

The Virginia Tech–USDA Forest Service Housing Commentary: Section I November 2020



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

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Opening Remarks

In November, the aggregate (month-over-month and year-over-year) United States housing market data was positive. November housing data denoted the second consecutive month of total starts greater than 1.5-million units. The single-family sub-sector is the primary source of the current uptrend and is progressively gaining momentum. Month-over-month data yielded decreases in three categories: completions, and new single-family and existing sales. Similarly, year-over-year data indicated declines for multi-family-starts and permits, and total and single-family completions. Residential construction spending was positive month-over-month and year-over-year; and expenditures in August, September, and November are the greatest since 2005-2006 (nominal basis).

The January 15th Atlanta Fed GDPNow™ model forecast was an aggregate 29.9% increase for total residential investment spending in Quarter Four 2020. New private permanent site expenditures were projected at 45.8%; the improvement spending forecast was 4.5%; and the manufactured/mobile expenditures projection was 22.0% (all: quarterly log change and at a seasonally adjusted annual rate).¹

“... The US housing market had a very strong year in 2020. And the best way we can describe 2021 is that we think that the market is going to transition from hot to warm. There's really, again, two ingredients to that view. Supply and demand. On the supply side, we think that supply is going to remain very, very tight. You know, if you look at the inventory of homes for sales, we're at actually multi-decades low in the US. And that tailwind, I think, will remain in place into 2021. On the demand side, there's no doubt that the disruption that the COVID-19 pandemic imposed to the labor force, it basically forced a lot of people to work from home. It did stimulate a lot of demand into 2020. And so that tailwind will likely fade in 2021. But we do see two structural factors that will remain in place and will, nonetheless, stimulate demand next year. The first one is demographic forces. We do expect millennials to continue to increase their ownership share in the housing market. And then the second is the one you've mentioned earlier, which is financing conditions or borrowing costs remain quite attractive for first-time home buyers. But obviously, if you looked at 30-year mortgage rates, we're basically at all time low-levels. And that's a pretty significant tailwind to demand in our view.”² – Lotfi Karoui, Managing Director, Goldman Sachs

This month's commentary contains applicable housing data. Section I contains 2021 housing forecasts, data, remodeling, and housing finance commentary. Section II includes regional Federal Reserve analysis, private firm indicators, and demographic information.

Sources: ¹ www.frbatlanta.org/cqer/research/gdpnow.aspx; 1/15/21;

² <https://www.goldmansachs.com/insights/pages/the-daily-check-in/2021-credit-market-outlook/transcript.pdf>; 12/15/20

November 2020

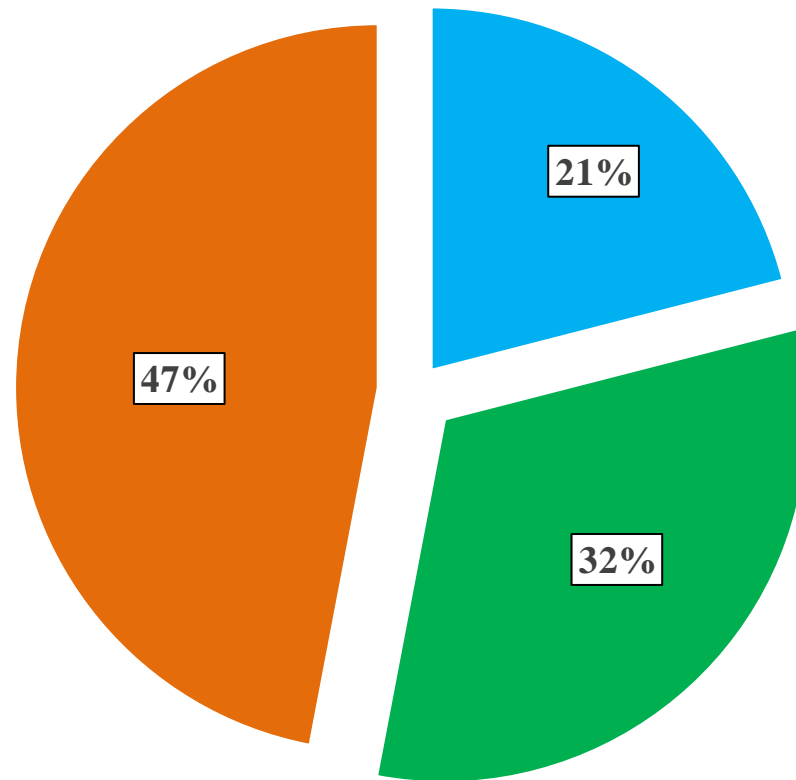
Housing Scorecard

	M/M	Y/Y
Housing Starts	▲ 1.2%	▲ 12.8%
Single-Family (SF) Starts	▲ 0.4%	▲ 27.1%
Multi-Family (MF) Starts*	▲ 4.0%	▼ -17.6%
Housing Permits	▲ 6.2%	▲ 8.5%
SF Permits	▲ 1.3%	▲ 22.2%
MF Permits*	▲ 19.2%	▼ -13.7%
Housing Under Construction	▲ 2.0%	▲ 7.3%
SF Under Construction	▲ 3.9%	▲ 12.8%
Housing Completions	▼ -12.1%	▼ -4.8%
SF Completions	▼ -0.6%	▼ -4.5%
New SF House Sales	▼ -11.0%	▲ 20.8%
Private Residential Construction Spending	▲ 2.7%	▲ 16.1%
SF Construction Spending	▲ 5.1%	▲ 18.1%
Existing House Sales ¹	▼ -2.5%	▲ 25.8%

* 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

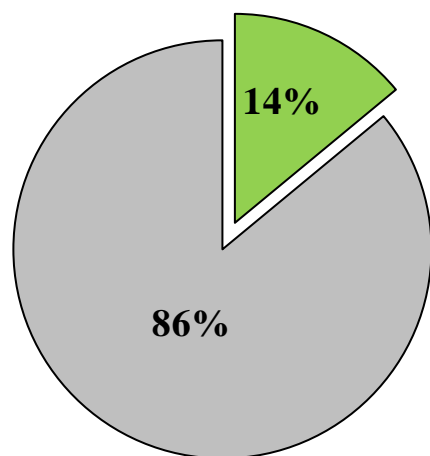


■ Non-structural panels

■ Total Sawnwood

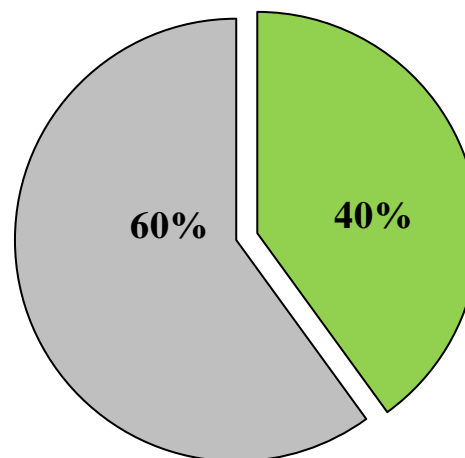
■ Structural panels

New SF Construction Percentage of Wood Products Consumption



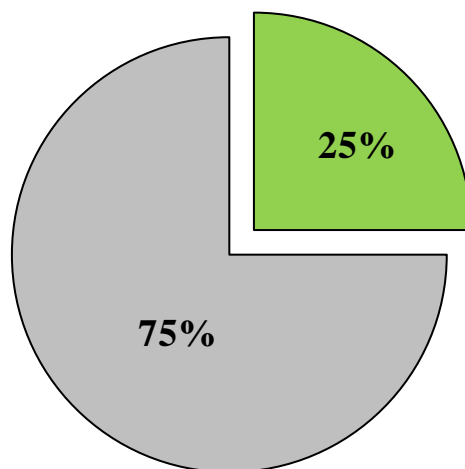
■ Non-structural panels:
New Housing

■ Other markets



■ Structural panels:
New housing

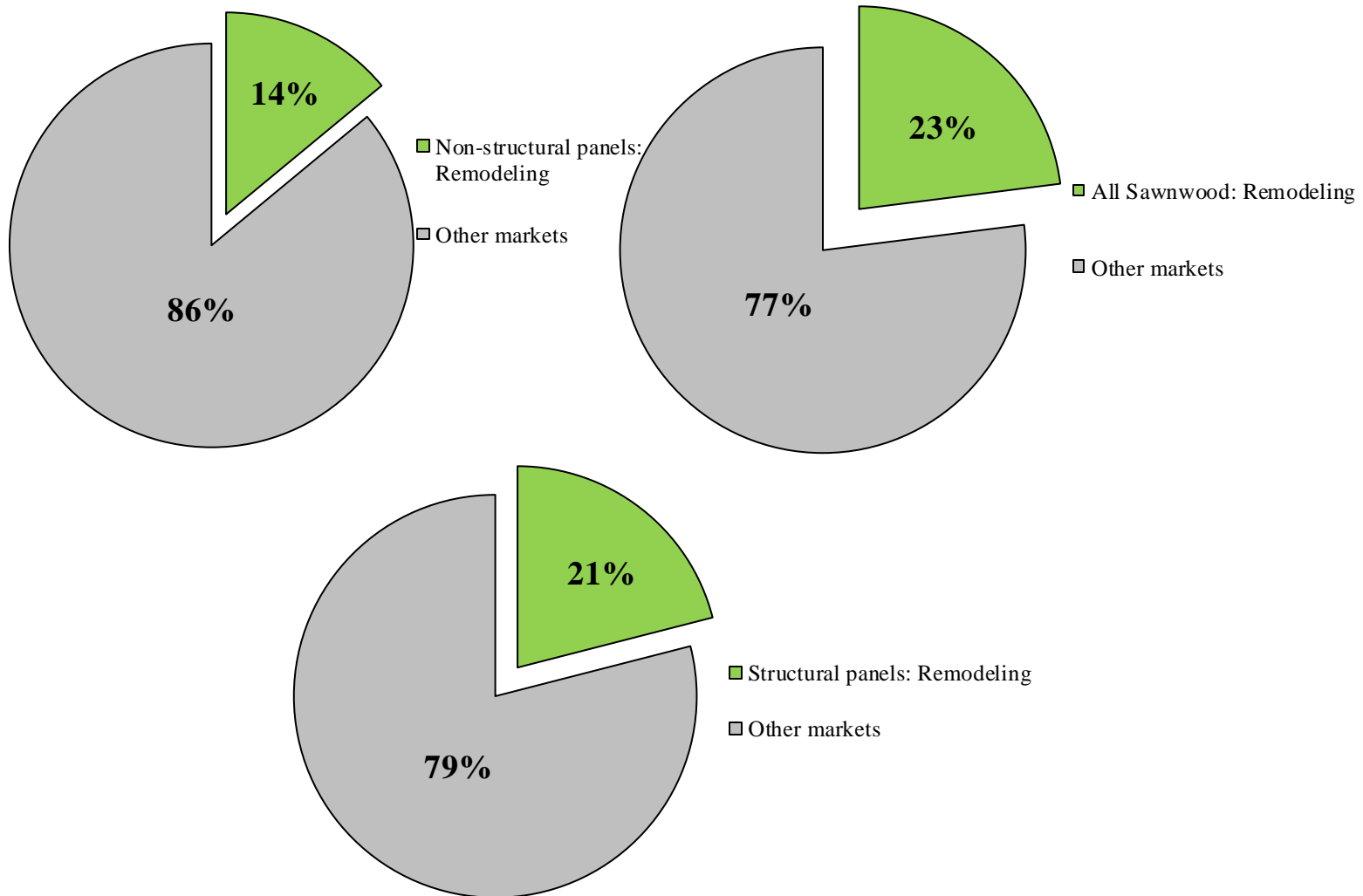
■ Other markets



■ All Sawnwood: New housing

■ Other markets

Repair and Remodeling's Percentage of Wood Products Consumption



2021 Housing Forecasts*

	Range	Median
Total starts:	1,233 to 1,605	1,440
Single-Family (SF) starts:	928 to 1,308	1,055
New SF house sales:	736 to 1,259	912

Organization	Total Starts	SF Starts	New SF House Sales
APA - The Engineered Wood Association ^a	1,420	1,050	
Bank of Montreal (BOM) ^b	1,450		
Blue Chip Economic Indicators ^c	1,380		
Deloitte ^d	1,330		
Dodge Data & Analytics ^e	1,412	928	
Fannie Mae ^f	1,444	1,107	872
Forest2Market ^g	1,233		
Goldman Sachs ^h	1,440		736
Merrill Lynch ⁱ	1,500		950
Mortgage Bankers Association (MBA) ^j	1,482	1,134	989

* All in thousands of units

2021 Housing Forecasts*

	Range	Median	
Total starts:	1,233 to 1,605	1,440	
Single-Family (SF) starts:	928 to 1,308	1,055	
New SF house sales:	736 to 1,259	912	
Organization	Total Starts	Single-Family Starts	New House Sales
National Association of Homebuilders ^k	1,383	1,034	884
National Association of Realtors ^l	1,500		
PNC Financial Services Group ^m	1,605		1,259
Fastmarkets RISI ⁿ	1,411	1,308	
Raymond James LTD ^o	1,440		
Royal Bank of Canada (RBC) ^p	1,308		
Scotiabank ^q	1,530		
TD Economics ^r	1,360		
UCLA Ziman Center for Real Estate ^s	1,290		
Urban Institute ^t	1,467		

* All in thousands of units

References

- a-APA, Housing Starts November 2020 (12/17/20). *APA – The Engineered Wood Association*. Tacoma, WA. 48 pps. (Subscription)
- b-https://economics.bmo.com/media/filer_public/cf/4b/cf4bc28a-a7c2-4624-abc0-b9a68daa0da0/outlookus.pdf
- c-<https://lrus.wolterskluwer.com/media/4022/bluechipecconomicindicators1020.pdf>
- d-<https://www2.deloitte.com/us/en/insights/economy/us-economic-forecast/united-states-outlook-analysis.html?id=us:2em:3pa:economic-outlook:eng:di:122220>
- e-<http://rockproducts.com/2020/11/11/dodge-data-analytics-expects-construction-starts-to-recover-in-2021/>
- f-<https://www.fanniemae.com/media/37541/display>
- g-<https://www.workingforest.com/18-predictions-for-the-global-forest-pulp-paper-and-chemicals-industries-in-2021/>
- h-<http://www.goldmansachs.com/insights/pages/outlook-2019/us-outlook/report.pdf>
- i-<https://www.calculatedriskblog.com/2020/12/update-2021-housing-forecasts.html>
- j-<https://mba-erm.informz.net/mba-erm/data/images/Mortgage%20Finance%20Forecast%20dec%202020.pdf>
- k-<https://www.nahb.org/news-and-economics/housing-economics/Forecasts> (Subscription)
- l-<https://www.nar.realtor/research-and-statistics/research-reports/2020-consensus-forecast>
- m-https://www.pnc.com/content/dam/pnc-com/pdf/aboutpnc/EconomicReports/NEO%20Reports/2020/NEO_Dec2020.pdf
- n-*Random Lengths* (1/8/21). Vol 77, Issue 01. Eugene, OR (Subscription)
- o-Raymond James LTD. Forest Products Industry Comment. January 13, 2021. (Subscription)
- p-http://www.rbc.com/economics/economic-data/pdf/economy_us.pdf
- q-<http://www.gbm.scotiabank.com/scpt/gbm/scotiaeconomics63/forecast.pdf>
- r-<https://economics.td.com/us-long-term-forecast>
- s-https://www.anderson.ucla.edu/documents/areas/ctr/forecast/reports/uclaforecast_Sept2020_USForecast.pdf
- t-https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-november-2020/view/full_report
- u-<https://image.mail1.wf.com/lib/fe8d13727664027a7c/m/5/bca49e58-a10c-496d-823c-a1c5f87a4d31.pdf>

2020 Housing Forecasts*

	Range	Median
Total starts:	1,200 to 1,423	1,305
Single-Family (SF) starts:	810 to 990	920
New SF house sales:	695 to 750	726

2019 Housing Forecasts*

	Range	Median
Total starts, range:	1,134 to 1,400	Median: 1,280
Single-family starts, range:	815 to 920	Median: 900
New SF house sales, range:	618 to 688	Median: 638

2018 Housing Forecasts*

	Range	Median
Total starts, range:	1,248 to 1,320	Median: 1,280
Single-family starts, range:	850 to 981	Median: 912
New SF house sales, range:	653 to 700	Median: 672

* All in thousands of units

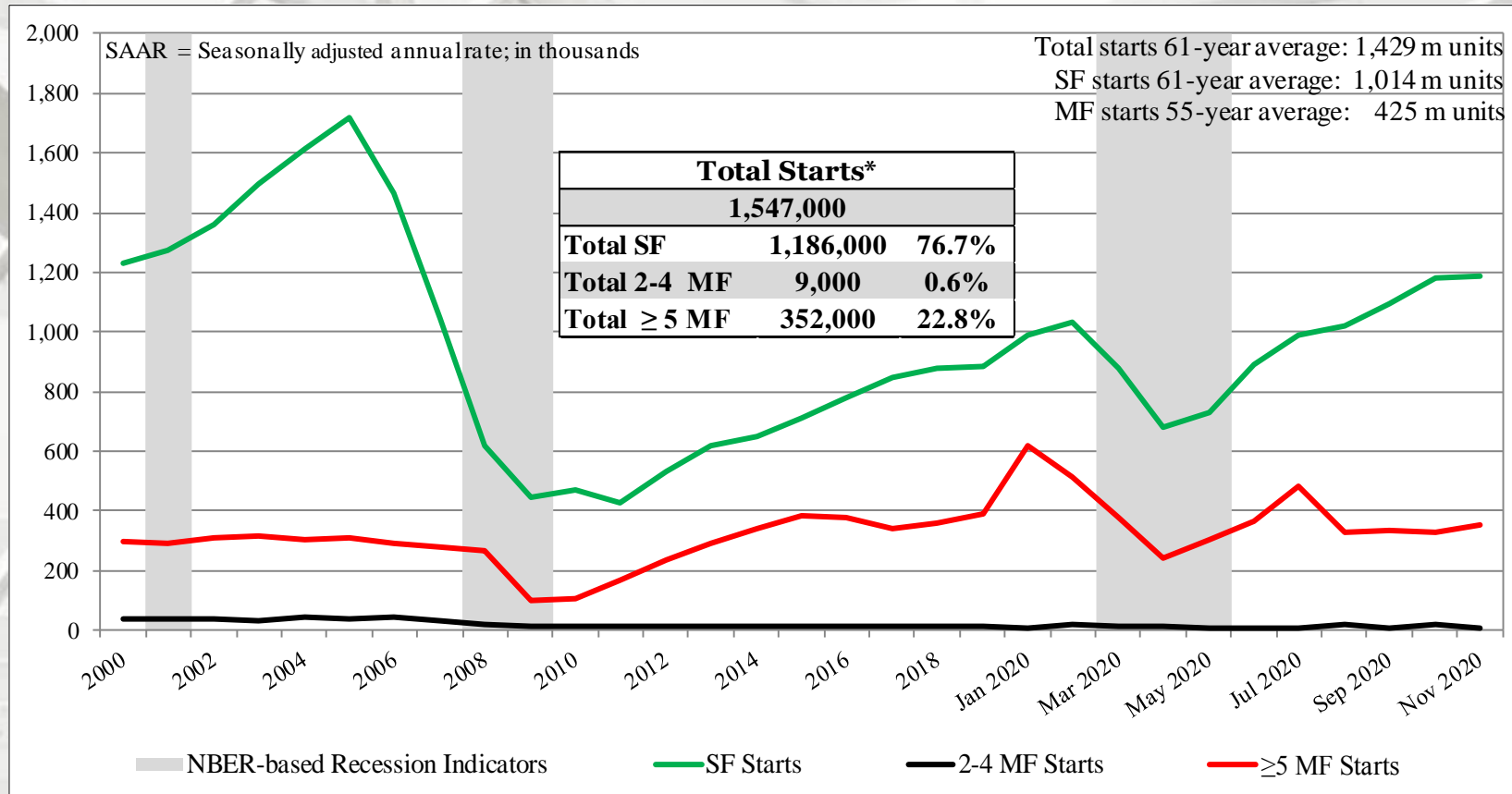
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
November	1,547,000	1,186,000	9,000	352,000
October	1,528,000	1,181,000	21,000	326,000
2019	1,371,000	933,000	19,000	419,000
M/M change	1.2%	0.4%	-57.1%	8.0%
Y/Y change	12.8%	27.1%	-52.6%	-16.0%

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

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

Total Housing Starts

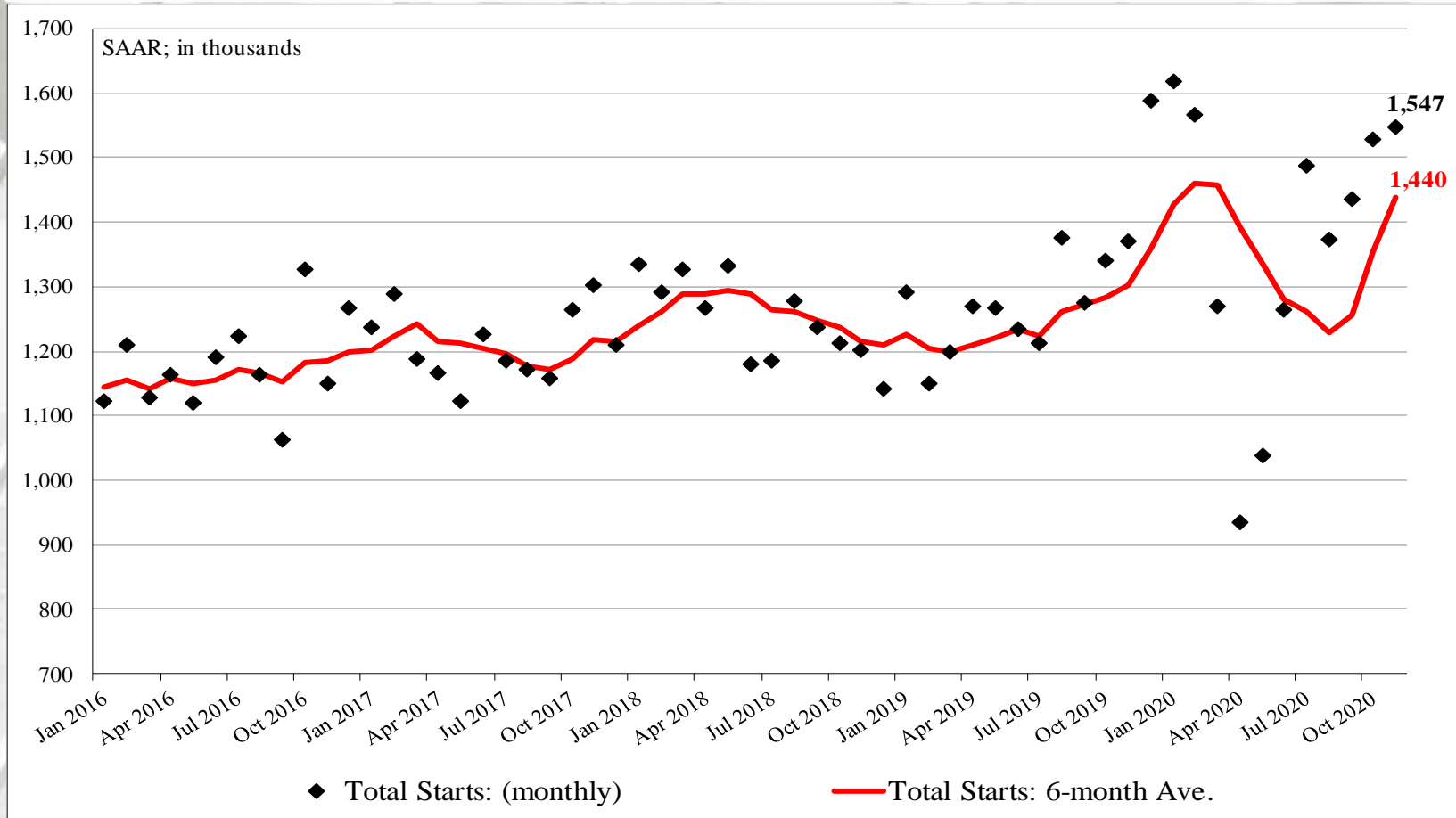


US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: ((Total starts – (SF + ≥ MF)).

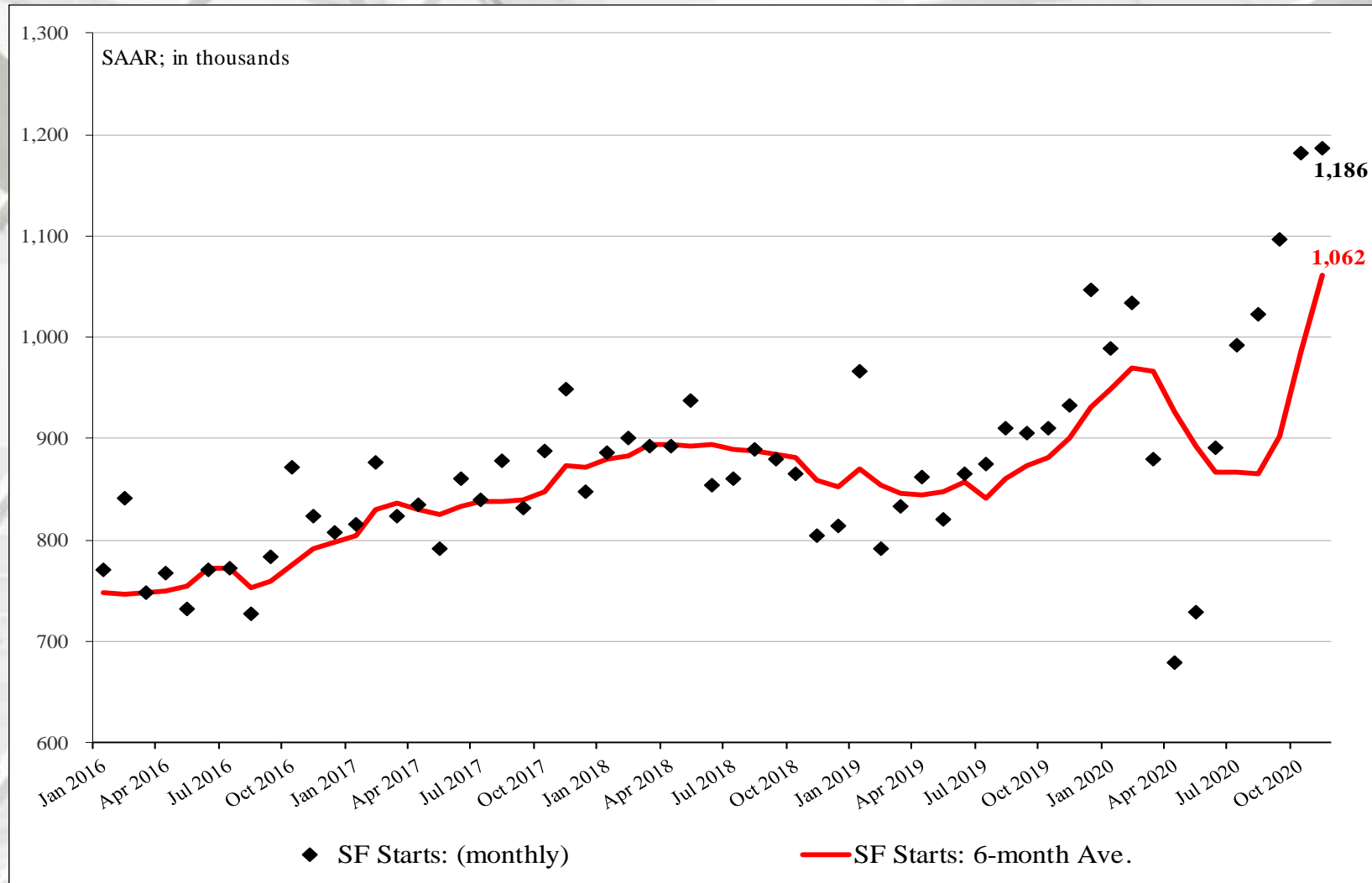
* Percentage of total starts.

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

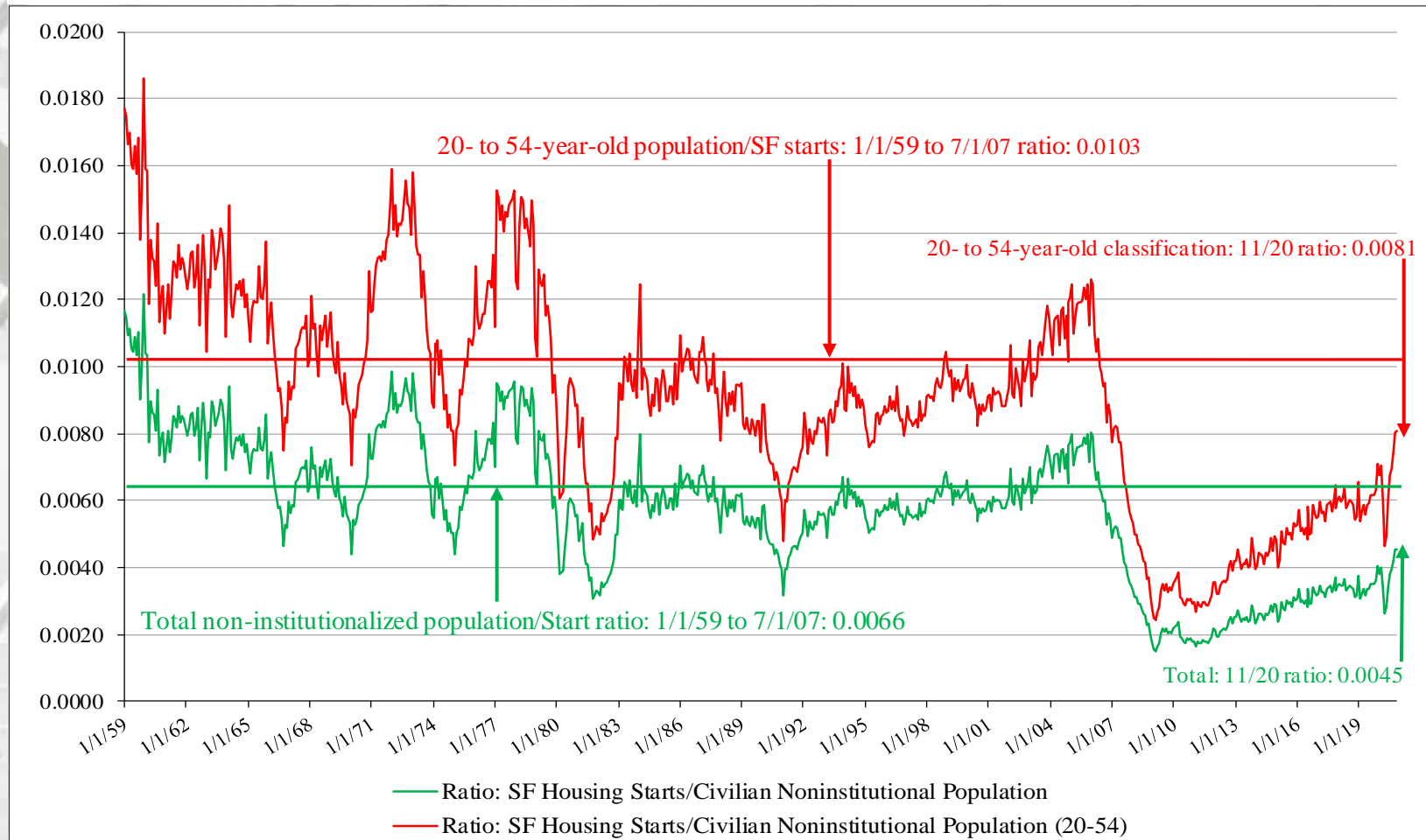
Total Housing Starts: Six-Month Average



SF Housing Starts: Six-Month Average



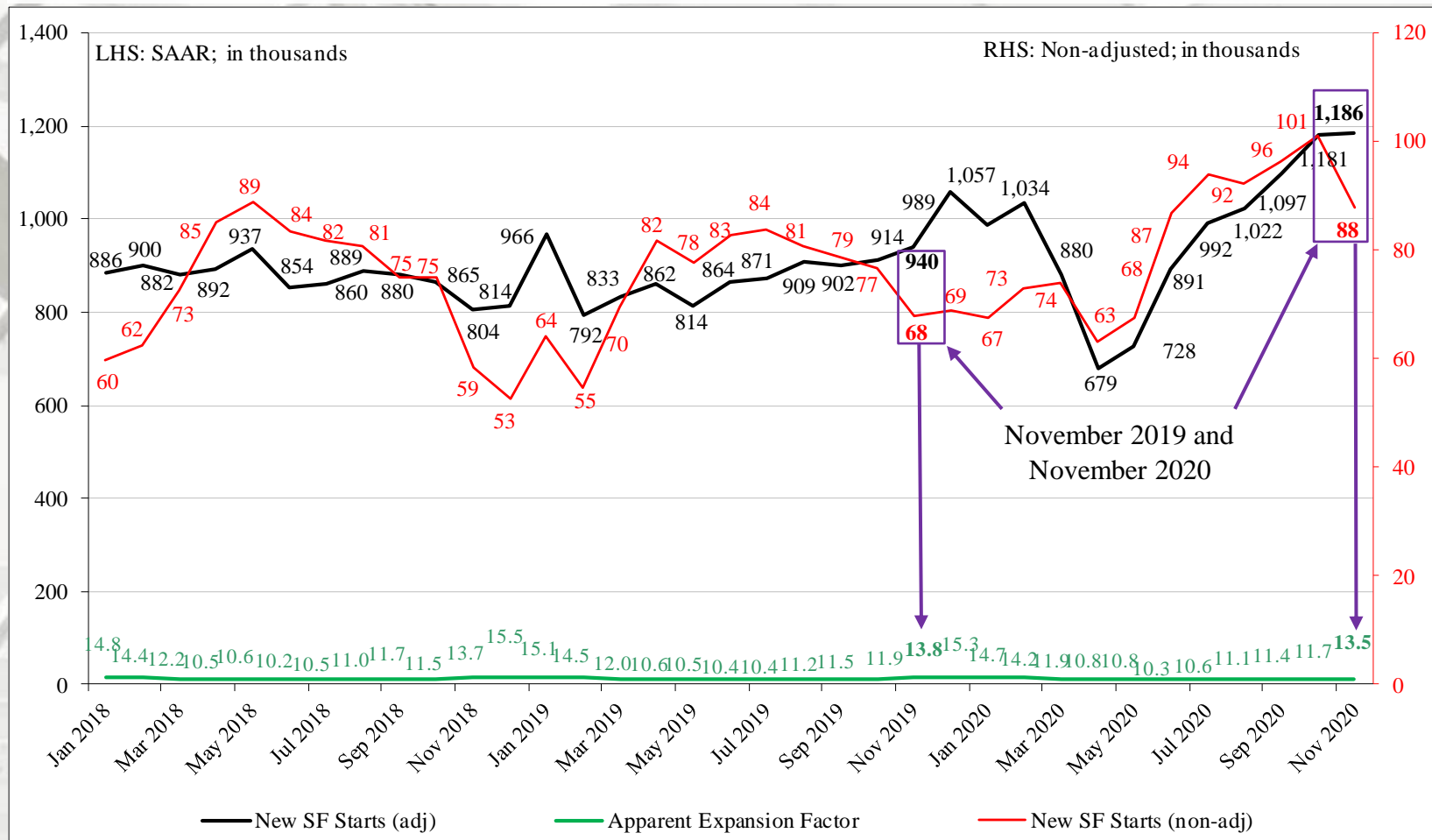
New SF Starts



New SF starts adjusted for the US population

From January 1959 to November 2007, the long-term ratio of the total US non-institutionalized population to new SF starts is 0.0066; in November 2020 it was 0.0045 – no change from October. The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in November 2020 was 0.0081 – a slight increase from October. 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

	NE Total	NE SF	NE MF**
November	135,000	59,000	76,000
October	85,000	56,000	29,000
2019	106,000	65,000	41,000
M/M change	58.8%	5.4%	162.1%
Y/Y change	27.4%	-9.2%	85.4%
	MW Total	MW SF	MW MF
November	196,000	137,000	59,000
October	206,000	151,000	55,000
2019	170,000	110,000	60,000
M/M change	-4.9%	-9.3%	7.3%
Y/Y change	15.3%	24.5%	-1.7%

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

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

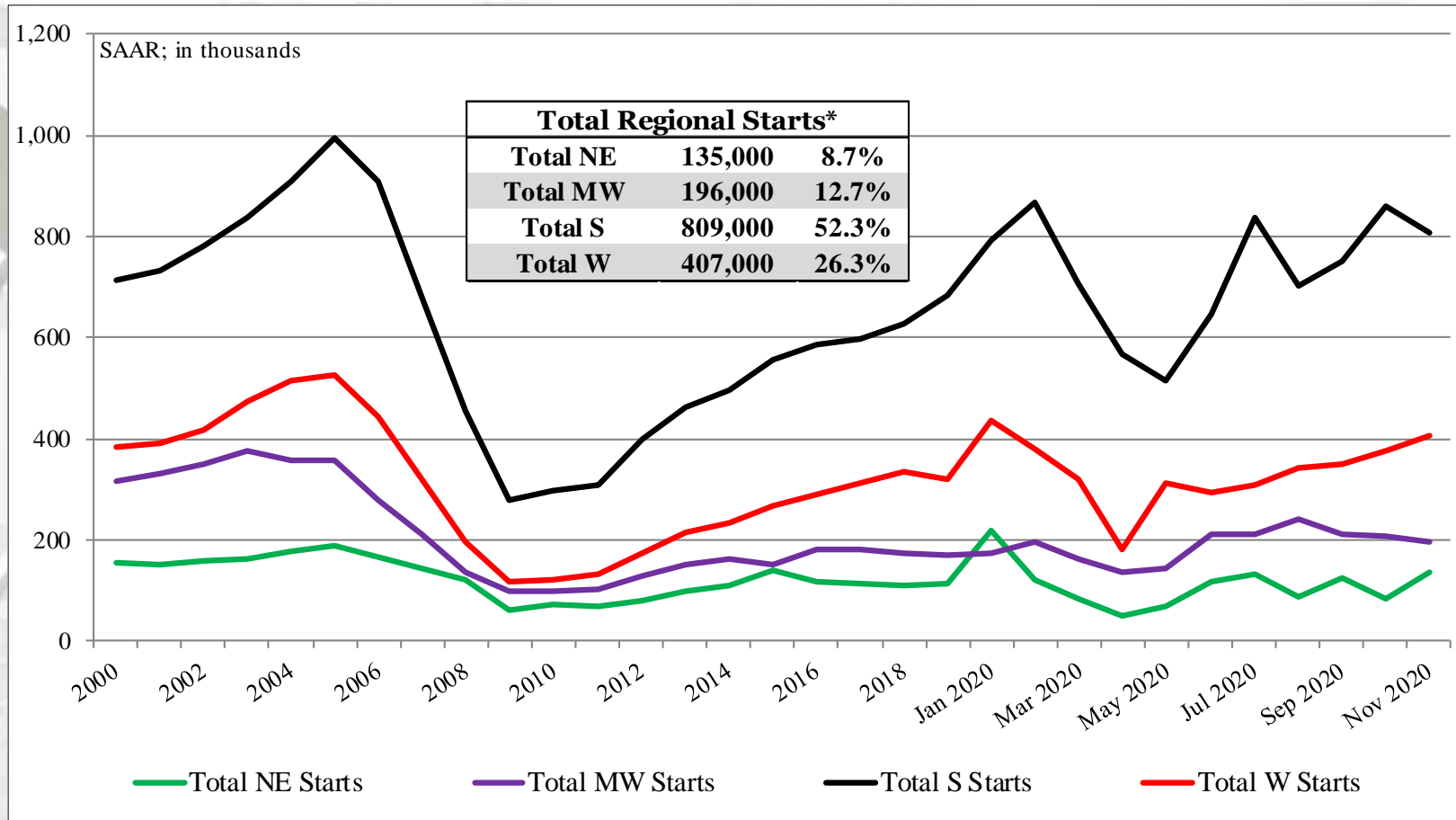
New Housing Starts by Region

	S Total	S SF	S MF**
November	809,000	661,000	148,000
October	861,000	682,000	179,000
2019	742,000	511,000	231,000
M/M change	-6.0%	-3.1%	-17.3%
Y/Y change	9.0%	29.4%	-35.9%
	W Total	W SF	W MF
November	407,000	329,000	78,000
October	376,000	292,000	84,000
2019	353,000	247,000	106,000
M/M change	8.2%	12.7%	-7.1%
Y/Y change	15.3%	33.2%	-26.4%

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

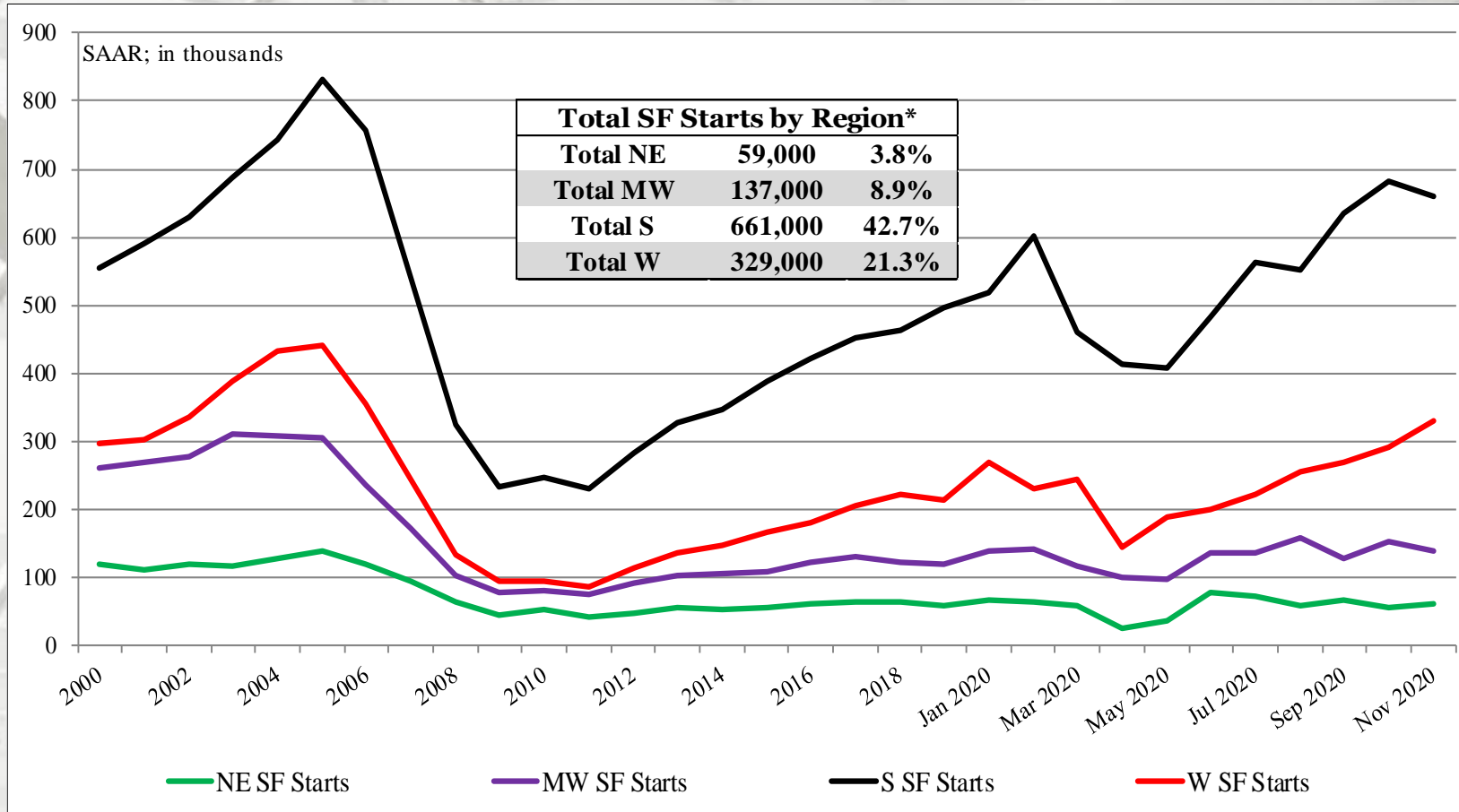


NE = Northeast, MW = Midwest, S = South, W = West

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

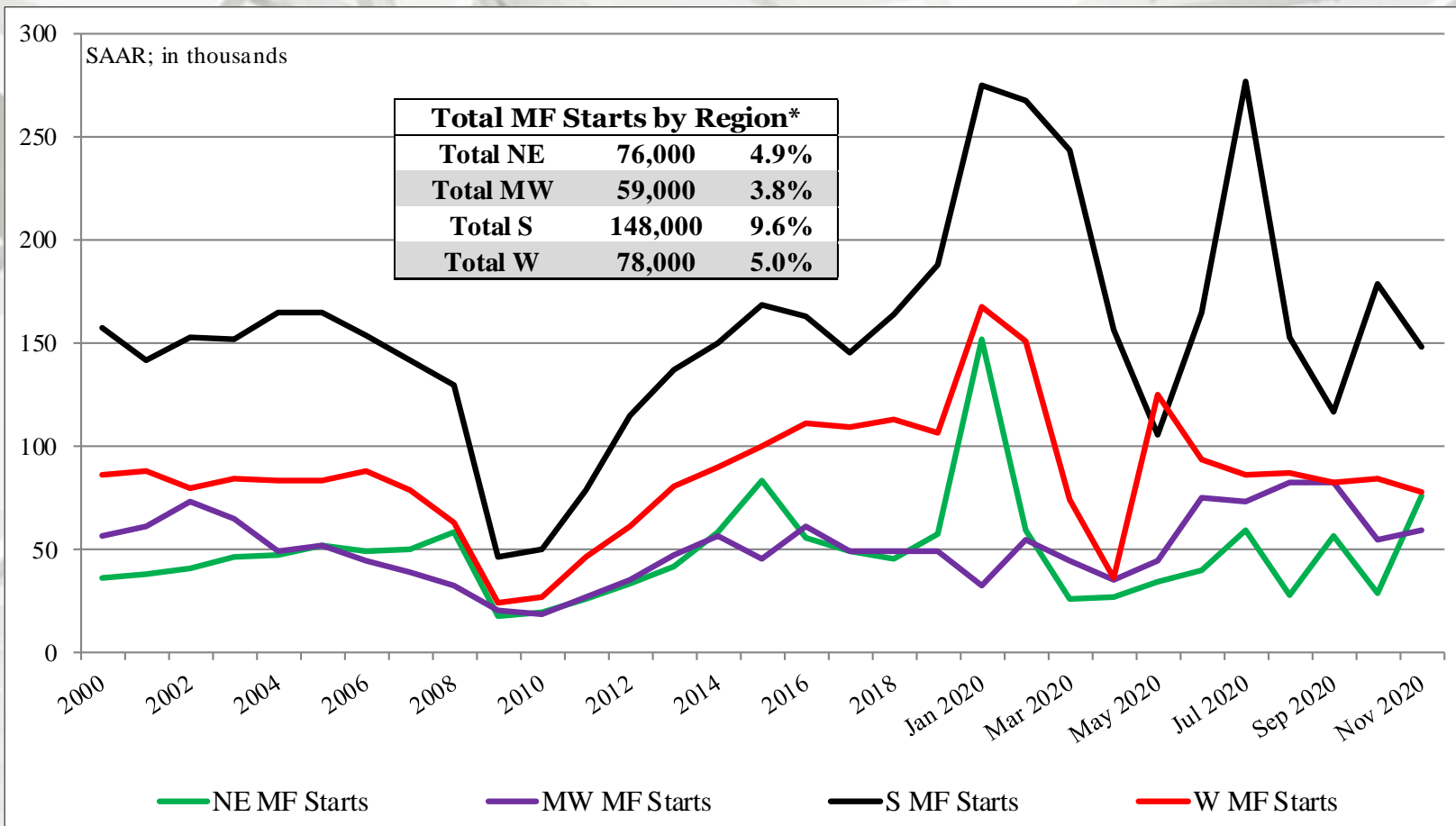


NE = Northeast, MW = Midwest, S = South, W = West

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

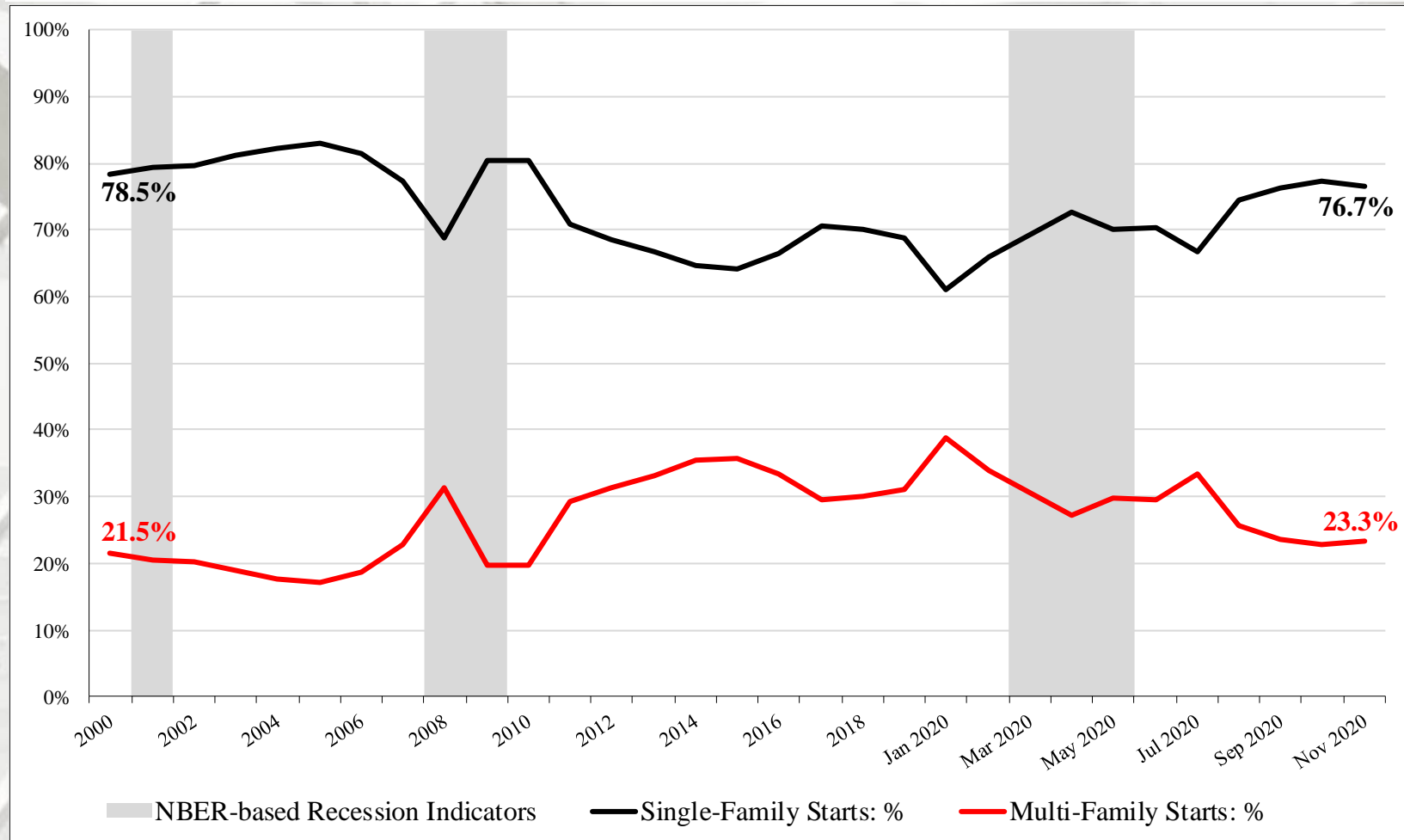


NE = Northeast, MW = Midwest, S = South, W = West

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 (%)



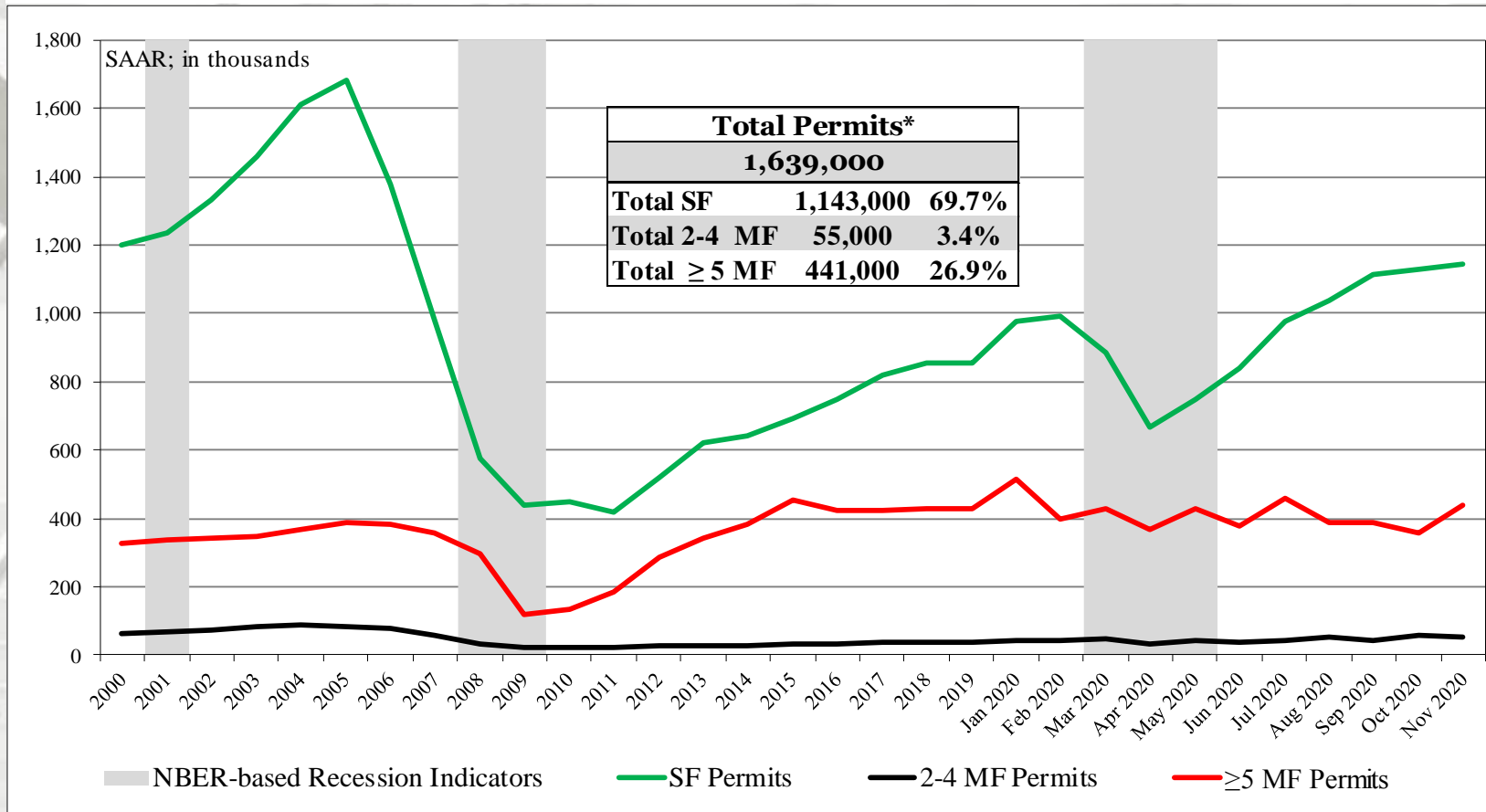
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
November	1,639,000	1,143,000	55,000	441,000
October	1,544,000	1,128,000	57,000	359,000
2019	1,510,000	935,000	41,000	534,000
M/M change	6.2%	1.3%	-3.5%	22.8%
Y/Y change	8.5%	22.2%	34.1%	-17.4%

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

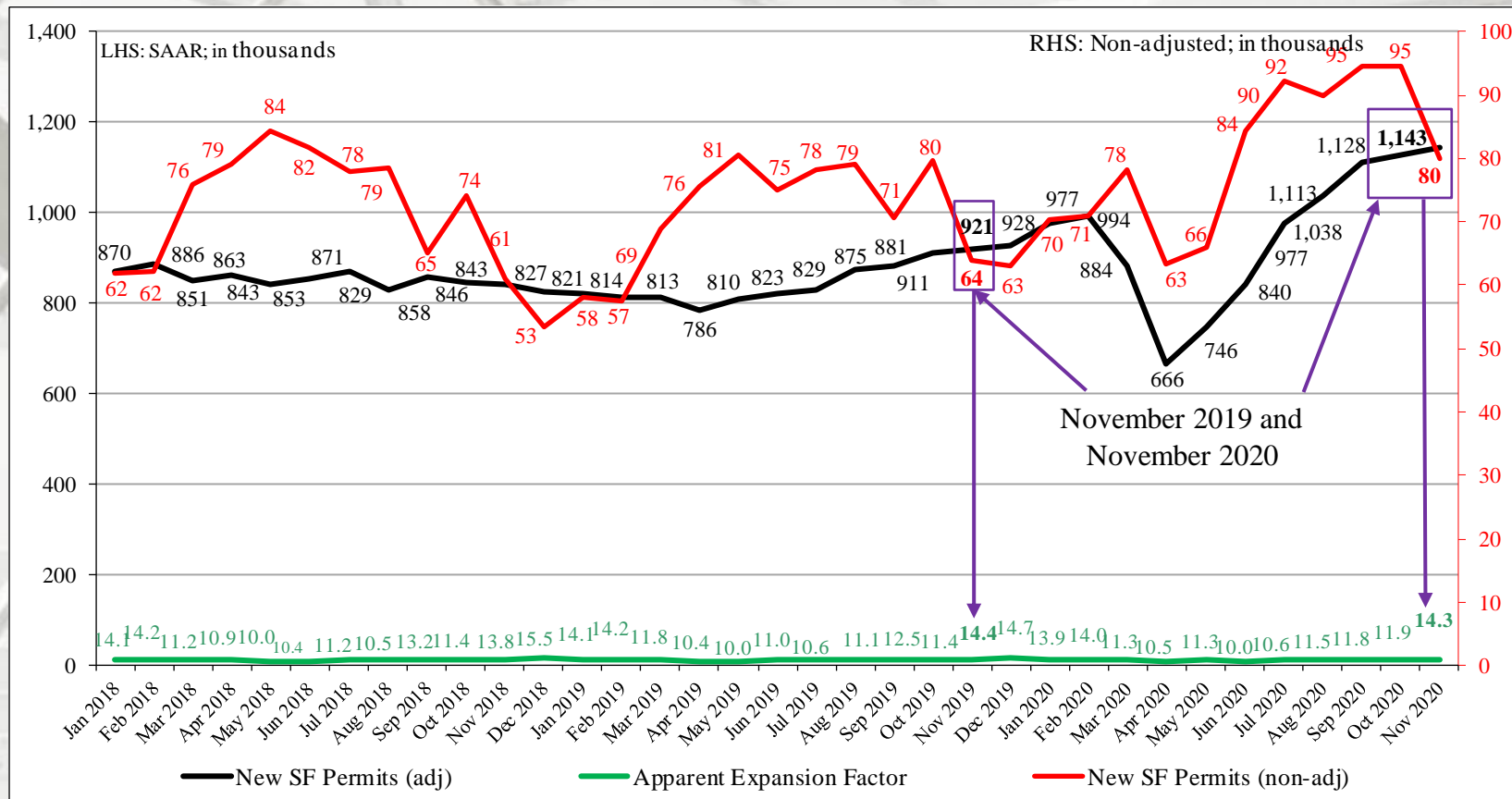
Total New Housing Permits



* 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

	NE Total*	NE SF	NE MF**
November	149,000	67,000	82,000
October	132,000	60,000	72,000
2019	172,000	57,000	115,000
M/M change	12.9%	11.7%	13.9%
Y/Y change	-13.4%	17.5%	-28.7%
	MW Total*	MW SF	MW MF**
November	219,000	145,000	74,000
October	211,000	145,000	66,000
2019	208,000	113,000	95,000
M/M change	3.8%	0.0%	12.1%
Y/Y change	5.3%	28.3%	-22.1%

NE = Northeast; MW = Midwest

* All data are SAAR

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

New Housing Permits by Region

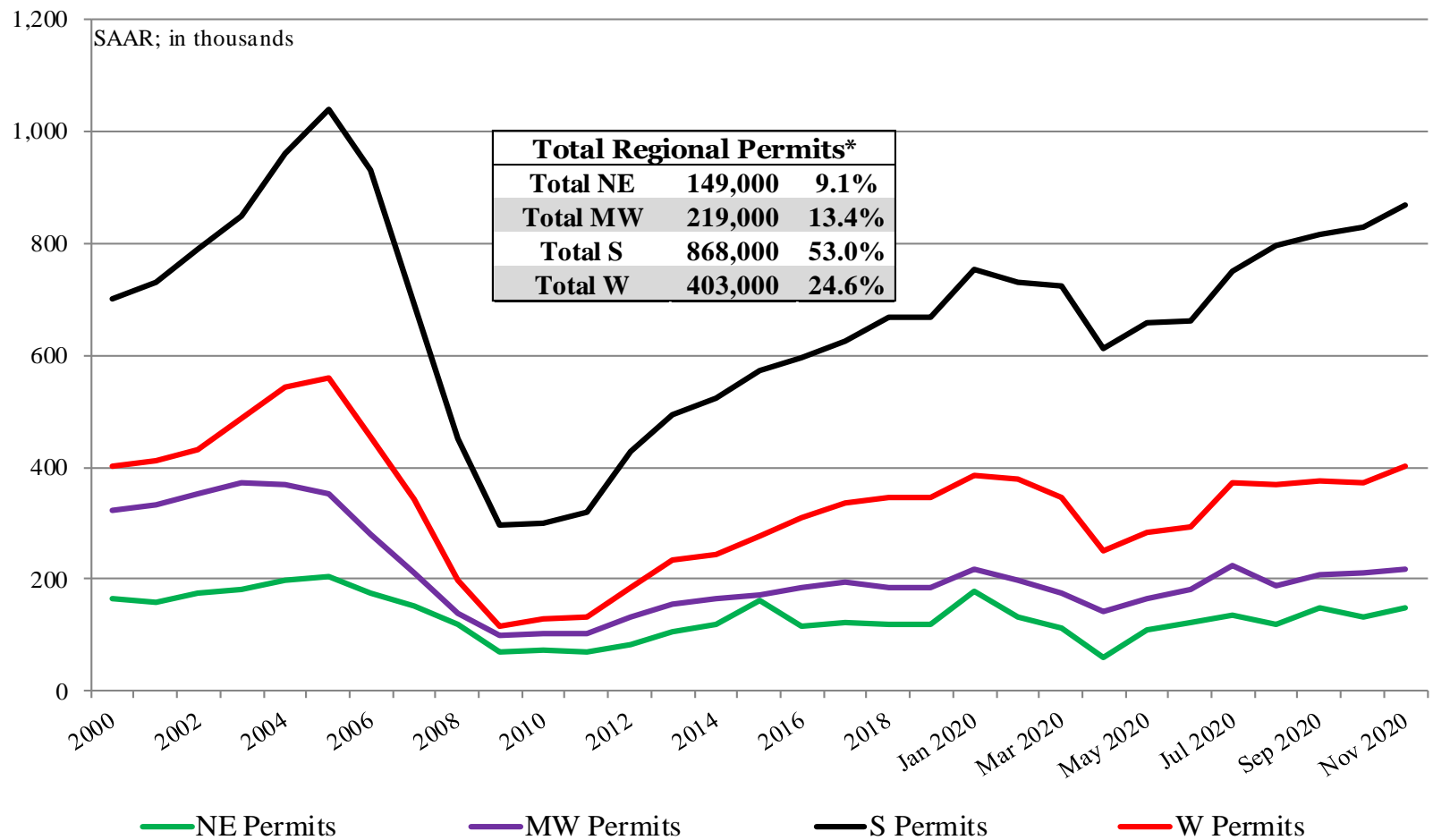
	S Total*	S SF	S MF**
November	868,000	657,000	211,000
October	829,000	652,000	177,000
2019	759,000	528,000	231,000
M/M change	4.7%	0.8%	19.2%
Y/Y change	14.4%	24.4%	-8.7%
	W Total*	W SF	W MF**
November	403,000	274,000	129,000
October	372,000	271,000	101,000
2019	371,000	237,000	134,000
M/M change	8.3%	1.1%	27.7%
Y/Y change	8.6%	15.6%	-3.7%

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).

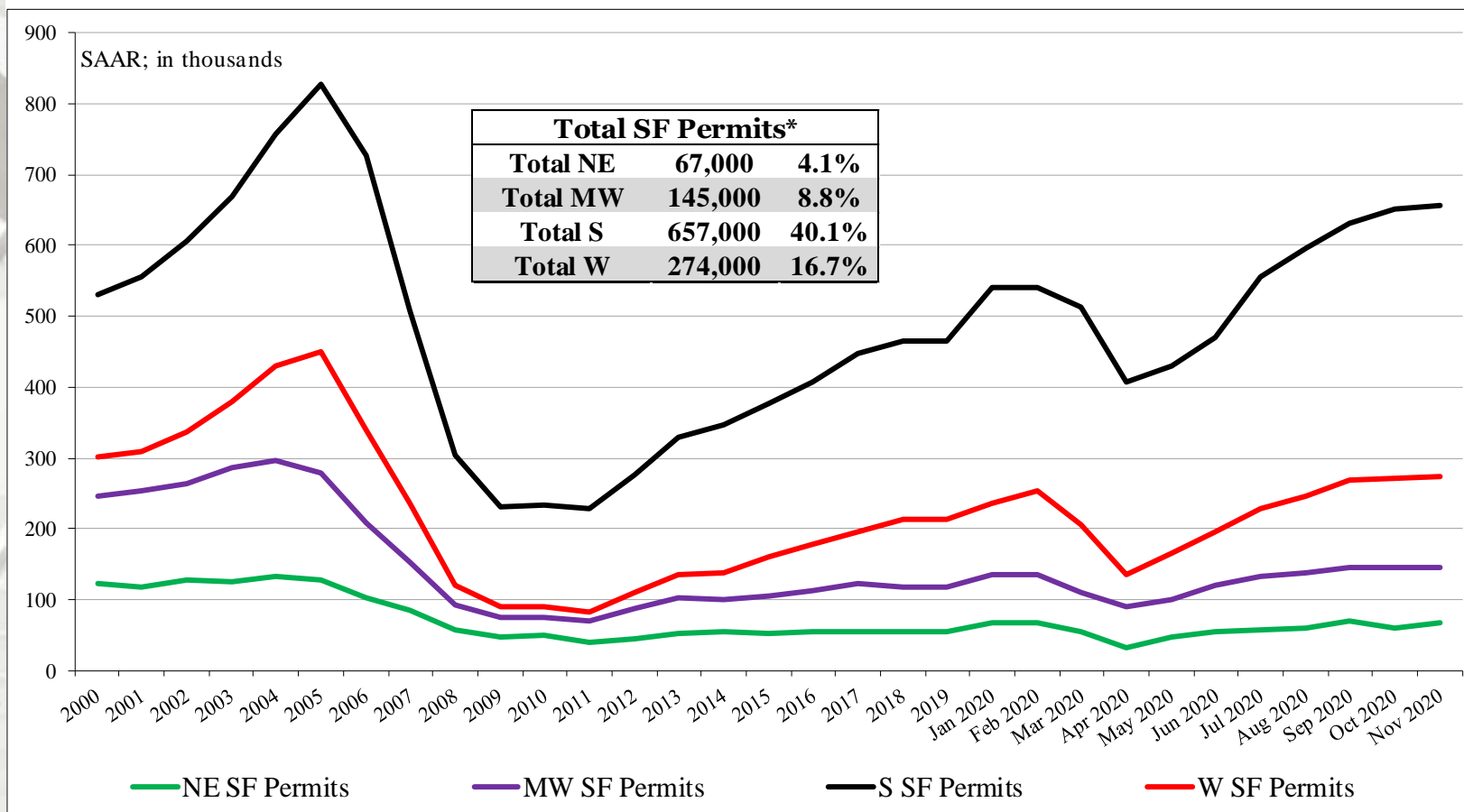
Total Housing Permits by Region



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

* Percentage of total permits.

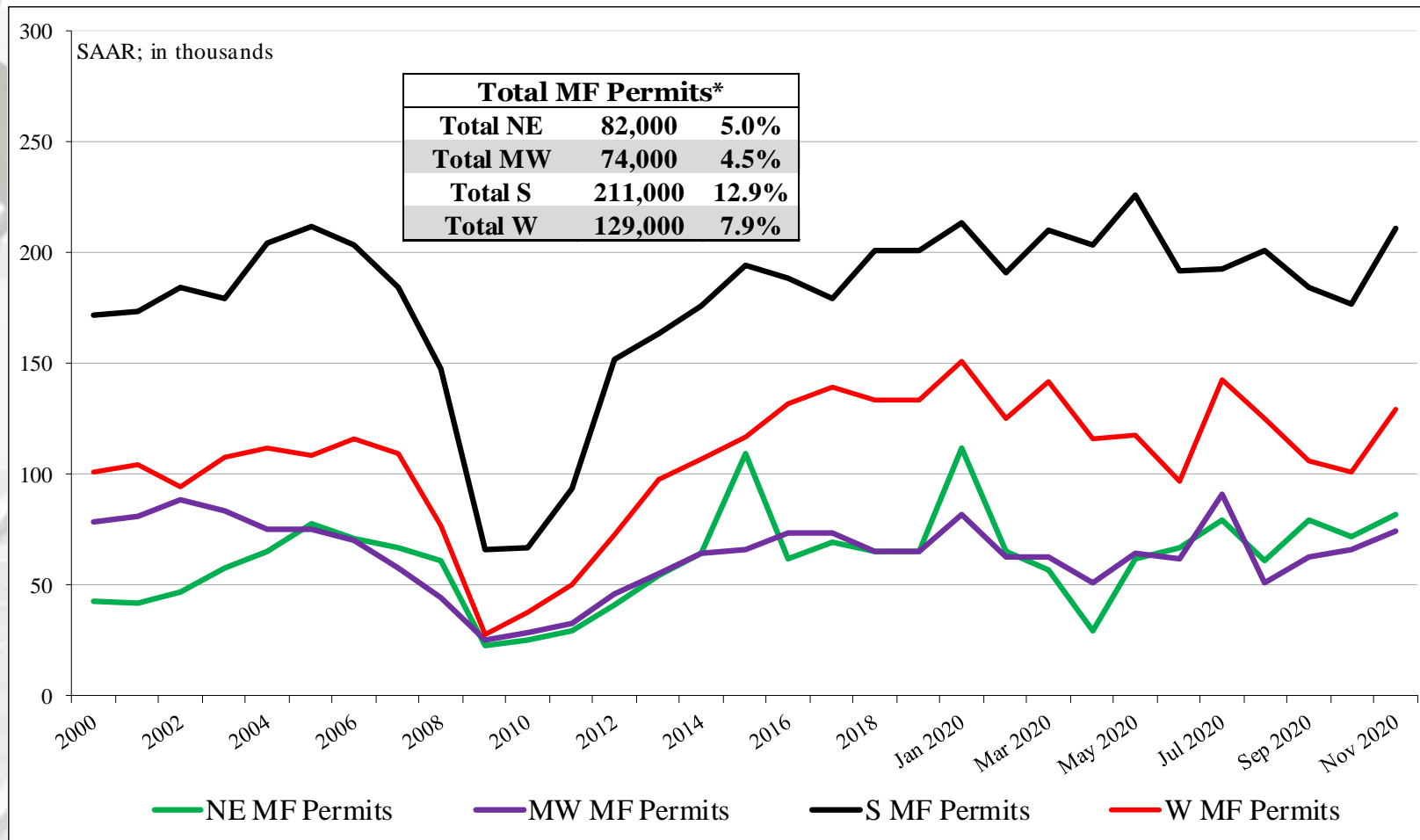
SF Housing Permits by Region



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.

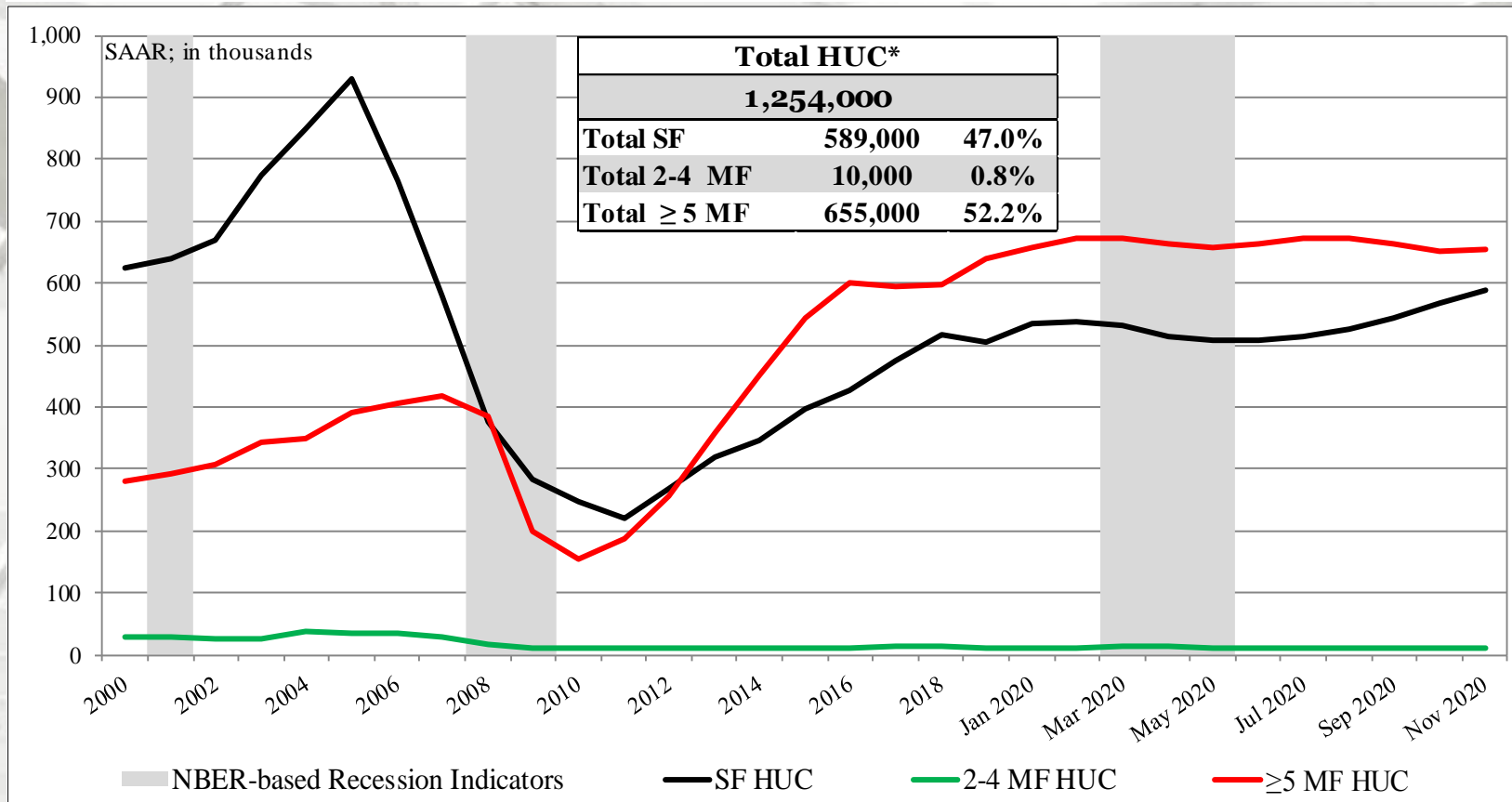
New Housing Under Construction (HUC)

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ≥ 5 unit Under Construction
November	1,254,000	589,000	10,000	655,000
October	1,230,000	567,000	11,000	652,000
2019	1,169,000	522,000	11,000	636,000
M/M change	2.0%	3.9%	-9.1%	0.5%
Y/Y change	7.3%	12.8%	-9.1%	3.0%

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

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

Total Housing Under Construction

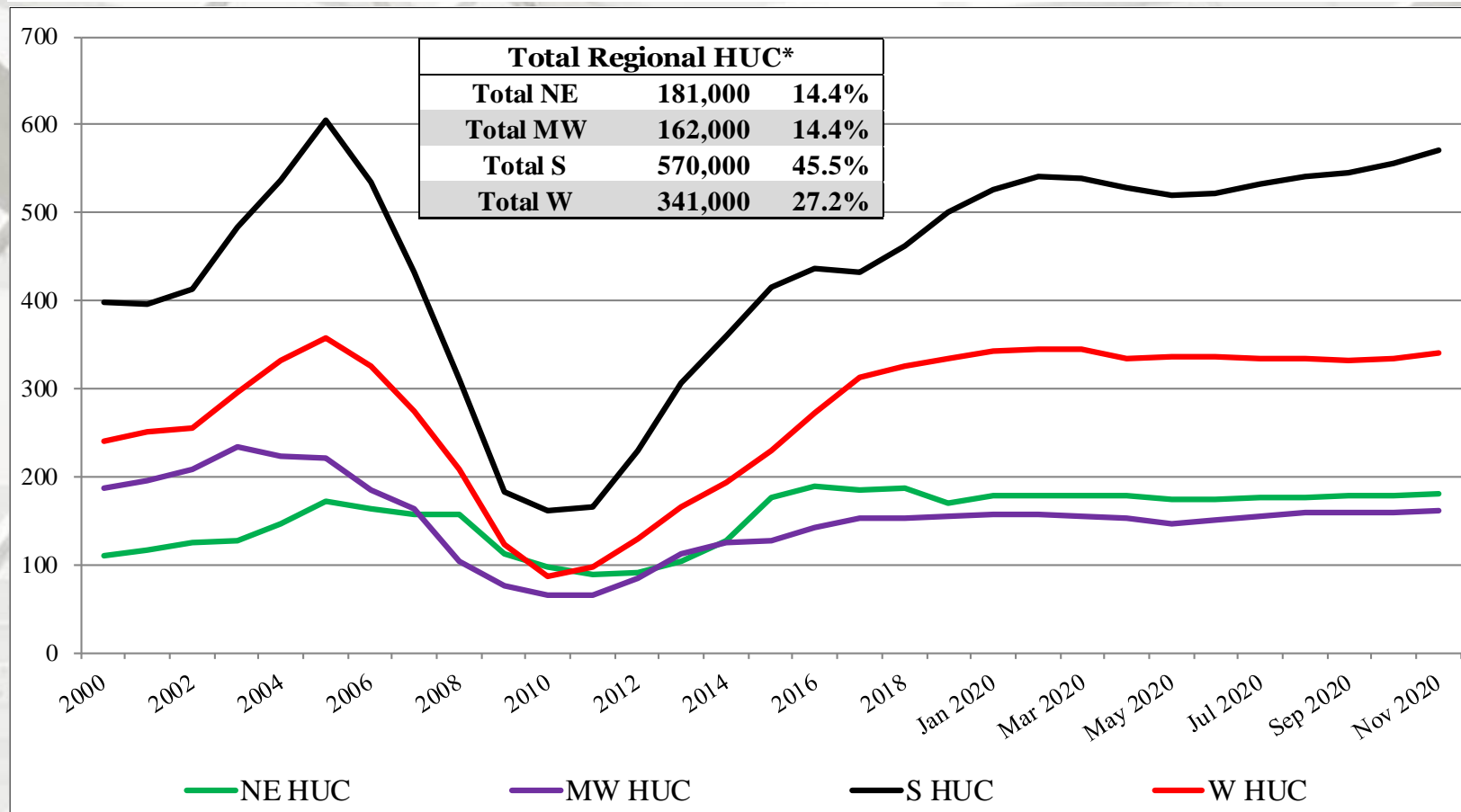


US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under constructions – (SF + ≥ 5 MF under construction)).

* 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



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

	NE Total	NE SF	NE MF**
November	181,000	56,000	125,000
October	179,000	57,000	122,000
2019	177,000	56,000	120,000
M/M change	1.1%	-1.8%	2.5%
Y/Y change	2.3%	0.0%	4.2%
	MW Total	MW SF	MW MF
November	162,000	83,000	79,000
October	160,000	83,000	77,000
2019	149,000	76,000	73,000
M/M change	1.3%	0.0%	2.6%
Y/Y change	8.7%	9.2%	8.2%

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).

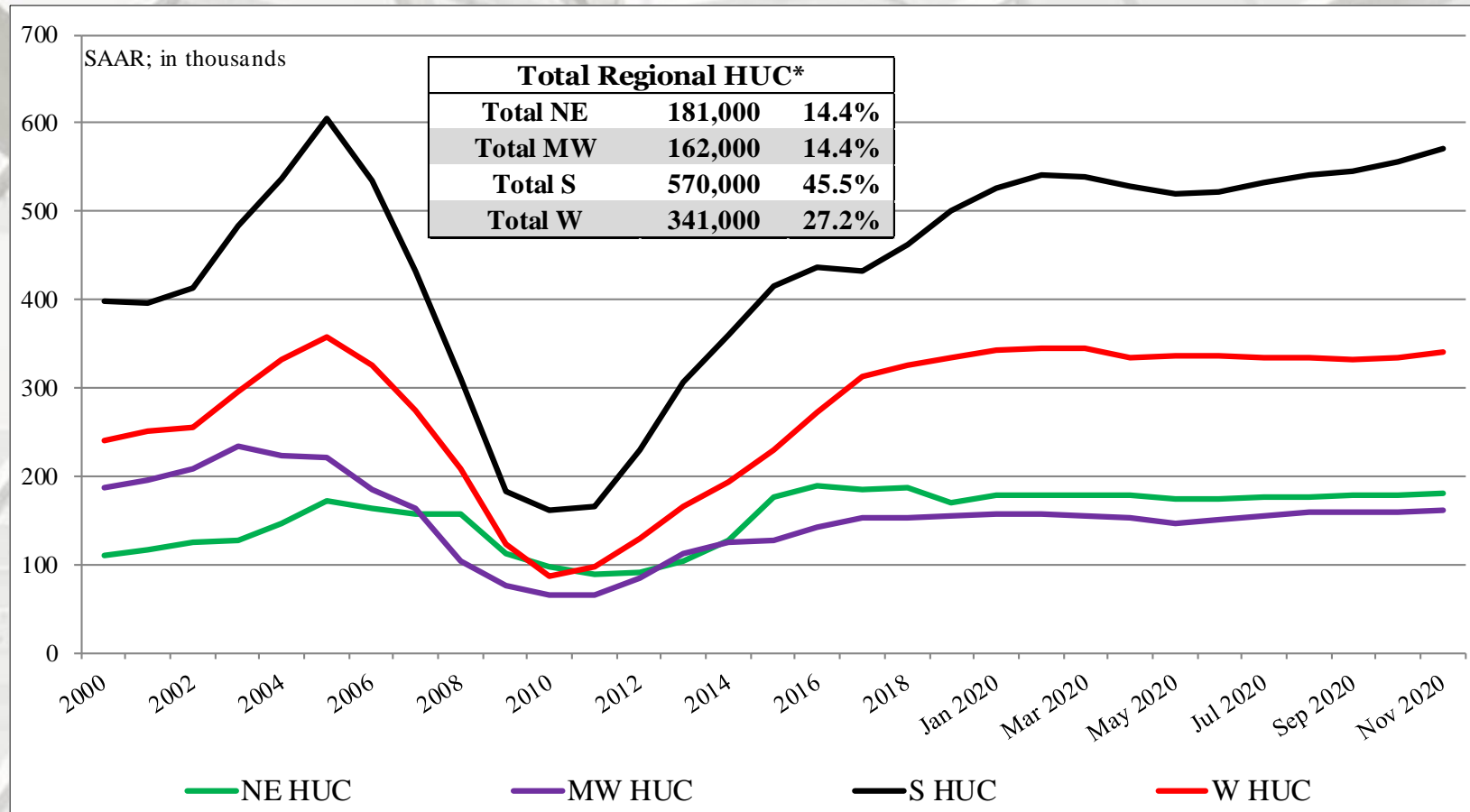
New Housing Under Construction by Region

	S Total	S SF	S MF**
November	570,000	292,000	278,000
October	556,000	278,000	278,000
2019	508,000	249,000	259,000
M/M change	2.5%	5.0%	0.0%
Y/Y change	12.2%	17.3%	7.3%
	W Total	W SF	W MF
November	341,000	158,000	183,000
October	335,000	149,000	186,000
2019	335,000	141,000	194,000
M/M change	1.8%	6.0%	-1.6%
Y/Y change	1.8%	12.1%	-5.7%

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

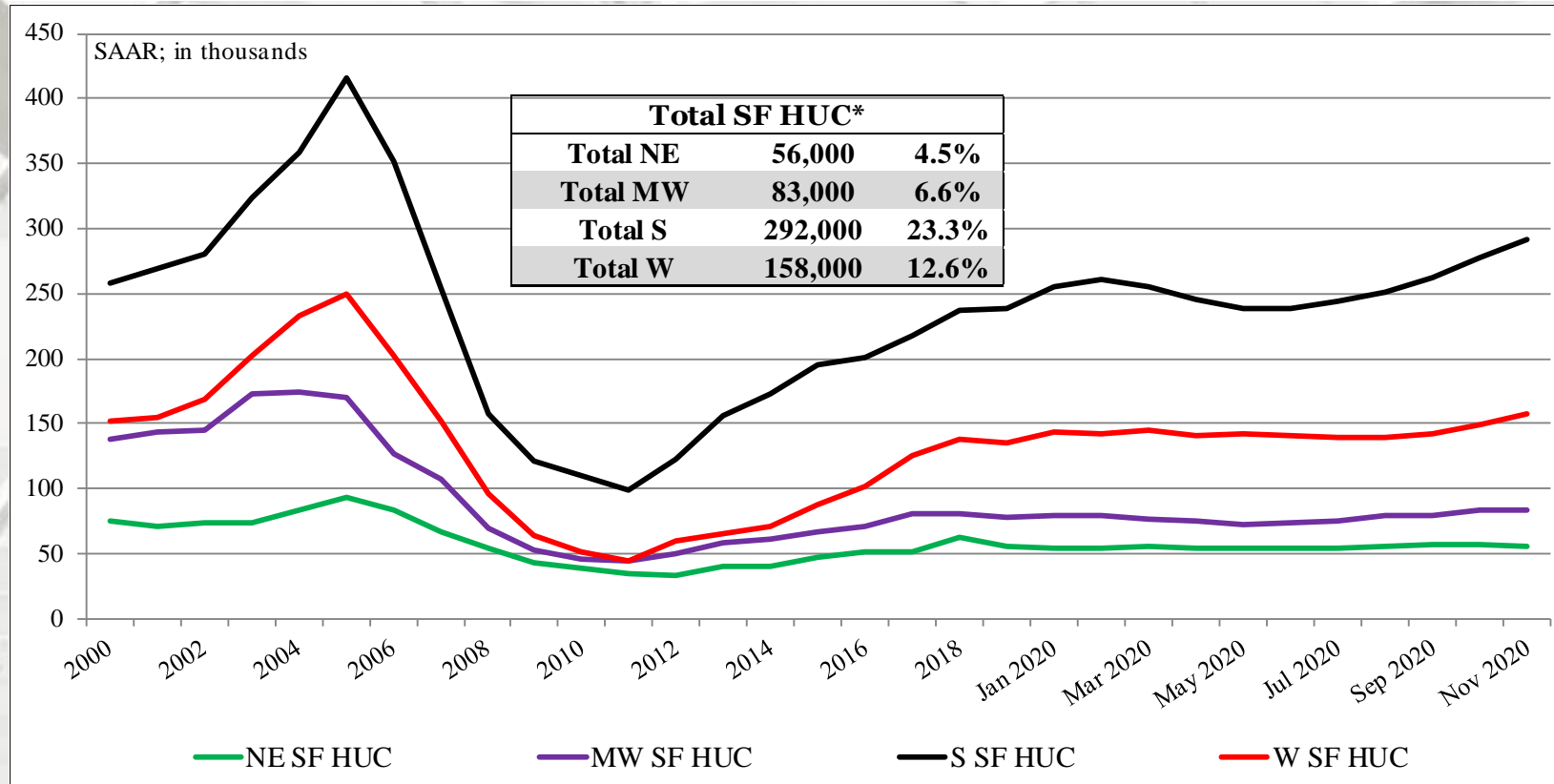


NE = Northeast, MW = Midwest, S = South, W = West

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

* Percentage of total housing under construction units.

SF Housing Under Construction by Region

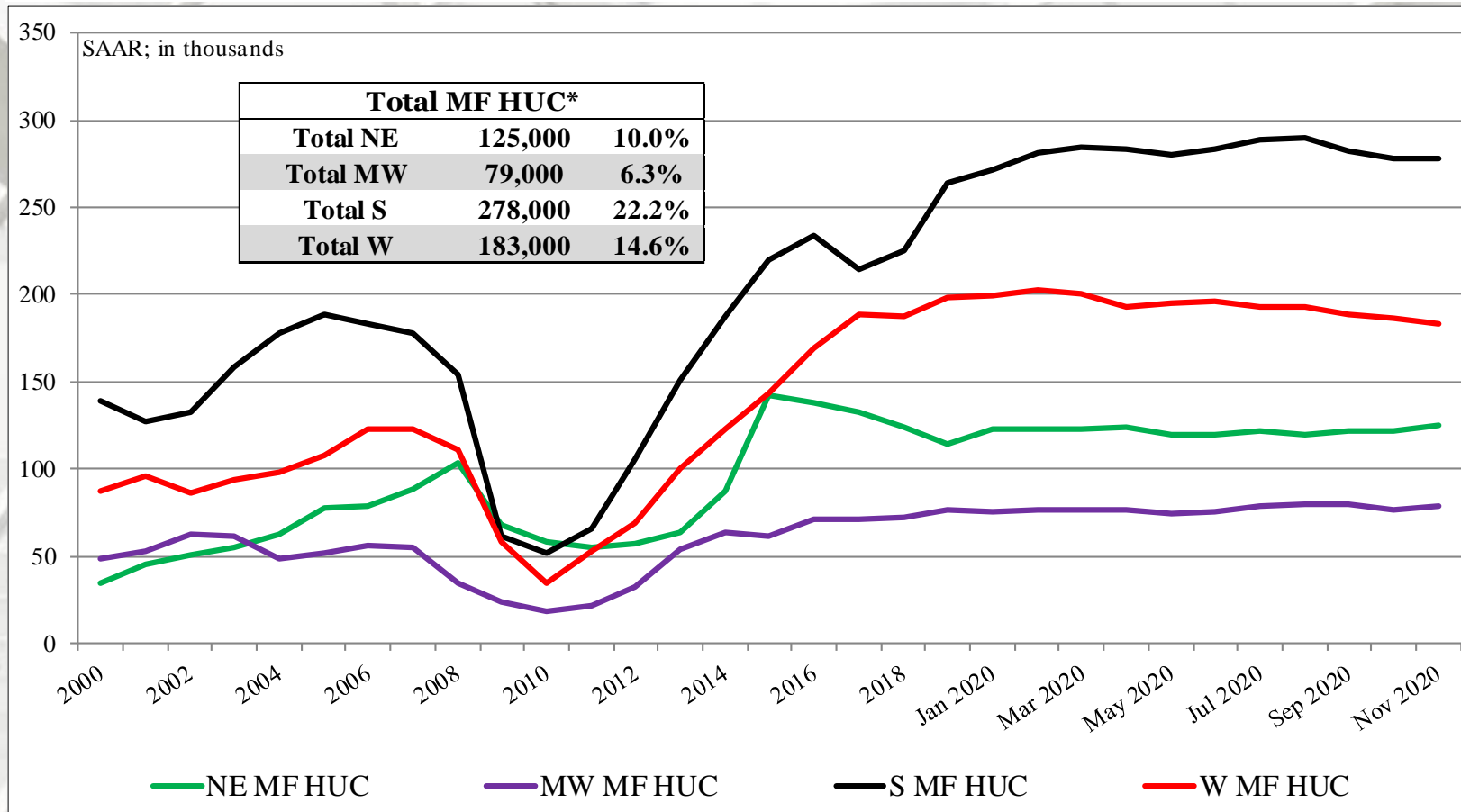


NE = Northeast, MW = Midwest, S = South, W = West.

US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under 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.

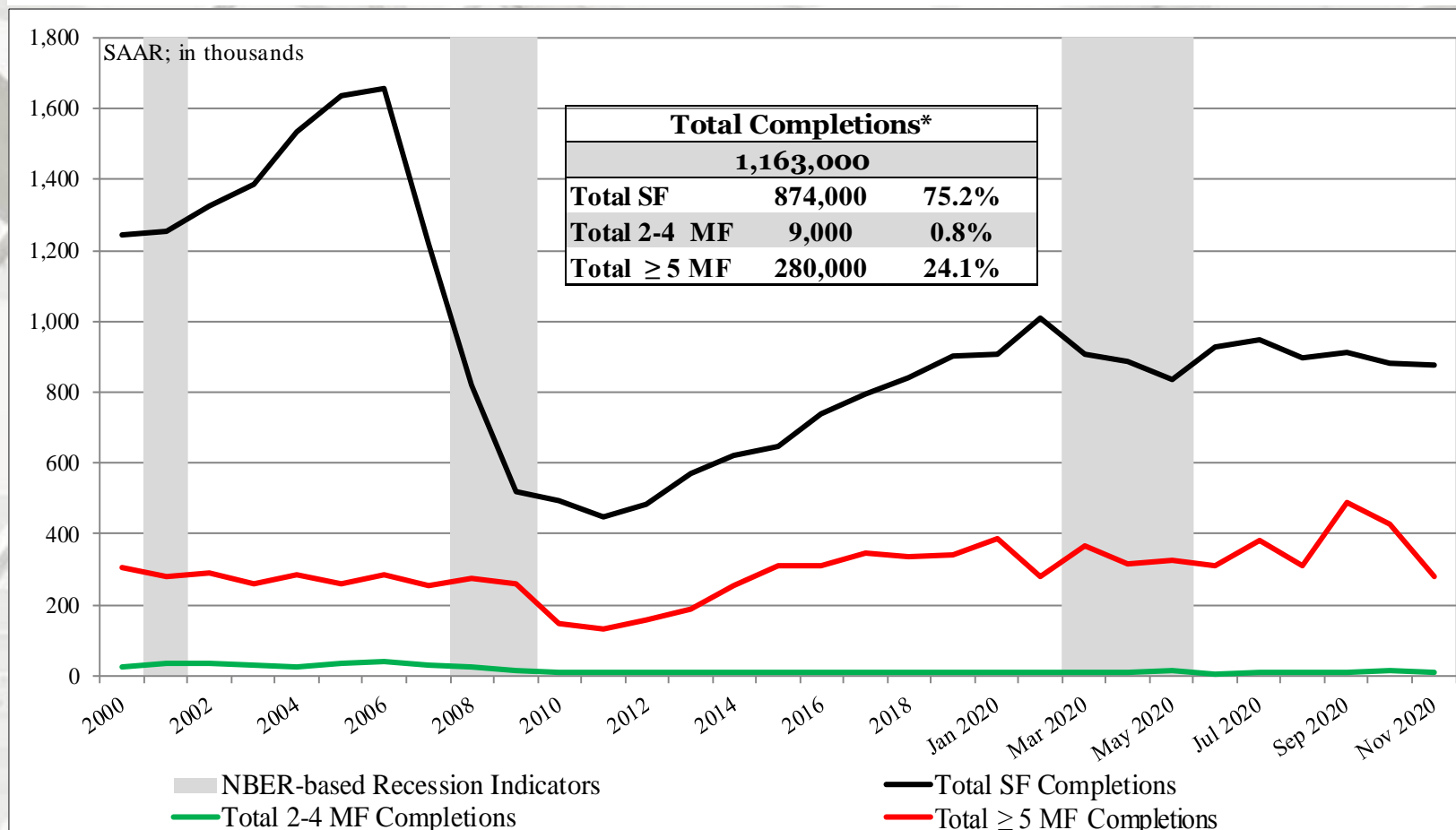
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit** Completions	MF ≥ 5 unit Completions
November	1,163,000	874,000	9,000	280,000
October	1,323,000	879,000	16,000	428,000
2019	1,222,000	915,000	10,000	297,000
M/M change	-12.1%	-0.6%	-43.8%	-34.6%
Y/Y change	-4.8%	-4.5%	-10.0%	-5.7%

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

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

Total Housing Completions



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

* Percentage of total housing completions

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

New Housing Completions by Region

	NE Total	NE SF	NE MF**
November	97,000	55,000	42,000
October	93,000	59,000	34,000
2019	117,000	63,000	54,000
M/M change	4.3%	-6.8%	23.5%
Y/Y change	-17.1%	-12.7%	-22.2%
	MW Total	MW SF	MW MF
November	157,000	136,000	21,000
October	190,000	114,000	76,000
2019	157,000	114,000	43,000
M/M change	-17.4%	19.3%	-72.4%
Y/Y change	0.0%	19.3%	-51.2%

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

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

* Percentage of total housing completions

New Housing Completions by Region

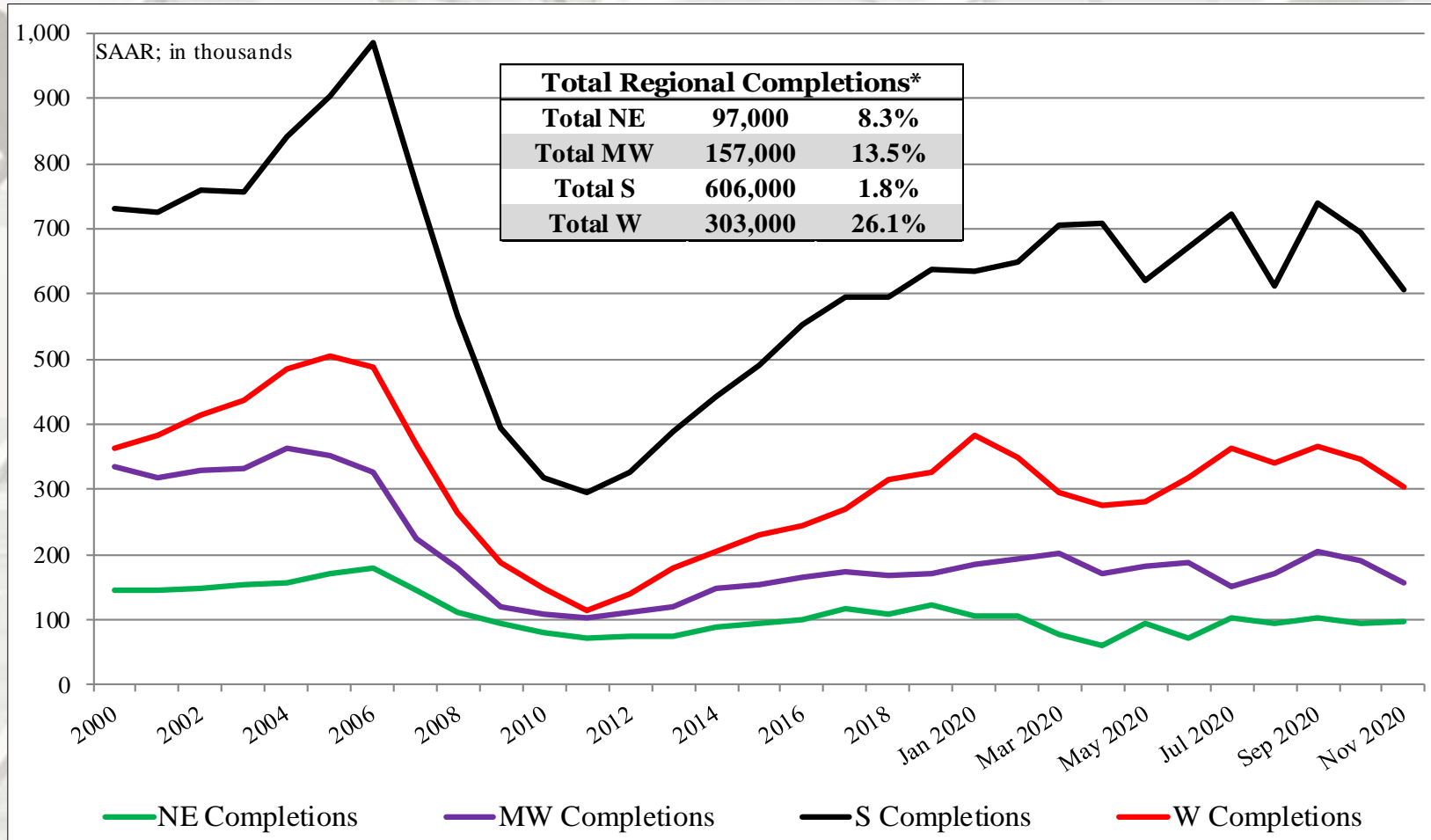
	S Total	S SF	S MF**
November	606,000	478,000	128,000
October	695,000	485,000	210,000
2019	647,000	522,000	125,000
M/M change	-12.8%	-1.4%	-39.0%
Y/Y change	-6.3%	-8.4%	2.4%
	W Total	W SF	W MF
November	303,000	205,000	98,000
October	345,000	221,000	124,000
2019	301,000	216,000	85,000
M/M change	-12.2%	-7.2%	-21.0%
Y/Y change	0.7%	-5.1%	15.3%

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

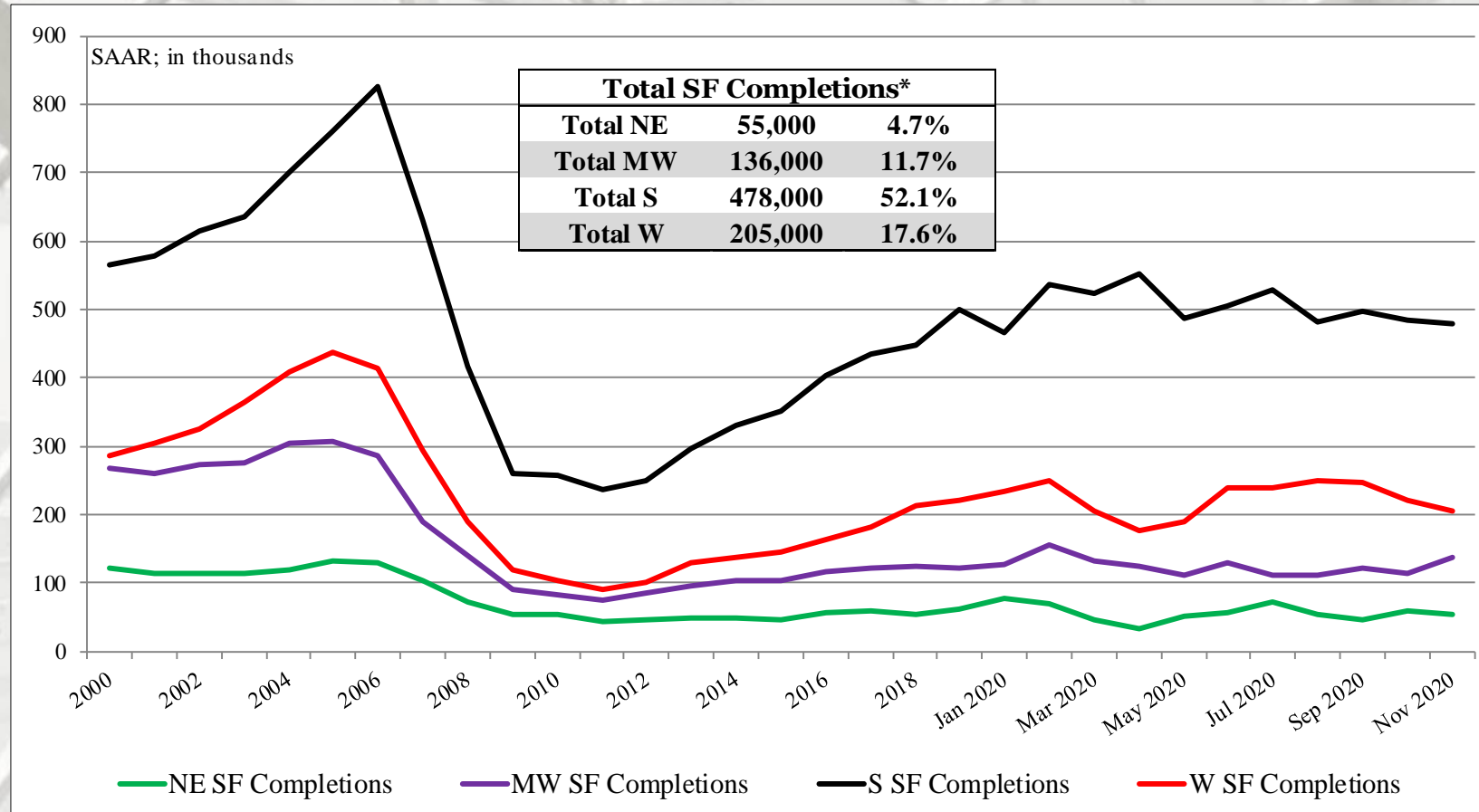
Total Housing Completions by Region



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

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

SF Housing Completions by Region

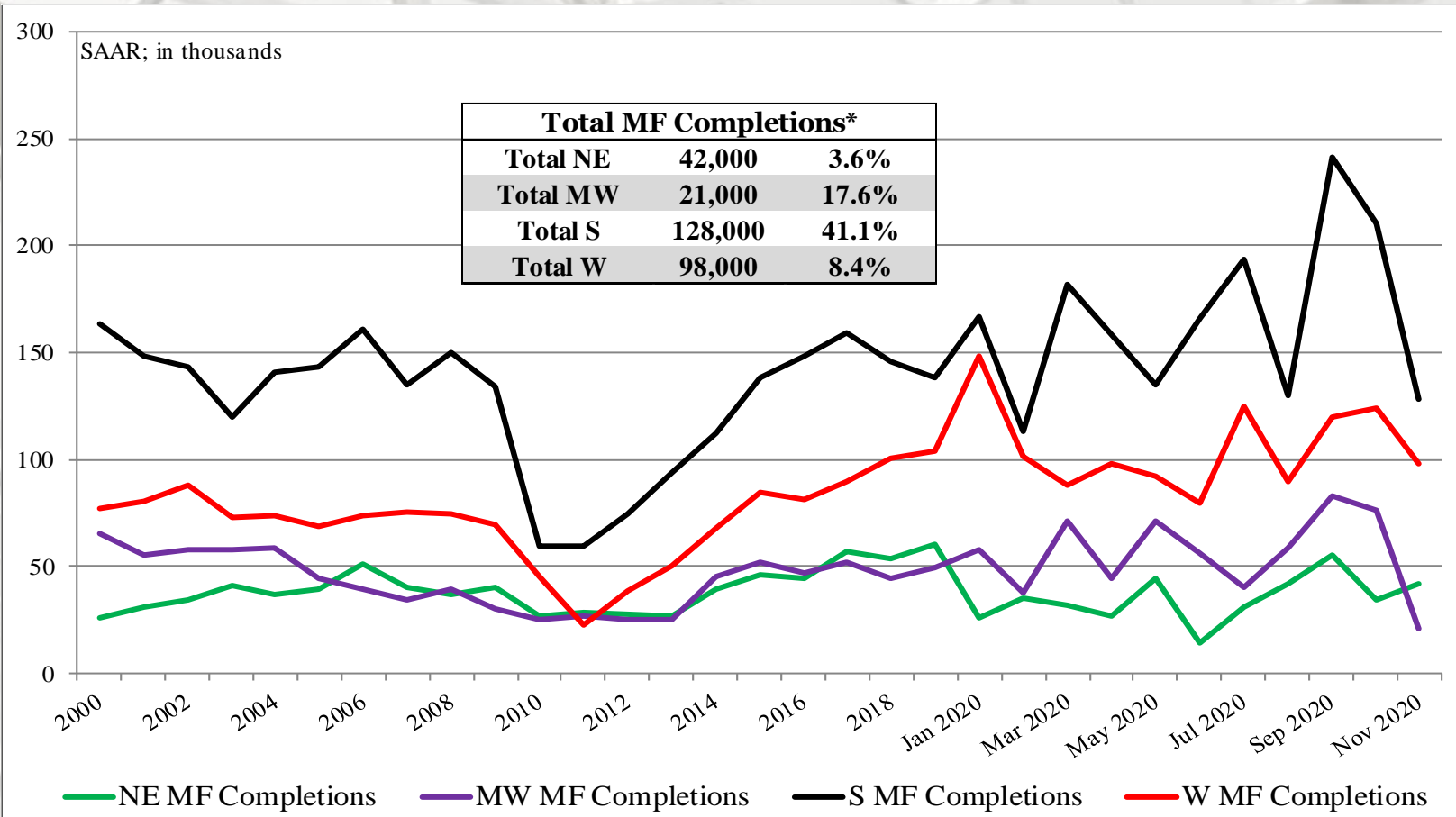


NE = Northeast, MW = Midwest, S = South, W = West

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
November	841,000	\$335,300	\$390,100	4.1
October	945,000	\$337,500	\$383,300	3.6
2019	696,000	\$328,000	\$384,400	5.6
M/M change	-11.0%	-0.7%	1.8%	13.9%
Y/Y change	20.8%	2.2%	1.5%	-26.8%

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

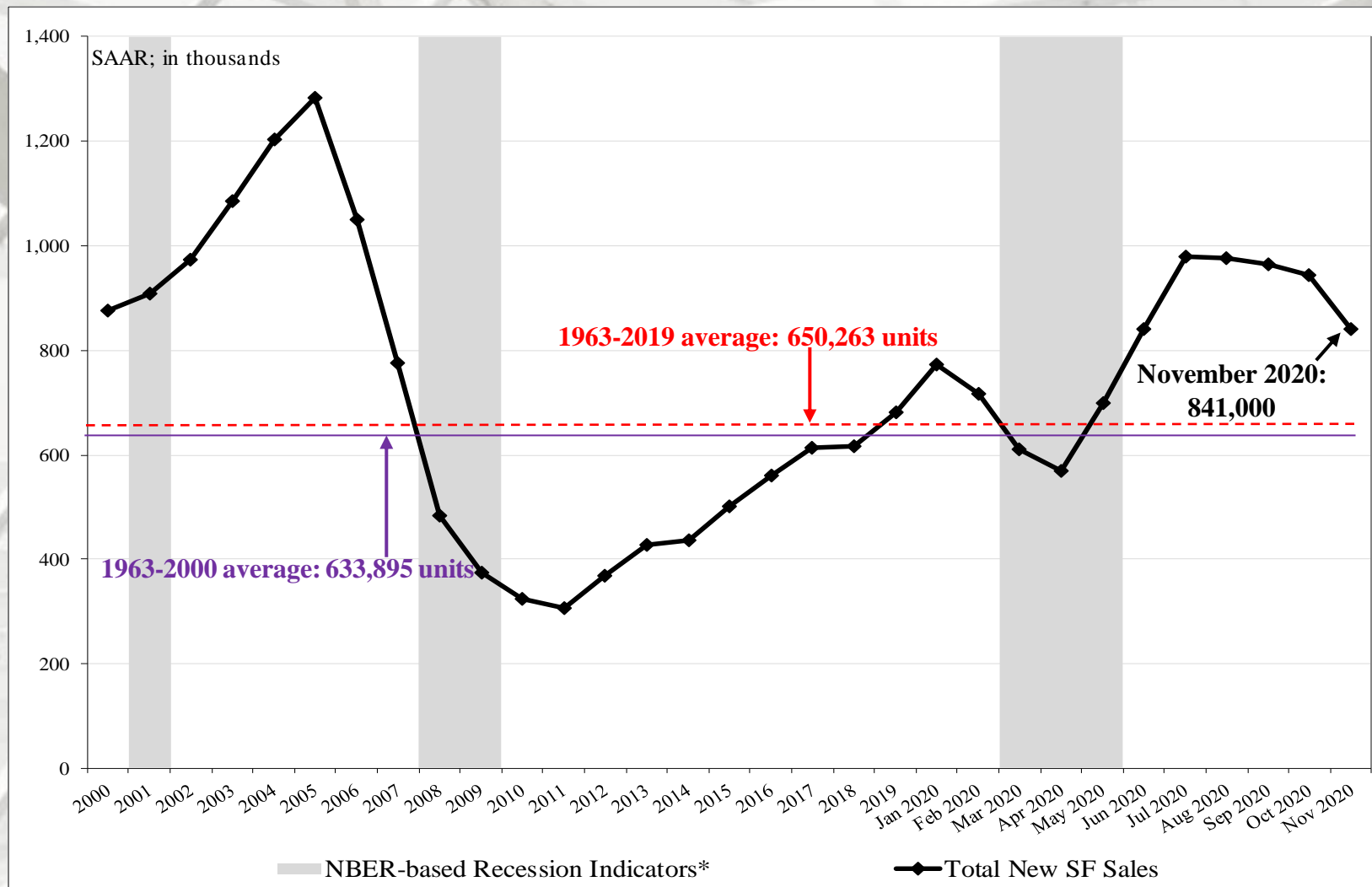
New SF sales were substantially less than the consensus forecast³ of 989 m (range: 965 m to 1,015 m). The past three month's new SF sales data also were revised:

August initial:	1,011m, revised to 977m;
September initial:	959m, revised to 965m;
October initial:	999m, revised to 945m.

Sources: ¹ <https://www.census.gov/construction/nrs/index.html>; 12/23/20; ² <https://www.census.gov/construction/nrs/pdf/newressales.pdf>

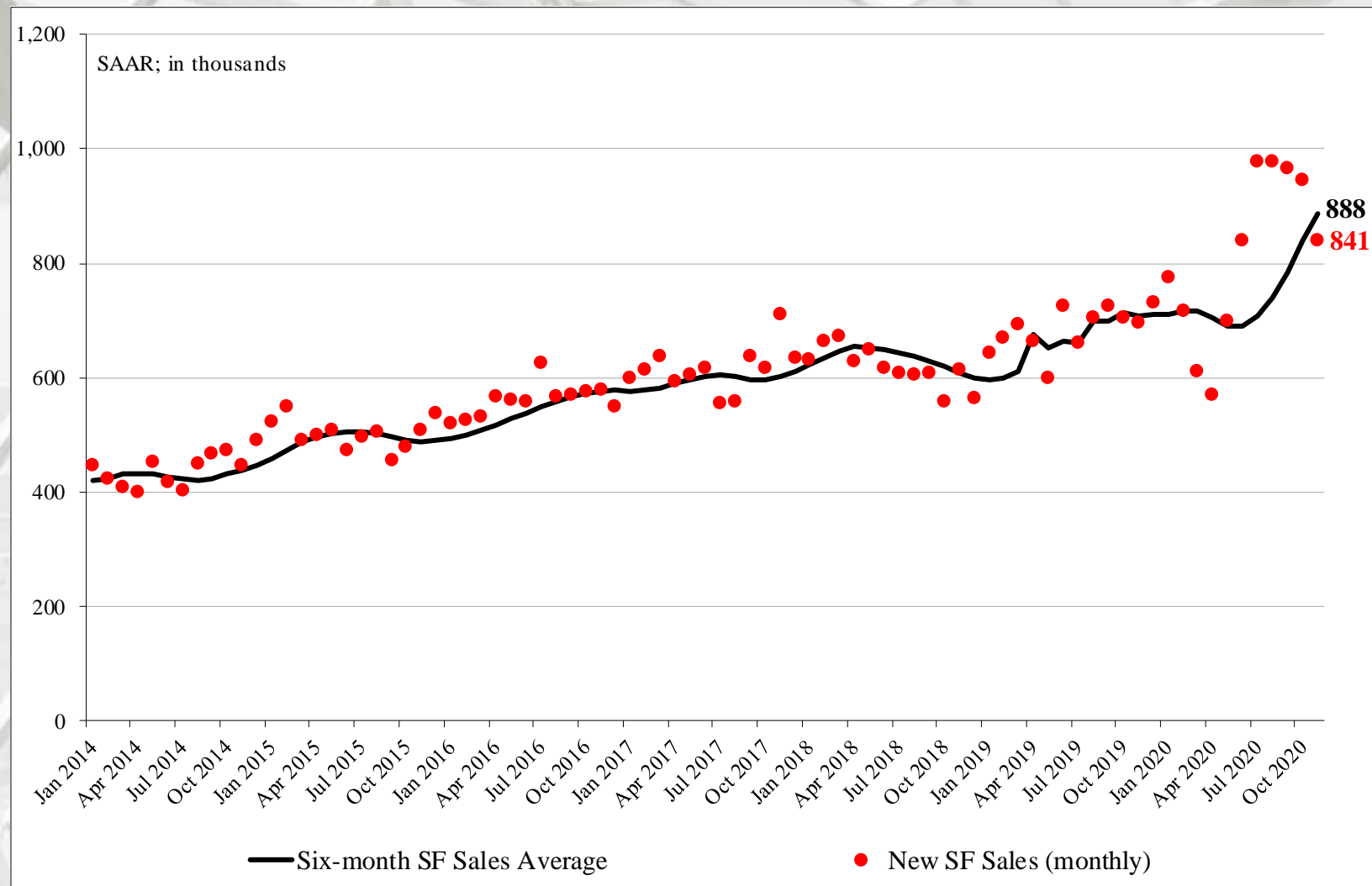
³ <http://us.econoday.com/>; 12/23/20

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			
November	39,000	59,000	513,000	230,000			
October	40,000	104,000	523,000	278,000			
2019	33,000	78,000	393,000	192,000			
M/M change	-2.5%	-43.3%	-1.9%	-17.3%			
Y/Y change	18.2%	-24.4%	30.5%	19.8%			
	\$150 - ≤ \$150m	\$200 - \$199.9m	\$300 - \$299.9m	\$400 - \$399.9m	\$500 - \$499.9m	\$750m ≥ \$750m	
November ^{1,2,3,4}	1,000	3,000	16,000	22,000	8,000	7,000	3,000
October	1,000	4,000	24,000	22,000	14,000	8,000	2,000
2019	1,000	4,000	16,000	12,000	8,000	7,000	3,000
M/M change	0.0%	-16.7%	3.4%	-19.2%	9.1%	-10.0%	33.3%
Y/Y change	0.0%	25.0%	57.9%	75.0%	50.0%	0.0%	33.3%
New SF sales: %	1.7%	5.1%	27.1%	37.3%	13.6%	11.9%	5.1%

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

¹ All data are SAAR

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

³ Detail November not add to total because of rounding.

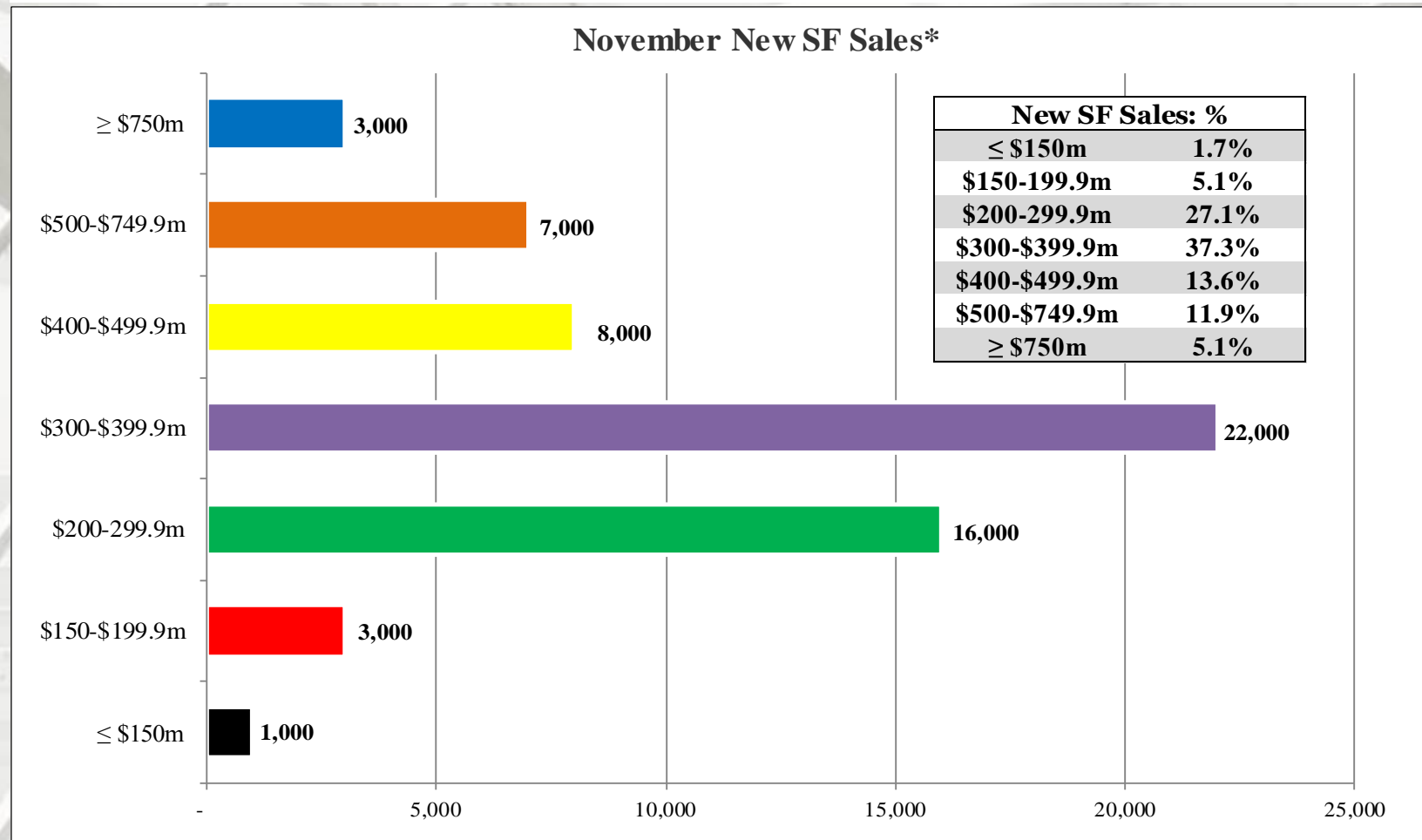
⁴ Housing prices are adjusted at irregular intervals.

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

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 12/23/20;

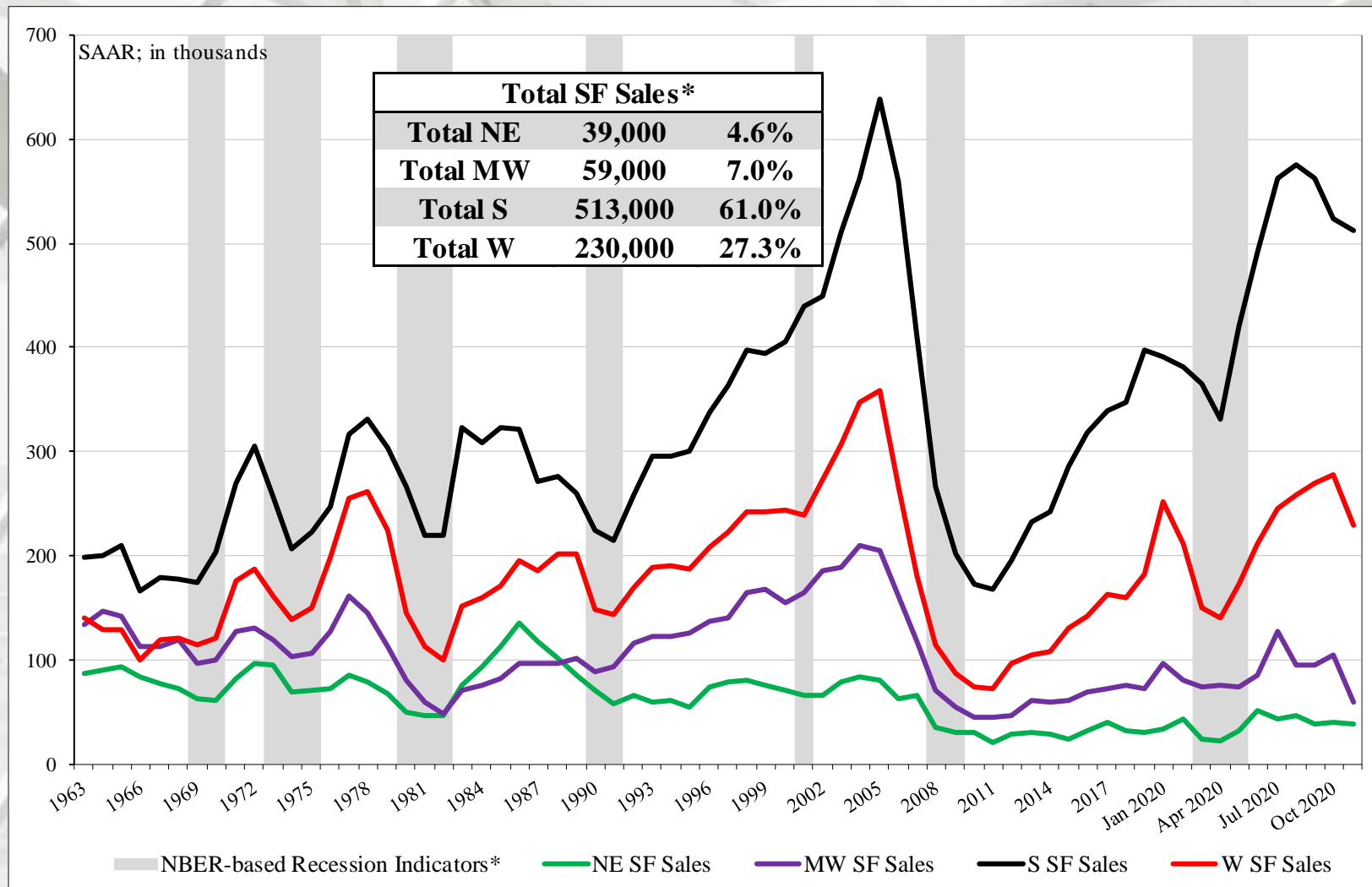
⁴ https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

New SF House Sales



- Total new sales by price category and percent.

New SF House Sales by Region

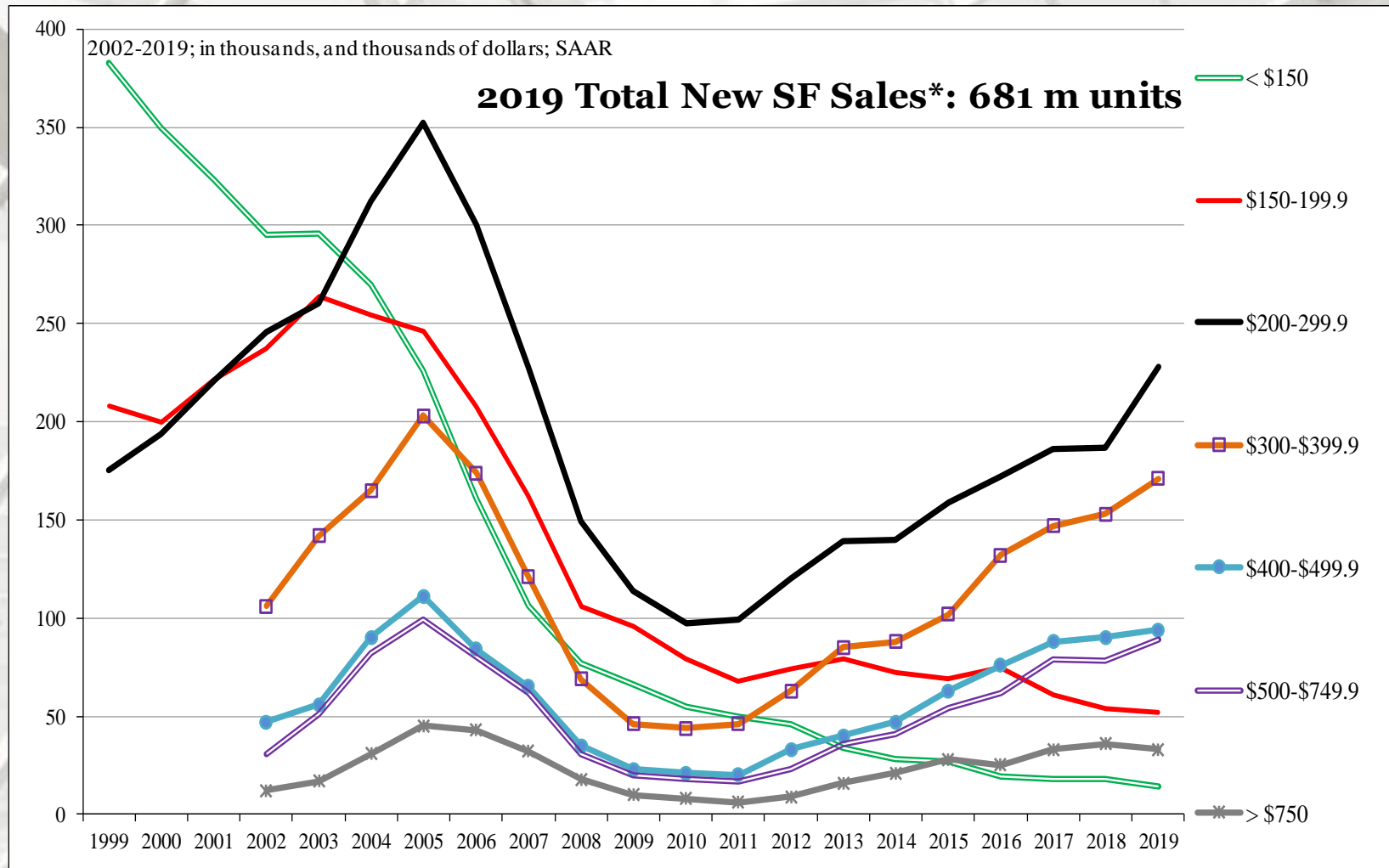


NE = Northeast; MW = Midwest; S = South; W = West

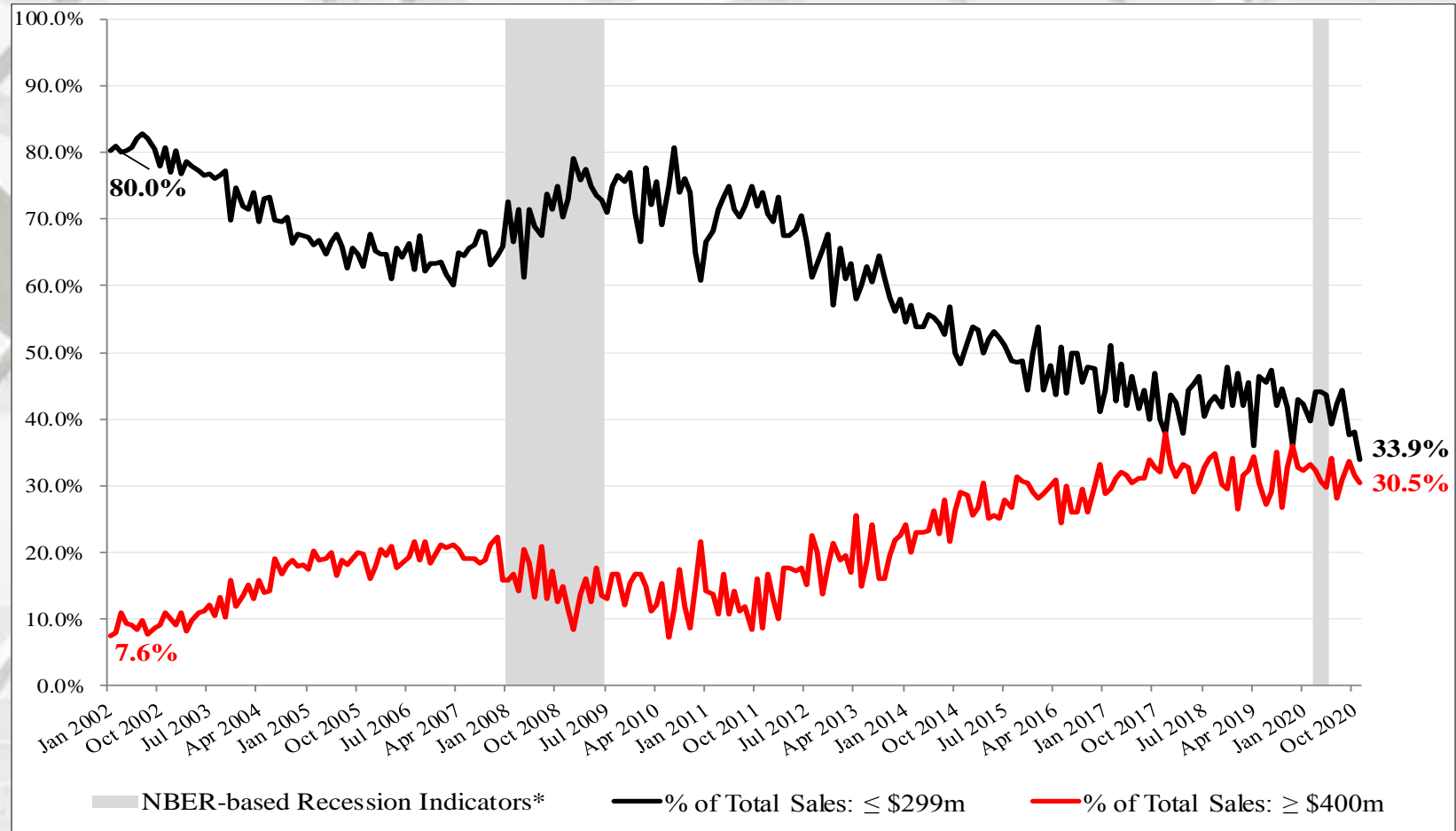
* Percentage of total new sales.

* 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



New SF House Sales

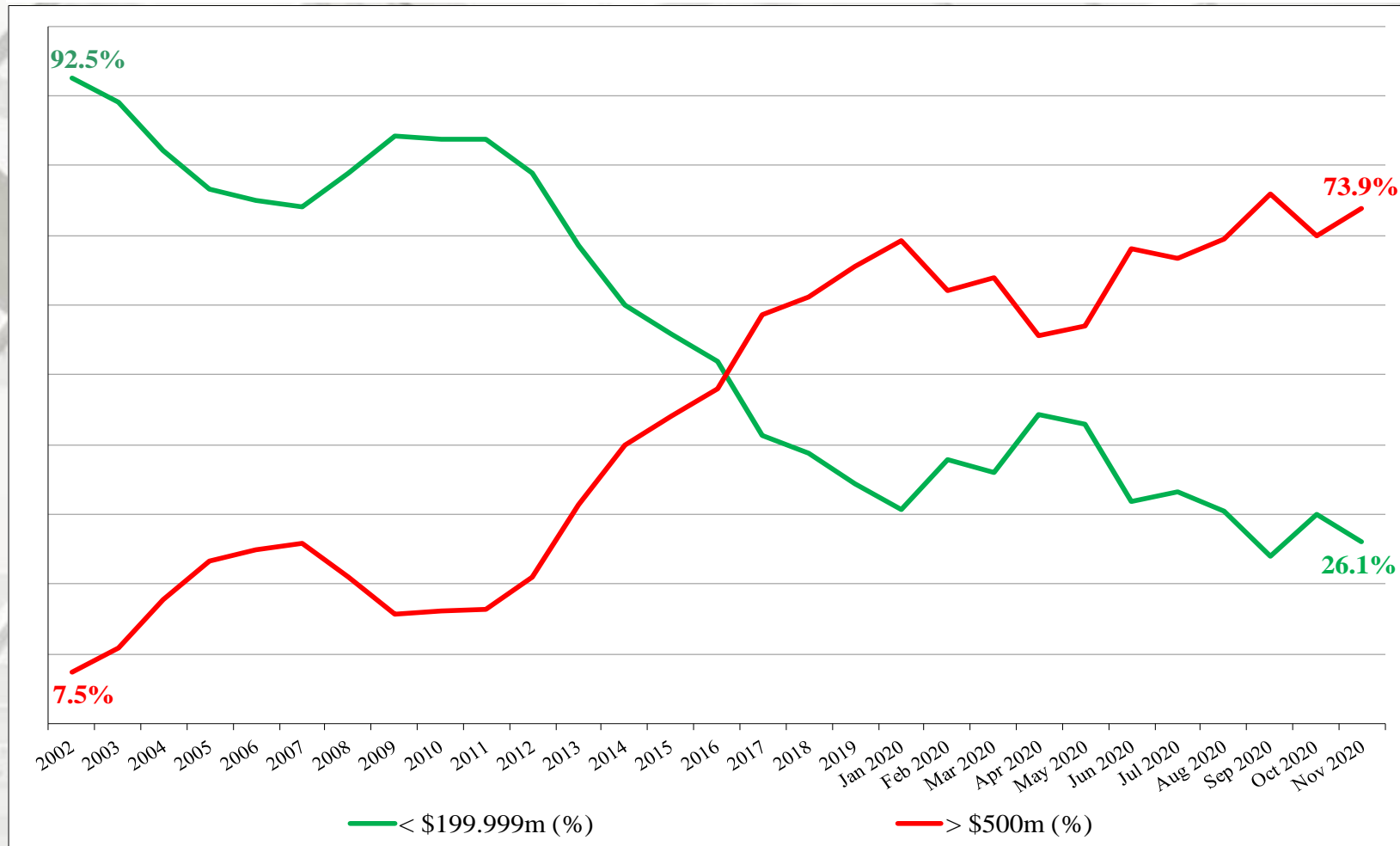


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

New SF Sales: ≤ \$200m and ≥ \$400m: 2002 – November 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.

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).

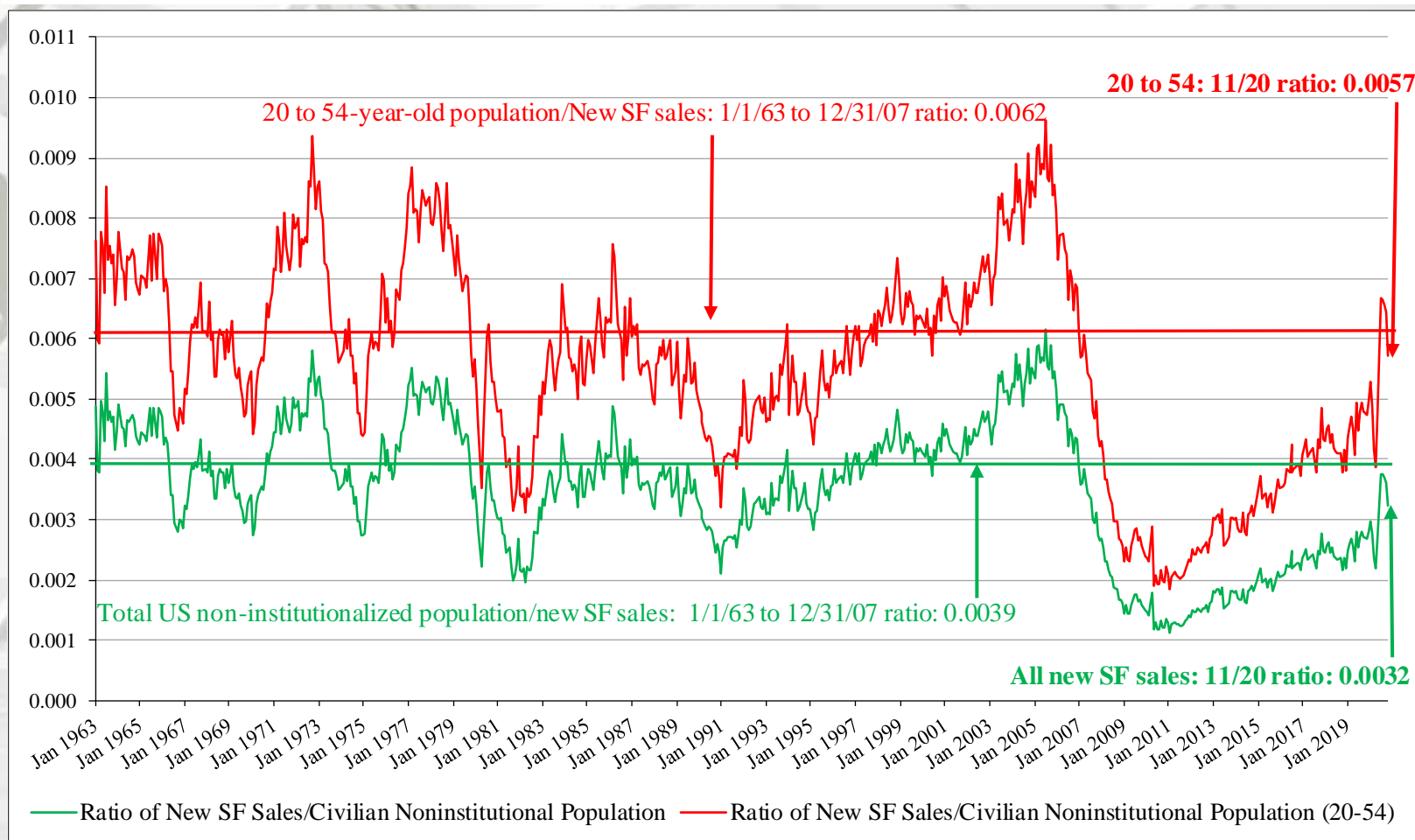
New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to November 2020

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).

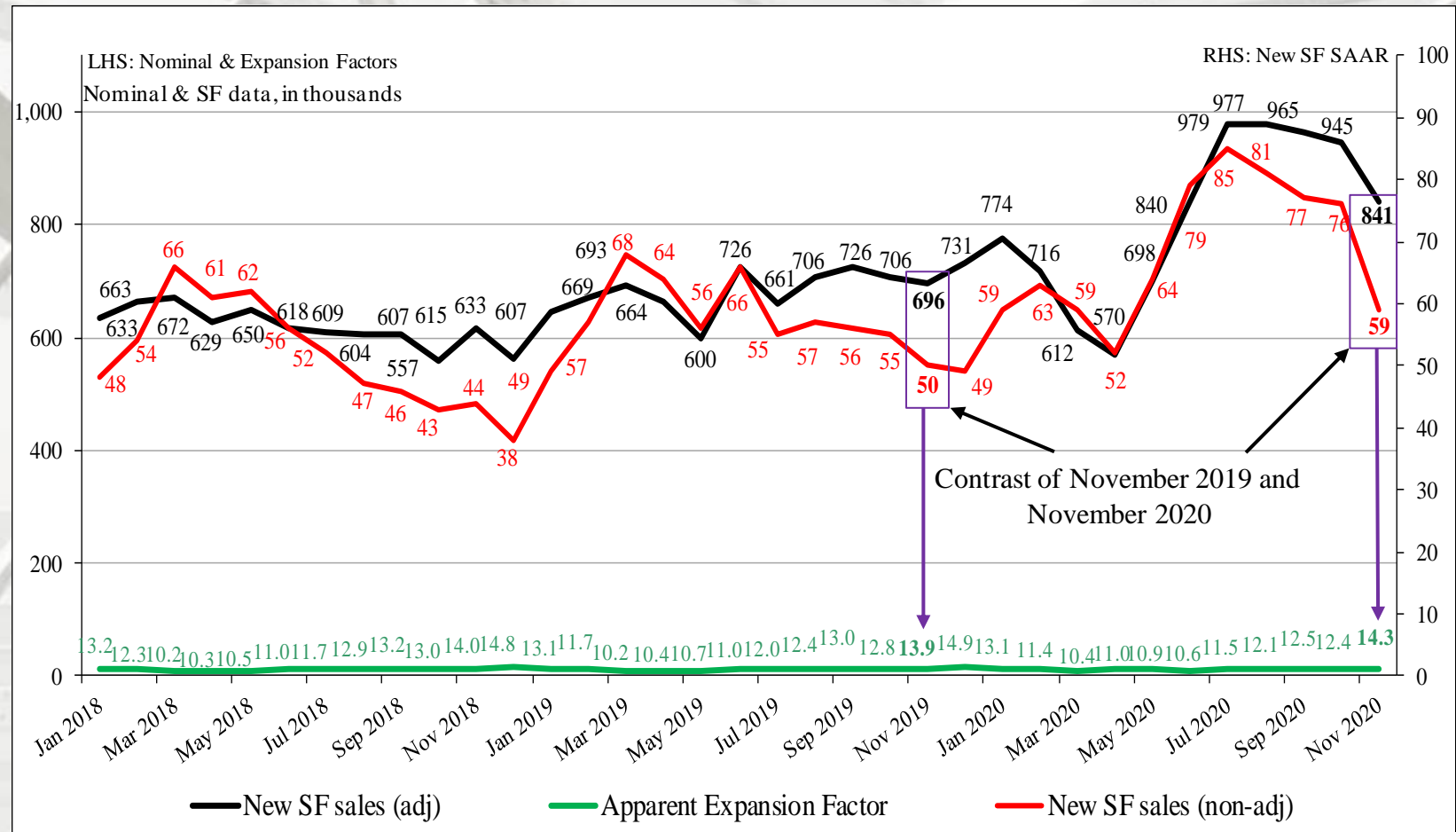
New SF House Sales



New SF sales adjusted for the US population

From January 1963 to January 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in November 2020 it was 0.0032 – a decrease from October. The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in November 2020 it was 0.0057 – also a decrease from October. All are non-adjusted data. New house sales for the 20 to 54 class exceeded population growth for the second time in more than a decade. From a total population world view, new sales remain less than the long-term average.

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

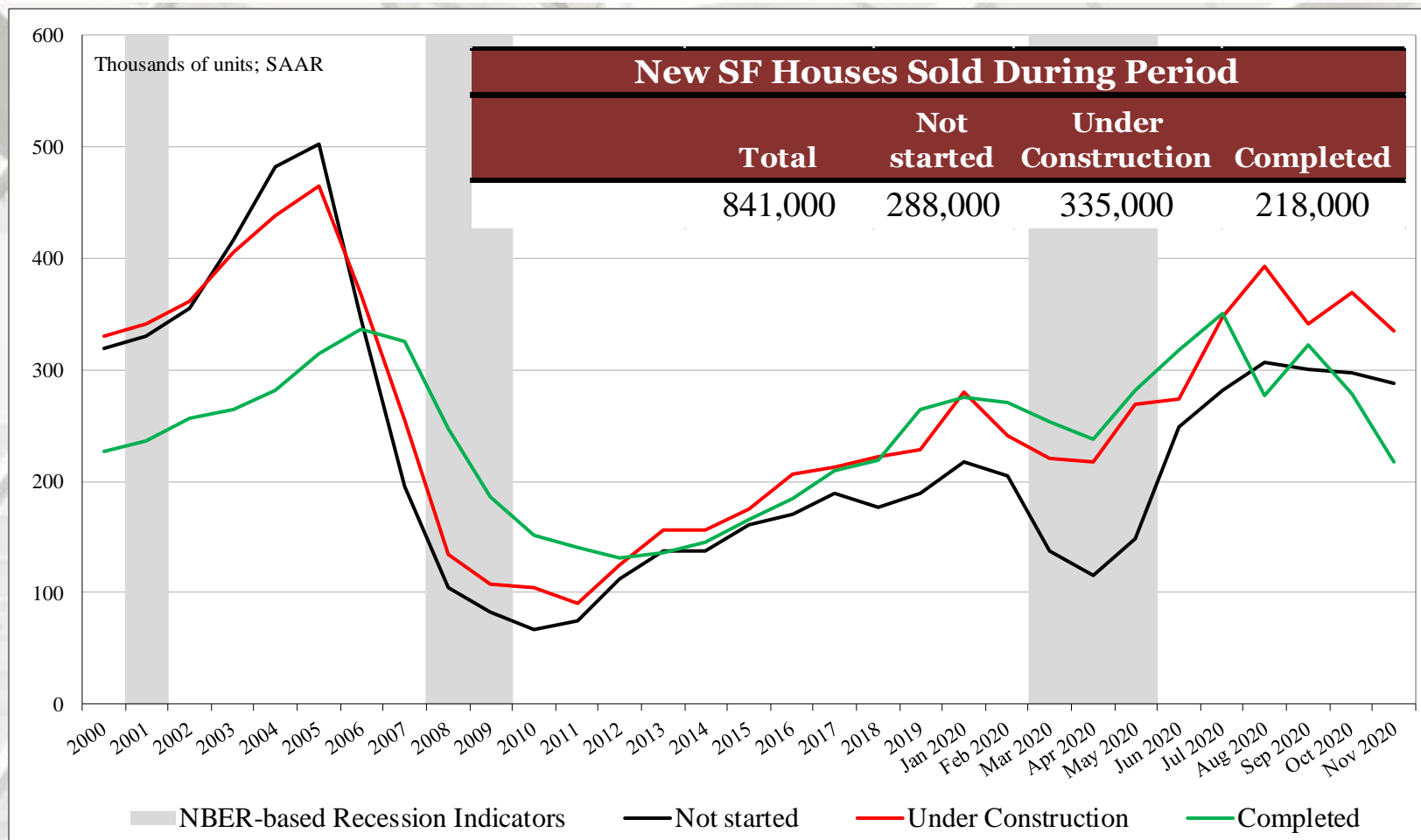
New SF House Sales

New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
November	841,000	288,000	335,000	218,000
October	945,000	298,000	369,000	278,000
2019	696,000	182,000	240,000	274,000
M/M change	-11.0%	-3.4%	-9.2%	-21.6%
Y/Y change	20.8%	58.2%	39.6%	-20.4%
Total percentage		34.2%	39.8%	25.9%

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).

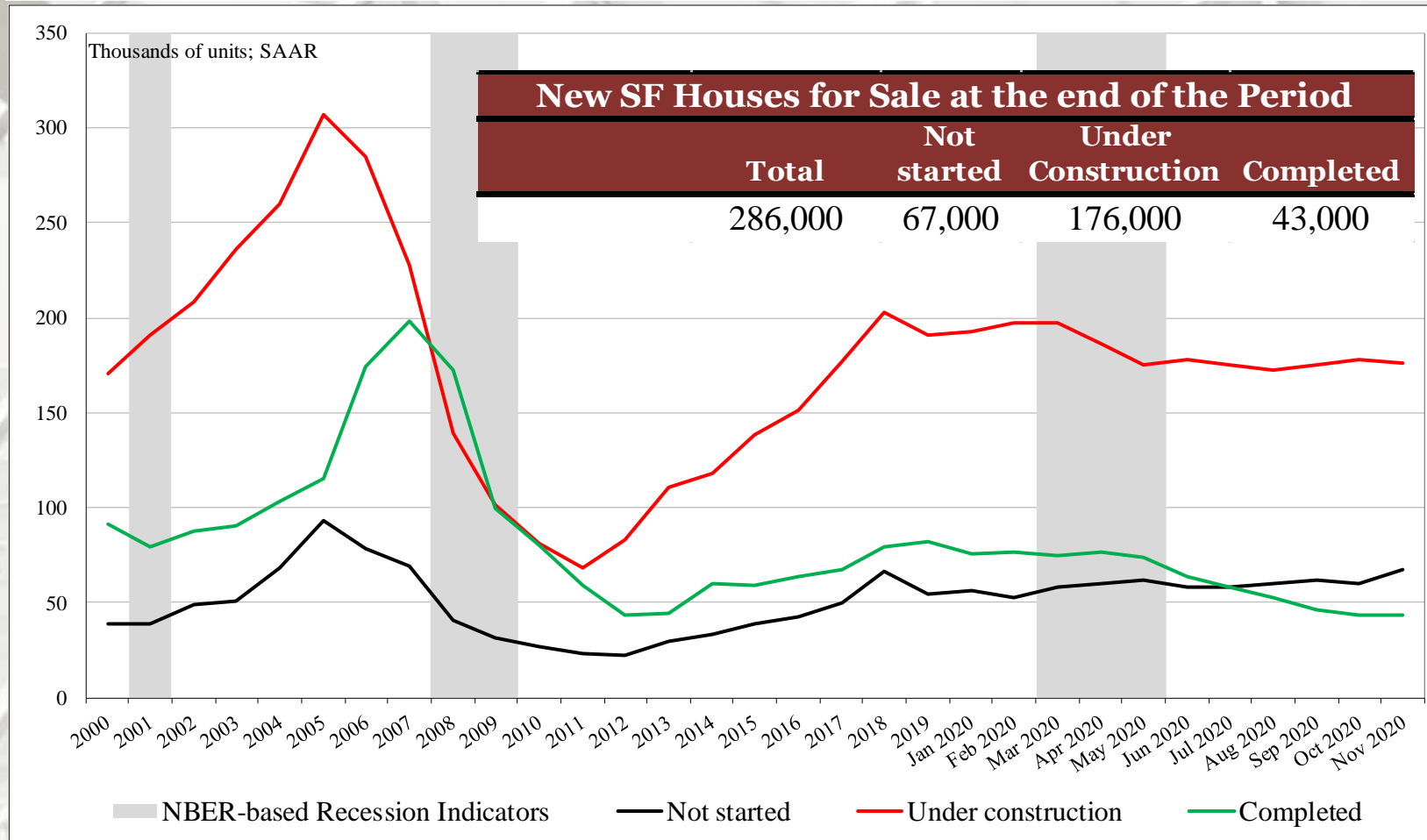
New SF Houses for Sale at End of Period

New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
November	286,000	67,000	176,000	43,000
October	281,000	60,000	178,000	46,000
2019	322,000	55,000	191,000	77,000
M/M change	1.8%	11.7%	-1.1%	-6.5%
Y/Y change	-11.2%	21.8%	-7.9%	-44.2%
Total percentage		23.4%	61.5%	15.0%

Sales of homes “Not started” registered an increase in November.

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).

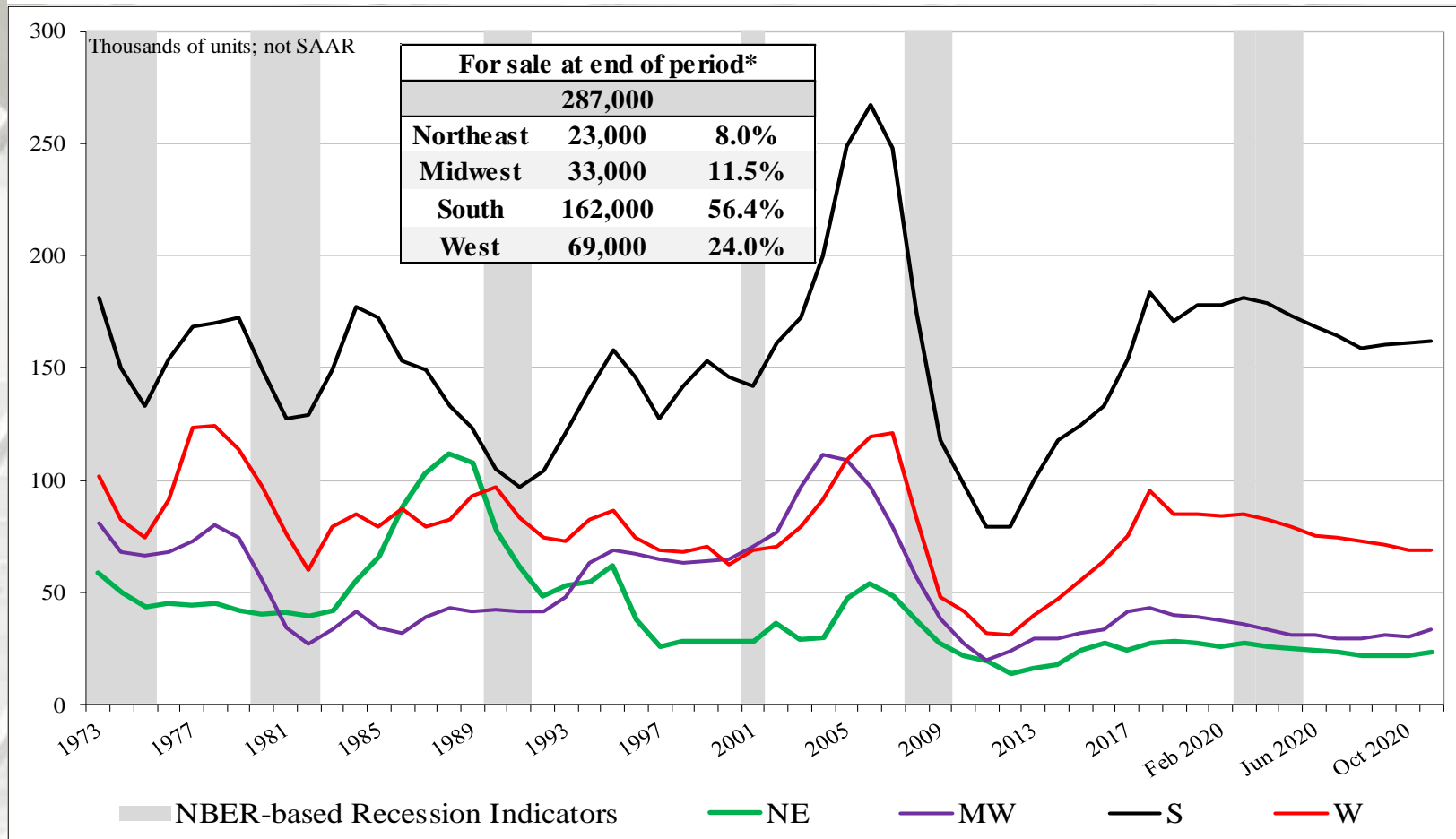
New SF House Sales

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

	Total	NE	MW	S	W
October	287,000	23,000	33,000	162,000	69,000
September	281,000	22,000	30,000	161,000	69,000
2019	325,000	29,000	39,000	169,000	87,000
M/M change	2.1%	4.5%	10.0%	0.6%	0.0%
Y/Y change	-11.7%	-20.7%	-15.4%	-4.1%	-20.7%

* Not SAAR

New SF Houses for Sale at End of Period by Region

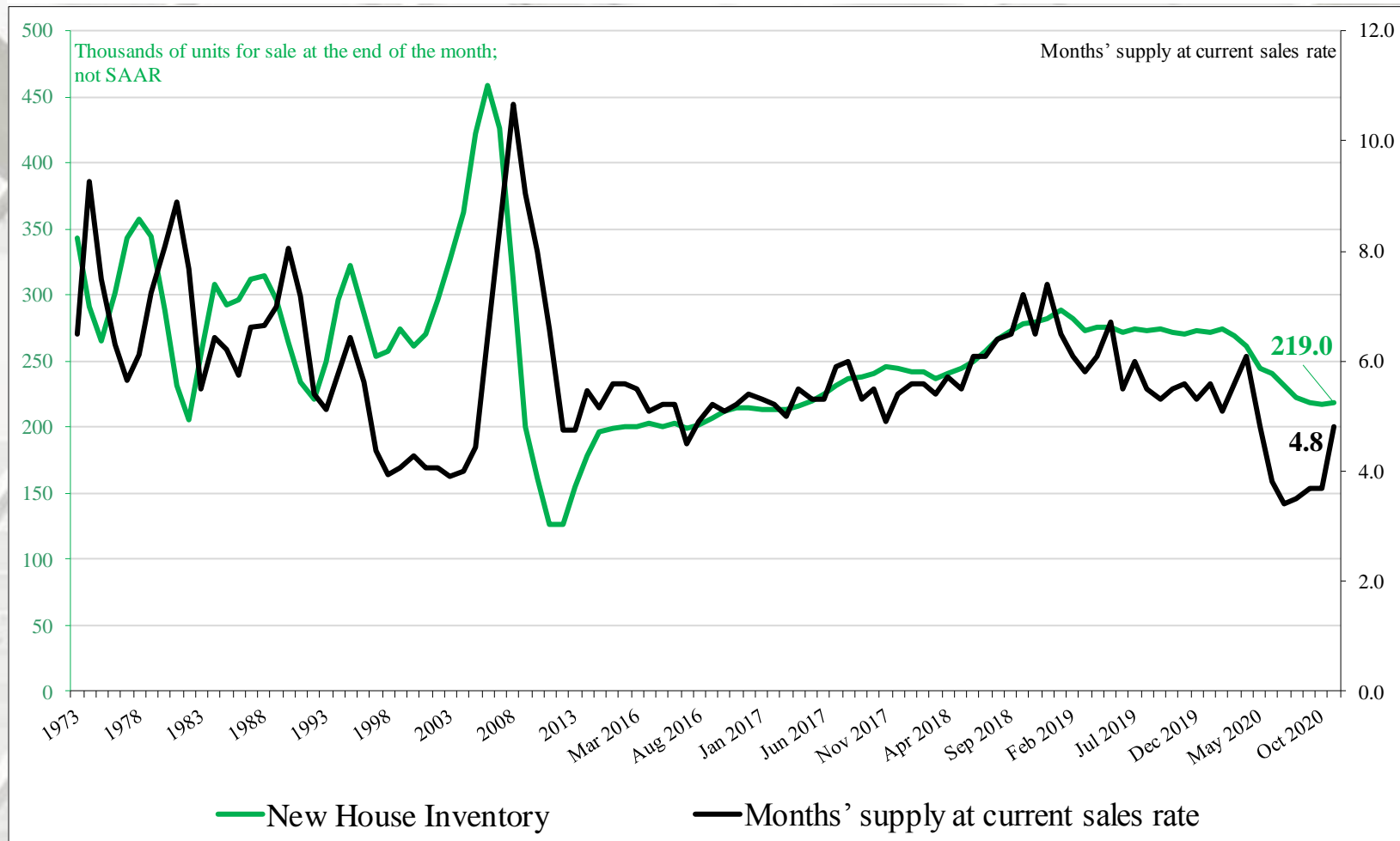


NE = Northeast; MW = Midwest; S = South; W = West

* 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).

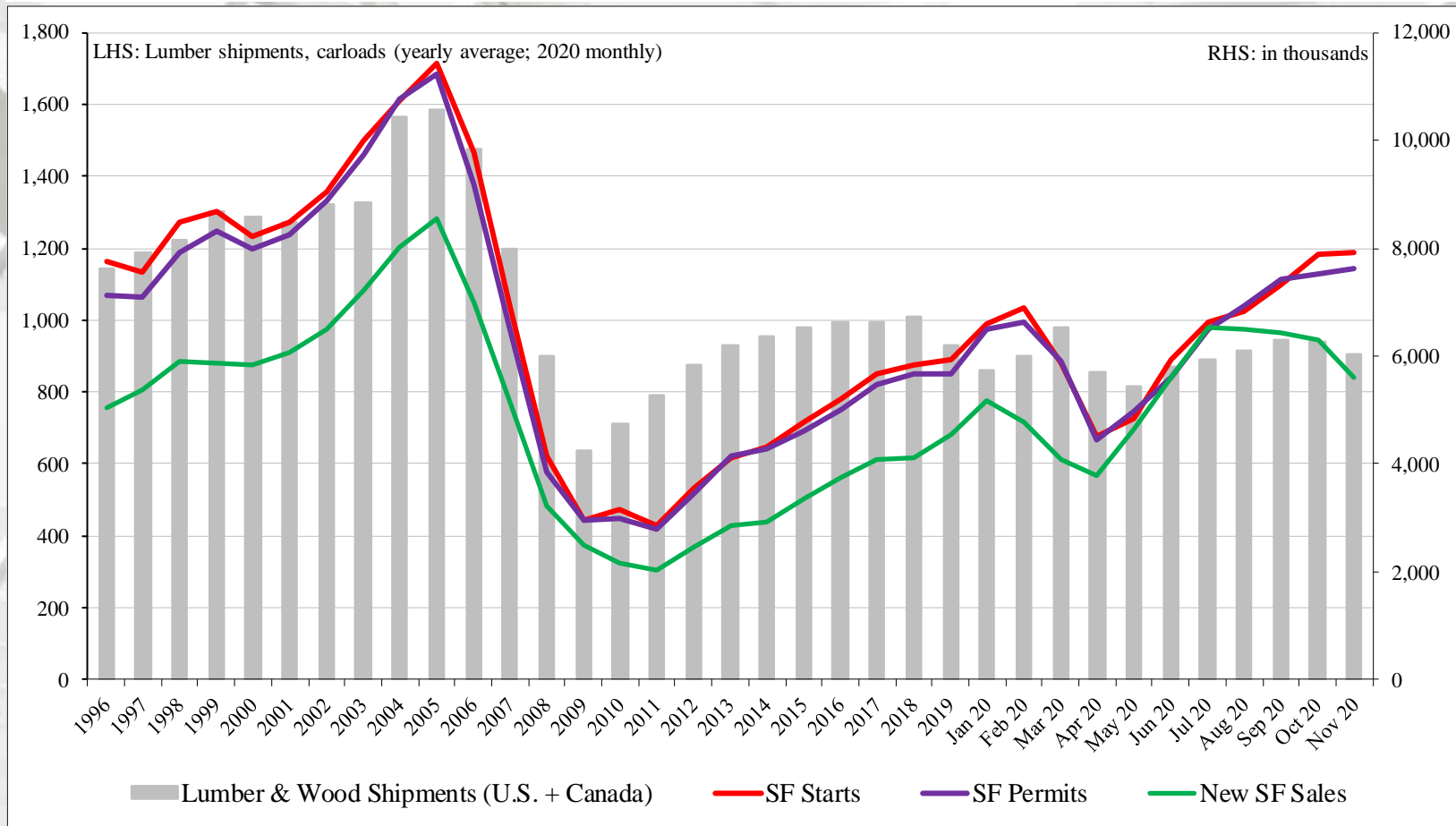
Months' Supply and New House Inventory^a



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

The months supply of new houses for sale was 4.8 months in November.

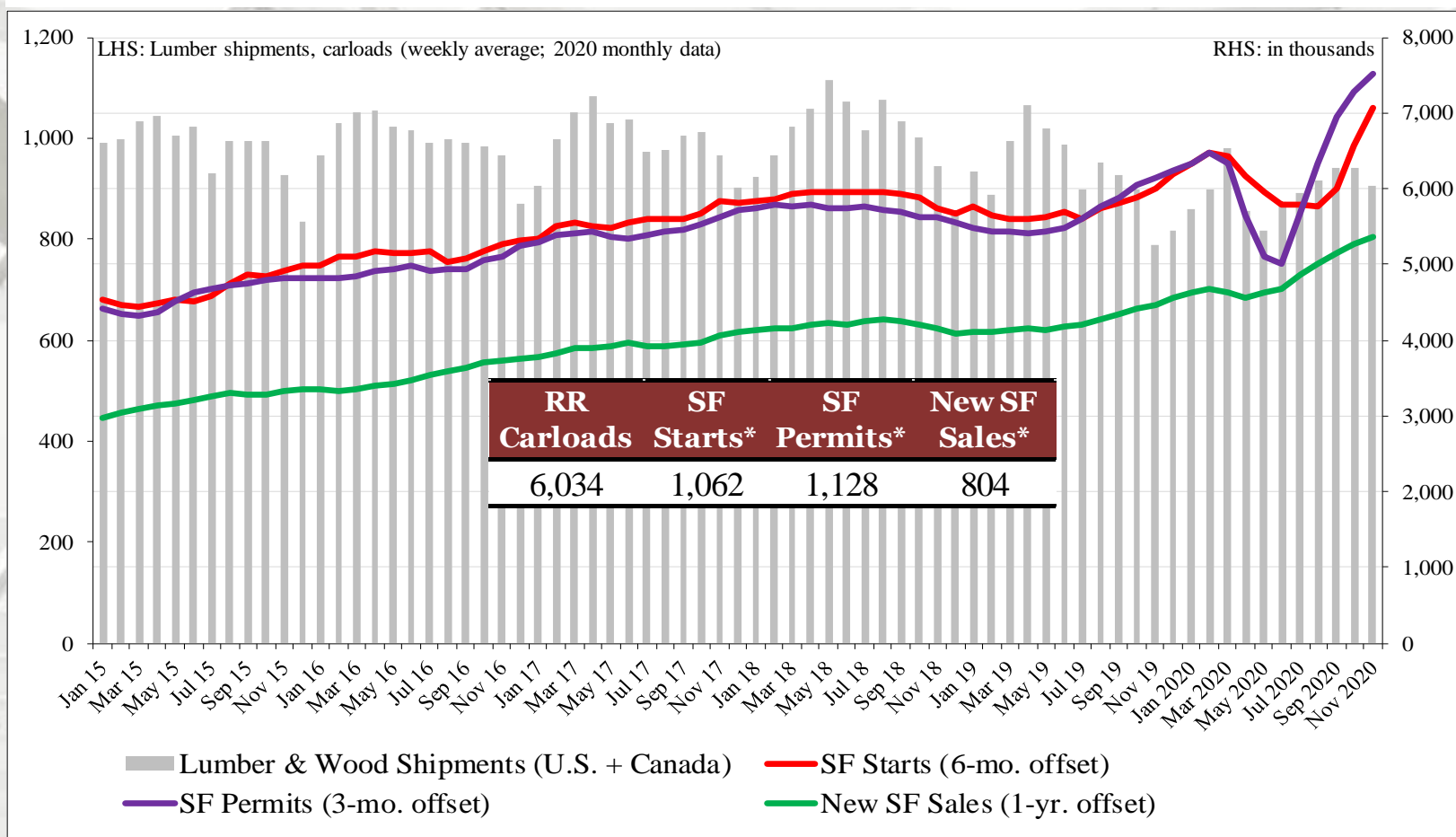
U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + US lumber and wood shipments to the US are contrasted above to U.S. housing metrics. Annual SF starts, SF Permits, and New sales are compared to carload lumber and wood shipments. The intent is to learn 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. Note that 2020 data is on a monthly basis.

* 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

November 2019 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
November	\$658,086	\$341,506	\$90,024	\$226,556
October	\$640,954	\$324,882	\$90,007	\$226,065
2019	\$566,916	\$289,083	\$77,743	\$200,090
M/M change	2.7%	5.1%	0.0%	0.2%
Y/Y change	16.1%	18.1%	15.8%	13.2%

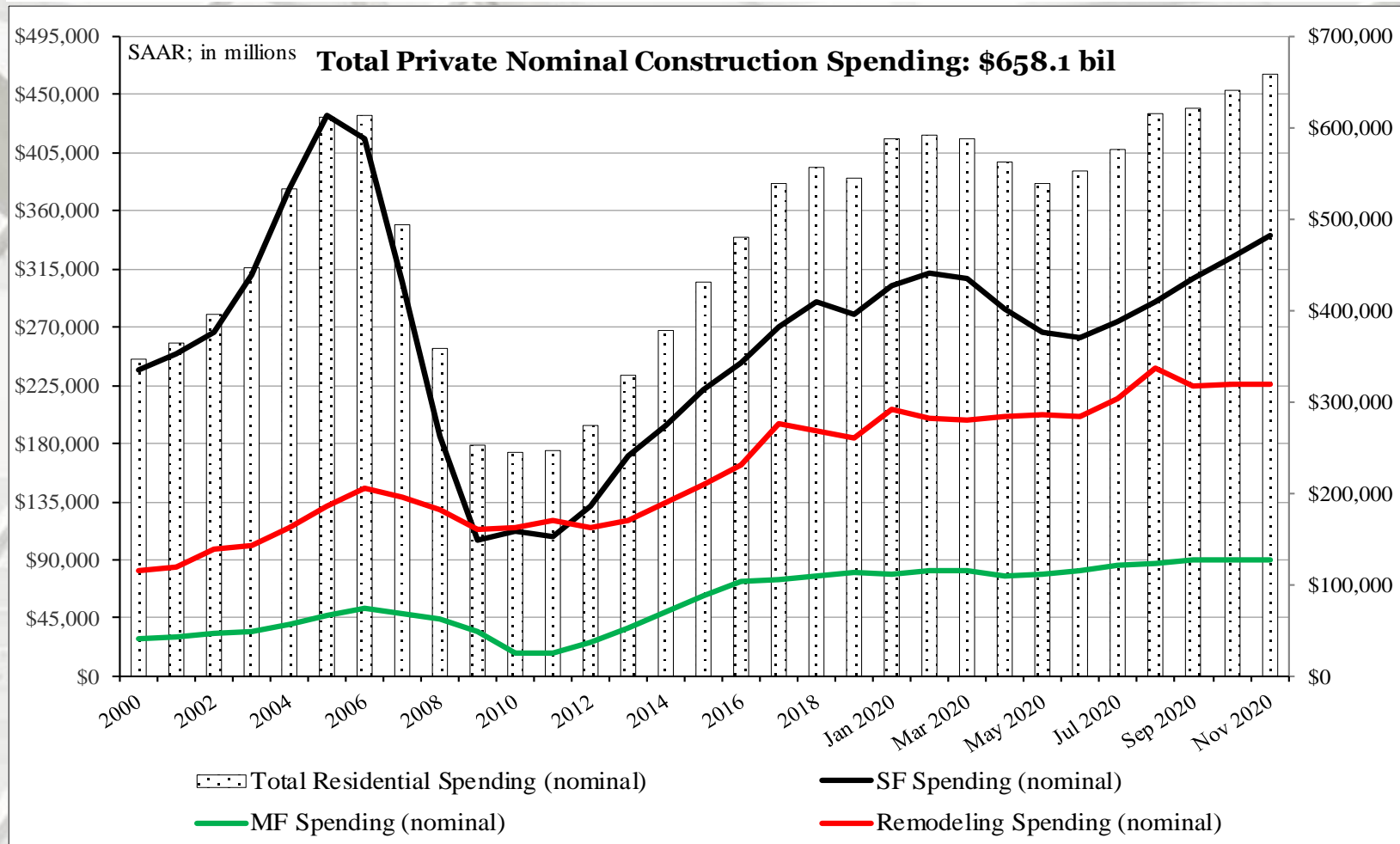
* billion.

** 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\$.

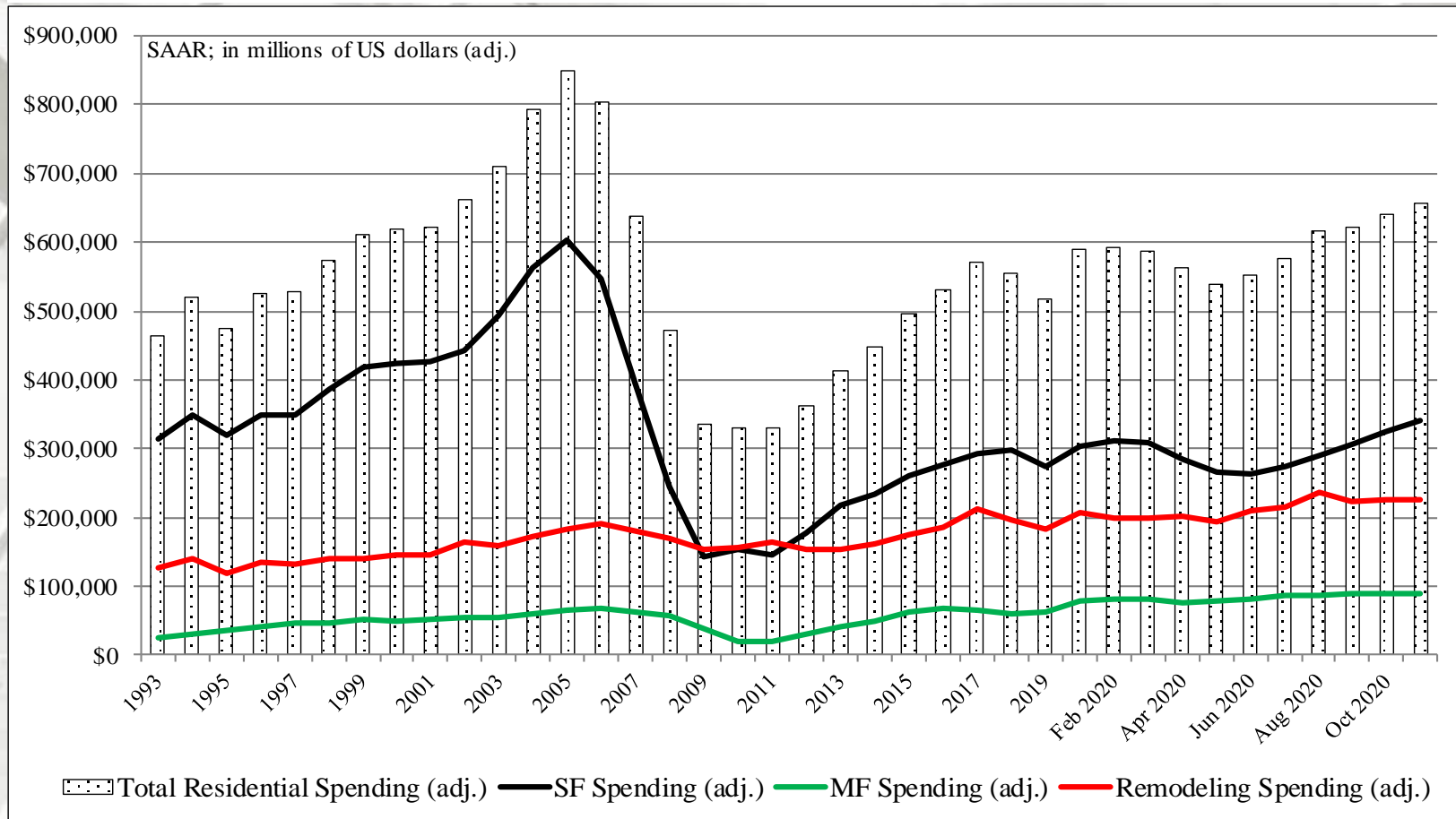
Total Construction Spending (nominal): 2000 – November 2020



Reported in nominal US\$.

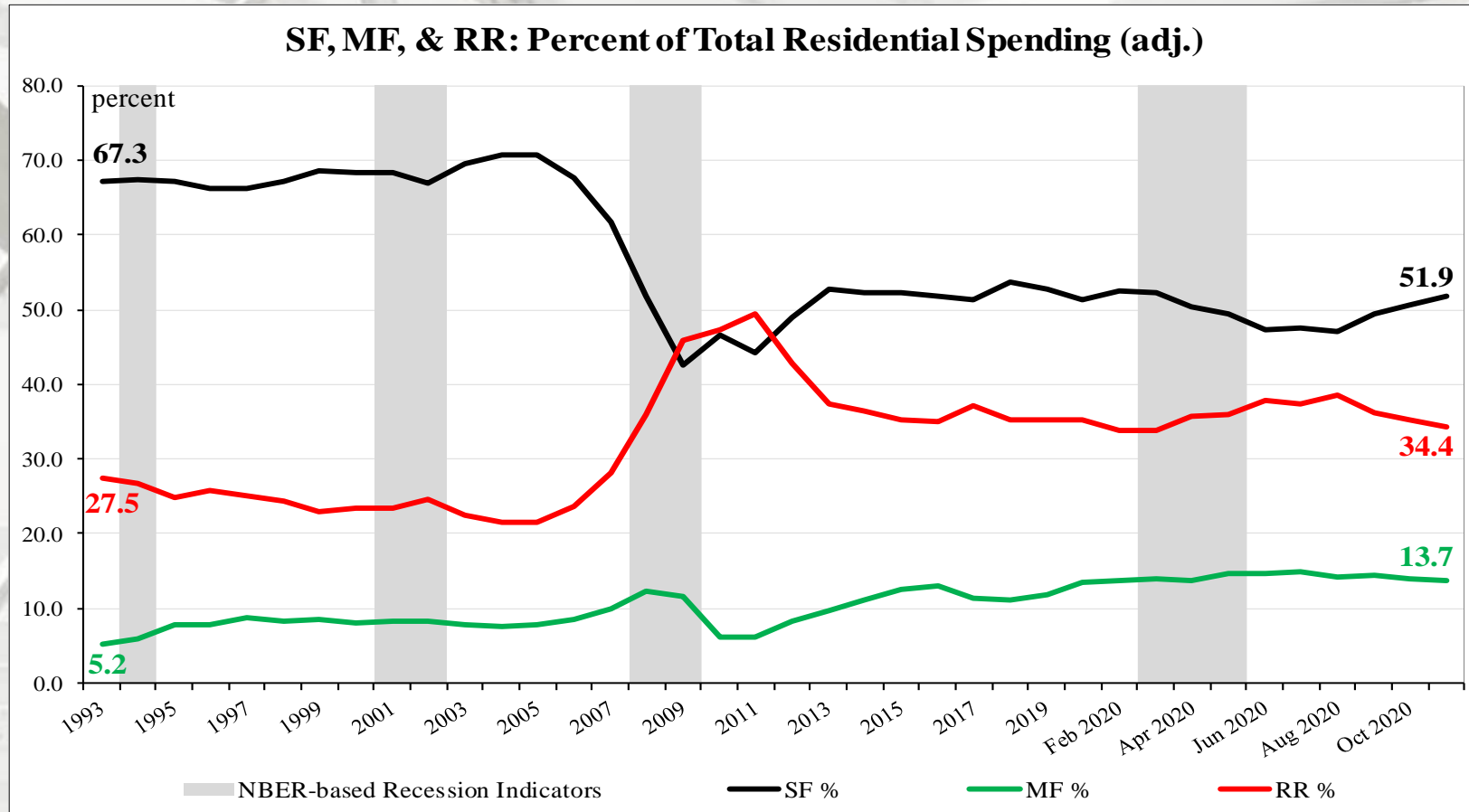
The US DOC does not report improvement spending directly, this is a monthly estimation for 2020.

Total Construction Spending (adjusted): 1993-November 2020



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

Construction Spending Shares: 1993 to November 2020



Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5 %

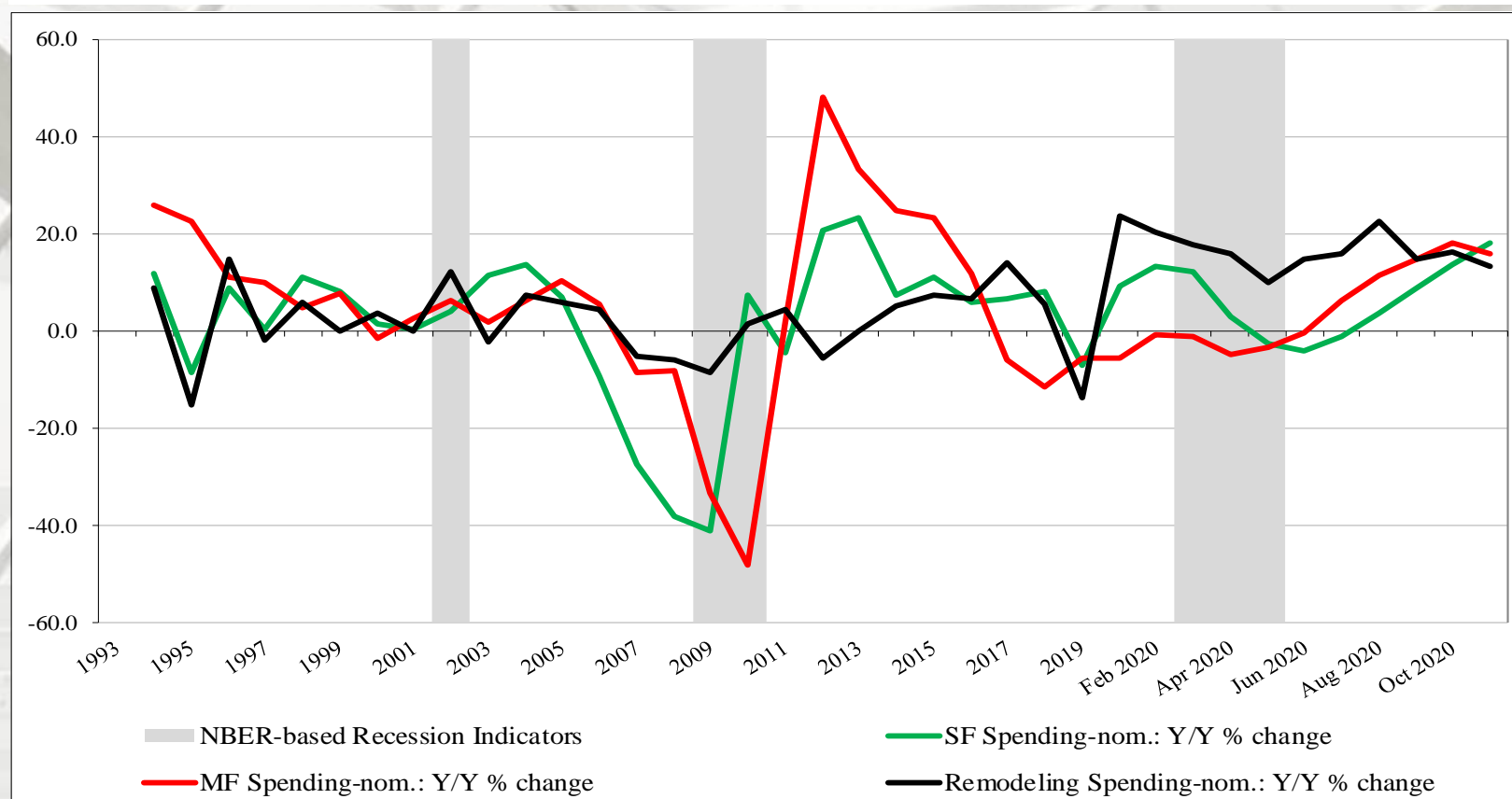
Residential remodeling (RR) spending average: 23.3 % (SAAR).

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

* NBER based Recession Indicator Bar s 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>; 1/4/21 and <http://www.bea.gov/iTable/iTable.cfm>; 3/2/20

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

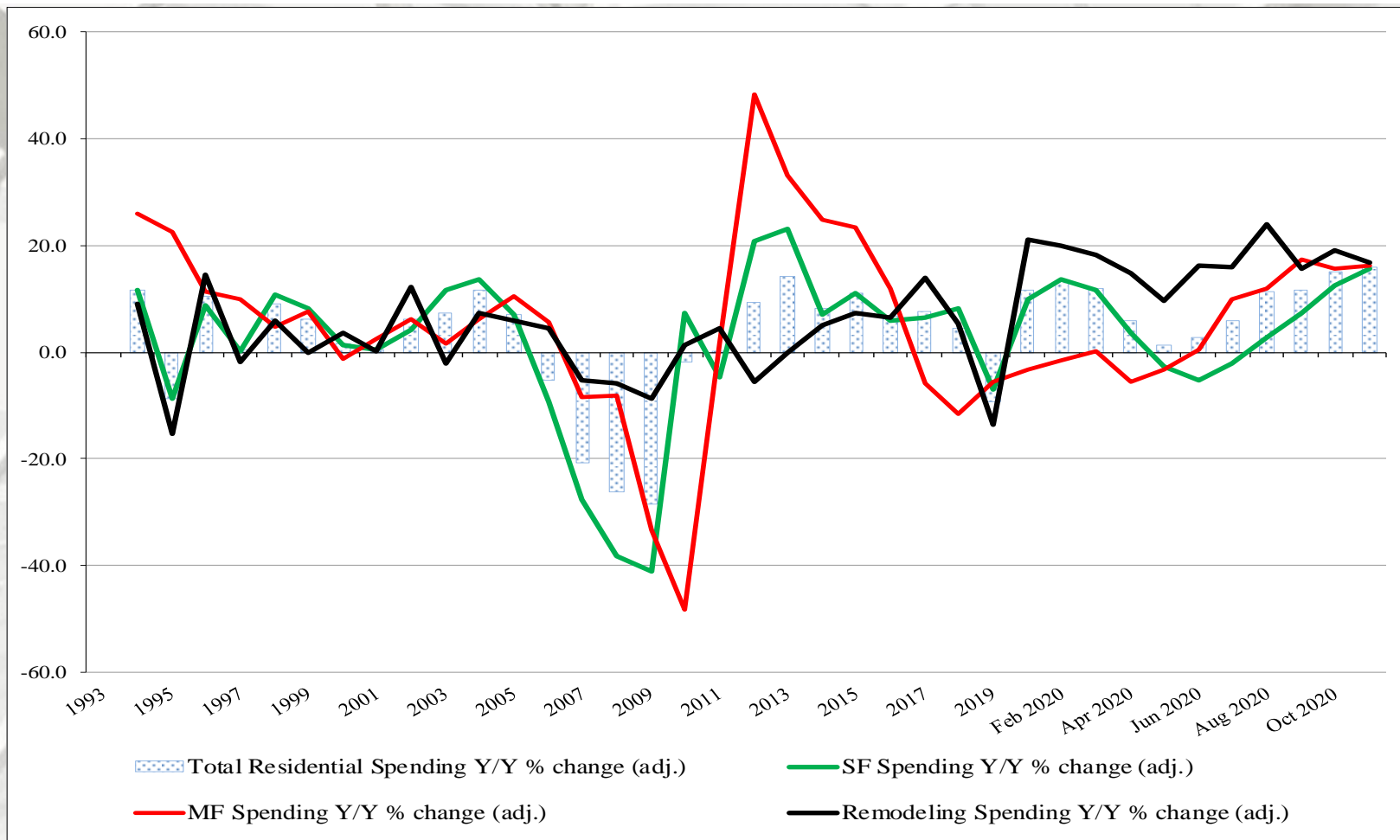


Nominal Residential Construction Spending: Y/Y percentage change, 1993 to November 2020

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

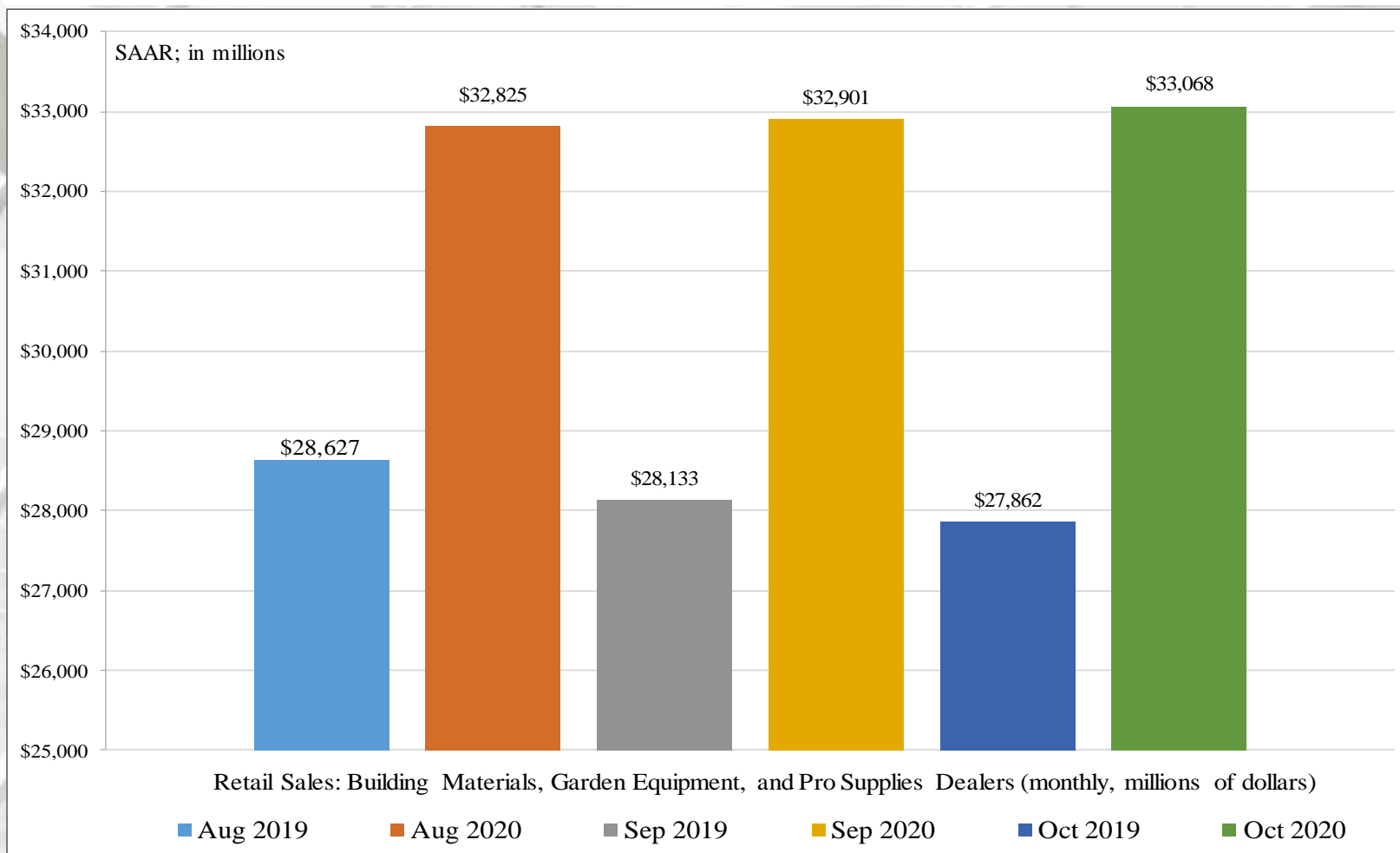
* NBER based Recession Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

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



Remodeling

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

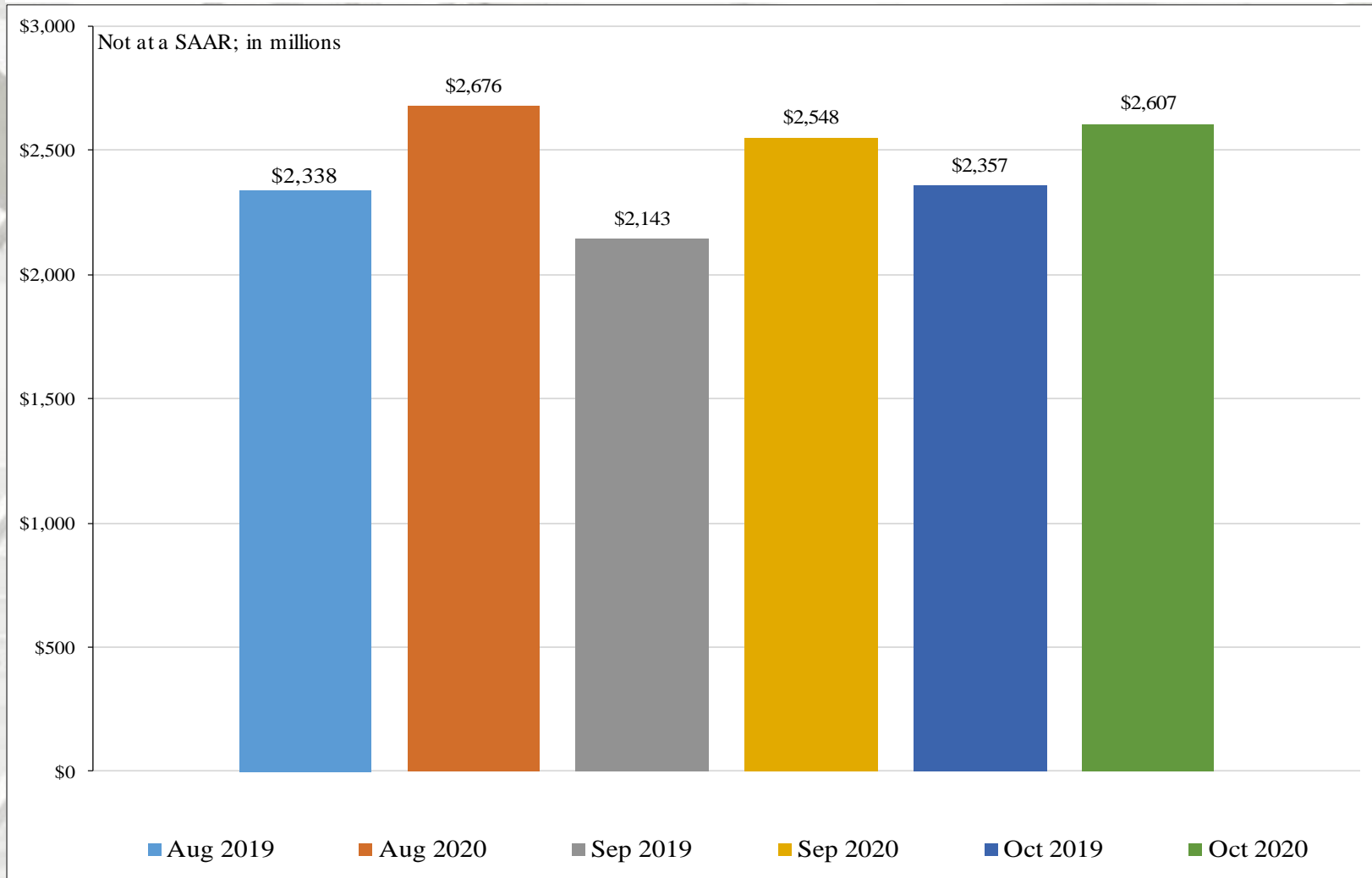


Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 4441

NAICS 4441 sales increased 0.5% from September to October and improved 18.7% from October 2019 (on a non-adjusted basis).

Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales increased 2.3% from September to October and improved 10.6% from October 2019 (on a non-adjusted basis).

Remodeling

Metrostudy/Zonda

RRI: Remodeling Market Remains Strong, But Economic Uncertainty Looms in 2021

Metrostudy/Zonda projects remodeling activity will see quarterly declines beginning in the first quarter of 2021

“Big-ticket remodeling spending increased 9.0% year-over-year (YOY) in the third quarter of 2020 and 1.4% from the second quarter, according to the latest Residential Remodeling Index (RRI) released by Metrostudy/Zonda. The Q3 2020 reading of 132.6 indicates economic conditions known to impact remodeling are 32.6% higher than the old peak in 2007.

The third quarter RRI marked the 34th consecutive quarter of annual and quarterly gains since national remodeling activity bottomed in 2011. However, Metrostudy/Zonda said forecasts from Moody’s Analytics for the economic and housing variables that are used in the RRI model suggest the streak of quarterly growth will come to an end in the first quarter of 2021. Beginning in the first quarter of 2021, Metrostudy/Zonda projects the RRI will see small quarterly decreases, which will lead to modest YOY decreases starting in the third quarter of 2021. The projected decreases in 2021 will be relatively moderate and the RRI is still expected to increase on an annual basis in 2021. The RRI is forecast to post a 0.4% gain for all of 2021, much lower than the 8.1% gain for the full year in 2020.” – Vincent Salandro, Associate Editor, Remodeling

Remodeling

Metrostudy/Zonda

RRI: Remodeling Market Remains Strong, But Economic Uncertainty Looms in 2021

Metrostudy/Zonda projects remodeling activity will see quarterly declines beginning in the first quarter of 2021

“The projected moderation in remodeling growth for 2021 is mostly due to expectations of a slow employment recovery, a still-fragile economy, and the unknown status of further government stimulus, according to Metrostudy/Zonda. While September employment data indicates the U.S. has recovered 54% of jobs lost since March, Metrostudy/Zonda expressed concern that without another large round of stimulus, high-unemployment, record hospitalizations, new shutdowns, and more workers self-selecting out of the economy could be a recipe that puts the United States at risk of a “double-dip recession.” If another round of stimulus is distributed “wisely,” there is a better likelihood that the economic recovery can maintain the current baseline, according to Metrostudy/Zonda.

In 2020, Metrostudy/Zonda said the remodeling market has benefited from the injection of government stimulus, the strong existing home market, and the “K-shaped” economic recovery. During the recovery, skilled professionals whose employment situation has been relatively unchanged by the pandemic comprise the top part of the “K” and doing fine, while those on the bottom of the “K” are struggling or facing “serious near-term struggles,” according to Metrostudy/Zonda. Workers at the top of the “K” also have unleashed large amounts of pent-up spending on their homes, making upgrades with money that would have otherwise been spent on vacations or going out.” – Vincent Salandro, Associate Editor, Remodeling

Remodeling

Metrostudy/Zonda

RRI: Remodeling Market Remains Strong, But Economic Uncertainty Looms in 2021

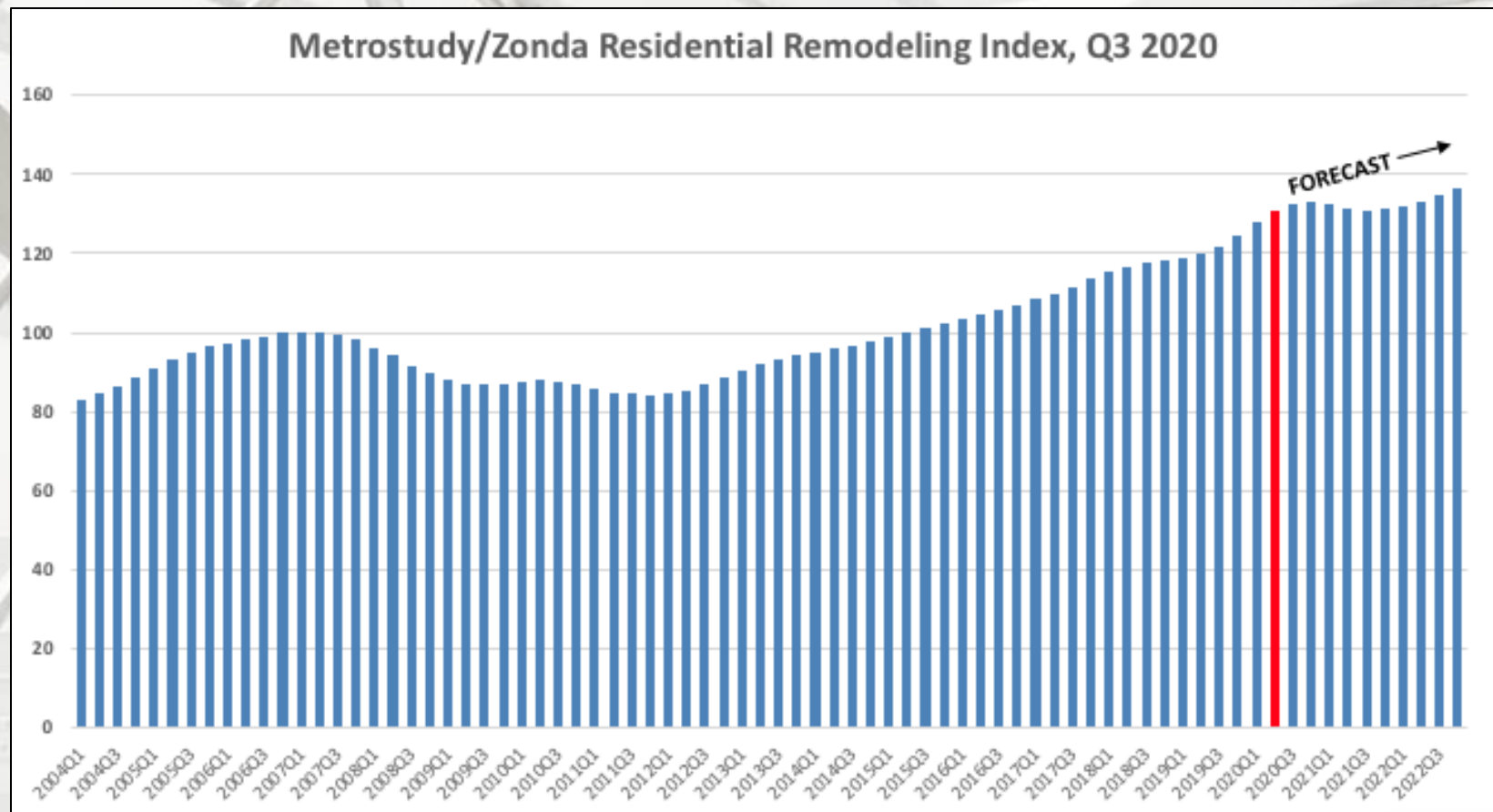
Metrostudy/Zonda projects remodeling activity will see quarterly declines beginning in the first quarter of 2021

“Metrostudy/Zonda projects the number of big-ticket, pro-worthy remodeling projects – worth \$1,000 or more – completed in 2020 will total 14.1 million, an 8.1% increase from 2019. Metrostudy/Zonda forecasts the number of big-ticket projects completed nationally will increase by 54,000 to 14.2 million in 2021.

According to Metrostudy/Zonda, 381 metropolitan statistical areas are expected to see growth in annual project volume in 2020 and, among those markets, the average growth rate is expected to be 5.7%.

The RRI is based on a statistical model that takes into account data such as household level remodeling permits and consumer-reported remodeling and replacement projects. It uses a model to predict the number and dollar volume of home improvement and replacement projects nationwide worth at least \$1,000 in 381 metropolitan statistical areas and nationwide.” – Vincent Salandro, Associate Editor, Remodeling

Remodeling



Existing House Sales

National Association of Realtors

November 2020 sales: 6.690 thousand

	Existing Sales	Median Price	Mean Price	Month's Supply
November	6,690,000	\$310,800	\$343,000	2.3
October	6,860,000	\$313,100	\$344,700	2.5
2019	5,320,000	\$271,300	\$308,200	3.7
M/M change	-2.5%	-0.7%	-0.5%	-8.0%
Y/Y change	25.8%	14.6%	11.3%	-37.8%

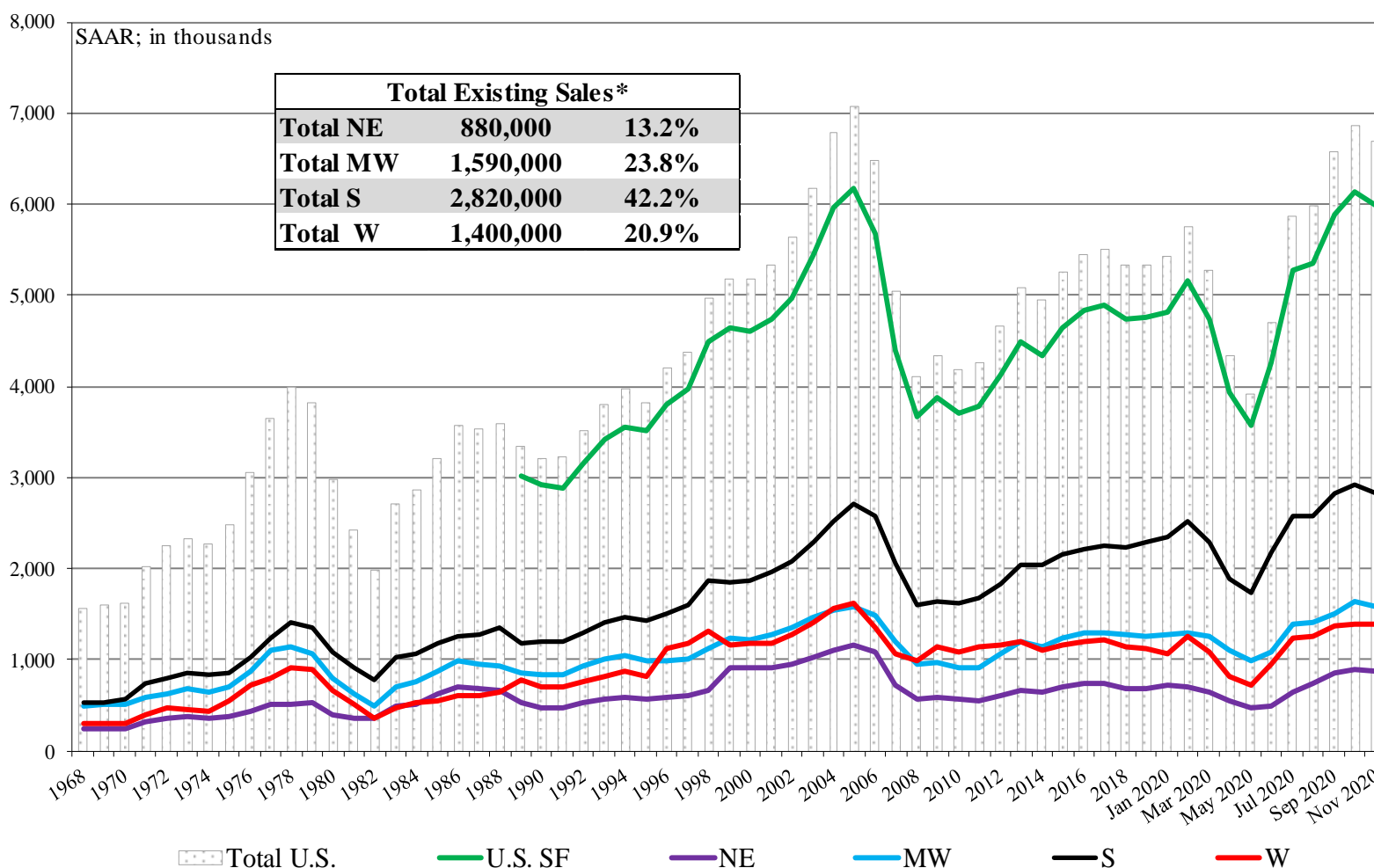
All sales data: SAAR

Existing House Sales

	Existing SF Sales	SF Median Price	SF Mean Price	
November	5,980,000	\$315,500	\$346,500	
October	6,130,000	\$317,800	\$348,300	
2019	4,760,000	\$274,100	\$309,800	
M/M change	-2.4%	-0.7%	-0.5%	
Y/Y change	25.6%	15.1%	11.8%	
	NE	MW	S	W
November	880,000	1,590,000	2,820,000	1,400,000
October	900,000	1,630,000	2,930,000	1,400,000
2019	700,000	1,280,000	2,240,000	1,100,000
M/M change	-2.2%	-2.5%	-3.8%	0.0%
Y/Y change	25.7%	24.2%	25.9%	27.3%

All sales data: SAAR.

Existing House Sales



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

* Percentage of existing sales.

U.S. Housing Prices

Federal Housing Finance Agency

FHFA House Price Index Up 1.5 Percent in October; Up 10.2 Percent from Last Year

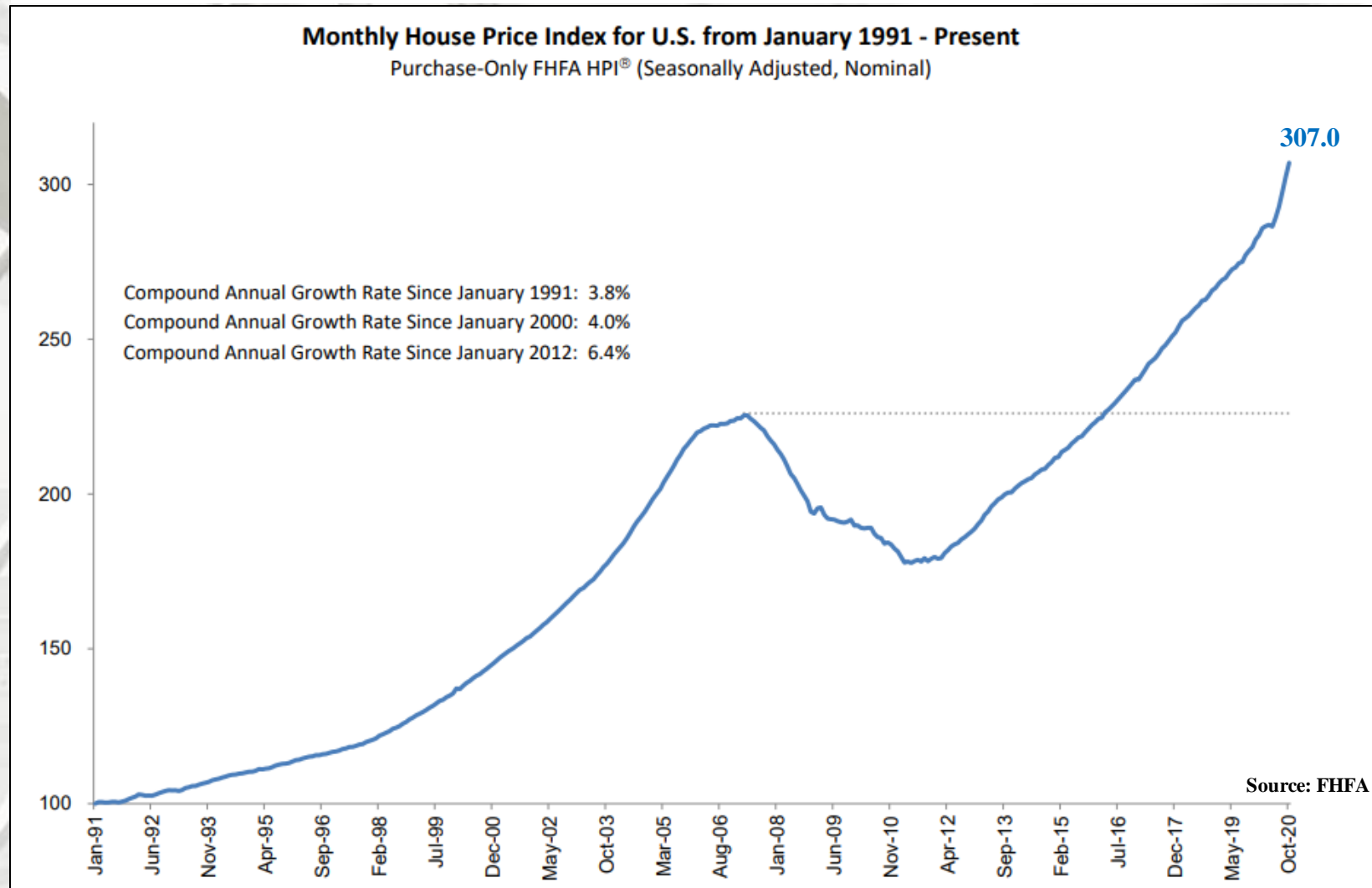
Significant Findings

“House prices rose nationwide in October, up **1.5 percent** from the previous month, according to the latest Federal Housing Finance Agency House Price Index (FHFA HPI®). House prices rose **10.2 percent** from October 2019 to October 2020. The previously reported **1.7 percent** price change for September 2020 remained unchanged.

For the nine census divisions, seasonally adjusted monthly house price changes from September 2020 to October 2020 ranged from **+0.9 percent** in the West North Central and East South Central divisions to **+2.1 percent** in the New England division. The 12-month changes ranged from **+8.4 percent** in the West South Central division to **+12.5 percent** in the Mountain and New England divisions.” – Raffi Williams and Adam Russell, FHFA

“U.S. house prices rose for the fifth straight month since states re-opened their local economies. The 12-month gain of 10.2 percent in October is the highest annual appreciation observed since the 2004-2005 period. Extremely low mortgage rates and a limited supply of homes for sale continue to propel price gains. The data do not yet reflect renewals of some local and state COVID-19 restrictions.” – Dr. Lynn Fisher, Deputy Director of the Division of Research and Statistics, FHFA

U.S. Housing Prices



U.S. Housing Prices

S&P CoreLogic Case-Shiller Index Shows Annual Home Price Gains Remained Strong in October

“Data for October 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 an 8.4% annual gain in October, up from 7.0% in the previous month. The 10-City Composite annual increase came in at 7.5%, up from 6.2% in the previous month. The 20-City Composite posted a 7.9% year-over-year gain, up from 6.6% in the previous month.

Phoenix, Seattle and San Diego continued to report the highest year-over-year gains among the 19 cities (excluding Detroit) in October. Phoenix led the way with a 12.7% year-over-year price increase, followed by Seattle with an 11.7% increase and San Diego with an 11.6% increase. All 19 cities reported higher price increases in the year ending October 2020 versus the year ending September 2020.” – 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 Month-Over-Month

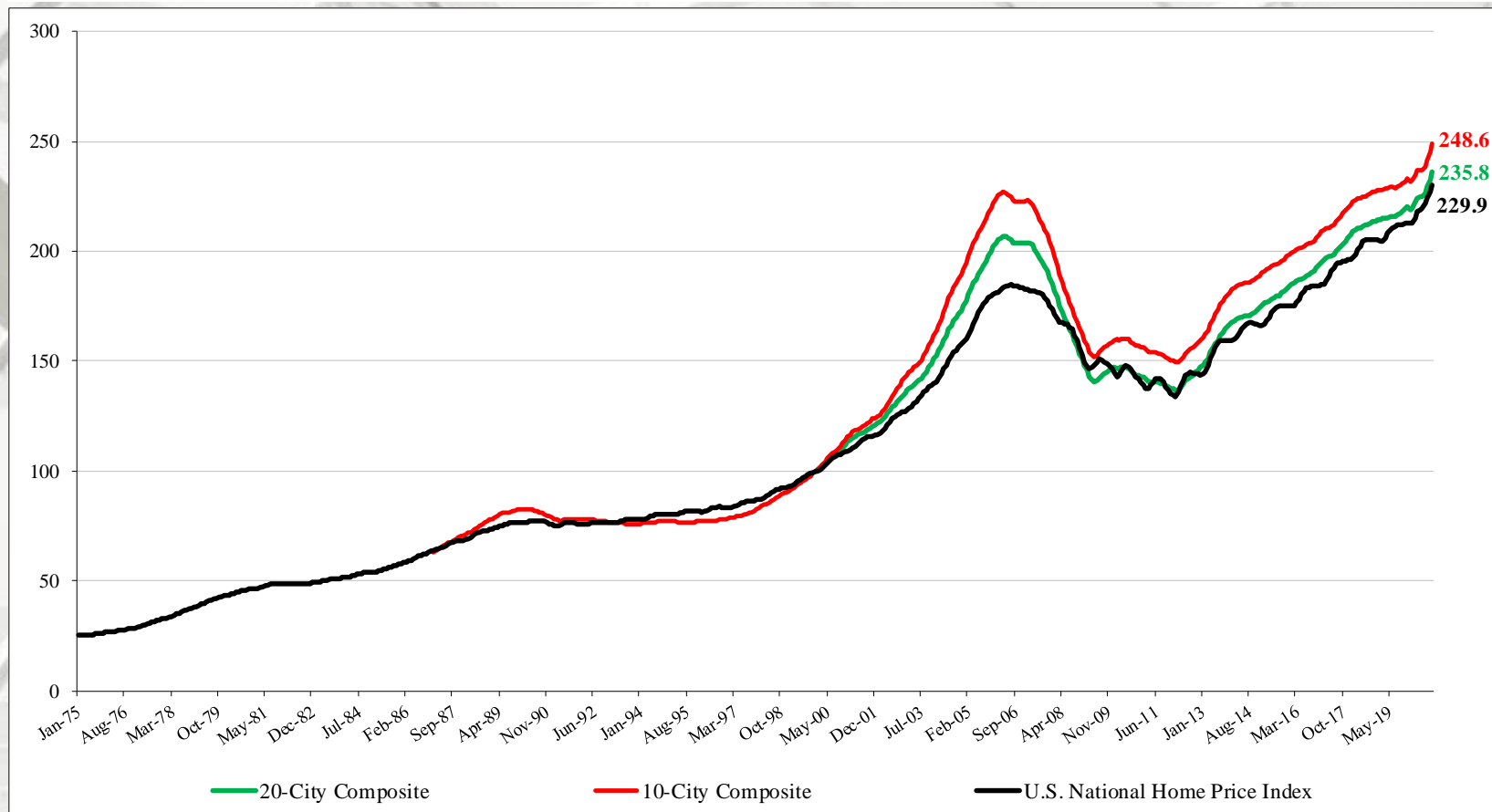
“The National Index posted a 1.4% month-over-month increase, while the 10-City and 20-City Composites both posted increases of 1.4% and 1.3% respectively, before seasonal adjustment in October. After seasonal adjustment, the National Index posted a month-over-month increase of 1.7%, while the 10-City and 20-City Composites both posted increases of 1.6%. In October, all 19 cities (excluding Detroit) reported increases before and after seasonal adjustment.

Analysis

“The surprising strength we noted in last month’s report continued into October’s home price data. The National Composite Index gained 8.4% relative to its level a year ago, accelerating from September’s 7.0% increase. The 10- and 20-City Composites (up 7.5% and 7.9%, respectively) also rose more rapidly in October than they had done in September. The housing market’s strength was once again broadly-based: all 19 cities for which we have October data rose, and all 19 gained more in the 12 months ended in October than they had gained in the 12 months ended in September.

We’ve noted before that a trend of accelerating increases in the National Composite Index began in August 2019 but was interrupted in May and June, as COVID-related restrictions produced modestly decelerating price gains. Since June, our monthly readings have shown accelerating growth in home prices, and October’s results emphatically emphasize that trend. The last time that the National Composite matched this month’s 8.4% growth rate was more than six and a half years ago, in March 2014. Although the full history of the pandemic’s impact on housing prices is yet to be written, the data from the last several months are consistent with the view that COVID has encouraged potential buyers to move from urban apartments to suburban homes. We’ll continue to monitor what the data can tell us about this question.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

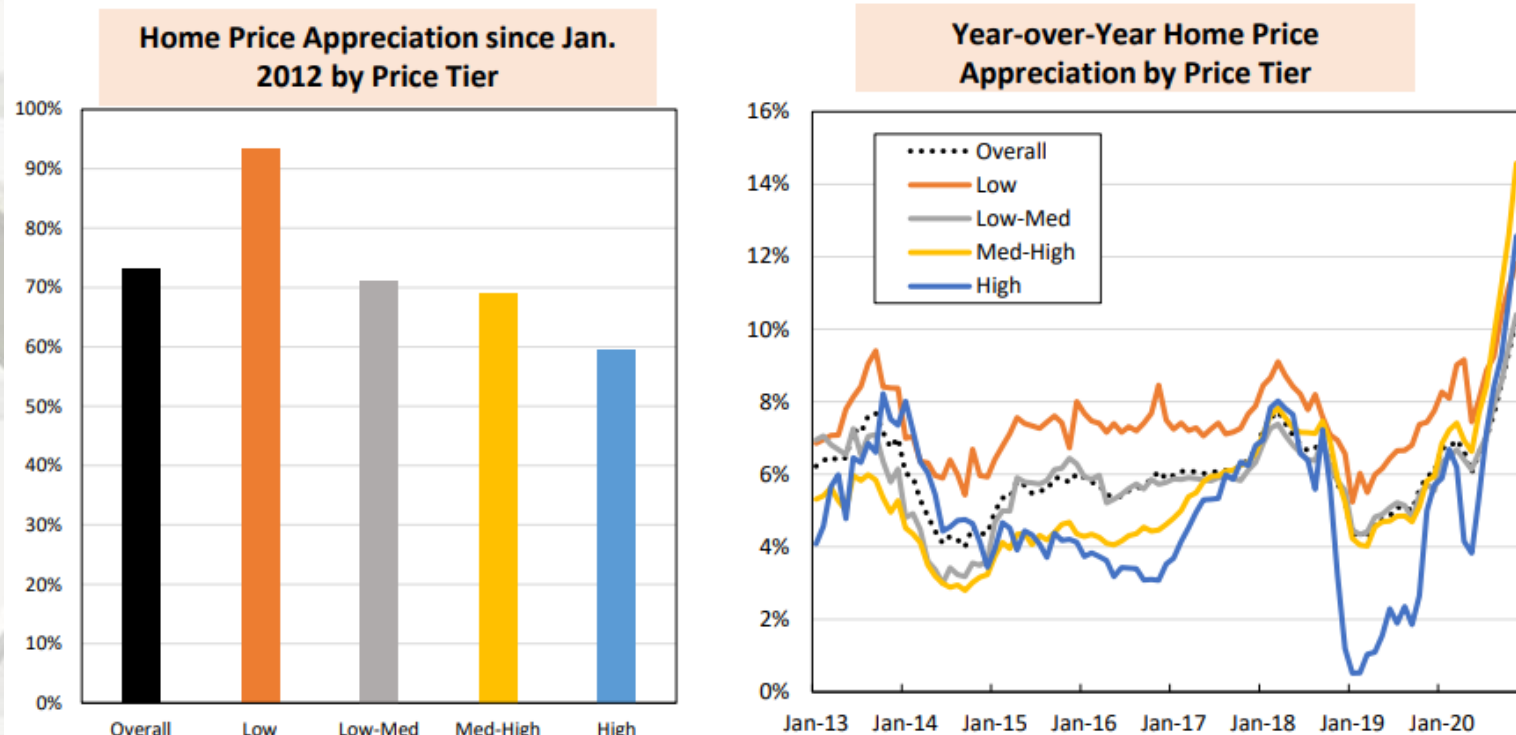
S&P/Case-Shiller Home Price Indices



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

“Phoenix’s 12.7% increase led all cities for the 17th consecutive month. Seattle (11.7%) and San Diego (11.6%) repeated in second and third place. Prices were strongest in the West and Southwest regions, but even the comparatively weak Midwest and Northeast (up 7.7% and 7.9% respectively) performed creditably well.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

U.S. Housing Prices



Note: Data for November 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.
Source: AEI Housing Center, www.AEI.org/housing.

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

“Since 2012 a large gap in HPA has developed between the lower and upper end of the market (left panel). Preliminary numbers for November 2020 indicate that the low price tier continued to have strong HPA, although the med-high and high price tiers, which are more dependent on the monetary punch bowl, are showing the strongest rates of appreciation. This is a trend reversal, since historically the low price tier has shown the fastest y-o-y HPA.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Housing Affordability

ATTOM Data Solutions

Homeownership Slips Into Unaffordable Territory Across Majority of U.S. in Fourth Quarter of 2020

Average Wage Below Level Needed To Afford Typical Home in the U.S.; Affordability Worsened in Fourth Quarter in 55 Percent of Housing Markets; Median Home Prices Up At Least 10 Percent in Most of Nation

“[ATTOM Data Solutions](https://www.attomdata.com/news/market-trends/home-sales-prices/attom-data-solutions-q4-2020-u-s-home-affordability-report), curator of the nation’s premier property database and first property data provider of Data-as-a-Service (DaaS), today released its fourth-quarter 2020 U.S. Home Affordability Report, showing that median home prices of single-family homes and condos in the fourth quarter of 2020 were less affordable than historical averages in 55 percent of counties with enough data to analyze, up from 43 percent a year ago and 33 percent three years ago. Yet rising wages and falling mortgage rates still helped keep median home prices close to affordable for average wage earners across the country.

The report determined affordability for average wage earners by calculating the amount of income needed to make monthly house payments — including mortgage, property taxes and insurance — on a median-priced home, assuming a \$100,000 loan and a 28 percent maximum “front-end” debt-to-income ratio. That required income was then compared to annualized average weekly wage data from the Bureau of Labor Statistics (see full methodology below, which has changed from earlier reports to account for higher down payments and two-worker households).

Compared to historical levels, 275 of the 499 counties analyzed in the fourth quarter of 2020, or 55 percent, were less affordable than past averages, up from 217 of the same group of counties in the fourth quarter of 2019 and 164 in the fourth quarter of 2017. The fallback came as continued spikes in median home prices of at least 10 percent over the past year in most of the country outpaced the impact of increasing wages and declining mortgage rates to historic lows. Those price increases occurred as the U.S. housing market kept booming despite economic troubles related to the ongoing Coronavirus pandemic.” – ATTOM Staff

Housing Affordability

ATTOM Data Solutions

Homeownership Slips Into Unaffordable Territory Across Majority of U.S. in Fourth Quarter of 2020

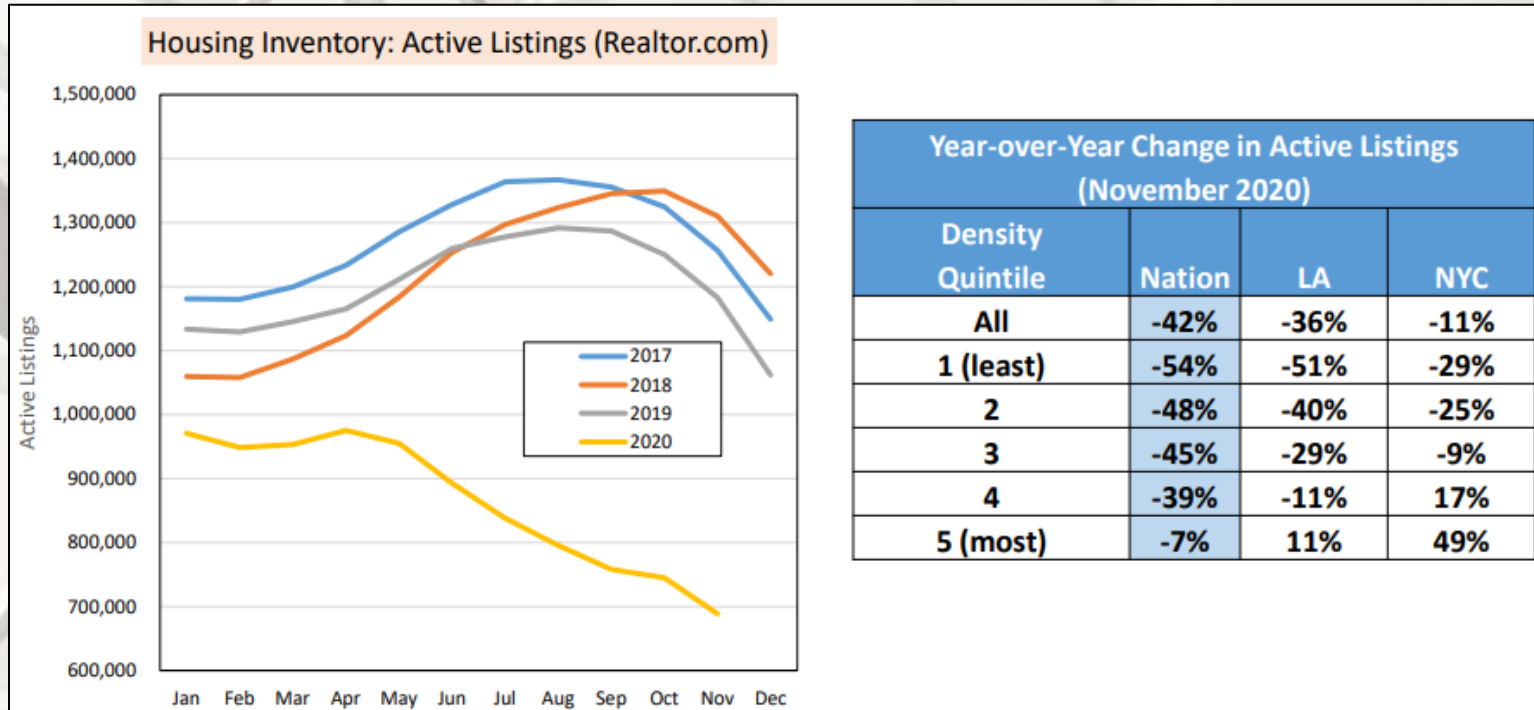
“With prices rising faster than earnings, major home-ownership expenses consumed 29.6 percent of the average wage across the nation during the fourth quarter of 2020. That figure was up from 26.4 percent in the fourth quarter of 2019 and was above the 28 percent benchmark lenders prefer for how much homeowners should spend on those major expenses – mortgage payments, insurance and property taxes. Those costs exceeded the benchmark in 59 percent of the counties included in the fourth-quarter 2020 report.

“Owning a home in the United States slipped into the unaffordable zone for average workers across the nation in the fourth quarter as the numbers continued a year-long slide in the wrong direction. The latest housing market data shows the average worker unable to meet the 28 percent affordability guideline used by lenders,” said Todd Teta, chief product officer with ATTOM Data Solutions. “That’s happened as home prices have continued rising throughout 2020 and the housing market has remained remarkably resilient in the face of the brutal economic fallout from the Coronavirus pandemic. The future remains wholly uncertain and affordability could swing back into positive territory. But for now, things are going in the wrong direction for buyers.”

Among the 499 counties in the report, 203 (41 percent) had major home-ownership expenses on typical homes in the fourth quarter that were affordable for average local wage earners. The largest of those counties, based on the 28-percent guideline, were Cook County (Chicago), IL; Harris County (Houston), TX; Philadelphia County, PA; Hillsborough County (Tampa), FL and Cuyahoga County (Cleveland), OH.

The most populous of the 296 counties with unaffordable major expenses on median-priced homes for average earners in the fourth quarter of 2020 (53 percent of the counties analyzed) were Los Angeles County, CA; Maricopa County (Phoenix), AZ; San Diego County, CA; Orange County, (outside Los Angeles), CA, and Miami-Dade County, FL.” – ATTOM Staff

U.S. Housing Supply

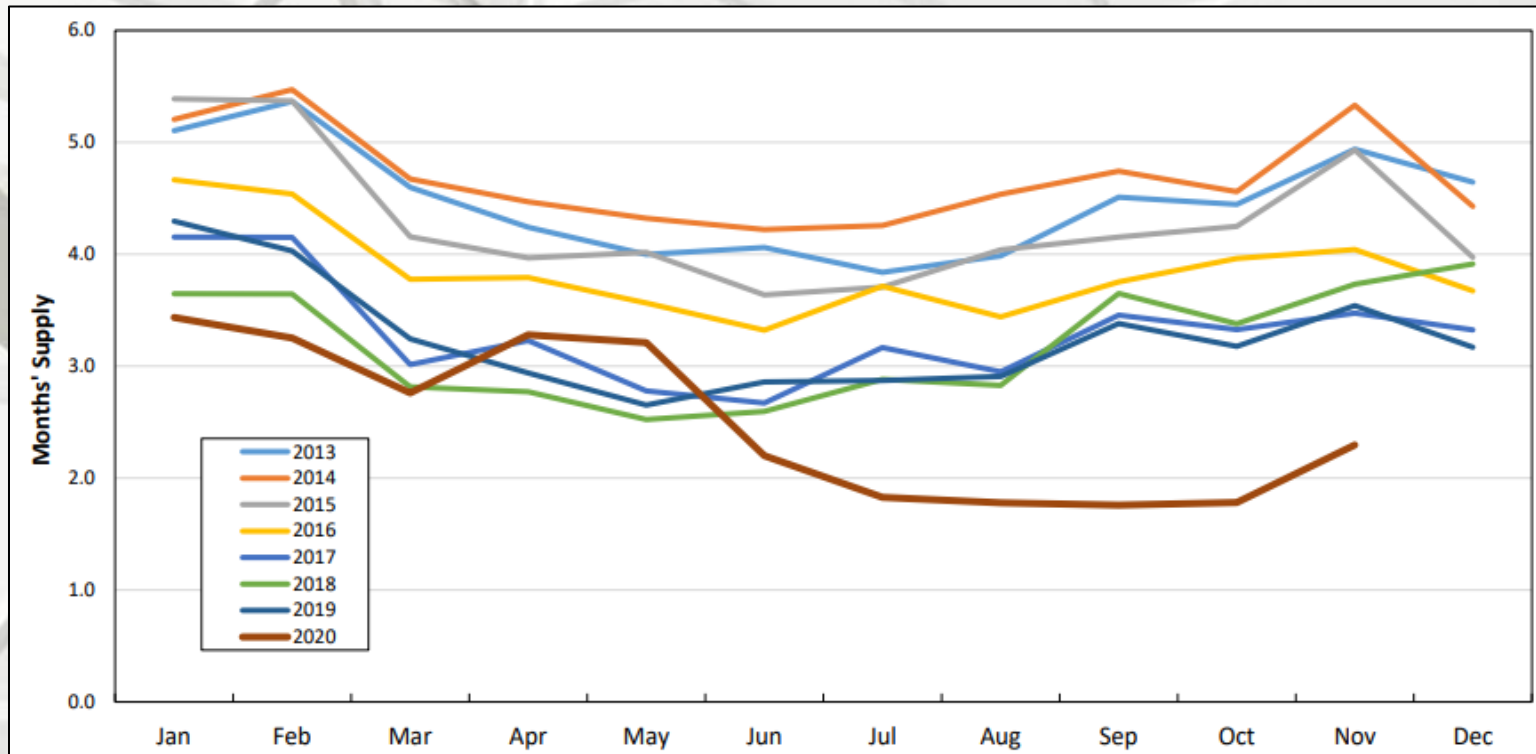


Sources: Realtor.com, Census Bureau, and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center Supply Is Being Depleted

“Supply has fallen dramatically in 2020 and is most depleted in less dense areas. For the foreseeable future, it will be difficult to replenish or add to supply: (i) baby boomers are tending to stay put more, (ii) it takes time to acquire land, entitle, and build new construction even in places like North Carolina and Texas, (iii) adding supply will face the usual difficulties in the Northeast and West, & (iv) new construction supply has fallen from 3.7 months in November 2019 to 2.3 months in November 2020.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Housing Supply

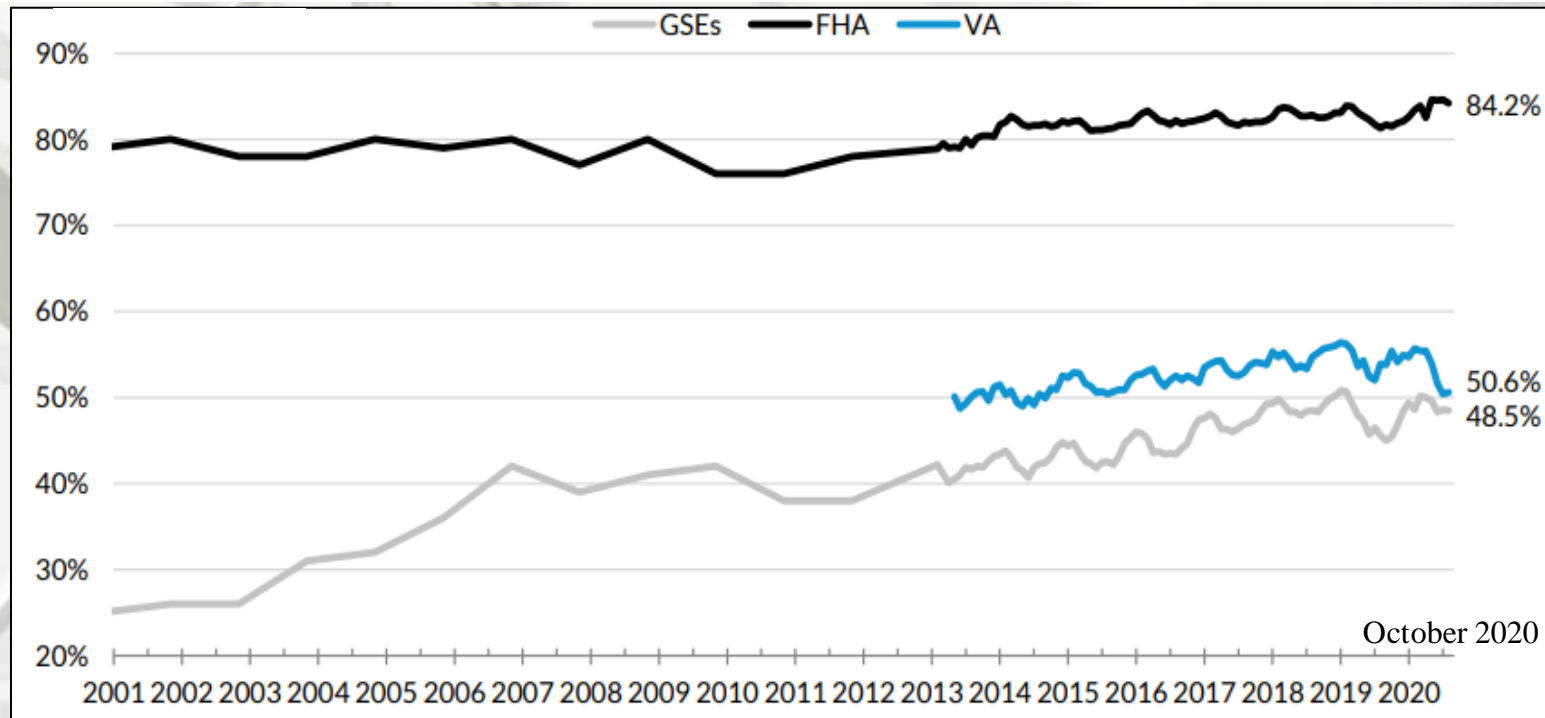


Note: Months' supply measures how long it would take for the existing level of inventory to be sold off at the current sale's pace. While the listings data come from the MLS, the sales numbers come from the public records
Sources: Realtor.com, Census Bureau, and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center Months' Supply

“With the start of the lockdown, inventory levels first increased due to reduced demand. However, levels have noticeably tightened during the housing market recovery, which started in mid-May. Low mortgage rates combined with record low inventory of 2 months virtually guarantee that HPA will remain strong over the coming months.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

First-Time House Buyers



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

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

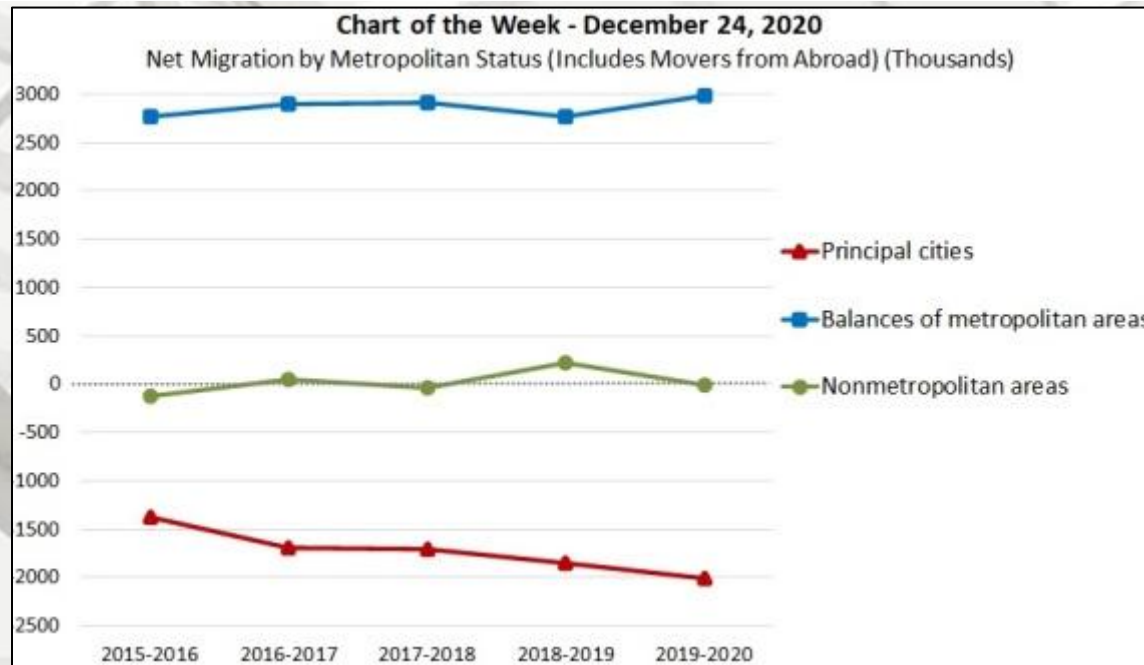
Urban Institute First-Time Homebuyer Share

“In October 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.2 percent. The FTHB share of VA lending in October was 50.6 percent. The GSE FTHB share in October was flat relative to September, at 48.5 percent. The bottom table shows that based on mortgages originated in October 2020, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and have a higher LTV, thus paying a higher interest rate.” – Bing Lai, Research Associate, Housing Finance Policy Center

Source: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-december-2020/view/full_report; 12/29/20

Return TOC

U.S. Housing Market



Mortgage Bankers Association (MBA)

Net migration by metropolitan status over the last five years

“...The green line shows that the net movement into nonmetropolitan areas has hovered around zero, growing by an average of 19,000 migrants (nationally). On the other hand, metropolitan areas absorbed more than 5.7 million migrants over this period.

Excluding metropolitan area principal cities, net migration into metro areas was almost 3 million in 2019-2020, and 14.3 million people over the last five years (blue line). Conversely, metropolitan area principal cities have experienced an accelerating out-migration in recent years (red line), with over 2 million people moving out in the year prior to the pandemic. Moreover, if we exclude movers from abroad, 2.5 million people moved out of the principal cities in 2019-2020. The increasing trend of out-migration from principal cities reflects many factors, including the main mass of millennials reaching prime first-time homebuyer age.” – Edward Seiler, Associate Vice President of Housing Economics, MBA Research

U.S. Housing Finance

Mortgage Bankers Association (MBA)

Mortgage Credit Availability Decreased in December

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

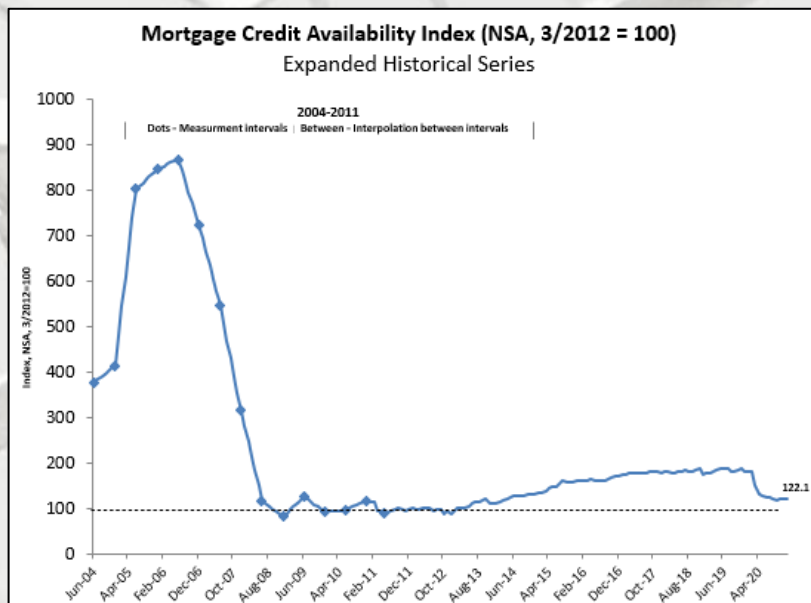
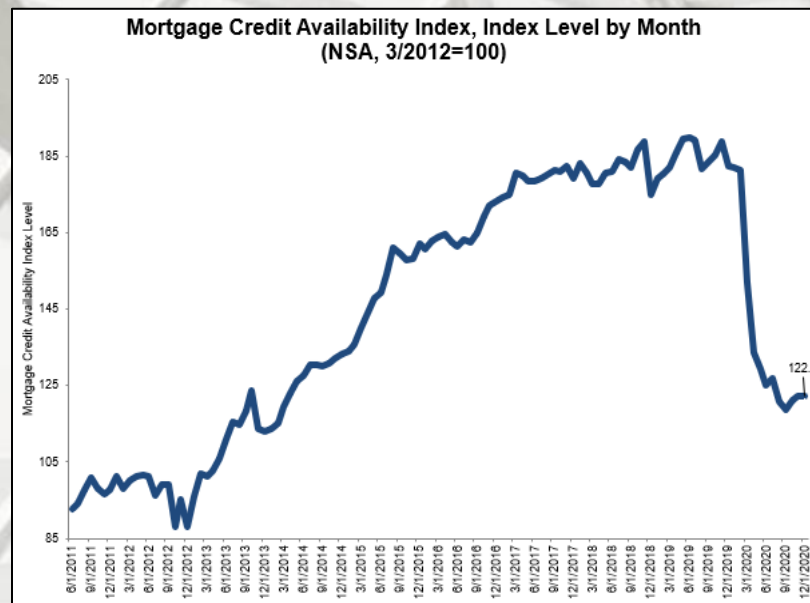
The MCAI fell by 0.1 percent to 122.1 in December. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI decreased 2.8 percent, while the Government MCAI increased by 2.1 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 1.4 percent, and the Conforming MCAI fell by 7.2 percent.

Credit availability in December remained essentially unchanged, with an increase in government credit offset by a decrease in conventional credit. The decline in conventional credit availability was the first in three months and was driven by fewer ARM offerings. ARM loans have increasingly seen a smaller share of the market, given the historically low rates for fixed-rate mortgages. Availability for government loans and jumbo loans have increased for four months and three months in a row, respectively.

The increased credit supply for jumbo loans and government loans, driven in part by the greater supply of lower credit score and higher LTV loans, will support first-time home buyers entering the market. This will also help to facilitate sustained purchase activity for what is expected to be a strong 2021 for the housing market.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

U.S. Housing Finance

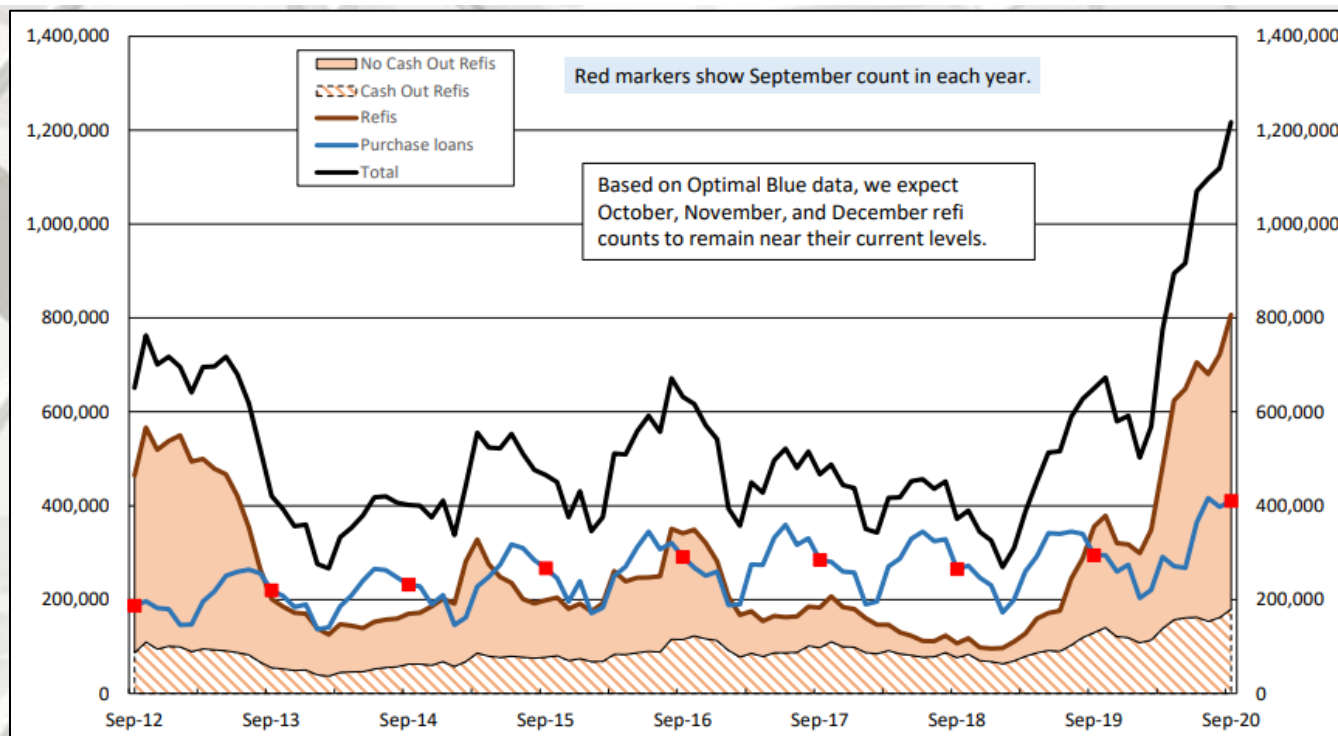
Mortgage Credit Availability (MBA)



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

U.S. Housing Finance

AEI Housing Center



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

The Refi Boom

“Driven by the lowest mortgage rates in history, all loan purposes are now at or near series’ highs. No cash out and cash out refinances are especially blowing past their prior highs. Compared to a year ago, no cash out refis are up 177% and cash-out refis are up 39%. For 2020, the MBA is estimating \$3.39 trillion in mortgage originations – the highest since \$3.81 trillion in 2003.” – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

December 21, 2020

	2020				2021				2022				2019	2020	2021	2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Housing Measures																	
Housing Starts (SAAR, Thous)	1,484	1,079	1,440	1,465	1,497	1,471	1,480	1,481	1,482	1,489	1,494	1,493	1,295	1,367	1,482	1,489	1,510
Single-Family	968	766	1,041	1,115	1,152	1,120	1,125	1,139	1,152	1,164	1,169	1,174	893	972	1,134	1,165	1,210
Two or More	517	313	399	350	345	351	355	342	330	325	325	319	403	395	348	325	300
Home Sales (SAAR, Thous)																	
Total Existing Homes	5,483	4,313	6,127	6,712	6,233	6,268	6,289	6,291	6,278	6,291	6,295	6,318	5,331	5,659	6,270	6,295	6,357
New Homes	701	703	973	992	979	985	984	1,007	1,008	1,012	1,015	1,016	685	842	989	1,013	1,036
FHFA US House Price Index (YOY % Change)	5.0	4.0	4.7	5.3	5.5	5.5	5.3	5.1	4.9	4.7	4.4	4.2	5.1	5.3	5.1	4.2	3.6
Median Price of Total Existing Homes (Thous \$)	272.4	309.2	297.4	295.9	287.2	285.9	284.6	284.0	284.4	285.5	286.2	286.9	274.6	293.7	297.4	291.6	288.4
Median Price of New Homes (Thous \$)	329.6	326.4	330.6	338.1	334.4	337.8	341.3	344.1	345.8	346.8	348.2	349.6	323.6	331.2	332.4	335.2	337.9
Interest Rates																	
30-Year Fixed Rate Mortgage (%)	3.5	3.2	3.0	2.8	2.9	3.0	3.2	3.2	3.5	3.5	3.5	3.6	3.5	2.8	3.2	3.6	4.1
10-Year Treasury Yield (%)	1.4	0.7	0.6	0.9	1.0	1.2	1.3	1.4	1.6	1.7	1.7	1.9	1.4	0.9	1.4	1.9	2.4
Mortgage Originations																	
Total 1- to 4-Family (Bil \$)	563	928	1,076	1,006	835	704	639	574	512	536	601	552	2,253	3,573	2,752	2,201	2,173
Purchase	257	348	418	401	330	376	435	420	362	395	459	412	1,225	1,424	1,561	1,628	1,653
Refinance	306	580	658	605	505	328	204	154	150	141	142	140	1,028	2,149	1,191	573	520
Refinance Share (%)	54	63	61	60	60	47	32	27	29	26	24	25	46	60	43	26	24
FHA Originations (Bil \$)													255	342	265	216	210
Total 1- to 4-Family (000s loans)	1,869	3,052	3,174	3,298	2,686	2,290	2,106	1,894	1,657	1,741	1,960	1,794	7,779	11,393	8,976	7,152	6,964
Purchase	891	1,203	1,416	1,379	1,114	1,269	1,470	1,416	1,199	1,310	1,525	1,366	4,392	4,890	5,269	5,400	5,398
Refinance	978	1,848	1,758	1,919	1,572	1,021	636	479	458	431	435	428	3,387	6,503	3,706	1,752	1,565
Refinance Share (%)	52	61	55	58	59	45	30	25	28	25	22	24	44	57	41	24	22
Mortgage Debt Outstanding																	
1- to 4-Family (Bil \$)	10,775	10,875	10,984	11,106	11,257	11,399	11,535	11,667	11,793	11,920	12,049	12,177	10,677	11,106	11,667	12,177	12,681

Notes:

Housing starts and home sales are seasonally adjusted at annual rate.

Total existing home sales include condos and co-ops.

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.

Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home equity loans.

The FHFA US House Price Index is the forecasted year over year percent change of the FHFA All Transactions House Price Index.

The mortgage debt outstanding forecast is for 1-4 unit mortgage debt and excludes home equity loans. Annual MDO numbers reflect EOP values.

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MBA Economic Forecast

MBA Economic Forecast

December 21, 2020

	2020				2021				2022				2019	2020	2021	2022	2023
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4					
Percent Change, SAAR																	
Real Gross Domestic Product	-5.0	-31.4	33.1	5.3	3.0	2.6	4.6	3.9	3.5	2.2	1.9	1.8	2.3	-2.2	3.5	2.3	1.9
Personal Consumption Expenditures	-6.9	-33.2	40.6	5.9	1.8	4.2	5.6	4.0	3.1	2.1	1.8	2.1	2.5	-1.9	3.9	2.3	1.4
Business Fixed Investment	-6.7	-27.2	21.8	4.3	6.0	2.0	4.7	5.7	5.1	3.8	3.1	3.6	1.4	-3.6	4.6	3.9	3.7
Residential Investment	19.0	-35.6	62.3	28.1	0.5	0.3	-2.5	-0.6	0.3	-1.5	1.0	0.1	1.6	12.4	-0.6	0.0	0.4
Govt. Consumption & Investment	1.3	2.5	-4.9	-3.8	1.2	0.8	1.0	0.6	0.7	0.3	0.6	0.0	3.0	-1.3	0.9	0.4	0.2
Net Exports (Bil. Chain 2012\$)	-650.7	-649.0	-857.2	-887.2	-876.3	-912.2	-929.8	-939.9	-936.2	-917.7	-898.5	-887.4	-763.9	-761.1	-914.6	-909.9	-818.8
Inventory Investment (Bil. Chain 2012\$)	-68.8	-244.0	-3.7	32.5	54.3	50.8	66.0	86.8	105.3	103.3	90.2	75.9	41.3	-71.0	64.5	93.7	71.0
Consumer Prices (YOY)	2.1	0.4	1.3	1.2	1.2	2.8	2.2	2.4	2.5	2.5	2.6	2.7	1.9	1.2	2.4	2.7	2.5
Percent																	
Unemployment Rate	3.8	13.0	8.8	6.7	6.4	6.2	5.6	5.1	4.7	4.6	4.6	4.6	3.7	8.1	5.8	4.6	4.5
Federal Funds Rate	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	1.625	0.125	0.125	0.125	0.625
10-Year Treasury Yield	1.4	0.7	0.6	0.9	1.0	1.2	1.3	1.4	1.6	1.7	1.7	1.9	1.4	0.9	1.4	1.9	2.4

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:

In November, the aggregate (month-over-month and year-over-year) United States housing market data was positive. November housing data denoted the second consecutive month of total starts greater than 1.5-million units. The single-family sub-sector is the primary source of the current uptrend and is progressively gaining momentum. Month-over-month data yielded decreases in three categories: completions and new single-family and existing sales. Similarly, year-over-year data indicated declines for multi-family-starts and permits, and total and single-family completions. Residential construction spending was positive month-over-month and year-over-year; and expenditures in August, September, and November are the greatest since 2005-2006 (nominal basis). Housing remains a bright spot for the United States economy.

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 remain in place;
- 2) Select builders are beginning to focus on entry-level houses;
- 3) Housing affordability indicates improvement;

Cons:

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

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