

The Virginia Tech–USDA Forest Service Housing Commentary: Section I June 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 and month-over-month data were once again disappointing. Census reporting indicated that month-over-month and year-over-year data were mostly negative. Month-over-month single-family permits and construction spending improved as did year-over-year total housing completions and new sales.

The August 8th Atlanta Fed GDPNow™ total residential investment spending forecast is a positive 1.6% for September 2023. Quarterly log change for new private permanent site expenditures were projected at 7.3%; the improvement spending forecast was -1.8%; and the manufactured/mobile home expenditures projection was -0.6% (all: quarterly log change and at a seasonally adjusted annual rate).¹

“Buyers searching for starter homes in today’s market are on a wild goose chase because in many parts of the country, there’s no such thing as a starter home anymore. The most affordable homes for sale are no longer affordable to people with lower budgets due to the combination of rising prices and rising rates. That’s locking many Americans out of the housing market altogether, preventing them from building equity and ultimately building lasting wealth. People who are already home owners are sitting pretty, comparatively, because most of them have benefited from home values soaring over the last few years. That could lead to the wealth gap in this country becoming even more drastic.” – Sheharyar Bokhari, Senior Economist, Redfin

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; 8/8/23

² [https://www.businesswire.com/news/home/20230728627765/en/First-Time-Buyers-Need-to-Earn-13-More-Than-a-Year-Ago-to-Afford-the-Typical-U.S.-Starter-Home](https://www.businesswire.com/news/home/20230728627765/en/First-Time-Buyers-Need-to-Earn-13-More-Than-a-Year-Ago-to-Afford-the-Typical-U.S.-Starter-Home;); 7/28/23

June 2023 Housing Scorecard

	M/M	Y/Y
Housing Starts	▼ 8.0%	▼ 8.1%
Single-Family (SF) Starts	▼ 7.0%	▼ 7.4%
Multi-Family (MF) Starts*	▼ 9.9%	▼ 9.4%
Housing Permits	▼ 3.7%	▼ 15.3%
SF Permits	▲ 2.4%	▼ 2.5%
MF Permits*	▼ 13.0%	▼ 31.3%
Housing Under Construction	▲ 0.1%	▼ 0.4%
SF Under Construction	▼ 0.9%	▼ 17.0%
Housing Completions	▼ 3.3%	▲ 5.5%
SF Completions	▼ 2.8%	▼ 2.3%
New SF House Sales	▼ 2.5%	▲ 23.8%
Private Residential Construction Spending	▲ 0.9%	▼ 10.4%
SF Construction Spending	▲ 2.1%	▼ 21.5%
Existing House Sales ¹	▼ 3.3%	▼ 18.9%

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

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

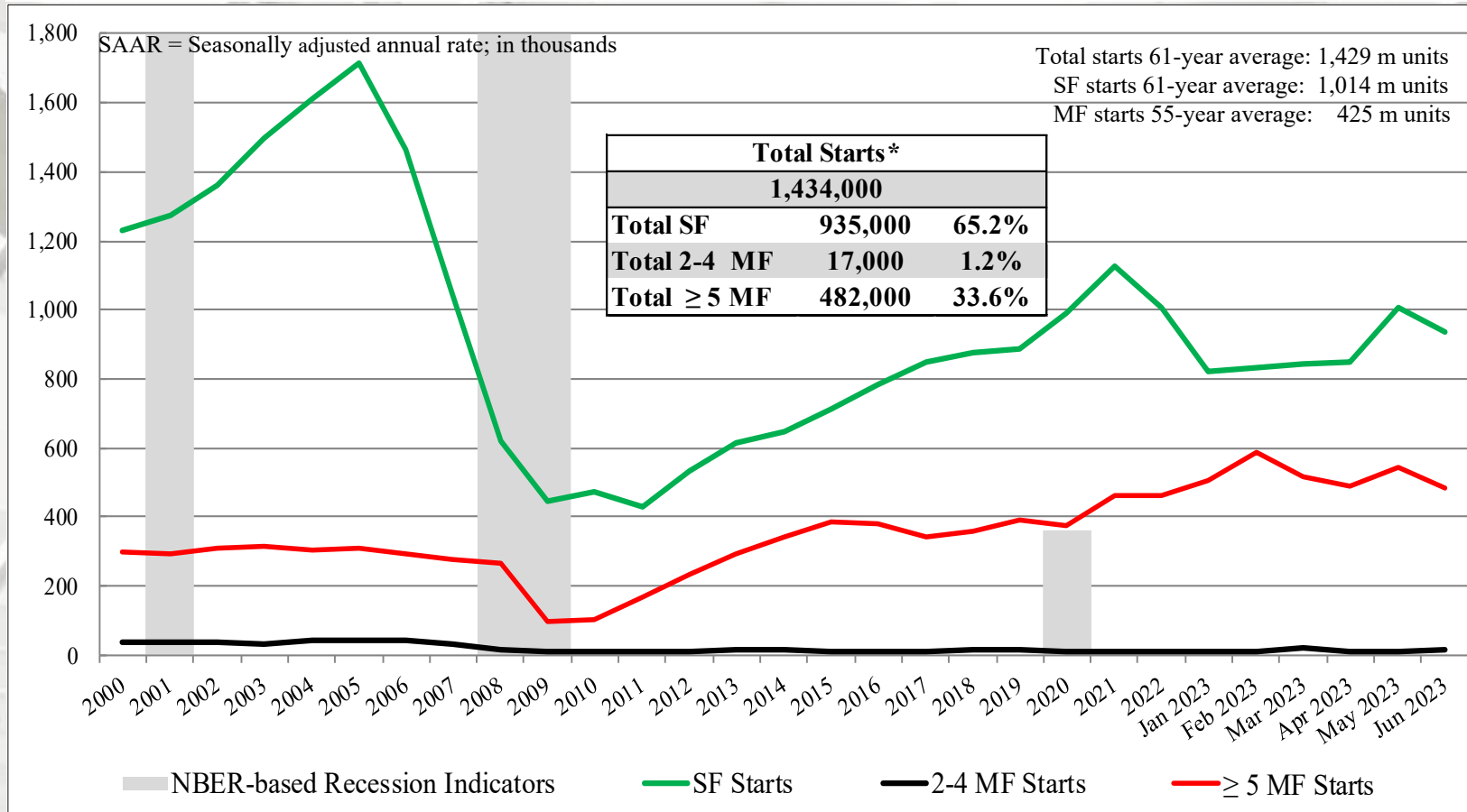
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
June	1,434,000	935,000	17,000	482,000
May	1,559,000	1,005,000	9,000	545,000
2022	1,561,000	1,010,000	8,000	543,000
M/M change	-8.0%	-7.0%	88.9%	-11.6%
Y/Y change	-8.1%	-7.4%	112.5%	-11.2%

* 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

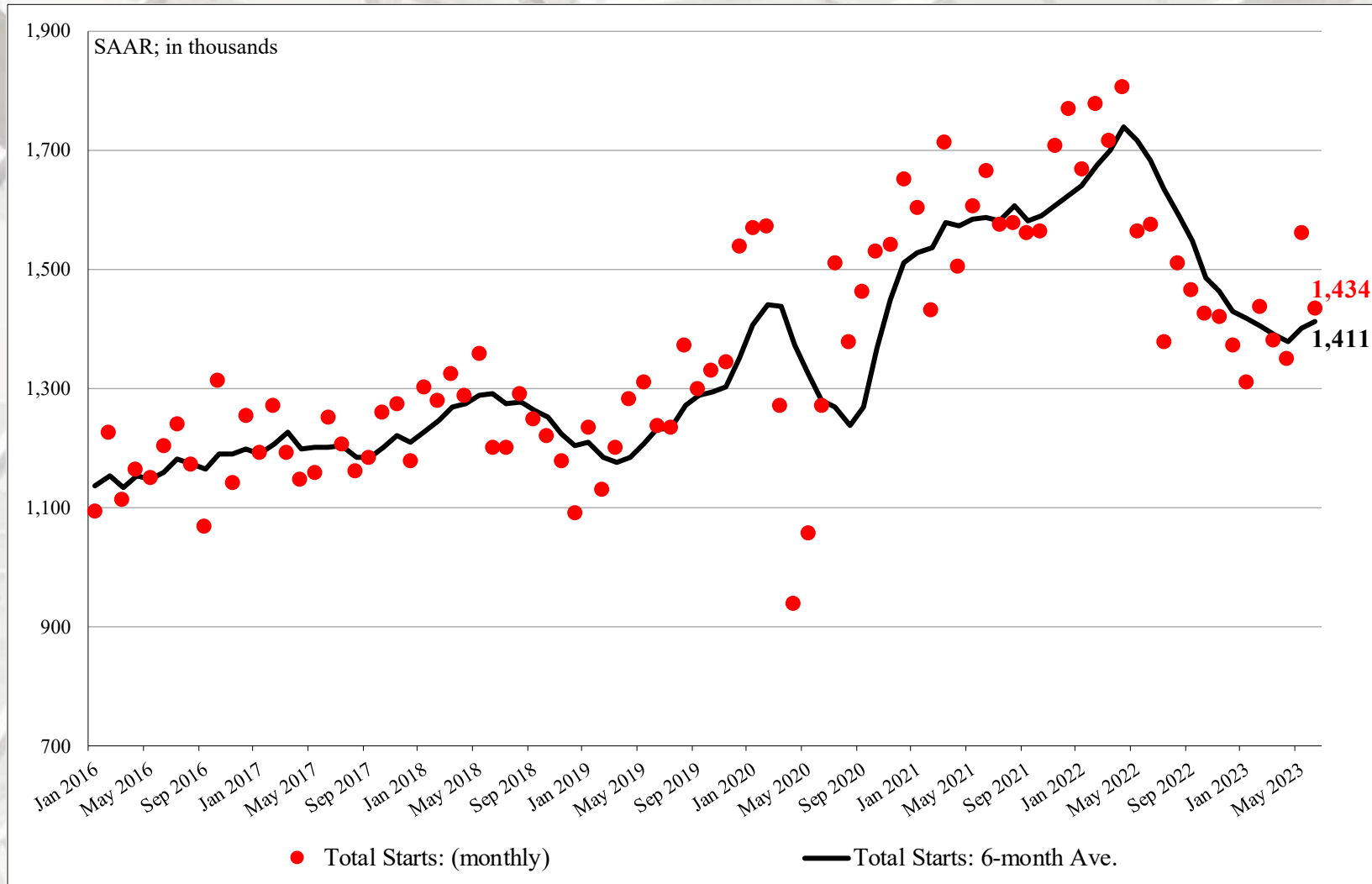


The US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: (Total starts – (SF + 5-unit MF)).

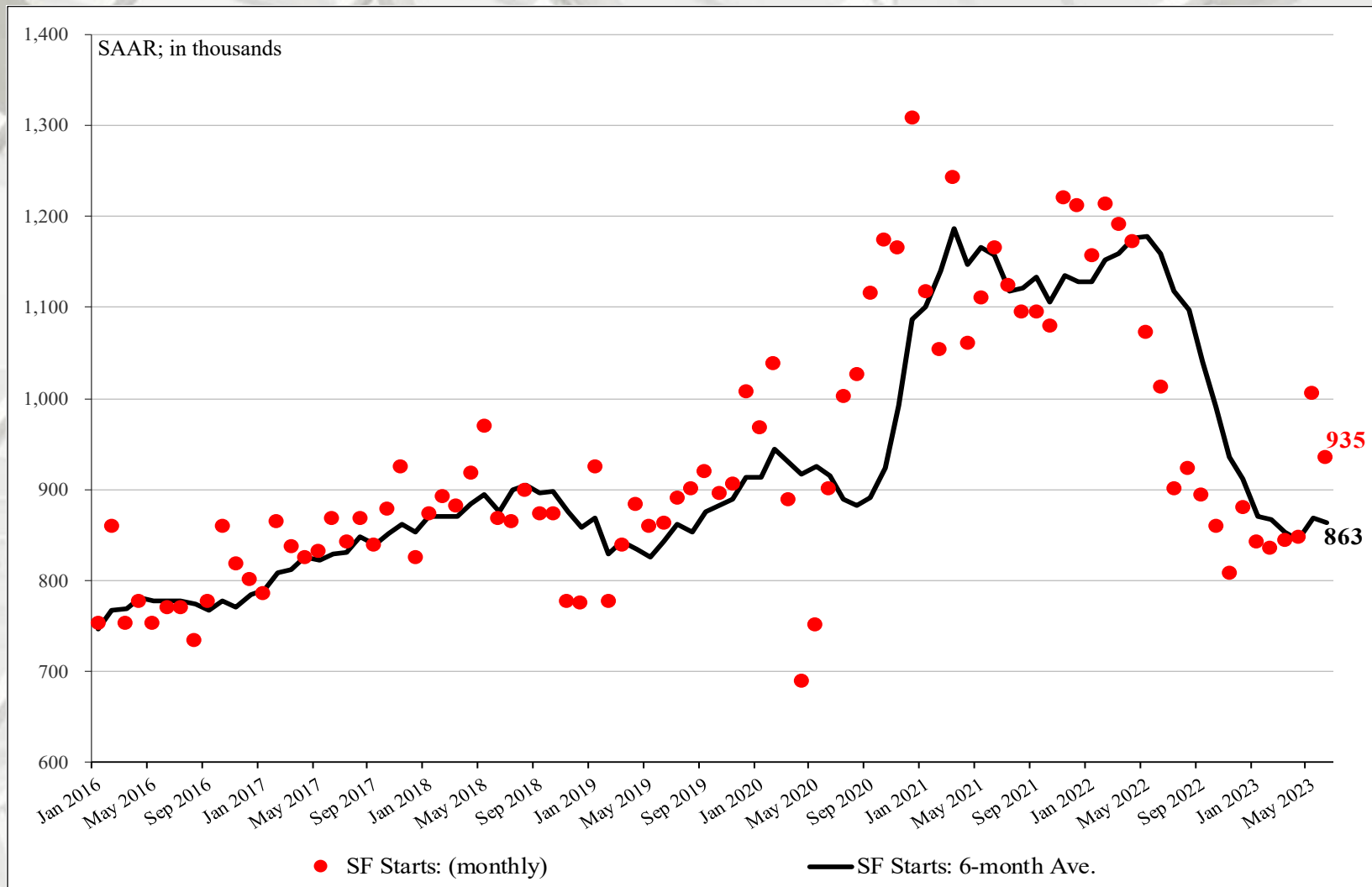
* Percentage of total starts.

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

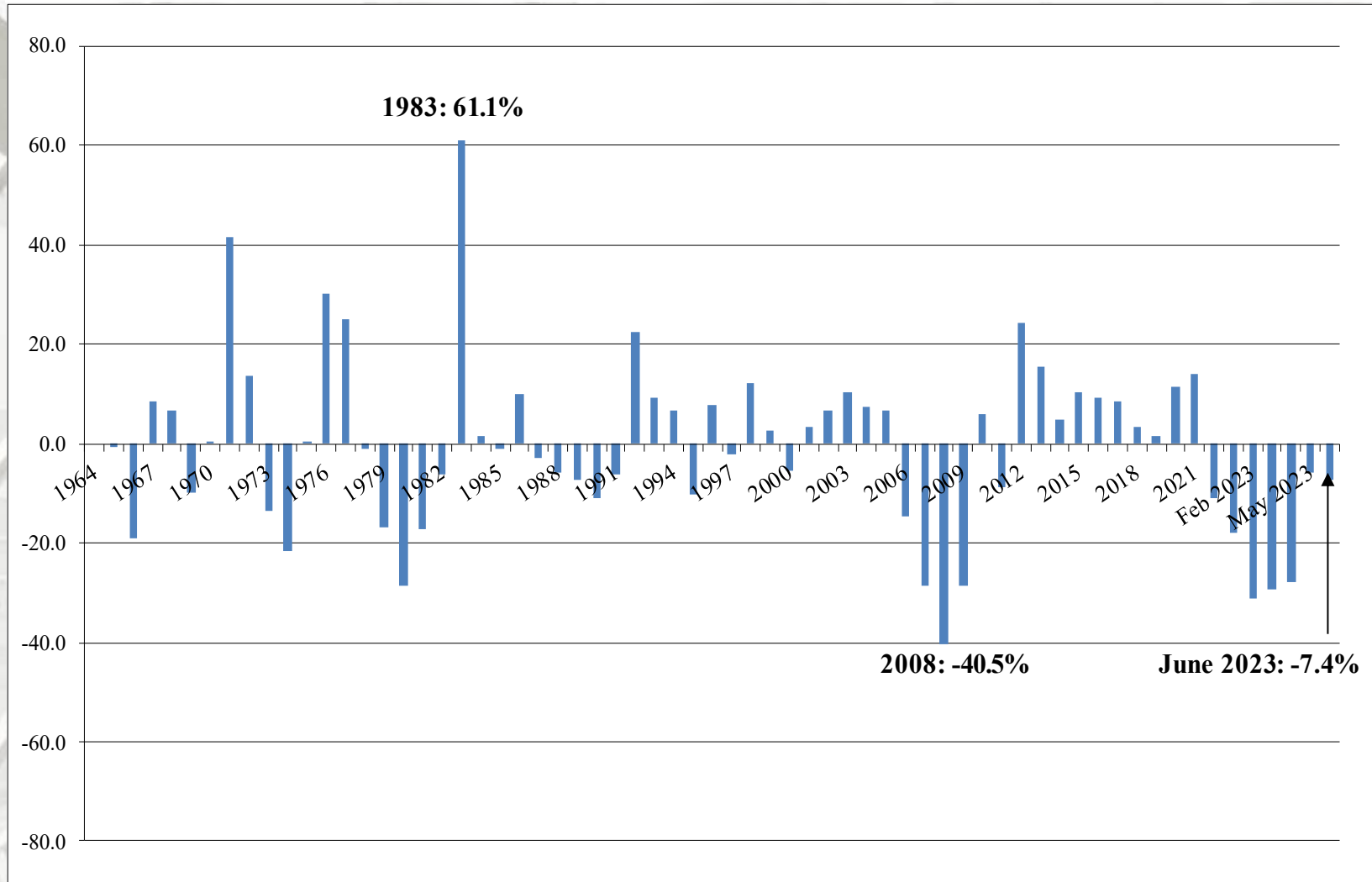
Total Housing Starts: Six-Month Moving Average



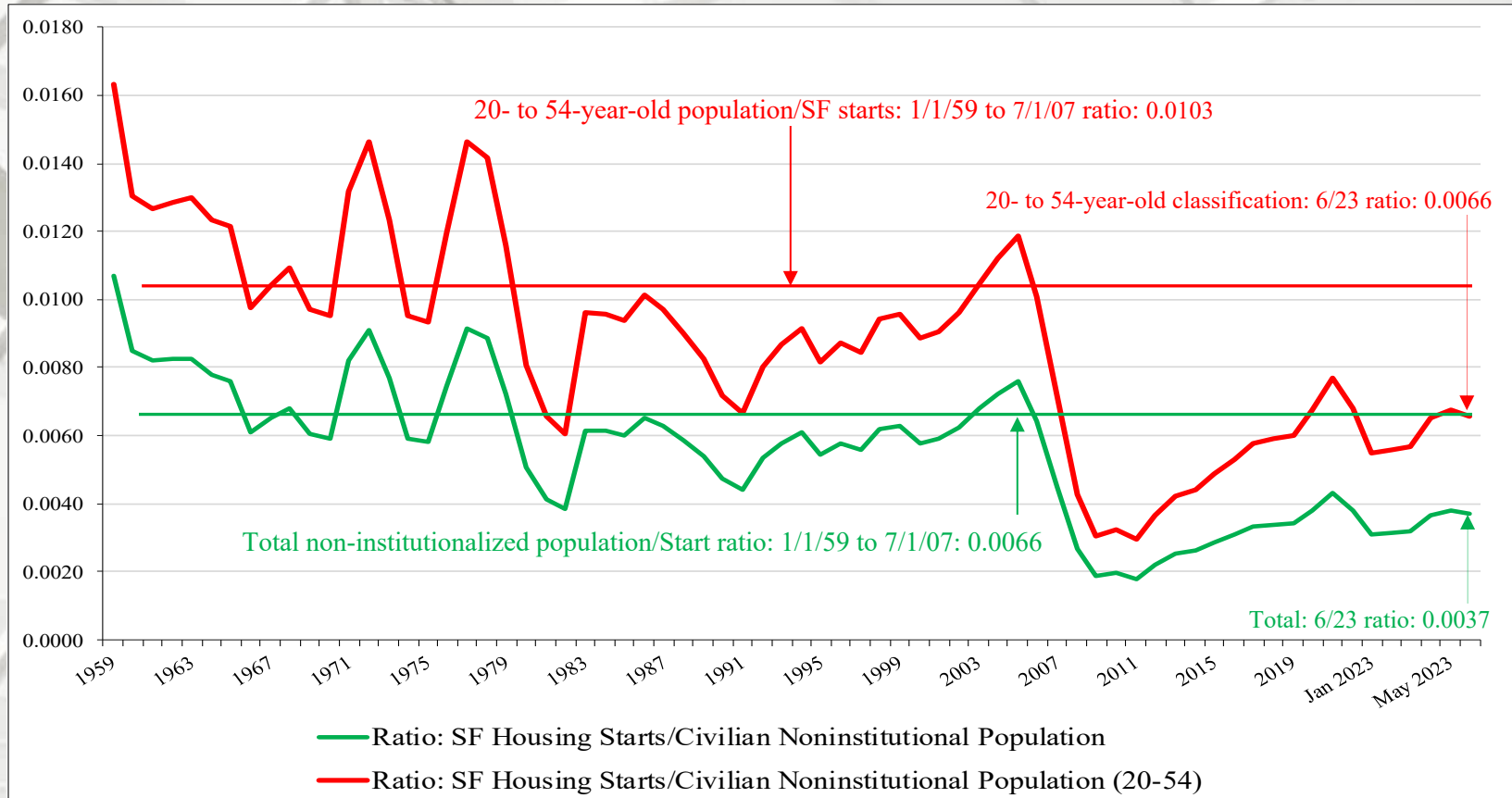
SF Housing Starts: Six-Month Moving Average



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



New SF Starts

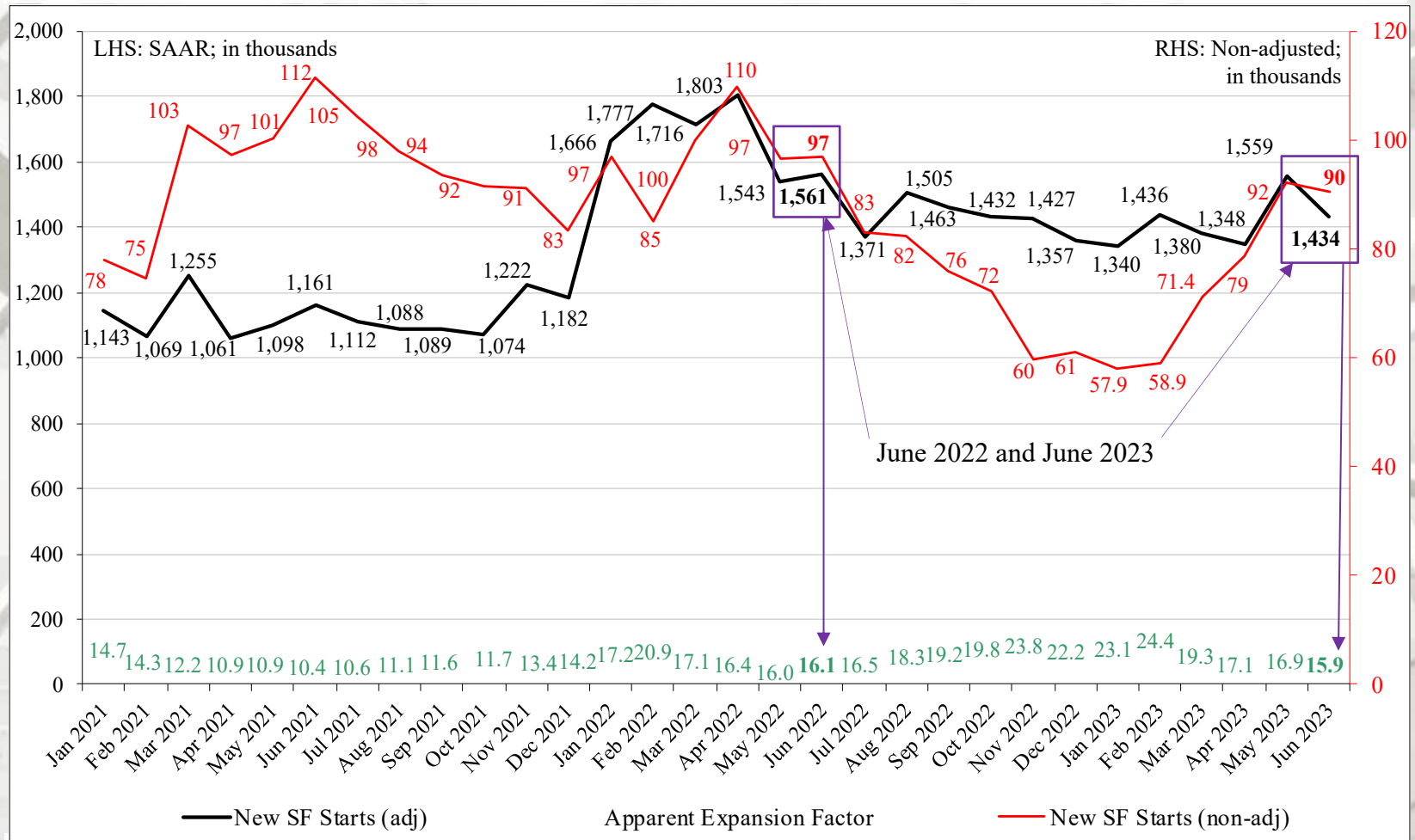


New SF starts adjusted for the US population

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 June 2023 it was 0.0037 – a slight decrease from May (0.0038). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in June 2023 it was 0.0066 – also a decline from May (0.0068). 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.

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**
June	95,000	52,000	43,000
May	97,000	59,000	38,000
2022	127,000	49,000	78,000
M/M change	-2.1%	-11.9%	13.2%
Y/Y change	-25.2%	6.1%	-44.9%
	MW Total	MW SF	MW MF
June	162,000	111,000	51,000
May	242,000	138,000	104,000
2022	205,000	140,000	65,000
M/M change	-33.1%	-19.6%	-51.0%
Y/Y change	-21.0%	-20.7%	-21.5%

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).

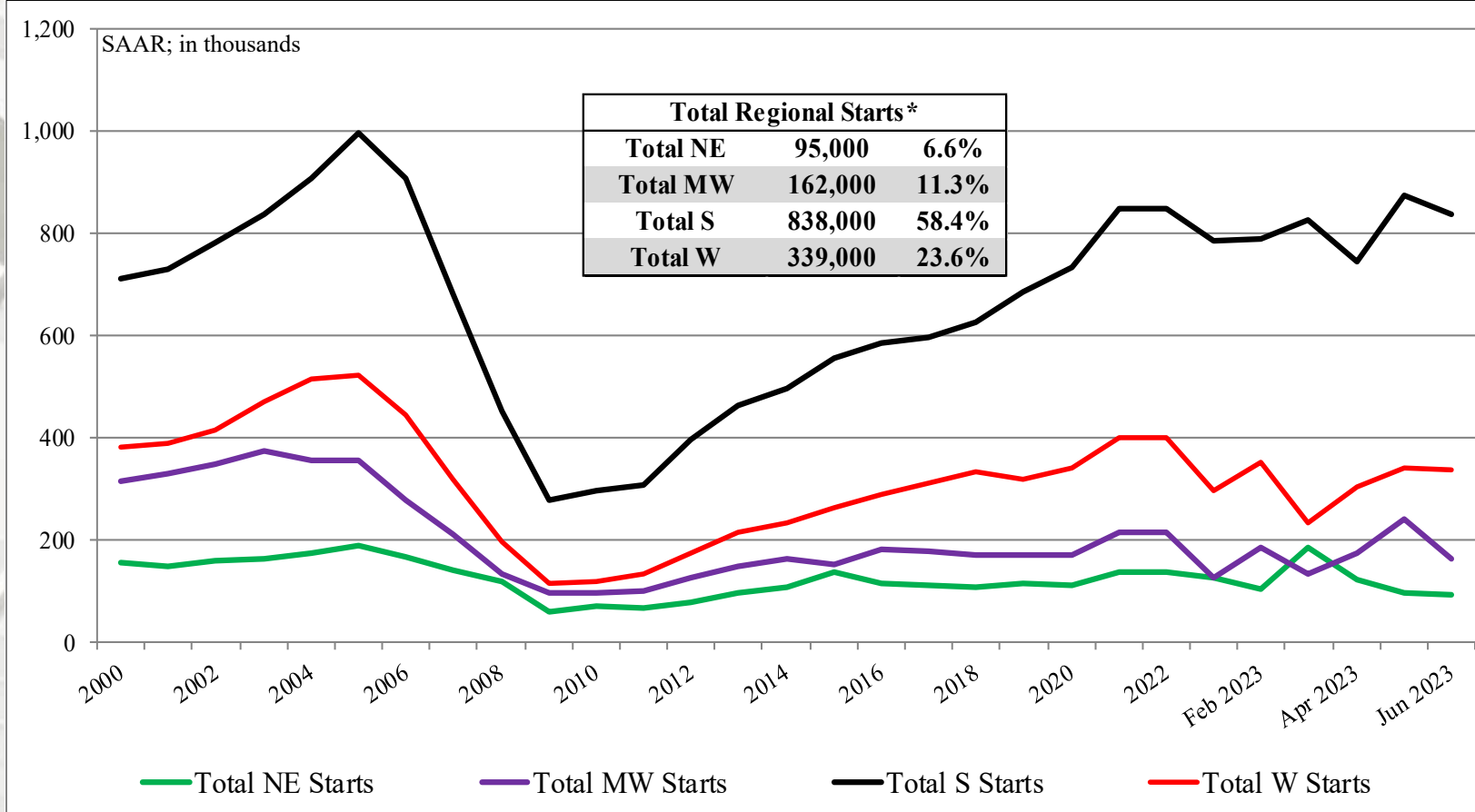
New Housing Starts by Region

	S Total	S SF	S MF**
June	838,000	568,000	270,000
May	877,000	613,000	264,000
2022	866,000	613,000	253,000
M/M change	-4.4%	-7.3%	2.3%
Y/Y change	-3.2%	-7.3%	6.7%
	W Total	W SF	W MF
June	339,000	204,000	135,000
May	343,000	195,000	148,000
2022	363,000	208,000	155,000
M/M change	-1.2%	4.6%	-8.8%
Y/Y change	-6.6%	-1.9%	-12.9%

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

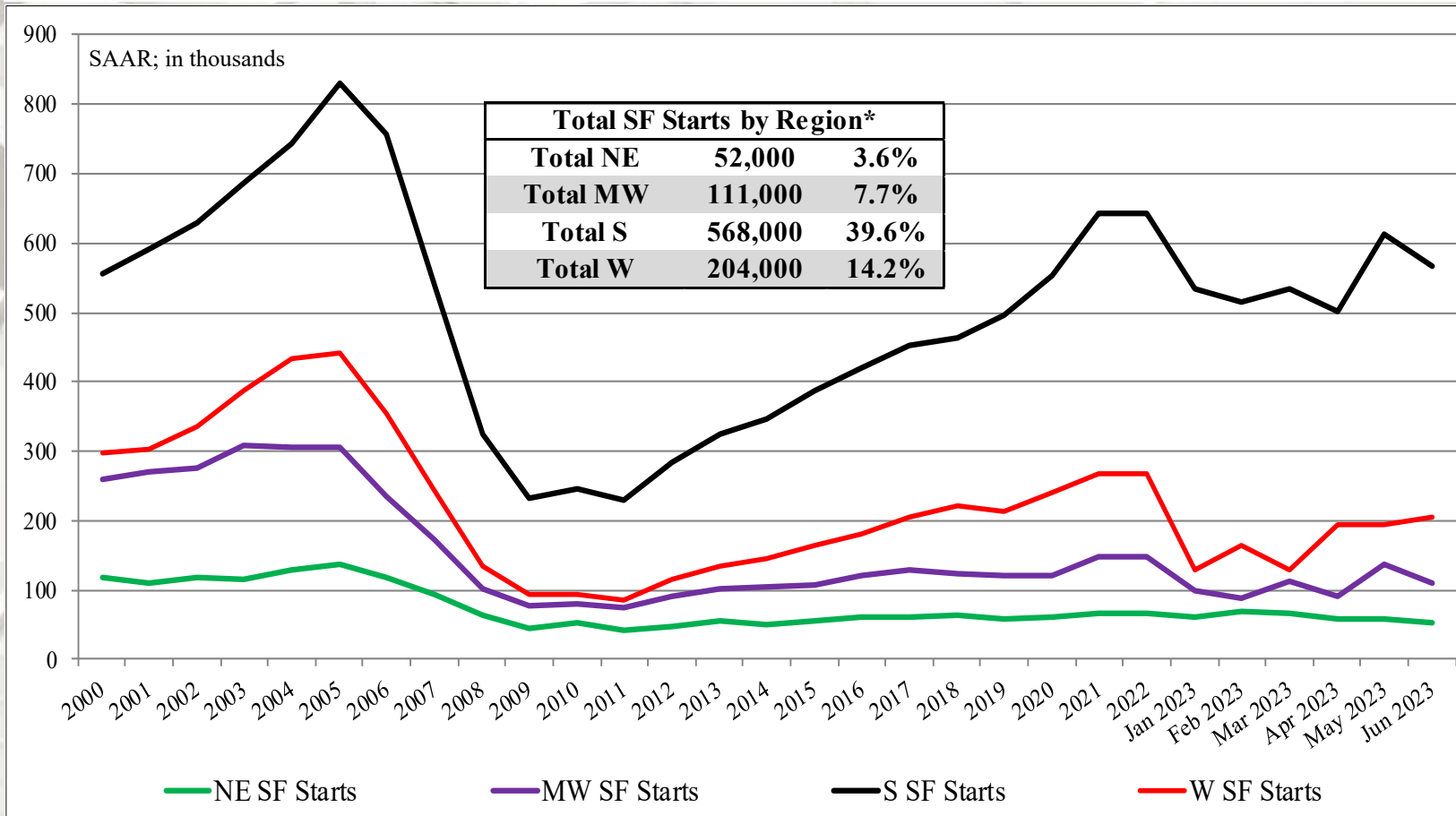


NE = Northeast, MW = Midwest, S = South, W = West

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

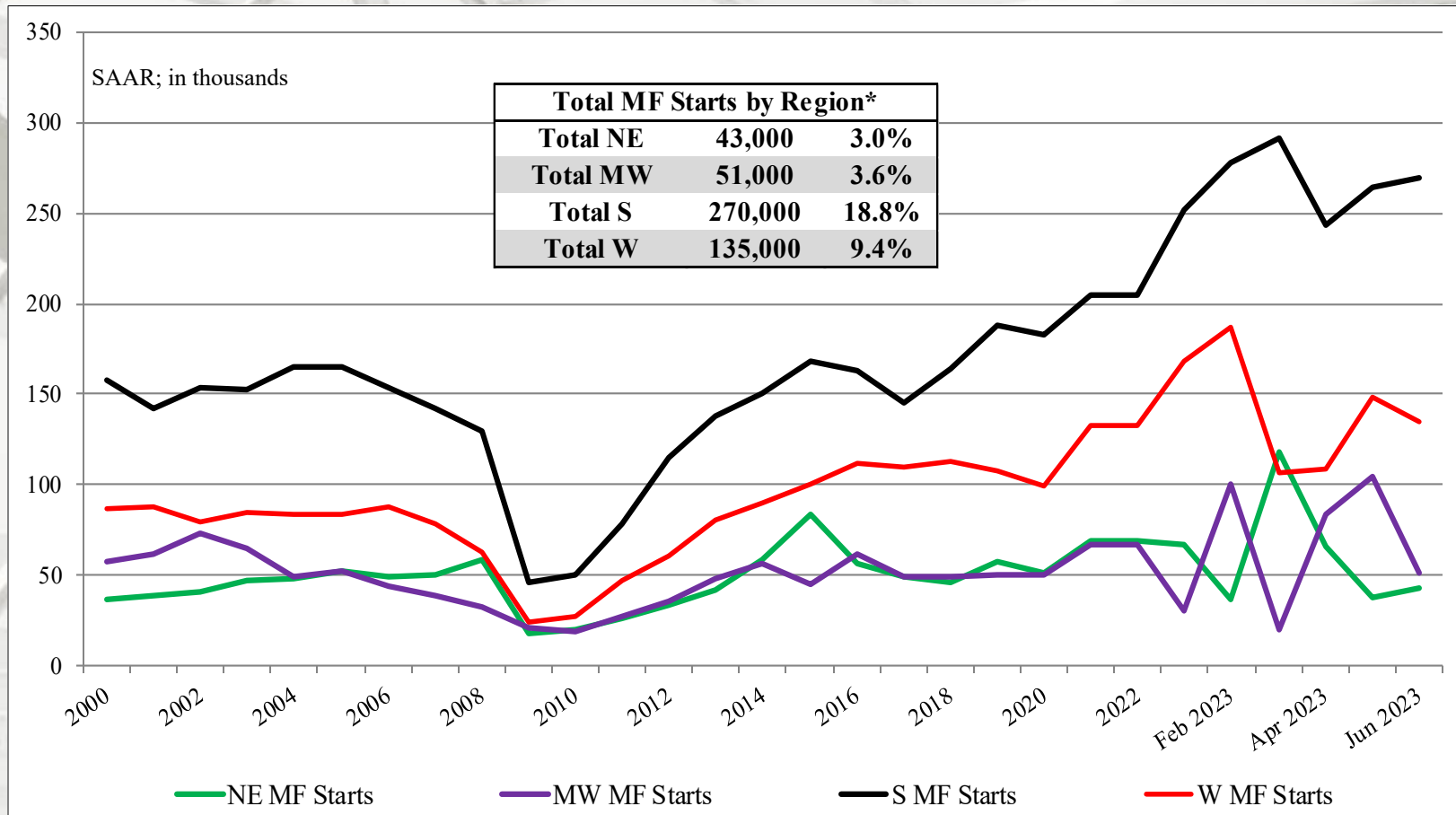


NE = Northeast, MW = Midwest, S = South, W = West

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

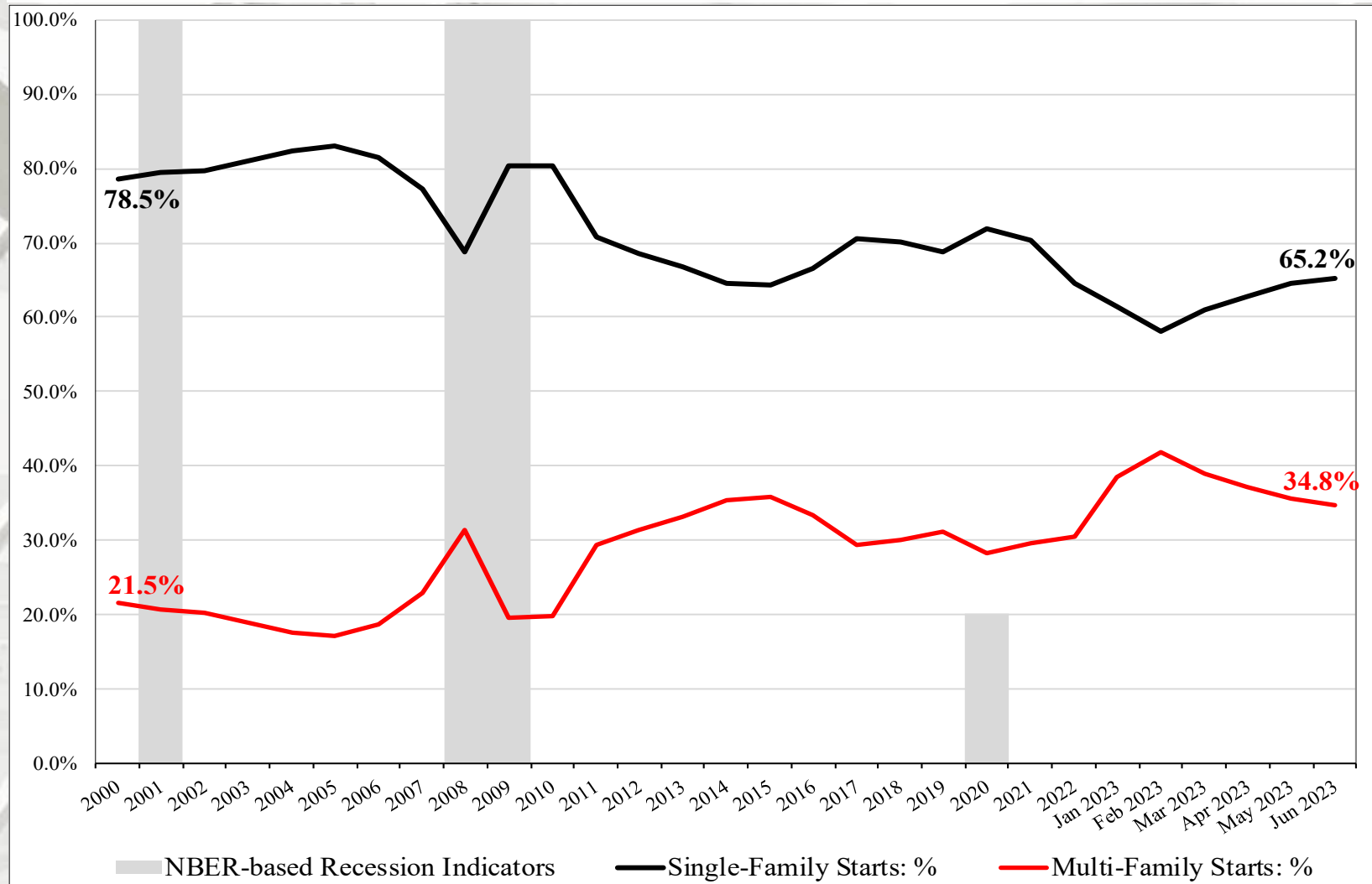


NE = Northeast, MW = Midwest, S = South, W = West

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 (%)



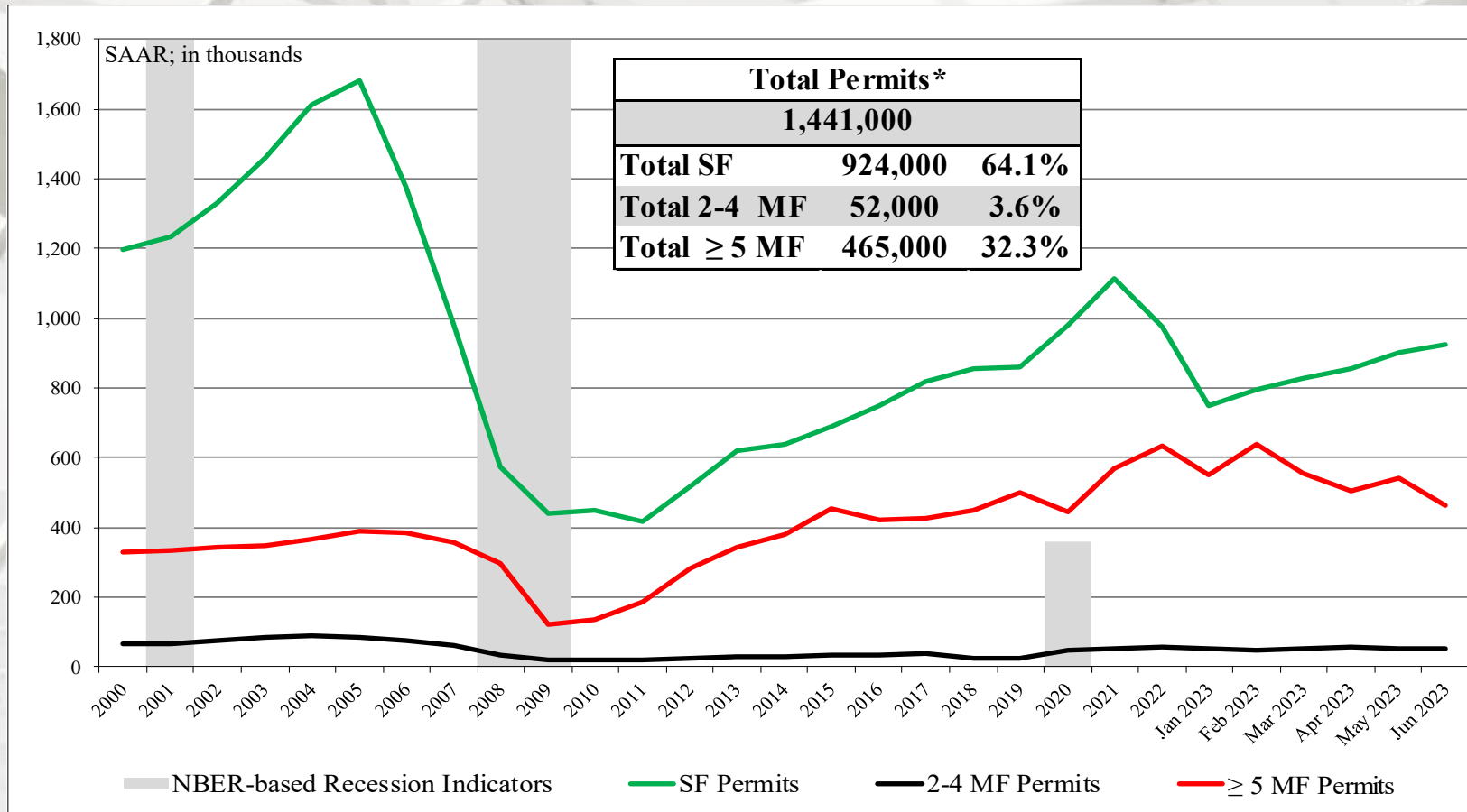
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
June	1,441,000	924,000	52,000	465,000
May	1,496,000	902,000	54,000	540,000
2022	1,701,000	948,000	55,000	698,000
M/M change	-3.7%	2.4%	-3.7%	-13.9%
Y/Y change	-15.3%	-2.5%	-5.5%	-33.4%

* 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**
June	106,000	57,000	49,000
May	137,000	56,000	81,000
2022	150,000	55,000	95,000
M/M change	-22.6%	1.8%	-39.5%
Y/Y change	-29.3%	3.6%	-48.4%

	MW Total*	MW SF	MW MF**
June	196,000	111,000	85,000
May	187,000	106,000	81,000
2022	202,000	118,000	84,000
M/M change	4.8%	4.7%	4.9%
Y/Y change	-3.0%	-5.9%	1.2%

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

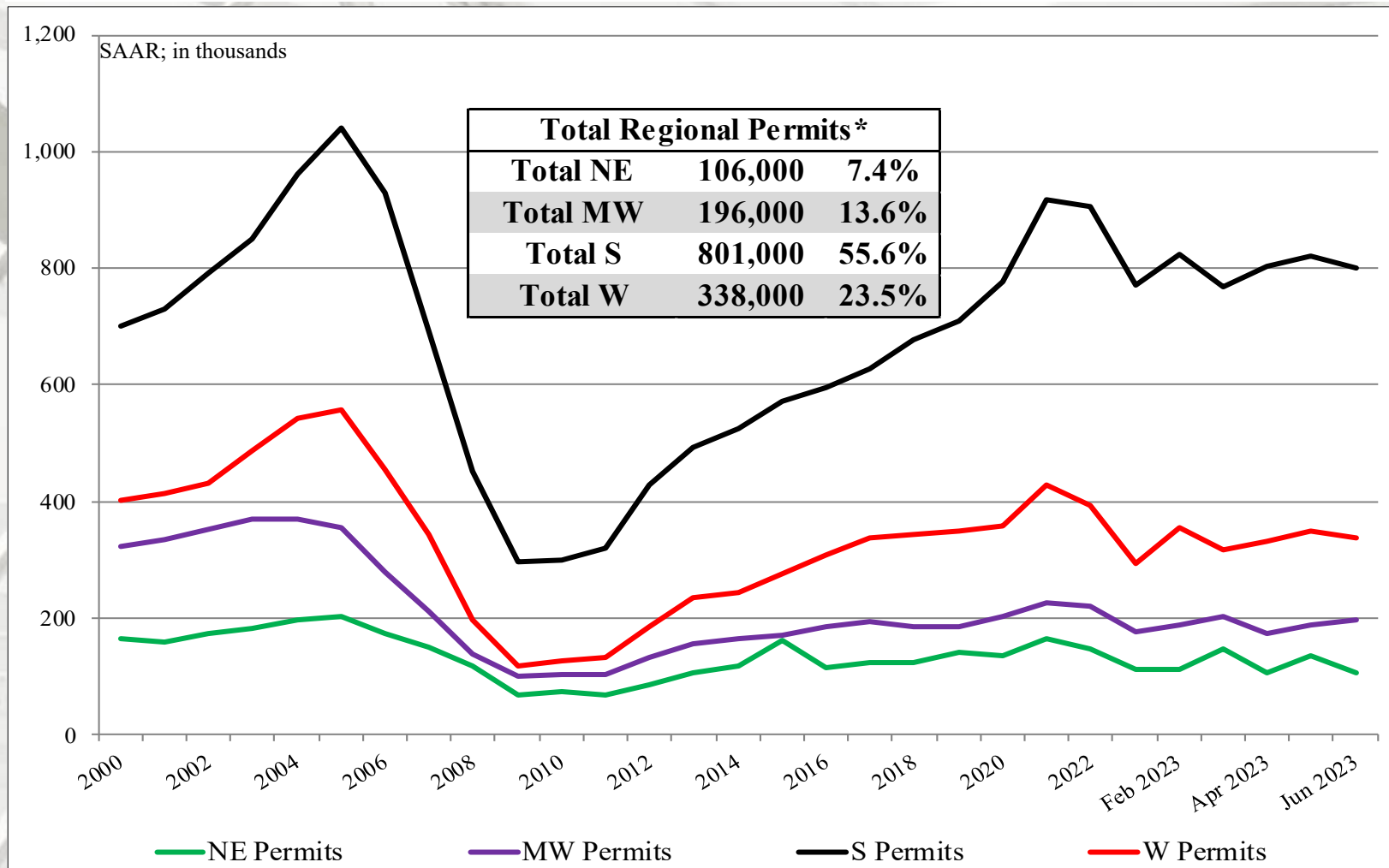
	S Total*	S SF	S MF**
June	801,000	558,000	243,000
May	822,000	544,000	278,000
2022	929,000	571,000	358,000
M/M change	-2.6%	2.6%	-12.6%
Y/Y change	-13.8%	-2.3%	-32.1%
	W Total*	W SF	W MF**
June	338,000	198,000	140,000
May	350,000	196,000	154,000
2022	420,000	204,000	216,000
M/M change	-3.4%	1.0%	-9.1%
Y/Y change	-19.5%	-2.9%	-35.2%

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).

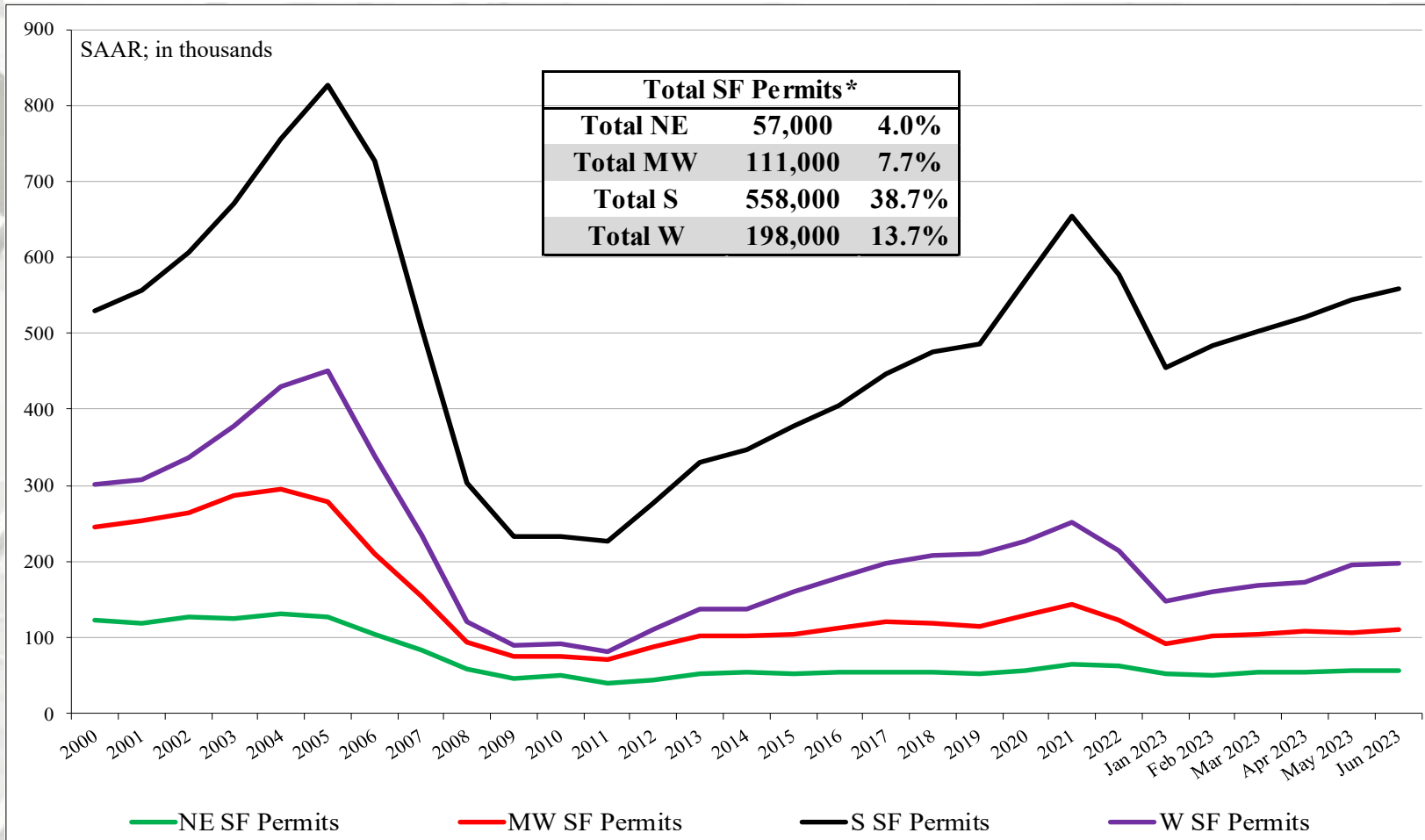
Total Housing Permits by Region



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

* Percentage of total permits.

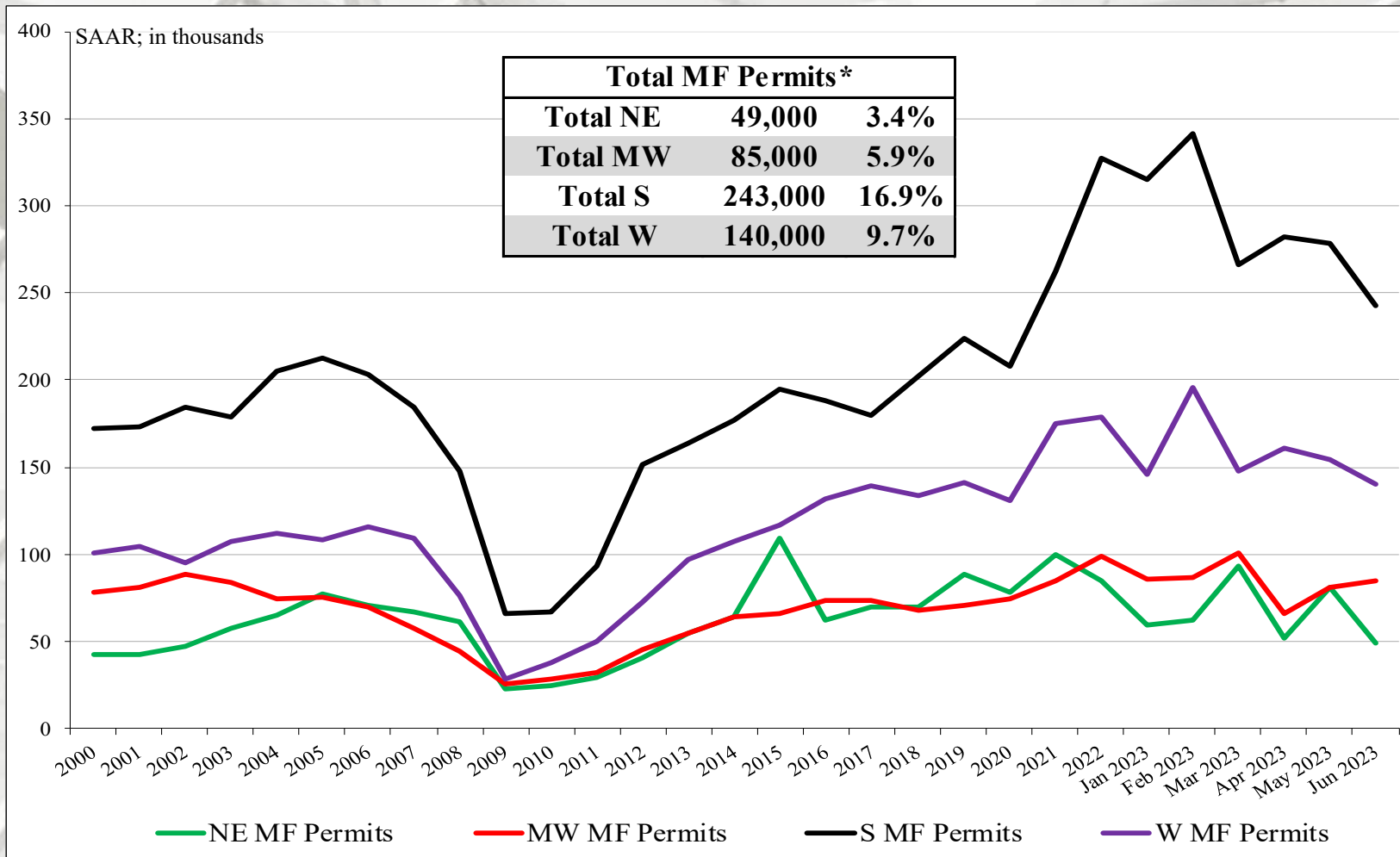
SF Housing Permits by Region



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.

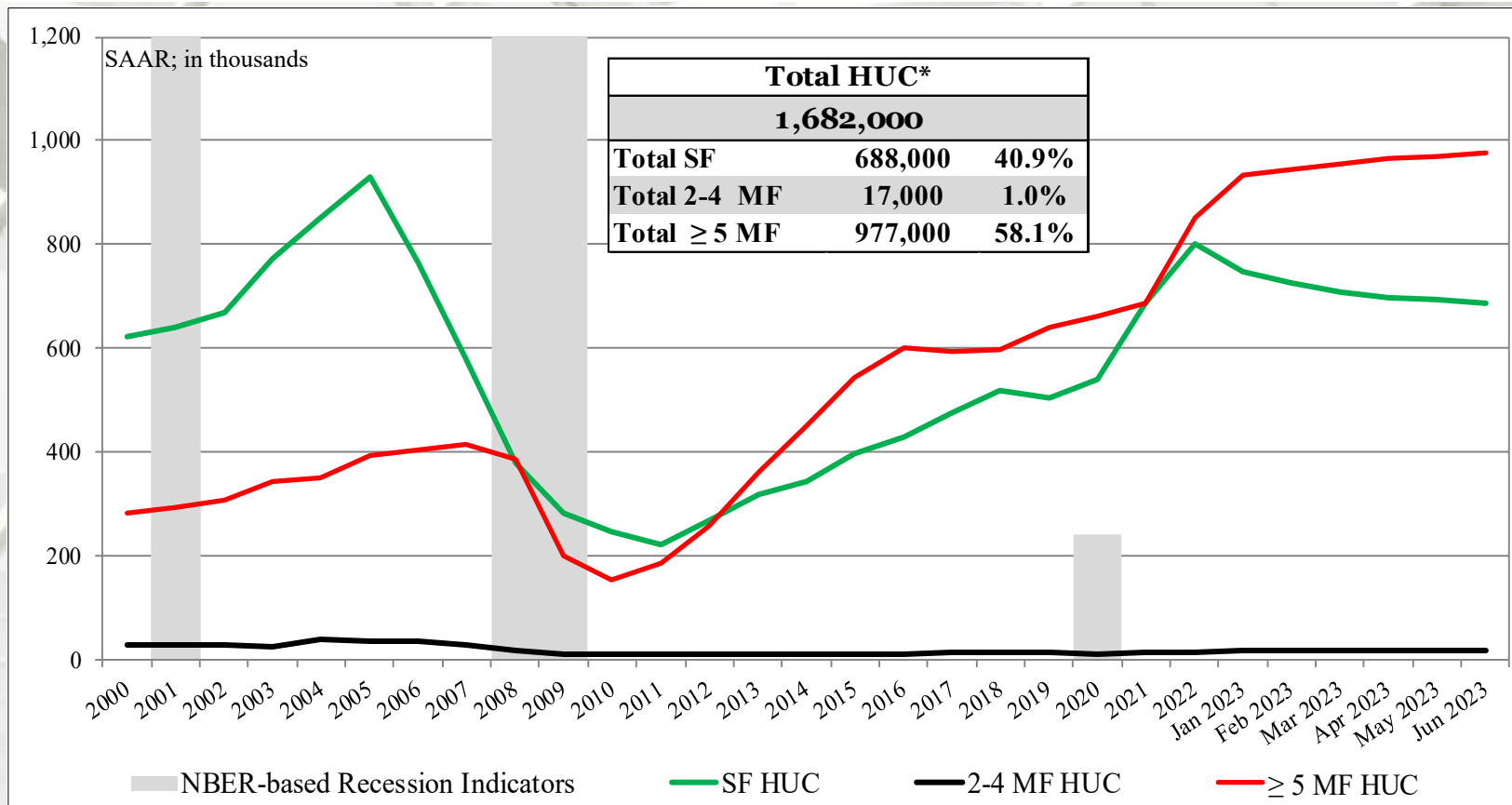
New Housing Under Construction (HUC)

	Total HUC*	SF HUC	MF 2-4 unit** HUC	MF ≥ 5 unit HUC
June	1,682,000	688,000	17,000	977,000
May	1,680,000	694,000	16,000	970,000
2022	1,688,000	829,000	15,000	844,000
M/M change	0.1%	-0.9%	6.3%	0.7%
Y/Y change	-0.4%	-17.0%	13.3%	15.8%

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**
June	220,000	66,000	154,000
May	215,000	66,000	149,000
2022	219,000	60,000	159,000
M/M change	2.3%	0.0%	3.4%
Y/Y change	0.5%	10.0%	-3.1%
	MW Total	MW SF	MW MF
June	208,000	92,000	116,000
May	209,000	93,000	116,000
2022	224,000	113,000	111,000
M/M change	-0.5%	-1.1%	0.0%
Y/Y change	-7.1%	-18.6%	4.5%

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).

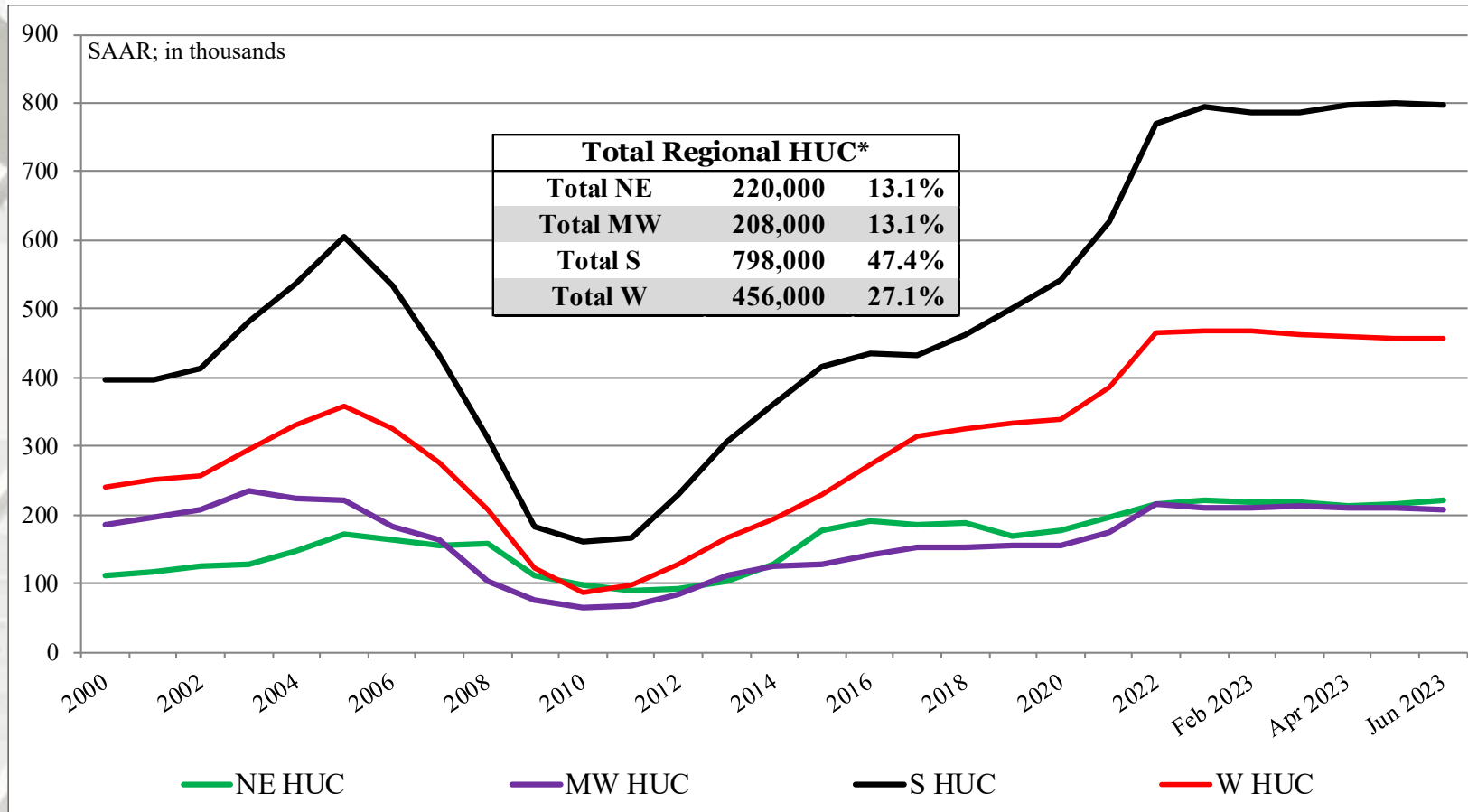
New Housing Under Construction by Region

	S Total	S SF	S MF**
June	798,000	366,000	432,000
May	799,000	370,000	429,000
2022	778,000	444,000	334,000
M/M change	-0.1%	-1.1%	0.7%
Y/Y change	2.6%	-17.6%	29.3%
	W Total	W SF	W MF
June	456,000	164,000	292,000
May	457,000	165,000	292,000
2022	467,000	212,000	255,000
M/M change	-0.2%	-0.6%	0.0%
Y/Y change	-2.4%	-22.6%	14.5%

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

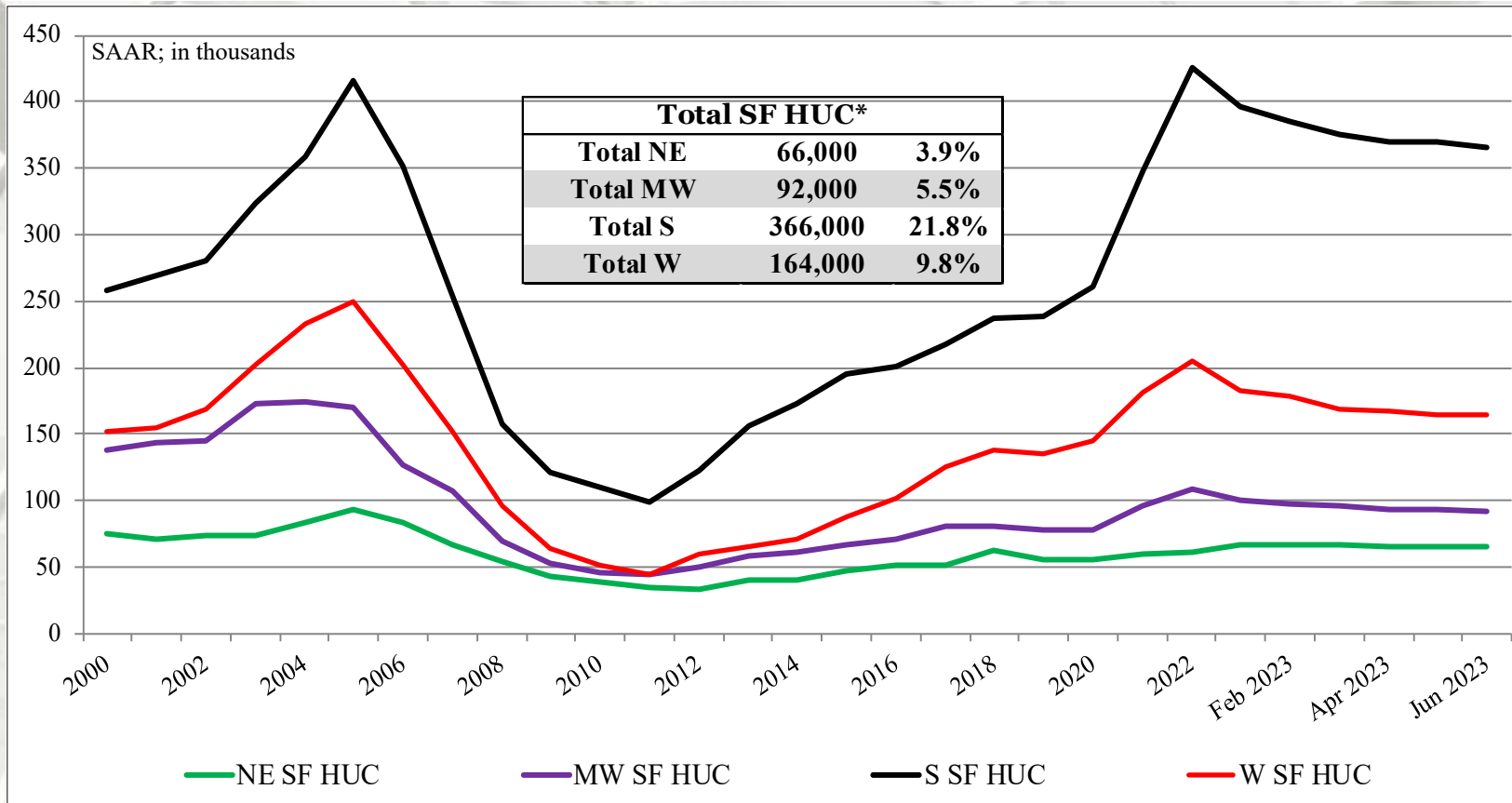


NE = Northeast, MW = Midwest, S = South, W = West

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

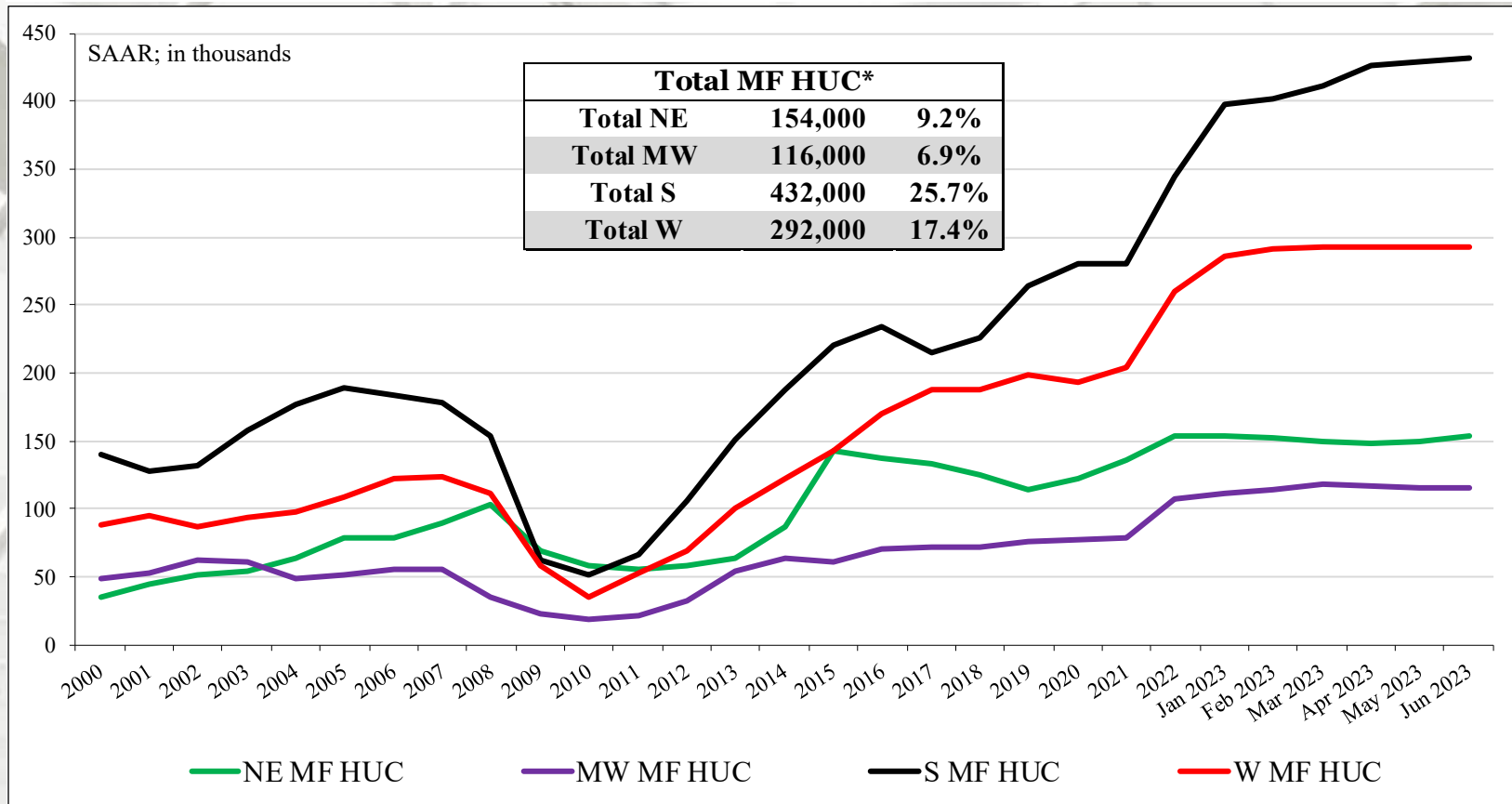


NE = Northeast, MW = Midwest, S = South, W = West.

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.

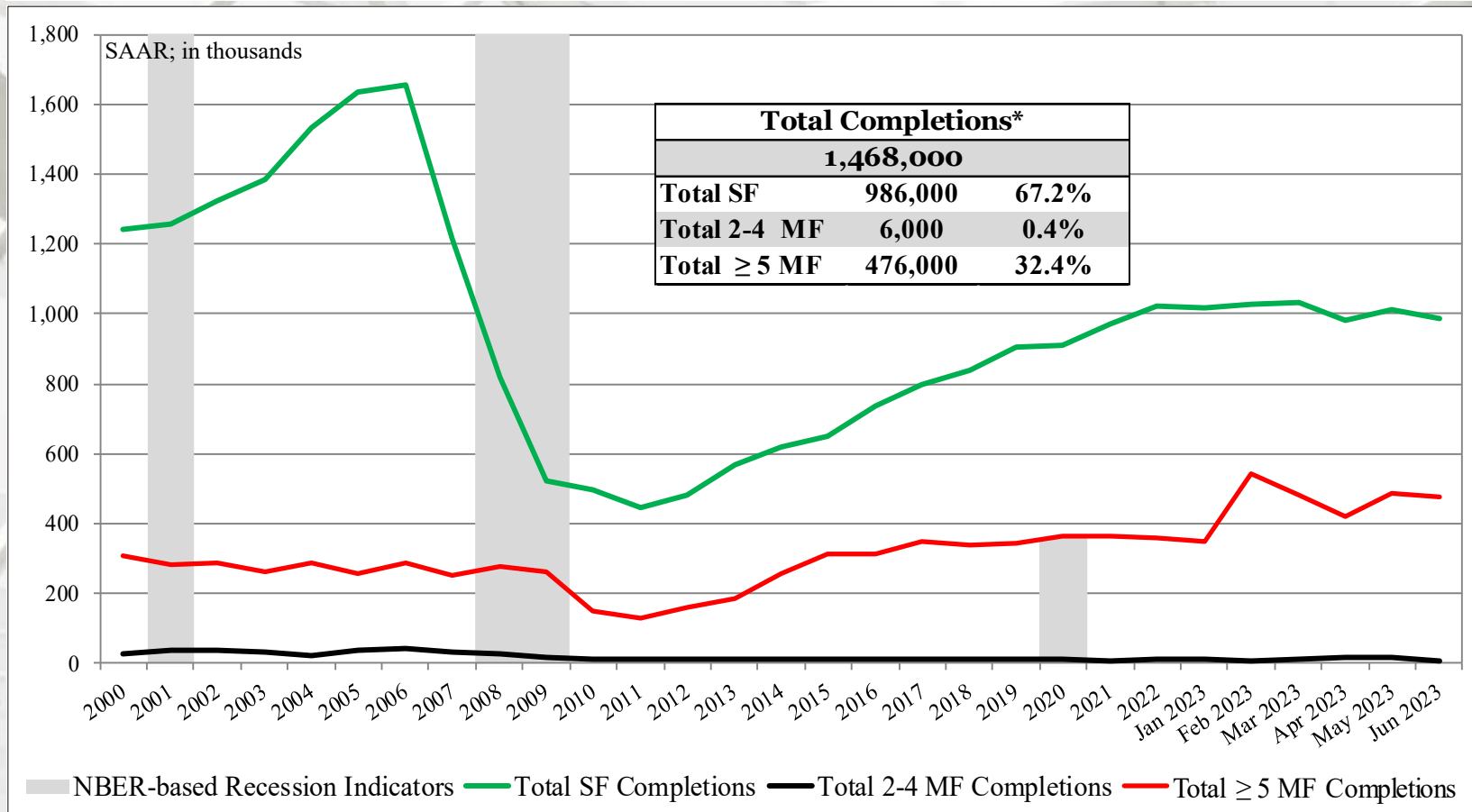
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
June	1,468,000	986,000	6,000	476,000
May	1,518,000	1,014,000	16,000	488,000
2022	1,392,000	1,009,000	6,000	377,000
M/M change	-3.3%	-2.8%	-62.5%	-2.5%
Y/Y change	5.5%	-2.3%	0.0%	26.3%

* 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

	NE Total	NE SF	NE MF**
June	130,000	59,000	71,000
May	115,000	61,000	54,000
2022	99,000	59,000	40,000
M/M change	13.0%	-3.3%	31.5%
Y/Y change	31.3%	0.0%	77.5%
	MW Total	MW SF	MW MF
June	196,000	118,000	78,000
May	205,000	139,000	66,000
2022	195,000	133,000	62,000
M/M change	-4.4%	-15.1%	18.2%
Y/Y change	0.5%	-11.3%	25.8%

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

New Housing Completions by Region

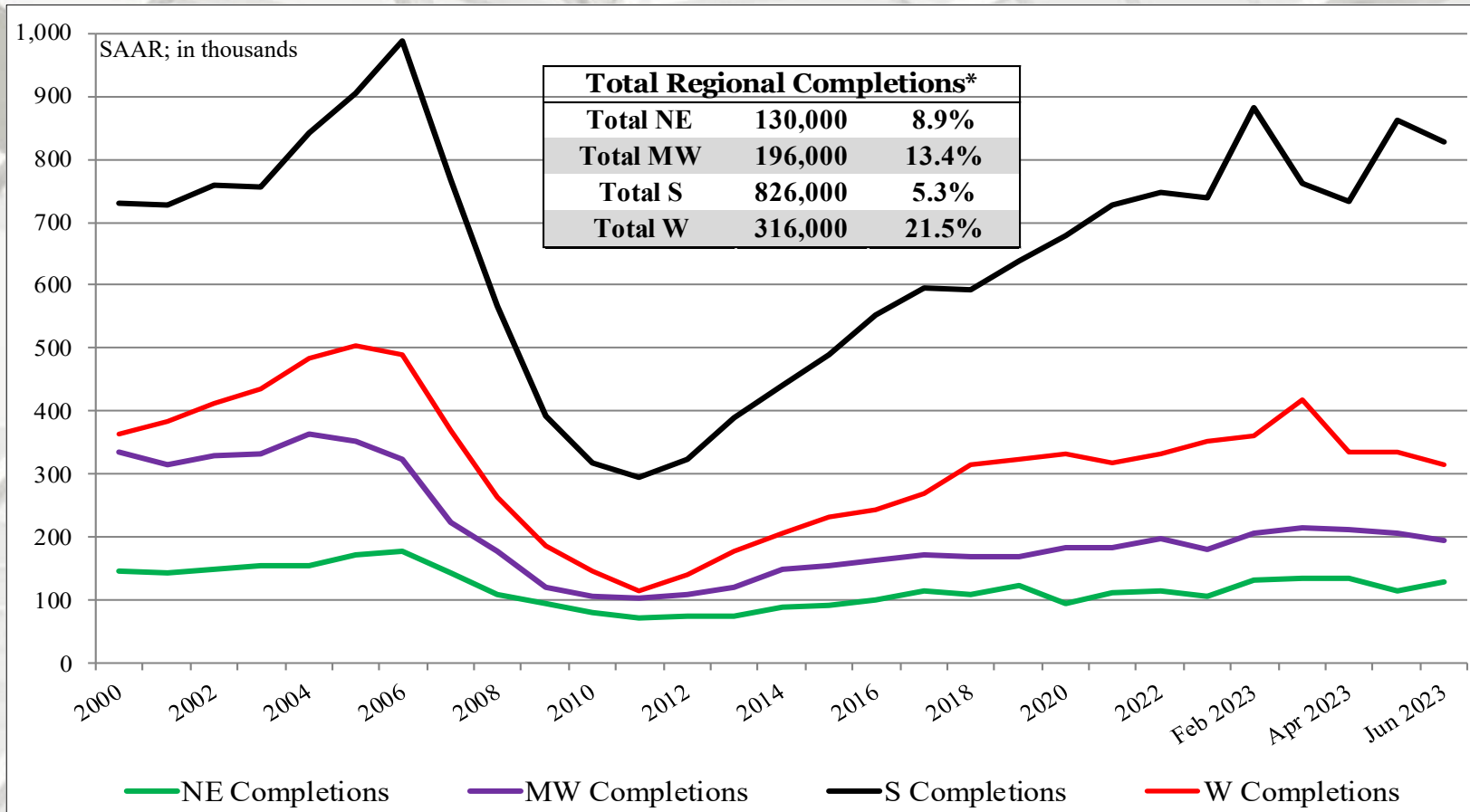
	S Total	S SF	S MF**
June	826,000	596,000	230,000
May	863,000	579,000	284,000
2022	777,000	591,000	186,000
M/M change	-4.3%	2.9%	-19.0%
Y/Y change	6.3%	0.8%	23.7%
	W Total	W SF	W MF
June	316,000	213,000	103,000
May	335,000	235,000	100,000
2022	321,000	226,000	95,000
M/M change	-5.7%	-9.4%	3.0%
Y/Y change	-1.6%	-5.8%	8.4%

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

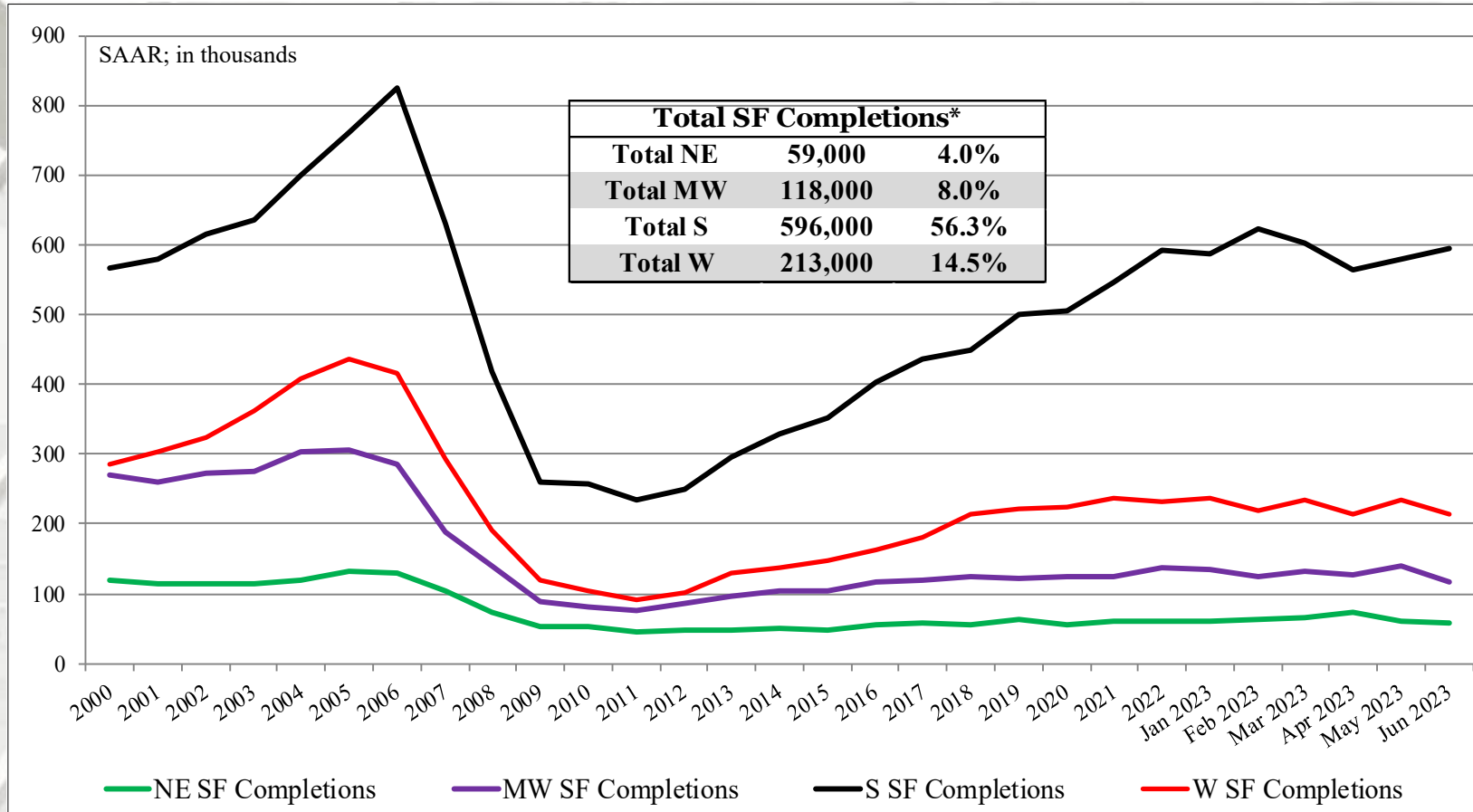
Total Housing Completions by Region



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

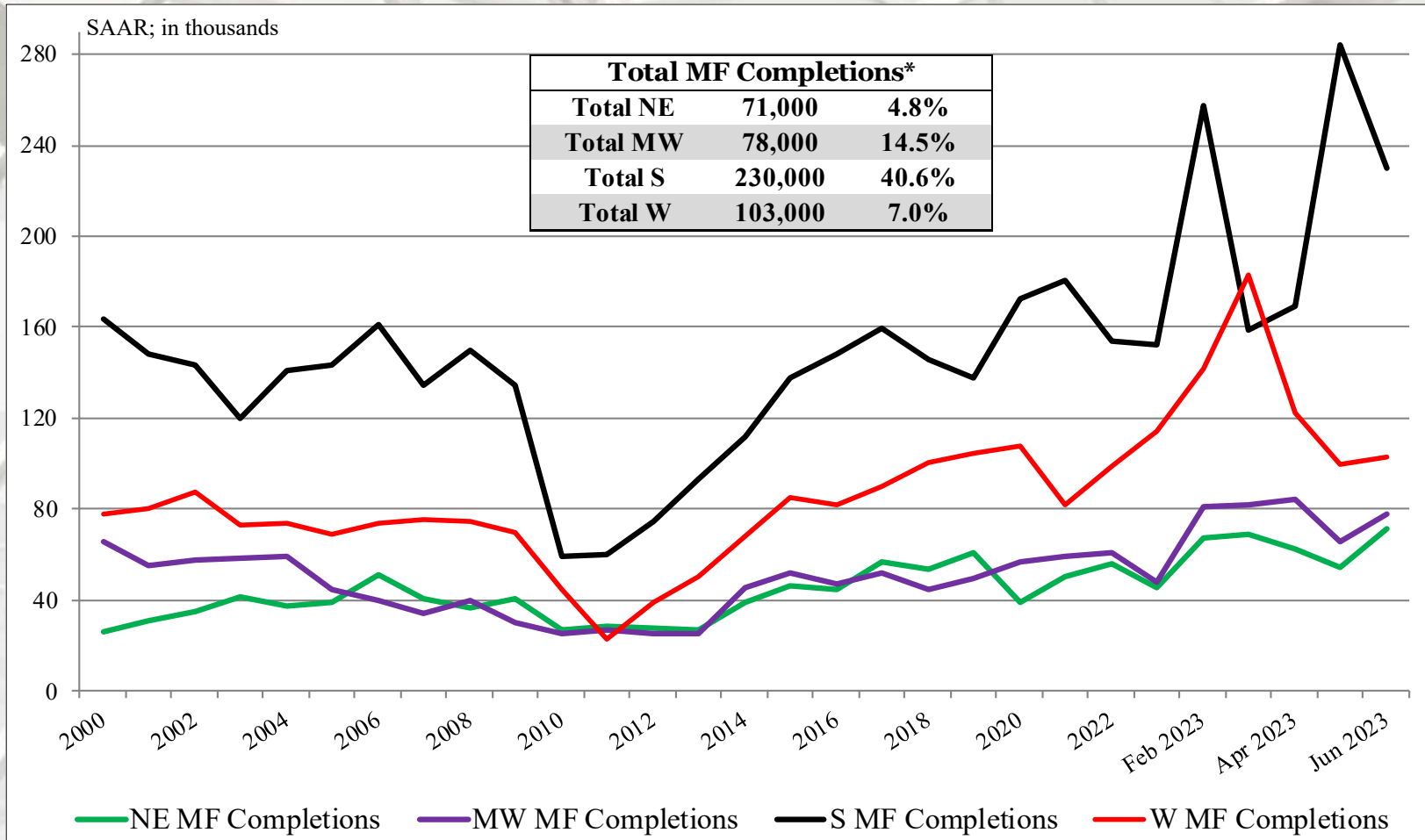


NE = Northeast, MW = Midwest, S = South, W = West

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

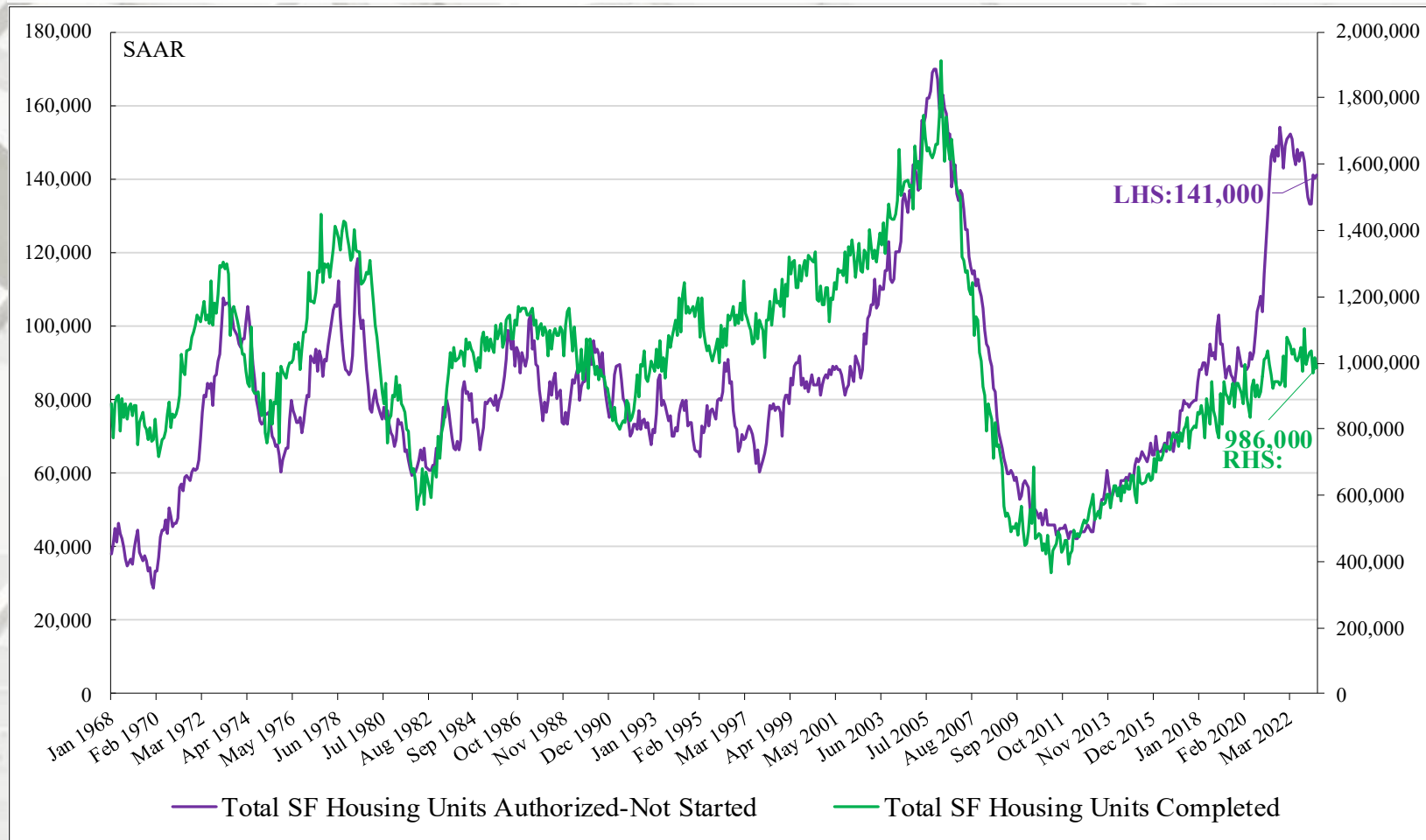


NE = Northeast, MW = Midwest, S = South, W = West

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 281,000 in June, a slight increase from May, and SF authorized units “not” started improved slightly to 141,000 units in June. Both Total and SF units completed decreased from May.

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

New Single-Family House Sales

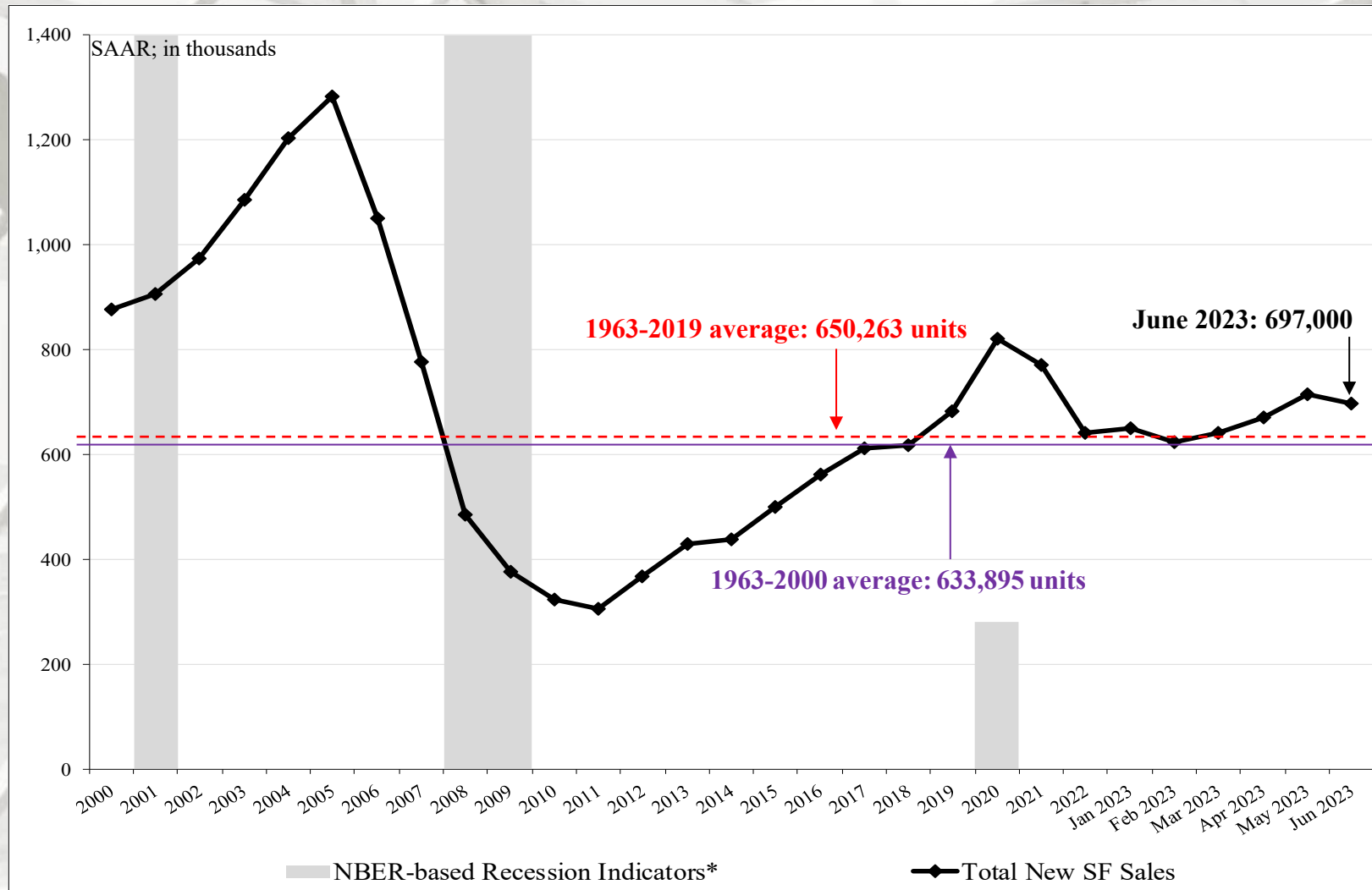
	New SF Sales*	Median Price	Mean Price	Month's Supply
June	697,000	\$415,400	\$494,700	7.4
May	715,000	\$417,300	\$488,700	7.2
2022	563,000	\$432,700	\$472,000	9.5
M/M change	-2.5%	-0.5%	1.2%	2.8%
Y/Y change	23.8%	-4.0%	4.8%	-22.1%

* 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 much less than the consensus forecast³ of 727 m; range 690 m to 772 m. The past three month's new SF sales data also were revised:

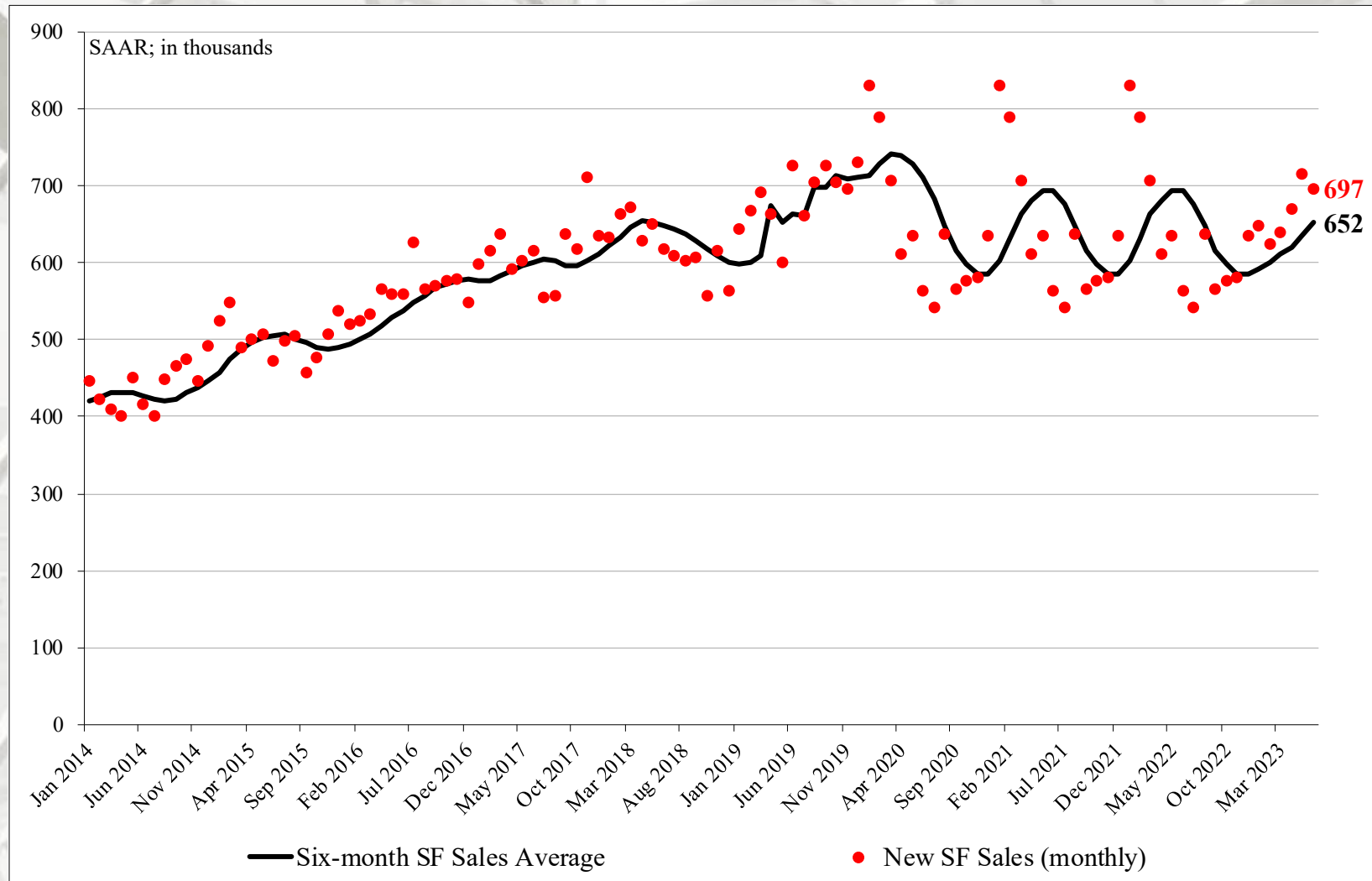
March initial: 683 m, revised to 640 m.
 April initial: 683 m, revised to 671 m.
 May initial: 763 m, revised to 715 m.

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			
June	41,000	53,000	460,000	143,000			
May	34,000	74,000	441,000	166,000			
2022	17,000	61,000	379,000	106,000			
M/M change	20.6%	-28.4%	4.3%	-13.9%			
Y/Y change	141.2%	-13.1%	21.4%	34.9%			
	≤ \$150m	\$150 - \$199.9m	\$200 - 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m
June ^{1,2,3,4}	500	500	7,000	19,000	12,000	13,000	7,000
May	500	500	11,000	19,000	14,000	16,000	7,000
2022	500	1,000	5,000	15,000	10,000	14,000	3,000
M/M change	0.0%	0.0%	-36.4%	0.0%	-14.3%	-18.8%	0.0%
Y/Y change	0.0%	-50.0%	40.0%	26.7%	20.0%	-7.1%	133.3%
% of New SF sales	0.8%	0.8%	13.6%	32.2%	20.3%	20.3%	11.9%

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 June not add to total because of rounding.

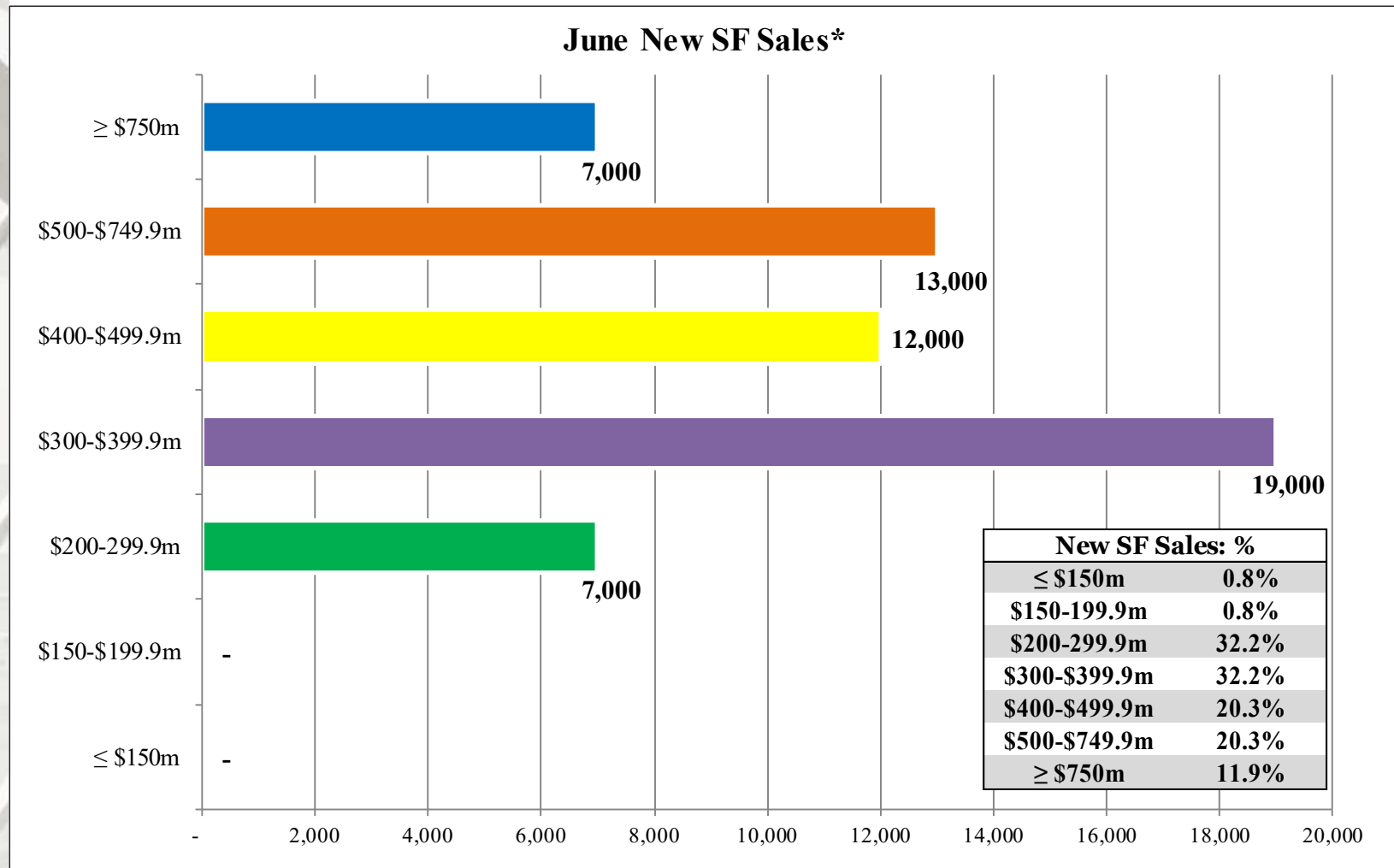
⁴ Housing prices are adjusted at irregular intervals.

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

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 7/26/23;

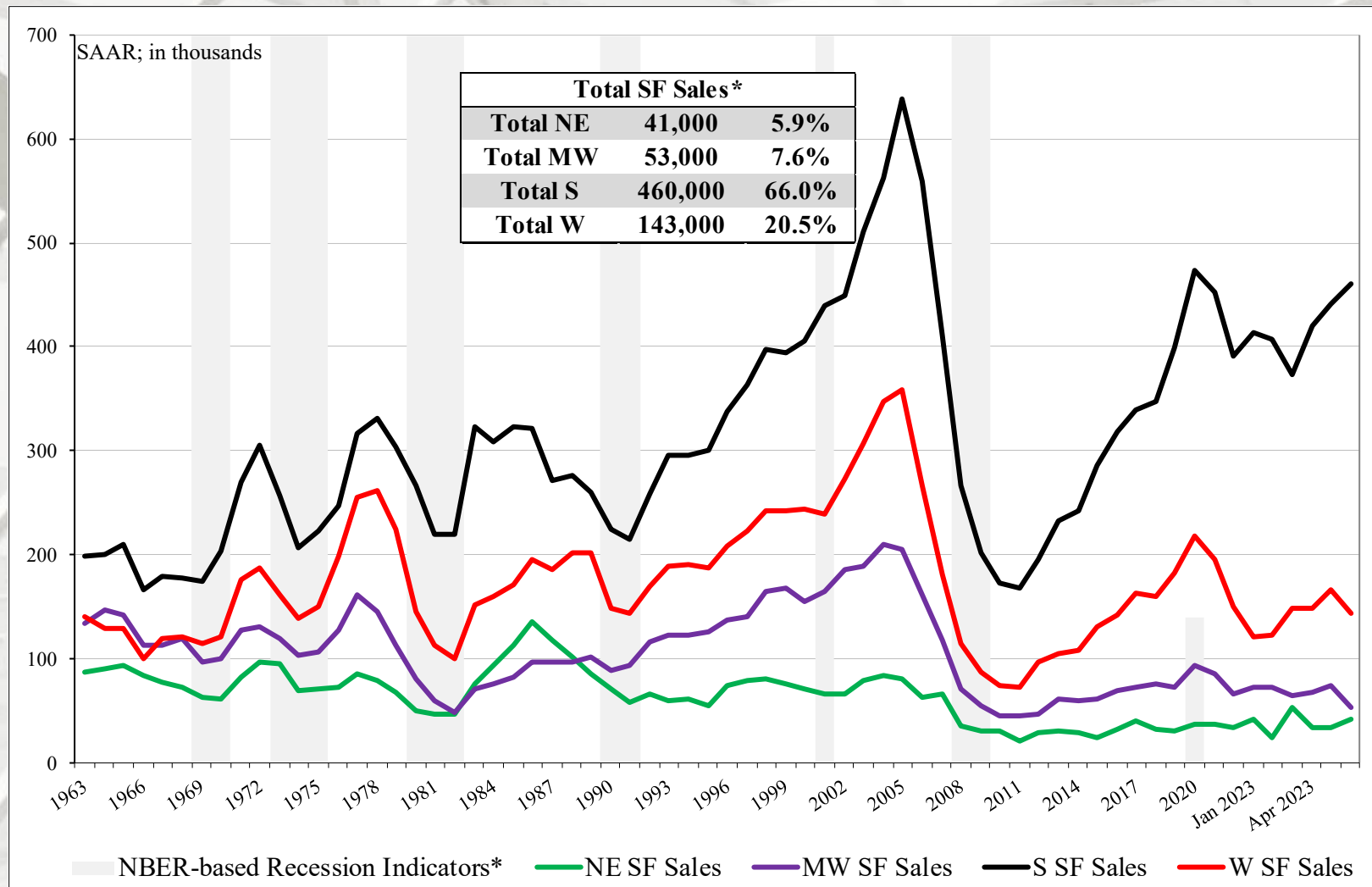
⁴ https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

New SF House Sales



* Total new sales by price category and percent.

New SF House Sales by Region

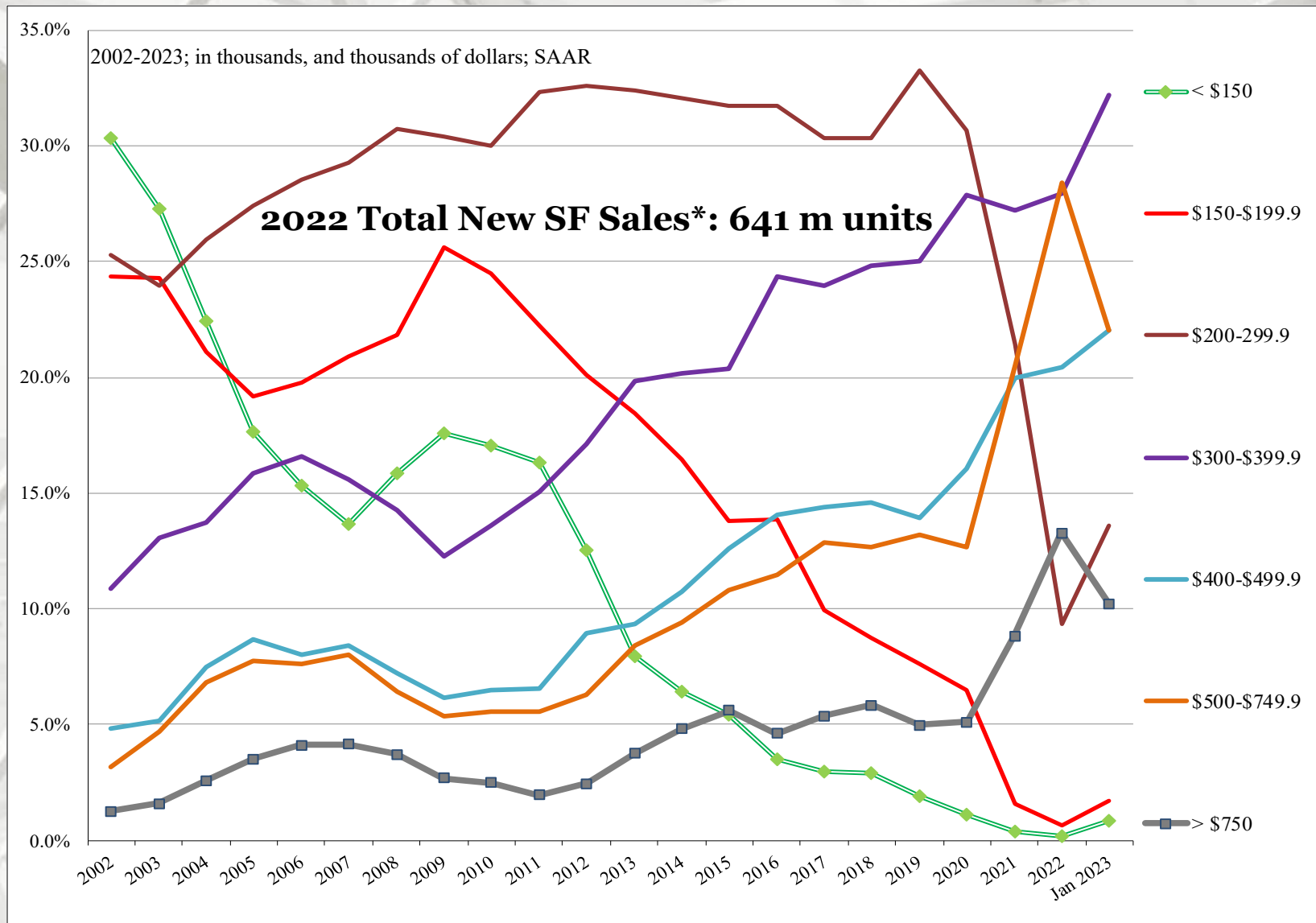


NE = Northeast; MW = Midwest; S = South; W = West

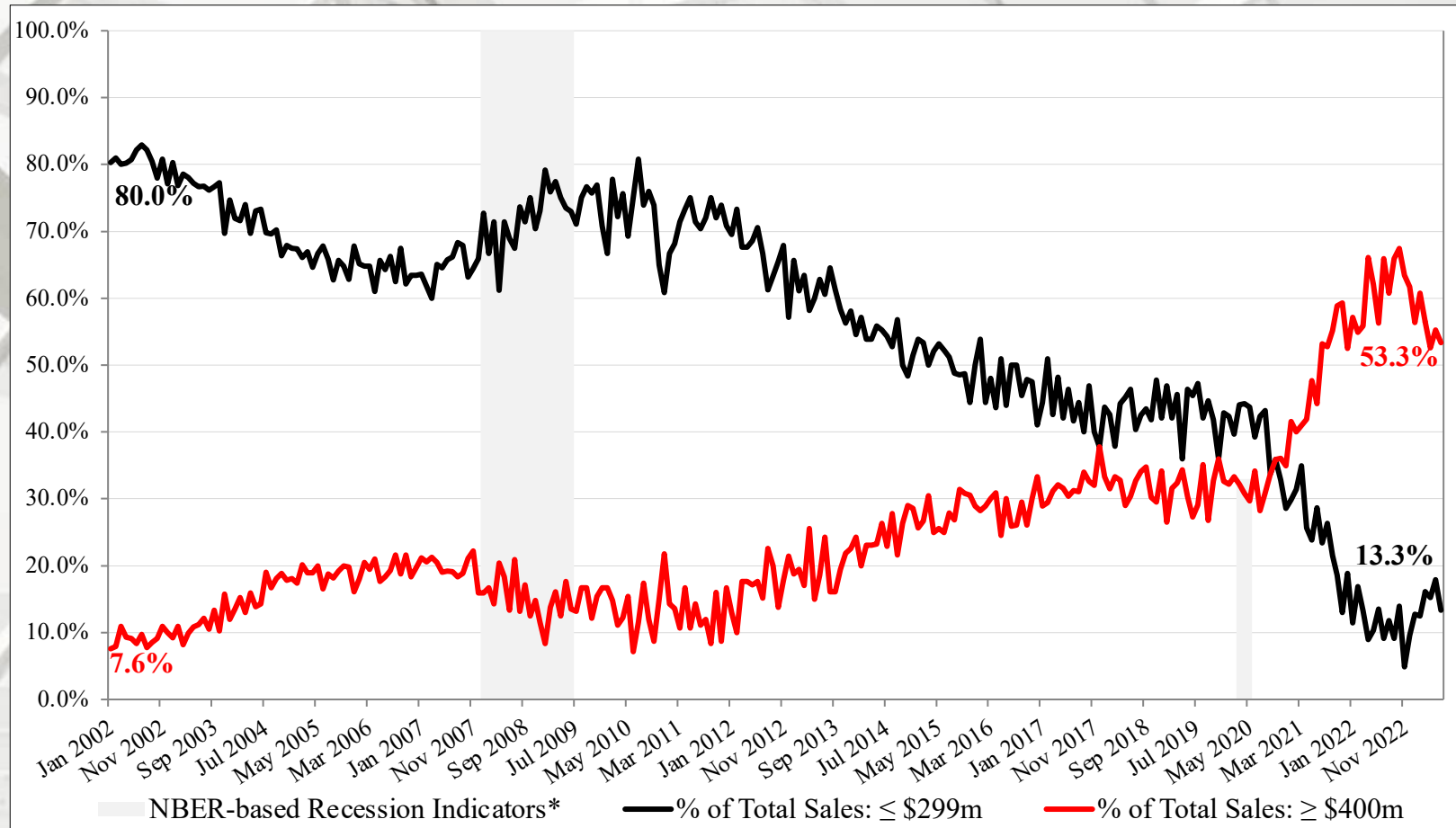
* Percentage of total new sales.

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



* 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 – June 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

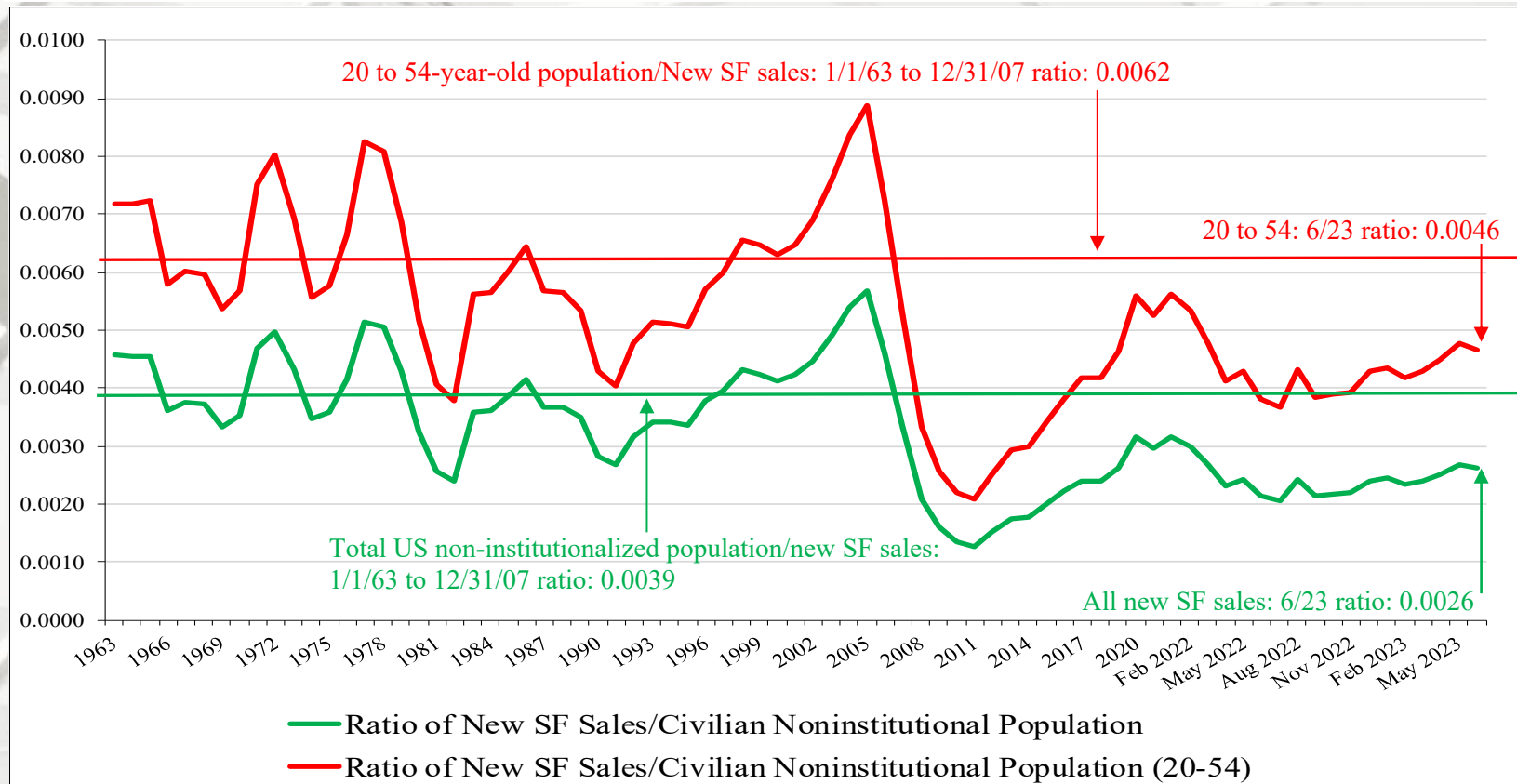


New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to June 2022

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

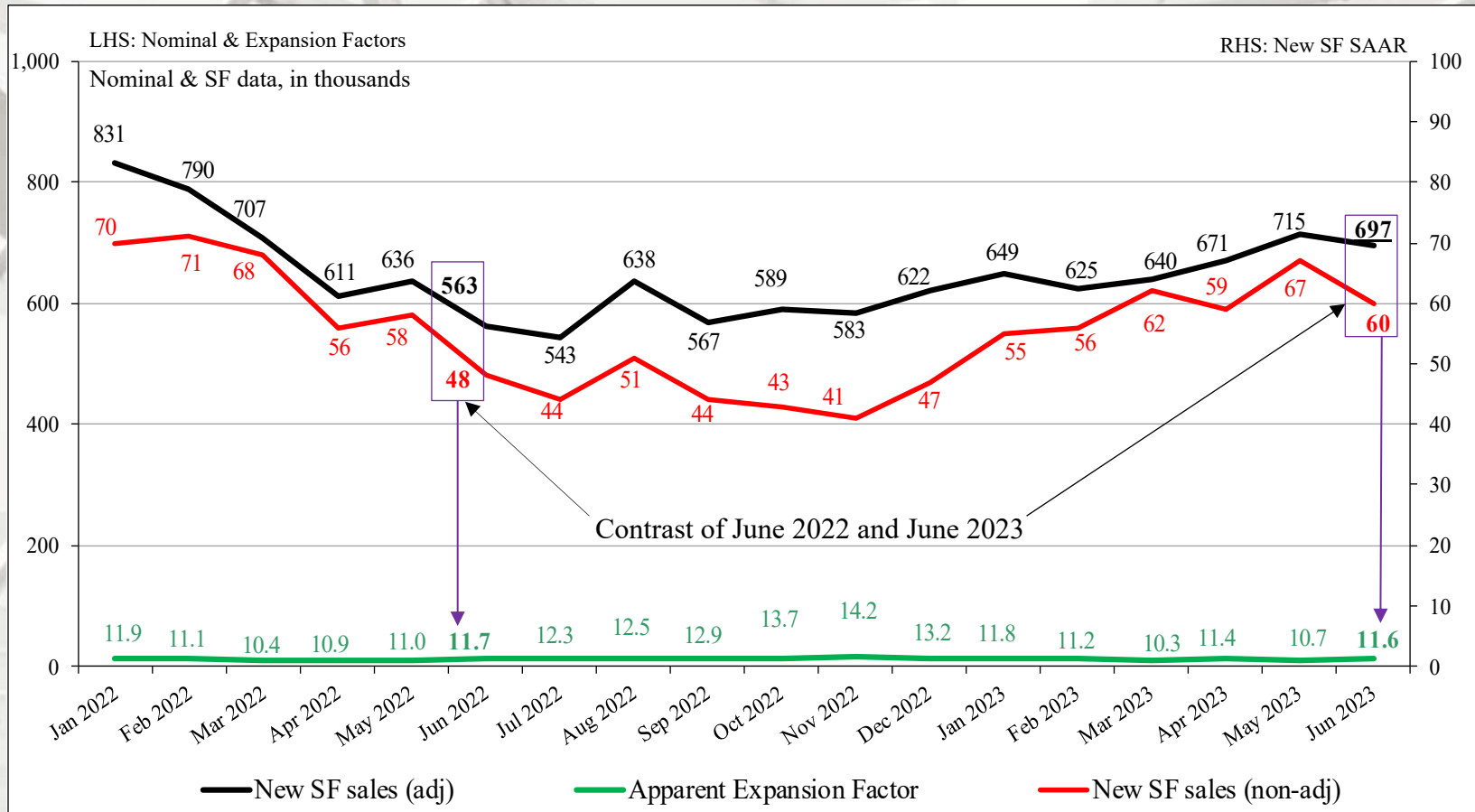


New SF sales adjusted for the US population

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 June 2023 it was 0.0026 – a decline from May (0.0027). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in June 2023 it was 0.0046 – also a decrease from May (0.0048). 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

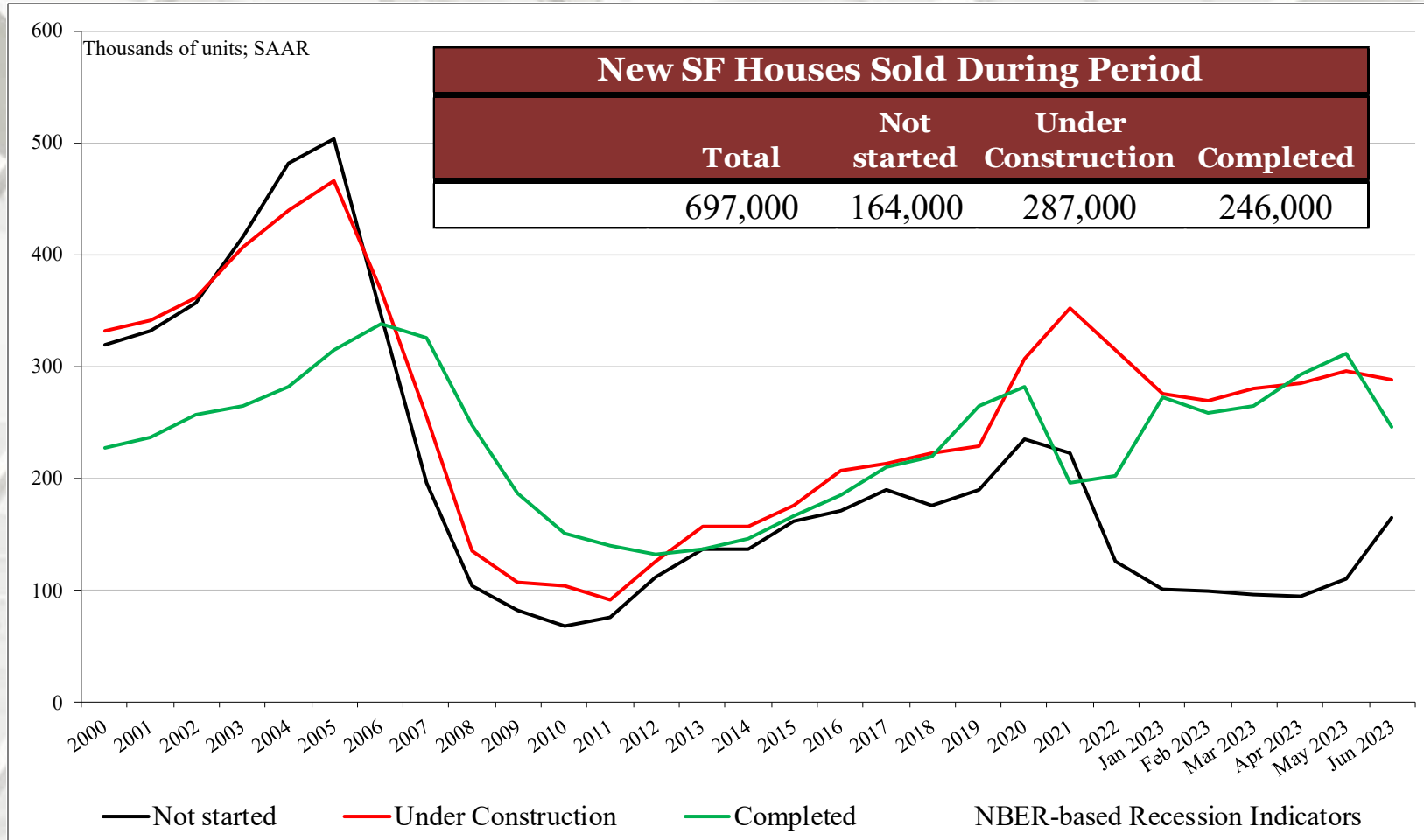
New SF House Sales

New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
June	697,000	164,000	287,000	246,000
May	715,000	109,000	295,000	311,000
2022	448,000	94,000	316,000	38,000
M/M change	-2.5%	50.5%	-2.7%	-20.9%
Y/Y change	55.6%	74.5%	-9.2%	547.4%
Total percentage		23.5%	41.2%	35.3%

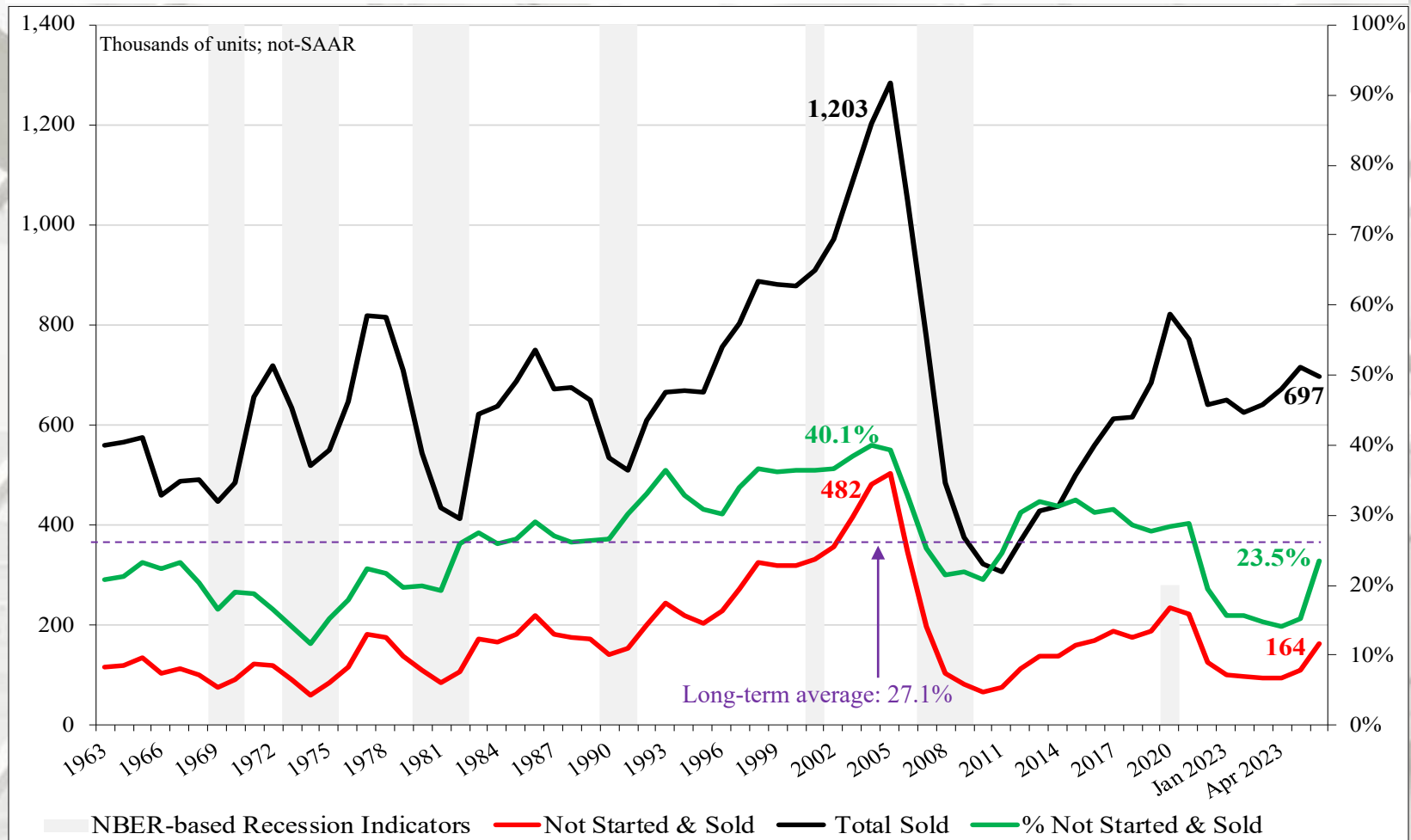
All data is SAAR

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 June (697 m), 23.5% (164 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

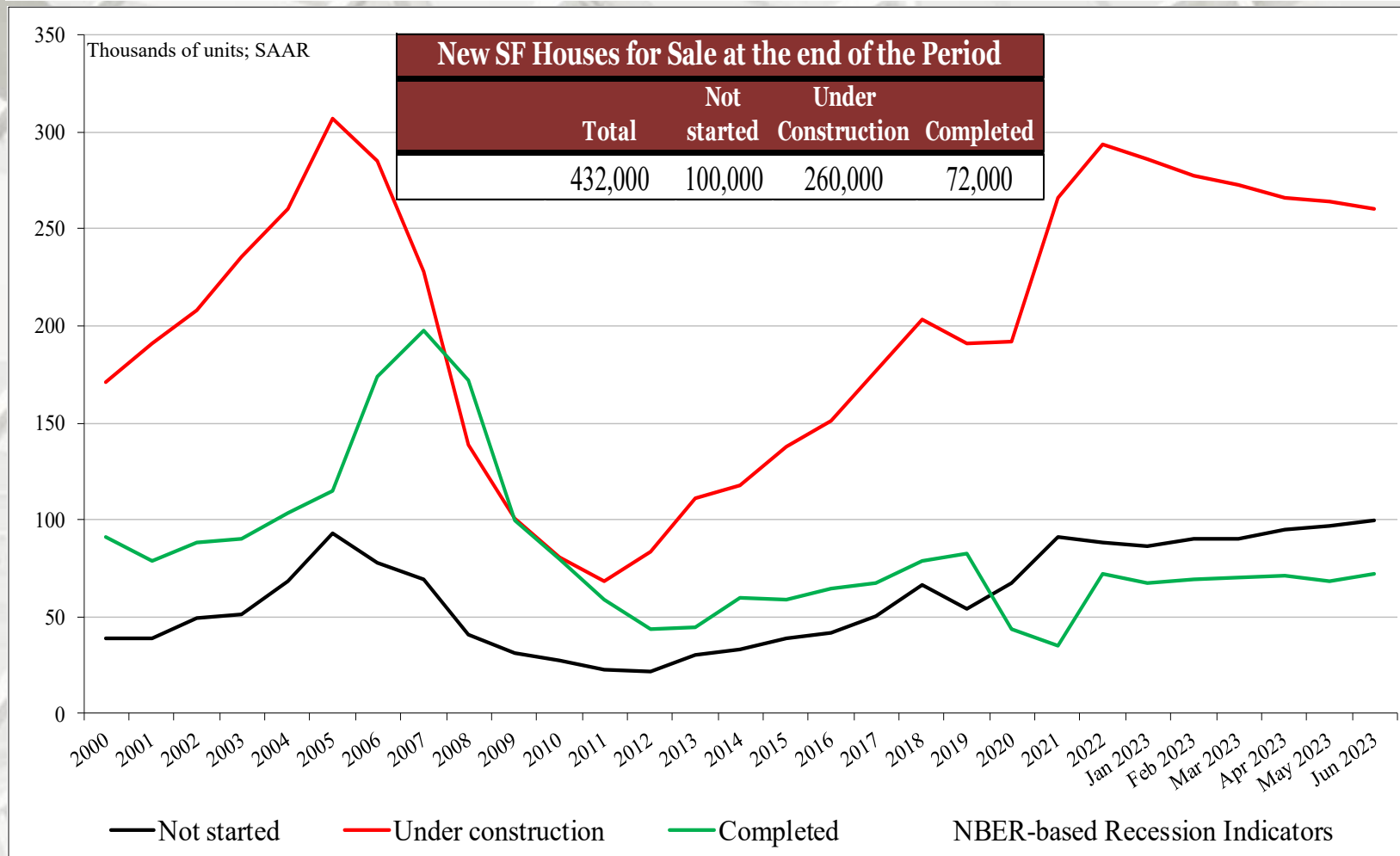
New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
June	432,000	100,000	260,000	72,000
May	429,000	97,000	264,000	68,000
2022	448,000	94,000	316,000	38,000
M/M change	0.7%	3.1%	-1.5%	5.9%
Y/Y change	-3.6%	6.4%	-17.7%	89.5%
Total percentage		23.1%	60.2%	16.7%

Not SAAR

Of houses listed for sale (432 m) in June, 16.7% (72 m) have been built. In the 'ground had not been broken for construction' or 'not started' category, 100 m (23.1%) 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).

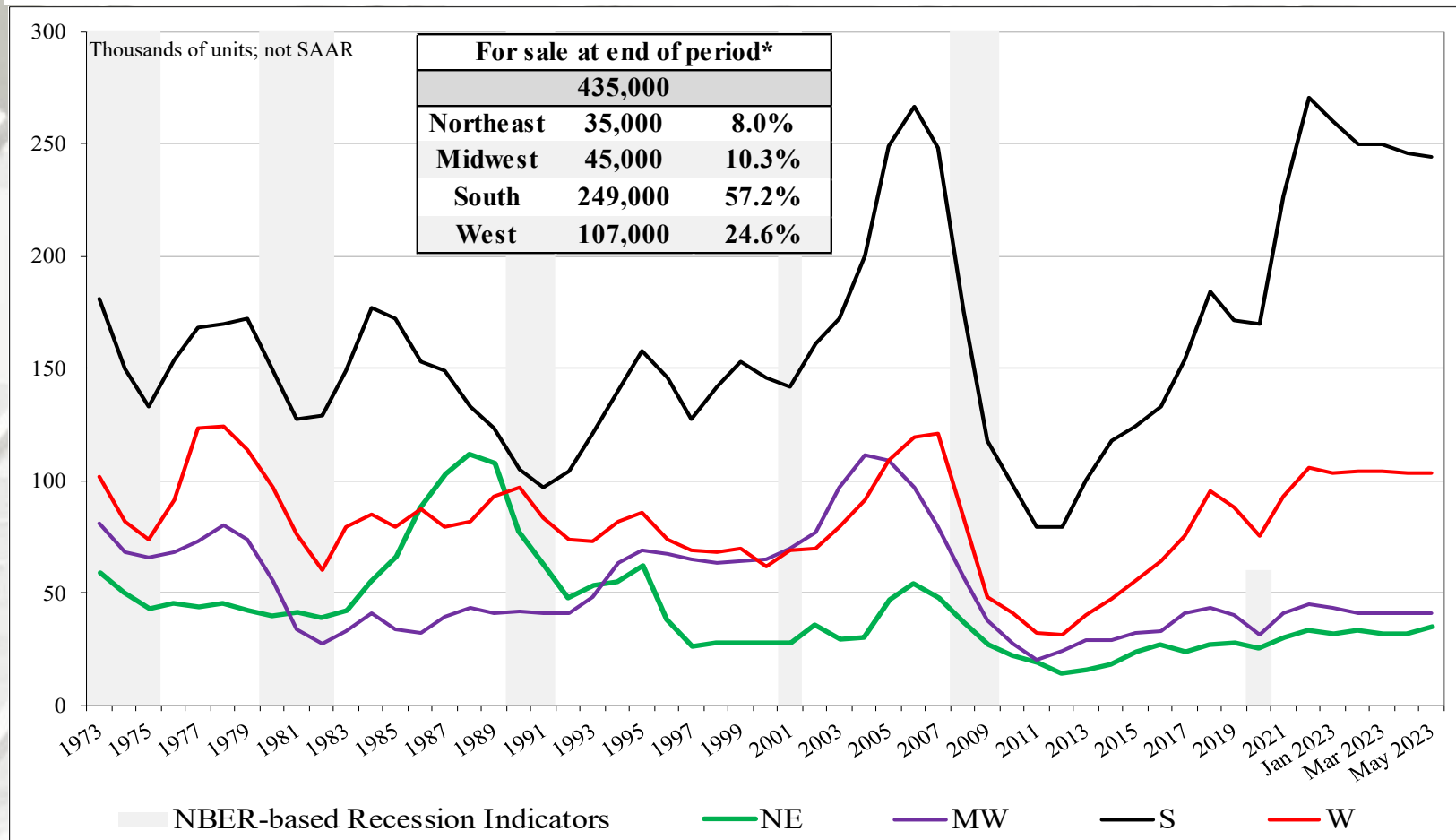
New SF House Sales

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

	Total	NE	MW	S	W
June	435,000	35,000	45,000	249,000	107,000
May	423,000	35,000	41,000	244,000	103,000
2022	452,000	25,000	48,000	271,000	108,000
M/M change	2.8%	0.0%	9.8%	2.0%	3.9%
Y/Y change	-3.8%	40.0%	-6.3%	-8.1%	-0.9%

* Not SAAR

New SF Houses for Sale at End of Period by Region

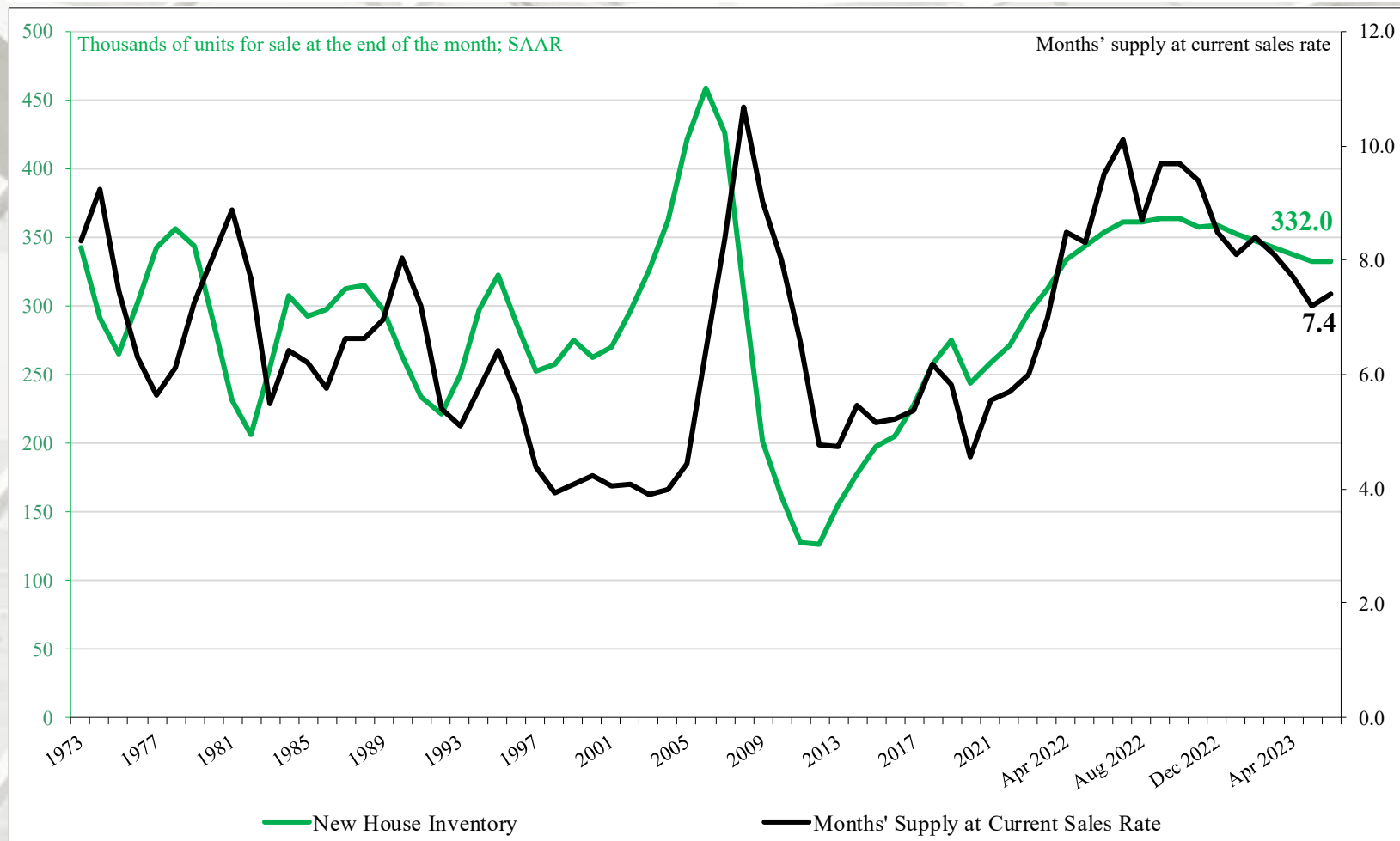


NE = Northeast; MW = Midwest; S = South; W = West

* 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).

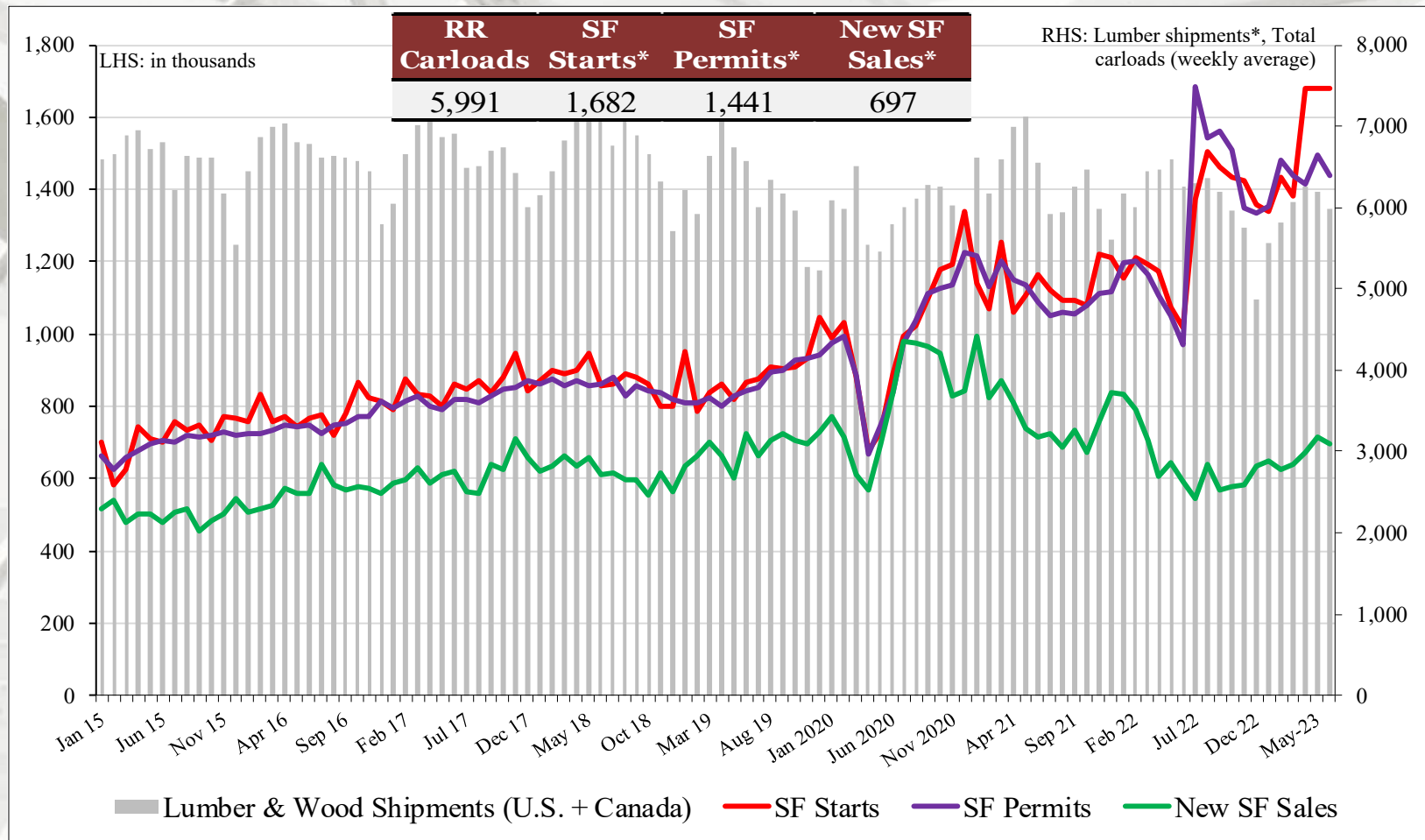
Months' Supply and New House Inventory^a



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

The months' supply of new houses for sale at the end of June was 7.4, greater than the historically preferred number of five- to six-months (SAAR).

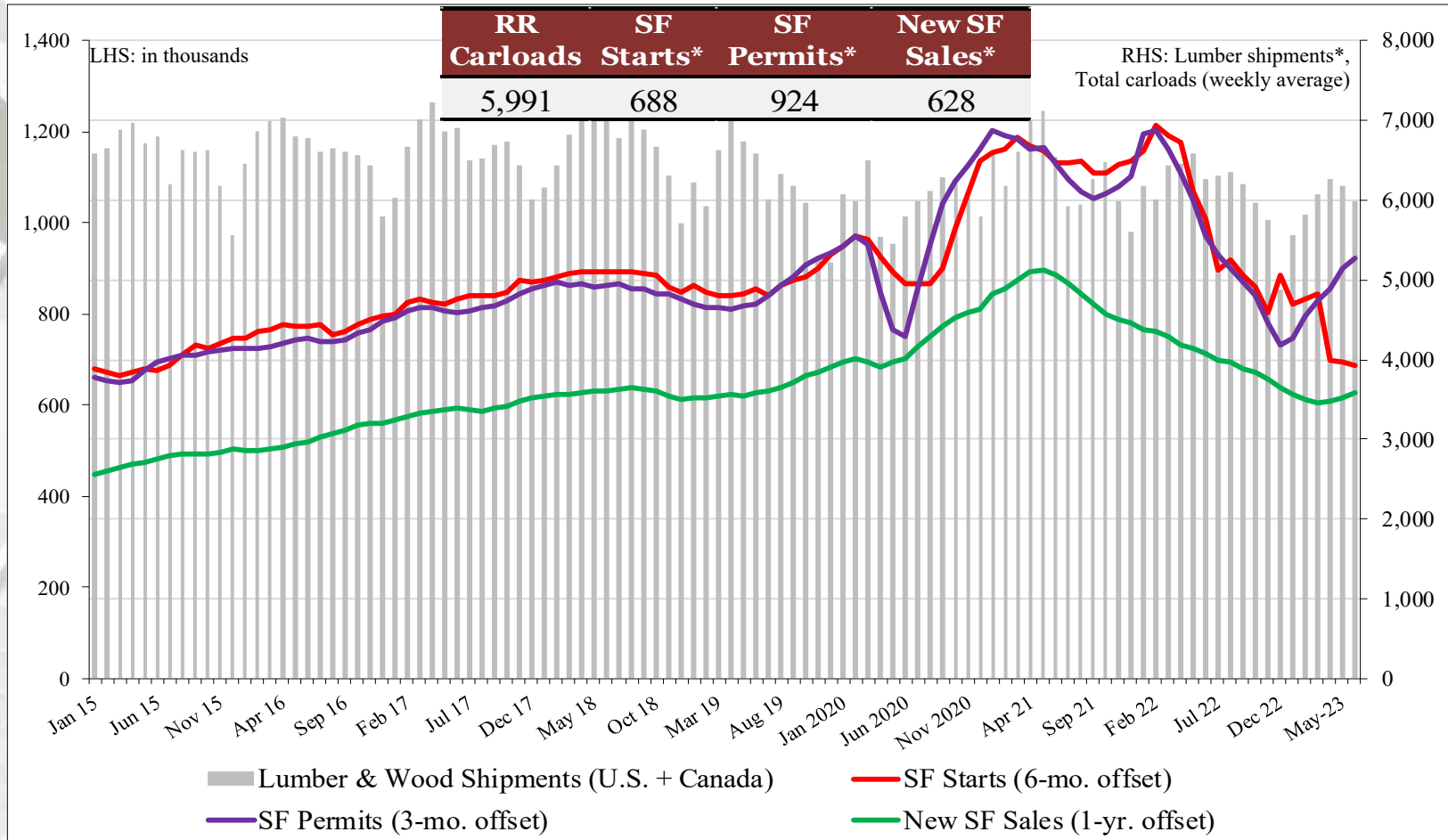
U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



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

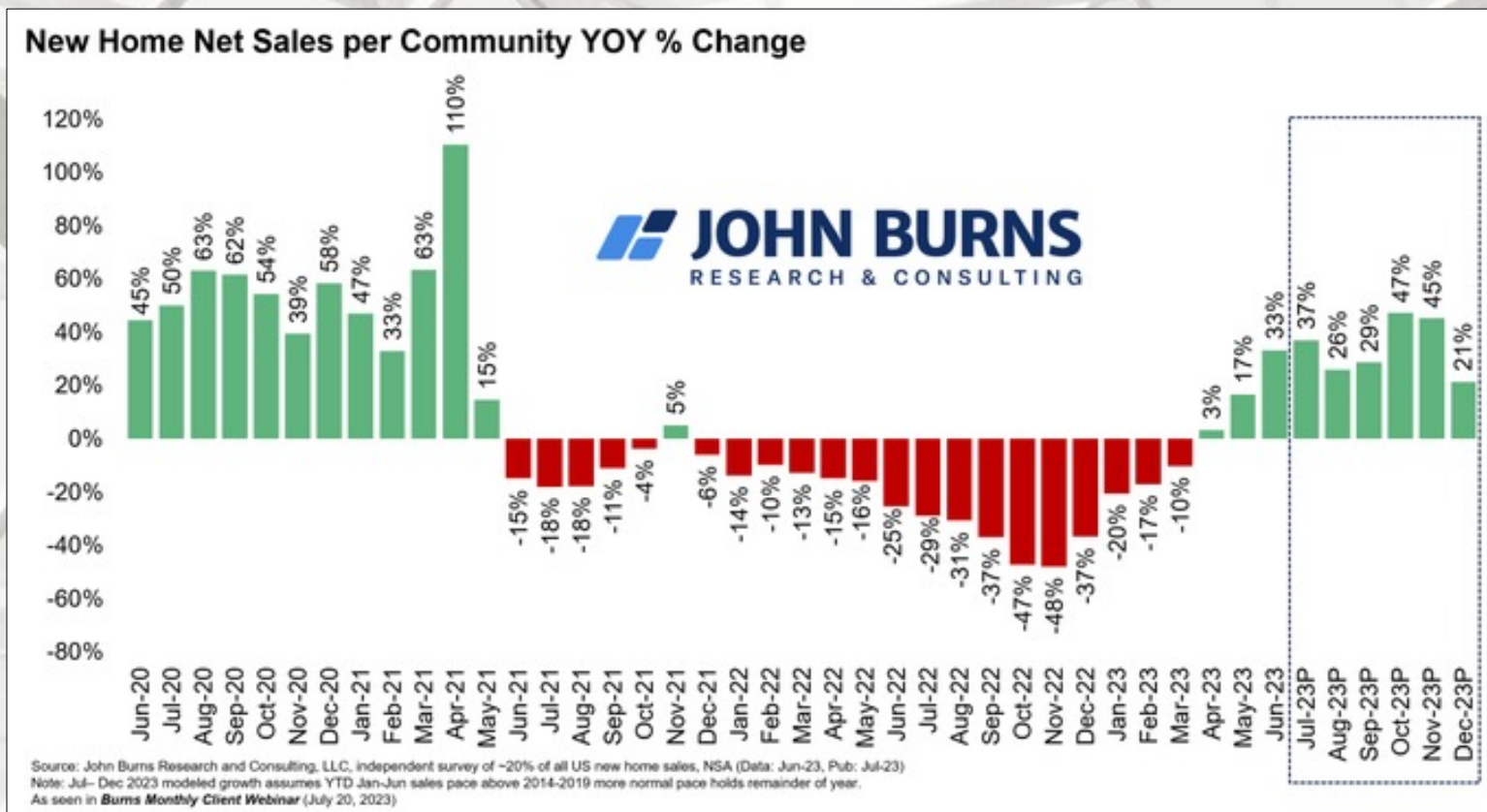
U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



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.

US house Builders: New Sales



John Burns Research & Consulting

“For home builder sales, here’s how the second half of 2023 could look using some realistic assumptions from our survey's 10+ years of history along with YTD trends. It’ll be interesting to hear how builders are thinking about the rest of 2023 as many start reporting in coming weeks.” – Rick Palacios Jr., Director of Research, John Burns Research and Consulting

June 2022 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
June	\$856,302	\$378,527	\$131,690	\$346,085
May	\$848,619	\$370,871	\$129,743	\$348,005
2022	\$955,943	\$481,988	\$108,102	\$365,853
M/M change	0.9%	2.1%	1.5%	-0.6%
Y/Y change	-10.4%	-21.5%	21.8%	-5.4%

* 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\$.

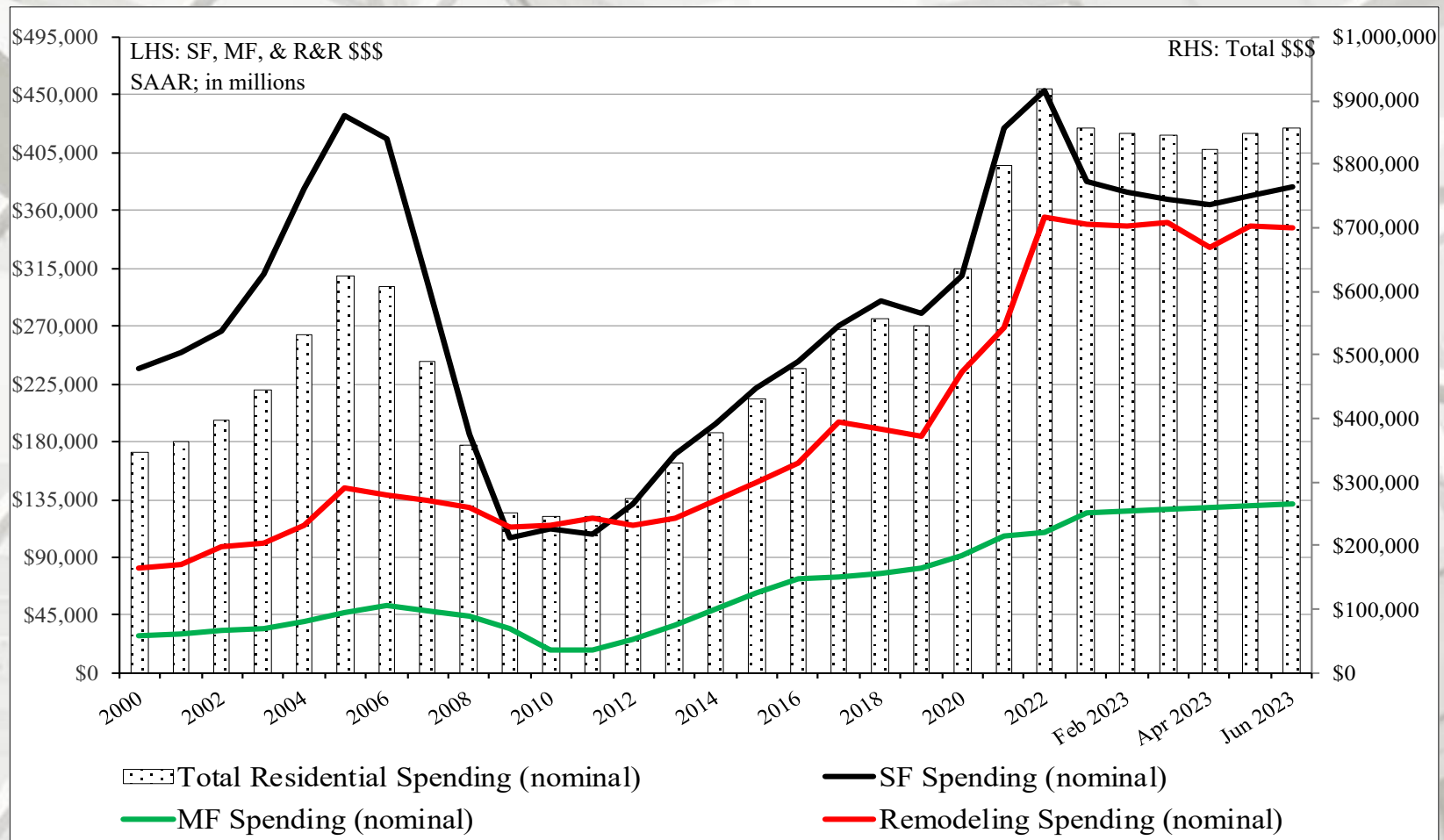
Total private residential construction spending includes new single-family, new multi-family, and improvement (AKA repair and remodeling) expenditures.

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.

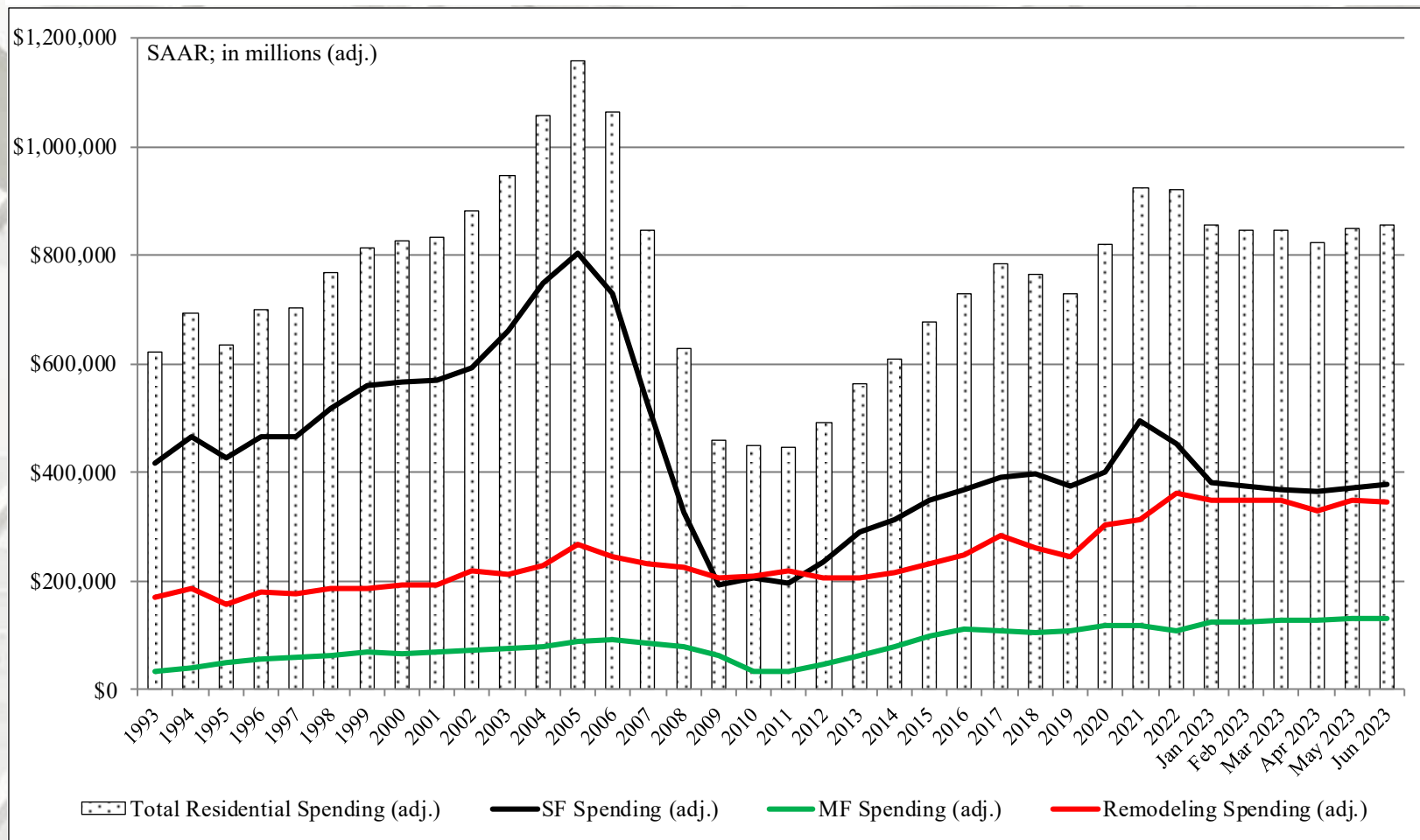
Total Construction Spending (nominal): 2000 – June 2023



Reported in nominal US\$.

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

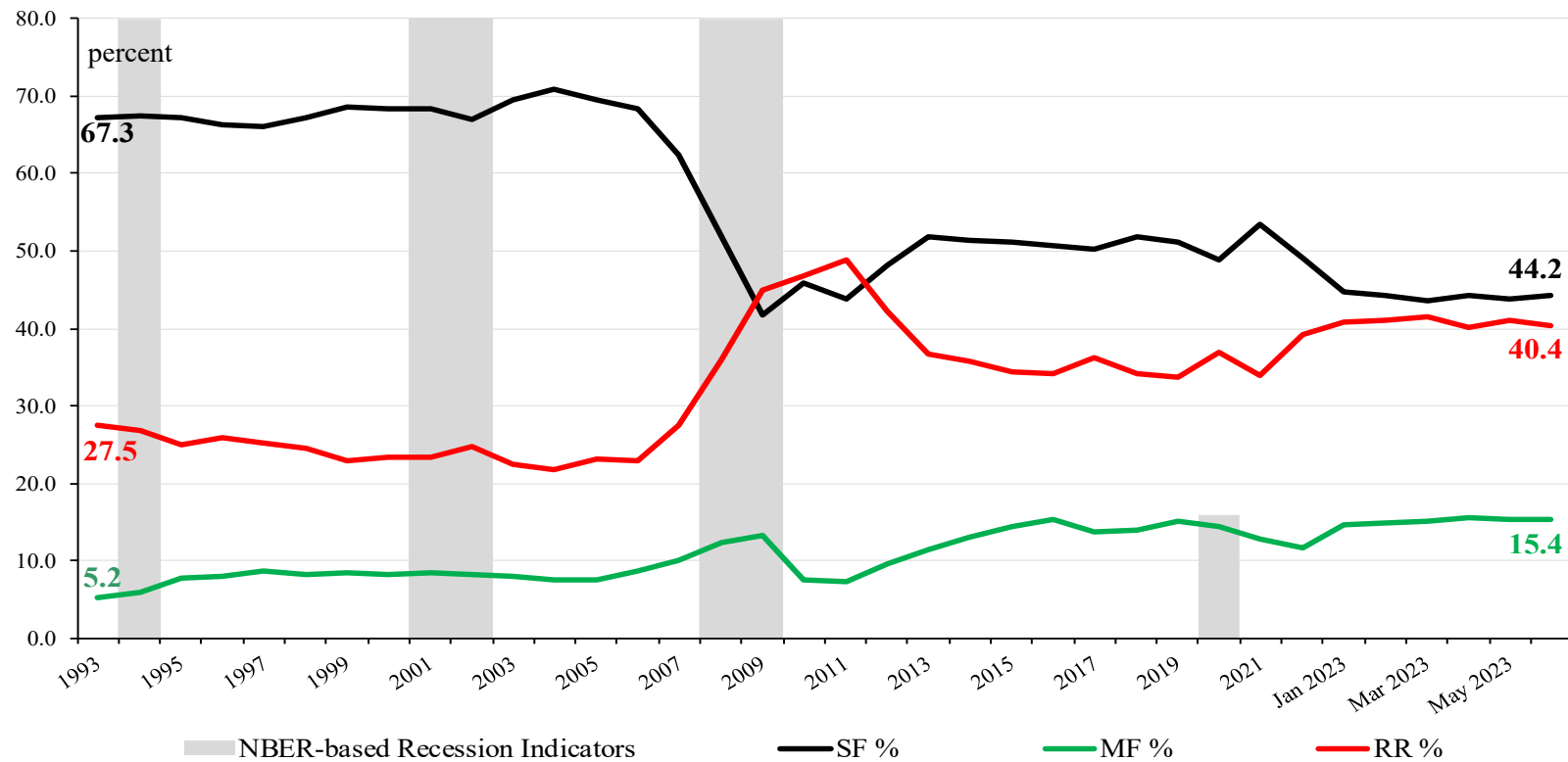
Total Construction Spending (adjusted): 1993 – June 2023



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

Construction Spending Shares: 1993 – June 2023

SF, MF, & RR: Percent of Total Residential Spending (adj.)



Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

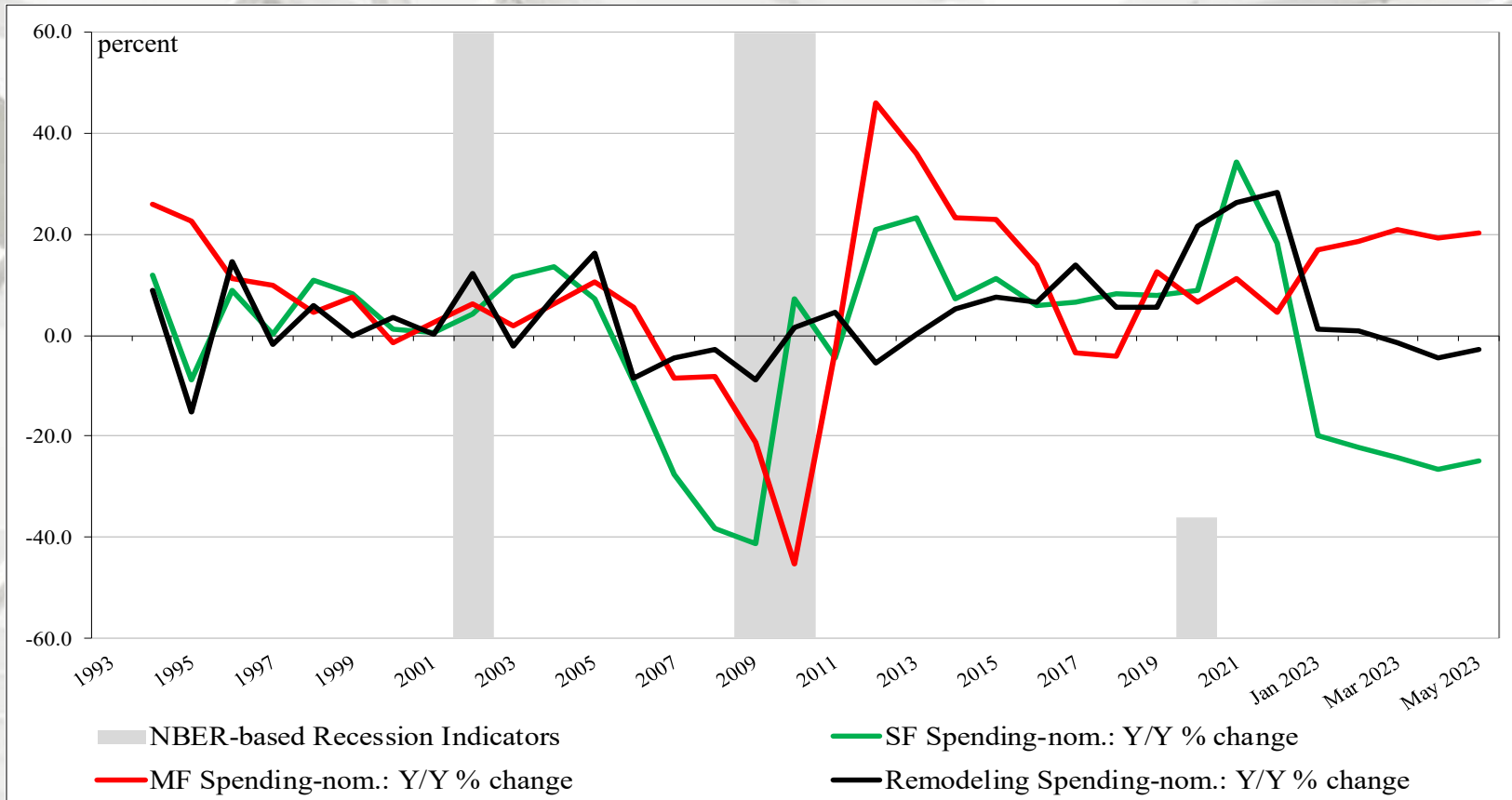
MF spending average: 7.5%

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

Note: 1993 to 2021 (adjusted for inflation, BEA Table 1.1.9); June 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).

Construction Spending: Y/Y Percentage Change

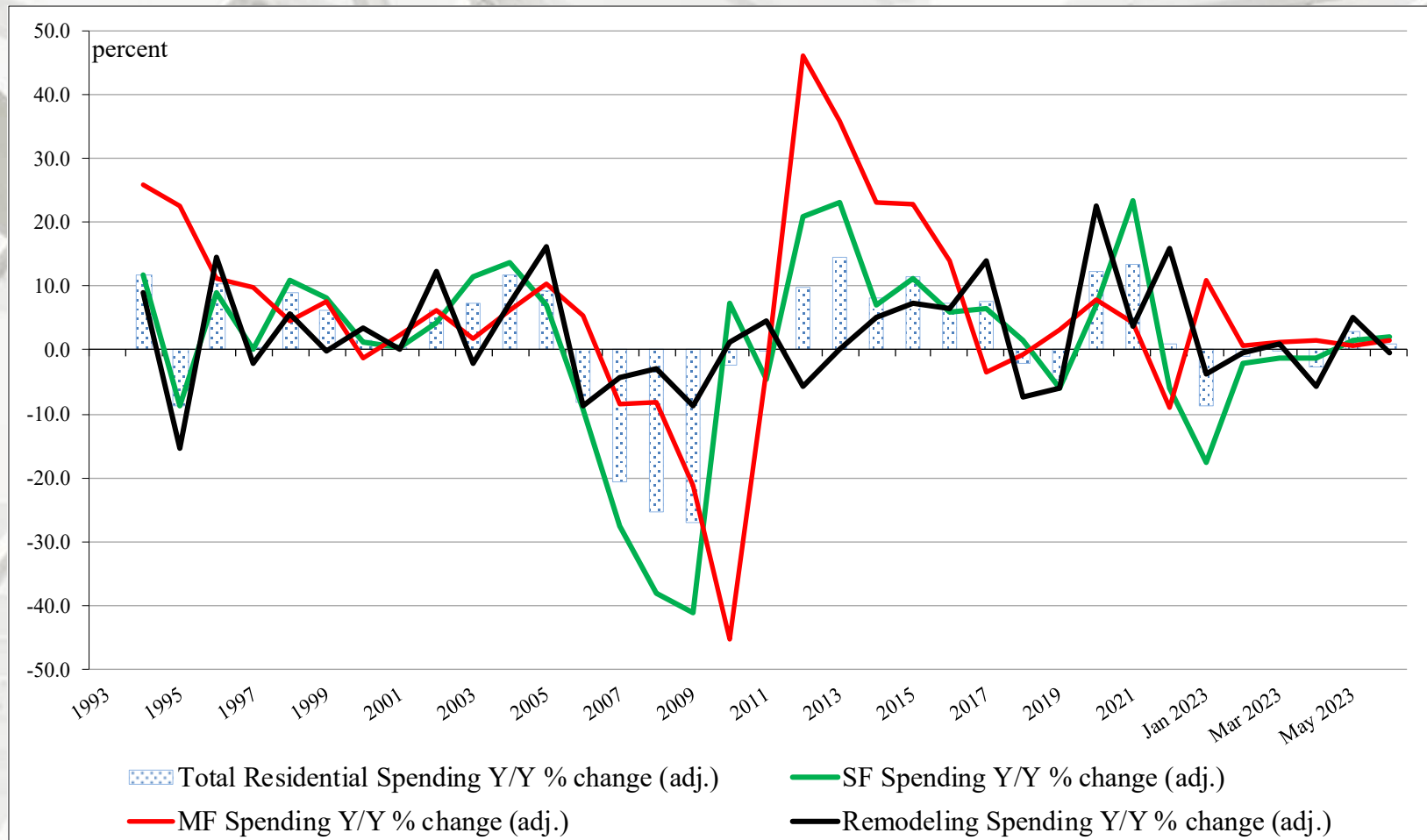


Nominal Residential Construction Spending: Y/Y percentage change, 1993 to June 2023

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

Adjusted Construction Spending: Y/Y Percentage Change

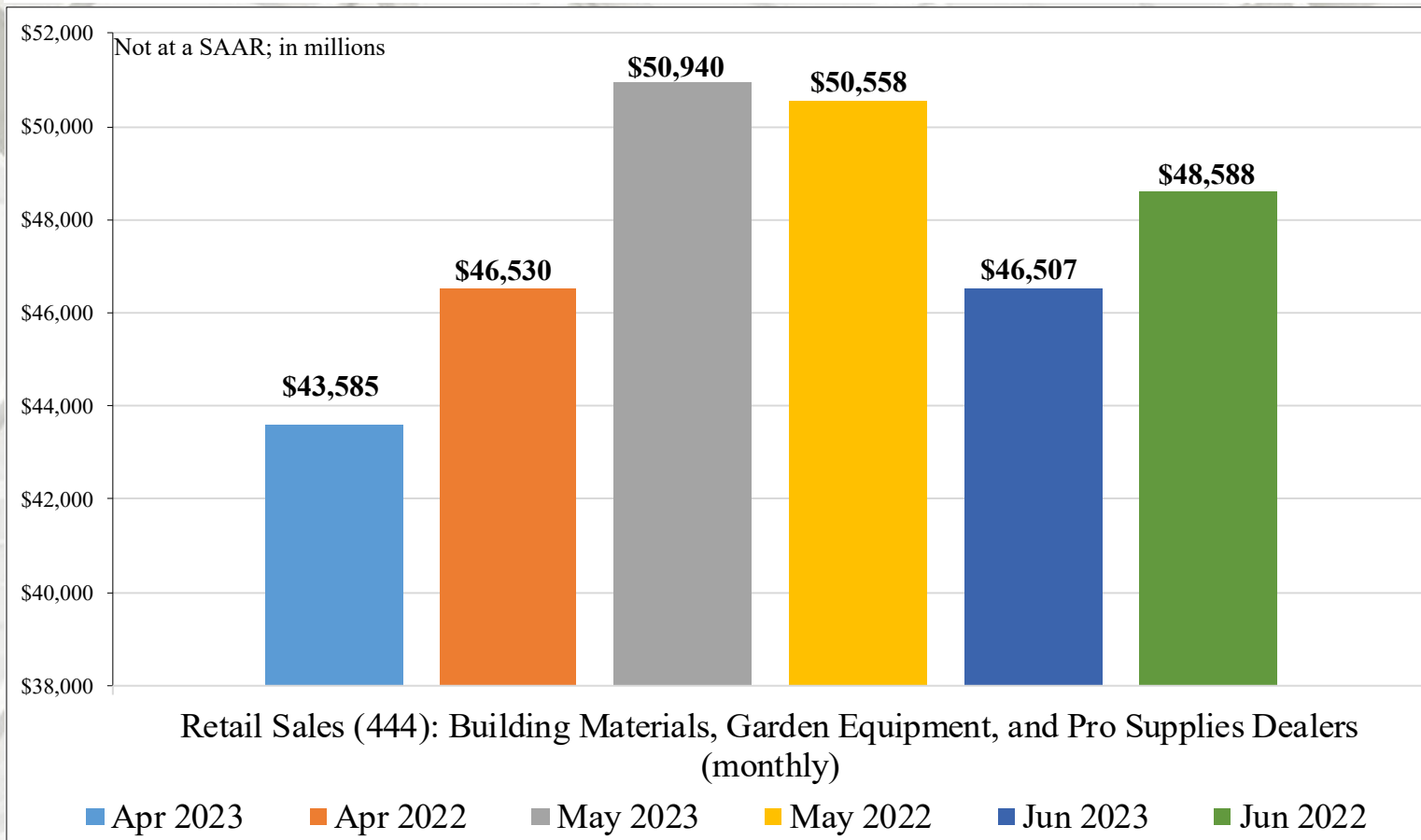


Adjusted Residential Construction Spending: Y/Y percentage change, 1993 to June 2023

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

Remodeling

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

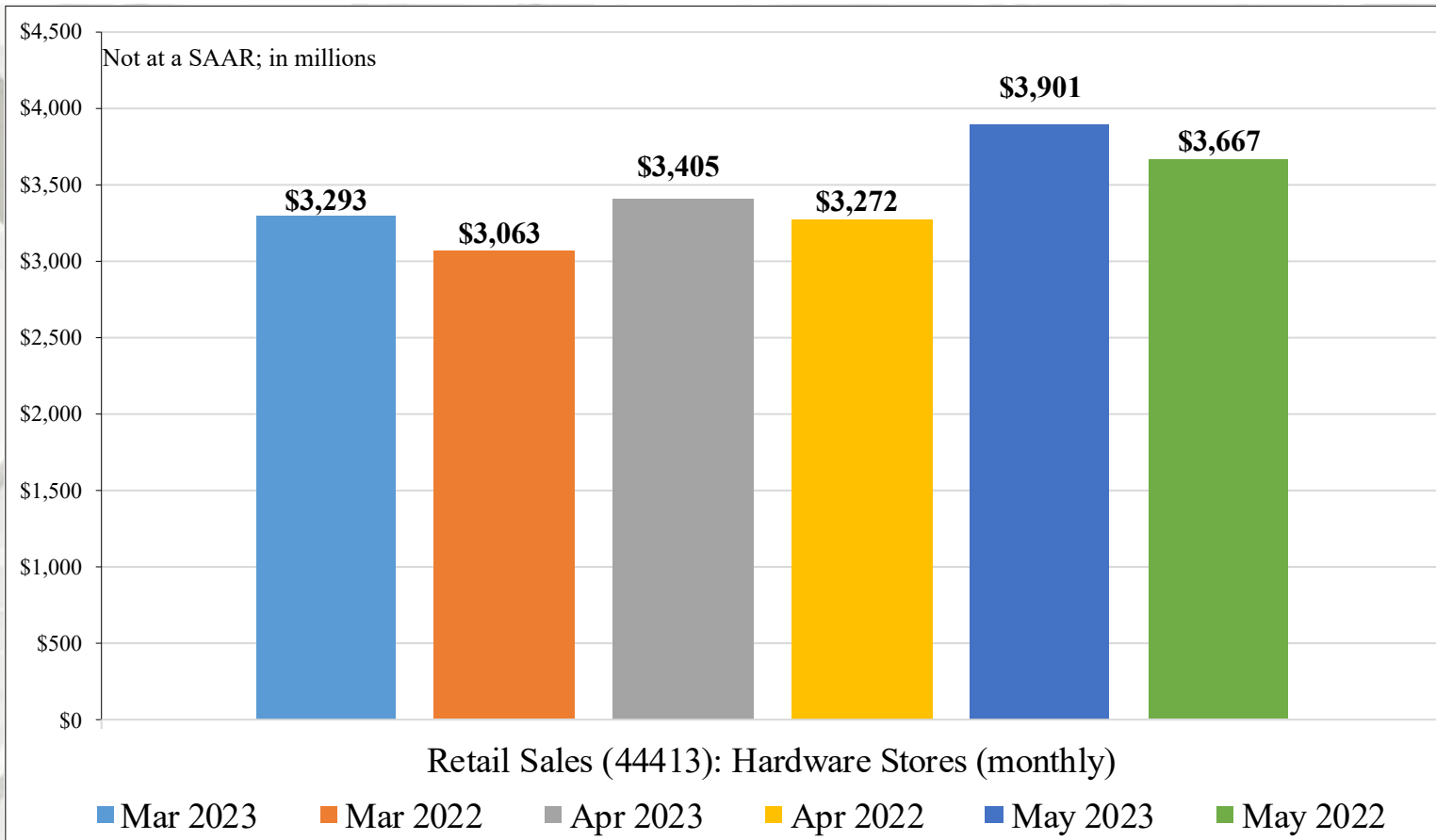


Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 444

NAICS 444 sales decreased 9.0% in July 2023 from July 2023 and decreased 3.5% Y/Y (on a non-adjusted basis).

Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales decreased 2.7% in June 2023 from April 2023 and improved 5.0% in June 2023 from June 2022 (on a non-adjusted basis).

Remodeling

Harvard Joint Center for Housing Studies

Further Softening Expected For Home Owner Remodeling

“Annual expenditures for improvements and repairs to owner-occupied homes are expected to decline at an accelerating rate through the first half of 2024, according to our latest [Leading Indicator of Remodeling Activity \(LIRA\)](#). The LIRA projects that year-over-year spending on homeowner improvements and maintenance will shrink by 2.7 percent through the first quarter of next year and by 5.9 percent through the second quarter, following a slowdown in growth that began in the final quarter of 2022.

Home remodeling activity continues to face strong headwinds from high interest rates, softening house price appreciation, and sluggish home sales. Annual spending on home owner improvements and repairs is expected to decrease from \$486 billion through the second quarter of this year to \$457 billion over the coming four quarters.

The ongoing reductions in household moves will cause a decline in the remodeling and repair activity that typically occurs around the time of a home sale. The magnitude of the impact may be offset if owners who are locked into their current homes with ultra-low mortgage rates continue to renovate to meet changing needs or take advantage of new federal incentives for energy-efficiency retrofits.” – Abbe Will, Associate Project Director of the Remodeling Futures Program; Harvard Joint Center for Housing Studies

Remodeling

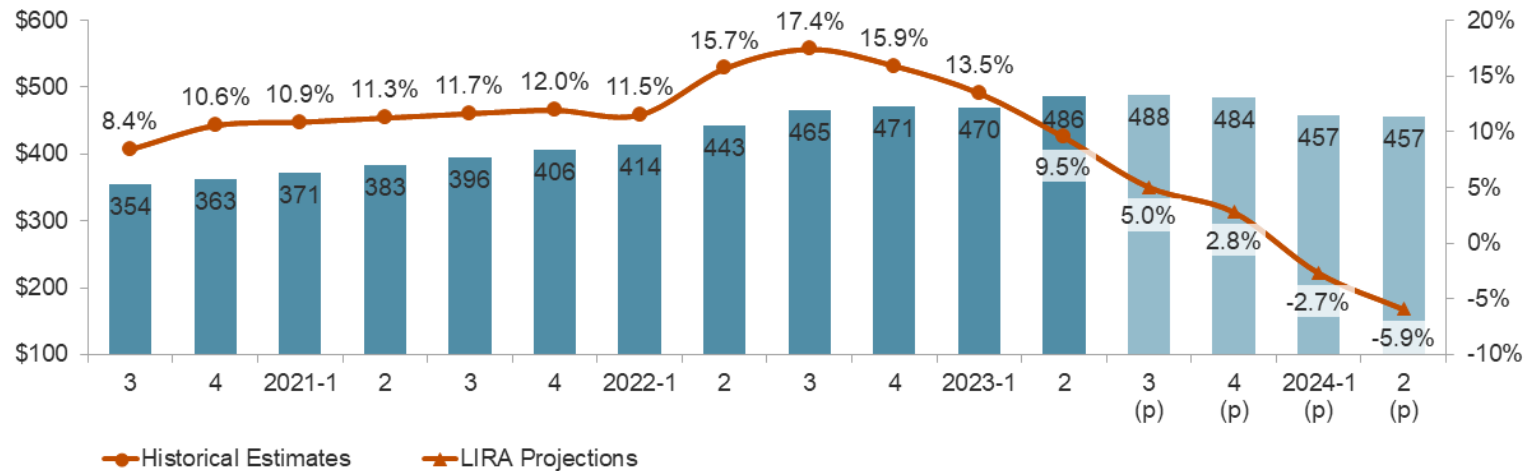
Harvard Joint Center for Housing Studies

Further Softening Expected For Home Owner Remodeling

Leading Indicator of Remodeling Activity – Second Quarter 2023


Homeowner Improvements & Repairs
Four-Quarter Moving Totals
Billions

Four-Quarter Moving
Rate of Change



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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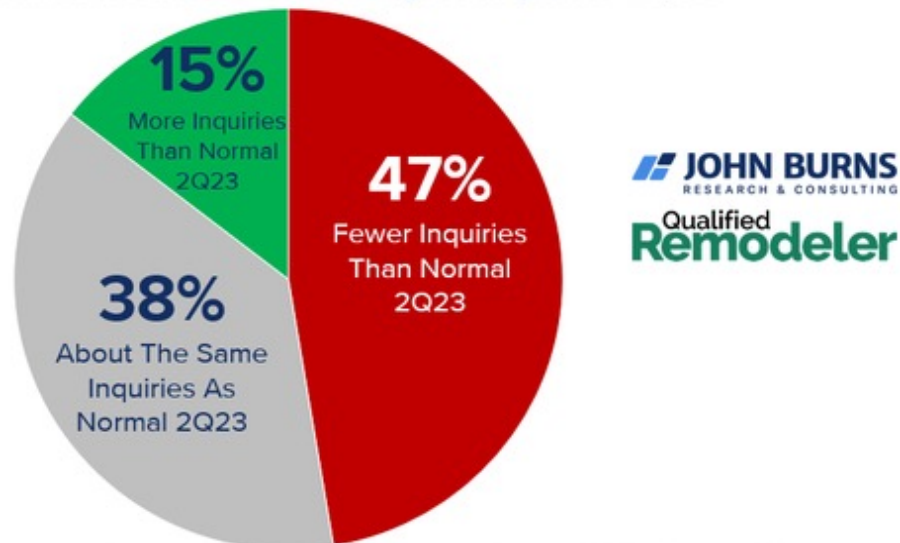
Joint Center for Housing Studies of Harvard University 

Remodeling

John Burns Real Estate Research and Consulting

Slowdown in new remodeling project inquiries: More weakness ahead for professional remodelers.

Professional Remodelers' New Project Inquiries 2Q23



Sources: Qualified Remodeler, John Burns Research and Consulting, LLC (Data: 2Q23; Pub: Jul-23)
As seen in **Qualified Remodeler/John Burns US Remodeler Index**

“Key stat from the latest US Remodeler Index survey of remodelers:

47% of remodelers had fewer-than-normal new project inquiries in 2Q23. 15% had more than normal. Another sign that, generally, home owners are taking a breather from spending on big home improvements in 2023.” – Eric Finnigan, VP of Research & Demographics; John Burns Research and Consulting

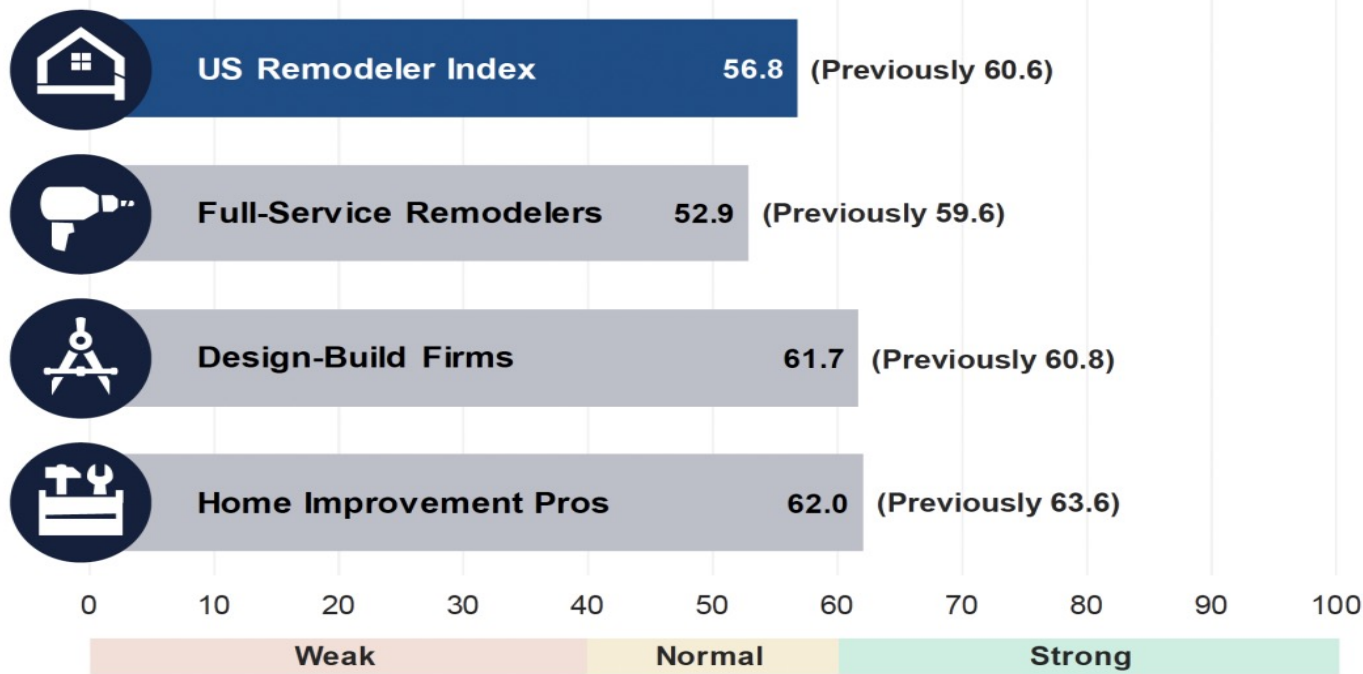
Remodeling

John Burns Real Estate Research and Consulting

U.S. Remodeler Index: Market Cools in Q2

Remodelers expect the market to moderate further in 2023 with no sharp pull back in sight.

US Remodeler Index 2Q23



Key stat from the latest US Remodeler Index survey of remodelers:

“The US Remodeler Index rates 56.8 out of 100, indicating professional remodeling industry sentiment in 2Q23 has returned to Normal.” – Patrick O’Toole, Owner, and Paul DeGrandis, President, SOLA Group, Inc., Eric Finnigan, VP of Research & Demographics, and Matthew Saunders, Sr. Vice President, Building Products; John Burns Research and Consulting

Remodeling

John Burns Real Estate Research and Consulting U.S. Remodeler Index

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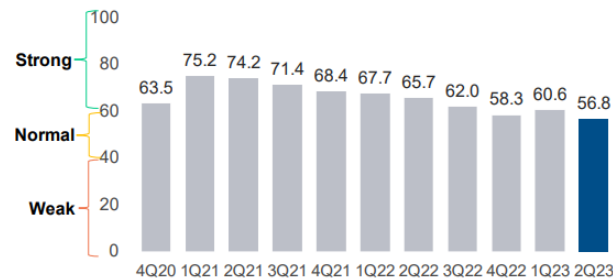
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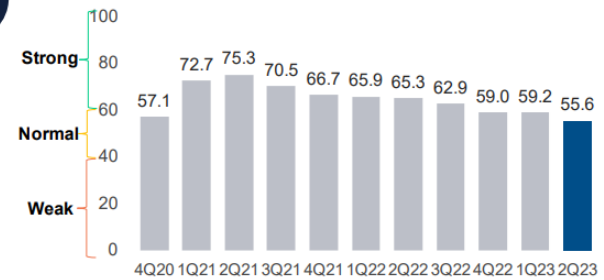
Residential remodeling cooled off in 2Q23 as homeowners grapple with high costs. The 2Q23 US Remodeler Index dropped to the lowest level since the survey began in 2020.



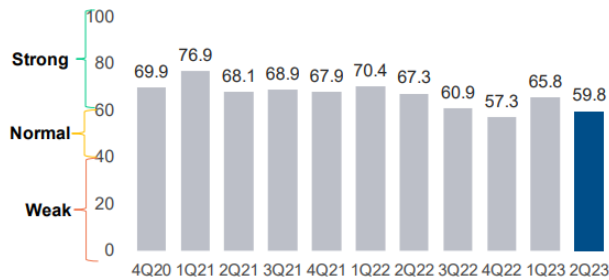
US Remodeler Index



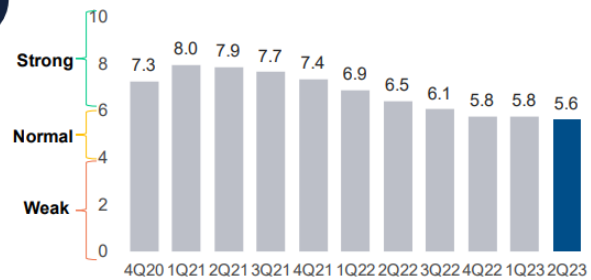
Current Remodeling Activity Gauge



Near-Term Remodeling Activity Gauge (Next 3 Mos.)



Remodeling Demand Meter



Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 2Q23, Pub: Jul-23)

Remodeling

John Burns Real Estate Research and Consulting U.S. Remodeler Index

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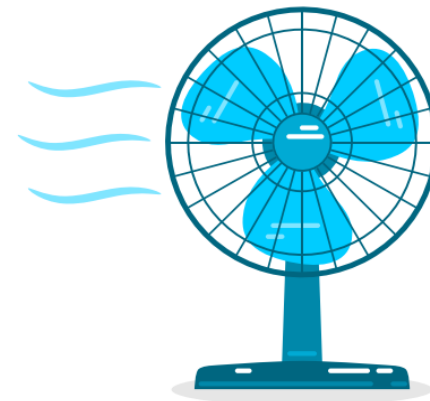
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Professional remodeling cooled off in 2Q23 as high interest rates and project costs deterred homeowners from spending money on their home.

The US Remodeler Index (USRI) decreased in 2Q23, reflecting a slower expansion in the remodeling industry.

- The 2Q23 USRI dipped -3.8 points, hitting **its lowest reading since the inception of our survey in 4Q20**.
 - Projects completed decelerated in 2Q23, and a further slowdown is expected ([page 4](#)).
- More **homeowners are souring on new big-ticket remodeling projects**, like kitchen and bathroom remodels ([page 19](#)).
- The **average remodeler is booked 4+ months ahead** ([page 22](#)).
 - Sentiment would likely be much weaker without large backlogs.
- Remodelers say **product lead times are back to normal for most product categories** ([page 30](#)).
 - Some challenges persist within appliances, cabinets, windows, and doors.
- Project **pricing has been stubbornly high** and is **expected to rise further: +5% in 2023 for materials and +6% for labor** ([page 25](#)).



The 2Q23 survey ran June 19–June 27, 2023. Responses, commentary, and sentiment reflect the very latest shifts in the professional remodeling industry.

Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 2Q23, Pub: Jul-23)

Remodeling

John Burns Real Estate Research and Consulting U.S. Remodeler Index

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The 2Q23 remodeling slowdown was uneven across the three industry segments. Remodelers marked down 2023 revenue expectations.

Professional remodelers completed +1% more projects in 2Q23 YOY (page 15).

- Full-service remodelers completed -0.5% fewer projects YOY.
- Home improvement pros completed +3.5% more projects YOY.
- Design-build firms completed +1.9% more projects YOY.

Professional remodelers have revised down full-year 2023 revenue guidance in 2Q23 (page 28):

- Full-service remodelers expect revenues to grow +0.5% on average (previously +3%).
- Design-build firms expect +3.0% revenue growth in 2023 (previously +4%).
- Home improvement pros expect 2023 revenue to grow +2.8% (previously +5%).

Professional remodelers highlighted the above trends, plus several additional themes in their commentary this quarter:

- Remodelers see a noticeable slowdown in new project inquiries (page 31).
- Homeowners are slower to commit to remodeling projects (page 31).
- Older and wealthy homeowners drive high-end remodeling demand (page 33).
- Remodelers expect little to no impact from new federal tax credits for energy efficient home improvements (page 34).

Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 2Q23, Pub: Jul-23)

JOHN BURNS RESEARCH & CONSULTING **Qualified Remodeler**

Remodeling

John Burns Real Estate Research and Consulting U.S. Remodeler Index

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Key 2Q23 professional remodeling takeaways by industry segment



Full-Service Remodelers

- **-0.5% decline** YOY in 2Q23 project completions
 - Negatively impacted from slowdown in new discretionary remodeling projects
 - 4.3-month average project backlog in 2Q23
- **+0.5% revenue growth** expected for full-year 2023 (previously +3%)
 - Future demand at risk from high project costs, high interest rates, and homeowner caution



Design-Build Firms

- **+1.9% growth** YOY in 2Q23 project completions
 - Supported by steady demand for large, whole-home renovation projects from wealthy homeowners
 - 4.6-month average project backlog in 2Q23
- **+3.0% revenue growth** expected for full-year 2023 (previously +4%)
 - Wealthy customers less sensitive to interest rates and costs



Home Improvement Pros

- **+3.5% growth** YOY in 2Q23 project completions
 - Boosted by focus on smaller, specialty projects, including non-discretionary replacement projects
 - 4.0-month average project backlog in 2Q23
- **+2.8% revenue growth** expected for full-year 2023 (previously +5%)
 - Most optimistic of the three industry segments and least susceptible to project delays

Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 2Q23, Pub: Jul-23)

JOHN BURNS RESEARCH & CONSULTING **Qualified Remodeler**

Existing House Sales

National Association of Realtors®

	Existing Sales	Median Price	Month's Supply
June	4,160,000	\$410,200	3.1
May	4,300,000	\$396,100	3.1
2022	5,130,000	\$413,800	2.9
M/M change	-3.3%	3.6%	0.0%
Y/Y change	-18.9%	-0.9%	6.9%

All sales data: SAAR

Existing House Sales

	NE	MW	S	W
June	510,000	990,000	1,910,000	750,000
May	500,000	990,000	2,020,000	790,000
2022	650,000	1,230,000	2,280,000	970,000
M/M change	2.0%	0.0%	-5.4%	-5.1%
Y/Y change	-21.5%	-19.5%	-16.2%	-22.7%

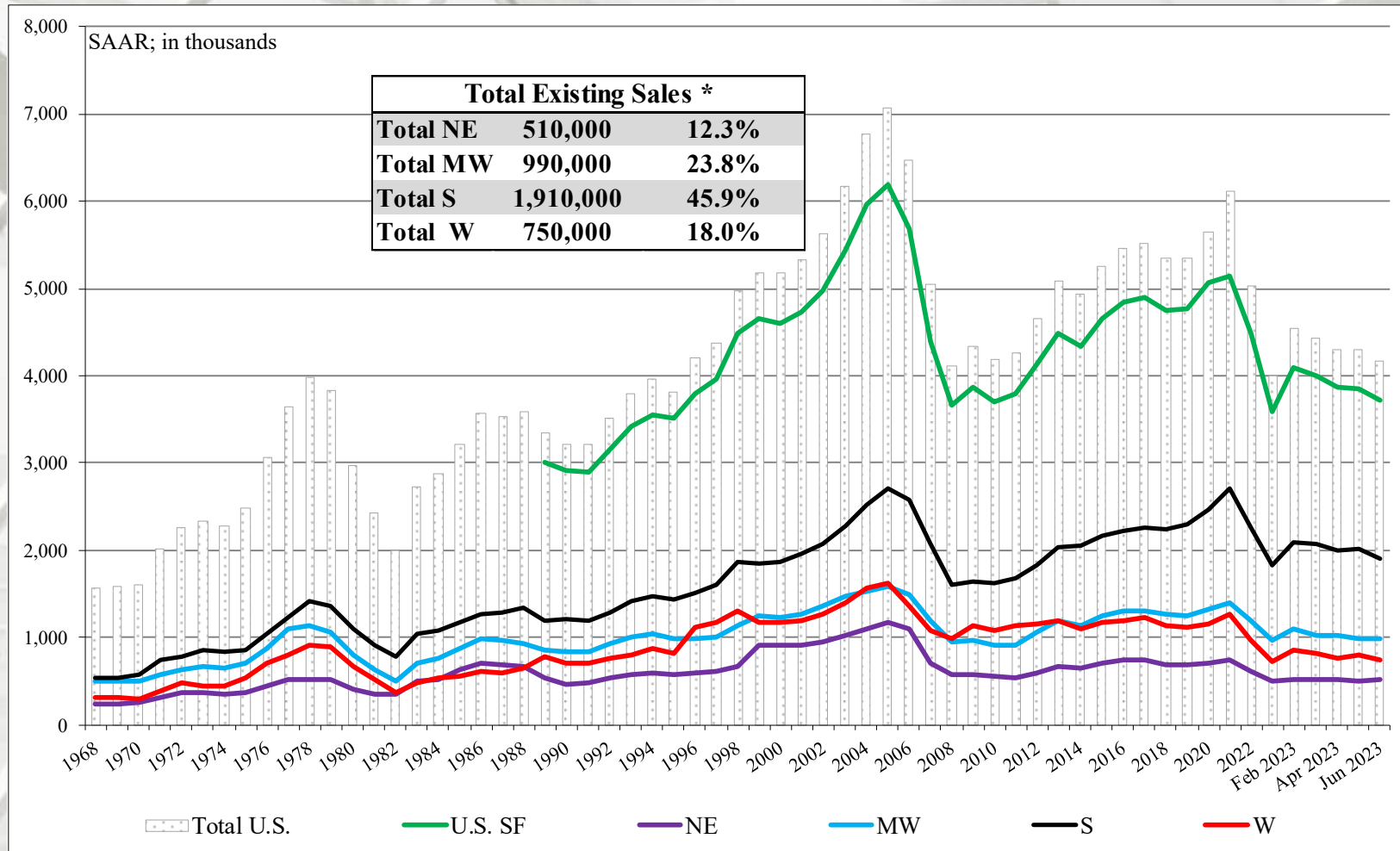
	Existing SF Sales	SF Median Price
June	3,720,000	\$416,000
May	3,850,000	\$401,100
2022	4,580,000	\$420,900
M/M change	-3.4%	3.6%
Y/Y change	-18.8%	-1.2%

All sales data: SAAR.

Source: <https://fred.stlouisfed.org/series/EXHOSLUSM495S>; 7/20/23

[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 0.7 Percent in May; Up 2.8 Percent from Last Year

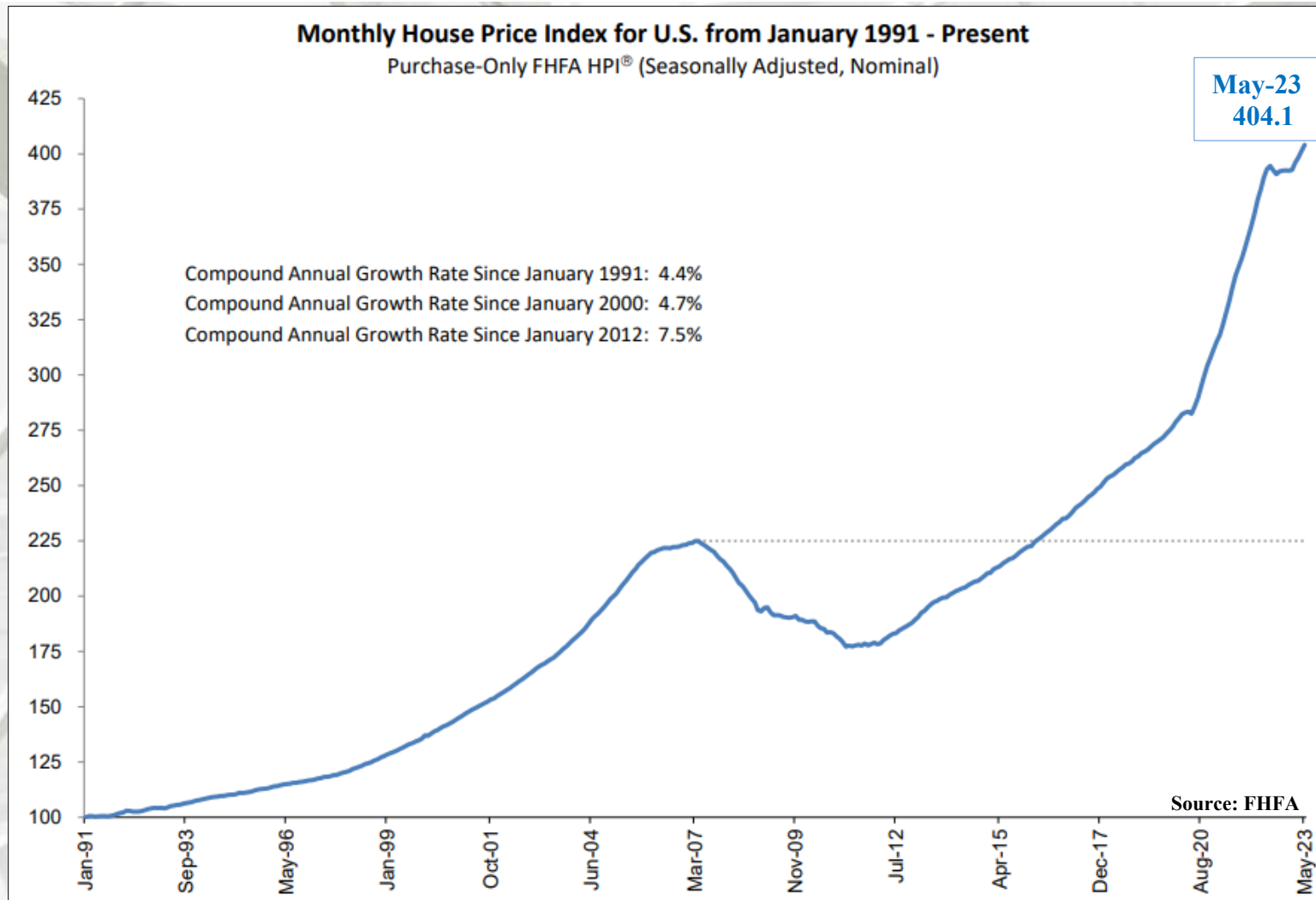
Significant Findings

“U.S. house prices rose in May, up **0.7 percent** from April, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI®). House prices rose **2.8 percent** from May 2022 to May 2023. The previously reported 0.7 percent increase in April remained unchanged.

For the nine census divisions, seasonally adjusted monthly price changes from April 2023 to May 2023 ranged from **-0.5 percent** in the New England division to **+1.7 percent** in the Pacific division. The 12-month changes were **-2.7 percent** in the Mountain division to **+5.5 percent** in the East North Central division.” – Adam Russell, FHFA

“U.S. house prices increased moderately in May, continuing the trend of the last few months. However, house prices in some regions of the country remained below the levels seen one year ago.” – 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 Repeats Gains in May

“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 for May 2023 show all 20 major metro markets reported month-over-month price increases for the third straight month. More than 27 years of history are available for the data series and can be accessed in full by going to 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 -0.5% annual decrease in May, down from a loss of -0.1% in the previous month. The 10-City Composite showed a decrease of -1.0%, which is a tick up from the -1.1% decrease in the previous month. The 20-City Composite posted a -1.7% year-over-year loss, same as in the previous month.

Chicago, Cleveland, and New York reported the highest year-over-year gains among the 20 cities in May. Chicago moved up one to the top spot with a 4.6% year-over-year price increase, while Cleveland came in at number two with a 3.9% increase, and New York entered the top three in third with a 3.5% increase. There was an even split of 10 cities reporting lower prices and those reporting higher prices in the year ending May 2023 versus the year ending April 2023. ...

Month-Over-Month

Before seasonal adjustment, the U.S. National Index posted a 1.2% month-over-month increase in May, while the 10-City and 20-City Composites both posted increases of 1.5%. After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 0.7%, while the 10-City Composite gained 1.1% and 20-City Composites posted an increase of 1.0%.” – 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

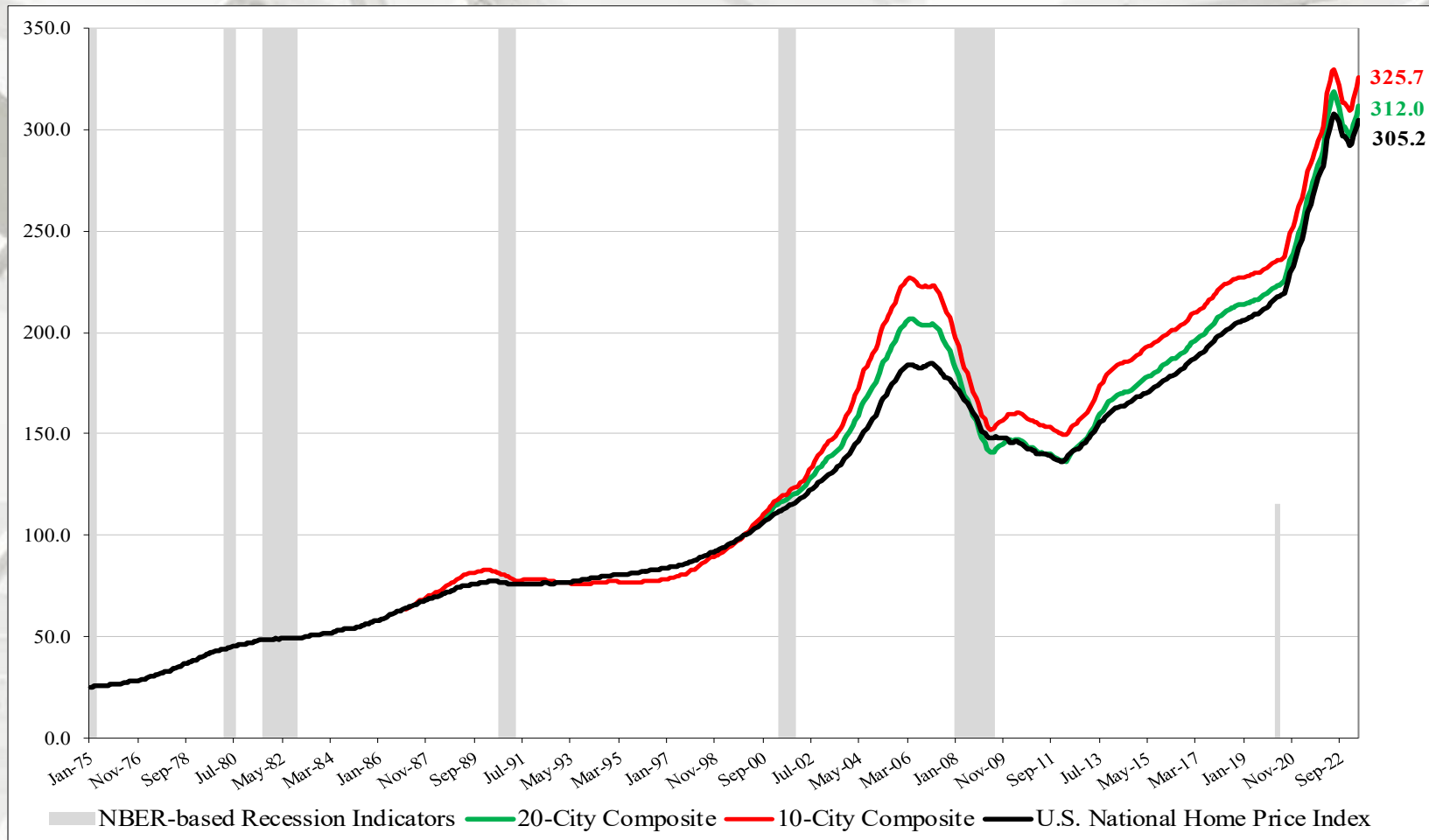
“The rally in U.S. home prices continued in May 2023. Our National Composite rose by 1.2% in May, and now stands only 1.0% below its June 2022 peak. The 10- and 20-City Composites also rose in May, in both cases by 1.5%. The ongoing recovery in home prices is broadly based. Before seasonal adjustment, prices rose in all 20 cities in May (as they had also done in March and April). Seasonally adjusted data showed rising prices in 19 cities in May, repeating April’s performance. (The outlier is Phoenix, down 0.1% in both months.) On a trailing 12-month basis, the National Composite is 0.5% below its May 2022 level, with the 10- and 20-City Composites also negative on a year-over-year basis.

Regional differences continue to be striking. This month’s league table shows the Revenge of the Rust Belt, as Chicago (+4.6%), Cleveland (+3.9%), and New York (+3.5%) were the top performers. If this seems like an unusual occurrence to you, it seems that way to me too. It’s been five years to the month since a cold-weather city held the top spot (and that was Seattle, which isn’t all that cold). Since May 2018, the top-ranked cities have been Las Vegas (12 months), Phoenix (33 months), Tampa (5 months), and Miami (9 months).

At the other end of the scale, the worst performers continue to cluster near the Pacific coast, with Seattle (-11.3%) and San Francisco (-11.0%) at the bottom. This month the Midwest (+2.7%) unseated the Southeast (+2.1%) as the country’s strongest region. The West (-6.9%) remains weakest.

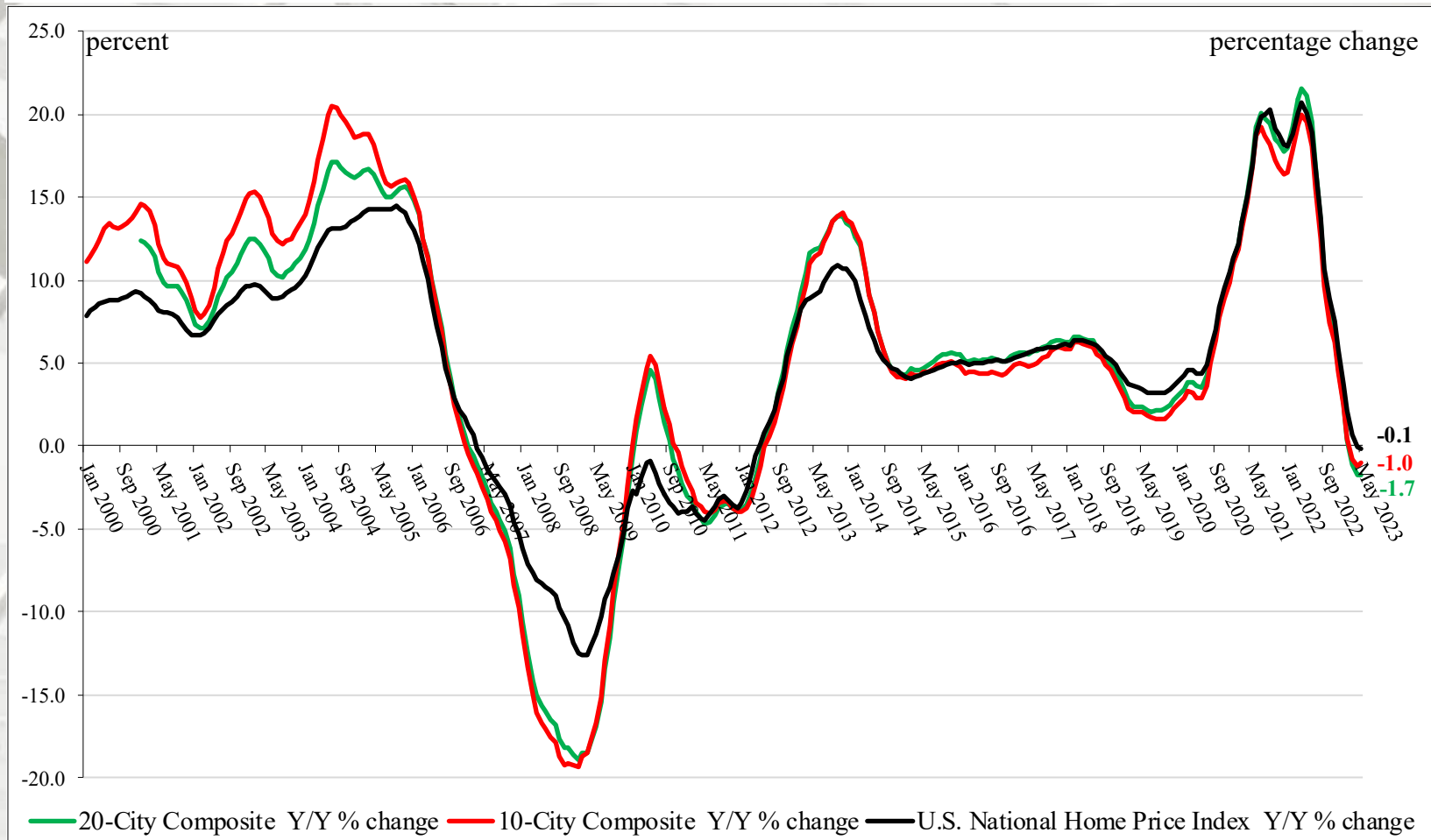
Home prices in the U.S. began to fall after June 2022, and May’s data bolster the case that the final month of the decline was January 2023. Granted, the last four months’ price gains could be truncated by increases in mortgage rates or by general economic weakness. But the breadth and strength of May’s report are consistent with an optimistic view of future 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).

S&P/Case-Shiller Home Price Indices

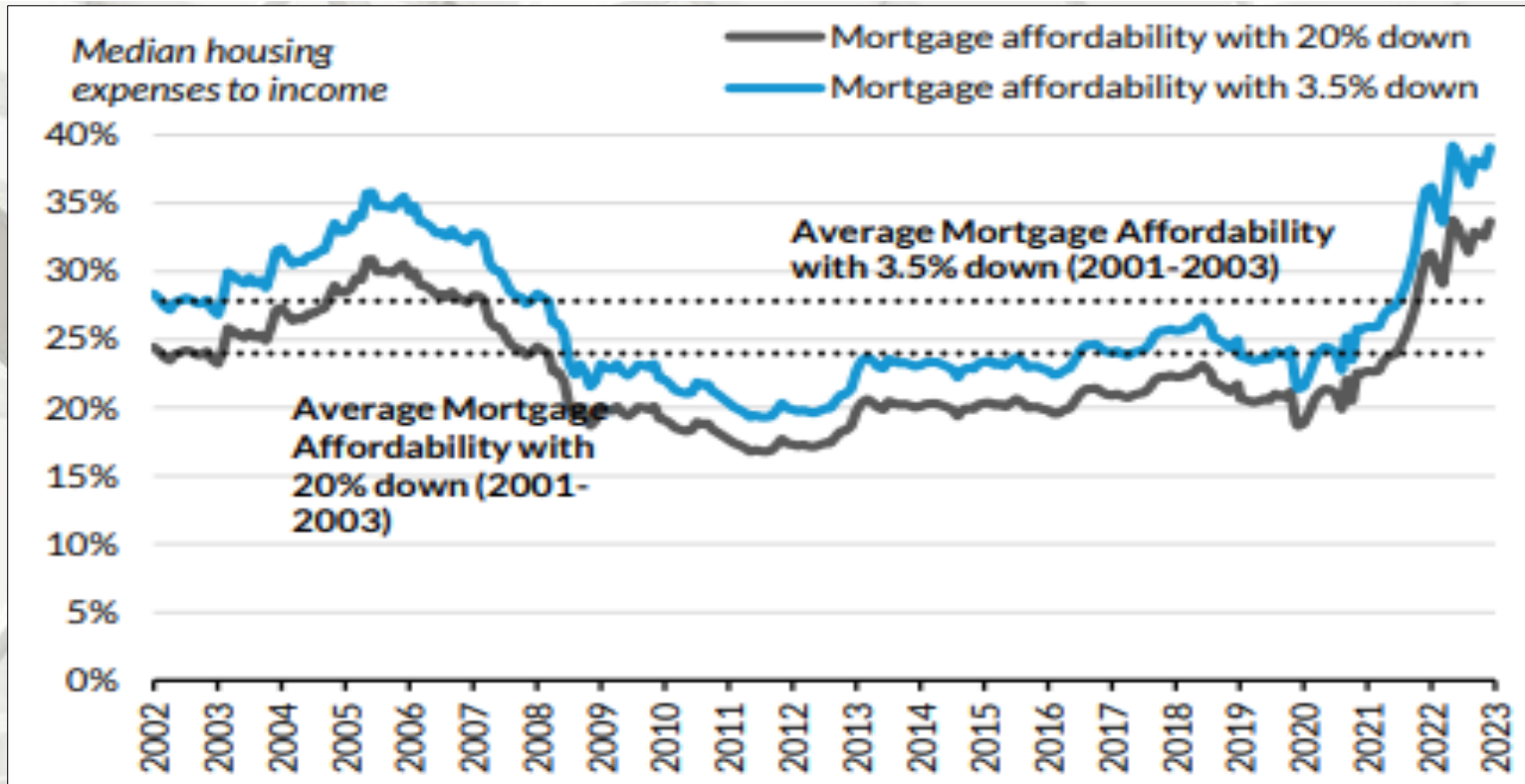


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Y/Y Price Change

From May 2022 to May 2023, the National Index decreased 0.1%; the Ten-City declined by 1.0%, and the Twenty-City decreased by 1.7%.

U.S. Housing Affordability



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

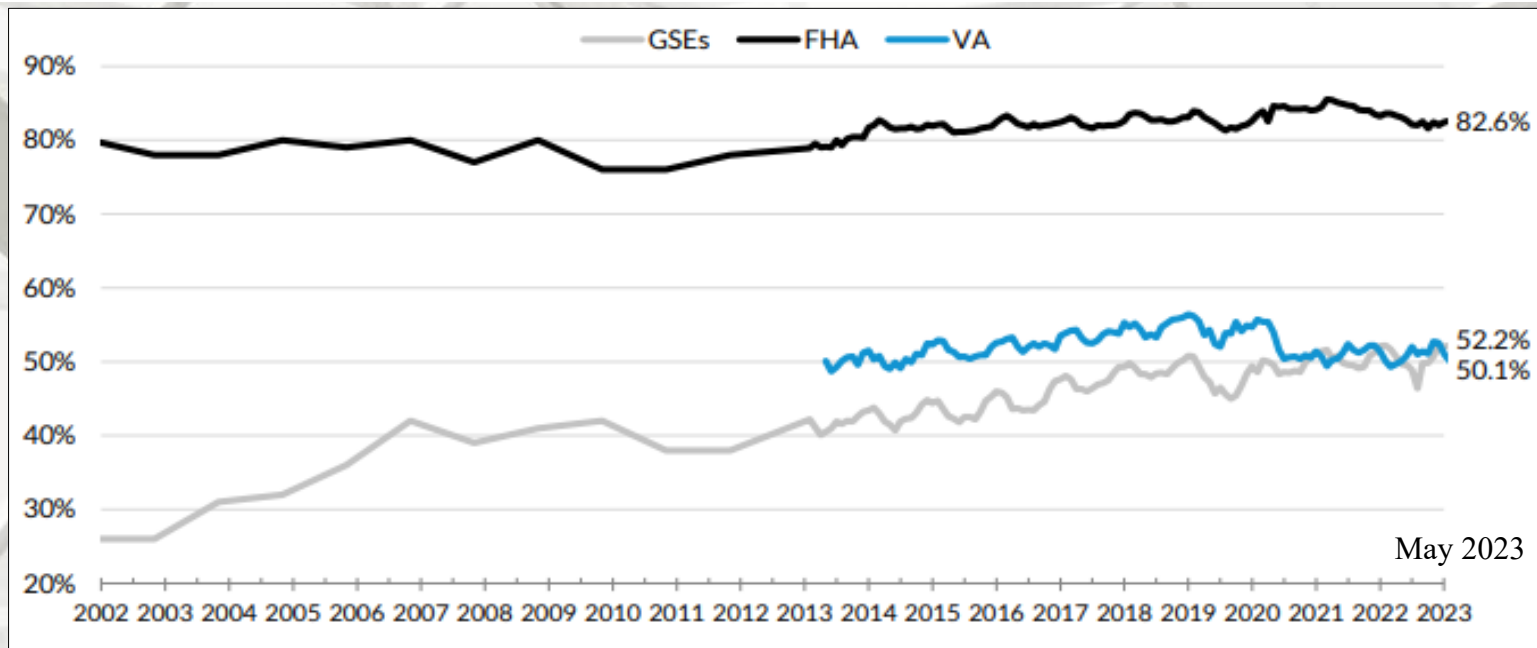
Note: All series measure the first-time home buyer share of purchase loans for principal residences.

Urban Institute

National Mortgage Affordability Over Time

“Mortgage affordability worsened in April, nearing levels last seen in December 2022. As of June 2023, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 33.9 percent, slightly higher than the 30.9 percent at the peak of the housing bubble in November 2005; and with 3.5 percent down it is 39.4 percent, also slightly above the 35.8 percent prior peak in November 2005.. . . ” – Laurie Goodman *et. al*, Vice President, Urban Institute

U.S. Housing Affordability



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

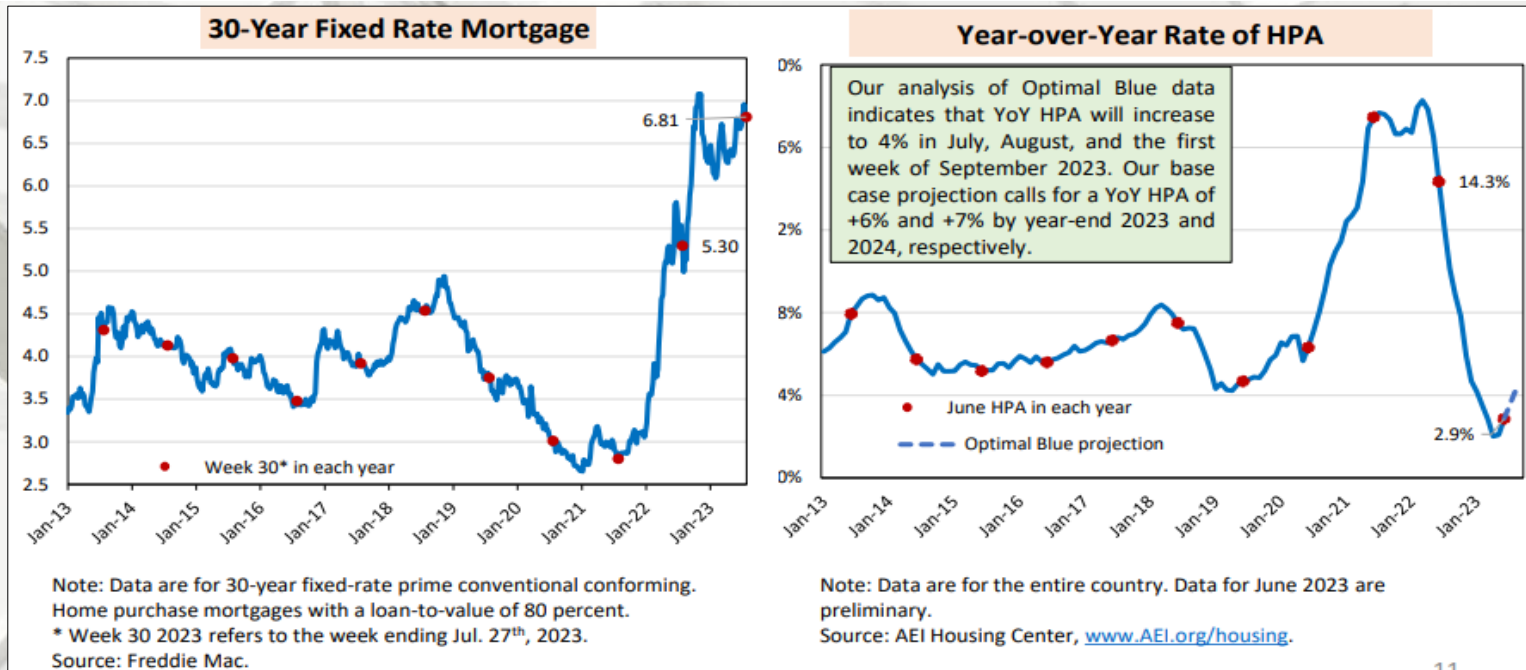
Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

Urban Institute

First-time Home Buyer Share

“In May 2023, the FTHB share for FHA, which has always been more focused on first time home buyers, was 82.6 percent. The FTHB share of GSE lending in April was 51.7 percent; the VA share was 50.2 percent. ...” – Laurie Goodman *et. al*, Vice President, Urban Institute

U.S. Housing Affordability



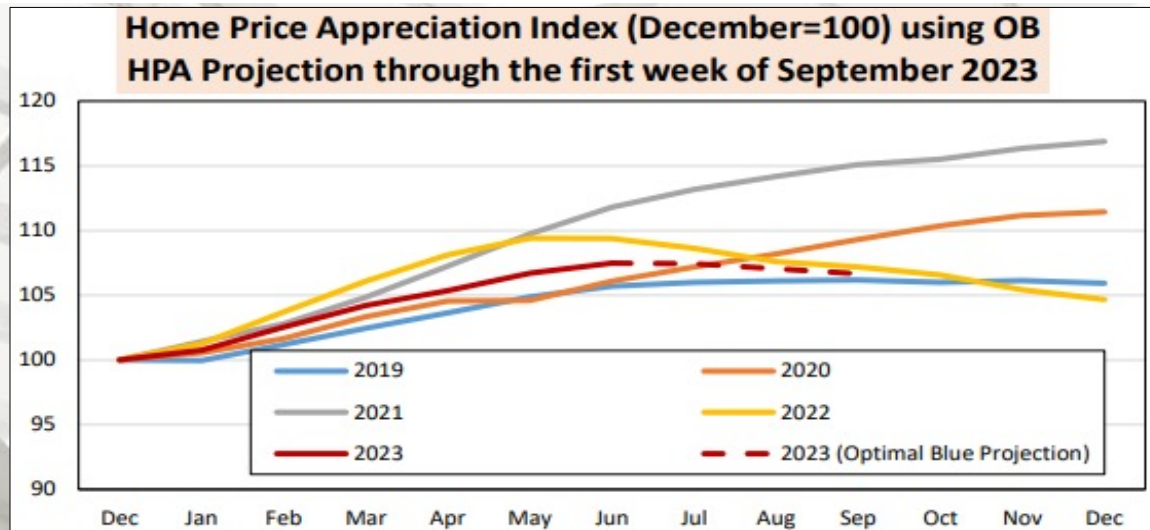
AEI Housing Center

Year-over-Year (YoY) Home Price Appreciation (HPA) Has Begun to Accelerate

“June 2023’s YoY HPA was 2.9%, up from 2.1% a month ago but down from 14.3% a year ago.

- YoY HPA has bottomed out and is expected to continue rising through August 2023 based on Optimal Blue data.
- This is largely due to historically low supply, cooling yet still strong job numbers, low levels of foreclosures in most areas of the country, work from home, and continued home price arbitrage opportunities.
- June 2023’s MoM HPA was 0.7%, continuing the upward trend that began in January 2023, after MoM HPA had declined from July 2022 to December 2022.
- Constant-quality HPA controls for mix shifts in home quality, 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

U.S. Housing Affordability



Note: Note: Data are for the entire country. Data for June 2023 are preliminary. June, July and the first week of August 2023 HPA is projected based on Optimal Blue data. Source: AEI Housing Center, www.AEI.org/housing

AEI Housing Center

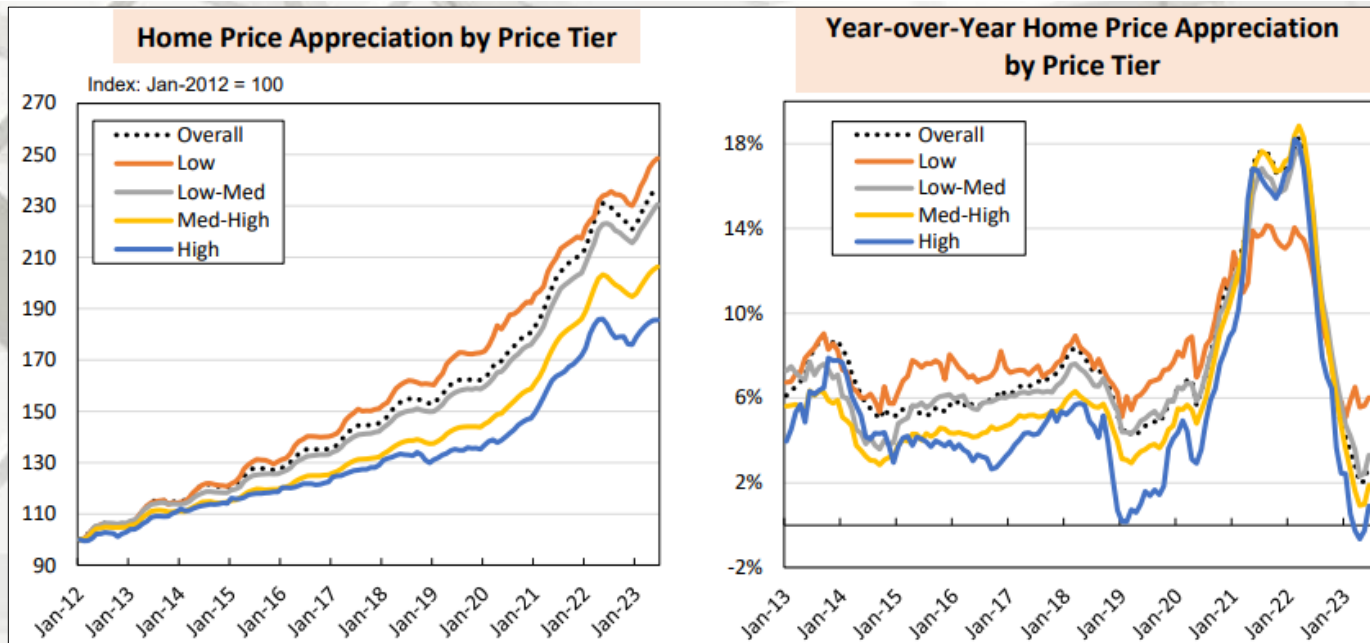
Home Price Appreciation: December 2023 and 2024 YoY HPA for Projections

“Given continuing tight supply notwithstanding rates at or near 7%, the mortgage rate boundaries have been raised by 0.25% for all projections:

Base Case HPA Projection for Dec. 2023 and Dec. 2024 of +6% and +7%, respectively.

- Assumes mortgage rate at 5.75%-7.25%, unemployment rate $\leq 5.5\%$, and months' remaining inventory < 4.5 months.
- **Bullish Case Projection** for Dec. 2024 of +12%
 - Assumes mortgage rate at 4.25%-5.75%, unemployment rate $\leq 5.5\%$, and months' remaining inventory < 4.5 months.
- **Bearish Case Projection** for Dec. 2024 of -5%
 - Assumes mortgage rate at 7.25%-8.75%, unemployment rate $> 5.5\%$ and $\leq 7.5\%$, and months' remaining inventory > 6 months.
 - Note: These things might occur at different times over the projection period.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

Home Price Appreciation by Price Tier



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

AEI Housing Center

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

- Preliminary numbers for June 2023 indicate that the low price tier leads the YoY change in home prices at 6.0% due to low months’ supply (2.0 months), low unemployment, and increasing demand promoted by agency credit easing (right panel).
- Being more dependent on the Fed’s monetary punchbowl, the med-high and high price tiers have had the largest declines in YoY HPA. However, this deceleration has ended as of May 2023.” – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

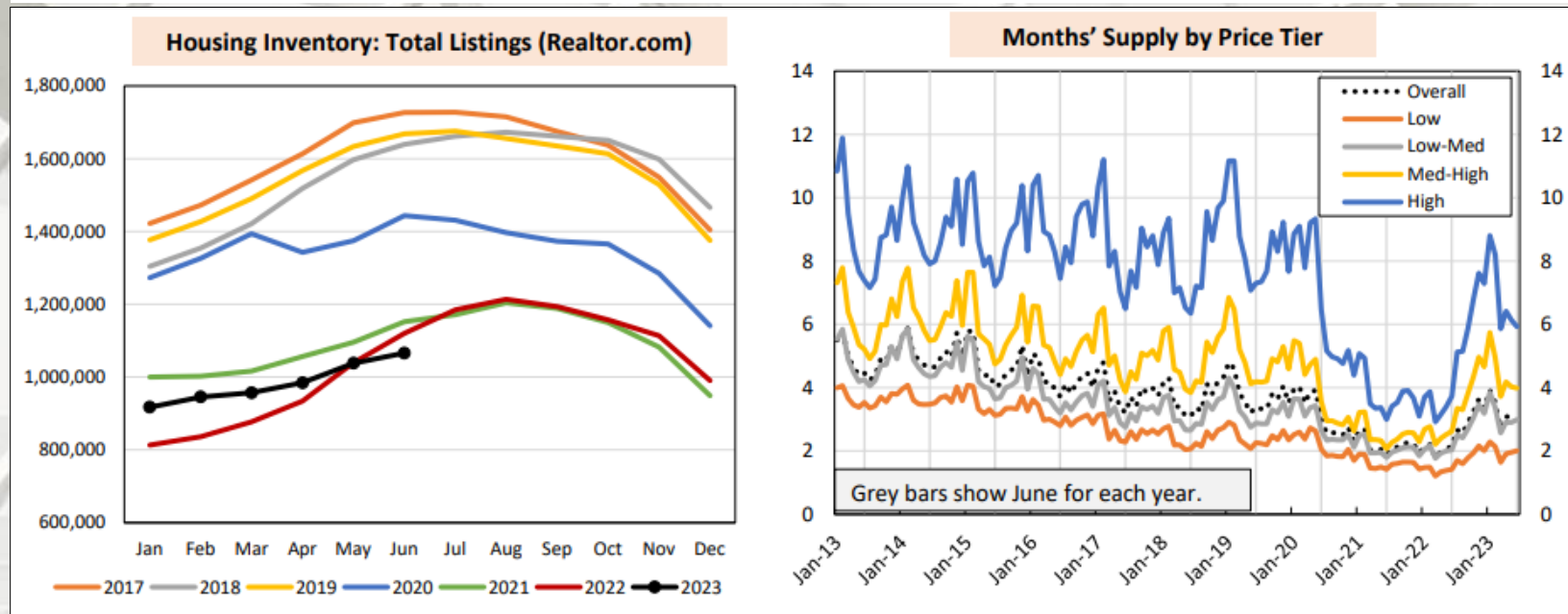
Home Housing Inventory and Months' Supply

AEI Housing Center

“Months’ remaining supply was 3.1 months (not seasonally-adjusted) in June 2023. Housing inventory continued to run below pre-pandemic levels and showed minimal seasonal increase, which helps explain the recent MoM home price appreciation increases.

- June 2023 inventory was up 2.7% from last month but down 4.9% from a year ago. June inventory dropped below 2017’s level, indicating an unhealthy market. Notwithstanding rates of around 7%, the supply demand imbalance will fuel continued upward price pressures.
- Inventory today is still hovering around two-thirds of 2017-2019 levels (left panel).
- The YoY HPA for low and high tiers is 6.0% and 0.9%, respectively, in June 2023.
- Months’ supply stood at 3.1 months in June 2023, same as last month but down from 3.4 months in June 2019, the last comparable pre-pandemic month (right panel).
- Given historical data, months’ supply would need to increase to >6 months to enter a buyer’s market and to 7-9 months to trigger a national YoY decline in home price appreciation.” – 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/housing.

U.S. Housing Finance

Mortgage Bankers Association (MBA)

Mortgage Credit Availability Decreased in July

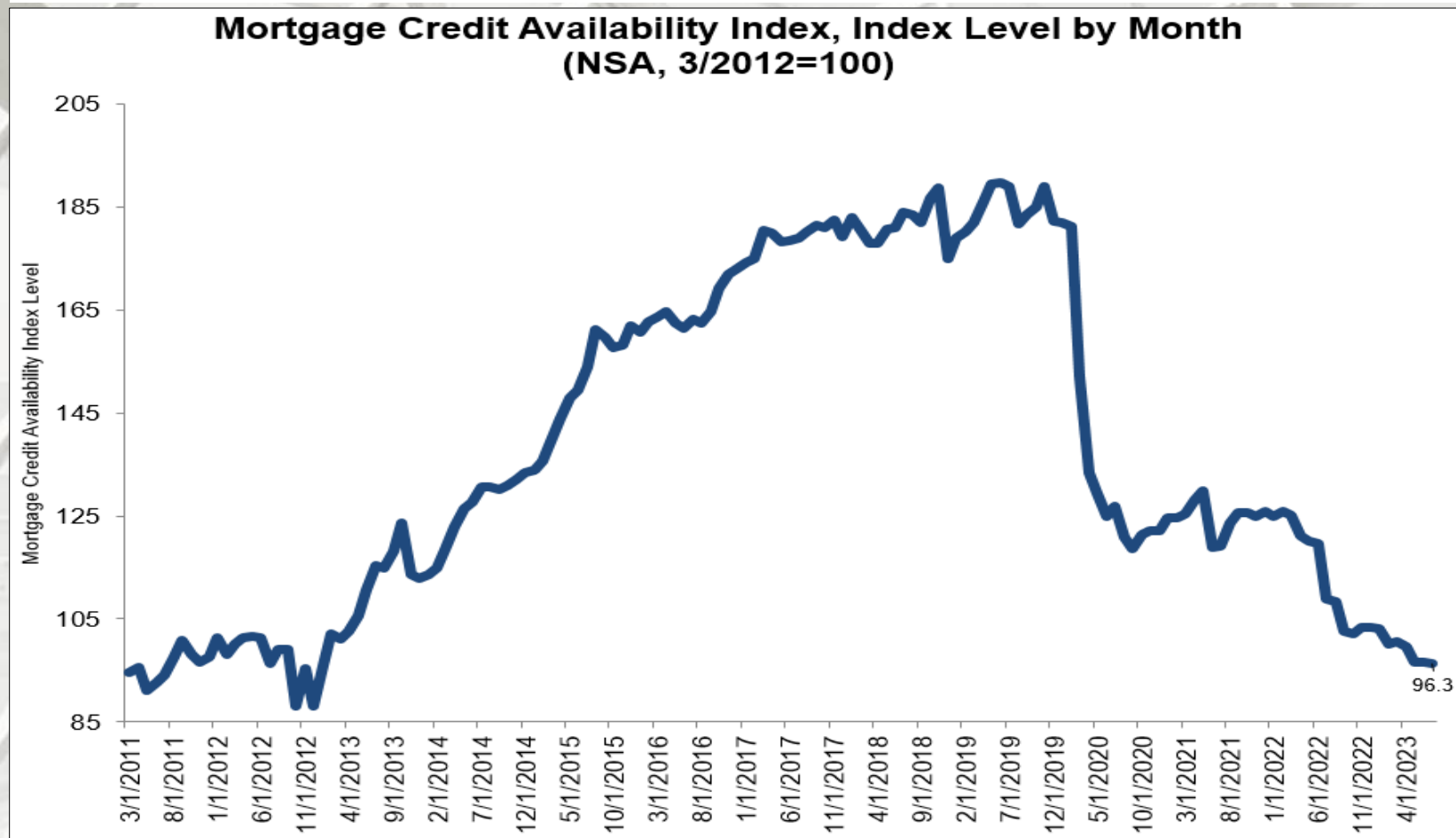
“Mortgage credit availability decreased in July according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) that analyzes data from ICE Mortgage Technology.

The MCAI fell by 0.3 percent to 96.3 in July. 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 0.5 percent, while the Government MCAI decreased by 0.1 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI decreased by 0.8 percent, and the Conforming MCAI rose by 0.2 percent.

Mortgage credit availability declined to its lowest level since 2013, as lenders pulled back on underutilized loan programs and as liquidity concerns remain for some jumbo lenders. Declining origination volumes have led to lower profitability for many lenders, resulting in narrower loan product offerings to reduce operational costs. One key driver of this month’s decline was a drop in cash-out refinance loan programs. The 30-year fixed mortgage rate averaged 6.94 percent in July, more than a percentage point higher than July 2022, and this has significantly discouraged cash-out refinance activity, as borrowers turn to home equity and consumer loans instead. The jumbo index fell for the third straight month, as jumbo lenders further reduce the number of available loan programs.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

U.S. Housing Finance

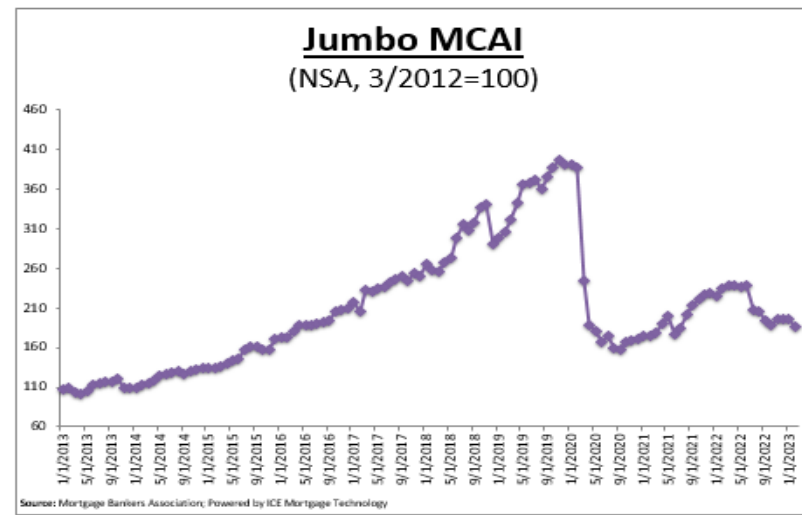
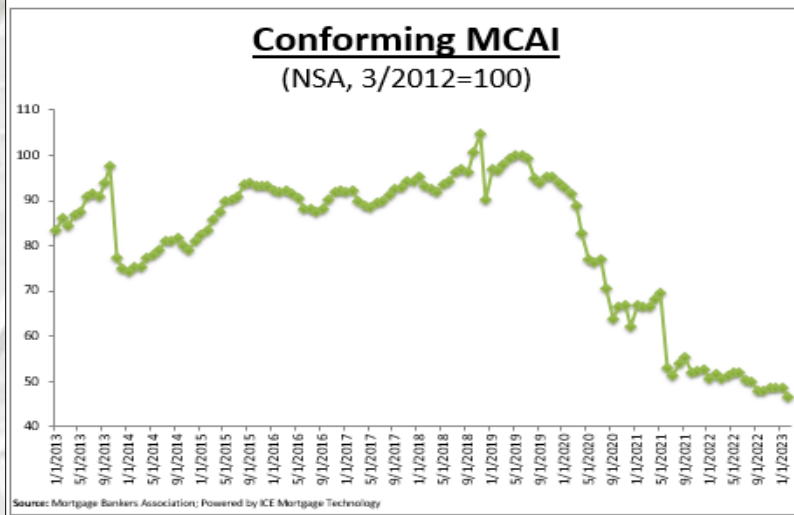
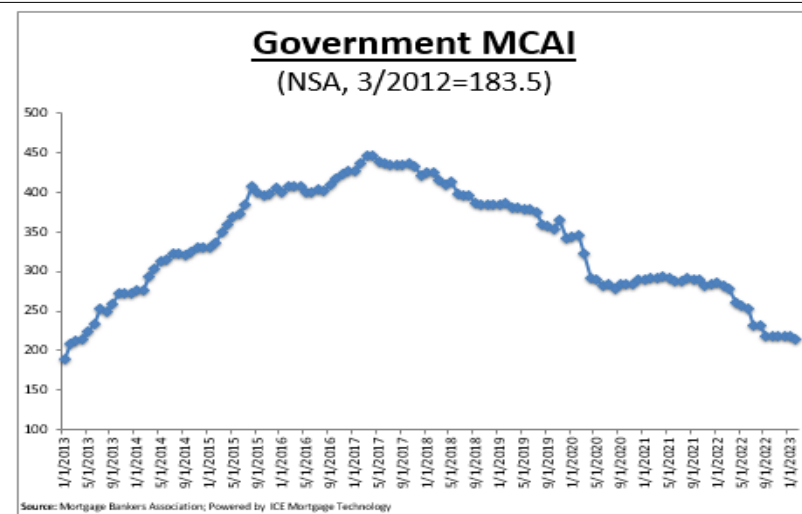
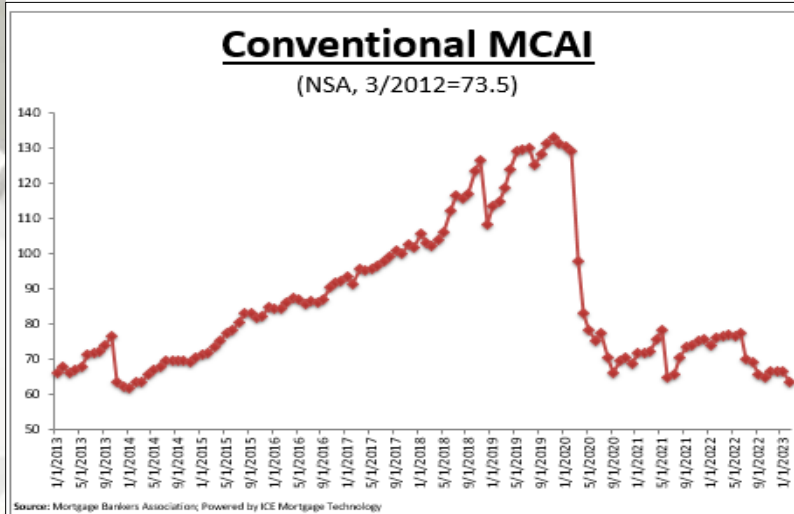
Mortgage Credit Availability (MBA)



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

U.S. Housing Finance

Mortgage Credit Availability (MBA)



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

Source: <https://www.mba.org/news-and-research/newsroom/news/2023/08/08/mortgage-credit-availability-decreased-in-july>; 8/8/23

MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

July 20, 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)	1,718	1,636	1,446	1,405	1,385	1,447	1,443	1,444	1,458	1,459	1,478	1,499	1,551	1,430	1,474	1,548
Single-Family	1,182	1,084	901	850	834	929	947	972	1,008	1,023	1,046	1,081	1,004	920	1,040	1,119
Two or More	535	551	545	556	552	518	496	472	450	436	432	418	547	509	434	429
Home Sales (SAAR, Thous)																
Total Existing Homes	6,057	5,373	4,770	4,197	4,327	4,250	4,295	4,319	4,403	4,454	4,622	4,840	5,099	4,298	4,580	5,049
New Homes	776	609	580	598	651	726	739	738	748	746	761	771	641	713	756	778
FHFA US House Price Index (YOY % Change)																
Median Price of Total Existing Homes (Thous \$)	365.8	405.9	391.5	372.8	366.7	397.5	391.4	383.2	384.6	383.6	384.2	383.4	384.0	384.7	384.0	386.6
Median Price of New Homes (Thous \$)	431.3	447.0	465.4	479.5	437.2	419.4	424.3	428.5	433.5	430.7	433.2	436.2	455.8	427.4	433.4	444.1
Interest Rates																
30-Year Fixed Rate Mortgage (%)	3.9	5.3	5.7	6.6	6.4	6.5	6.6	5.9	5.7	5.5	5.2	4.9	6.6	5.9	4.9	4.6
10-Year Treasury Yield (%)	1.9	2.9	3.1	3.8	3.6	3.6	3.7	3.4	3.3	3.1	3.0	3.0	3.8	3.4	3.0	2.8
Mortgage Originations																
Total 1- to 4-Family (Bil \$)																
Purchase	689	678	480	398	333	463	468	495	460	575	568	583	2,245	1,759	2,186	2,468
Refinance	381	477	388	332	267	371	375	378	338	434	406	418	1,578	1,391	1,596	1,783
Refinance Share (%)	308	201	92	66	66	92	93	117	122	141	162	165	667	368	590	685
FHA Originations (Bil \$)	45	30	19	17	20	20	20	24	27	25	29	28	30	21	27	28
Total 1- to 4-Family (000s loans)																
Purchase	1,939	1,789	1,206	973	816	1,128	1,139	1,211	1,131	1,431	1,429	1,472	5,907	4,294	5,462	6,200
Refinance	1,000	1,202	946	790	634	876	884	891	797	1,039	977	1,009	3,938	3,285	3,822	4,288
Refinance Share (%)	938	588	260	182	182	252	254	320	334	392	452	462	1,969	1,009	1,640	1,912
Refinance Share (%)	48	33	22	19	22	22	22	26	30	27	32	31	33	23	30	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. Copyright 2023 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

July 20, 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	2.0	1.4	-0.3	-0.4	0.8	1.5	2.1	2.0	0.9	0.7	1.6	1.9
Personal Consumption Expenditures	1.3	2.0	2.3	1.0	4.2	0.9	-0.1	0.9	1.5	1.5	1.9	1.8	1.7	1.5	1.7	2.2
Business Fixed Investment	7.9	0.1	6.2	4.0	0.6	6.9	-2.5	-3.1	-1.3	0.6	1.5	2.1	4.5	0.4	0.7	2.0
Residential Investment	-3.1	-17.8	-27.1	-25.1	-4.0	-2.0	4.5	5.6	9.3	5.0	4.0	5.9	-18.8	0.9	6.1	4.1
Govt. Consumption & Investment	-2.3	-1.6	3.7	3.8	5.0	1.1	2.5	0.5	0.6	0.6	0.6	0.8	0.9	2.3	0.6	0.8
Net Exports (Bil. Chain 2012\$)	-1260.3	-1207.6	-1063.8	-1037.8	-1010.3	-1055.3	-1071.8	-1111.1	-1131.3	-1139.1	-1142.2	-1158.5	-1142.4	-1062.1	-1142.8	-1220.9
Inventory Investment (Bil. Chain 2012\$)	182.4	93.7	32.9	116.1	3.0	33.5	19.5	7.0	-4.6	3.7	19.0	32.2	106.3	15.8	12.6	51.1
Consumer Prices (YOY)	8.0	8.6	8.3	7.1	5.8	4.1	3.1	3.0	2.7	2.7	2.6	2.2	7.1	3.0	2.2	2.1
Percent																
Unemployment Rate	3.8	3.6	3.5	3.6	3.5	3.6	3.9	4.5	4.8	4.7	4.6	4.3	3.6	3.9	4.6	4.2
Federal Funds Rate	0.375	1.625	3.125	4.375	4.875	5.125	5.375	5.375	4.875	4.375	3.875	3.375	4.375	5.375	3.375	2.375
10-Year Treasury Yield	1.9	2.9	3.1	3.8	3.6	3.6	3.7	3.4	3.3	3.1	3.0	3.0	3.8	3.4	3.0	2.8

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

MORTGAGE BANKERS ASSOCIATION

Summary

In conclusion:

Year-over-year and month-over-month data were once again disappointing. Census reporting indicated that month-over-month and year-over-year data were mostly negative. Month-over-month single-family permits and construction spending improved as did year-over-year total housing completions and new sales. 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 June 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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