

ECON 101

An Outlook for Real Estate & the Economy

IT'S ALL ABOUT
SUPPLY & DEMAND



CHANGE

GRID

Essential to Invest in the Grid





Ted C. Jones @DrTCJ · Jul 5



Fragile US Electrical Grid

60% of US power distribution lines have surpassed their 50-year life expectancy per [@BlackVeatchJobs](#) while the [@TheBrattleGroup](#) estimates from \$1.5 trillion to \$2 trillion will need be spent on the grid by 2030 just to maintain reliability

[@NCSLorg](#)

DrTCJ 

CRIME

Nothing to Do With Politics – Societal Based

2022-2023

New & Accelerating Pre-Existing Trends

Permanent Changes *66 Days Average*

Shrinking Commercial Sales

Shrinking House & Apartment Sales

Downward Pressure on Rents & Home Values

Recession – *But Improving Q3-Q4 2023*

Ted's Forecasts – Some Up To 15 Months Ago

- Stock Market Will Drop 15% to 30% in next 24 to 30 Months
- Total Value of Crypto Will Drop 80%
- Residential Interest Rates Will Be in the 6% Range
- Nasdaq Down 33% from Peak, S&P500 Down 23%
- Crypto \$2.98 Trillion Peak, Now \$919 Billion -69.2%
- 30-Year Residential Rates Now 6.94% Per Freddie Mac



Ted C. Jones

@DrTCJ

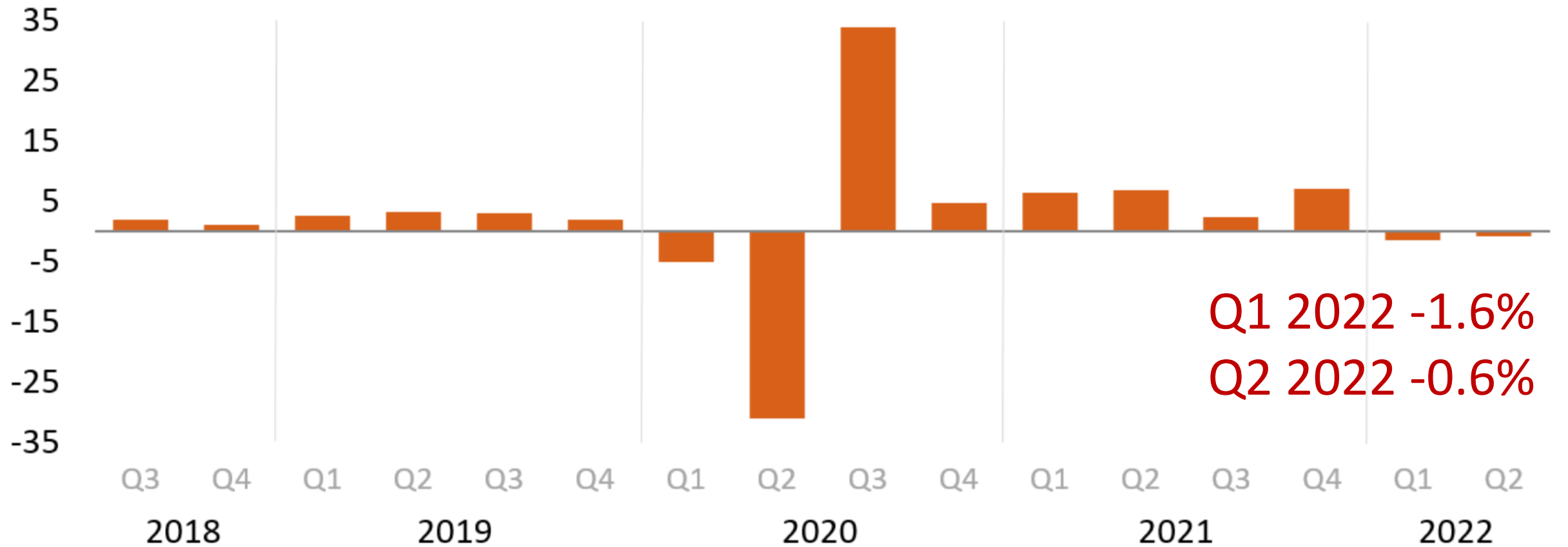
Goldman Sachs note to clients says if the Fed has to hit the economy hard enough to raise the unemployment rate to 5%, the S&P500 index would have to fall another 14%. A 6% unemployment rate would drop the S&P500 27% in worse case scenario

@GoldmanSachs
@MKTWeconomics

DrTCJ 

Recession

Real GDP: Percent change from preceding quarter



U.S. Bureau of Economic Analysis

Seasonally adjusted at annual rates

U.S. Census Bureau Vintage Population Estimates



Greatest Percentage Gain

Overall Rank	State	As of July 1		Percent Change	Net Change People
		2020	2021		
1	Idaho	1,847,772	1,900,923	2.9%	53,151
2	Utah	3,281,684	3,337,975	1.7%	56,291
3	Montana	1,086,193	1,104,271	1.7%	18,078
4	Arizona	7,177,986	7,276,316	1.4%	98,330
5	South Carolina	5,130,729	5,190,705	1.2%	59,976
6	Delaware	991,886	1,003,384	1.2%	11,498
7	Texas	29,217,653	29,527,941	1.1%	310,288
8	Florida	21,569,932	21,781,128	1.0%	211,196
9	Nevada	3,114,071	3,143,991	1.0%	29,920

U.S. Census Bureau Vintage Population Estimates

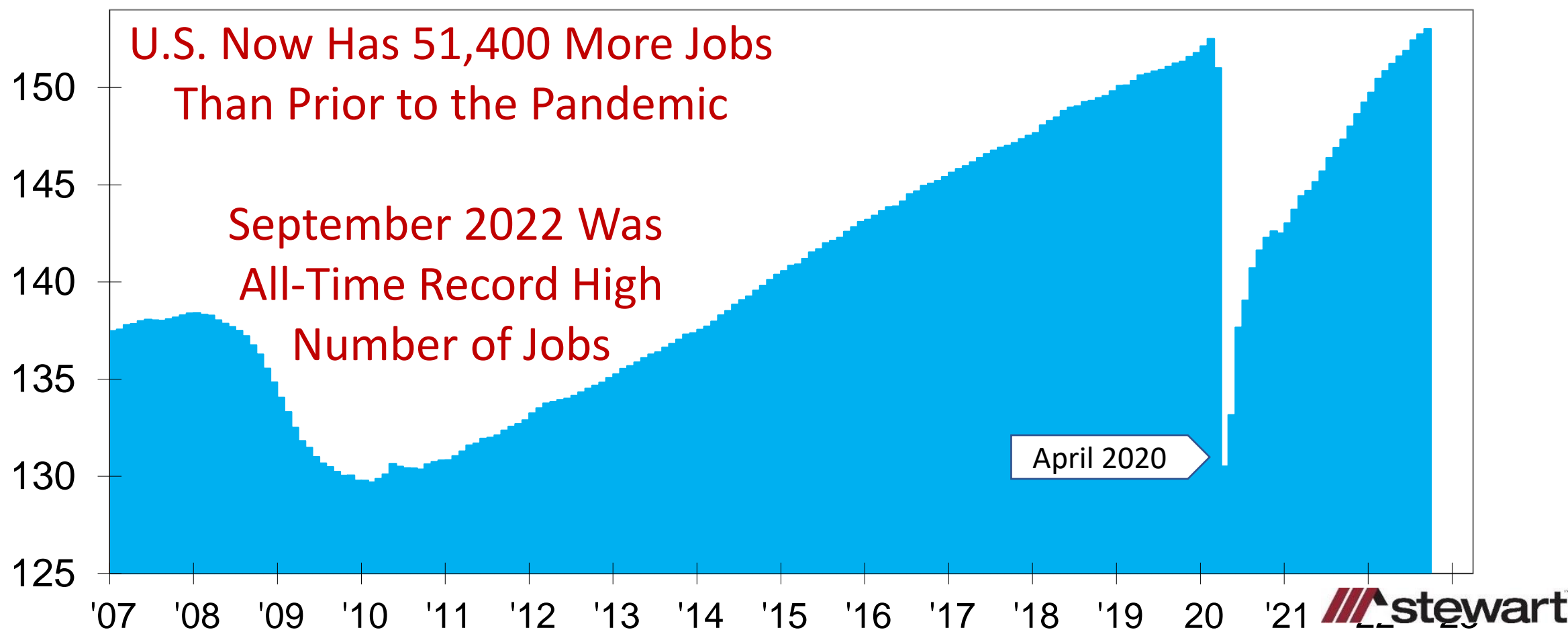


Greatest Percentage Gain

Overall Rank	State	As of July 1		Percent Change	Net Change People
		2020	2021		
42	Mississippi	2,956,870	2,949,965	-0.2%	-6,905
43	West Virginia	1,789,798	1,782,959	-0.4%	-6,839
44	North Dakota	778,962	774,948	-0.5%	-4,014
45	Massachusetts	7,022,220	6,984,723	-0.5%	-37,497
46	Louisiana	4,651,203	4,624,047	-0.6%	-27,156
47	California	39,499,738	39,237,836	-0.7%	-261,902
48	Hawaii	1,451,911	1,441,553	-0.7%	-10,358
49	Illinois	12,785,245	12,671,469	-0.9%	-113,776
50	New York	20,154,933	19,835,913	-1.6%	-319,020
51	District of Columbia	690,093	670,050	-2.9%	-20,043
	United States	331,501,080	331,893,745	0.1%	392,665

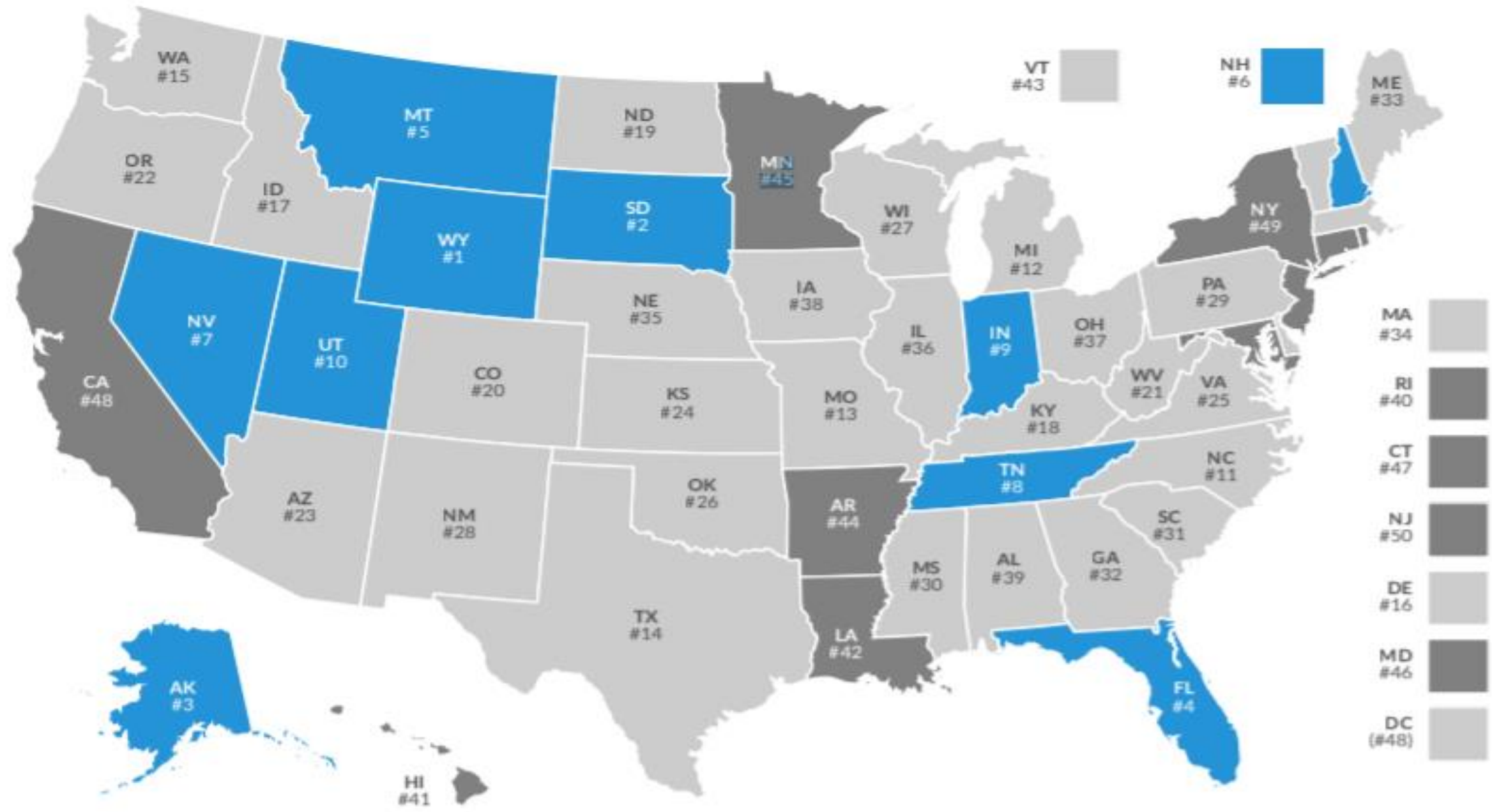
U.S. Jobs

Jobs (Millions) *Seasonally Adjusted*



2022 State Business Tax Climate Index

THE TAX FOUNDATION



State Job Losses February 2020 to Trough -- *April or May 2020*



Michigan	23.7%	Oregon	14.5%	New Mexico	12.1%
Nevada	23.4%	Maryland	14.4%	Tennessee	12.0%
Hawaii	23.1%	Louisiana	14.2%	Alabama	11.8%
Rhode Island	21.3%	Alaska	14.1%	Washington	11.8%
Vermont	20.2%	West Virginia	14.1%	Virginia	11.7%
New York	20.2%	South Carolina	14.0%	Iowa	11.2%
Pennsylvania	18.5%	Florida	14.0%	Texas	11.2%
Massachusetts	18.5%	Minnesota	13.9%	Arizona	11.1%
Connecticut	17.2%	Wisconsin	13.6%	Kansas	11.1%
New Jersey	17.0%	Illinois	13.4%	Dist of Columbia	10.6%
New Hampshire	16.9%	Colorado	13.3%	Idaho	10.3%
Ohio	15.8%	Georgia	13.1%	South Dakota	10.0%
Indiana	15.8%	Mississippi	13.0%	Arkansas	9.8%
California	15.4%	Montana	12.7%	Oklahoma	9.8%
Kentucky	15.1%	North Carolina	12.4%	Nebraska	9.2%
Maine	14.8%	North Dakota	12.3%	Wyoming	9.2%
Delaware	14.7%	Missouri	12.2%	Utah	8.9%
US					
	14.7%				

Change in Jobs - February 2020 Through August 2022



Utah	6.7%	New Jersey	0.3%	Maryland	-1.6%
Idaho	6.3%	Washington	0.2%	Wisconsin	-1.8%
Texas	4.3%	Alabama	0.0%	Rhode Island	-1.8%
Florida	4.1%	Missouri	-0.1%	Pennsylvania	-1.8%
North Carolina	3.9%	Virginia	-0.2%	West Virginia	-1.9%
Montana	3.5%	Nebraska	-0.2%	Connecticut	-2.1%
Georgia	3.4%	California	-0.3%	Kansas	-2.2%
Arizona	3.1%	Maine	-0.6%	Michigan	-2.2%
Tennessee	2.8%	Oklahoma	-0.6%	Minnesota	-2.2%
Arkansas	2.4%	Iowa	-0.8%	Ohio	-2.2%
South Dakota	2.1%	Mississippi	-0.9%	North Dakota	-2.6%
South Carolina	2.0%	Delaware	-1.1%	Louisiana	-3.1%
Colorado	2.0%	New Mexico	-1.2%	New York	-3.3%
Nevada	0.8%	Illinois	-1.2%	Alaska	-3.8%
Indiana	0.6%	Massachusetts	-1.5%	Vermont	-4.6%
Kentucky	0.3%	New Hampshire	-1.6%	Dist of Columbia	-5.0%
Oregon	0.3%	Wyoming	-1.6%	Hawaii	-8.0%

State Job Growth -- 1-Month July 2022 to August 2022



Alaska	1.4%	Iowa	0.2%	Illinois	0.1%
Kentucky	1.4%	Florida	0.2%	Idaho	0.0%
Rhode Island	0.5%	North Carolina	0.2%	Maine	0.0%
Oregon	0.5%	Maryland	0.2%	Alabama	0.0%
Washington	0.5%	Wisconsin	0.2%	Indiana	0.0%
Colorado	0.4%	North Dakota	0.2%	Oklahoma	-0.1%
South Carolina	0.4%	Connecticut	0.2%	Hawaii	-0.1%
Delaware	0.4%	Massachusetts	0.2%	Montana	-0.1%
Virginia	0.4%	Ohio	0.1%	Minnesota	-0.1%
Louisiana	0.4%	Arizona	0.1%	Nebraska	-0.1%
New Jersey	0.4%	West Virginia	0.1%	Vermont	-0.2%
South Dakota	0.4%	Texas	0.1%	Nevada	-0.2%
Georgia	0.3%	California	0.1%	Missouri	-0.2%
Utah	0.3%	Pennsylvania	0.1%	Kansas	-0.2%
Arkansas	0.3%	New Mexico	0.1%	Dist of Columbia	-0.5%
New York	0.3%	Tennessee	0.1%	New Hampshire	-0.5%
Wyoming	0.2%	Michigan	0.1%	Mississippi	-0.7%

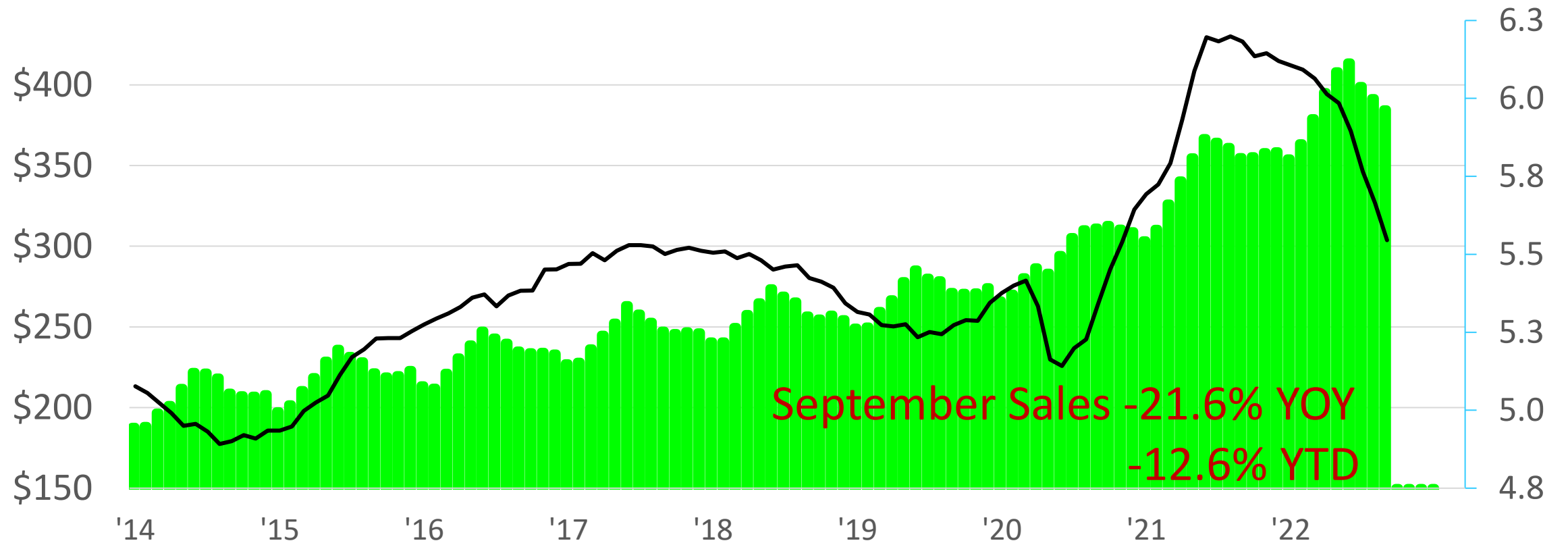
The 1st Indicator of
a Softening, Down-Turning
Real Estate Market is a
Decline in Sales as Prices
Rise Strongly

Ted C Jones - 2002

US Existing Home Sales & Median Prices

Median Price - \$ Thousands

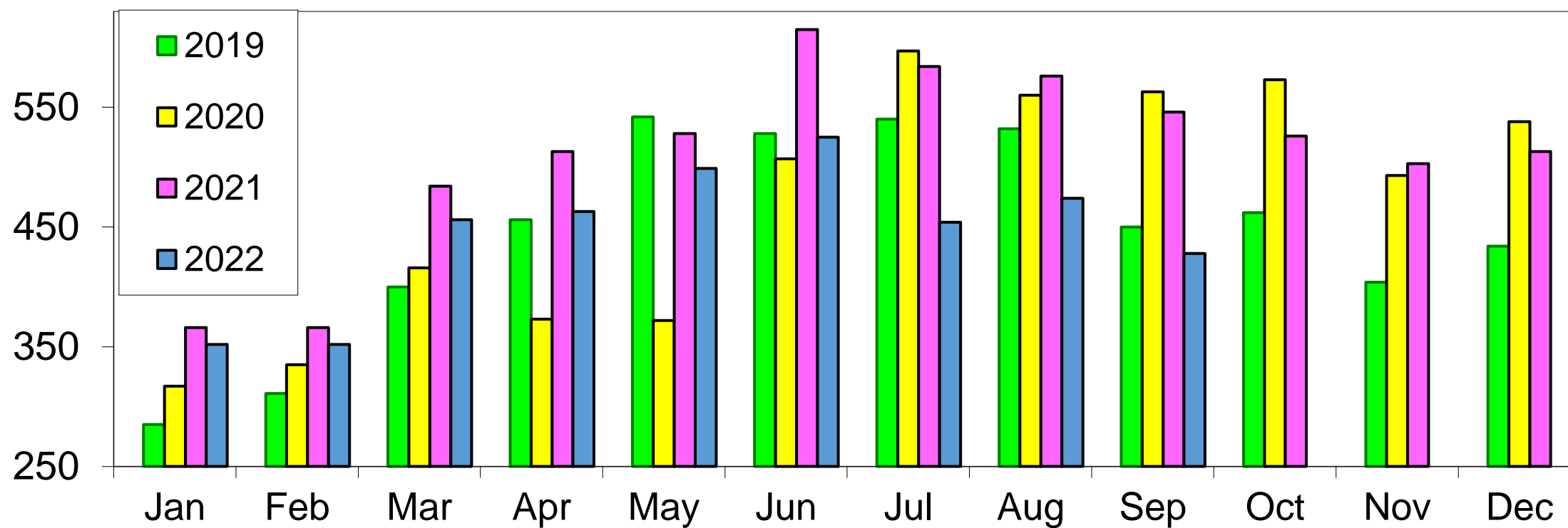
Sales – Prior 12 Months *Millions*



U.S. Existing Home Sales

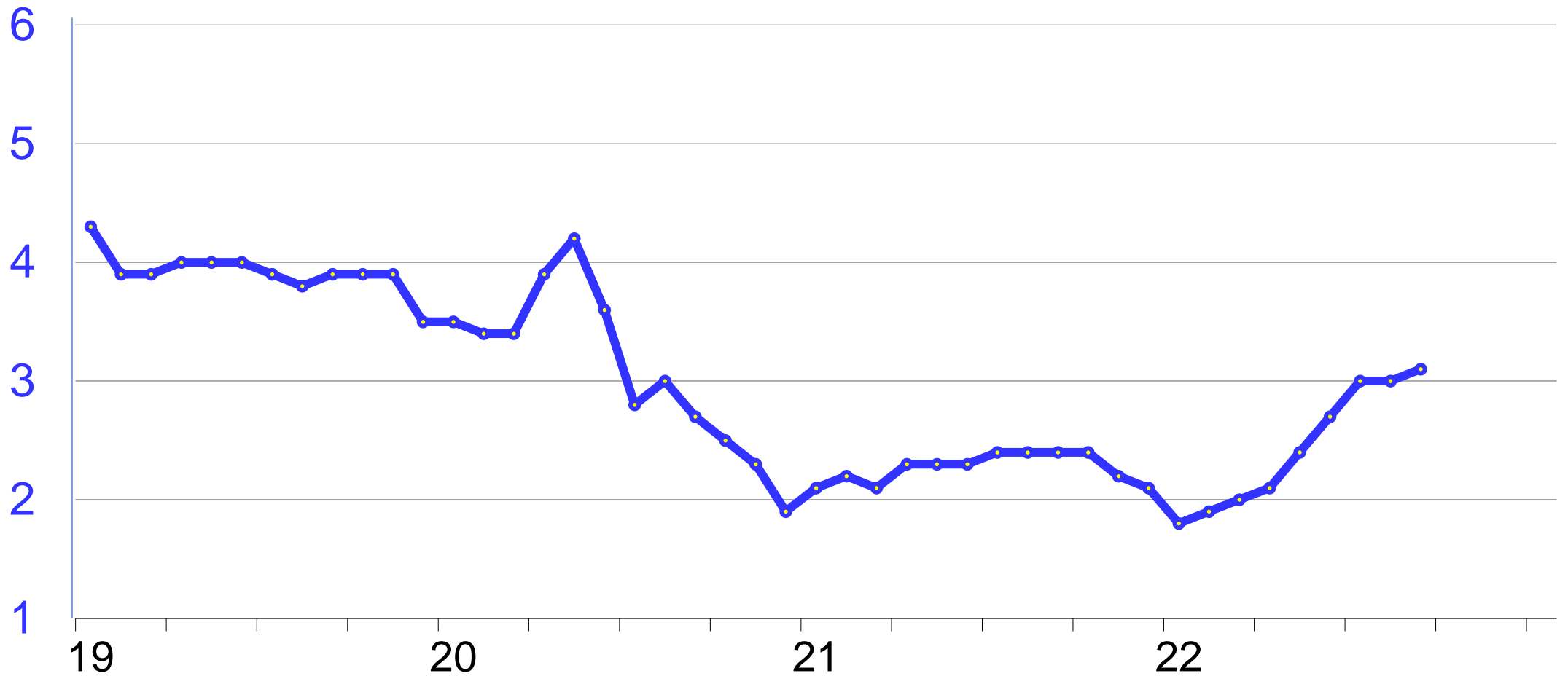
Monthly Sales – *Not Seasonally Adjusted* - Thousands

Key Comparison is 2019 (Pre-Pandemic) to 2022 (Post Pandemic)



Months Inventory – Existing Home Sales

Seasonally Adjusted



Existing Single-Family Sales

September 2022

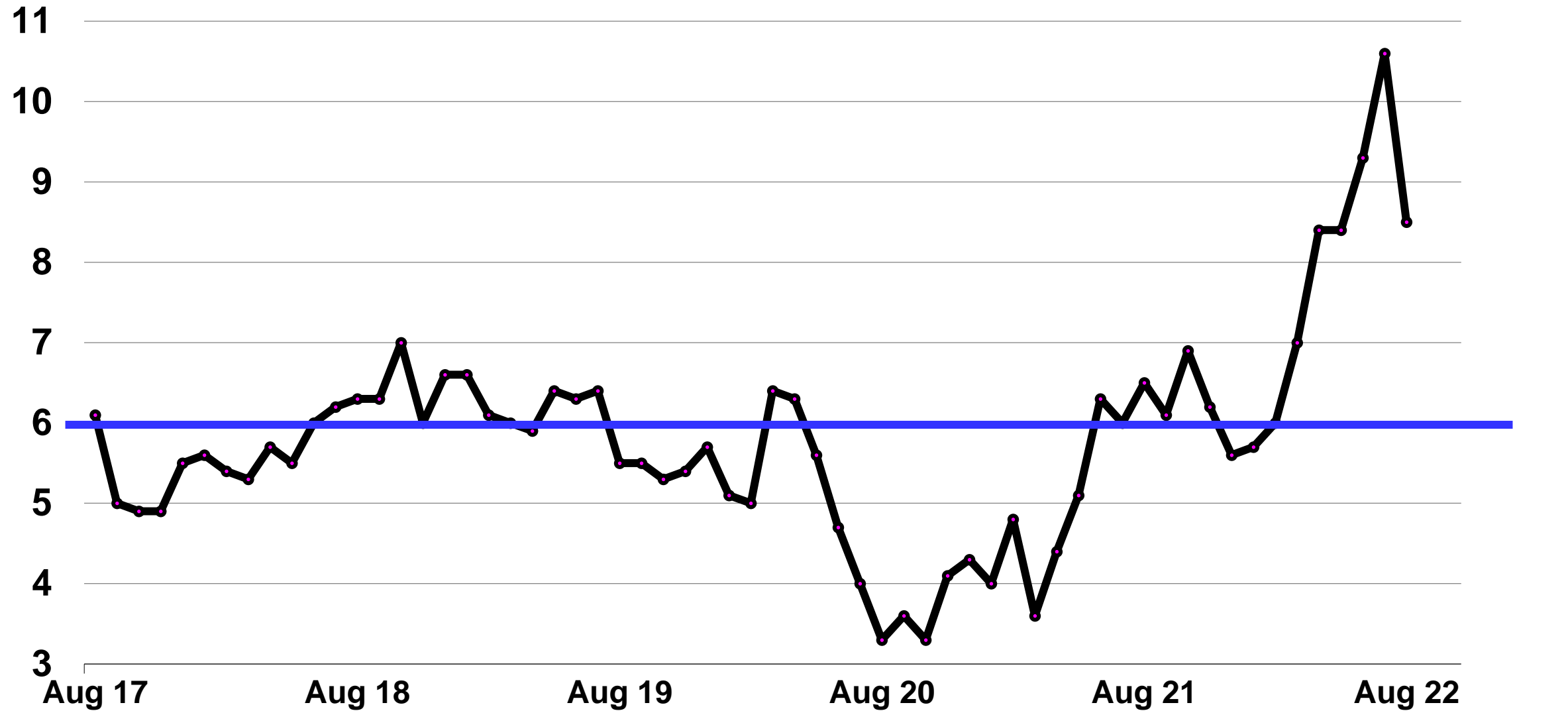
Price Range <i>Thousands</i>	Sales Distribution	Change in Sales Vs August 2021	Median Days On The Market
\$0 to \$100	4.1%	-23.8%	21
\$100 - \$250	22.2%	-28.4%	13
\$250 - \$500	43.9%	-17.9%	15
\$500 - \$750	17.4%	-9.9%	19
\$750 - \$1 Million	6.3%	-9.5%	21
Great than \$1 Million	6.1%	-15.5%	23

Existing Home Sales Year-to-Date September 2022

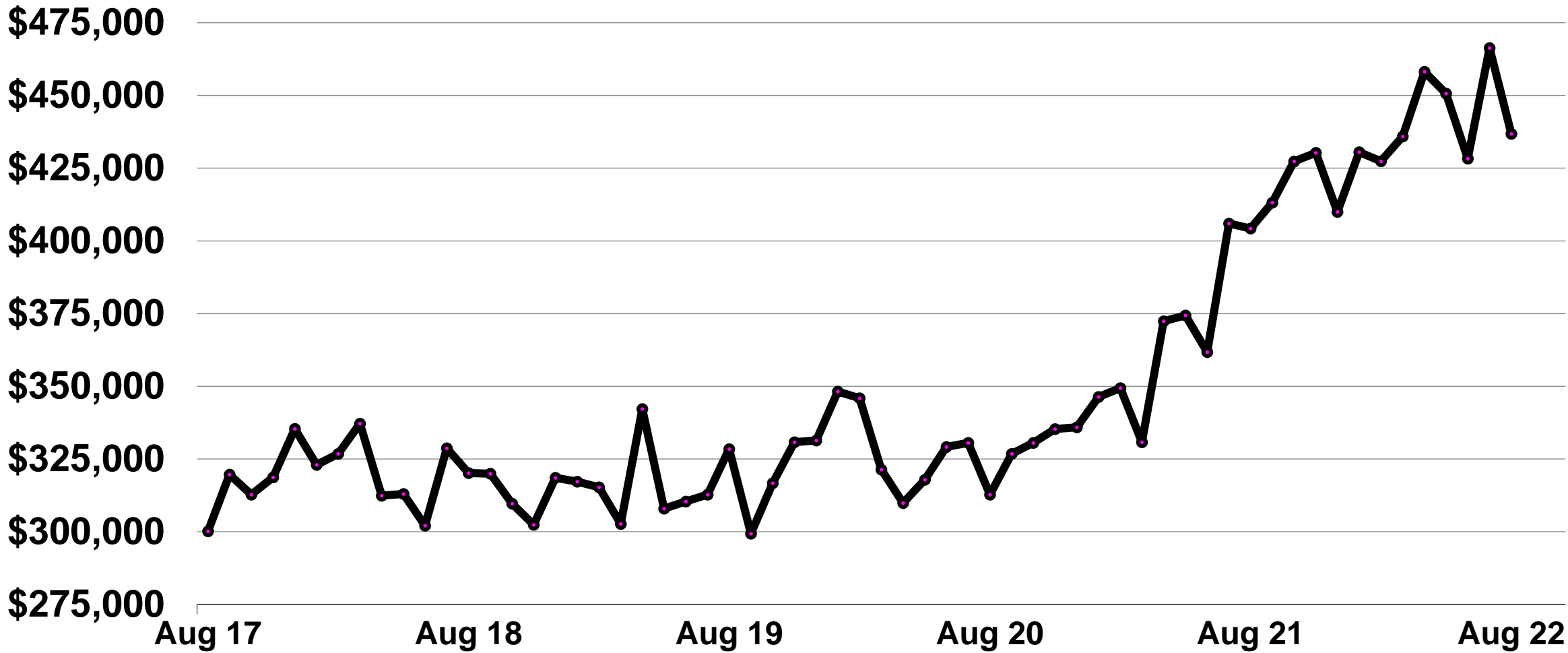
Year	Single Family	Townhouse Condo	Total
2021	4,038,000	540,000	4,578,000
2022	3,180,000	397,000	3,577,000
Percent Change	-21.2%	-26.5%	-21.9%

Source: National Association of Realtors®

U.S. Months Inventory -- New Housing



New Home Sales Median Price





Ted C. Jones
@DrTCJ

..

Where 1st-Time Homebuyers Got Their Down Payment

52% from their paychecks

24% stimulus money

23% saved extra during the pandemic

22% worked a 2nd job

17% inheritance

15% sold stocks

12% cash gift from family

12% sold cryptocurrency

10% retirement account

@Redfin

@MBAMortgage

12:20 PM · Feb 7, 2022 · Twitter for iPad



U.S. Entered 2020 4.2 to 7.2 Million Dwellings Short

U.S. Net New Jobs and Newly Permitted Dwellings

Year	Single Family	Multifamily	Total New Dwelling Units	Net New Jobs	New Jobs Per Dwelling
2010	448,771	157,321	606,092	1,034,000	1.71
2011	420,737	205,887	626,624	2,074,000	3.31
2012	521,516	311,391	832,907	2,176,000	2.61
2013	625,225	370,090	995,315	2,301,000	2.31
2014	640,606	411,872	1,052,478	3,004,000	2.85
2015	696,000	486,584	1,182,584	2,720,000	2.30
2016	750,802	455,846	1,206,648	2,318,000	1.92
2017	820,133	462,001	1,282,134	2,175,000	1.70
2018	856,382	473,495	1,329,877	2,318,000	1.74
2019	862,299	523,970	1,386,269	2,011,000	1.45
Total			10,500,928	22,131,000	2.11

Ted's Metric
Need 1.25
to 1.5 Net
New Jobs
Per New
Dwelling
Unit

Residential Interest Rate Forecast

30-Year Fixed-Rate Conventional Mortgages as of October 2022

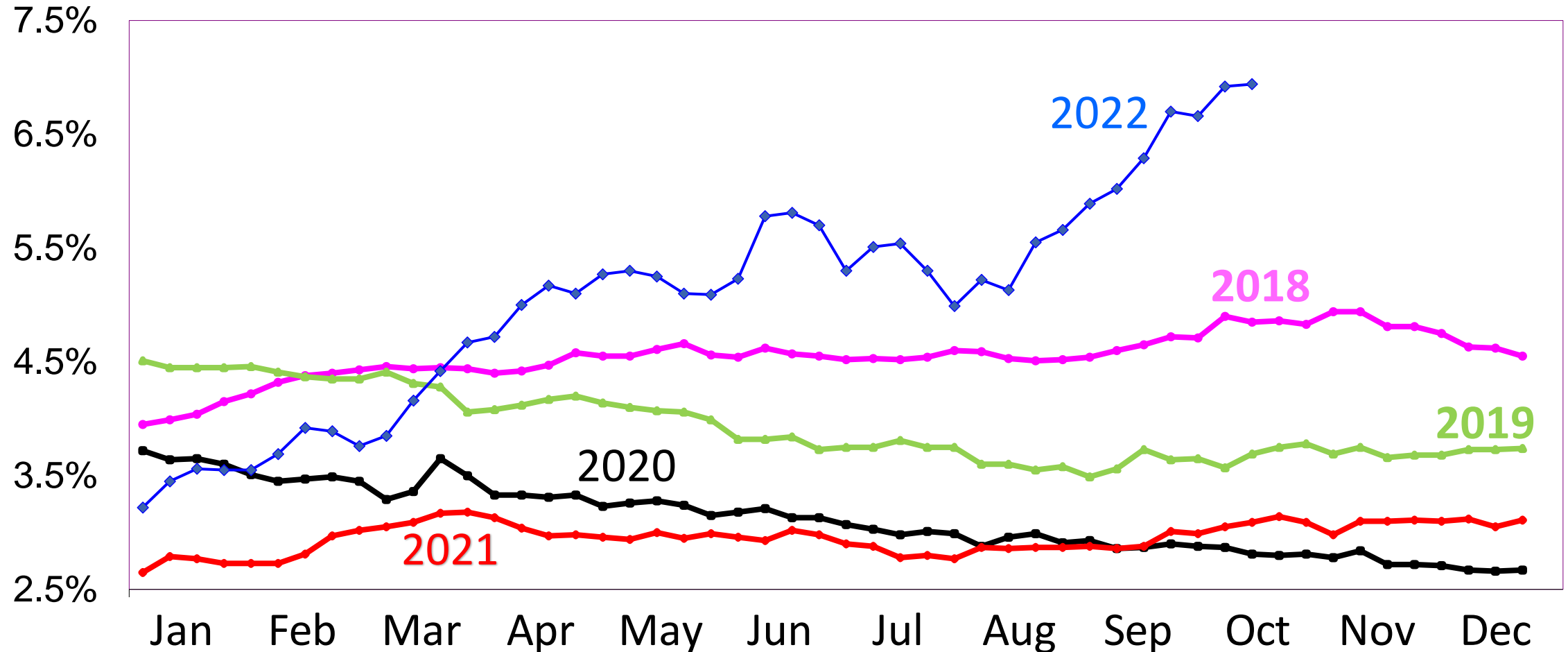
	2019	2020	2021	2022	2023
Fannie Mae	3.9%	3.1%	3.0%	5.3%	6.4%
MBA	3.7%	2.8%	3.1%	5.5%	5.0%
Average	3.80%	2.95%	3.05%	5.40%	5.70%

Fannie Mae

	Q1	Q2	Q3	Q4
2022	3.8%	5.2%	5.6%	6.7%
2023	6.6%	6.5%	6.4%	6.2%

30-Year Conventional Residential Mortgage Rates

Percent





Ted C. Jones
@DrTCJ



Where I Think the Fed is Heading

Expect Powell to continue raising the target Fed Funds Rate (currently 2.25% to 2.5%) until it is greater than the PCE (Personal Consumption Expenditure price index) It includes broadest measure of goods & services & is at 6.8% June 2022

@DrTCJ

10:00 AM · Aug 24, 2022 · Twitter Web App

Now 6.2% August 2022
Fed Funds 3.00% to 3.25%



2-Year Treasury Rate 4.4 Percent
Fed Funds Target 3.00 to 3.25 Percent

Fed Will Continue to Raise Rates Until Above 2-Year Treasury Yield
150 to 200 Basis Points

Existing Home Sales Forecast

October 2022 MBA September 2022

Sales -- Thousands *Annual*

	2021	2022	2023
Fannie Mae	6,120	5,021	3,928
MBA	6,127	5,409	5,264
Average	6,124	5,215	4,596

Percent Change - *Year-Over-Year*

Fannie Mae	-18.0%	-21.8%
MBA	-11.7%	-2.7%
Average	-14.8%	-11.9%

Existing Home Median Price Forecast

October 2022 MBA September 2022

Median Price -- \$ *Thousands*

	2021	2022	2023
Fannie Mae	\$ 347.1	\$ 378.3	\$ 372.7
MBA	\$ 347.9	\$ 381.8	\$ 396.2
Average	\$ 347.5	\$ 380.1	\$ 384.4

Percent Change - *Year-Over-Year*

Fannie Mae	9.0%	-1.5%
MBA	9.7%	3.8%
Average	9.4%	1.1%

Existing Home Sales

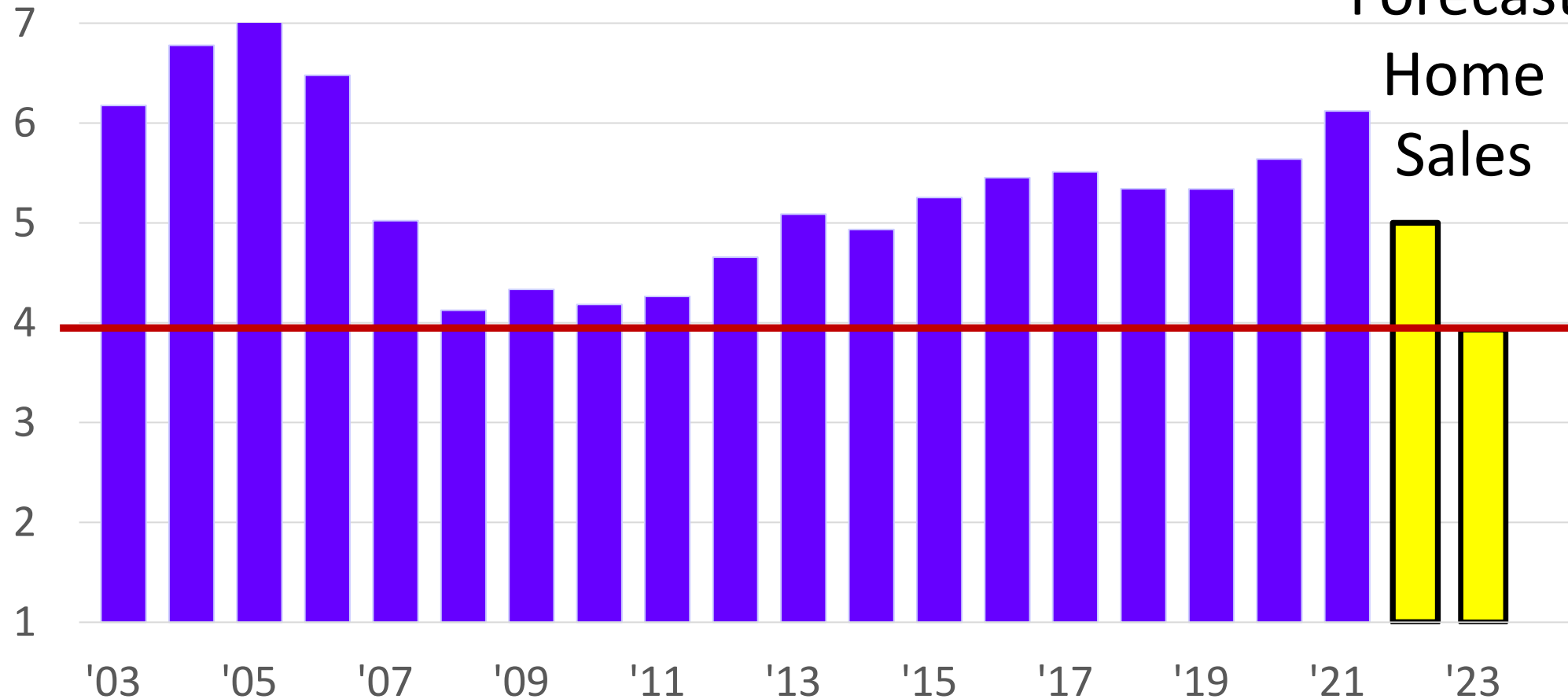
NAR Historical



October 2022

Forecast

Home
Sales



New Home Sales Forecast

October 2022 MBA September 2022

Sales -- Thousands *Annual*

	2021	2022	2023
Fannie Mae	771	620	542
MBA	769	668	738
Average	770	644	640

Percent Change - *Year-Over-Year*

Fannie Mae	-19.6%	-12.6%
MBA	-13.1%	10.5%
Average	-16.4%	-0.6%

New Home Median Price Forecast

October 2022 MBA September 2022

Median Price -- \$ *Thousands*

	2021	2022	2023
Fannie Mae	\$ 397.0	\$ 432.7	\$ 426.2
MBA	\$ 394.0	\$ 435.7	\$ 440.8
Average	\$ 395.5	\$ 434.2	\$ 433.5

Percent Change - Year-Over-Year

Fannie Mae	9.0%	-1.5%
MBA	10.6%	1.2%
Average	9.8%	-0.2%

Residential Lending Forecast

Fannie Mae Oct 2022
MBA Sep 2022

Residential Lending Forecast

Oct 2022

MBA September 2022

Purchase Lending \$ Billions

	2021	2022	2023	2022	2023
Fannie Mae	\$1,900.0	\$1,629.0	\$1,343.0	-14.3%	-17.6%
MBA	\$1,863.0	\$1,618.0	\$1,704.0	-13.2%	5.3%
Average	\$1,881.5	\$1,623.5	\$1,523.5	-13.7%	-6.2%

Refinance Lending \$ Billions

	2021	2022	2023	2022	2023
Fannie Mae	\$2,670.0	\$ 701.0	\$ 392.0	-73.7%	-44.1%
MBA	\$2,574.0	\$ 706.0	\$ 540.0	-72.6%	-23.5%
Average	\$2,622.0	\$ 703.5	\$ 466.0	-73.2%	-33.8%

Total Lending \$ Billions

	2021	2022	2023	2022	2023
Fannie Mae	\$4,570.0	\$2,330.0	\$1,735.0	-49.0%	-25.5%
MBA	\$4,437.0	\$2,324.0	\$2,244.0	-47.6%	-3.4%
Average	\$4,503.5	\$2,327.0	\$1,989.5	-48.3%	-14.5%

Declining Home Prices

\$715 Per Month Would Pay a 6.92% \$108,300 30-Year Loan

US Congress Joint Economic Committee
Analysis on the Impact of Inflation

Prices up +13.2% from Jan 2021 to August 2022
costing the average US household \$715 monthly

Even if price gains cease, the average US household
will pay \$8,581 additional over the next 12 months

5:06 AM · Oct 13, 2022 · Twitter Web App



Why Home Values Are Declining

Monthly
Payment

Principal & Interest Payments -- Assuming 13% Down

\$937 Monthly Rise
In P&I Payment

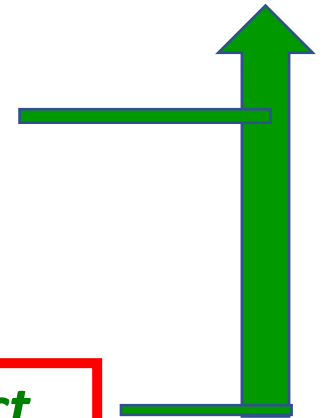
	Median Home Price	30-Year Mortgage Rate	Monthly P&I Payment
Aug 2021	\$ 361,500	2.84%	\$ 1,299
Aug 2022	\$ 389,500	5.22%	\$ 1,865
Net Change	\$ 28,000	2.38%	\$ 566
Percent	7.7%	83.8%	43.6%

Change Aug '21 to Aug '22

Oct 2022	\$ 389,500	6.92%	\$ 2,236
Net Change	\$ 28,000	1.70%	\$ 371
Percent	7.7%	59.9%	19.9%

Higher Oct Interest Rate Impact

Change Aug '22 to Oct '22



Monthly P&I Payment Increase

Ted's 2023 Existing Home Sales Forecast

Total Sales Down 14% to 20% Vs 2021

Median Price Gain in 2022 in Lower Single Digits
Then Negative 10% to 14% YOY in 2023

30-Year Mortgage Rates in 6% to Low 7s

- Buy the Median-Priced Home
- 20% Down
- Average Annual Interest Rate

Monthly P&I Payment Change 2020 to 2023

+85.0% Fannie Mae Forecast

+75.2% MBA Forecast

Where Home Prices are Dropping the Most Percent Change in Monthly Median Home List Price Since June

- 10.3% Austin
- 9.9% Phoenix
- 8.9% Palm Bay FL
- 8.6% Charleston
- 8.6% Ogden UT
- 8.0% Denver NC
- 7.9% Las Vegas
- 7.7% Stockton CA
- 7.5% Durham
- 7.4% Spokane WA

[@realtordotcom](#)



Secondary &
Tertiary
Market Trend
Continues



Vermont #1 Best 2021 76% Inbound

Top Inbound Metros 2021

Rank	MSA	Shipments	Percent Inbound
1	Medford-Ashland OR	101	83%
2	Punta Gorda FL	213	81%
3	Wilmington NC	494	80%
4	Eugene-Springfield OR	120	79%
5	Sarasota-Bradenton FL	1496	79%
6	Sioux Falls SD	132	78%
7	Ft Myers-Cape Coral FL	951	77%
8	Myrtle Beach SC	440	76%
9	Santa Fe NM	561	76%
10	Bellingham WA	164	72%

Top Inbound Metros 2021

Rank	MSA	Shipments	Percent Inbound
11	Dothan AL	178	70%
12	Daytona Beach FL	1153	68%
13	Knoxville TN	1104	68%
14	Huntsville AL	637	68%
15	West Pal Beach-Boca Raton FL	1479	68%
16	State College PA	178	67%
17	Burlington VT	192	66%
18	Tampa-St Pete-Clearwater FL	2855	66%
19	Nashville TN	2137	65%
20	Asheville NC	444	64%





Texas #1 2021 Destination

Inbound



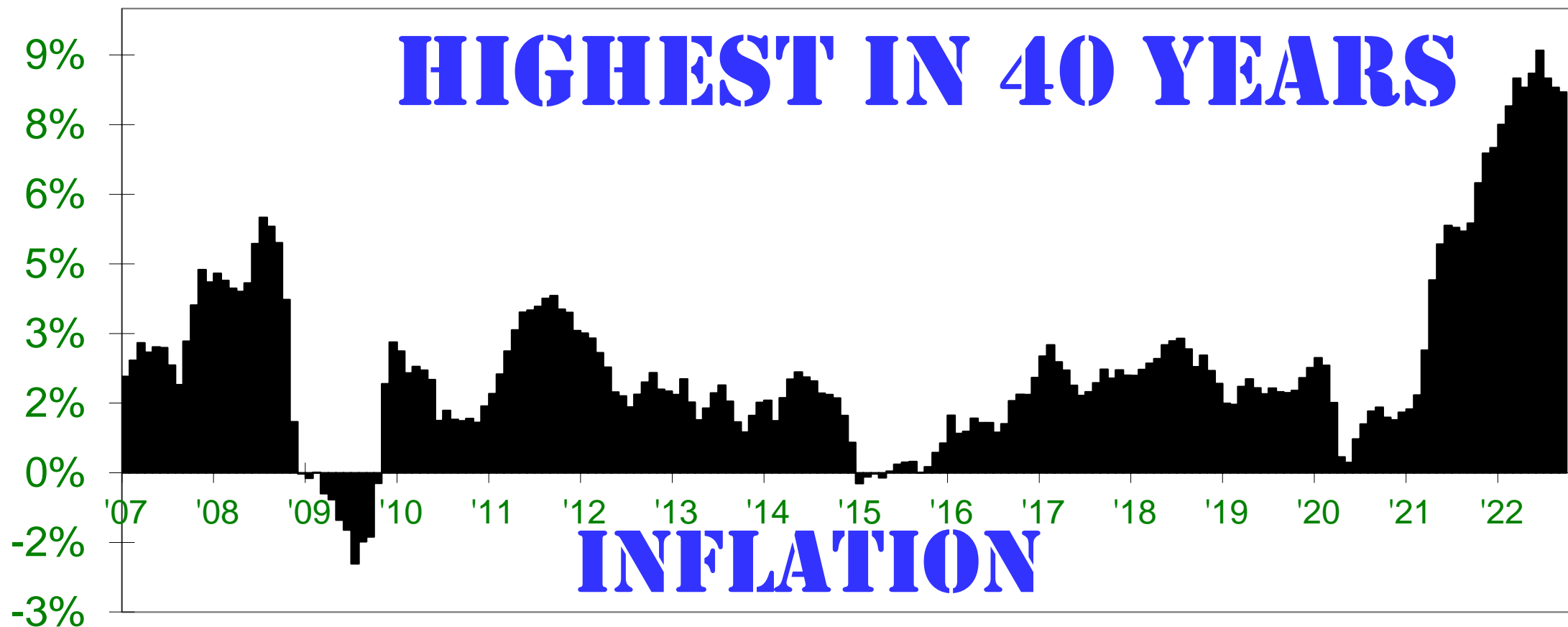
- | | |
|----|---------------------------------|
| 1 | Kissimmee-St. Cloud, FL (2) |
| 2 | Raleigh-Durham, NC |
| 3 | Palm Bay-Melbourne, FL (23) |
| 4 | North Port, FL (1) |
| 5 | Madison, WI (5) |
| 6 | Fort Myers-North Fort Myers, FL |
| 7 | College Station-Bryan, TX |
| 8 | Sacramento-Roseville, CA (11) |
| 9 | Clermont, FL |
| 10 | Sarasota-Bradenton, FL |

- | | |
|----|------------------------|
| 11 | Daytona Beach, FL |
| 12 | San Diego, CA |
| 13 | Port St. Lucie, FL (3) |
| 14 | Milwaukee, WI (13) |
| 15 | Grapevine, TX |
| 16 | Austin, TX |
| 17 | Myrtle Beach, SC |
| 18 | Surprise, AZ (8) |
| 19 | Brandon-Riverview, FL |
| 20 | Wilmington, NC |

CPI for All Urban Consumers -- U.S. City Average

12-Month Change Seasonally Adjusted

8.2% September 2022



\$715 Per Month Would Pay a 6.92% \$108,300 30-Year Loan

US Congress Joint Economic Committee
Analysis on the Impact of Inflation

Prices up +13.2% from Jan 2021 to August 2022
costing the average US household \$715 monthly

Even if price gains cease, the average US household
will pay \$8,581 additional over the next 12 months

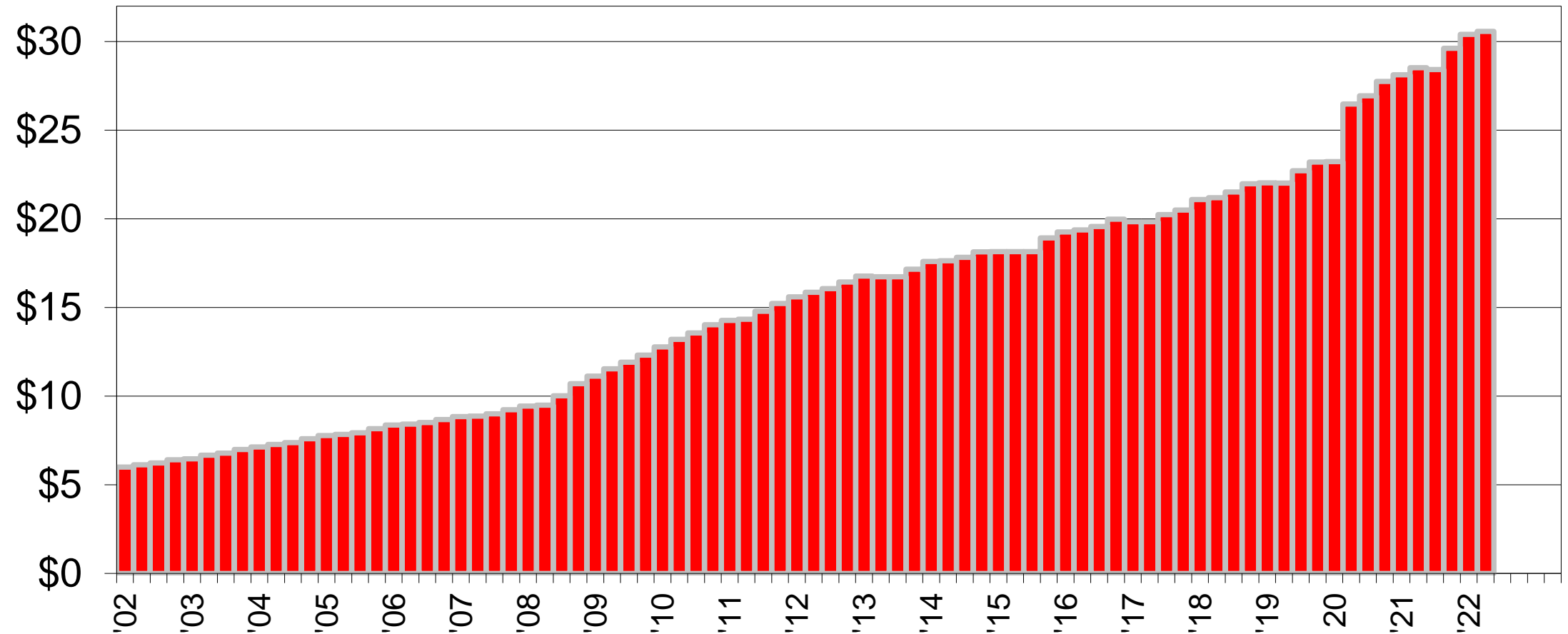
5:06 AM · Oct 13, 2022 · Twitter Web App



Federal Debt – Total Public Debt



\$ Trillions



Federal Debt & GDP 2021

2021 Debt \$28.2 Trillion

\$392 Billion Interest Expense

1.39% Interest Rate *(4%+ Now)*

\$4.05 Trillion Government Taxes Collected

Interest Expense 9.7% of Taxes Paid

14.3% Interest Rate Requires 100% of All 2021 Tax Collections to Pay for Interest

Every 1 Percent Increase
in Interest Rates Increases
the Annual Payment on
U.S. Govt Debt by \$200
Billion Per Year

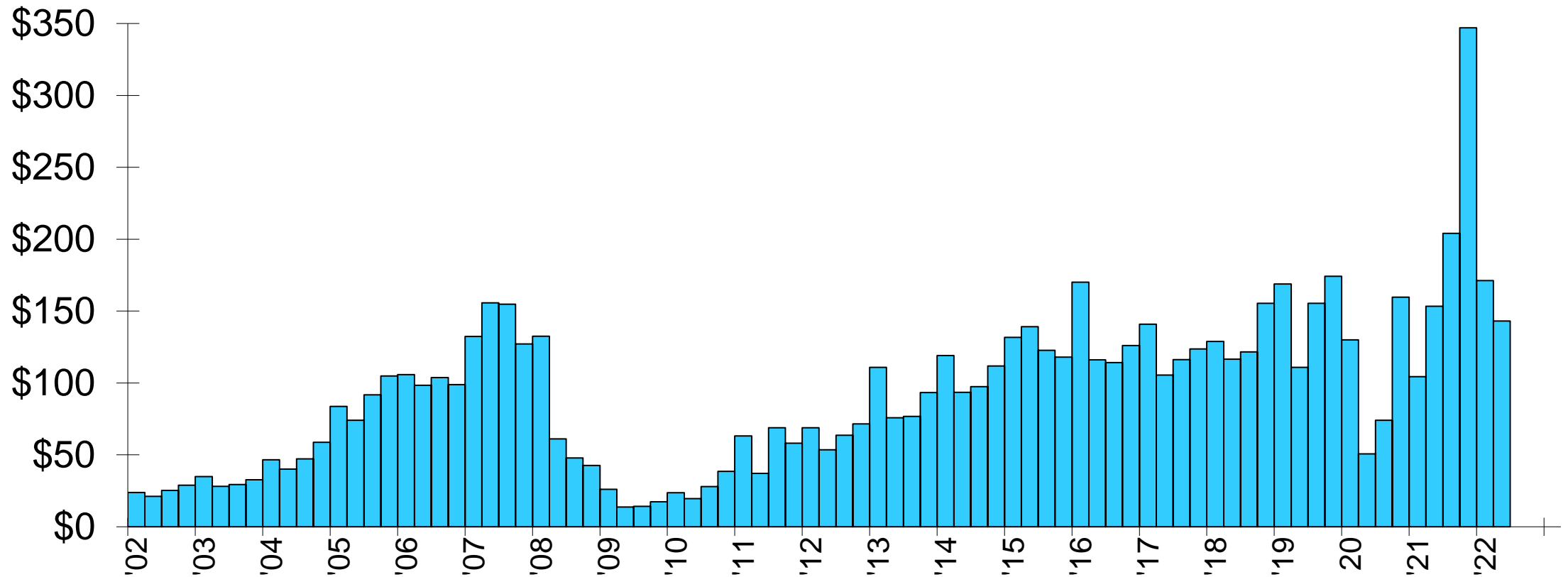
Commercial Sales

	Q3 2022		YTD 2022	
	Vol (\$b)	YOY	Vol (\$b)	YOY
Office	26.9	-33%	88.5	-1%
Retail	18.2	-9%	66.8	49%
Industrial	35.5	-18%	113.4	15%
Hotel	8.1	-21%	31.9	-1%
Apartment	74.1	-17%	238.0	25%
Seniors Housing & Care	2.6	-63%	9.1	-41%
Dev Site	6.8	-17%	23.6	20%
Total	172.2	-21%	571.5	16%

U.S. Commercial Real Estate Sales

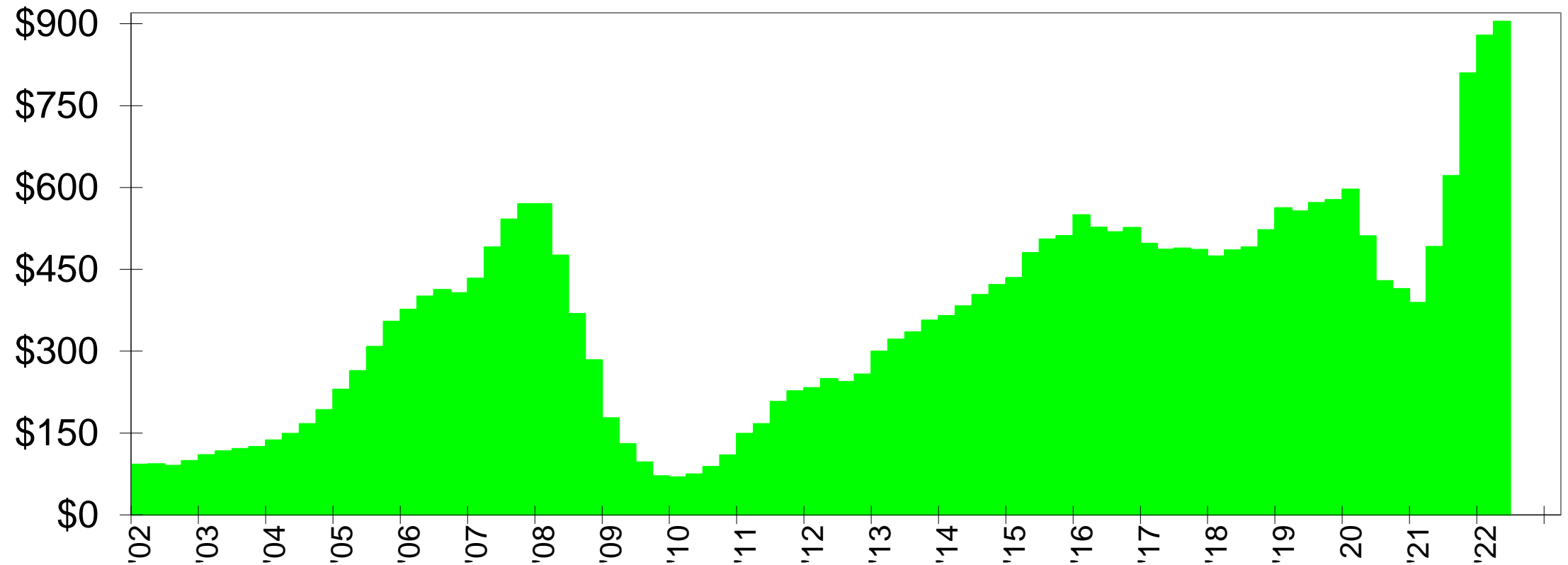
\$ Billions – Quarterly

Q4 2021 **Best** Quarter in History



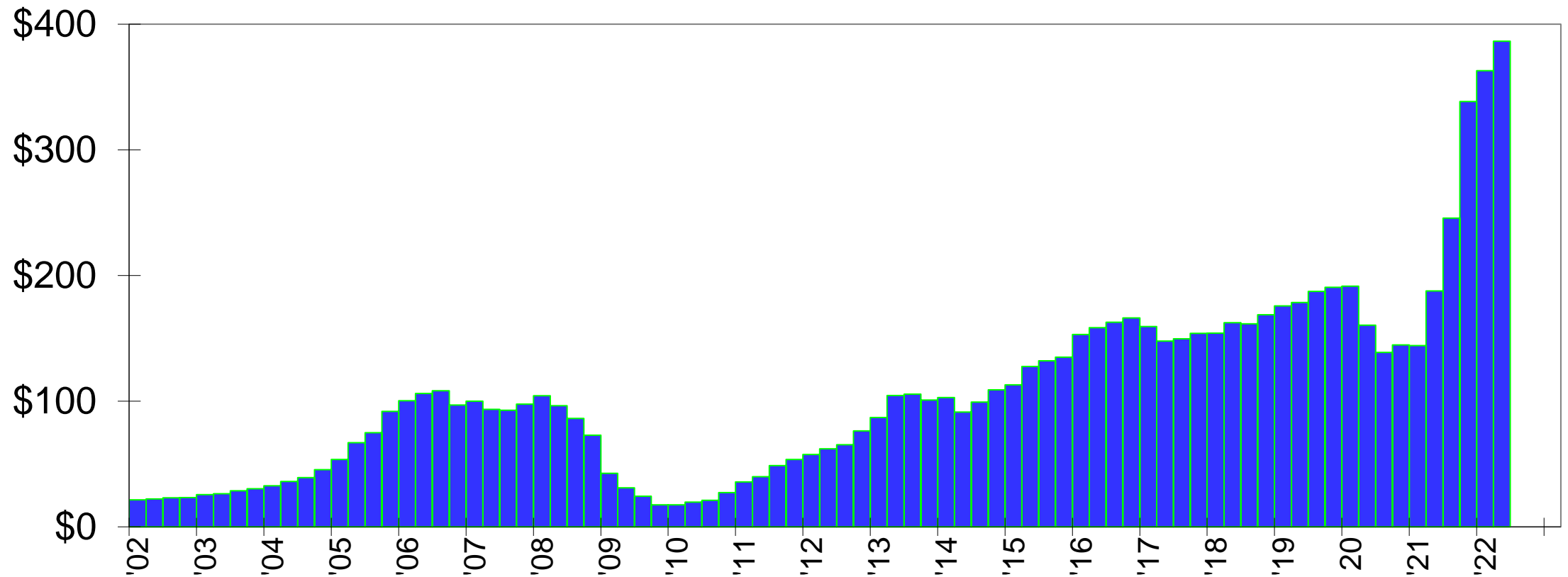
US Commercial Real Estate Sales

\$ Billions – *Trailing 12 Months*



US Apartment Sales

\$ Billions – *Trailing 12 Months*



Average US Apartment Rent September 2022

Unit Type	Average Rent	YoY % Change	MoM % Change
1-Bedroom	\$1,721	27.13%	-2.77%
2-Bedroom	\$2,054	23.43%	-2.47%

Rent Will Service \$317,240 Loan at 6.92%

Existing Home Prices Up 8.4% YOY National Association of Realtors®
August 2022 Median Price \$384,800



Ted C. Jones
@DrTCJ

Government imposed regulations account for more than 40% of all multifamily development costs according to a study by [@NAHBhome](#) & [@NMHCInnovation](#) National Multifamily Housing Counsel

87.5% of builders will avoid new construction in markets with rent controls

[@GlobeStcom](#)

8:02 AM · Jun 10, 2022 · Twitter for iPad



CREATIVITY

ECON 101

An Outlook for Real Estate & the Economy

IT'S ALL ABOUT
SUPPLY & DEMAND

