

The Virginia Tech – U.S. Forest Service

August 2019

Housing Commentary: Section I



Urs Buehlmann

Department of Sustainable Biomaterials
College of Natural Resources & Environment

Virginia Tech
Blacksburg, VA

540.231.9759

buehlmann@gmail.com

Delton Alderman

Forest Products Marketing Unit
Forest Products Laboratory

U.S. Forest Service
Madison, WI

304.431.2734

dalderman@fs.fed.us



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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>.

To request the commentary, please email: buehlmann@gmail.com or Delton.R.Alderman@usda.gov

Opening Remarks

August 2019 United States housing data indicated improvement in most categories; yet, most indicators remain well less than their respective historical averages. Single-family starts, permits, and completions were all positive month-over-month. Total housing starts, permits, under construction, and completions were positive year-over-year. New single-family sales recorded impressive month-over-month and year-over-year gains. Notably, total and single-family private construction spending continued year-over-year declines.

The October 15th Atlanta Fed GDPNow™ model estimate for September 2019 projects an aggregate 4.8% increase for residential investment spending. New private permanent site expenditures were projected at a 0.5% decrease; the improvement spending forecast was a 5.6% increase; and the manufactured/mobile housing projection was a 7.7% decrease (all: quarterly log change and seasonally adjusted annual rate).¹

“The housing story remains primarily one of imbalance between demand and supply. Home buyers aren’t the only ones struggling. Both our [consumer](#) and [lender](#) attitudinal surveys hit new highs this month due to near-historically low mortgage rates and generally favorable household balance sheets, but inventory constraints, particularly in the affordable space, continue to hold back housing market sales volume. Refreshingly, in the absence of existing stock, home builders appear to be increasingly focused on entry-level homes, as the median square footage of new single-family construction fell 4.3 percent in the second quarter.”² – Doug Duncan, Senior Vice President and Chief Economist, Fannie Mae

This month’s commentary contains applicable housing data. Section I contains data and commentary. Section II includes regional Federal Reserve analysis, private indicators, and demographic and economic analysis.

Sources: ¹ www.frbatlanta.org/cqer/research/gdpnow.aspx; 10/13/19;

² <https://www.fanniemae.com/portal/media/corporate-news/2019/economic-housing-outlook-091719-6925.html>; 9/17/19

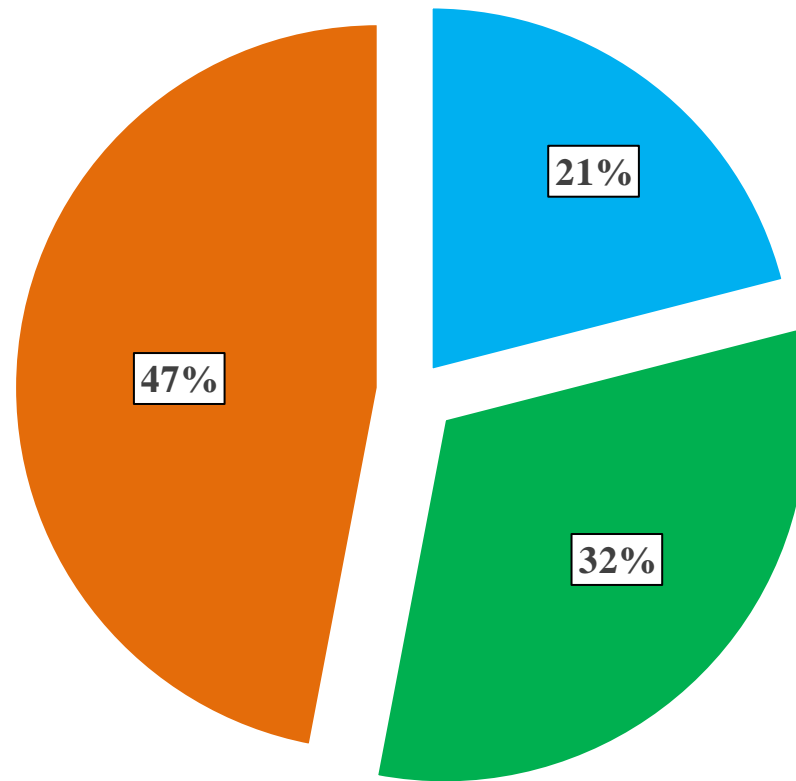
August 2019 Housing Scorecard

	M/M	Y/Y
Housing Starts	▲ 12.3%	▲ 6.6%
Single-Family (SF) Starts	▲ 4.4%	▲ 3.4%
Multi-Family (MF) Starts*	▲ 32.8%	▲ 14.1%
Housing Permits	▲ 7.7%	▲ 12.0%
SF Permits	▲ 4.5%	▲ 4.5%
MF Permits*	▲ 13.3%	▲ 26.3%
Housing Under Construction	▲ 0.3%	▲ 1.6%
SF Under Construction	▼ 0.4%	▼ 0.6%
Housing Completions	▲ 2.4%	▲ 5.0%
SF Completions	▲ 3.7%	▲ 0.6%
New SF House Sales	▲ 7.1%	▲ 18.0%
Private Residential Construction Spending	▲ 0.9%	▼ 5.0%
SF Construction Spending	▲ 1.4%	▼ 6.6%
Existing House Sales ¹	▲ 1.3%	▲ 2.6%

* 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

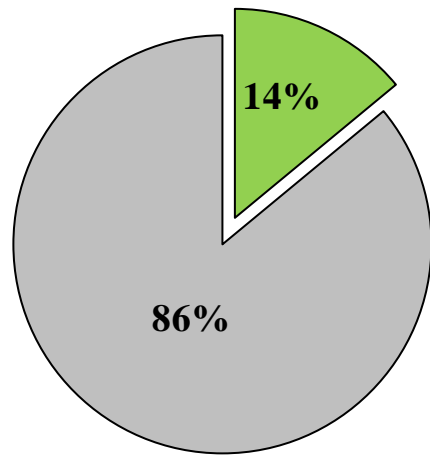


■ Non-structural panels

■ Total Sawnwood

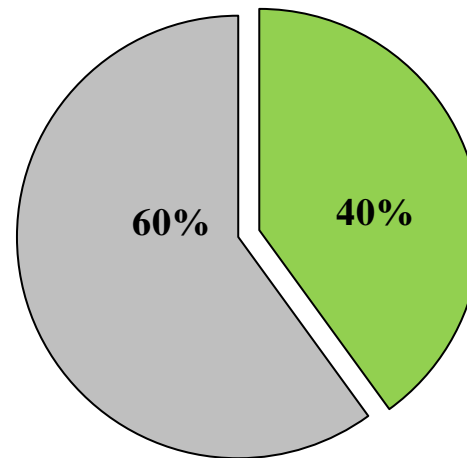
■ Structural panels

New SF Construction Percentage of Wood Products Consumption



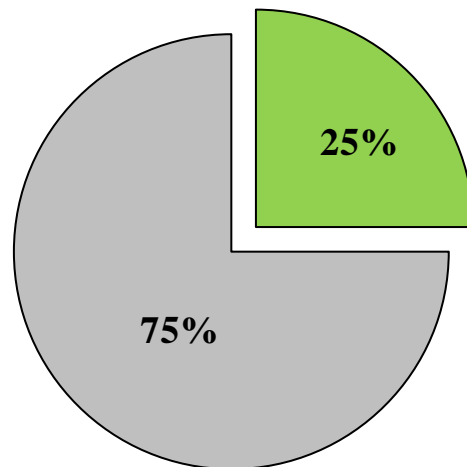
■ Non-structural panels:
New Housing

■ Other markets



■ Structural panels:
New housing

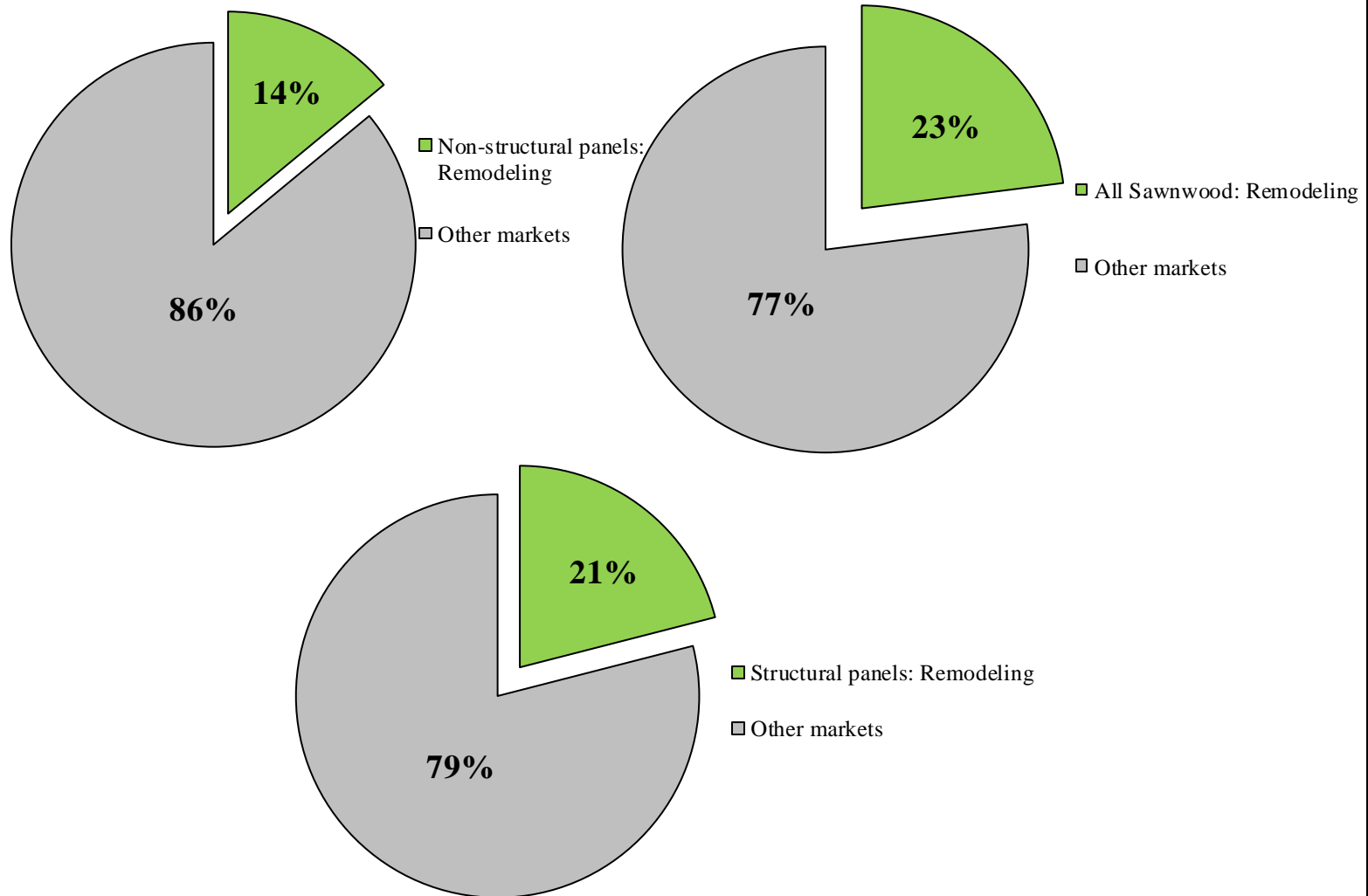
■ Other markets



■ All Sawnwood: New housing

■ Other markets

Repair and Remodeling's Percentage of Wood Products Consumption



New Housing Starts

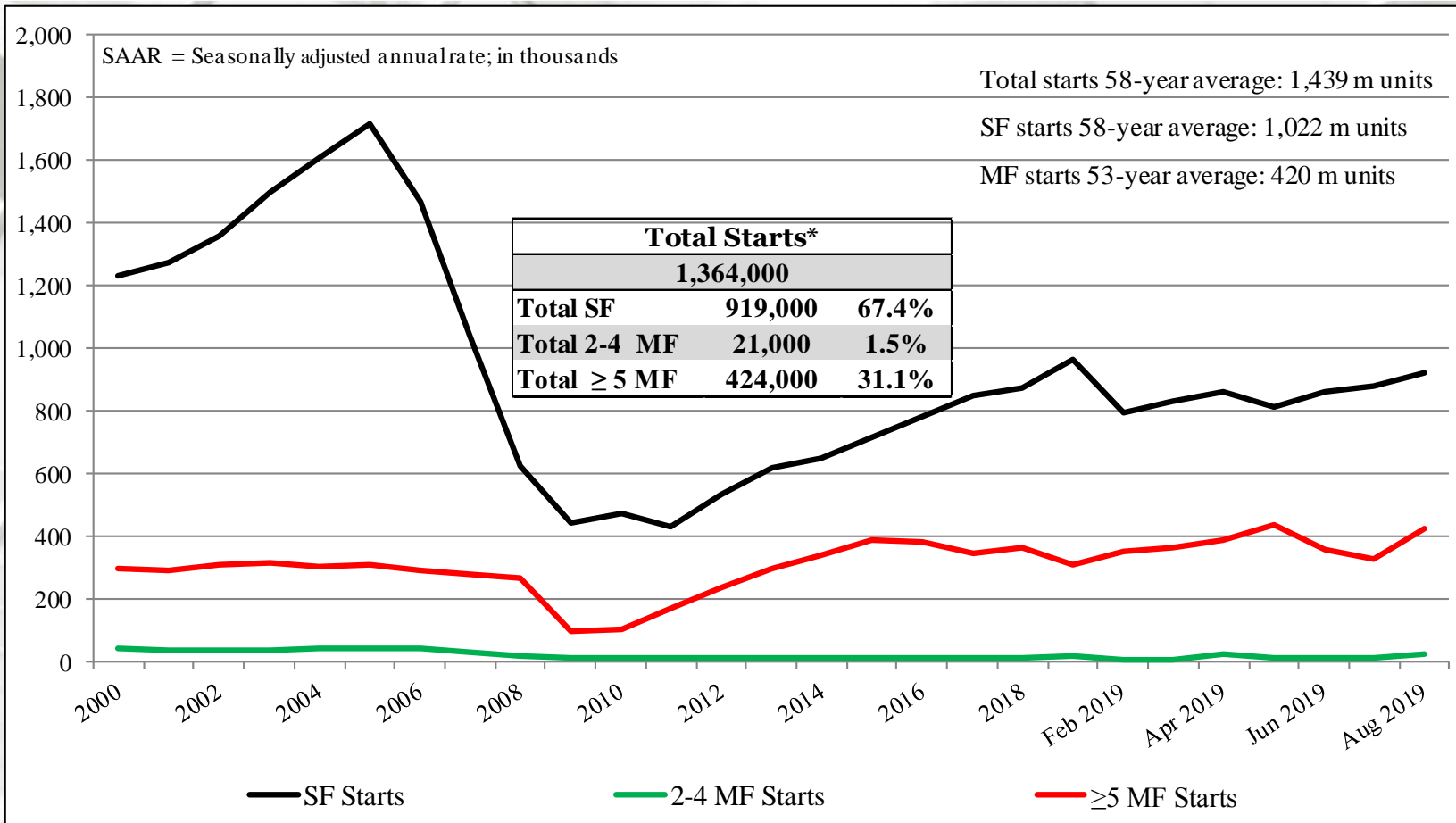
	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
August	1,364,000	919,000	21,000	424,000
July	1,215,000	880,000	11,000	324,000
2018	1,279,000	889,000	17,000	373,000
M/M change	12.3	4.4	90.9	30.9
Y/Y change	6.6	3.4	23.5	13.7

* 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)).

M/M and Y/Y: percent

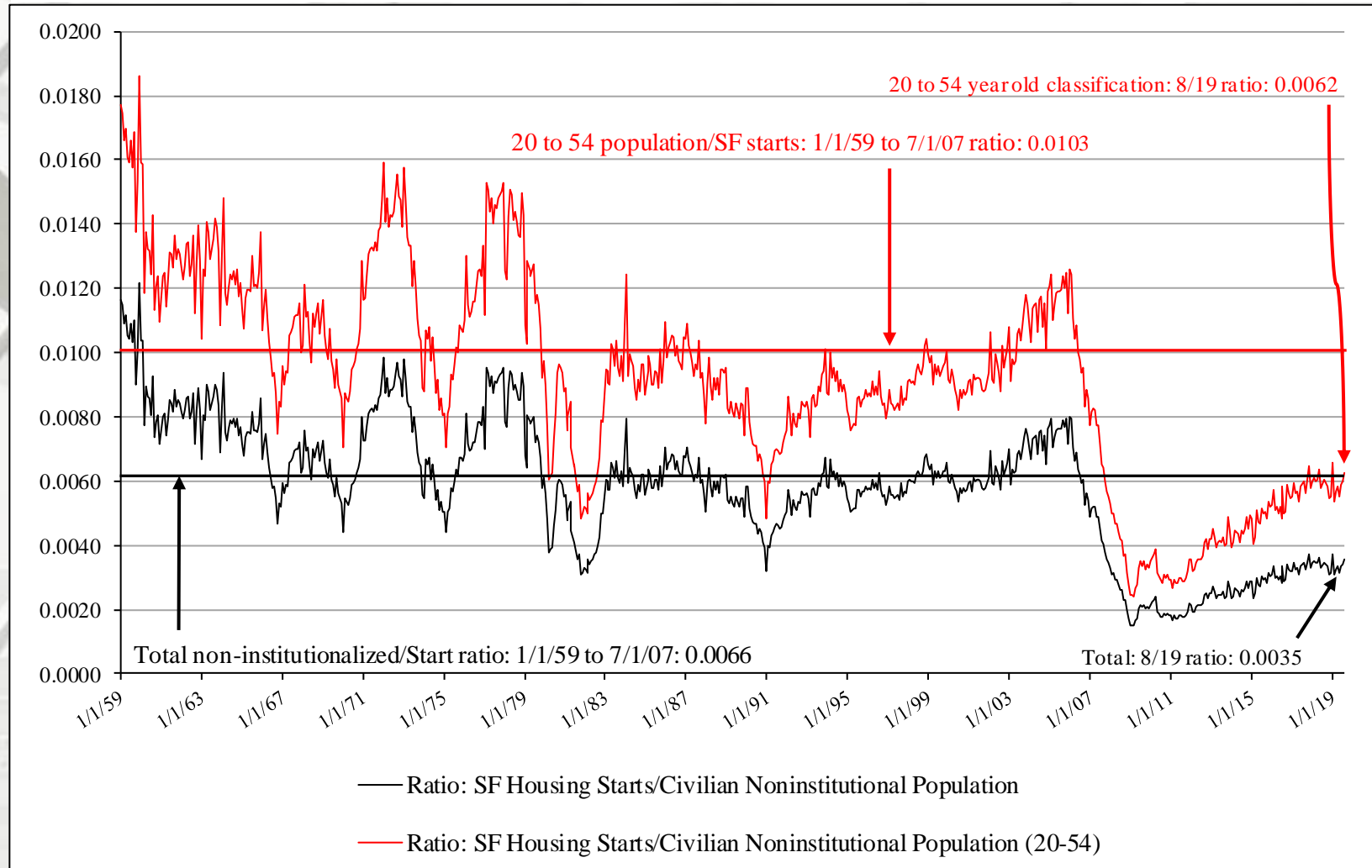
Total Housing Starts



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

* Percentage of total starts.

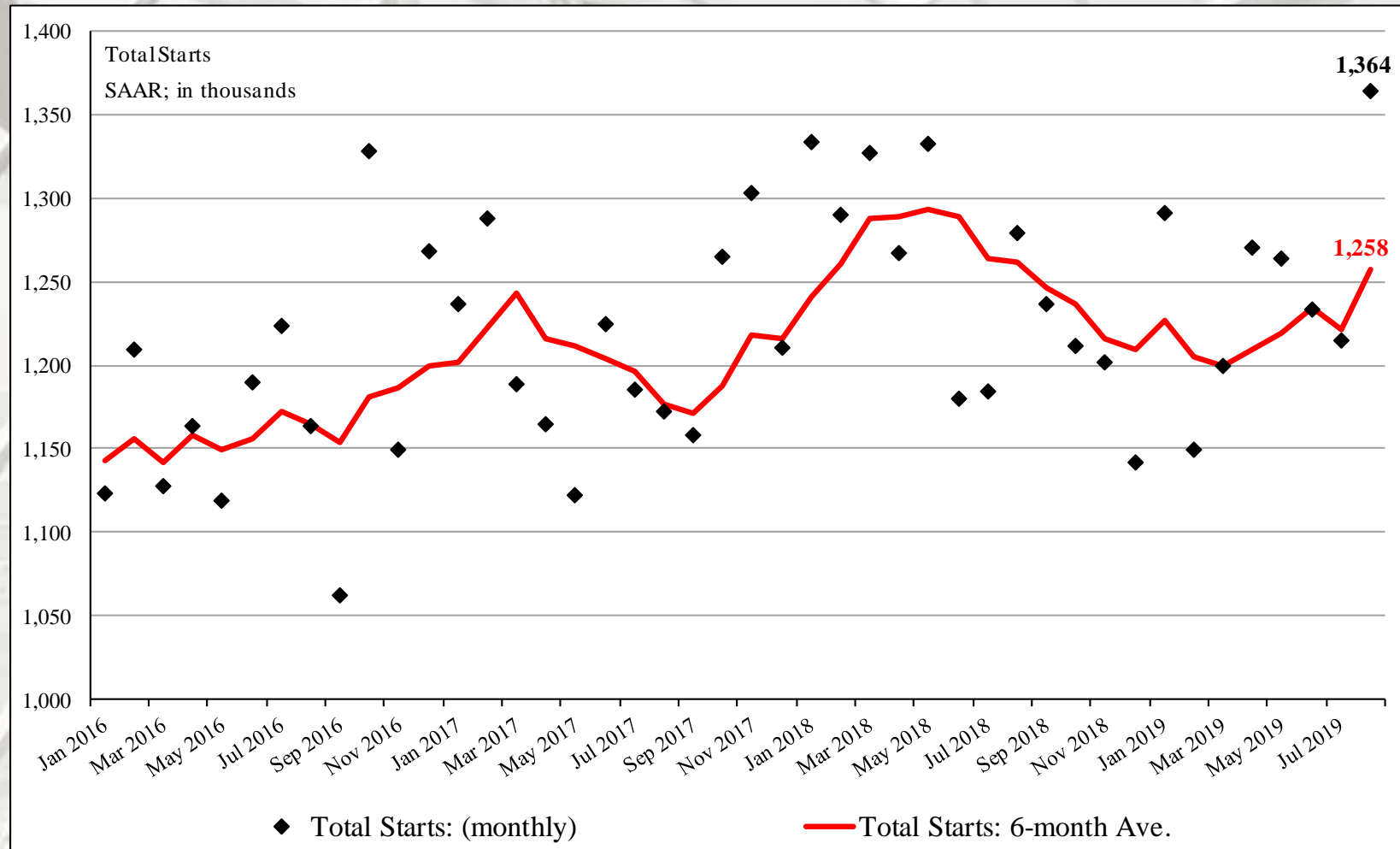
New SF Starts



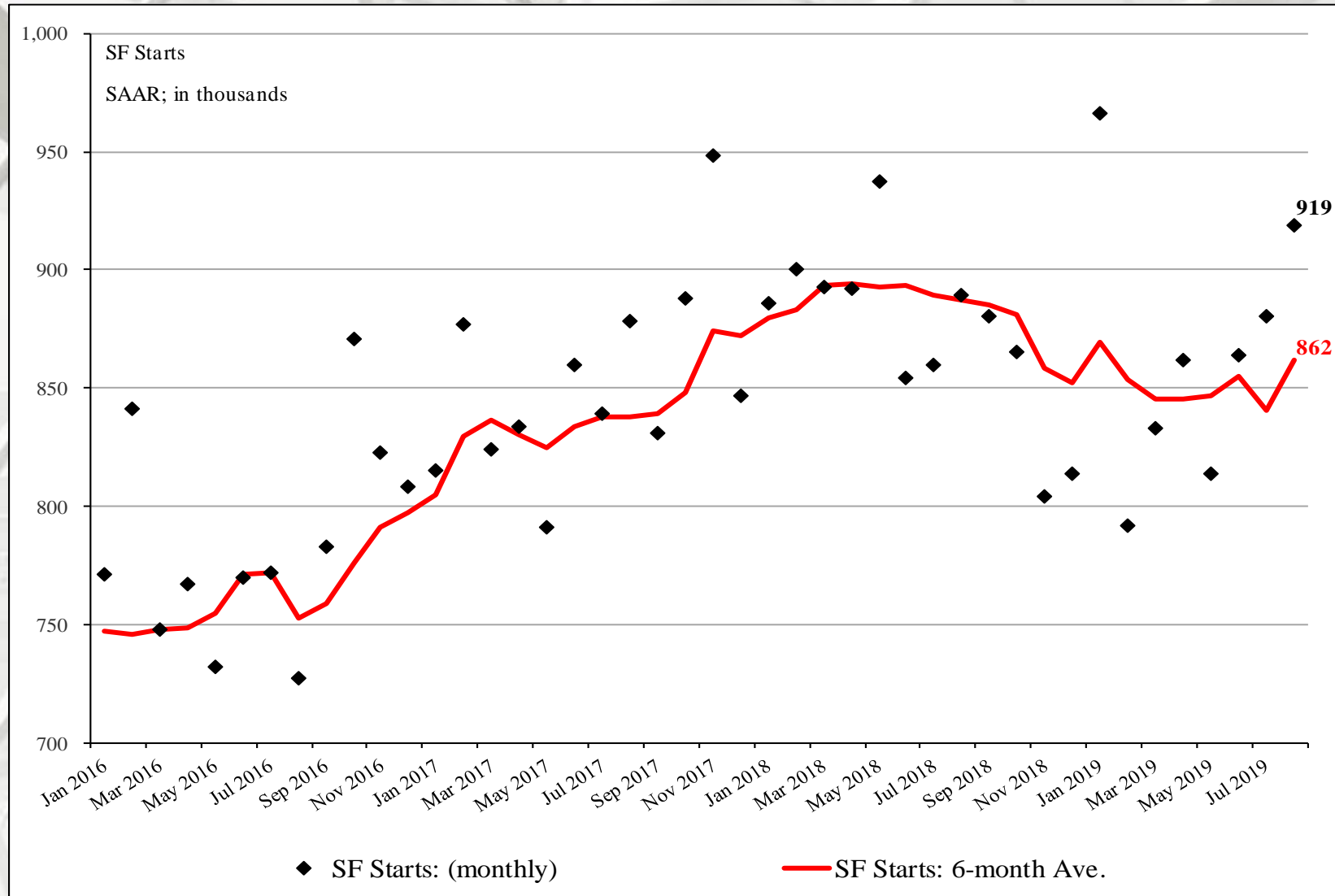
New SF starts adjusted for the US population

From August 1959 to August 2007, the long-term ratio of new SF starts to the total US non-institutionalized population was 0.0066; in August 2019 it was 0.0035 – an increase from July (0.0034). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in August 2019 was 0.0062 – also an increase from July (0.0060). From a population worldview, new SF construction is less than what is necessary for changes in population (i.e., under-building).

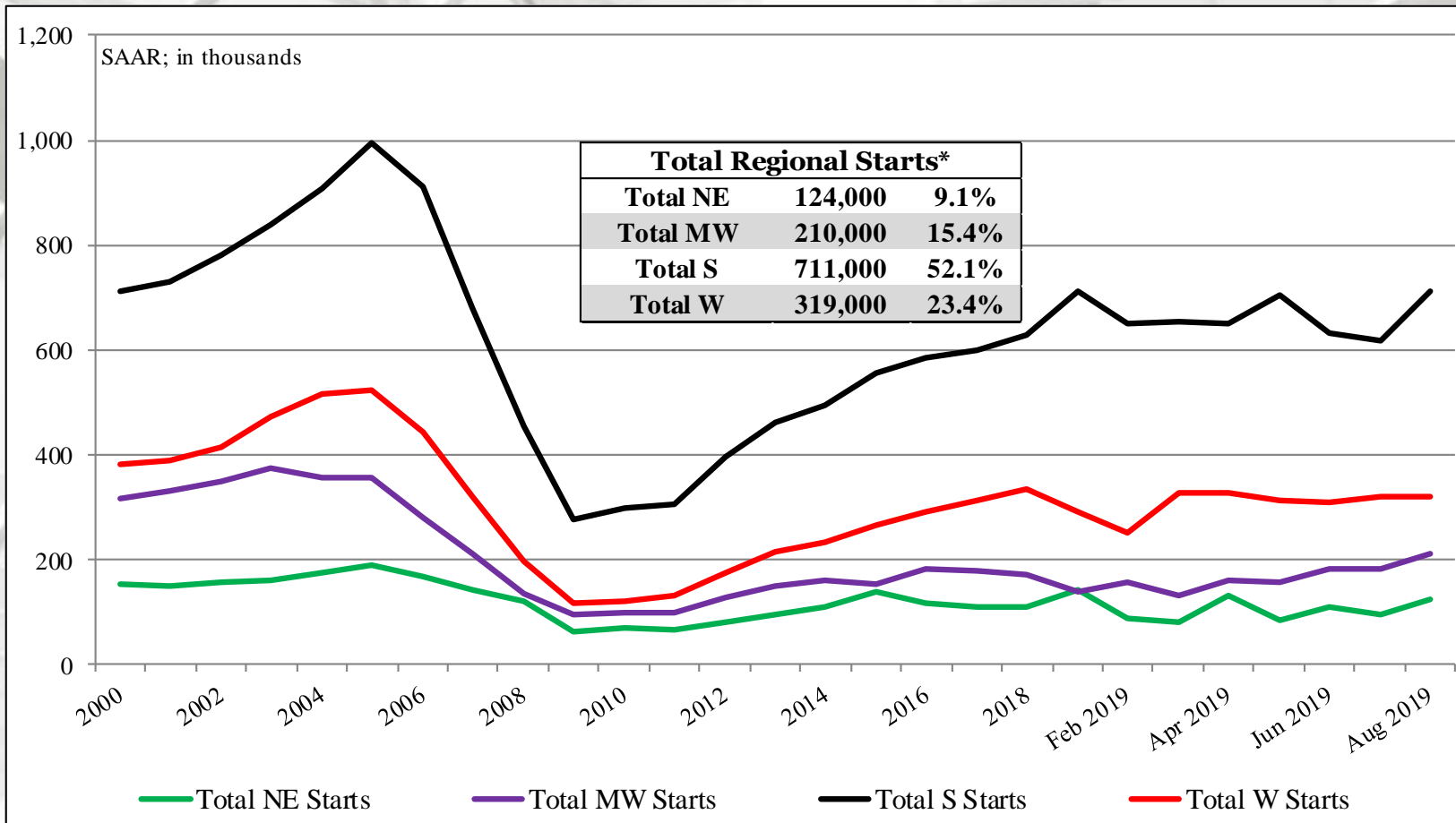
Total Housing Starts: Six-Month Average



SF Housing Starts: Six-Month Average



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.

New Housing Starts by Region

	NE Total	NE SF	NE MF**
August	124,000	59,000	65,000
July	95,000	60,000	35,000
2018	99,000	66,000	33,000
M/M change	30.5	-1.7	85.7
Y/Y change	25.3	-10.6	97.0
	MW Total	MW SF	MW MF
August	210,000	137,000	73,000
July	182,000	126,000	56,000
2018	187,000	118,000	69,000
M/M change	15.4	8.7	30.4
Y/Y change	12.3	16.1	5.8

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).

M/M and Y/Y: percent.

New Housing Starts by Region

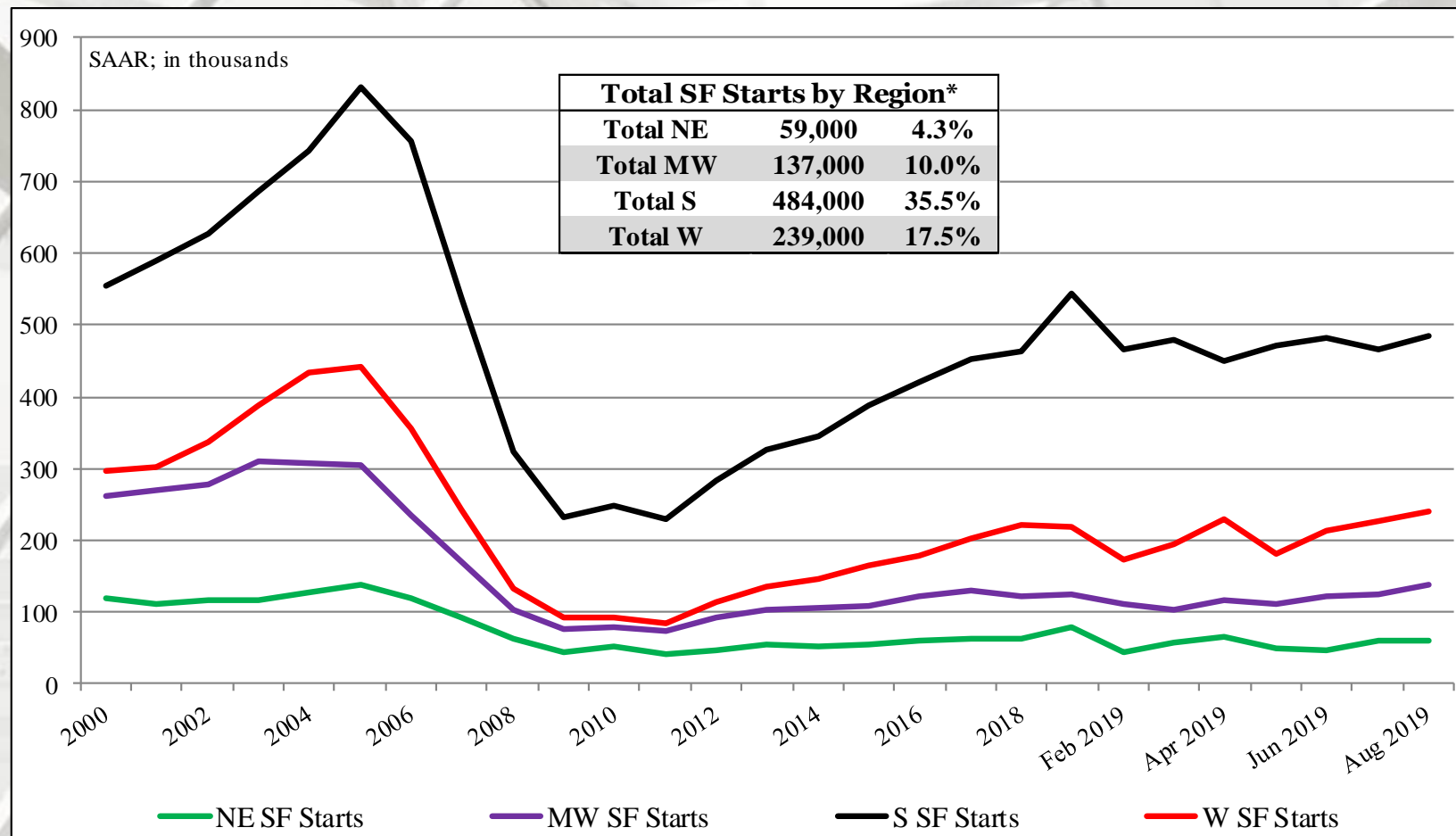
	S Total	S SF	S MF**
August	711,000	484,000	227,000
July	619,000	467,000	152,000
2017	658,000	478,000	180,000
M/M change	14.9	3.6	49.3
Y/Y change	8.1	1.3	26.1
	W Total	W SF	W MF
August	319,000	239,000	80,000
July	319,000	227,000	92,000
2018	335,000	227,000	108,000
M/M change	0.0	5.3	-13.0
Y/Y change	-4.8	5.3	-25.9

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).

M/M and Y/Y: percent

Total SF Housing Starts by Region

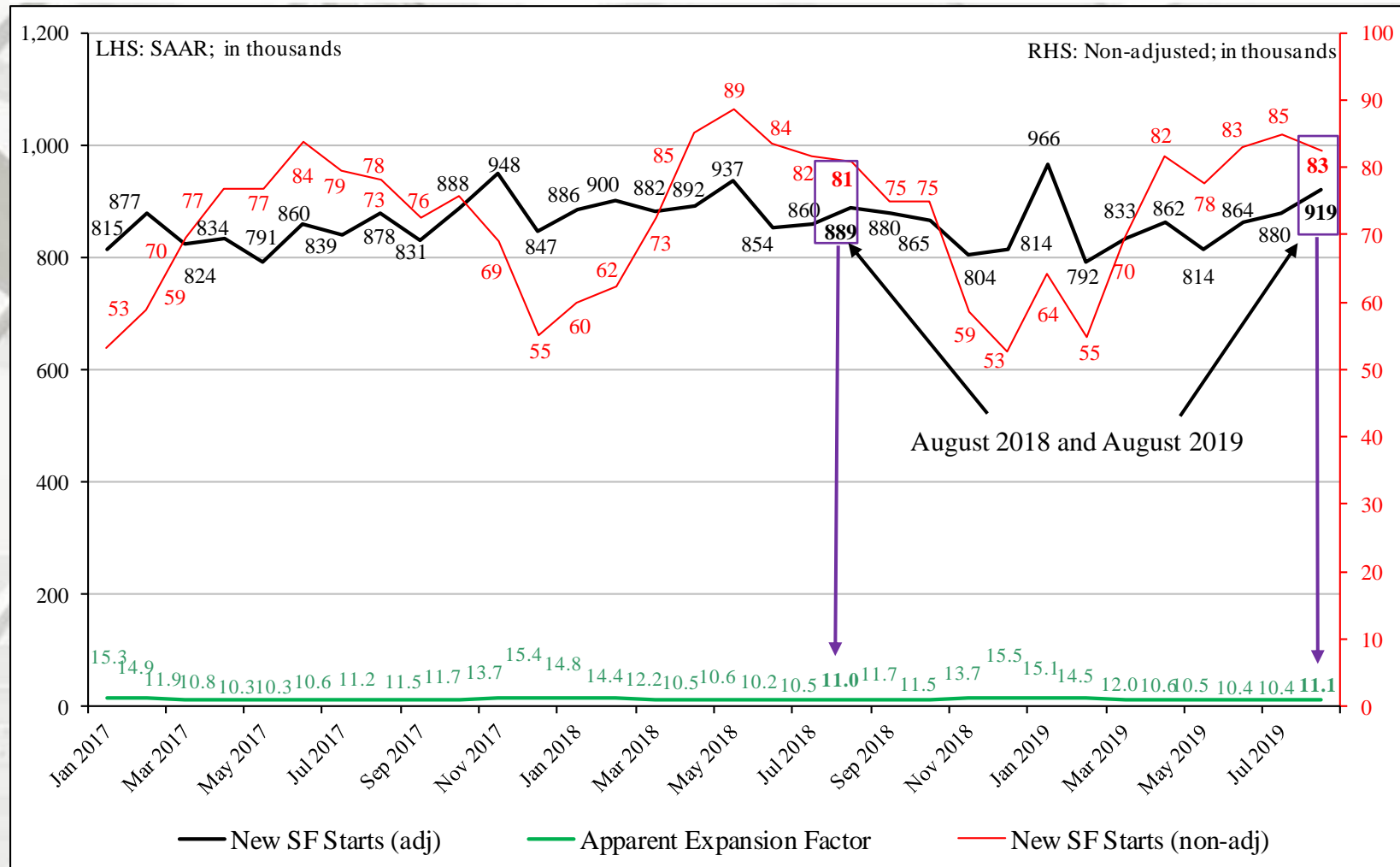


NE = Northeast, MW = Midwest, S = South, W = West

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.

Nominal & SAAR SF Starts

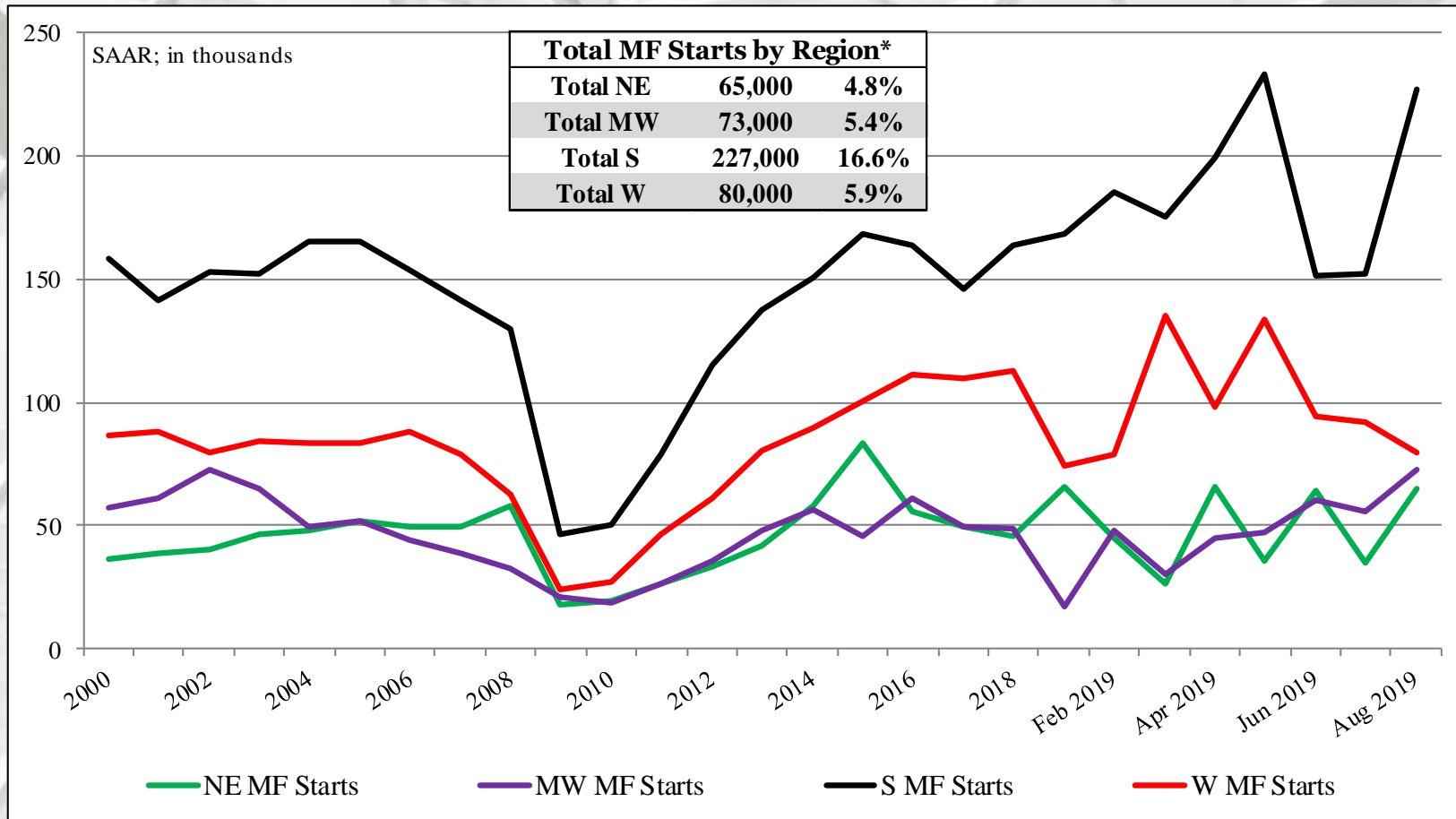


Nominal and Adjusted New SF Monthly Starts

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

MF Housing Starts by Region

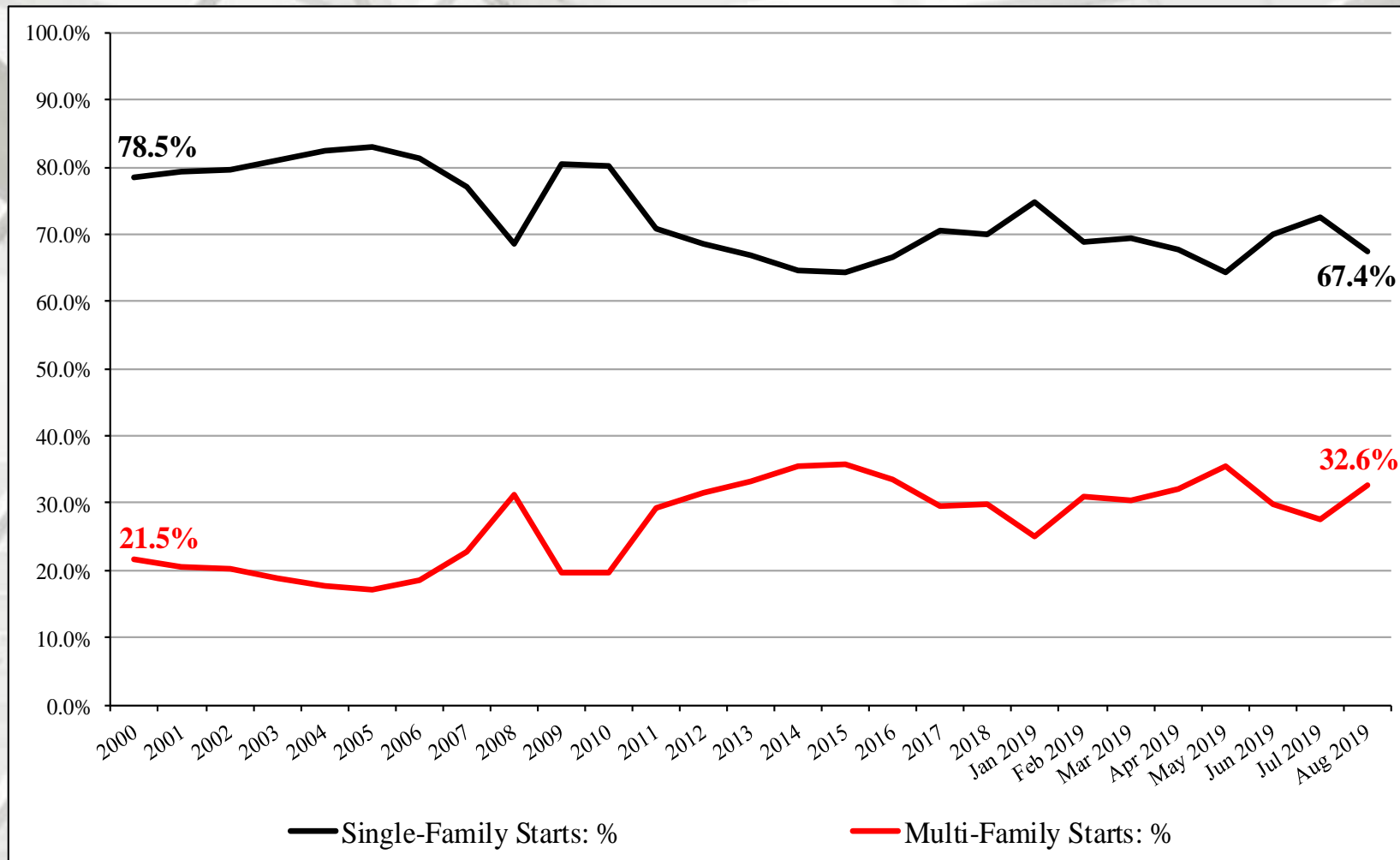


NE = Northeast, MW = Midwest, S = South, W = West

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 (%)

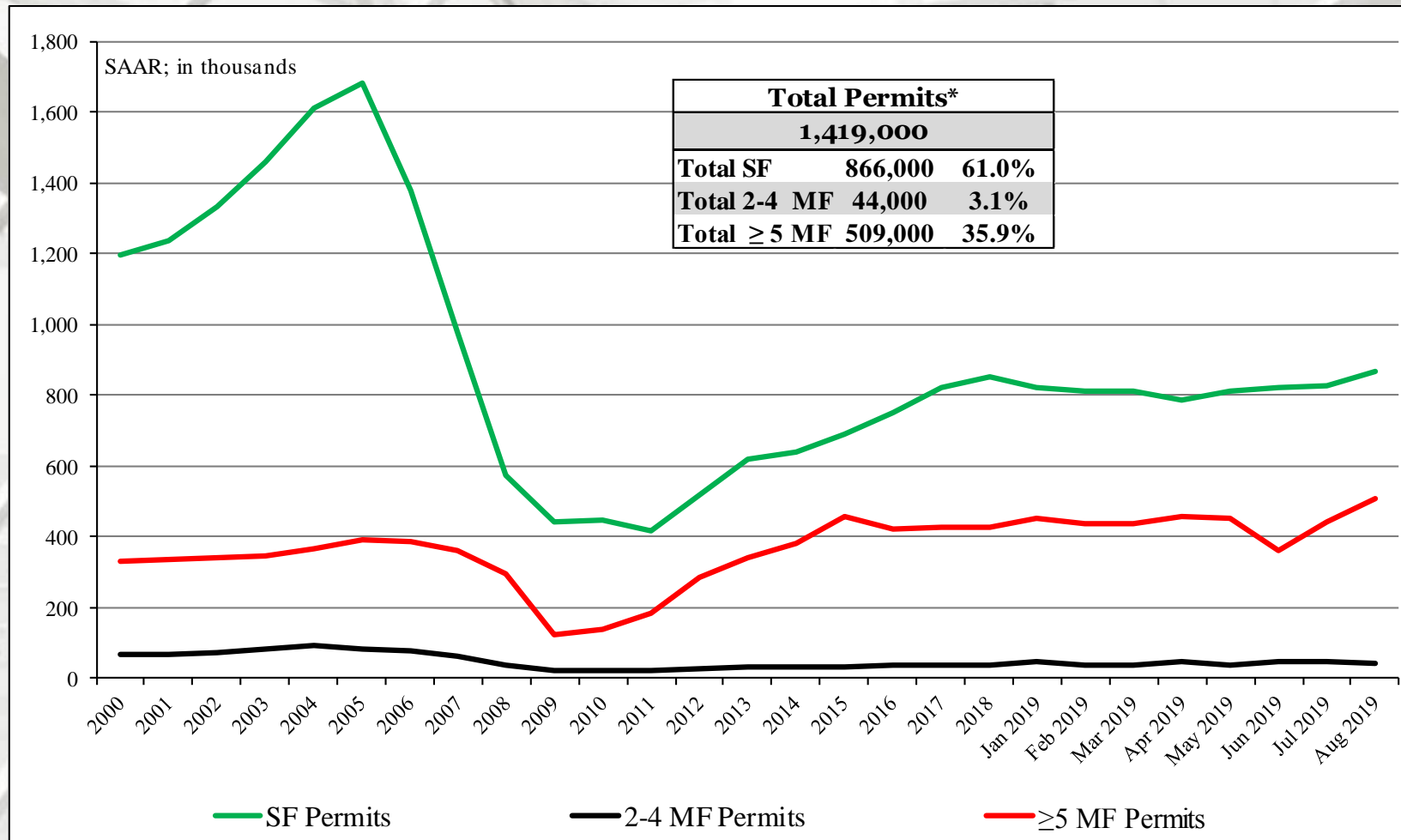


New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
August	1,419,000	866,000	44,000	509,000
July	1,317,000	829,000	45,000	443,000
2018	1,267,000	829,000	38,000	400,000
M/M change	7.7	4.5	-2.2	14.9
Y/Y change	12.0	4.5	15.8	27.3

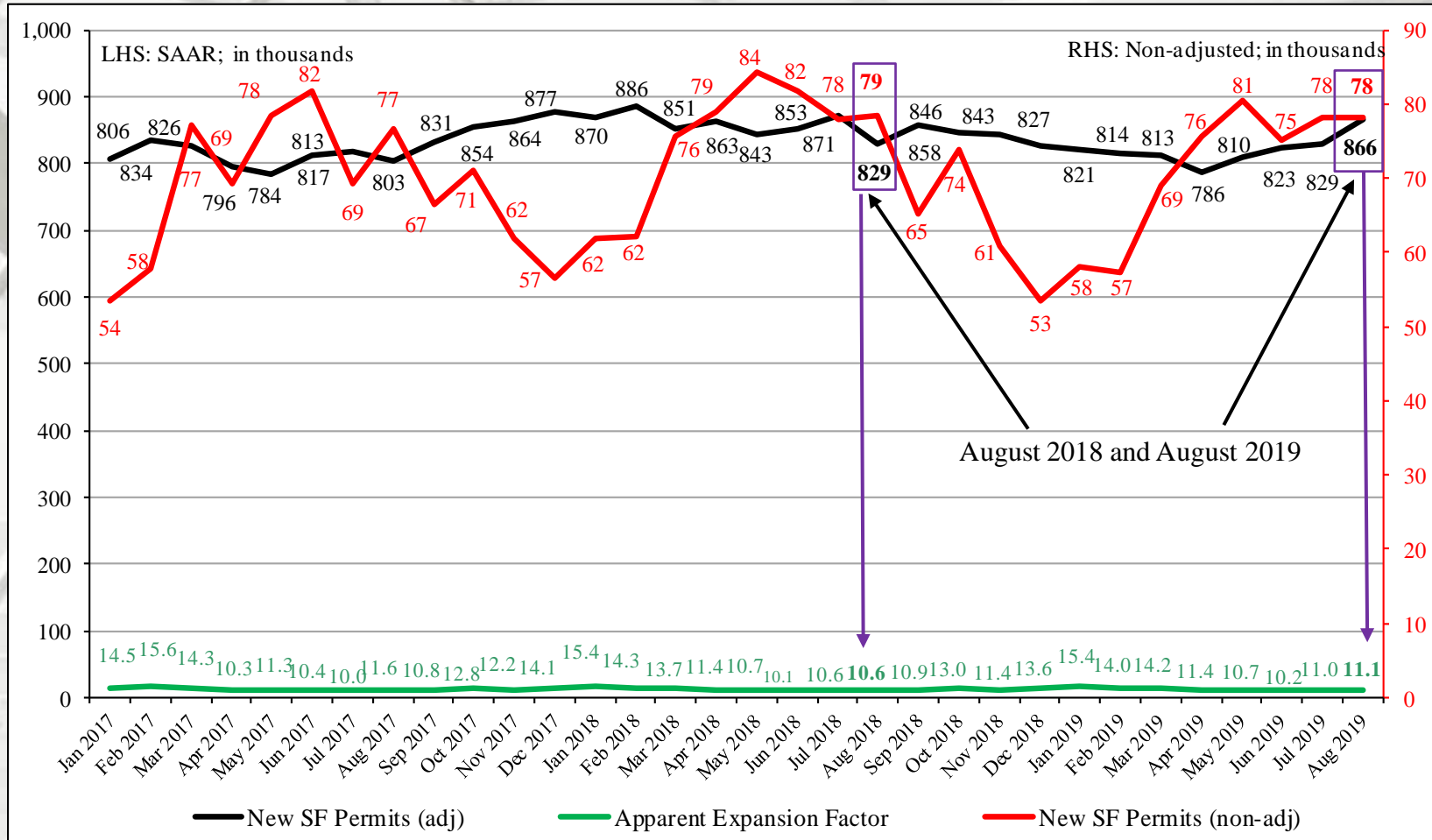
All permit data are presented at a seasonally adjusted annual rate (SAAR)
M/M and Y/Y: percent.

Total New Housing Permits



* Percentage of total permits.

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**
August	151,000	54,000	97,000
July	119,000	54,000	65,000
2018	110,000	49,000	61,000
M/M change	26.9	0.0	49.2
Y/Y change	37.3	10.2	59.0
	MW Total*	MW SF	MW MF**
August	189,000	110,000	79,000
July	165,000	107,000	58,000
2018	192,000	116,000	76,000
M/M change	14.5	2.8	36.2
Y/Y change	-1.6	-5.2	3.9

NE = Northeast; ME = Midwest

* All data are SAAR

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

M/M and Y/Y: percent.

New Housing Permits by Region

	S Total*	S SF	S MF**
August	748,000	495,000	253,000
July	674,000	461,000	213,000
2018	654,000	461,000	193,000
M/M change	11.0	7.4	18.8
Y/Y change	14.4	7.4	31.1
	W Total*	W SF	W MF**
August	331,000	207,000	124,000
July	359,000	207,000	152,000
2018	311,000	203,000	108,000
M/M change	-7.8	0.0	-18.4
Y/Y change	6.4	2.0	14.8

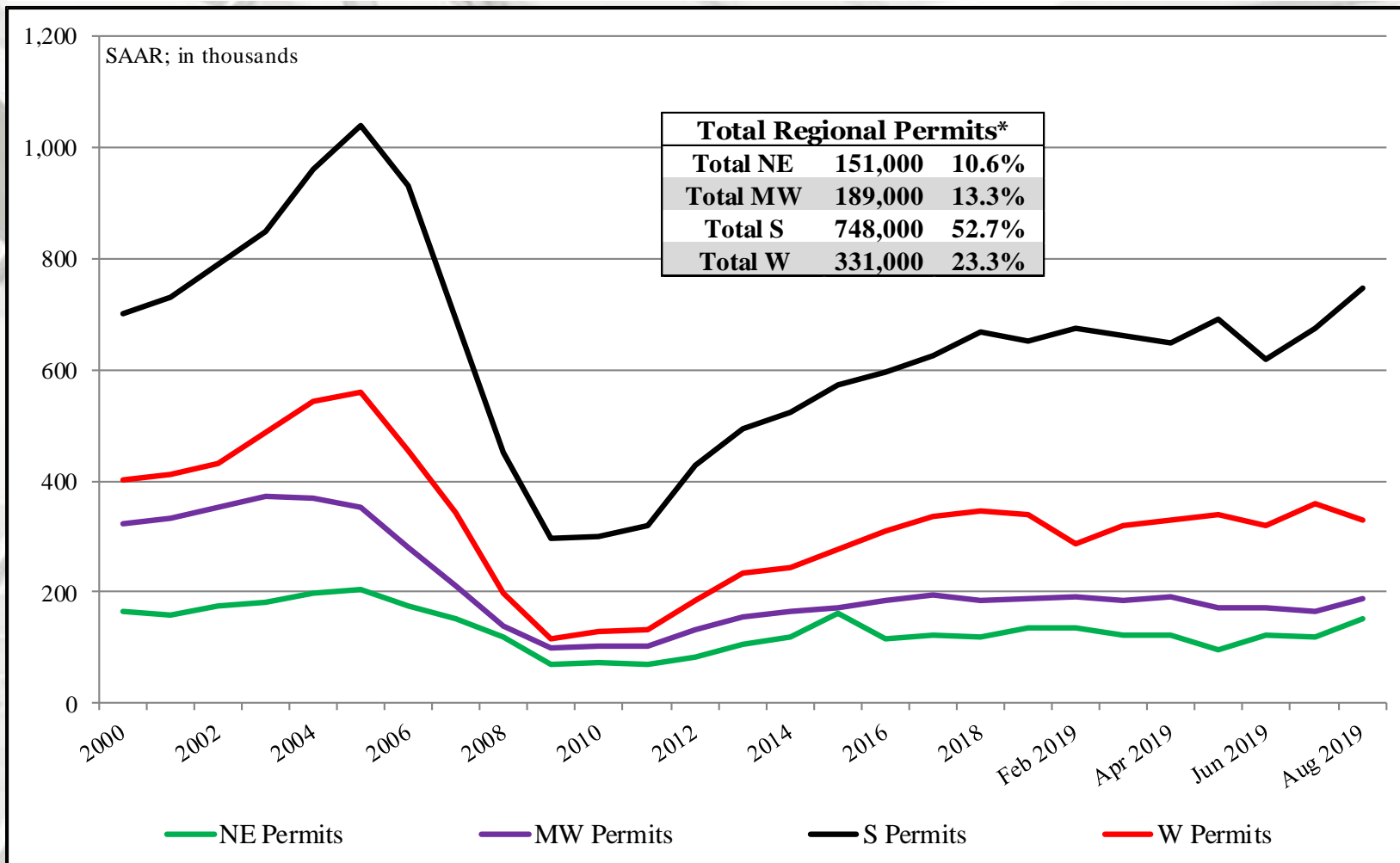
S = South; W = West

* All data are SAAR

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

M/M and Y/Y: percent.

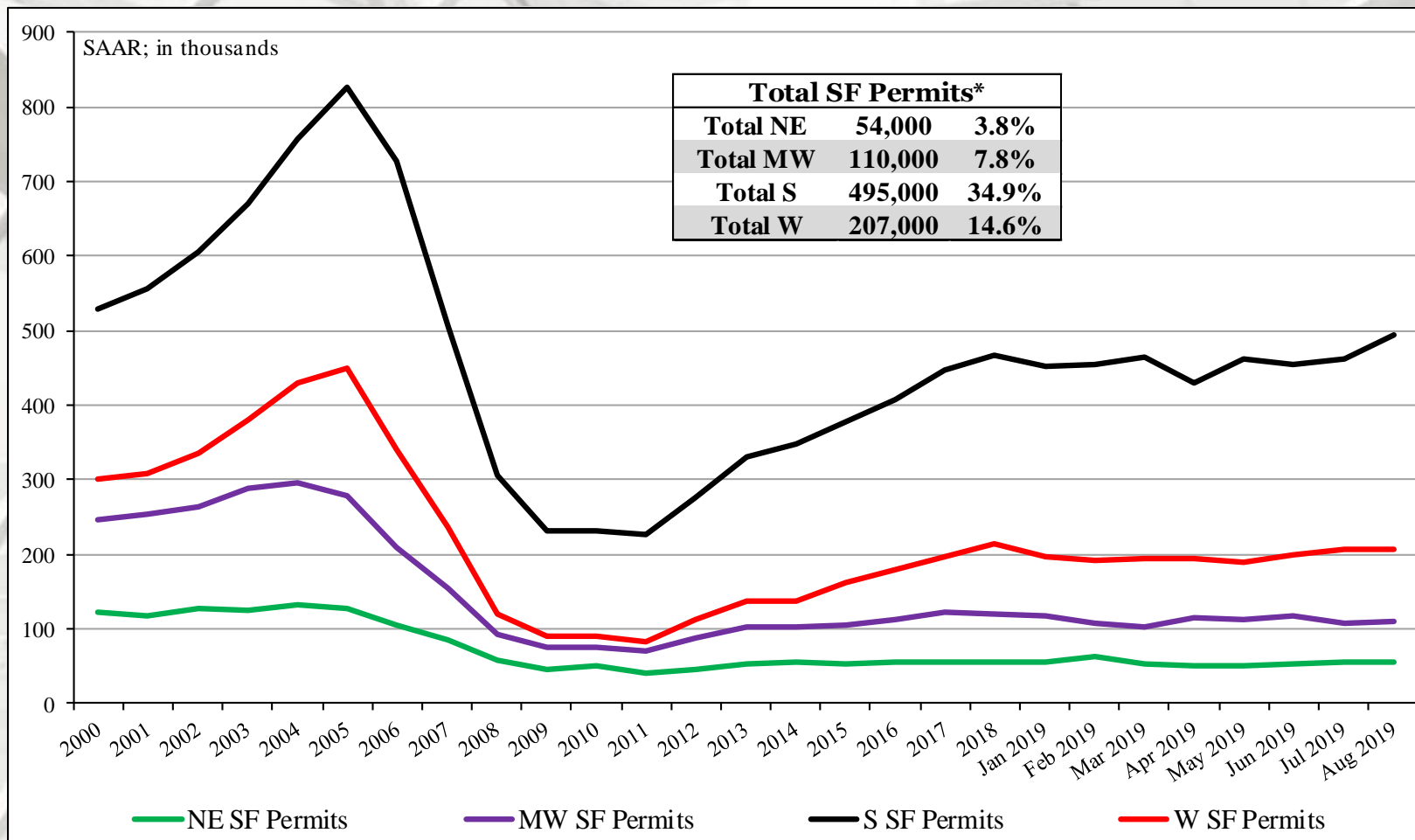
Total Housing Permits by Region



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

* Percentage of total permits.

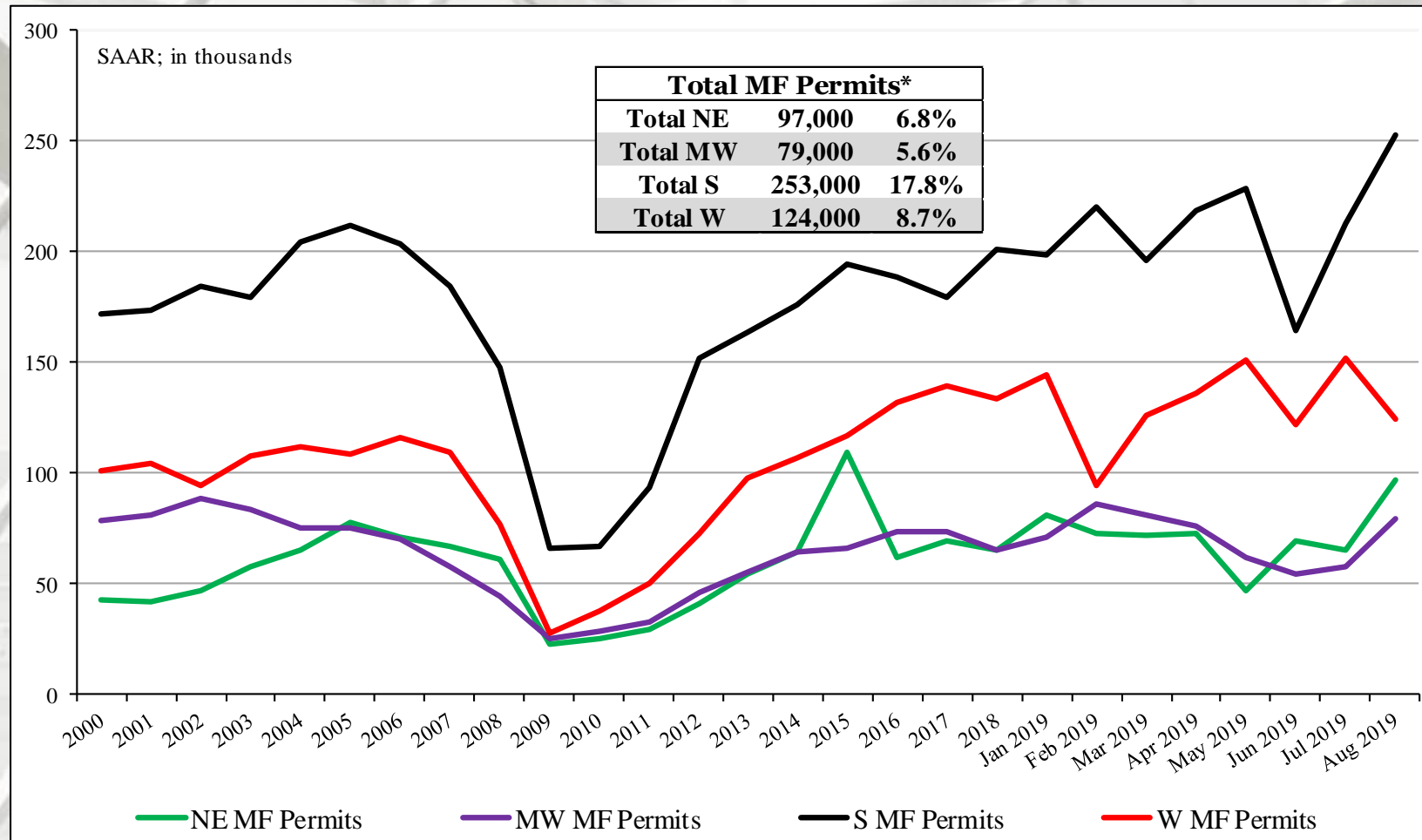
SF Housing Permits by Region



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
August	1,144,000	517,000	10,000	617,000
July	1,141,000	519,000	10,000	612,000
2018	1,126,000	520,000	13,000	593,000
M/M change	0.3	-0.4	0.0	0.8
Y/Y change	1.6	-0.6	-23.1	4.0

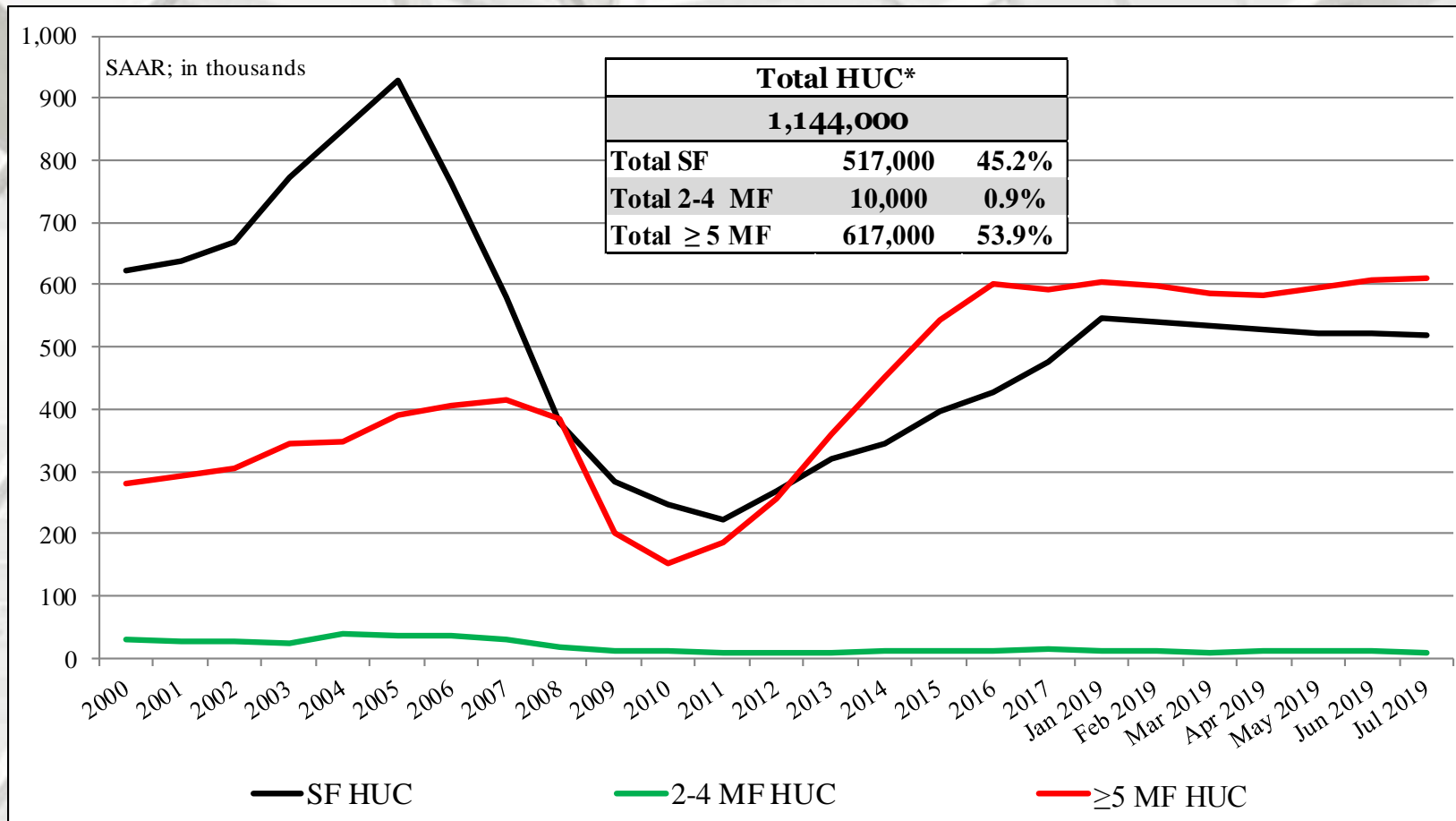
All housing under construction data are presented at a seasonally adjusted annual rate (SAAR).

** US DOC does not report 2-4 multifamily units under construction directly, this is an estimation

((Total under construction – (SF + 5 unit MF)).

M/M and Y/Y: percent.

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.

New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
August	177,000	59,000	118,000
July	179,000	60,000	119,000
2018	189,000	60,000	129,000
M/M change	-1.1	-1.7	-0.8
Y/Y change	-6.3	-1.7	-8.5
	MW Total	MW SF	MW MF
August	144,000	75,000	69,000
July	146,000	75,000	71,000
2018	153,000	81,000	72,000
M/M change	-1.4	0.0	-2.8
Y/Y change	-5.9	-7.4	-4.2

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).

M/M and Y/Y: percent.

New Housing Under Construction by Region

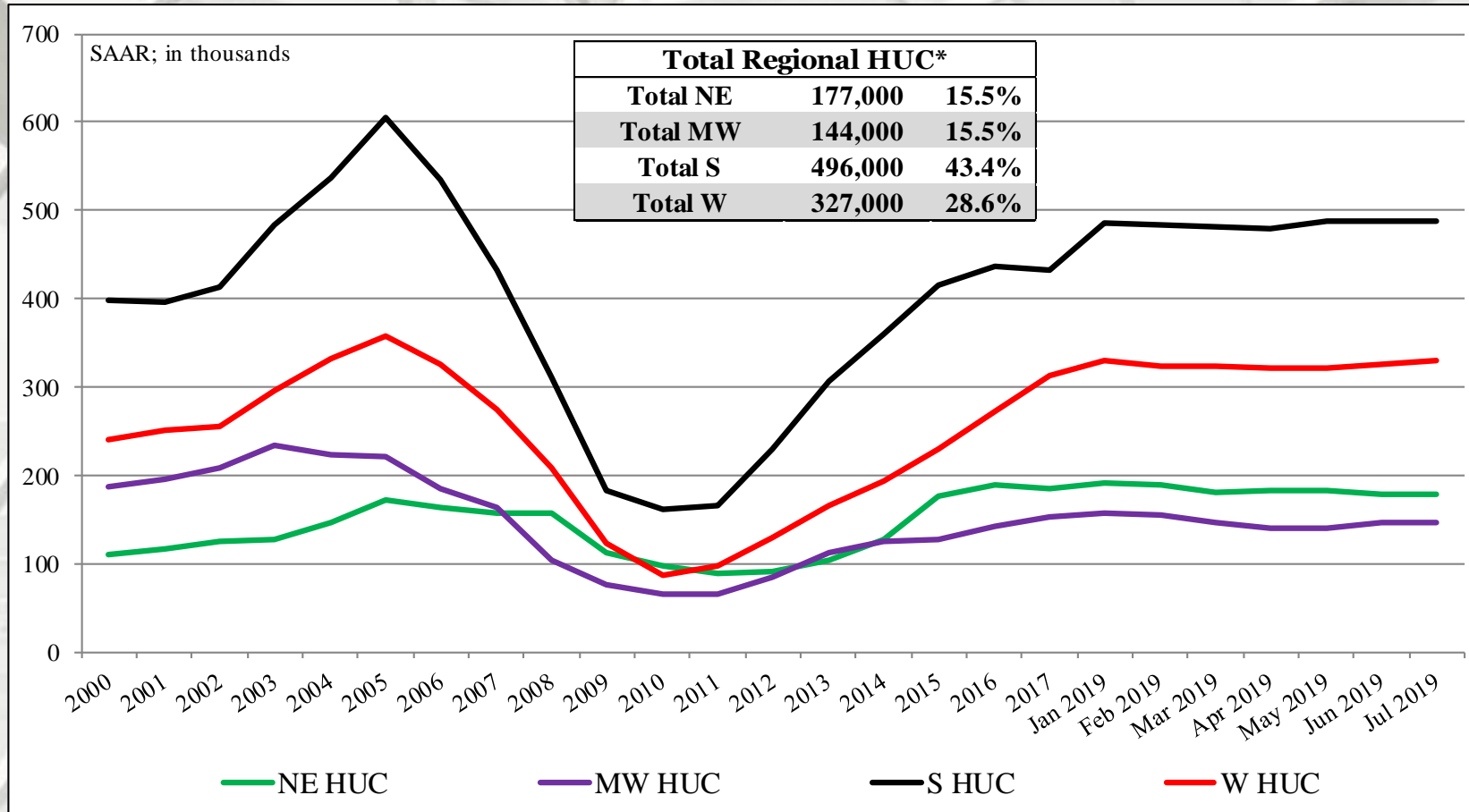
	S Total	S SF	S MF**
August	496,000	245,000	251,000
July	487,000	247,000	240,000
2018	451,000	239,000	212,000
M/M change	1.8	-0.8	4.6
Y/Y change	10.0	2.5	18.4
	W Total	W SF	W MF
August	327,000	138,000	189,000
July	329,000	137,000	192,000
2018	333,000	140,000	193,000
M/M change	-0.6	0.7	-1.6
Y/Y change	-1.8	-1.4	-2.1

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).

M/M and Y/Y: percent.

Total Housing Under Construction by Region

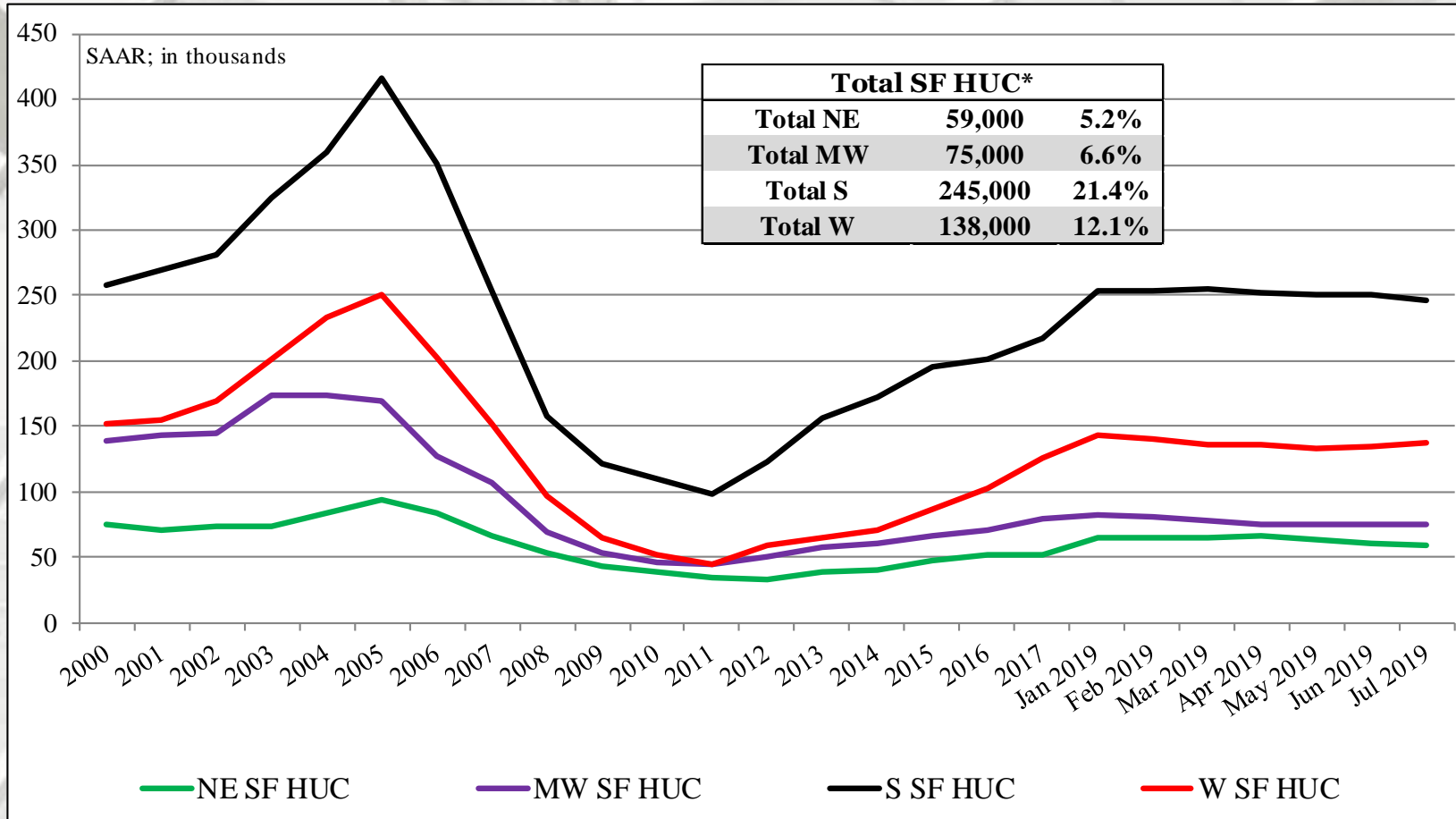


NE = Northeast, MW = Midwest, S = South, W = West

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

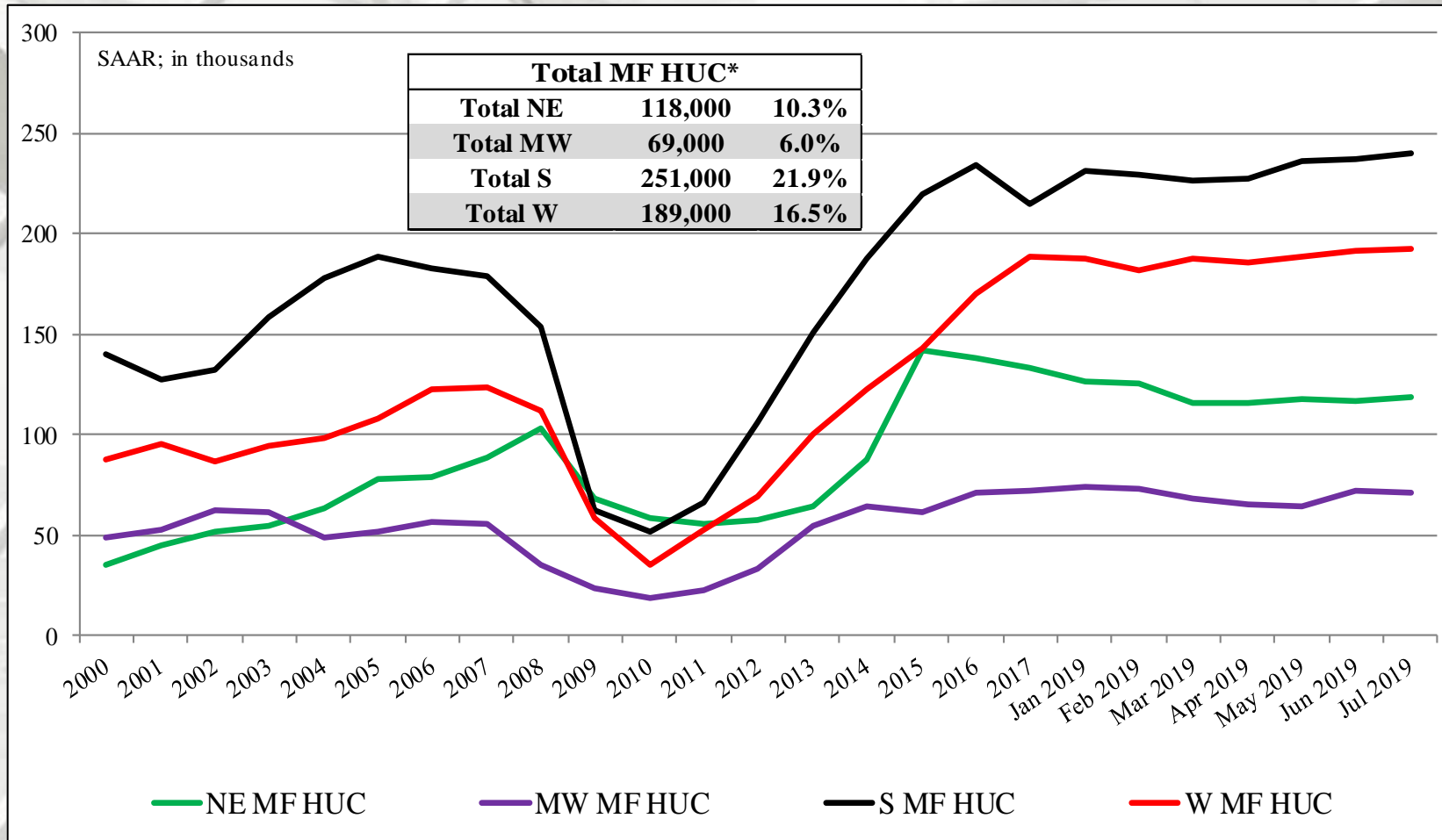


NE = Northeast, MW = Midwest, S = South, W = West.

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.

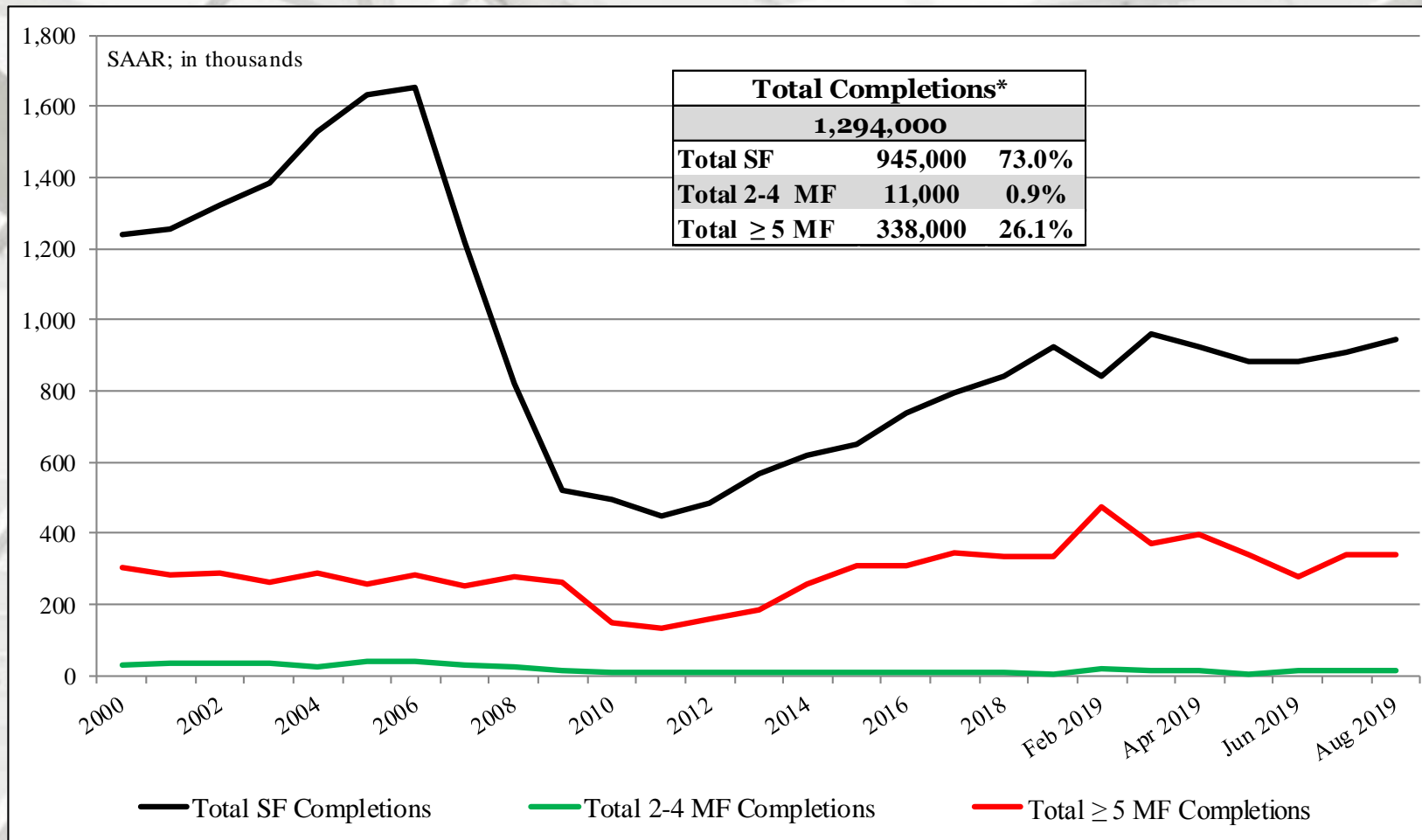
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
August	1,294,000	945,000	11,000	338,000
July	1,264,000	911,000	12,000	341,000
2018	1,232,000	939,000	5,000	288,000
M/M change	2.4%	3.7%	-8.3%	-0.9%
Y/Y change	5.0%	0.6%	120.0%	17.4%

* 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

New Housing Completions by Region

	NE Total	NE SF	NE MF**
August	146,000	75,000	71,000
July	105,000	70,000	35,000
2018	90,000	48,000	42,000
M/M change	39.0%	7.1%	102.9%
Y/Y change	62.2%	56.3%	69.0%
	MW Total	MW SF	MW MF
August	198,000	130,000	68,000
July	202,000	126,000	76,000
2018	205,000	148,000	57,000
M/M change	-2.0%	3.2%	-10.5%
Y/Y change	-3.4%	-12.2%	19.3%

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).

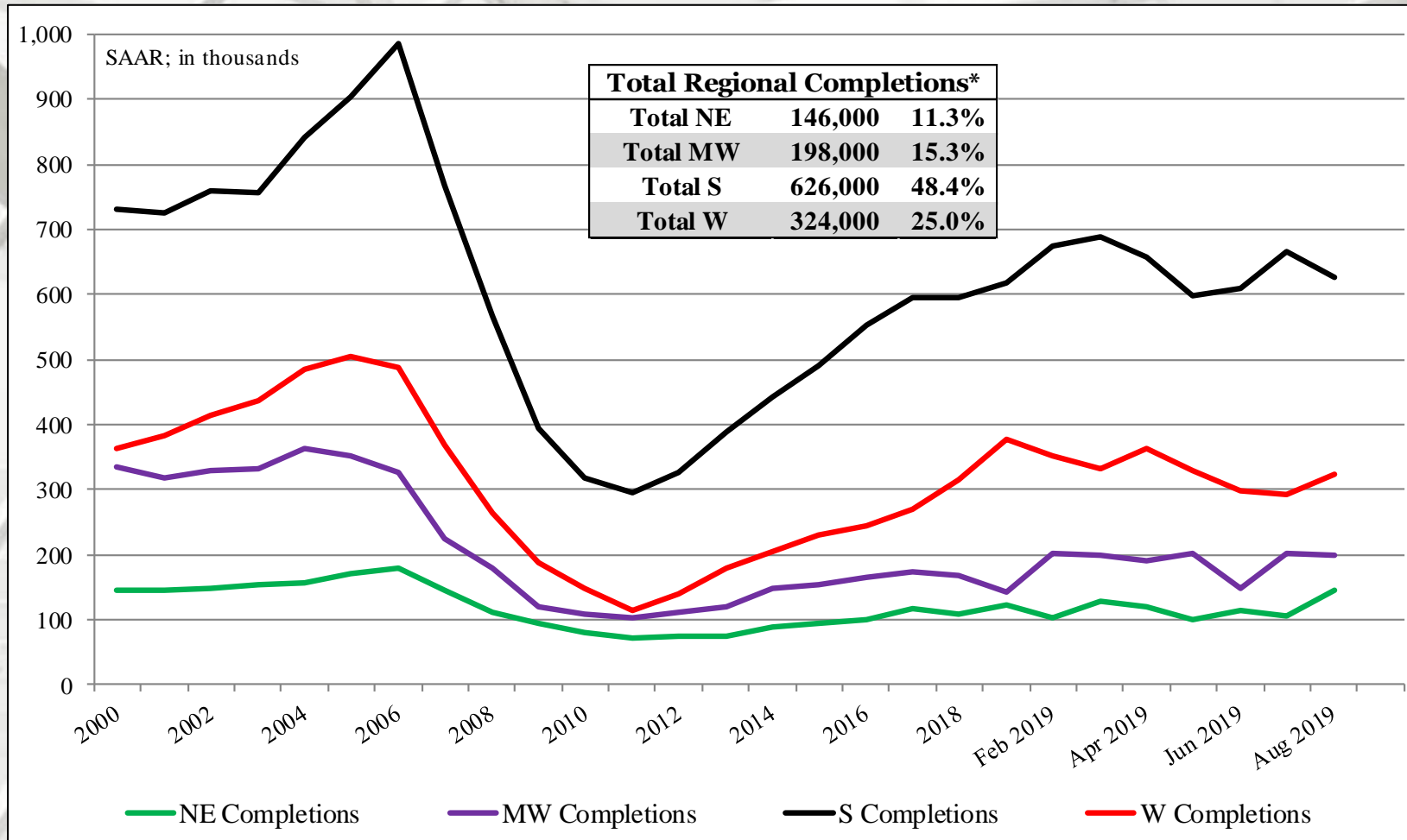
New Housing Completions by Region

	S Total	S SF	S MF**
August	626,000	520,000	106,000
July	665,000	519,000	146,000
2018	651,000	535,000	116,000
M/M change	-5.9%	0.2%	-27.4%
Y/Y change	-3.8%	-2.8%	-8.6%
	W Total	W SF	W MF
August	324,000	220,000	104,000
July	292,000	196,000	96,000
2018	286,000	208,000	78,000
M/M change	11.0%	12.2%	8.3%
Y/Y change	13.3%	5.8%	33.3%

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).

Total Housing Completions by Region

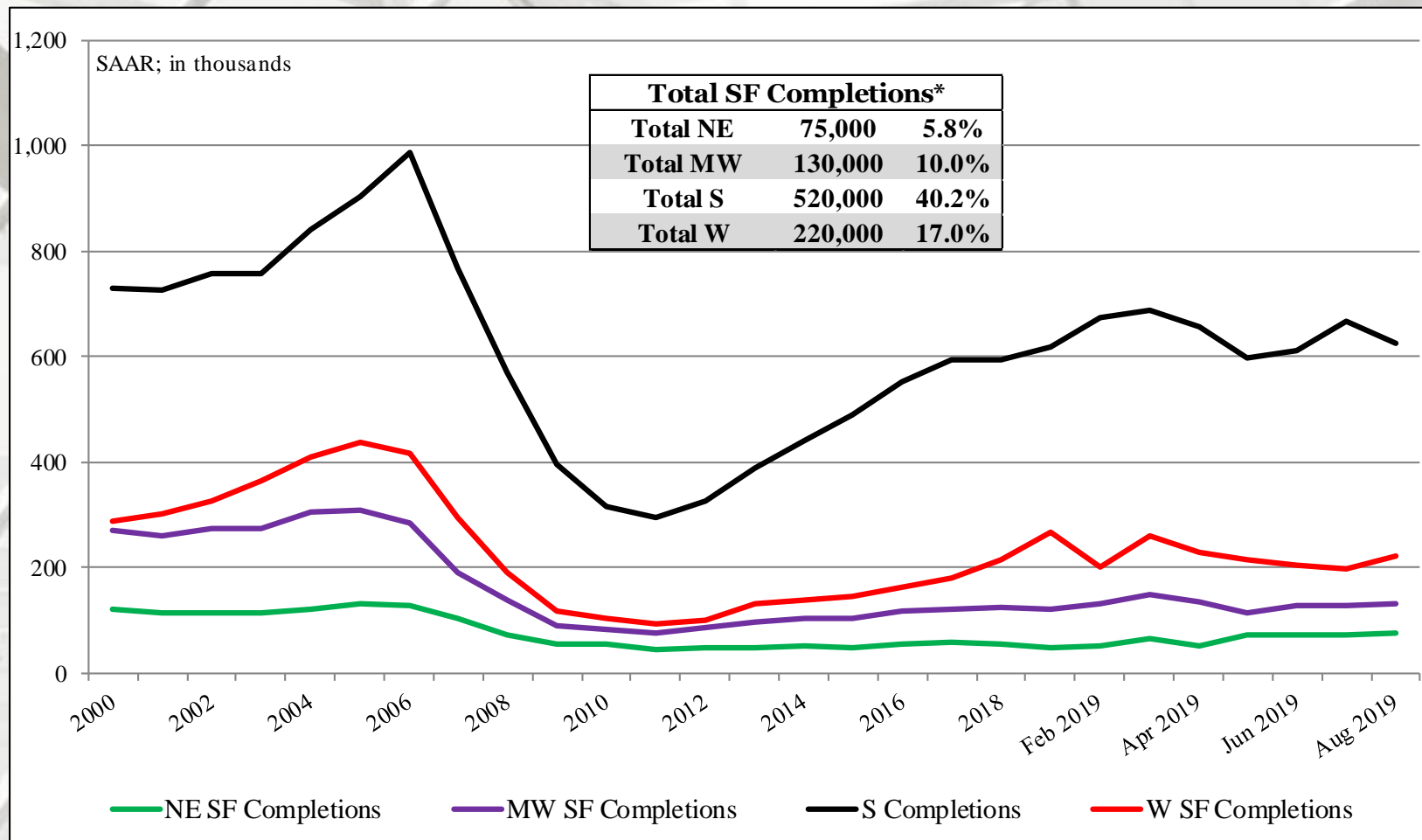


NE = Northeast, MW = Midwest, S = South, W = West

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

SF Housing Completions by Region

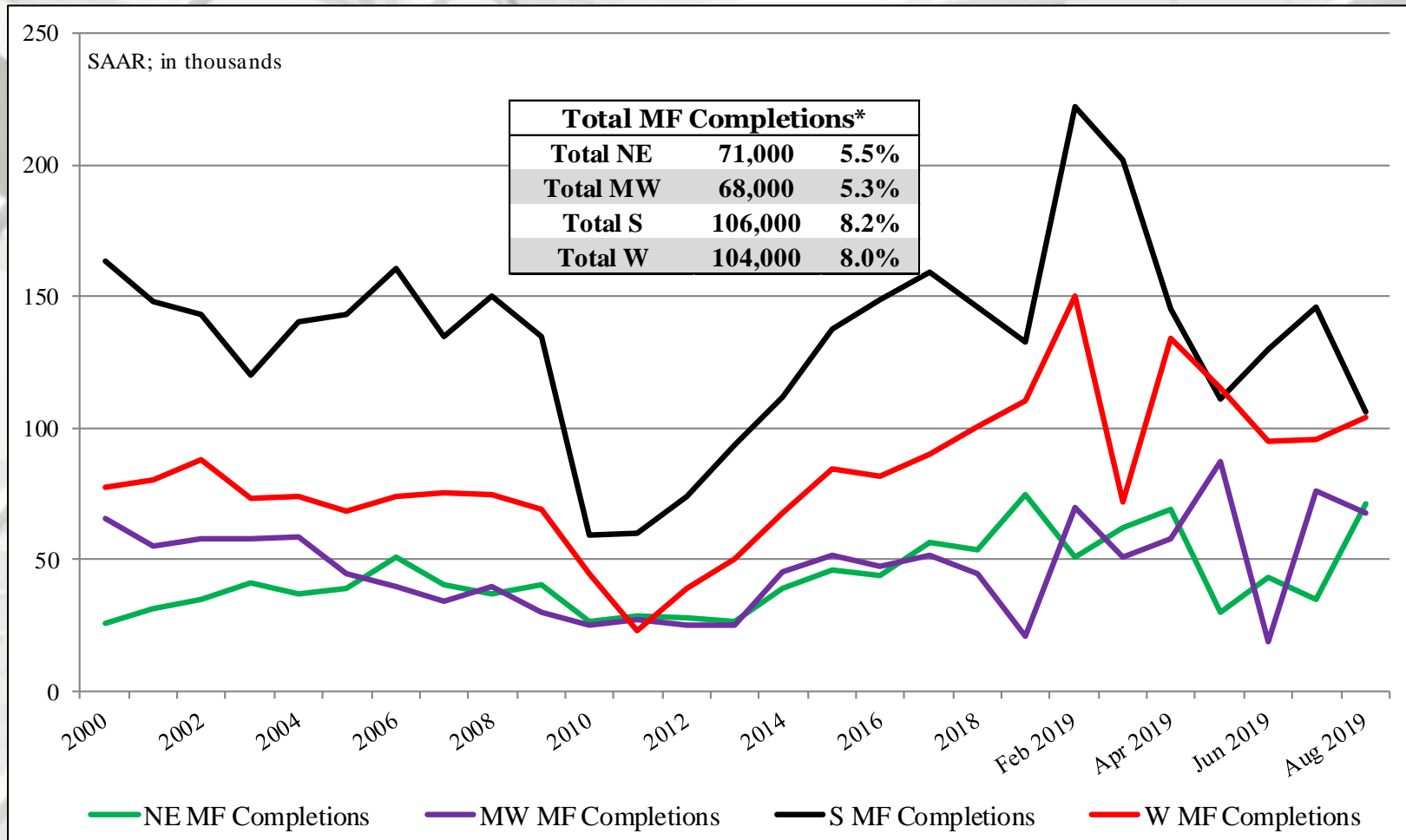


NE = Northeast, MW = Midwest, S = South, W = West

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

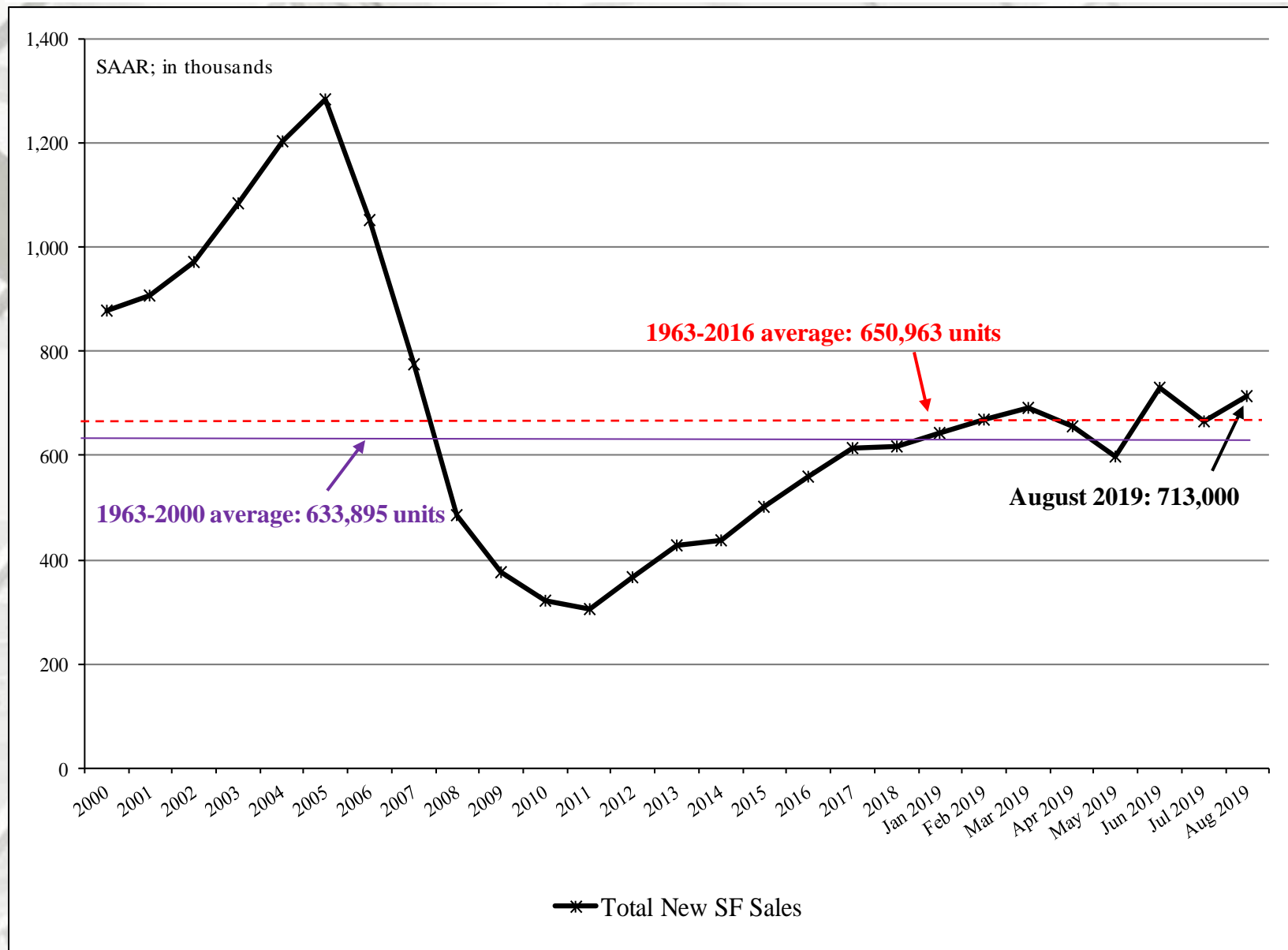
	New SF Sales*	Median Price	Mean Price	Month's Supply
August	713,000	\$328,400	\$404,200	5.5
July	666,000	\$305,400	\$372,700	5.9
2018	604,000	\$321,400	\$380,900	6.3
M/M change	7.1%	7.5%	8.5%	-6.8%
Y/Y change	18.0%	2.2%	6.1%	-12.7%

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

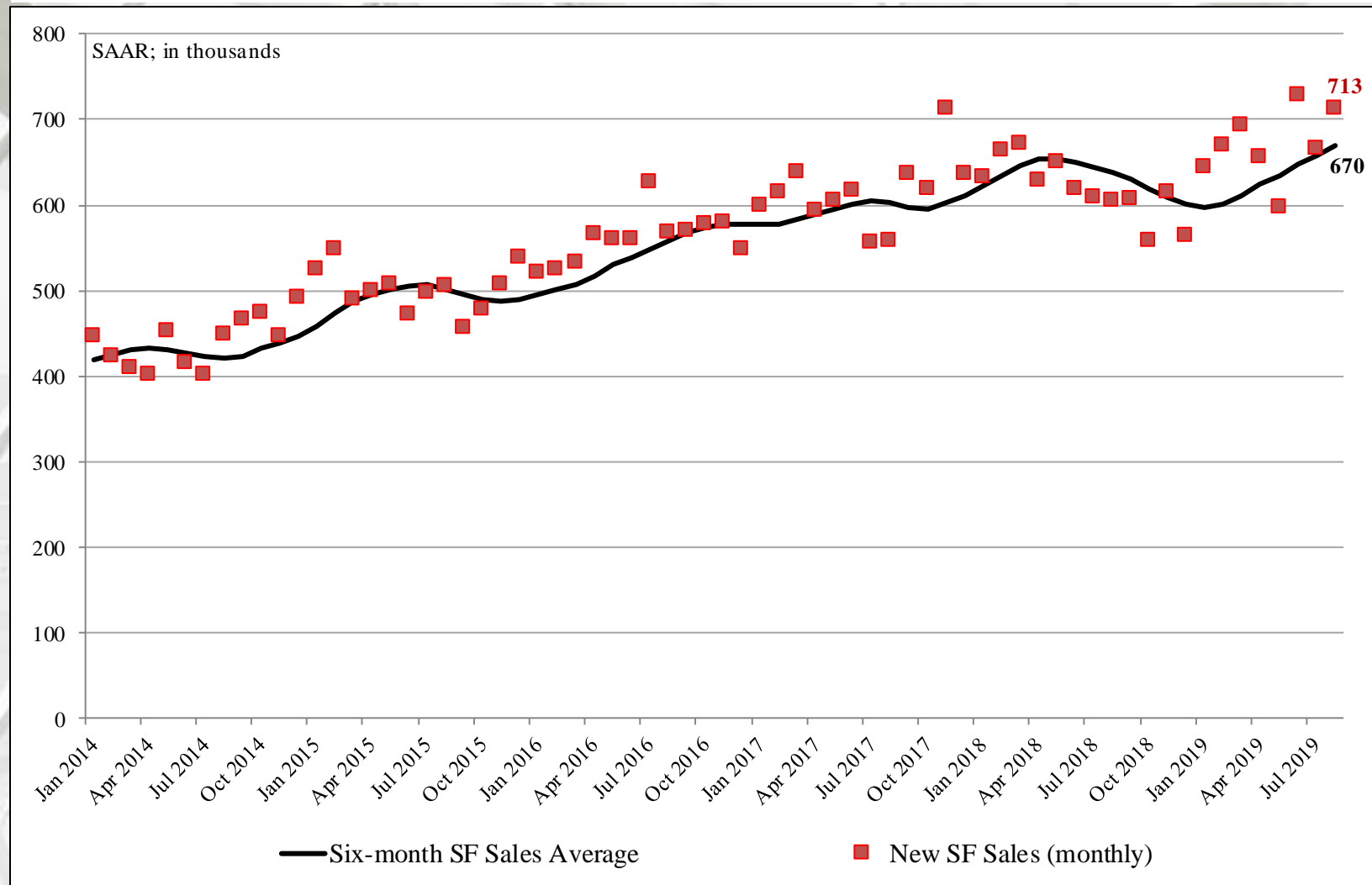
New SF sales were much greater than the consensus forecast³ of 662 m (range: 640 m to 685 m). The past three month's new SF sales data also were revised:

May initial: 626 m revised to 598 m;
 June initial: 646 m revised to 729 m;
 July initial: 635 m revised to 666 m.

New SF House Sales



New SF Housing Sales: Six-month average & monthly



New SF House Sales by Region and Price Category

	NE	MW	S	W			
August	32,000	64,000	426,000	191,000			
July	34,000	66,000	402,000	164,000			
2018	32,000	69,000	341,000	162,000			
M/M change	-5.9%	-3.0%	6.0%	16.5%			
Y/Y change	0.0%	-7.2%	24.9%	17.9%			
	\$150 - ≤ \$150m	\$200 - \$199.9m	\$300 - 299.9m	\$400 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m
August ^{1,2,3,4}	1,000	5,000	18,000	12,000	8,000	9,000	5,000
July	1,000	6,000	20,000	14,000	6,000	6,000	3,000
2018	1,000	4,000	15,000	12,000	6,000	7,000	3,000
M/M change	0.0%	-16.7%	-10.0%	-14.3%	33.3%	50.0%	66.7%
Y/Y change	0.0%	25.0%	20.0%	0.0%	33.3%	28.6%	66.7%
New SF sales: %	1.8%	8.8%	31.6%	21.1%	14.0%	15.8%	8.8%

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 August not add to total because of rounding.

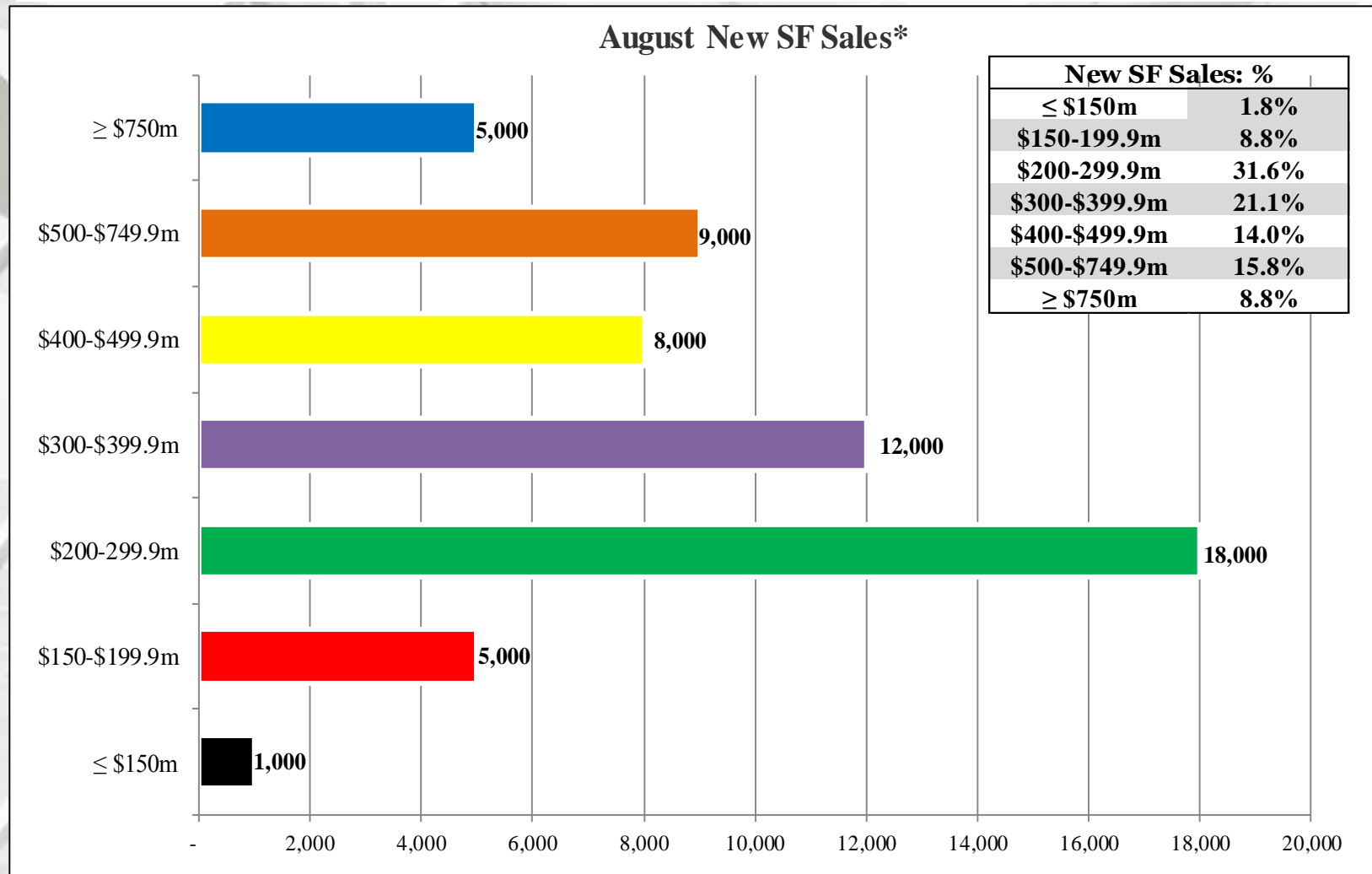
⁴ Housing prices are adjusted at irregular intervals.

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

Sources: ^{1,2,3} <https://www.census.gov/construction/nrs/index.html>; 9/25/19;

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

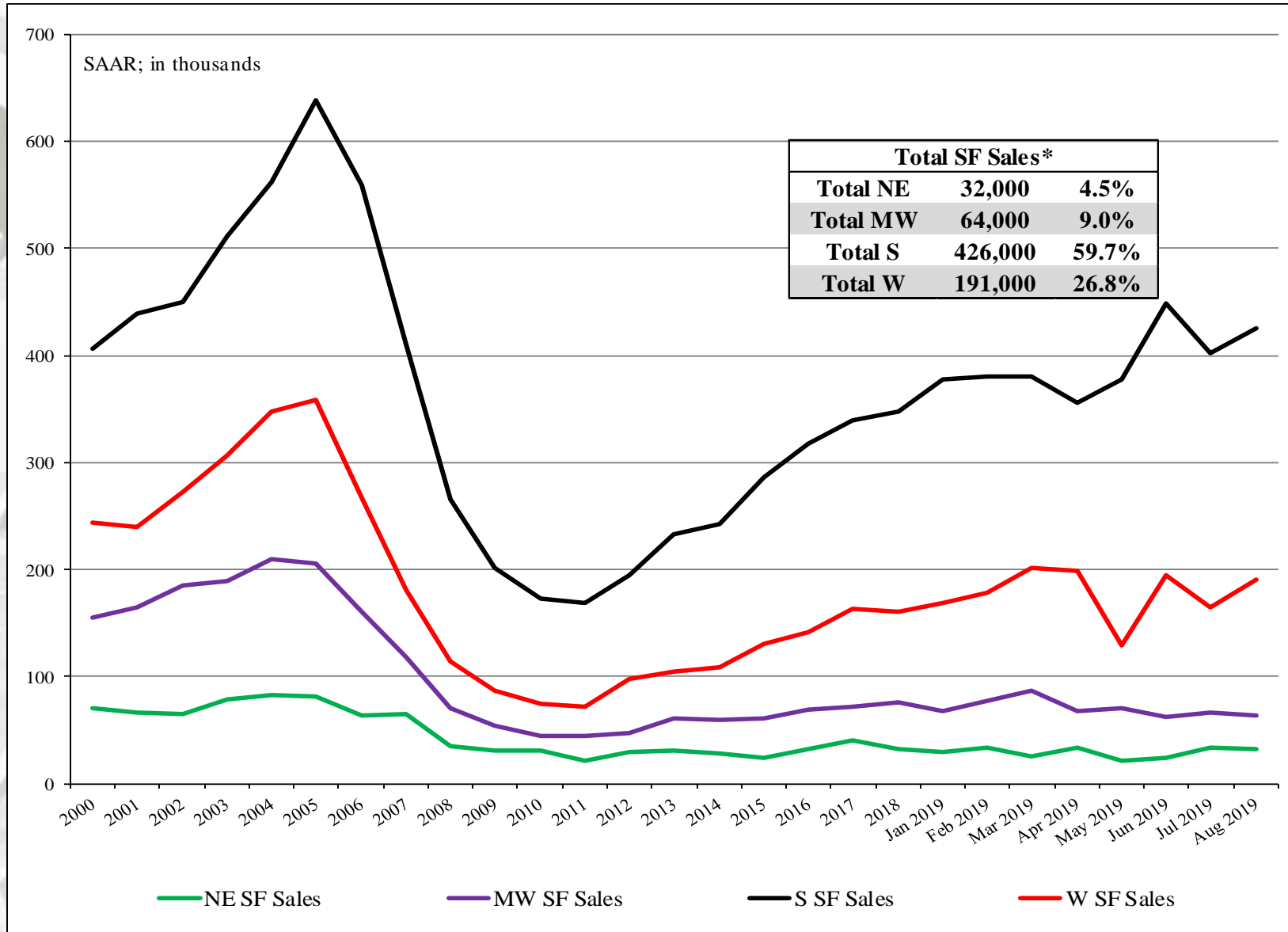
New SF House Sales



- Total new sales by price category and percent.

Note August sales do not total to 100 percent due to insufficient data in the less than \$150,000 category.

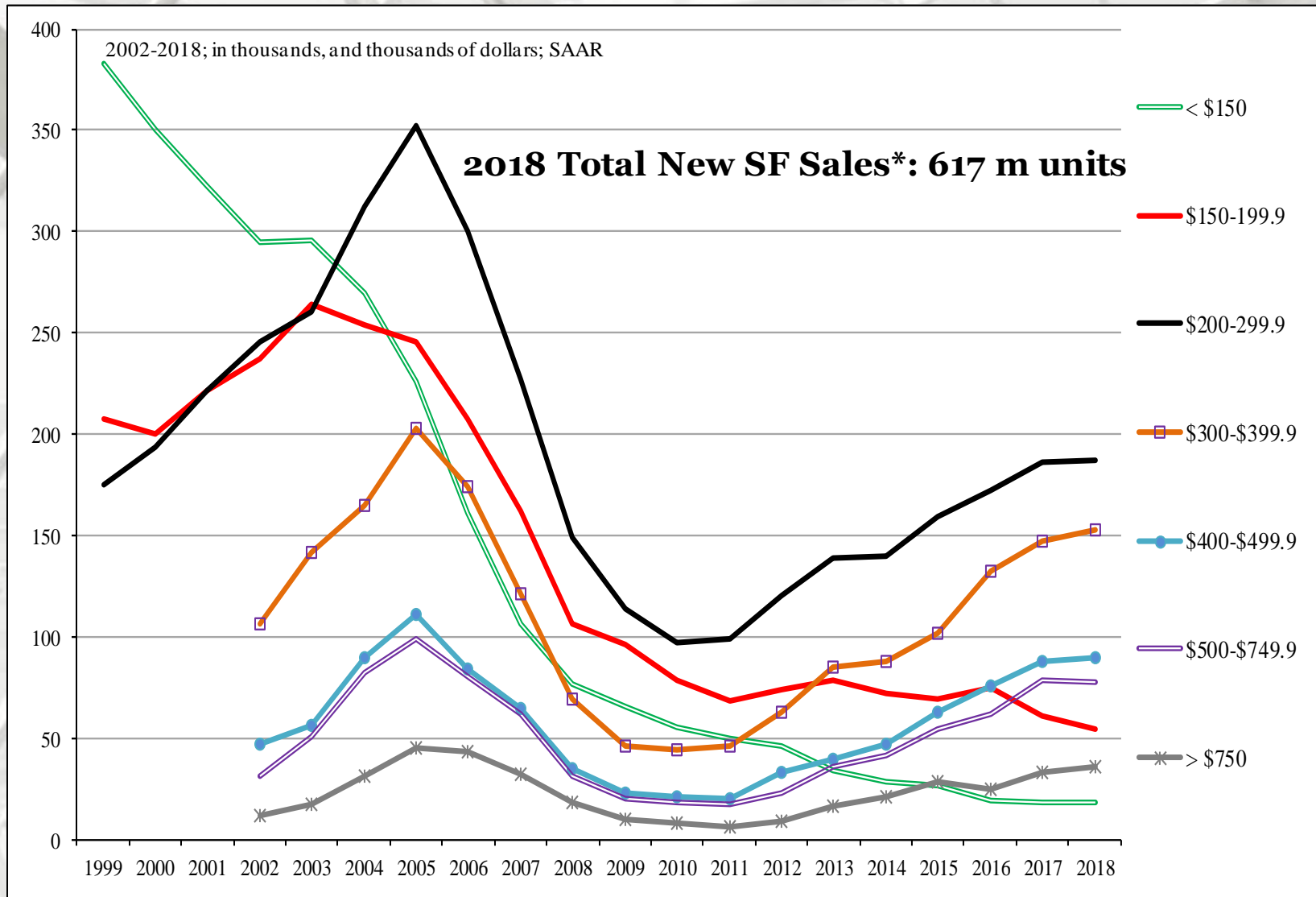
New SF House Sales by Region



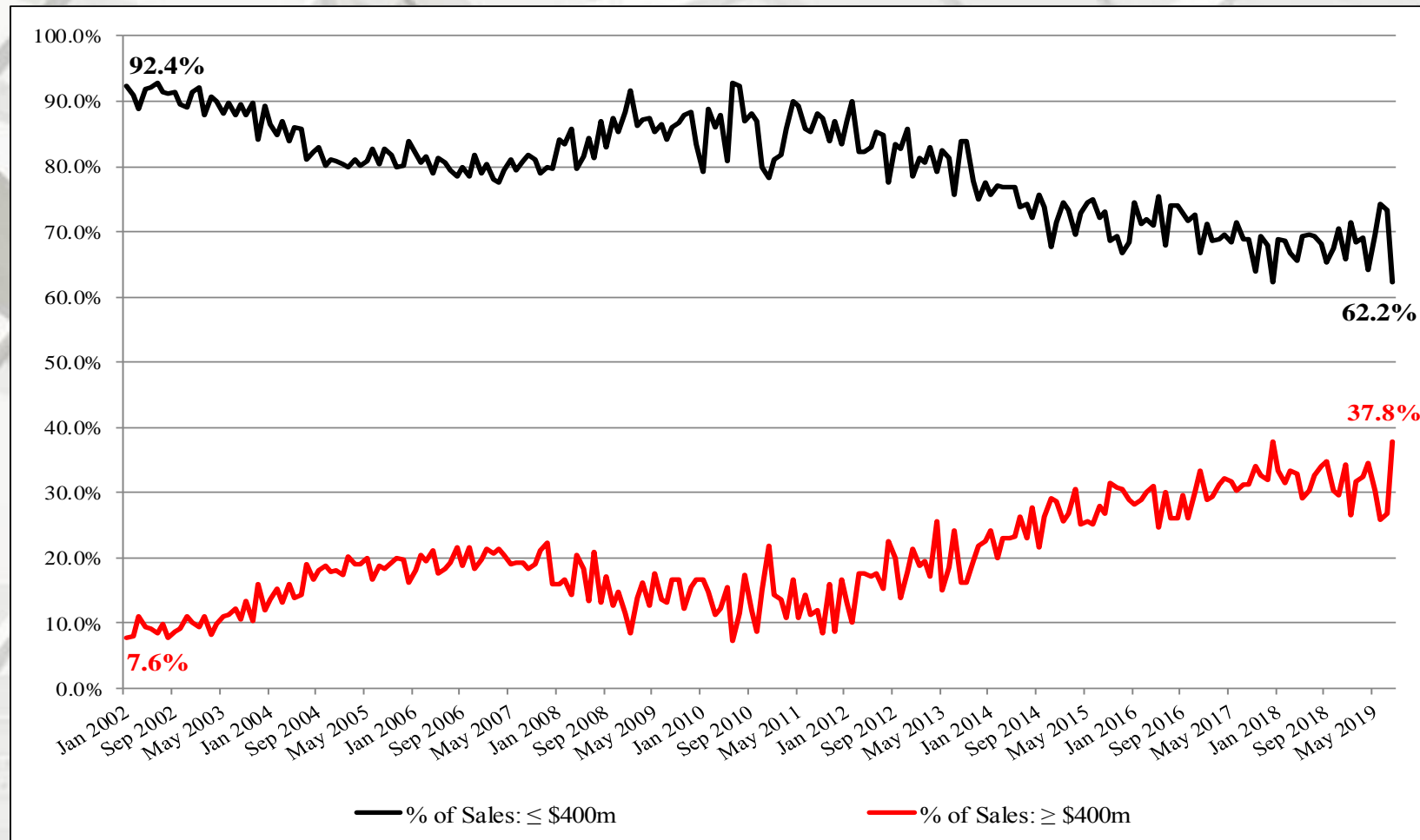
NE = Northeast; MW = Midwest; S = South; W = West

* Percentage of total new sales.

New SF House Sales by Price Category



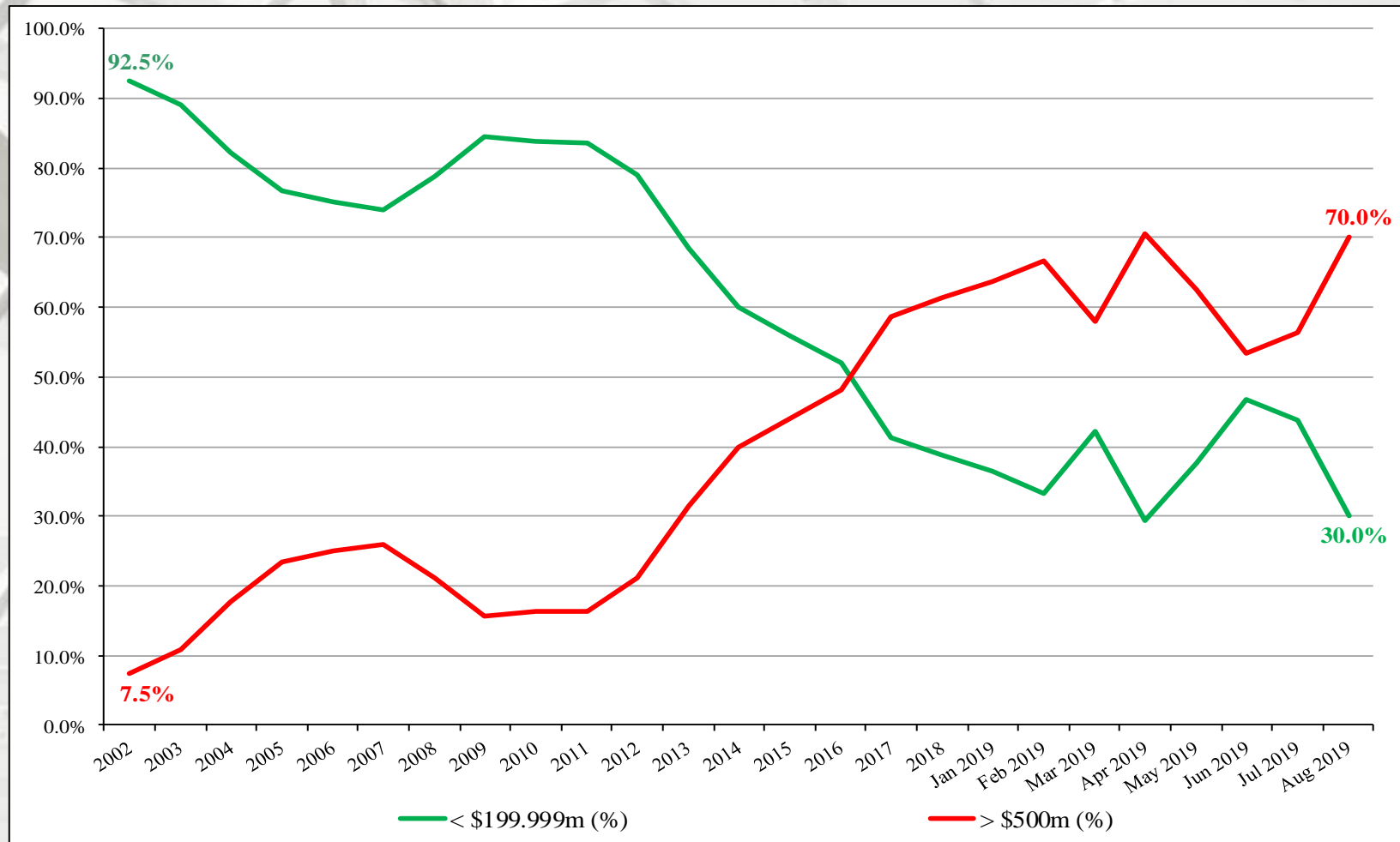
New SF House Sales



New SF Sales \$400m houses: 2002 – August 2019

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

New SF House Sales

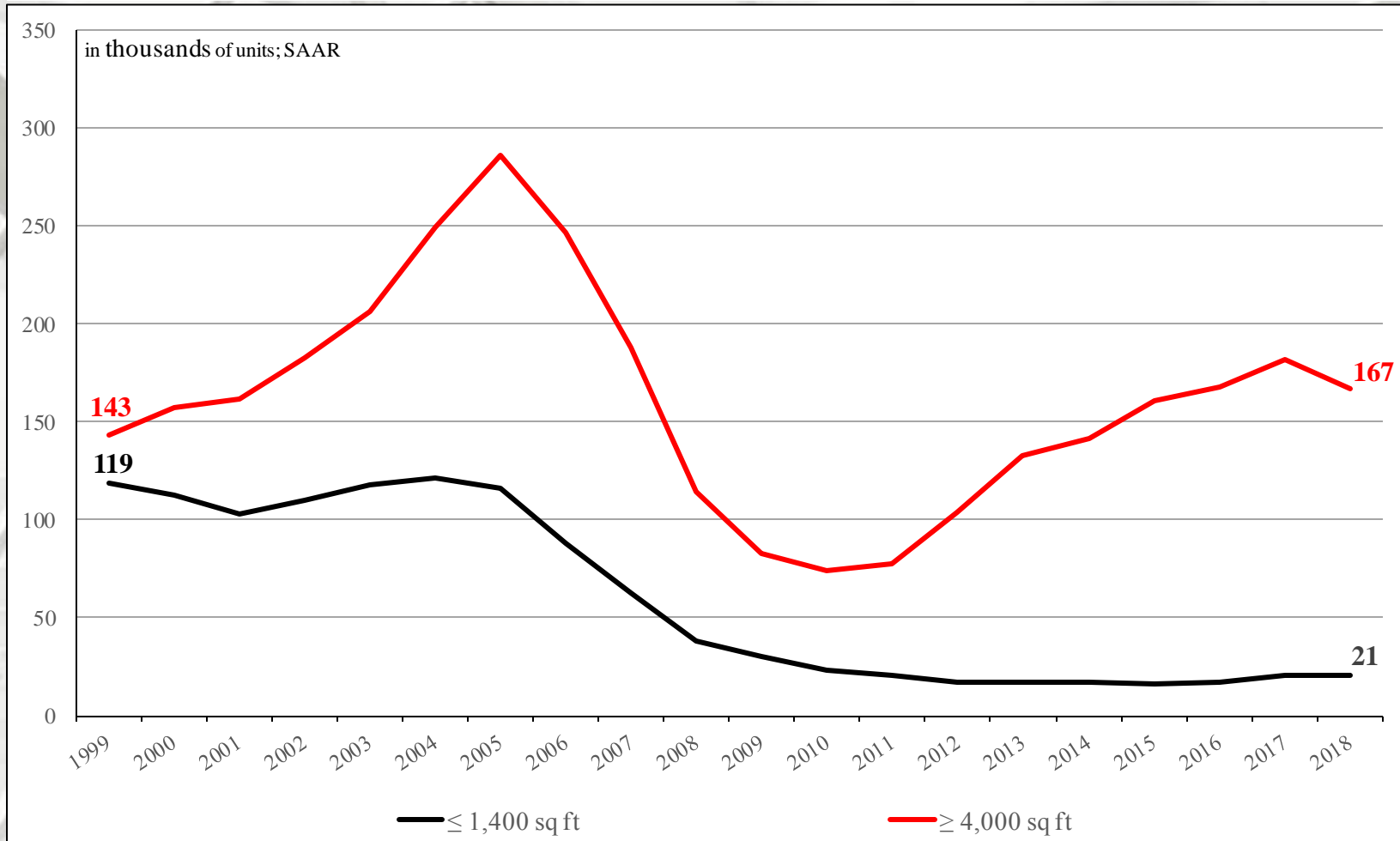


New SF Sales: ≤ \$ 200m and ≥ \$500m: 2002 to August 2019

The number of ≤ \$200 thousand plus 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.

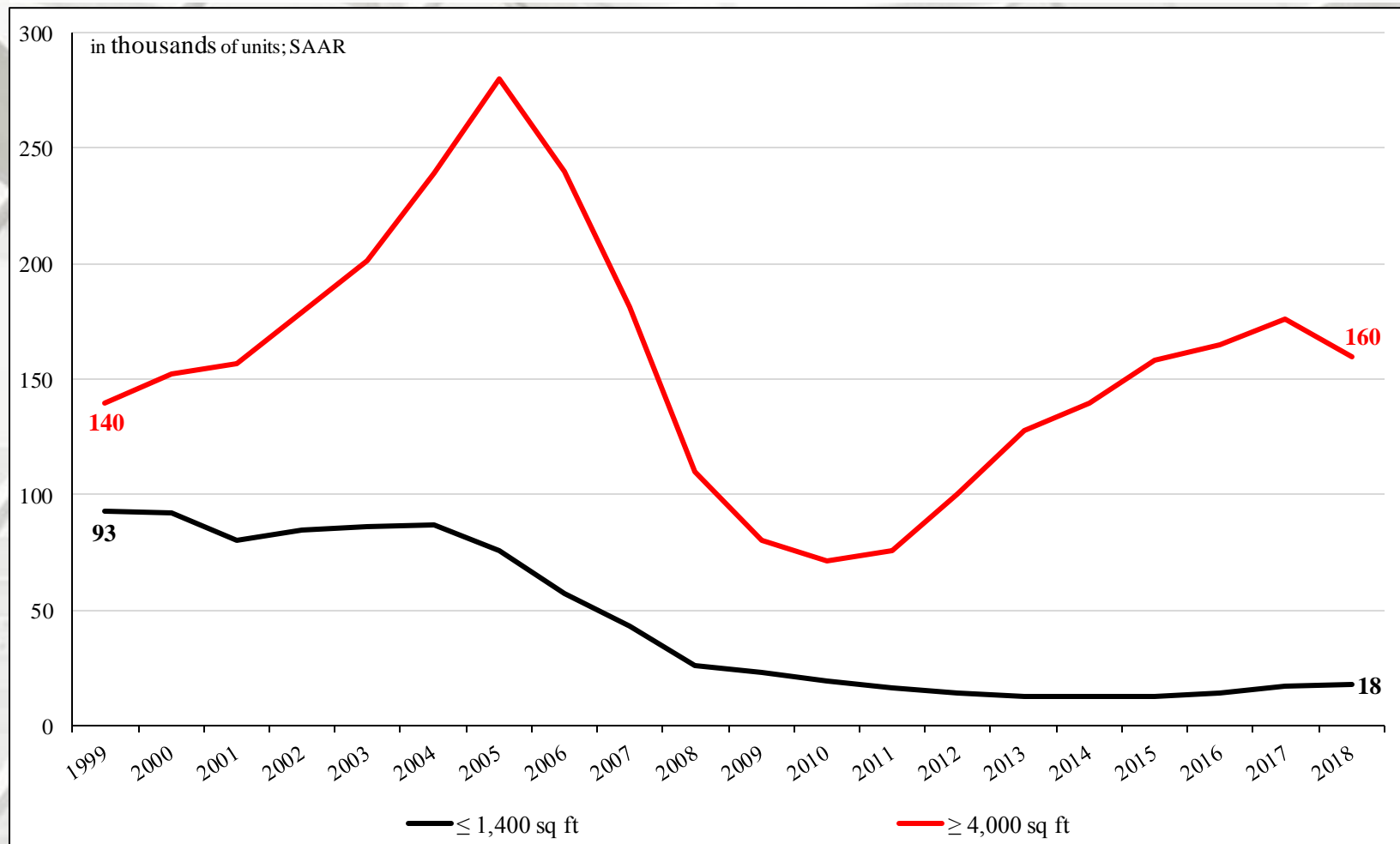
Total New SF House Sales by Square Feet of Floor Area



Total new SF Sales: ≤ 1,400 square feet and ≥ 4,000 square feet: 1999 to 2018

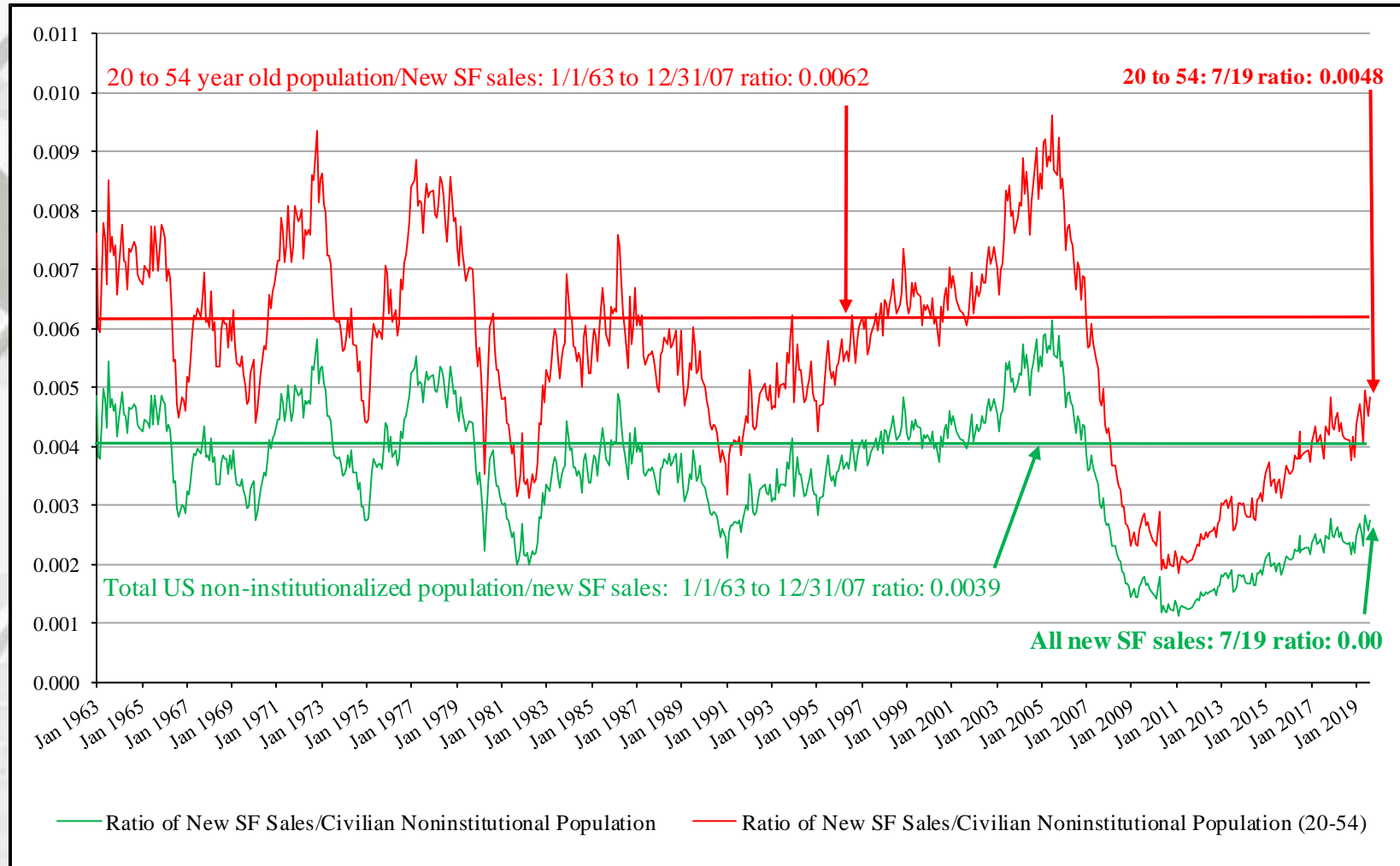
The number of SF houses sold ($\geq 4,000$ sq ft) has risen dramatically since 2010 in comparison to the $\leq 1,400$ sq ft houses. Some of the most oft mentioned reasons for this is builder net margins and regulation.

New Detached SF House Sales by Square Feet of Floor Area



New Detached SF Sales: ≤ 1,400 square feet and ≥ 4,000 square feet: 1999 to 2018

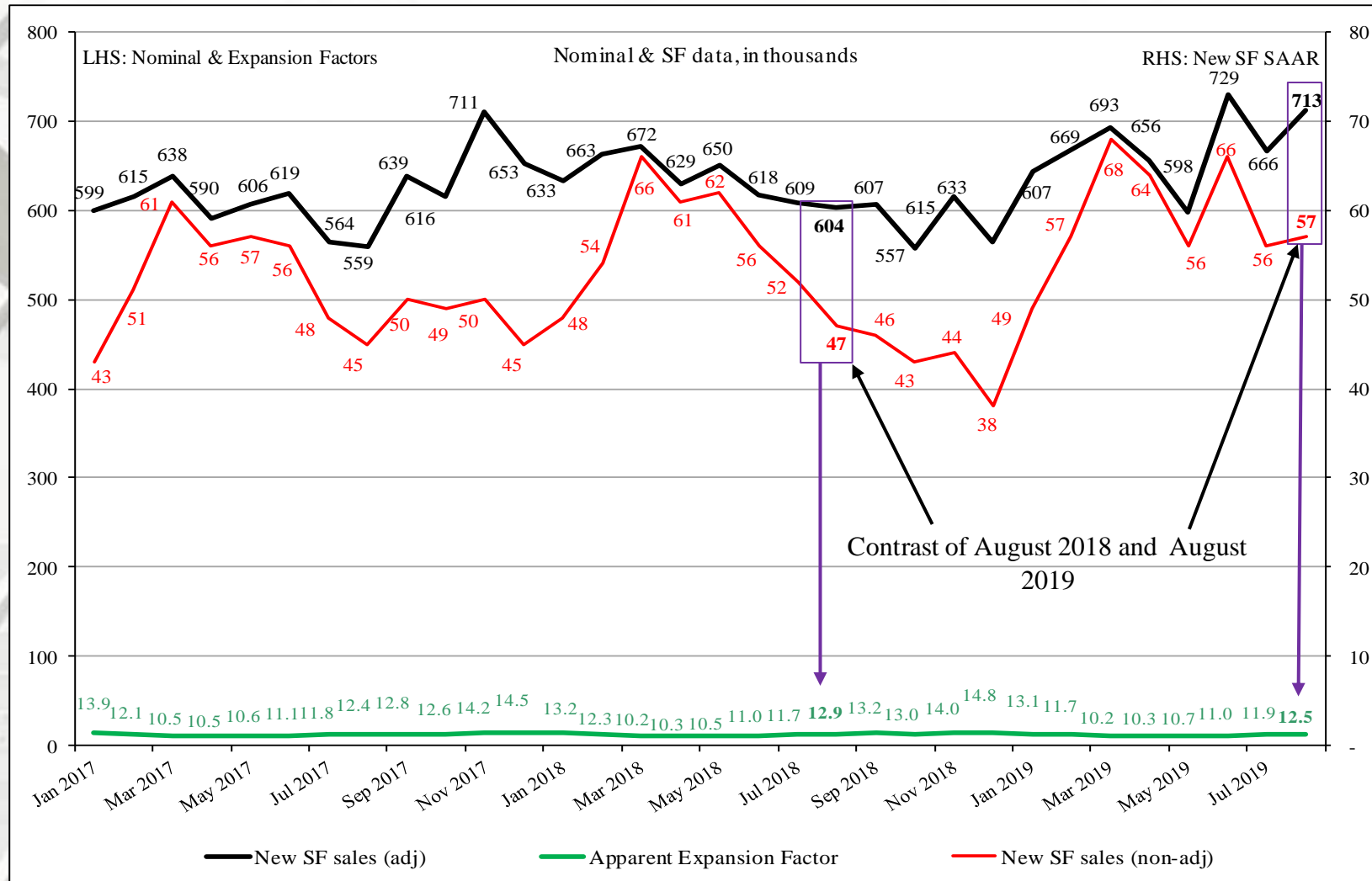
New SF House Sales



New SF sales adjusted for the US population

From August 1963 to August 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in August 2019 it was 0.0024 – an increase from July (0.0028). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in August 2019 it was 0.0043 – an increase from July (0.0049). 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

New SF Houses Sold During Period

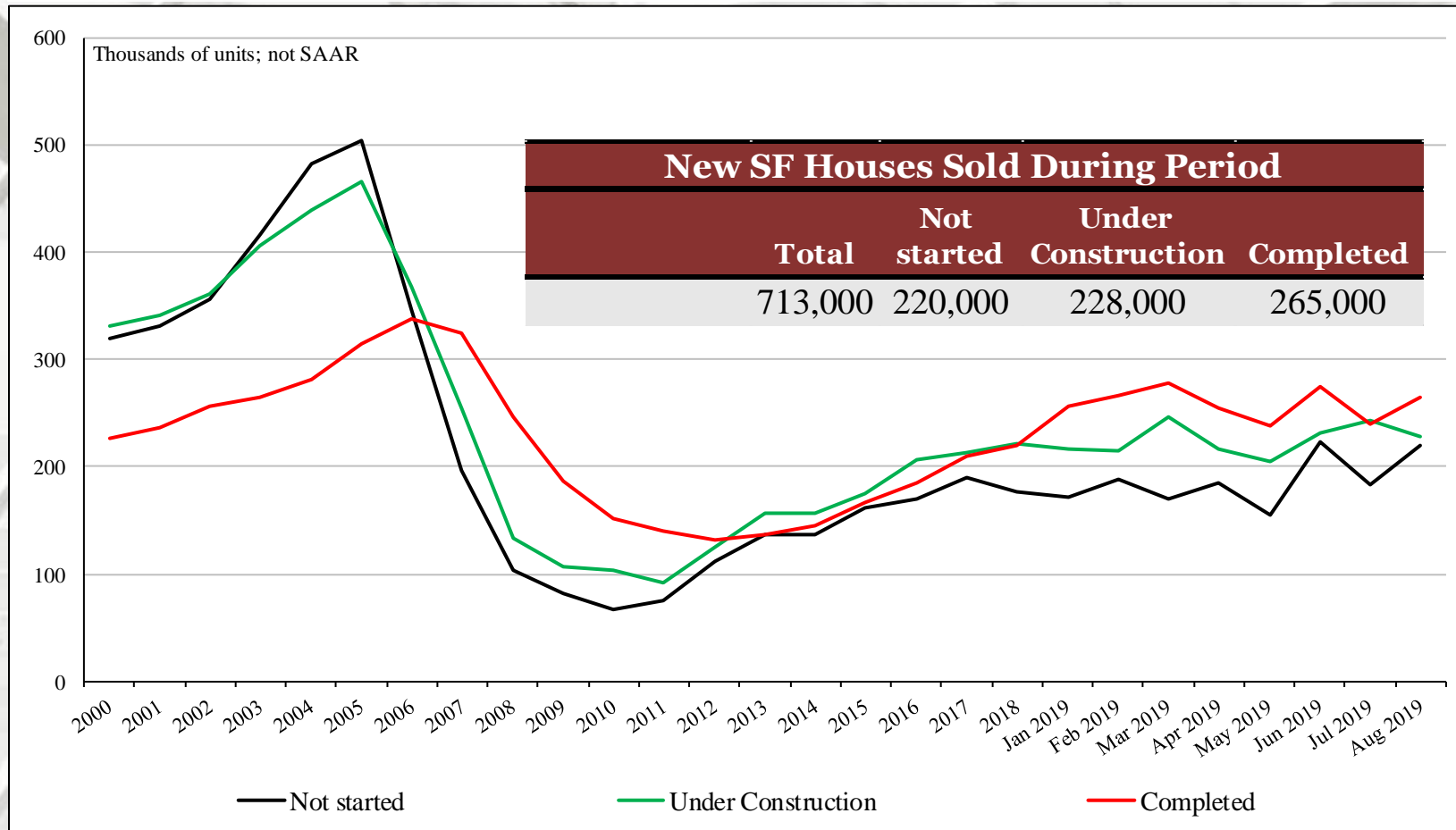
	Total	Not started	Under Construction	Completed
August	713,000	220,000	228,000	265,000
July	666,000	183,000	243,000	240,000
2018	604,000	176,000	208,000	220,000
M/M change	7.1%	20.2%	-6.2%	10.4%
Y/Y change	18.0%	25.0%	9.6%	20.5%
Total percentage		30.9%	32.0%	37.2%

New SF Houses Sold During Period

In August 2019, a substantial portion of new sales, 30.9% – have not been started; an increase from July.

Not SAAR

New SF House Sales: Sold During Period



Not SAAR

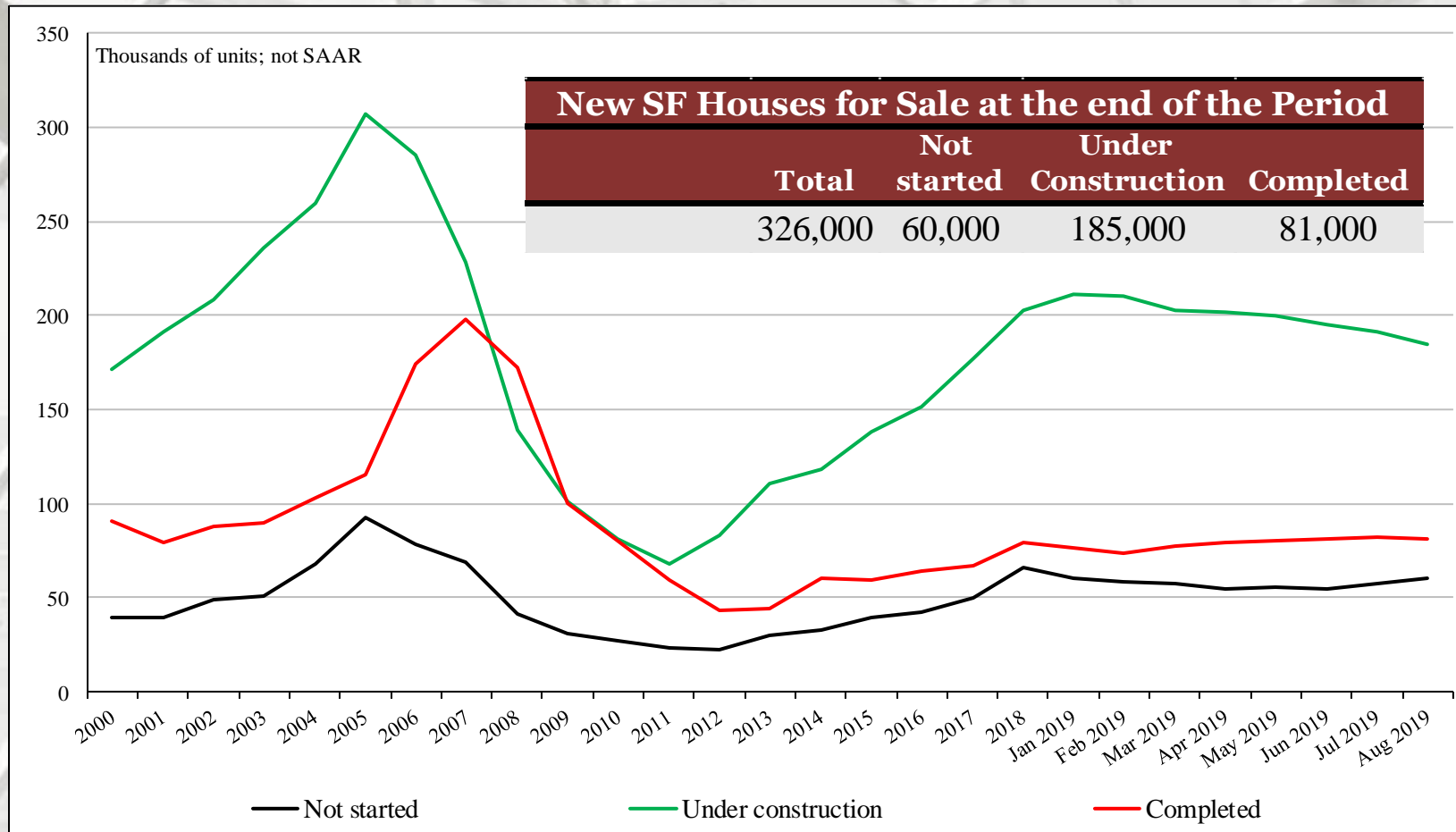
New SF House Sales

New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
August	326,000	60,000	185,000	81,000
July	330,000	57,000	191,000	82,000
2018	318,000	55,000	194,000	69,000
M/M change	-1.2%	5.3%	-3.1%	-1.2%
Y/Y change	2.5%	9.1%	-4.6%	17.4%
Total percentage		18.4%	56.7%	24.8%

Not SAAR

New SF House Sales: For Sale at End of Period



Not SAAR

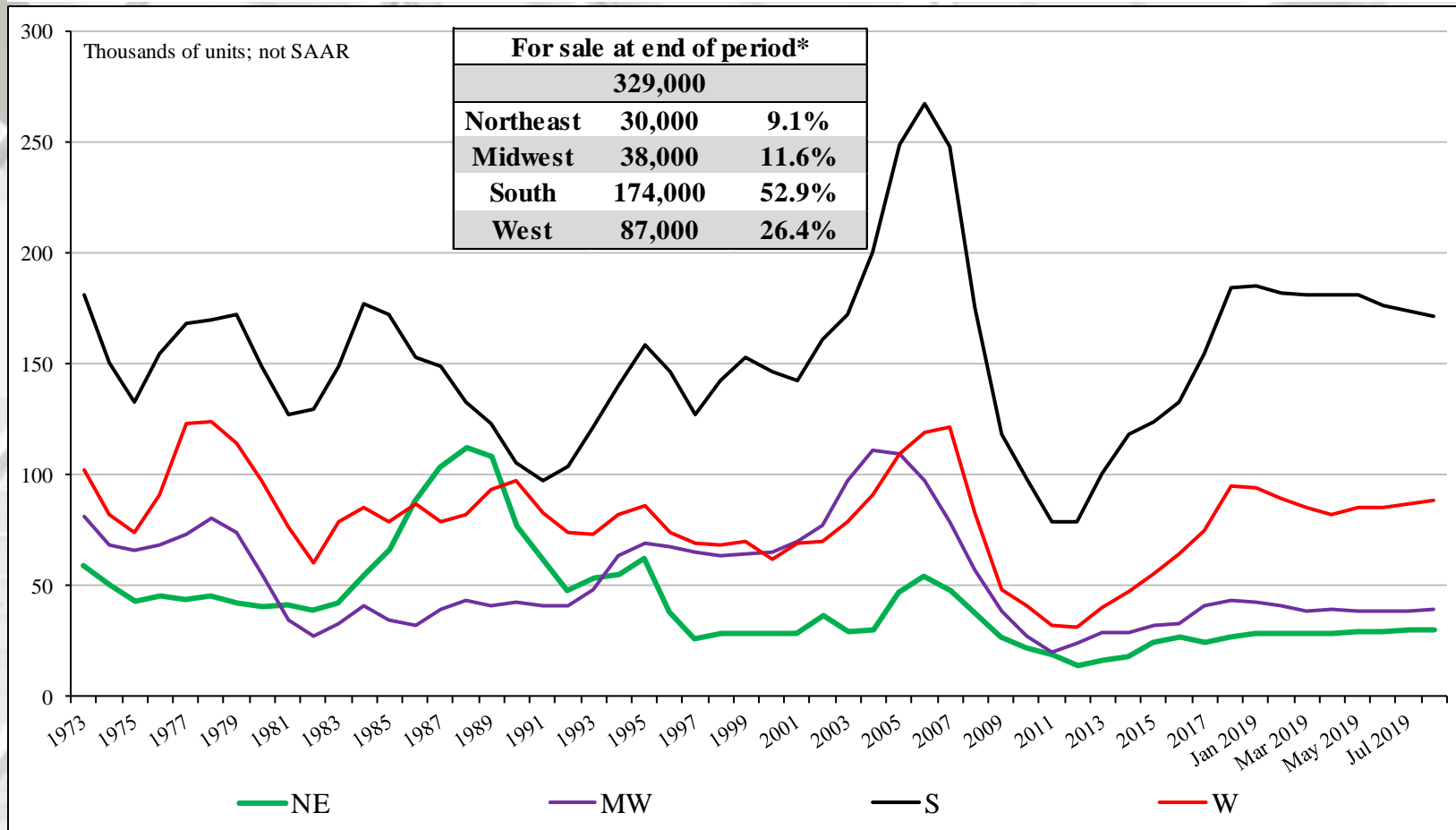
New SF House Sales

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

	Total	NE	MW	S	W
August	329,000	30,000	38,000	174,000	87,000
July	334,000	29,000	38,000	181,000	85,000
2018	313,000	27,000	40,000	164,000	83,000
M/M change	-1.5%	3.4%	0.0%	-3.9%	2.4%
Y/Y change	5.1%	11.1%	-5.0%	6.1%	4.8%

NE = Northeast; MW = Midwest; S = South; W = West
Not SAAR

New SF Houses Sale at End of Period by Region



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

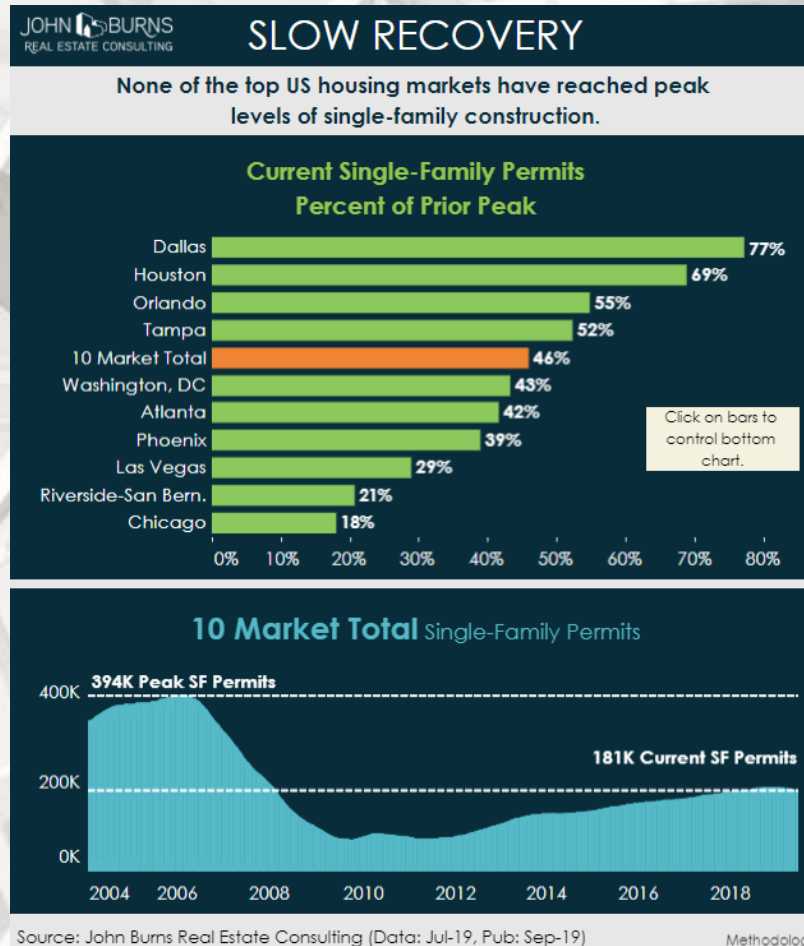
* Percentage of new SF sales.

New SF Housing

John Burns Real Estate Consulting LLC

Home Building Less than Half of What It Used to Be

“14 years ago, construction in the top 10 markets totaled 394,000 single-family homes. Today, those markets are building 54% fewer homes! Note the huge difference in recovery.”
– Erik Franks, Senior Vice President, Research, John Burns Real Estate Consulting LLC



New SF Housing

John Burns Real Estate Consulting LLC

Home Building Less than Half of What It Used to Be

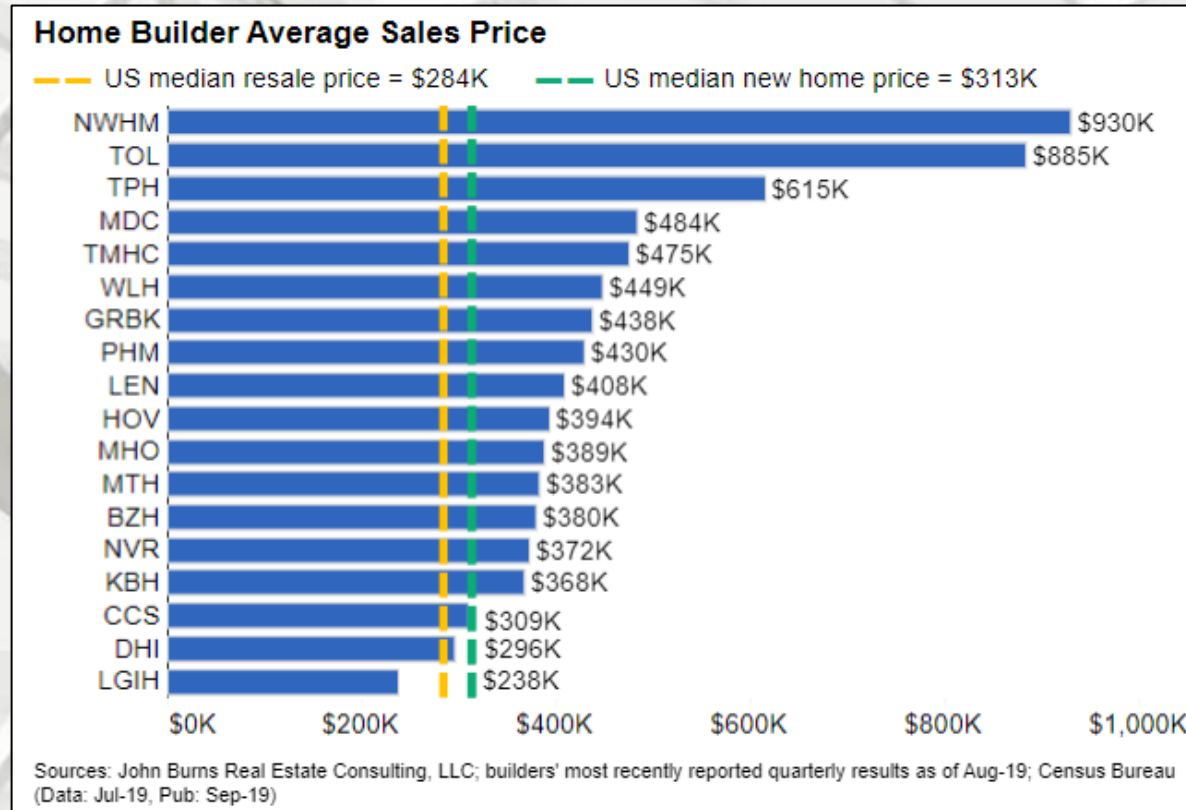
“While Houston (#3 in 2005) and Dallas (#5 in 2005) have largely recovered, the other markets have not. Atlanta builders are building 36,000 fewer homes than in 2005, and Phoenix builders are building 37,000 fewer.

Chicago, Riverside-San Bernardino, and Las Vegas stand out the most, building just 18%, 21%, and 29%, respectively, of peak construction levels of 2005/2006! Chicago has fallen from the 7th-largest single-family housing market in the country to the 32nd-largest market.

We get asked all the time when the US will return to 1-million or more single-family housing units, and our quick, somewhat flippant answer is “when the builders can make money selling 1-million homes.” Cost increases at every step of the way have pushed home prices to a point where home builders find it very difficult to build homes priced \$250,000 and below in places where most people want to live.

There is plenty of total housing demand, but most of the demand is below today’s new home prices. In 2003, before subprime lenders broke the rules, half of the new homes in the country were priced below \$191,000. Today, half of new homes are priced above \$313,000, and 15 of the 18 largest publicly traded home builders sport an average sales price north of \$365,000.” – Erik Franks, Senior Vice President, Research, John Burns Real Estate Consulting LLC

New SF Housing



John Burns Real Estate Consulting LLC

Home Building Less than Half of What It Used to Be

“Our builder clients are pivoting to address the mismatch of demand and supply of new, lower-priced homes. According to our recent survey, 55% of entry-level builders are building on smaller lots, 45% are building smaller homes, 39% are using less costly materials, and 33% are moving further from the job centers. That is a good start, but we have a long way to go to get back to 1 million single-family homes per year.” – Erik Franks, Senior Vice President, Research, John Burns Real Estate Consulting LLC

August 2019 Construction Spending

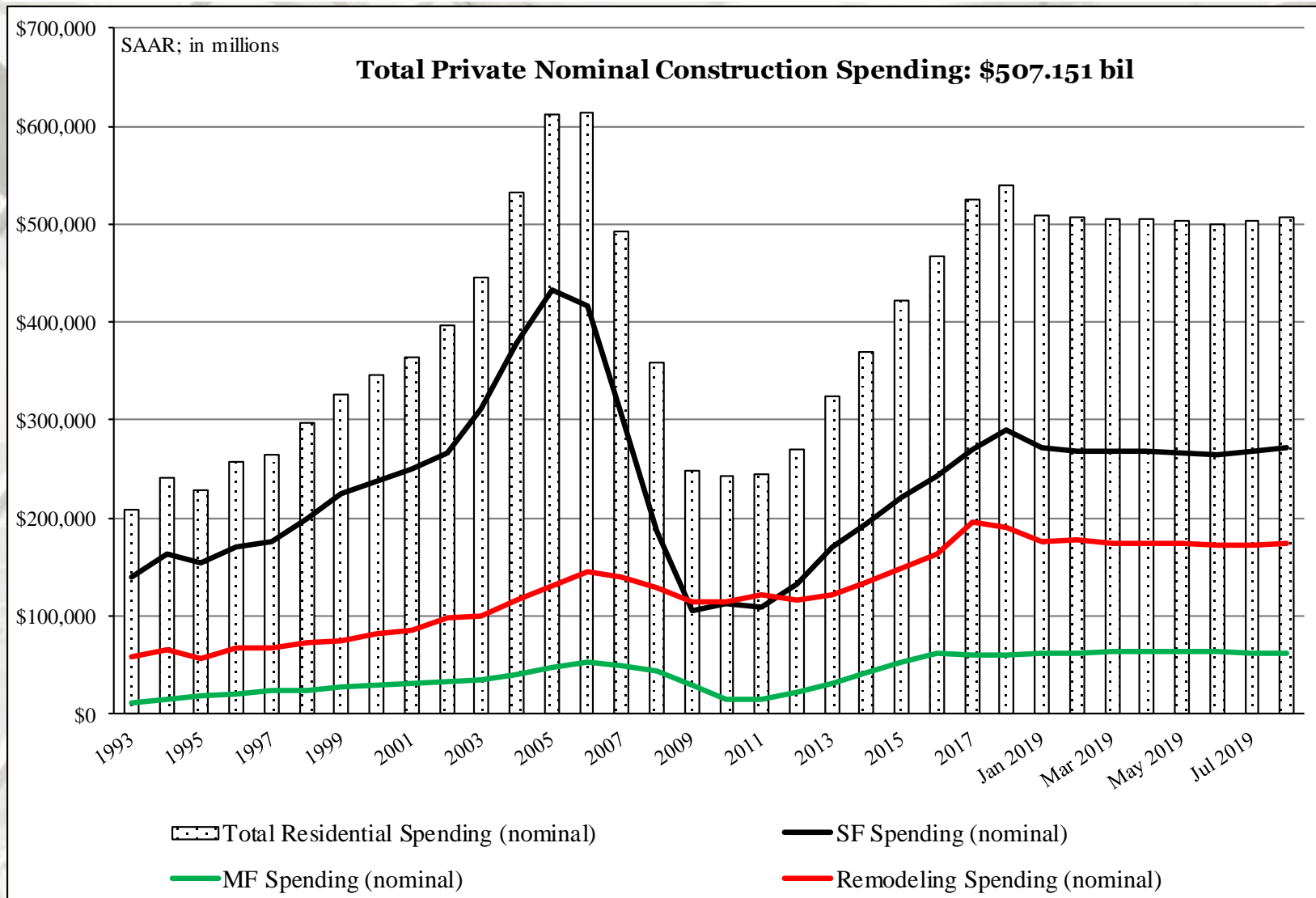
	Total Private Residential*	SF	MF	Improvement**
August	\$507,151	\$271,928	\$62,028	\$173,195
July	\$502,522	\$268,177	\$62,574	\$171,771
2018	\$533,844	\$291,022	\$57,757	\$185,065
M/M change	0.9%	1.4%	-0.9%	0.8%
Y/Y change	-5.0%	-6.6%	7.4%	-6.4%

* 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\$.

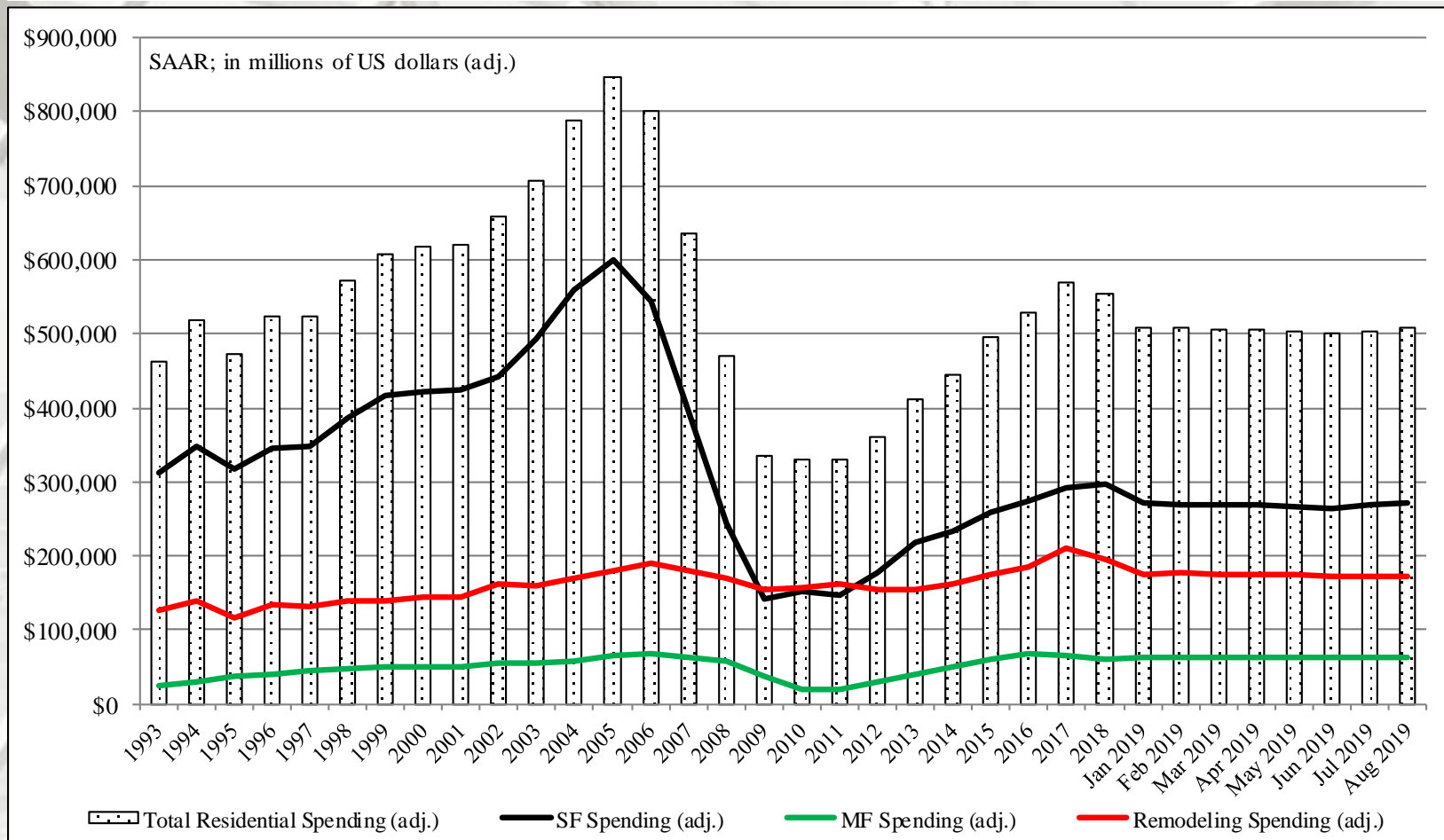
Total Construction Spending (nominal): 1993 – August 2019



Reported in nominal US\$.

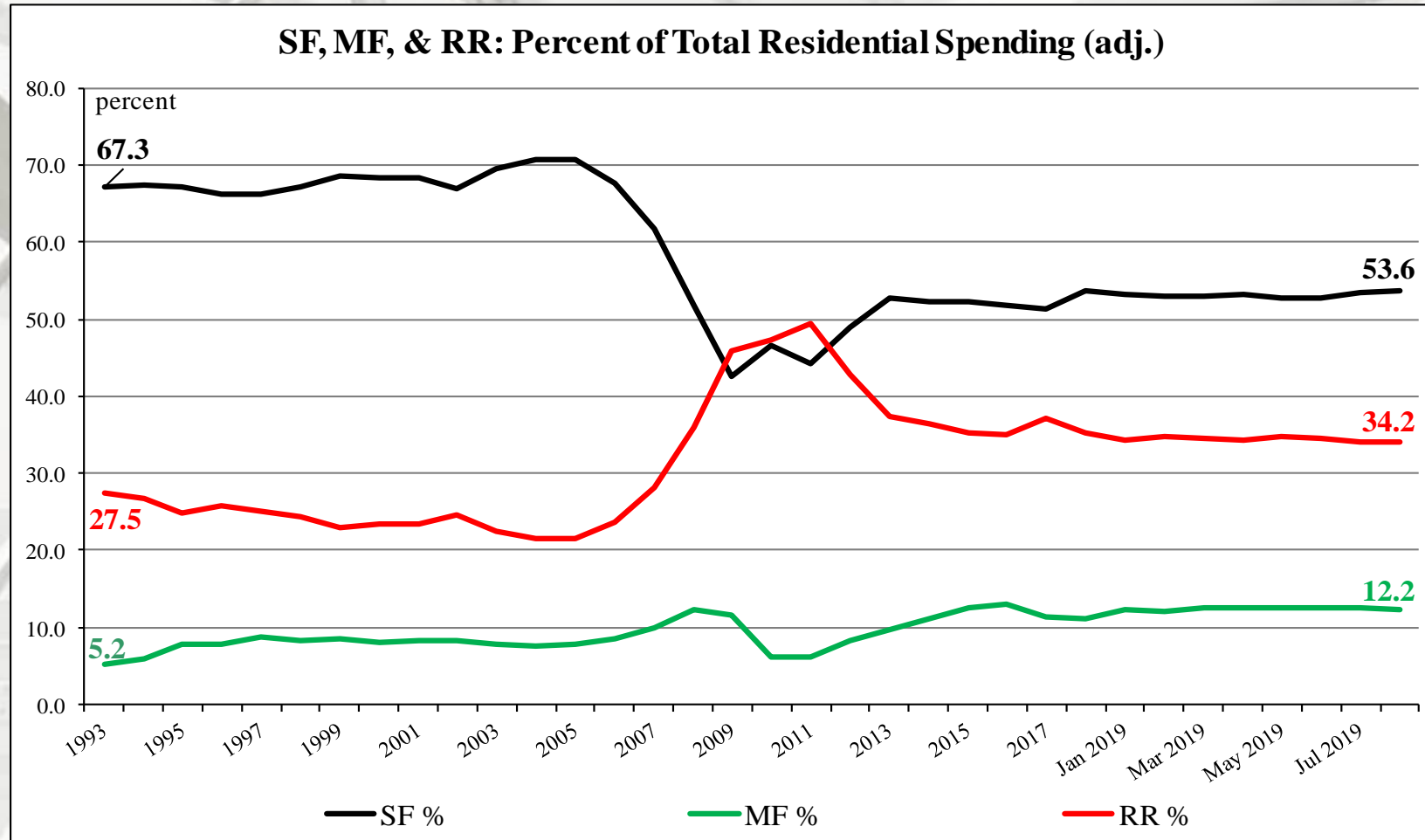
The US DOC does not report improvement spending directly, this is a monthly estimation for 2019.

Total Construction Spending (adjusted): 1993-2019*



Reported in adjusted US\$: 1993 – 2018 (adjusted for inflation, BEA Table 1.1.9); *January to August 2019 reported in nominal US\$.

Construction Spending Shares: 1993 to August 2019



Total Residential Spending: 1993 through 2006

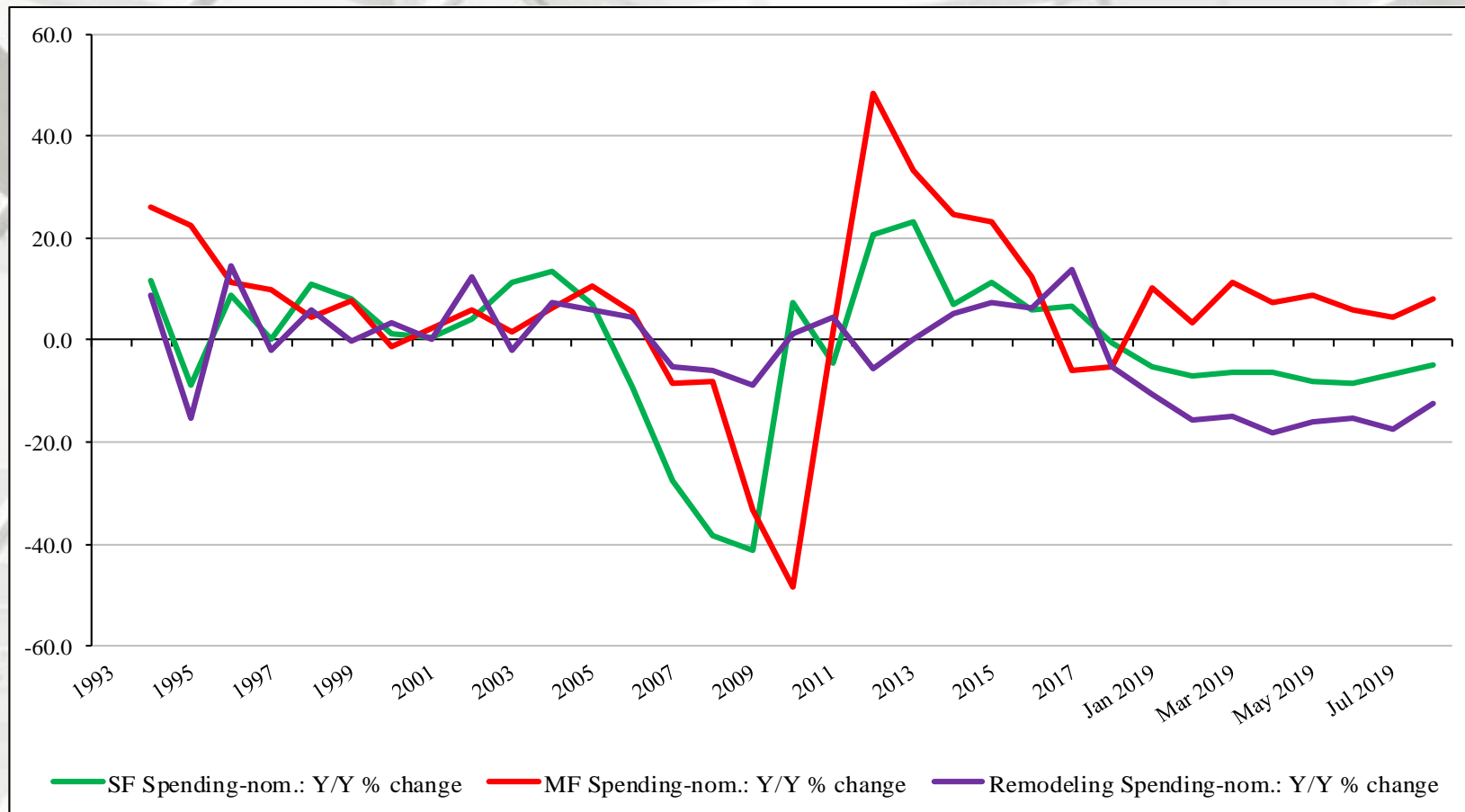
SF spending average: 69.2%

MF spending average: 7.5%

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

Note: 1993 to 2017 (adjusted for inflation, BEA Table 1.1.9); Jan-August 2018 reported in nominal US\$.

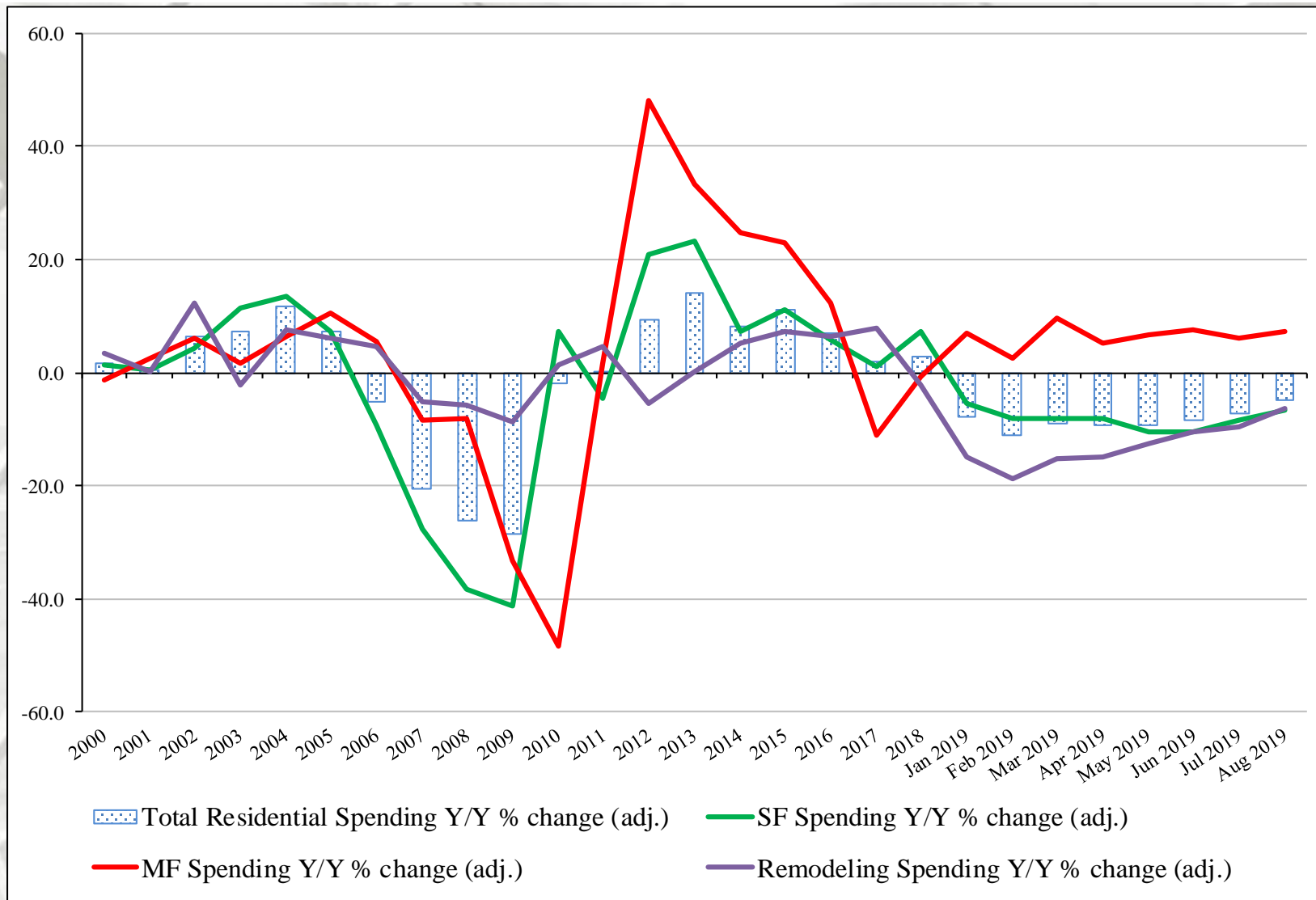
Adjusted Construction Spending: Y/Y Percentage Change, 1993 to August 2019



Nominal Residential Construction Spending: Y/Y percentage change, 1993 to August 2019

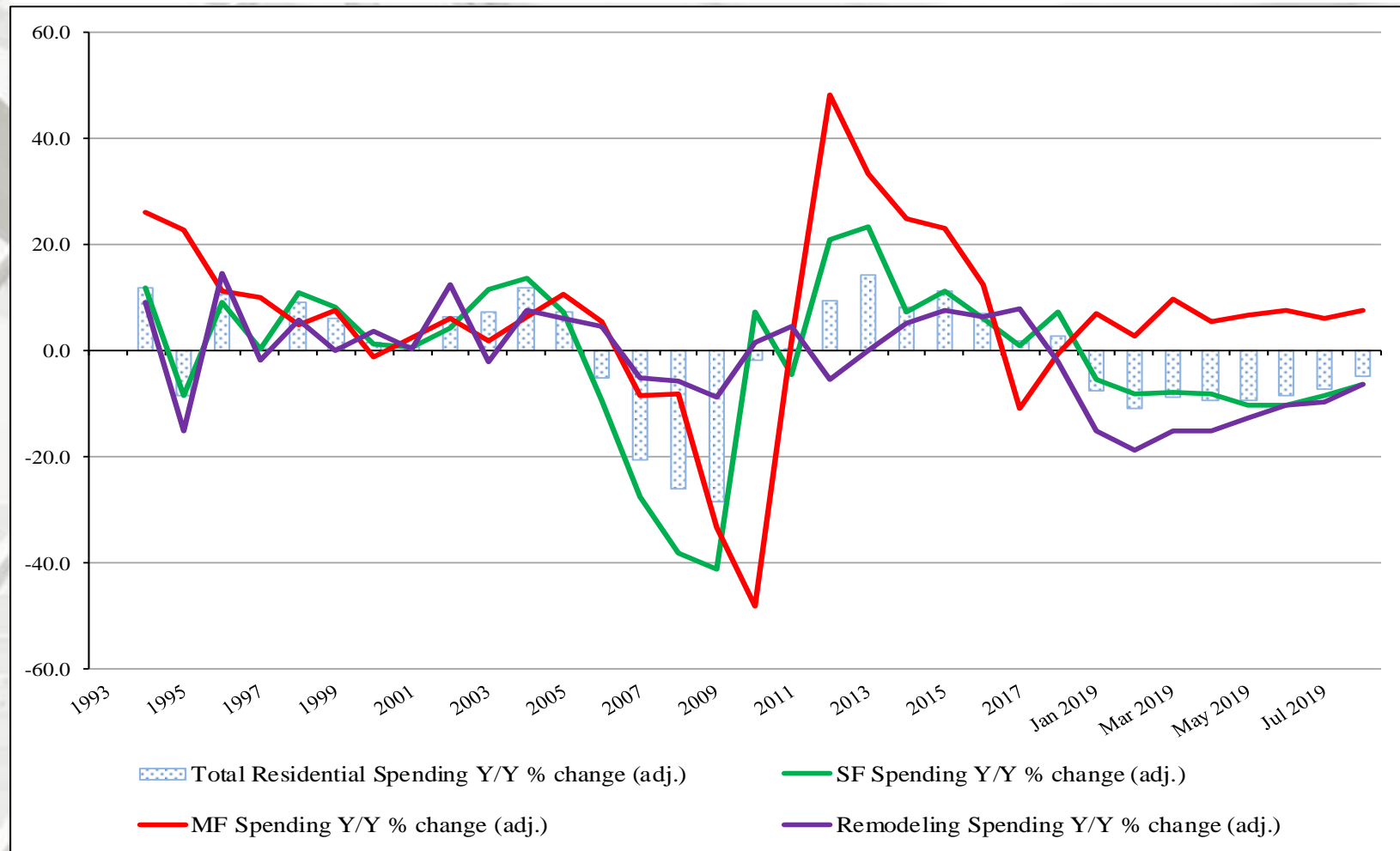
Presented above is the percentage change of inflation adjusted Y/Y construction spending. Only MF expenditures were positive on a percentage basis, year-over-year. 2019 data reported in nominal dollars.

Adjusted Construction Spending: Y/Y Percentage Change, 2000 to August 2019



Adjusted dollar values; except 2019 data – reported in nominal dollars.

Total Adjusted Construction Spending: Y/Y Percentage Change, 1993 to August 2019



Inflation Adjusted Residential Construction Spending: Y/Y percentage change, 1993 to August 2019

Only MF expenditures was positive in August, all others were negative; 2019 data reported in nominal dollars.

Construction Spending

FMI

FMI's North American Construction Outlook Second Quarter 2019 Report

“Total engineering and construction spending for the U.S. is forecast to end up 1 percent in 2019, compared to up 4 percent in 2018. Spending growth in 2019 is expected to be led by public investment across both nonresidential buildings and nonresidential structures. Current top-performing segments forecast in 2019 include conservation and development (+9 percent), transportation (+8 percent), water supply (+8 percent), public safety (+7 percent), office (+6 percent), and highway and street (+6 percent). Forecast bottom performing segments in 2019 include religious (-6 percent), single-family residential (-5 percent) and residential improvements (-4 percent).

Only one segment, sewage and waste disposal, was upgraded into our growth category through the second half of 2019. Conversely, educational and manufacturing have both been downgraded from growth to stable. Last, both single family residential and residential improvements have now been downgraded from stable to down. All three residential segments are now expected to end this year lower than 2018 spending levels.” -- Jay Bowman, Managing Director, FMI

Remodeling

Metrostudy

Remodeling Outlook Remains Positive Despite Expectations of Tight Housing Market, RRI Finds

The index posts YOY growth for the 29th consecutive quarter, but forecasts more moderate growth in 2020.

“Big-ticket remodeling activity nationwide increased 3.4% year over year (YOY) in the second quarter of 2019, Metrostudy announced in its release of the latest [Residential Remodeling Index](#) (RRI). The index climbed to a new high of 118.3 in the second quarter, a 0.7% increase from the first quarter RRI.

The RRI values means that economic conditions known to influence remodeling activity are 18.3% better than the old peak in early 2007, just before the Great Recession. The positive growth in the RRI marks the 29th consecutive quarter of YOY gains since remodeling activity bottomed in 2011.

While Metrostudy calls for continued gains over the next few years in the remodeling industry, growth is expected at slower rates. The RRI is expected to average YOY increases of 3.2% in 2019, 2.0% in 2020, and 2.4% in 2021. The projected gains in 2020 and 2021 are both lower than projections from the first quarter RRI. The moderate gains are expected to be related to lower housing turnover via the low levels of new home construction, according to Metrostudy.” – Vincent Salandro, Assistant Editor, Remodeling

Remodeling

Real Estate Investing Today

Home Improvement Spending Motivators by Generation

“Home improvement spending is up this year, and that’s because various generations are spending more on renovations than ever before. The reasoning behind this is because more individuals are buying houses and updating their homes to their liking. Millennials, Generation X, and baby boomers, all have one thing in common: they are buying homes, and spending money to fix them, but all for different reasons.

Millennials

Millennials – also known as Generation Y – are individuals born between the years of 1981 to 1996. This group of individuals has been dubbed the “renovation generation,” due to the fact that they are completing the most home improvement projects to date. There are plenty of reasons why millennials aren’t buying homes, but one of the main factors is that this generation was extremely affected by the Great Recession. Due to college debt and lack of job prospects, the labor market has been difficult and Millennials state they simply can’t afford to buy a home.

While the patterns of this generation continue to stump the real estate industry, there are some interesting insights available on millennials that are buying homes. For those people that are, they desire smaller, older homes in need of renovations. This is because they view homeownership as an investment opportunity and will be frugal in the buying process that will then allow them to make upgrades that provide the best return on investment (ROI).” – Jessica Dubois, Author, Real Estate Investing Today

Remodeling

Real Estate Investing Today

Home Improvement Spending Motivators by Generation

Millennials: Top Spending Motivators

“Since this generation was affected so drastically by the recession, they are much more frugal with spending their money. While millennials are more likely to complete more home projects, they also complete extensive research before moving forward. They use the internet, and Big Box stores such as Home Depot, or Lowes, to compare prices on their project costs. A huge motivator for spending on home improvement projects is the promise of ROI. Millennials complete home projects to increase their property value and look to improve the aesthetics and design.

Millennials: Top Remodel Project

Since this generation is looking for projects that are the best investment, it only makes sense that their top remodel projects are big-ticket rooms such as the kitchen. Kitchens are considered to be the heart of the home and center of activity, so there are many reasons why it's a good choice to invest in a remodel.

While this project can provide a good ROI – studies state an average return between 59.7 and 80.5 percent – it can also become quite costly based on the size of the renovation and materials chosen. However, it's better to place money into the kitchen, even though minor remodels, as they have a better ROI than any bathroom remodel. Since kitchen remodeling costs can vary from one homeowner to another, it's important to figure out an average cost for your kitchen renovation that's specific to your area. You'll want to do this well in advance to help determine the ROI.” – Jessica Dubois, Author, Real Estate Investing Today

Remodeling

Real Estate Investing Today

Home Improvement Spending Motivators by Generation

Generation X

“Generation X precedes millennials and is composed of individuals born between the years of 1961–1981. This generation has a higher homeownership rate compared to other generations at their age. Gen Xers are looking to buy their dream homes, and make adjustments to their liking. Many of those that fall into this generation have families, some with young children, and others who are caring for their baby boomer parents. This is a large factor in what homes they are buying, what they are renovating, and how much they are spending throughout the process.

Generation X: Top Spending Motivators

Since this generation is seeking their forever home that will accommodate their growing and aging families, they aren't hopping on the smaller home bandwagon. These buyers need plenty of space to live comfortably, which means they require larger homes.

Larger homes mean more updates, which ultimately means more money to spend. This generation is motivated to spend money on their remodeling projects to modernize their homes. While this generation does their research and considers the internet a popular home improvement resource, many utilize at-home installation services offered by Big Box stores. If they are spending the money, they want their renovations completed correctly by a professional.” – Jessica Dubois, Author, Real Estate Investing Today

Remodeling

Real Estate Investing Today

Home Improvement Spending Motivators by Generation

Generation X: Top Remodel Project

“It’s no surprise that a major bathroom remodel is a top project for Gen Xers. Many imagine having their dream on-suite, and this generation isn’t afraid to spend the money to get it. Bathrooms are a great way to relax after a long and busy day, and this generation full of working adults and families desire the option to do so.

While many home design trends can age quickly, popular bathroom trends are here to stay. More often than not, bathroom renovations consist of the addition of large walk-in showers, big bathtubs, and tiled floors. Generation X performs home improvement with the idea of remaining in their homes as they age and will follow remodeling trends to keep their homes up-to-date.

Baby Boomers

Baby boomers precede Generation X and are born between the years of 1946 to 1964. According to [a study completed by Harvard University](#), boomers will eventually make up one-third of the home improvement market. This generation is remaining in their homes later in life than members of previous generations, and they’re completing the projects to ensure they do so easily.

While numerous people think older homeowners wish to sell their homes to downsize or find new housing accommodations, many are actually looking to make renovations. Boomers choosing to renovate over selling their home are doing so to better enjoy their retirement or to safely age in place.” – Jessica Dubois, Author, Real Estate Investing Today

Remodeling

Real Estate Investing Today

Home Improvement Spending Motivators by Generation

Baby Boomers: Top Spending Motivators

“Baby boomers are seeking out ways to “modernize” their homes in ways that also provide comfort and leisure. For those that have lived in their homes for decades, they are ready to transform the areas they don’t like. Boomers outspend the other generations – and they have the financial means to do so. Aging in place requires modifications that will allow boomers to safely navigate through their home. For the boomers that face mobility issues, and may rely on a form of assistance (wheelchair or walker) their renovations are motivated by projects such as wider doorways or walk-in showers.

Baby Boomers: Top Remodel Project

For most baby boomers, home improvement projects are a means to an end. They’ve worked hard their entire life and now they’re ready to enjoy it. While most projects – as stated before— are completed to help age in place, a lot of projects are in support of low-maintenance and relaxation.

A popular renovation for boomers is the addition of a deck or patio. They’re retired (or soon to be) and want to enjoy the outdoors with family and friends. This project is the perfect way to do so. They may look for features to their deck or patio that increase the safety such as handrails, removal of stairs, or the addition of ramps for wheelchair accessibility.

Ultimately, it’s important to keep in mind that home modifications will vary based on the individual’s needs.” – Jessica Dubois, Author, Real Estate Investing Today

Existing House Sales

National Association of Realtors

August 2019 sales: 5.490 thousand

	Existing Sales	Median Price	Mean Price	Month's Supply
August	5,490,000	\$278,200	\$314,600	4.1
July	5,420,000	\$280,800	\$316,800	4.2
2018	5,350,000	\$265,600	\$304,000	4.3
M/M change	1.3%	-0.9%	-0.7%	-2.4%
Y/Y change	2.6%	4.7%	3.5%	-4.7%

All sales data: SAAR

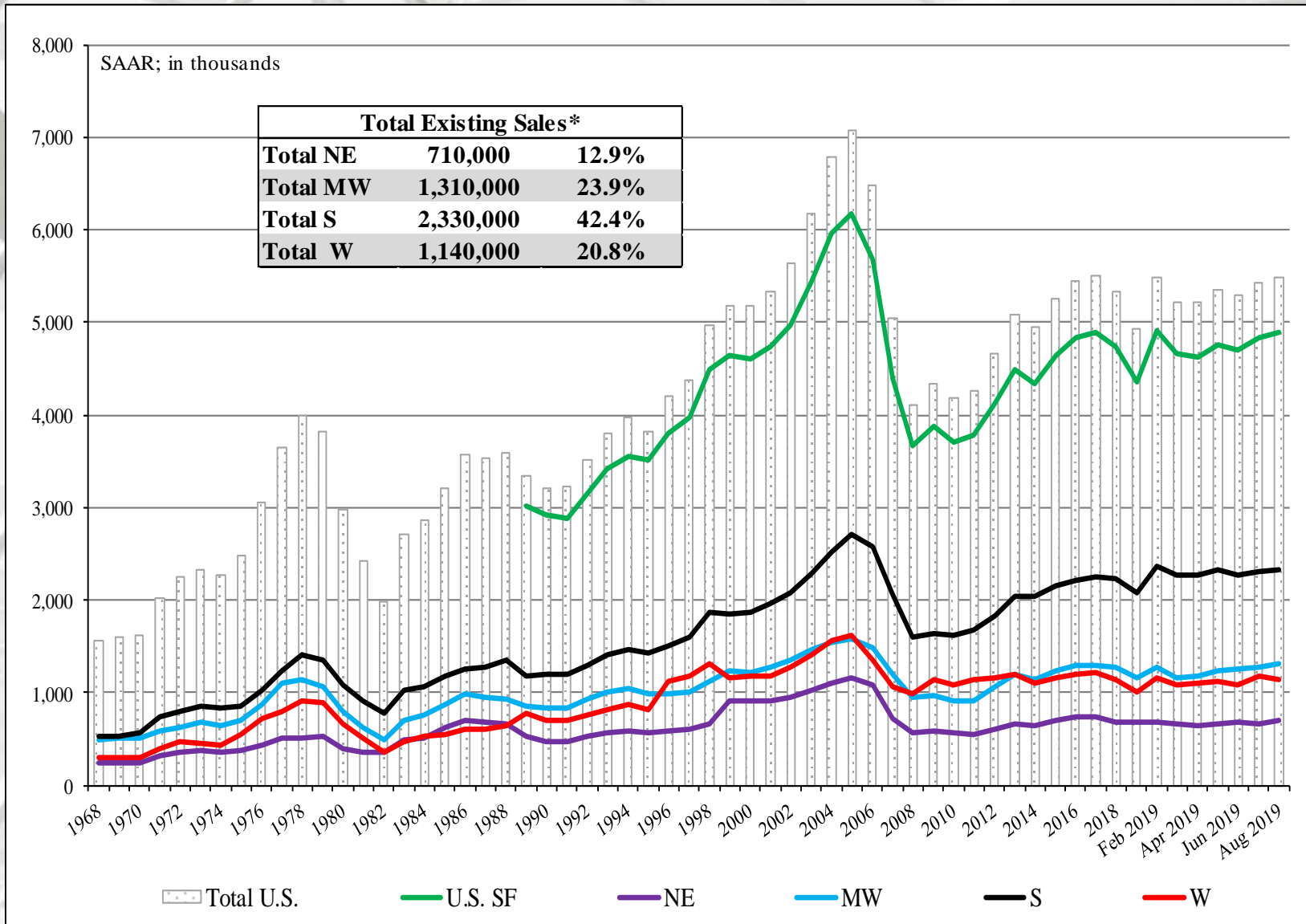
Existing House Sales

	Existing SF Sales	SF Median Price	SF Mean Price
August	4,900,000	280,700	316,100
July	4,840,000	284,000	318,800
2018	4,760,000	268,200	305,500
M/M change	1.2%	-0.9%	-0.8%
Y/Y change	2.9%	4.7%	3.5%

	NE	MW	S	W
August	710,000	1,310,000	2,330,000	1,140,000
July	660,000	1,270,000	2,310,000	1,180,000
2018	700,000	1,280,000	2,250,000	1,120,000
M/M change	7.6%	3.1%	0.9%	-3.4%
Y/Y change	1.4%	2.3%	3.6%	1.8%

All sales data: SAAR.

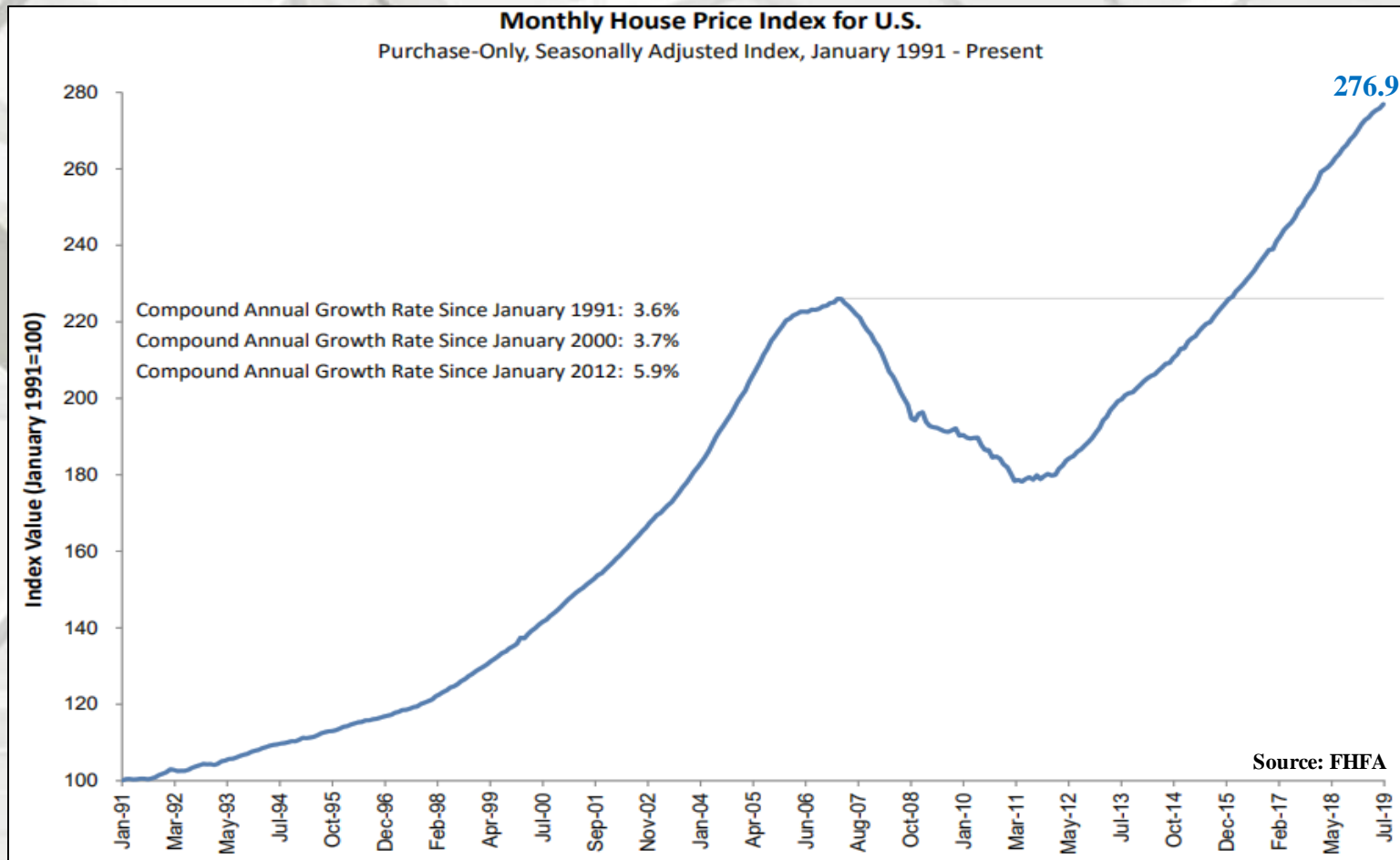
Existing House Sales



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

* Percentage of existing sales.

U.S. Housing Prices



FHFA House Price Index Up 0.4 Percent in July; Up 5.0 Percent from Last Year

“The FHFA House Price Index (HPI) reported a **0.4 percent** increase in U.S. house prices in July from the previous month. From July 2018 to July 2019, house prices were up 5.0 percent. For the nine census divisions, seasonally adjusted monthly price changes from June 2019 to July 2019 ranged from +0.1 percent in the Middle Atlantic division to +1.2 percent in the Mountain division. The 12-month changes were all positive, ranging from +3.6 percent in the Middle Atlantic division to +7.6 percent in the Mountain division.” – Corinne Russell and Stefanie Johnson, FHFA

U.S. Housing Prices

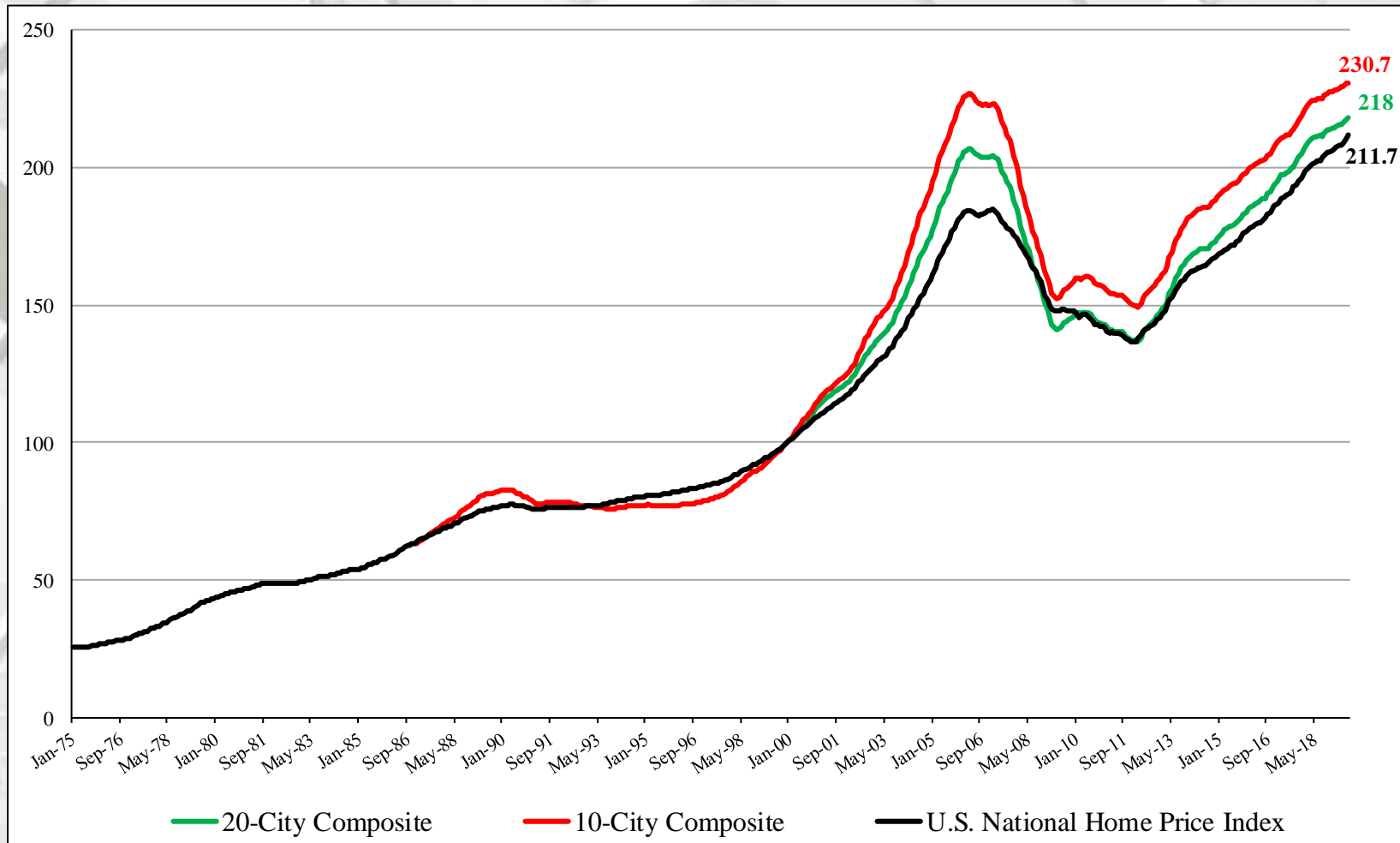
“Data for July 2019 shows that the rate of home price increases across the U.S. continues to slow. The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 3.2% annual gain in July, remaining the same from the previous month. The 10-City Composite annual increase came in at 1.6%, down from 1.9% in the previous month. The 20-City Composite posted a 2.0% year-over-year gain, down from 2.2% in the previous month.

Charlotte Joins Top Three Cities In Annual Home Price Gains According To S&P CoreLogic Case-Shiller Index

“Year-over-year home prices continued to gain, but at ever more modest rates. Charlotte surpassed Tampa to join the top three cities, and Seattle may be turning around from its recent negative streak of YOY price changes, improving from -1.3% in June to -0.06% in July.

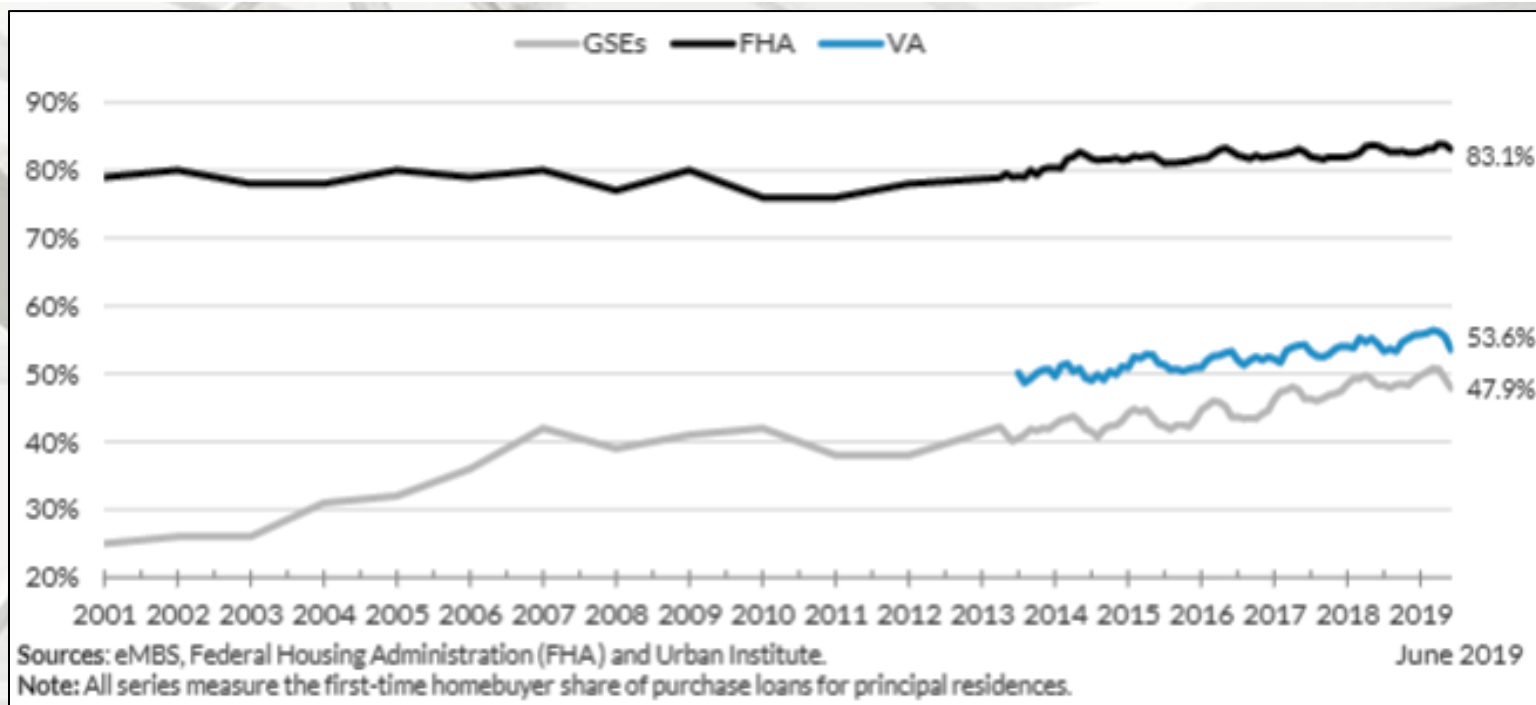
Overall, leadership remains in the southwest (Phoenix and Las Vegas) and southeast (Charlotte and Tampa). Other pockets of relative strength include Minneapolis, which increased its YOY gain to 4.2%, and Detroit, which is closely behind at 4.1% YOY. The 10-City and 20-City Composites both experienced lower YOY price gains than last month, declining to 1.6% and 2.0% respectively. However, the U.S. National Home Price NSA Index remained steady with a YOY price gain of 3.2%, the same as prior month. Home price gains remained positive in low single digits in most cities, and other fundamentals indicate renewed housing demand. According to the National Association of Realtors, the YOY change in existing home sales was positive in July for the first time in a number of months, and housing supply tightened since peaking in June.” – Philip Murphy, Managing Director and Global Head of Index Governance, S&P Dow Jones Indices

S&P/Case-Shiller Home Price Indices



“Phoenix, Las Vegas and Charlotte reported the highest year-over-year gains among the 20 cities. In July, Phoenix led the way with a 5.8% year-over-year price increase, followed by Las Vegas with a 4.7% increase, and Charlotte with a 4.6% increase. Seven of the 20 cities reported greater price increases in the year ending July 2019 versus the year ending June 2019.” – Soogyung Jordan, Global Head of Communications, S&P CoreLogic

First-Time House Buyers

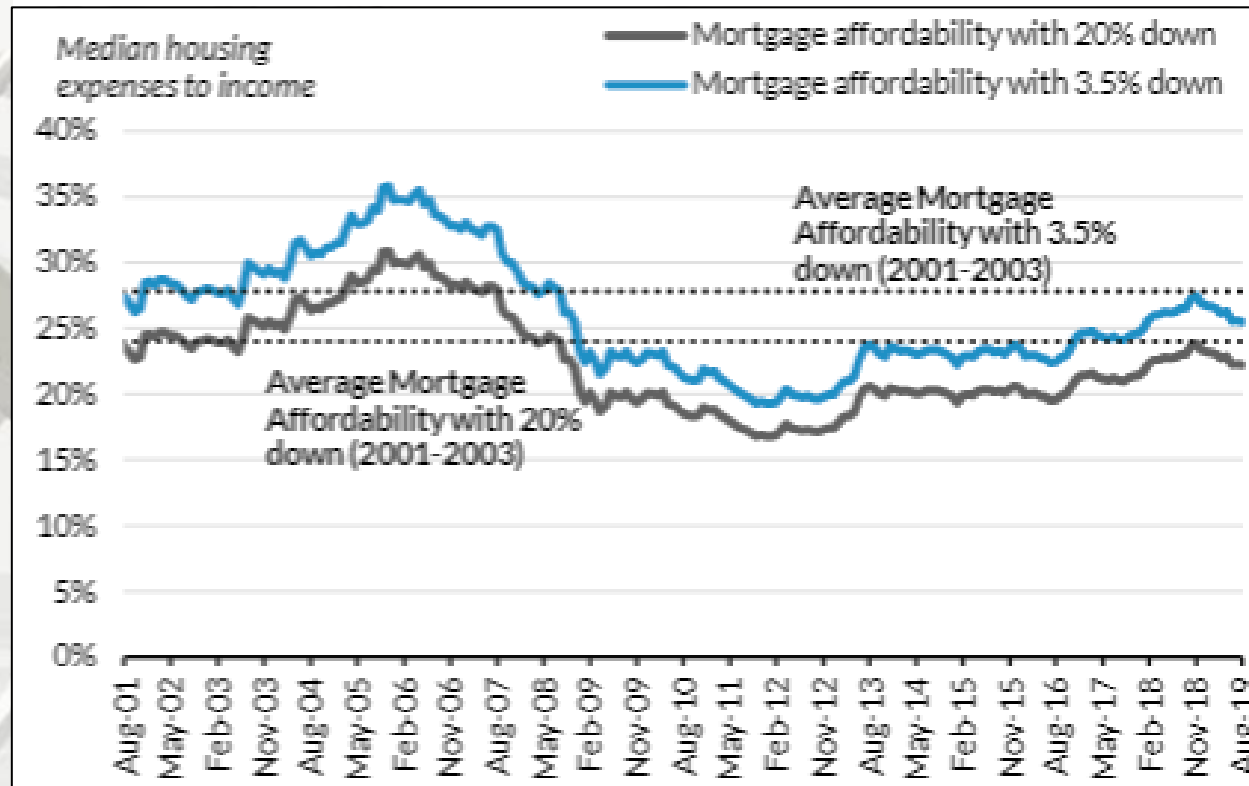


Urban Institute

“In June 2019, the FTHB share for FHA, which has always been more focused on first time home buyers, fell very slightly to 83.1 percent. The FTHB share of VA lending also fell in June, to 53.6 percent. The GSE FTHB share in June was 47.9 percent. The bottom table shows that based on mortgages originated in June 2019, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and higher LTV and higher DTI, thus paying a higher interest rate.” – Bing Lai, Research Associate, Housing Finance Policy Center

Housing Affordability

National Housing Affordability Over Time



Urban Institute

“Home prices remain affordable by historic standards, despite price increases over the last 7 years, as interest rates remain relatively low in an historic context. As of August 2019, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 22.2 percent; with 3.5 down, it is 25.5 percent. Since February, the median housing expenses to income ratio has been slightly lower than the 2001-2003 average. As shown in the bottom picture, mortgage affordability varies widely by MSA.” – Laurie Goodman, VP, Housing Finance Policy Center

Mortgage Credit Availability

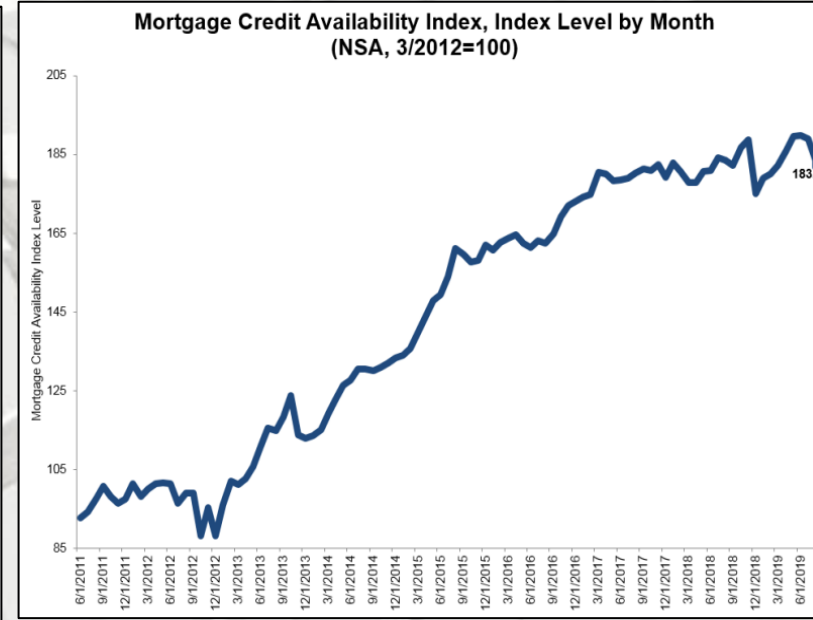
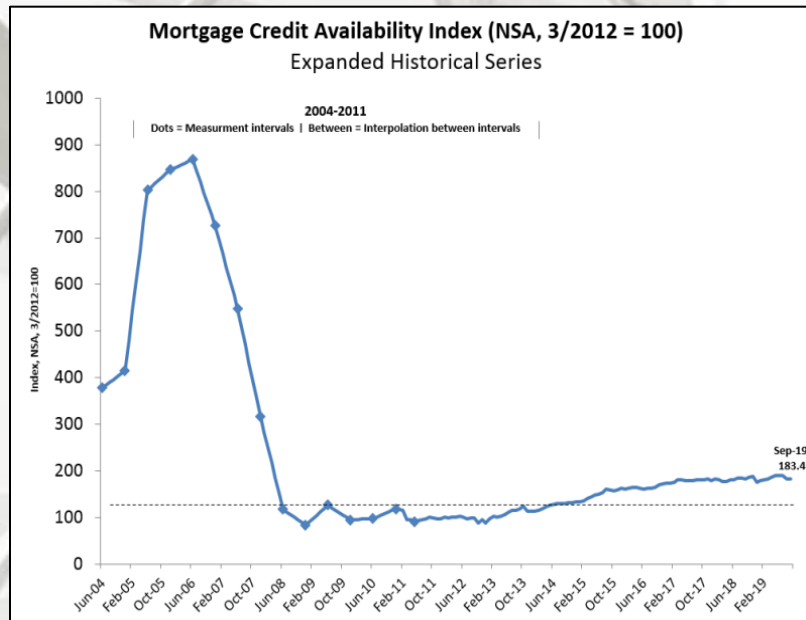
Mortgage Credit Availability Increased in September

“Mortgage credit availability decreased in August 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 rose by 0.9 percent to 183.4 in September. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI increased 2.4 percent, while the Government MCAI decreased by 0.6 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 4.7 percent, and the Conforming MCAI fell by 1.1 percent.

Credit availability increased slightly in September, driven by a 5 percent increase in the supply of jumbo loans. The jumbo index, which grew from a combination of lower credit score requirements, non-QM loans, and investor products, is now at a record high since tracking began in 2011. Meanwhile, the trend of tightening credit availability in conforming and government programs continued over the past few months, as both indices decreased.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

Mortgage Credit Availability



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

United States Housing Market

Zillow

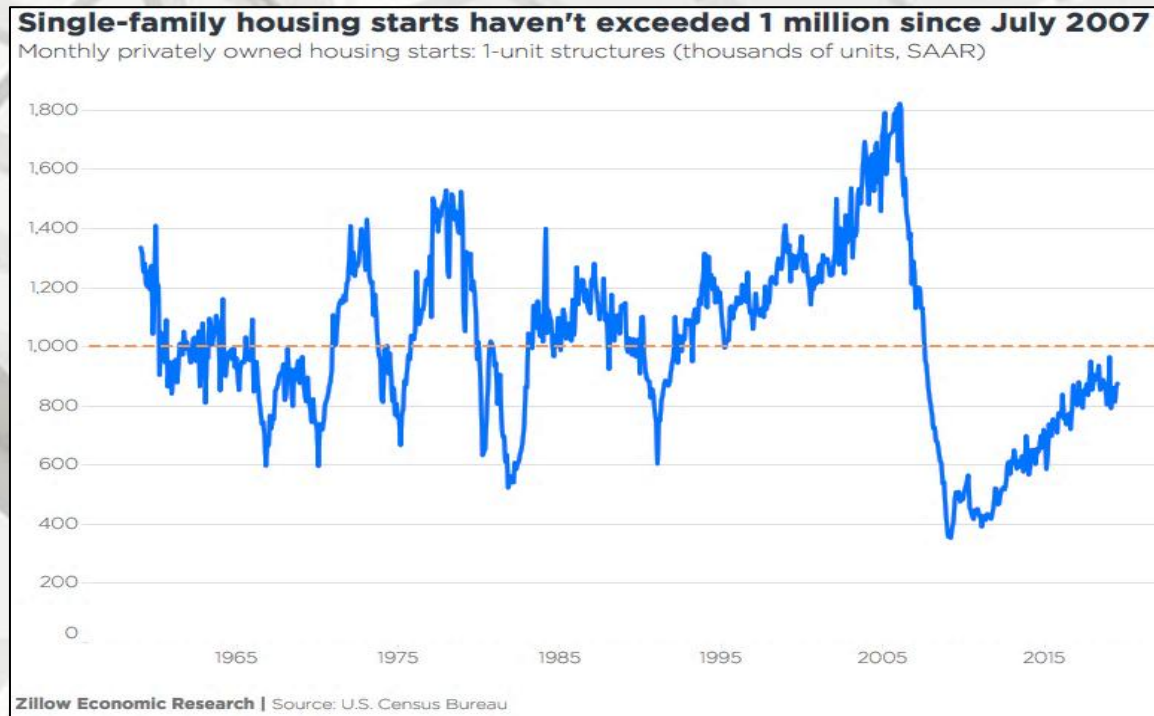
Experts: It May Take Years for Home Building to Get Back to Historic Levels

- “The average seasonally adjusted annual rate (SAAR) of new single-family housing starts in any given month since 1959 is just over 1-million. But in every year since 2007 the rate has failed to reach that level, and a majority of experts surveyed by Zillow said they don’t expect starts to record another seven-digit rate until 2022 or later.
- The most popular potential solutions among panelists to help bump building activity include relaxing local review regulations for projects of a certain size, reducing mandatory minimum lot sizes and easing the land subdivision process for landowners.
- On average, panelists said they expect annual home value growth – currently growing at a 5.2% pace – to slow to 3.6% by the end of this year.

Today’s slow pace of single-family home building isn’t expected to get back to historic norms until 2022 or later, and expectations for home value growth over the next few years continue to weaken, according to a recent Zillow survey of more than 100 economists and real estate experts.

Since 1959, the average seasonally adjusted annualized rate (SAAR) of new single-family housing starts has been just over 1-million in any given month, reaching heights of more than 1.8-million in a handful of months in 2006, on the eve of the Great Recession. But single-family starts fell off a cliff soon after, and haven’t exceeded 1-million (SAAR) in a month since July 2007.” – Zillow Research

United States Housing Market

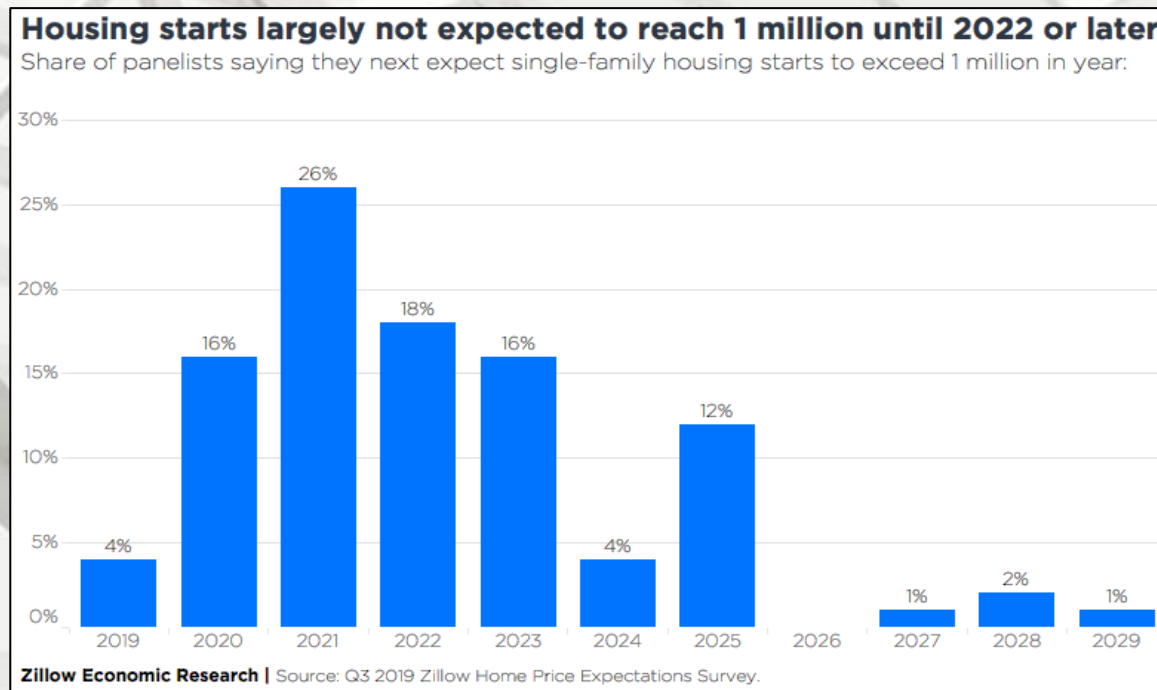


Zillow

Experts: It May Take Years for Home Building to Get Back to Historic Levels

“The Q3 2019 Zillow Home Price Expectations Survey, sponsored by Zillow and administered by Pulsenomics, asked more than 100 economists, investment strategists and housing experts for their opinions on when annualized housing starts will next reach one million. [1] Just 1 in 5 panelists with an opinion about this matter (20%) said they expect single-family starts to reach that mark before the end of 2020. More than a quarter of respondents (26%) said it might happen in 2021, the most popular single response year – but taken together, a majority (54%) said the 1-million mark was most likely to be exceeded in 2022 or later.” – Zillow Research

United States Housing Market

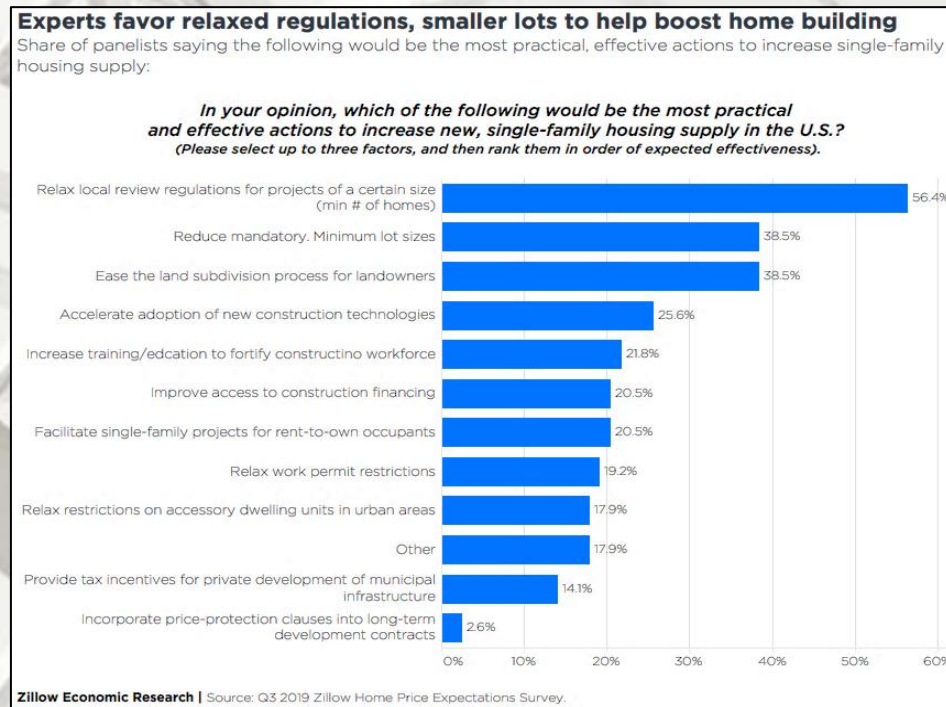


Zillow

Experts: It May Take Years for Home Building to Get Back to Historic Levels

“Research indicates that in recent years, [the level of building has fallen well short](#) of what would otherwise be expected to simply keep up with population growth. But builders during that time have had [well-documented difficulties](#) ramping up homebuilding activity, grappling with issues related to acquiring buildable land in desirable areas; securing lumber and other materials; and finding enough workers. As prices for these key inputs rise and/or succumb to stretches of volatility, it is increasingly difficult for builders to profitably construct large numbers of homes, especially at price points accessible to low- and middle-income home buyers. Rising local regulatory costs related to permitting, environmental review and/or zoning restrictions often also play a role.” – Zillow Research

United States Housing Market



Zillow

Experts: It May Take Years for Home Building to Get Back to Historic Levels

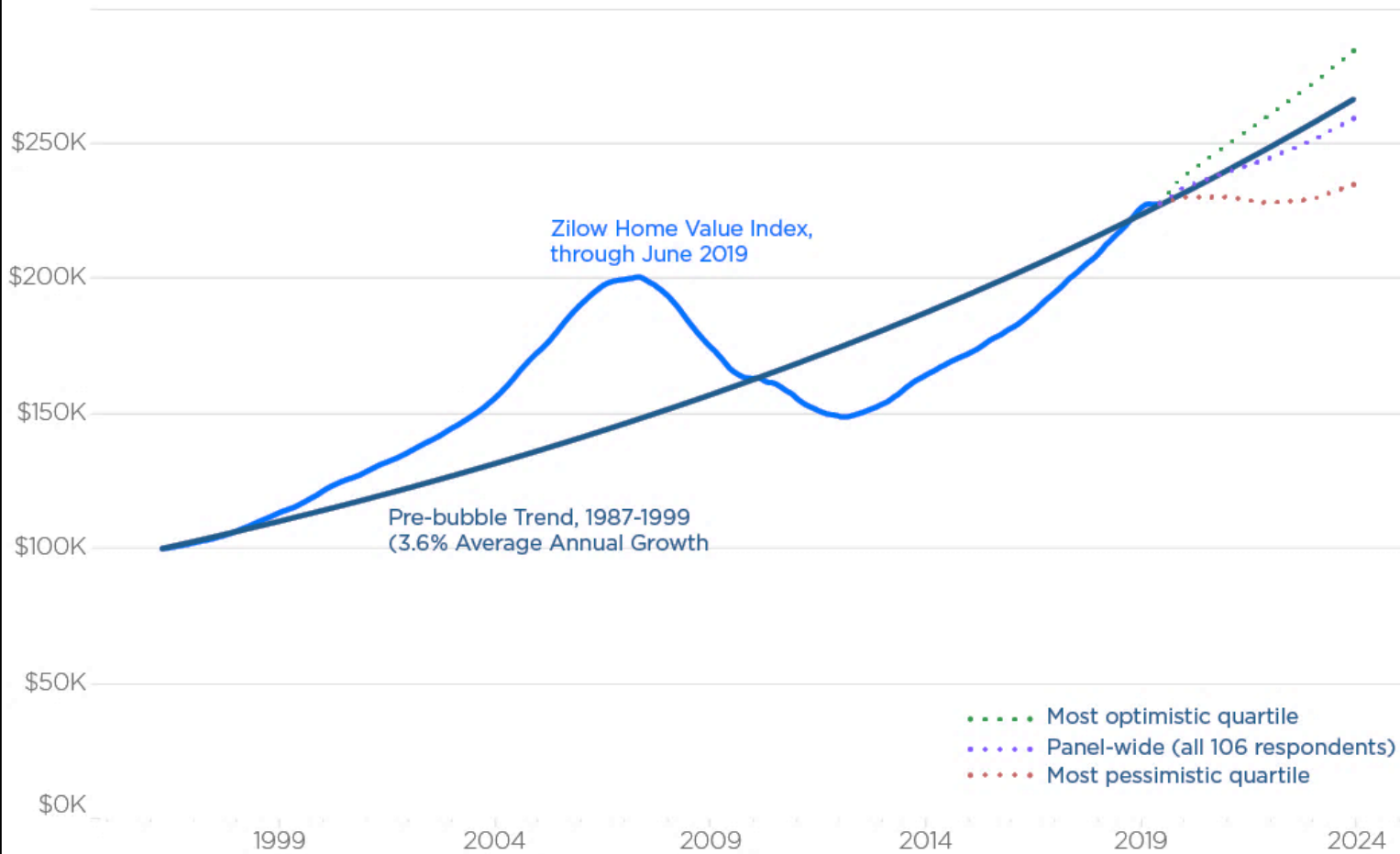
“Panelists were asked to select up to three possible solutions that might make building easier, and to rank their selections in order of their expected effectiveness in goosing home building activity. The three most commonly chosen and highest-ranked actions chosen were:

- Relaxing local review regulations for projects of a certain size (chosen by 56% of panelists [\[2\]](#))
- Reducing mandatory minimum lot sizes (38% of panelists)
- Easing the land subdivision process for landowners (38%)” – Zillow Research

United States Housing Market

Longer-term U.S. home value growth largely expected to match pre-bubble trends

Expectations for U.S. home value growth, 2019-2023



Zillow Economic Research | Source: Q3 2019 Zillow Home Price Expectations Survey.

United States Housing Market

Zillow

Experts: It May Take Years for Home Building to Get Back to Historic Levels

“A key factor for builders in determining their own appetite for ramping up activity will be expectations for future home value growth – and panelists are currently more pessimistic on their growth projections over the next few years than they were at the same time last year.

Panelists were asked to project annual growth in the Zillow Home Value Index by the end of this year and through 2023. On average, panelists said they expect annual home value growth – [currently growing at a 5.2% pace](#) – to slow to 3.6% by the end of this year and to 2.5% and 2.2% in 2020 and 2021, respectively, before picking up somewhat to 2.65% and 3.4% by the end of 2022 and 2023. Those forecasts are slower than what was expected by the same panel at the same time last year (Q3 2018), when panelists forecast growth of 4.2% in 2019, 2.9% in 2020, 2.6% in 2021 and 2.9% in 2022. [\[3\]](#)

Through the end of this year, the most optimistic quartile of respondents said they expected annual home value growth to stay about the same as it is currently and end the year up 5.45%; the most pessimistic quartile said they expected growth to slow even further, to 2.15%.

[\[1\]](#) This edition of the Zillow Home Price Expectations Survey surveyed 106 experts between July 25, 2019 and August 6, 2019. The survey was conducted by Pulsenomics LLC on behalf of Zillow, Inc.

[\[2\]](#) Responses were also scored by weighting the factors according to the importance-ranking assigned to each factor selected by panelists.

[\[3\]](#) Panelists were not asked to provide a forecast for 2023 annual home value growth in the Q3 2018 version of the Zillow Home Price Expectations Survey.” – Zillow Research

Summary

In conclusion:

August 2019 United States housing data indicated improvement in most categories; yet, most indicators remain well less than their respective historical averages. Single-family starts, permits, and completions were all positive month-over-month. Total housing starts, permits, under construction, and completions were positive year-over-year. New single-family sales recorded impressive month-over-month and year-over-year gains. Notably, total and single-family private construction spending continued year-over-year declines.

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.

Cons:

- 1) Housing affordability indicates improvement;
- 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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