

The Virginia Tech – U.S. Forest Service

May 2020

Housing Commentary: Section I



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This report is a free monthly service of Virginia Tech. Past issues are available at:
<http://woodproducts.sbio.vt.edu/housing-report>.

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Opening Remarks

The United States housing construction market indicated modest improvement in May, on a month-over-month basis. Total starts; total, single-family and multi-family permits and new single-family sales increased on a month-over-month basis. On a year-over-year basis, the majority of the data indicated declines, except for total starts, new single-family sales, and total private residential construction spending. The impact of Covid19 is still evident in this month's data.

The July 9th Atlanta Fed GDPNow™ model for June 2020 forecasts an aggregate 35.6% decrease for residential investment spending. New private permanent site expenditures were projected at a 36.7% decline; the improvement spending forecast was a 6.8% decrease; and the manufactured/mobile expenditures projection was a 70.6% decline (all: quarterly log change and at a seasonally adjusted annual rate).¹

“Housing is clearly one of the economy’s bright spots. Mortgage applications for the purchase of a home, which are a reliable leading indicator of new and existing home sales, have steadily risen since bottoming in early April and are now up 18.1% compared to last year. While existing sales weakened substantially during May, new home sales surged over 16%. New homes are much more conducive to virtual showings, which makes social distancing less of an issue.”² – Mark Vitner, Senior Economist and Charlie Dougherty, Economist; Economics Group, Wells Fargo LLC

This month's commentary contains applicable housing data. Section I contains updated housing forecasts, data, and commentary. Section II includes regional Federal Reserve analysis and private firm indicators.

Sources: ¹ www.frbatlanta.org/cqer/research/gdpnow.aspx; 7/9/20;

² <https://www08.wellsfargomedia.com>; 6/24/20

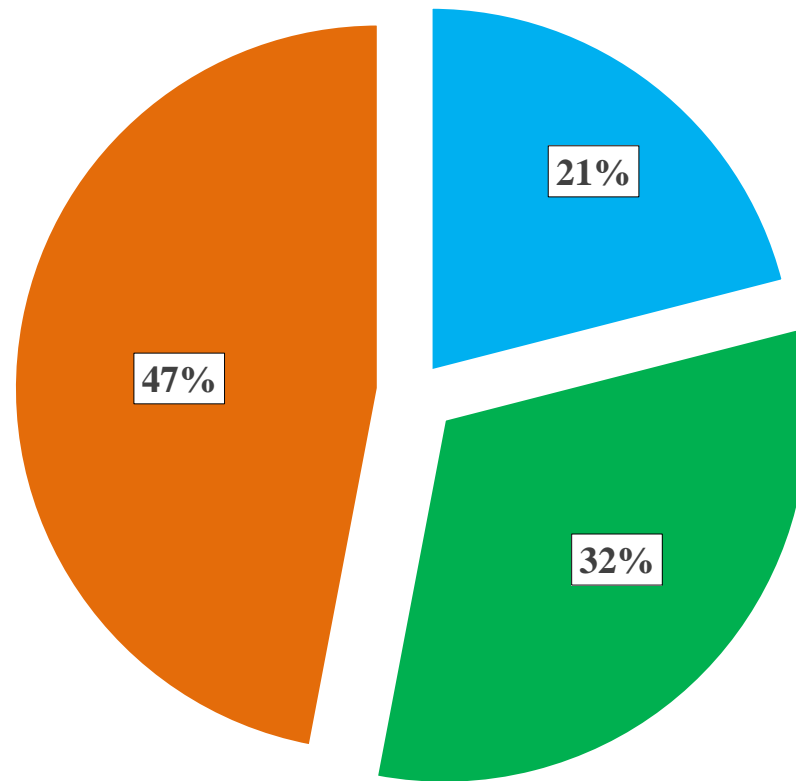
May 2020 Housing Scorecard

	M/M	Y/Y
Housing Starts	▲ 4.3%	▼ 23.2%
Single-Family (SF) Starts	▼ 0.1%	▼ 17.8%
Multi-Family (MF) Starts*	▲ 15.0%	▼ 33.1%
Housing Permits	▲ 14.4%	▼ 8.8%
SF Permits	▲ 11.9%	▼ 9.9%
MF Permits*	▲ 18.8%	▼ 7.0%
Housing Under Construction	▼ 1.4%	▲ 3.8%
SF Under Construction	▼ 2.1%	▼ 3.8%
Housing Completions	▼ 7.3%	▼ 9.8%
SF Completions	▼ 9.8%	▼ 10.8%
New SF House Sales	▲ 16.6%	▲ 12.7%
Private Residential Construction Spending	▼ 4.0%	▲ 0.7%
SF Construction Spending	▼ 8.5%	▼ 4.4%
Existing House Sales ¹	▼ 9.7%	▼ 26.6%

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

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

New Construction's Percentage of Wood Products Consumption

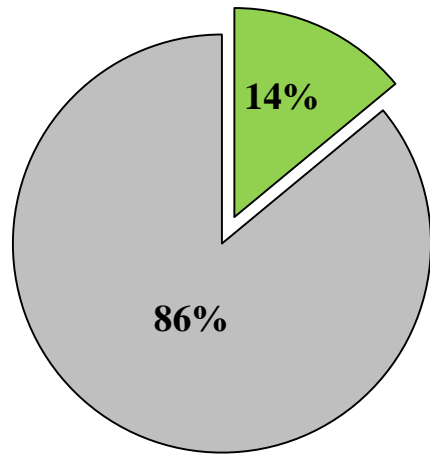


■ Non-structural panels

■ Total Sawnwood

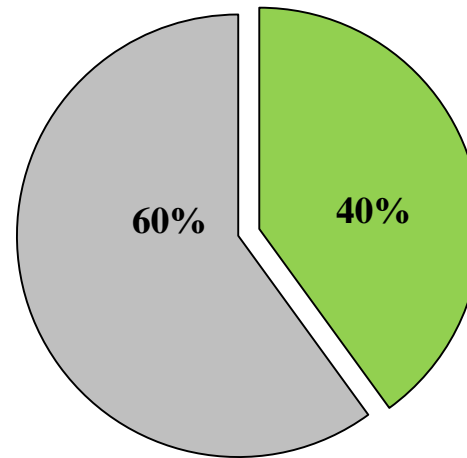
■ Structural panels

New SF Construction Percentage of Wood Products Consumption



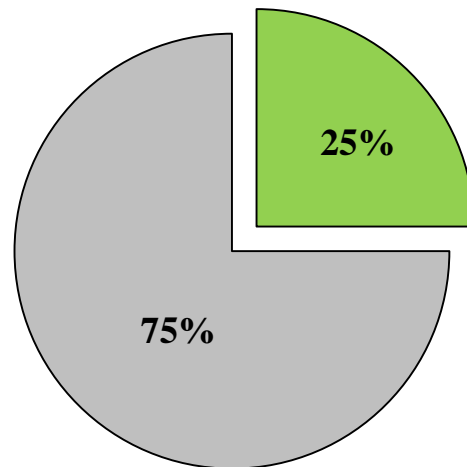
■ Non-structural panels:
New Housing

■ Other markets



■ Structural panels:
New housing

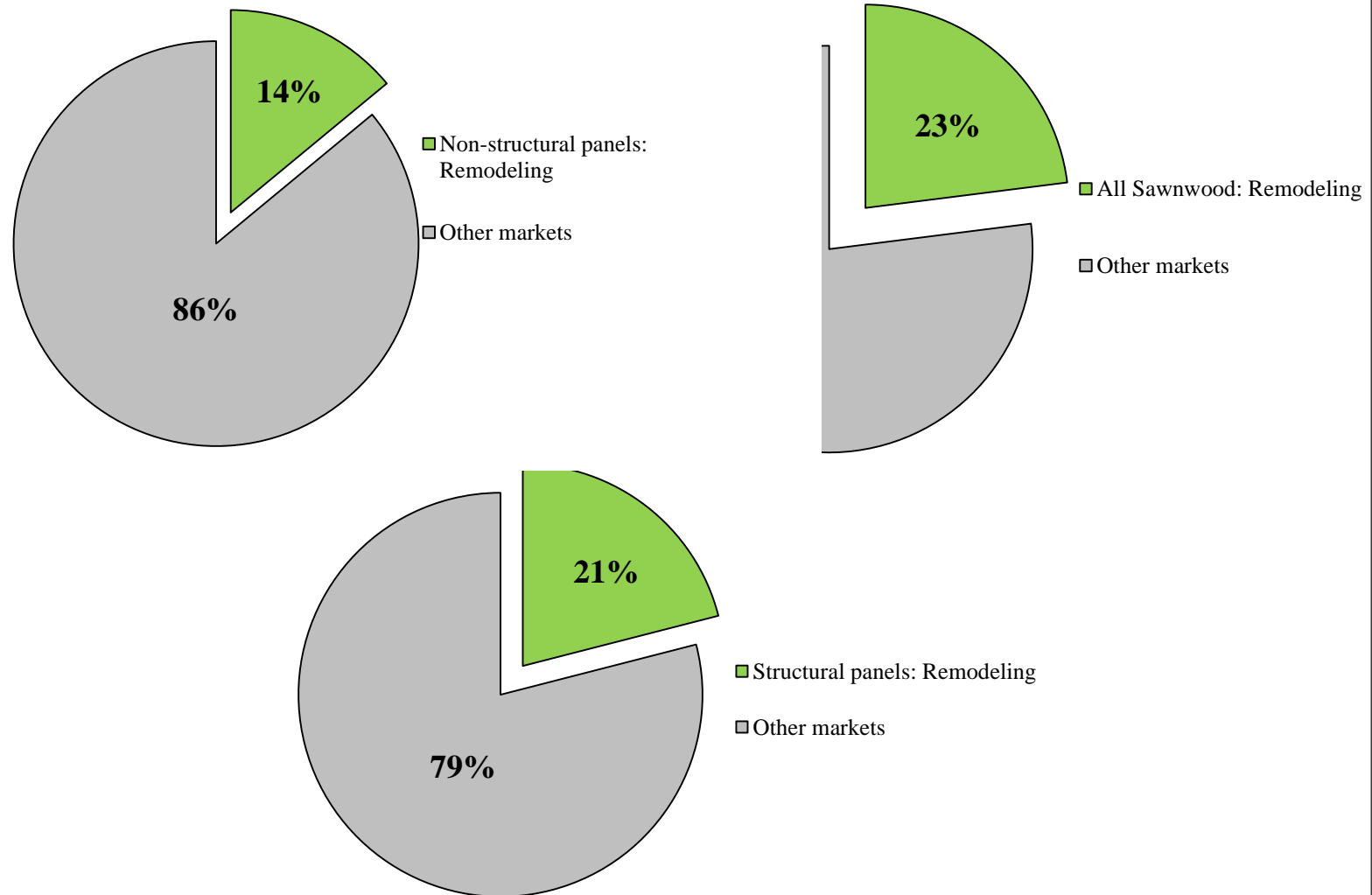
■ Other markets



■ All Sawwood: New housing

■ Other markets

Repair and Remodeling's Percentage of Wood Products Consumption



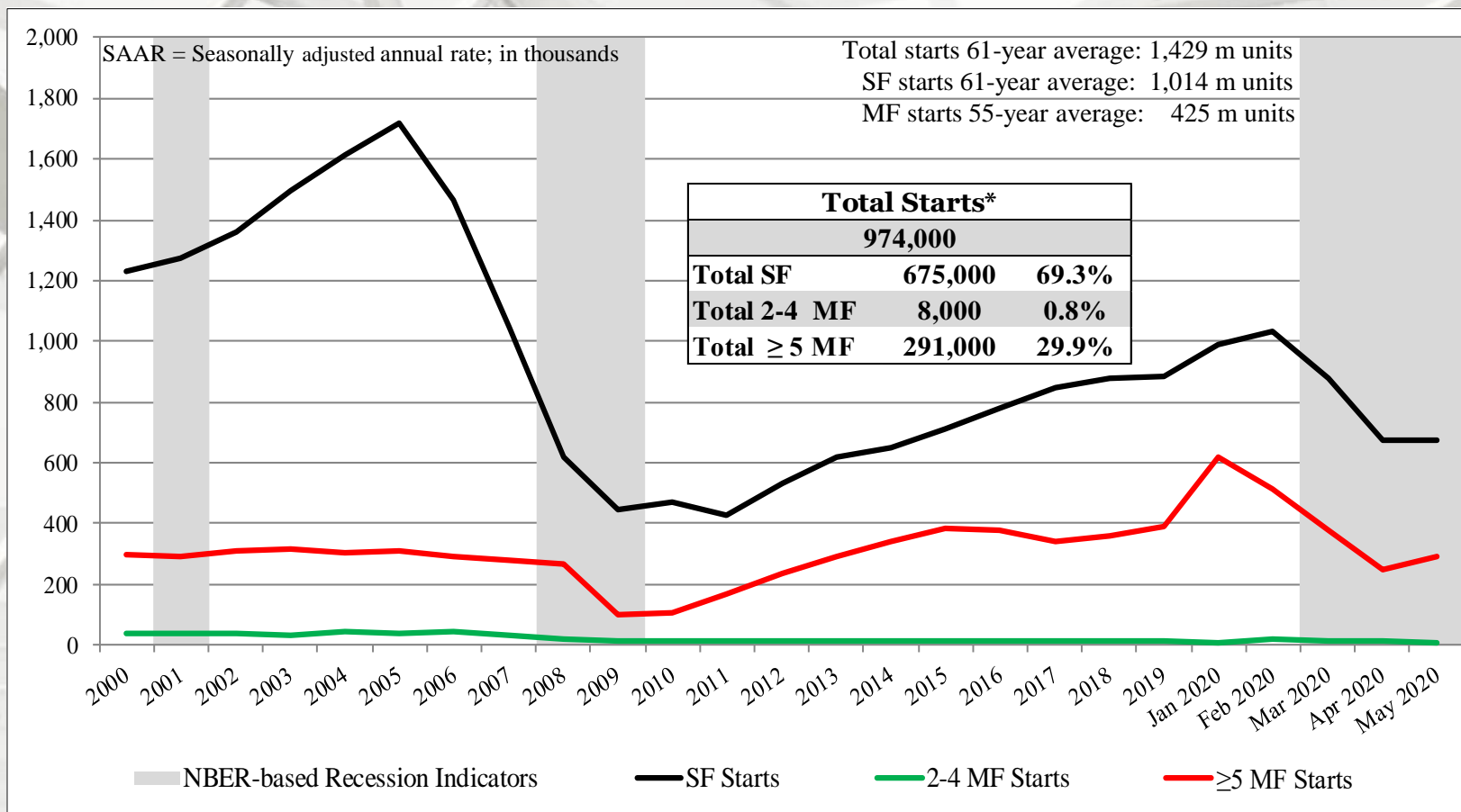
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
May	974,000	675,000	8,000	291,000
April	934,000	674,000	11,000	249,000
2019	1,268,000	821,000	12,000	435,000
M/M change	4.3%	0.1%	-27.3%	16.9%
Y/Y change	-23.2%	-17.8%	-33.3%	-33.1%

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

** US DOC does not report 2 to 4 multifamily starts directly, this is an estimation ((Total starts – (SF + 5 unit MF)).

Total Housing Starts

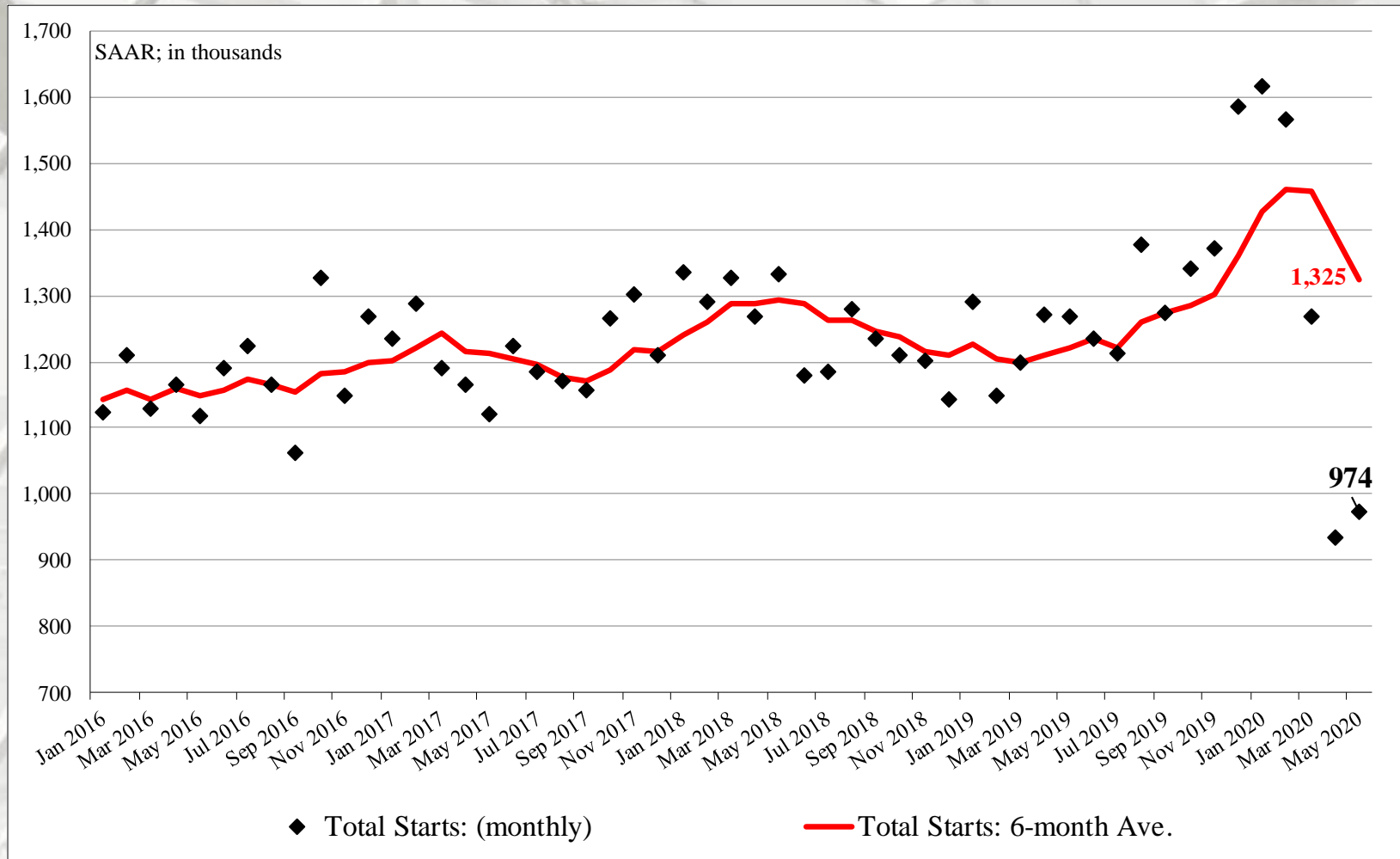


US DOC does not report 2 to 4 multifamily starts directly, this is an estimation: ((Total starts – (SF + ≥ MF)).

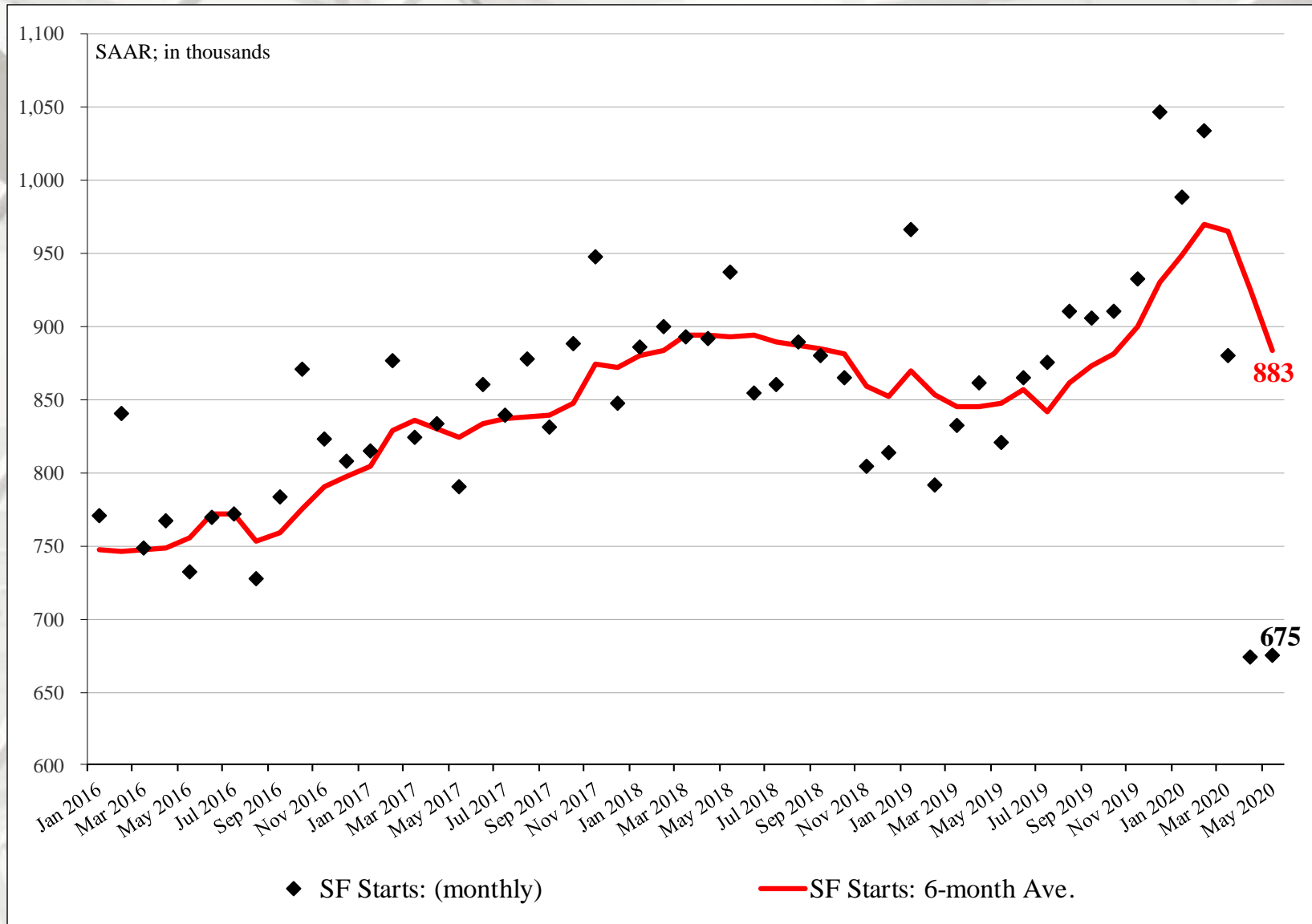
* Percentage of total starts.

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

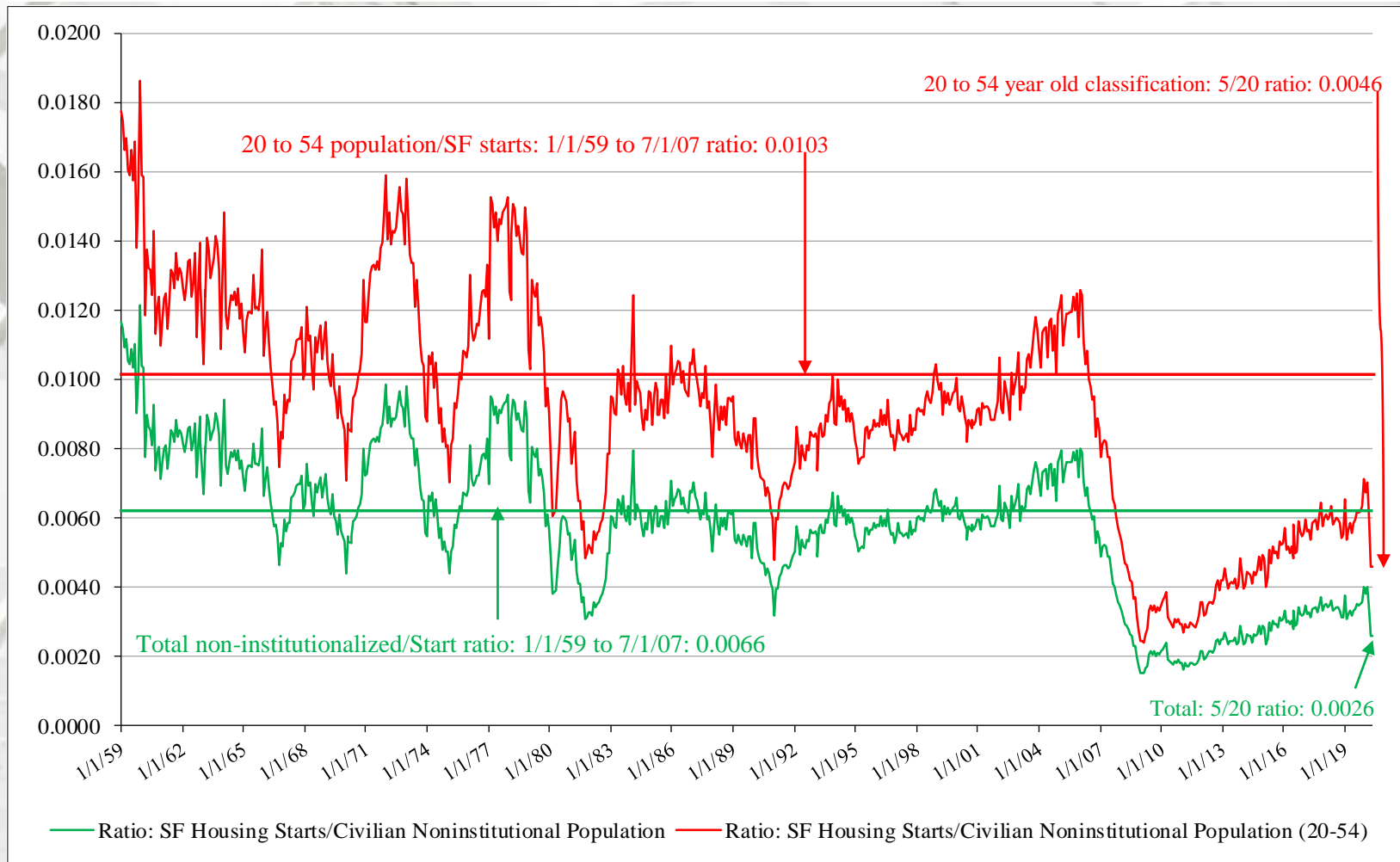
Total Housing Starts: Six-Month Average



SF Housing Starts: Six-Month Average



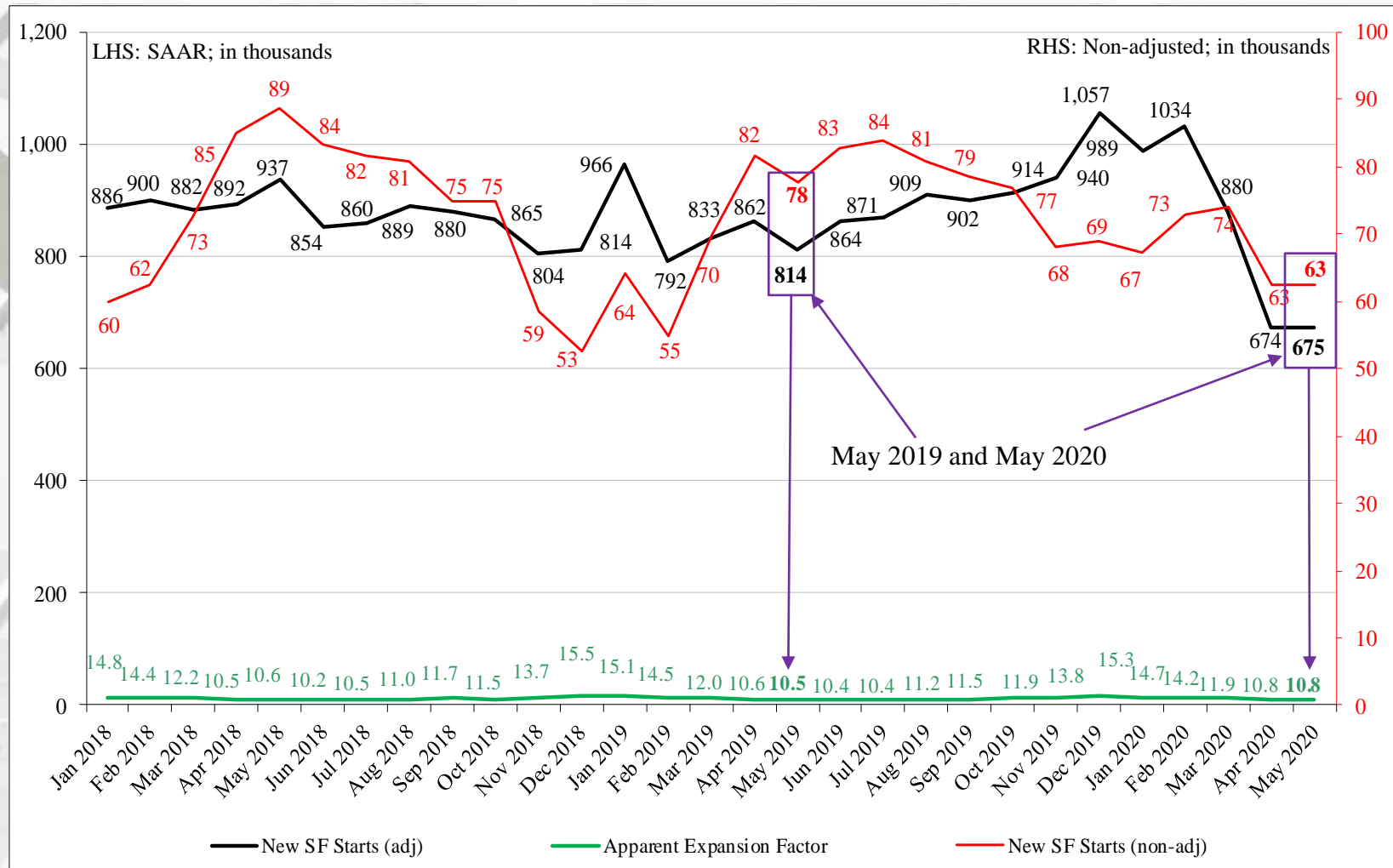
New SF Starts



New SF starts adjusted for the US population

From January 1959 to May 2007, the long-term ratio of new SF starts to the total US non-institutionalized population was 0.0066; in May 2020 it was 0.0026 – no change from April. The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in May 2020 was 0.0046 – also no change from April. From a population worldview, new SF construction is less than what is necessary for changes in population (i.e., under-building).

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 1/3

	NE Total	NE SF	NE MF**
May	53,000	36,000	17,000
April	47,000	22,000	25,000
2019	87,000	51,000	36,000
M/M change	12.8%	63.6%	-32.0%
Y/Y change	-39.1%	-29.4%	-52.8%
	MW Total	MW SF	MW MF
May	133,000	84,000	49,000
April	135,000	100,000	35,000
2019	158,000	111,000	47,000
M/M change	-1.5%	-16.0%	40.0%
Y/Y change	-15.8%	-24.3%	4.3%

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

** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

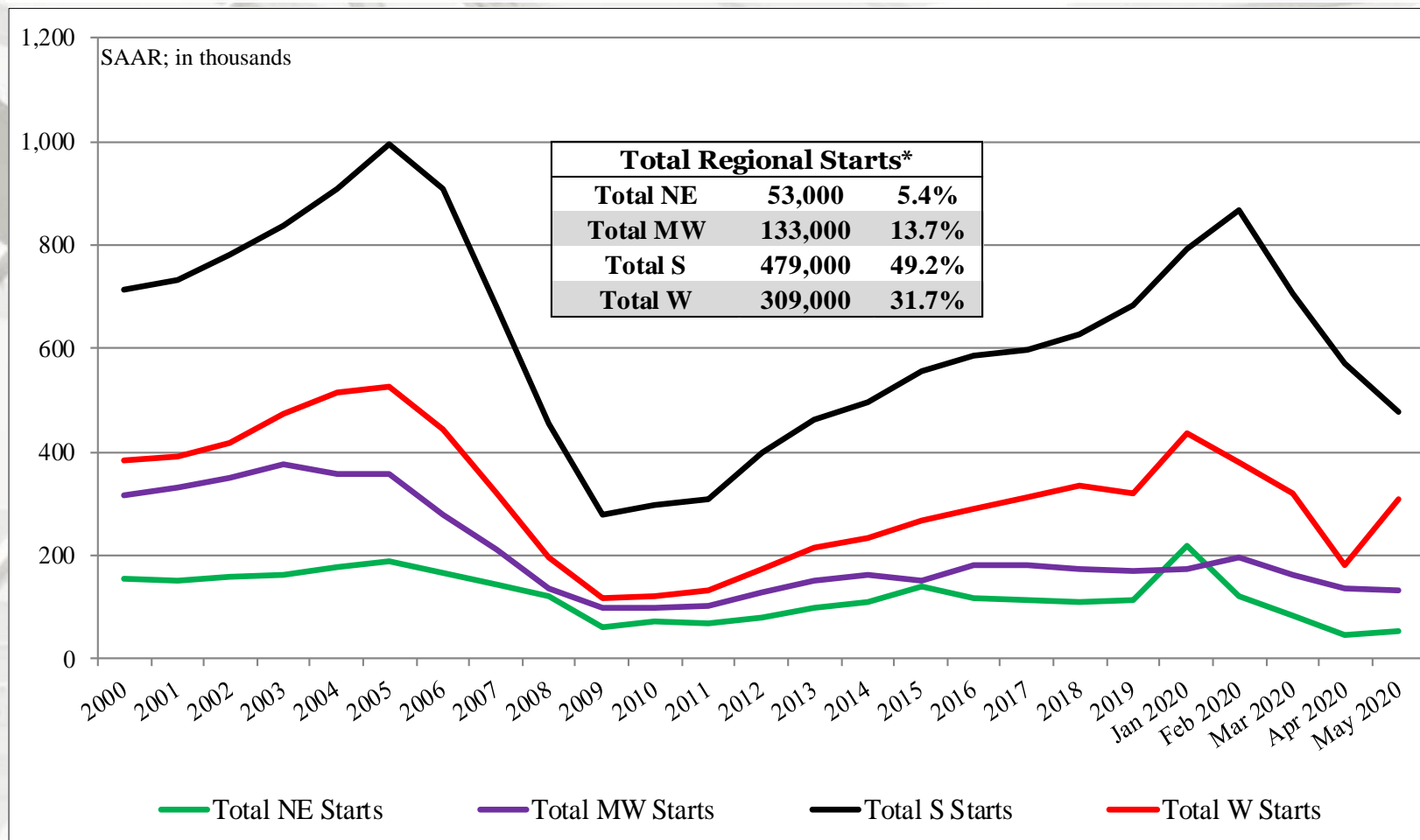
New Housing Starts by Region 2/3

	S Total	S SF	S MF**
May	479,000	380,000	99,000
April	570,000	408,000	162,000
2019	708,000	477,000	231,000
M/M change	-16.0%	-6.9%	-38.9%
Y/Y change	-32.3%	-20.3%	-57.1%
	W Total	W SF	W MF
May	309,000	175,000	134,000
April	182,000	144,000	38,000
2019	315,000	182,000	133,000
M/M change	69.8%	21.5%	252.6%
Y/Y change	-1.9%	-3.8%	0.8%

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

** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

New Housing Starts by Region 3/3

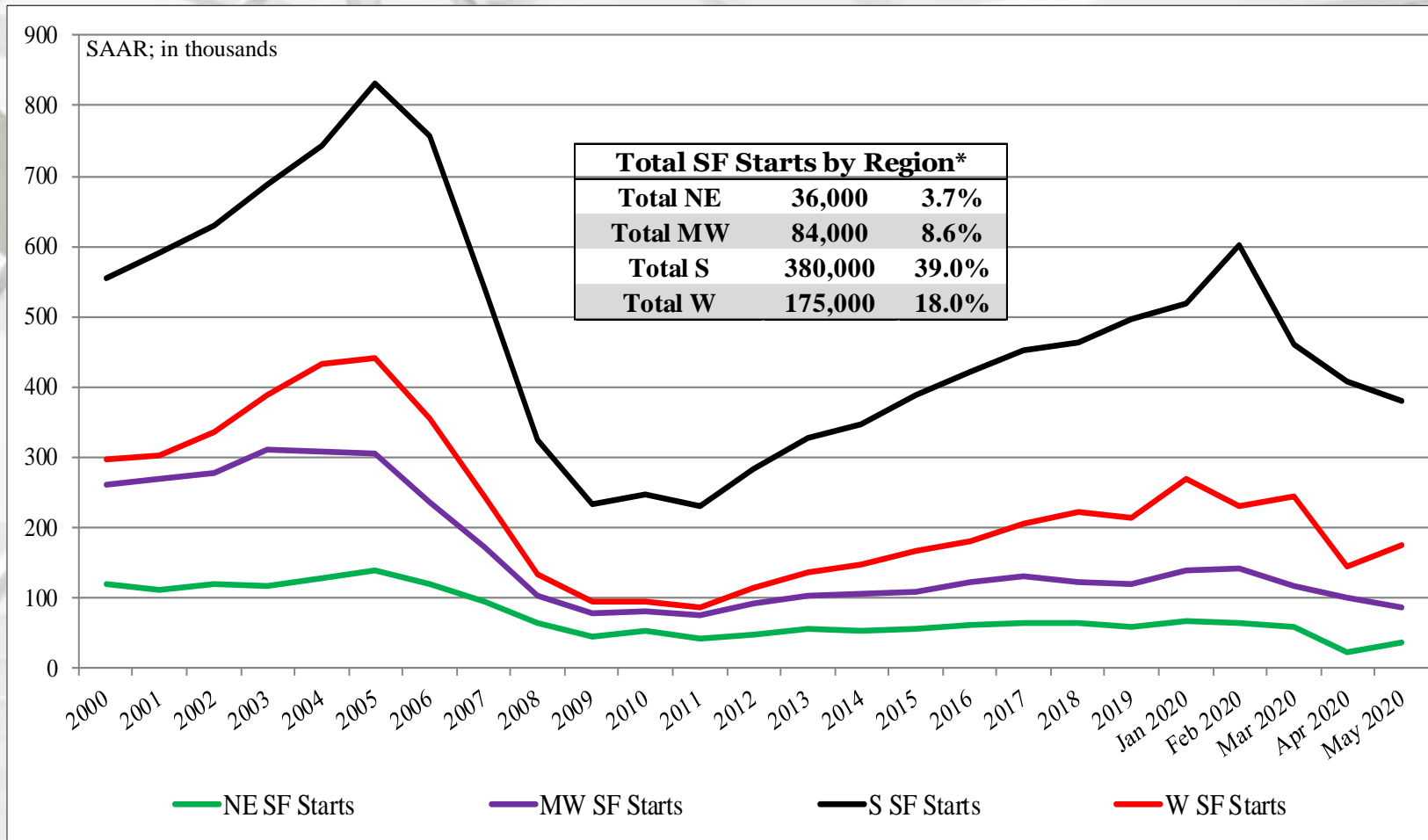


NE = Northeast, MW = Midwest, S = South, W = West

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

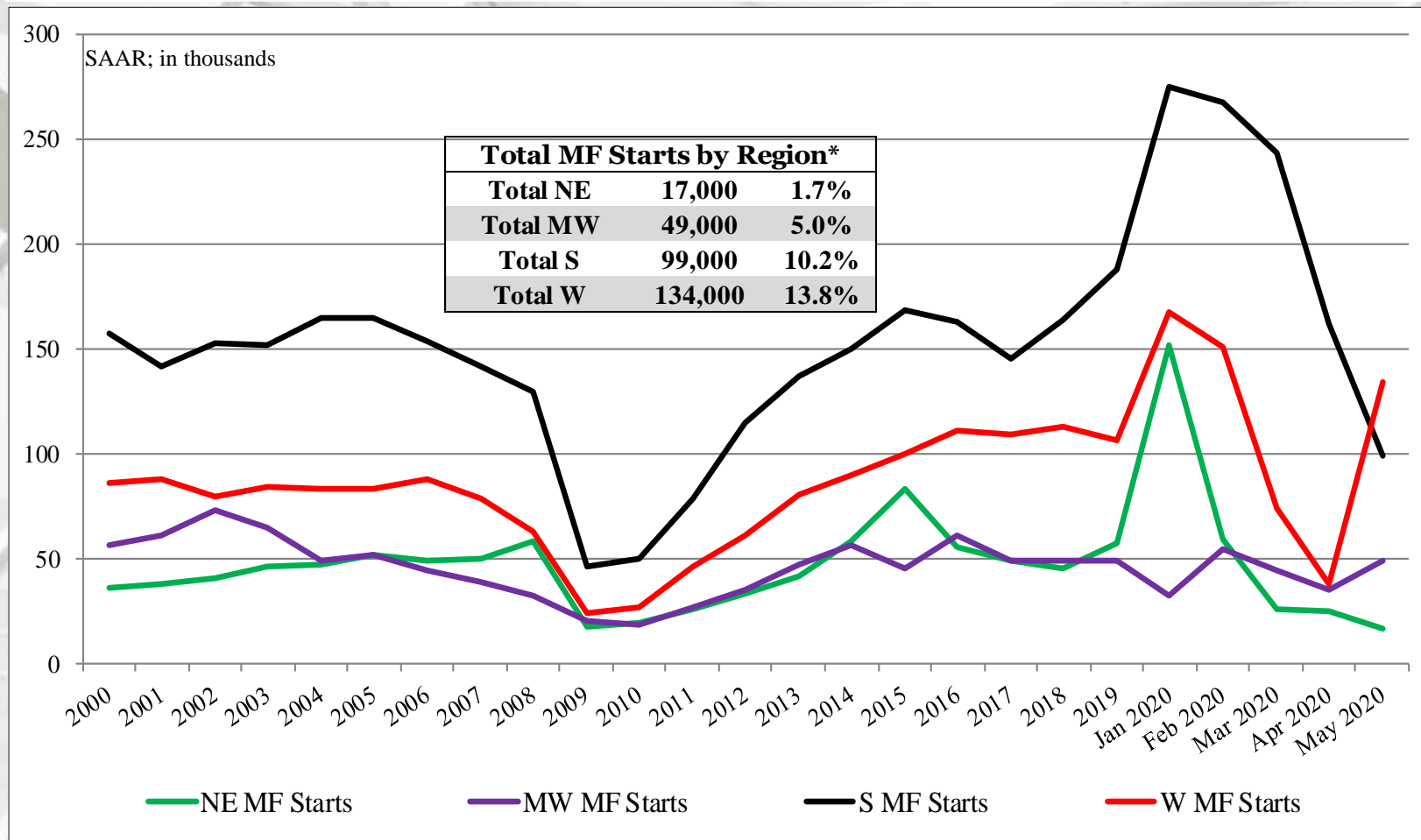


NE = Northeast, MW = Midwest, S = South, W = West

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

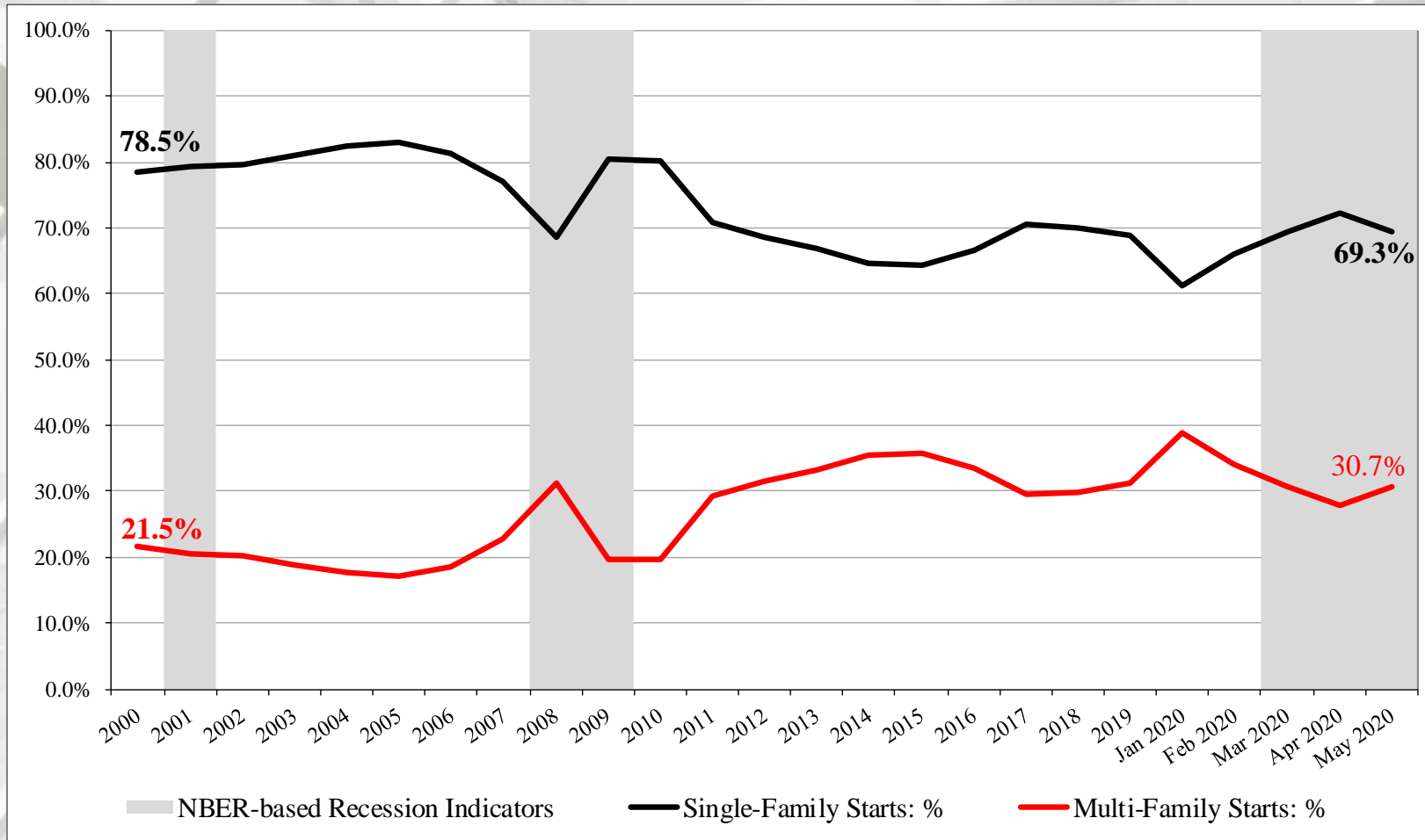


NE = Northeast, MW = Midwest, S = South, W = West

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* Percentage of total starts.

SF vs. MF Housing Starts (%)



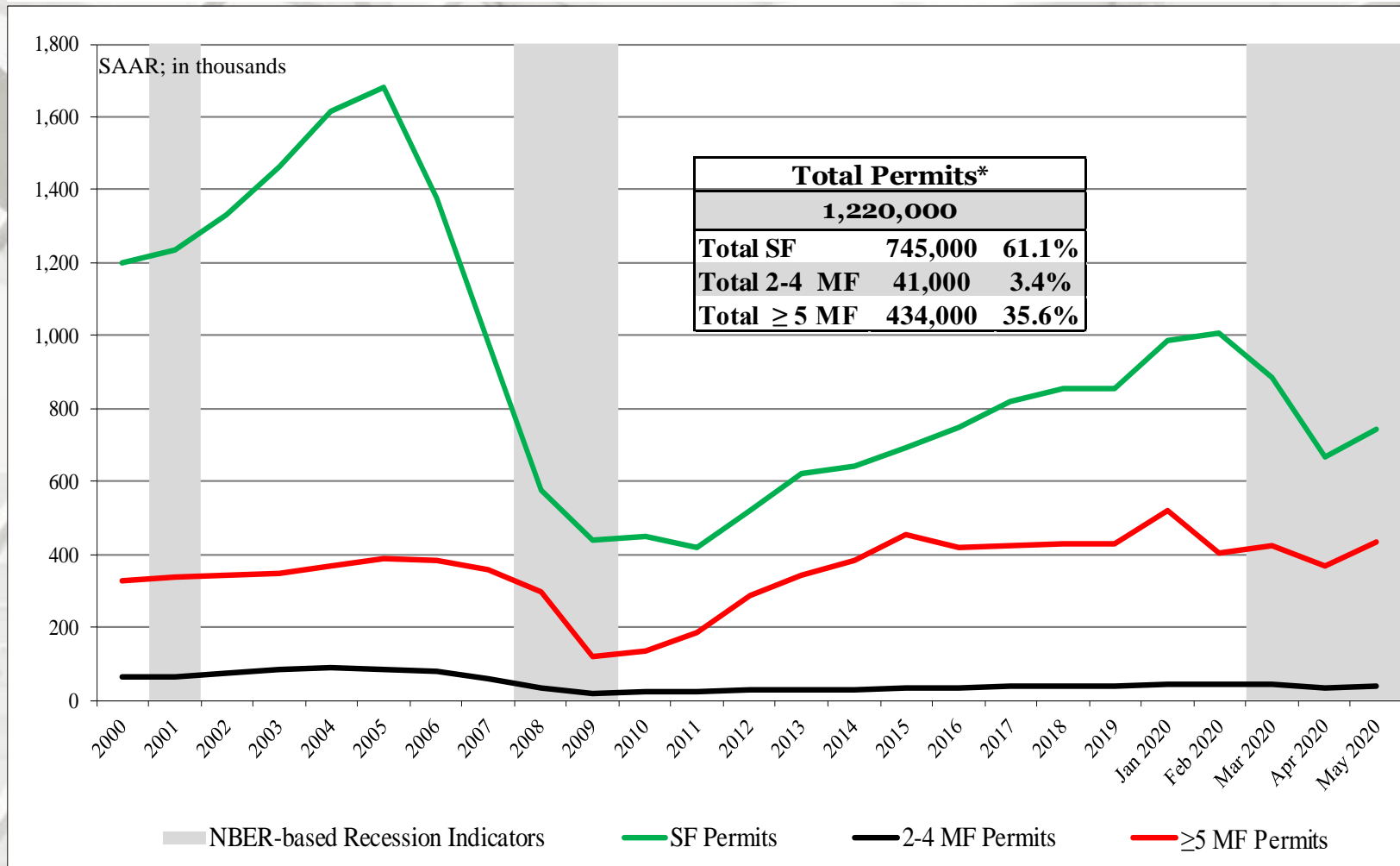
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
May	1,220,000	745,000	41,000	434,000
April	1,066,000	666,000	33,000	367,000
2019	1,338,000	827,000	37,000	474,000
M/M change	14.4%	11.9%	24.2%	18.3%
Y/Y change	-8.8%	-9.9%	10.8%	-8.4%

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

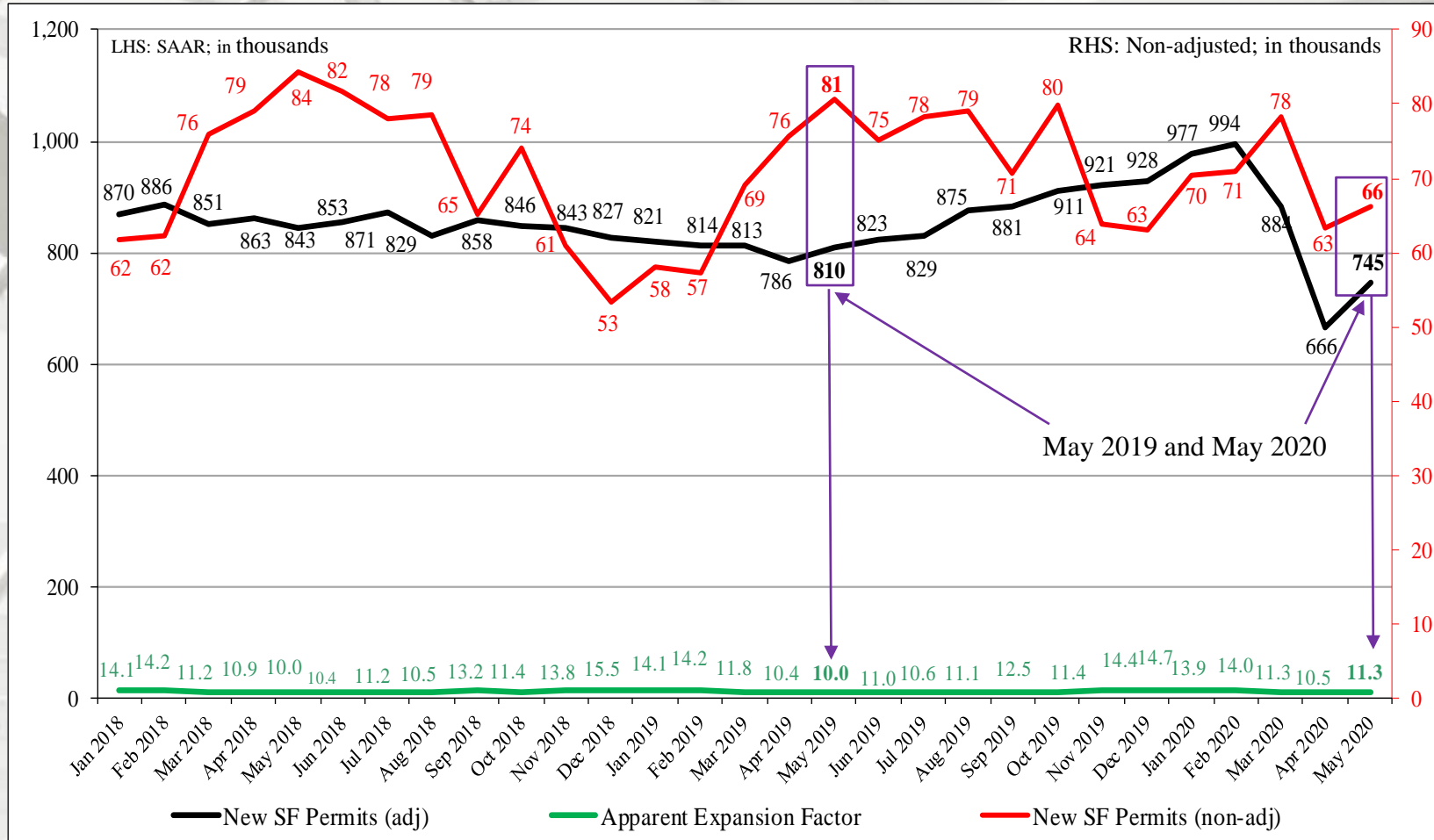
Total New Housing Permits



* 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).

Nominal & SAAR SF Permits



Nominal and Adjusted New SF Monthly Permits

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 Permits by Region 1/2

	NE Total*	NE SF	NE MF**
May	111,000	48,000	63,000
April	61,000	32,000	29,000
2019	104,000	50,000	54,000
M/M change	82.0%	50.0%	117.2%
Y/Y change	6.7%	-4.0%	16.7%
	MW Total*	MW SF	MW MF**
May	167,000	101,000	66,000
April	141,000	90,000	51,000
2019	175,000	111,000	64,000
M/M change	18.4%	12.2%	29.4%
Y/Y change	-4.6%	-9.0%	3.1%

NE = Northeast; ME = Midwest

* All data are SAAR

** US DOC does not report multifamily permits directly, this is an estimation (Total permits – SF permits).

New Housing Permits by Region 2/2

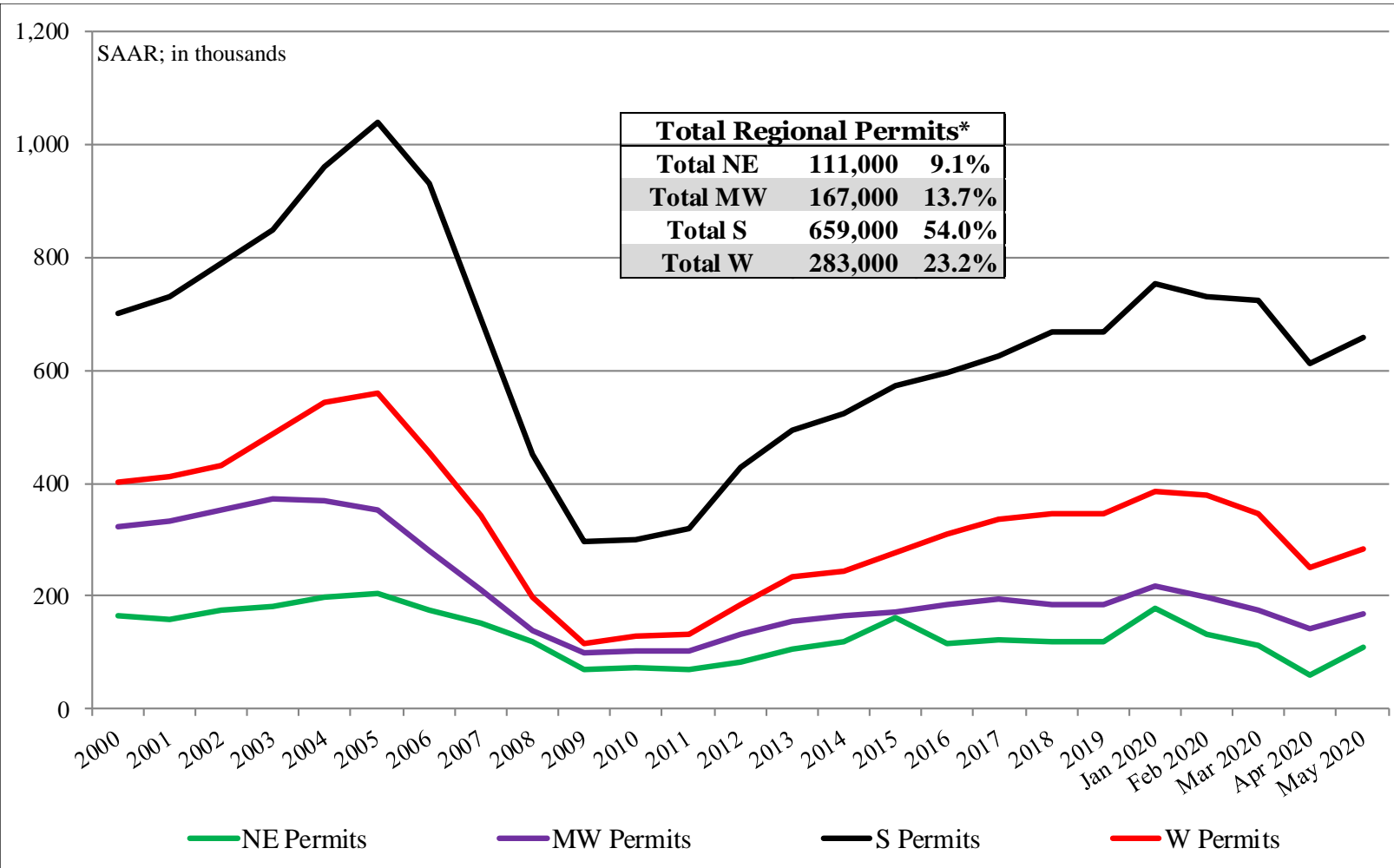
	S Total*	S SF	S MF**
May	659,000	431,000	228,000
April	612,000	408,000	204,000
2019	713,000	470,000	243,000
M/M change	7.7%	5.6%	11.8%
Y/Y change	-7.6%	-8.3%	-6.2%
	W Total*	W SF	W MF**
May	283,000	165,000	118,000
April	252,000	136,000	116,000
2019	346,000	196,000	150,000
M/M change	12.3%	21.3%	1.7%
Y/Y change	-18.2%	-15.8%	-21.3%

S = South; W = West

* All data are SAAR

** US DOC does not report multifamily permits directly, this is an estimation (Total permits – SF permits).

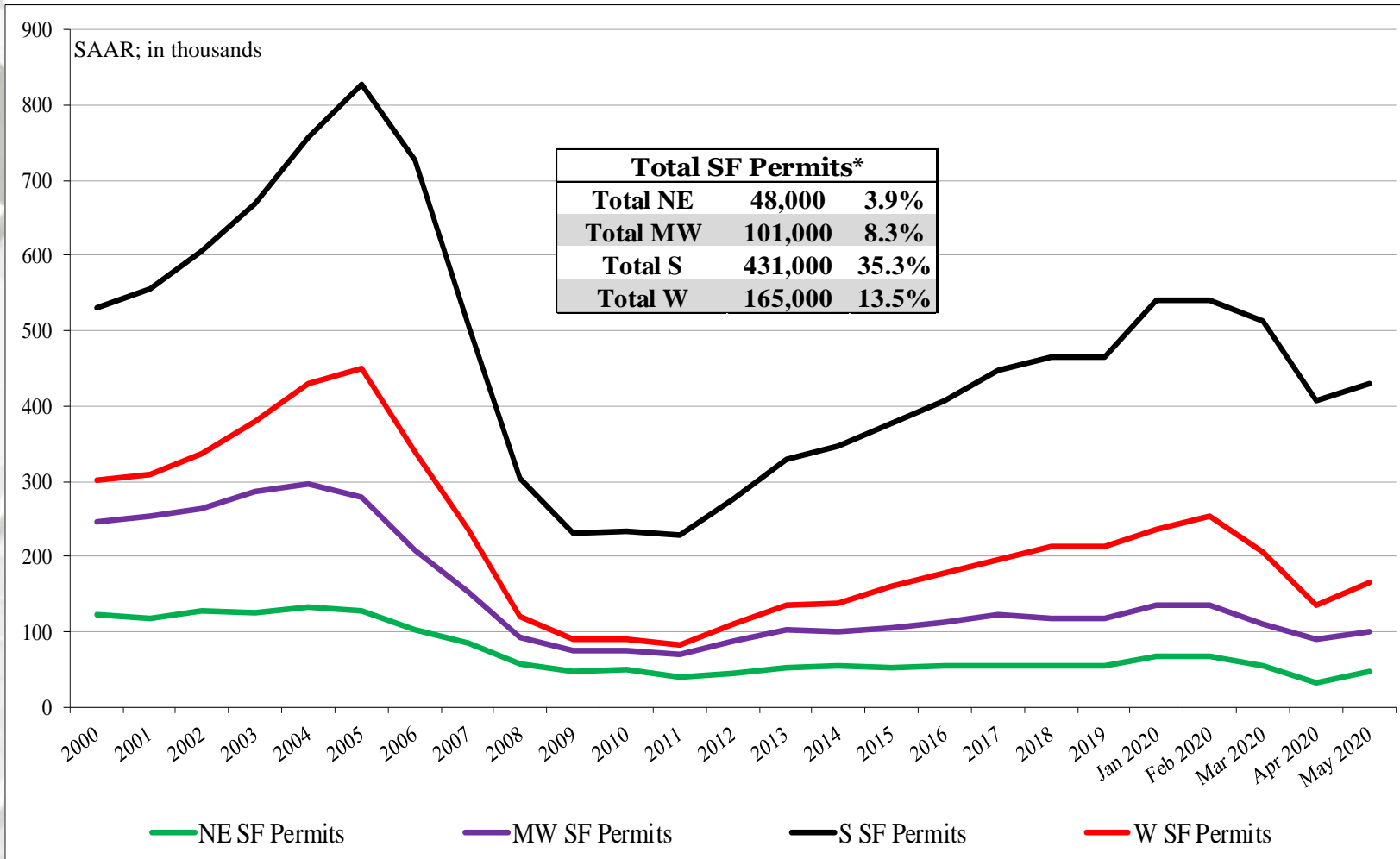
Total Housing Permits by Region



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

* Percentage of total permits.

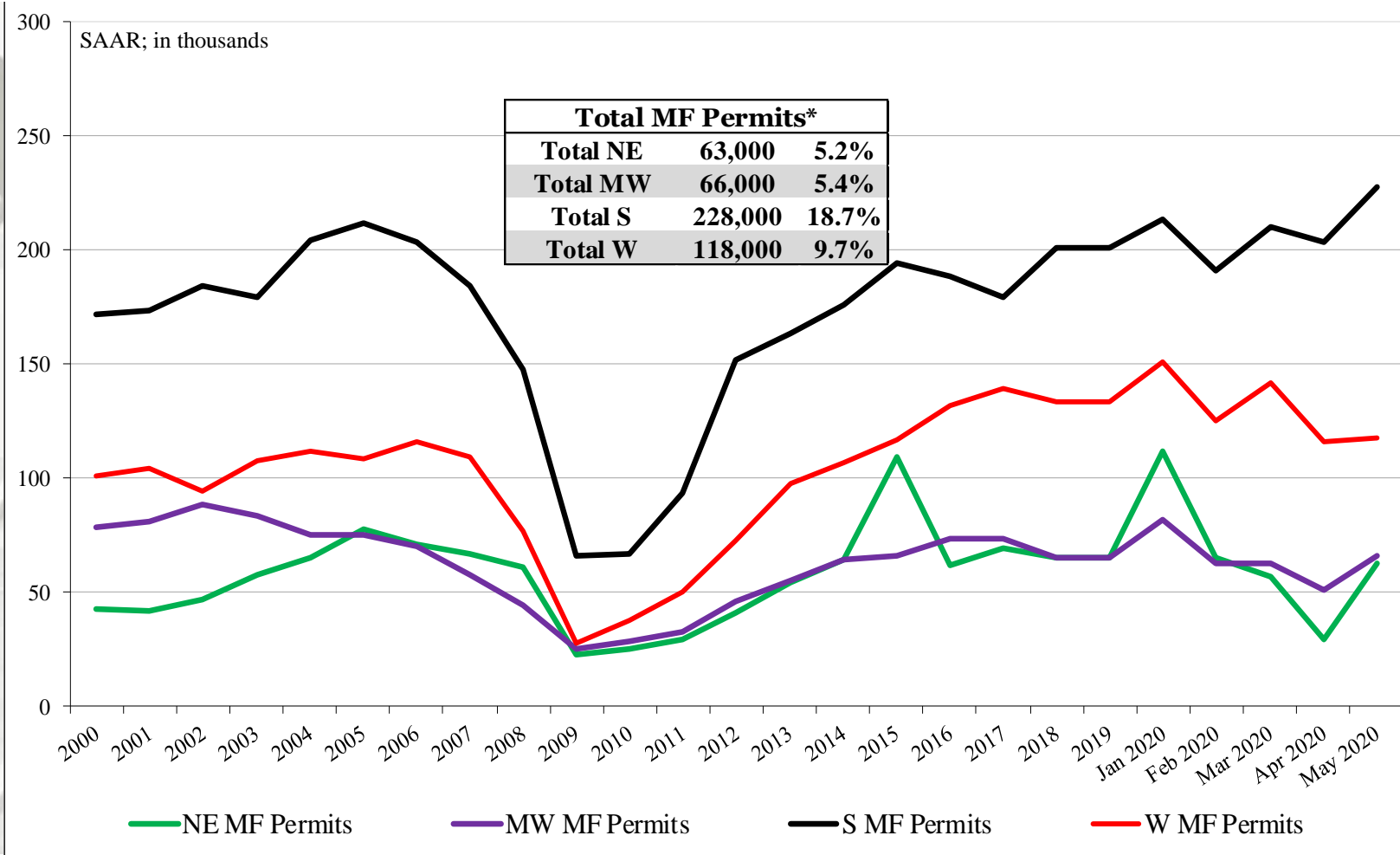
SF Housing Permits by Region



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.

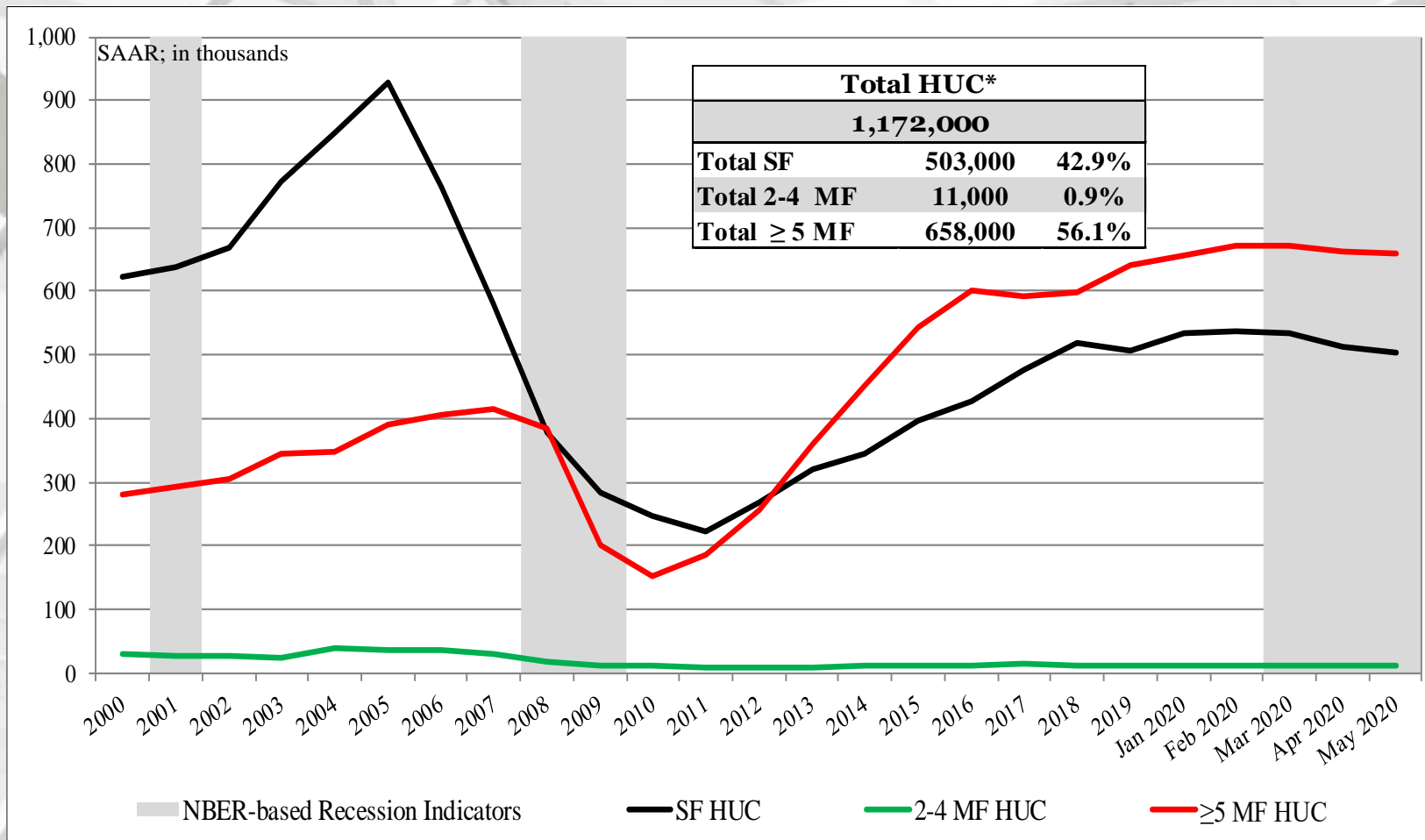
New Housing Under Construction (HUC)

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ≥ 5 unit Under Construction
May	1,172,000	503,000	11,000	658,000
April	1,189,000	514,000	13,000	662,000
2019	1,129,000	523,000	11,000	595,000
M/M change	-1.4	-2.1	-15.4	-0.6
Y/Y change	3.8	-3.8	0.0	10.6

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

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

Total Housing Under Construction



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

* 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 1/2

	NE Total	NE SF	NE MF**
May	170,000	53,000	117,000
April	174,000	54,000	120,000
2019	182,000	64,000	118,000
M/M change	-2.3	-1.9	-2.5
Y/Y change	-6.6	-17.2	-0.8
	MW Total	MW SF	MW MF
May	142,000	71,000	71,000
April	148,000	74,000	74,000
2019	139,000	75,000	64,000
M/M change	-4.1	-4.1	-4.1
Y/Y change	2.2	-5.3	10.9

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

** US DOC does not report multifamily units under construction directly, this is an estimation
(Total under construction – SF under construction).

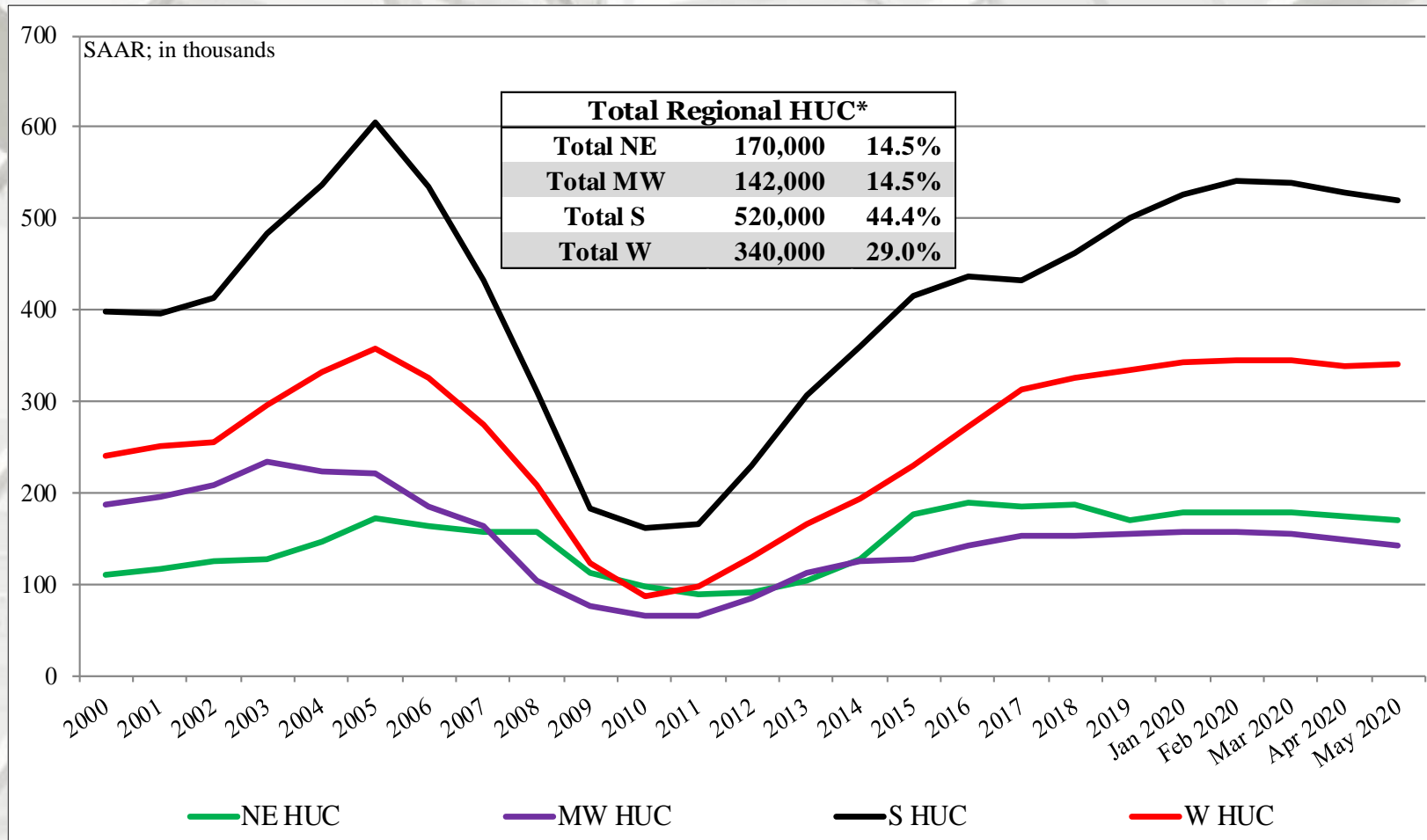
New Housing Under Construction by Region 2/2

	S Total	S SF	S MF**
May	520,000	239,000	281,000
April	529,000	245,000	284,000
2019	487,000	251,000	236,000
M/M change	-1.7	-2.4	-1.1
Y/Y change	6.8	-4.8	19.1
	W Total	W SF	W MF
May	340,000	140,000	200,000
April	338,000	141,000	197,000
2019	321,000	133,000	188,000
M/M change	0.6	-0.7	1.5
Y/Y change	5.9	5.3	6.4

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

** US DOC does not report multifamily units under construction directly, this is an estimation
(Total under construction – SF under construction).

Total Housing Under Construction by Region



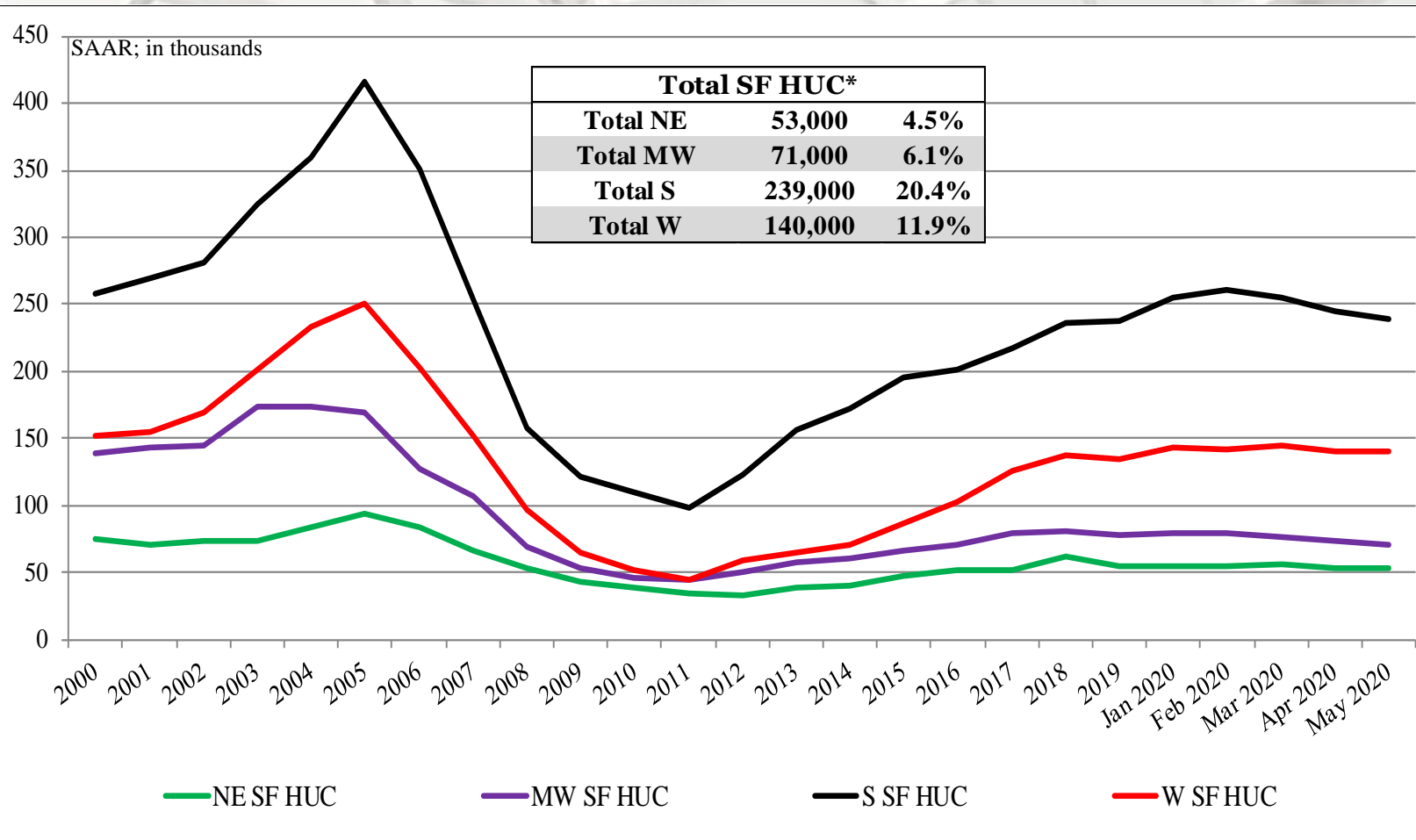
NE = Northeast, MW = Midwest, S = South, W = West

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

* Percentage of total housing under construction units.

Source: <http://www.census.gov/construction/nrc/pdf/newresconst.pdf>; 6/17/20

SF Housing Under Construction by Region

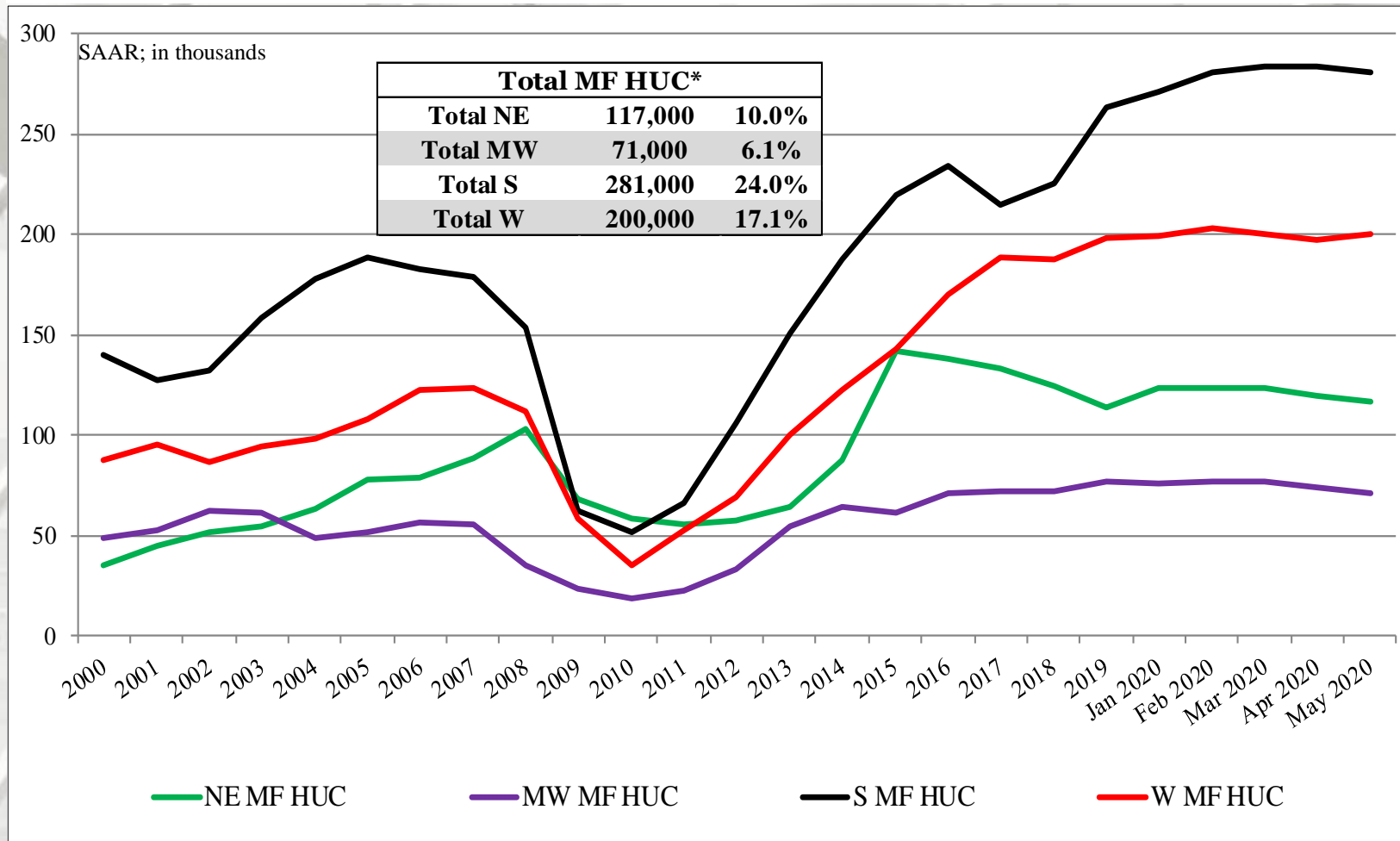


NE = Northeast, MW = Midwest, S = South, W = West.

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

* Percentage of total housing under construction units.

MF Housing Under Construction by Region



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

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

* Percentage of total housing under construction units.

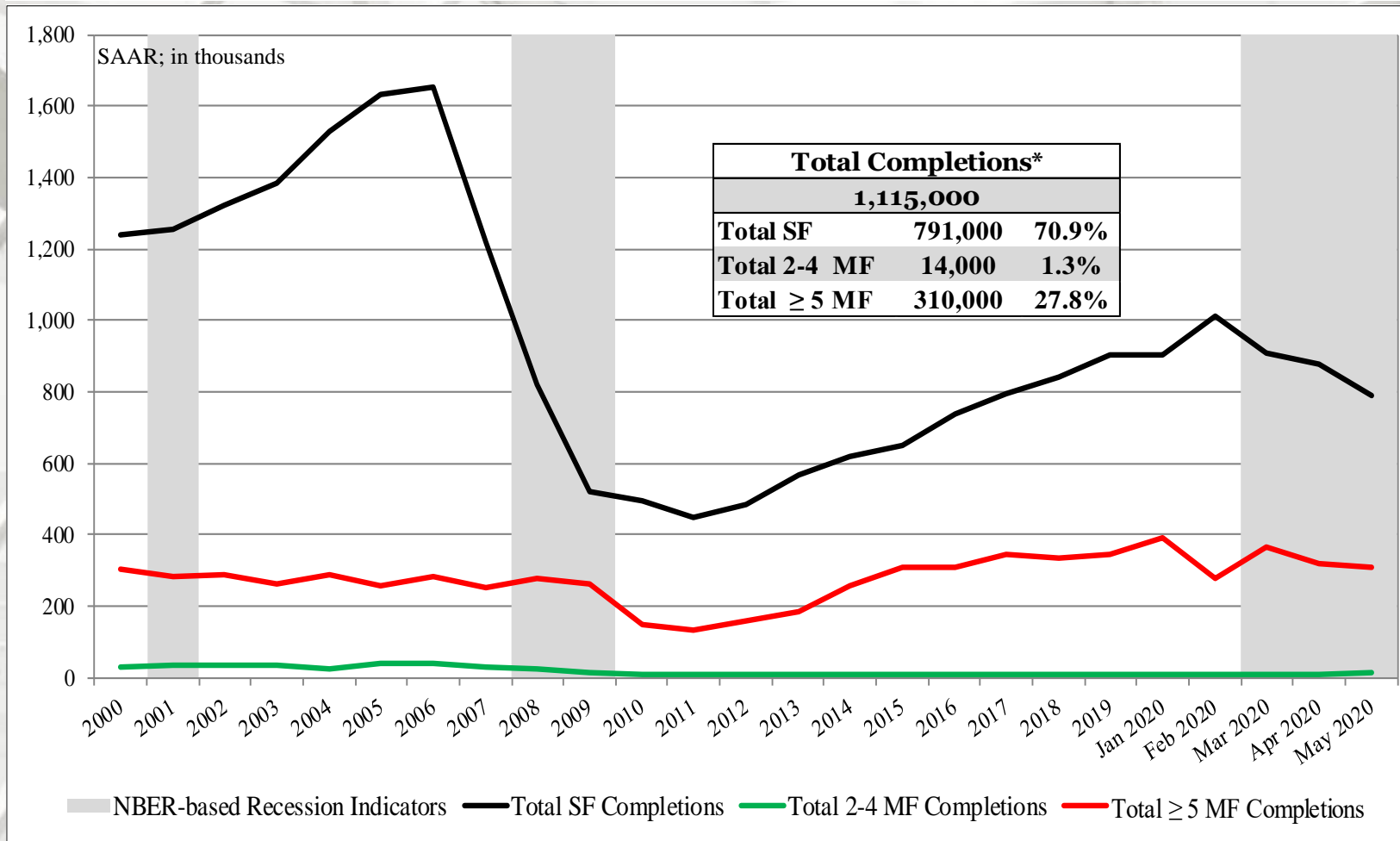
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
May	1,115,000	791,000	14,000	310,000
April	1,203,000	877,000	9,000	317,000
2019	1,230,000	887,000	4,000	339,000
M/M change	-7.3%	-9.8%	55.6%	-2.2%
Y/Y change	-9.3%	-10.8%	250.0%	-8.6%

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

** US DOC does not report multifamily 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 1/2

	NE Total	NE SF	NE MF**
May	68,000	48,000	20,000
April	61,000	34,000	27,000
2019	99,000	69,000	30,000
M/M change	11.5%	41.2%	-25.9%
Y/Y change	-31.3%	-30.4%	-33.3%
	MW Total	MW SF	MW MF
May	193,000	115,000	78,000
April	173,000	129,000	44,000
2019	200,000	113,000	87,000
M/M change	11.6%	-10.9%	77.3%
Y/Y change	-3.5%	1.8%	-10.3%

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

** US DOC does not report multifamily units completions directly, this is an estimation
(Total completions – SF completions).

New Housing Completions by Region 2/2

	S Total	S SF	S MF**
May	583,000	449,000	134,000
April	698,000	538,000	160,000
2019	602,000	491,000	111,000
M/M change	-16.5%	-16.5%	-16.3%
Y/Y change	-3.2%	-8.6%	20.7%
	W Total	W SF	W MF
May	271,000	179,000	92,000
April	271,000	176,000	95,000
2019	329,000	214,000	115,000
M/M change	0.0%	1.7%	-3.2%
Y/Y change	-17.6%	-16.4%	-20.0%

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

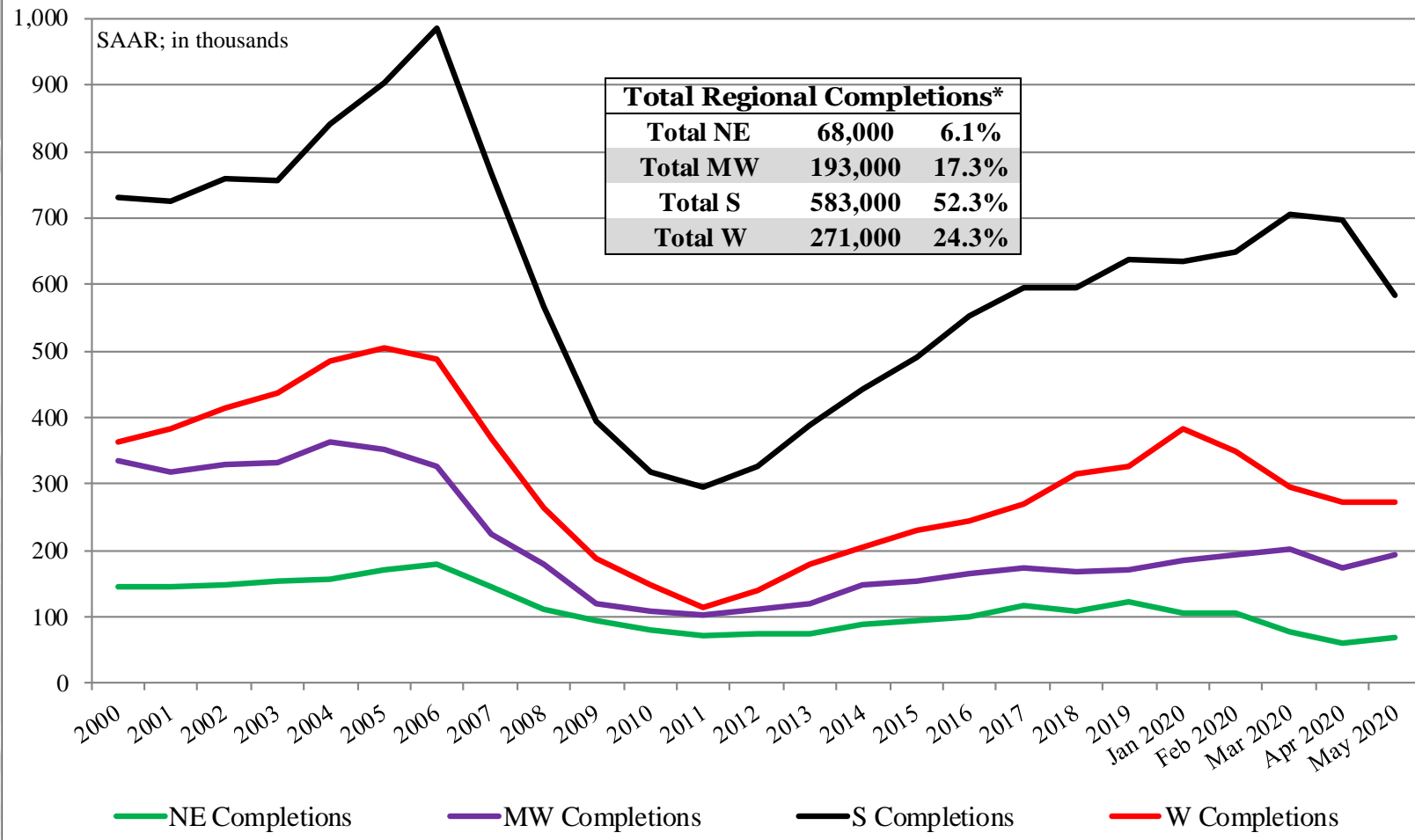
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: <http://www.census.gov/construction/nrc/pdf/newresconst.pdf>; 6/17/20

Return TOC

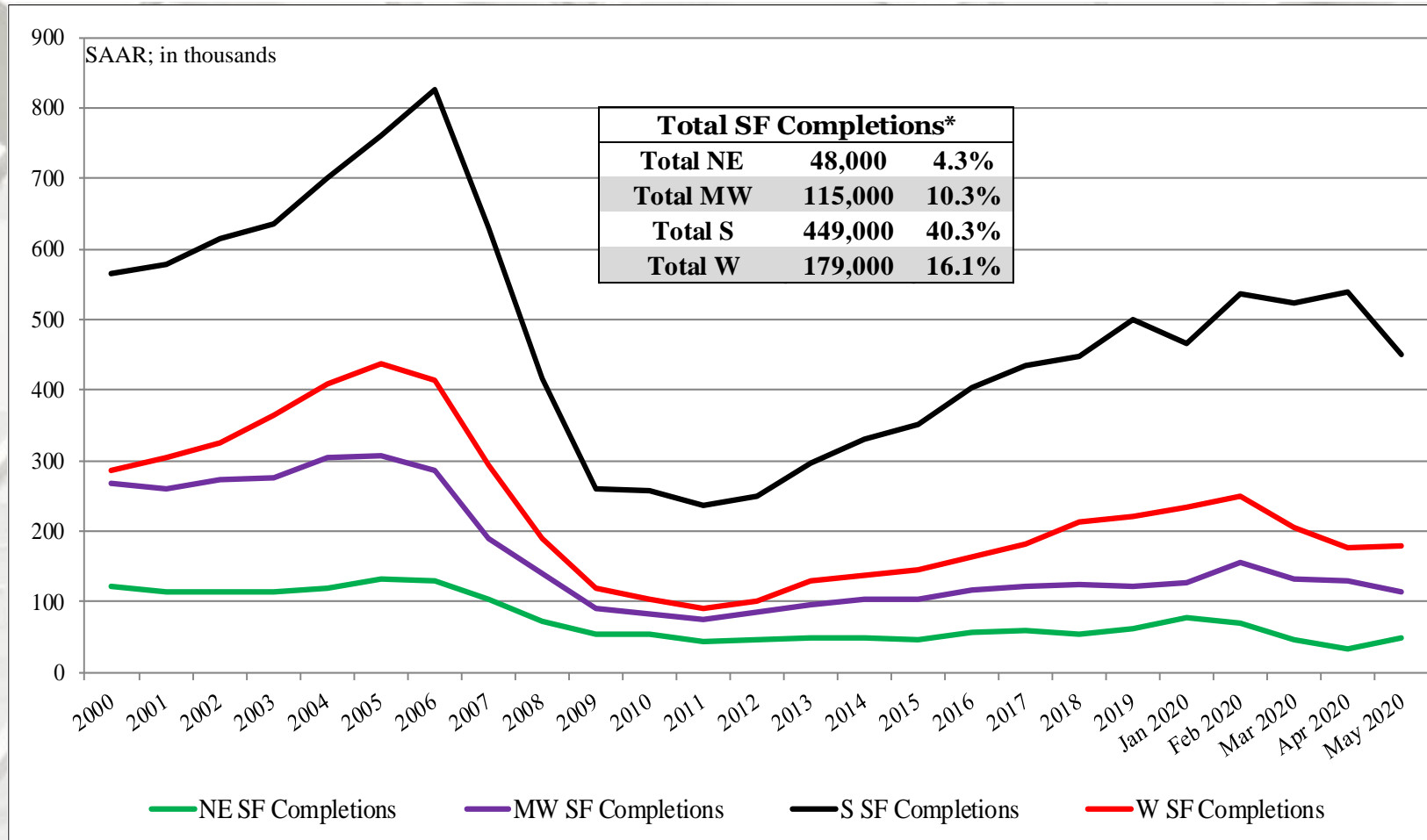
Total Housing Completions by Region



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

** US DOC does not report multifamily units completions directly, this is an estimation
(Total completions – SF completions).

SF Housing Completions by Region

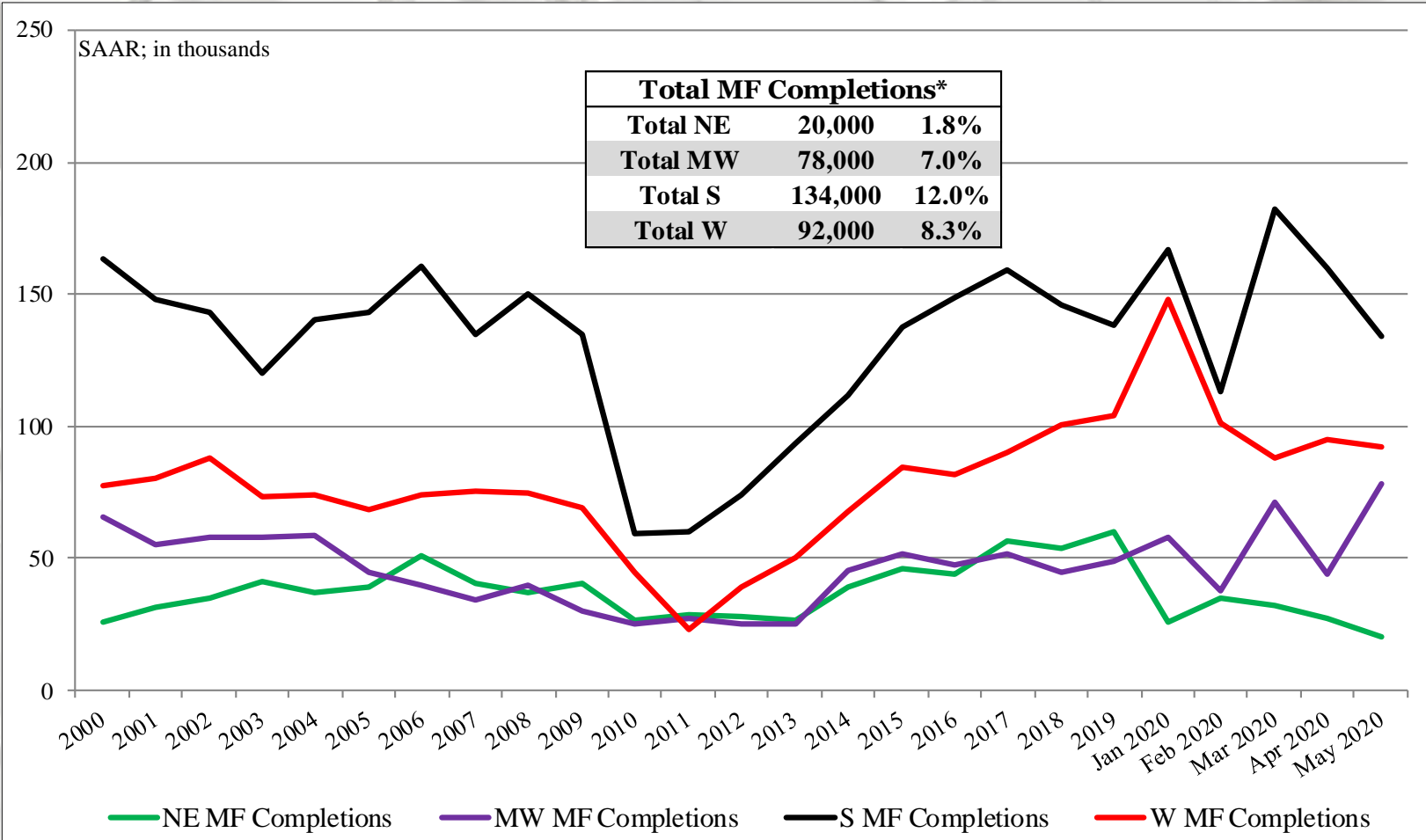


NE = Northeast, MW = Midwest, S = South, W = West

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

New Single-Family House Sales

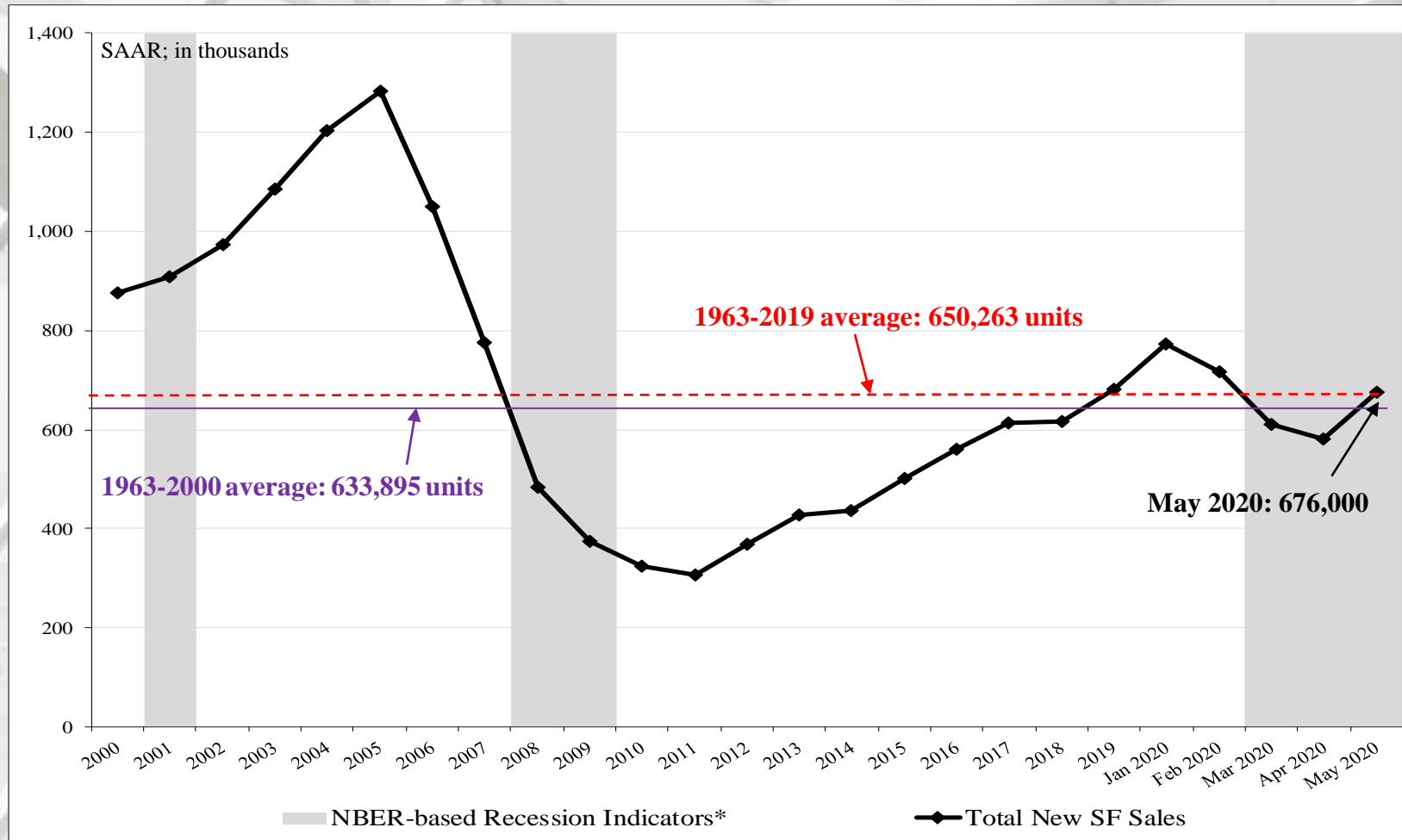
	New SF Sales*	Median Price	Mean Price	Month's Supply
May	676,000	\$317,900	\$368,800	5.6
April	580,000	\$303,000	\$352,300	6.7
2019	600,000	\$312,700	\$379,100	6.7
M/M change	16.6%	4.9%	4.7%	-16.4%
Y/Y change	12.7%	1.7%	-2.7%	-16.4%

* 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 greater than the consensus forecast³ of 630 m (range: 600 m to 670 m). The past three month's new SF sales data also were revised:

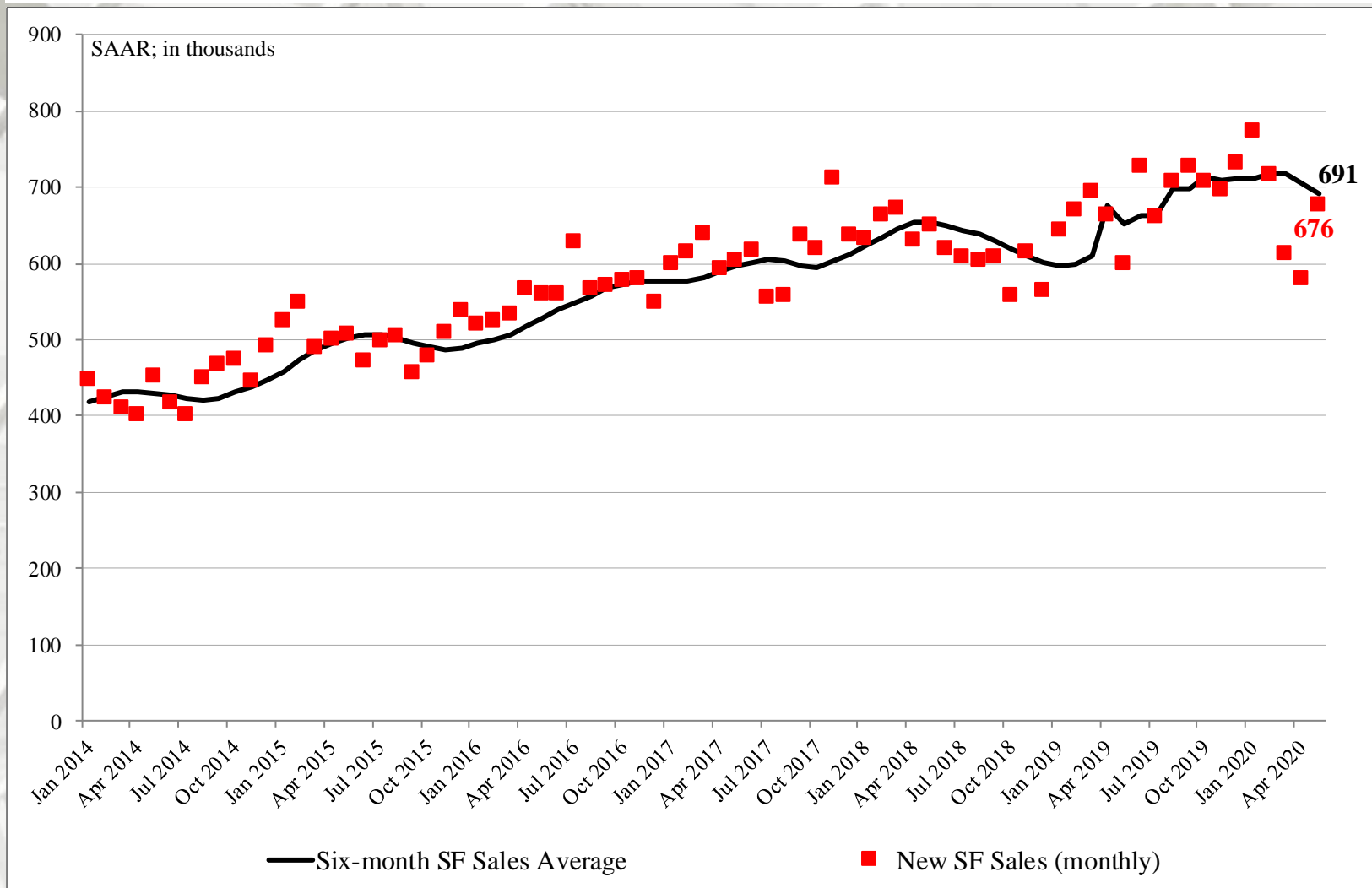
February initial:	765 m revised to 716 m;
March initial:	627 m revised to 612 m;
April initial:	623 m revised to 580 m.

New SF House Sales 1/7



* 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			
May	32,000	73,000	402,000	169,000			
April	22,000	78,000	349,000	131,000			
2019	22,000	71,000	378,000	129,000			
M/M change	45.5%	-6.4%	15.2%	29.0%			
Y/Y change	45.5%	2.8%	6.3%	31.0%			
	\$150 - ≤ \$150m	\$150 - \$199.9m	\$200 - 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m
May ^{1,2,3,4}	2,000	8,000	20,000	18,000	8,000	7,000	3,000
April	2,000	6,000	19,000	13,000	8,000	5,000	2,000
2019	2,000	4,000	20,000	13,000	7,000	7,000	3,000
M/M change	100.0%	20.0%	0.0%	-18.8%	-11.1%	-16.7%	-33.3%
Y/Y change	100.0%	50.0%	5.6%	-27.8%	-20.0%	-44.4%	-33.3%
New SF sales: %	3.0%	12.1%	30.3%	27.3%	12.1%	10.6%	4.5%

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 May not add to total because of rounding.

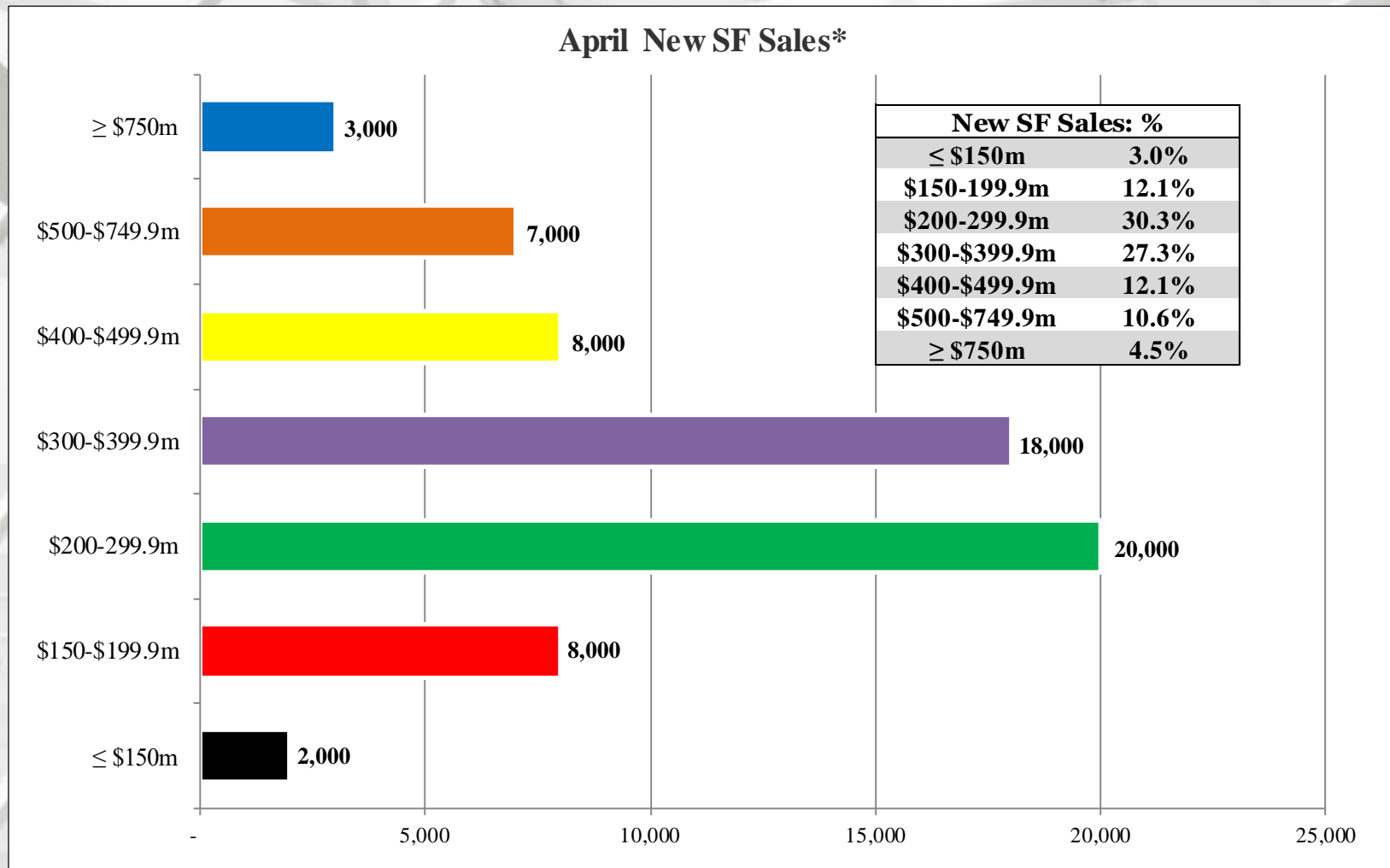
⁴ Housing prices are adjusted at irregular intervals.

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

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 6/23/20;

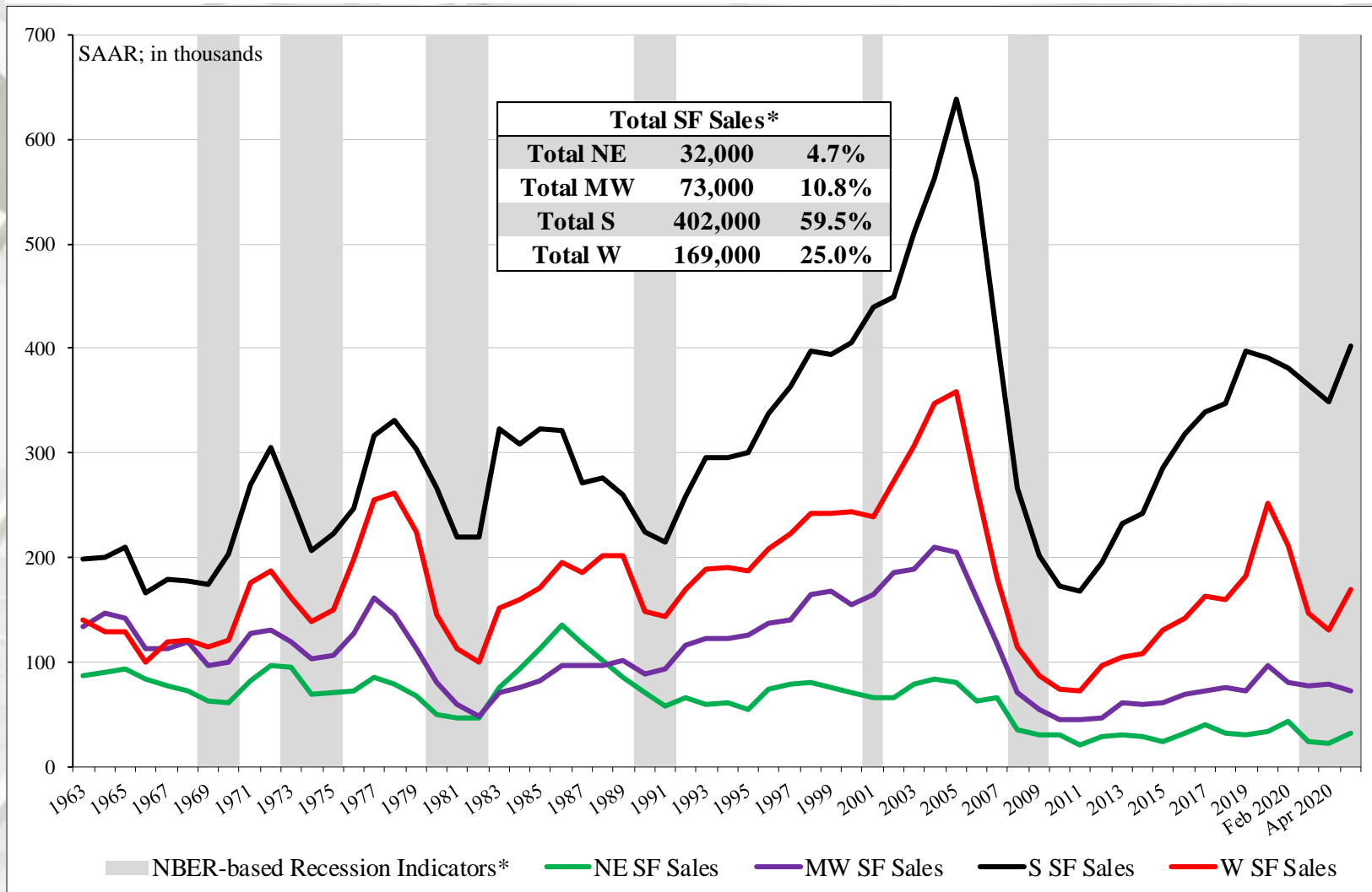
⁴ https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

New SF House Sales



- Total new sales by price category and percent.

New SF House Sales by Region

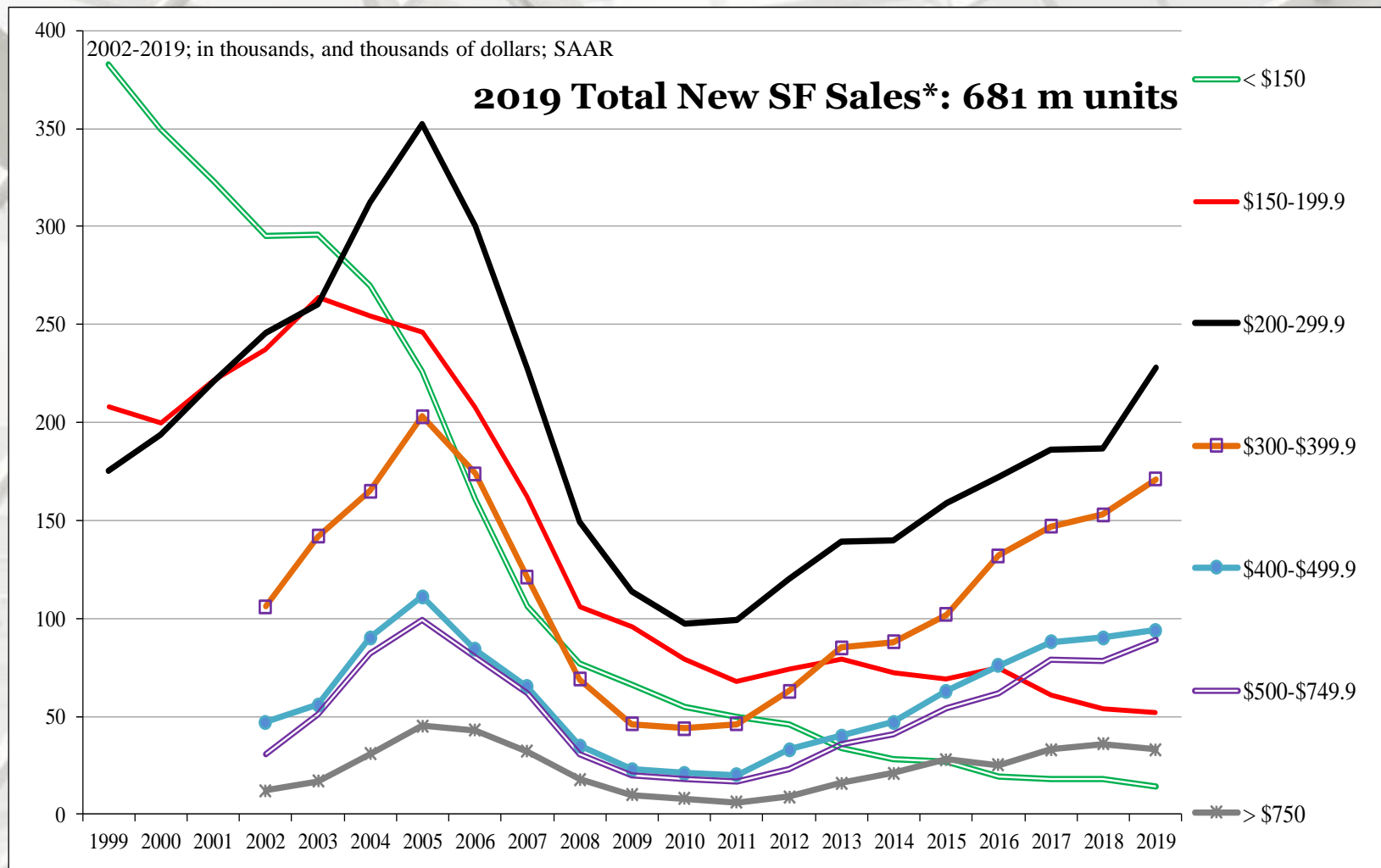


NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of total new sales.

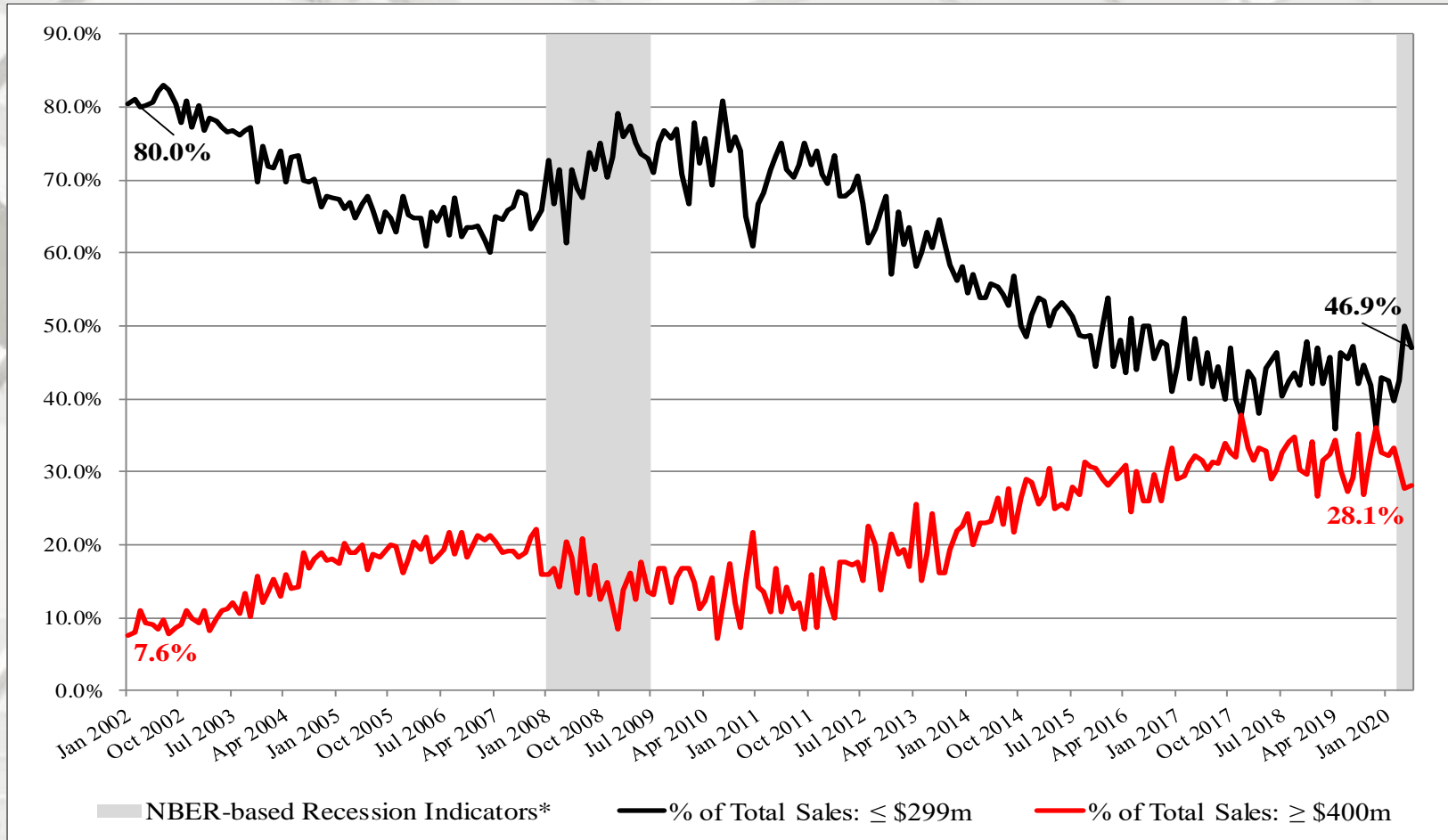
* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF House Sales by Price Category



* Sales tallied by price category.

New SF House Sales 2/7



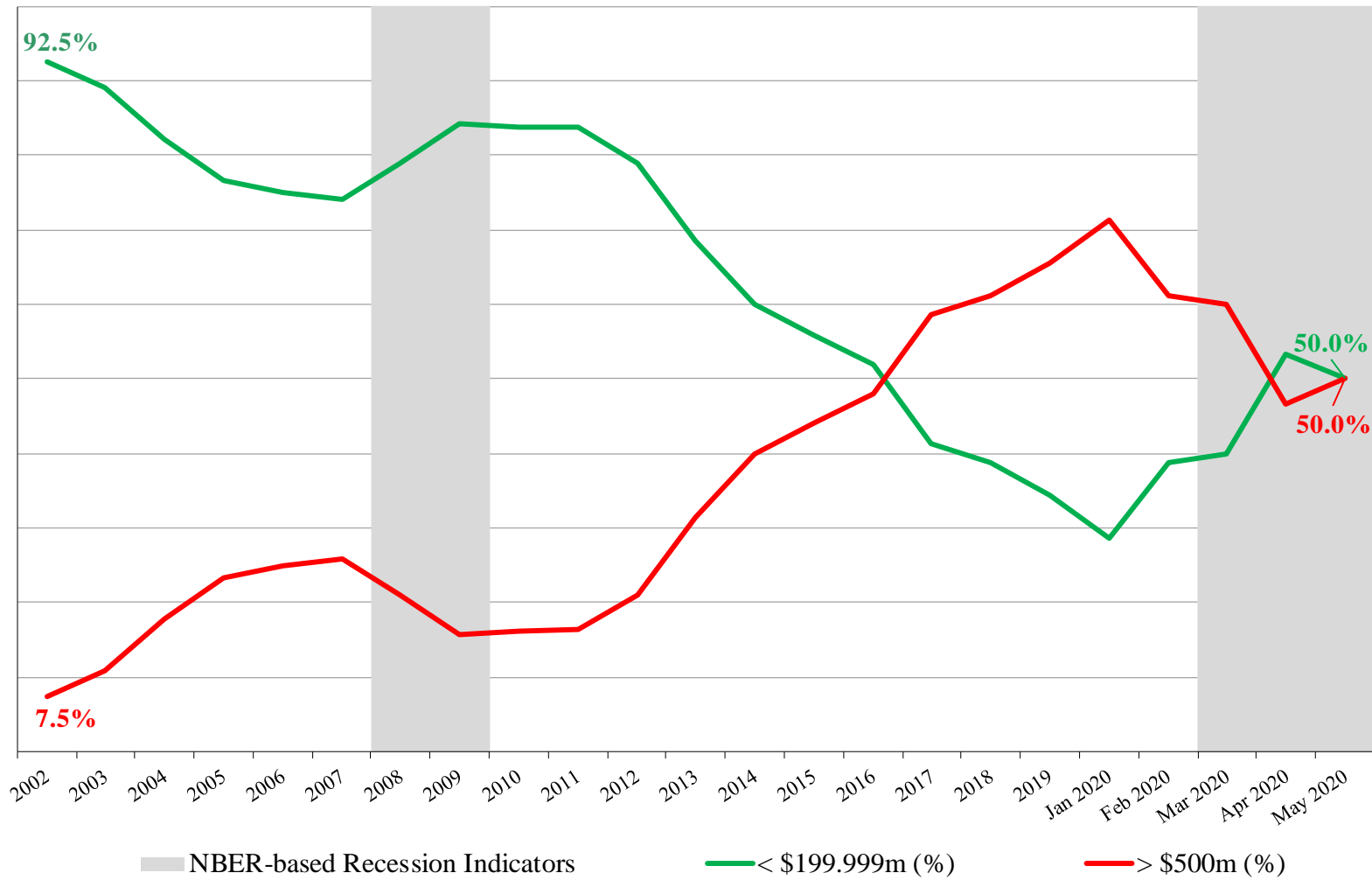
* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF Sales: ≤ \$200m and ≥ \$400m: 2002 – May 2020

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.

Source: ¹ <https://www.census.gov/construction/nrs/index.html>; ² https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 6/23/20

New SF House Sales 3/7



New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to May 2020

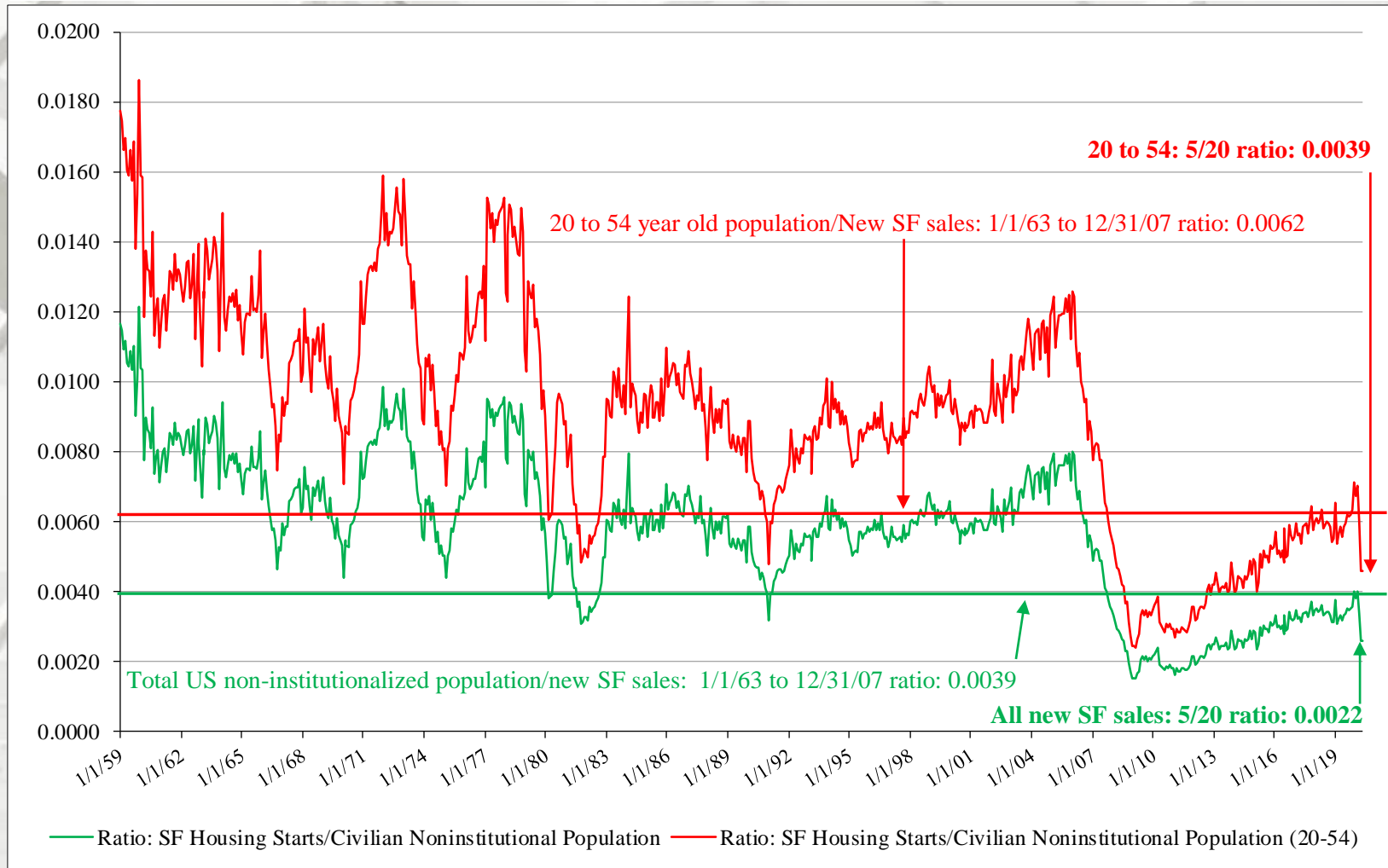
The number of ≤ \$200 thousand SF houses has declined dramatically since 2002^{1, 2}. Subsequently, from 2012 onward, the ≥ \$500 thousand class has soared (on a percentage basis) in contrast to the ≤ \$200m class. One of the most oft mentioned reasons for this occurrence is builder net margins.

Note: Sales values are not adjusted for inflation.

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

Source: ¹ <https://www.census.gov/construction/nrs/index.html>; ² https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 6/23/20

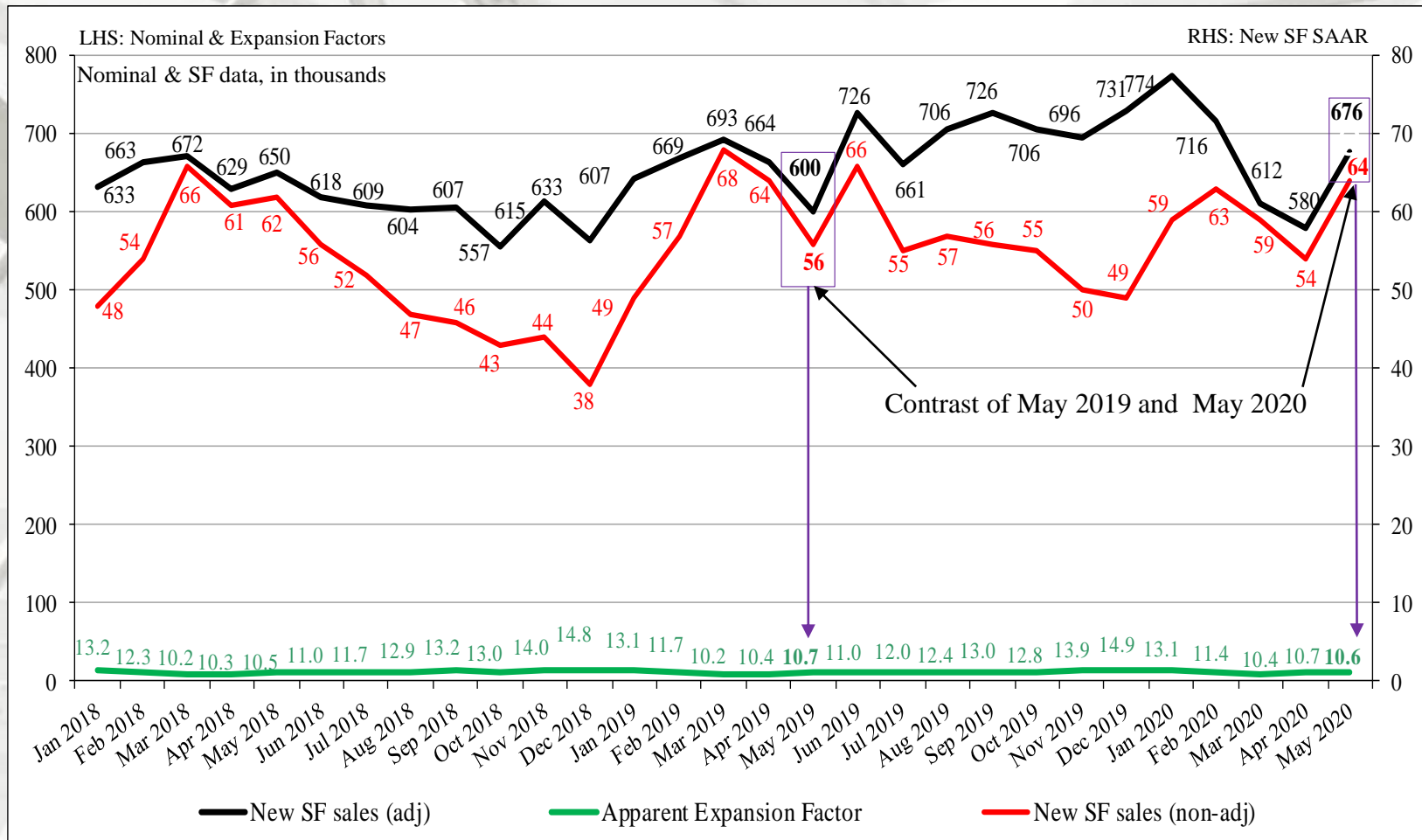
New SF House Sales 4/7



New SF sales adjusted for the US population

From May 1963 to May 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in May 2020 it was 0.0022 – a decline from April (0.0024). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in May 2020 it was 0.0042 – also a decrease from April (0.0039). All are non-adjusted data. From a population viewpoint, construction is less than what is necessary for changes in the population (i.e., under-building).

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

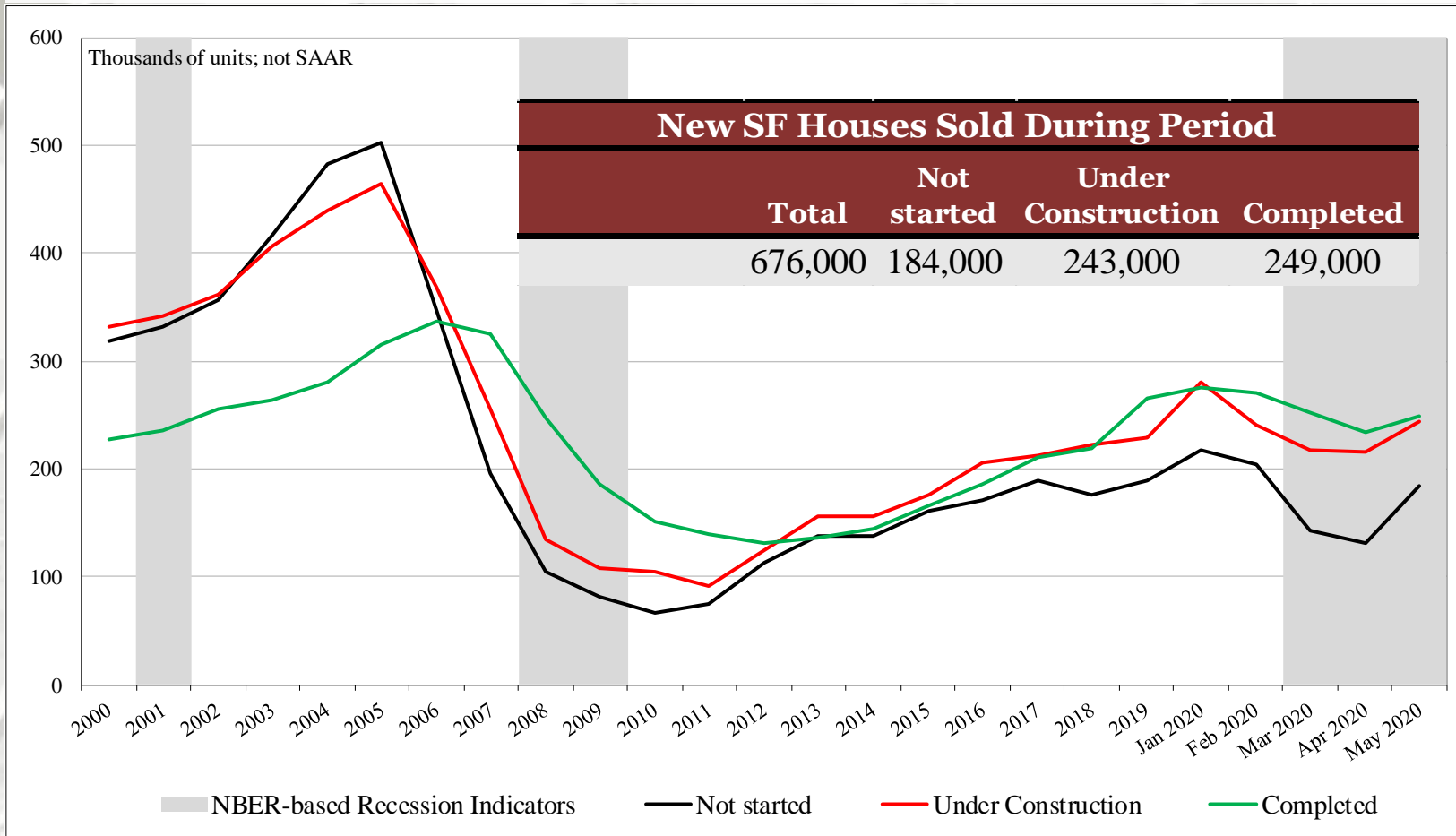
New SF House Sales 5/7

New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
May	676,000	184,000	243,000	249,000
April	580,000	131,000	216,000	233,000
2019	600,000	154,000	206,000	240,000
M/M change	16.6%	40.5%	12.5%	6.9%
Y/Y change	12.7%	19.5%	18.0%	3.8%
Total percentage		27.2%	35.9%	36.8%

Not SAAR

New SF House Sales: Sold During Period



Not SAAR

* 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

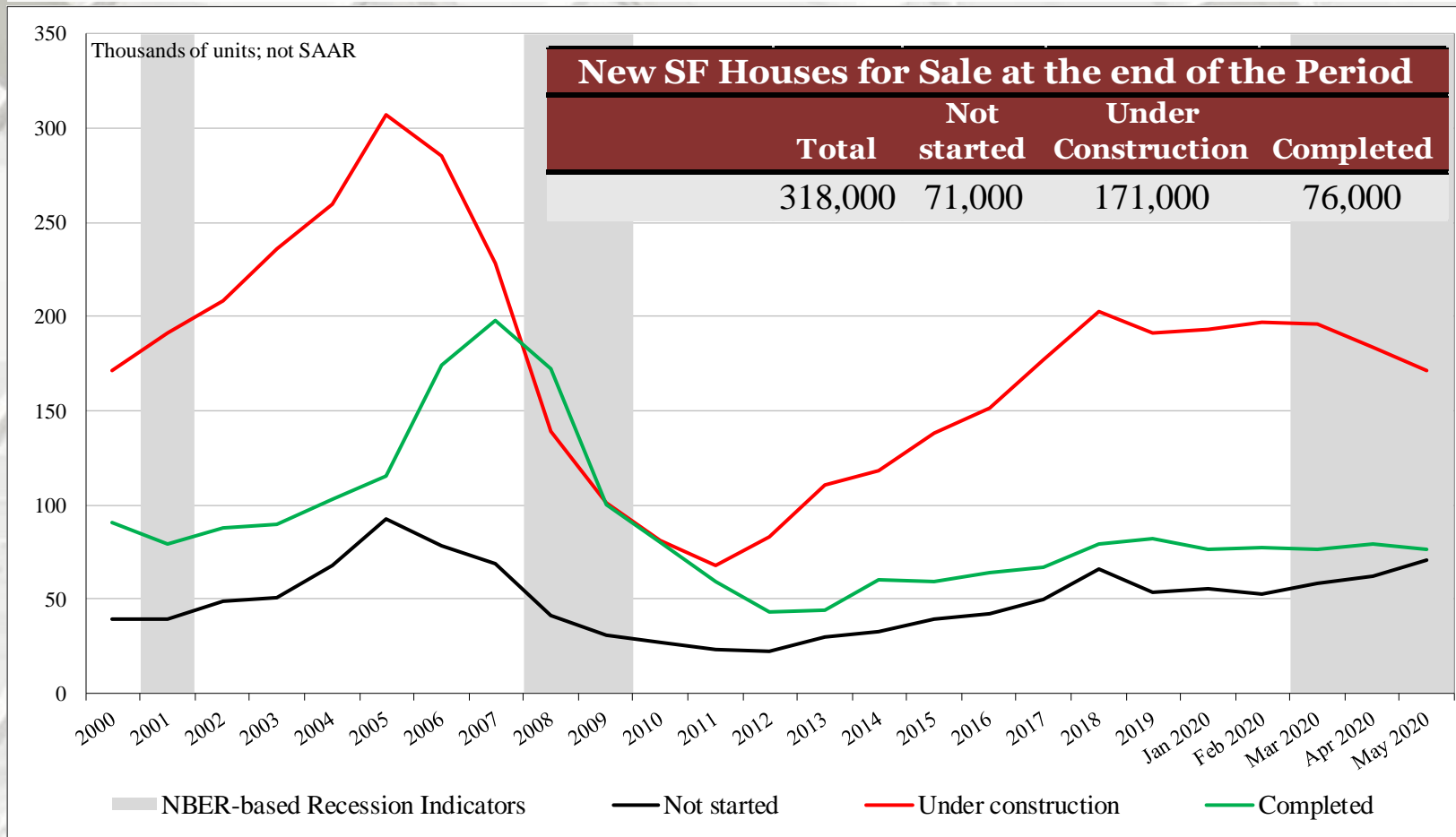
New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
May	318,000	71,000	171,000	76,000
April	325,000	62,000	184,000	79,000
2019	336,000	55,000	201,000	80,000
M/M change	-2.2%	14.5%	-7.1%	-3.8%
Y/Y change	-5.4%	29.1%	-14.9%	-5.0%
Total percentage		22.3%	53.8%	23.9%

Not SAAR

Sales of homes “Not started” registered a large increase in May (4.5% M/M and nearly 7% Y/Y). This is due, in part, to past under building; buyers desiring “new” houses; land restrictions (e.g., availability and regulations); and shortages of carpenters.

New SF House Sales: For Sale at End of Period



Not SAAR

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

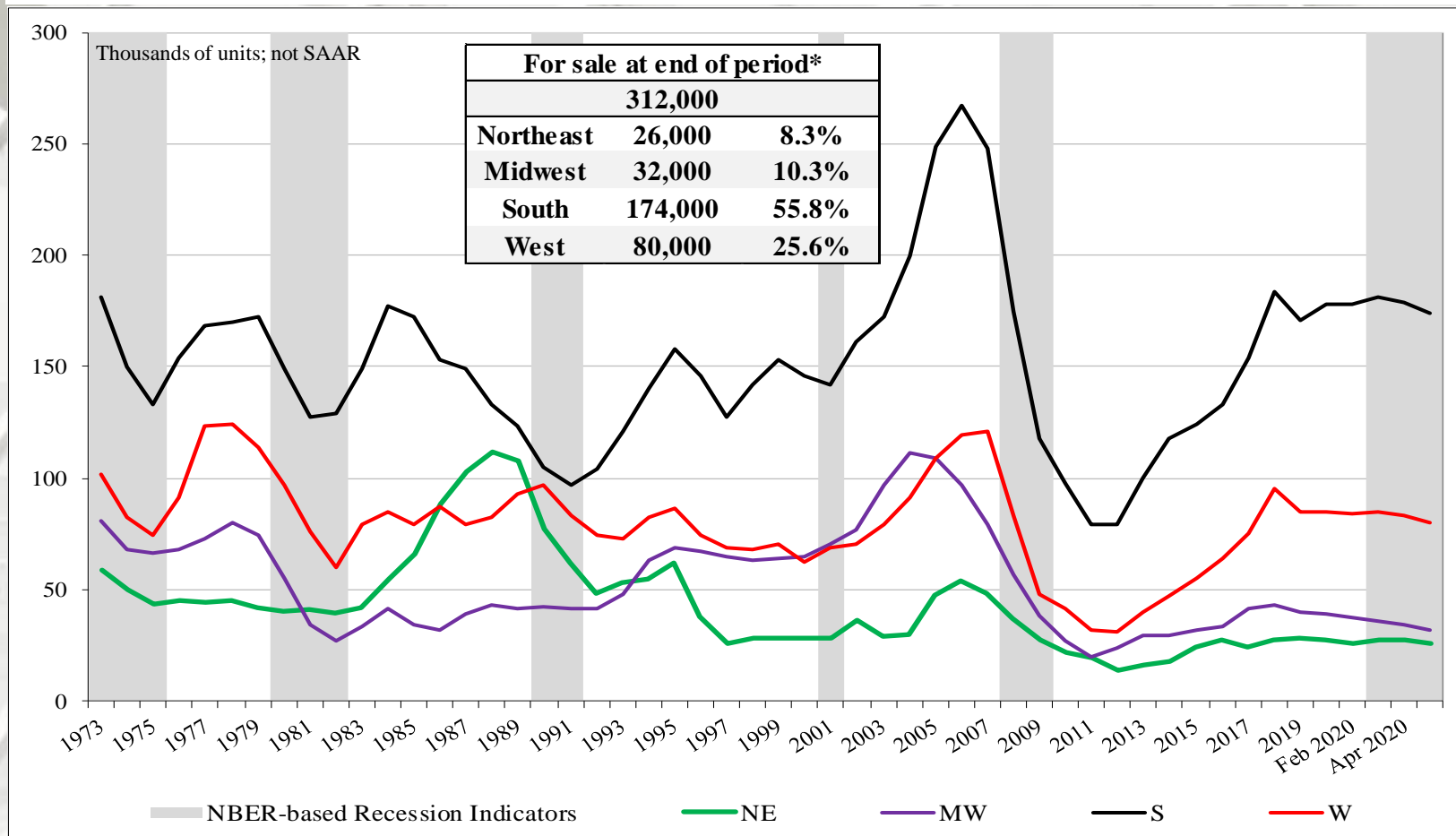
New SF House Sales 7/7

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

	Total	NE	MW	S	W
May	312,000	26,000	32,000	174,000	80,000
April	322,000	27,000	34,000	179,000	83,000
2019	334,000	29,000	38,000	181,000	85,000
M/M change	-3.1%	-3.7%	-5.9%	-2.8%	-3.6%
Y/Y change	-6.6%	-10.3%	-15.8%	-3.9%	-5.9%

* 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).

May 2019 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
May	\$535,933	\$261,754	\$77,336	\$196,843
April	\$558,342	\$286,133	\$75,632	\$196,577
2019	\$532,148	\$273,721	\$81,923	\$176,504
M/M change	-4.0%	-8.5%	2.3%	0.1%
Y/Y change	0.7%	-4.4%	-5.6%	11.5%

* billion.

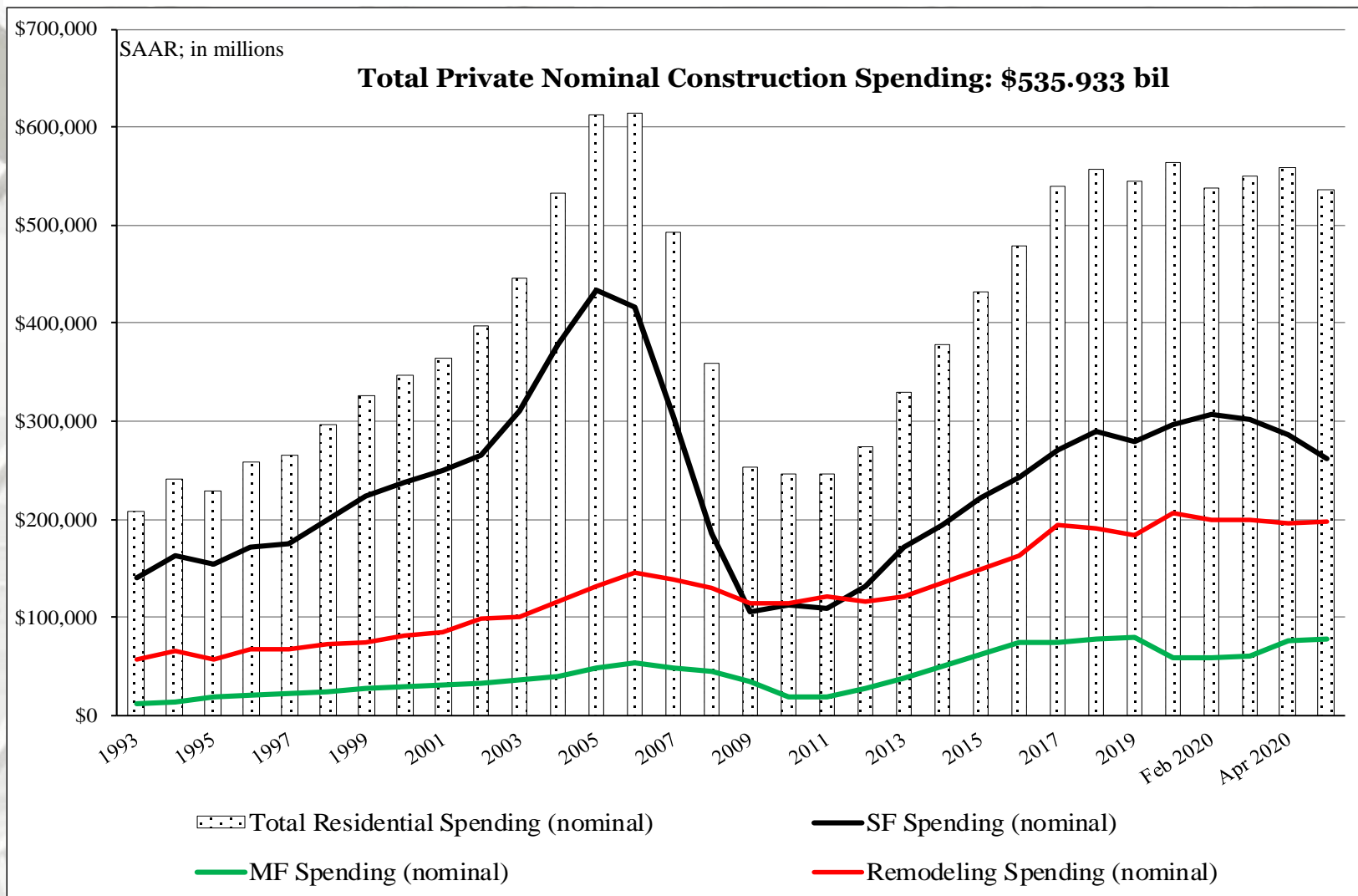
** The US DOC does not report improvement spending directly, this is a monthly estimation:

((Total Private Spending – (SF spending + MF spending)).

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

Note: Construction spending is revised yearly in June. This year, data were revised from 2009 to 2019. The data revisions for total private residential spending and MF registered positive improvements from 2009 to 2019. Large increases were noted for MF expenditures.

Total Construction Spending (nominal): 1993 – May 2020



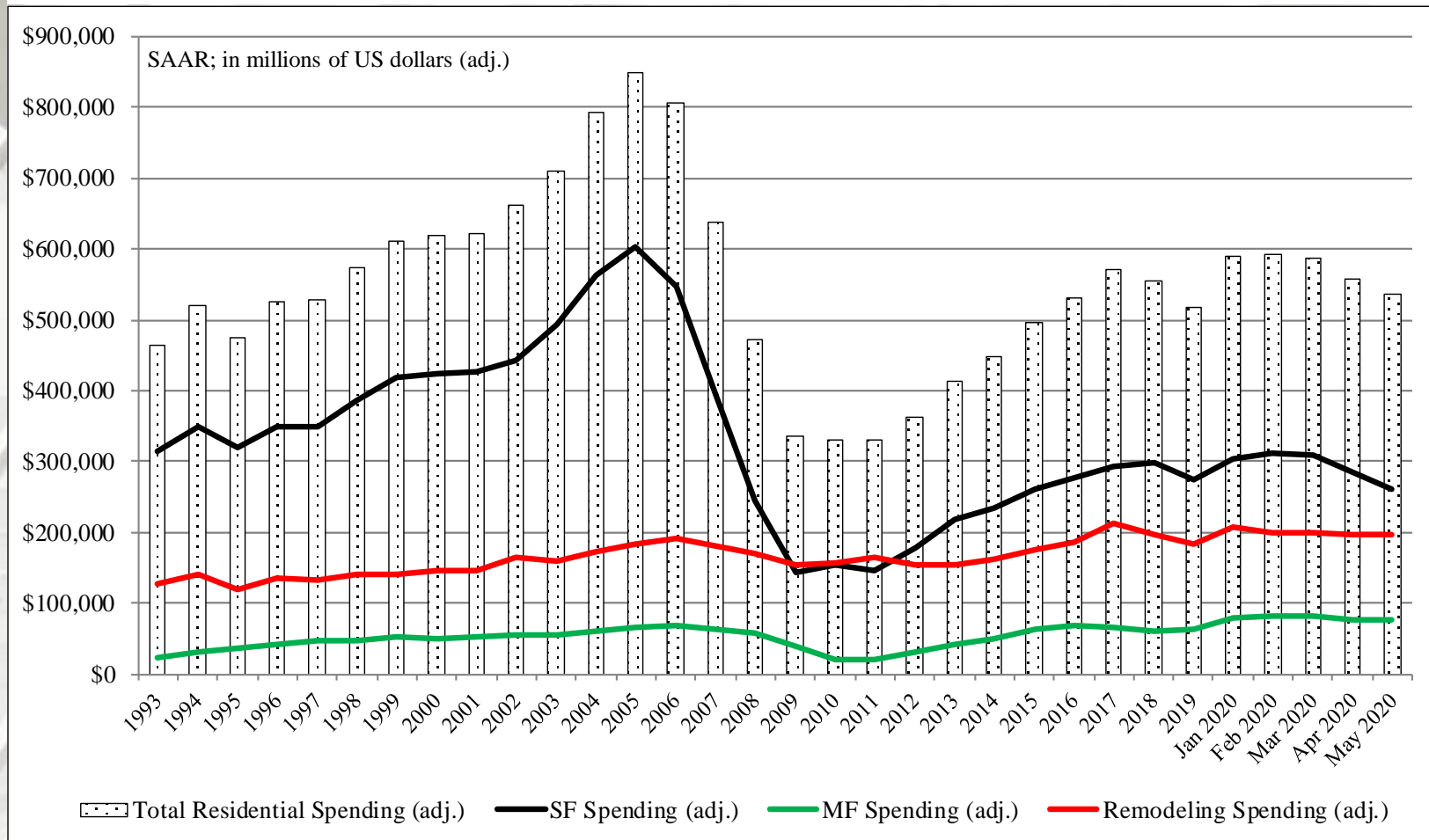
Reported in nominal US\$.

The US DOC does not report improvement spending directly, this is a monthly estimation for 2020.

Source: <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 7/1/20

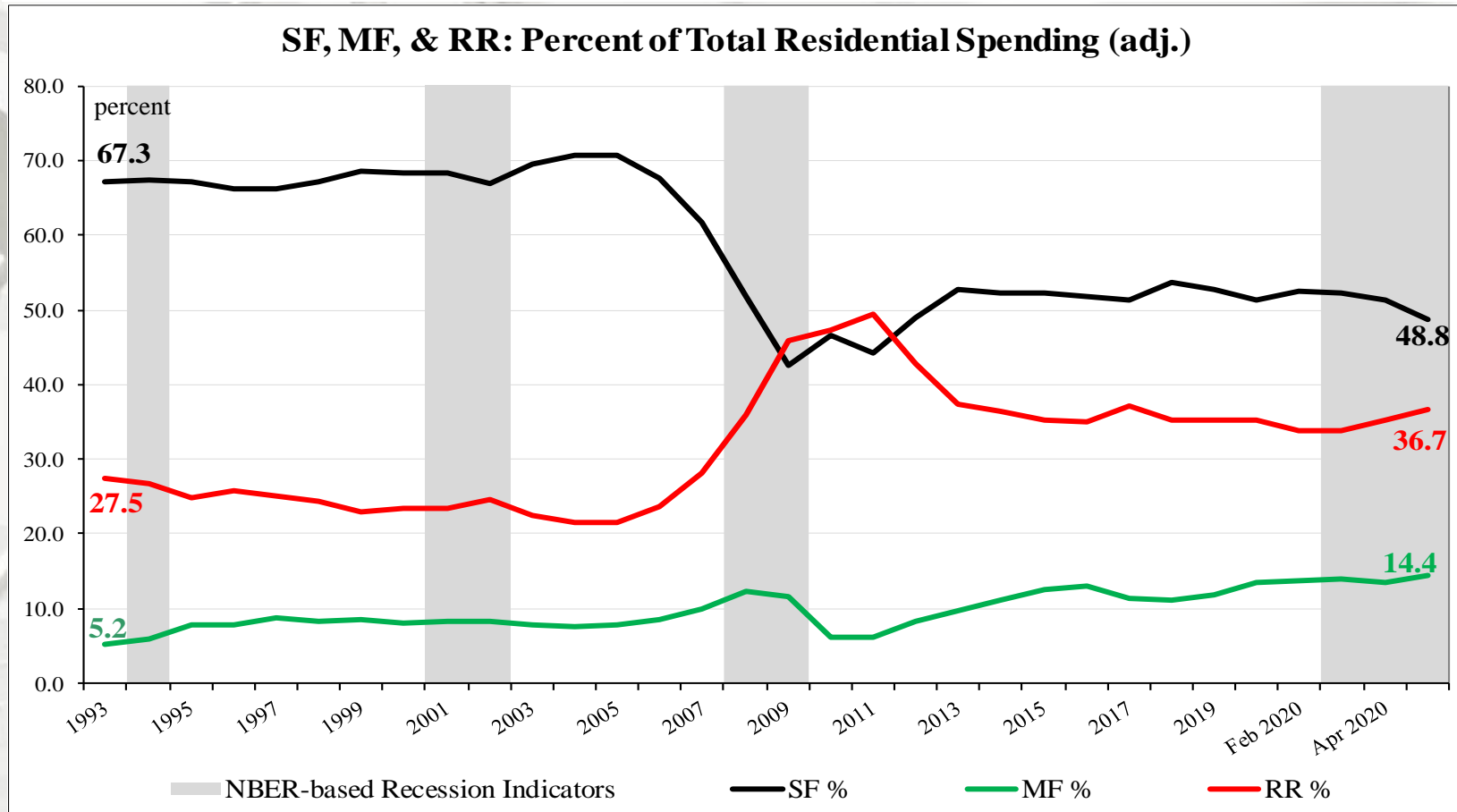
Return TOC

Total Construction Spending (adjusted): 1993-May 2020



Reported in adjusted US\$: 1993 – 2018 (adjusted for inflation, BEA Table 1.1.9); January to May 2020 reported in nominal US\$.

Construction Spending Shares: 1993 to May 2020



Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5%

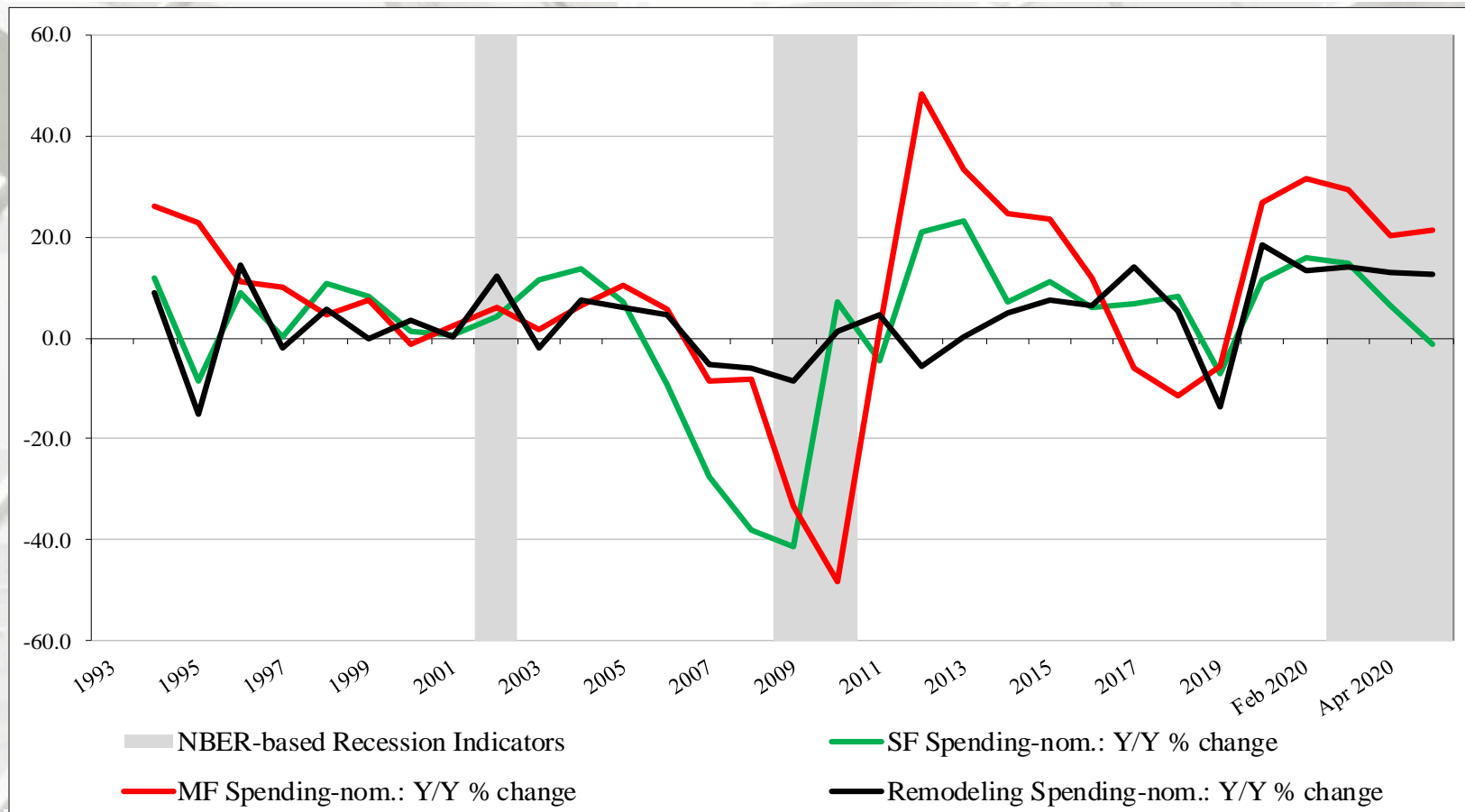
Residential remodeling (RR) spending average: 23.3% (SAAR).

Note: 1993 to 2019 (adjusted for inflation, BEA Table 1.1.9); January-May 2020 reported in nominal US\$.

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

Sources: * <https://fred.stlouisfed.org/series/USREC>, 6/8/20; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 7/1/20 and <http://www.bea.gov/iTable/iTable.cfm>; 3/2/20

Adjusted Construction Spending: Y/Y Percentage Change, 1993 to May 2020 1/2

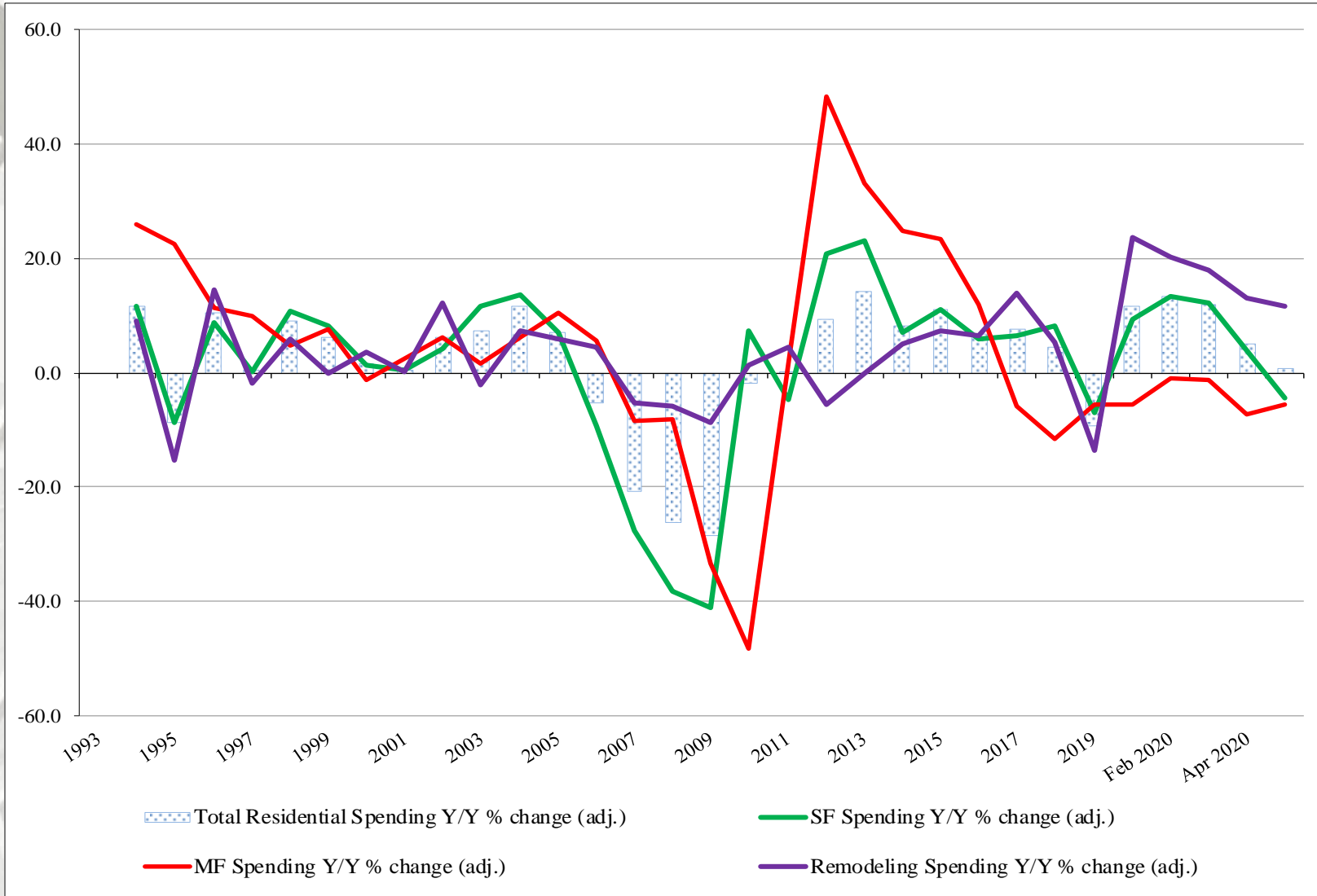


Nominal Residential Construction Spending: Y/Y percentage change, 1993 to May 2020

Presented above is the percentage change of inflation adjusted Y/Y construction spending. SF and RR expenditures were positive on a percentage basis, year-over-year (2020 data reported in nominal dollars).

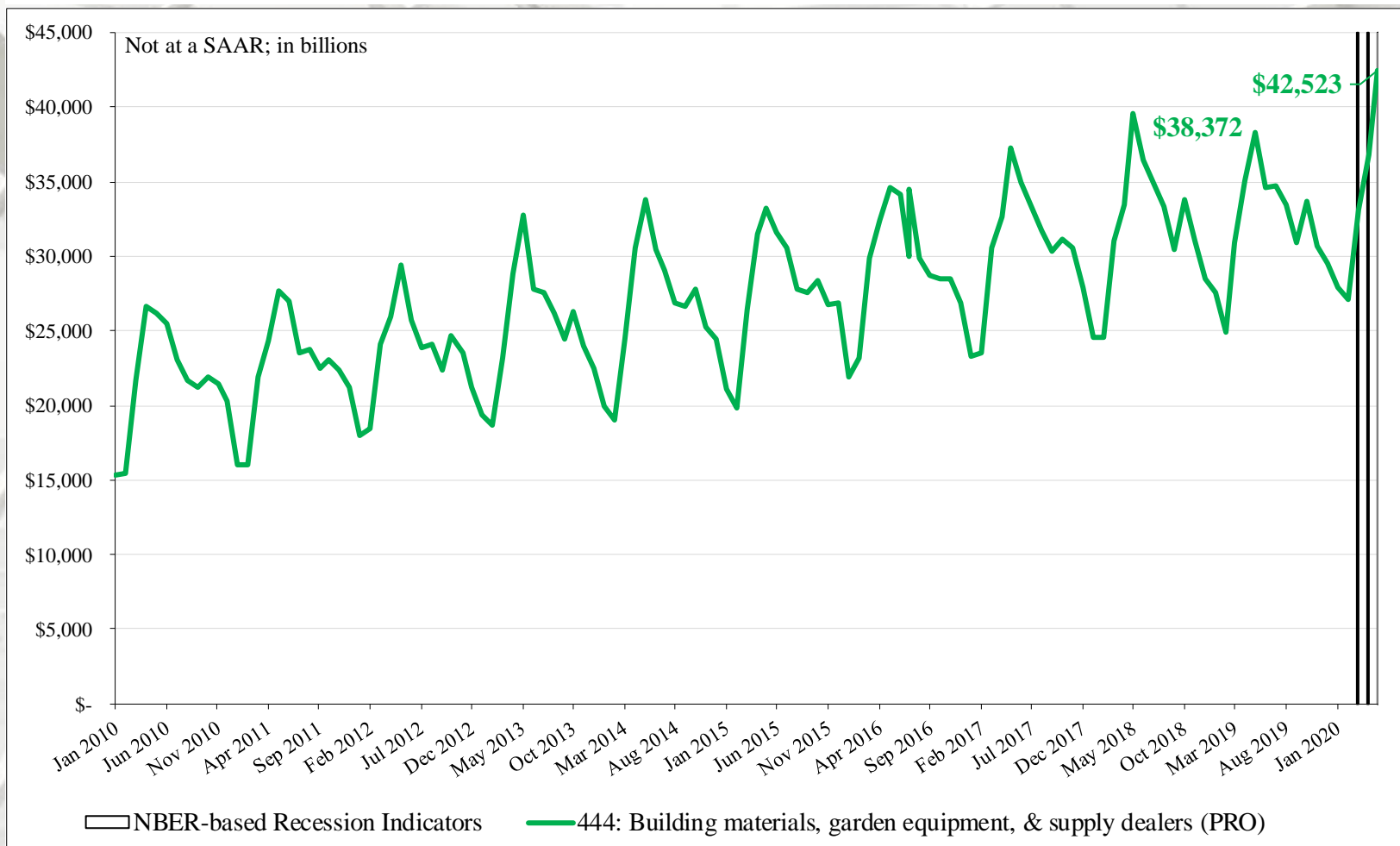
* NBER based Recession Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Adjusted Construction Spending: Y/Y Percentage Change, 1993 to May 2020 2/2



Remodeling 1/15

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



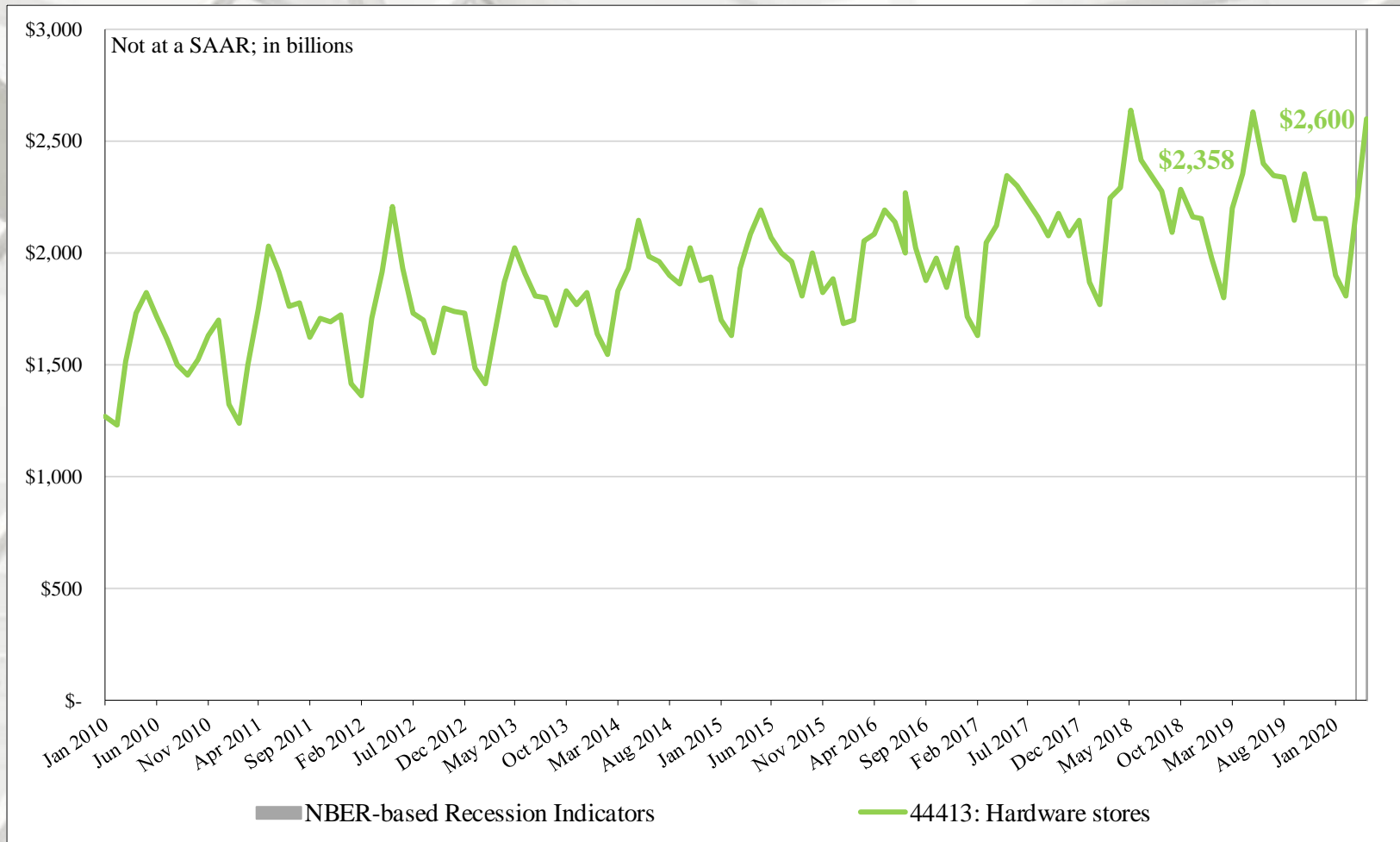
Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 444

NAICS 444 retail sales improved 15.7% from April and 10.8% from May 2019 (on a non-adjusted basis).

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

Remodeling 2/15

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales improved 18.6% from March and 10.3% from April 2019 (on a non-adjusted basis).

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

Remodeling 3/15

Houzz

Baby Boomers Drive Home Renovations

Home renovation and design activity remains stable year over year

“Baby Boomers accounted for over half of renovating homeowners in 2019 (55 percent), according to the ninth annual Houzz & Home survey of more than 87,000 U.S. respondents, up from 52 percent in 2018. Gen Xers (ages 40-54) comprise nearly one-third of home renovators (30 percent) and Millennials (ages 25-39) represent a smaller share of renovating homeowners compared with one year ago (14 percent in 2018 compared with 12 percent in 2019). Overall home renovation activity remained stable year over year, with 54 percent of homeowners reporting a renovation project in 2019, and tackling nearly three interior rooms on average. When the study was fielded in early 2020, planned activity for the year remained consistent with past years, however the impact of the coronavirus pandemic on planned renovation activity remains to be seen.

Median spend declined to \$13,000 in 2019 from \$15,000 in 2018, due to a reduction in average project scope. Baby Boomers offset some of this decline with the highest median renovation spend in 2019 at \$15,000, followed by Gen Xers and Millennials (\$12,000 and \$10,000, respectively). Following the 2018 spike in overall median kitchen remodel spend to \$14,000, levels have returned to that of previous years at \$12,000, mirroring a drop in the share of major kitchen renovations (from 37 percent in 2018 to 33 percent in 2019). While kitchen renovation spend declined across all age groups, Baby Boomers continued to spend at a median of \$14,000 on major kitchen projects.

Following significant growth in home renovation activity over the past few years, we’re seeing the market settle somewhat in terms of scope and spend. That said, Baby Boomers, particularly those who have been in their homes for more than six years, are continuing to drive renovation activity and spend, bringing consistency to the market as they pursue projects that will allow them to age in place for the next decade or more.” – Marine Sargsyan, Senior Economist, Houzz

Remodeling 4/15

Houzz

Baby Boomers Drive Home Renovations

“Baby Boomers were three times more likely to pursue a project because they’ve wanted to do it all along than because they wanted to customize a recently purchased home (58 percent versus 20 percent, respectively). Irrespective of their motivation to renovate, they plan to stay in their homes for 11 years or more (60 percent). Home purchases more commonly motivated younger homeowners, such as Gen Zers (ages 18-24) and Millennials (51 and 43 percent, respectively).

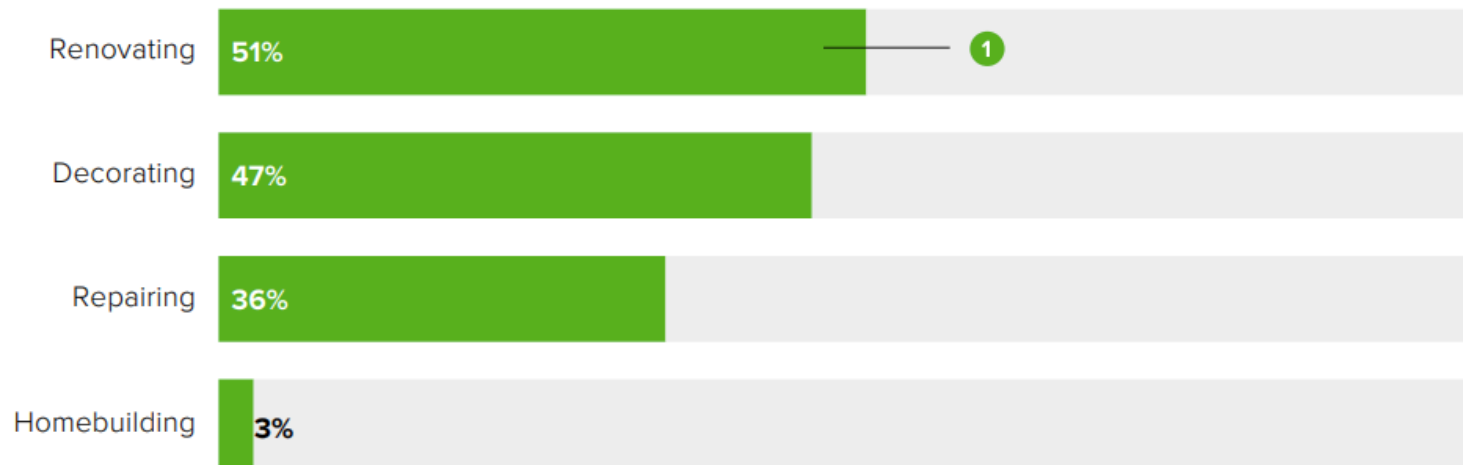
Although median spend on home renovations decreased to \$13,000 in 2019, compared with \$15,000 in the two previous years, it is still higher than the national planned spend (\$10,000) for 2019 as reported in 2018. The decrease is consistent with a modest decline from 2018 to 2019 in the average number of projects undertaken by renovating homeowners, as well as a decline in project scope. The mix of projects was consistent with previous years, with 59% decorating, 54% renovating and 3% building homes in 2019.

Consistent with prior years, in early 2020, half of homeowners on Houzz planned to continue or start renovations during the year (51%), with a planned median spend of \$10,000 per renovating homeowner. However, given the impact of the coronavirus pandemic, these numbers may have shifted.

Cash was by far the most common form of home renovation funding (83%), even in projects with more significant spend (over \$50,000). The next most common source of funding was credit cards (38%), which were more popular among those with lower expenditures (between \$1,000 and \$5,000). Home loans (secured or unsecured), as well as home sale proceeds, gifts and inheritances, and insurance payouts were all more common in larger projects. Tax refunds were only by only 6% of renovators.” – Marine Sargsyan, Senior Economist, Houzz

Remodeling 5/15

Frequency of Planned 2020 Home-Related Activities and Renovation Spend Among Homeowners**



1 National Planned Renovation Spend per Household

Median Spend

2020 (Planned)

\$10,000

90th Percentile Spend

2020 (Planned)

\$50,000

Remodeling 6/15

Harvard Joint Center for Housing Studies

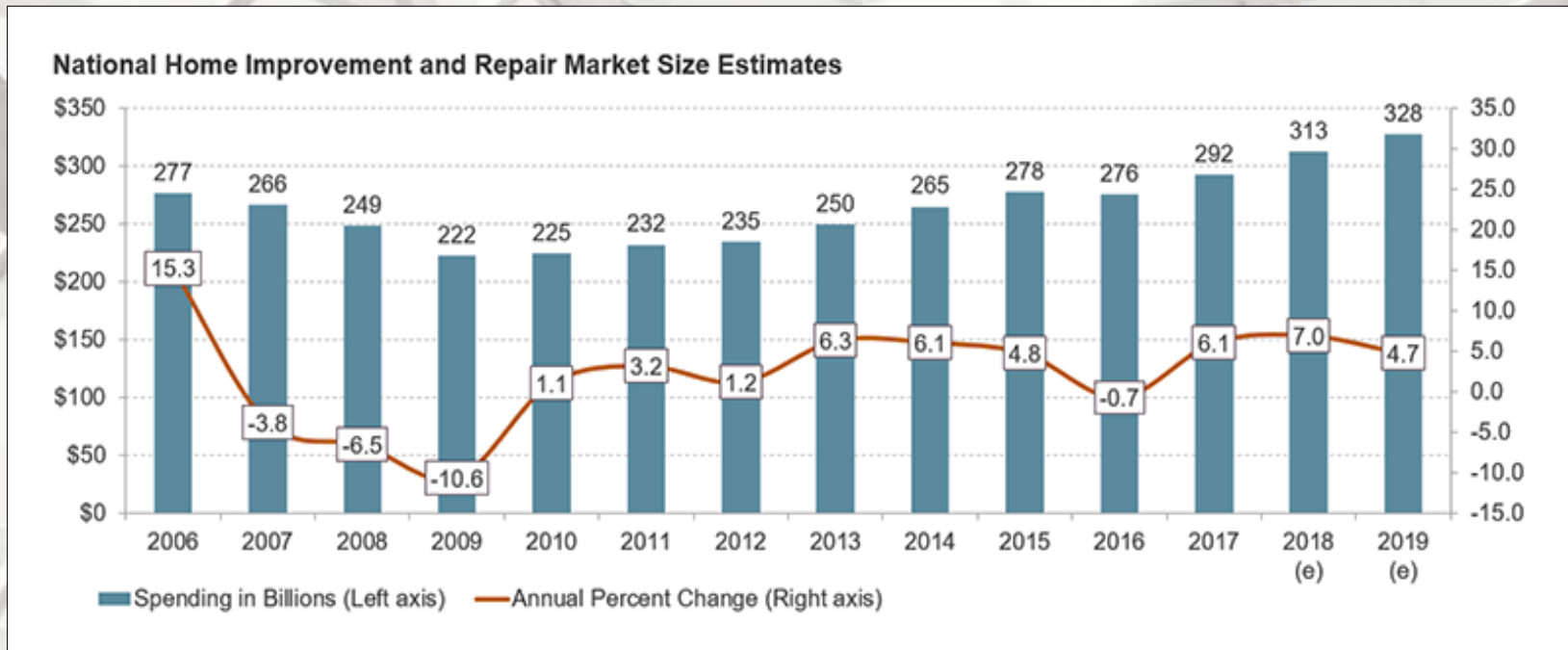
How This Recession Is Expected To Affect Home Improvement Spending

“After almost a decade of sustained growth in spending for home improvement projects, remodeling activity is likely to decline during the pandemic-induced economic downturn. In fact, in the [Farnsworth Group’s first quarter 2020 Contractor Index Survey](#) conducted in late March, many remodeling contractors already had experienced delayed or cancelled projects. On average, contractors projected a 10 percent decline in revenue over the coming 12 months. [Our first quarter 2020 Leading Indicator for Remodeling Activity \(LIRA\)](#) also pointed to an emerging decline in maintenance and improvement spending by homeowners.

However, historical evidence suggests that the magnitude of the downturn will depend on the evolving mix of home improvement projects, and the reasons households undertake those projects. Even before COVID-19 put the brakes on remodeling spending, there were signs that a broader slowdown for the industry was underway. Sales of existing homes, one of the best indicators of future home improvement spending, hadn’t grown over the past two years, housing starts remained well below the longer-term needs generated by population growth, and although house prices bounced back from the Great Recession, they were growing relatively slowly in most markets.

Our estimates of total spending for maintenance, repairs, and improvements to owner-occupied housing units totaled almost \$330 billion last year, up from \$222 billion in 2009, when the industry was just finishing a three-year downturn (Figure 1). The 4 percent average annual growth in remodeling spending over the past decade shows how steadily the industry grew coming out of the last recession.” – Kermit Baker, Senior Research Fellow, Harvard Joint Center for Housing Studies, Project Director of the Remodeling Futures Program

Remodeling 7/15



Source: JCHS analysis of HUD, American Housing Surveys; DOC, Retail Sales of Building Materials; and Leading Indicator of Remodeling Activity (LIRA).

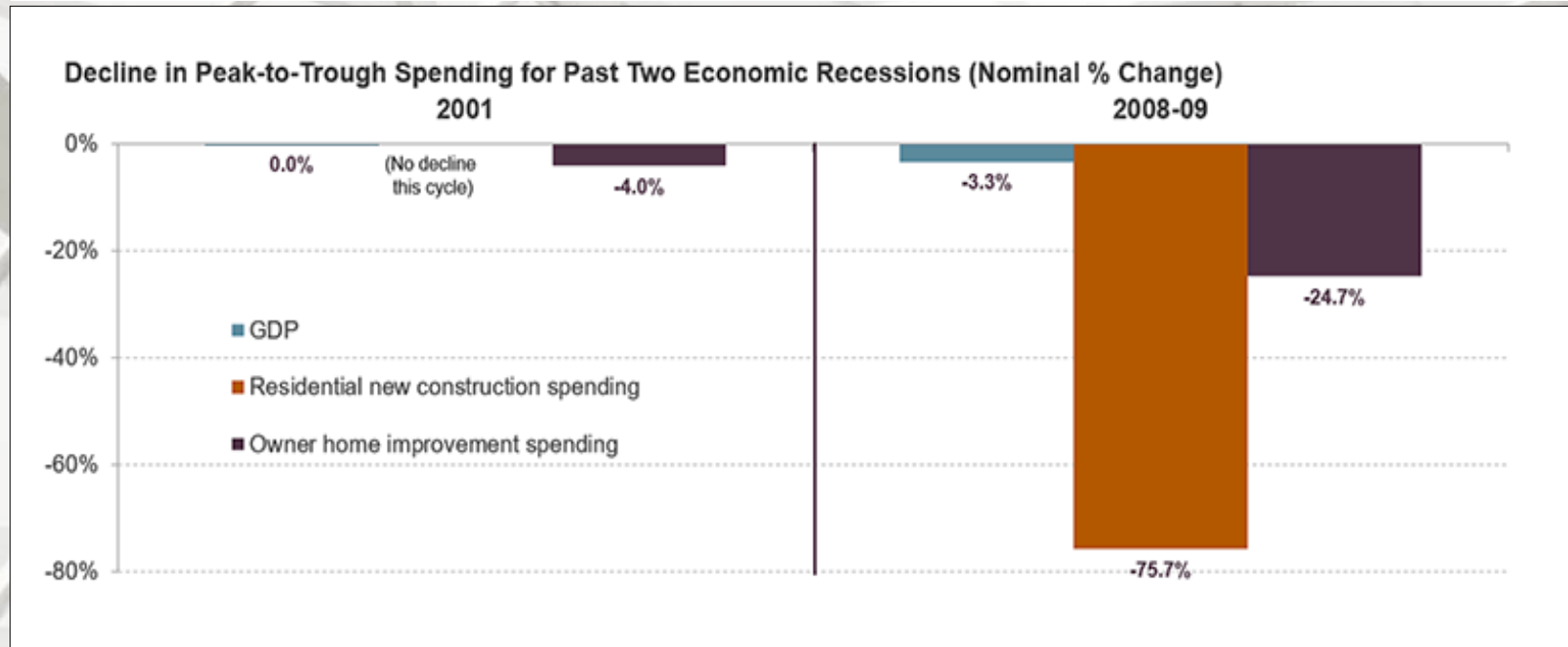
Remodeling 8/15

Harvard Joint Center for Housing Studies

“Still, the mandated slowdown of the national economy to address the pandemic has clearly depressed remodeling spending well beyond a cyclical slowdown. National economic recessions typically have a marked effect on household spending patterns for home improvement projects. During the Great Recession, spending to improve the existing housing stock in the US declined by almost 25 percent. However, during the previous economic downturn – the dot-com recession in 2001 – home improvement spending declined a scant 4 percent from its market peak to eventual trough. Even the sometimes dramatic swings experienced by home improvement spending tend to pale in comparison to those of homebuilding. Spending on new homes didn’t experience any decline during the 2001 recession but saw a whopping 75 percent decline during the Great Recession (Figure 2).

Regardless of the magnitude of the current downturn for home improvement spending, however, some market sectors can be expected to see a steeper decline than others. For the typical homeowner, their home is their single most important investment, and as such households have historically made the maintenance and improvement of their homes a top priority, even in challenging economic times. However, there are criteria that households generally use to prioritize which projects they need to undertake more immediately, and which they can defer. Generally, when budgets are tight and economic times are uncertain, households are more likely to undertake the projects themselves on a DIY basis, defer discretionary projects and focus on those that have a greater impact on maintaining and preserving their home, and downscale the scope of the project to the extent possible.” – Kermit Baker, Senior Research Fellow, Harvard Joint Center for Housing Studies, Project Director of the Remodeling Futures Program

Remodeling 9/15



Note: Annual peak-to-trough spending for the 2001 recession is calculated from 2001:2 to 2001:3 for GDP and 2001:4 to 2002:4 for improvements, and for the 2008-09 recession from 2008:3 to 2009:2 for GDP, 2006:4 to 2009:4 for improvements, and 2006:2 to 2011:3 for new residential construction.

Sources: JCHS tabulations of US Department of Commerce (DOC), Bureau of Economic Analysis, National Income and Product Accounts; US Census Bureau, Construction Spending Put in Place; US Department of Housing and Urban Development (HUD), American Housing Surveys; and National Bureau of Economic Research, US Business Cycle Expansions and Contractions.

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Harvard Joint Center for Housing Studies

“Regardless of the magnitude of the current downturn for home improvement spending, however, some market sectors can be expected to see a steeper decline than others. For the typical homeowner, their home is their single most important investment, and as such households have historically made the maintenance and improvement of their homes a top priority, even in challenging economic times. However, there are criteria that households generally use to prioritize which projects they need to undertake more immediately, and which they can defer. Generally, when budgets are tight and economic times are uncertain, households are more likely to undertake the projects themselves on a DIY basis, defer discretionary projects and focus on those that have a greater impact on maintaining and preserving their home, and downscale the scope of the project to the extent possible.

Different market segments behave differently during downturns

Despite the consensus view that spending on home improvements and repairs is expected to decline in the coming quarters, previous economic cycles have shown that some market segments are more vulnerable to downturns than others. In fact, even with a severe cutback in overall spending, historical evidence suggests that some sectors will see only a modest impact on activity, and potentially even experience gains. Prior remodeling cycles suggest that there are at least four dimensions that will influence how well specific home improvement categories will perform during an economic downturn: the method by which the project is installed; the size of the project; whether the project is a “want to do” or a “need to do” project; and the characteristics of the home and the household undertaking the project.” – Kermit Baker, Senior Research Fellow, Harvard Joint Center for Housing Studies, Project Director of the Remodeling Futures Program

Remodeling 11/15

Harvard Joint Center for Housing Studies

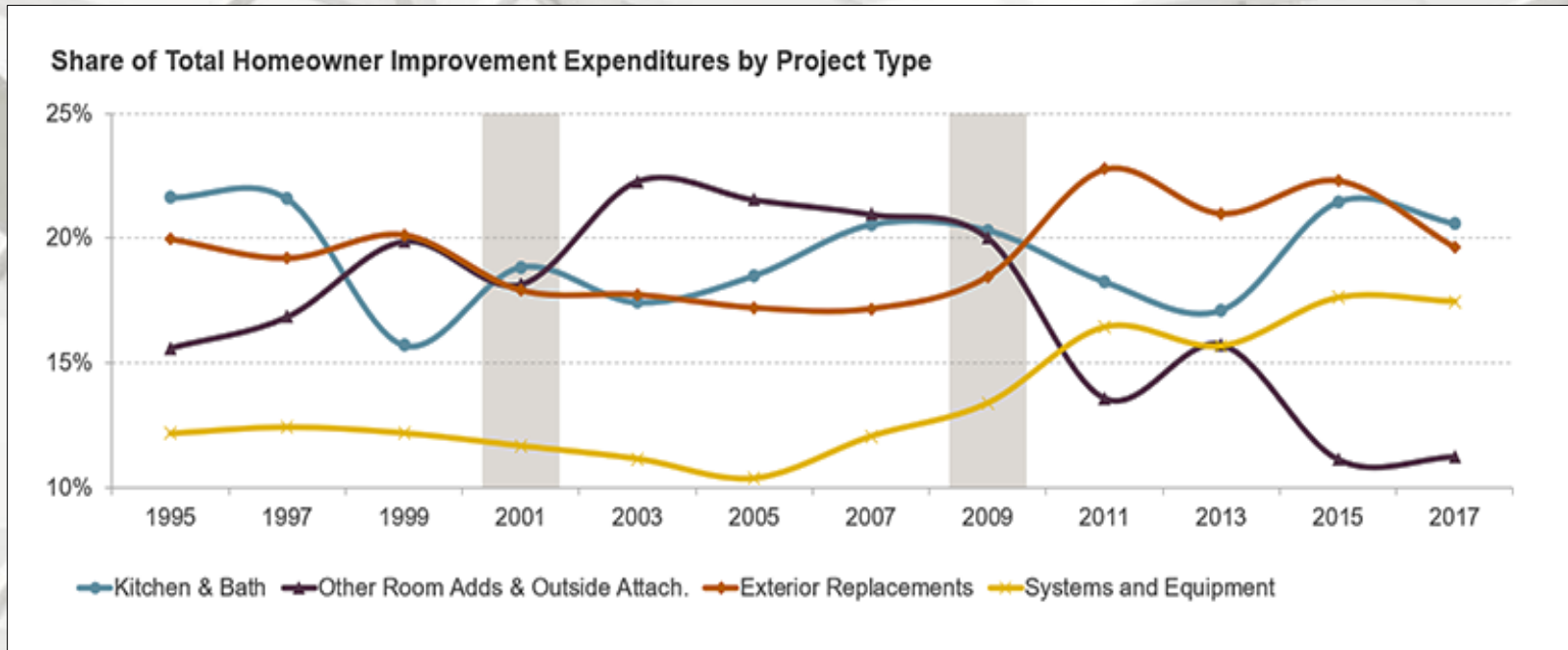
“1. Method of installation. In deciding to undertake a home improvement project during a downturn, some may choose to save money by undertaking projects themselves (DIY) rather than hiring a professional contractor to handle the installation. Recently, stay-at-home requirements have given households the motivation and opportunity to undertake many DIY home projects. Still, over the past few decades, the DIY share of market spending has been around 20 percent, and steadily declining. However, since a DIY project encompasses only product purchases and not labor and indirect costs, the DIY share of product purchases is actually much higher.

Still, the DIY share of spending does vary with economic conditions. Since a household can save on project costs by doing their own installation, for many project categories the DIY share may increase during downturns. At least partially offsetting this consideration, however, many non-discretionary projects that may hold up better during economic downturns – exterior replacements and systems upgrades – are less likely to be undertaken on a DIY basis due to the technical skills required. Additionally, older households are much less likely to undertake DIY projects, so the growth in older owners has tempered DIY growth.

2. Project category. A significant share of home improvement activity involves upgrading or adding onto existing facilities, such as kitchen and bath remodels or room additions. Owners often scale back or defer these so-called discretionary projects if there is concern over the economic outlook. In contrast, exterior replacement projects (such as roofing, siding, or window replacements) or systems upgrades (such as plumbing, electrical, or HVAC projects) generally are more difficult to defer.

As such, the discretionary project share of home improvement spending generally rises during economic expansions and declines during economic downturns. The share of total owner spending on additions and major alterations and kitchen and bath remodels fell during the Great Recession. In contrast, the share of spending on exterior replacement and systems and equipment upgrades increased over this period (Figure 3).” – Kermit Baker, Senior Research Fellow, Harvard Joint Center for Housing Studies, Project Director of the Remodeling Futures Program

Remodeling 12/15



Notes: Kitchen and bath includes remodels and room additions. Outside attachments include porches, decks, patios, and terraces. Exterior replacements include roofing, siding, windows, doors, chimney, stairs, and other exterior projects. Systems and equipment includes HVAC, electrical, plumbing fixtures and pipes, water heaters, dishwashers, disposals, and security systems.

Source: JCHS tabulations of HUD, American Housing Surveys.

Remodeling 13/15

Harvard Joint Center for Housing Studies

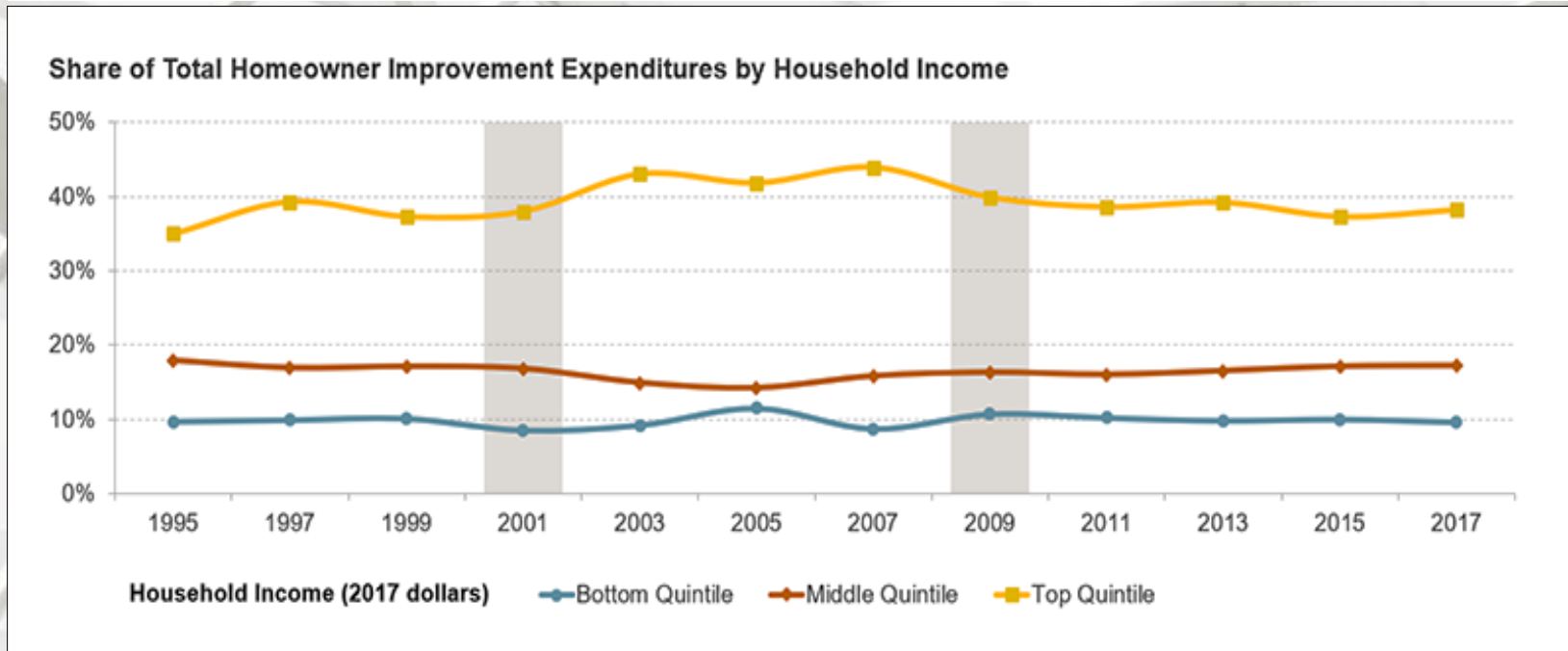
“3. Project size. When the economy weakens, households typically scale back on the size of their projects. An upper-end project may turn into a mid-level version. A full-scale remodeling project may be converted to the replacement of a few project elements.

For example, households reporting home improvement projects in 2009, at the low point of the previous cycle, spent an average of \$9,300 (adjusted for 2017 dollars) compared to the almost \$12,000 inflation-adjusted remodeling expenditure in 2007. This lower average project size was not only from the changing mix of projects, such as switching from more expensive discretionary projects to less expensive replacement projects, but also from a general downsizing of projects within a category. In 2009, the average expenditure for both discretionary and replacement projects was 15-20 percent less in inflation-adjusted dollars than the average 2007 expenditures for projects in those categories.

4. Home value and household income. Higher-income households account for a disproportionate share of home improvement spending. Over the past two decades, households in the top 20 percent of the income distribution have averaged about 40 percent of all spending on home improvement projects. One reason for this is higher-income households tend to live in larger and more expensive homes with more products and features that require regular replacement and upgrading.

Additionally, though, upper-income households spend more on discretionary home improvement projects like upper-end kitchen and bath remodels, room additions, and structural alterations. During economic downturns, discretionary spending tends to decline, even among households that might be thought to have sufficient income to undertake these projects regardless of the condition of the economy. In 2007, households in the top 20 percent of the income distribution accounted for just under 44 percent of all homeowner home improvement spending. Those in the middle quintile accounted for just under 16 percent of all spending, while those in the bottom quintile accounted for less than nine percent. By 2009, the share of spending by owners in the top income quintile had declined to under 40 percent, the share for the middle quintile nudged up a very modest amount, while those in the bottom 20 percent increased their share to almost 11 percent (Figure 4).” – Kermit Baker, Senior Research Fellow, Harvard Joint Center for Housing Studies, Project Director of the Remodeling Futures Program

Remodeling 14/15

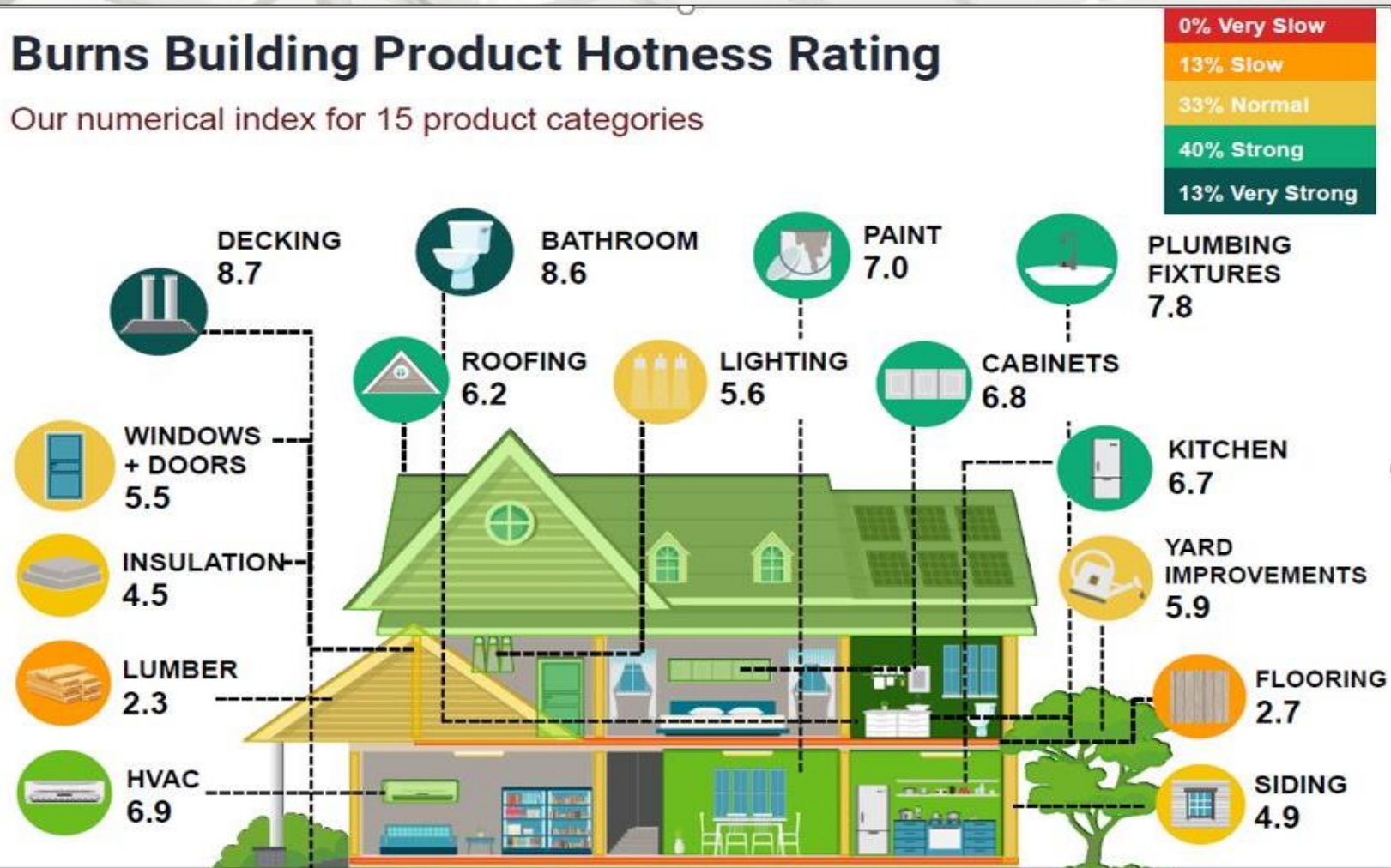


Source: JCHS tabulations of HUD, American Housing Surveys.

Remodeling 15/15

Burns Building Product Hotness Rating

Our numerical index for 15 product categories



John Burns Real Estate Consulting LLC

“Most building product categories have strong sales and strong fundamentals right now, although consumers are pivoting down to lower-priced projects.” – John Burns, CEO, John Burns Real Estate Consulting LLC

Existing House Sales 1/3

National Association of Realtors

May 2020 sales: 4.430 thousand

	Existing Sales	Median Price	Mean Price	Month's Supply
May	3,910,000	\$284,600	\$319,300	4.8
April	4,330,000	\$286,700	\$321,100	4.0
2019	5,330,000	\$278,200	\$314,600	4.3
M/M change	-9.7%	-0.7%	-0.6%	20.0%
Y/Y change	-26.6%	2.3%	1.5%	11.6%

All sales data: SAAR

Existing House Sales 2/3

	Existing SF Sales	SF Median Price	SF Mean Price
May	3,570,000	287,700	321,500
April	3,940,000	288,700	322,200
2019	4,750,000	280,900	316,300
M/M change	-9.4%	-0.7%	-0.2%
Y/Y change	-24.8%	2.4%	1.6%

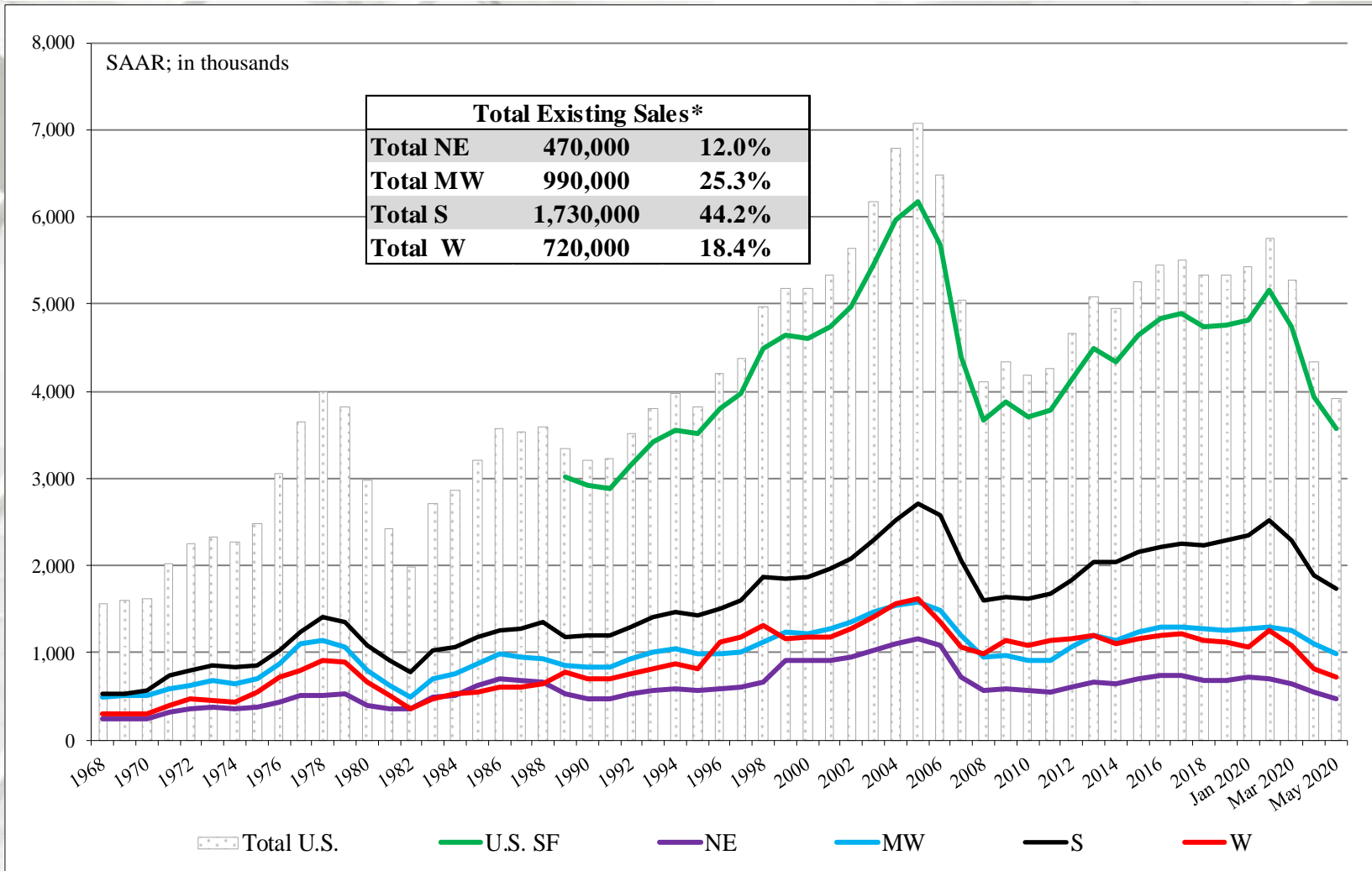
	NE	MW	S	W
May	470,000	990,000	1,730,000	720,000
April	540,000	1,100,000	1,880,000	810,000
2019	670,000	1,240,000	2,310,000	1,110,000
M/M change	-13.0%	-10.0%	-8.0%	-11.1%
Y/Y change	-29.9%	-20.2%	-25.1%	-35.1%

All sales data: SAAR.

Source: <https://fred.stlouisfed.org/series/EXHOSLUSM495S>; 6/22/20

[Return TOC](#)

Existing House Sales 3/3



* Percentage of existing sales.

U.S. Housing Prices 1/4

Federal Housing Finance Agency

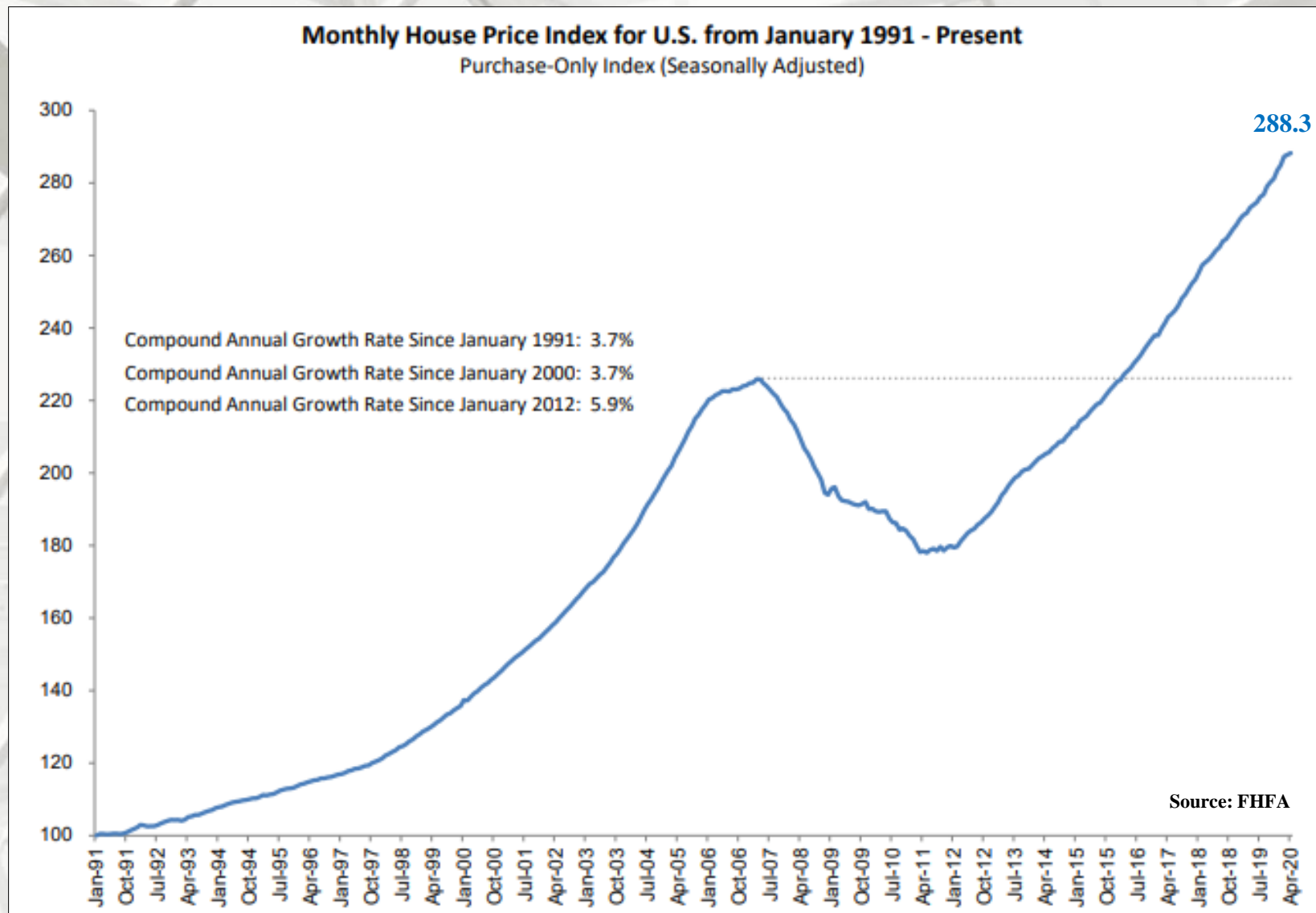
FHFA House Price Index Up 0.2 Percent in April; Up 5.5 Percent from Last Year

Significant Findings

- “U.S. house prices rose in April, up **0.2 percent** from the previous month, according to the Federal Housing Finance Agency (FHFA) House Price Index (HPI). House prices rose **5.5 percent** from April 2019 to April 2020. The previously reported **0.1 percent** increase for March 2020 remains unchanged.
- For the nine census divisions, seasonally adjusted monthly house price changes from March 2020 to April 2020 ranged from **-0.5 percent** in the South Atlantic division to **+0.8 percent** in the West South Central division. The 12-month changes were all positive, ranging from **+5.0 percent** in the Middle Atlantic division to **+6.8 percent** in the Mountain division.” – Cynthia Adcock and Raffi Williams, FHFA

“U.S. house prices posted another positive monthly increase in April. Regionally, results varied. Two of the usually stronger growth areas, the Mountain and Pacific divisions, were flat over the month but other divisions continued to experience strong price appreciation even with all of the COVID-19 challenges. Both the New England and South Atlantic regions saw monthly decreases in prices, but all divisions posted positive year over year growth of at least 5 percent. The number of transactions used to estimate the HPI were slightly down from March to April but were still a robust sample. We expect the normal spring bump in sales was pushed off by the COVID-19 shutdowns and may extend into the summer months as states reopen and real estate sales pick back up.” – Dr. Lynn Fisher, Deputy Director of the Division of Research and Statistics, FHFA

U.S. Housing Prices 2/4



U.S. Housing Prices 3/4

S&P CoreLogic Case-Shiller Index Annual Home Price Gains Remained Steady in April According to S&P CoreLogic Case-Shiller Index

“Data for April 2020 show that home prices continue to increase at a modest rate across the U.S. More than 27 years of history are available for these data series, and can be accessed in full by going to www.spdji.com.

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 4.7% annual gain in April, up from 4.6% in the previous month. The 10-City Composite annual increase came in at 3.4%, remaining the same as last month. The 20-City Composite posted a 4.0% year-over-year gain, up from 3.9% in the previous month.

Phoenix, Seattle and Minneapolis reported the highest year-over-year gains among the 19 cities (excluding Detroit) in April. Phoenix led the way with an 8.8% year-over-year price increase, followed by Seattle with a 7.3% increase and Minneapolis with a 6.4% increase. Twelve of the 19 cities reported higher price increases in the year ending April 2020 versus the year ending March 2020.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

U.S. Housing Prices 4/4

S&P CoreLogic Case-Shiller Index

Month-Over-Month

“The National Index posted a 1.1% month-over-month increase, while the 10-City and 20-City Composites posted increases of 0.7% and 0.9% respectively before seasonal adjustment in April. After seasonal adjustment, the National Index posted a month-over-month increase of 0.5%, while the 10-City and 20-City Composites both posted 0.3% increases. In April, all 19 cities (excluding Detroit) reported increases before seasonal adjustment, while 16 of the 19 cities reported increases after seasonal adjustment.

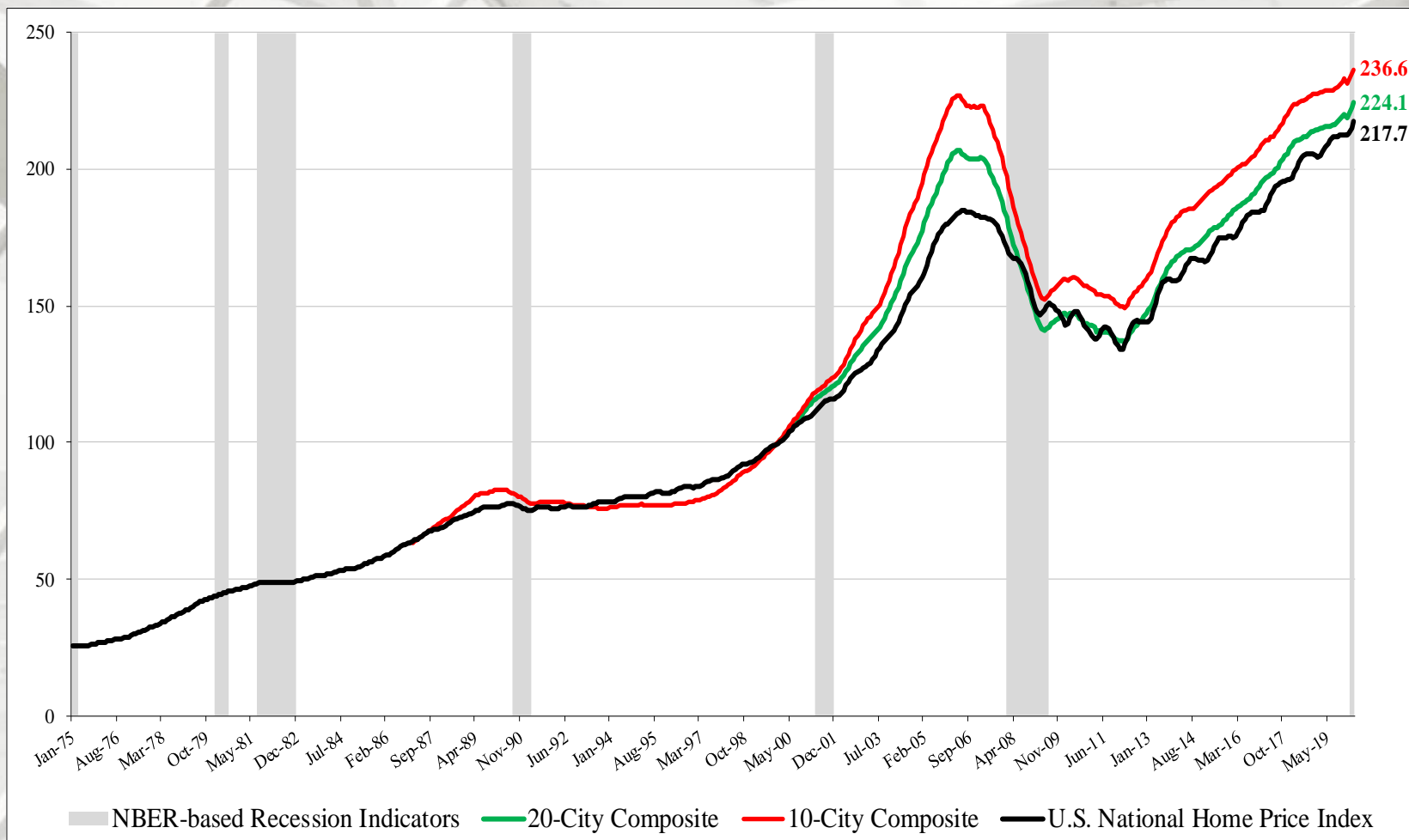
Analysis

April’s housing price data continue to be remarkably stable. The National Composite Index rose by 4.7% in April 2020, with comparable growth in the 10- and 20-City Composites (up 3.4% and 4.0%, respectively). In all three cases, April’s year-over-year gains were ahead of March’s, continuing a trend of gently accelerating home prices that began last fall. Results in April continued to be broad-based. Prices rose in each of the 19 cities for which we have reported data, and price increases accelerated in 12 cities.

As was the case in March, we have data from only 19 cities this month, since transactions records for Wayne County, Michigan (in the Detroit metropolitan area) continue to be unavailable. This is, so far, the only directly visible impact of COVID-19 on the S&P CoreLogic Case-Shiller Indices. The price trend that was in place pre-pandemic seems so far to be undisturbed, at least at the national level. Indeed, prices in 12 of the 20 cities in our survey were at an all-time high in April.

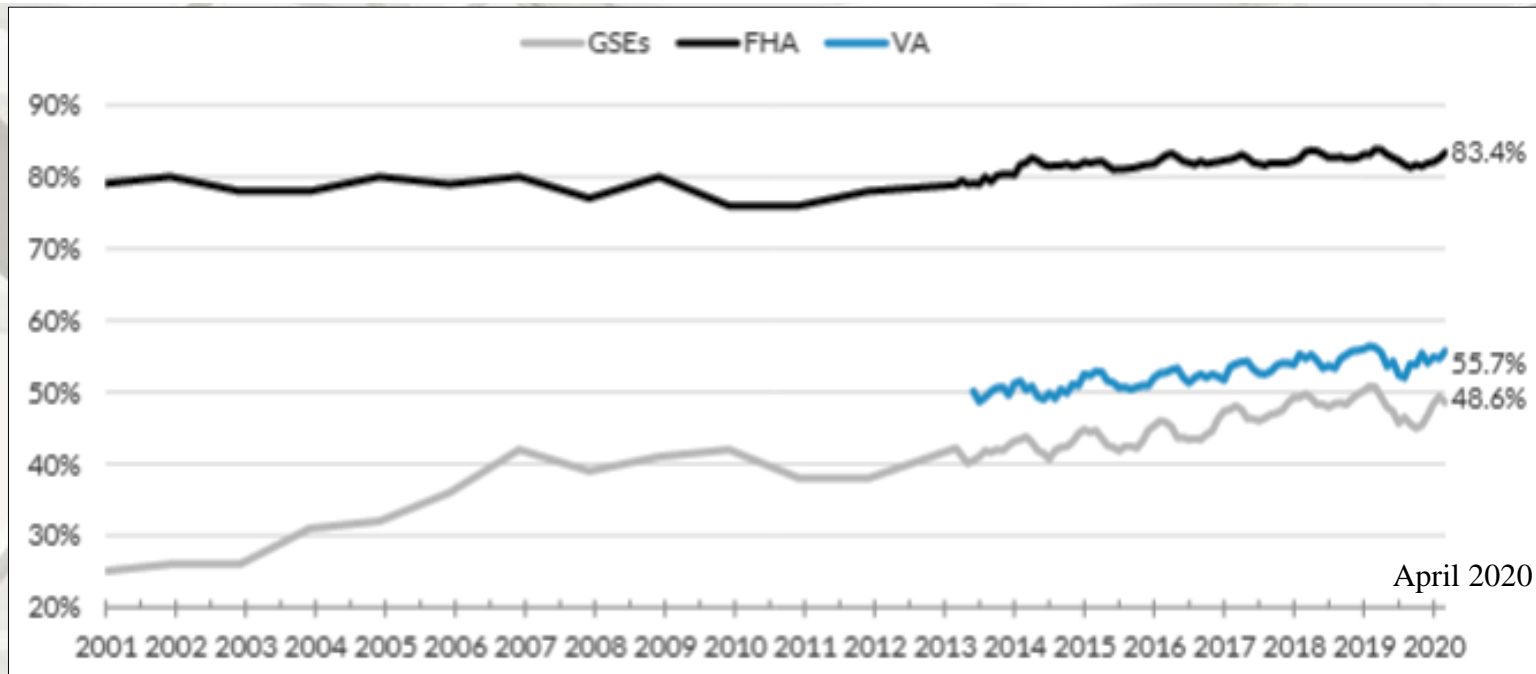
Among the cities, Phoenix retains the top spot for the 11th consecutive month, with a gain of 8.8% for April. Home prices in Seattle rose by 7.3%, followed by increases in Minneapolis (6.4%) and Cleveland (6.0%). Prices were particularly strong in the West and Southeast, and comparatively weak in the Northeast.” – 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).

First-Time House Buyers 1/2



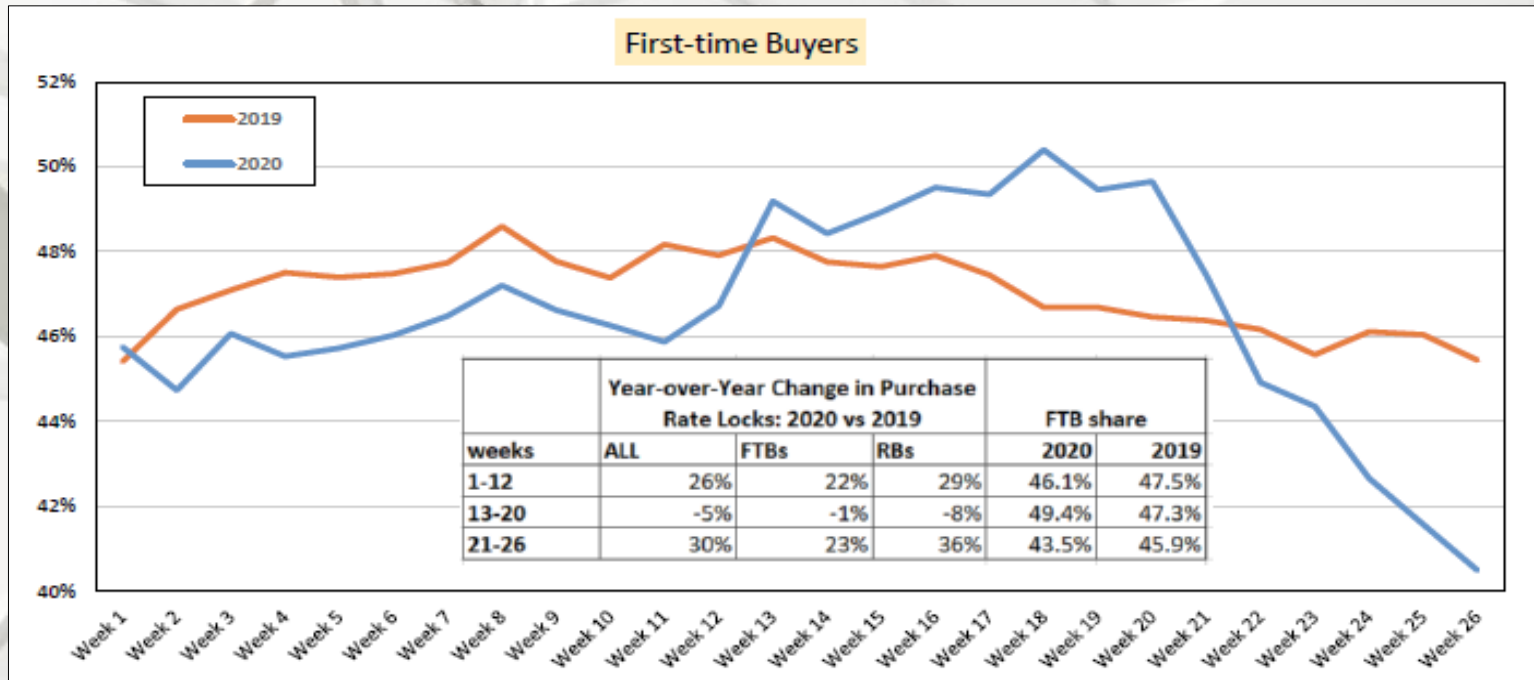
Sources: eMBS, Federal Housing Administration (FHA) and Urban Institute.

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

Urban Institute

“In April 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, grew slightly to 83.4 percent. The FTHB share of VA lending decreased slightly in April, to 55.7 percent. The GSE FTHB share in April was down from March to 48.6 percent.” – Bing Lai, Research Associate, Housing Finance Policy Center

First-Time House Buyers 2/2



Note: Chart includes Primary Owner Occupied Home Rate Locks only.
Sources: AEI Housing Center, www.AEI.org/housing and Optimal Blue.

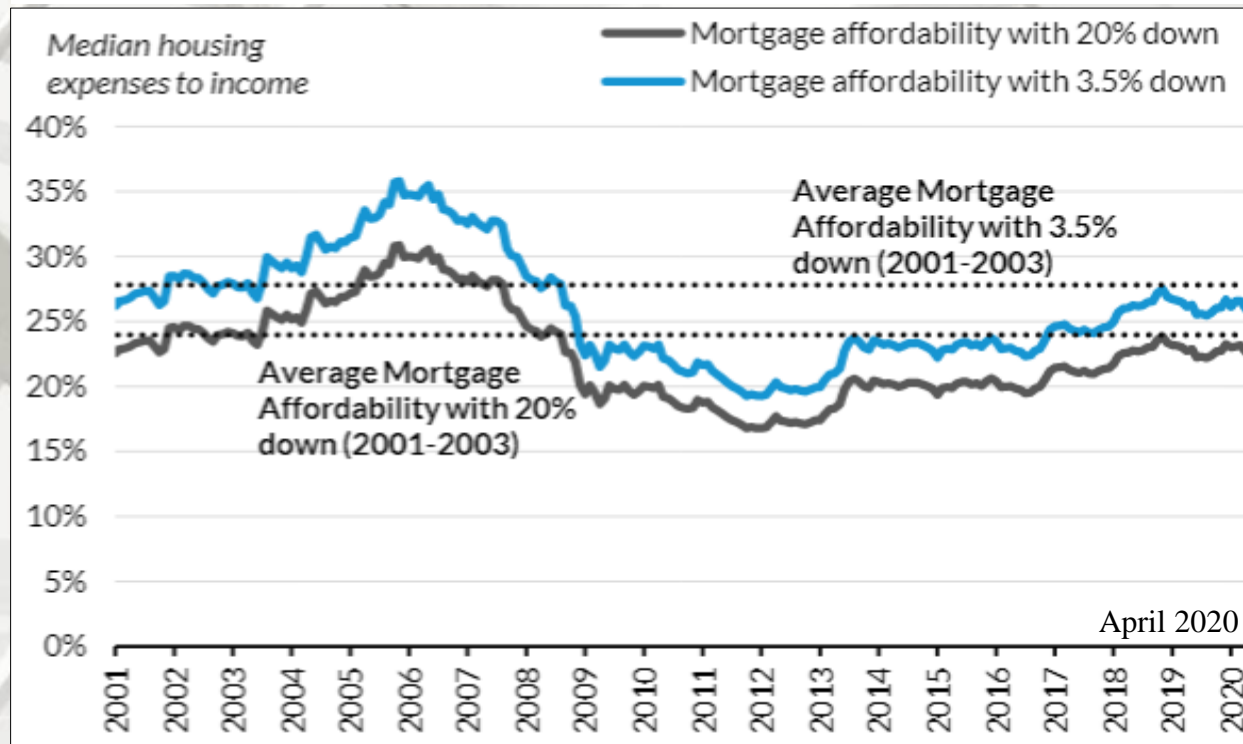
AEI Housing Center

First Time Homebuyer Share of Purchase Rate Locks

“During weeks 13-21 of 2020, FTBs accounted for a higher share of rate locks than in 2019. In week 22 2020, this trend reverted back to below the 2019 share, similar to the first couple weeks of 2020. The FTB share now stands at 40.5% of primary owner occupied rate locks, down from a high of 50.1% in week 18, down from 45.4% a year ago, and down from an average of 45.7% before the virus. This means that repeat buyers are returning to the market. Keep in mind that overall volume is up strongly. As a result, FTB lock counts for weeks 1-26 are up 14% compared to 2019.” – Edward Pinto and Tobias Peter, AEI Housing Center

Housing Affordability 1/2

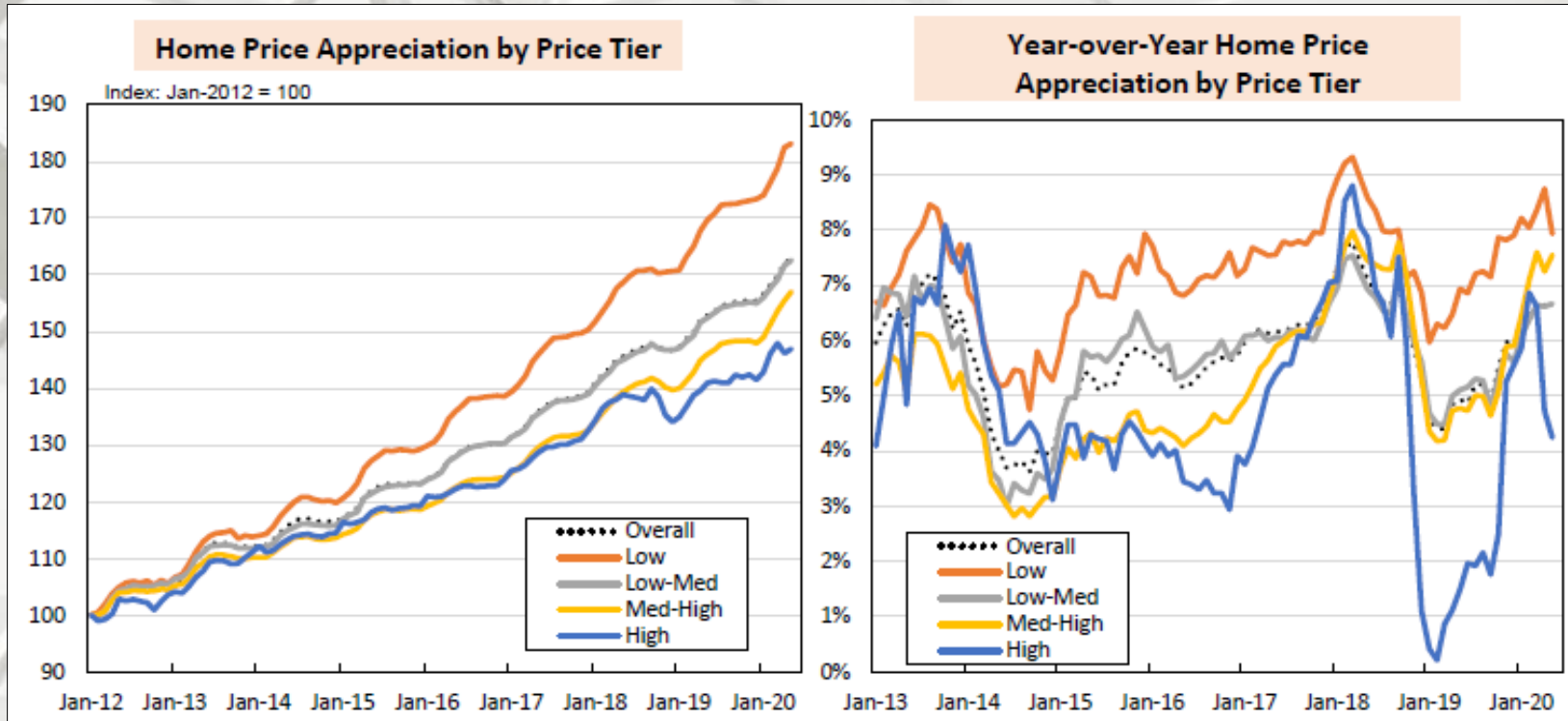
National Housing Affordability Over Time



Urban Institute

“Home prices remain affordable by historic standards, despite price increases over the last 8 years, as interest rates remain relatively low in an historic context. As of April 2020, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 22.7 percent; with 3.5 down, it is 26.0 percent. Since February 2019, the median housing expenses to income ratio has been slightly lower than the 2001-2003 average. As shown, mortgage affordability varies widely by MSA.” – Laurie Goodman, VP, Housing Finance Policy Center

Housing Affordability 2/2



Note: Data for May 2020 are preliminary. Price tiers are set at the metro level and are defined as follows: Low: all sales at or below the 40th percentile of FHA sales prices; Low-Medium: all sales at or below the 80th percentile of FHA sales prices; Medium-High: all sales at or below the 125% of the GSE loan limit; and High: all other sales. HPAs are smoothed around the times of FHFA loan limit changes.

AEI Housing Center National House Price Appreciation (HPA) by Price Tier

“Preliminary numbers for May 2020 indicate that overheating of the low price tier continued (right panel). HPA in the low price tier was 7.9% year-over-year. HPA in the high tier (about 7% share) increased significantly to 4.2% compared to 1.5% a year ago. These results are preliminary due to COVID-19 related reporting delays and may be revised when all county records have been updated.” – Edward Pinto and Tobias Peter, AEI Housing Center

AEI Housing Center

AEI Flash Housing Market Indicators

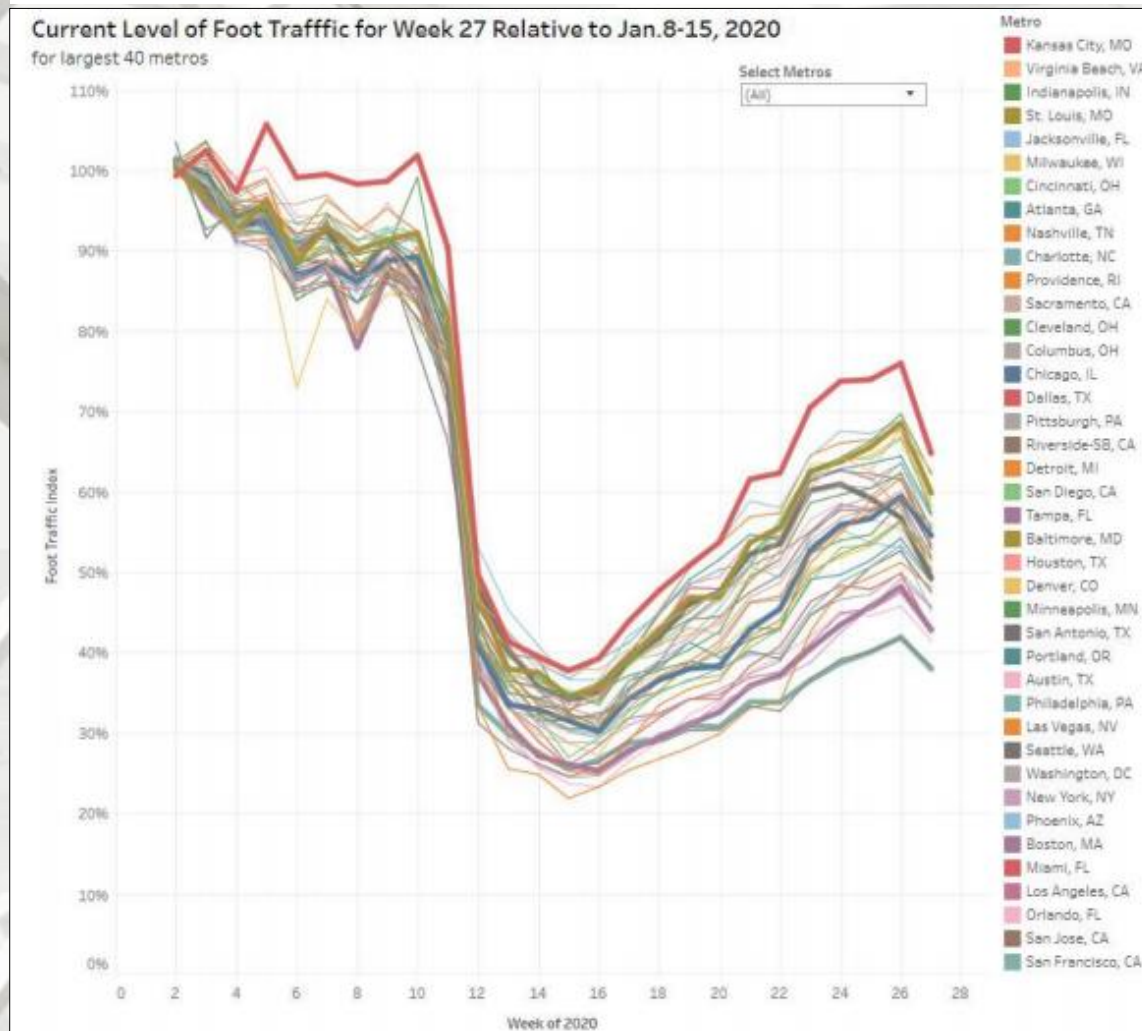
Week of June 27 to July 3, 2020

Key takeaways:

- “In a continuation of the last several weeks’ strong upward trend, purchase rate lock volume for the week of June 27 (week 27) rose 62% from a year ago. This provides further evidence that the worst of the near-term effects of the COVID-19 pandemic lockdown may be behind us on a national level.
 - Some of the increase was due to 4th of July falling on a Saturday this year as opposed to Thursday last year. If we only focus on the first 3 days of the week, the increase was 49% from a year ago.
 - As a result of the last three weeks’ strong purchase lock volume, combined with strong volume in weeks 1-13, year-to-date volume is now running 18% ahead of last year.
 - However, much of the Northeast, Midwest, and West continue to lag the national trend.
- National home price appreciation (HPA) exceeded the rate before the pandemic, which may indicate the home price boom will likely continue due to low rates and heavy demand.
 - For week 27, national HPA stood at 8.5%, which is up from a pre-pandemic high of 7.3% during week 10.
 - This recovery comes after HPA had decelerated to 3.7% in week 18.
- For the week of June 27 (week 27), cash-out refinance rate lock activity was up 101% from a year ago. Overall, cash-out volume continues to run well above the pre-crisis period.” – Edward Pinto and Tobias Peter, AEI Housing Center

U.S. Housing Market

AEI Housing Center Current Level of Foot Traffic*



*Foot traffic is a term used in real estate to describe the number of customers that view a house for sale.

Note: Bold lines correspond to Kansas City, Jacksonville, Pittsburgh, Minneapolis, Las Vegas, and San Francisco. They rank in the order that they finished in week 27, high to low.

Source: AEI Housing Center, www.AEI.org/housing and Safegraph.com

US Housing Market 1/2

Redfin

Web searches for single-family homes have popped as the coronavirus pandemic has turned privacy into a hot commodity.

“Online searches for single-family homes rose to the highest level in four years last month. This comes as the coronavirus pandemic drives buyers to seek out larger houses located farther away from dense urban areas.

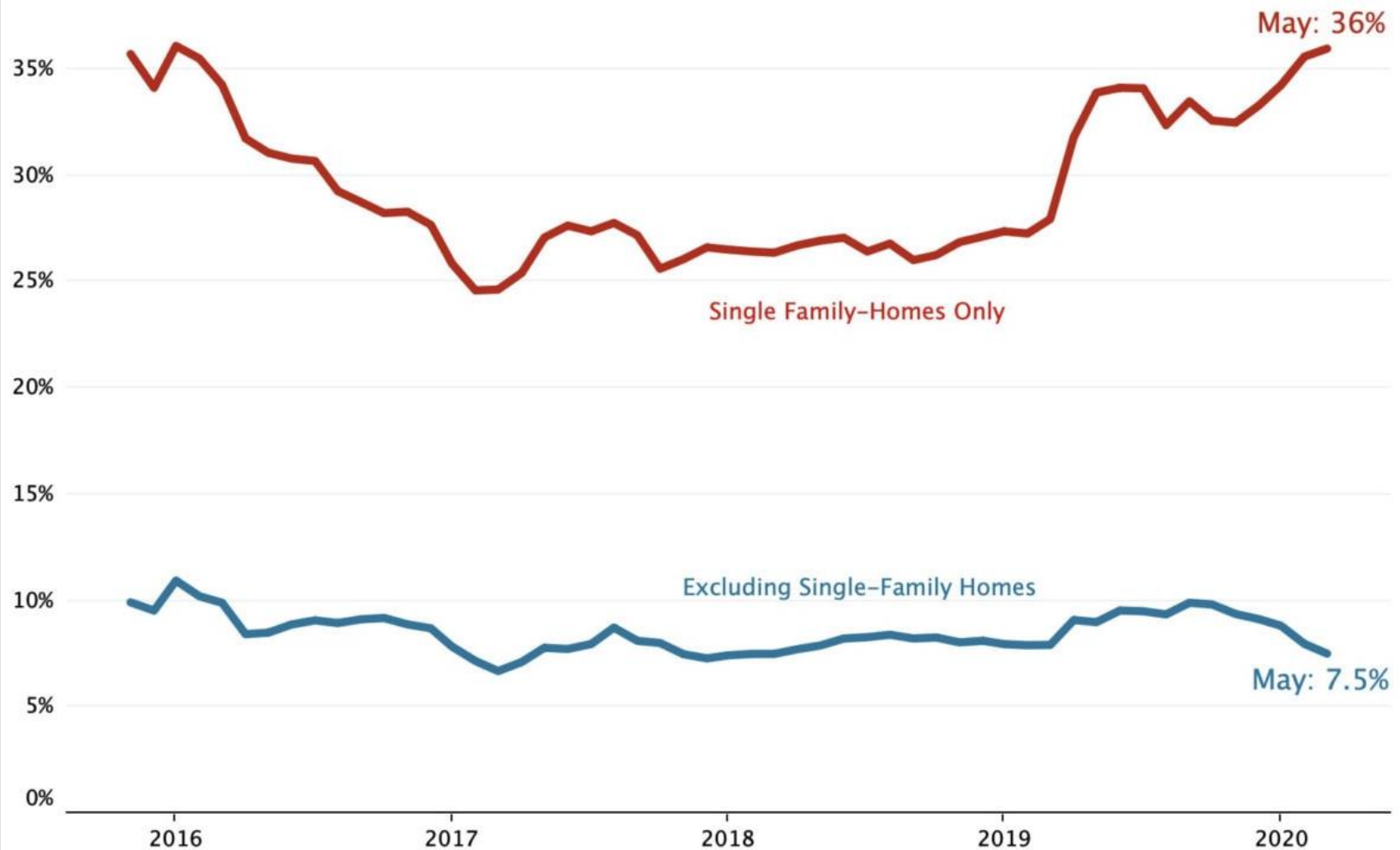
In May, 36% of saved searches created by Redfin.com users filtered exclusively for single-family homes. That’s up from 33% in February – before the coronavirus was known to be widespread in the U.S. – and represents the largest share since March 2016. It also marks an increase from 28% in May 2019.

Meanwhile, the share of searches for other types of homes, such as condos, townhouses and multifamily listings, has declined. Last month, 7.5% saved searches on Redfin.com excluded single-family homes – the lowest level in three years.

“One of the biggest benefits of living in a condo or an apartment is sharing the cost of rooftops, pools and gyms, but many of these communal amenities have been roped off due to the pandemic,” said Redfin lead economist Taylor Marr. “People who were previously willing to share space with strangers in exchange for a nice view and a quick commute now want their own yards and home offices. Flexible work-from-home policies have made this dream achievable for many house hunters.”” – Lily Katz, Data Journalist, Redfin

US Housing Market 2/2

Searches for Single-Family Homes are on the Rise
Share of saved searches on Redfin.com



Source: User saved searches on Redfin.com

REDFIN

Mortgage Credit Availability 1/2

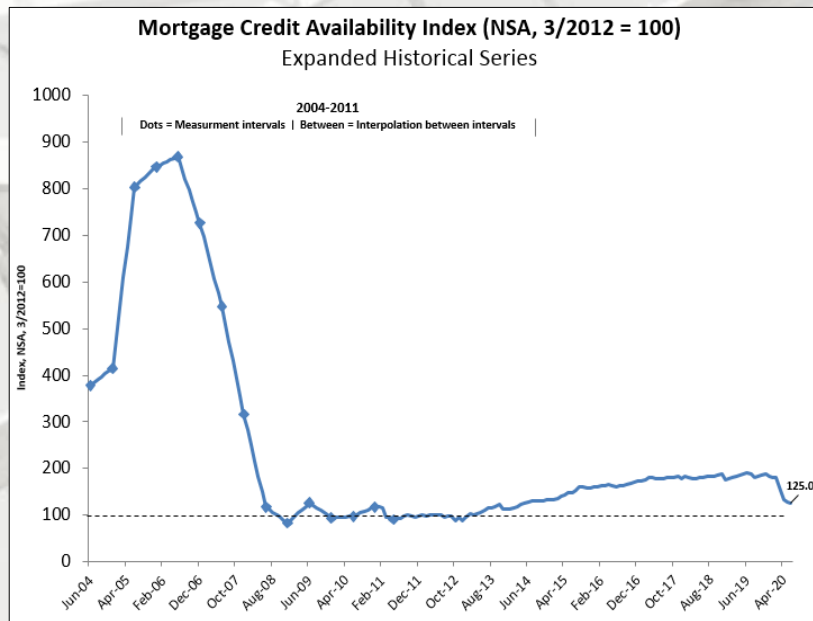
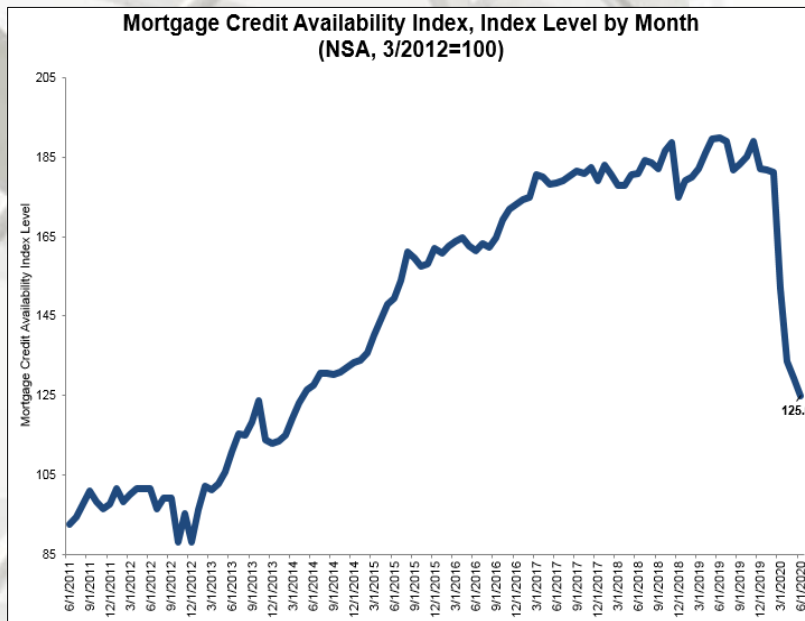
Mortgage Credit Availability Decreased in June

“Mortgage credit availability decreased in June according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) which analyzes data from Ellie Mae's AllRegs® Market Clarity® business information tool.

The MCAI fell by 3.3 percent to 125.0 in June. 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 4.1 percent, while the Government MCAI decreased by 2.8 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI decreased by 7.3 percent, and the Conforming MCAI fell by 1.0 percent.

Mortgage credit supply dropped again in June, as investors further reduced their willingness to purchase jumbo loans and those with lower credit scores. Lenders are navigating a gradual economic and housing market recovery that is still facing headwinds from the ongoing COVID-19 pandemic. The overall credit availability index decreased 3.3 percent to its lowest level since April 2014, with all of the sub-indexes falling to lows not seen since 2014-2015. Credit supply has fallen over 30 percent since February – before the pandemic – with an 18 percent decrease in government loan availability, and a 57 percent drop in jumbo loan availability.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

Mortgage Credit Availability 2/2



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

Summary

In conclusion:

The United States housing construction market indicated modest improvement in May, on a month-over-month basis. Total starts; total, single-family and multi-family permits and new single-family sales increased on a month-over-month basis. On a year-over-year basis, the majority of the data indicated declines, except for total starts, new single-family sales, and total private residential construction spending. The impact of Covid19 is still evident in this month's data.

Housing, in the majority of categories, remains substantially less than their respective historical averages. The new SF housing construction sector is where the majority of value-added forest products are utilized and this housing sector has ample room for improvement.

Pros:

- 1) Historically low interest rates are still in place;
- 2) Select builders are beginning to focus on entry-level houses;
- 3) Housing affordability indicates improvement;

Cons:

- 1) Coronavirus19 (Covid19);
- 2) Lot availability and building regulations (according to several sources);
- 3) Laborer shortages;
- 4) Household formations still lag historical averages;
- 5) Changing attitudes towards SF ownership;
- 6) Job creation is improving and consistent but some economists question the quantity and types of jobs being created;
- 7) Debt: Corporate, personal, government – United States and globally;
- 8) Other global uncertainties.

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