

# The Virginia Tech–USDA Forest Service Housing Commentary: Section I April 2022



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<http://woodproducts.sbio.vt.edu/housing-report>.

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# Opening Remarks

April 2022 data softness was widespread, with only the housing under construction and private residential construction spending categories positive on a month-over-month basis. Year-over-year data were better; however, single-family permits were negative again. This marks the third month, in 2022, of single-family starts declining and permits also have decreased for two-consecutive months. This suggests further moderation in single-family activity in the upcoming months.

The June 15th Atlanta Fed GDPNow™ model forecast was a negative 8.9% for total residential investment spending for June 2022. New private permanent site expenditures were projected at -7.4%; the improvement spending forecast was -0.8%; and the manufactured/mobile expenditures projection was 14.5% (all: quarterly log change and at a seasonally adjusted annual rate).<sup>1</sup>

“We wrote about our concerns for the US housing market last week, citing the surge in mortgage rates and the challenge of saving for a deposit in an environment where prices have risen 35% nationally over the past two years. We increasingly sense that we are moving from a situation of massive excess demand post pandemic to one where we could be soon experiencing excess supply. This led us to warn of the prospect of a transaction slowdown and potential price correction in coming quarters. April’s US new home sales numbers only make us more nervous. They recorded a huge drop from March’s 709k (originally reported as 763k) down to 591k in April, more than 150k below the consensus 749k. This forecast looked grossly optimistic to us since, when compared against mortgage applications numbers for home purchases the risks were always going to be skewed to a big downward surprise. In fact, today's outcome is exactly in line with what the relationship suggested. ... Weakening demand and rising supply imply the possibility that house prices will soon top out and start to fall. Rising interest rates in an environment of falling home prices are never a good combination for consumer sentiment and will add to the chances of a retrenchment and potential recession down the line.”<sup>2</sup> – James Knightley, Chief International Economist, ING

This month’s commentary contains applicable housing data, remodeling commentary, and United States housing market observations. Section I contains relevant data, remodeling, and housing finance commentary. Section II includes regional Federal Reserve analysis, private firm indicators, and demographic/economic information.

Sources: <sup>1</sup> [www.frbatlanta.org/cqer/research/gdpnow.aspx](http://www.frbatlanta.org/cqer/research/gdpnow.aspx); 6/15/22;

<sup>2</sup> <https://think.ing.com/snaps/us-growth-worries-mount-as-housing-transactions-collapse>; 5/24/22

# April 2022

## Housing Scorecard

	M/M	Y/Y
Housing Starts	▼ 0.2%	▲ 14.6%
Single-Family (SF) Starts	▼ 7.3%	▲ 3.7%
Multi-Family (MF) Starts*	▲ 15.3%	▲ 40.5%
Housing Permits	▼ 3.0%	▲ 3.3%
SF Permits	▼ 4.6%	▼ 3.7%
MF Permits*	▼ 0.3%	▲ 16.5%
Housing Under Construction	▲ 1.6%	▲ 24.1%
SF Under Construction	▲ 1.0%	▲ 26.0%
Housing Completions	▼ 5.1%	▼ 8.6%
SF Completions	▼ 4.9%	▲ 0.7%
New SF House Sales	▼ 16.6%	▼ 26.9%
Private Residential Construction Spending	▲ 0.9%	▲ 18.4%
SF Construction Spending	▲ 0.5%	▲ 19.3%
Existing House Sales <sup>1</sup>	▼ 2.4%	▼ 5.9%

\* All multi-family (2 to 4 + ≥ 5-units)

M/M = month-over-month; Y/Y = year-over-year;  
NC = No change

# USDA Forest Service Housing Story Map

**USDA FOREST SERVICE HOUSING MARKET REVIEW**

Forest Products Laboratory, Economics, Statistics and Life Cycle Analysis Research

WELCOME MONTHLY HOUSING BRIEFS AND COMMENTARIES CONSTRUCTION DATA HOUSING METRICS AND THE WOOD RESOURCE RESOURCES AND REFERENCES

## USDA Forest Service Housing Market Review

### Housing's Importance

The total value of all homes in the U.S. in 2017 was estimated at \$31.8 trillion.<sup>1</sup>

The value of wood building materials consumed in new residential and remodeling construction was estimated at \$37.4 billion in 2018.<sup>2</sup>

Historic as well as current housing trends show that new, single-family construction is the greatest value-added wood products consuming sector and is a leading coincident economic indicator of the U.S. economy. The forest products sector helps sustain the social, economic, and ecological benefits of forest based industry in the United States. Product revenues sustain economic benefits that include jobs and income. Ecological and social benefits can be supported by timber revenue to landowners that help keep land in forests, and by forest treatments that can help maintain ecological functions. The degree to which the forest products sector helps sustain benefits is influenced by levels of demand and consumption of forest products and how technology, markets, and demand for timber translates into harvest of different species and sizes of trees in different regions.

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## USDA Forest Service Housing Market Review

Each story map's tab contains a compilation of housing information. The 'Construction Data' tab is interactive and allows one to gather and view US Census-Construction data at the national or metropolitan statistical area (MSA) level.

The story map is available at the following link:

<https://www.arcgis.com/apps/MapSeries/index.html?appid=9553db0ea36140d28076399e898dc693>

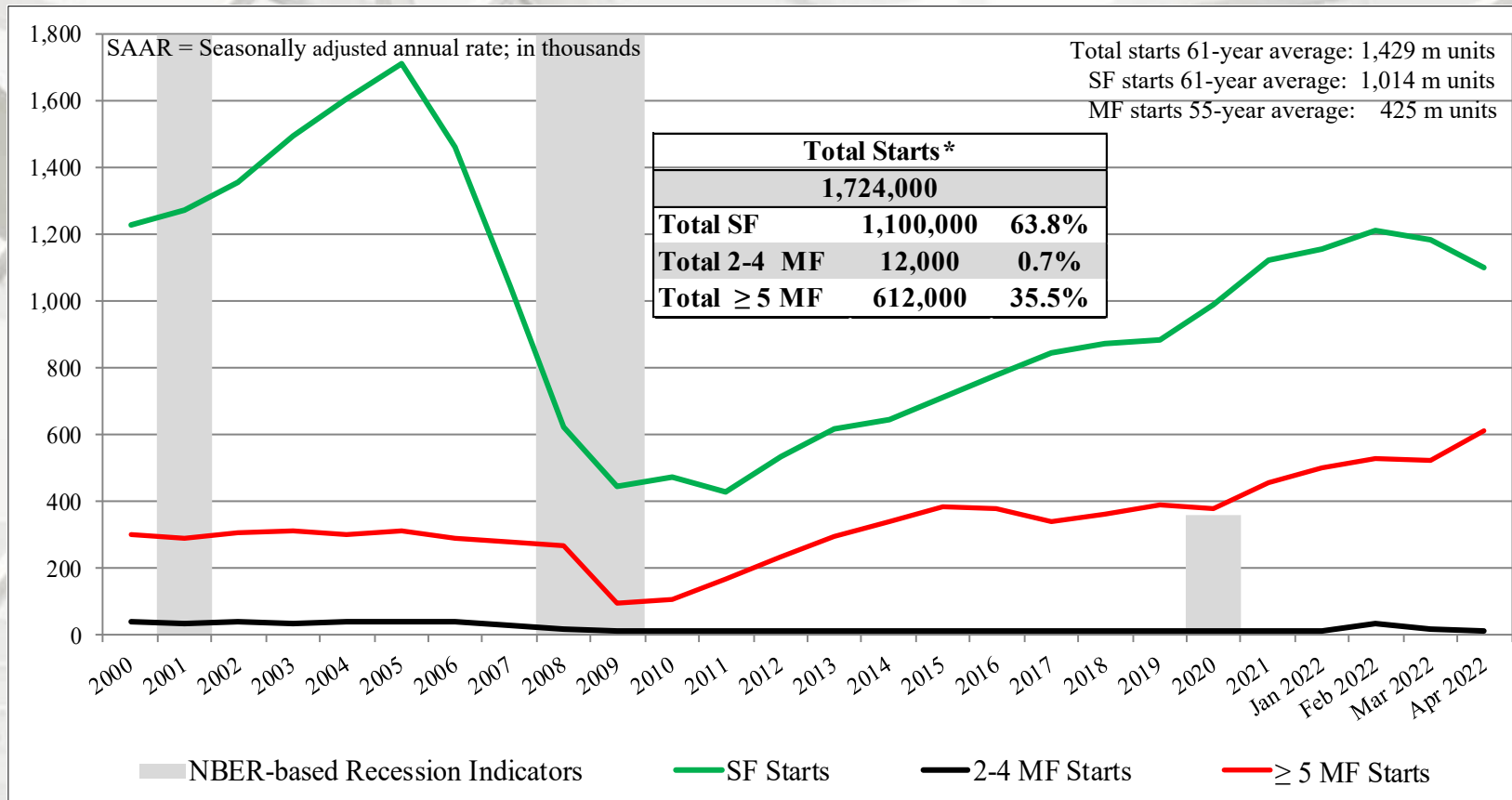
# New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
April	1,724,000	1,100,000	12,000	612,000
March	1,728,000	1,187,000	17,000	524,000
2021	1,505,000	1,061,000	14,000	430,000
M/M change	-0.2%	-7.3%	-29.4%	16.8%
Y/Y change	14.6%	3.7%	-14.3%	42.3%

\* All start data are presented at a seasonally adjusted annual rate (SAAR).

\*\* US DOC does not report 2 to 4 multi-family starts directly; this is an estimation ((Total starts – (SF + 5-unit MF)).

# Total Housing Starts

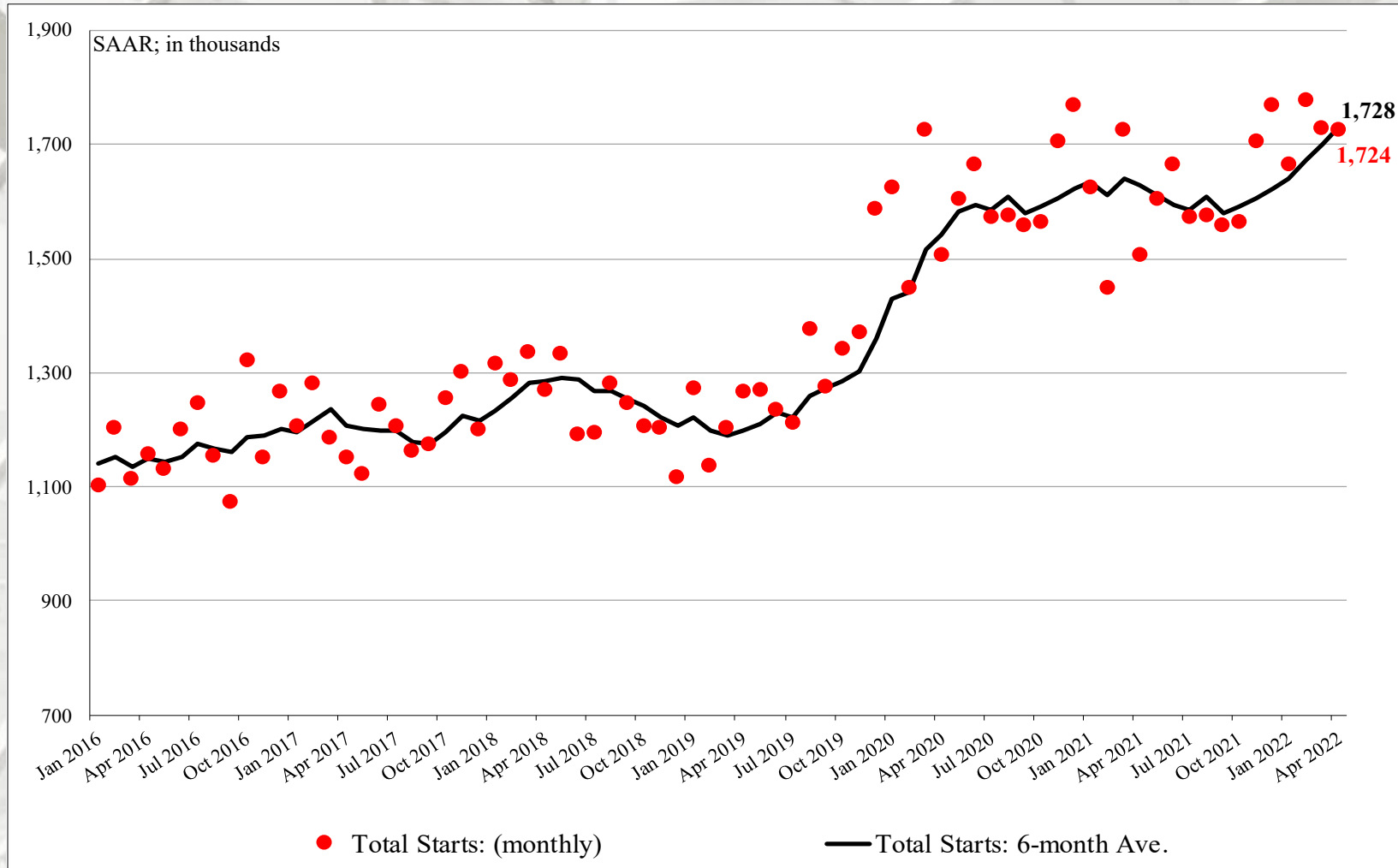


US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: ((Total starts – (SF + ≥ MF)).

\* Percentage of total starts.

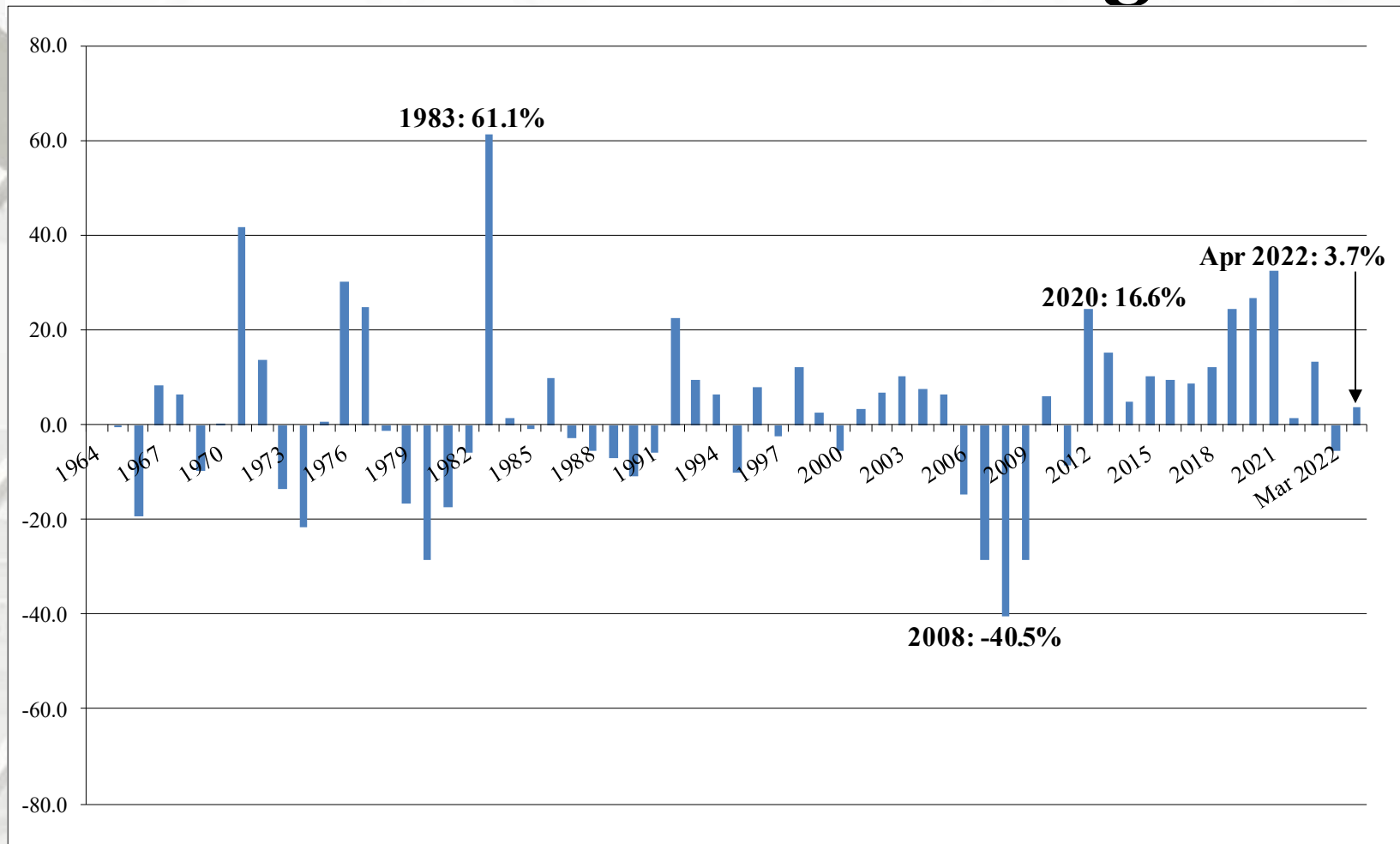
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Total Housing Starts: Six-Month Average

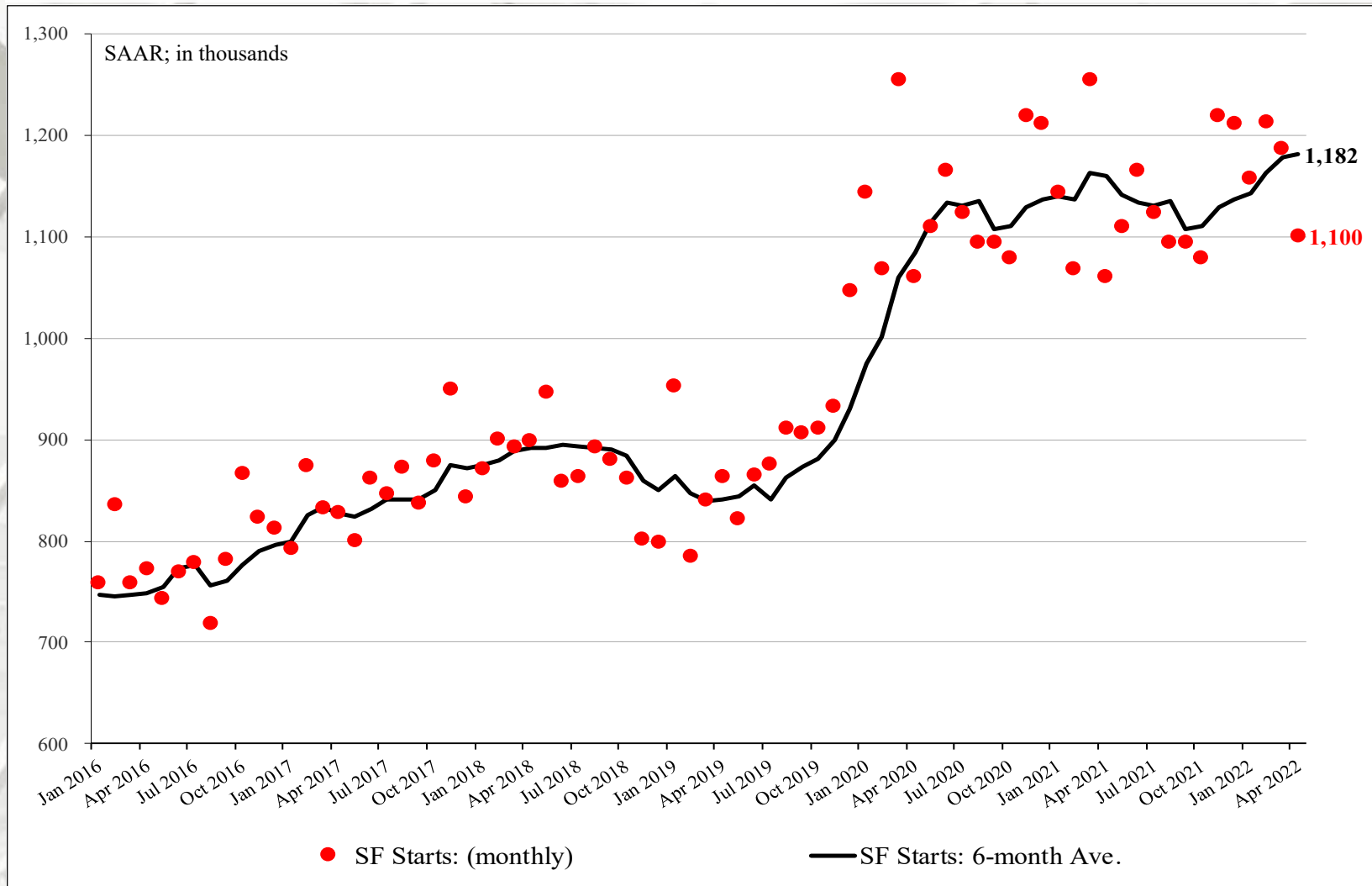




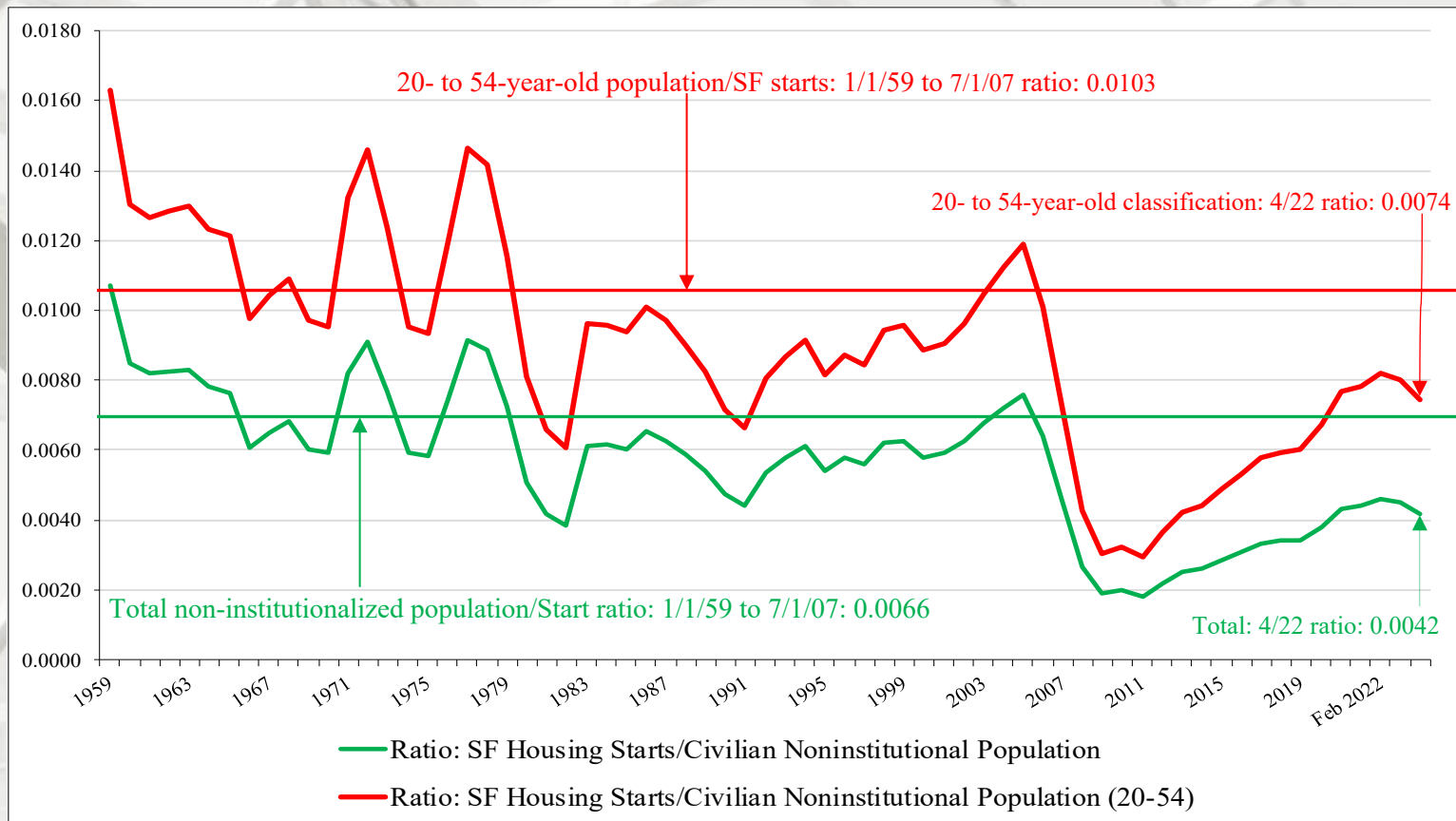
# SF Housing Starts: Year-over-Year Change



# SF Housing Starts: Six-Month Average



# New SF Starts

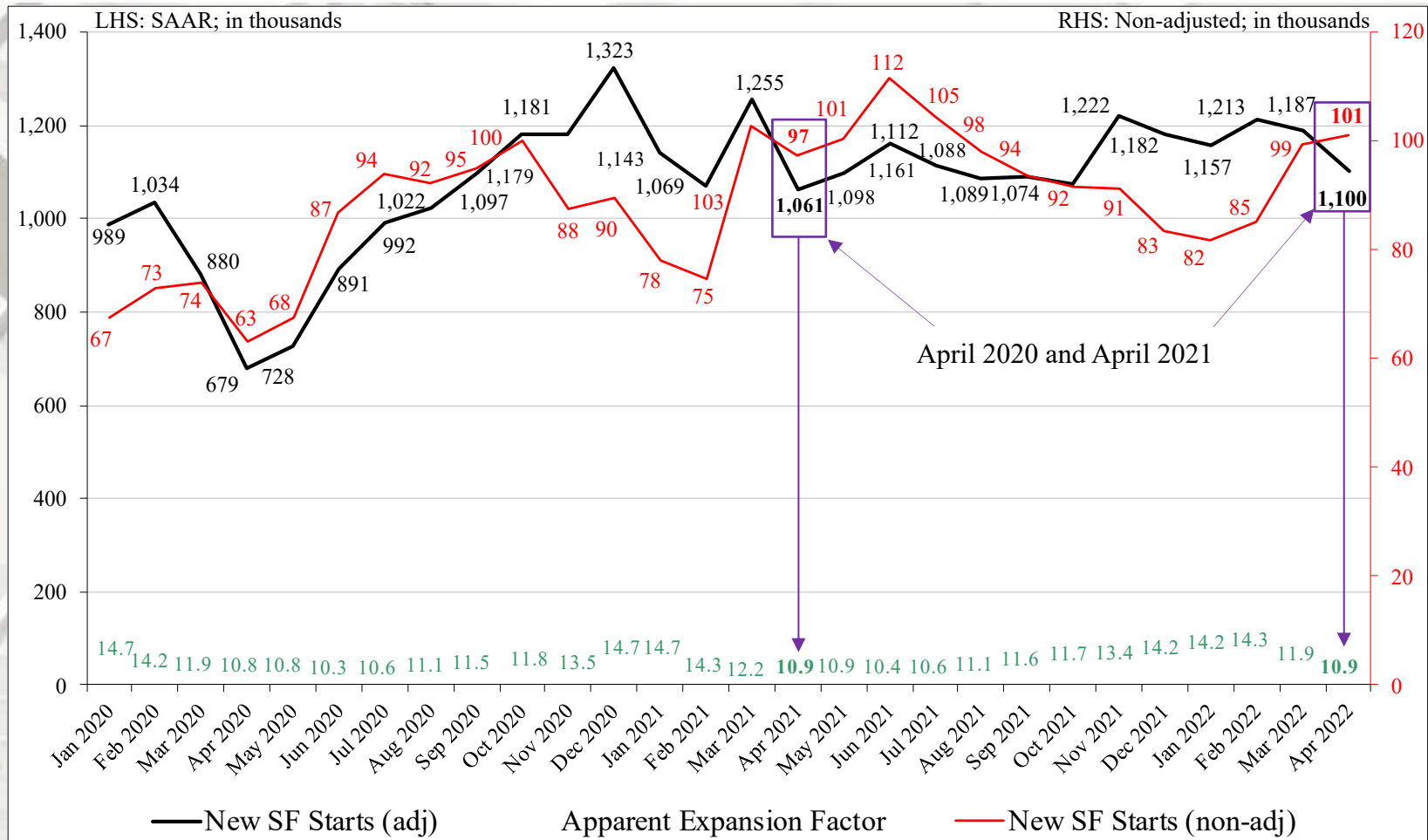


## New SF starts adjusted for the US population

From April 1959 to July 2007, the long-term ratio of new SF starts to the total US non-institutionalized population is 0.0066. In April 2022 it was 0.0042 – a decrease from March. The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in April 2021 it was 0.0074 – also a decrease from February (0.0080). New SF construction in both age categories is less than what is necessary for changes in the population (i.e., under-building).

However, on a long-term basis, some studies report normalized long-term demand at 900,000 to 1,000,000 new SF house sales per year beginning in 2025 through 2050.

# Nominal & SAAR SF Starts



## Nominal and Adjusted New SF Monthly Starts

Presented above is nominal (non-adjusted) new SF start data contrasted against SAAR data.

The apparent expansion factor "... is the ratio of the unadjusted number of houses started in the US to the seasonally adjusted number of houses started in the US (i.e., to the sum of the seasonally adjusted values for the four regions)." – U.S. DOC-Construction

# New Housing Starts by Region

	<b>NE Total</b>	<b>NE SF</b>	<b>NE MF**</b>
April	182,000	60,000	122,000
March	237,000	63,000	174,000
2021	156,000	74,000	82,000
M/M change	-23.2%	-4.8%	-29.9%
Y/Y change	16.7%	-18.9%	48.8%
	<b>MW Total</b>	<b>MW SF</b>	<b>MW MF</b>
April	184,000	140,000	44,000
March	236,000	162,000	74,000
2021	180,000	145,000	35,000
M/M change	-22.0%	-13.6%	-40.5%
Y/Y change	2.2%	-3.4%	25.7%

All data are SAAR; NE = Northeast and MW = Midwest.

\*\* US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

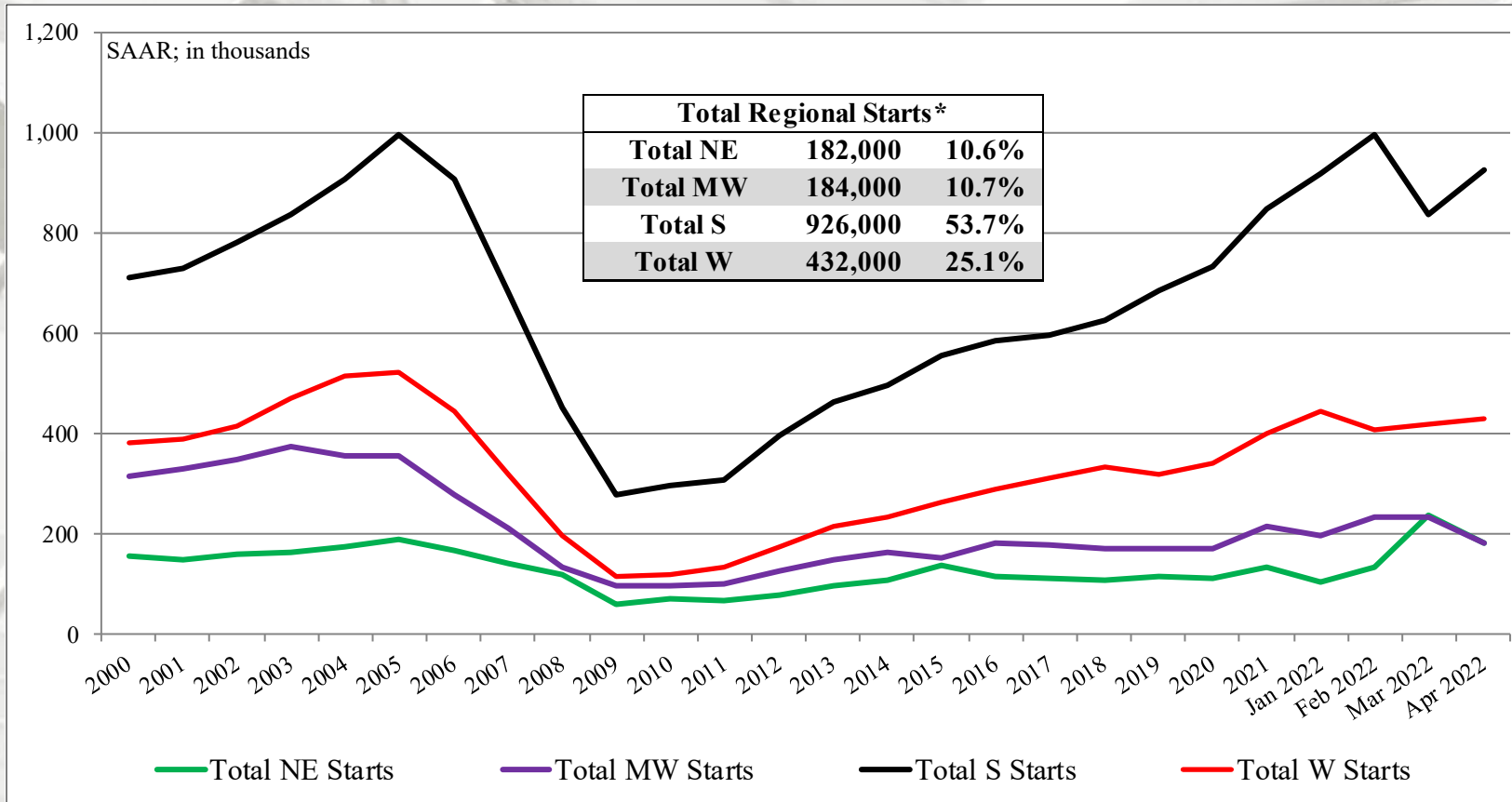
# New Housing Starts by Region

	<b>S Total</b>	<b>S SF</b>	<b>S MF**</b>
April	926,000	604,000	322,000
March	837,000	670,000	167,000
2021	782,000	586,000	196,000
M/M change	10.6%	-9.9%	92.8%
Y/Y change	18.4%	3.1%	64.3%
	<b>W Total</b>	<b>W SF</b>	<b>W MF</b>
April	432,000	296,000	136,000
March	418,000	292,000	126,000
2021	387,000	256,000	131,000
M/M change	3.3%	1.4%	7.9%
Y/Y change	11.6%	15.6%	3.8%

All data are SAAR; S = South and W = West.

\*\* US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

# New Housing Starts by Region

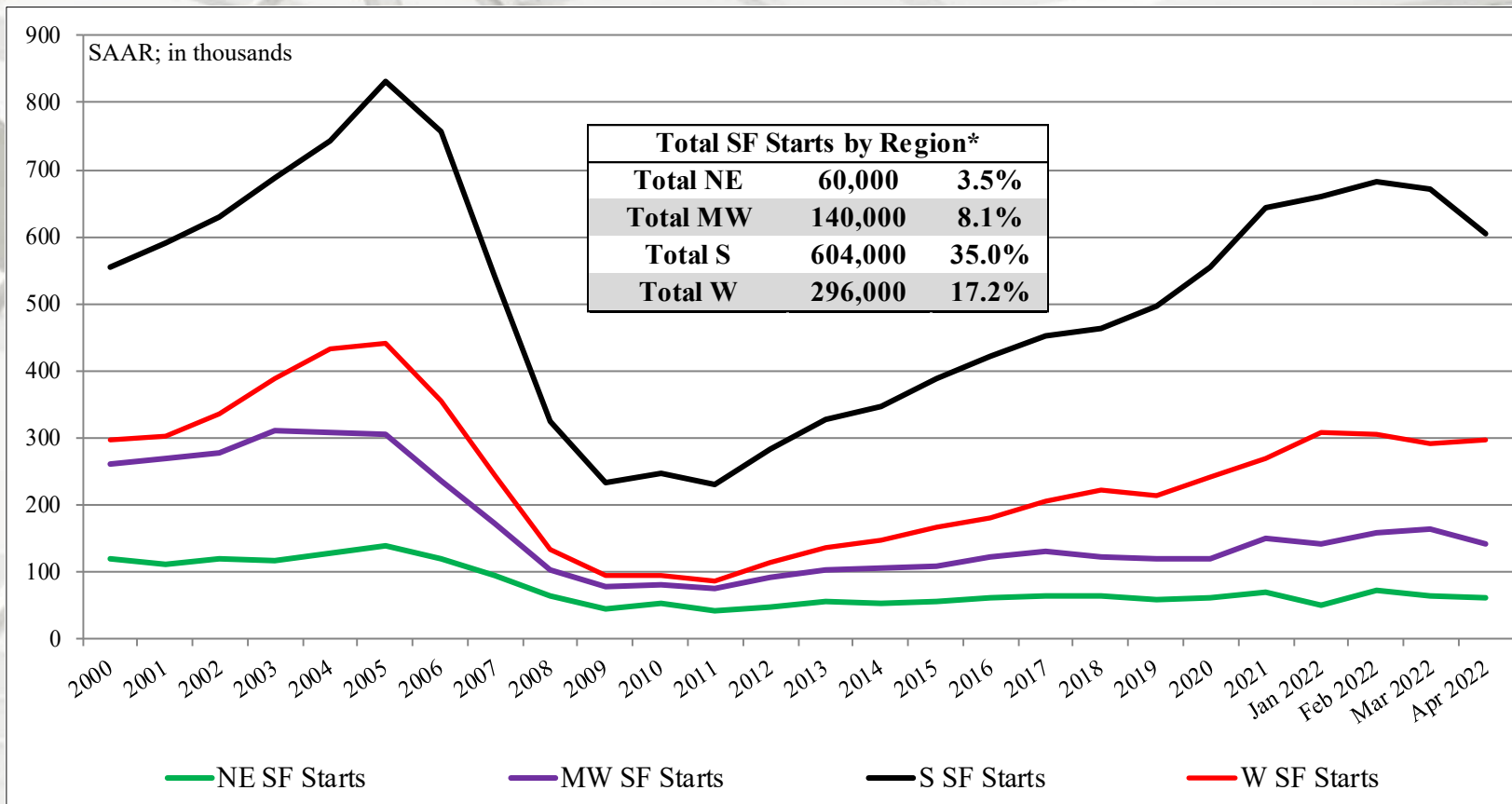


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.

# Total SF Housing Starts by Region



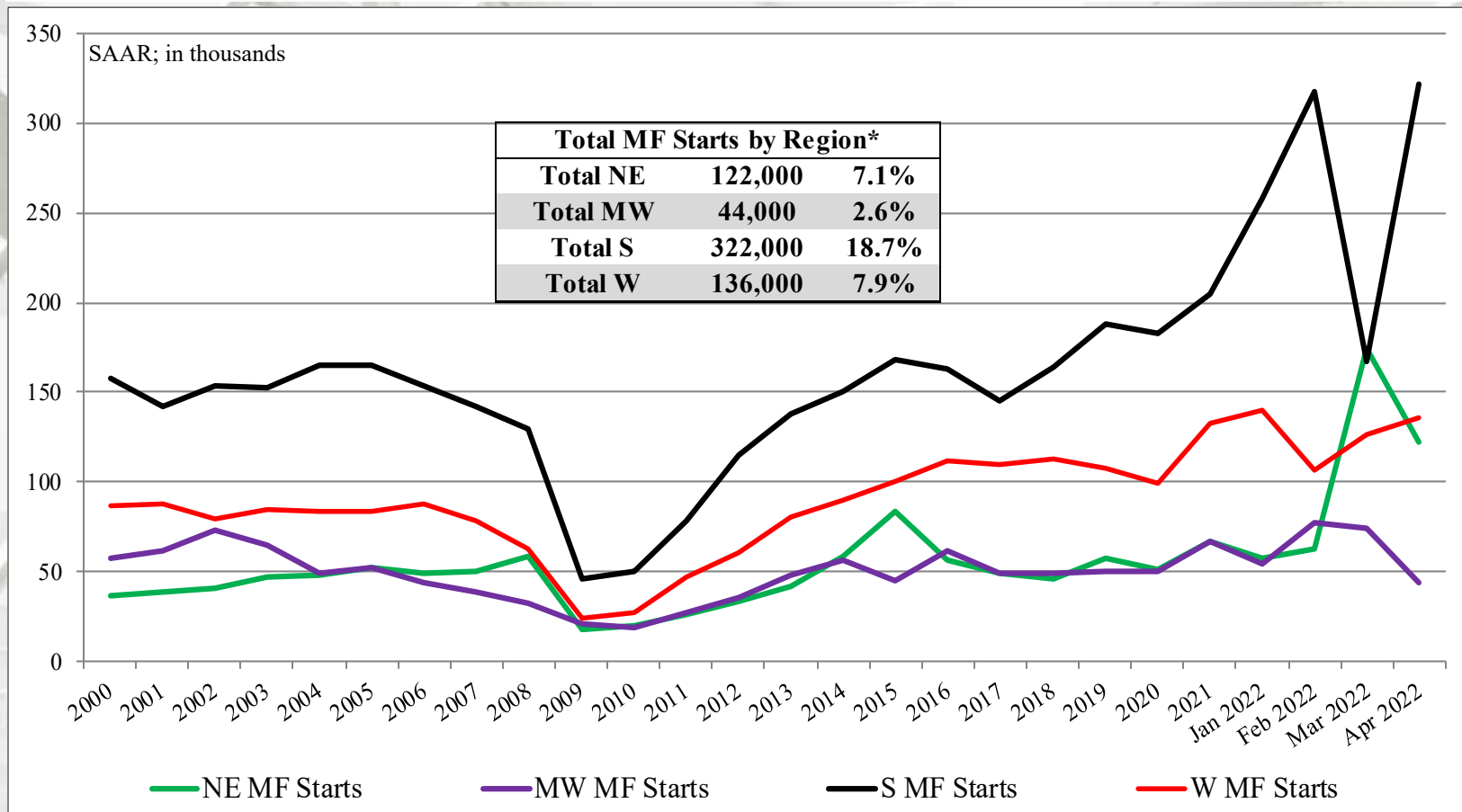
NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.



# MF Housing Starts by Region

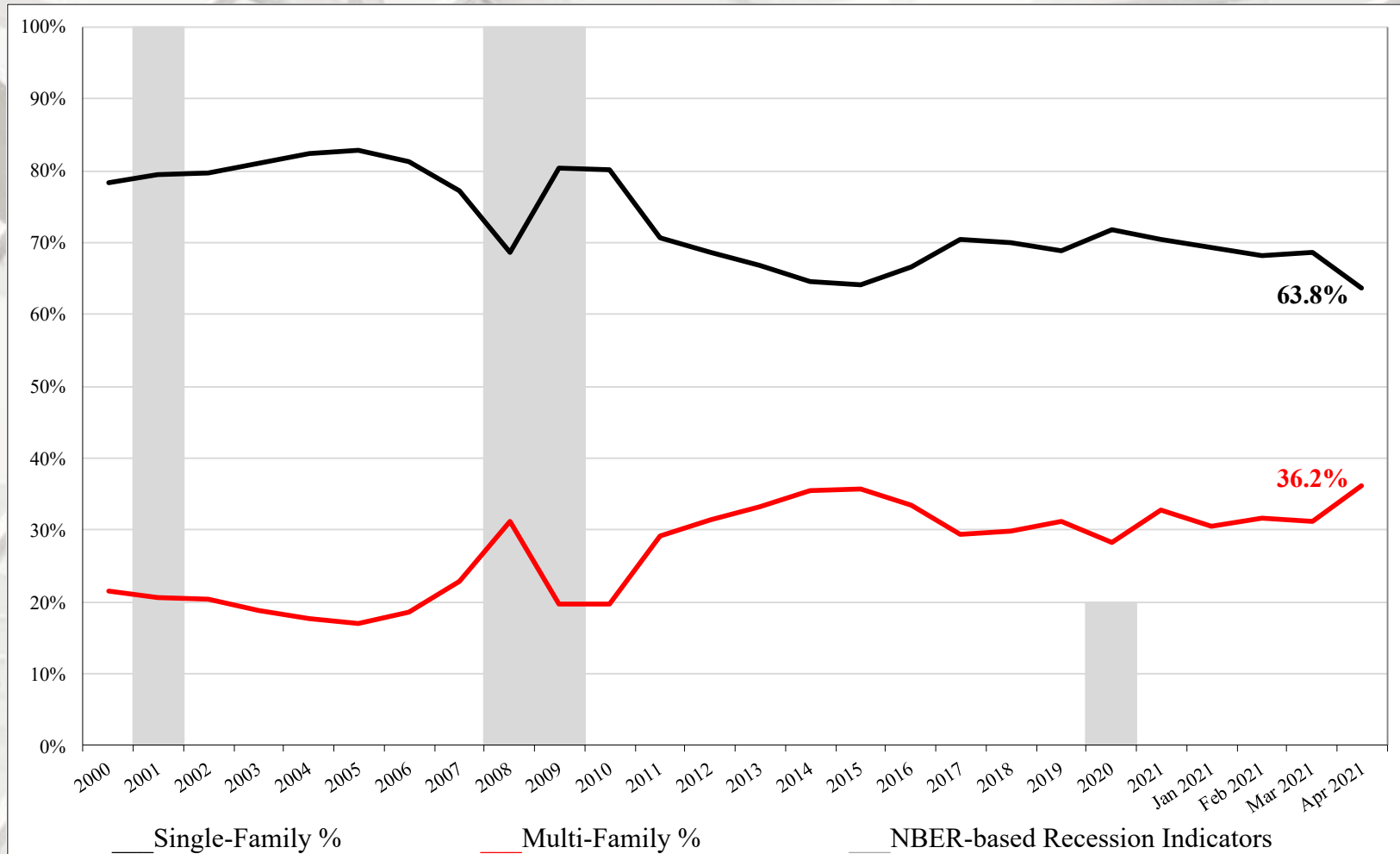


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.

# SF vs. MF Housing Starts (%)



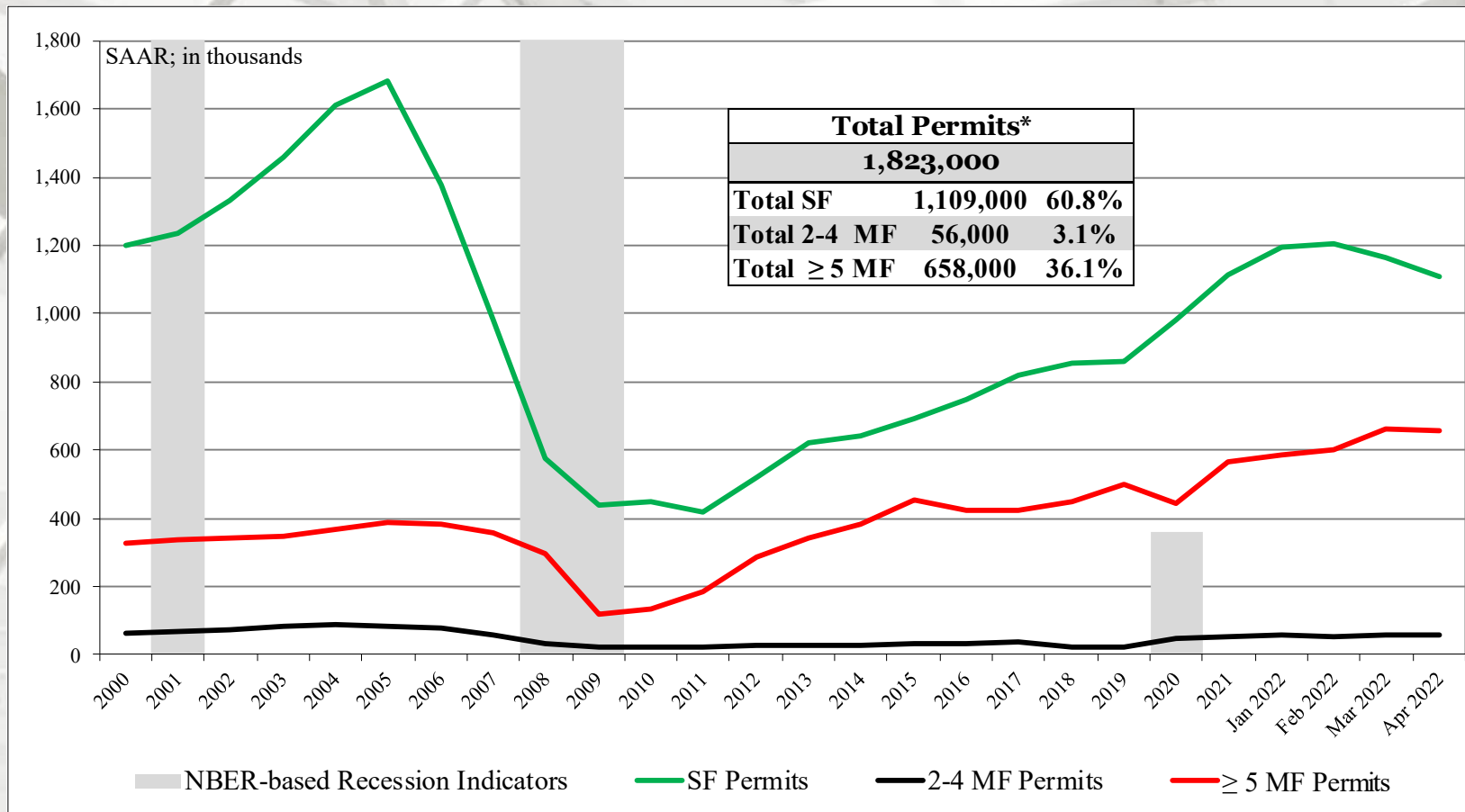
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
April	1,823,000	1,109,000	56,000	658,000
March	1,879,000	1,163,000	56,000	660,000
2021	1,765,000	1,152,000	49,000	564,000
M/M change	-3.0%	-4.6%	0.0%	-0.3%
Y/Y change	3.3%	-3.7%	14.3%	16.7%

\* All permit data are presented at a seasonally adjusted annual rate (SAAR).

# Total New Housing Permits



\* Percentage of total permits.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Permits by Region

	<b>NE Total*</b>	<b>NE SF</b>	<b>NE MF**</b>
April	163,000	62,000	101,000
March	185,000	66,000	119,000
2021	160,000	72,000	88,000
M/M change	-11.9%	-6.1%	-15.1%
Y/Y change	1.9%	-13.9%	14.8%
	<b>MW Total*</b>	<b>MW SF</b>	<b>MW MF**</b>
March	250,000	133,000	117,000
February	260,000	143,000	117,000
2021	229,000	155,000	74,000
M/M change	-3.8%	-7.0%	0.0%
Y/Y change	9.2%	-14.2%	58.1%

NE = Northeast; MW = Midwest

\* All data are SAAR

\*\* US DOC does not report multi-family permits directly; this is an estimation (Total permits – SF permits).

# New Housing Permits by Region

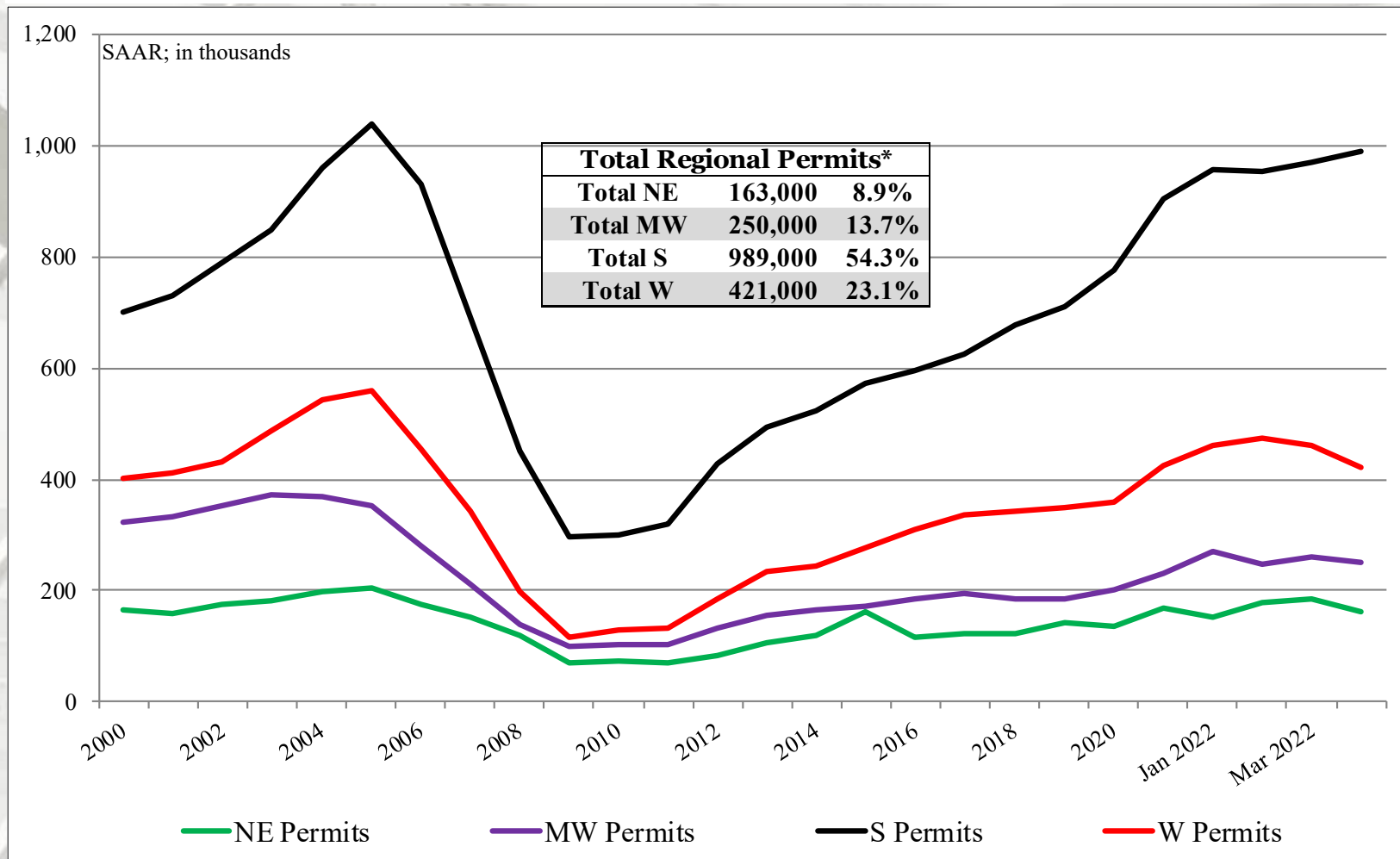
	<b>S Total*</b>	<b>S SF</b>	<b>S MF**</b>
April	989,000	671,000	318,000
March	972,000	679,000	293,000
2021	951,000	664,000	287,000
M/M change	1.7%	-1.2%	8.5%
Y/Y change	4.0%	1.1%	10.8%
	<b>W Total*</b>	<b>W SF</b>	<b>W MF**</b>
April	421,000	243,000	178,000
March	462,000	275,000	187,000
2021	425,000	261,000	164,000
M/M change	-8.9%	-11.6%	-4.8%
Y/Y change	-0.9%	-6.9%	8.5%

S = South; W = West

\* All data are SAAR

\*\* US DOC does not report multi-family permits directly; this is an estimation (Total permits – SF permits).

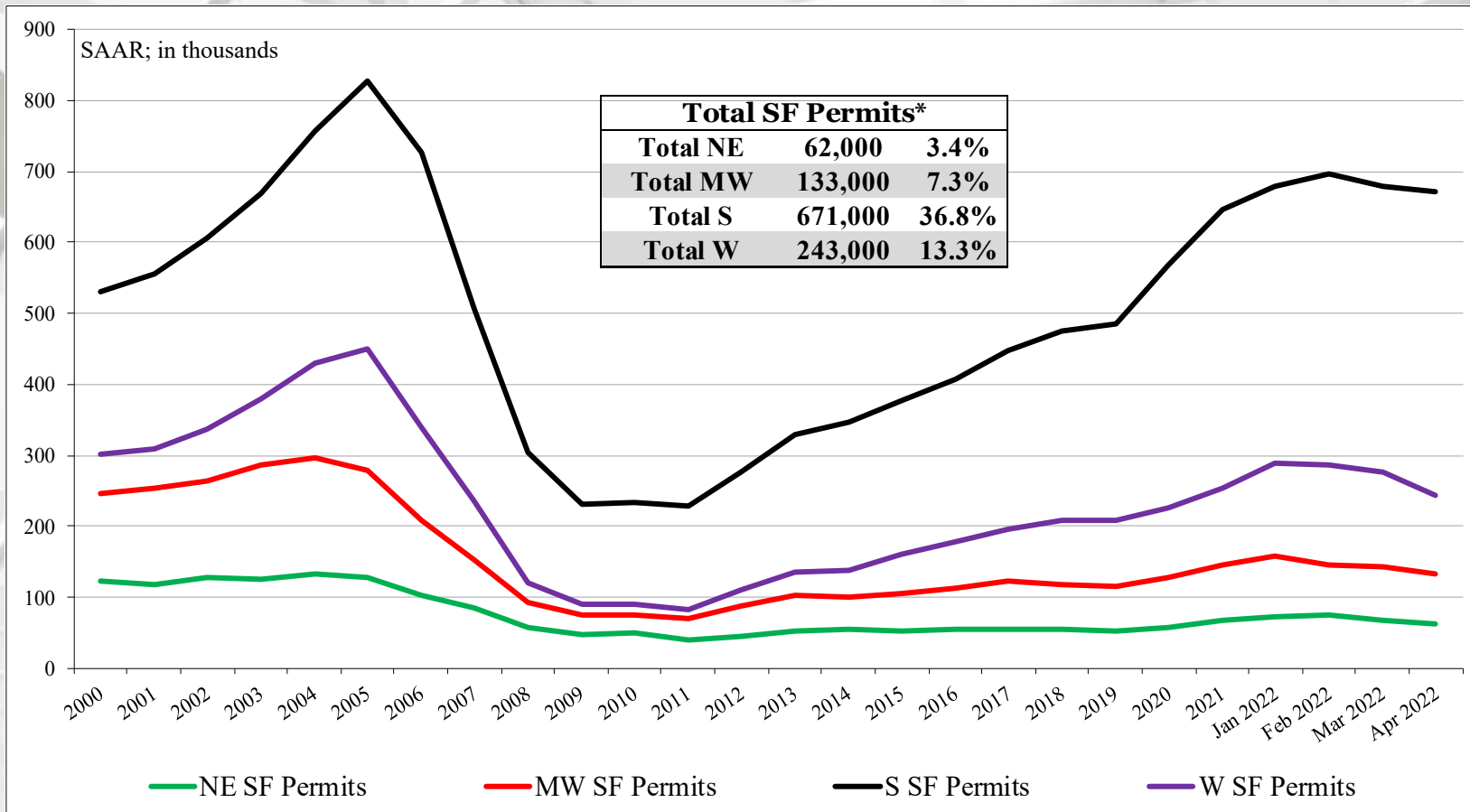
# Total Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

\* Percentage of total permits.

# SF Housing Permits by Region

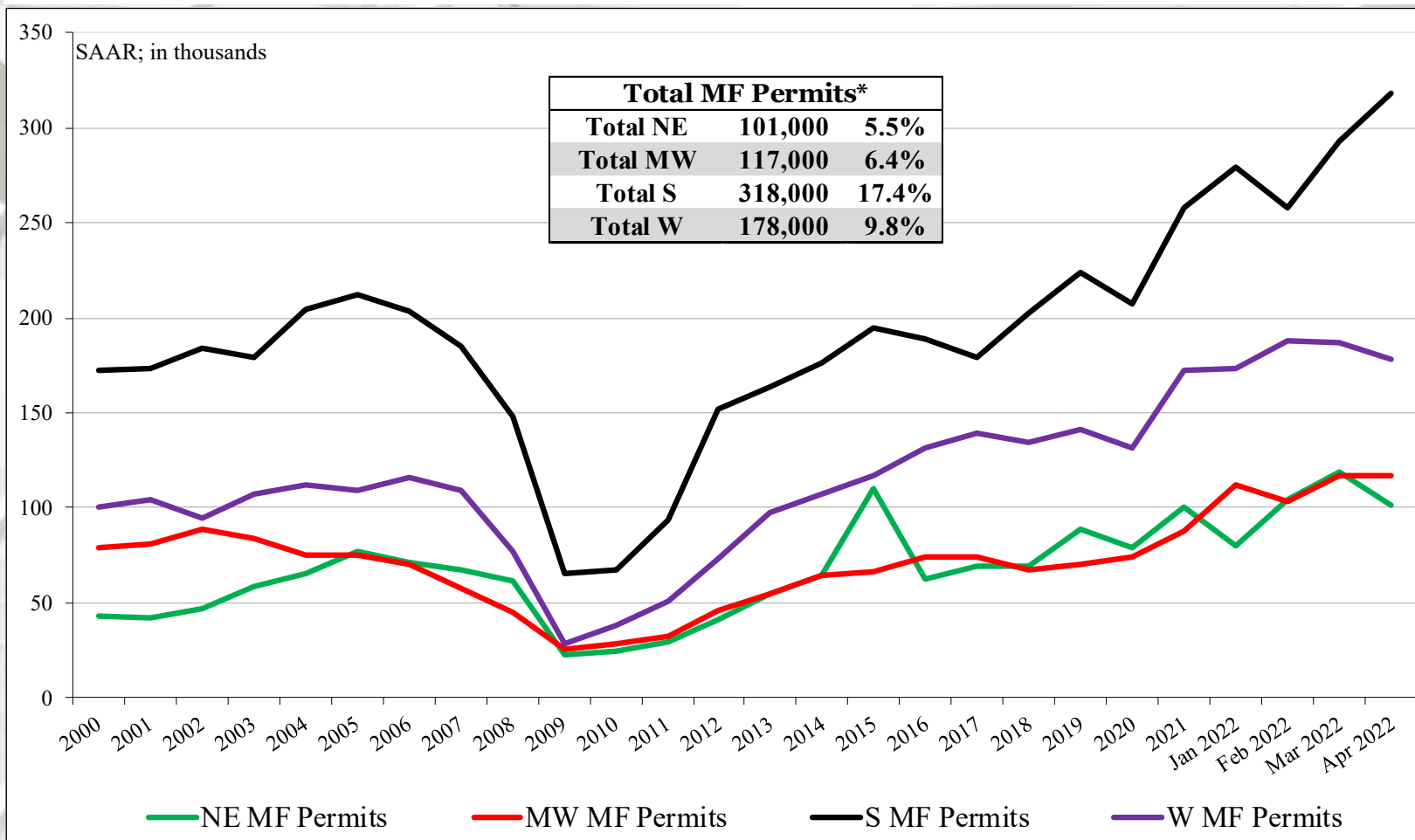


NE = Northeast, MW = Midwest, S = South, W = West

\* Percentage of total permits.



# MF Housing Permits by Region



NE = Northeast, MW = Midwest, S = South, W = West

\* Percentage of total permits.

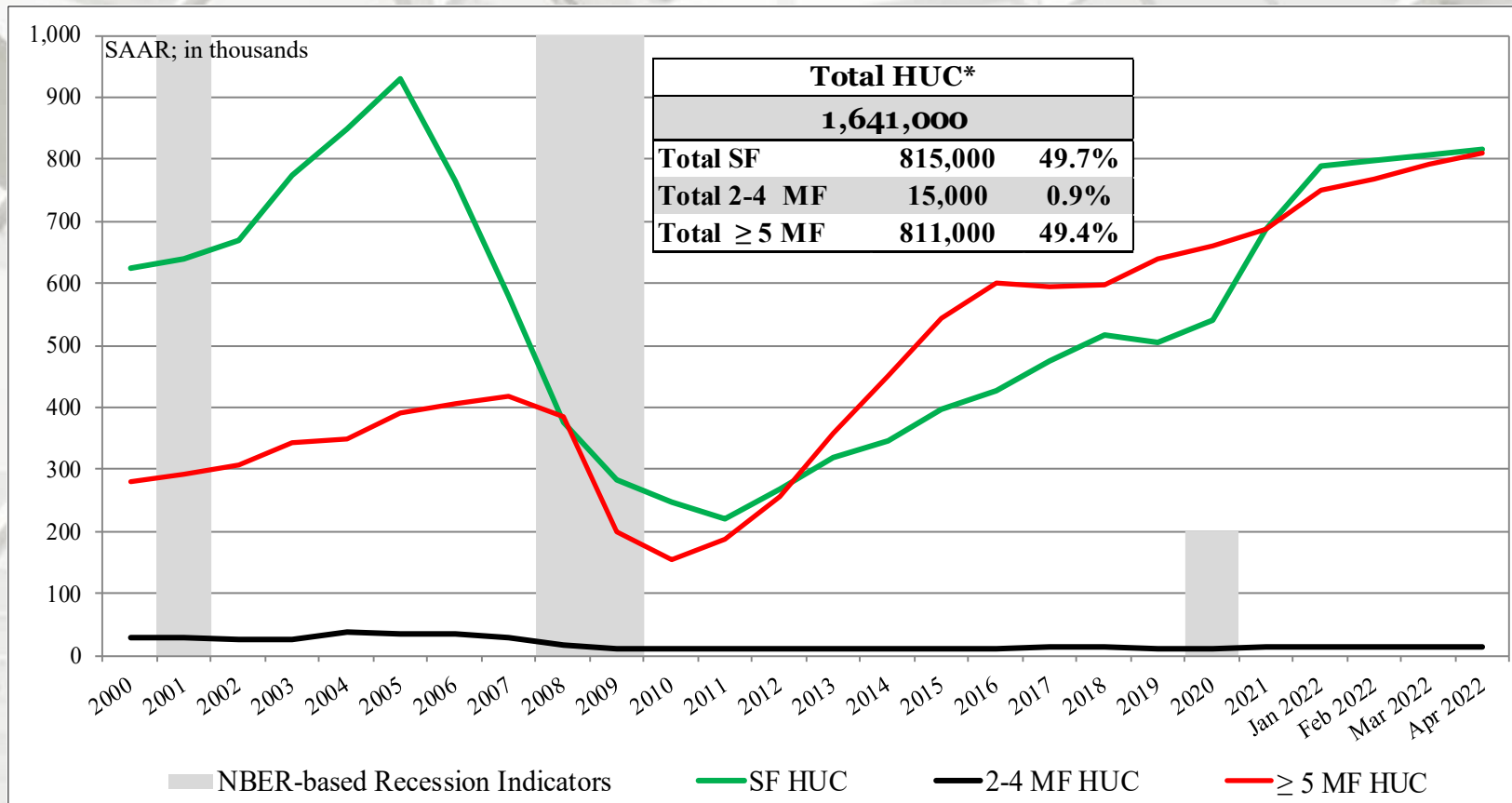
# New Housing Under Construction (HUC)

	Total HUC*	SF HUC	MF 2-4 unit** HUC	MF ≥ 5 unit HUC
April	1,641,000	815,000	15,000	811,000
March	1,615,000	807,000	15,000	793,000
2021	1,322,000	647,000	13,000	662,000
M/M change	1.6%	1.0%	0.0%	2.3%
Y/Y change	24.1%	26.0%	15.4%	22.5%

All housing under construction data are presented at a seasonally adjusted annual rate (SAAR).

\*\* US DOC does not report 2-4 multi-family units under construction directly; this is an estimation  
((Total under construction – (SF + 5-unit MF)).

# Total Housing Under Construction

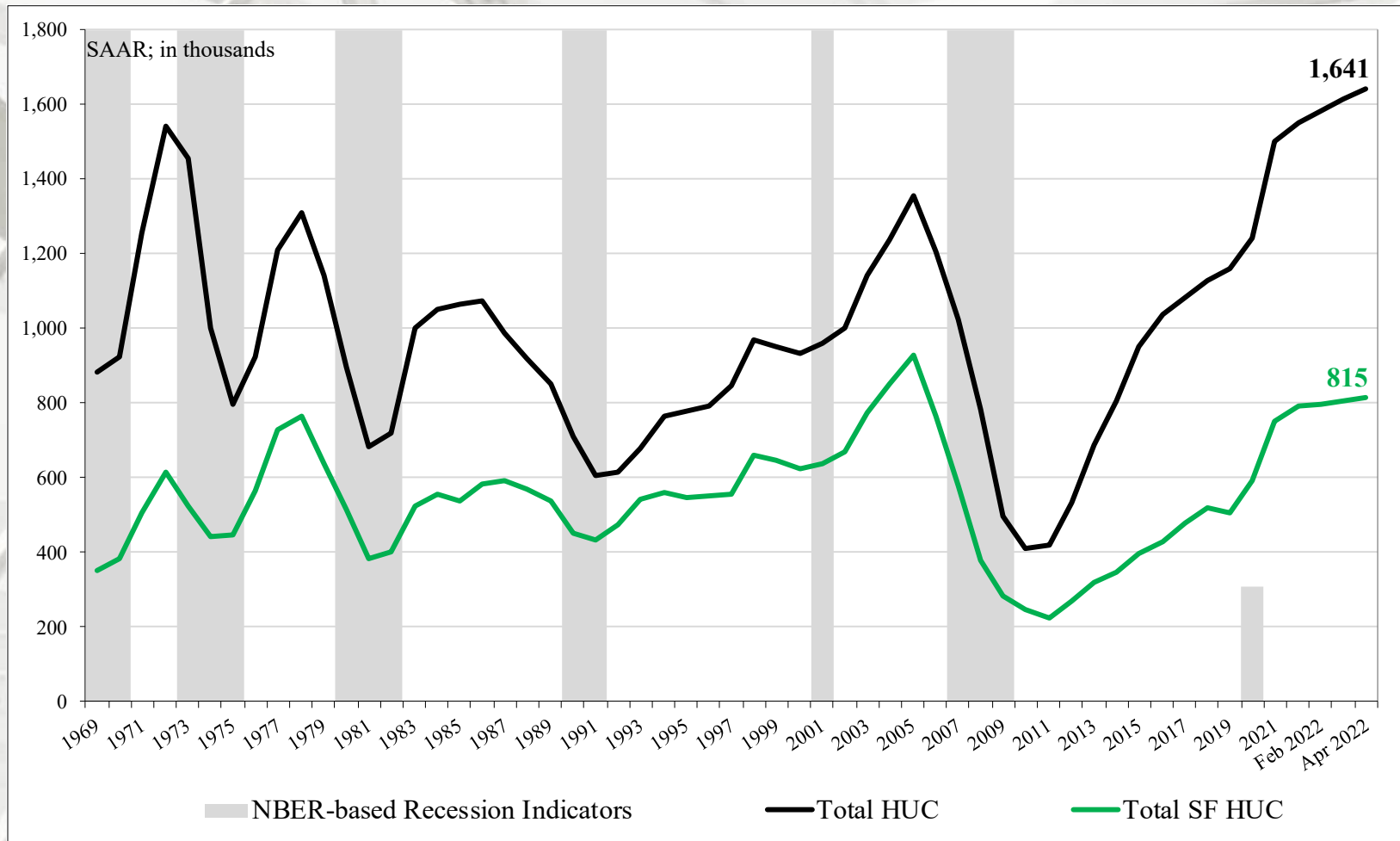


US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under constructions – (SF + ≥ 5 MF HUC)).

\* Percentage of total housing under construction units.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Total Housing Under Construction



In April total housing units under construction (HUC) were 1,641,000 units, the most since April 1973: 1,628,000 units. April's SF HUC reading, 815,000 units, was substantially less than reported for April 2006 (929,000 units).

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Under Construction by Region

	<b>NE Total</b>	<b>NE SF</b>	<b>NE MF**</b>
April	210,000	60,000	150,000
March	209,000	61,000	148,000
2021	192,000	59,000	123,000
M/M change	0.5%	-1.6%	1.4%
Y/Y change	9.4%	1.7%	22.0%
	<b>MW Total</b>	<b>MW SF</b>	<b>MW MF</b>
April	212,000	115,000	97,000
March	211,000	113,000	98,000
2021	167,000	93,000	74,000
M/M change	0.5%	1.8%	-1.0%
Y/Y change	26.9%	23.7%	31.1%

All data are SAAR; NE = Northeast and MW = Midwest.

\*\* US DOC does not report multi-family units under construction directly; this is an estimation  
(Total under construction – SF under construction).

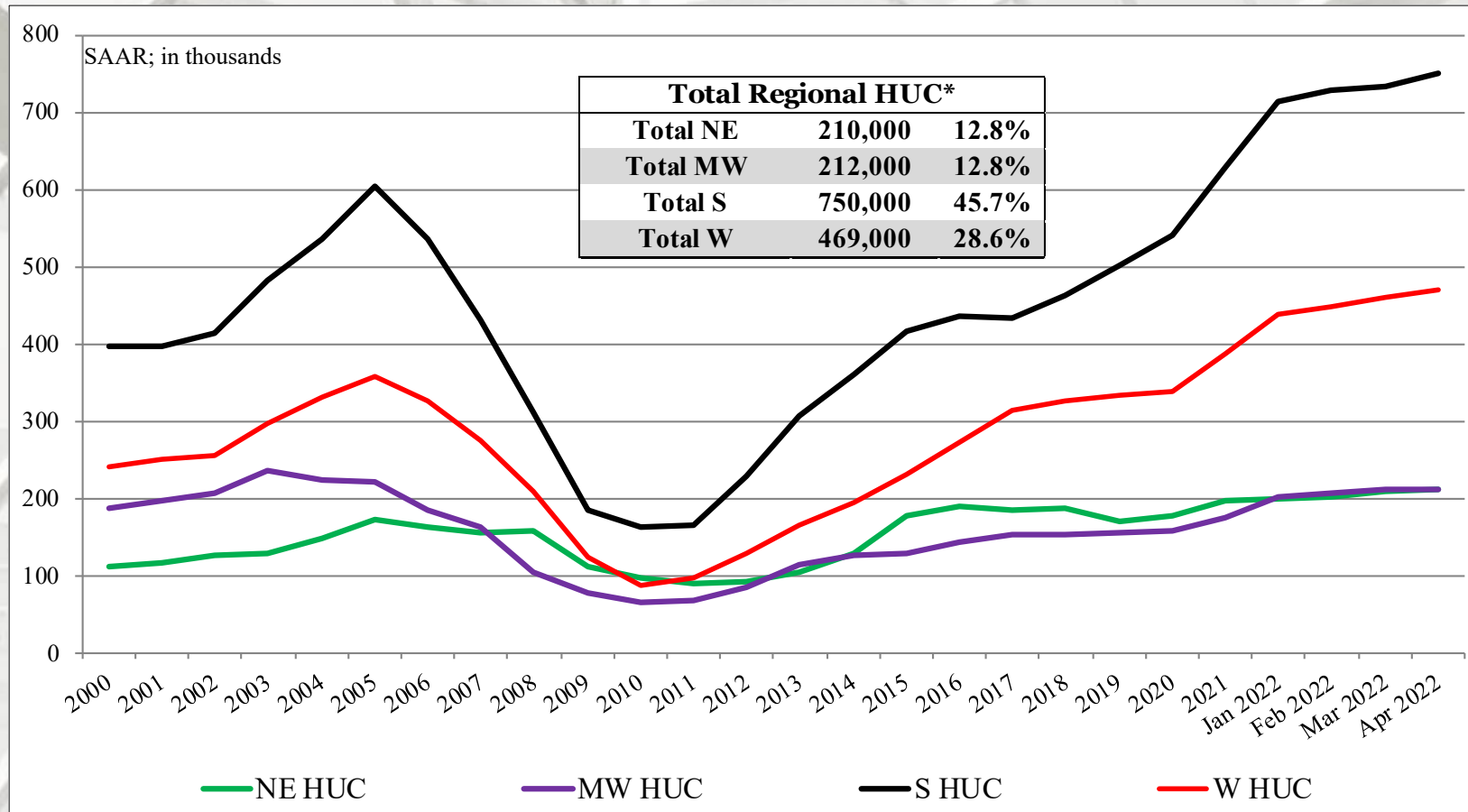
# New Housing Under Construction by Region

	<b>S Total</b>	<b>S SF</b>	<b>S MF**</b>
April	750,000	425,000	325,000
March	734,000	420,000	314,000
2021	594,000	320,000	274,000
M/M change	2.2%	1.2%	3.5%
Y/Y change	26.3%	32.8%	18.6%
	<b>W Total</b>	<b>W SF</b>	<b>W MF</b>
April	469,000	215,000	254,000
March	461,000	213,000	248,000
2021	369,000	175,000	194,000
M/M change	1.7%	0.9%	2.4%
Y/Y change	27.1%	22.9%	30.9%

All data are SAAR; S = South and W = West.

\*\* US DOC does not report multi-family units under construction directly; this is an estimation  
(Total under construction – SF under construction).

# Total Housing Under Construction by Region

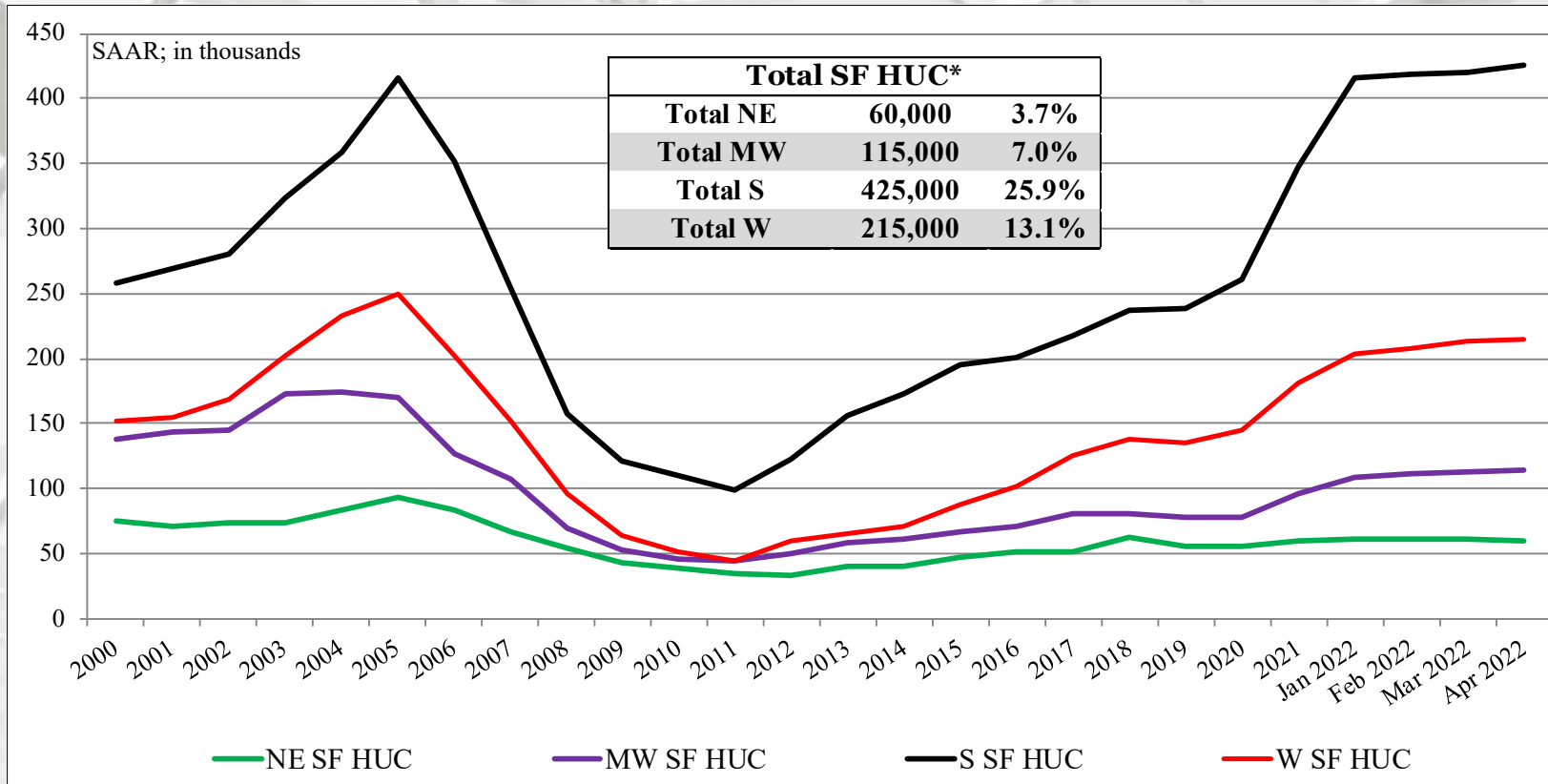


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.

# SF Housing Under Construction by Region



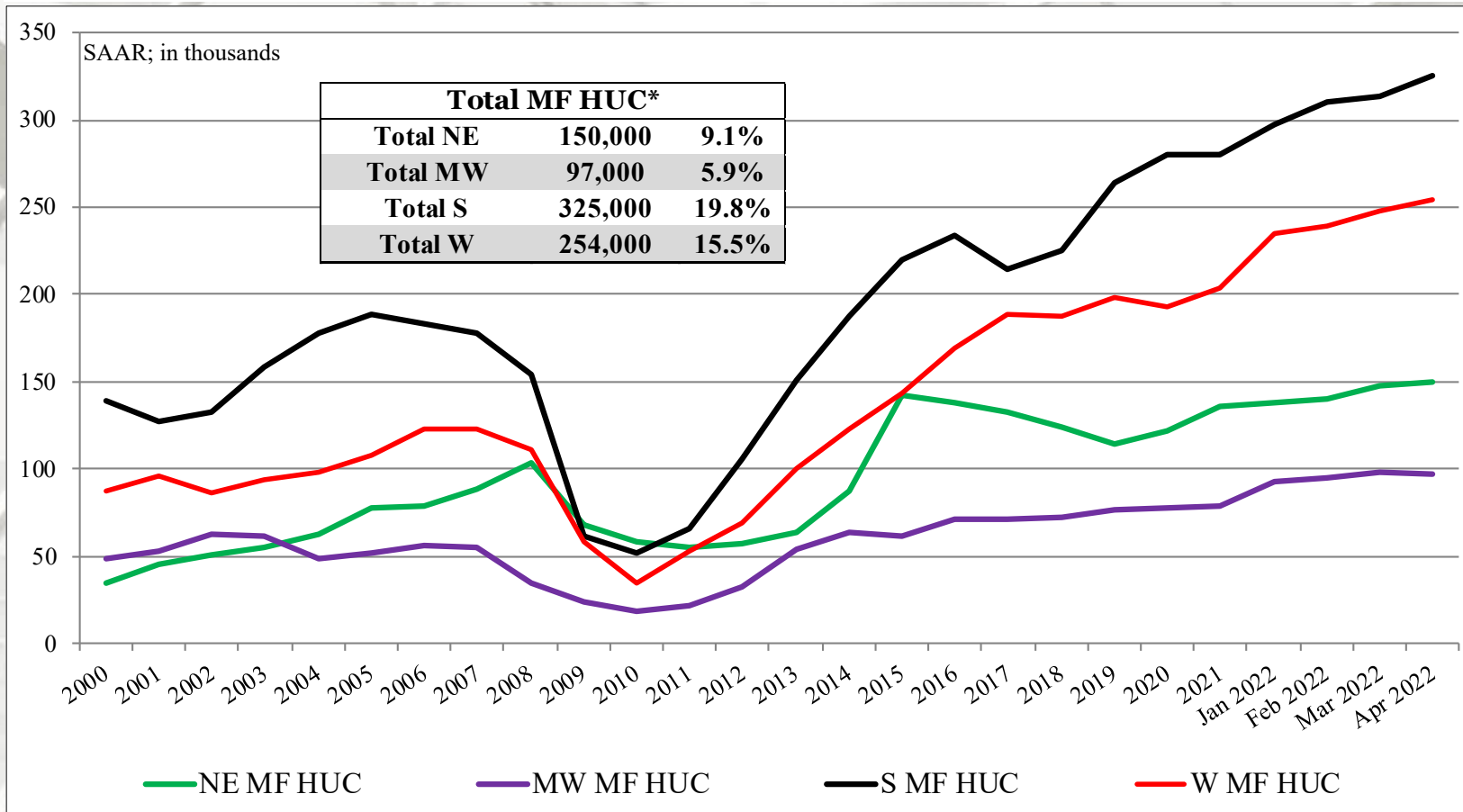
NE = Northeast, MW = Midwest, S = South, W = West.

US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.



# MF Housing Under Construction by Region



NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.

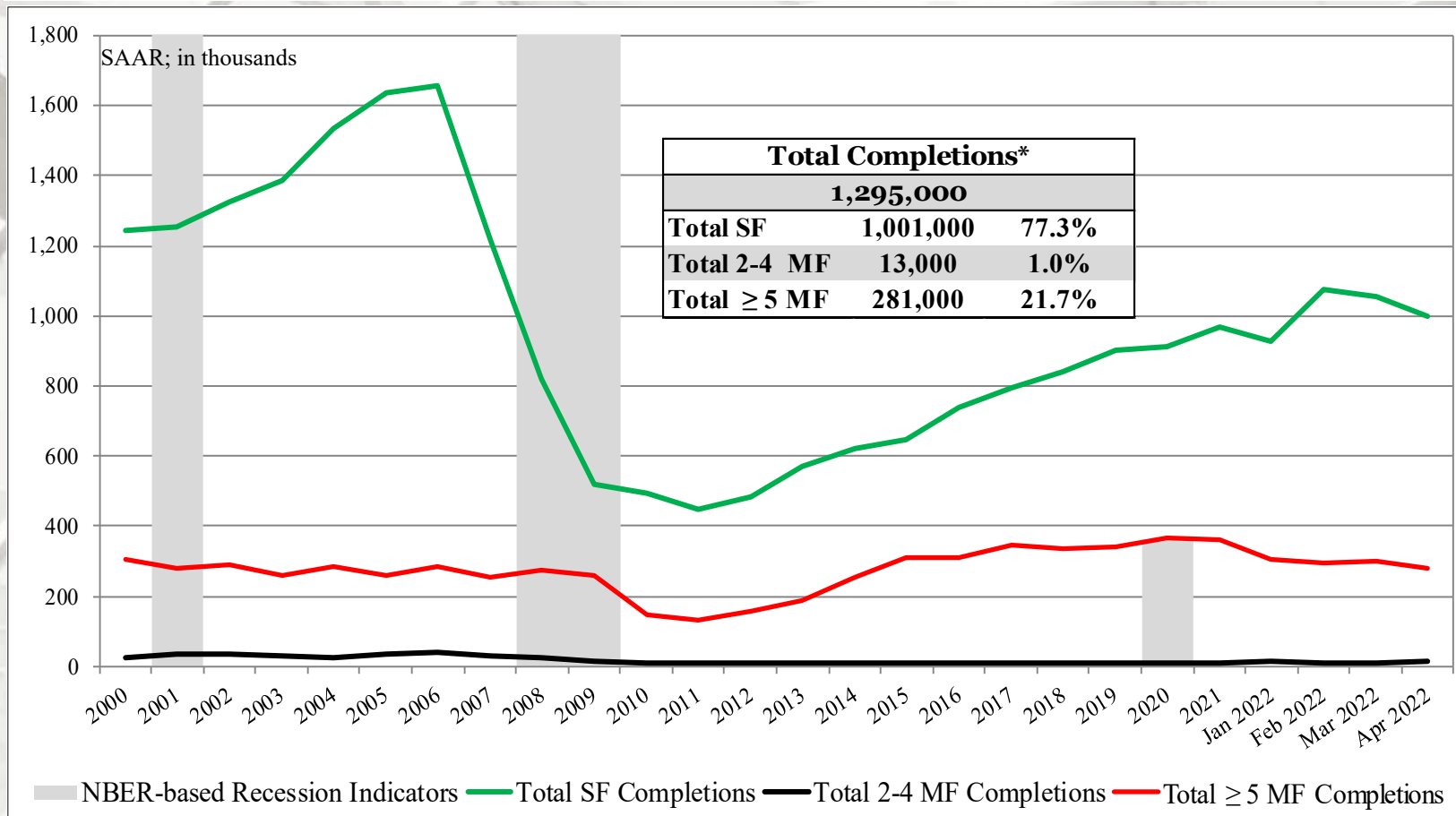
# New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
April	1,295,000	1,001,000	13,000	281,000
March	1,365,000	1,053,000	11,000	301,000
2021	1,417,000	994,000	2,000	421,000
M/M change	-5.1%	-4.9%	18.2%	-6.6%
Y/Y change	-8.6%	0.7%	550.0%	-33.3%

\* All completion data are presented at a seasonally adjusted annual rate (SAAR).

\*\* US DOC does not report multi-family completions directly; this is an estimation ((Total completions – (SF + ≥ 5-unit MF)).

# Total Housing Completions



\*\* US DOC does not report multifamily completions directly, this is an estimation ((Total completions – (SF + ≥ 5-unit MF)).

\* Percentage of total housing completions

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Completions by Region

	<b>NE Total</b>	<b>NE SF</b>	<b>NE MF**</b>
April	99,000	62,000	37,000
March	109,000	62,000	47,000
2021	102,000	52,000	50,000
M/M change	-9.2%	0.0%	-21.3%
Y/Y change	-2.9%	19.2%	-26.0%
	<b>MW Total</b>	<b>MW SF</b>	<b>MW MF</b>
April	179,000	120,000	59,000
March	186,000	138,000	48,000
2021	179,000	122,000	57,000
M/M change	-3.8%	-13.0%	22.9%
Y/Y change	0.0%	-1.6%	3.5%

NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

\* Percentage of total housing completions

# New Housing Completions by Region

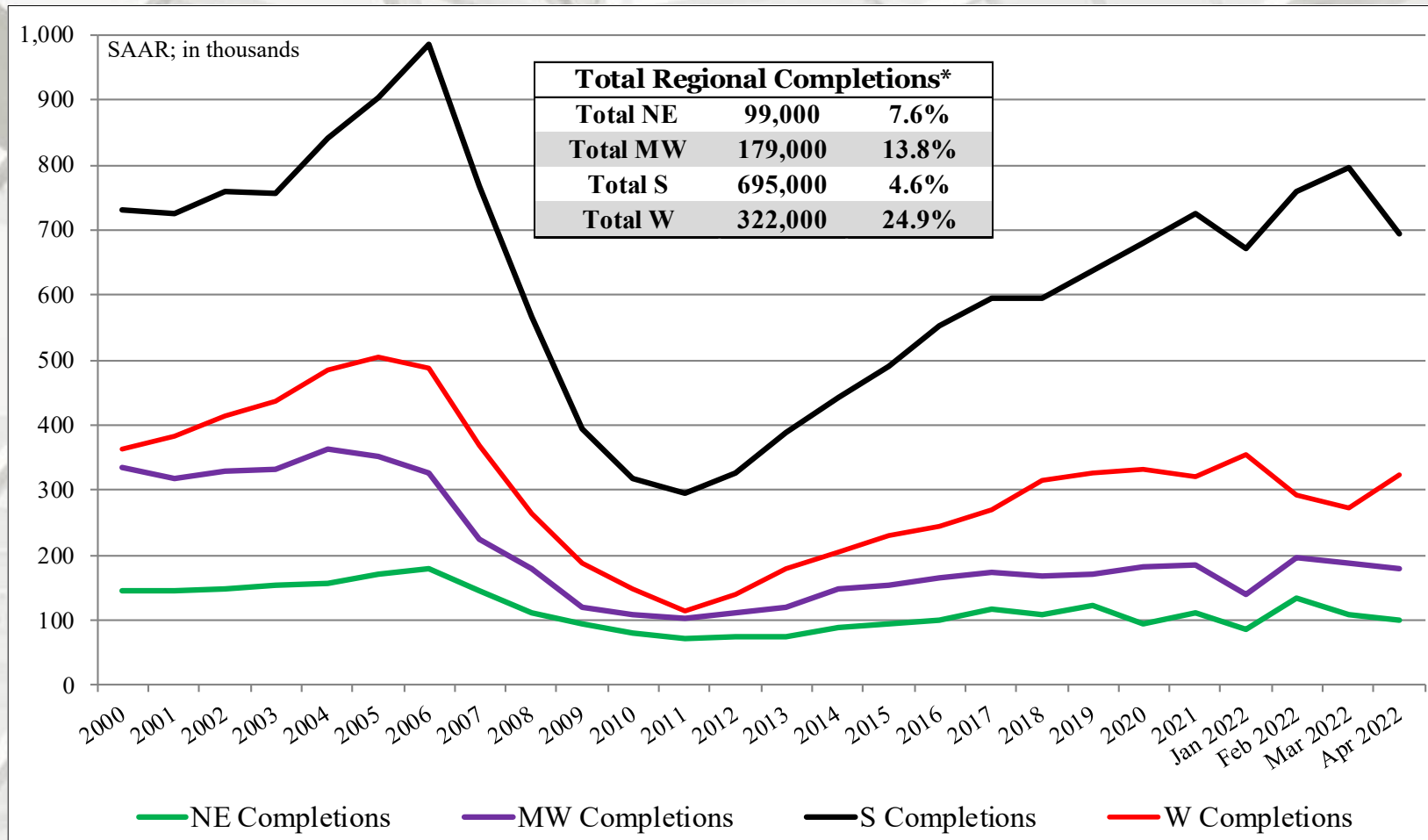
	<b>S Total</b>	<b>S SF</b>	<b>S MF**</b>
April	695,000	562,000	133,000
March	797,000	628,000	169,000
2021	791,000	565,000	226,000
M/M change	-12.8%	-10.5%	-21.3%
Y/Y change	-12.1%	-0.5%	-41.2%
	<b>W Total</b>	<b>W SF</b>	<b>W MF</b>
April	322,000	257,000	65,000
March	273,000	225,000	48,000
2021	345,000	255,000	90,000
M/M change	17.9%	14.2%	35.4%
Y/Y change	-6.7%	0.8%	-27.8%

NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

\* Percentage of total housing completions

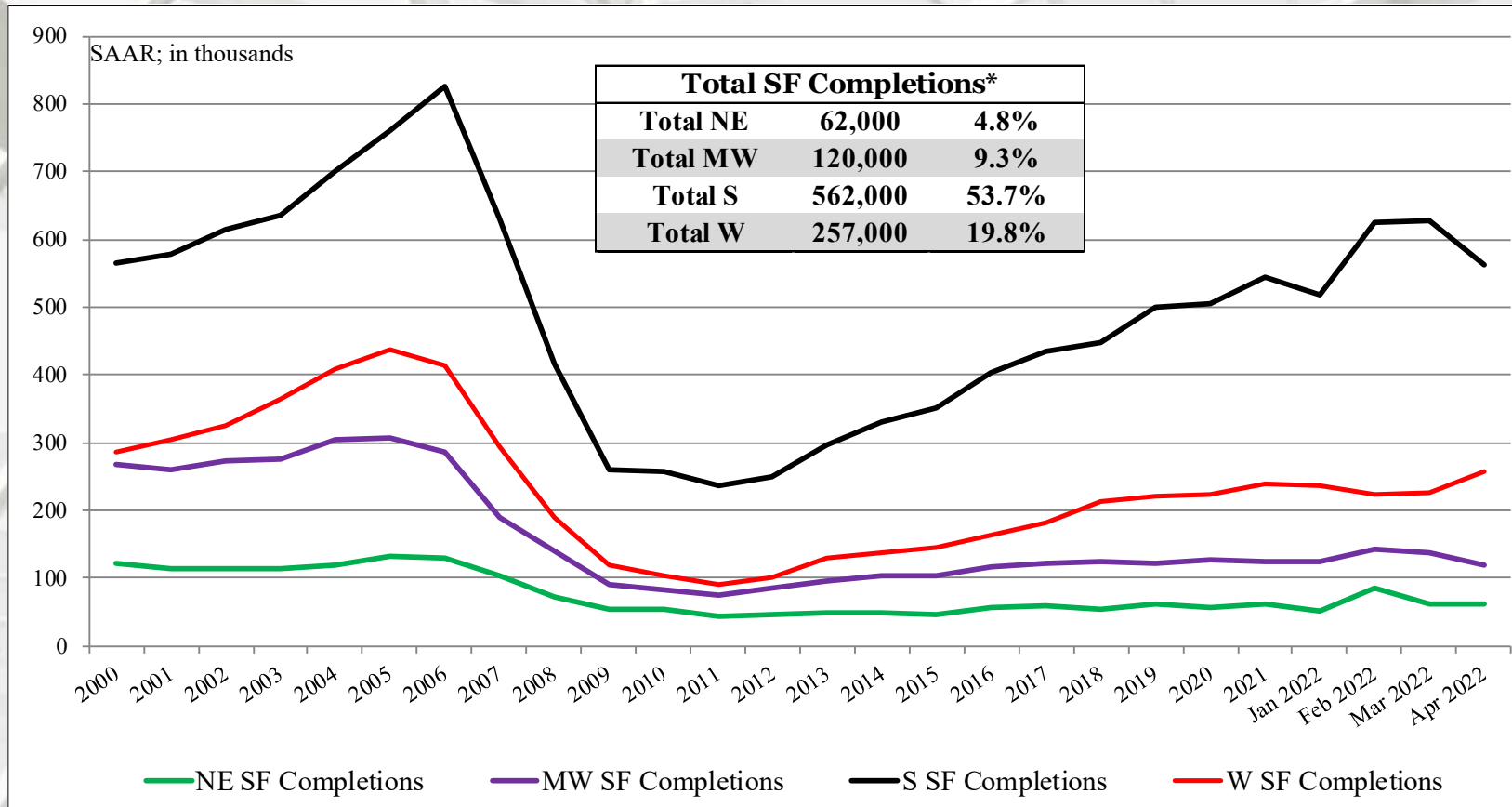
# Total Housing Completions by Region



All data are SAAR; NE = Northeast and MW = Midwest; S = South, W = West

\*\* US DOC does not report multi-family unit completions directly; this is an estimation (Total completions – SF completions).

# SF Housing Completions by Region

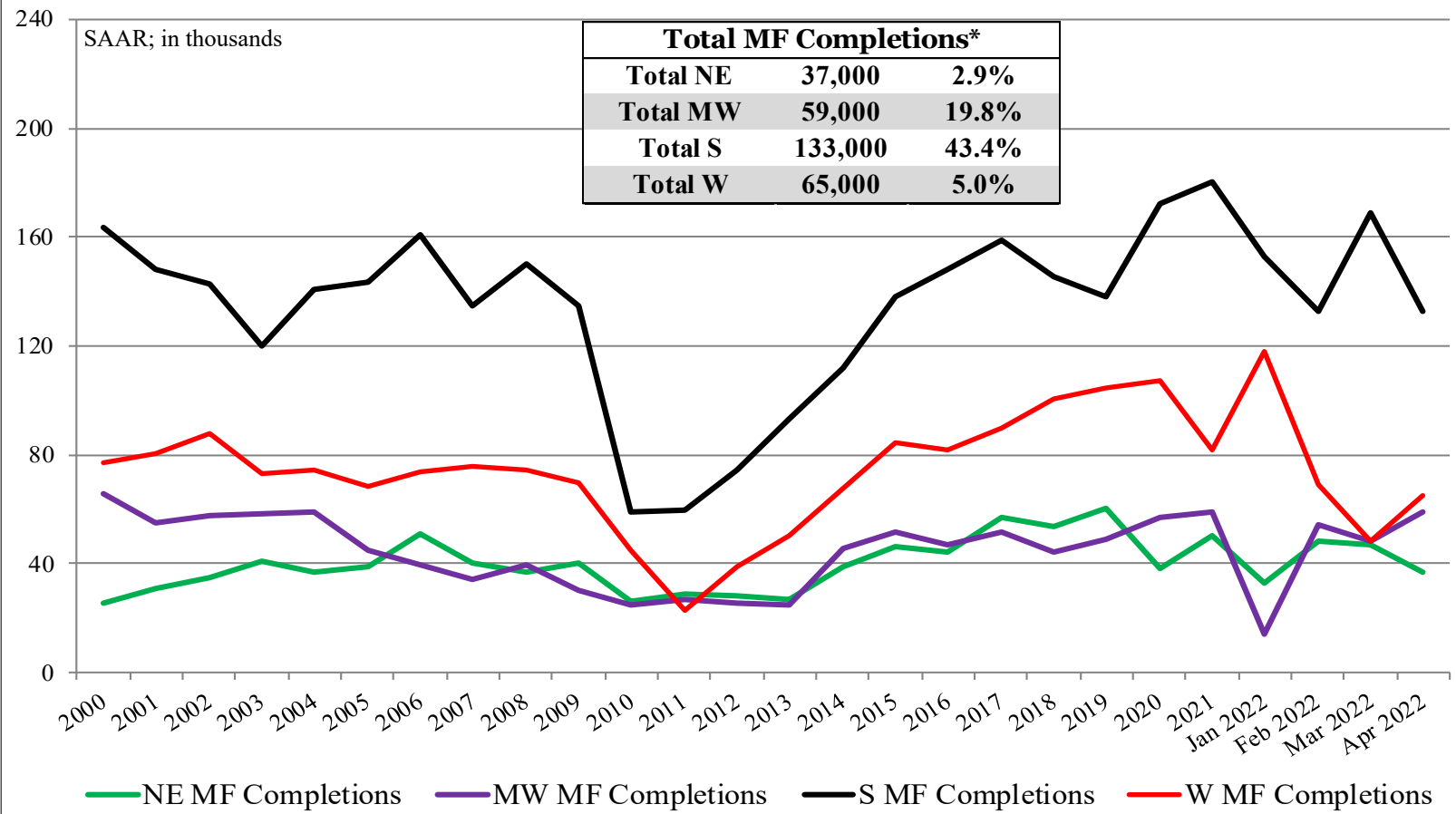


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

\* Percentage of total housing completions

# MF Housing Completions by Region



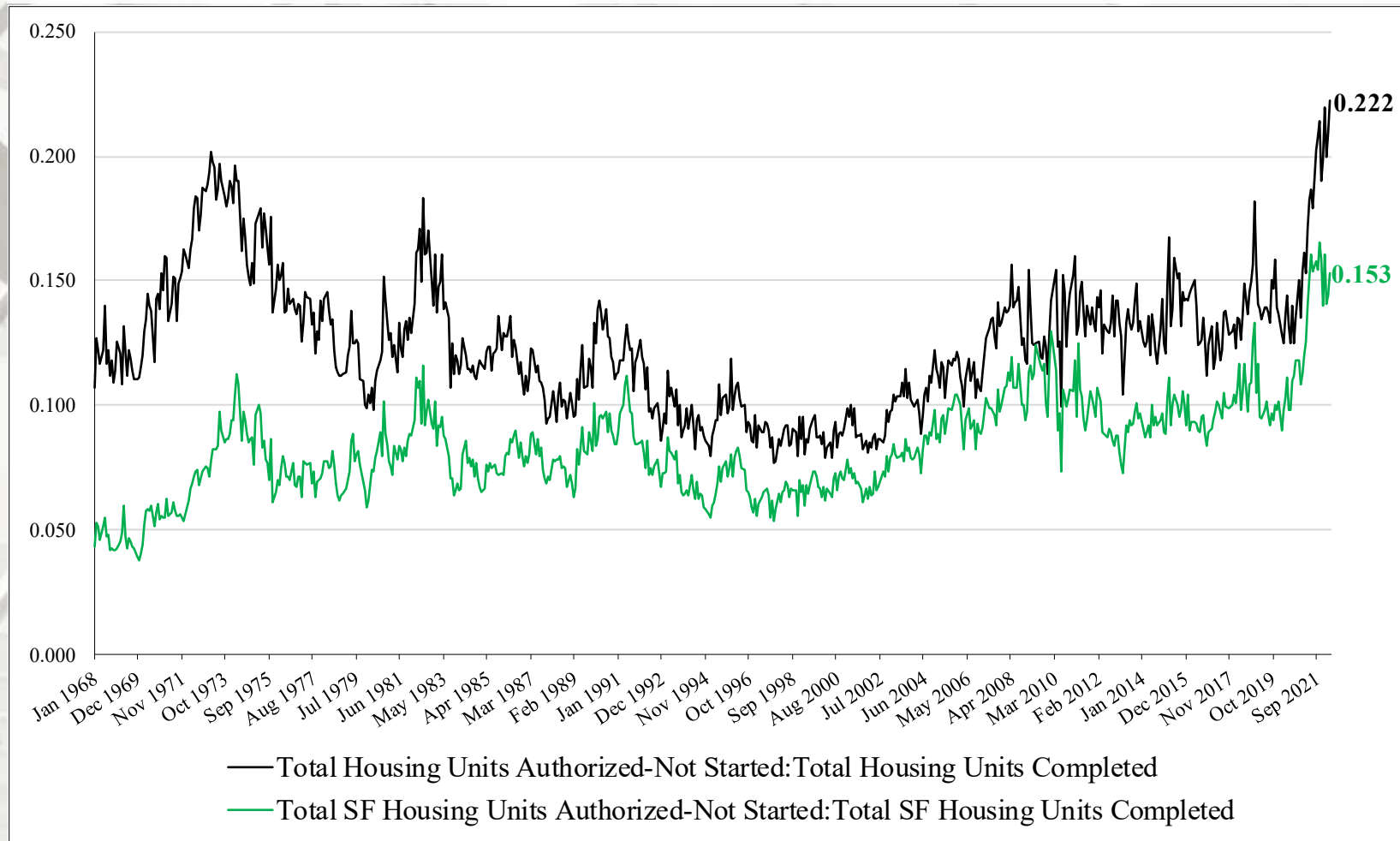
NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

\* Percentage of total housing completions



# Ratio of Housing Units Authorized & Not Started to Housing Units Completed: M/M



## Authorized, Not Started vs. Housing Completions

The ratio of SF houses authorized-not started to SF completed is the greatest in the history of this data series. The total housing unit ratio is the greatest since April 1973 (0.202). Authorized units not started increased to 288,000 in April.

The primary reason is manufacturing supply chain disruptions – ranging from appliances to windows; labor, logistics, and local building regulations.

# New Single-Family House Sales

	New SF Sales*	Median Price	Mean Price	Month's Supply
April	591,000	\$450,600	\$570,300	9.0
March	709,000	\$435,000	\$522,500	6.9
2021	809,000	\$376,600	\$434,800	4.7
M/M change	-16.6%	3.6%	9.1%	30.4%
Y/Y change	-26.9%	19.6%	31.2%	91.5%

\* All new sales data are presented at a seasonally adjusted annual rate (SAAR)<sup>1</sup> and housing prices are adjusted at irregular intervals<sup>2</sup>.

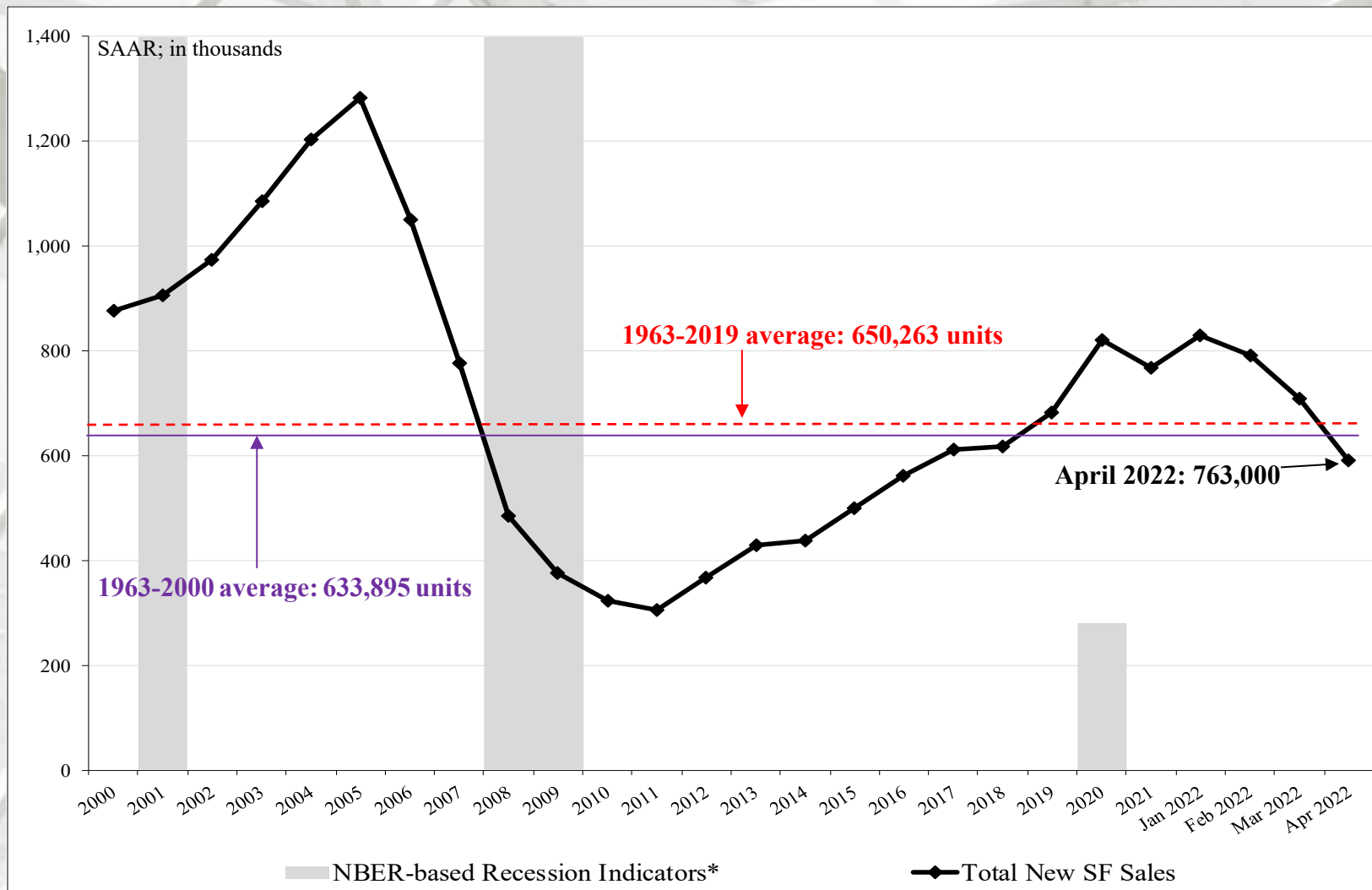
New SF sales were substantially less than the consensus forecast<sup>3</sup> of 750 m (range: 700 m to 780 m). The past three month's new SF sales data also were revised:

January initial: 801 m, revised to 831 m.

February initial: 772 m, revised to 792 m.

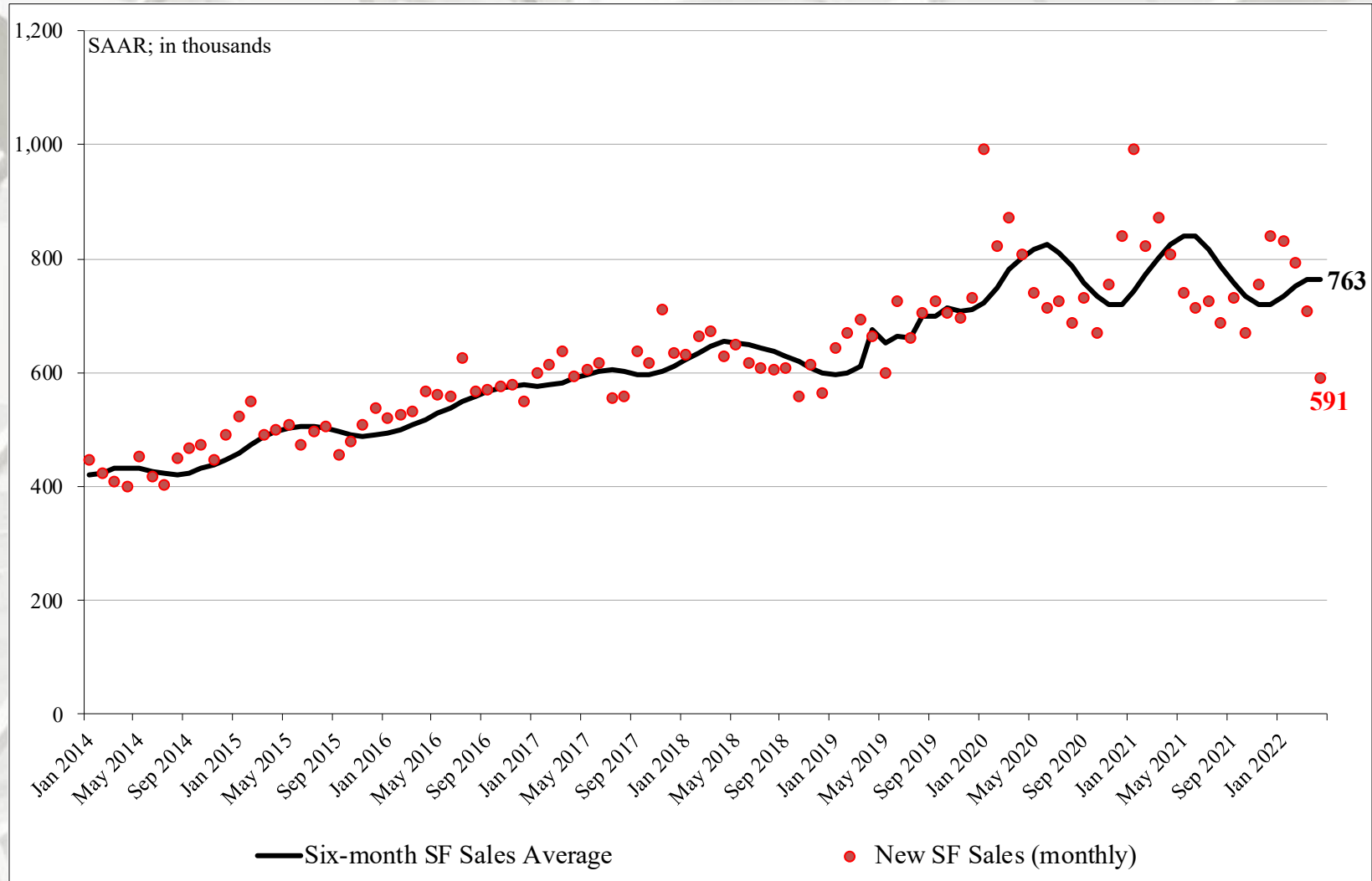
March initial: 763 m, revised to 709 m.

# New SF House Sales



\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF Housing Sales: Six-month average & monthly



## New SF House Sales by Region and Price Category

	NE	MW	S	W			
April	48,000	73,000	307,000	163,000			
March	51,000	86,000	383,000	189,000			
2021	41,000	98,000	484,000	186,000			
M/M change	-5.9%	-15.1%	-19.8%	-13.8%			
Y/Y change	17.1%	-25.5%	-36.6%	-12.4%			
	\$150 - ≤ \$150m	\$200 - \$199.9m 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m	
April <sup>1,2,3,4</sup>	500	500	5,000	14,000	11,000	15,000	8,000
March	500	500	9,000	21,000	12,000	18,000	7,000
2021	1,000	1,000	17,000	24,000	11,000	15,000	5,000
M/M change	0.0%	0.0%	-44.4%	-33.3%	-8.3%	-16.7%	14.3%
Y/Y change	-50.0%	-50.0%	-70.6%	-41.7%	0.0%	0.0%	60.0%
New SF sales: %	0.9%	0.9%	9.4%	26.4%	20.8%	28.3%	15.1%

NE = Northeast; MW = Midwest; S = South; W = West

<sup>1</sup> All data are SAAR

<sup>2</sup> Houses for which sales price were not reported have been distributed proportionally to those for which sales price was reported;

<sup>3</sup> Detail April not add to total because of rounding.

<sup>4</sup> Housing prices are adjusted at irregular intervals.

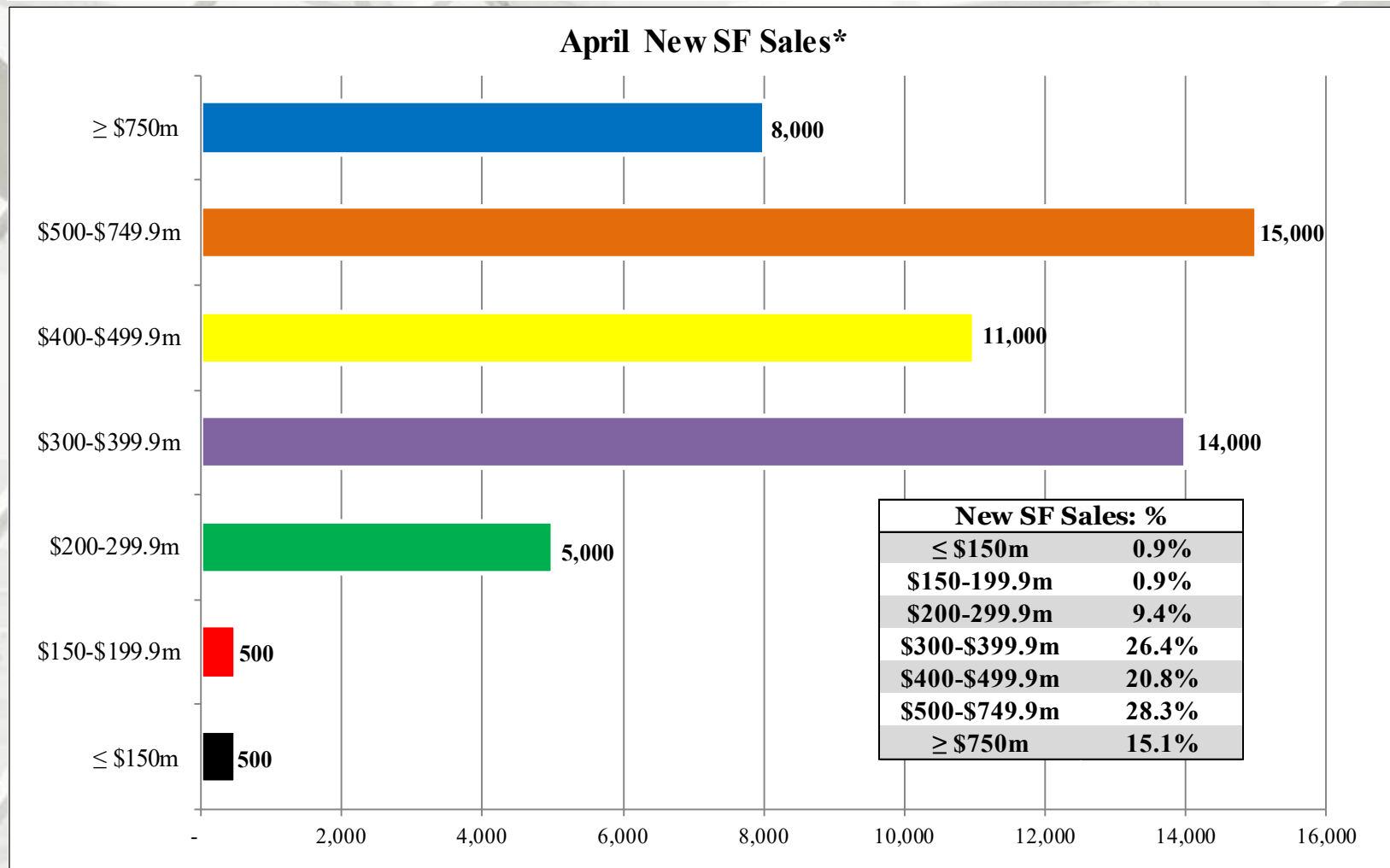
<sup>5</sup> Z = Less than 500 units or less than 0.5 percent

Sources: <sup>1,2,3</sup> <https://www.census.gov/construction/nrs/index.html>; 5/24/22;

<sup>4</sup> [https://www.census.gov/construction/cpi/pdf/descpi\\_sold.pdf](https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf)

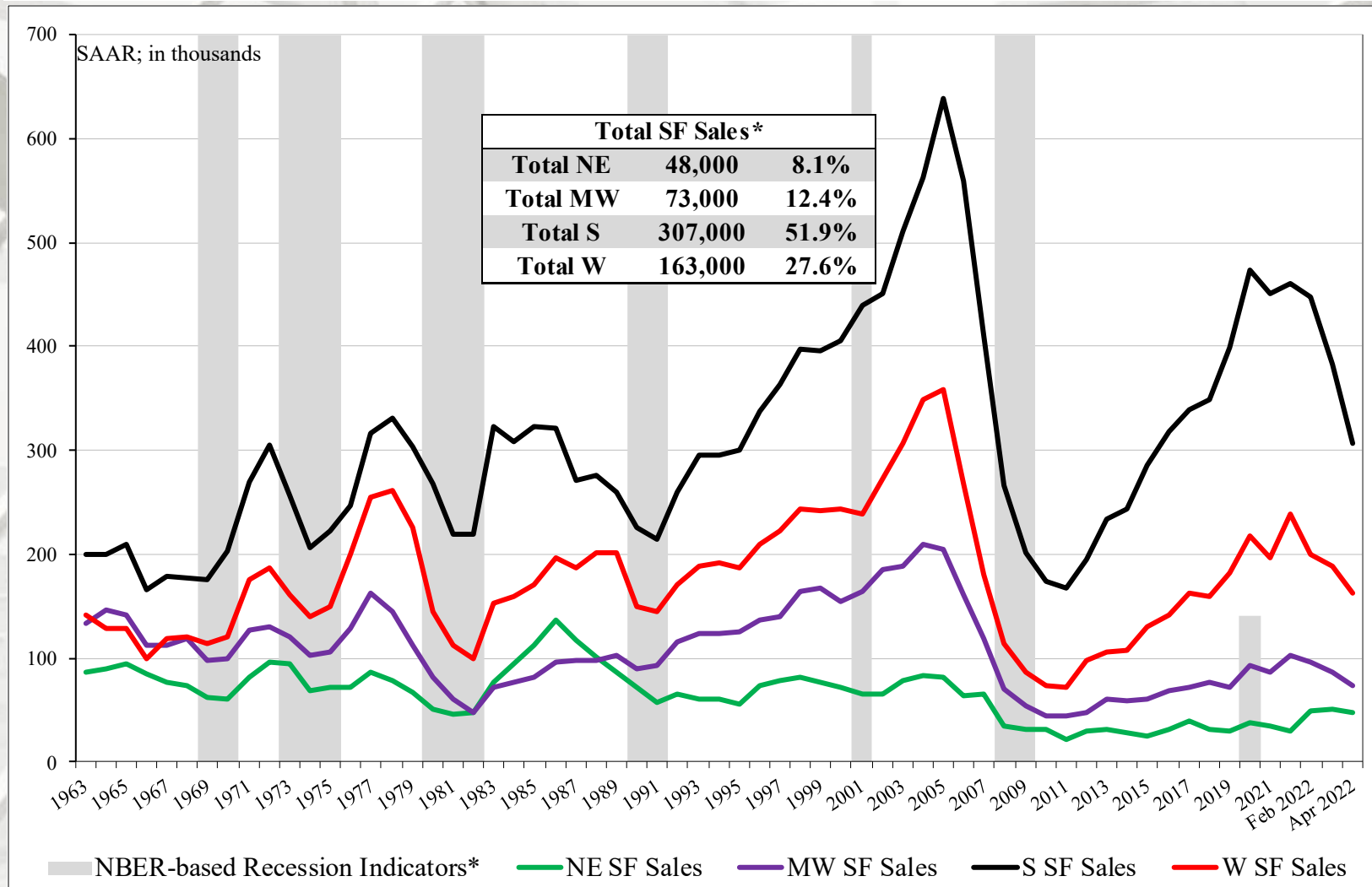
[Return TOC](#)

# New SF House Sales



\* Total new sales by price category and percent.

# New SF House Sales by Region

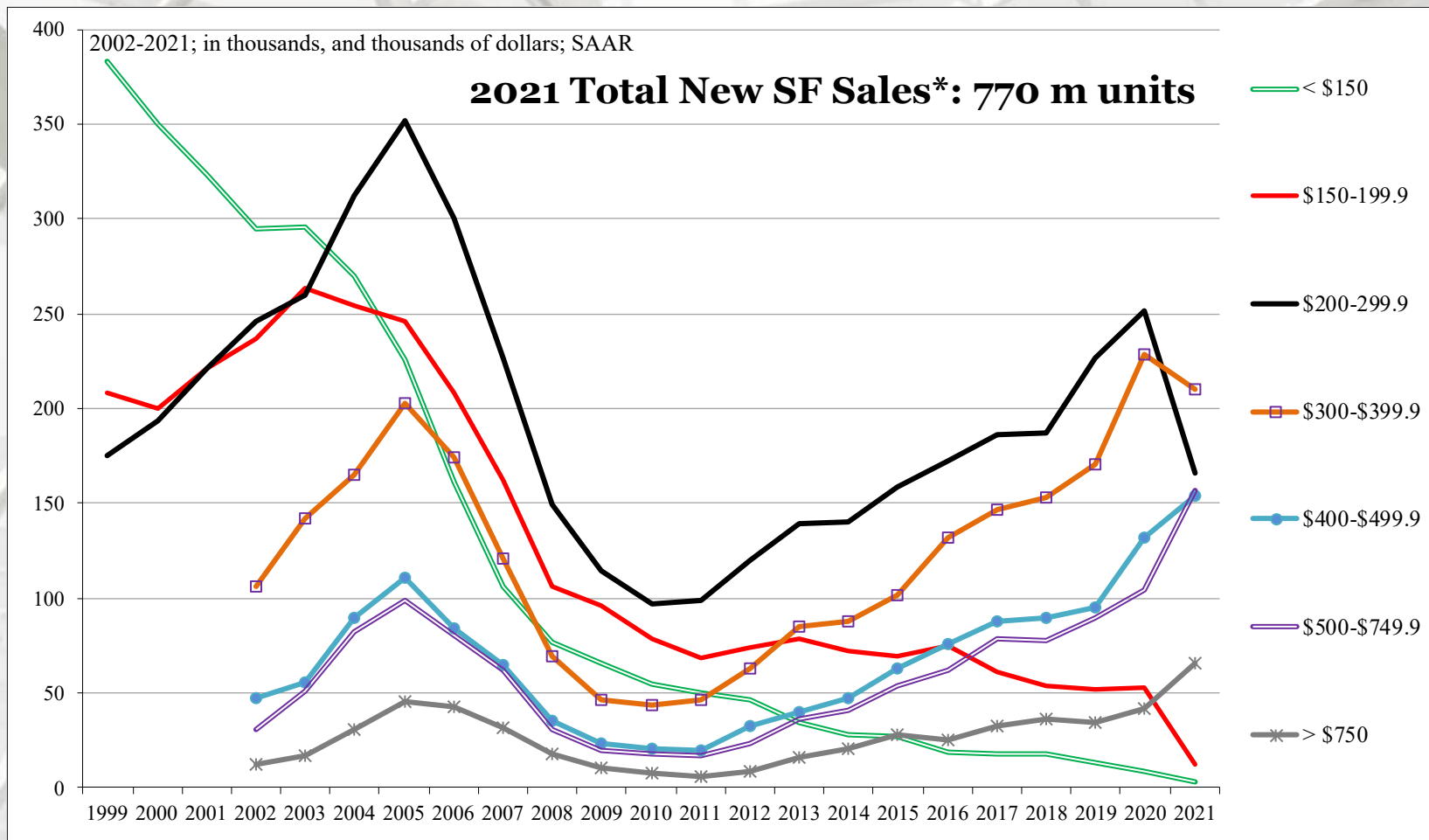


NE = Northeast; MW = Midwest; S = South; W = West

\* Percentage of total new sales.

\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

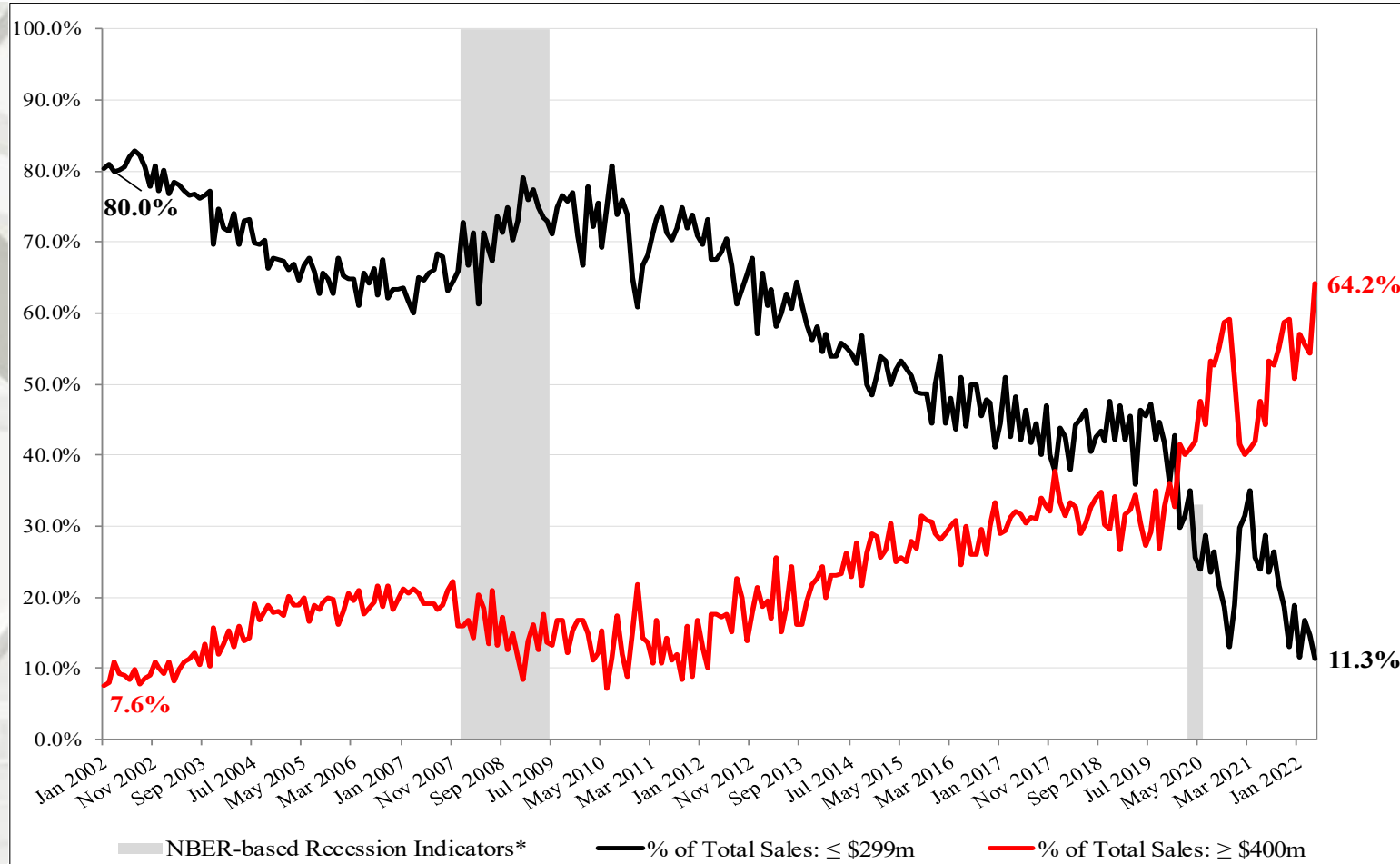
# New SF House Sales by Price Category



\* Sales tallied by price category, nominal dollars.



# New SF House Sales

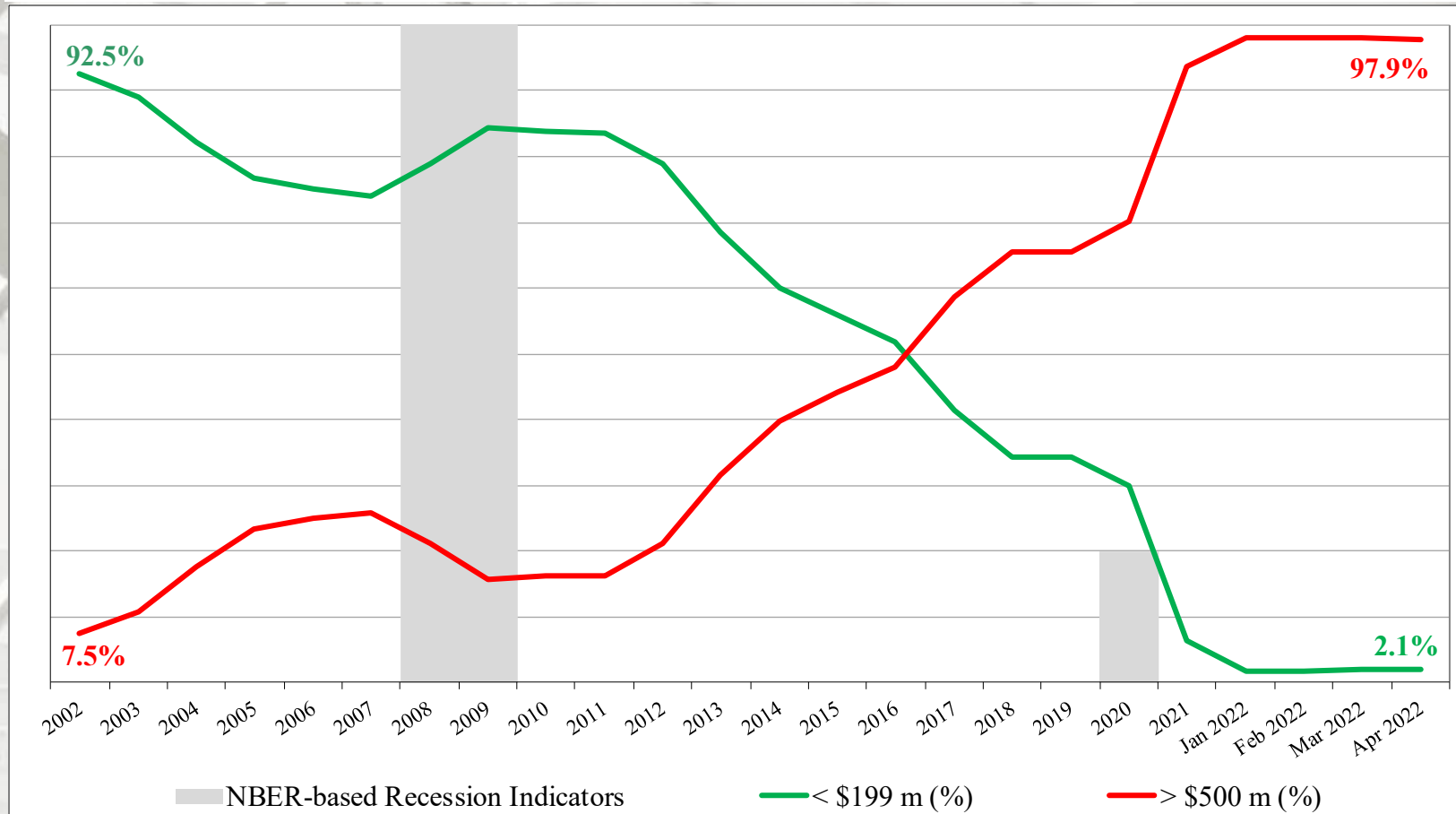


\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

## New SF Sales: ≤ \$299m and ≥ \$400m: 2002 – April 2022

The sales share of \$400 thousand plus SF houses is presented above<sup>1,2</sup>. Since the beginning of 2012, the upper priced houses have and are garnering a greater percentage of sales. A decreasing spread indicates that more high-end luxury homes are being sold. Several reasons are offered by industry analysts; 1) builders can realize a profit on higher priced houses; 2) historically low interest rates have indirectly resulted in increasing house prices; and 3) purchasers of upper end houses fared better financially coming out of the Great Recession.

# New SF House Sales

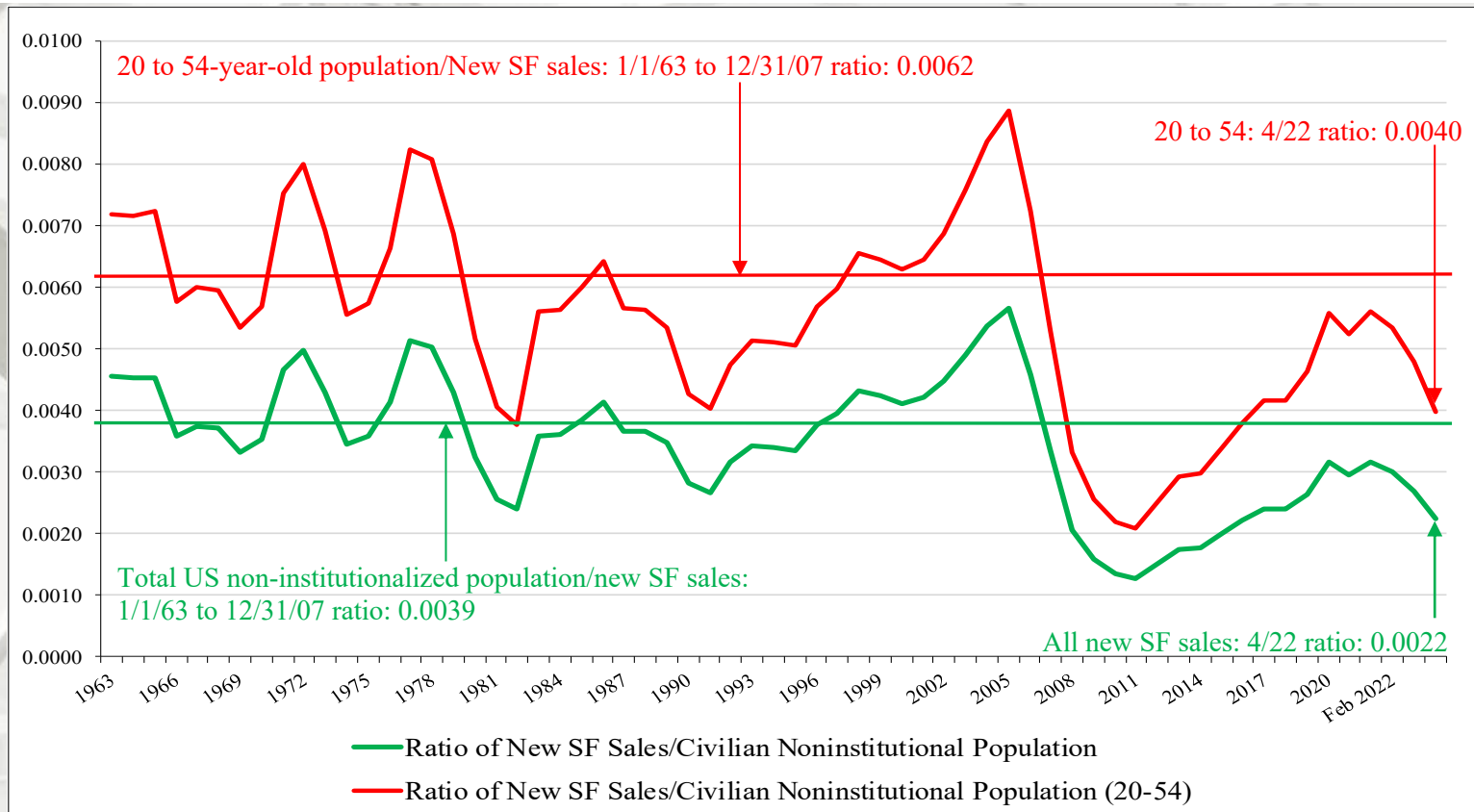


## New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to April 2022

The number of ≤ \$200 thousand SF houses has declined dramatically since 2002<sup>1, 2</sup>. Subsequently, from 2012 onward, the ≥ \$500 thousand class has soared (on a percentage basis) in contrast to the ≤ \$200m class. One of the most oft mentioned reasons for this occurrence is builder net margins.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF House Sales

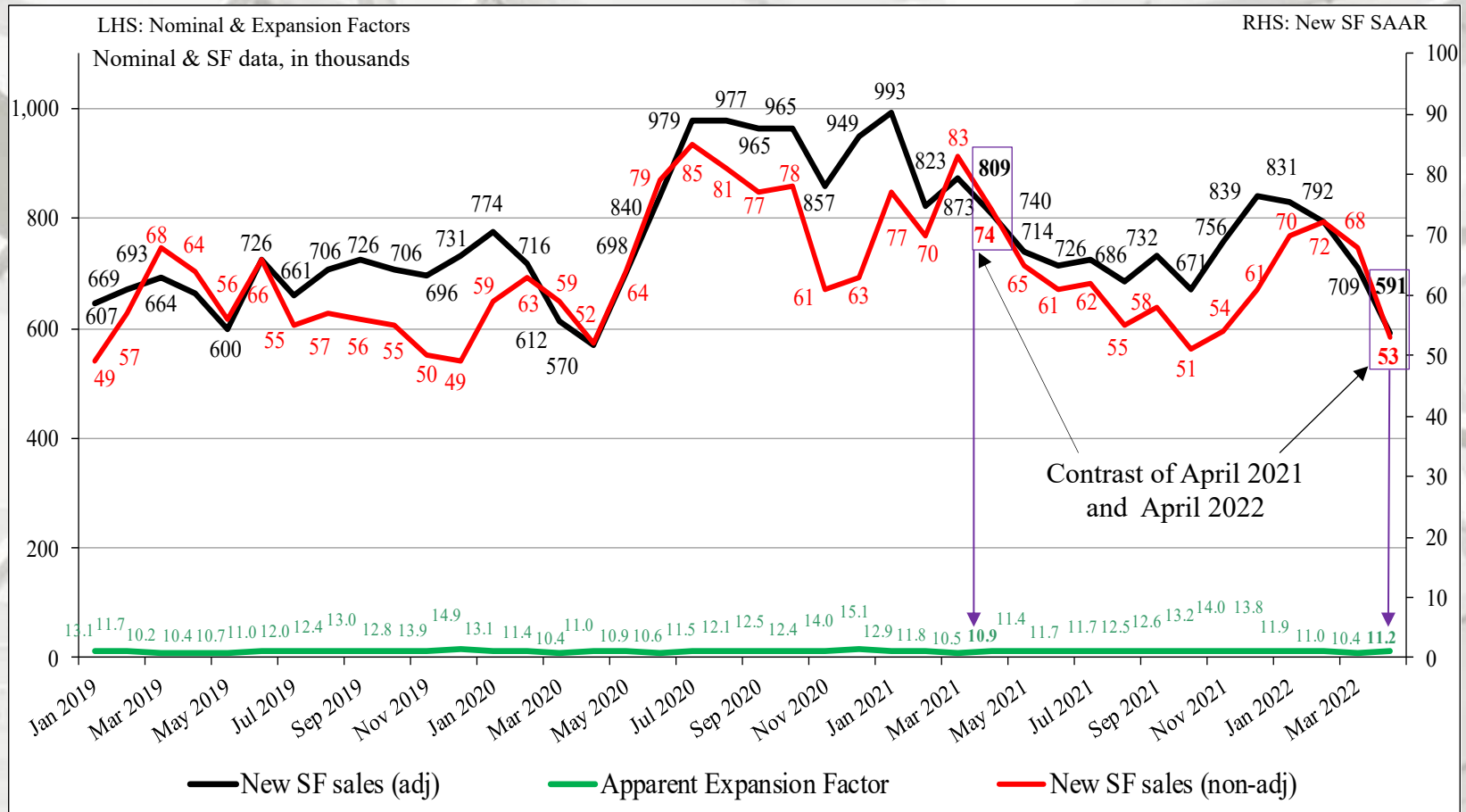


## New SF sales adjusted for the US population

From April 1963 to July 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in April 2022 it was 0.0022 – a decrease from March (0.0027). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0048; in April 2022 it was 0.0040 – also a decrease from March (0.0048). All are non-adjusted data. From a total population world view, new sales remain less than the long-term average.

However, on a long-term basis, some studies peg normalized long-term demand at 900,000 to 1,000,000 new SF house sales per year beginning in 2025 through 2050.

# Nominal vs. SAAR New SF House Sales



## Nominal and Adjusted New SF Monthly Sales

Presented above is nominal (non-adjusted) new SF sales data contrasted against SAAR data.

The apparent expansion factor "...is the ratio of the unadjusted number of houses sold in the US to the seasonally adjusted number of houses sold in the US (i.e., to the sum of the seasonally adjusted values for the four regions)." – U.S. DOC-Construction

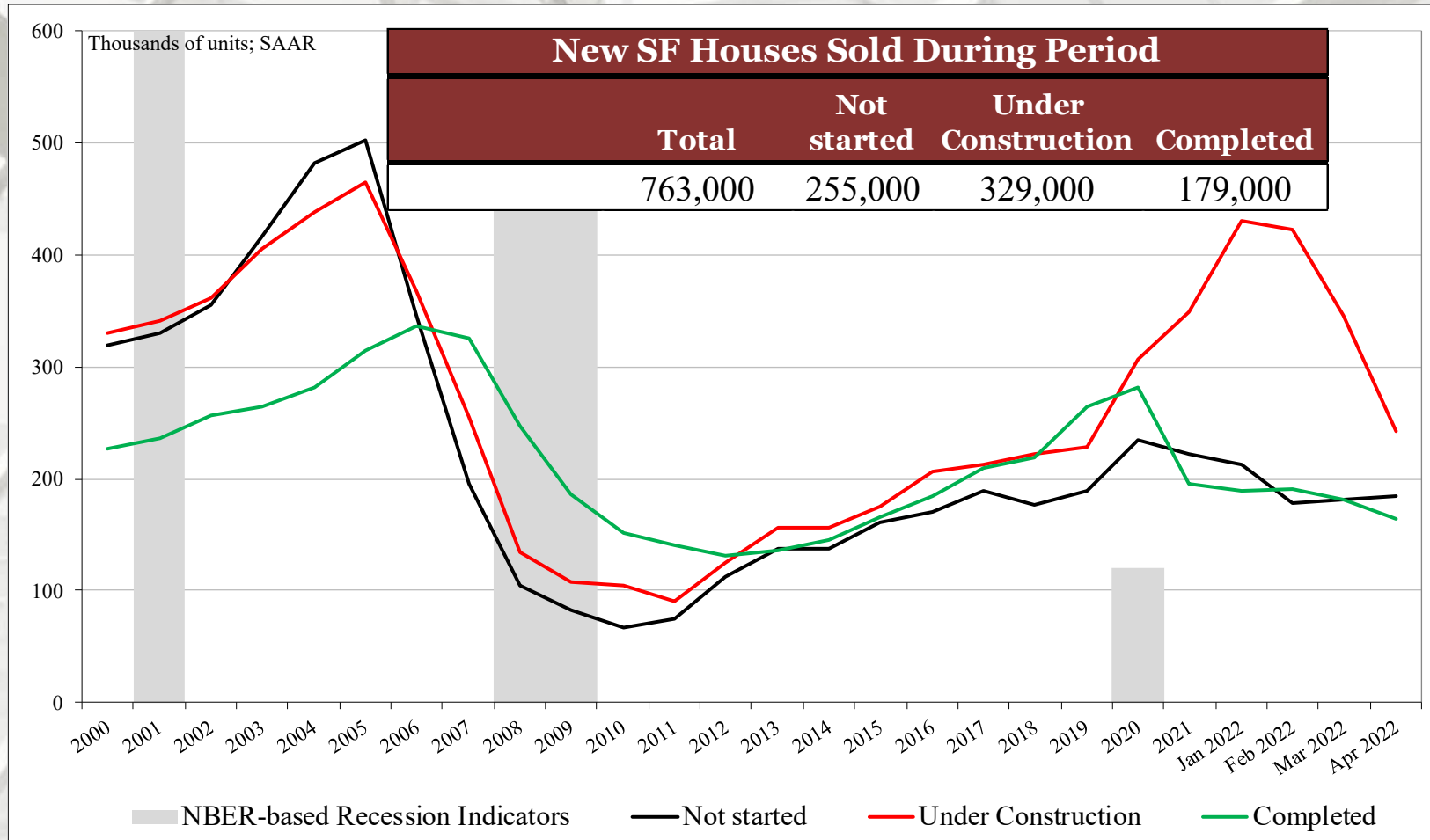
# New SF House Sales

## New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
April	591,000	185,000	242,000	164,000
March	709,000	181,000	346,000	182,000
2021	809,000	271,000	326,000	212,000
M/M change	-16.6%	2.2%	-30.1%	-9.9%
Y/Y change	-26.9%	-31.7%	-25.8%	-22.6%
Total percentage		31.3%	40.9%	27.7%

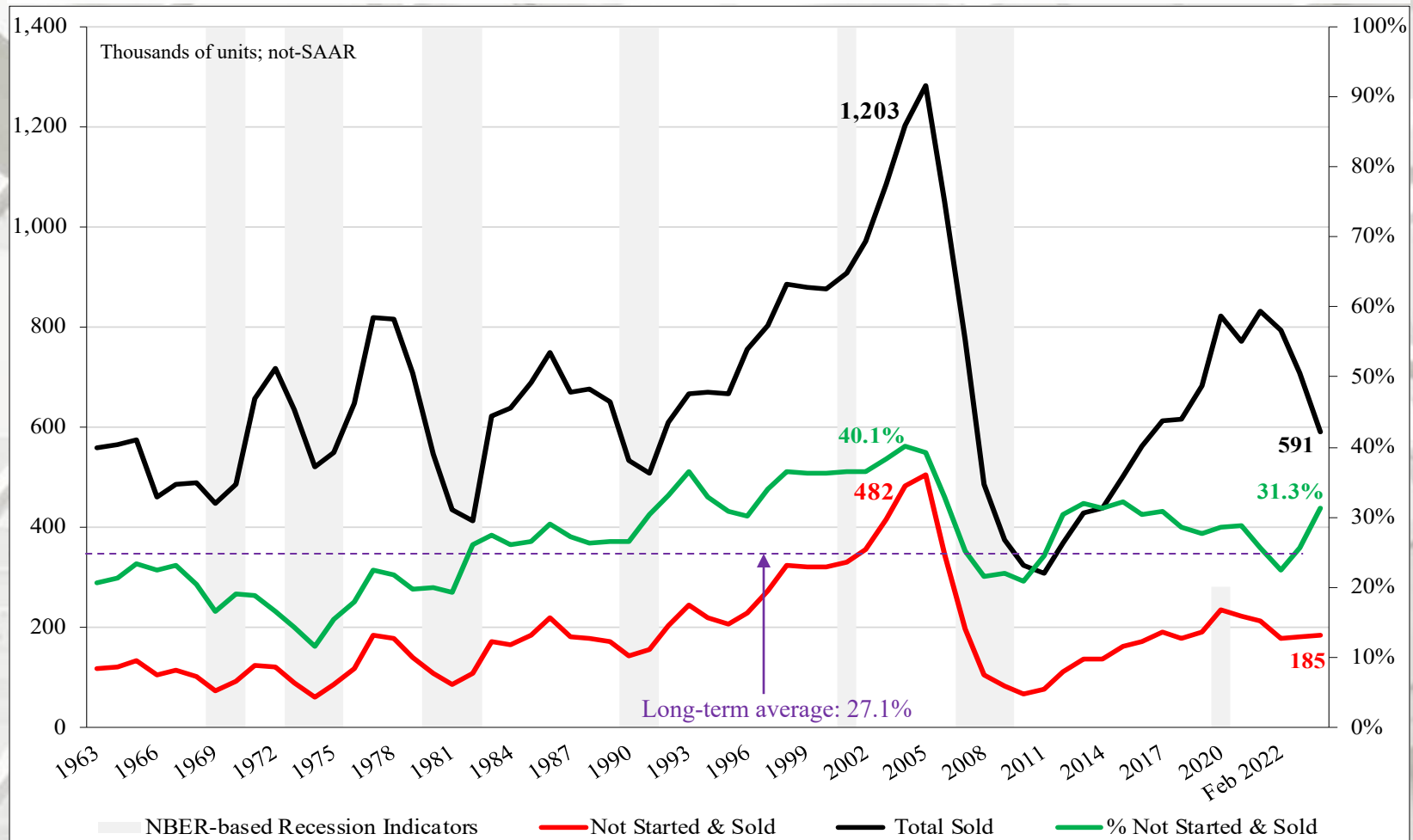
SAAR

# New SF House Sales: Sold During Period



\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF House Sales: Percentage Not Started & Sold During Period



Of the new houses sold in April (591 m), 31.3% (185 m) had not been started. The long-term average is 27.1%.

\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF Houses for Sale at End of Period

## New SF Houses for Sale at the end of the Period

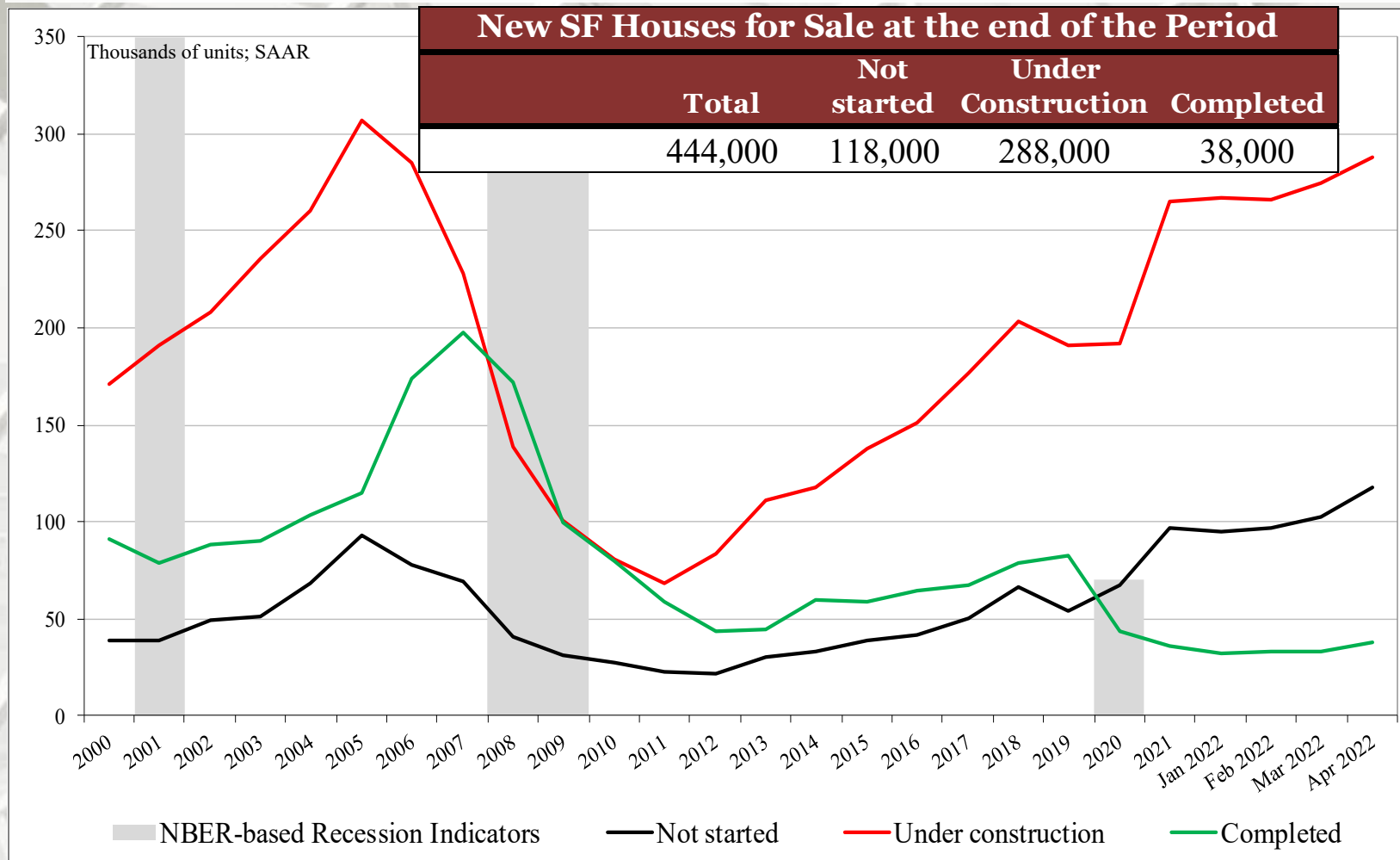
	Total	Not started	Under Construction	Completed
April	444,000	118,000	288,000	38,000
March	410,000	102,000	275,000	33,000
2021	317,000	85,000	199,000	33,000
M/M change	8.3%	15.7%	4.7%	15.2%
Y/Y change	40.1%	38.8%	44.7%	15.2%
<b>Total percentage</b>		<b>26.6%</b>	<b>64.9%</b>	<b>8.6%</b>

Not SAAR

Of houses listed for sale (444 m) in April, 8.6% (38 m) have been built. In the 'ground had not been broken for construction' or 'not started' category, 118 m (26.6%) were sold.



# New SF House Sales: For Sale at End of Period



NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

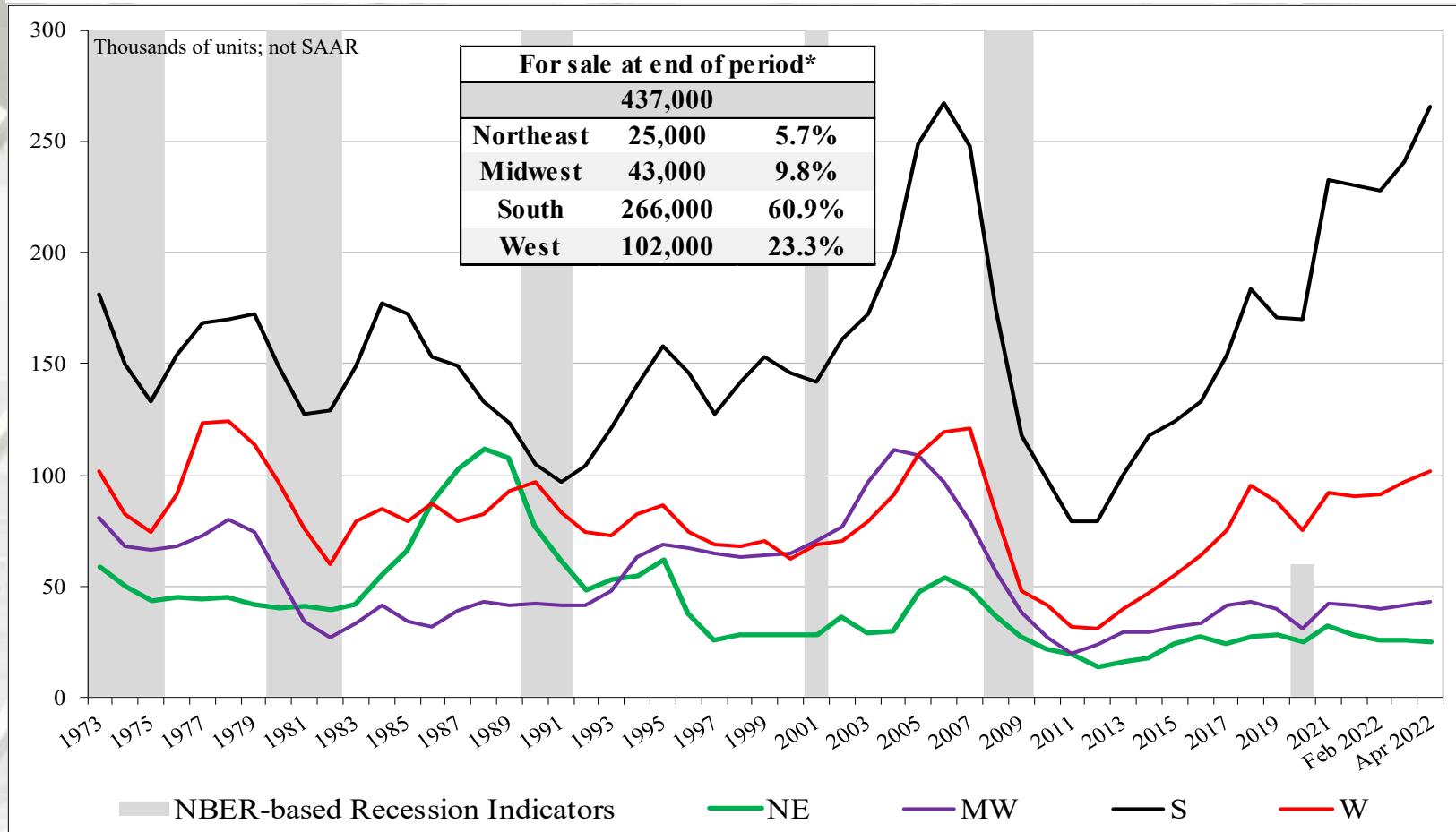
# New SF House Sales

## New SF Houses for Sale at the end of the Period by Region\*

	Total	NE	MW	S	W
April	437,000	25,000	43,000	266,000	102,000
March	406,000	26,000	41,000	241,000	97,000
2021	315,000	26,000	31,000	174,000	83,000
M/M change	7.6%	-3.8%	4.9%	10.4%	5.2%
Y/Y change	38.7%	-3.8%	38.7%	52.9%	22.9%

\* Not SAAR

# New SF Houses for Sale at End of Period by Region

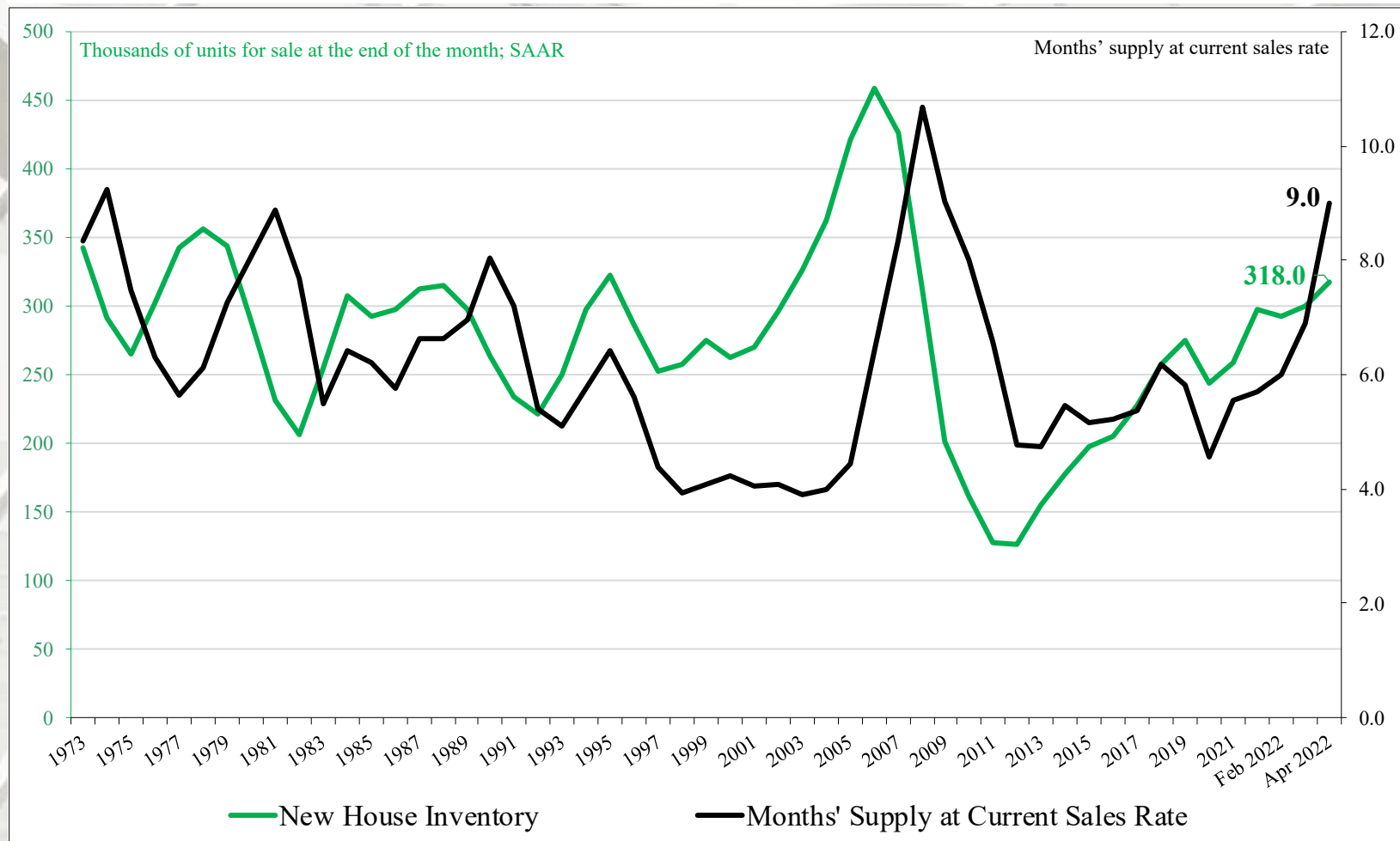


NE = Northeast; MW = Midwest; S = South; W = West

\* Percentage of new SF sales.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Months' Supply and New House Inventory<sup>a</sup>



<sup>a</sup> New HUC + New House Completions (sales data only)

The months supply of new houses for sale was 9.0 at the end of April 2022 (SAAR).

# April 2022 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
April	\$891,513	\$477,675	\$102,221	\$311,617
March	\$883,507	\$475,143	\$101,432	\$306,932
2021	\$752,819	\$400,562	\$99,150	\$253,107
M/M change	0.9%	0.5%	0.8%	1.5%
Y/Y change	18.4%	19.3%	3.1%	23.1%

\* millions.

\*\* The US DOC does not report improvement spending directly, this is a monthly estimation: ((Total Private Spending – (SF spending + MF spending)).

All data are SAARs and reported in nominal US\$.

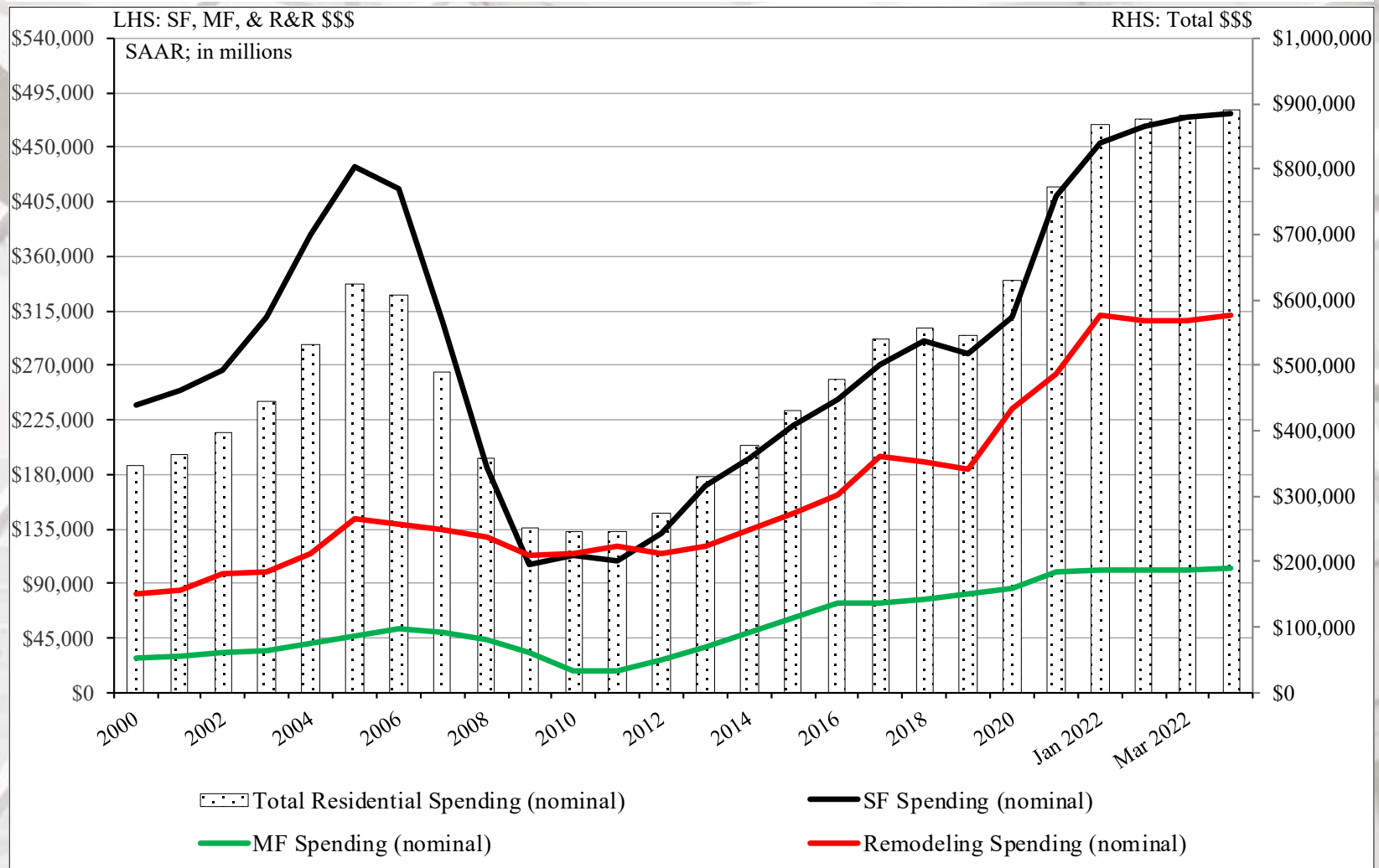
Total private residential construction spending includes new single-family, new multi-family, and improvement (AKA repair and remodeling) expenditures.

New single-family: new houses and town houses built to be sold or rented and units built by the owner or for the owner on contract. The classification excludes residential units in buildings that are primarily nonresidential. It also excludes manufactured housing and houseboats.

New multi-family includes new apartments and condominiums. The classification excludes residential units in buildings that are primarily nonresidential.

Improvements: Includes remodeling, additions, and major replacements to owner occupied properties subsequent to completion of original building. It includes construction of additional housing units in existing residential structures, finishing of basements and attics, modernization of kitchens, bathrooms, etc. Also included are improvements outside of residential structures, such as the addition of swimming pools and garages, and replacement of major equipment items such as water heaters, furnaces and central air-conditioners. Maintenance and repair work is not included.

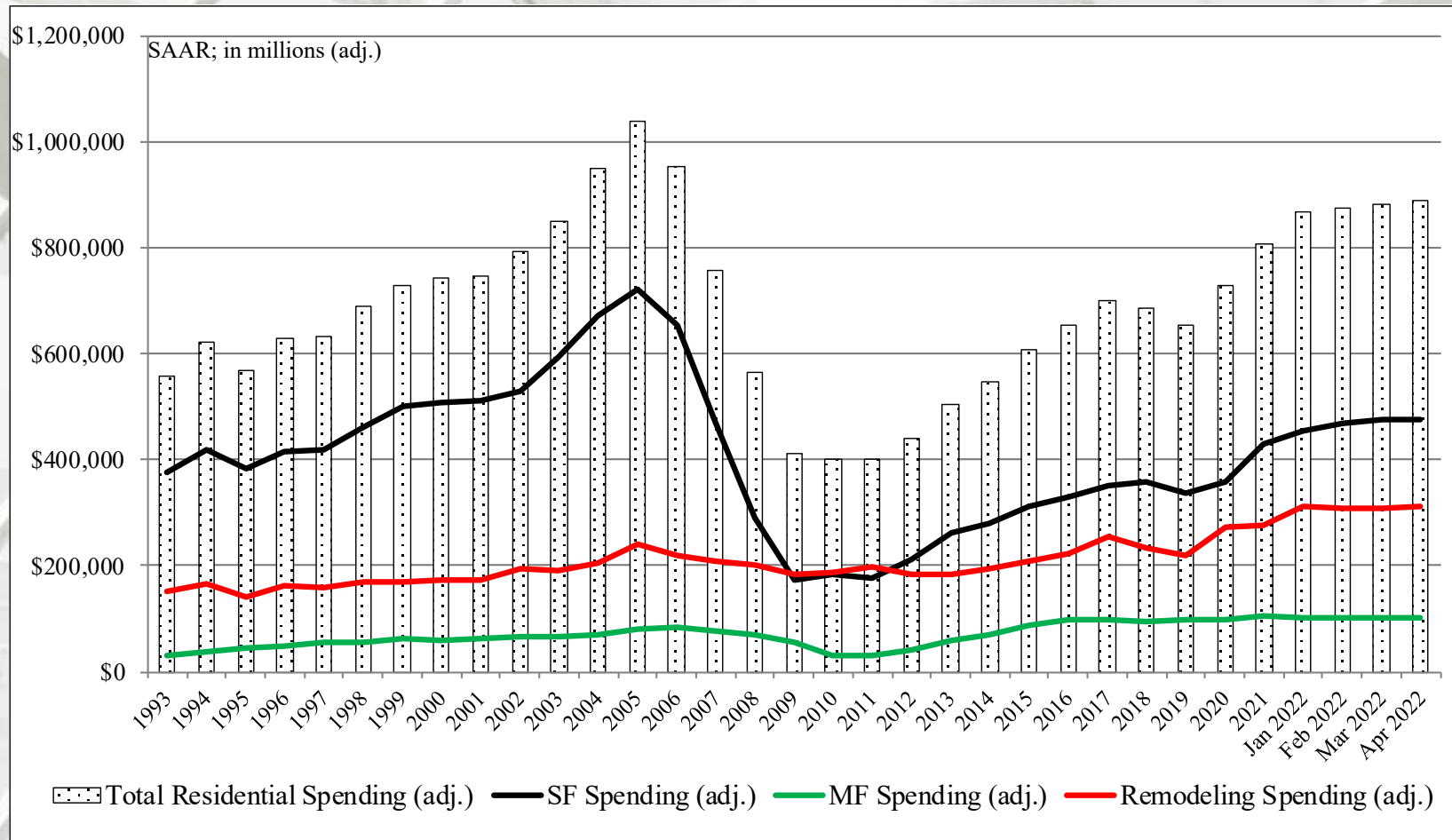
# Total Construction Spending (nominal): 2000 – April 2022



Reported in nominal US\$.

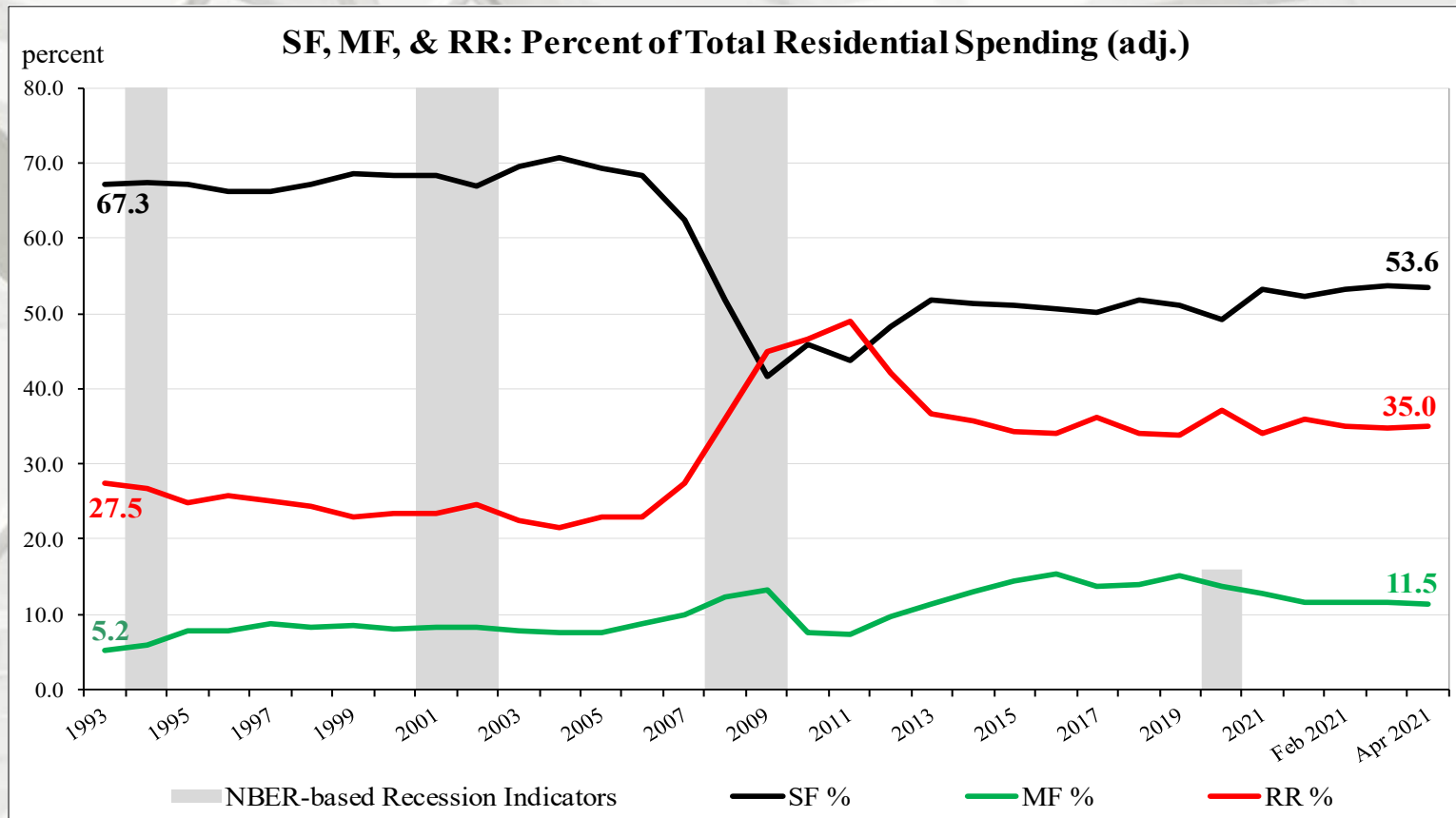
The US DOC does not report improvement spending directly, this is a monthly estimation for 2022.

# Total Construction Spending (adjusted): 1993 – April 2022



Reported in adjusted \$US: 1993 – 2021 (adjusted for inflation, BEA Table 1.1.9); April 2022 reported in nominal US\$.

# Construction Spending Shares: 1993 – April 2022



## Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5%

Residential remodeling (RR) spending average: 23.3% (SAAR).

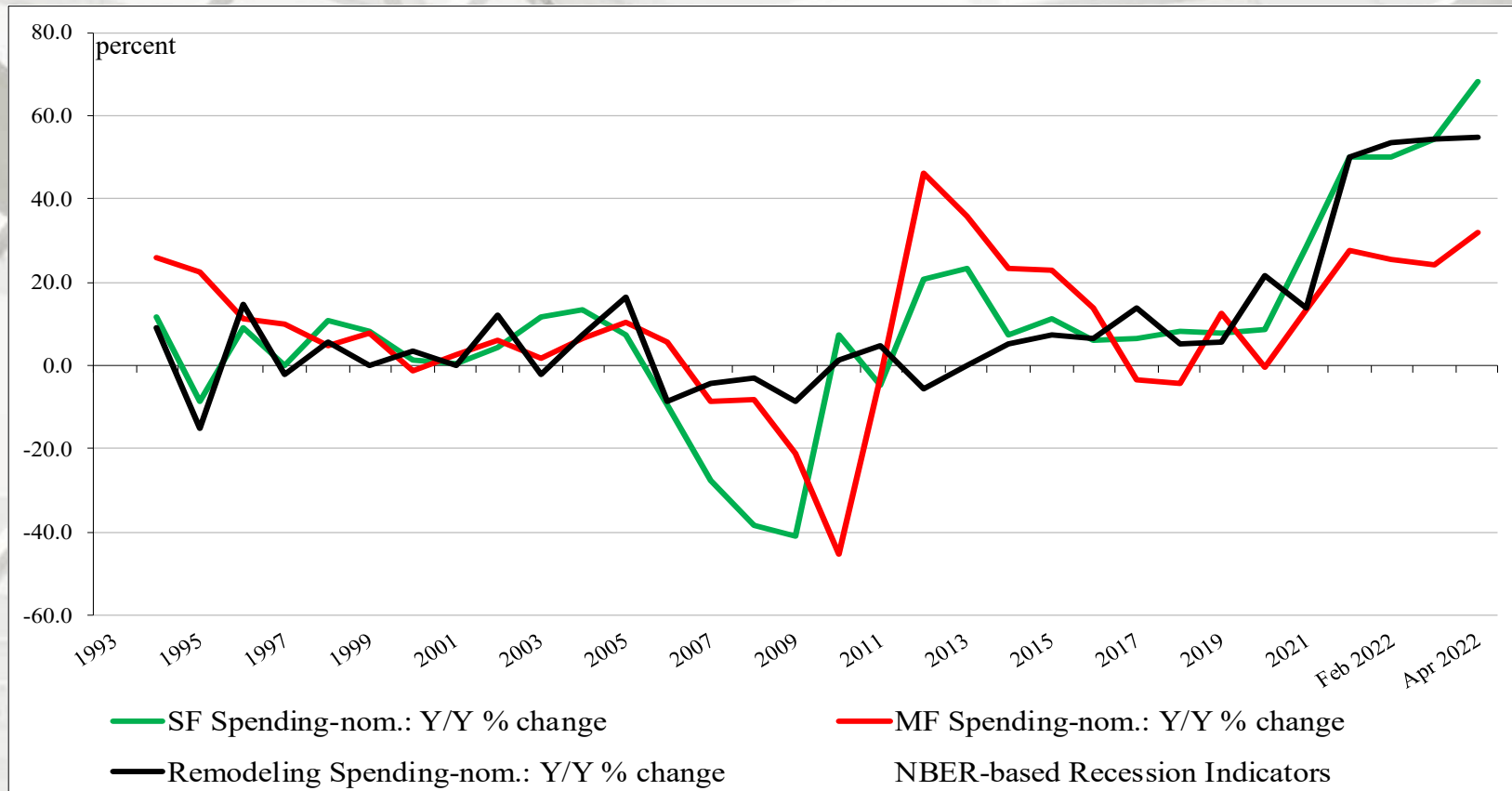
Note: 1993 to 2021 (adjusted for inflation, BEA Table 1.1.9); April 2022 reported in nominal US\$.

\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Sources: \* <https://fred.stlouisfed.org/series/USREC>, 6/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 6/1/22 and <http://www.bea.gov/iTable/iTable.cfm>; 3/30/22



# Adjusted Construction Spending: Y/Y Percentage Change, 1993 – April 2022



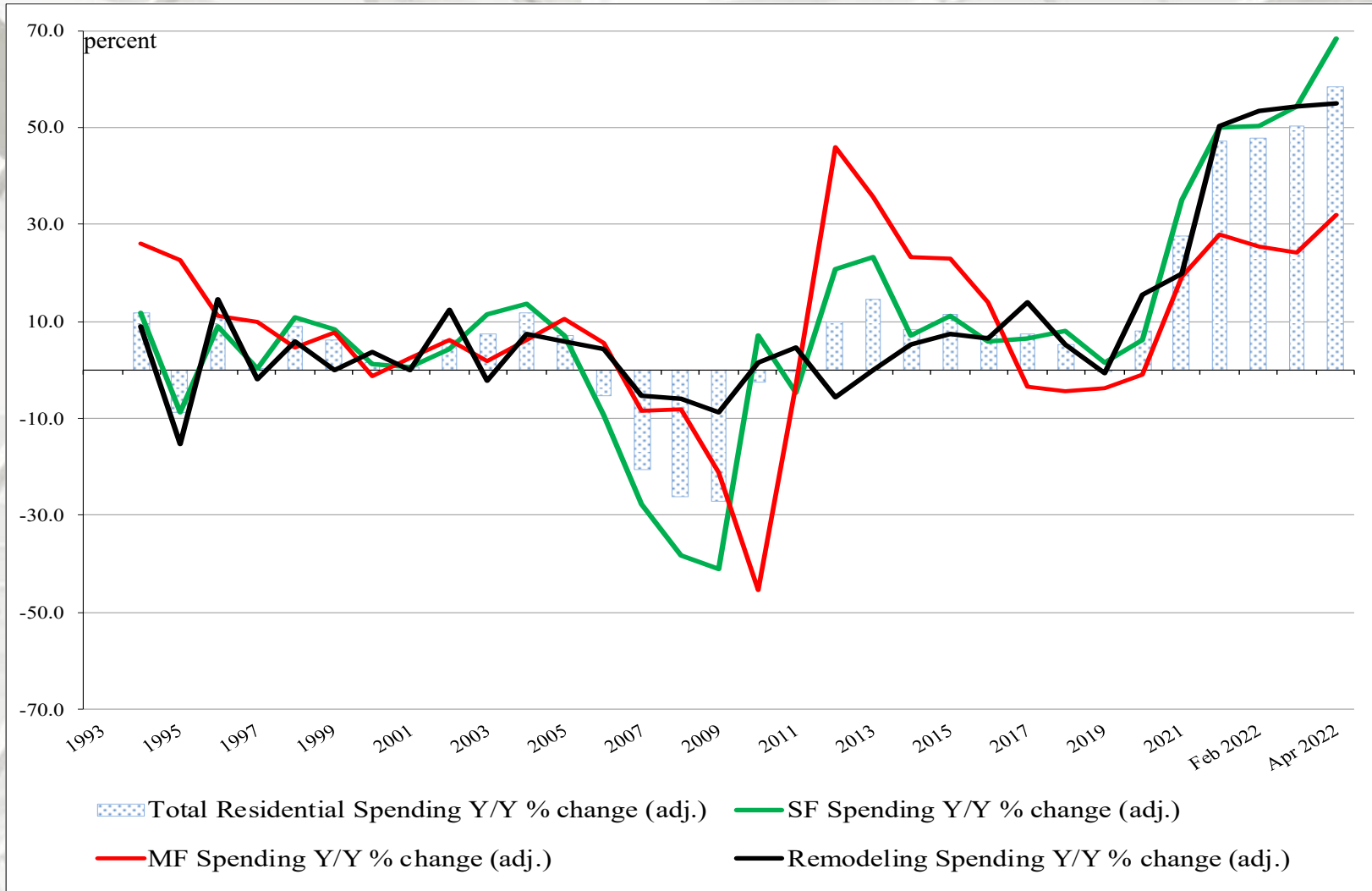
## Nominal Residential Construction Spending: Y/Y percentage change, 1993 to April 2021

Presented above is the percentage change of inflation adjusted Y/Y construction spending. SF, MF, and RR expenditures were positive on a percentage basis, year-over-year and month-over-month (April 2022 data reported in nominal dollars).

\* NBER based Recession Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

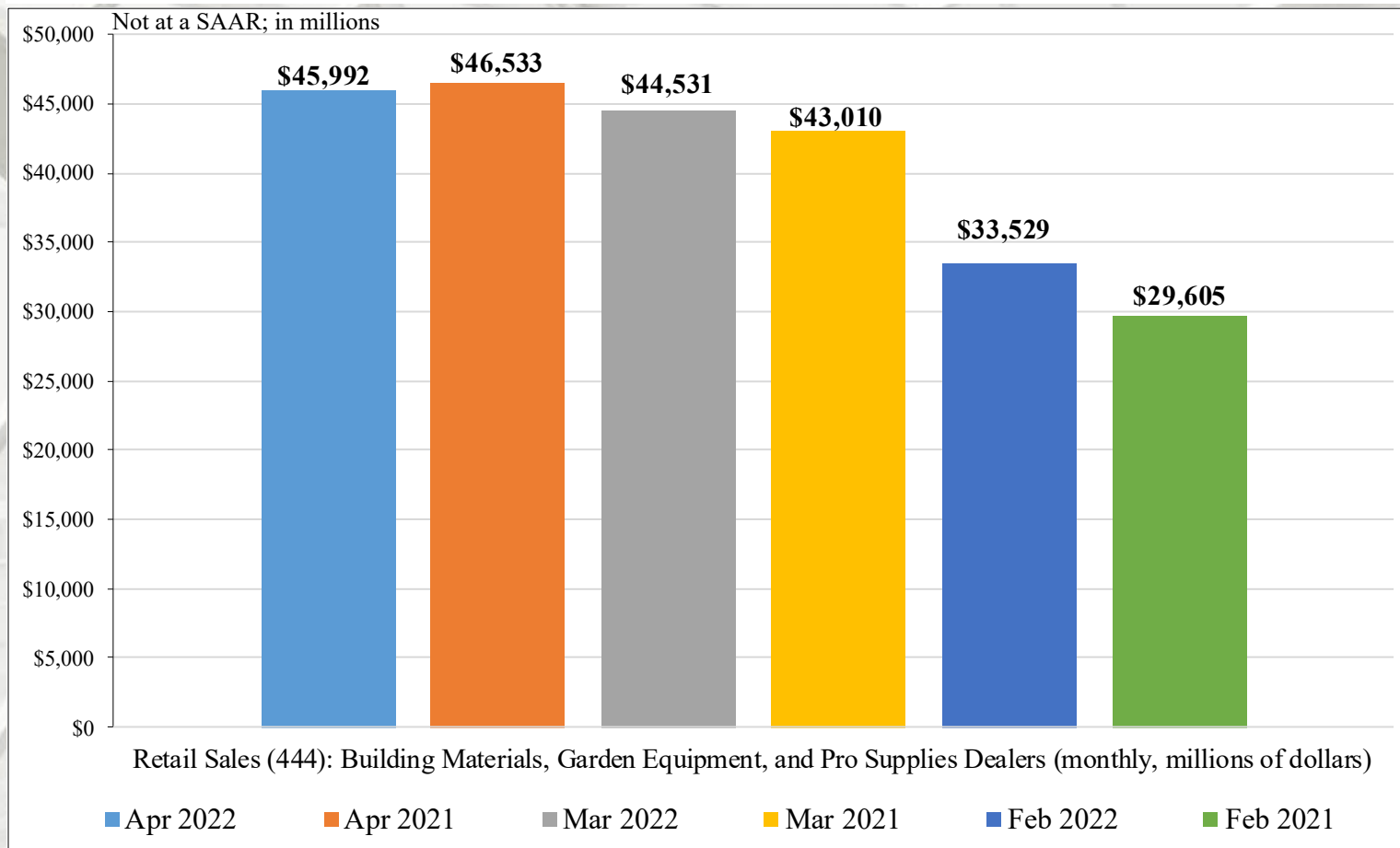
Sources: \* <https://fred.stlouisfed.org/series/USREC>, 6/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 6/1/22 and <http://www.bea.gov/iTable/iTable.cfm>; 3/30/22

# Adjusted Construction Spending: Y/Y Percentage Change, 1993 – April 2022



# Remodeling

## Retail Sales: Building materials, Garden Equipment, & PRO Supply Dealers

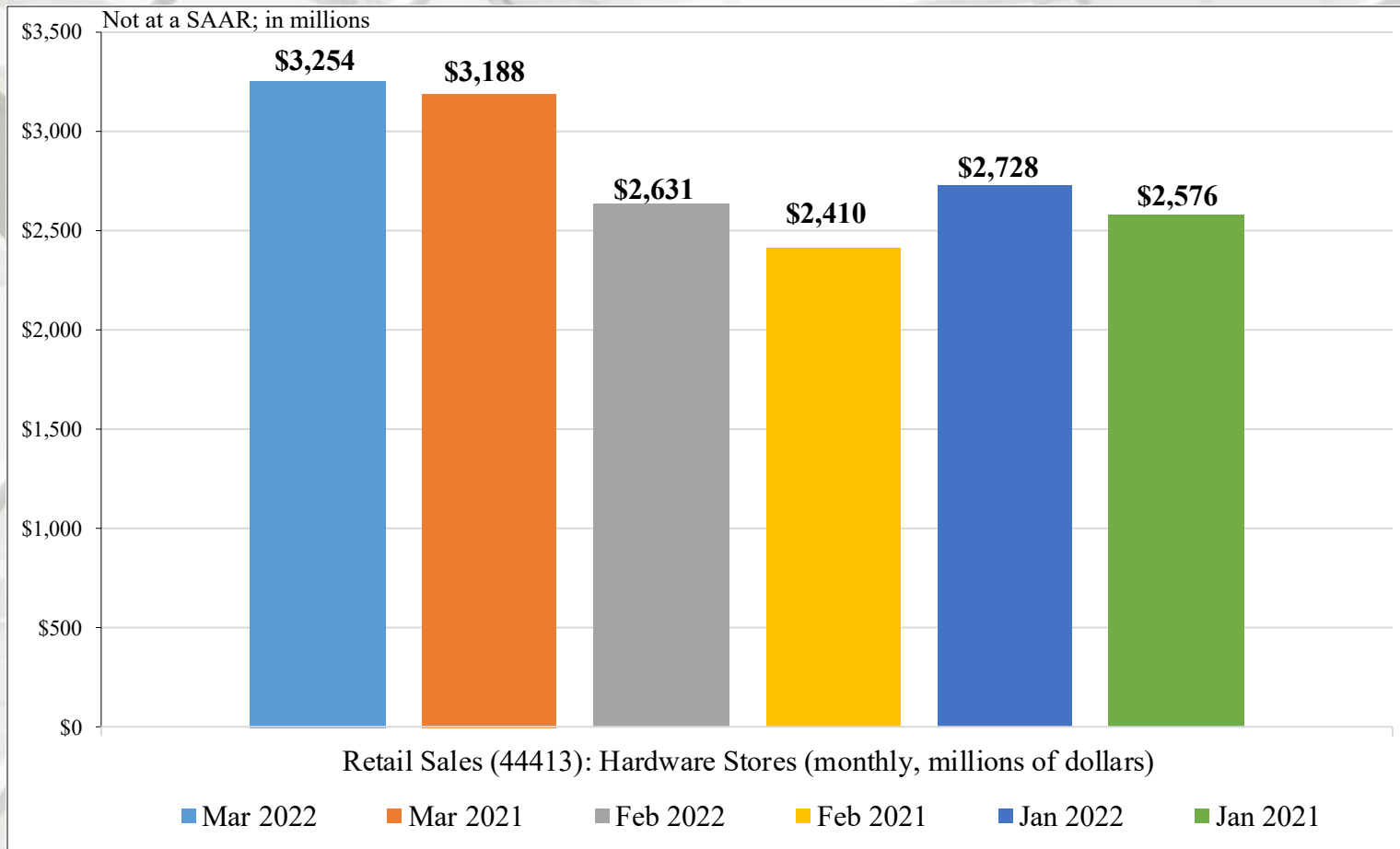


### Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 444

NAICS 444 sales increased 3.3% in April 2022 from March 2022 and declined 1.2% Y/Y (on a non-adjusted basis).

# Remodeling

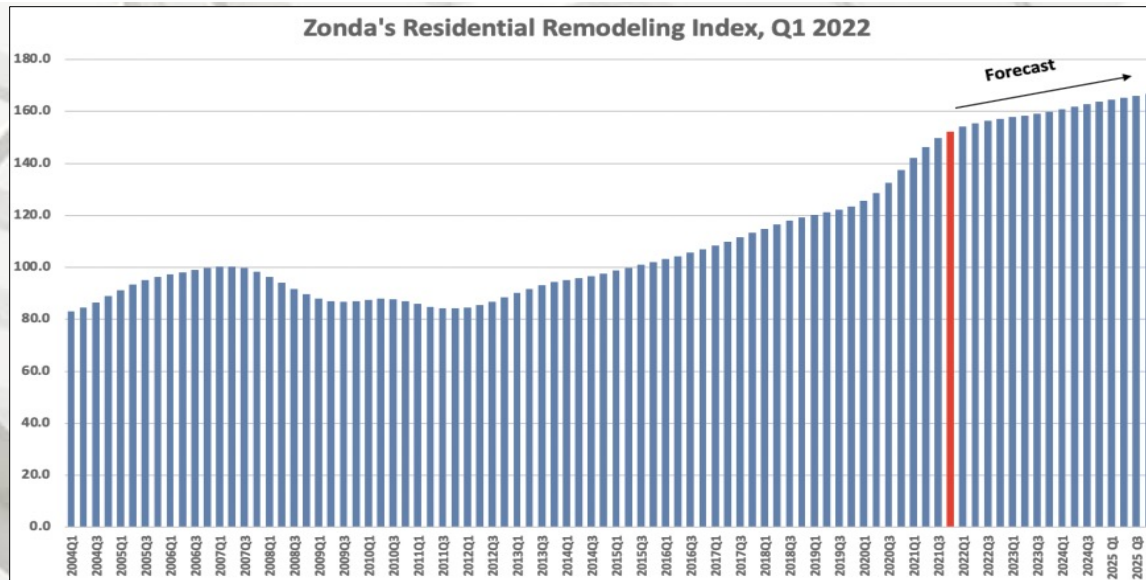
## Retail Sales: Hardware Stores



### Hardware Stores: NAICS 44413

NAICS 44413 retail sales increased 23.7% in March 2022 from February 2022 and increased 2.1% in March 2022 from March 2021 (on a non-adjusted basis).

# Remodeling



## Zonda

### **Red Hot Remodeling Growth Expected To Ease Into 2023 Remodeling Growth Continues to Stabilize After Robust 2021**

Following record growth in 2021, Zonda forecasts remodeling activity will grow 5.5% in 2022 before settling into moderate growth rates for 2023 and 2024.

“Zonda’s Residential Remodeling Index ([RRI](#)) posted a record-high reading of 154.1 in the first quarter of 2022, an 8.4% increase from the first quarter of 2021 and a gain of 1.2% from the previous quarter. The RRI grew 12.7% in 2021, the strongest annual increase in the index’s history dating back to 2004. Zonda forecasts the RRI will end 2022 with a 5.5% gain, before settling into more “historically moderate” growth rates of 2% in both 2023 and 2024.

The latest RRI reading indicates big-ticket remodeling activity in the U.S. is currently 54% higher than the baseline year of 2007, the peak of remodeling activity during the 2000’s. The growth during the first quarter of 2022 marks the 40th consecutive quarters of growth since remodeling activity bottomed in 2011. ...” – Vincent Salandro, *Associate Editor*, Remodeling

# Existing House Sales

## National Association of Realtors®

	Existing Sales	Median Price	Mean Price	Month's Supply
April	5,610,000	\$391,200	\$397,600	2.2
March	5,750,000	\$374,800	\$386,500	1.9
2021	5,960,000	\$340,700	\$364,100	2.3
M/M change	-2.4%	4.4%	2.9%	15.8%
Y/Y change	-5.9%	14.8%	9.2%	-4.3%

All sales data: SAAR

# Existing House Sales

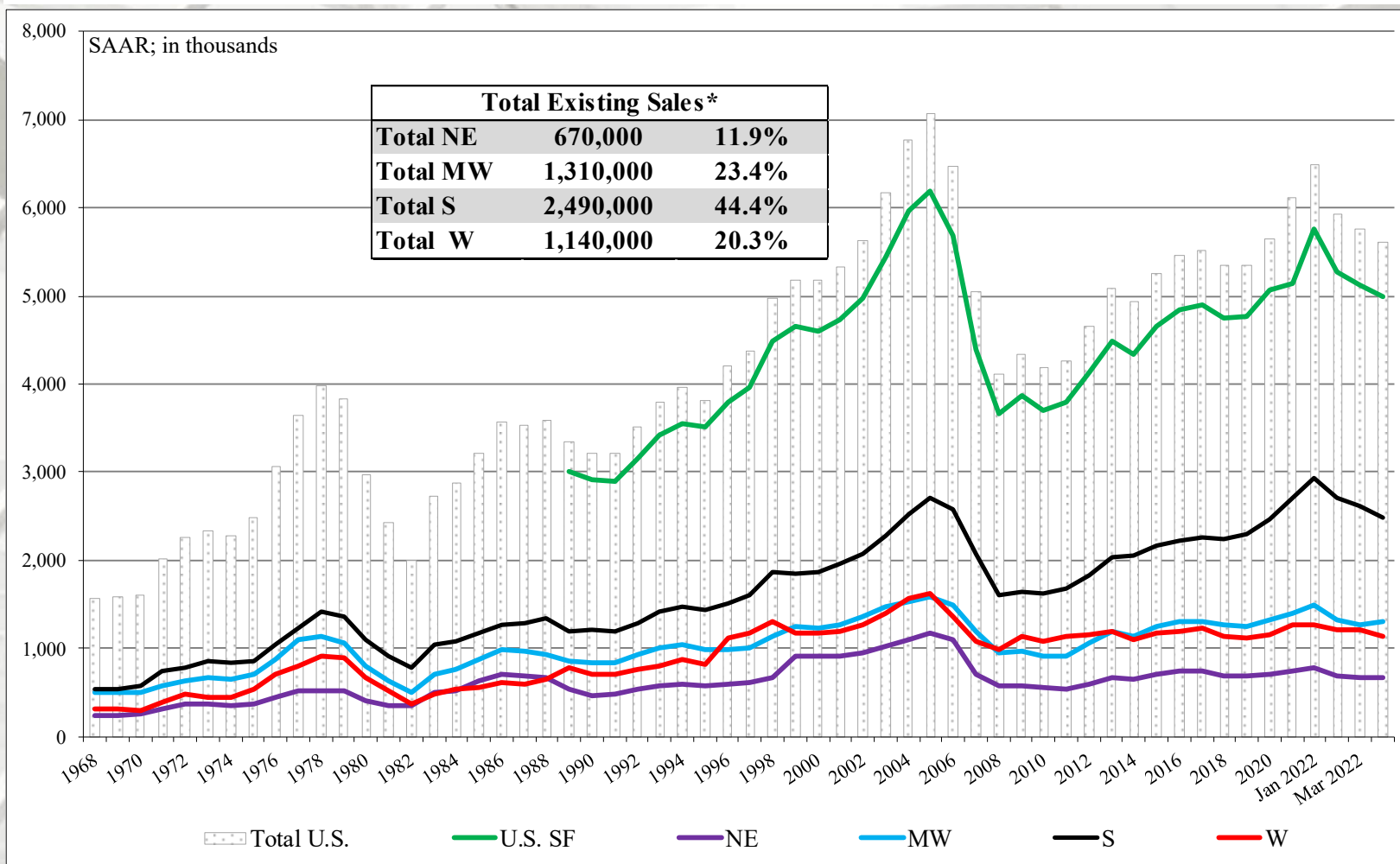
	Existing SF Sales	SF Median Price	SF Mean Price
April	4,990,000	\$366,000	\$378,300
March	5,120,000	\$356,700	\$372,400
2021	5,240,000	\$315,100	\$345,300
M/M change	-2.5%	4.4%	2.8%
Y/Y change	-4.8%	14.8%	9.3%

	NE	MW	S	W
April	670,000	1,310,000	2,490,000	1,140,000
March	660,000	1,270,000	2,610,000	1,210,000
2021	750,000	1,330,000	2,640,000	1,240,000
M/M change	1.5%	3.1%	-4.6%	-5.8%
Y/Y change	-10.7%	-1.5%	-5.7%	-8.1%

All sales data: SAAR.

# Existing House Sales



NE = Northeast; MW = Midwest; S = South; W = West

\* Percentage of total existing sales.



# U.S. Housing Prices

## Federal Housing Finance Agency

### U.S. House Price Index – Q1 2022

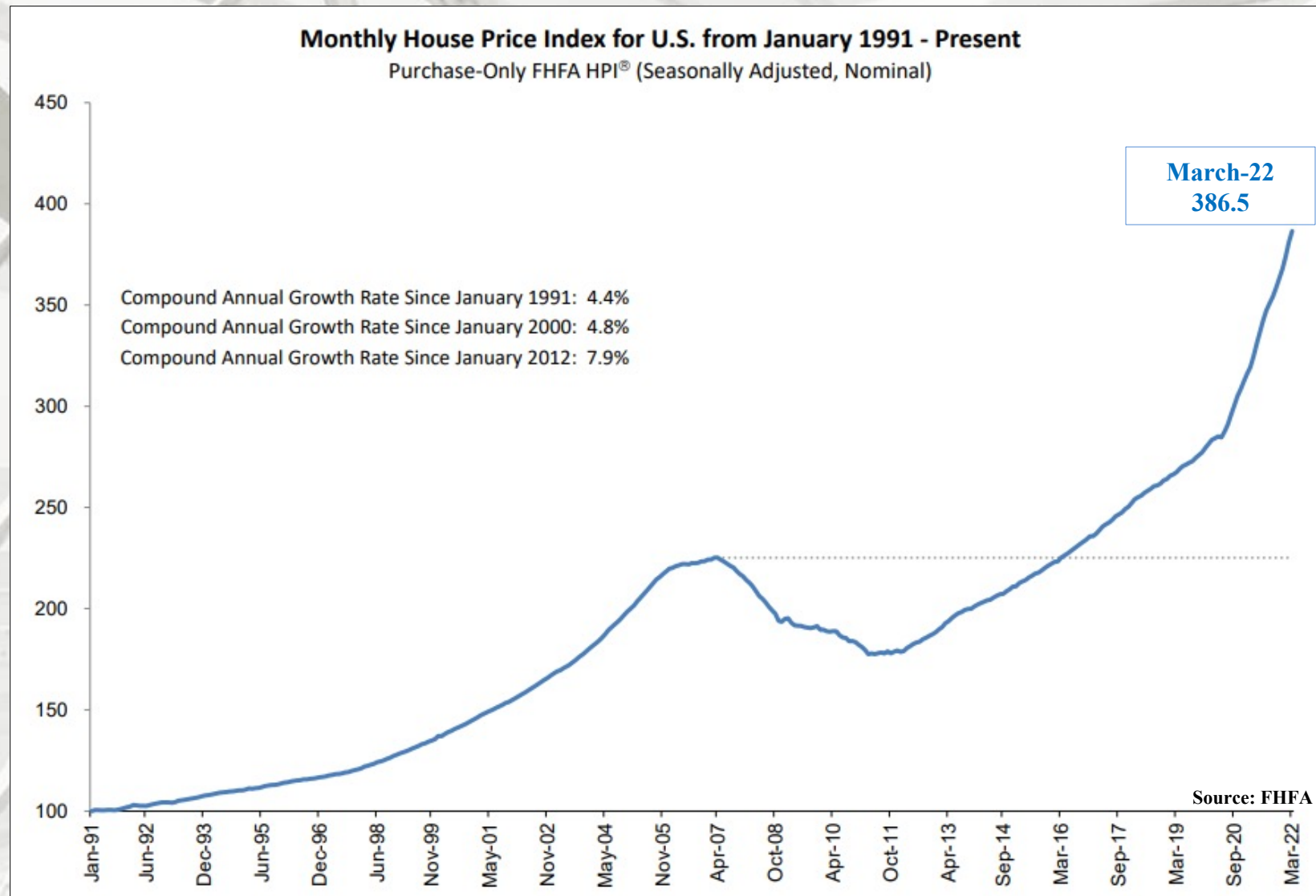
#### U.S. House Prices Rise 18.7 Percent over the Last Year; Up 4.6 Percent from the Fourth Quarter

#### Significant Findings

“U.S. house prices rose **18.7 percent** from the first quarter of 2021 to the first quarter of 2022 according to the Federal Housing Finance Agency House Price Index (FHFA HPI®). House prices were up **4.6 percent** compared to the fourth quarter of 2021. FHFA’s seasonally adjusted monthly index for March was up **1.5 percent** from February.” – Raffi Williams and Adam Russell, FHFA

“High appreciation rates continued across housing markets during the first quarter of 2022. Strong demand coupled with tight supply have kept prices climbing. Through the end of March, higher mortgage rates have not yet translated into slower price gains, but new home sales have dropped during the last few months, with a significant falloff in April.” – William Doerner, Ph.D., Supervisory Economist, Division of Research and Statistics, FHFA

# U.S. Housing Prices



# U.S. Housing Prices

## S&P CoreLogic Case-Shiller Index Reports Annual Home Price Gain of 20.6% in March

“... Data for March 2022 show that home prices continue to increase across the U.S. More than 27 years of history are available for these data series, and can be accessed in full by going to [www.spdji.com](http://www.spdji.com).

### Year-Over-Year

The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 20.6% annual gain in March, up from 20.0% in the previous month. The 10-City Composite annual increase came in at 19.5%, up from 18.7% in the previous month. The 20-City Composite posted a 21.2% year-over-year gain, up from 20.3% in the previous month. Tampa, Phoenix, and Miami reported the highest year-over-year gains among the 20 cities in March. Tampa led the way with a 34.8% year-over-year price increase, followed by Phoenix with a 32.4% increase, and Miami with a 32.0% increase. Seventeen of the 20 cities reported higher price increases in the year ending March 2022 versus the year ending February 2022.

### Month-Over-Month

Before seasonal adjustment, the U.S. National Index posted a 2.6% month-over-month increase in March, while the 10-City and 20-City Composites posted increases of 2.8% and 3.1%, respectively. After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 2.1%, and the 10-City and 20-City Composites posted increases of 2.2% and 2.4%, respectively.

In March, all 20 cities reported increases before and after seasonal adjustments.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

# U.S. Housing Prices

## S&P CoreLogic Case-Shiller Index

### Analysis

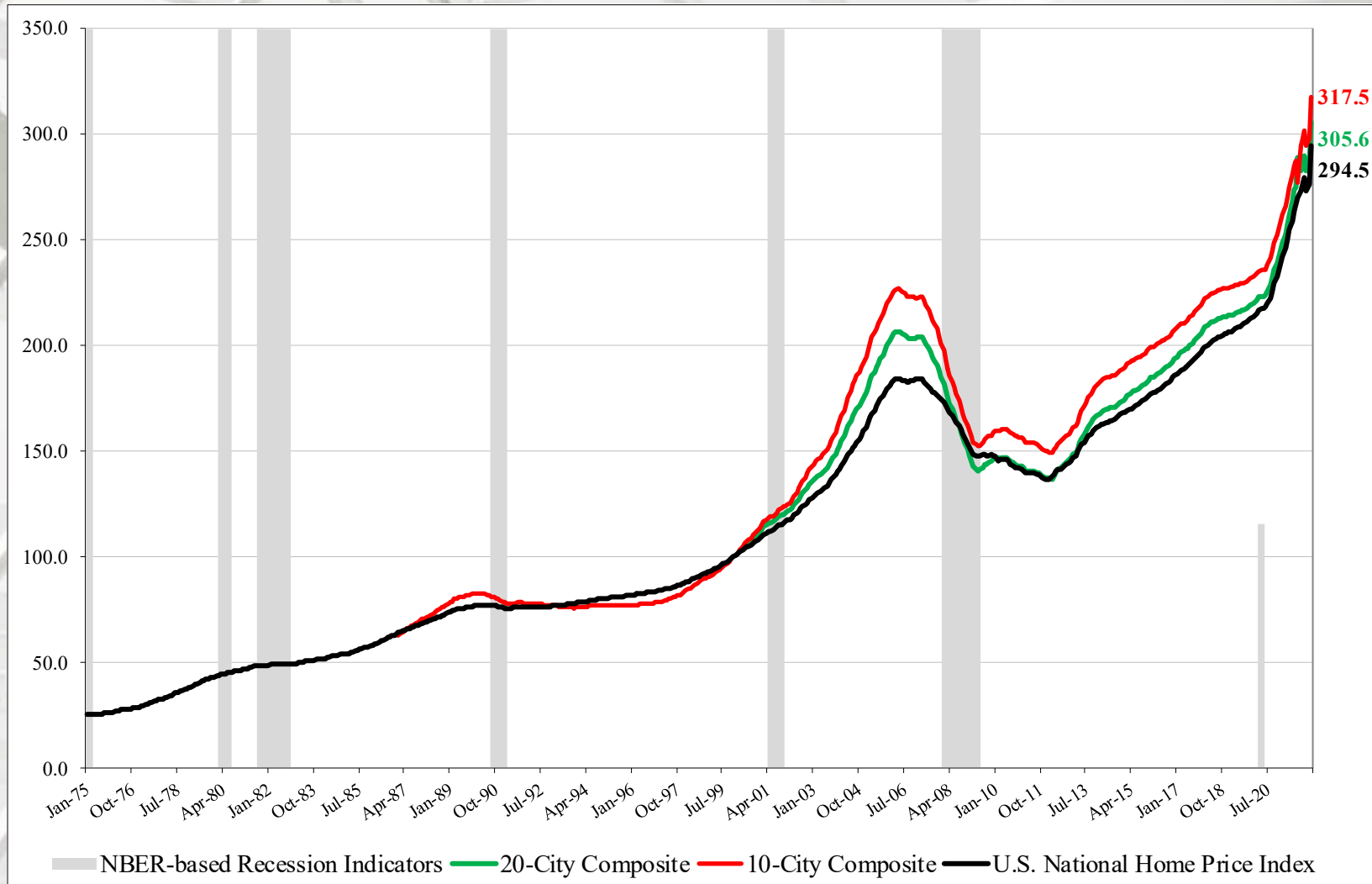
“Those of us who have been anticipating a deceleration in the growth rate of U.S. home prices will have to wait at least a month longer. The National Composite Index recorded a gain of 20.6% for the 12 months ended March 2022; the 10- and 20-City Composites rose 19.5% and 21.2%, respectively. For both National and 20-City Composites, March's reading was the highest year-over-year price change in more than 35 years of data, with the 10-City growth rate at the 99th percentile of its own history.

The strength of the Composite indices suggests very broad strength in the housing market, which we continue to observe. All 20 cities saw double-digit price increases for the 12 months ended in March, and price growth in 17 cities accelerated relative to February's report. March's price increase ranked in the top quintile of historical experience for every city, and in the top decile for 19 of them.

For the first time in nearly three years, the city with the most rapid growth in housing prices was not Phoenix. In March, Tampa led all cities with a gain of 34.8%, with Phoenix (32.4%) and Miami (32.0%) taking silver and bronze honors. As was the case last month, prices were strongest in the South (+29.8%) and Southeast (+29.6%), with every region continuing to show impressive gains.

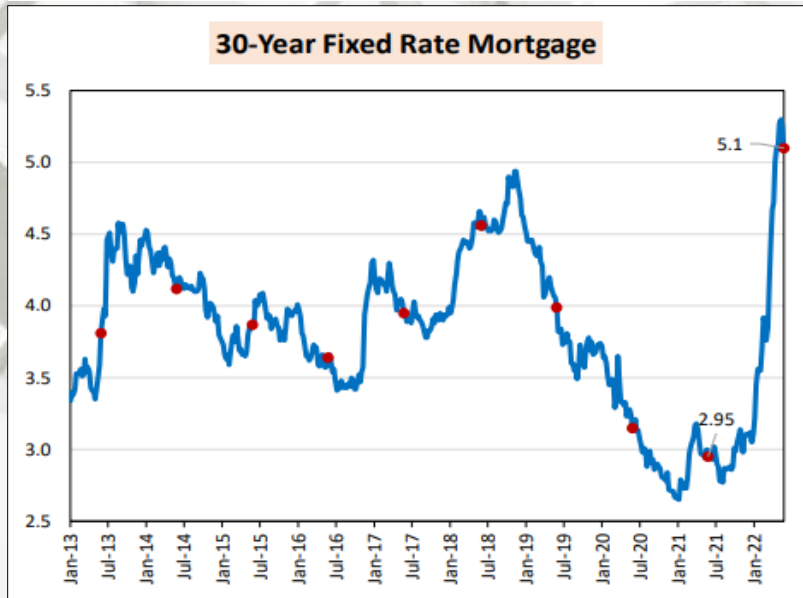
Mortgages are becoming more expensive as the Federal Reserve has begun to ratchet up interest rates, suggesting that the macroeconomic environment may not support extraordinary home price growth for much longer. Although one can safely predict that price gains will begin to decelerate, the timing of the deceleration is a more difficult call.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

# S&P/Case-Shiller Home Price Indices

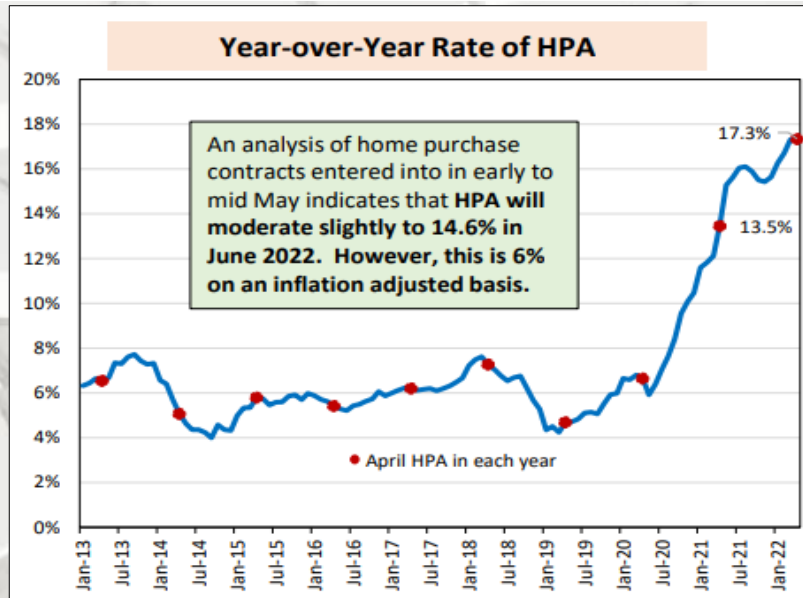


\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# U.S. Housing Affordability & Prices



Note: Data are for 30-year fixed-rate prime conventional conforming home purchase mortgages with a loan-to-value of 80 percent  
Source: Freddie Mac.



Note: Data are for the entire country. Data for April 2022 are preliminary.  
Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).

## AEI Housing Center

### Home Price Appreciation Accelerates Despite the Rate Hikes

“HPA for April 2022 came in at 17.3% year-over-year – level with a month ago and up from 13.5% a year ago. Since the beginning of 2020, home prices have risen 38%. This rapid pace of HPA is driven by supply constraints (see next slides), relatively low mortgage rates, and an arbitrage opportunity enhanced by the work from home economy. Based on Optimal Blue data, HPA is projected to remain in the mid-teens through May at 16.8% and moderate slightly in June to 14.6% due to the increasing rates. Without a significant increase in supply or a mortgage rate higher than 6%, y-o-y HPA for December 2022 and 2023 (y-o-y) is expected to be 12% and 9%, respectively (note: a forecast change).” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

# U.S. Housing Affordability & Prices

## Black Knight®

### April 2022 Mortgage Monitor

#### May Sees Least Affordable Housing Market in 16 Years While Existing Mortgage Holders Gain Record \$1.2 Trillion in Tappable Equity in Q1 2022

- “U.S. home prices are up 42% since the start of the pandemic, with the average home having gained almost 9% in value just since the start of 2022
- Though the annual rate of appreciation cooled slightly (19.9% in April vs. an upwardly revised 20.4% for March), rising home prices and interest rates have made for the worst affordability since July 2006
- The monthly principal and interest (P&I) payment on the average-priced home with 20% down is nearly \$600 (+44%) more than it was at the start of the year and \$865 (+79%) more than before the pandemic
- As of May 19, with 30-year mortgage rates at 5.25%, the share of median income required to make that P&I payment had climbed to 33.7%, just shy of the 34.1% high reached in July 2006
- While tightening affordability is hampering prospective homebuyers, the home price growth at the root of the issue continues to increase the housing wealth of current homeowners with mortgages
- U.S. mortgage holders saw their collective tappable equity – the amount available to borrow against while retaining at least a 20% equity stake in the home – increase by \$1.2 trillion in Q1 2022 alone
- In total, mortgage holders gained \$2.8 trillion in tappable equity over the past 12 months – a 34% increase that equates to more than \$207,000 in equity available per borrower.” – Black Knight Data & Analytics

# U.S. Housing Affordability & Prices

**Black Knight®**

## **April 2022 Mortgage Monitor**

“The [Data & Analytics](#) division of [Black Knight, Inc.](#) (NYSE:BKI) released its latest [Mortgage Monitor Report](#), based upon the company’s industry-leading mortgage, real estate and public records datasets. While rising home prices and volatile interest rates continue to compound the affordability pressures in the housing market, the same dynamics have also served to increase the housing wealth of American mortgage holders by a significant margin. According to Black Knight Data & Analytics President Ben Graboske, tappable equity – the amount available for mortgage holders to borrow against while retaining a 20% equity stake in their homes – has reached yet another all-time high.

“Home price growth cooled – albeit very slightly – in April,” said Graboske. “While a downward shift from 20.4% to 19.9% annual growth is hardly cause for concern, it’s also likely we’ve not yet seen the full impact of recent rate increases. Rather, April’s decline is more likely a sign of deceleration caused by the modest rate increases in late 2021 and early 2022 when rates first began ticking upwards. The March and April 2022 rate spikes will take time to show up in repeat sales indexes. That said, price growth thus far has created a very difficult environment for prospective homebuyers to navigate. The monthly P&I payment required for the average home purchase is up nearly \$600 since the start of the year, and factoring in current income levels housing is now within a whisper of the record low affordability seen at the peak of the market in 2006. Even modest increases in either rates or home prices at this point would push us over that line.” – Black Knight Data & Analytics



# U.S. Housing Affordability & Prices

**Black Knight®**

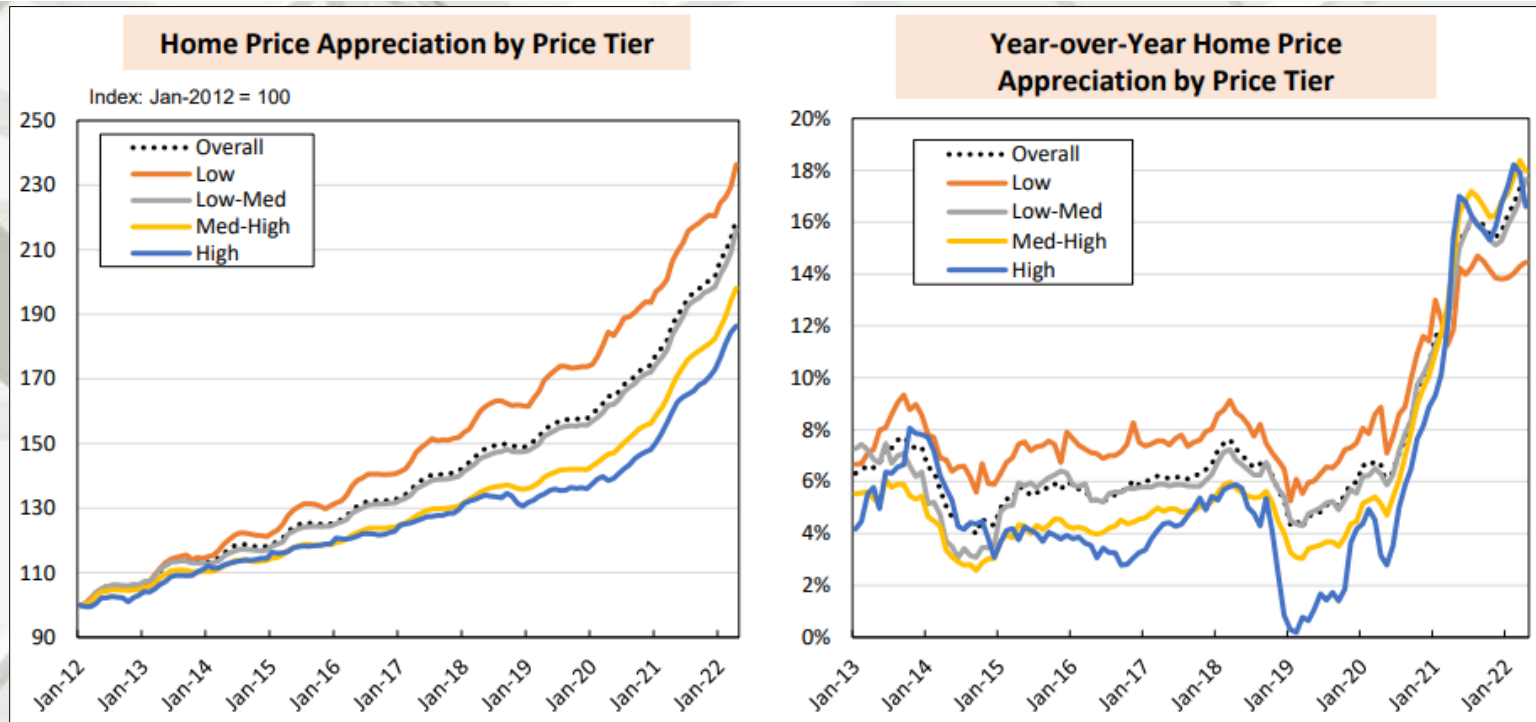
## **April 2022 Mortgage Monitor**

““There’s another side to this story, though; one of significant equity growth among current homeowners. With the average-priced home up 42% in value since the start of the pandemic, current homeowners with mortgages are sitting on an average \$207,000 in equity that they could choose to tap while still keeping a 20% equity buffer in place. That’s a result of an astonishing \$1.2 trillion gain in tappable equity in the first quarter of 2022 alone – the largest such quarterly growth ever recorded. In total, American mortgage holders have more than \$11 trillion in tappable equity, also a history-making total. It really is a bifurcated landscape – one that grows ever more challenging for those looking to purchase a home but is simultaneously a boon for those who already own and have seen their housing wealth rise substantially over the last couple of years. Depending upon where you stand, this could be the best or worst of all possible markets.”

The Mortgage Monitor also looked at another key contributing factor to home prices and affordability – record-low for-sale inventories. Despite seeing a rise of 27,500 from March to April, active listings remain 67% below pre-pandemic levels, with 820,000 fewer listings than would be typical at this point in most home buying seasons. New listing volumes were up 1% from the same time last year, but remained 11% below pre-pandemic levels for the month of April, suggesting that the number of homes hitting the market remains well below what would be considered “normal” levels.

The continued lack of supply continues to weigh on home sales and keep prices higher than they might otherwise be given current affordability metrics. In recent years, a 20.5% payment-to-income ratio has been a rough tipping point at which appreciation begins to soften, but given the severity of inventory shortages, home prices continue to rise – even as that ratio has climbed to 33.7%, just shy of the 34.1% high reached in July 2006.” – Black Knight Data & Analytics

# U.S. Housing Affordability & Prices



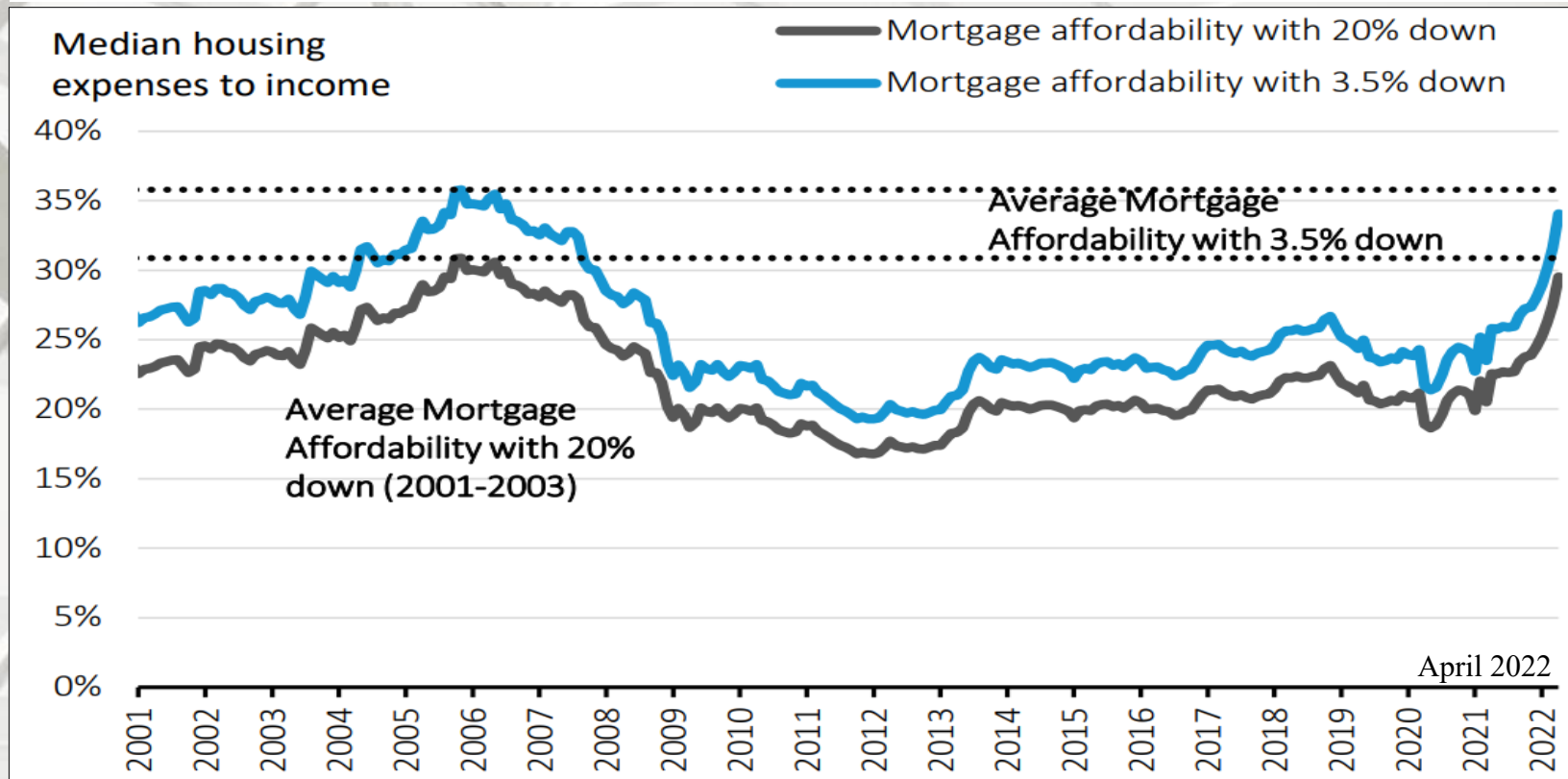
Note: Data are for the entire country. Data for April 2021 are preliminary.  
Source: AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).

## AEI Housing Center

### Home Price Appreciation by Price Tier

“Since 2012 a large gap in HPA has developed between the lower and upper end of the market (left panel). Preliminary numbers for April 2022 indicate that the low price tier continues to have strong HPA, but the med-high and high price tiers, which are more dependent on the Fed’s monetary punch bowl for increased buying power from low rates, are showing the strongest HPA, with the impact from higher rates slowly emerging (right panel). This is a trend reversal.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

# U.S. Housing Affordability

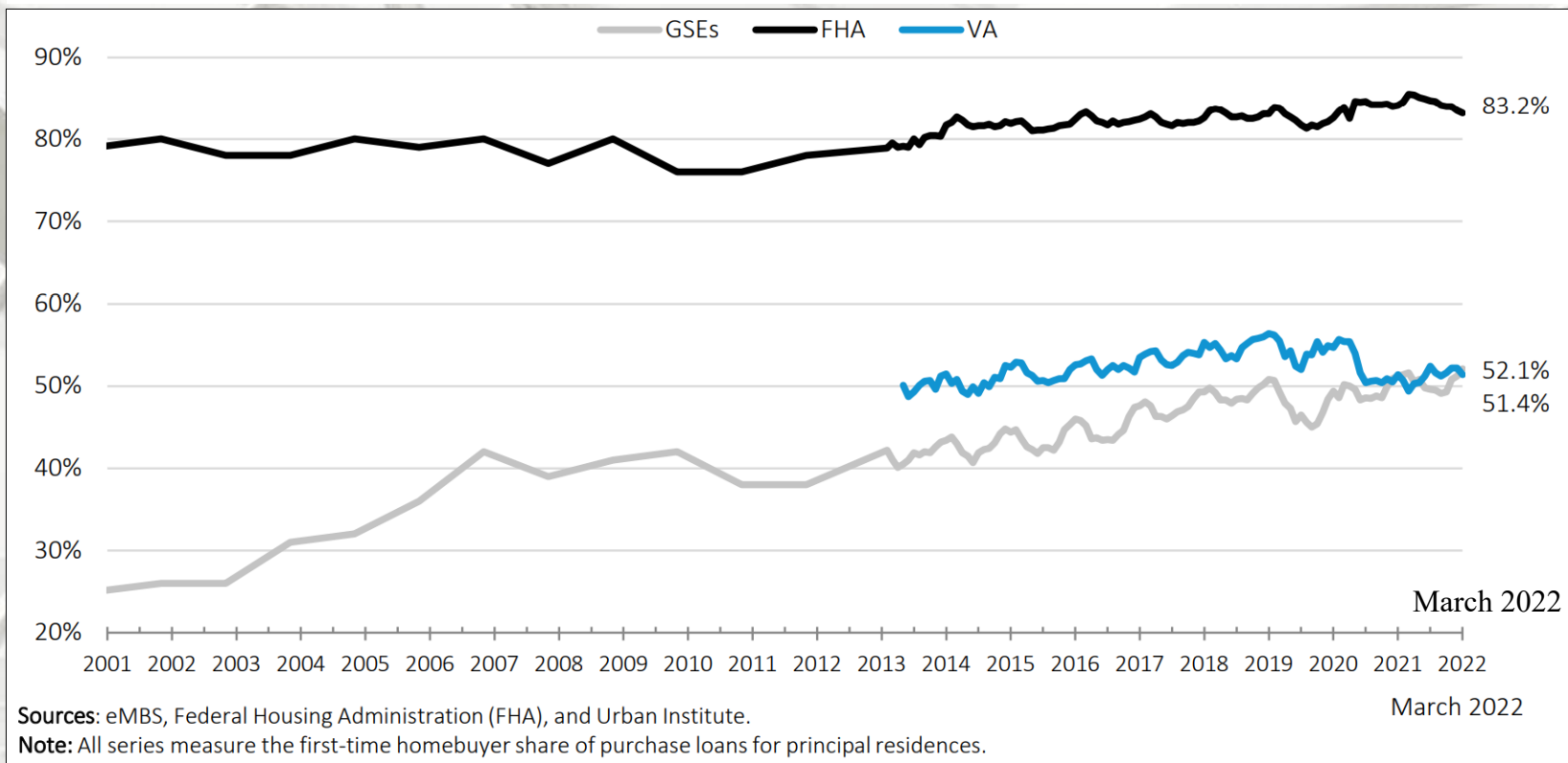


Urban Institute

## National Mortgage Affordability Over Time

“With the rise in interest rates, and rapid increases in home prices, affordability continues to worsen. As of April 2022, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 29.5 percent, compared to 30.9 percent at the peak of the housing bubble in November 2005; with 3.5 percent down it is 34.0 percent, compared to a 35.8 prior peak in November 2005. These numbers represent a sharp worsening in affordability over the past year. ... ” – Laurie Goodman *et. al*, Vice President, Urban Institute

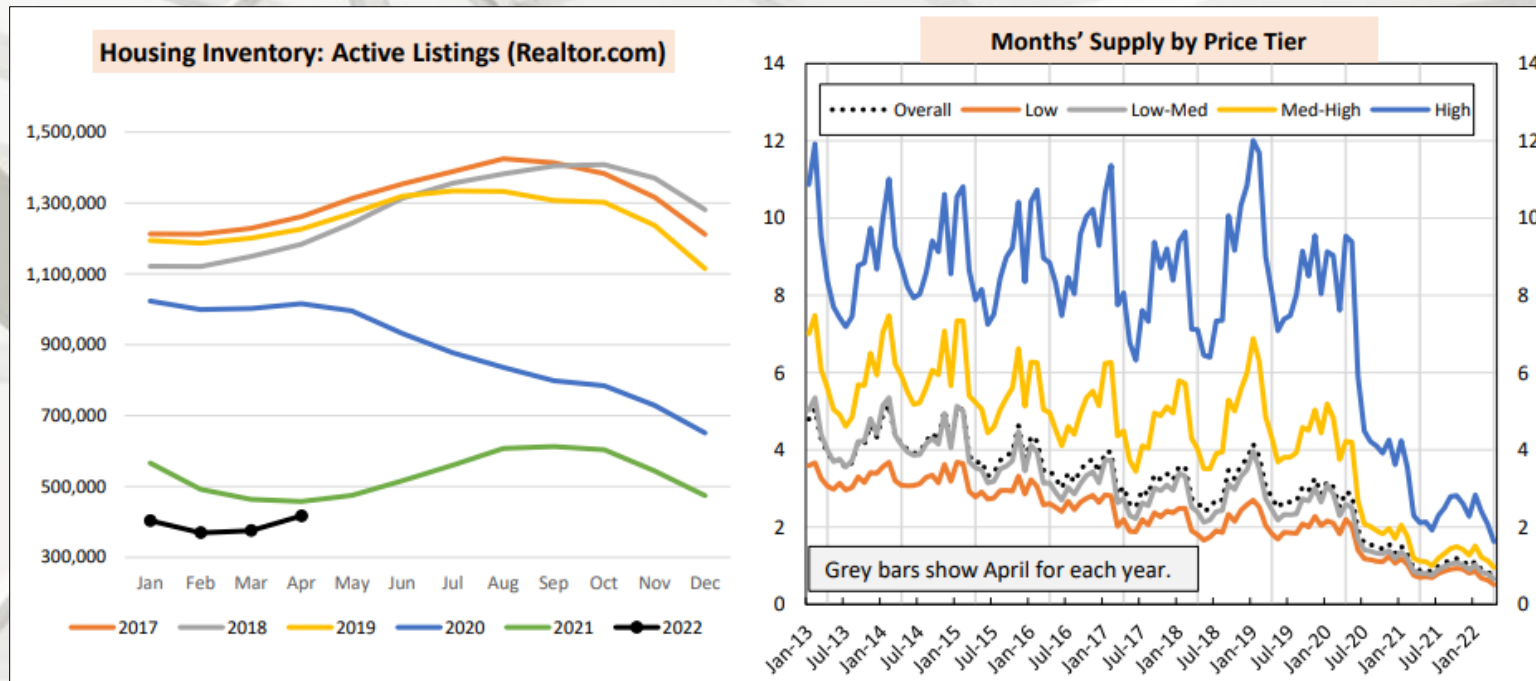
# U.S. Housing Affordability



## Urban Institute First-time Home Buyers

“In March 2022, the FTHB share for FHA, which has always been more focused on first time home buyers, was 83.2 percent. The FTHB share of VA lending in March was 52.1 percent; the GSE share was a very similar 51.4 percent. The table shows that based on mortgages originated in March 2022, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and have a higher LTV, thus paying a higher interest rate.” – Laurie Goodman *et. al*, Vice President, Urban Institute

# U.S. Housing Supply



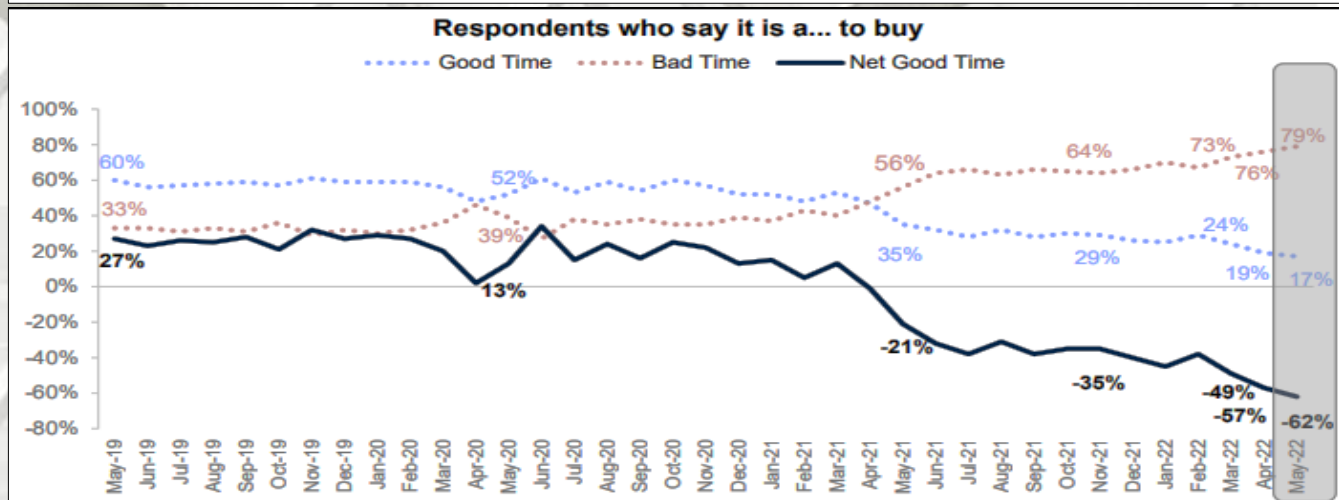
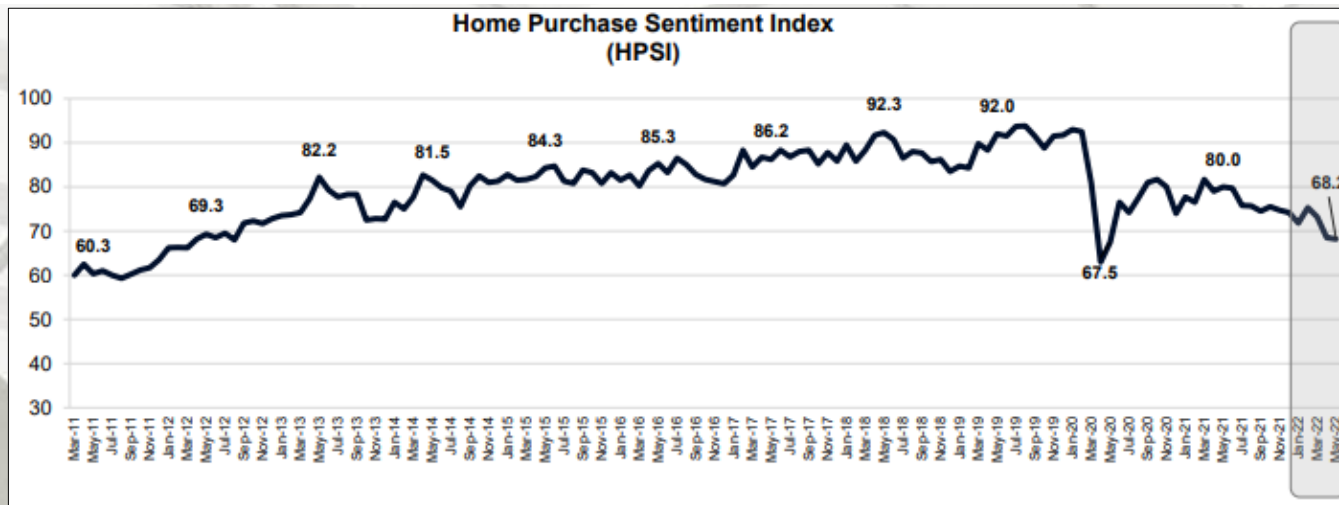
Sources: Realtor.com, Zillow, and AEI Housing Center, [www.AEI.org/housing](http://www.AEI.org/housing).

## AEI Housing Center

### Supply Remains Depleted, Likely Fueling Continued Rapid HPA

“Housing inventory reached a new series’ low for the month of April (left). While active listings increased in April – mimicking pre-pandemic seasonal trends experienced in 2018-2019 – April 2022 inventory was still down 9% from the already low level of April 2021 and both stand at about a third of their 2017-2020 levels. Months’ supply stood at 0.7 months in April 2022, down from 2.8 months in April 2019 (right). This is the lowest level seen in our series for April.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

# U.S. Housing Market

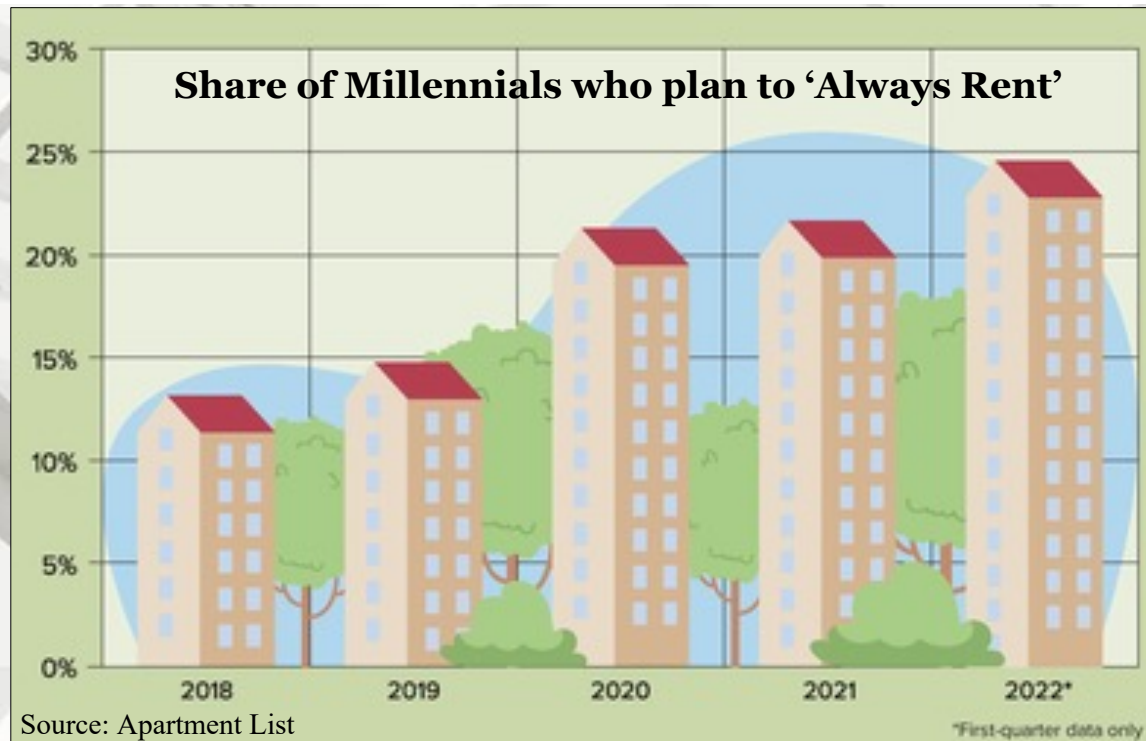


## Fannie Mae

### Home Purchase Sentiment Index® (HPSI)

“The HPSI decreased by 0.3 points to 68.2 in May. In May, the net share of consumers who say it is a good time to buy decreased by 5 percentage points to -62%, a new survey low. The decrease in the HPSI can be attributed to net decreases in three components this month: Job Loss Concern, Buying Conditions, and Change in Household Income. There were net increases in three components: Selling Conditions, Home Price Outlook, and Mortgage Rate Outlook.” – Fannie Mae

# U.S. Housing Market



## Scotsman Guide

### Millennials May Be Gradually Giving Up On Home Ownership

“An annual series of surveys has revealed a discouraging (although not entirely shocking) takeaway; Millennials may be gradually giving up on home ownership. Renters have been polled on their home buying sentiments since 2019, and survey data shows that the share of respondents who plan to remain renters rather than pursue a home purchase has increased each year of the poll’s existence. A big jump in the share who want to “always rent” coincided with the arrival of the COVID-19 pandemic, growing from 14.9% in 2019 to 21.3% in 2020. Data for this year is still preliminary and only includes responses from the first quarter, but thus far, the share of Millennial renters who say they will never own is nearly one in four.” – Arnie Aurellano, Content editor, Scotsman Guide, Inc.

# U.S. Housing Market

## Zonda New Home Lot Supply Index (LSI)

### Lot Supply Index 1Q22

**The New Home Lot Supply Index (LSI) came in at 38.6 for 1Q22, representing a continuation of the flattening seen last quarter.**

#### **New home lot inventory remains flat**

“The New Home Lot Supply Index, backed by data from Zonda, shows lot supply tightened year-over-year across the United States. The index is a residential real estate indicator based on the number of single-family vacant developed lots and the rate those lots are absorbed.

- The New Home LSI came in at 38.6 for 1Q22, representing a 20.4% decrease from 1Q21.
- On a quarter-over-quarter basis, supply decreased by 0.2%, essentially flat from 4Q21.
- Nationally, the 1Q22 data reflects a significantly undersupplied market.

Lot inventory flattened quarter-over-quarter, which represents a notable change from the consistent decline over the past couple of years. Home building starts with lots and the flattening trend captures the time and money invested in land development since the start of the pandemic.

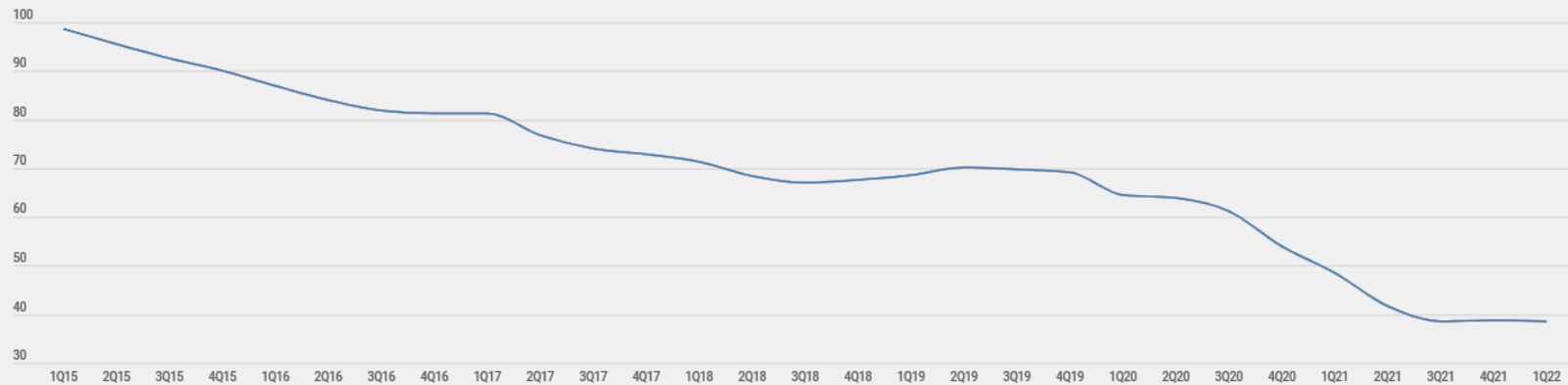
#### **Lot supply trended below 1Q21 levels in almost every top market across the country**

- Lot inventory in all the top markets remains “significantly undersupplied” but lots going through capital improvements suggest vacant developed lots should rise over the next 6-18 months.
- The top three markets where land supply tightened the most on a year-over-year basis were all in Florida. The year-over-year declines were led by Jacksonville, Tampa, and Miami. Similar to most areas in the country, builders in these markets have been burning through their available lots in attempts to meet demand.
- Los Angeles/OC, Miami, and Jacksonville currently have the tightest lot supply among major markets.
- The LSI grew quarter-over-quarter in twelve of Zonda’s select 30 markets, even with last quarter. On a quarter-over-quarter basis, Austin and Indianapolis grew the most, up 18% and 17%, respectively.” – Ali Wolf, Chief Economist, Zonda



# U.S. Housing Market

New Home Lot Supply Index



Source: Zonda; Data as of 1Q22

Share

Zonda.

## NATIONAL INDEX

38.6

### SFD Lot Supply

Year-over-year

-20.4%

Quarter-over-quarter

-0.2%

## Most impacted markets

Supply in 28 of 30 select markets tightened year-over-year, led by Jacksonville, Tampa, and Miami

📍 Jacksonville, FL

YOY

-45.6%

📍 Tampa, FL

YOY

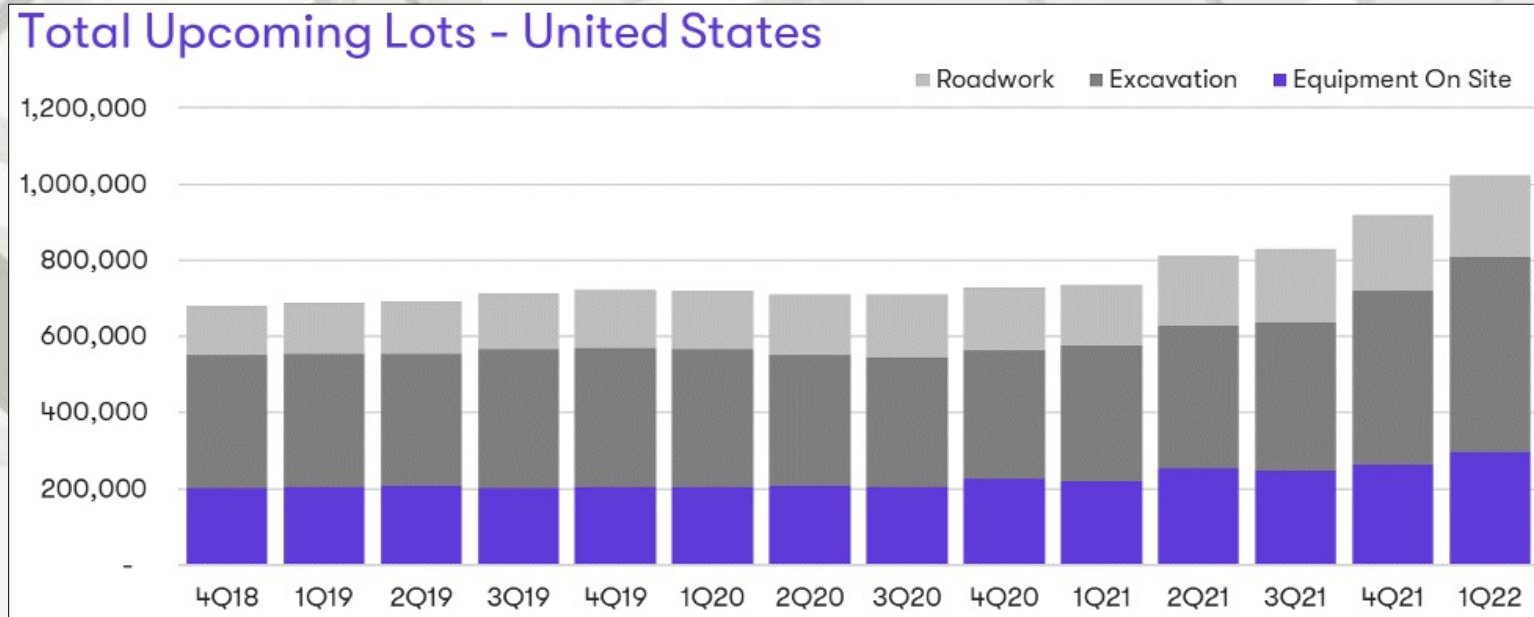
-41.4%

📍 Miami, FL

YOY

-40.4%

# U.S. Housing Market



## Zonda New Home Lot Supply Index (LSI)

“Zonda tracks future lots through the stages of development. The stages range from raw land through streets in, which is the last step before the lot becomes a VDL. Zonda groups the last few stages into a classification called total upcoming lots, which implies delivery within the next 12 months.

Total upcoming lots for 1Q22 increased 39% year-over-year and 11% from last quarter alone. The largest annual gains among the total upcoming lots came in the equipment on-site stage, which grew 40% from the same time last year and implies expected delivery in the following quarter. The current majority of total upcoming lots fall in the excavation stage, making up 70% nationally and have an expected delivery between 4Q22 and 1Q23 (the range represents different timeframes from local entitlement processes).

Note, not all the lots in excavation will match Zonda’s estimated timeline.

Home builders are finding it difficult to quickly get more homes built because of the land, labor, material, and governmental shortages and delays. The same challenges apply to land and lot development, which is impacting availability. However, there is light at the end of the tunnel. Our total upcoming lots data tells us more vacant developed lots should become available over the next 12 months.” – Ali Wolf, Chief Economist, Zonda

# U.S. Housing Market

## American Loggers Council

### **Record fuel prices forcing shutdowns, threaten entire U.S. timber supply chain, ALC warns**

“Skyrocketing, record-breaking diesel fuel prices are forcing some logging and trucking operations to shut down. More shutdowns will follow. Fuel was once 25 per cent of the operational cost of running a truck, now it is up to 60 per cent plus. When it costs \$1,118 to fill up a logging truck, plus the other expenses to operate, there is not a profit at the end of the day.

Unlike most industries, the timber industry cannot pass on increased costs caused by fuel and inflation. Their consumer (mills) simply disregards the request for a fuel adjustment and the information breaking down the additional production and transportation costs. Many have provided partial fuel adjustments but not to the degree necessary to offset the additional expense. It is a take it or leave it business philosophy.

As a result, mills in Michigan and Maine are reportedly nearly out of wood. Companies have “parked” their equipment because they cannot afford to operate under the current price structure.

“Got down to three truck drivers out of seven trucks. Was fairly close to the mill, now they want me to move 70 miles from home and haul to two different mills that the truck drivers had to wait three hours minimum to get unloaded,” explained Tim Rodrigues of Rodrigues & Sons Logging in Texas. “So, I just carried my stuff home. I’ve sold most of it. No need to lose what little money I have.”” – American Loggers Council

# U.S. Housing Finance

## Mortgage Bankers Association (MBA)

### Mortgage Credit Availability Decreased in May

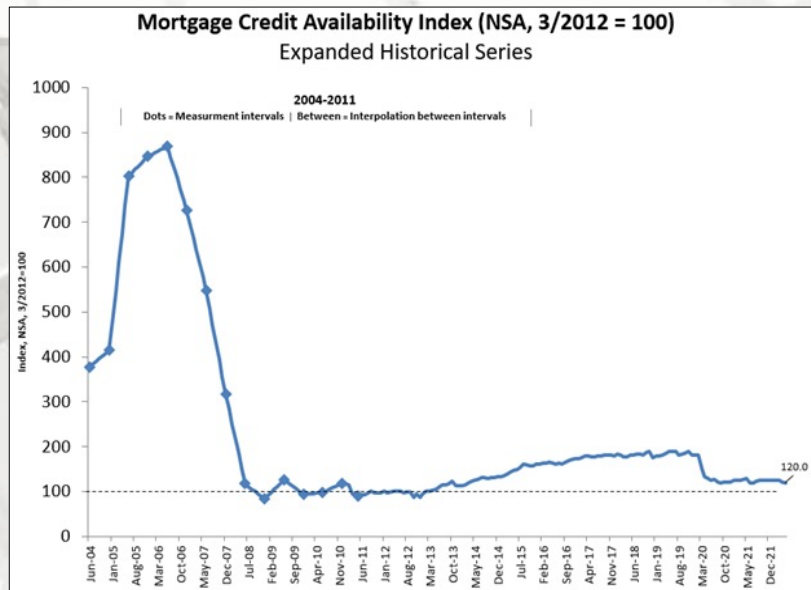
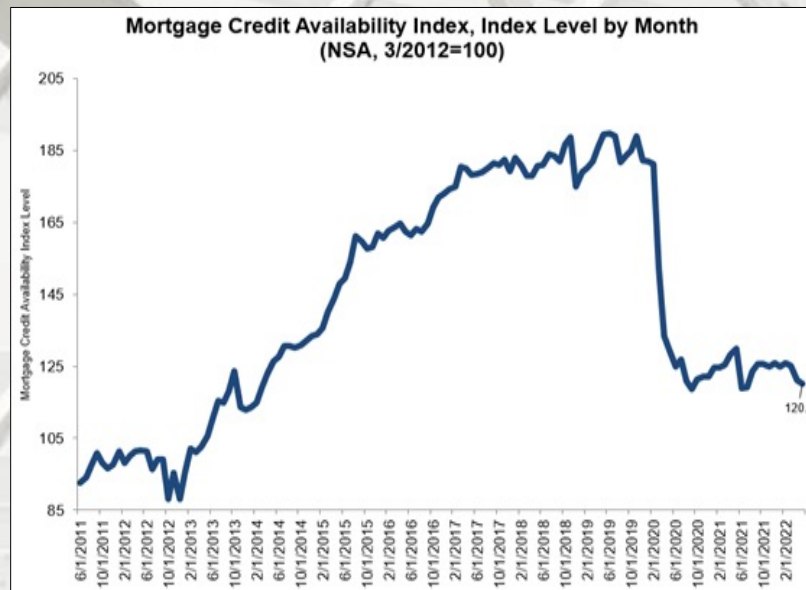
“Mortgage credit availability decreased in May according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) that analyzes data from ICE Mortgage Technology.

The MCAI fell by 0.9 percent to 120.0 in May. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI decreased 0.4 percent, while the Government MCAI decreased by 1.3 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI decreased by 1.1 percent, and the Conforming MCAI rose by 1.0 percent.

Mortgage credit supply declined for the third month in a row to the lowest level since July 2021. The index remains more than 30 percent below pre-pandemic levels, as recent months’ credit tightening has occurred in refinance loan programs. Last month’s tightening was most notable in the government and jumbo segments of the mortgage market. The decrease in government credit was driven mainly by a reduction in streamline refinance programs, as mortgage rates increased sharply through May, slowing refinance activity. Jumbo credit availability, which was starting to see a more meaningful recovery from 2020’s pullback, declined after three months of expansion.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

# U.S. Housing Finance

## Mortgage Credit Availability (MBA)



Source: Mortgage Bankers Association; Powered by Ellie Mae's AllRegs® Market Clarity®

# Mortgage Bankers Association (MBA)

## Purchase Applications Payment Index

MBA's new monthly affordability index reports applications data by loan type, geography, and race; comparison to asking rents

“Homebuyer affordability decreased in April, with the national median payment applied for by applicants jumping 8.3 percent to \$1,653 from \$1,526 in January. This is according to the Mortgage Bankers Association’s (MBA) Purchase Applications Payment Index (PAPI), which measures how new monthly mortgage payments vary across time – relative to income – using data from MBA’s Weekly Applications Survey (WAS).

Low unemployment has spurred strong income growth in early 2022, but home buyer affordability has decreased due to the quick rise in mortgage rates amidst steep home-price growth. The 30-year fixed-rate mortgage spiked 73 basis points from December 2021 through April 2022. Together with increased loan application amounts, a mortgage applicant's median principal and interest payment in April jumped \$127 from January and \$337 from one year ago.

An increase in MBA’s PAPI – indicative of declining borrower affordability conditions – means that the mortgage payment to income ratio (PIR) is higher due to increasing application loan amounts, rising mortgage rates, or a decrease in earnings. A decrease in the PAPI – indicative of improving borrower affordability conditions – occurs when loan application amounts decrease, mortgage rates decrease, or earnings increase.” – Edward Seiler, Associate Vice President, Housing Economics, and Executive Director, Research Institute for Housing America, MBA

# Mortgage Bankers Association (MBA)

## Purchase Applications Payment Index

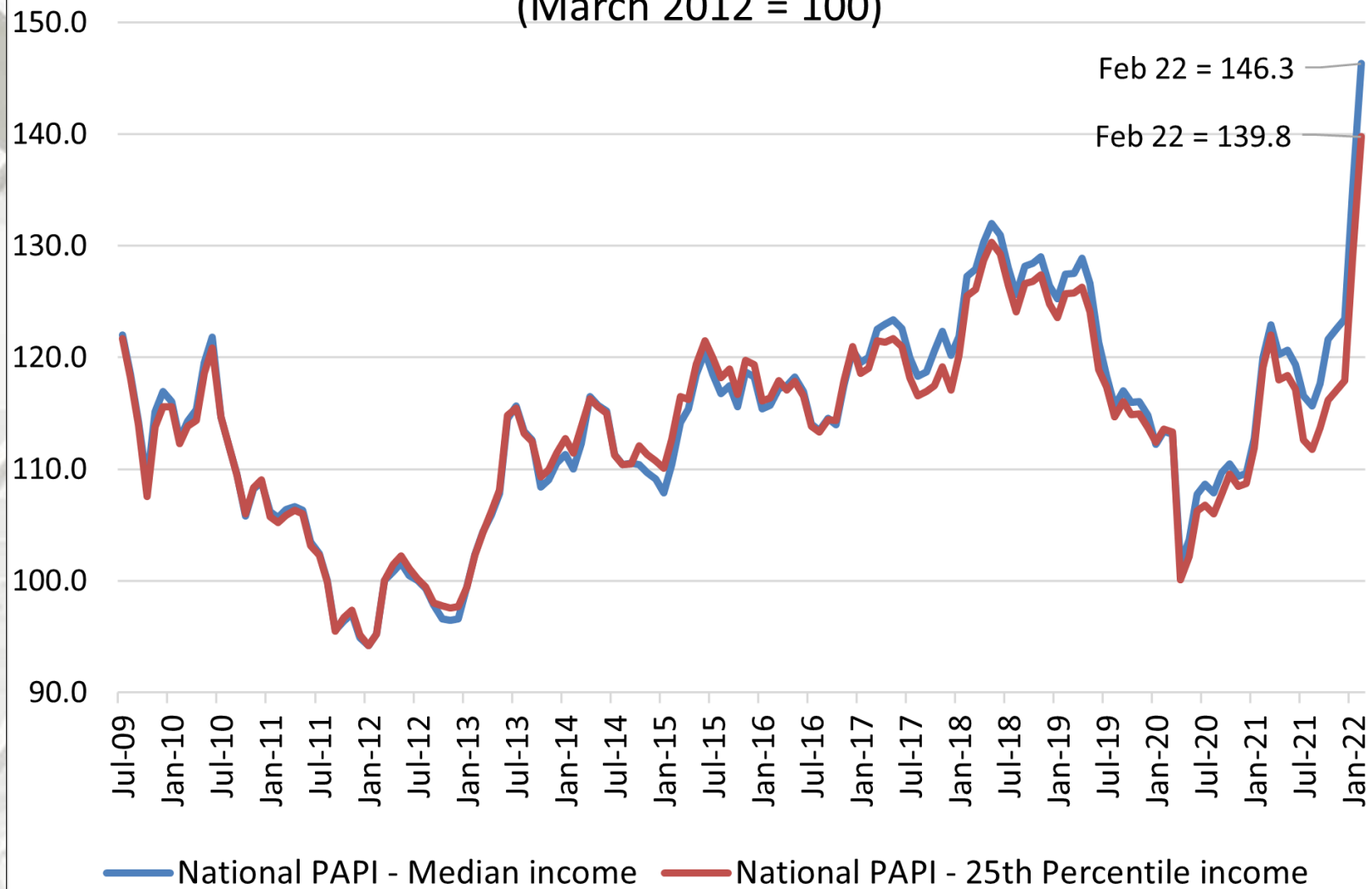
“The national PAPI (Figure 1) increased 8.3 percent to 146.3 in April 2022 from 135.1 in January 2022, meaning payments on new mortgages take up a larger share of a typical person’s income. Compared to April 2021 (120.0), the index jumped 21.9 percent. For borrowers applying for lower-payment mortgages (the 25th percentile), the national mortgage payment increased 9.8 percent to \$1,094 from \$996 in January 2022.

MBA’s national mortgage payment to rent ratio (MPRR) – this month comparing median purchase mortgage application payments to median asking rents in December 2021 from November 2021 – increased to 1.15 from 1.14 and was up from 1.01 in December 2020, meaning mortgage payments for home purchases have increased relative to rents. The national median asking rent in fourth-quarter 2021 was \$1,207. The 25th percentile mortgage application payment to median asking rent ratio increased from 0.73 in November 2021 to 0.74 in December 2021.

Asking rents from first-quarter 2020 to fourth-quarter 2021 increased 16 percent, even outpacing the steep growth in mortgage application payments over that period. MBA’s mortgage payment to rent ratio is now at roughly the same level it was at the start of the COVID-19 pandemic in April 2020. ...” – Edward Seiler, Associate Vice President, Housing Economics, and Executive Director, Research Institute for Housing America, MBA

# Mortgage Bankers Association (MBA)

Figure 1: Purchase Applications Payment Index for All U.S.  
(March 2012 = 100)





# MBA Mortgage Finance Forecast

## MBA Mortgage Finance Forecast

June 10, 2022

	2021				2022				2023				2021	2022	2023	2024
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
<b>Housing Measures</b>																
Housing Starts (SAAR, Thous)	1,581	1,591	1,569	1,679	1,724	1,701	1,675	1,682	1,710	1,734	1,720	1,746	1,605	1,695	1,728	1,715
Single-Family	1,138	1,112	1,104	1,170	1,186	1,137	1,186	1,216	1,236	1,267	1,264	1,292	1,131	1,181	1,265	1,273
Two or More	443	479	465	509	538	564	489	466	474	467	456	454	474	514	463	443
<b>Home Sales (SAAR, Thous)</b>																
Total Existing Homes	6,287	5,950	6,067	6,203	6,063	5,630	5,645	5,710	5,719	5,838	5,879	6,039	6,127	5,762	5,869	6,076
New Homes	896	737	699	752	814	693	774	794	803	832	815	816	771	769	816	827
FHFA US House Price Index (YOY % Change)	13.1	17.7	18.6	17.6	18.8	16.6	5.6	2.7	2.4	2.3	2.5	2.4	17.6	2.7	2.4	2.5
Median Price of Total Existing Homes (Thous \$)	313.5	351.7	356.1	353.8	361.4	396.5	391.9	385.7	387.5	396.1	398.3	401.1	343.8	383.9	395.8	411.3
Median Price of New Homes (Thous \$)	364.9	380.6	407.8	422.5	430.9	452.6	442.8	437.1	440.3	442.0	443.6	444.1	394.0	440.8	442.5	447.7
<b>Interest Rates</b>																
30-Year Fixed Rate Mortgage (%)	2.9	3.0	2.9	3.1	3.8	5.1	5.1	5.0	5.0	5.0	4.8	4.8	3.1	5.0	4.8	4.4
10-Year Treasury Yield (%)	1.3	1.6	1.3	1.5	1.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	1.5	2.9	2.8	2.6
<b>Mortgage Originations</b>																
Total 1- to 4-Family (Bil \$)	1,094	1,050	954	893	689	678	527	517	481	621	582	581	3,991	2,411	2,266	2,501
Purchase	320	460	442	424	381	477	417	406	349	484	449	437	1,646	1,681	1,720	1,806
Refinance	774	590	512	469	308	201	110	111	132	137	133	144	2,345	730	546	695
Refinance Share (%)	71	56	54	53	45	30	21	21	27	22	23	25	59	30	24	28
FHA Originations (Bil \$)													293	169	170	180
Total 1- to 4-Family (000s loans)	3,146	2,926	2,714	2,497	1,830	1,846	1,561	1,446	1,313	1,670	1,571	1,502	11,283	6,683	6,057	6,296
Purchase	974	1,341	1,302	1,259	1,025	1,282	1,113	1,059	912	1,252	1,153	1,090	4,876	4,479	4,408	4,494
Refinance	2,172	1,585	1,412	1,238	805	564	448	387	401	418	418	412	6,407	2,204	1,649	1,802
Refinance Share (%)	69	54	52	50	44	31	29	27	31	25	27	27	57	33	27	29
<b>Mortgage Debt Outstanding</b>																
1- to 4-Family (Bil \$)	11,783	12,022	12,274	12,536	12,777	12,993	13,211	13,389	13,590	13,800	14,000	14,188	12,536	13,389	14,188	14,814

**Notes:**

Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home equity loans. Mortgage rate forecast is based on Freddie Mac's 30-Yr fixed rate which is based on predominantly home purchase transactions. The 10-Year Treasury Yield and 30-Yr mortgage rate are the average for the quarter, but annual columns show Q4 values. The FHFA US House Price Index is the forecasted year over year percent change of the FHFA Purchase-Only House Price Index. Copyright 2022 Mortgage Bankers Association. All rights reserved. THE HISTORICAL DATA AND PROJECTIONS ARE PROVIDED "AS IS" WITH NO WARRANTIES OF ANY KIND.

**MBA**

MORTGAGE BANKERS ASSOCIATION

# MBA Economic Forecast

## MBA Economic Forecast

June 10, 2022

	2021				2022				2023				2021	2022	2023	2024
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
<b>Percent Change, SAAR</b>																
Real Gross Domestic Product	6.3	6.7	2.3	6.9	-1.5	2.3	2.6	2.9	2.1	2.0	2.0	1.7	5.5	1.6	1.9	1.5
Personal Consumption Expenditures	11.4	12.0	2.0	2.5	3.1	4.2	3.1	2.2	2.0	2.1	1.9	2.1	6.9	3.1	2.0	2.2
Business Fixed Investment	12.9	9.2	1.7	2.9	9.2	1.3	8.6	3.1	2.3	1.5	1.6	0.8	6.6	5.5	1.6	0.5
Residential Investment	13.3	-11.7	-7.7	2.2	0.4	-11.5	-0.8	6.7	6.4	6.3	4.3	6.6	-1.5	-1.5	5.9	2.5
Govt. Consumption & Investment	4.2	-2.0	0.9	-2.6	-2.7	0.7	0.8	0.5	0.8	0.8	0.9	1.0	0.1	-0.2	0.9	1.0
Net Exports (Bil. Chain 2012\$)	-1033.0	-1048.4	-1112.3	-1139.5	-1310.0	-1268.5	-1280.8	-1292.0	-1295.9	-1301.8	-1298.6	-1320.3	-1083.3	-1287.8	-1304.2	-1372.6
Inventory Investment (Bil. Chain 2012\$)	-75.1	-143.3	-56.8	164.3	127.2	76.4	53.7	82.5	79.8	76.9	75.4	74.4	-27.7	84.9	76.6	62.7
Consumer Prices (YOY)	1.9	4.8	5.3	6.7	8.0	8.1	6.8	5.4	3.8	2.4	2.6	2.7	6.7	5.4	2.7	2.3
<b>Percent</b>																
Unemployment Rate	6.2	5.9	5.1	4.2	3.8	3.6	3.5	3.4	3.4	3.6	3.7	4.1	5.4	3.6	3.7	4.3
Federal Funds Rate	0.125	0.125	0.125	0.125	0.375	1.375	1.875	2.625	2.875	3.375	3.375	3.375	0.125	2.625	3.375	2.625
10-Year Treasury Yield	1.3	1.6	1.3	1.5	1.9	2.9	2.9	2.9	2.9	2.9	2.8	2.8	1.5	2.9	2.8	2.6

**Notes:**

The Fed Funds Rate forecast is shown as the mid point of the Fed Funds range at the end of the period.

All data except interest rates are seasonally adjusted

The 10-Year Treasury Yield is the average for the quarter, while the annual value is the Q4 value

Forecast produced with the assistance of the Macroeconomic Advisers' model

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**MBA**

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# Summary

## **In conclusion:**

April 2022 data softness was widespread, with only the housing under construction and private residential construction spending categories positive on a month-over-month basis. Year-over-year data were better; however, single-family permits were negative again. This marks the third month, in 2022, of single-family starts declining and permits also have decreased for two-consecutive months. This suggests further moderation in single-family activity in the upcoming months.

The disparity between the number of houses started versus houses completed are at the greatest level since 1984. This spread is evident for both single- and multi-family starts as builders await building materials and products necessary to complete started houses. New and existing house sales were negative, due to a lack of available inventory for sale and increasing mortgage interest rates. Increasing mortgage rates, in combination with record house prices, may reduce affordability for potential house buyers.

## **Pros:**

- 1) Select builders are beginning to focus on entry-level houses;
- 2) Demand remains strong.

## **Cons:**

- 1) Increasing mortgage interest rates;
- 2) Inflation;
- 3) The war in Ukraine;
- 4) COVID-19;
- 5) Construction material and appliance constraints;
- 6) Logistics/Supply chains;
- 7) Lot availability and building regulations (according to several sources);
- 8) Laborer shortages in many sectors;
- 9) Household formations still lag historical averages;
- 10) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
- 11) Debt: Corporate, personal, government – United States and globally;
- 12) Other global uncertainties.

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