

The Virginia Tech–USDA Forest Service Housing Commentary: Section I March 2023



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Virginia Polytechnic Institute and State University

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

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Opening Remarks

Year-over-year data were dismal. Month-over-month data were mixed – yet, total, single-family, and multi-family starts and permits; completions, and new and existing house sales being positive.

Construction spending, total and single-family continued their decreasing trend. Borrowing costs and consumer sentiment, combined with elevated house prices have resulted in a major obstacle for new and existing house sales.

The May 16th Atlanta Fed GDPNow™ total residential investment spending forecast is a negative 6.5% for Q2 2023. New private permanent site expenditures were projected at -2.6%; the improvement spending forecast was -1.1%; and the manufactured/mobile home expenditures projection was -2.1% (all: quarterly log change and at a seasonally adjusted annual rate).¹

“...Looking to the future, the greatest issue is the underlying demand for housing, followed by how much of that demand was already met during the two-years of extremely low interest rates. Underbuilding has been a common theme of the housing optimists, who think that we have not been building enough. A typical point made is that we used to build about one-million single family houses a year, but for over a decade we only built 650,000 a year, a decline of 40%. (The actual average from 1960 through 2007 was 949,000; in 2008-2019 it was 656,000.)

Demand, however, has been falling over the last half century. Most houses last a long time. Two-hundred year old houses are not rare in the older parts of the United States. The critical issue, then, is not replacing old housing but the creation of new households. And the Census data are sobering. In the earlier period, we added 1.3 million households per year, on average, but in later years just 1.0 million households. That decline is less than the construction drop, but let’s look at multi-family building. It rose from 29% of total housing units built to 31% of total units, taking up some of the slack. ...”² – Bill Conerly, Senior Contributor, Forbes

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: ¹ www.frbatlanta.org/cqer/research/gdpnow.aspx; 5/16/23

² <https://www.forbes.com/sites/billconerly/2023/04/18/housing-market-forecast-2023-24-the-myth-of-massive-underbuilding>; 4/18/23

March 2023 Housing Scorecard

	M/M	Y/Y
Housing Starts	▼ 0.8%	▼ 17.2%
Single-Family (SF) Starts	▲ 2.7%	▼ 27.7%
Multi-Family (MF) Starts*	▼ 5.9%	▲ 6.5%
Housing Permits	▼ 7.7%	▼ 23.9%
SF Permits	▼ 23.9%	▼ 4.2%
MF Permits*	▼ 18.1%	▼ 14.0%
Housing Under Construction	▼ 0.8%	▲ 2.8%
SF Under Construction	▼ 2.3%	▼ 11.8%
Housing Completions	▼ 0.6%	▲ 12.9%
SF Completions	▲ 2.4%	▼ 0.2%
New SF House Sales	▲ 9.6%	▼ 3.4%
Private Residential Construction Spending	▼ 0.2%	▼ 10.0%
SF Construction Spending	▼ 0.8%	▼ 22.9%
Existing House Sales ¹	▼ 2.4%	▼ 21.1%

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

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

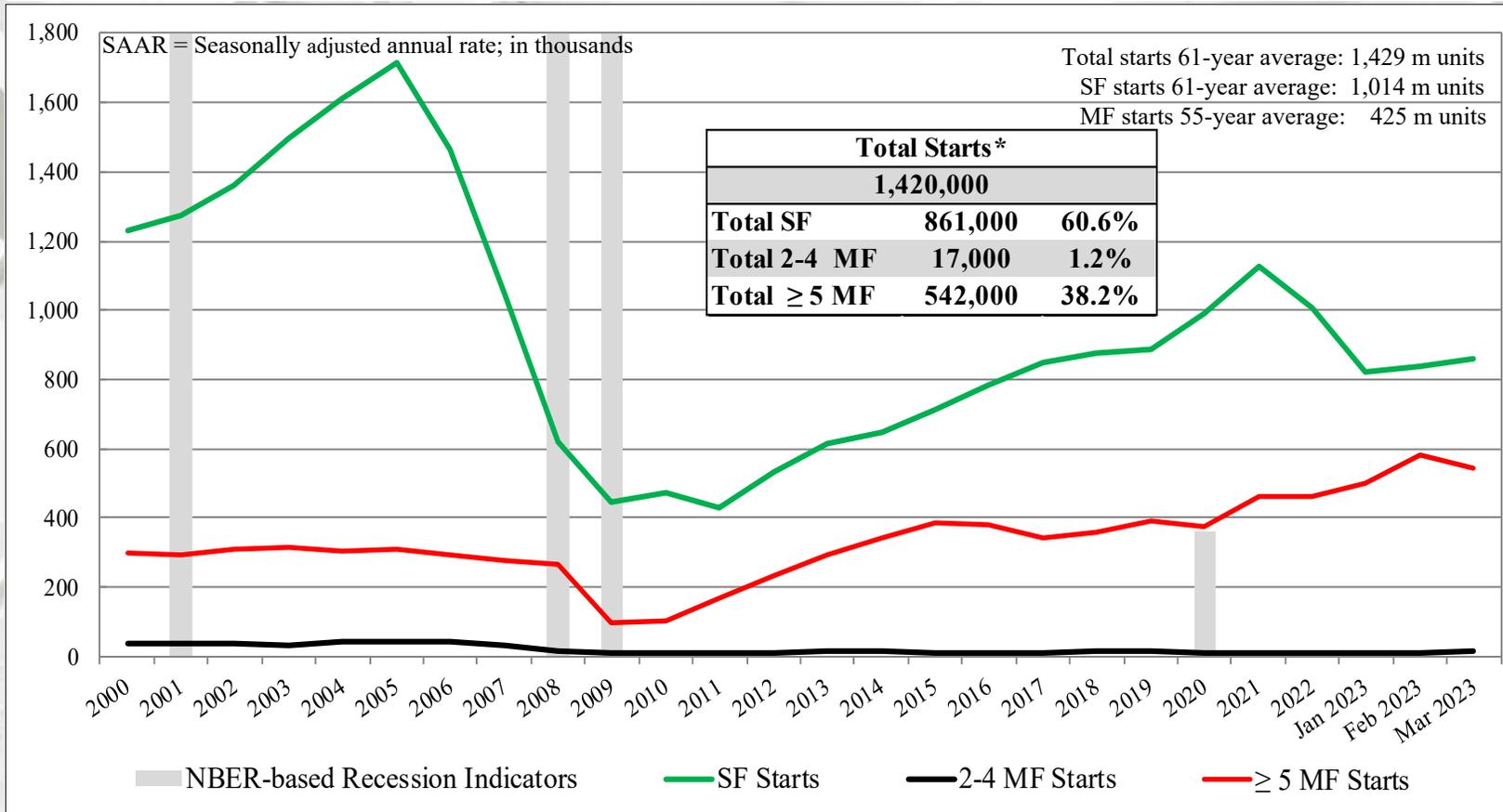
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
March	1,420,000	861,000	17,000	542,000
February	1,432,000	838,000	13,000	581,000
2022	1,716,000	1,191,000	14,000	511,000
M/M change	-0.8%	2.7%	30.8%	-6.7%
Y/Y change	-17.2%	-27.7%	21.4%	6.1%

* 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

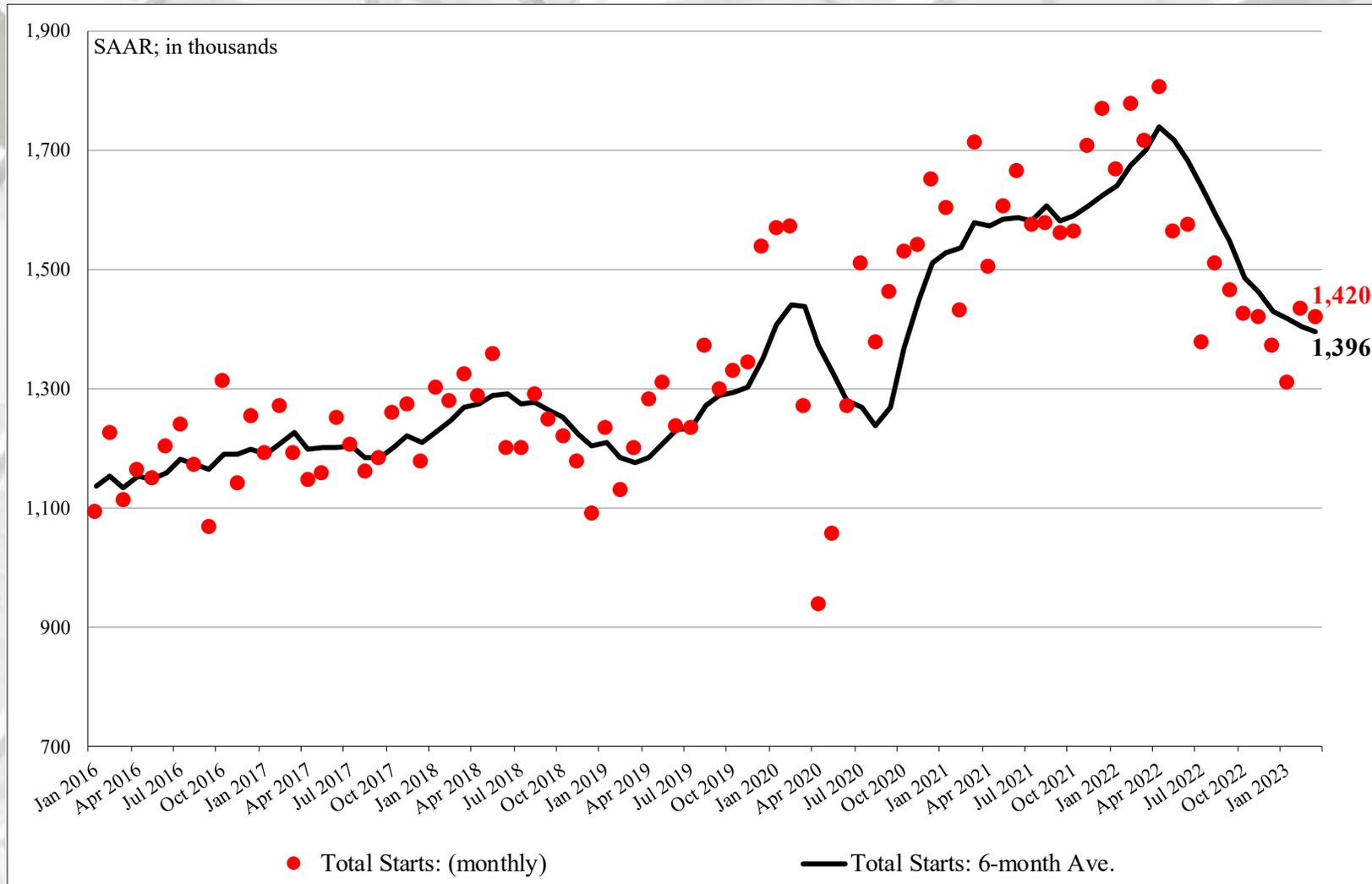


US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: (Total starts – (SF + 5-unit MF)).

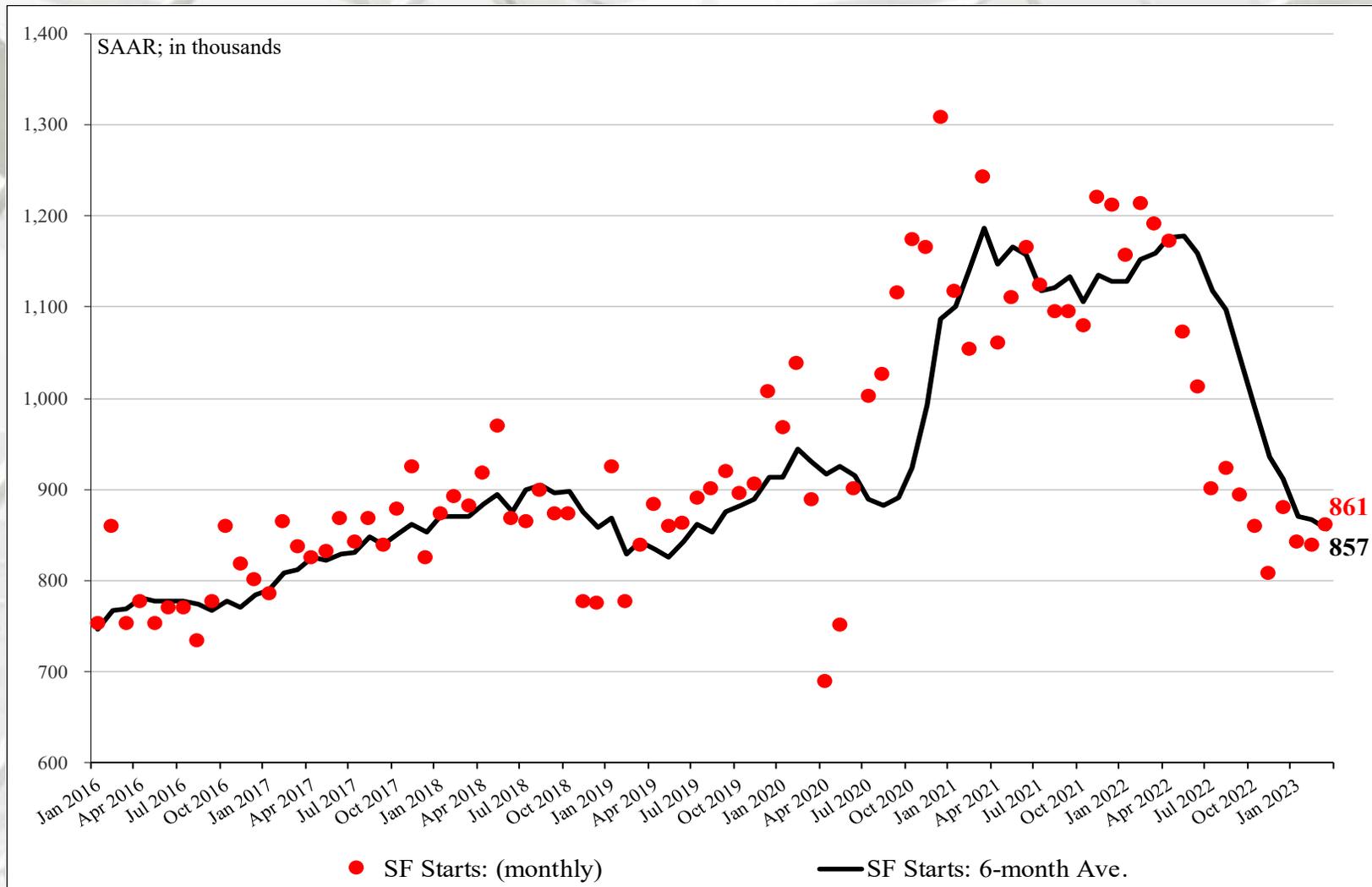
* Percentage of total starts.

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

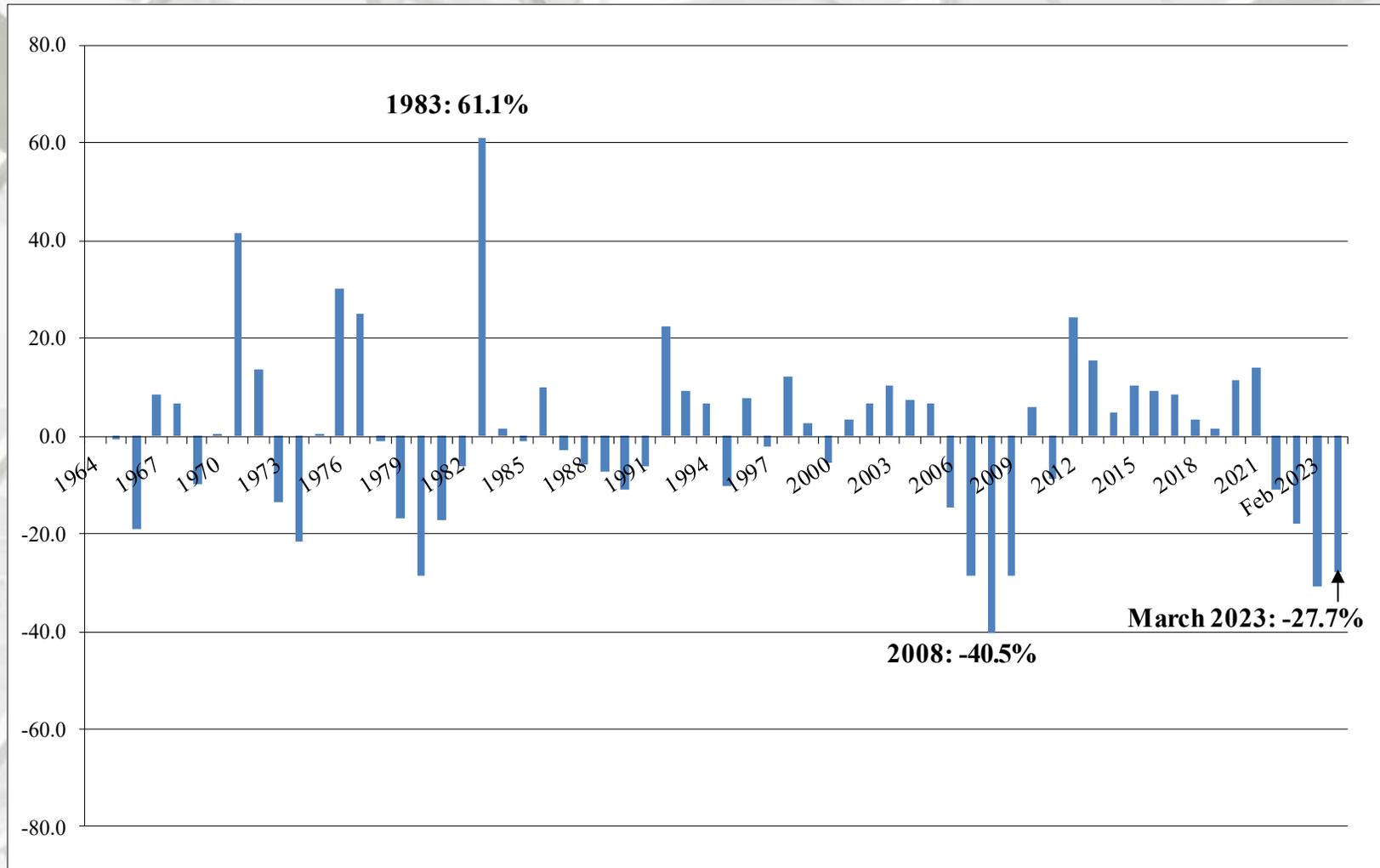
Total Housing Starts: Six-Month Moving Average



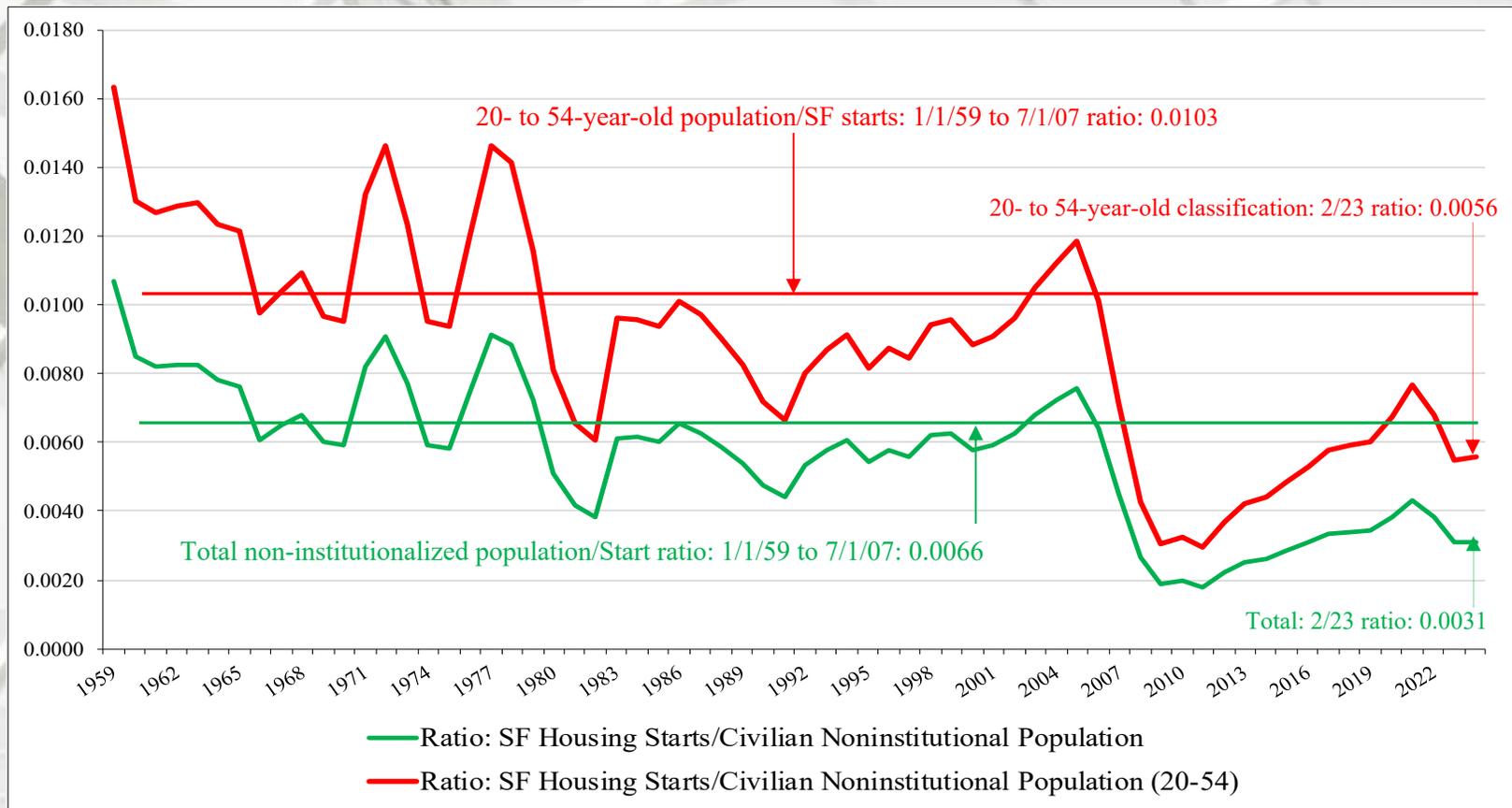
SF Housing Starts: Six-Month Moving Average



SF Housing Starts: Year-over-Year Change (%)



New SF Starts



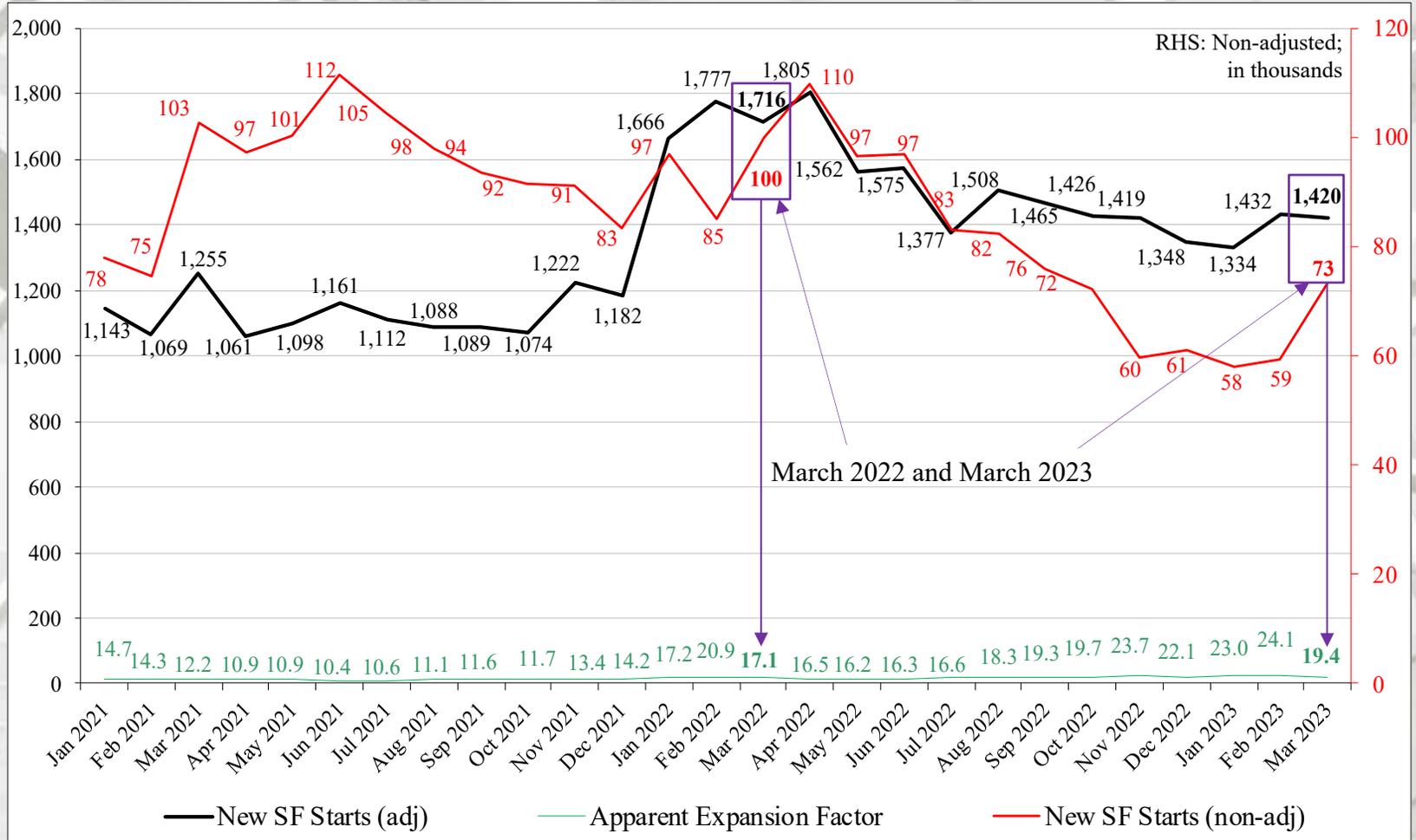
New SF starts adjusted for the US population

From January 1959 to July 2007, the long-term ratio of new SF starts to the total US non-institutionalized population is 0.0066. In March 2022 it was 0.0031 – no change from January. The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in March 2023 it was 0.0056 – an increase from January (0.0055). New SF construction in both age categories is less than what is necessary for changes in the population (i.e., under-building).

Note some studies report normalized long-term demand at 900,000 to 1,000,000 new SF house starts per year – beginning in 2025 through 2050.

in thousands

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

	NE Total	NE SF	NE MF**
March	181,000	71,000	110,000
February	105,000	68,000	37,000
2022	211,000	64,000	147,000
M/M change	72.4%	4.4%	197.3%
Y/Y change	-14.2%	10.9%	-25.2%
	MW Total	MW SF	MW MF
March	133,000	110,000	23,000
February	174,000	89,000	85,000
2022	239,000	161,000	78,000
M/M change	-23.6%	23.6%	-72.9%
Y/Y change	-44.4%	-31.7%	-70.5%

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).

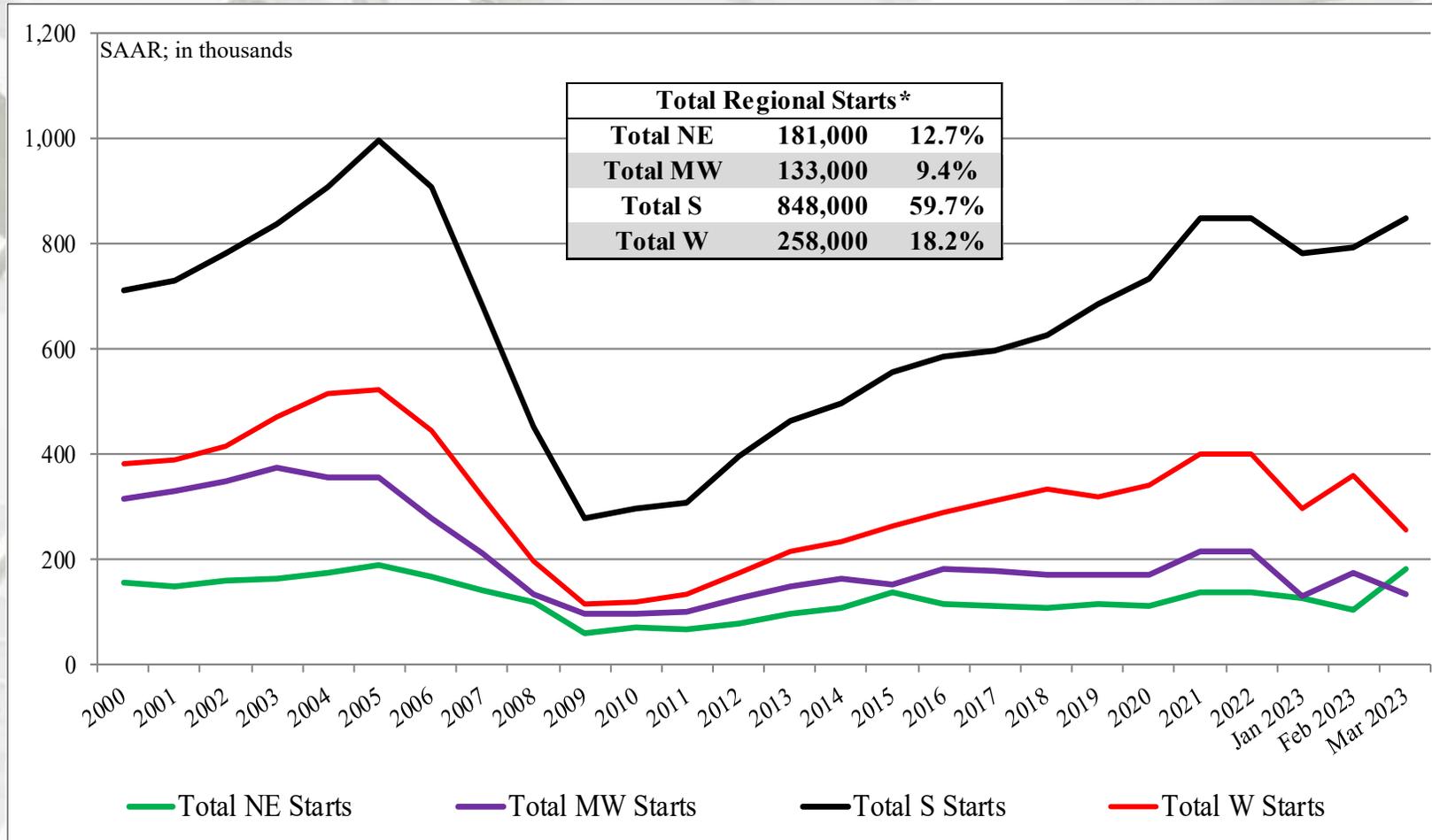
New Housing Starts by Region

	S Total	S SF	S MF**
March	848,000	544,000	304,000
February	794,000	519,000	275,000
2022	846,000	674,000	172,000
M/M change	6.8%	4.8%	10.5%
Y/Y change	0.2%	-19.3%	76.7%
	W Total	W SF	W MF
March	258,000	136,000	122,000
February	359,000	162,000	197,000
2022	420,000	292,000	128,000
M/M change	-28.1%	-16.0%	-38.1%
Y/Y change	-38.6%	-53.4%	-4.7%

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

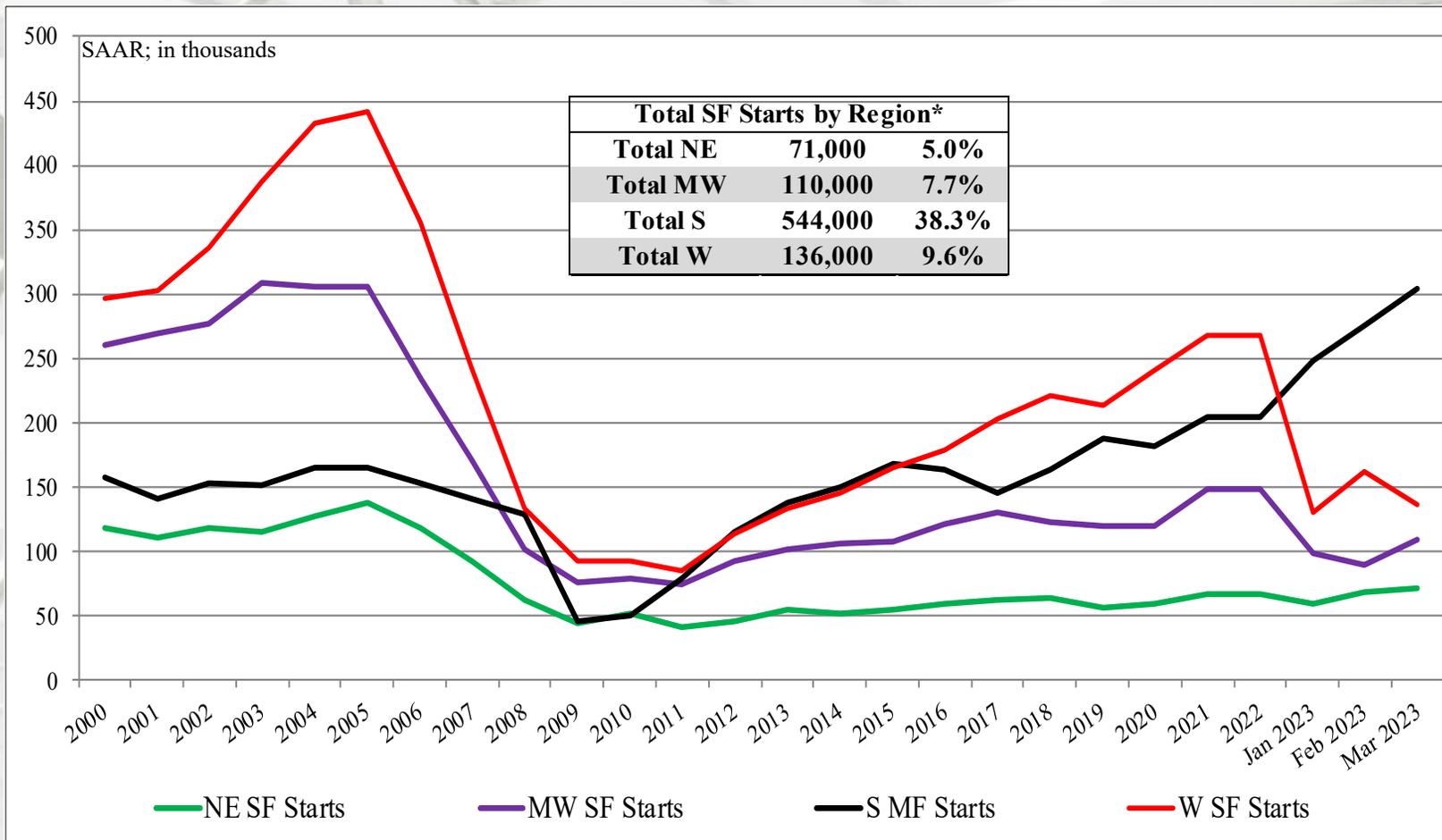
** US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

New Housing Starts by Region



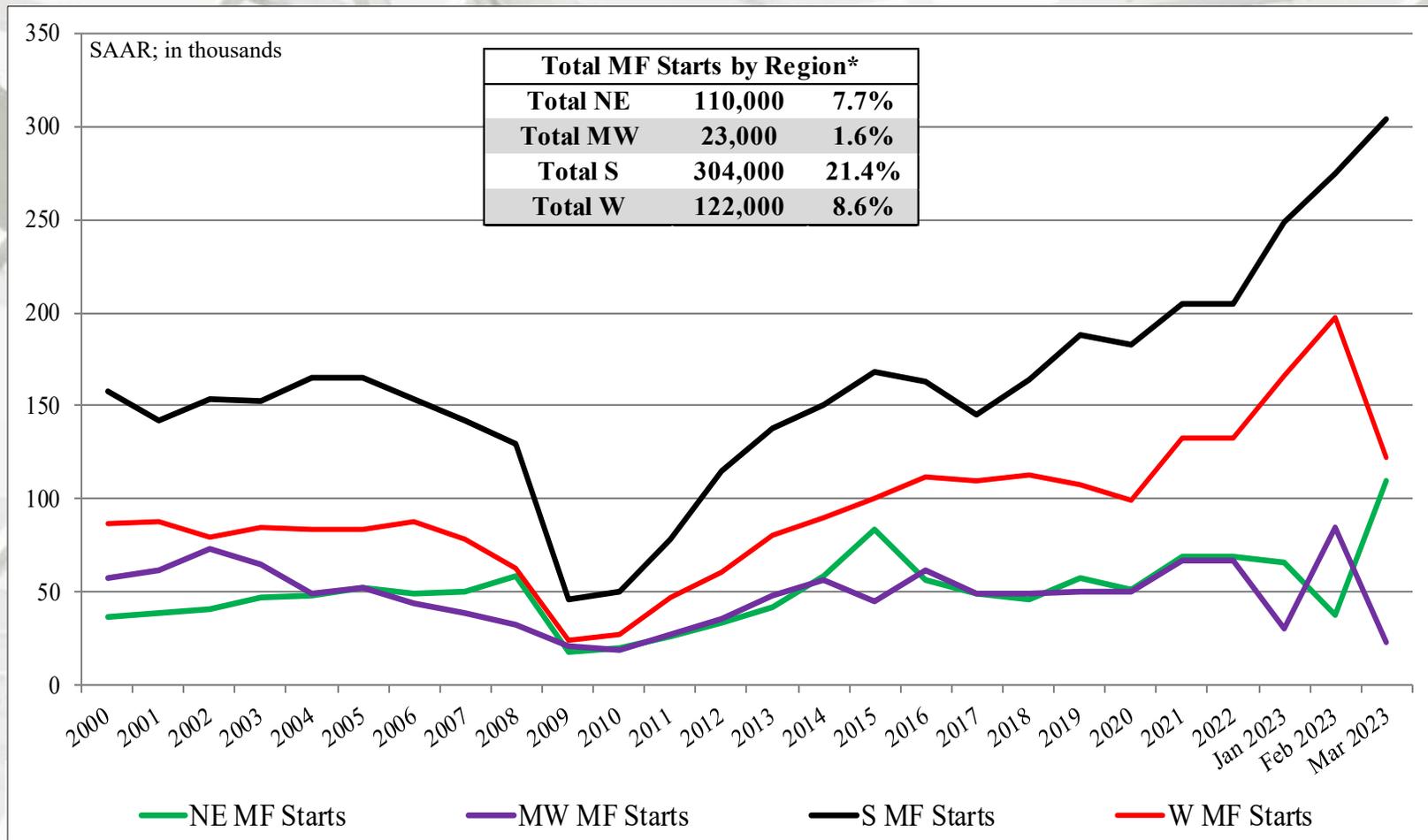
* Percentage of total starts.

Total SF Housing Starts by Region



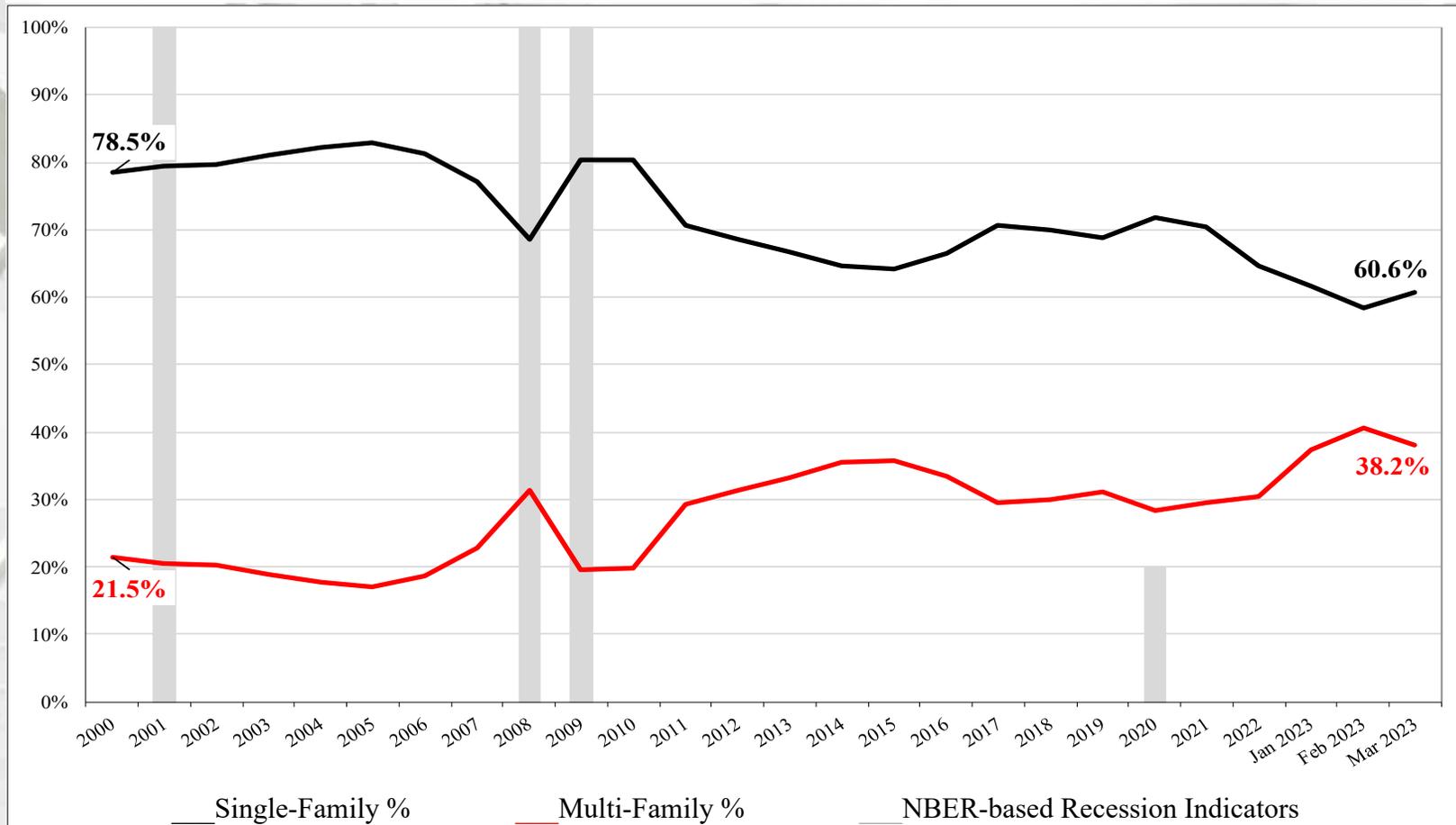
* Percentage of total starts.

MF Housing Starts by Region



* Percentage of total starts.

SF vs. MF Housing Starts (%)



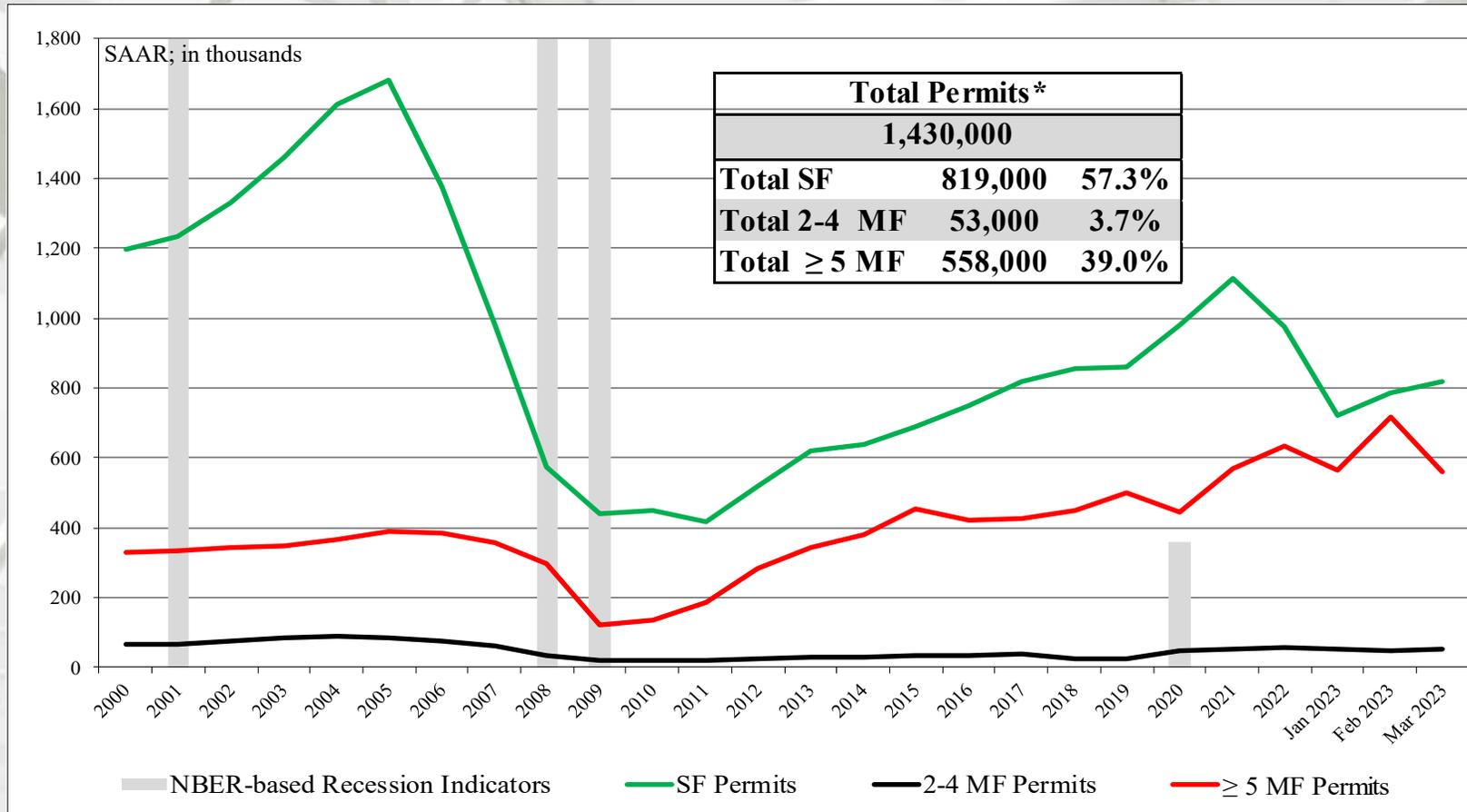
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
March	1,430,000	819,000	53,000	558,000
February	1,550,000	786,000	47,000	717,000
2022	1,879,000	1,163,000	56,000	660,000
M/M change	-7.7%	4.2%	12.8%	-22.2%
Y/Y change	-23.9%	-29.6%	-5.4%	-15.5%

* 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

	NE Total*	NE SF	NE MF**
March	143,000	55,000	88,000
February	115,000	54,000	61,000
2022	185,000	66,000	119,000
M/M change	24.3%	1.9%	44.3%
Y/Y change	-22.7%	-16.7%	-26.1%

	MW Total*	MW SF	MW MF**
March	204,000	104,000	100,000
February	196,000	103,000	93,000
2022	260,000	143,000	117,000
M/M change	4.1%	1.0%	7.5%
Y/Y change	-21.5%	-27.3%	-14.5%

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

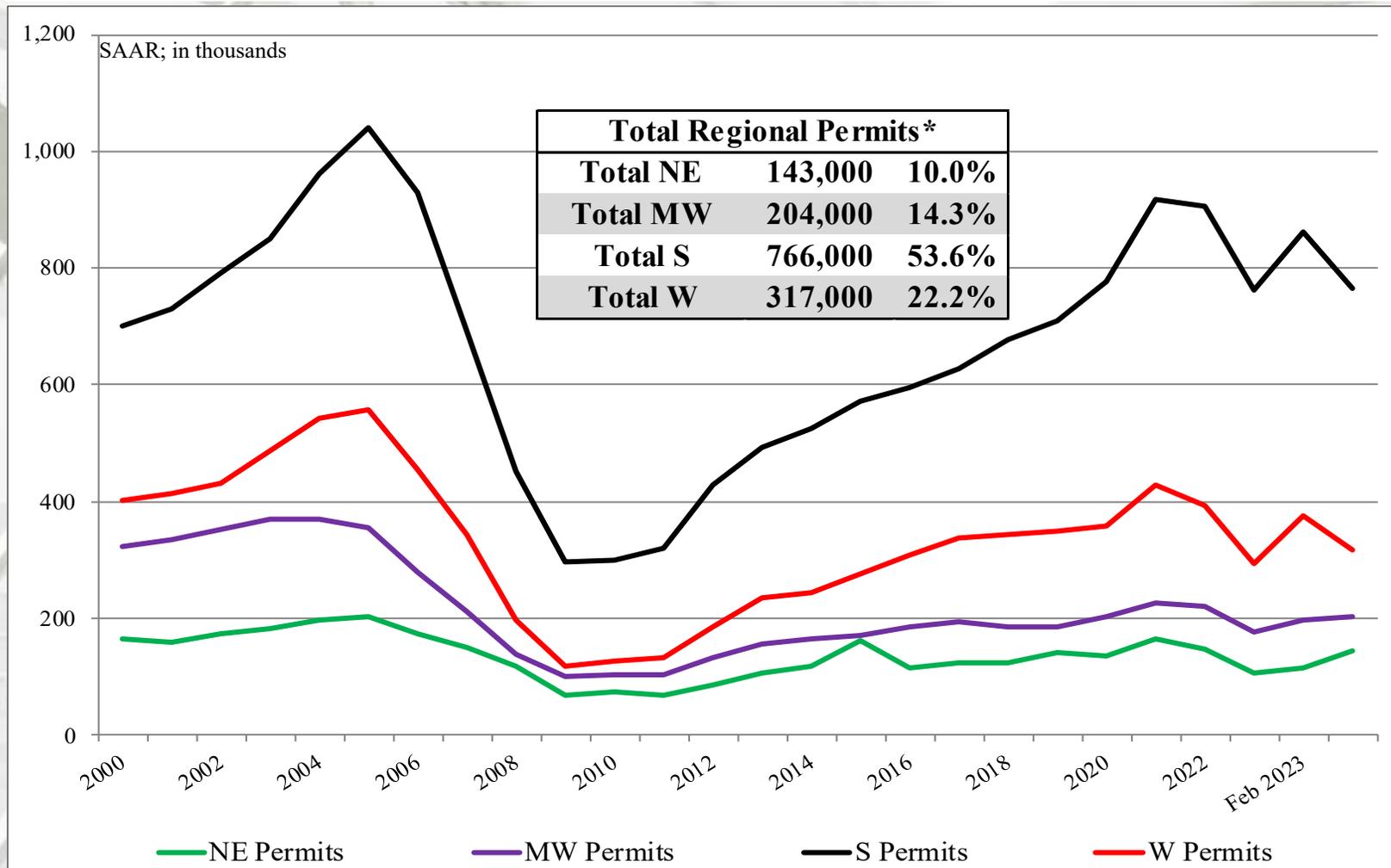
	S Total*	S SF	S MF**
March	766,000	491,000	275,000
February	863,000	472,000	391,000
2022	972,000	679,000	293,000
M/M change	-11.2%	4.0%	-29.7%
Y/Y change	-21.2%	-27.7%	-6.1%
	W Total*	W SF	W MF**
March	317,000	169,000	148,000
February	376,000	157,000	219,000
2022	462,000	275,000	187,000
M/M change	-15.7%	7.6%	-32.4%
Y/Y change	-31.4%	-38.5%	-20.9%

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).

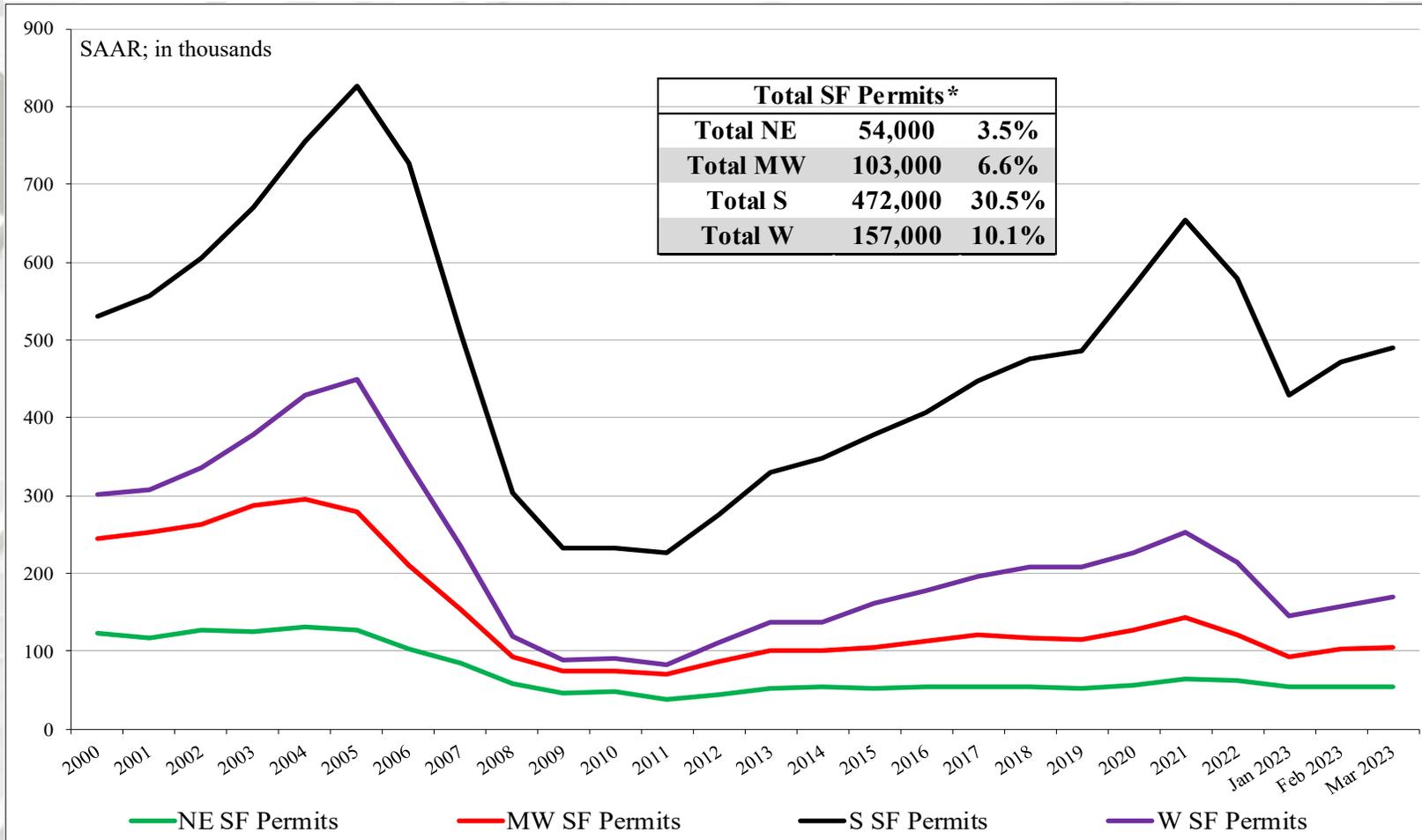
Total Housing Permits by Region



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

* Percentage of total permits.

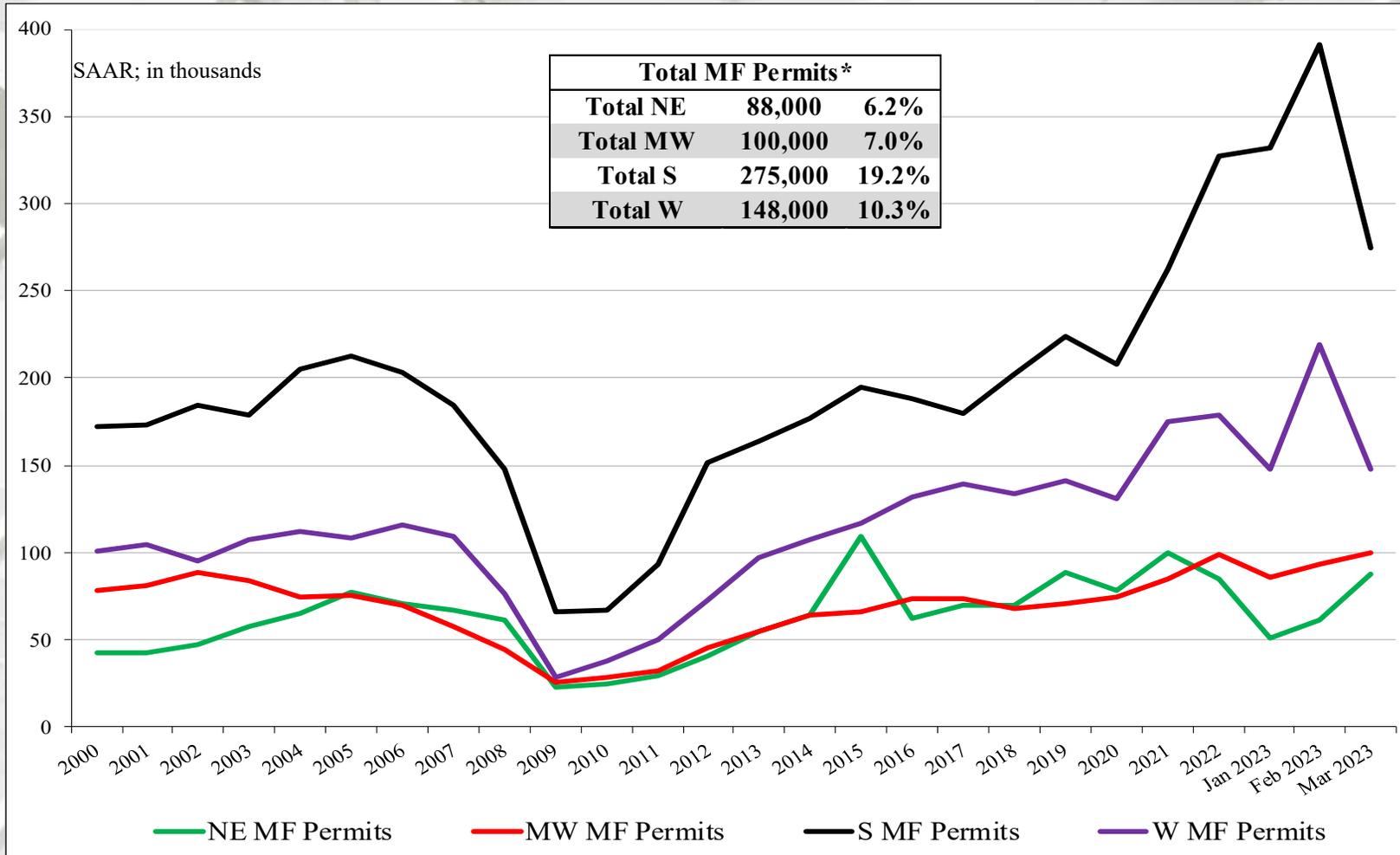
SF Housing Permits by Region



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.

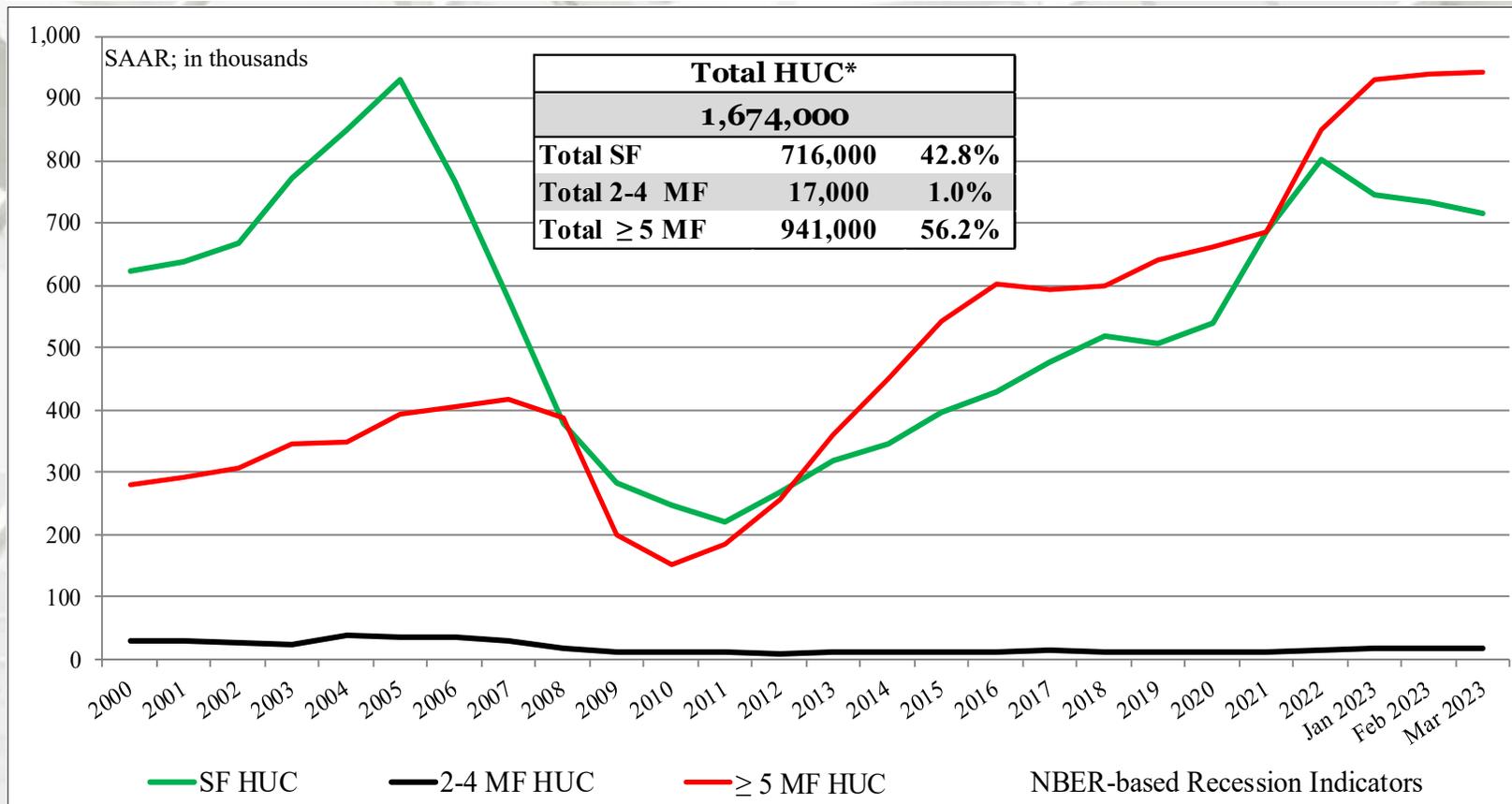
New Housing Under Construction (HUC)

	Total HUC*	SF HUC	MF 2-4 unit** HUC	MF ≥ 5 unit HUC
March	1,674,000	716,000	17,000	941,000
February	1,688,000	733,000	16,000	939,000
2022	1,629,000	812,000	14,000	803,000
M/M change	-0.8%	-2.3%	6.3%	0.2%
Y/Y change	2.8%	-11.8%	21.4%	17.2%

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-unit 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).

New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
March	219,000	68,000	151,000
February	219,000	68,000	151,000
2022	212,000	63,000	149,000
M/M change	0.0%	0.0%	0.0%
Y/Y change	3.3%	7.9%	1.3%
	MW Total	MW SF	MW MF
March	211,000	99,000	112,000
February	213,000	100,000	113,000
2022	216,000	112,000	104,000
M/M change	-0.9%	-1.0%	-0.9%
Y/Y change	-2.3%	-11.6%	7.7%

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).

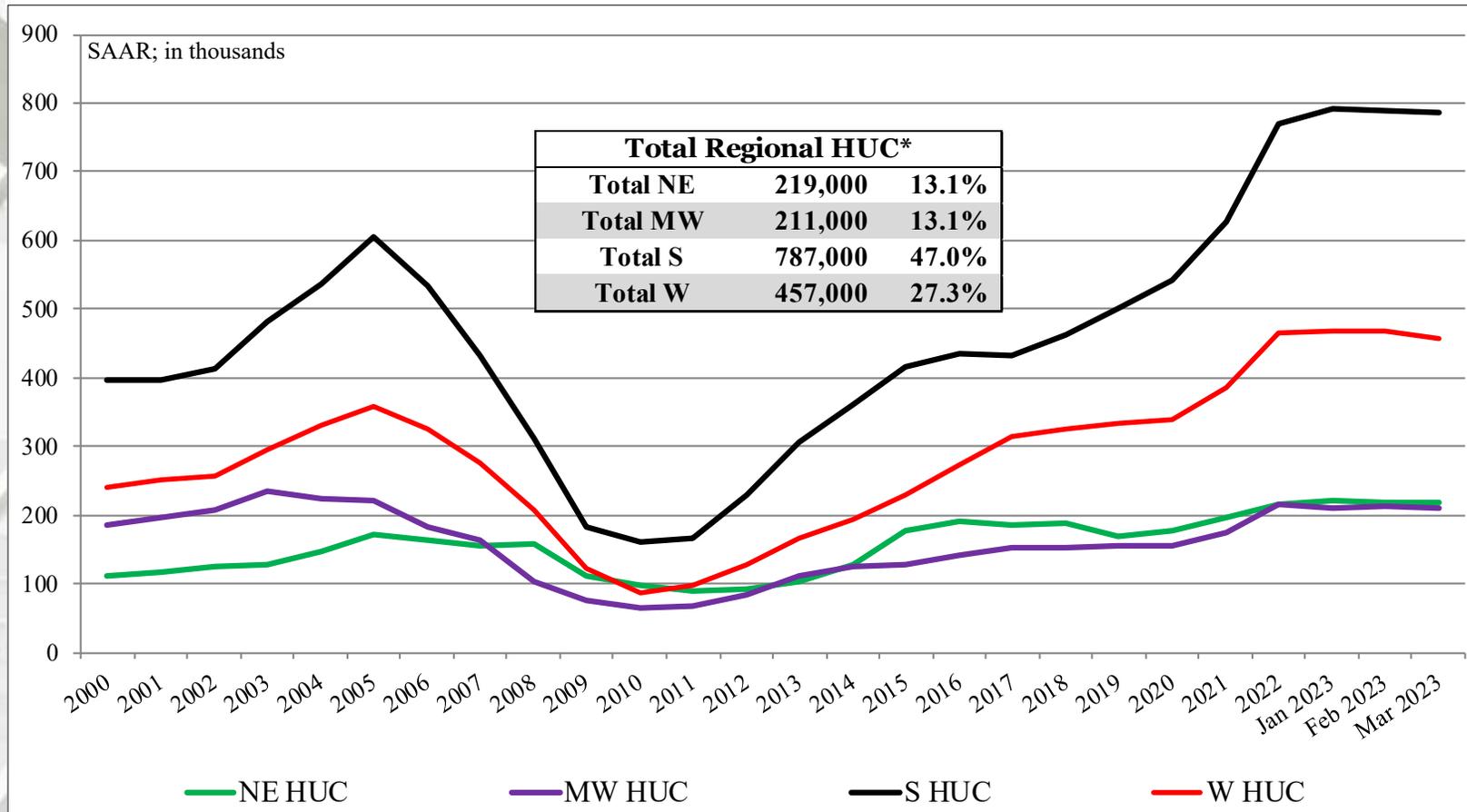
New Housing Under Construction by Region

	S Total	S SF	S MF**
March	787,000	379,000	408,000
February	788,000	387,000	401,000
2022	739,000	424,000	315,000
M/M change	-0.1%	-2.1%	1.7%
Y/Y change	6.5%	-10.6%	29.5%
	W Total	W SF	W MF
March	457,000	170,000	287,000
February	468,000	178,000	290,000
2022	462,000	213,000	249,000
M/M change	-2.4%	-4.5%	-1.0%
Y/Y change	-1.1%	-20.2%	15.3%

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

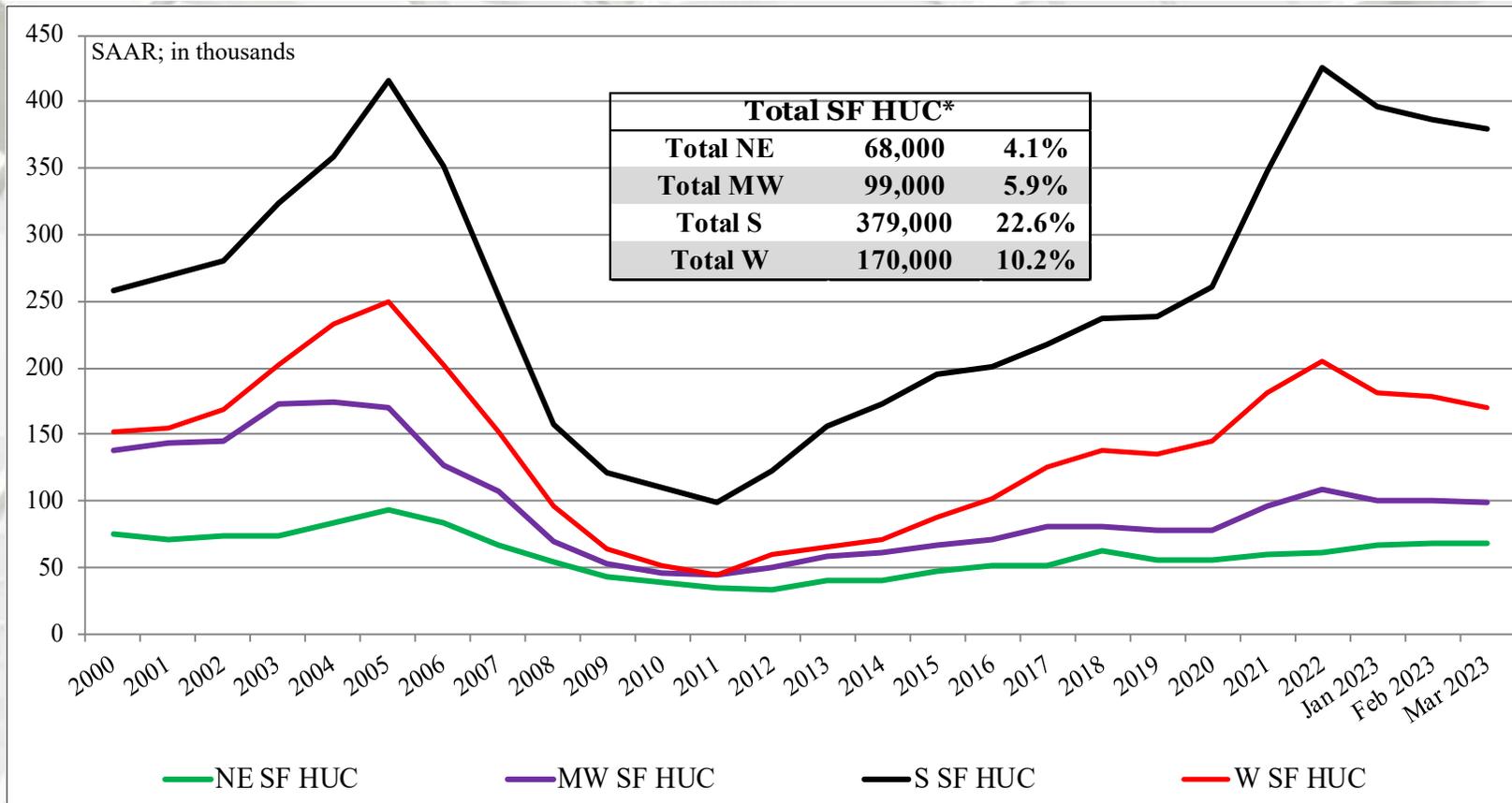


NE = Northeast, MW = Midwest, S = South, W = West

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

* Percentage of total housing under construction units.

SF Housing Under Construction by Region

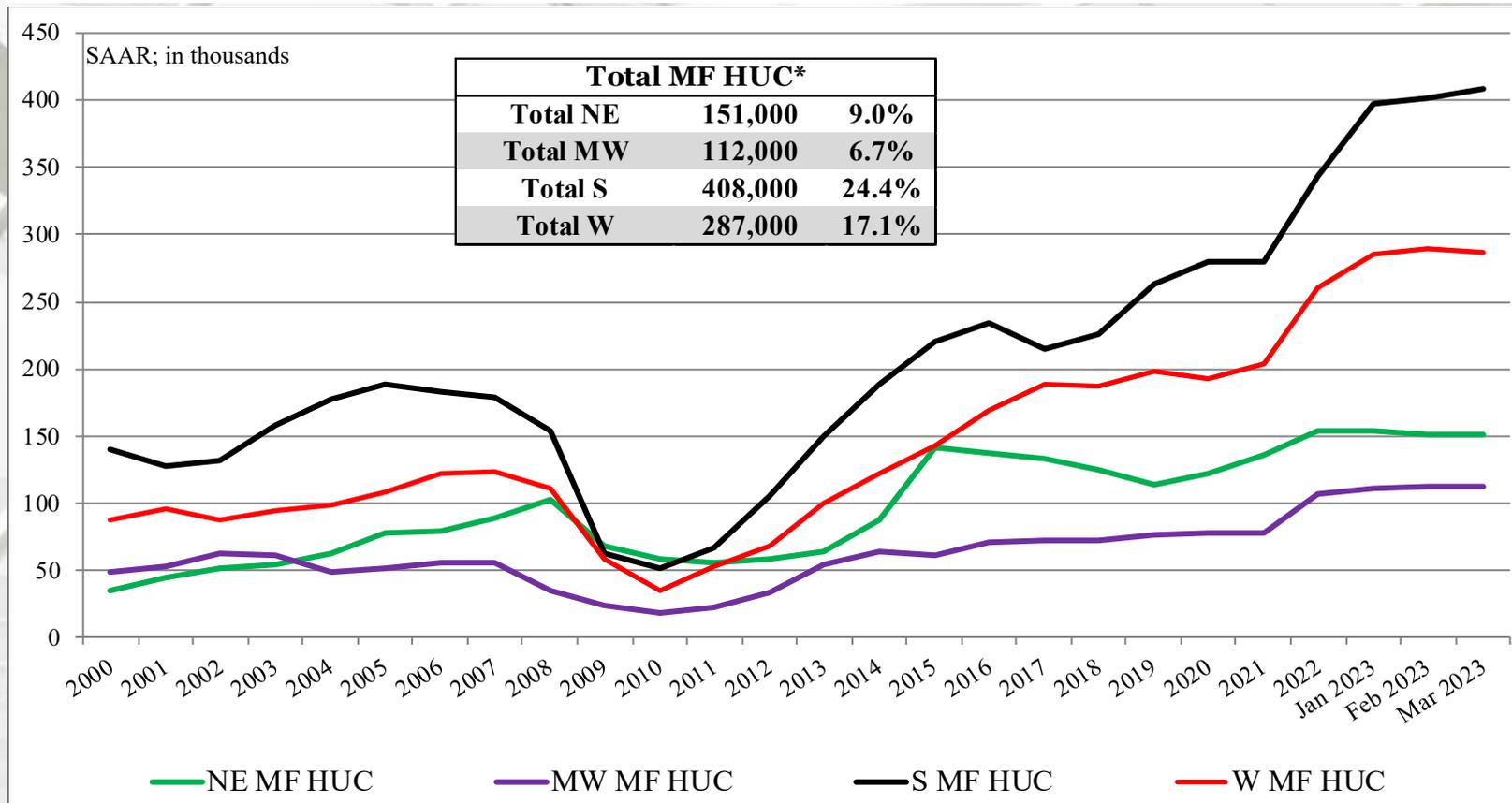


NE = Northeast, MW = Midwest, S = South, W = West.

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

* Percentage of total housing under construction units.

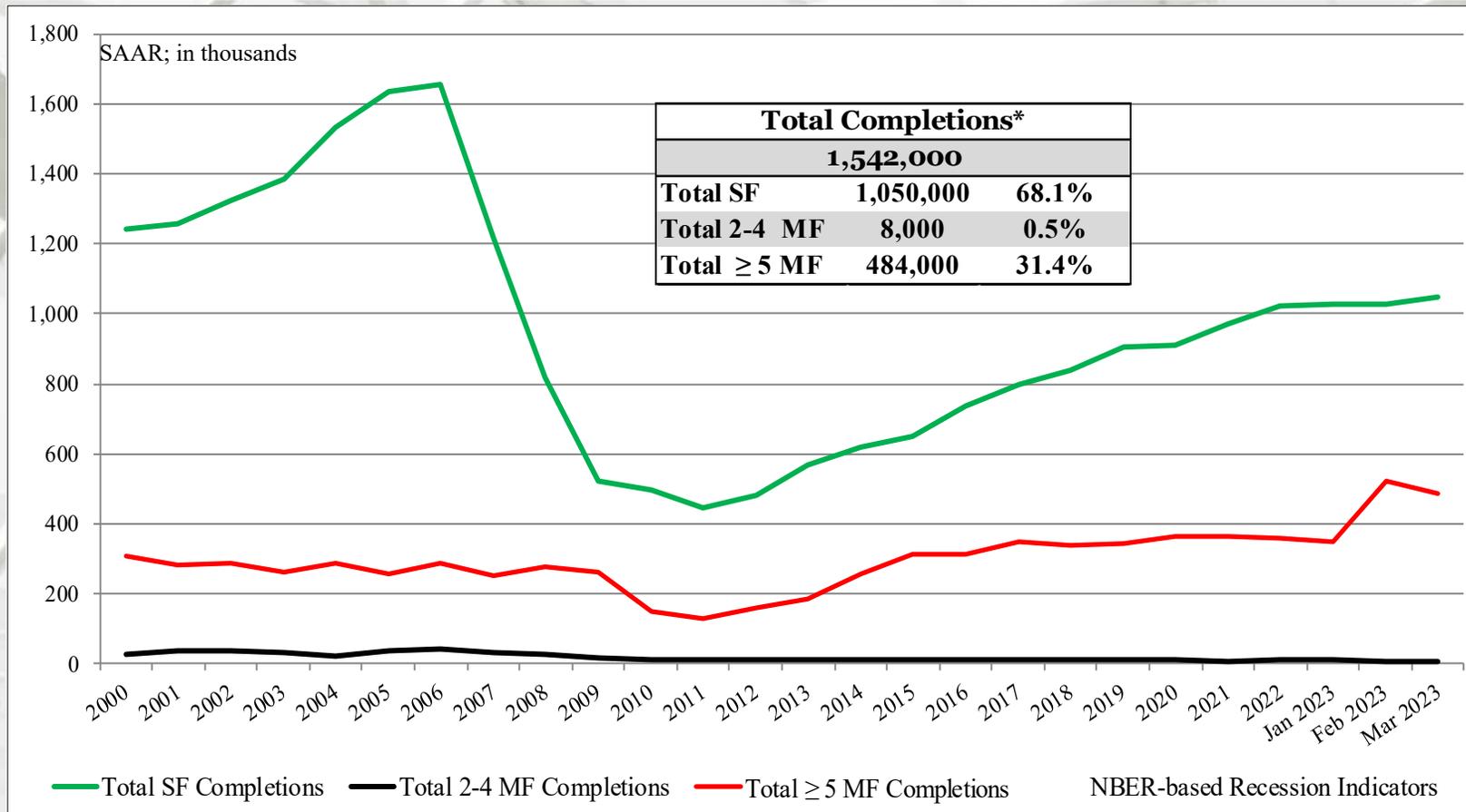
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
March	1,542,000	1,050,000	8,000	484,000
February	1,552,000	1,025,000	6,000	521,000
2022	1,366,000	1,052,000	11,000	303,000
M/M change	-0.6%	2.4%	33.3%	-7.1%
Y/Y change	12.9%	-0.2%	-27.3%	59.7%

* 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

	NE Total	NE SF	NE MF**
March	121,000	66,000	55,000
February	128,000	63,000	65,000
2022	108,000	61,000	47,000
M/M change	-5.5%	4.8%	-15.4%
Y/Y change	12.0%	8.2%	17.0%
	MW Total	MW SF	MW MF
February	202,000	127,000	75,000
January	196,000	116,000	80,000
2022	192,000	143,000	49,000
M/M change	3.1%	9.5%	-6.3%
Y/Y change	5.2%	-11.2%	53.1%

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

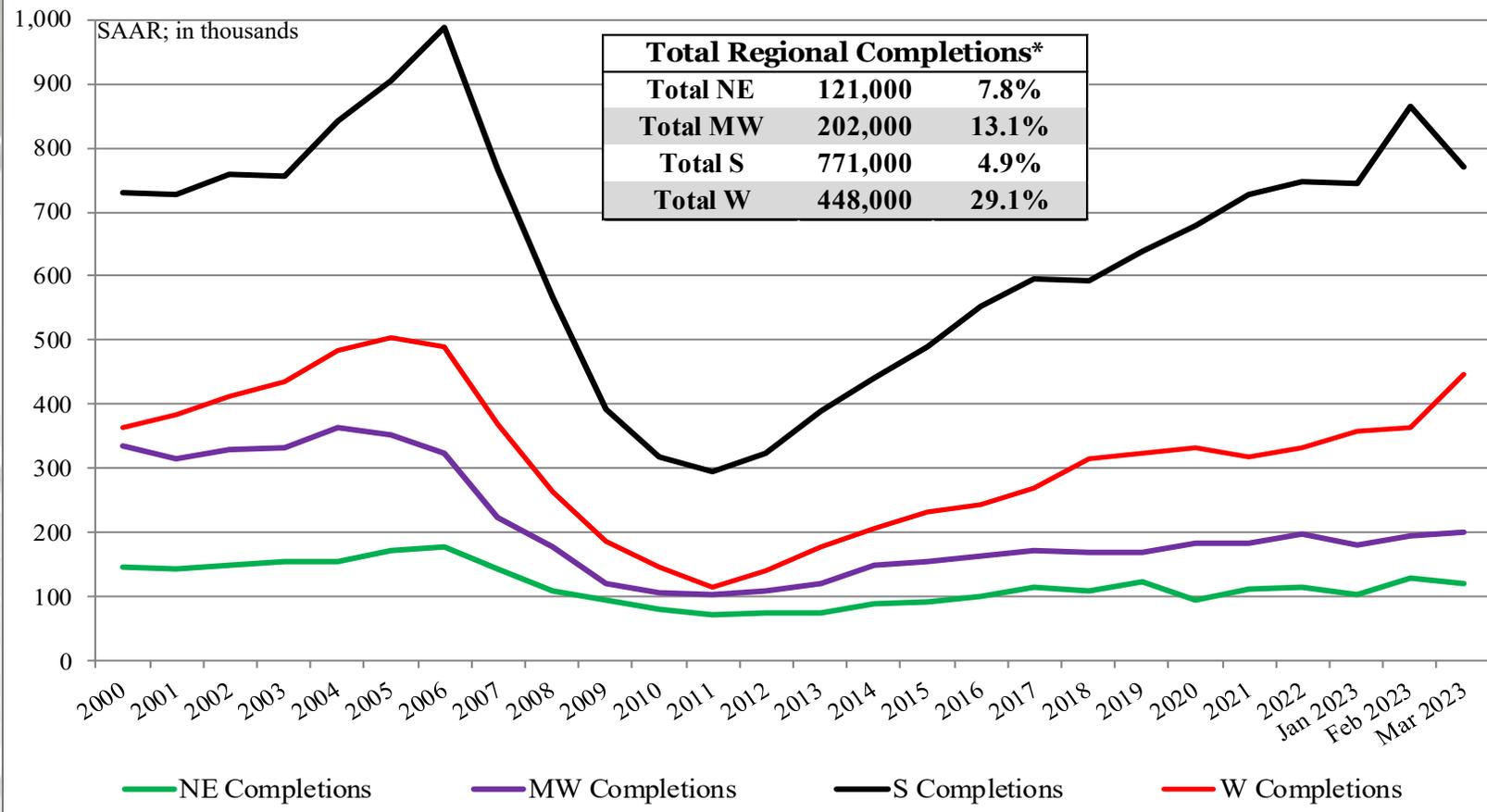
	S Total	S SF	S MF**
February	771,000	609,000	162,000
January	865,000	621,000	244,000
2022	793,000	624,000	169,000
M/M change	-10.9%	-1.9%	-33.6%
Y/Y change	-2.8%	-2.4%	-4.1%
	W Total	W SF	W MF
March	448,000	248,000	200,000
February	363,000	225,000	138,000
2022	273,000	224,000	49,000
M/M change	23.4%	10.2%	44.9%
Y/Y change	64.1%	10.7%	308.2%

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

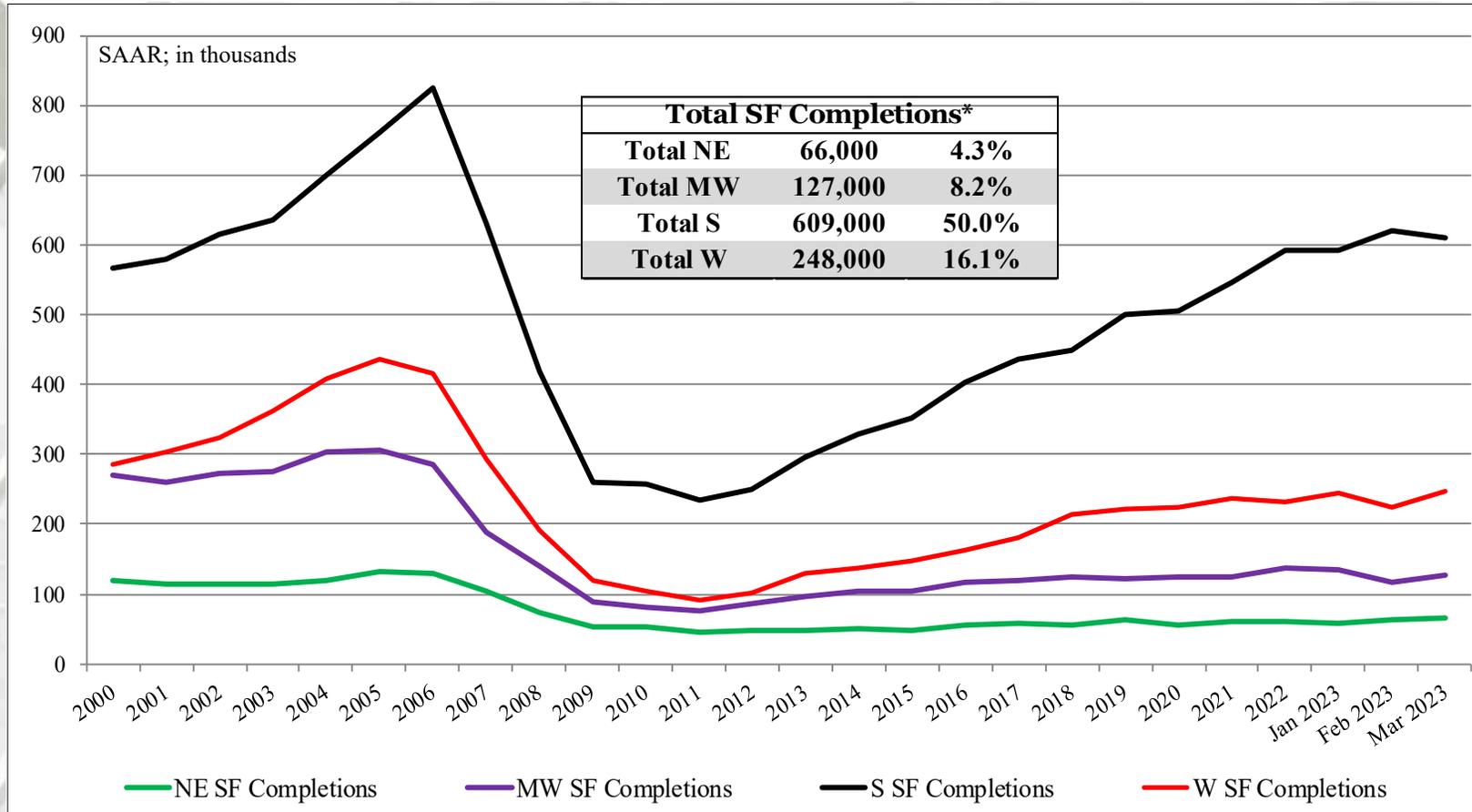
Total Housing Completions by Region



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

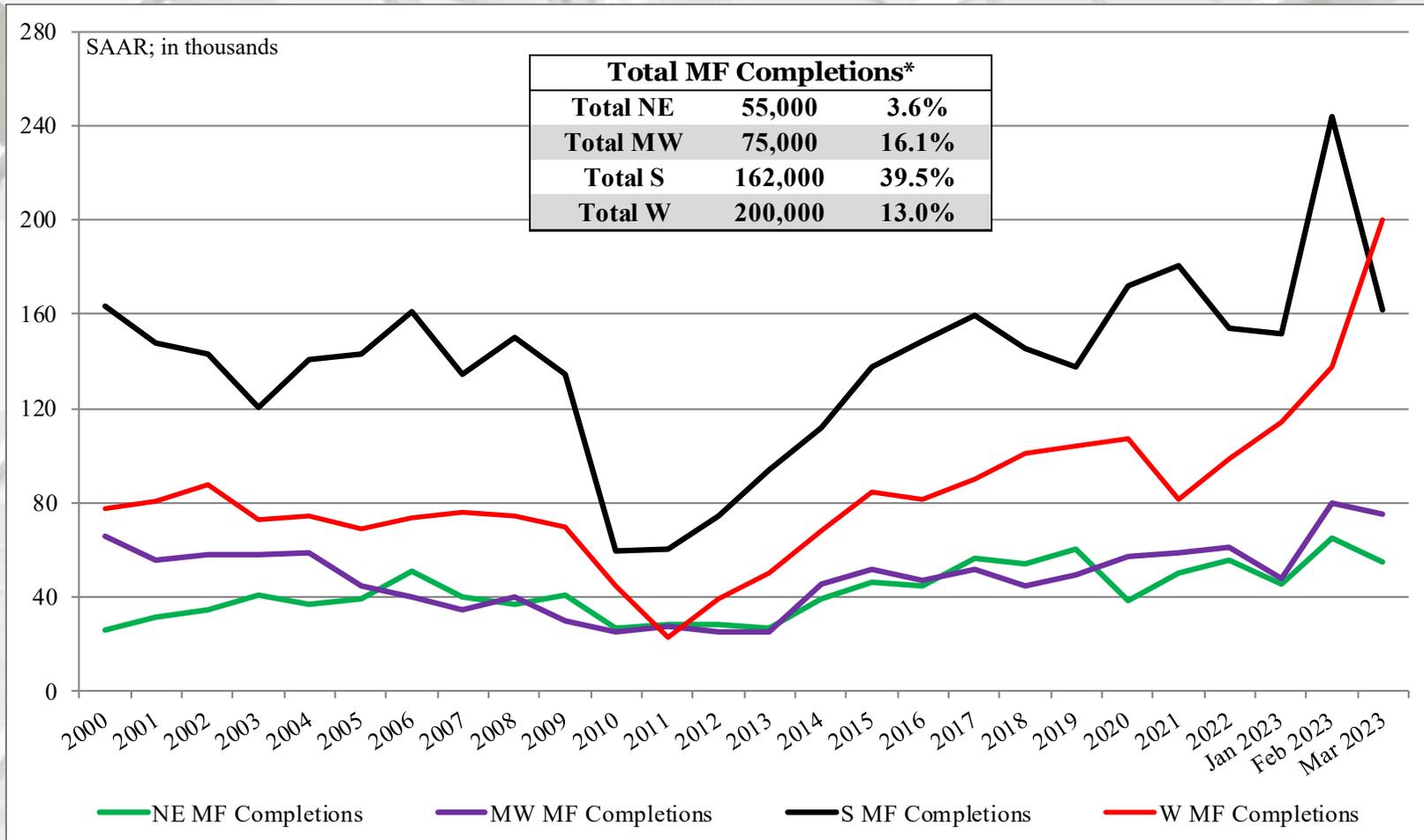


NE = Northeast, MW = Midwest, S = South, W = West

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

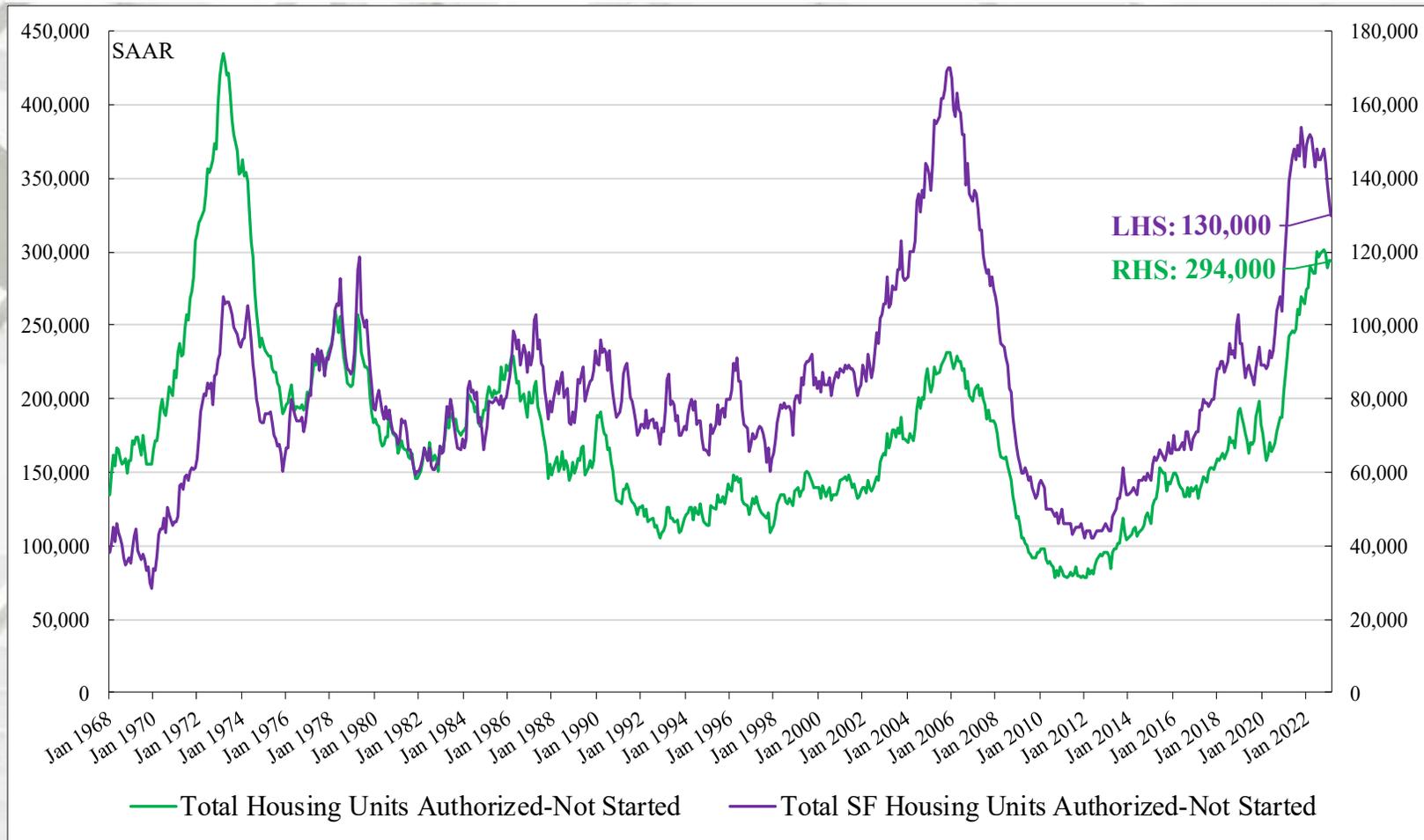


NE = Northeast, MW = Midwest, S = South, W = West

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

Comparison of SF Units Authorized & Not Started to SF Housing Units Completed

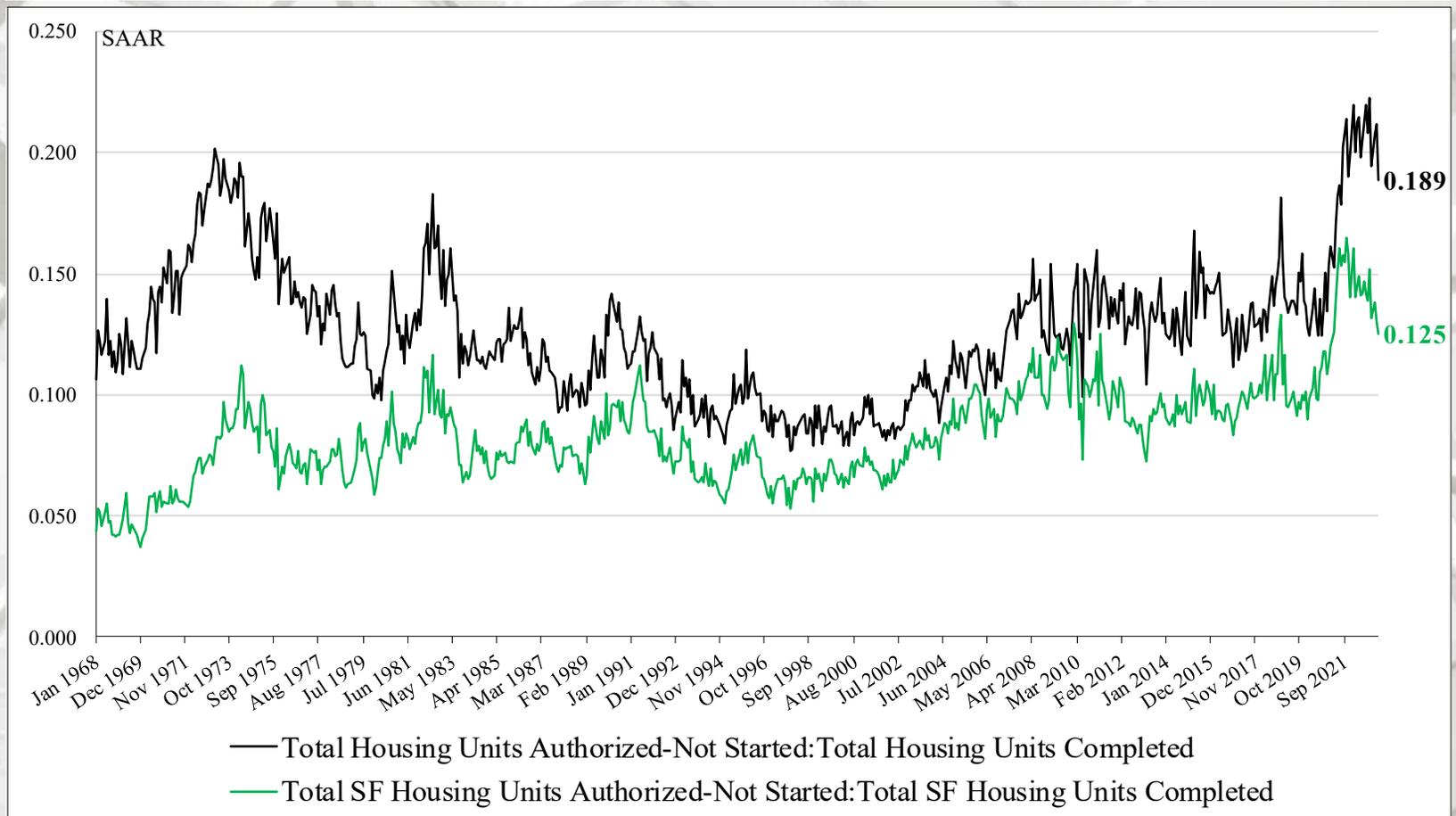


Authorized, Not Started vs. Housing Completions

Total authorized units “not” started was 294,000 in March, no change from January, and SF authorized units “not” started decreased to 130,000 in March.

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

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



Authorized, Not Started vs. Housing Completions

Total authorized units “not” started was 294,000 in March, no change from January, and SF authorized units “not” started decreased to 130,000 in March.

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

New Single-Family House Sales

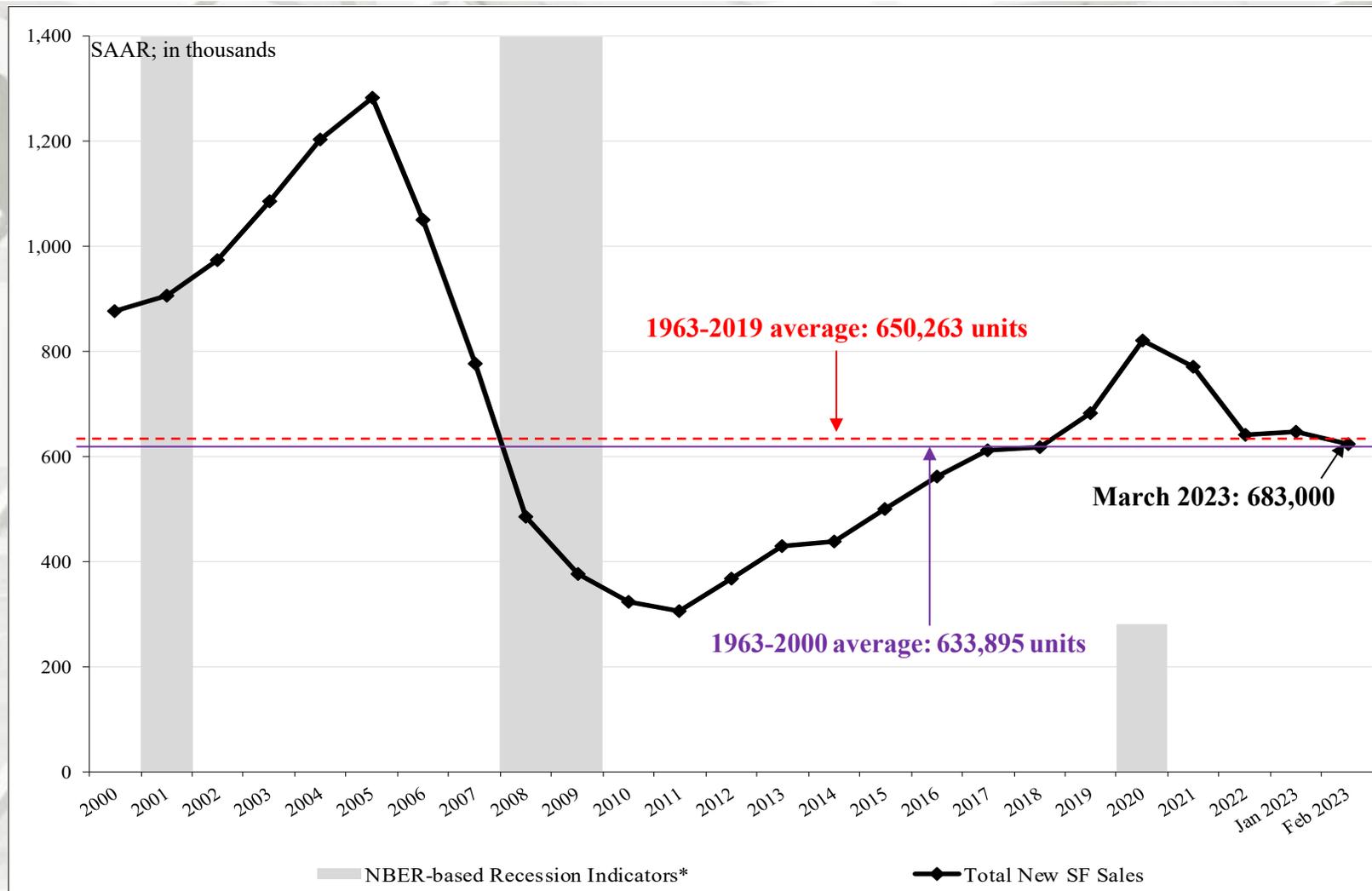
	New SF Sales*	Median Price	Mean Price	Month's Supply
March	683,000	\$449,800	\$562,400	7.6
February	623,000	\$433,200	\$501,800	8.4
2022	707,000	\$435,900	\$511,800	7.0
M/M change	9.6%	3.8%	12.1%	-9.5%
Y/Y change	-3.4%	3.2%	9.9%	8.6%

* All new sales data are presented at a seasonally adjusted annual rate (SAAR)¹ and housing prices are adjusted at irregular intervals².

New SF sales were more than the consensus forecast³ of 630 m. The past three month's new SF sales data also were revised:

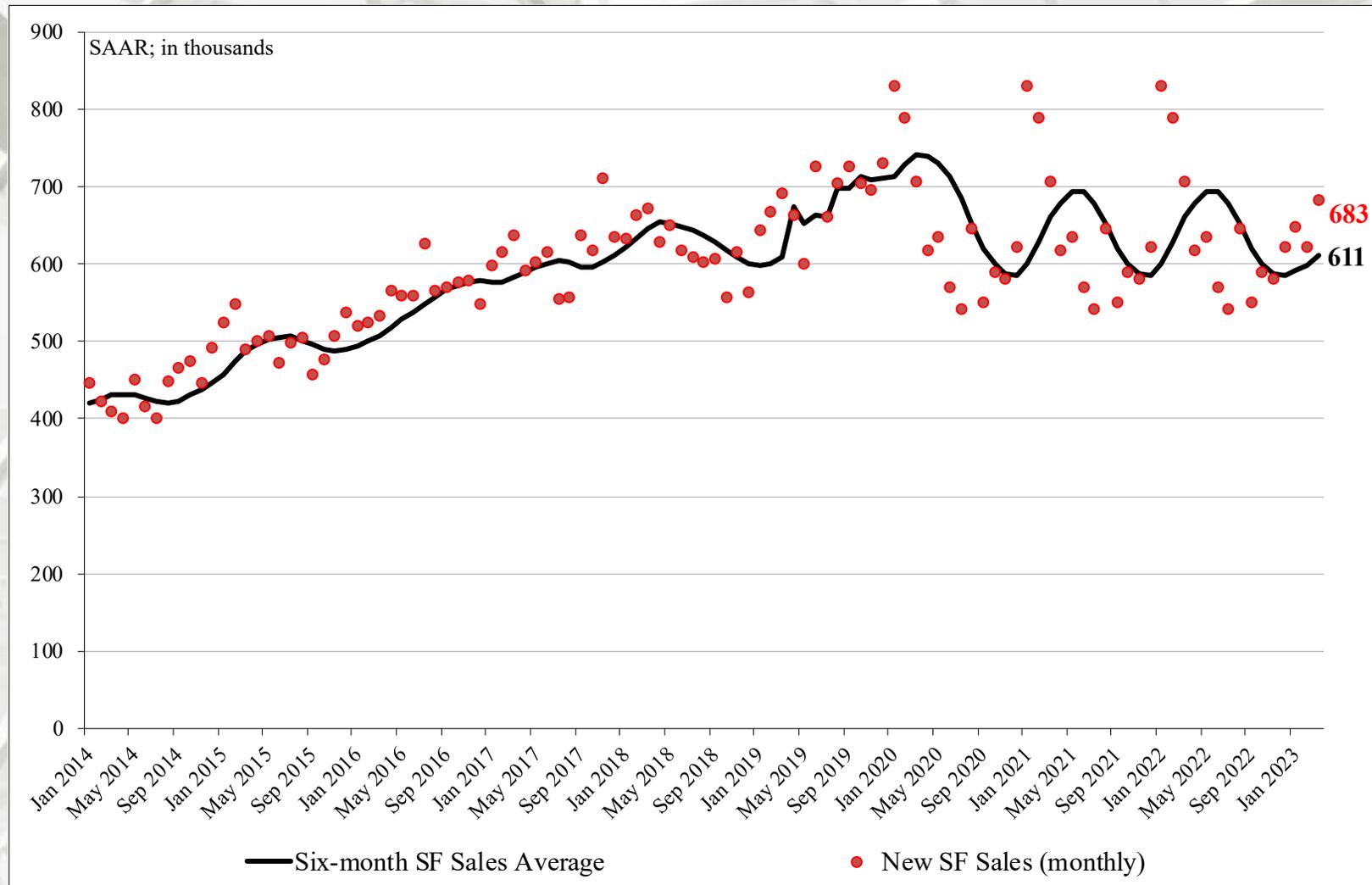
December initial: 616 m, revised to 622 m.
 January initial: 670 m, revised to 648 m.
 February initial: 640 m, revised to 623 m.

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			
March	65,000	71,000	386,000	161,000			
February	24,000	67,000	408,000	124,000			
2022	51,000	80,000	399,000	177,000			
M/M change	170.8%	6.0%	-5.4%	29.8%			
Y/Y change	27.5%	-11.3%	-3.3%	-9.0%			
	≤ \$150m	\$150 - \$199.9m	\$200 - 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m
March ^{1,2,3,4}	0	0	6,000	16,000	11,000	17,000	6,000
February	0	1,000	8,000	19,000	13,000	13,000	6,000
2022	0	0	11,000	21,000	14,000	17,000	8,000
M/M change	0.0%	0.0%	16.7%	18.8%	36.4%	0.0%	33.3%
Y/Y change	0.0%	0.0%	-12.5%	-13.6%	25.0%	-5.6%	0.0%
% of New SF sales	0.8%	0.8%	10.6%	28.8%	22.7%	25.8%	12.1%

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

¹ All data are SAAR

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

³ Detail March not add to total because of rounding.

⁴ Housing prices are adjusted at irregular intervals.

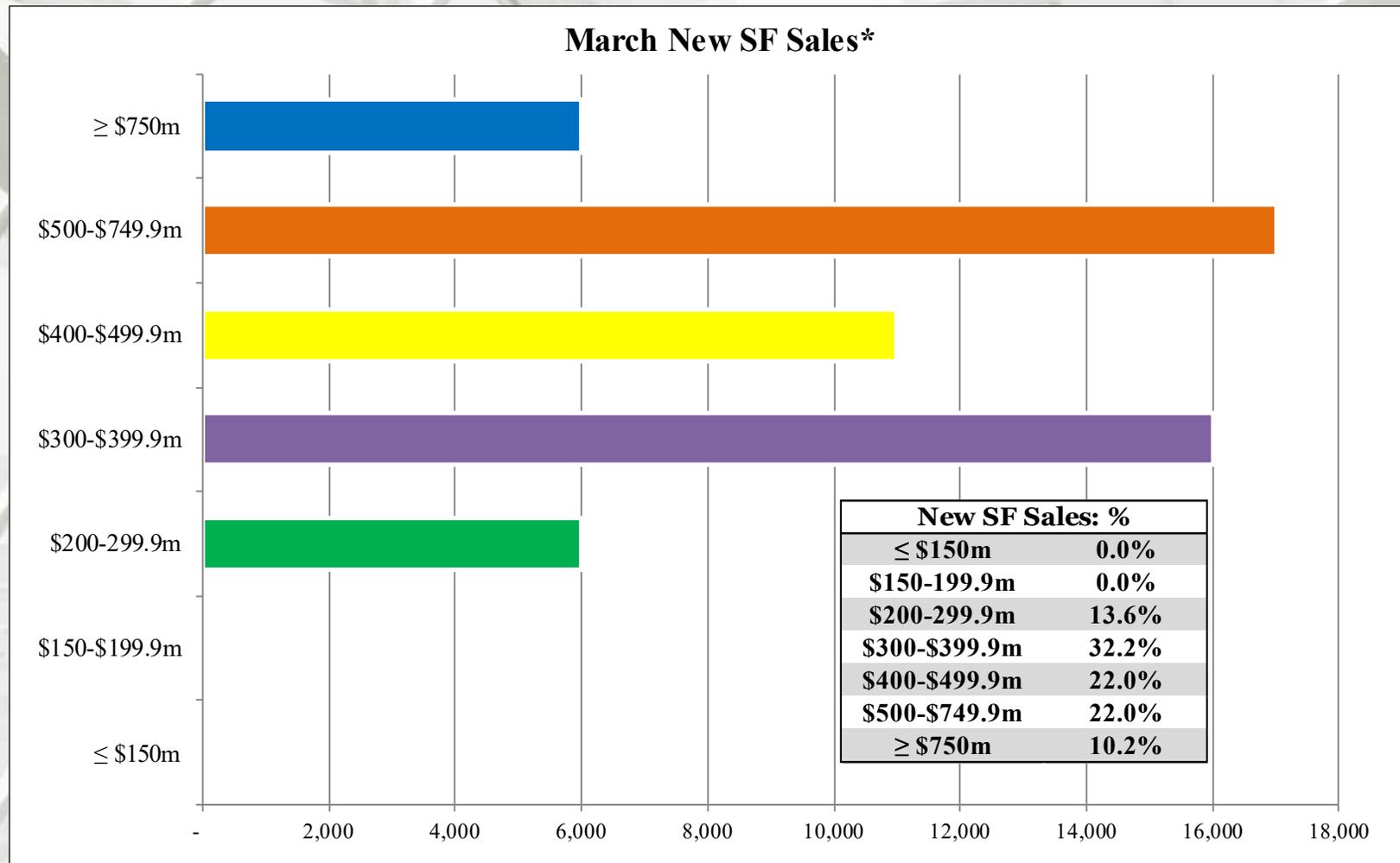
⁵ Z = Less than 500 units or less than 0.5 percent

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 4/25/23;

⁴ https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

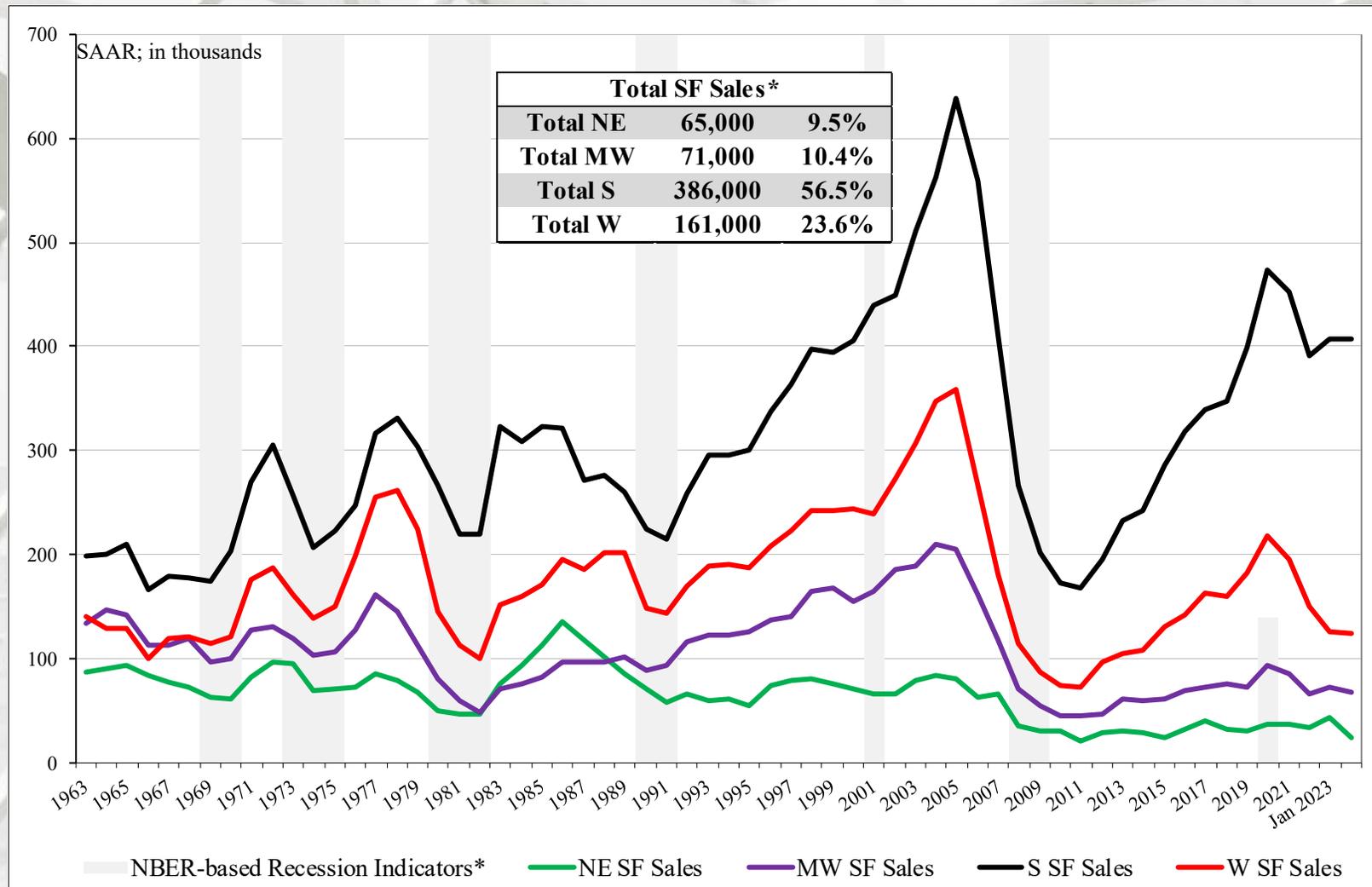
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New SF House Sales



* Total new sales by price category and percent.

New SF House Sales by Region

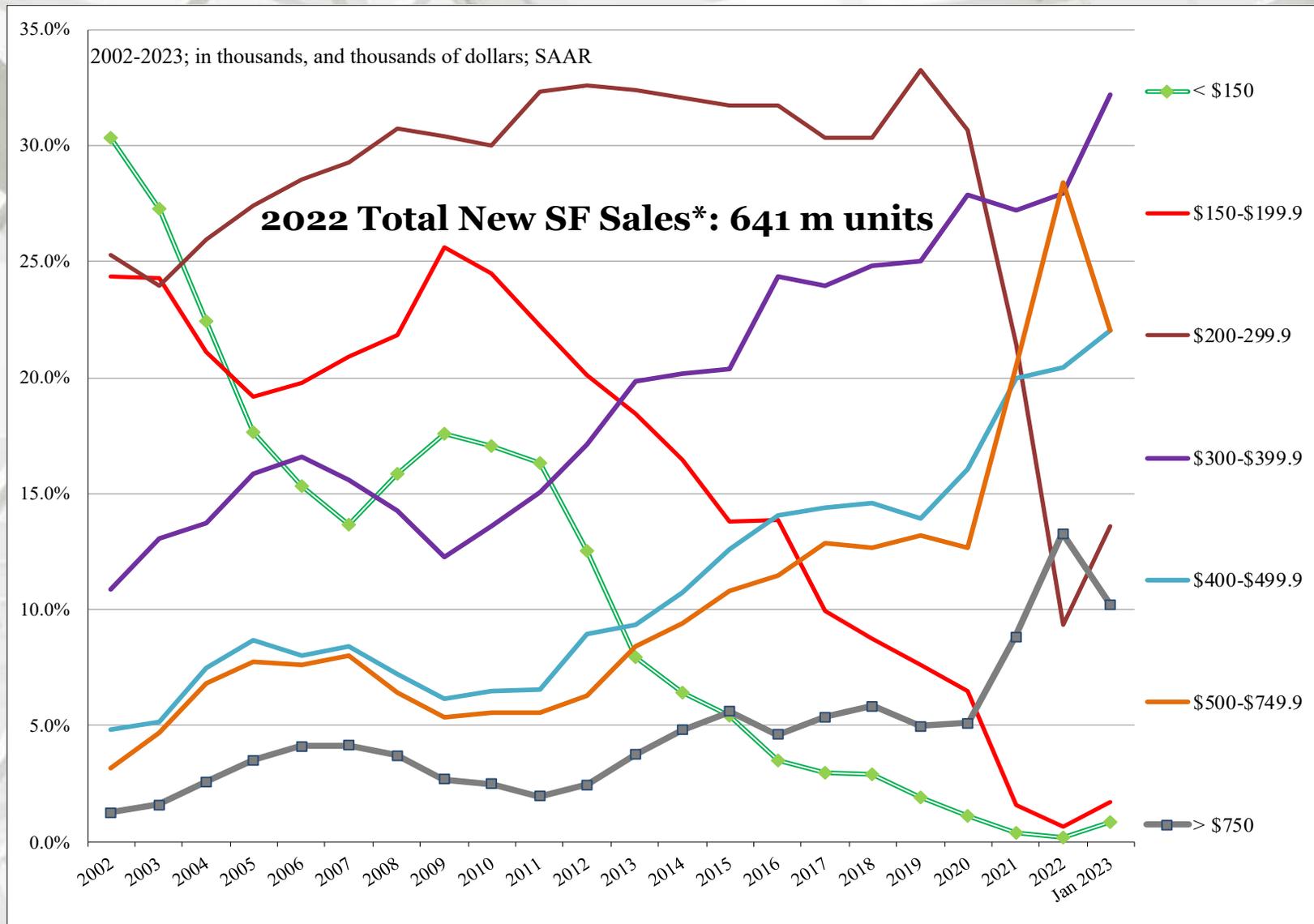


NE = Northeast; MW = Midwest; S = South; W = West

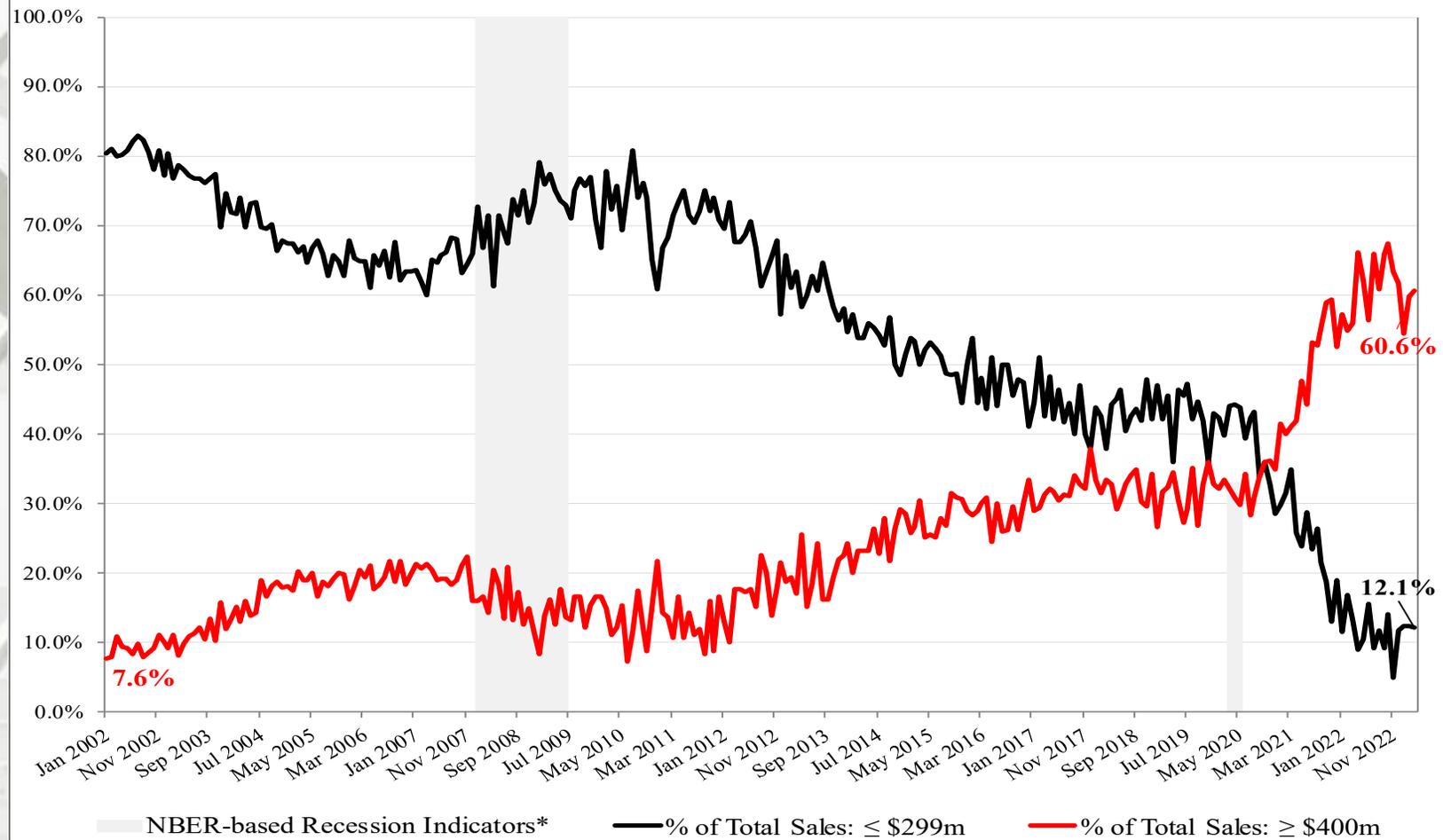
* Percentage of total new sales.

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



New SF House Sales



New SF Sales: ≤ \$299m and ≥ \$400m: 2002 – March 2023

The sales share of \$400 thousand plus SF houses is presented above^{1,2}. 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

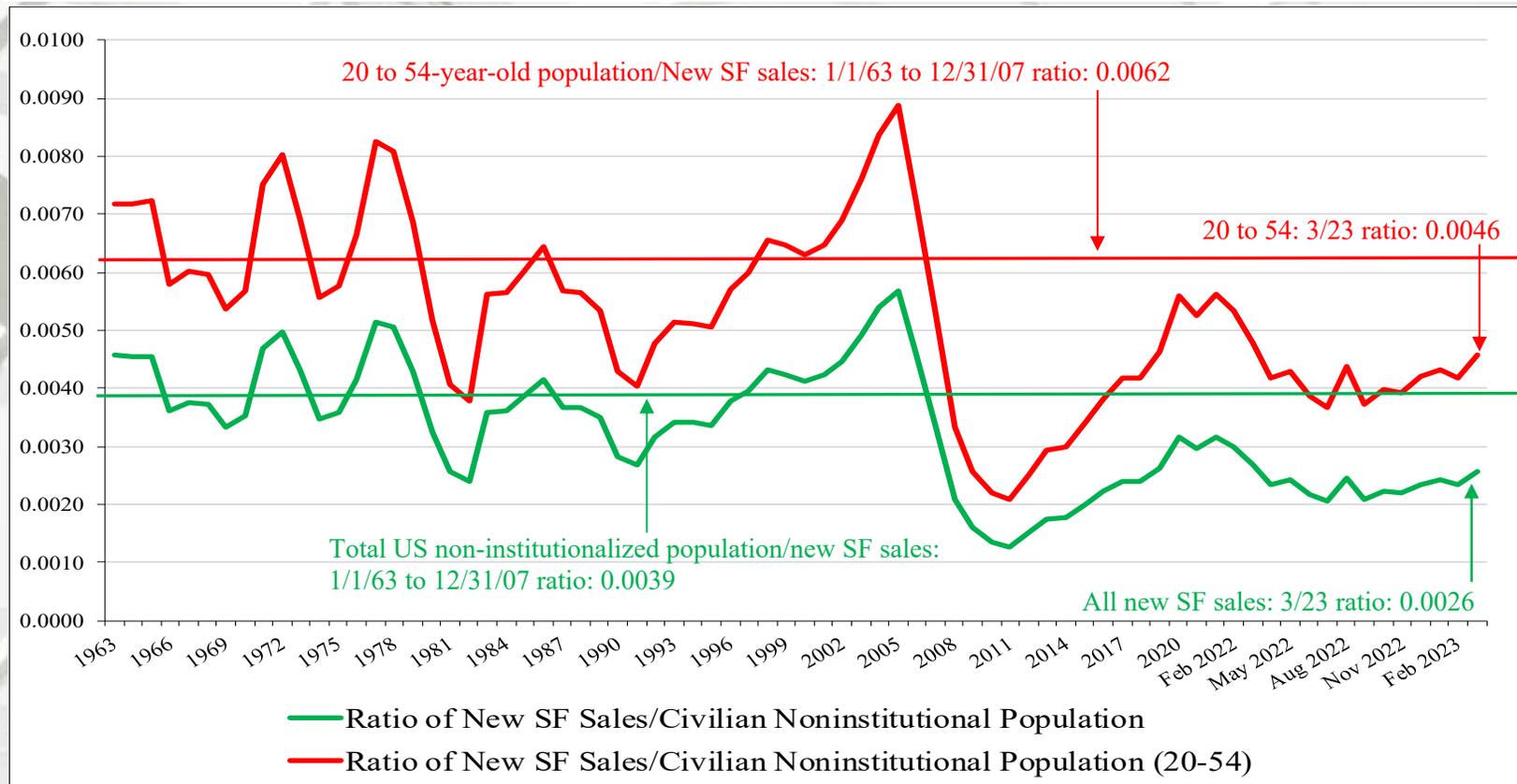


New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to March 2022

The number of ≤ \$200 thousand SF houses has declined dramatically since 2002^{1, 2}. Subsequently, from 2012 onward, the ≥ \$500 thousand class has soared (on a percentage basis) in contrast to the ≤ \$200 thousand class. Oft mentioned reasons for this occurrence is builder net margins, affordability, and purchase of new houses for rent – single-family rentals.

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

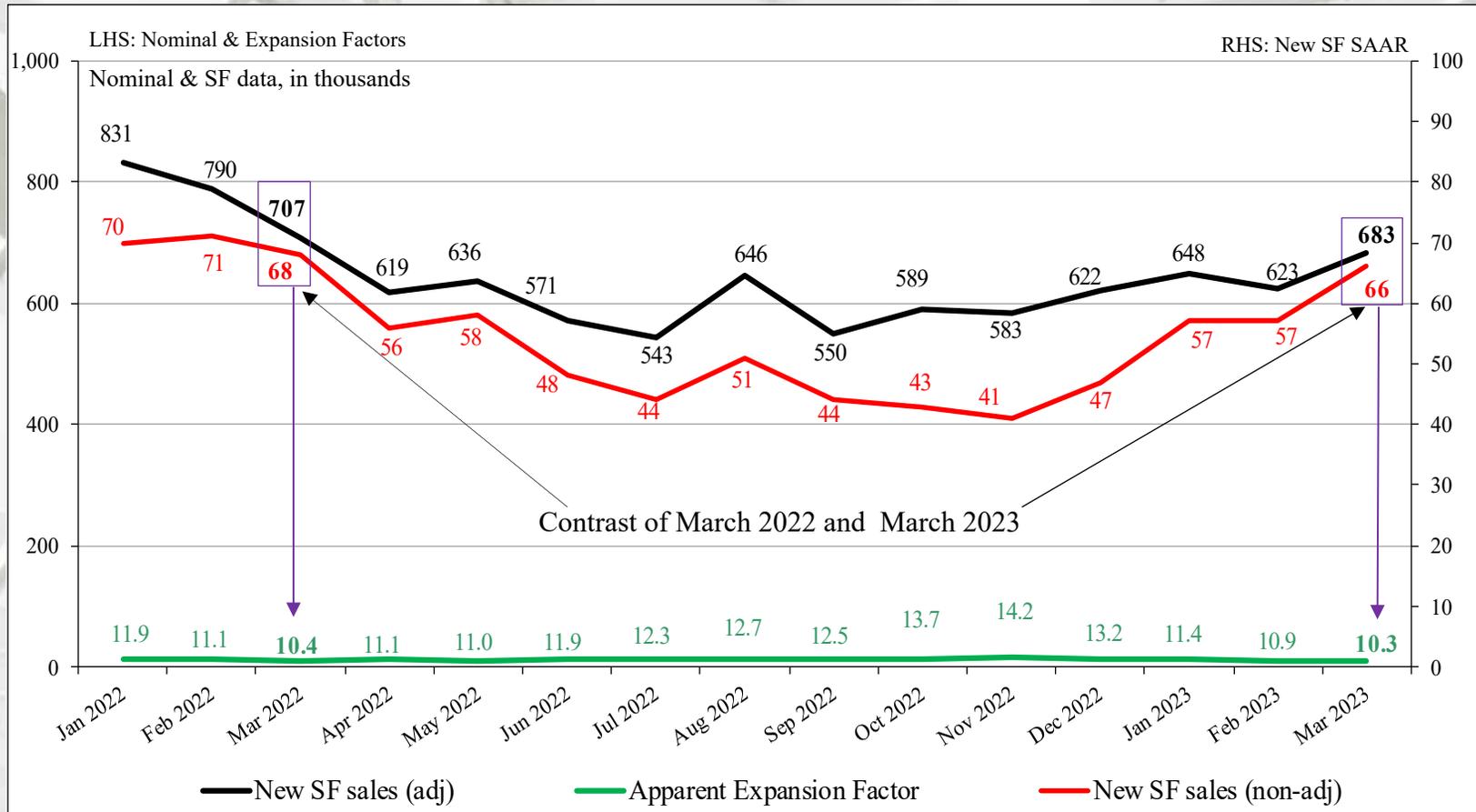


New SF sales adjusted for the US population

From January 1963 to December 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in March 2023 it was 0.0026 – an improvement from February. The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in March 2023 it was 0.0046 – also an improvement from February (0.0042). All are non-adjusted data. From a non-institutionalized population world view, new sales remain less than the long-term average.

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

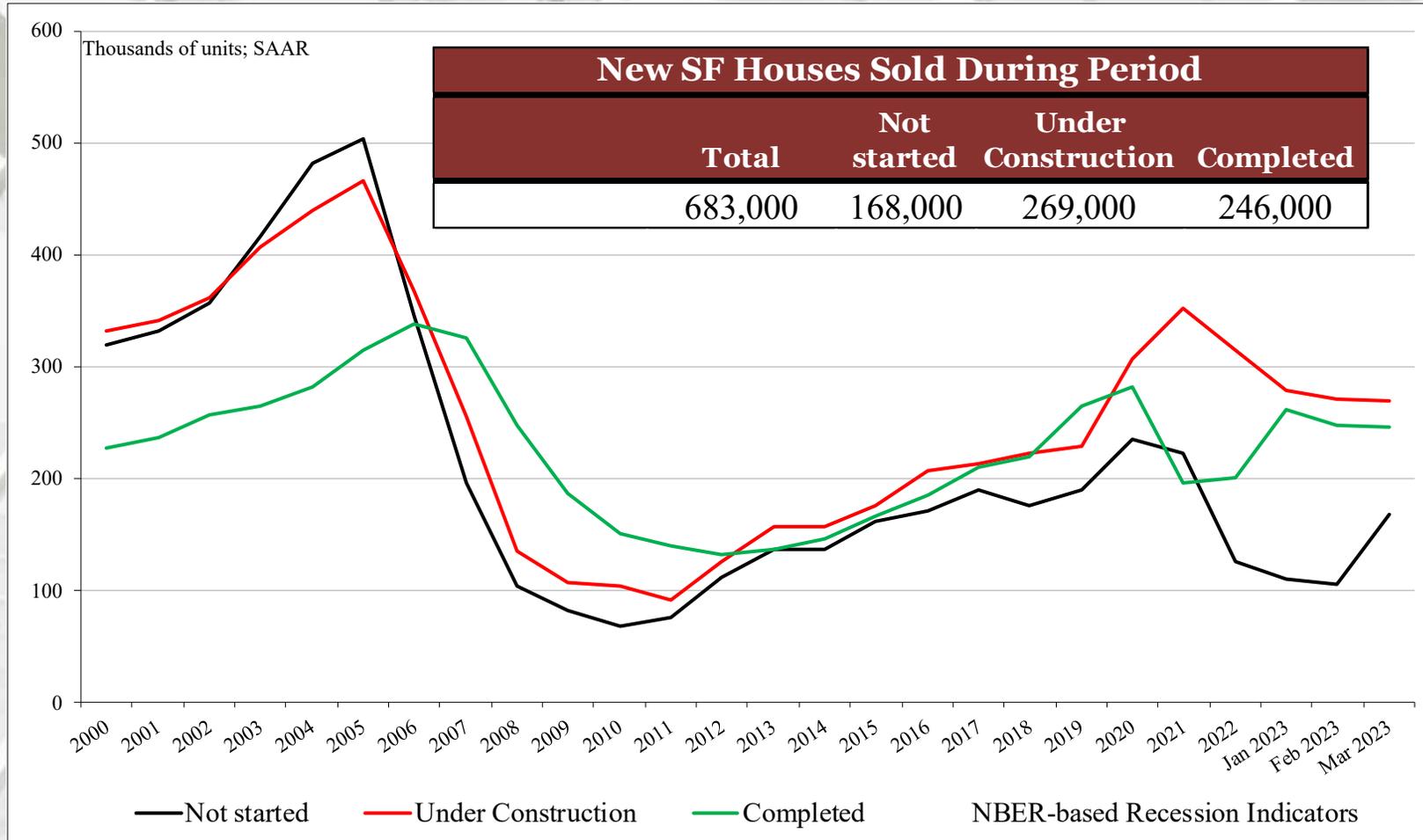
New SF House Sales

New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
March	683,000	168,000	269,000	246,000
February	623,000	105,000	271,000	247,000
2022	406,000	25,000	42,000	242,000
M/M change	9.6%	60.0%	-0.7%	-0.4%
Y/Y change	68.2%	572.0%	540.5%	1.7%
Total percentage		24.6%	39.4%	36.0%

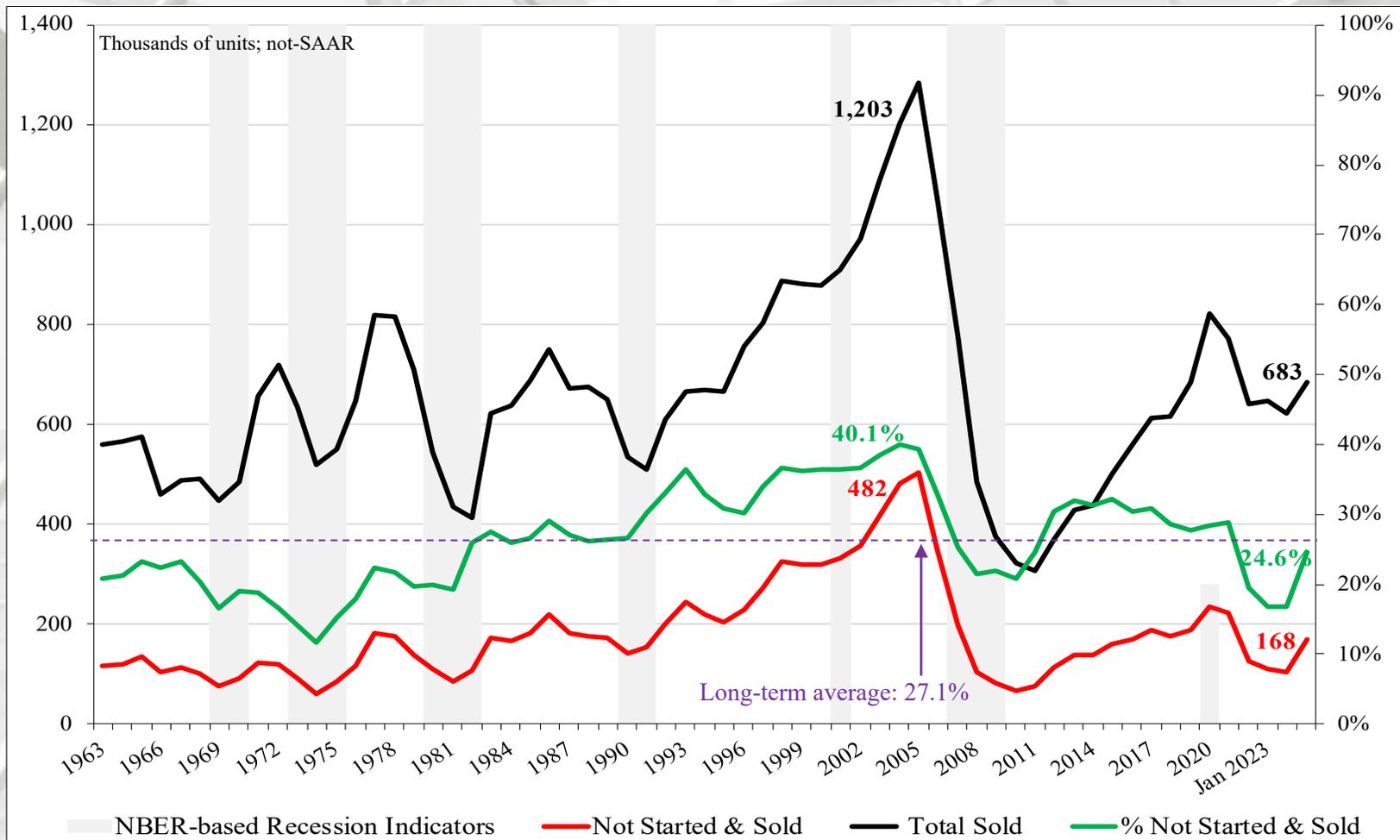
All data is SAAR

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 March (683 m), 24.6% (168 m) had not been started and sold. 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

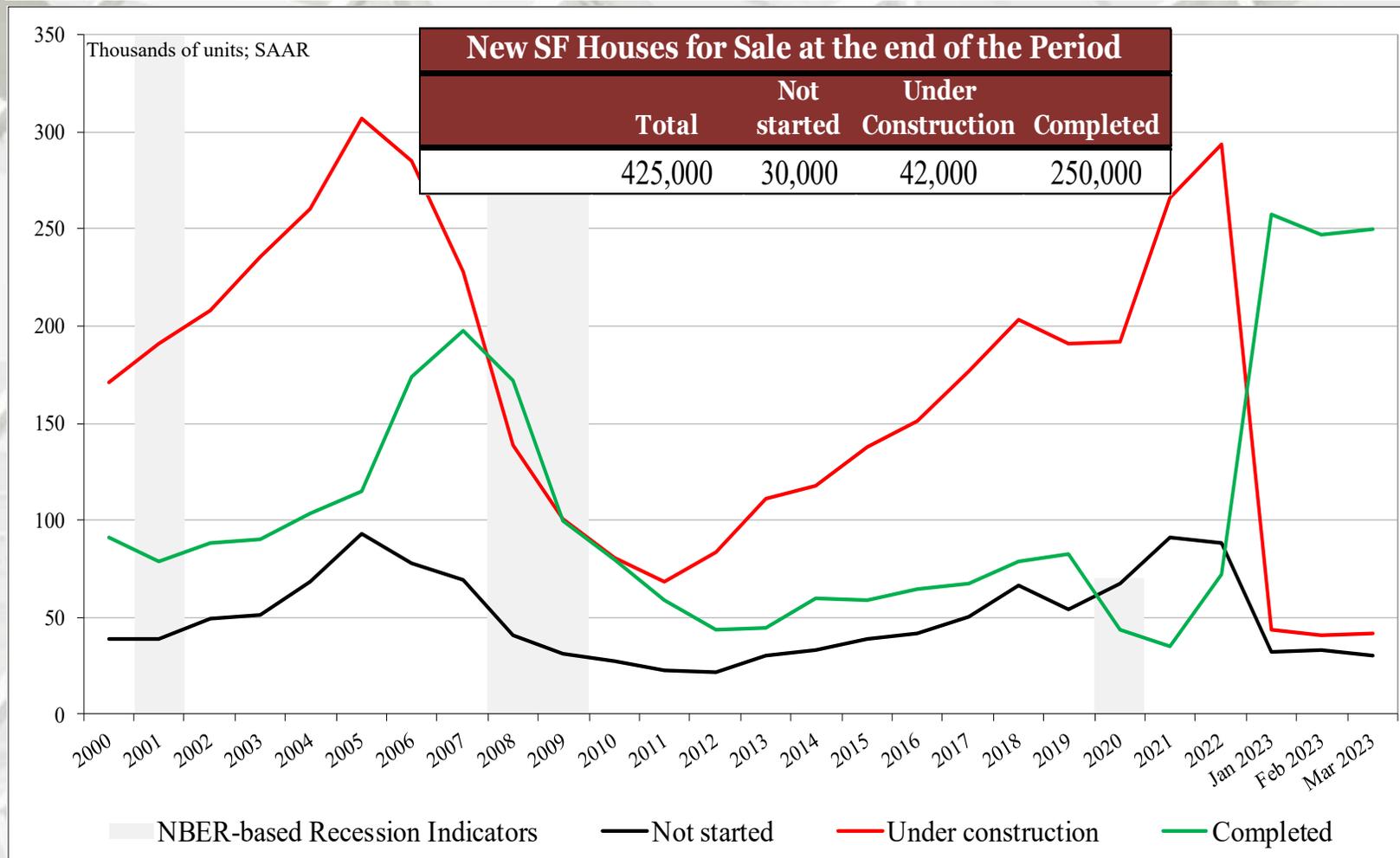
New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
March	425,000	30,000	42,000	250,000
February	425,000	33,000	41,000	247,000
2022	406,000	394,000	394,000	394,000
M/M change	0.0%	-9.1%	2.4%	1.2%
Y/Y change	4.7%	20.0%	0.0%	3.3%
Total percentage		7.1%	9.9%	58.8%

Not SAAR

Of houses listed for sale (432 m) in March, 16.4% (71 m) have been built. In the 'ground had not been broken for construction' or 'not started' category, 94 m (21.7%) 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).

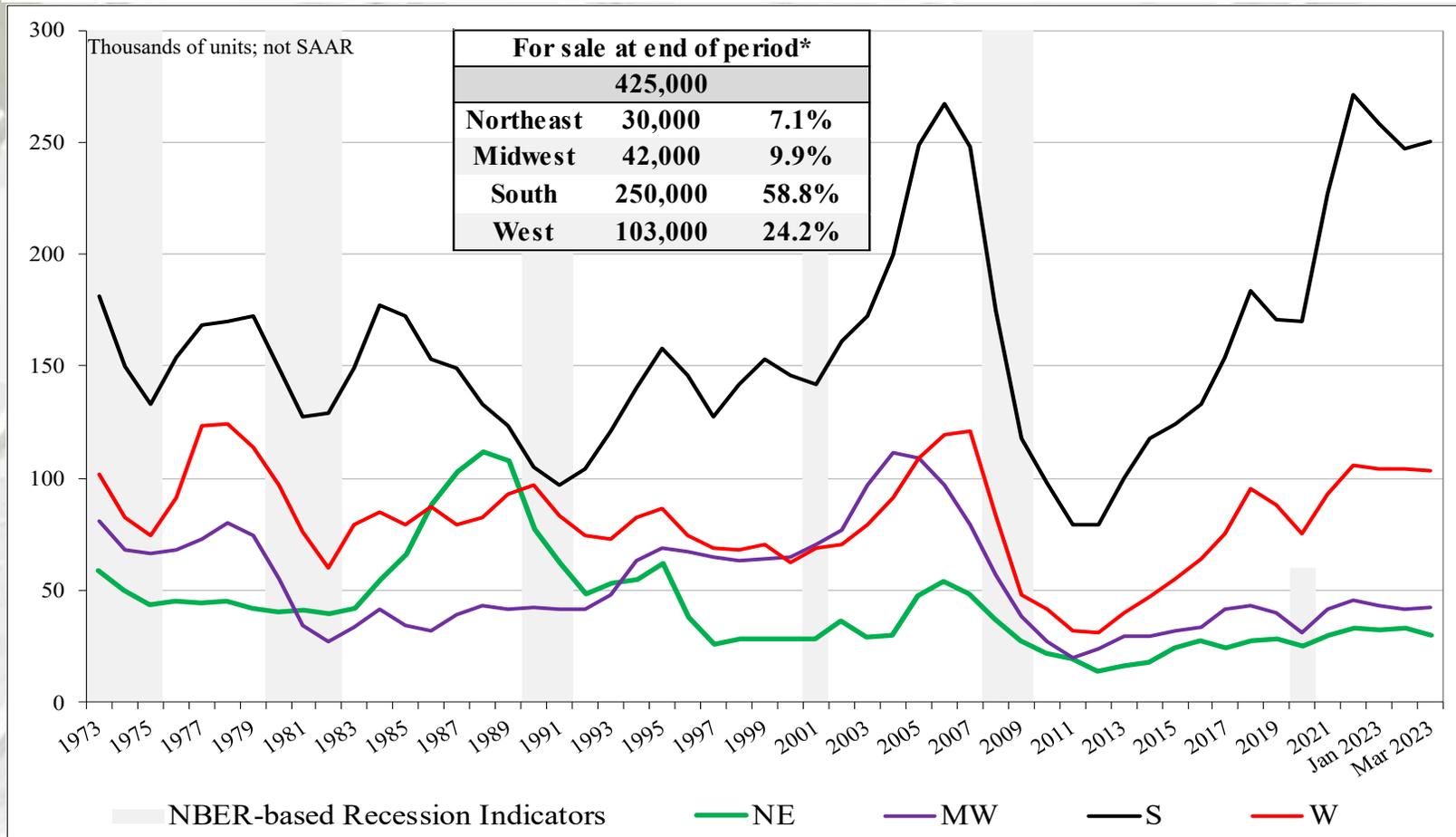
New SF House Sales

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

	Total	NE	MW	S	W
March	425,000	30,000	42,000	250,000	103,000
February	425,000	33,000	41,000	247,000	104,000
2022	406,000	25,000	42,000	242,000	96,000
M/M change	0.0%	-9.1%	2.4%	1.2%	-1.0%
Y/Y change	4.7%	20.0%	0.0%	3.3%	7.3%

* Not SAAR

New SF Houses for Sale at End of Period by Region

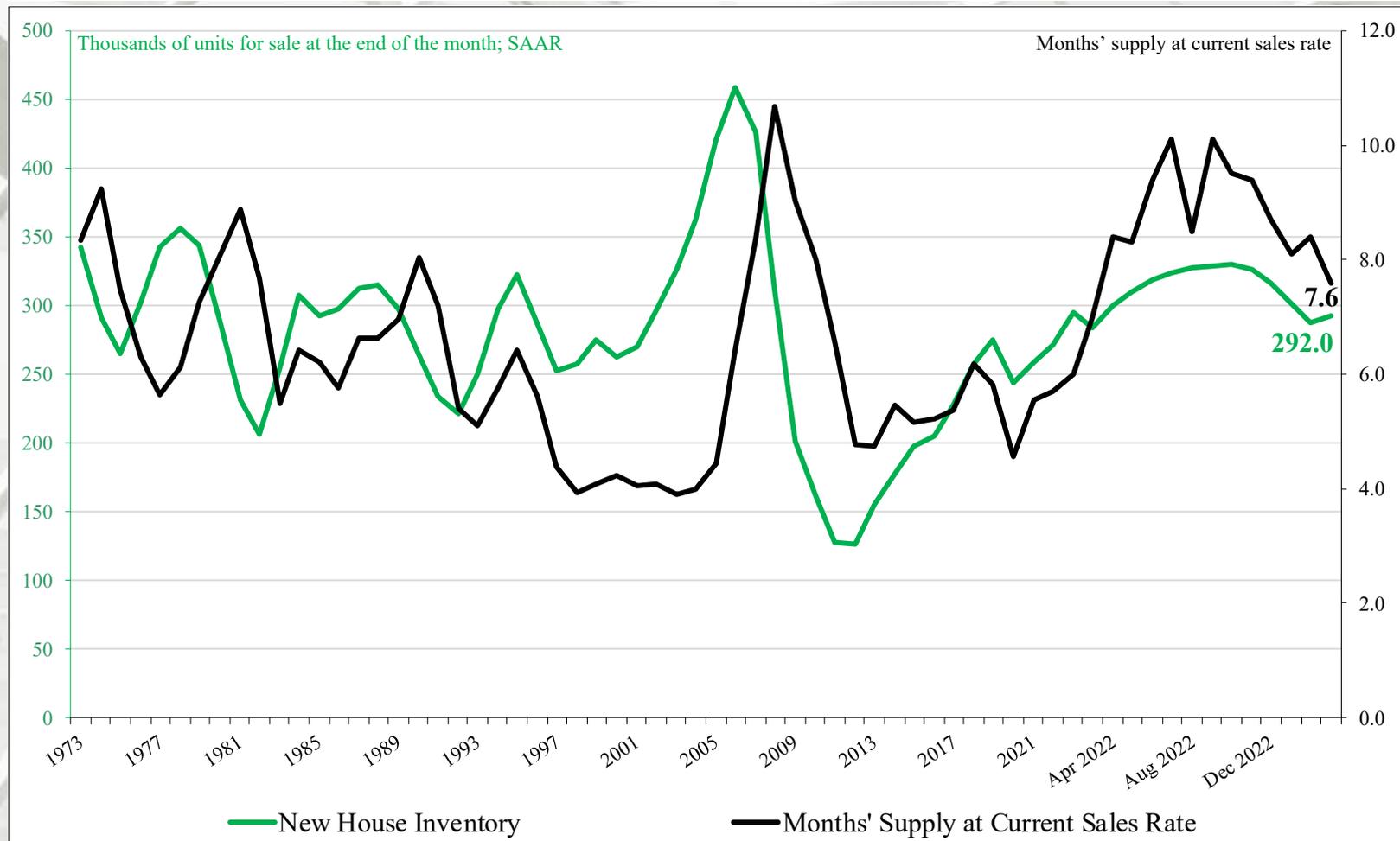


NE = Northeast; MW = Midwest; S = South; W = West

* 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).

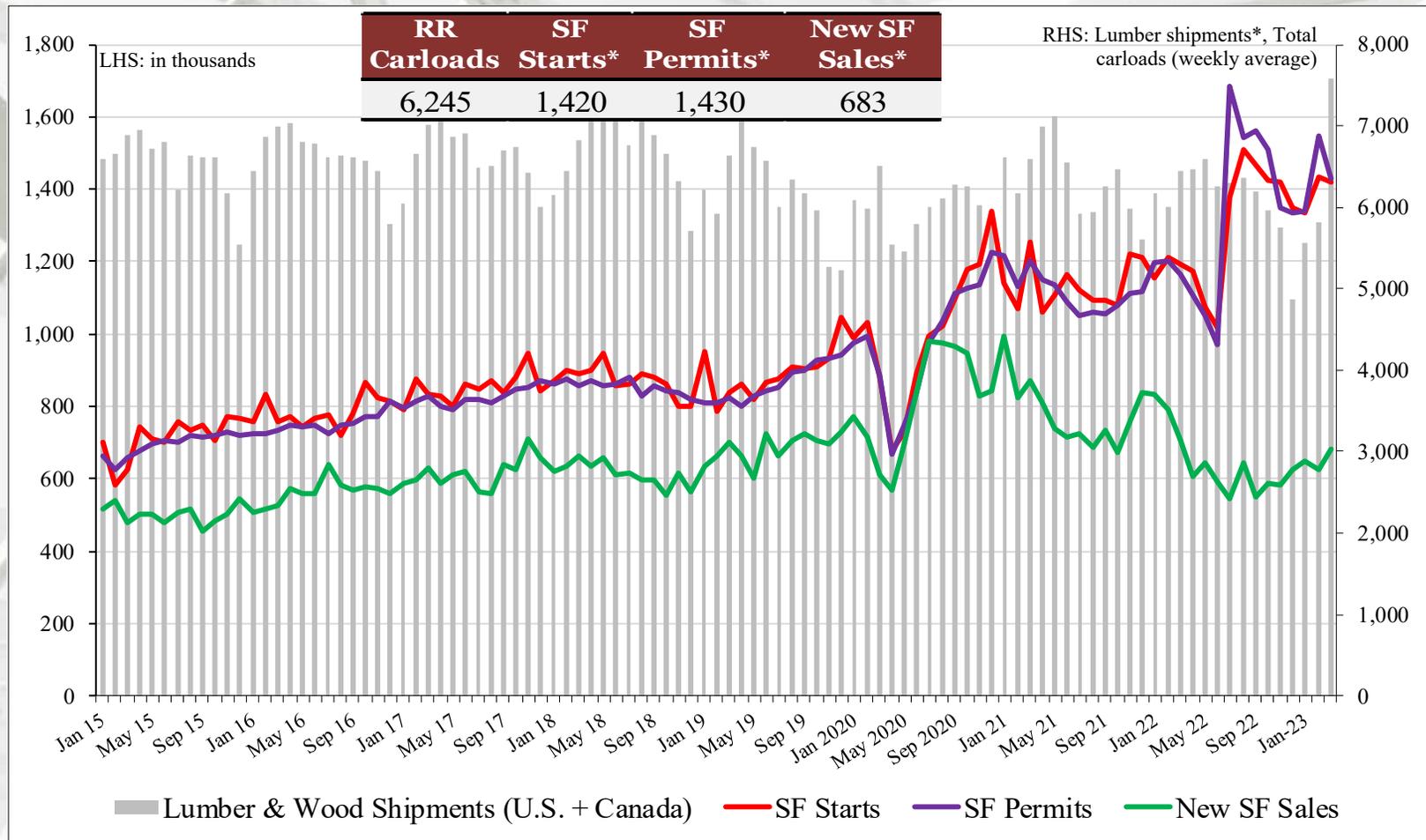
Months' Supply and New House Inventory^a



^a New HUC + New House Completions (sales data only)

The months' supply of new houses for sale at the end of March was 7.6, greater than the historically preferred number of five- to six-months (SAAR).

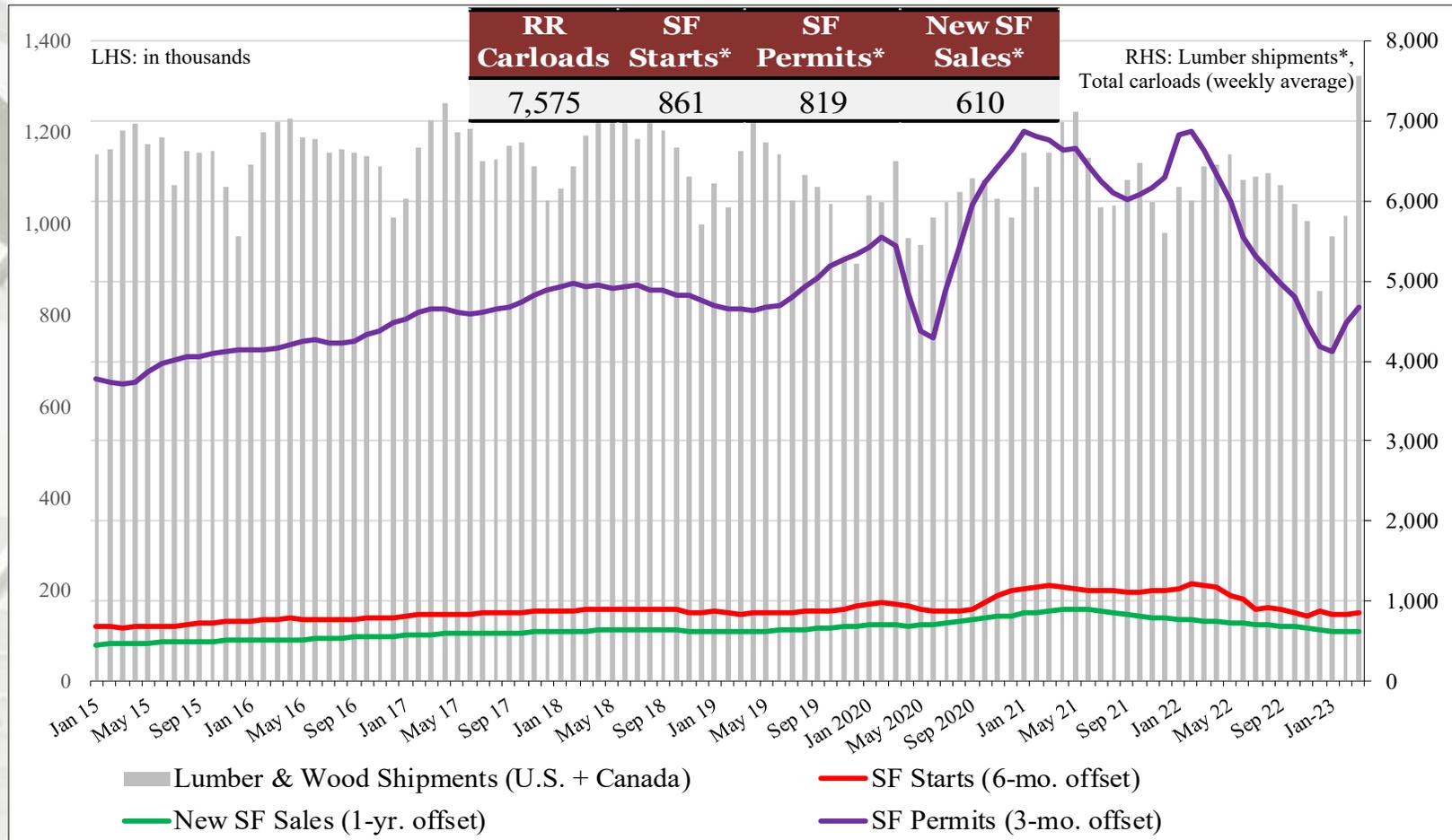
U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + U.S. lumber and wood shipments to the U.S. are contrasted above to U.S. housing metrics. Annual SF starts, SF Permits, and New sales are compared to total carload lumber and wood shipments. The intent is to discern if lumber shipments relate to future SF starts, SF permits, and new SF sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available.

* In thousands

U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + US lumber and wood shipments to the US are contrasted above to U.S. housing metrics. SF starts are off-set 6-months (a typical time-frame from permit issuance to actual start); Permits are off-set 3-months; and New sales are off-set 1-year. The intent is to discern if lumber shipments relate to future SF starts, SF permits, and New sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available.

* In thousands.

March 2022 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
March	\$827,696	\$366,325	\$123,245	\$338,126
February	\$829,121	\$369,170	\$122,811	\$337,140
2022	\$920,041	\$474,854	\$100,190	\$344,997
M/M change	-0.2%	-0.8%	0.4%	0.3%
Y/Y change	-10.0%	-22.9%	23.0%	-2.0%

* 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\$.

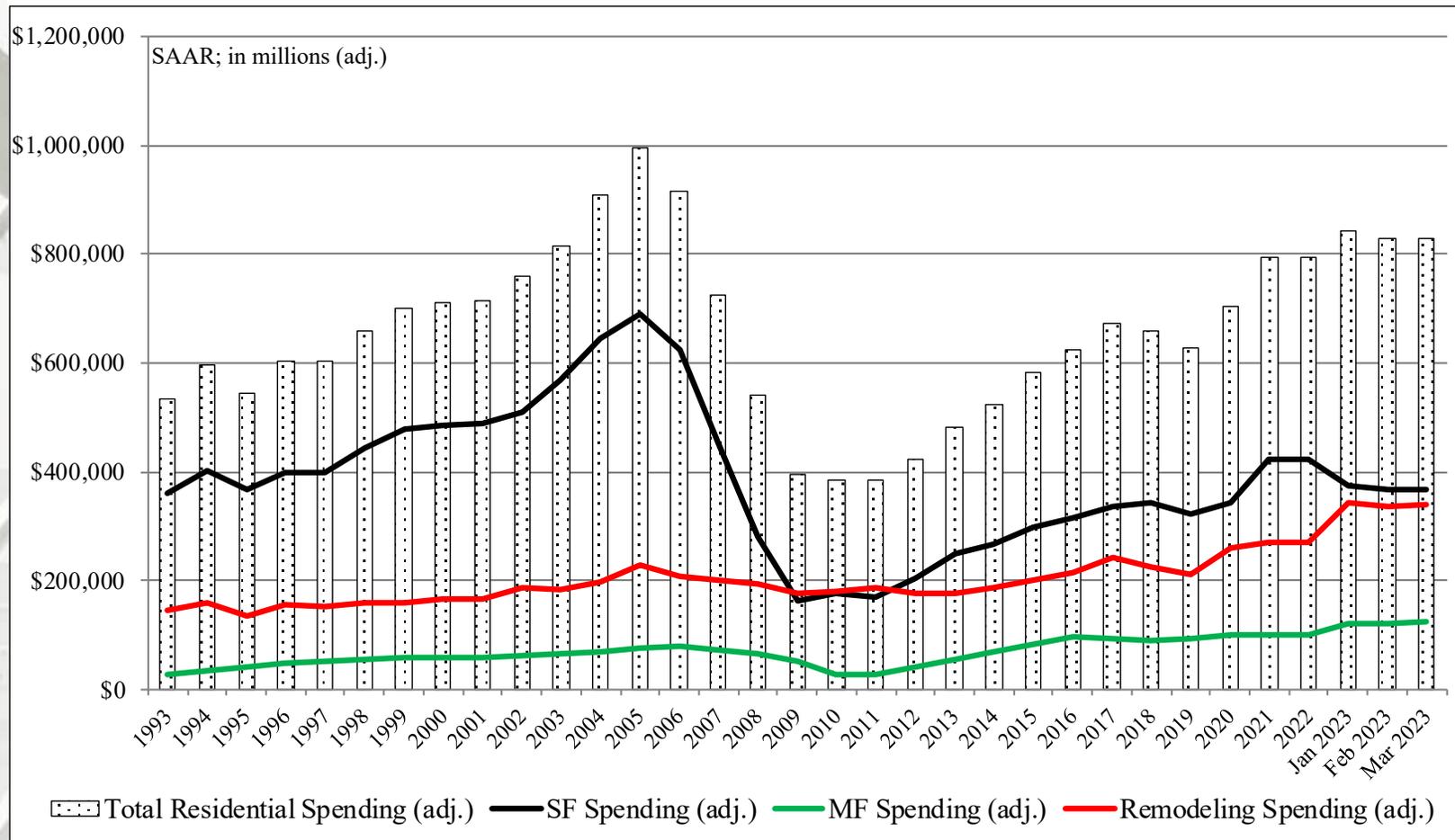
Total private residential construction spending includes new single-family, new multi-family, and improvement (AKA repair and remodeling) expenditures.

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.

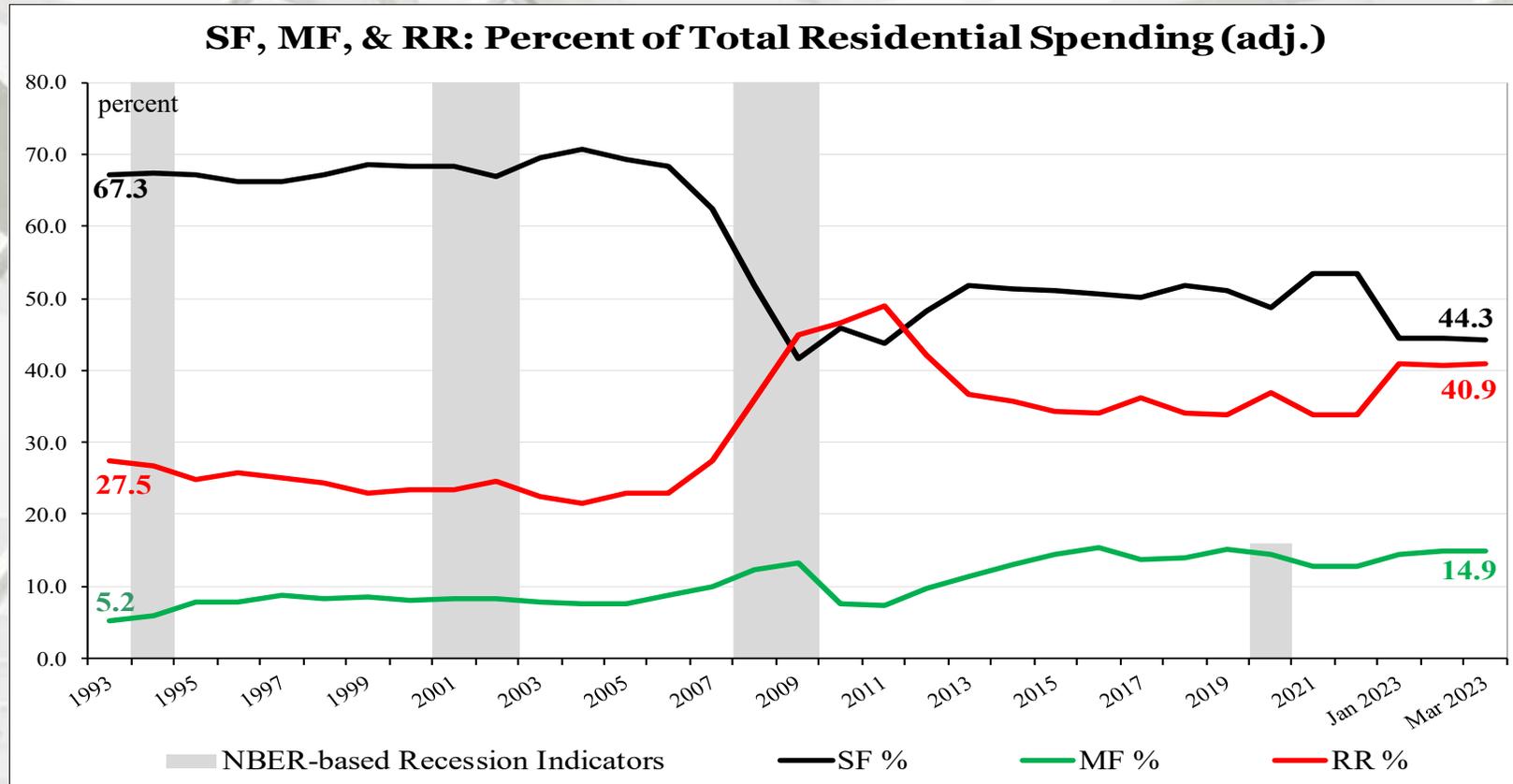
Improvements: Includes remodeling, additions, and major replacements to owner occupied properties subsequent to completion of original building. It includes construction of additional housing units in existing residential structures, finishing of basements and attics, modernization of kitchens, bathrooms, 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 (adjusted): 1993 – March 2023



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

Construction Spending Shares: 1993 – March 2023



Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5%

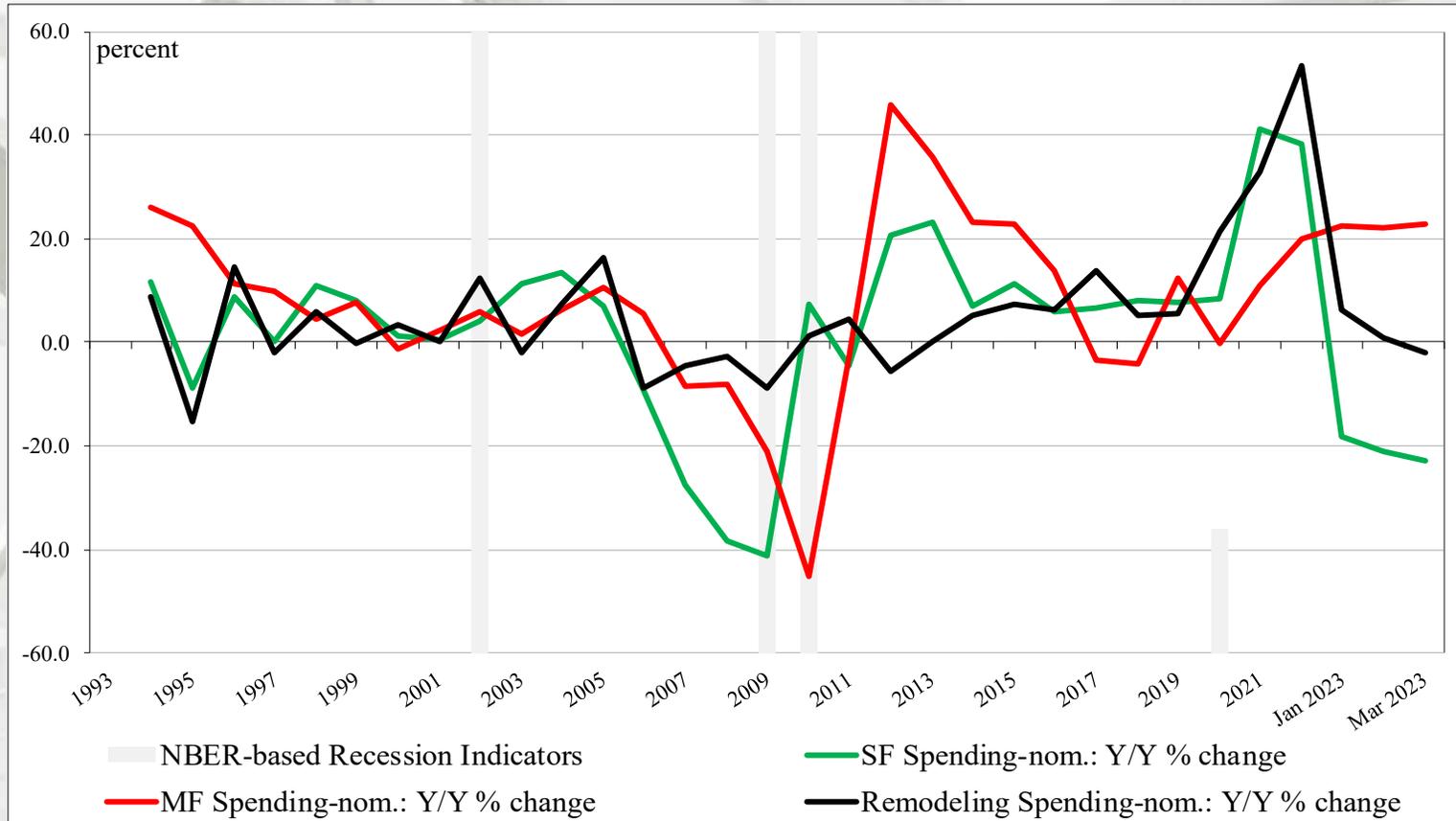
Residential remodeling (RR) spending average: 23.3% (SAAR).

Note: 1993 to 2021 (adjusted for inflation, BEA Table 1.1.9); March 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>, 7/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 5/1/23 and <http://www.bea.gov/iTable/iTable.cfm>; 9/30/22

Adjusted Construction Spending: Y/Y Percentage Change, 1993 – March 2023



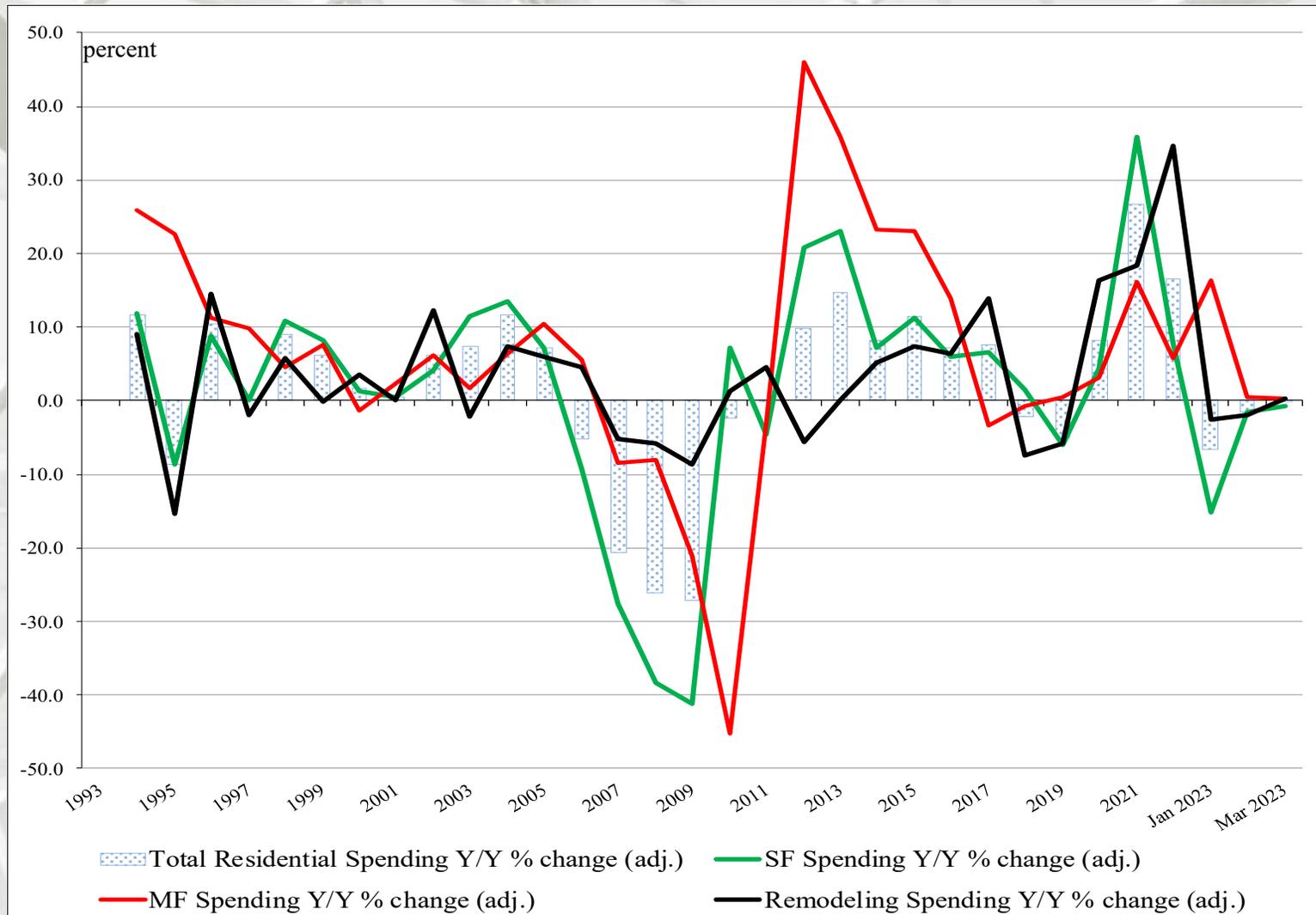
Nominal Residential Construction Spending: Y/Y percentage change, 1993 to March 2023

Presented above is the percentage change of inflation adjusted Y/Y construction spending. MF expenditures were positive on a percentage basis, year-over-year (March 2023 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).

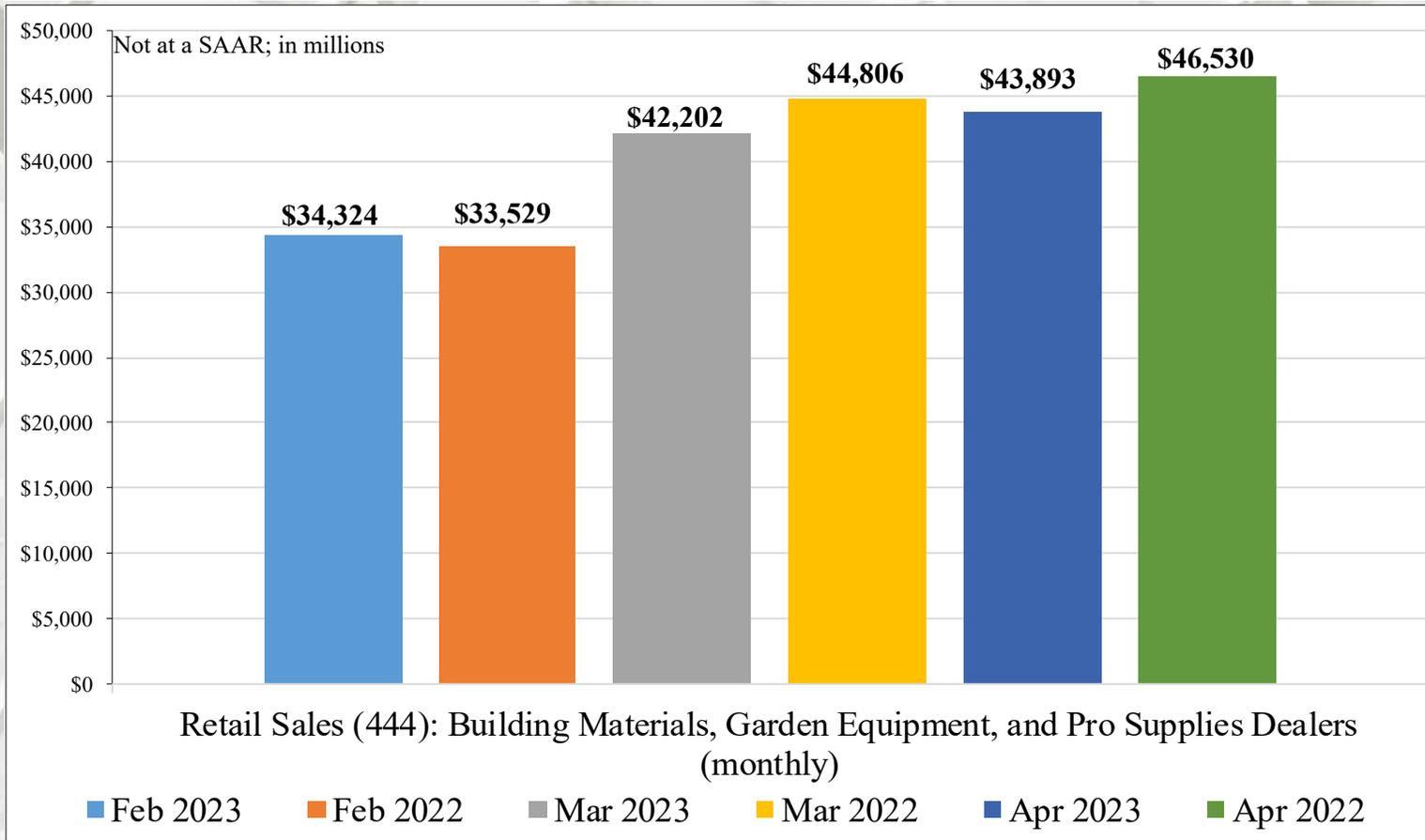
Sources: * <https://fred.stlouisfed.org/series/USREC>, 6/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 5/1/23 and <http://www.bea.gov/iTable/iTable.cfm>; 9/30/22

Adjusted Construction Spending: Y/Y Percentage Change, 1993 – March 2023



Remodeling

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



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

NAICS 444 sales increased 4.0% in April 2023 from March 2023 and decreased 5.7% Y/Y (on a non-adjusted basis).

Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales increased 23.9% in March 2023 from February 2023 and improved 7.1% in March 2023 from March 2022 (on a non-adjusted basis).

Remodeling

Harvard Joint Center for Housing Studies

Home Remodeling Market Projected To Contract By 2024

Leading Indicator of Remodeling Activity (LIRA)

“After more than a decade of continuous growth, annual spending on improvements and repairs to owner-occupied homes is expected to decline by early next year, according to the Leading Indicator of Remodeling Activity (LIRA) released today by the Remodeling Futures Program at the Joint Center for Housing Studies of Harvard University. The LIRA projects that year-over-year expenditures for homeowner improvements and maintenance will post a modest decline of 2.8 percent through the first quarter of 2024.

Higher interest rates and sharp downturns in homebuilding and existing home sales are driving our projections for sluggish remodeling activity next year. With ongoing uncertainty in financial markets and the threat of a recession, home owners are increasingly likely to pare back or delay projects beyond necessary replacements and repairs”, Carlos Martín, Project Director of the Remodeling Futures Program

Home owner improvement and maintenance spending is expected to top out at \$458 billion in the coming year, compared with market spending of \$471 billion over the past four quarters. However, strong and steady growth in the number of homes permitted for remodeling projects, as well as a slew of federal incentives for energy-efficiency retrofits may yet buoy remodeling expenditure from steeper declines, Abbe Will, Associate Project Director of the Remodeling Futures Program,”
– Kerry Donahue, Harvard Joint Center for Housing Studies

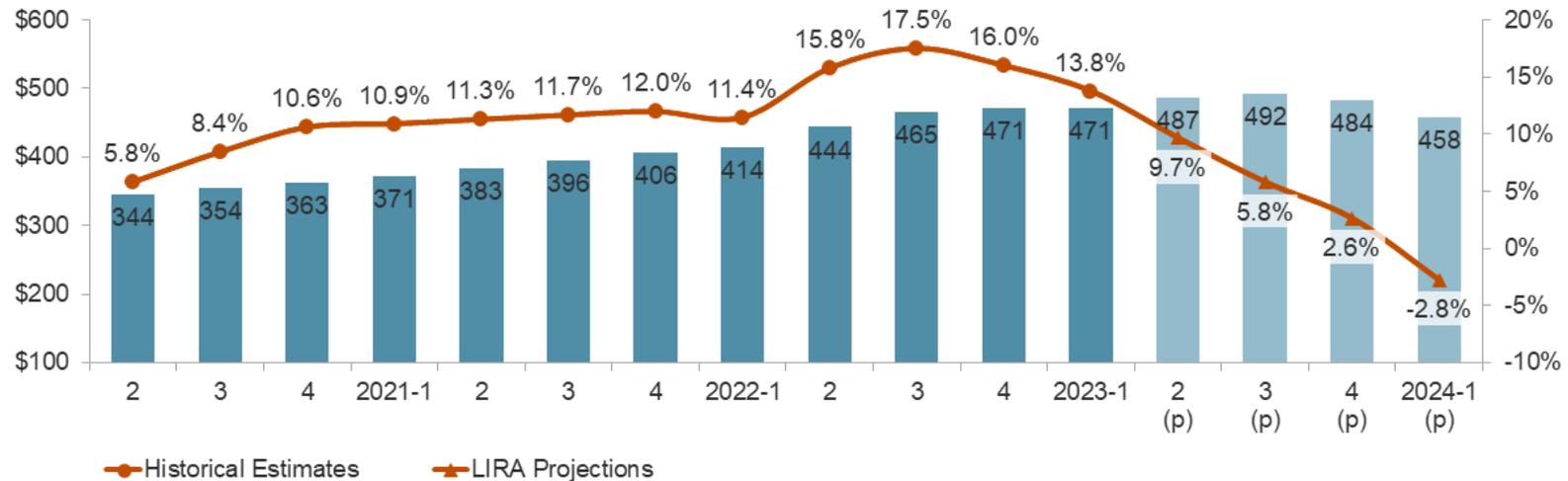
Remodeling

Harvard Joint Center for Housing Studies

Leading Indicator of Remodeling Activity (LIRA)

Leading Indicator of Remodeling Activity – First Quarter 2023

Homeowner Improvements & Repairs
Four-Quarter Moving Totals
Billions



Notes: Improvements include remodels, replacements, additions, and structural alterations that increase the value of homes. Routine maintenance and repairs preserve the current quality of homes. Historical estimates since 2021 are produced using the LIRA model until American Housing Survey benchmark data become available.

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Joint Center for Housing Studies of Harvard University 

Existing House Sales

National Association of Realtors®

	Existing Sales	Median Price	Month's Supply
March	4,440,000	\$375,700	2.6
February	4,550,000	\$363,600	2.6
2022	5,690,000	\$379,300	2.0
M/M change	-2.4%	3.3%	0.0%
Y/Y change	-22.0%	-0.9%	30.0%

All sales data: SAAR

Existing House Sales

	NE	MW	S	W
March	520,000	1,030,000	2,070,000	820,000
February	520,000	1,090,000	2,090,000	850,000
2022	660,000	1,250,000	2,600,000	1,180,000
M/M change	0.0%	-5.5%	-1.0%	-3.5%
Y/Y change	-21.2%	-17.6%	-20.4%	-30.5%

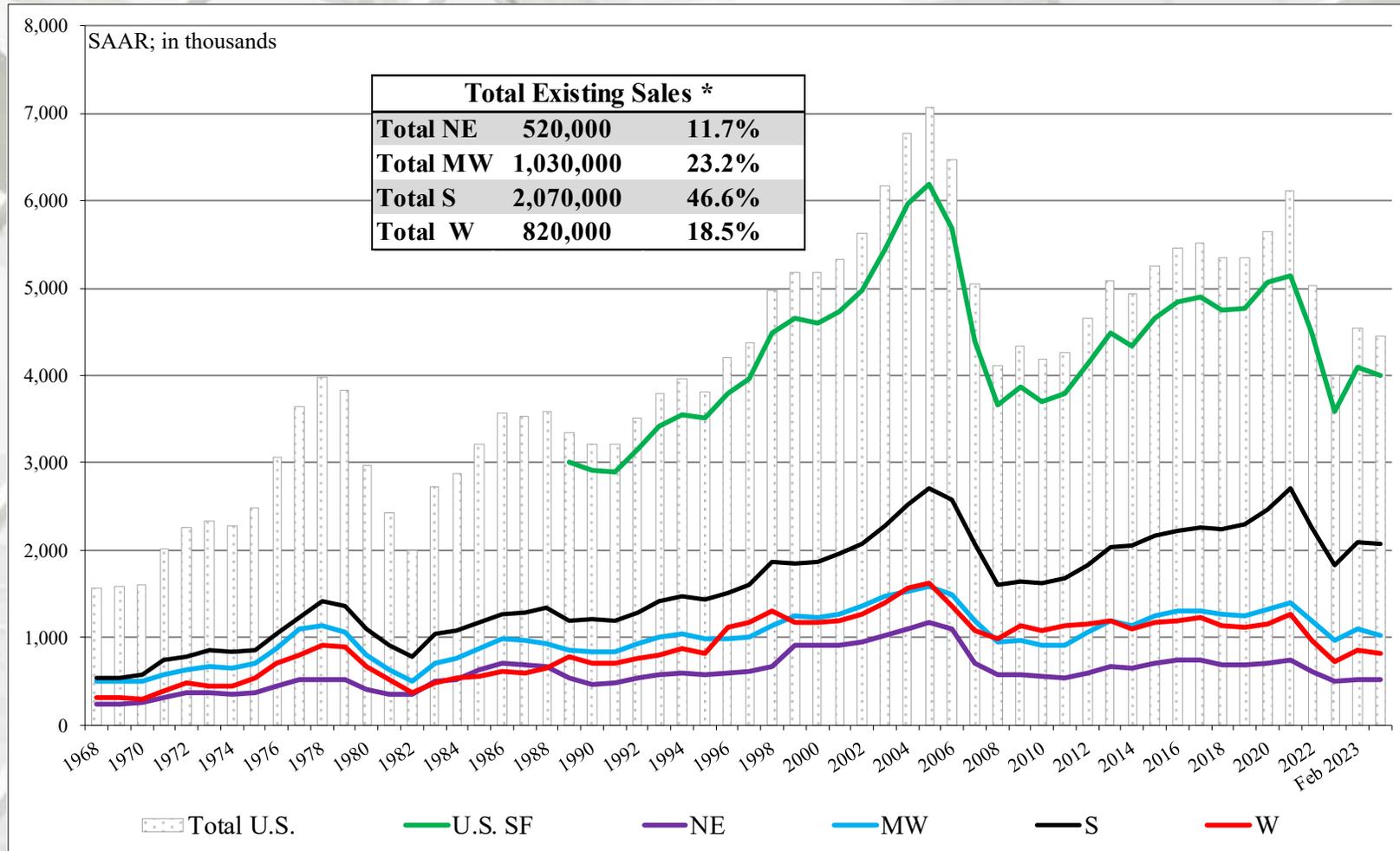
	Existing SF Sales	SF Median Price
March	3,990,000	\$380,000
February	4,100,000	\$368,100
2022	5,060,000	\$385,400
M/M change	-2.7%	3.3%
Y/Y change	-21.1%	-1.4%

All sales data: SAAR.

Source: <https://fred.stlouisfed.org/series/EXHOSLUSM495S>; 4/20/23

Return TOC

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

FHFA House Price Index Up 0.5 Percent in February; Up 4.0 Percent from Last Year

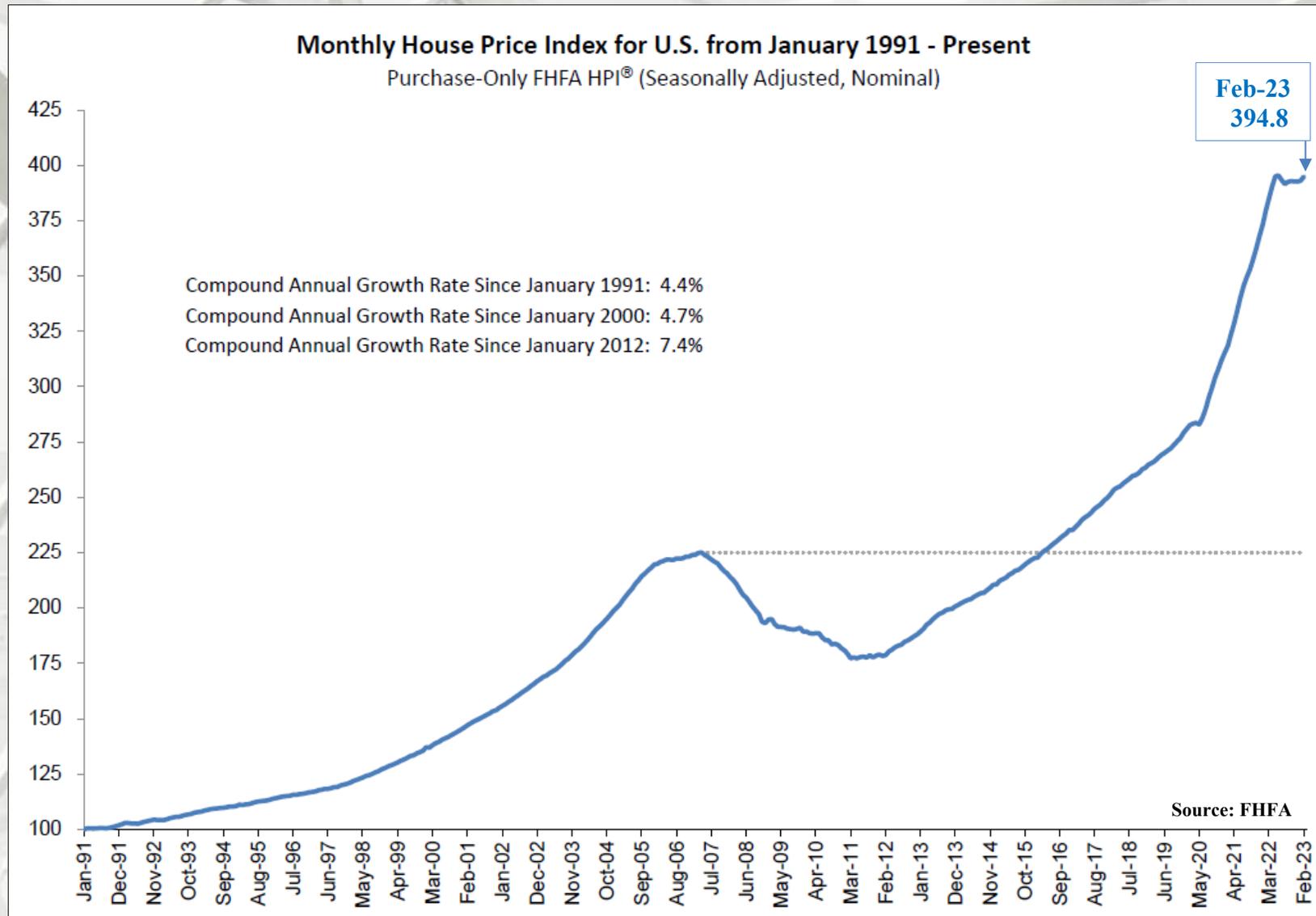
Significant Findings

“U.S. house prices rose in February, up **0.5 percent** from January, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI®). House prices rose **4.0 percent** from February 2022 to February 2023. The previously reported **0.2 percent** price increase for January 2023 was revised downward to a **0.1 percent** increase.

For the nine census divisions, seasonally adjusted monthly price changes from January 2023 to February 2023 ranged from **-0.4 percent** in the South Atlantic division to **+2.3 percent** in the East South Central division. The 12-month changes were **-2.7 percent** in the Pacific division to **+8.3 percent** in the East South Central division.” – Raffi Williams and Adam Russell, FHFA

“U.S. house prices increased slightly in February. This increase was, in part, due to a decline in mortgage rates by more than half a percentage point from the peak reached in early November as well as historically low housing inventory.” – Dr. Nataliya Polkovnichenko, Supervisory Economist, Division of Research and Statistics, FHFA

U.S. Housing Prices



U.S. Housing Prices

S&P CoreLogic Case-Shiller Index Declines Moderated In February

“S&P Dow Jones Indices (S&P DJI) released the latest results for the S&P CoreLogic Case-Shiller Indices, the leading measure of U.S. home prices. Data released today for February 2023 show a modest increase in our national composites, although eight of the 20 major metro markets reported lower prices. More than 27 years of history are available for the data series and can be accessed in full by going to <https://www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/>.

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 2.0% annual gain in February, down from 3.7% in the previous month. The 10-City Composite annual increase came in at 0.4%, down from 2.5% in the previous month. The 20-City Composite posted a 0.4% year-over-year gain, down from 2.6% in the previous month.

Miami, Tampa, and Atlanta again reported the highest year-over-year gains among the 20 cities in February. The order remained the same with Miami leading the way with a 10.8% year-over-year price increase, followed by Tampa in second with a 7.7% increase, and Atlanta in third with a 6.6% increase. All 20 cities reported lower prices in the year ending February 2023 versus the year ending January 2023.

Month-Over-Month

Before seasonal adjustment, the U.S. National Index posted a 0.2% month-over-month increase in February, while the 10-City and 20-City Composites posted increases of 0.3% and 0.2%, respectively.

After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 0.2%, while both the 10-City and 20-City Composites posted increases of 0.1%.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

U.S. Housing Prices

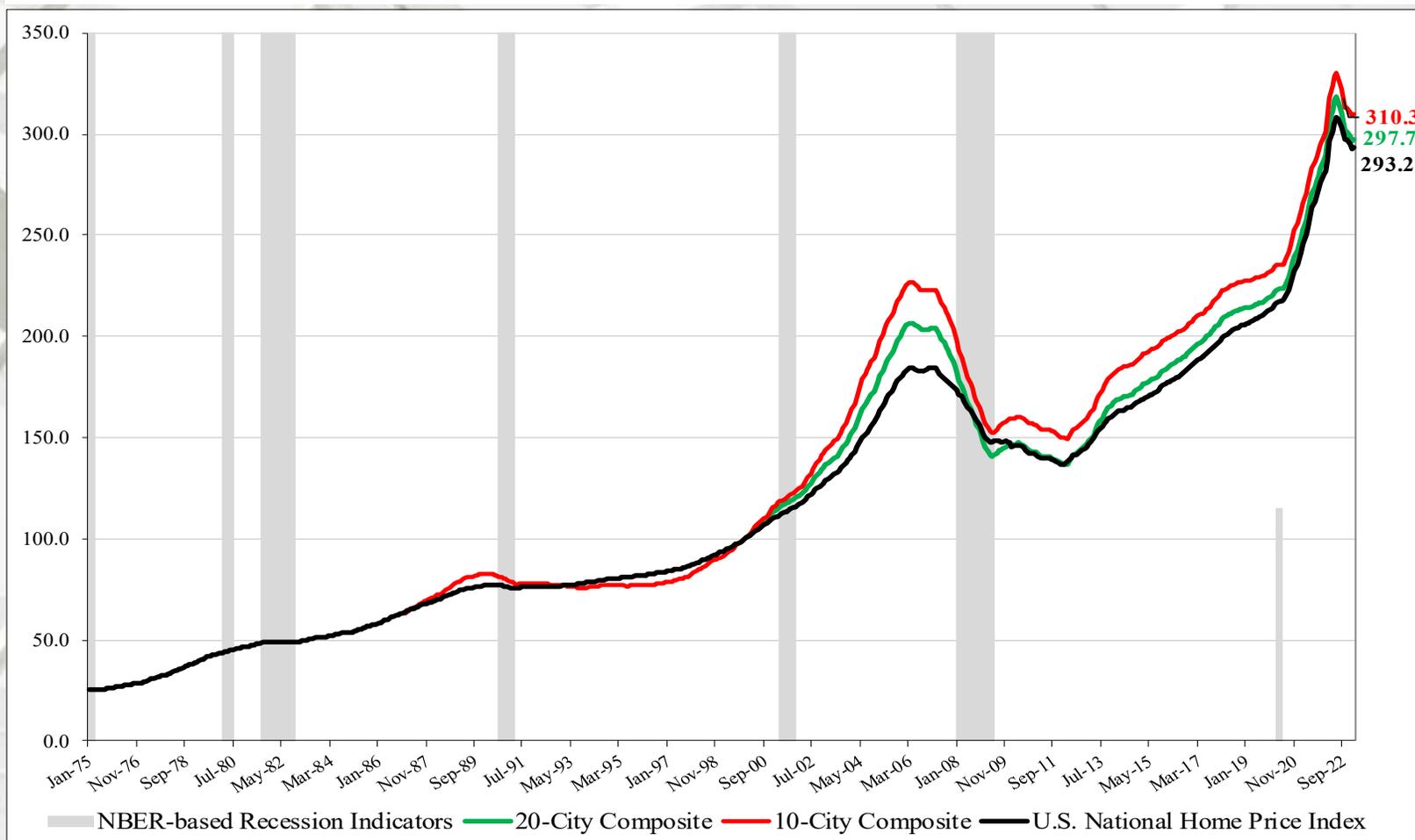
S&P CoreLogic Case-Shiller Index Analysis

“Home price trends moderated in February 2023. The National Composite, which had declined for seven consecutive months, rose a modest 0.2% in February, and now stands 4.9% below its June 2022 peak. Our 10- and 20-City Composites performed similarly, with February gains of 0.3% and 0.2%; these Composites are currently 6.0% and 6.6% below their respective peaks. On a trailing 12-month basis, the National Composite is only 2.0% above its level in February 2022; the 10- and 20-City Composites are both up 0.4% on a year-over-year basis.

The moderation we observed nationally is also apparent at a more granular level. Before seasonal adjustment, prices rose in 12 cities in February (versus in only one in January). Seasonally adjusted data showed nine cities with rising prices in February (versus five in January). With or without seasonal adjustment, most cities’ February results showed improvement relative to their January counterparts.

February’s results were most interesting because of their stark regional differences. Miami’s 10.8% year-over-year gain made it the best-performing city for the seventh consecutive month. Tampa (+7.7%) and Atlanta (+6.6%) continued in second and third place, with Charlotte (+6.0%) close behind. Results were different in the Pacific and Mountain time zones. Last month, four West Coast cities (San Francisco, Seattle, San Diego, and Portland) were in negative year-over-year territory. In February they were joined by four of their western neighbors, as Las Vegas (-2.6%), Phoenix (-2.1%), Los Angeles (-1.3%), and Denver (-1.2%) all tipped into negative territory. It’s unsurprising that the Southeast (+7.8%) remains the country’s strongest region, while the West (-4.2%) continues as the weakest.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

S&P/Case-Shiller Home Price Indices

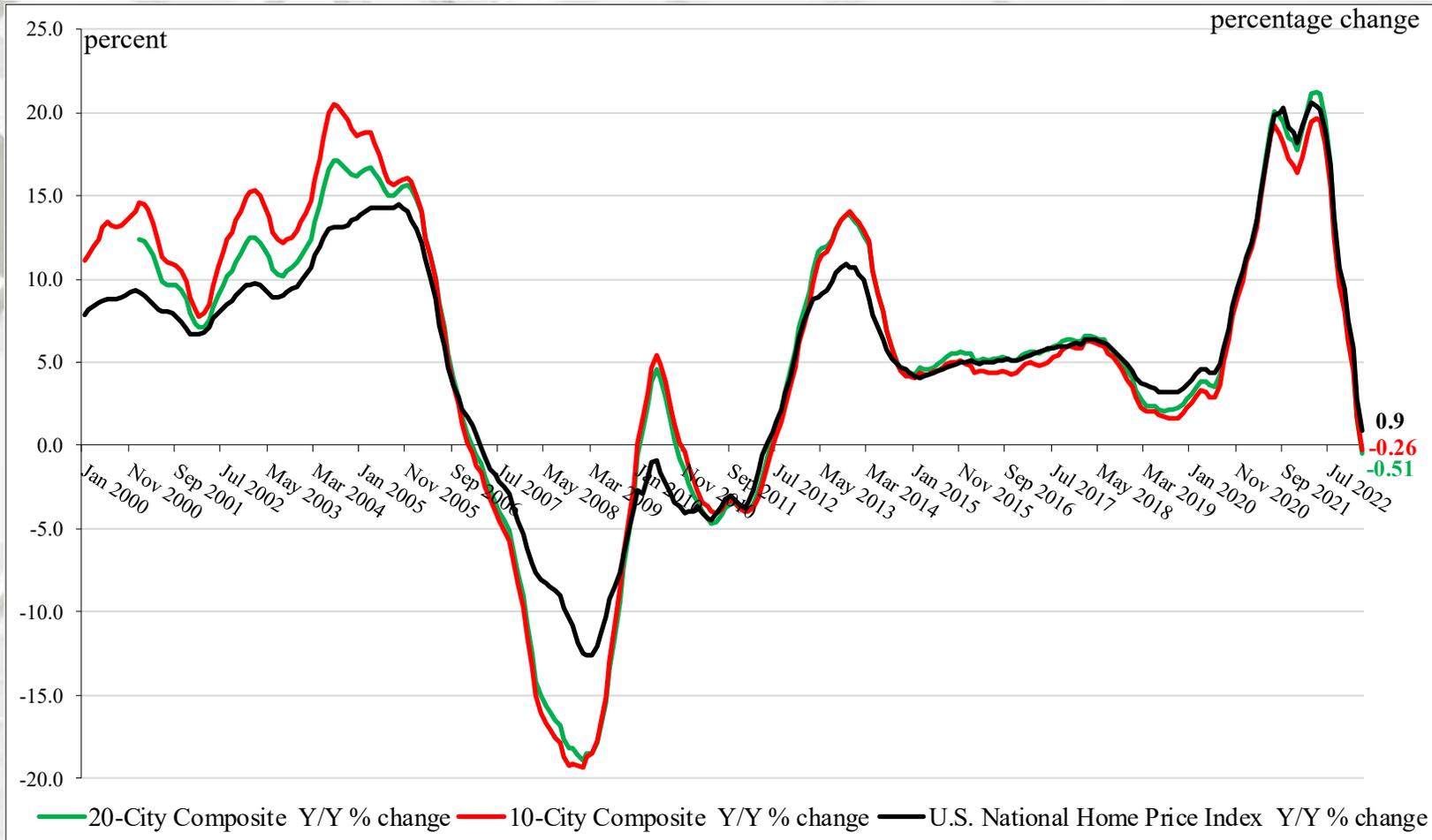


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Analysis

“The results released today pre-date the disruptions in the commercial banking industry which began in early March. Although forecasts are mixed, so far the Federal Reserve seems focused on its inflation-reduction targets, which suggests that interest rates may remain elevated, at least in the near-term. Mortgage financing and the prospect of economic weakness are therefore likely to remain a headwind for housing prices for at least the next several months.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

S&P/Case-Shiller Home Price Indices

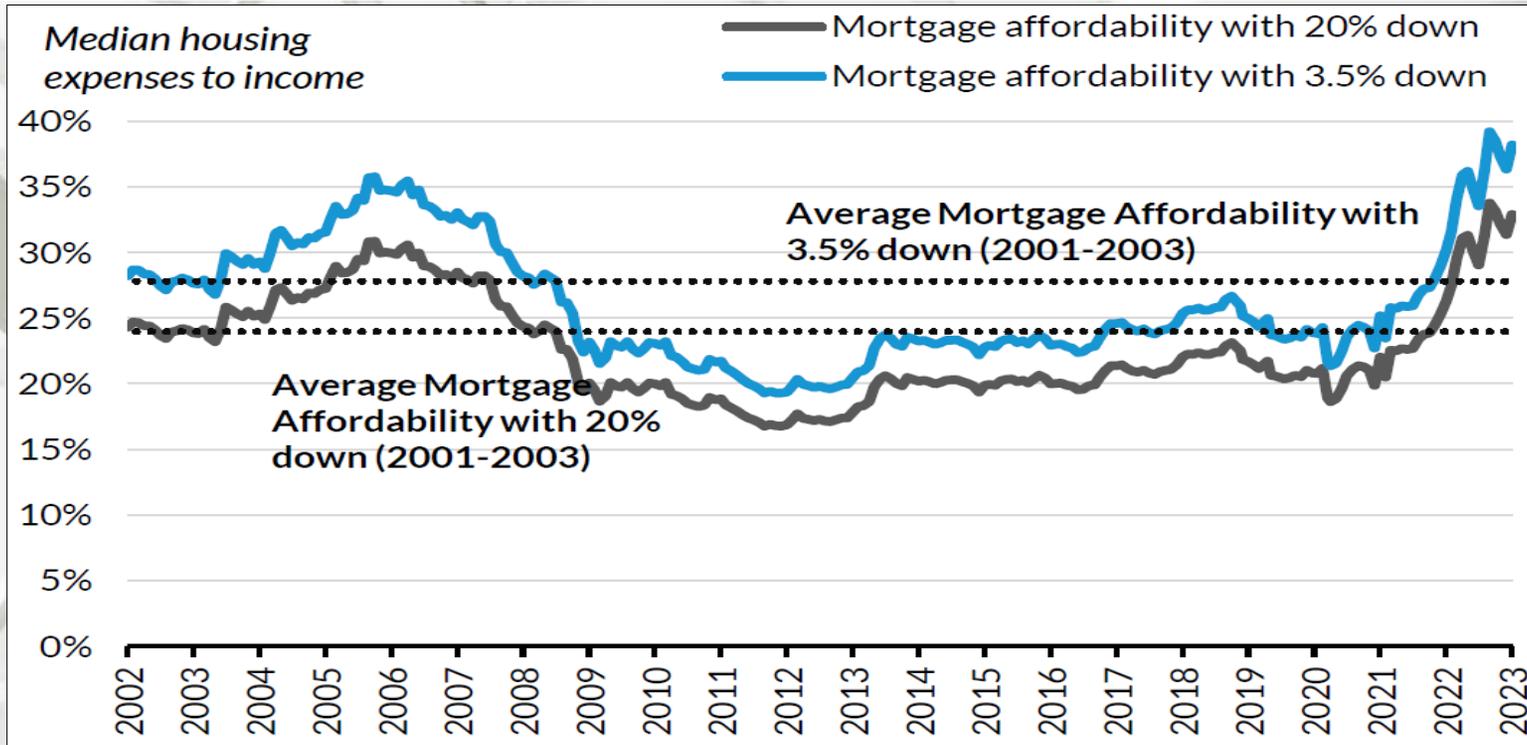


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Y/Y Price Change

From February 2022 to February 2023, the National Index increased 0.9%; the Ten-City declined by 0.3%, and the Twenty-City decreased by 0.5%.

U.S. Housing Affordability



Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute.

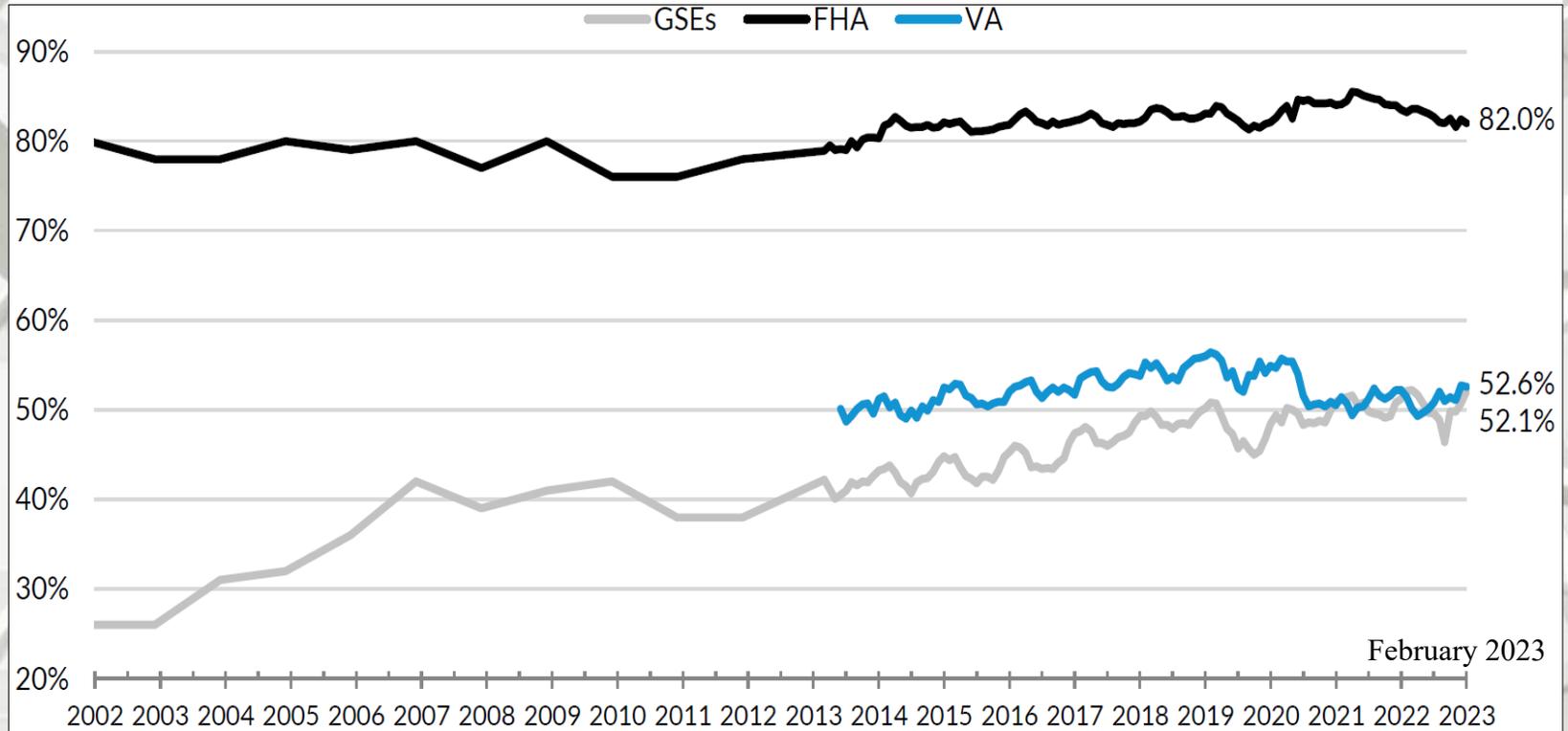
Note: All series measure the first-time home buyer share of purchase loans for principal residences.

Urban Institute

National Mortgage Affordability Over Time

“After some modest relief in December and January, mortgage affordability worsened in February. As of February 2023, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 32.9 percent, slightly higher than the 30.9 percent at the peak of the housing bubble in November 2005; with 3.5 percent down it is 38.2 percent, also slightly above the 35.8 percent prior peak in November 2005. As shown in the. ... ” – Laurie Goodman *et. al*, Vice President, Urban Institute

U.S. Housing Affordability



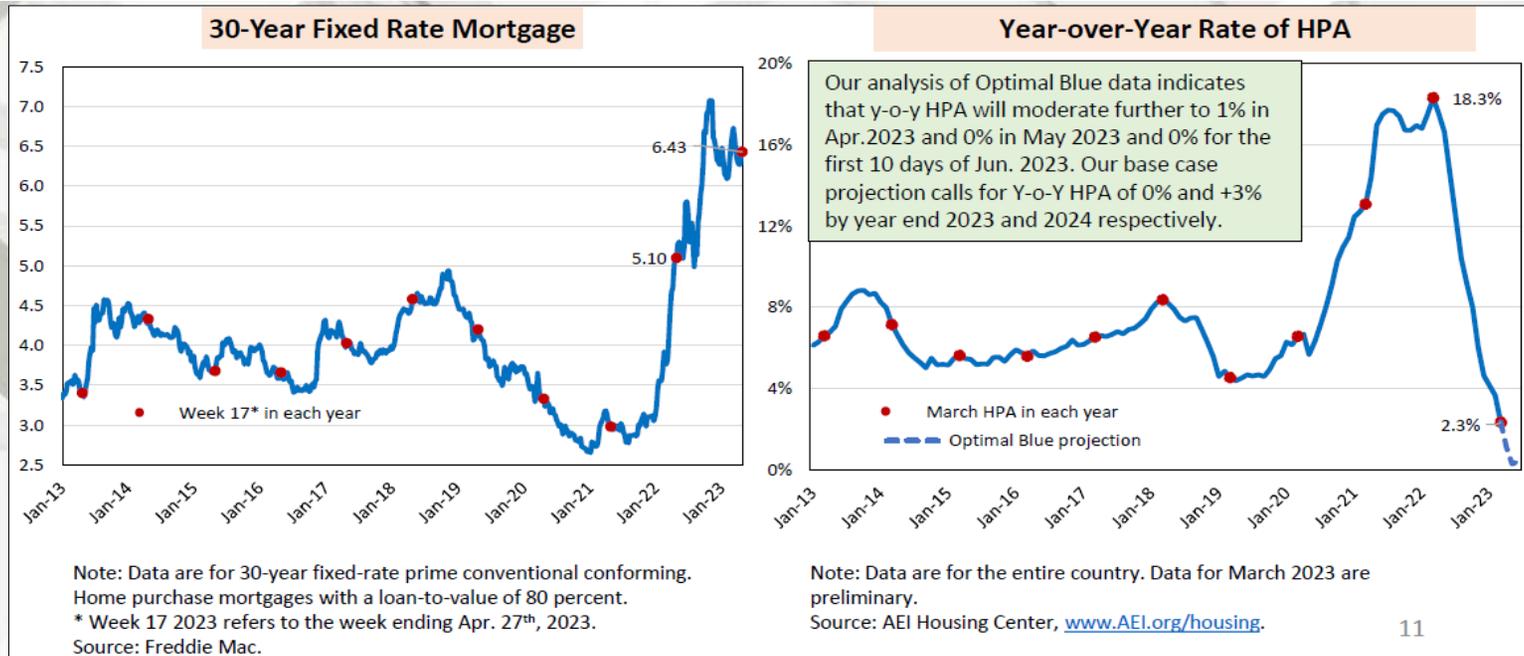
Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute.

Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

Urban Institute First-time Home Buyers

“In February 2023, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 82.0 percent. The FTHB share of GSE lending in November was 52.1 percent; the VA share was 52.6 percent. ...” – Laurie Goodman *et. al.*, Vice President, Urban Institute

U.S. Housing Affordability



AEI Housing Center

Year over Year Home Price Appreciation (HPA) Decline Slowed Down as Month over Month HPA Remained Positive for the 3rd Consecutive Month

“March 2023’s YoY HPA was 2.3%, down from 3.4% a month ago and a significant drop from the YoY peak of 18.3% in March 2022.

- March 2023’s MoM HPA was 1.4%, thus trending up after again MoM HPA had declined from July 2022 to December 2022.
- Given historically low supply, cooling yet still strong job numbers, low foreclosures, work from home, and continued home price arbitrage opportunities, we continue to project a YoY HPA of 0% for December 2023.
- Constant quality HPA controls for mix shifts, which otherwise may skew MoM or YoY changes.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

AEI Housing Center First-time Home Buyers

“The AEI Housing Center’s 2022 First-time Homebuyer Report is the best resource for understanding first-time homebuyer (FTB) affordability. This report analyzes over 5 million FTB sales from 2013 to 2022 for the largest 60 metros. We rank these metros based on their affordability for FTBs by using the ratio of home prices to income for each individual FTB.

- In 2022, Pittsburgh was the most affordable metro, while Salt Lake City ranked as the least affordable one.
- Across the 60 metros, the median FTB affordability ratio was 3.8, meaning the median FTB spent 3.8 times household income to purchase a home. This is up from 3.0 in 2013.
- FTB affordability was further worsened by rising mortgage interest rates, which averaged 5.3% in 2022 compared to 4.0% in 2013. In 2022, the median FTB had almost doubled his or her monthly mortgage payment compared to 2013.
- To view the full report, visit: <https://www.aei.org/best-and-worst-metro-areas-to-be-a-first-time-homebuyer>.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

AEI Housing Center First-time Home Buyers



10 Best Metros

- | | |
|---------------------|------------------|
| 1 Pittsburgh, PA | 6 Cincinnati, OH |
| 2 Cleveland, OH | 7 St. Louis, MO |
| 3 Omaha, NE | 8 Milwaukee, WI |
| 4 Detroit, MI | 9 Chicago, IL |
| 5 Oklahoma City, OK | 10 Columbus, OH |



10 Worst Metros

- | | |
|-----------------------|-------------------------|
| 60 Salt Lake City, UT | 55 Boise City, ID |
| 59 San Jose, CA | 54 Colorado Springs, CO |
| 58 Los Angeles, CA | 53 Seattle, WA |
| 57 San Diego, CA | 52 Las Vegas, NV |
| 56 San Francisco, CA | 51 Denver, CO |

First-time Buyer (FTB) Affordability by Year in the 60 Largest Metros

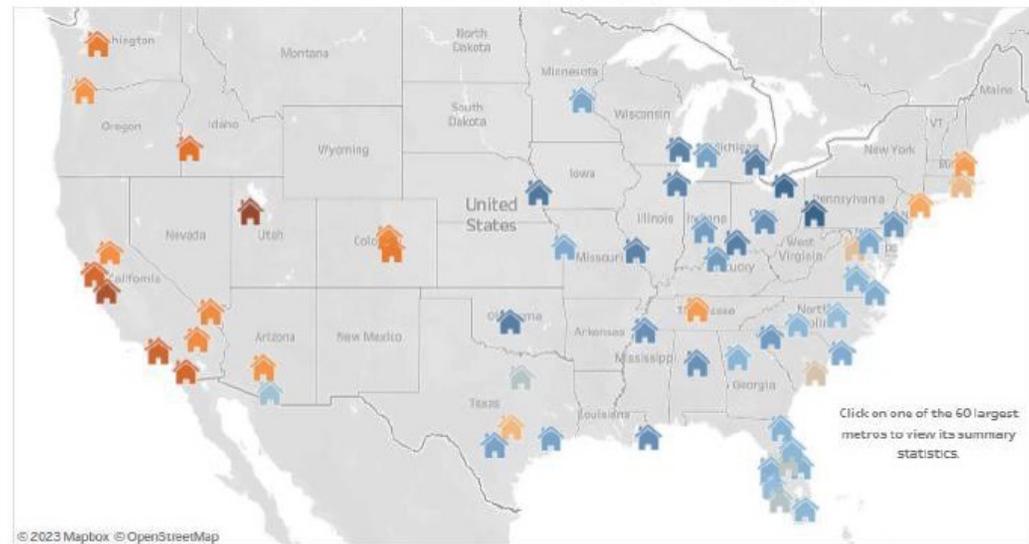
Generally, affordability is best in the Midwest and South and worst on the Coasts and in the West.

FTB Affordability Ratio



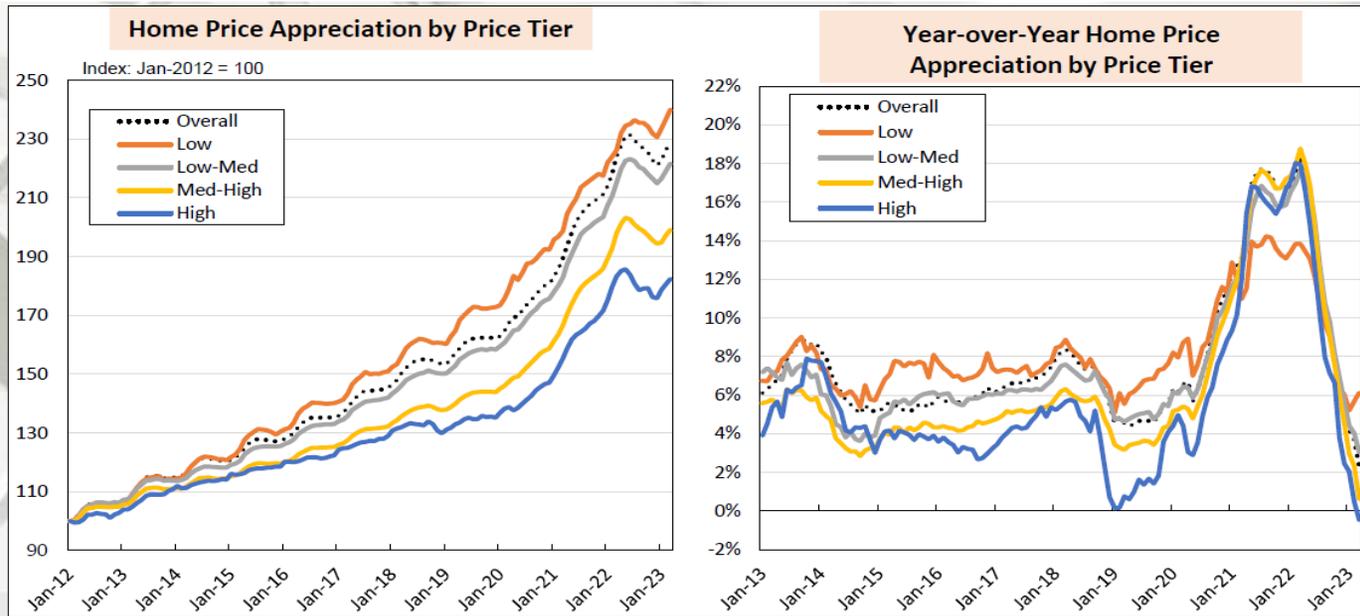
Year

2022



Source: AEI Housing Center, www.AEI.org/housing

Home Price Appreciation by Price Tier



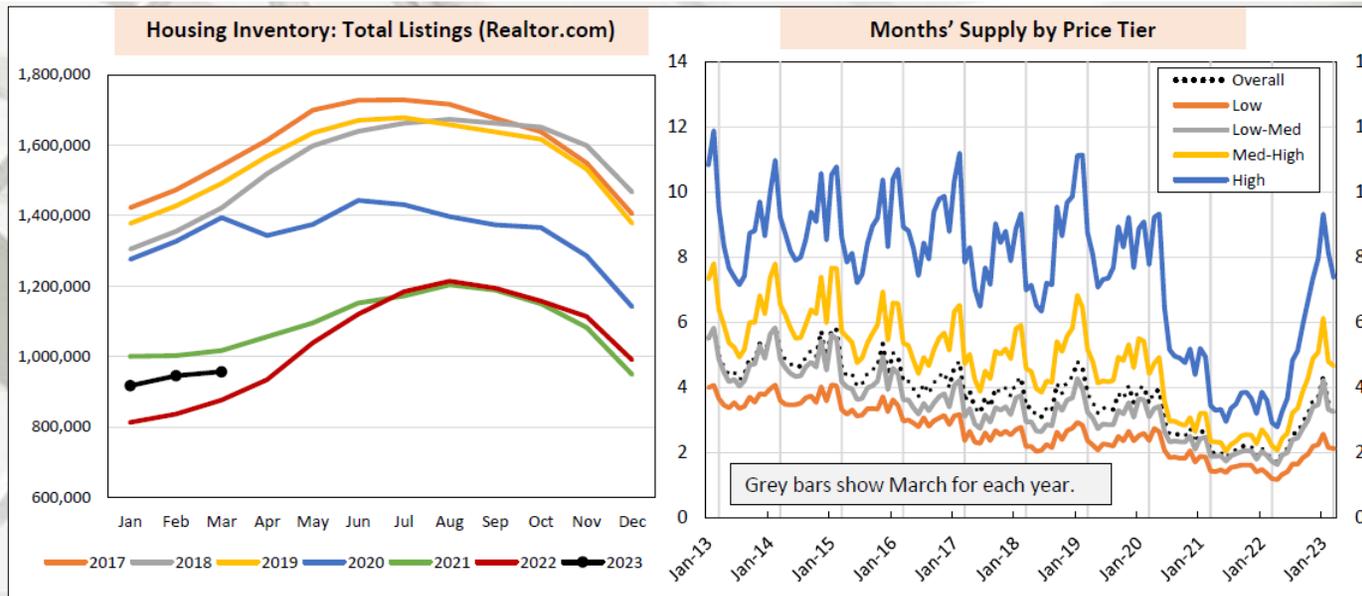
Note: Data are for the entire country. Data for March 2023 are preliminary.
Source: AEI Housing Center, www.AEI.org/housing

AEI Housing Center

“Since 2012, a large gap in HPA has developed between the lower and upper end of the market (left panel).

- Preliminary numbers for March 2023 indicate that home prices were up MoM across all four price tiers, likely due to mortgage rates being down from their late 2022 peak, the spring buying season, and the generally tight supply (left
- The med-high and high-price tiers, being more dependent on the Fed’s monetary punchbowl, are showing the largest decelerations in YoY HPA as the Fed hikes rates (right panel)
- Price pressure is strongest for the low price tier due to tight supply, strong demand, and low unemployment.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

Home Housing Inventory and Months' Supply



Note: Realtor.com, Zillow, and AEI Housing Center, www.AEI.org/housingSource: AEI Housing Center.

AEI Housing Center

“Months’ remaining supply for March (not seasonally adjusted) leveled at 3.5 months. Housing inventory continued to run below pre pandemic levels and remains at sellers’ market levels.

- March 2023 overall inventory was up 9 % from a year ago but was still around two thirds of 2017 2019 levels (left panel)
- The low and high tiers are up 5.8% and 3.6% respectively in March 2023 (both YoY) YoY). Months’ supply stood at 3.5 months in March 2023, down from the pre pandemic level of 3.8 months in March 2019, and same as 3.5 months in February 2023 (right panel)
- Housing inventory levels would need to increase to > 6 months to indicate a buyer’s market and may need to increase to 7 9 months to trigger a decline in national YoY home price appreciation.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

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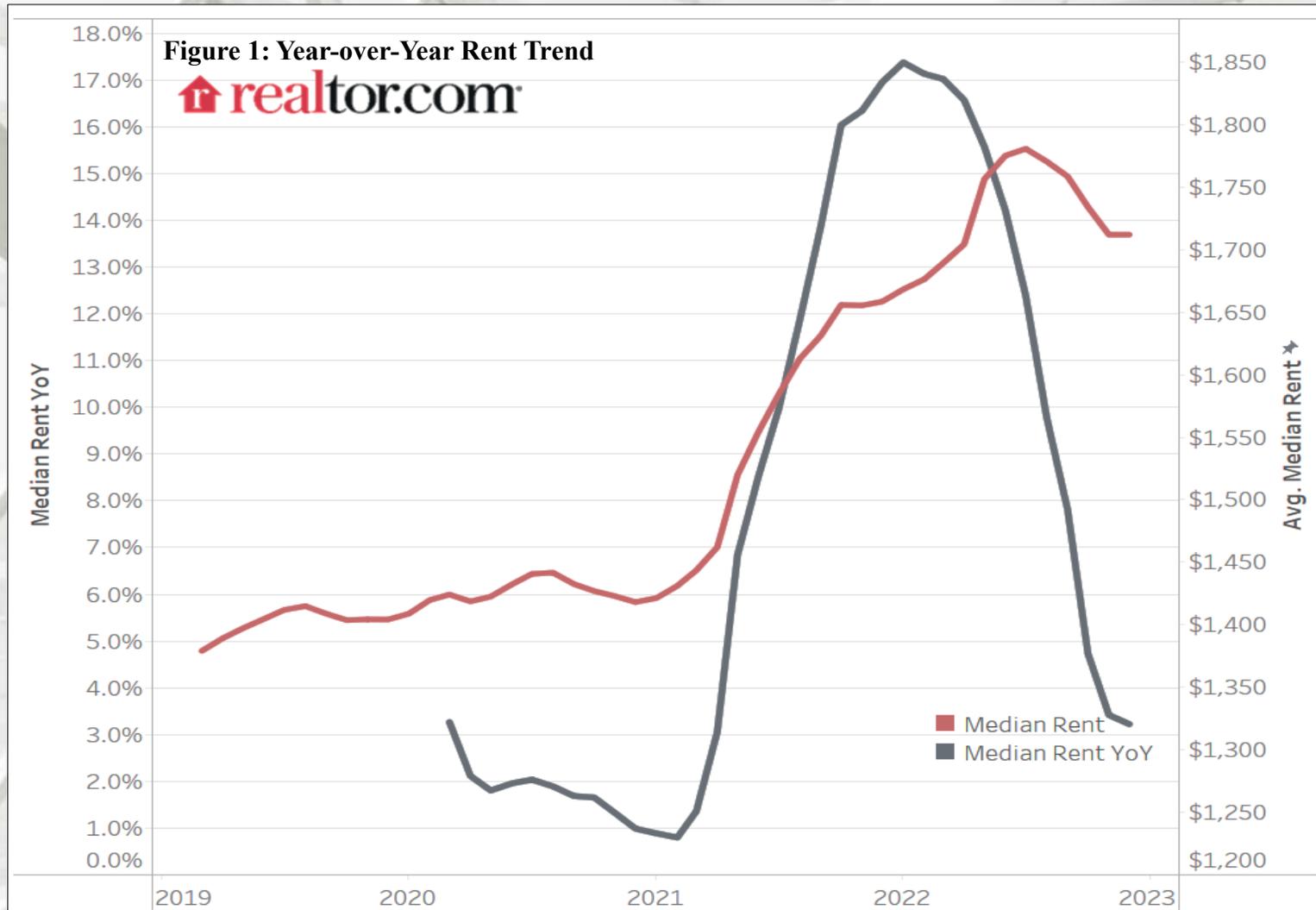
March Rental Report: Despite Rent Growth, Renting a Starter Home is More Affordable than Buying

“Highlights

- With the year-over-year growth rate slowing to 3.2% in March, the 2022 average growth rate for 0-2 bedroom properties across the top 50 metros finished the year in double-digits, at 11.6%.
- Signaling a potential reversal of the recent slowdown, median asking rent plateaued in March (\$1,712), tying November’s level which was down by \$69 from July’s peak.
- In 45 of the 50 largest U.S. metros, the monthly cost of renting a home is lower than buying a starter home, and despite higher rents, renting has become relatively more affordable than buying year-over-year.
- Looking ahead, strong rental demand is expected to outpace improvements in rental supply. Realtor.com® forecasts [that rent growth will continue in 2023, at roughly half the pace](#) of 2022 (6.3%), narrowly above the 2013 to 2019 average rent growth.

After an entire year of slowing down, the year-over-year median rent growth for 0-2 bedroom properties across the top 50 metros hit 3.2% in March 2022, the lowest growth rate in 20 months, down notably from March’s peak trend (17.4%). However, after four months of declines, median asking rent plateaued in March (\$1,712). It is down by \$69 from the peak (July 2022) and is still \$308 (21.9%) higher than March 2019 (pre-pandemic).” – Jiayi Xu and Danielle Hale, Realtor.com®

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The advantage of renting is growing in rent-favoring markets

“A common question potential first-time homebuyers face is whether it makes sense to continue renting or make a home purchase. One of the top considerations is the financial costs and benefits of renting versus owning, and one approach is to compare the monthly housing costs of renting a home against the costs of buying a home. To determine the monthly cost of buying a home, we find the median listing price of 0-2 bedrooms home listings (i.e., starter homes). As [first time home buyers plan lower down payments](#), we assume a 7% down payment (based on the [national average](#) since 2018) and use the 30-year fixed mortgage rate during the month to calculate a monthly mortgage payment. We also include the HOA fees, taxes, and homeowner’s insurance averaged at metro levels as part of the costs. We then compare this buy-cost to the median rent in each metro and focus on the difference between monthly expenses for each. In March 2022, a typical renter from the top 50 metros faced \$792 (41.4%) lower monthly payment than a starter homeowner on average. In addition, renting is the more affordable option than buying a starter home in 45 of the 50 largest metros. This is a huge increase compared to 12 months ago when renting was the more affordable option in 30 metros.

The monthly savings from renting in rent-favoring markets grew compared to the prior year. In these markets, the monthly cost of buying a starter home in March 2022 was \$906 (48.0%) higher than the cost of renting, on average. However, renting a 0-2 bedroom unit in the rent-favoring markets in Dec. 2021 would have saved just \$450 (22.9%), on average.” – Jiayi Xu and Danielle Hale, Realtor.com®

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The advantage of renting is growing in rent-favoring markets

“Slowing rent growth contributed to this shift: in March 2022, the year-over-year growth in rent-favoring markets was only 3.4%, one fifth of the pace observed 12 months ago. At the same time, skyrocketing mortgage rates upped the cost of taking on a mortgage, making renting relatively more affordable compared to buying. In March 2022, with an average 30-year fixed mortgage rate of 6.36%, the year-over-year growth in the monthly cost to buy for a starter home was 38.1%, climbing to \$2,657. This is more than 10 times the rate of increase for rent during the same period. In comparison, in March 2021, when the mortgage rate was half as high, the cost of buying in rent-favoring markets increased only at about half the rate of rent.

In the top 10 metros that favor renting over buying, the monthly payments for starter homes were 82.2% (\$1,920) higher than rents. Similar to findings in June 2022, these rent-favoring metros are mostly markets with higher concentration of tech workers and high earners, where both the average rent-cost and buy-cost are higher than the national average. Austin, TX topped the list of markets that favor renting, where the monthly cost of buying a “starter” home was \$3,672, which was 121.3% more than the monthly rent of \$1,659, for a monthly savings of \$2,013. San Francisco, CA; Seattle, WA; San Jose, CA and San Diego, CA metro areas round out the top five markets where the cost of buying was higher than the monthly rent.” – Jiayi Xu and Danielle Hale, Realtor.com®

Table 1. Summary Statistics of Rent-favoring Metros

	Counts	Avg. Median Rent	Avg. Monthly Buy Cost	Avg. \$ Diff. (Buy-Rent)	Avg. % Diff. (Buy-Rent)	Avg. Rent YY	Avg. Buy Cost YY
Rent-favoring metros in Dec. 2022	45	\$1,751	\$2,657	\$906	48%	3.4%	38.1%
Rent-favoring metros in Dec. 2021	30	\$1,764	\$2,214	\$450	22.9%	15.9%	8.0%

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Table 2. Top 10 Metros that Favor Renting over Buying in Dec. 2022

Metro	Median Rent	Monthly Buy Cost	\$ Difference (Buy-Rent)	% Difference (Buy-Rent)	Rent YY	Buy Cost YY
Austin-Round Rock, TX	\$1,659	\$3,672	\$2,013	121.3%	-0.7%	31.1%
San Francisco-Oakland-Hayward, CA	\$2,943	\$5,798	\$2,855	97.0%	3.4%	34.7%
Seattle-Tacoma-Bellevue, WA	\$2,059	\$3,831	\$1,772	86.1%	1.2%	57.3%
San Jose-Sunnyvale-Santa Clara, CA	\$3,156	\$5,777	\$2,621	83.0%	5.9%	39.6%
San Diego-Carlsbad, CA	\$2,702	\$4,787	\$2,085	77.2%	1.2%	51.3%
Los Angeles-Long Beach-Anaheim, CA	\$2,870	\$5,020	\$2,150	74.9%	2.3%	37.7%
Boston-Cambridge-Newton, MA-NH	\$2,868	\$4,965	\$2,097	73.1%	6.4%	32.8%
Portland-Vancouver-Hillsboro, OR-WA	\$1,750	\$2,996	\$1,246	71.2%	4.7%	34.8%
Phoenix-Mesa-Scottsdale, AZ	\$1,592	\$2,708	\$1,116	70.1%	-3.3%	36.6%
Sacramento-Roseville-Arden-Arcade, CA	\$1,834	\$3,075	\$1,241	67.7%	-4.2%	32.9%

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The advantage of renting is growing in rent-favoring markets

“Between March 2021 and June 2022, 11 metros that were previously more favorable for buying became more favorable for renting instead. In March 2022, 10 of these metros still had higher buy costs compared to the cost of renting, which highlights how the persistence of home price gains and mortgage rate increases have shifted the landscape in favor of renting in these areas. In addition, it is interesting to see that even in metros like Miami, Tampa, and Orlando, which have seen some of the highest rent growth and rent costs in the past year, renting offers households a lower monthly cost for starter homes, even as it has become more expensive to do so, raising affordability concerns.” – Jiayi Xu and Danielle Hale, Realtor.com®

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Table 3. Summary Statistics of Buy-favoring Metros

	Counts	Avg. Median Rent	Avg. Monthly Buy Cost	Avg. \$ Diff. (Buy-Rent)	Avg. %Diff. (Buy-Rent)	Avg. Rent YY	Avg. Buy Cost YY
Buy-favoring metros in Dec. 2022	5	\$1,362	\$1,127	\$-235	-18.2%	2.7%	31.6%
Buy-favoring metros in Dec. 2021	20	\$1,500	\$1,261	\$-240	-17.3%	18.3%	9.7%

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The benefit of buying is shrinking in buy-favoring markets

“In March, there were only 5 metros that favored buying starter homes rather than renting. It is a significant decrease from the previous year, when there were 20 metros where buying was a more affordable option.

In these buy-favoring markets, the monthly cost of buying a starter home was \$235 (18.2%) cheaper than the cost of renting, on average. In addition, none of these five metros has a higher monthly buy cost than the national average. However, the financial advantage of buying a starter home instead of renting has decreased in all of these markets. In particular, the savings from buying a starter home rather than renting in Memphis and Baltimore were nearly \$300 less than a year ago. In St. Louis, the savings were \$255 less than last March. In Pittsburgh and Birmingham, the savings were \$130 and \$101 less than the previous year respectively, as high prices and mortgage rates erode the financial payoff to buying, making renting a more attractive option. ...

2023 Rental Market Outlook

In 2022, the average year-over-year growth rate for 0-2 bedroom properties across the top 50 metros was 11.6%. While rent growth slowed throughout 2022, the more moderate slowdown seen in March could suggest that the current downward trend may not continue much longer. In fact, Realtor.com® forecasts [the rent growth will continue in 2023, although at a slower pace.](#)” – Jiayi Xu and Danielle Hale, Realtor.com®

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2023 Rental Market Outlook

“On the demand side, as renting is a more cost-effective option than buying in most of the metros, would-be-homebuyers may spend longer in the rental market, sustaining rental housing demand at a relatively high level. Slowing new single-family construction and anticipated increases in the cost of buying a home in 2023 are likely to reinforce this trend, while expected economic strength increases the number of households searching for a place to call home. However, if the Fed fails to achieve its ‘soft landing’ goal, then a combination of high rent costs, high inflation, and low-income growth may slow the formation of additional renter households. People may prefer to live with their families or take on roommates to save costs and adapt to economic uncertainty.

Specifically, we expect rental demand in big metros to be even stronger in 2023. Dense, urban markets like New York, Chicago, and Boston, which were among the slowest growth metros in 2021, are now topping the fastest growth list. In addition, the biggest rent growth in 2022 was seen among smaller studios, reversing the trend seen in 2021 of larger units commanding the biggest increases. The outperformance of studios is consistent with the recent trend of moving back to urban centers, where studios are more common.

In 2023, we expect a higher number of new rental homes to enter the market, increasing the supply available to renters. With high [mortgage rates](#) and [high listing prices](#), [homebuilding activity continues to pivot to multi-family properties](#). The [latest available data](#) shows that there are more multifamily than single-family homes under construction. Specifically, in November 2022, 915,000 units in buildings with five units or more were under construction compared to 777,000 single family units. In addition, the number of multifamily units under construction is 1.4 times higher than 3 years ago (pre-pandemic) and nearly 4 times higher than a decade ago. Thus, the completion of this extra supply could shift market balance, raising the [still-low rental vacancy rate](#) and helping ease recent rent growth driven by the strong demand.” – Jiayi Xu and Danielle Hale, Realtor.com®

U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week

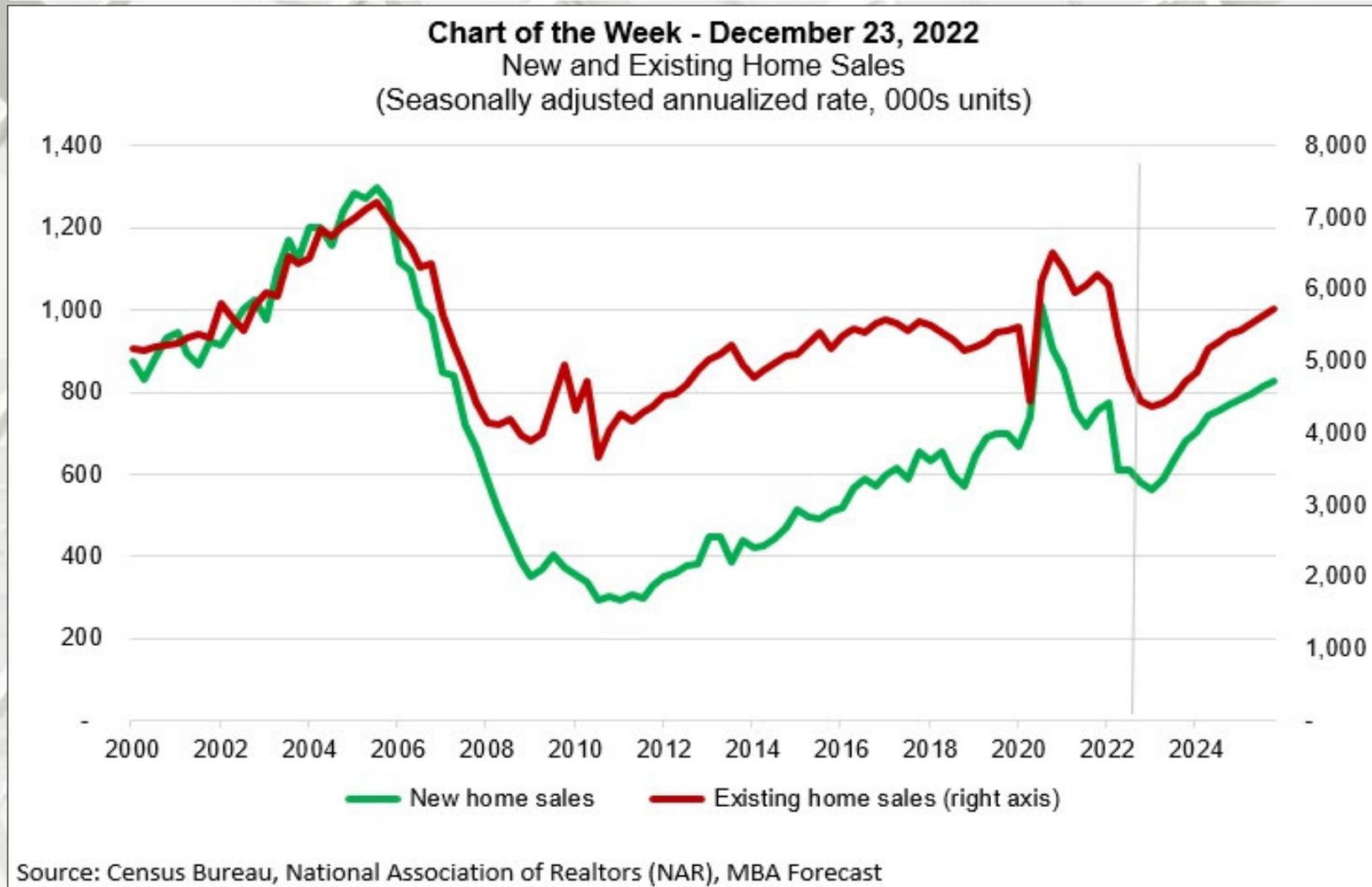
“Recent data from NAR showed that the annualized pace of existing home sales in March 2022 was 4.09 million units – a 35% drop compared to March 2021. This decrease was consistent with the pace of home purchase applications, which have been running around 40% behind last year’s pace over the past few months, based on data from [MBA’s Weekly Applications Survey](#). Additionally, the National Association of Homebuilders’ (NAHB) index of builder sentiment has recorded declines in every month of 2022, citing slower buyer traffic and reduced sales expectations. The impact of that sentiment has shown up in Census data on single-family housing starts, weakening in all but two months so far this year, and MBA’s estimate of new home sales, which has declined in eight out of the past 11 months. One of the main drivers of these trends was the rapid doubling of mortgage rates over the course of 2022 — from around 3% to over 7%, which pushed many buyers out of the market. The [median purchase mortgage payment](#) remained close to \$2,000 in March, an increase of \$594 over the first 11 months of the year, equal to a 42.9% increase, which has severely reduced homebuyer purchasing power.

Taking all this into account, we are forecasting a weak start to 2023 for the housing market. Driven by a recession in the first half of the year and a continuation of the trends outlined above, we expect a 13% drop in existing home sales and a 4% decrease in new home sales for 2023, following 16% decreases in both segments in 2022. Additionally, even though third quarter 2022 data still showed a 12% year-over-year increase in home prices, recent monthly changes have been negative, and the declines in some parts of the country have been quite large. We expect that the low inventory of existing homes and lack of distressed properties on the market will prevent a deeper decline in national home prices, but we do expect more quarters of negative year-over-year price changes.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Joel Kan, Industry Technology and Associate Vice President, Industry Surveys and Forecasts, MBA

U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week



U.S. Housing

Mortgage Bankers Association (MBA)

MBA Chart of the Week

“However, we remain bullish on housing demand in the medium term: there are 50 million 28-38 year-olds in the US population right now. Household formation should remain robust for the coming years, and many of these young people are at or approaching peak first-time homebuyer age. The first-time homebuyer share is currently 28% after averaging around 40% before rates spiked and that is expected to rebound. The end of the recession, supportive demographic drivers, along with the moderation in home prices and lower mortgage rates that will ease some of the affordability hurdles, will support a 15% increase in existing home sales and a 21% increase in new home sales for 2024.

We do expect that the housing market will lead the U.S. out of this recession, just as it has led the way into one.” – Mike Fratantoni, Chief Economist and Senior Vice President of Research and Joel Kan, Industry Technology and Associate Vice President, Industry Surveys and Forecasts, MBA

U.S. Housing Finance

Mortgage Bankers Association (MBA)

Mortgage Credit Availability Declined in April

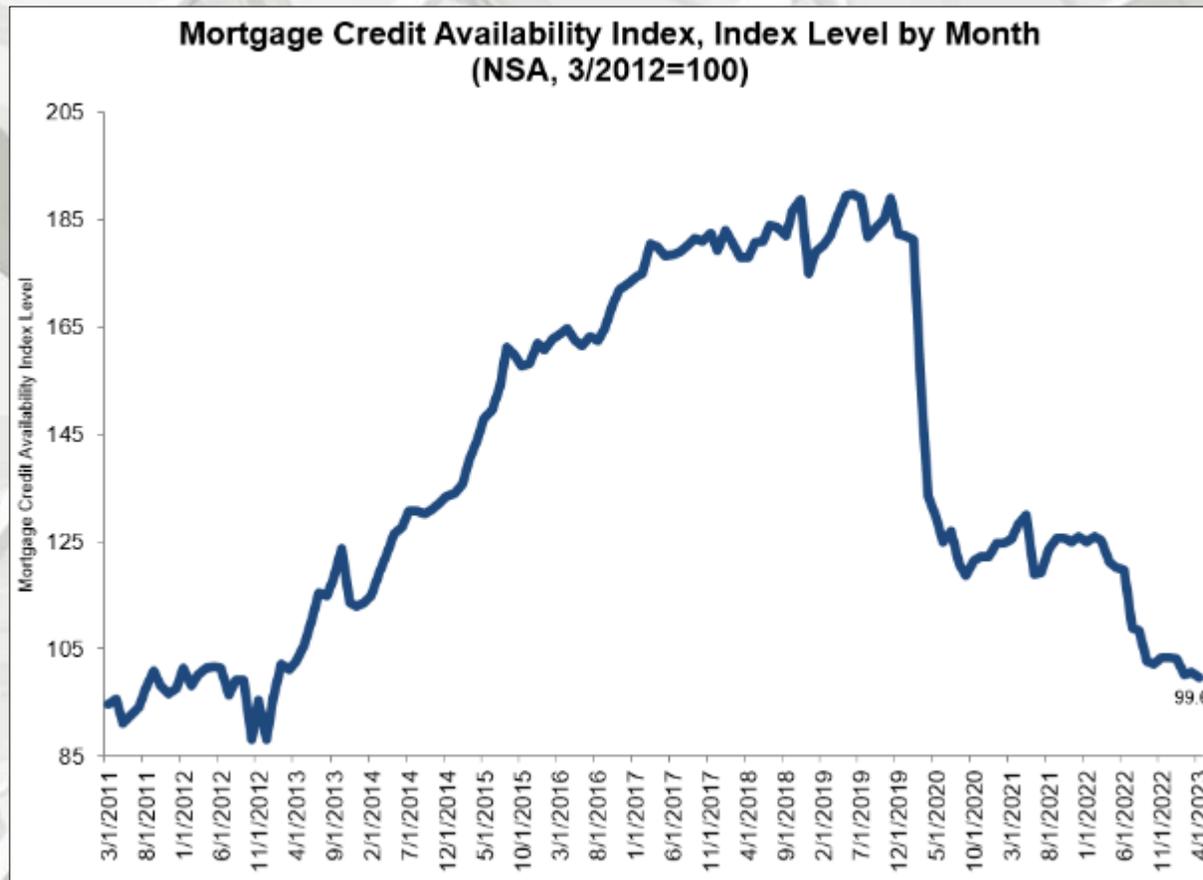
“Mortgage credit availability decreased in April according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) that analyzes data from ICE Mortgage Technology.

The MCAI fell by 0.9 percent to 99.6 in April. 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 increased 0.5 percent, while the Government MCAI decreased by 2.1 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 1.5 percent, and the Conforming MCAI fell by 1.1 percent.

Mortgage credit availability declined in April to the lowest level since January 2013, reflecting the tightening in broader credit conditions stemming from recent banking sector challenges and an uncertain economic outlook. The contraction was driven by reduced demand for loan programs such as certain adjustable-rate mortgages loans, cash-out and streamline refinances, and those with lower credit score requirements. Government credit supply decreased for the third consecutive month, as industry capacity continues to adjust to significantly reduced origination volume, along with the expectations of a weakening economy later this year. Even with high mortgage rates and reduced credit availability, the lack of for-sale inventory continues to be the biggest hurdle to more home purchase growth this year.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

U.S. Housing Finance

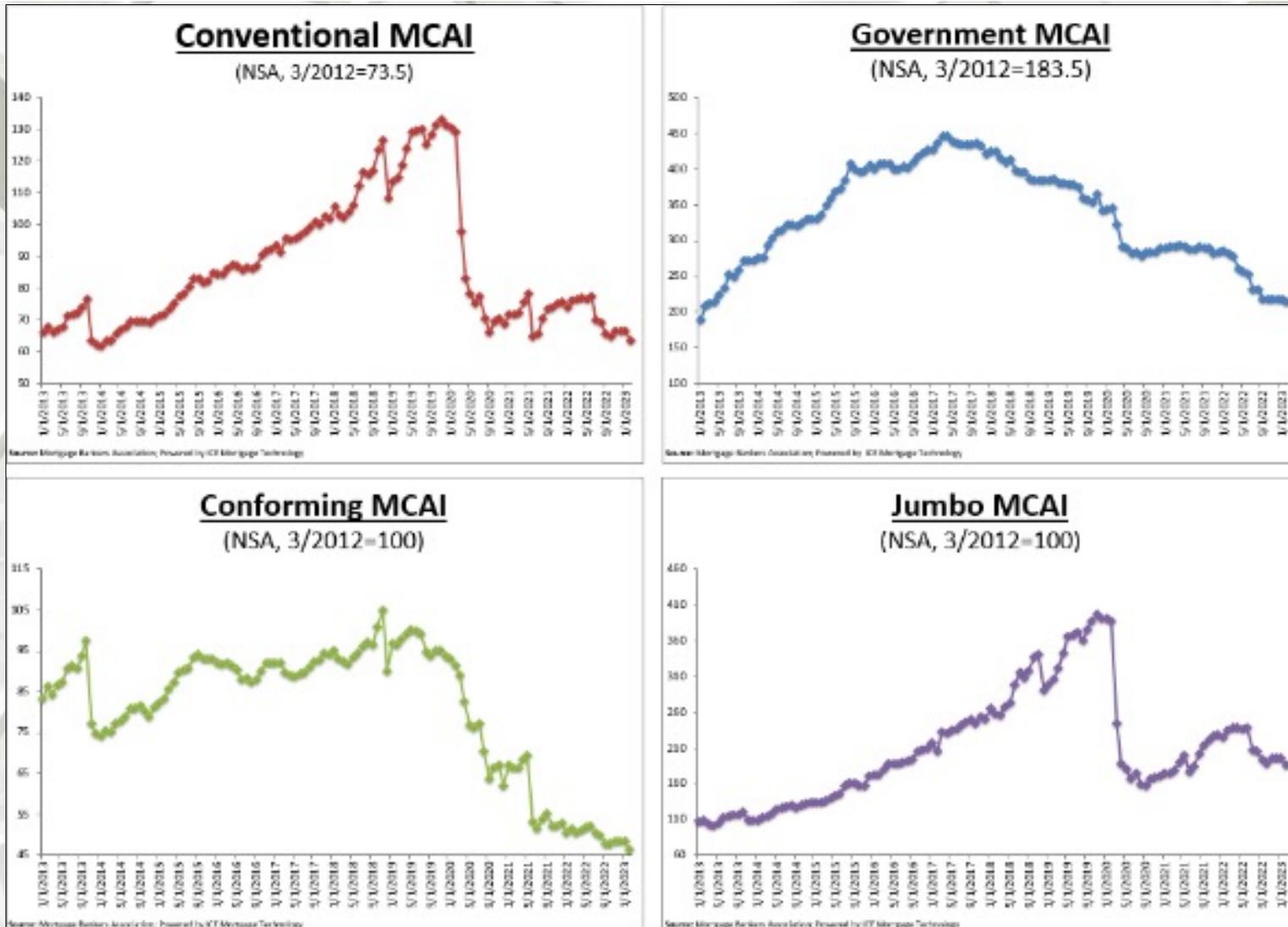
Mortgage Credit Availability (MBA)



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

U.S. Housing Finance

Mortgage Credit Availability (MBA)



MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

April 17, 2023

	2022				2023				2024				2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Housing Measures																
Housing Starts (SAAR, Thous)	1,720	1,647	1,450	1,398	1,373	1,372	1,367	1,375	1,383	1,412	1,457	1,516	1,554	1,372	1,442	1,582
Single-Family	1,187	1,086	905	849	823	852	887	915	943	992	1,030	1,079	1,007	869	1,011	1,158
Two or More	533	561	545	549	550	520	480	460	440	420	427	437	547	503	431	425
Home Sales (5AAR, Thous)																
Total Existing Homes	6,057	5,373	4,770	4,177	4,193	4,166	4,157	4,274	4,490	4,757	4,867	5,030	5,094	4,198	4,786	5,326
New Homes	776	609	580	605	637	624	613	637	660	688	709	738	643	628	699	769
FHFA US House Price Index (YOY % Change)																
Median Price of Total Existing Homes (Thous \$)	18.8	17.9	14.2	8.3	4.1	2.4	0.9	-0.6	-2.7	-3.0	-2.0	-1.4	8.3	-0.6	-1.4	2.1
Median Price of New Homes (Thous \$)	365.8	405.9	391.5	372.8	356.0	358.5	362.5	367.6	367.3	374.6	374.7	376.8	384.0	361.1	373.3	386.5
Median Price of New Homes (Thous \$)	431.3	447.0	465.4	473.6	428.4	430.8	430.3	431.9	423.3	430.1	433.2	436.3	454.3	430.4	430.7	445.0
Interest Rates																
30-Year Fixed Rate Mortgage (%)	3.9	5.3	5.7	6.6	6.4	6.2	5.8	5.5	5.3	5.1	4.9	4.7	6.6	5.5	4.7	4.5
10-Year Treasury Yield (%)	1.9	2.9	3.1	3.8	3.7	3.4	3.2	3.1	3.0	2.8	2.7	2.6	3.8	3.1	2.6	2.5
Mortgage Originations																
Total 1- to 4-Family (Bil \$)	689	678	480	398	333	461	490	522	473	604	581	590	2,245	1,806	2,249	2,468
Purchase	381	477	388	332	267	365	364	378	327	450	414	422	1,578	1,374	1,614	1,783
Refinance	308	201	92	66	66	96	126	144	146	154	167	168	667	432	635	685
Refinance Share (%)	45	30	19	17	20	21	26	28	31	25	29	28	30	24	28	28
FHA Originations (Bil \$)													158	123	137	139
Total 1- to 4-Family (000s loans)	1,939	1,789	1,206	973	816	1,125	1,202	1,286	1,180	1,505	1,463	1,490	5,907	4,429	5,638	6,200
Purchase	1,000	1,202	946	790	634	862	857	892	777	1,077	997	1,019	3,938	3,245	3,871	4,288
Refinance	938	588	260	182	182	263	345	394	403	428	466	471	1,969	1,184	1,768	1,912
Refinance Share (%)	48	33	22	19	22	23	29	31	34	28	32	32	33	27	31	31
Mortgage Debt Outstanding																
1- to 4-Family (Bil \$)	12,695	12,971	13,195	13,325	13,439	13,570	13,664	13,720	13,755	13,806	13,850	13,876	13,325	13,720	13,876	14,093

Notes:

As of the August 2022 forecast, 2021 origination volume was revised based on the 2021 Home Mortgage Disclosure Act data. 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.

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MBA

MORTGAGE BANKERS ASSOCIATION

MBA Economic Forecast

MBA Economic Forecast

April 17, 2023

	2022				2023				2024				2022	2023	2024	2025
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
Percent Change, SAAR																
Real Gross Domestic Product	-1.6	-0.6	3.2	2.6	1.3	-1.2	-0.5	1.1	1.3	1.6	1.8	1.9	0.9	0.2	1.6	2.1
Personal Consumption Expenditures	1.3	2.0	2.3	1.0	3.3	-1.0	1.0	1.8	1.4	1.6	1.9	1.9	1.7	1.3	1.7	2.4
Business Fixed Investment	7.9	0.1	6.2	4.0	-0.5	-1.4	-2.7	-0.5	0.4	0.6	1.5	1.8	4.5	-1.3	1.1	2.1
Residential Investment	-3.1	-17.8	-27.1	-25.1	-5.0	-4.0	4.6	7.6	6.1	6.4	6.1	9.7	-18.8	0.7	7.1	6.5
Govt. Consumption & Investment	-2.3	-1.6	3.7	3.8	3.0	0.3	1.7	1.0	1.0	0.9	0.7	0.8	0.9	1.5	0.9	0.8
Net Exports (Bil. Chain 2012\$)	-1260.3	-1207.6	-1063.8	-1037.8	-1030.0	-1015.3	-1047.1	-1072.7	-1095.3	-1119.2	-1137.6	-1163.3	-1142.4	-1041.3	-1128.9	-1235.5
Inventory Investment (Bil. Chain 2012\$)	182.4	93.7	32.9	116.1	53.8	28.6	-8.7	-13.0	-3.8	11.7	20.3	29.0	106.3	15.2	14.3	47.4
Consumer Prices (YOY)	8.0	8.6	8.3	7.1	5.8	4.4	4.1	3.7	3.3	2.9	2.5	2.6	7.1	3.7	2.6	2.4
Percent																
Unemployment Rate	3.8	3.6	3.5	3.6	3.5	3.9	4.5	4.9	5.0	5.0	4.8	4.6	3.6	4.2	4.9	4.3
Federal Funds Rate	0.375	1.625	3.125	4.375	4.875	4.875	4.875	4.875	4.375	3.875	3.375	3.125	4.375	4.875	3.125	2.375
10-Year Treasury Yield	1.9	2.9	3.1	3.8	3.7	3.4	3.2	3.1	3.0	2.8	2.7	2.6	3.8	3.1	2.6	2.5

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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Summary

In conclusion:

Year-over-year data were dismal. Month-over-month data were mixed – yet, total, single-family, and multi-family starts and permits; completions, and new and existing house sales being positive. Construction spending, total and single-family continued their decreasing trend. Borrowing costs and consumer sentiment, combined with elevated house prices have resulted in a major obstacle for new and existing house sales.

Pros:

- 1) The desire to own a house remains strong, though consumer sentiment may be waning

Cons:

- 1) Mortgage interest rates and affordability;
- 2) US bank failures;
- 3) Inflation;
- 4) The war in Ukraine and other international concerns;
- 5) Construction material, appliance constraints, and logistics/supply chains remain;
- 6) Lot availability and building regulations (according to several sources);
- 7) Labor shortages in many sectors;
- 8) Household formations still lag historical averages;
- 9) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
- 10) Debt: Corporate, personal, government – United States and globally;
- 11) Other global uncertainties.

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