

The Virginia Tech – U.S. Forest Service October 2017 Housing Commentary: Section I



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<http://woodproducts.sbio.vt.edu/housing-report>. To request the report, please email: buehlmann@gmail.com

Opening Remarks

October's housing data remained tepid. Housing starts, including new single-family starts, appear to have leveled-off on a year-to-year basis. The bright points in October were total starts and completions. Regionally, data were mixed across all sectors. The December 14th Atlanta Fed GDPNow™ model projects aggregate residential investment spending to increase 5.1% in Quarter Four 2017. New private construction expenditures are estimated to decrease (-2.1%); the improvement spending forecast is for a 4.8% increase; and the manufactured/mobile housing forecast is a 30.7% increase (all: seasonally adjusted annual rate).¹

“Everyone needs to remember that a rebound from the September hurricanes likely drove U.S. new home sales to a 10-year high, not a fundamental shift in the conditions which constrain single-family construction. For the year to date, mortgage applications for new homes are up 6.6 percent over last year, according to MBA's Builder Applications Survey, with the three-month moving average up just 5 percent relative to the same period a year ago. Labor shortages are poised to put the homebuilding industry under pressure to meet accumulating demand for new homes in 2018, raising wages and the costs of new construction.”² – Lynn Fisher, Vice President of Research and Economics, Mortgage Bankers Association

This month's commentary also contains a 2018 forecast, applicable housing data; new single-family and multifamily analysis; construction firms, housing occupancy and vacancy; remodeling projections; and economic and demographic information. Section I contains data and commentary and Section II includes Federal Reserve analysis, private indicators, and demographic commentary.

Sources: ¹ <https://www.frbatlanta.org/-/media/Documents/cqer/researchcq/gdpnow/GDPTrackingModelDataAndForecasts.xlsx>; 12/14/17;

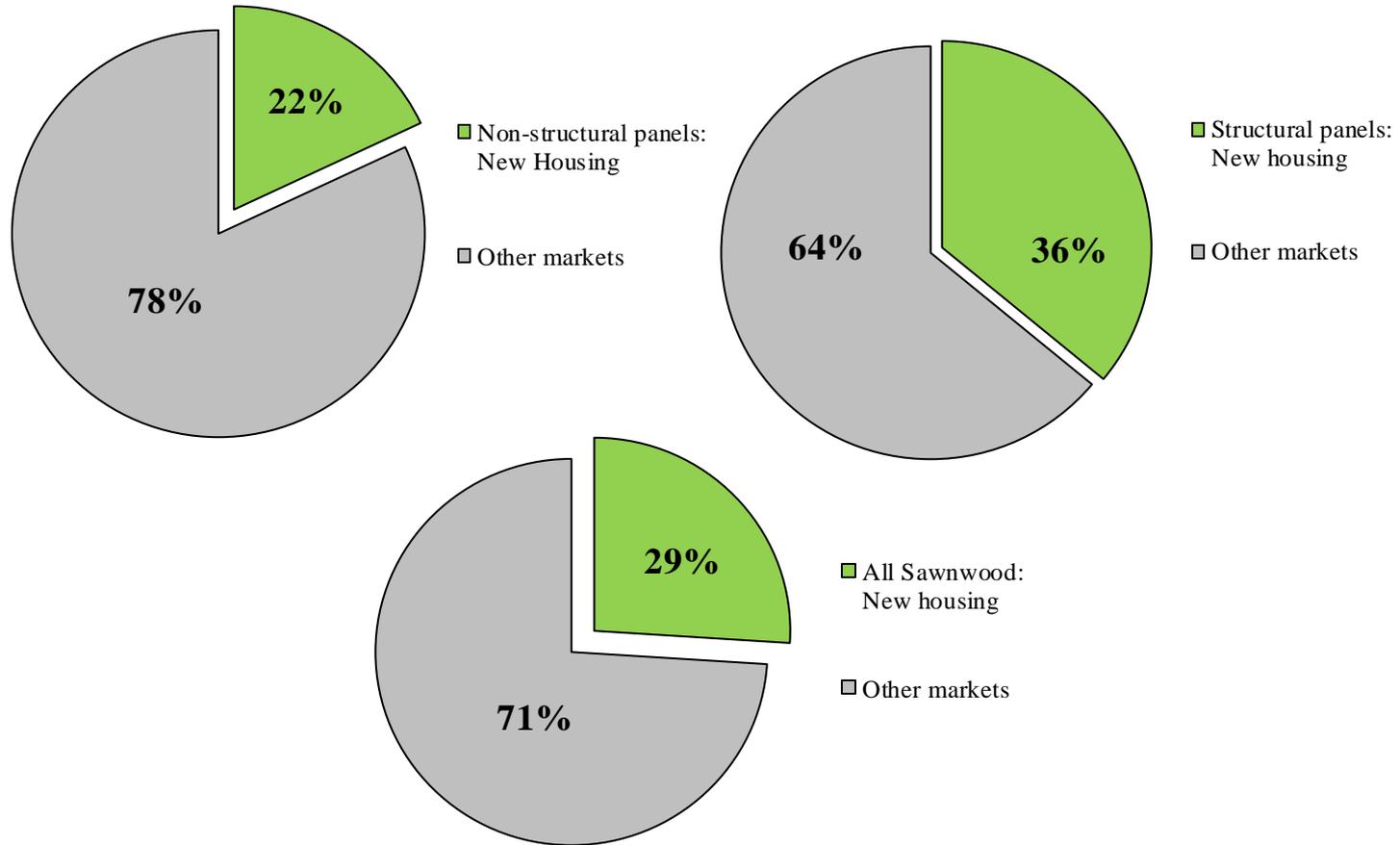
² <https://www.mba.org/news-research-and-resources/newsroom>; 11/28/17

October 2017 Housing Scorecard

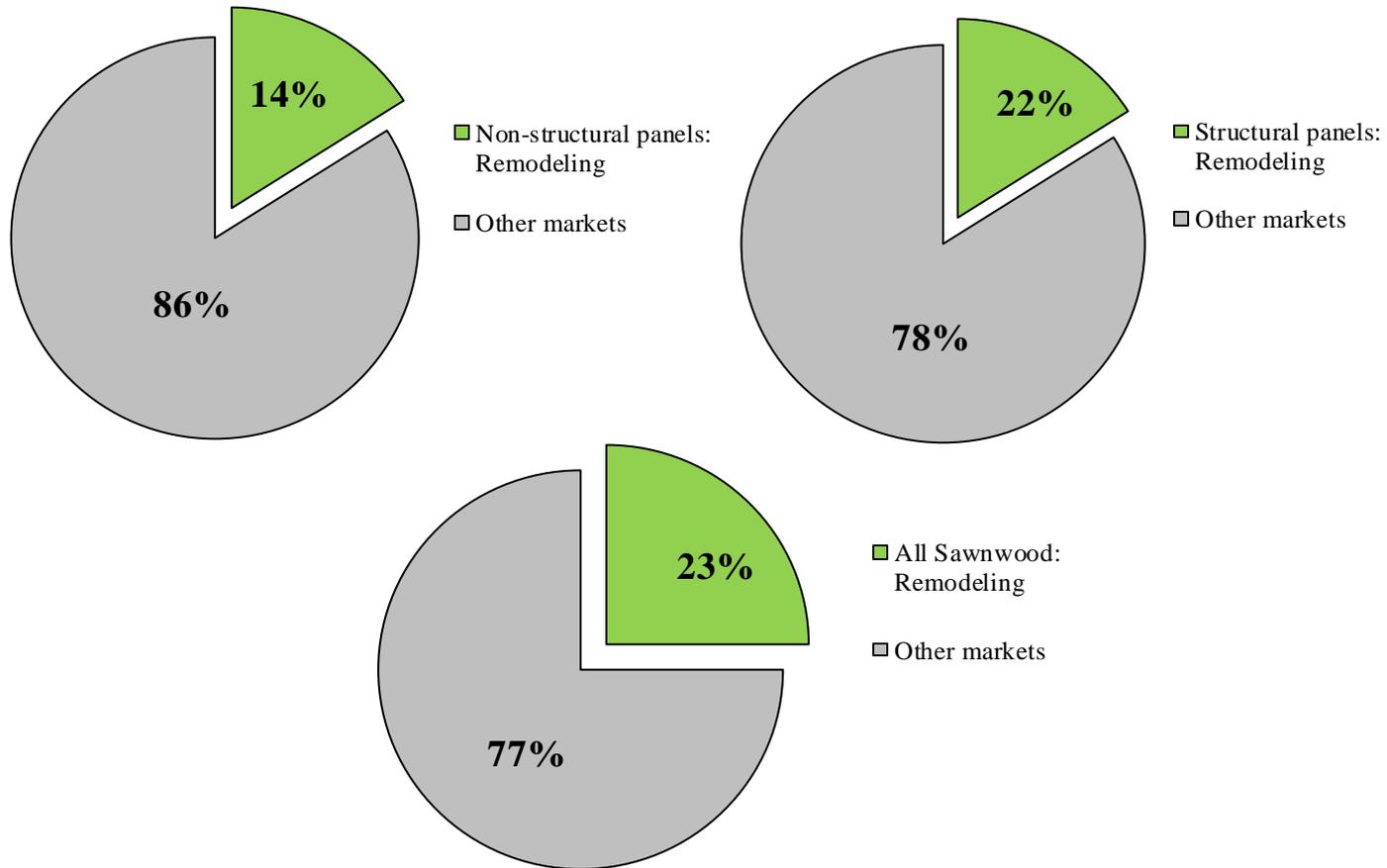
	M/M	Y/Y
Housing Starts	△ 13.7%	▽ 2.9%
Single-Family Starts	△ 5.3%	△ 0.7%
Housing Permits	△ 5.9%	△ 0.9%
Single-Family Permits	△ 1.9%	△ 7.7%
Housing Completions	△ 12.6%	△ 15.5%
Single-Family Completions	△ 2.6%	△ 5.0%
New Single-Family House Sales	△ 6.2%	△ 18.7%
Private Residential Construction Spending	△ 0.4%	△ 7.4%
Single-Family Construction Spending	△ 0.3%	△ 8.9%
Existing House Sales ¹	△ 2.0%	▽ 0.9%

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

New Construction's Percentage of Wood Products Consumption



Repair and Remodeling's Percentage of Wood Products Consumption



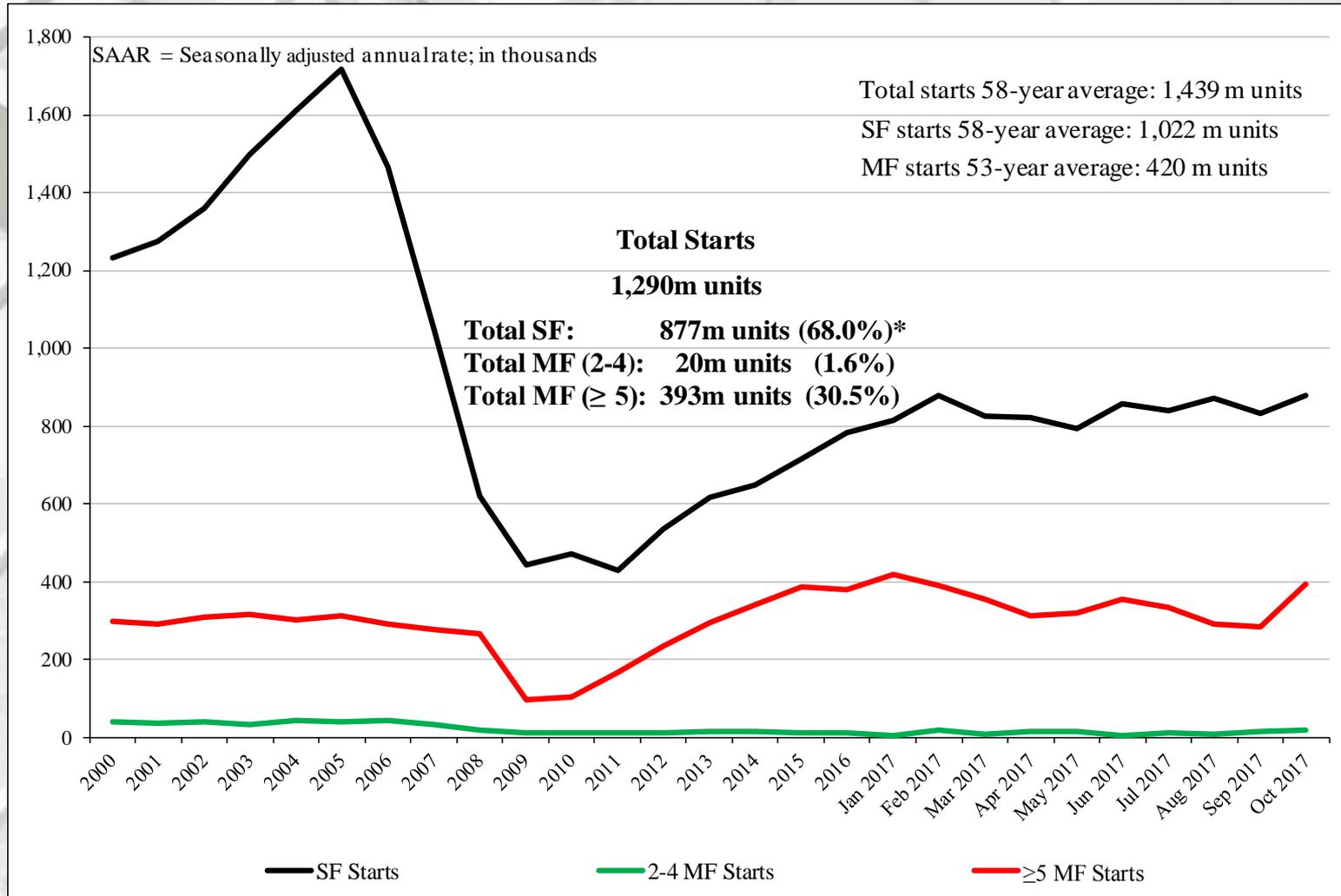
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
October	1,290,000	877,000	20,000	393,000
September	1,135,000	833,000	16,000	286,000
2016	1,328,000	871,000	10,000	447,000
M/M change	13.7%	5.3%	25.0%	37.4%
Y/Y change	-2.9%	0.7%	100.0%	-12.1%

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

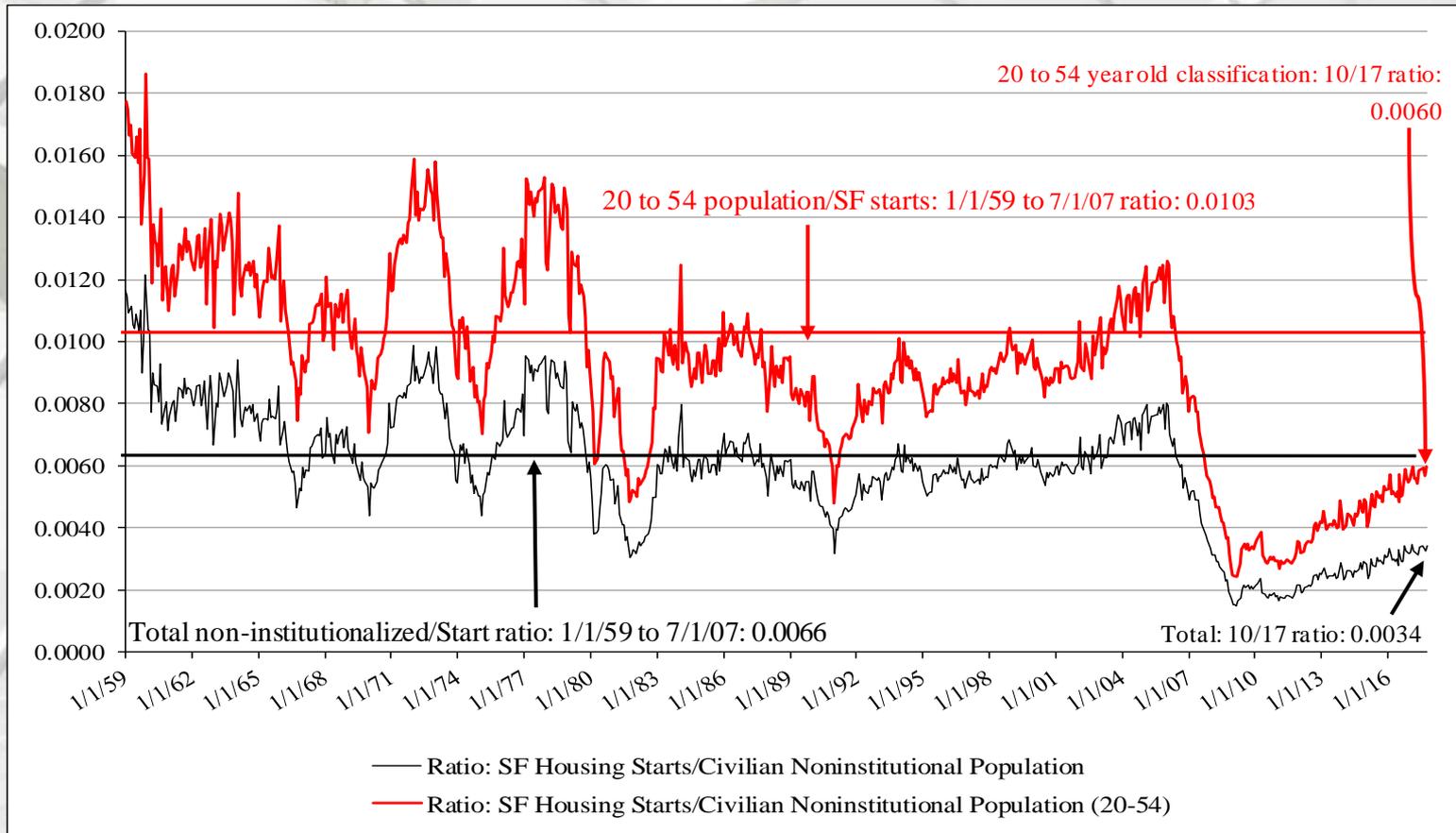
** US DOC does not report 2 to 4 multifamily starts directly, this is an estimation ((Total starts – (SF + 5 unit MF)).

Total Housing Starts



* Percentage of total starts.

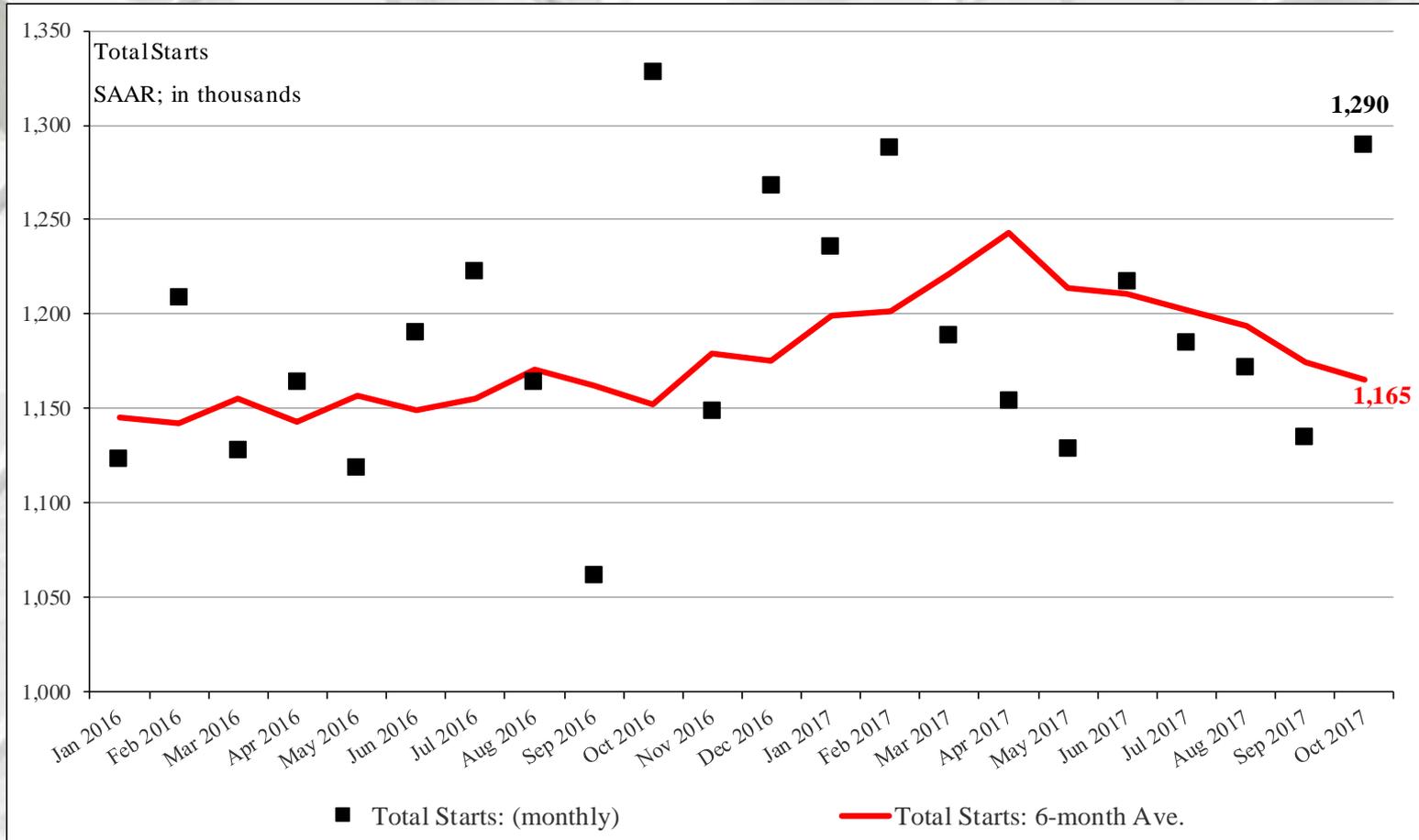
New SF Starts



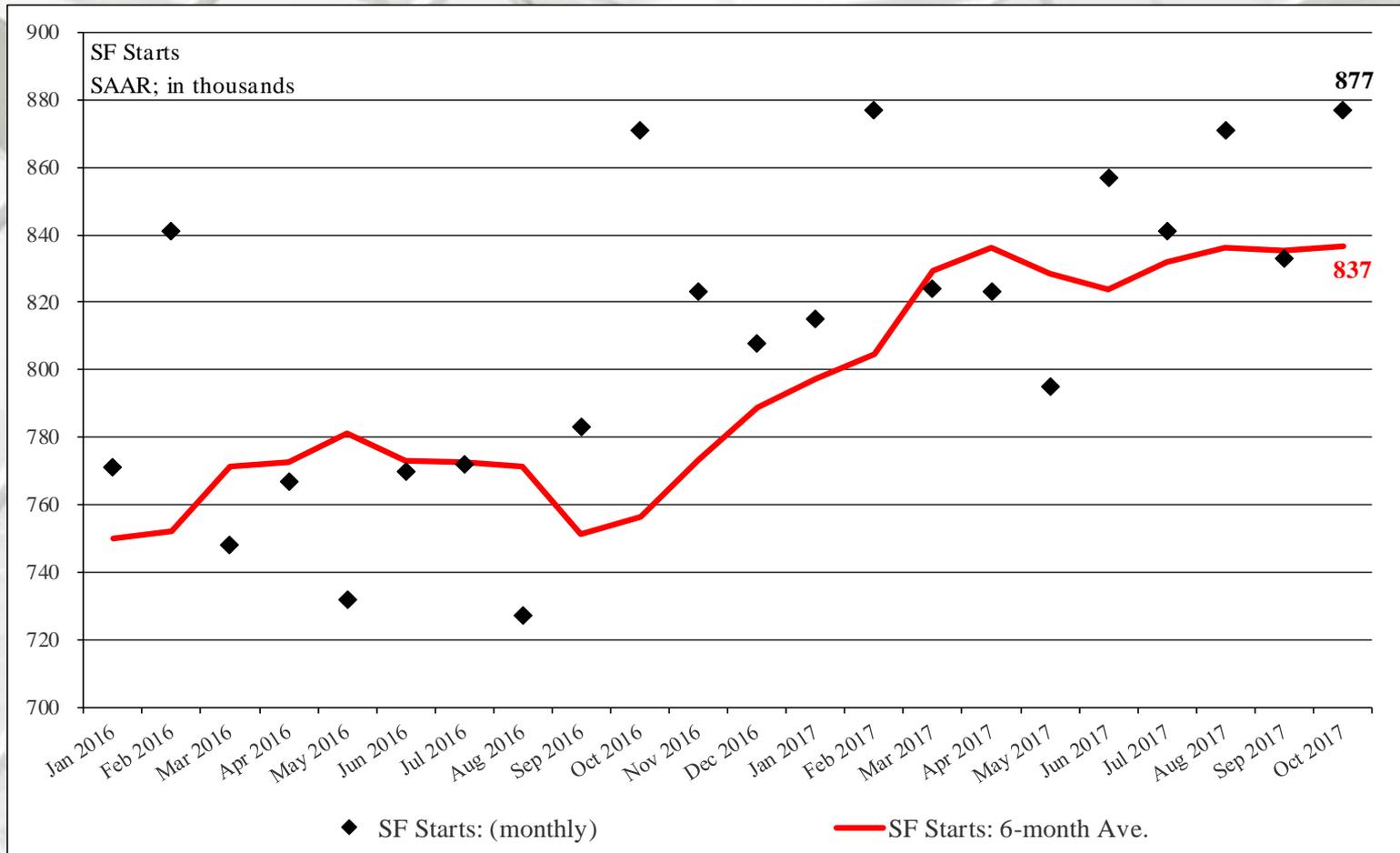
New SF starts adjusted for the US population

From January 1959 to July 2007, the long-term ratio of new SF starts to the total US non-institutionalized population was 0.0066; in October 2017 it was 0.0034— an increase from September (0.0033). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in October 2017 it was 0.0060 – a substantial increase from September (0.0057). From a population worldview, 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 Total	NE SF	NE MF**
October	145,000	59,000	86,000
September	102,000	76,000	26,000
2016	162,000	68,000	94,000
M/M change	42.2%	-22.4%	230.8%
Y/Y change	-10.5%	-13.2%	-8.5%

	MW Total	MW SF	MW MF
October	212,000	138,000	74,000
September	179,000	128,000	51,000
2016	198,000	125,000	73,000
M/M change	18.4%	7.8%	45.1%
Y/Y change	7.1%	10.4%	1.4%

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

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

New Housing Starts by Region

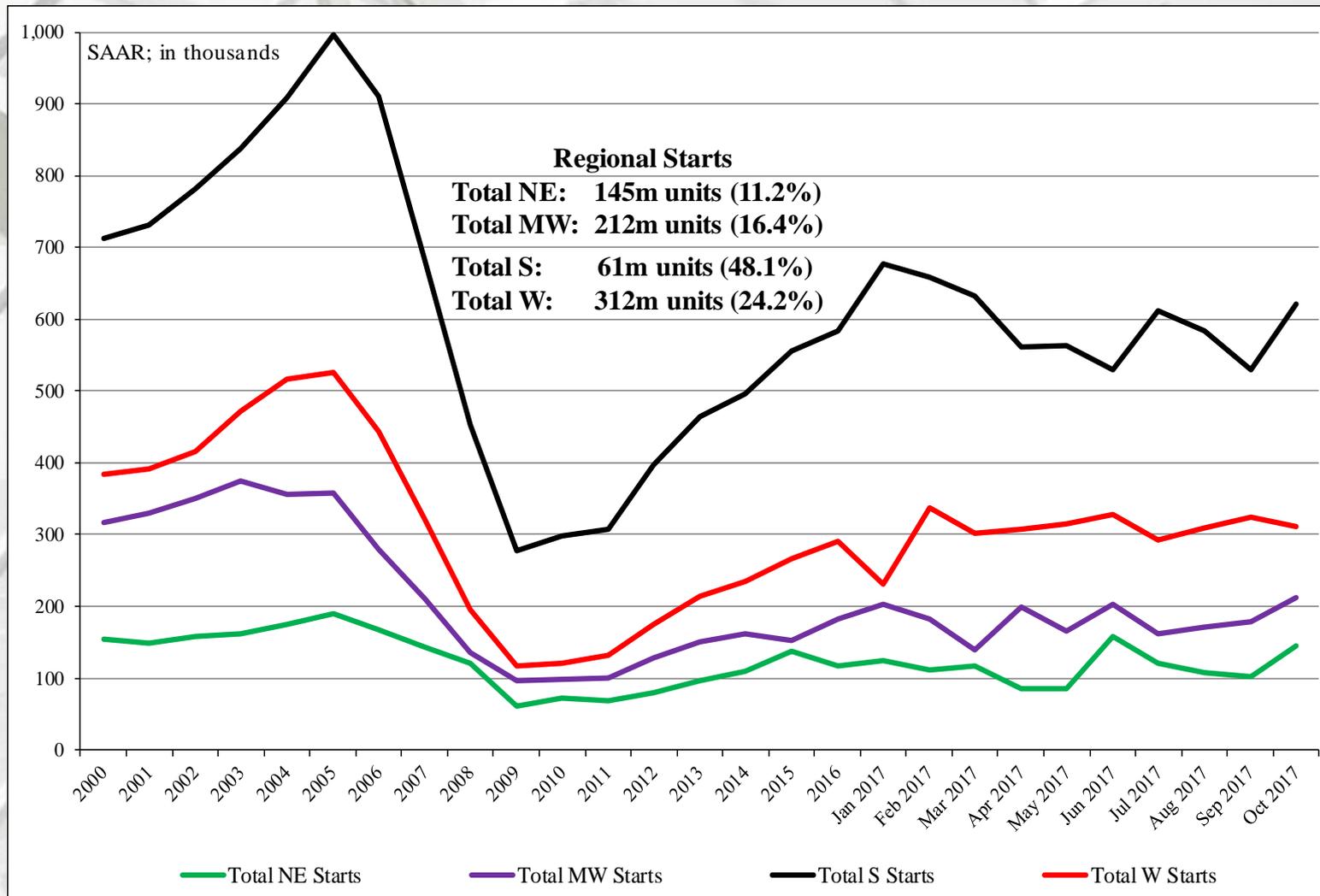
	S Total	S SF	S MF**
October	621,000	477,000	144,000
September	530,000	409,000	121,000
2016	624,000	463,000	161,000
M/M change	17.2%	16.6%	19.0%
Y/Y change	-0.5%	3.0%	-10.6%

	W Total	W SF	W MF
October	312,000	203,000	109,000
September	324,000	220,000	104,000
2016	344,000	215,000	129,000
M/M change	-3.7%	-7.7%	4.8%
Y/Y change	-9.3%	-5.6%	-15.5%

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

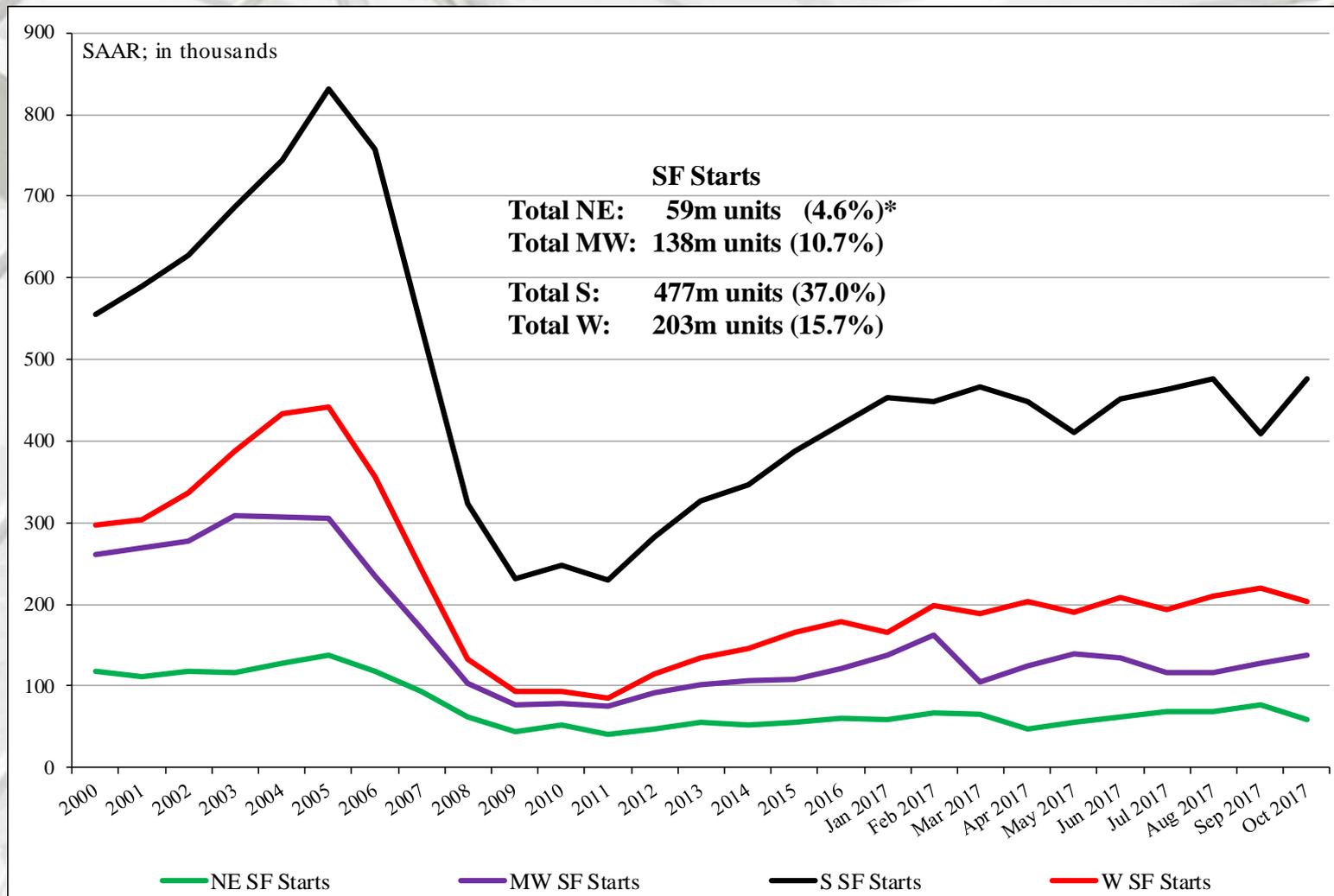
** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

Total Housing Starts by Region



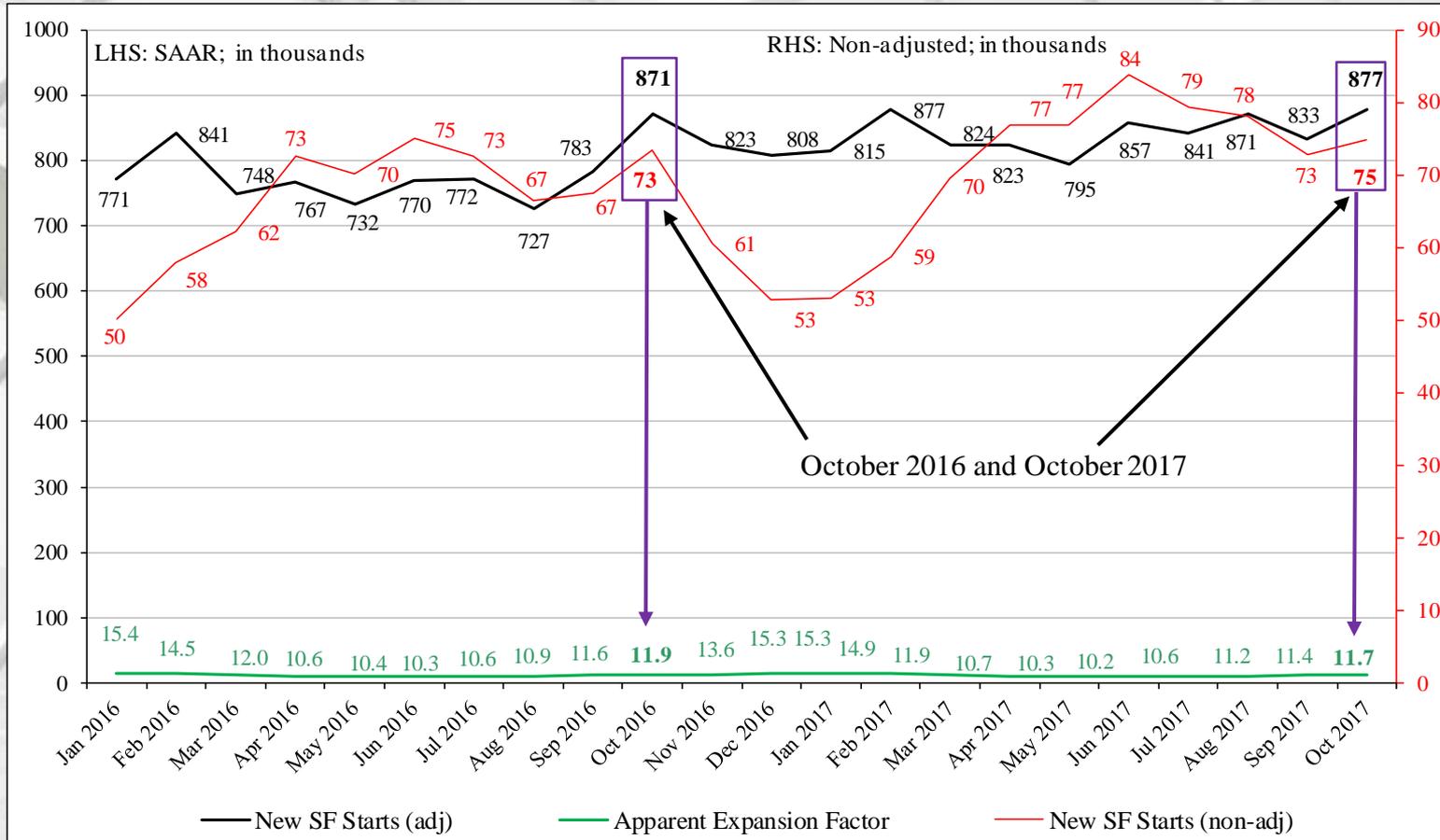
* Percentage of total starts.

SF Housing Starts by Region



* Percentage of total SF starts.

Nominal & SAAR SF Starts

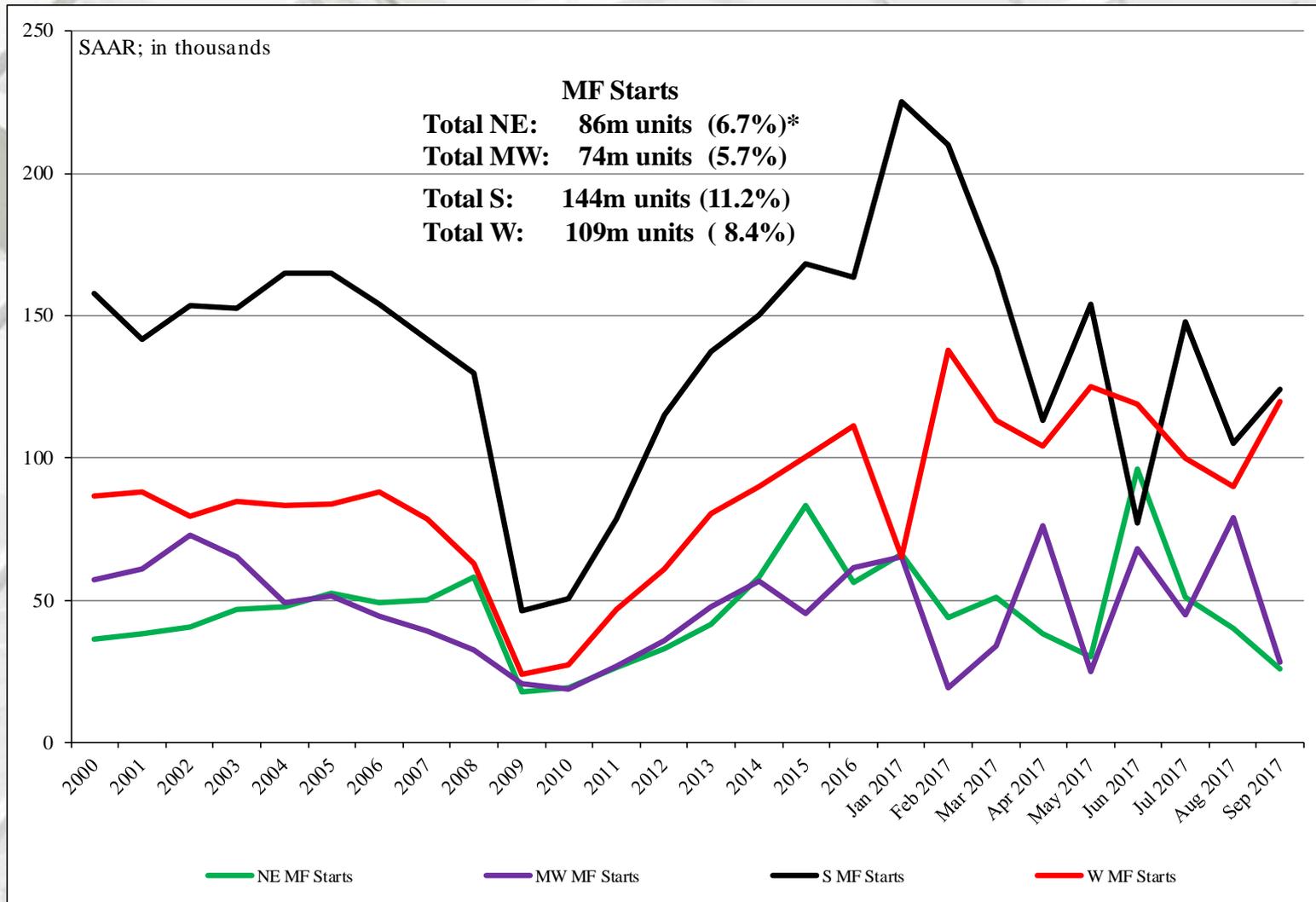


Nominal and Adjusted New SF Monthly Starts

Presented above is nominal (non-adjusted) new SF start data contrasted against SAAR data.

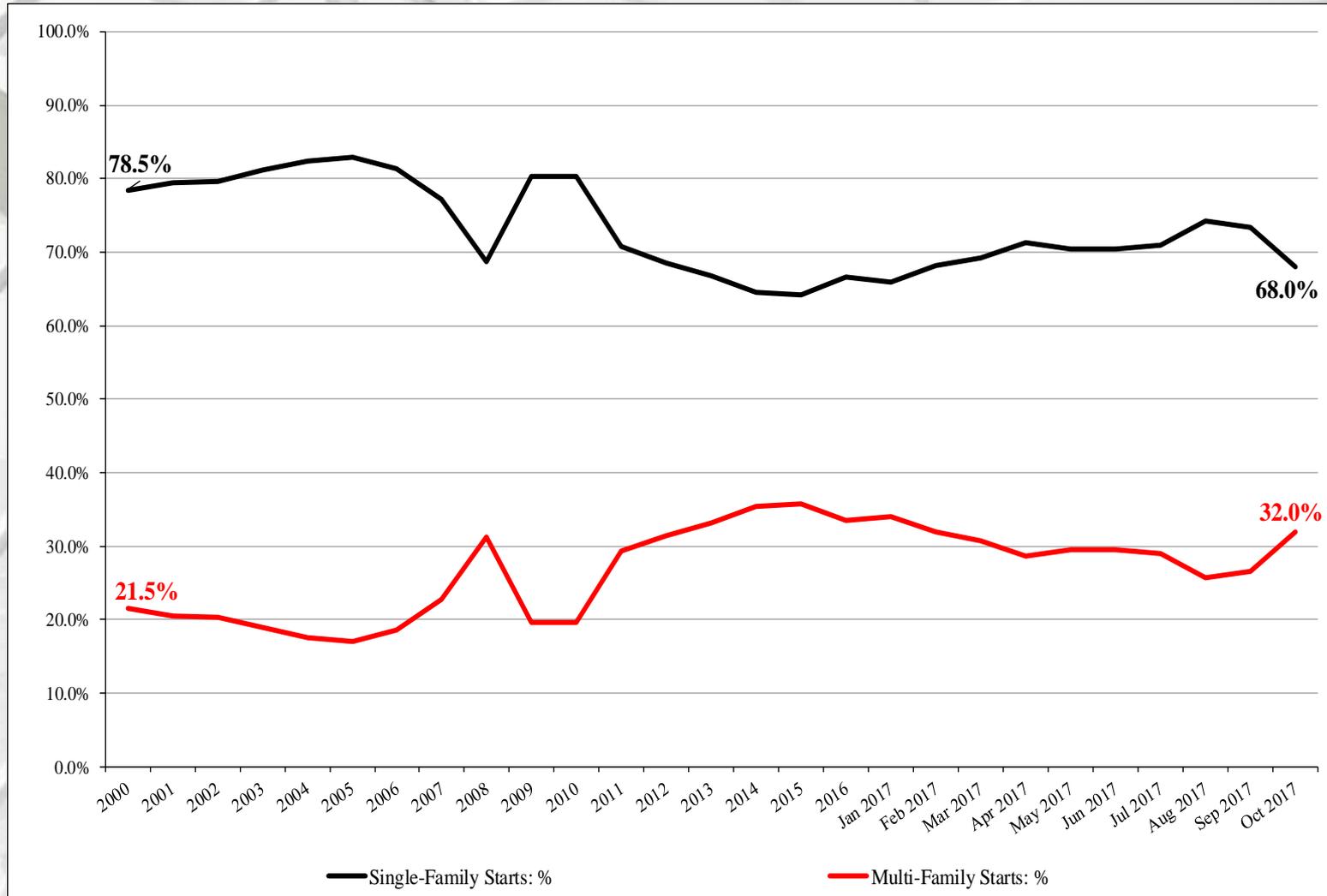
The apparent expansion factor "... is the ratio of the unadjusted number of houses started in the US to the seasonally adjusted number of houses started in the US (i.e., to the sum of the seasonally adjusted values for the four regions)." – U.S. DOC-Construction

MF Housing Starts by Region

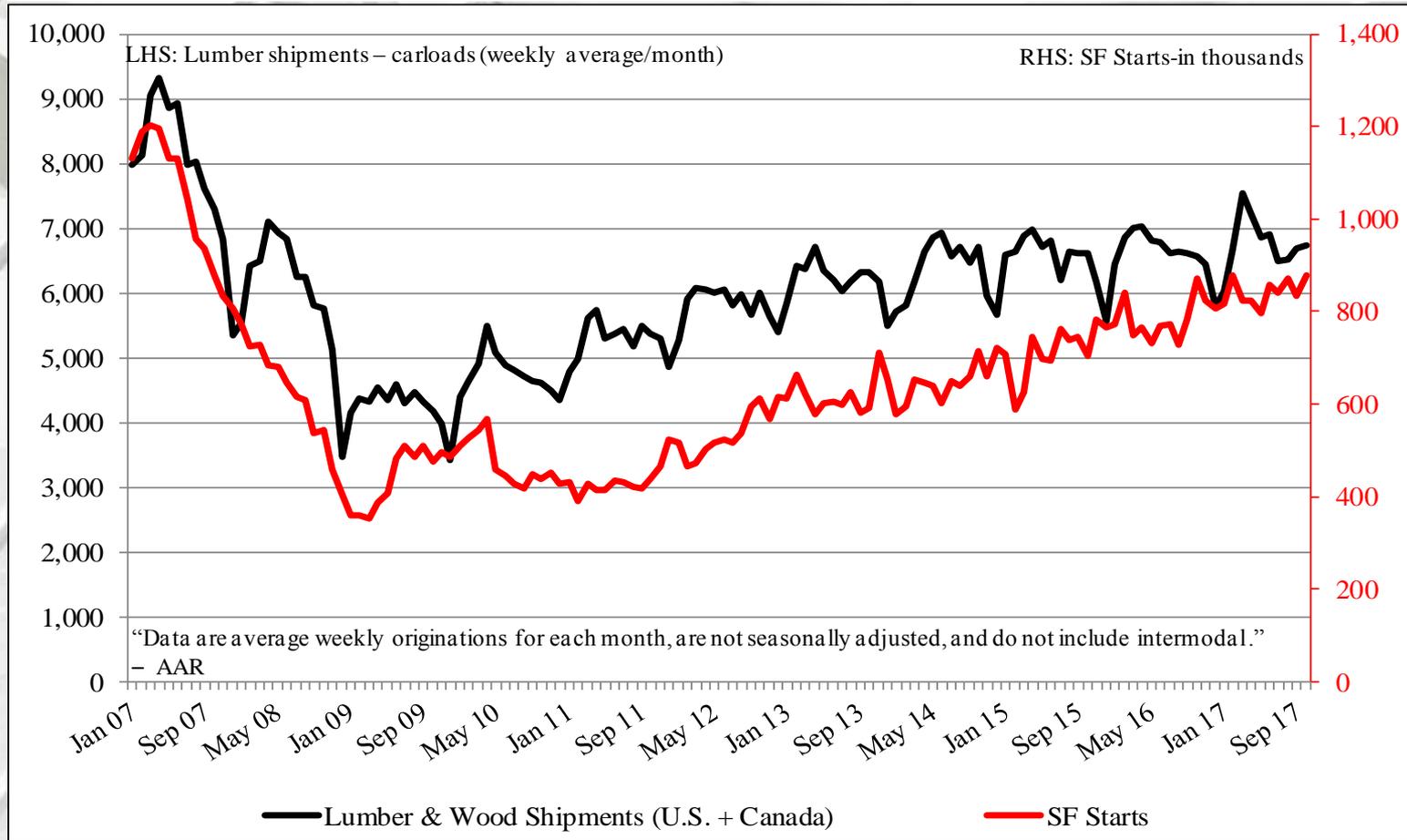


* Percentage of total MF starts.

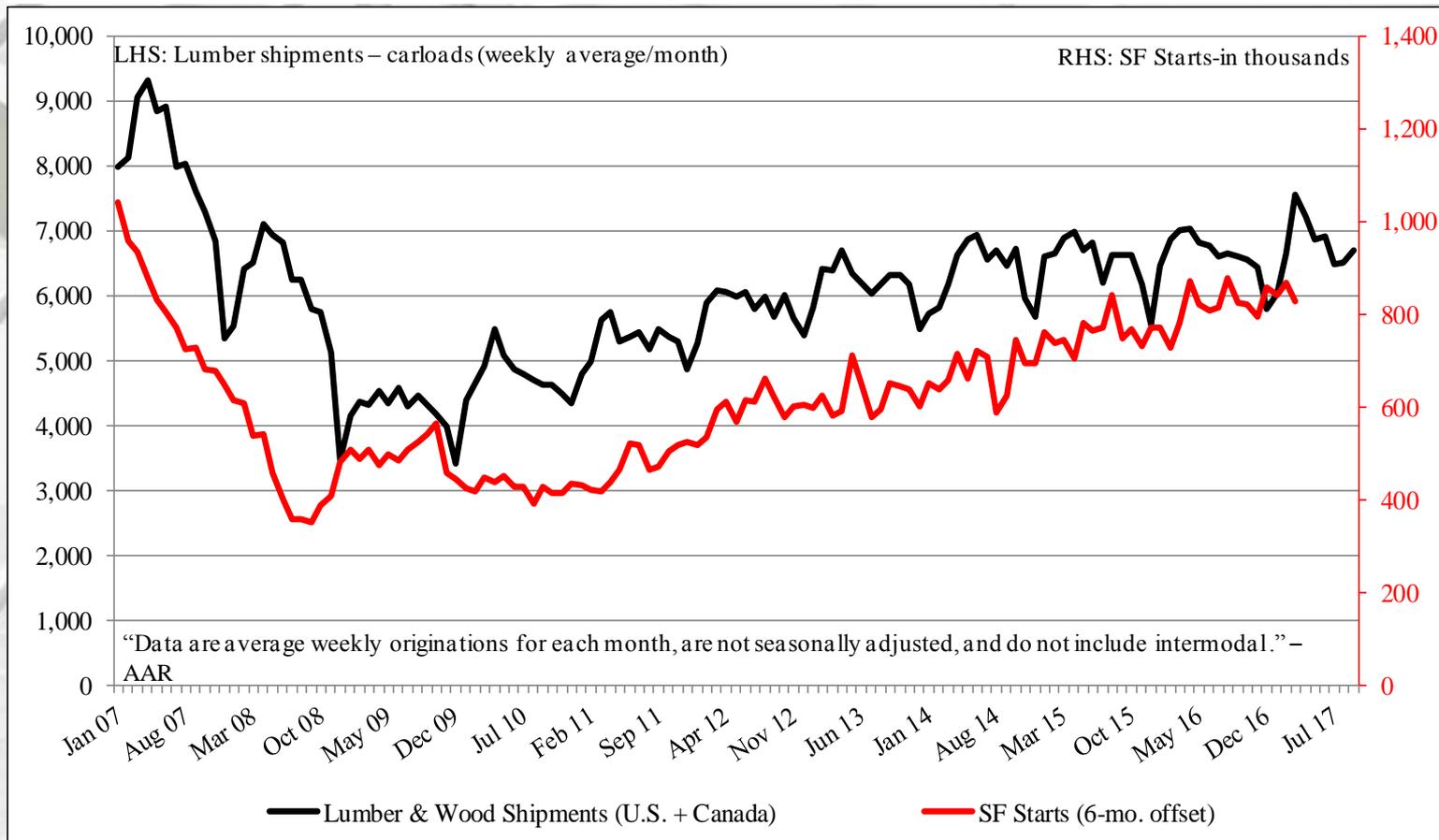
SF & MF Housing Starts (%)



Railroad Lumber & Wood Shipments vs. U.S. SF Housing Starts



Railroad Lumber & Wood Shipments vs. U.S. SF Housing Starts: 6-month Offset



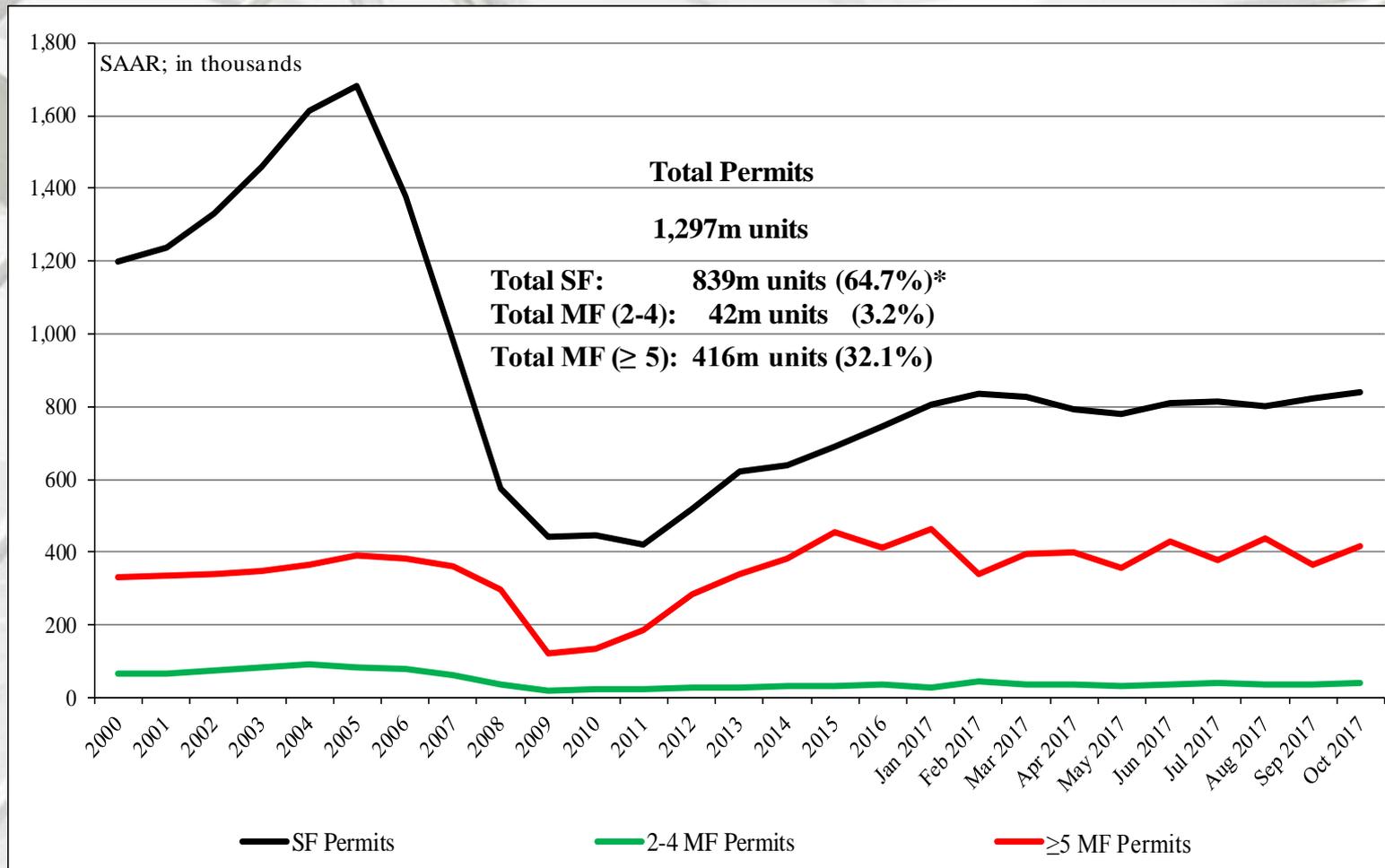
In this graph, January 2007 lumber shipments are contrasted with October 2007 SF starts, and continuing through October 2017 SF starts. The purpose is to discover if lumber shipments relate to future single-family starts. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
October	1,297,000	839,000	42,000	416,000
September	1,225,000	823,000	35,000	367,000
2016	1,285,000	779,000	32,000	474,000
M/M change	5.9%	1.9%	20.0%	13.4%
Y/Y change	0.9%	7.7%	31.3%	-12.2%

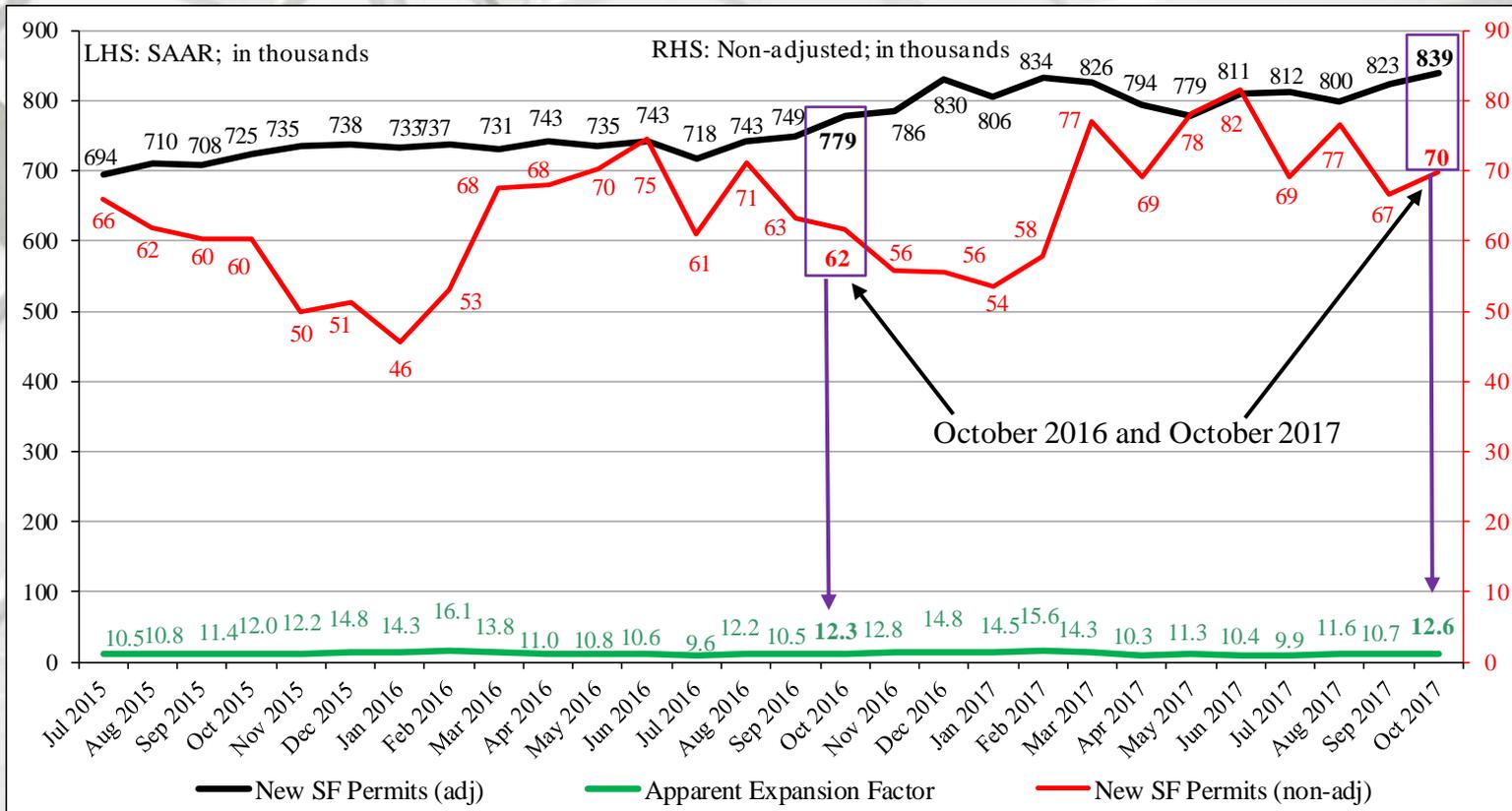
* All permit data are presented at a seasonally adjusted annual rate (SAAR).

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**
October	126,000	52,000	74,000
September	121,000	71,000	50,000
2016	116,000	59,000	57,000
M/M change	4.1%	-26.8%	48.0%
Y/Y change	8.6%	-11.9%	29.8%

	MW Total*	MW SF	MW MF**
October	192,000	117,000	75,000
September	185,000	122,000	63,000
2016	202,000	113,000	89,000
M/M change	3.8%	-4.1%	19.0%
Y/Y change	-5.0%	3.5%	-15.7%

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

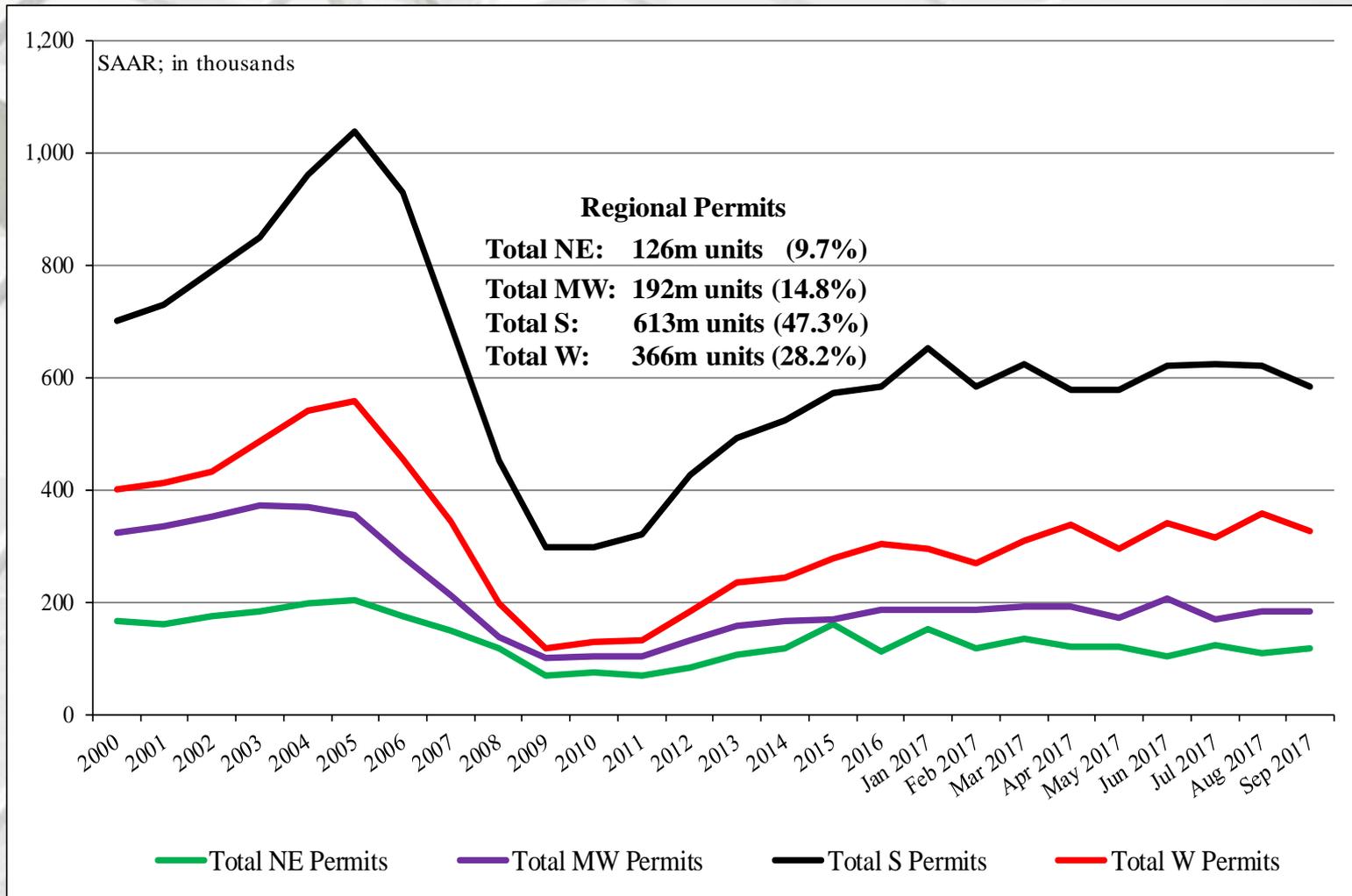
New Housing Permits by Region

	S Total*	S SF	S MF**
October	613,000	455,000	158,000
September	595,000	428,000	167,000
2016	616,000	420,000	196,000
M/M change	3.0%	6.3%	-5.4%
Y/Y change	-0.5%	8.3%	-19.4%

	W Total*	W SF	W MF**
October	366,000	215,000	151,000
September	324,000	202,000	122,000
2016	351,000	187,000	164,000
M/M change	13.0%	6.4%	23.8%
Y/Y change	4.3%	15.0%	-7.9%

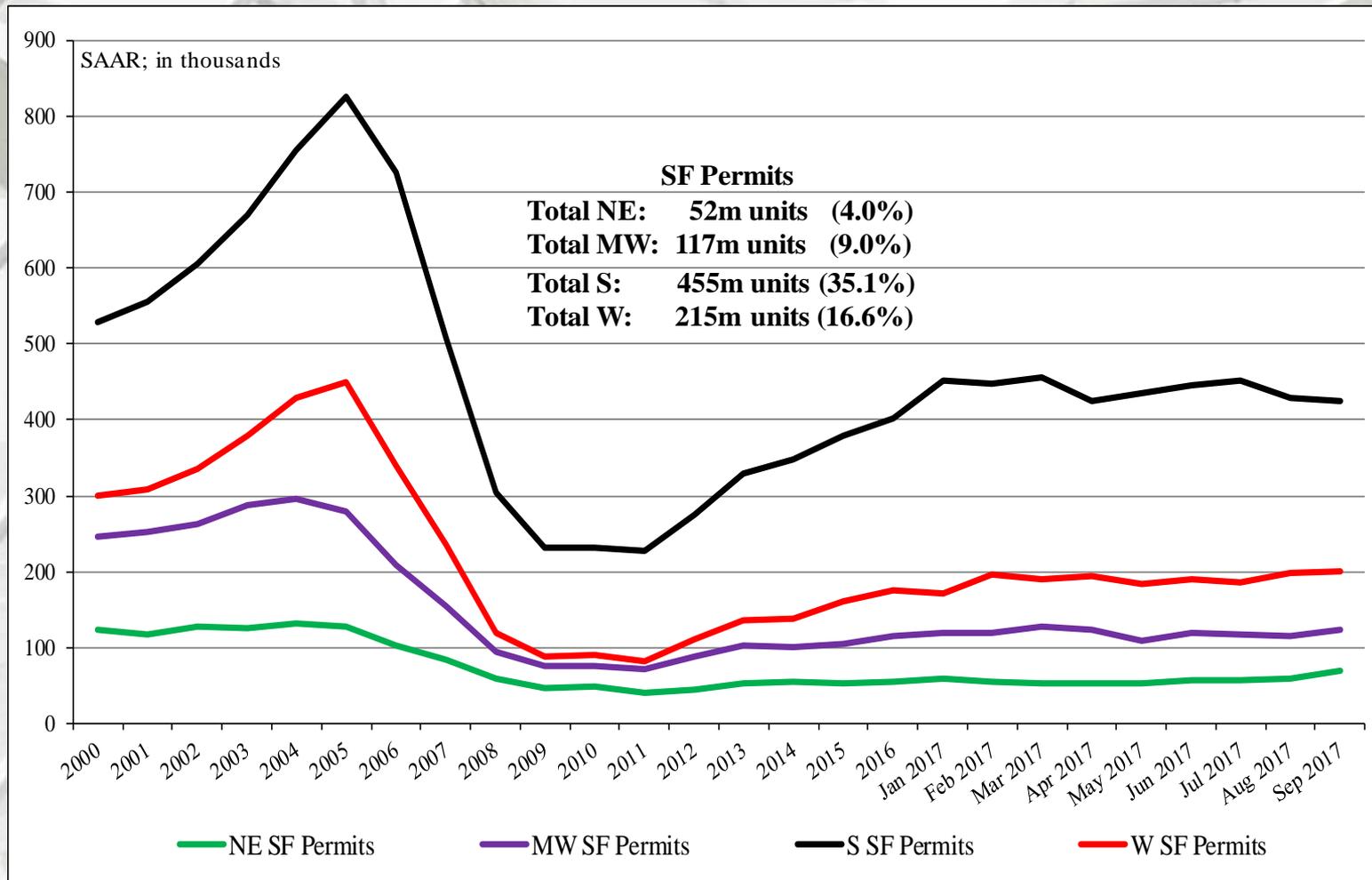
- All data are SAAR
- ** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

Total Housing Permits by Region



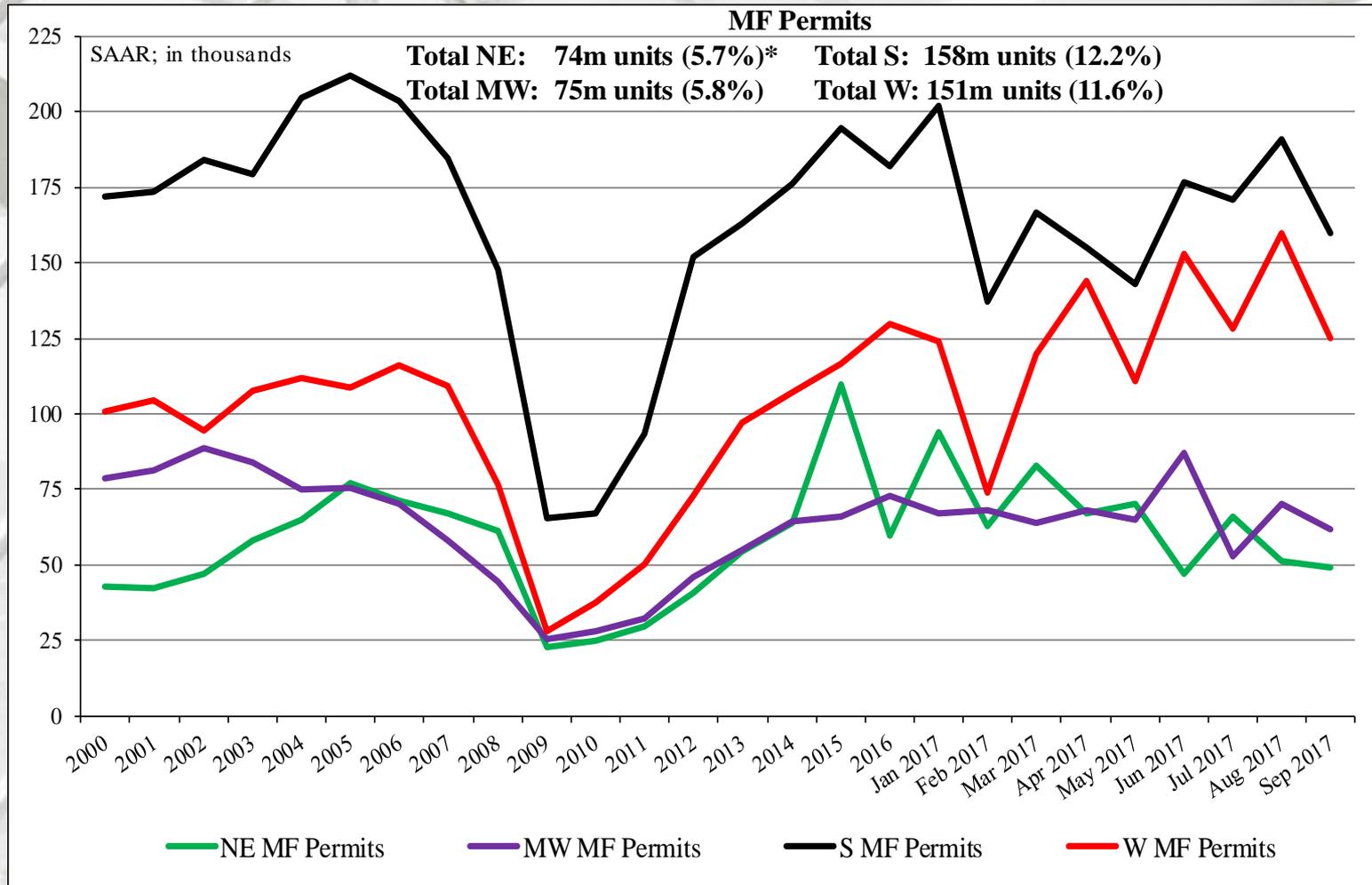
* Percentage of total permits.

SF Housing Permits by Region



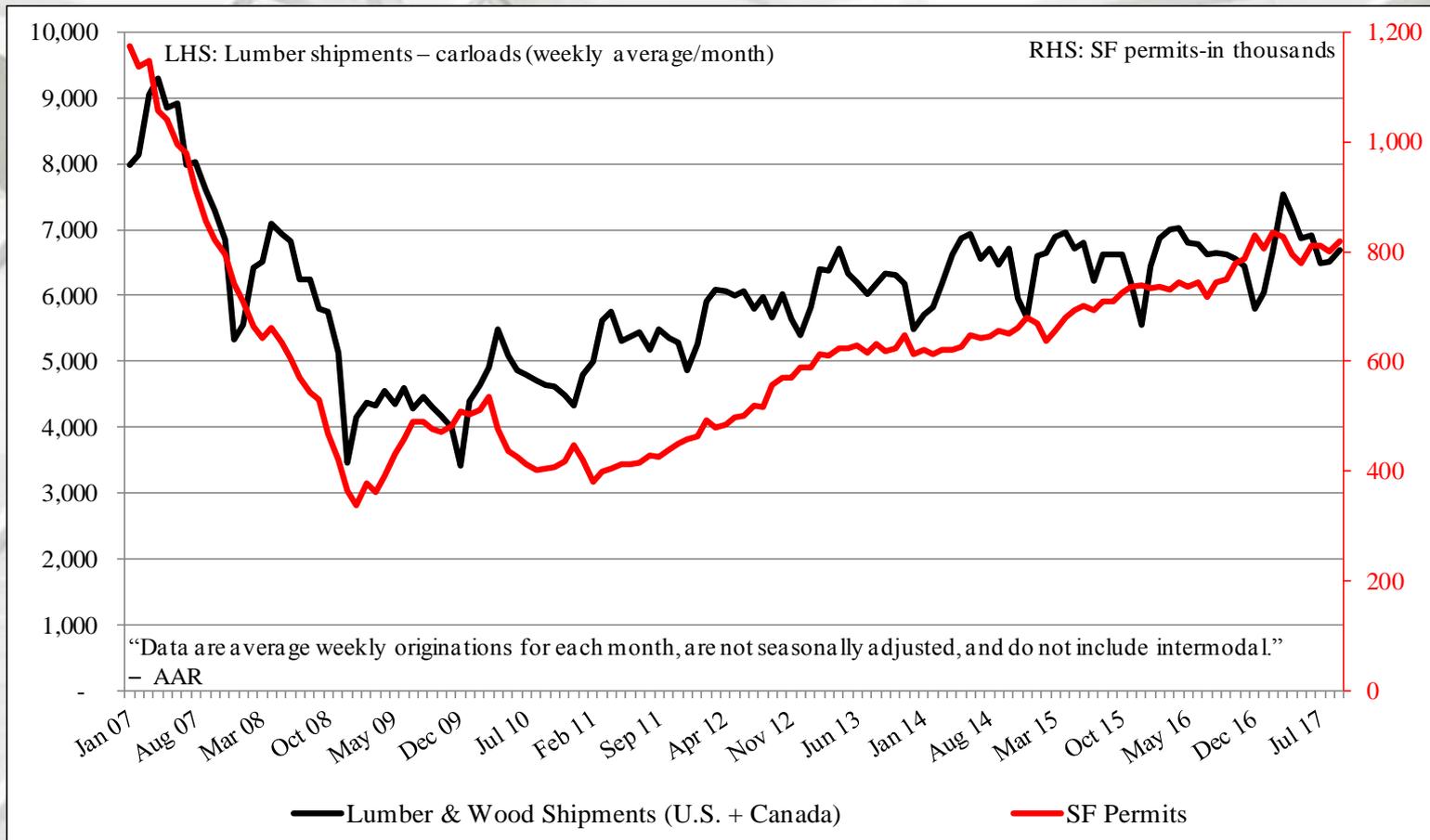
* Percentage of total SF permits.

MF Housing Permits by Region

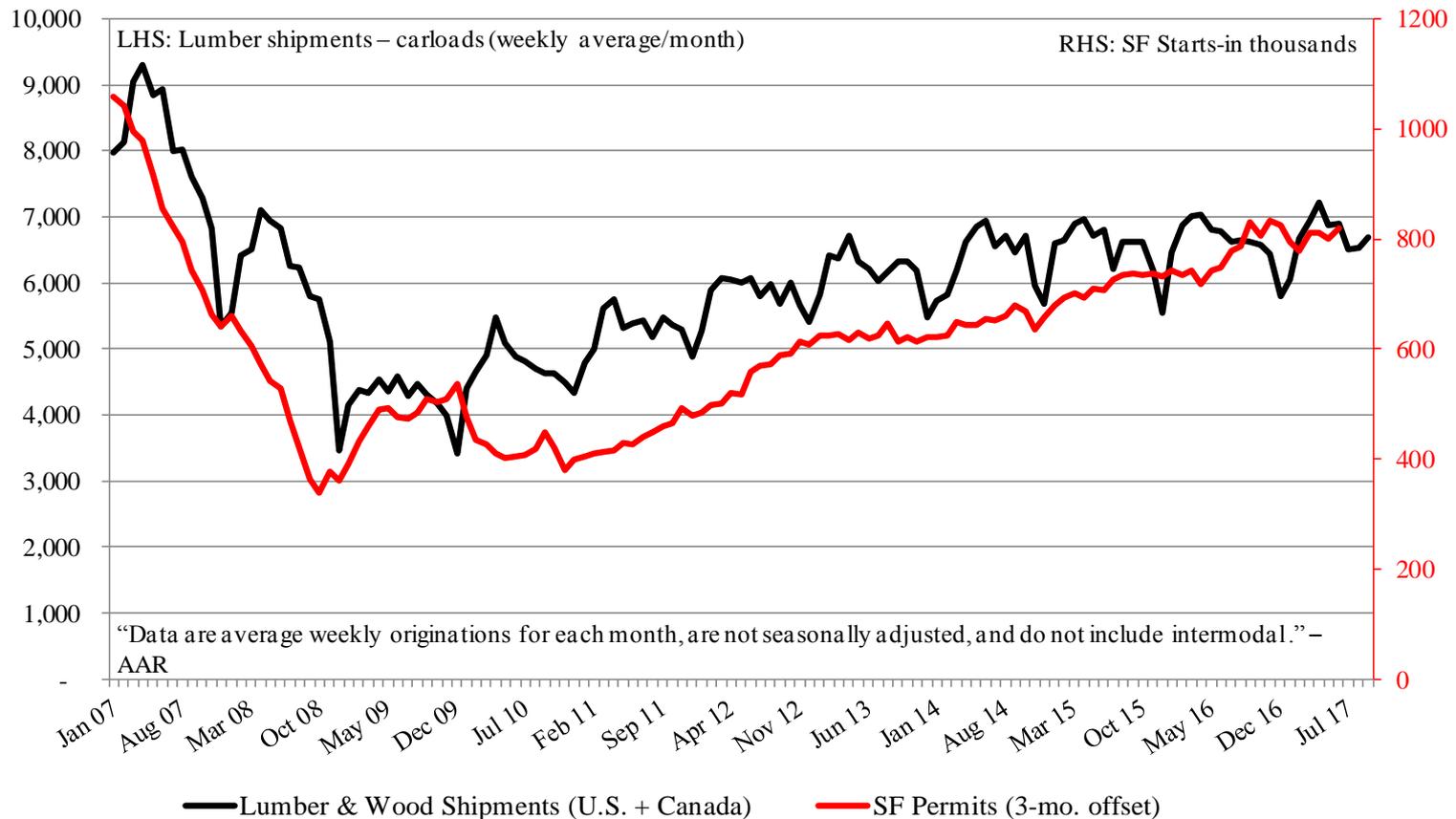


* Percentage of total MF permits.

Railroad Lumber & Wood Shipments vs. U.S. SF Housing Permits



Railroad Lumber & Wood Shipments vs. U.S. SF Housing Permits: 3-month Offset



In this graph, January 2007 lumber shipments are contrasted with April 2007 SF permits, continuing through October 2017. The purpose is to discover if lumber shipments relate to future single-family permits. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

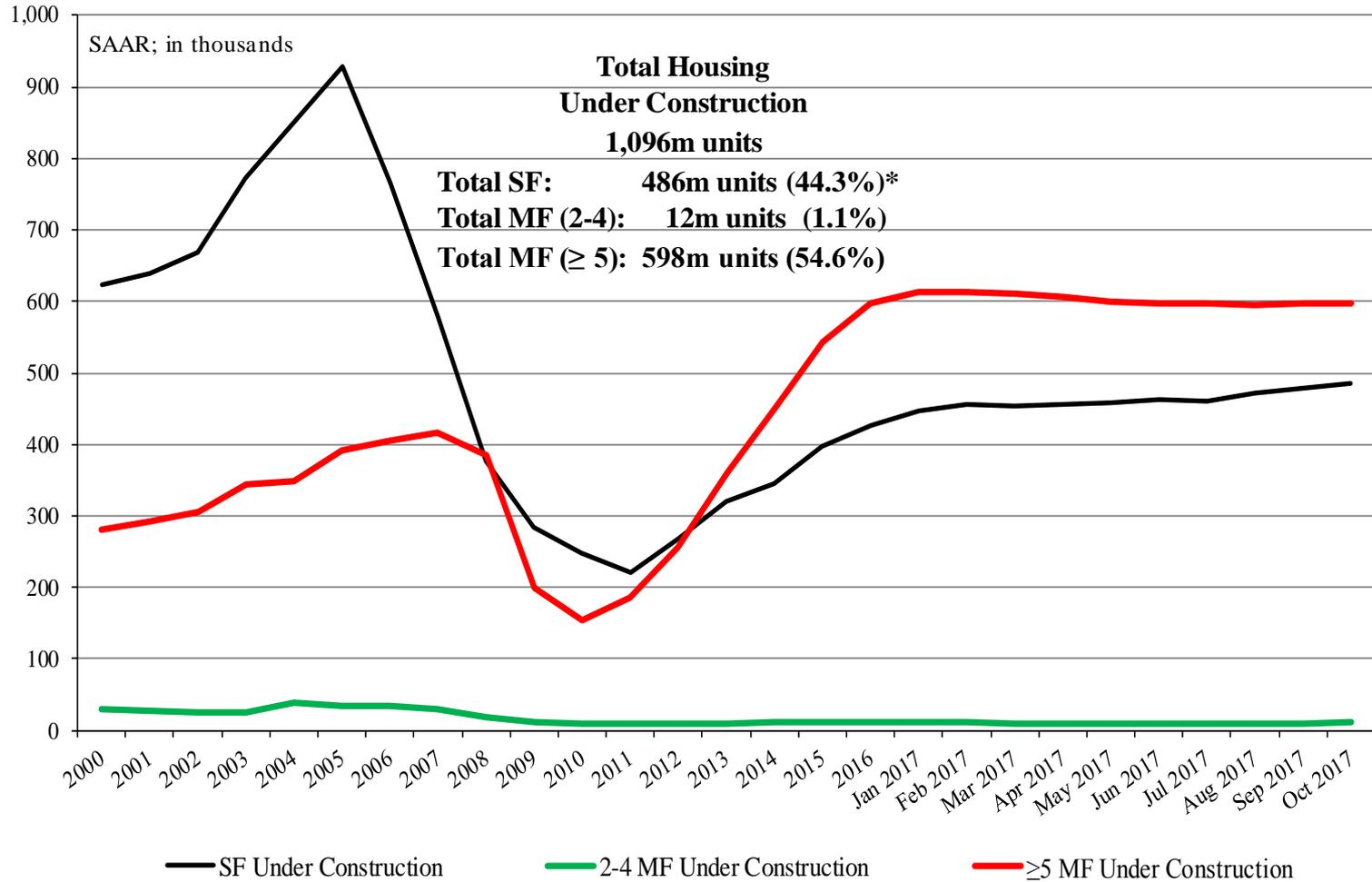
New Housing Under Construction

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ≥ 5 unit Under Construction
October	1,096,000	486,000	12,000	598,000
September	1,086,000	478,000	10,000	598,000
2016	1,053,000	442,000	12,000	599,000
M/M change	0.9%	1.7%	20.0%	0.0%
Y/Y change	4.1%	10.0%	0.0%	-0.2%

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

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

Total Housing Under Construction



* Percentage of total housing under construction units.

New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
October	191,000	53,000	138,000
September	190,000	53,000	137,000
2016	196,000	51,000	145,000
M/M change	0.5%	0.0%	0.7%
Y/Y change	-2.6%	3.9%	-4.8%
	MW Total	MW SF	MW MF
October	156,000	79,000	77,000
September	151,000	78,000	73,000
2016	142,000	73,000	69,000
M/M change	3.3%	1.3%	5.5%
Y/Y change	9.9%	8.2%	11.6%

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

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

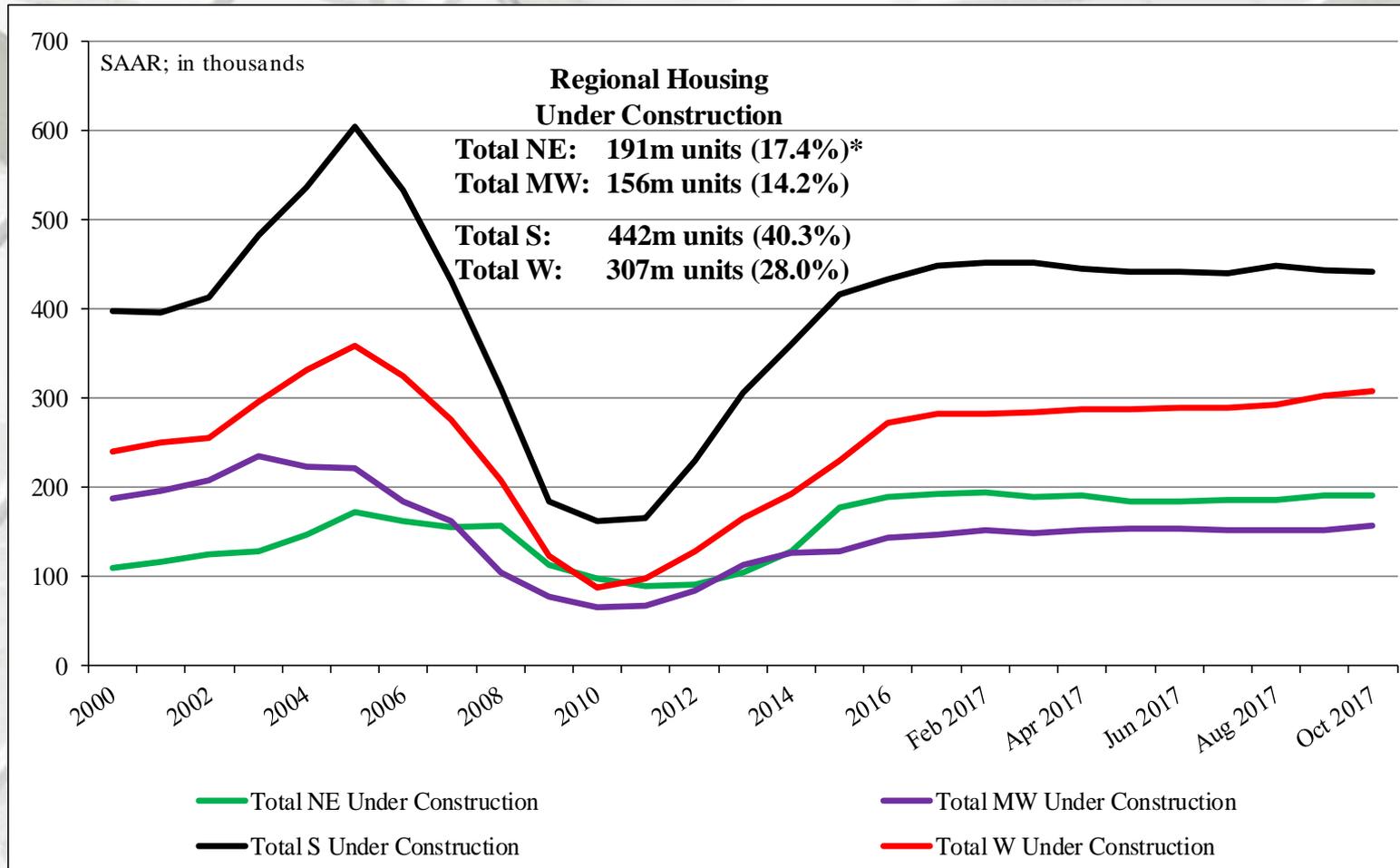
New Housing Under Construction by Region

	S Total	S SF	S MF**
October	442,000	232,000	210,000
September	443,000	227,000	216,000
2016	447,000	213,000	234,000
M/M change	-0.2%	2.2%	-2.8%
Y/Y change	-1.1%	8.9%	-10.3%
	W Total	W SF	W MF
October	307,000	122,000	185,000
September	302,000	120,000	182,000
2016	268,000	105,000	163,000
M/M change	1.7%	1.7%	1.6%
Y/Y change	14.6%	16.2%	13.5%

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

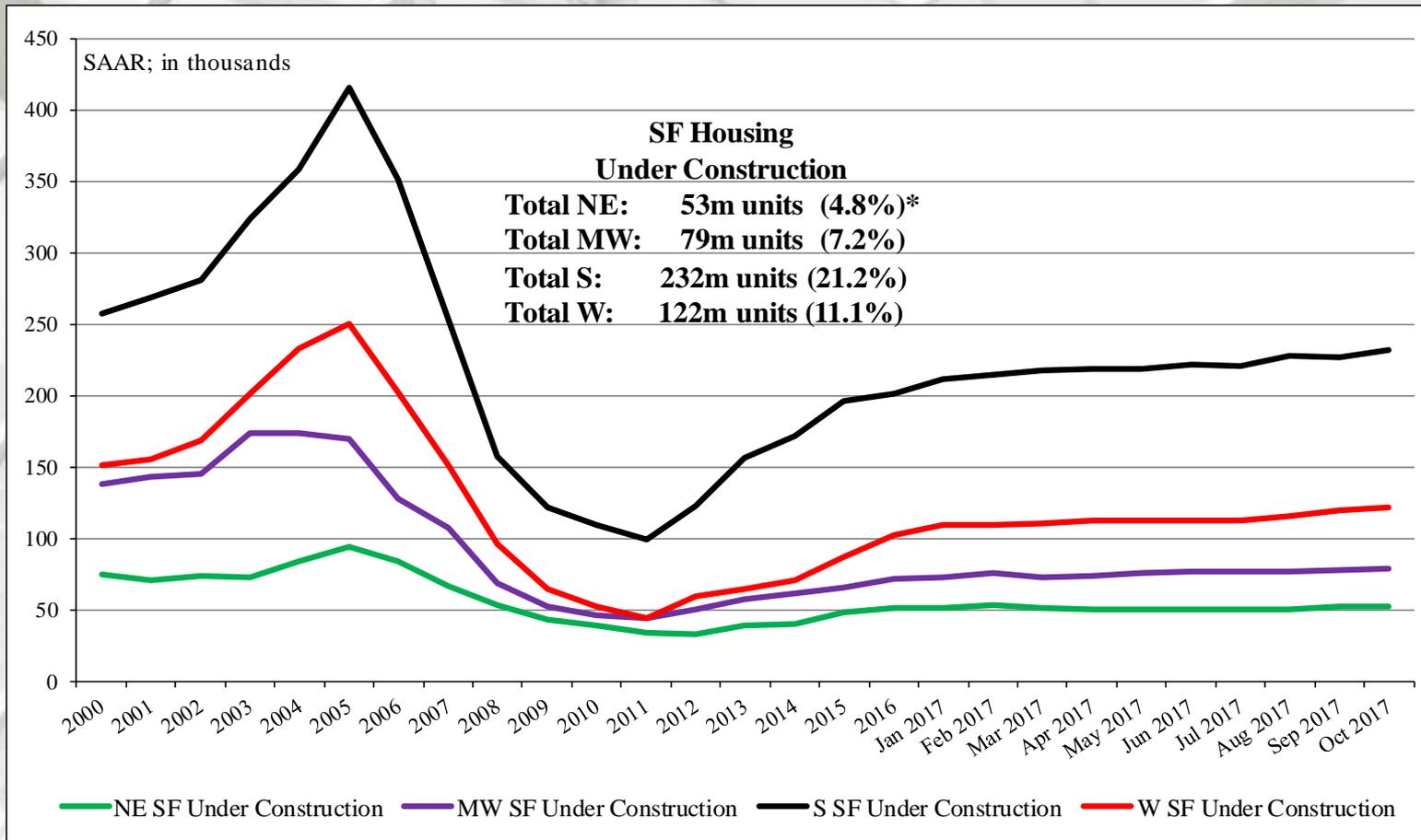
** US DOC does not report multifamily units under construction directly, this is an estimation
(Total under construction – SF under construction).

Total Housing Under Construction by Region



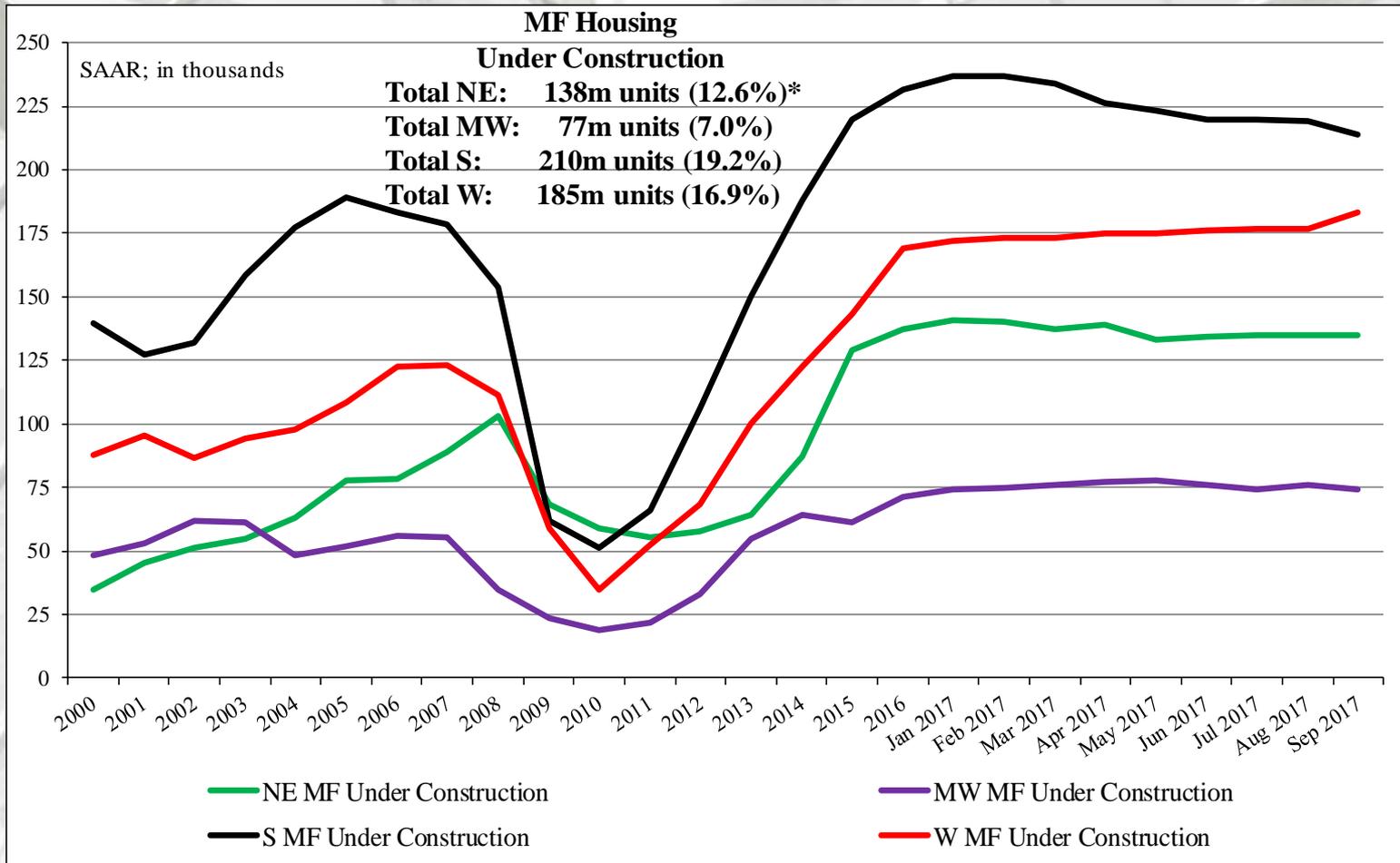
* Percentage of total housing under construction units.

SF Housing Under Construction by Region



* Percentage of total housing under construction units.

MF Housing Under Construction by Region



* Percentage of total housing under construction units.

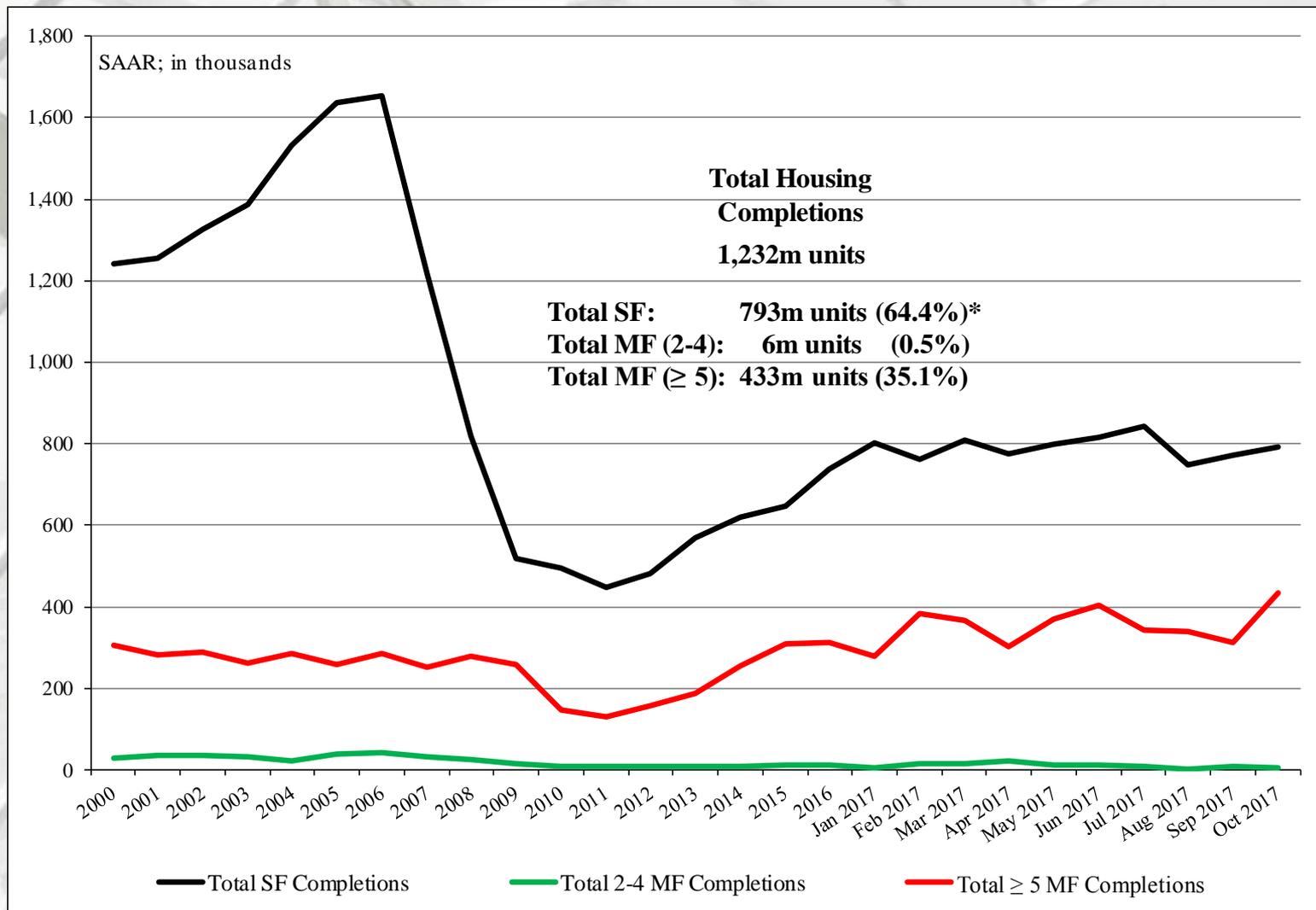
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
October	1,232,000	793,000	6,000	433,000
September	1,094,000	773,000	7,000	314,000
2016	1,067,000	755,000	7,000	305,000
M/M change	12.6%	2.6%	-14.3%	37.9%
Y/Y change	15.5%	5.0%	-14.3%	42.0%

* 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



* Percentage of total housing completions

Total Housing Completions by Region

	NE Total	NE SF	NE MF**
October	163,000	62,000	101,000
September	81,000	53,000	28,000
2016	82,000	49,000	33,000
M/M change	101.2%	17.0%	260.7%
Y/Y change	98.8%	26.5%	206.1%
	MW Total	MW SF	MW MF
October	144,000	131,000	13,000
September	183,000	113,000	70,000
2016	189,000	120,000	69,000
M/M change	-21.3%	15.9%	-81.4%
Y/Y change	-23.8%	9.2%	-81.2%

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

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

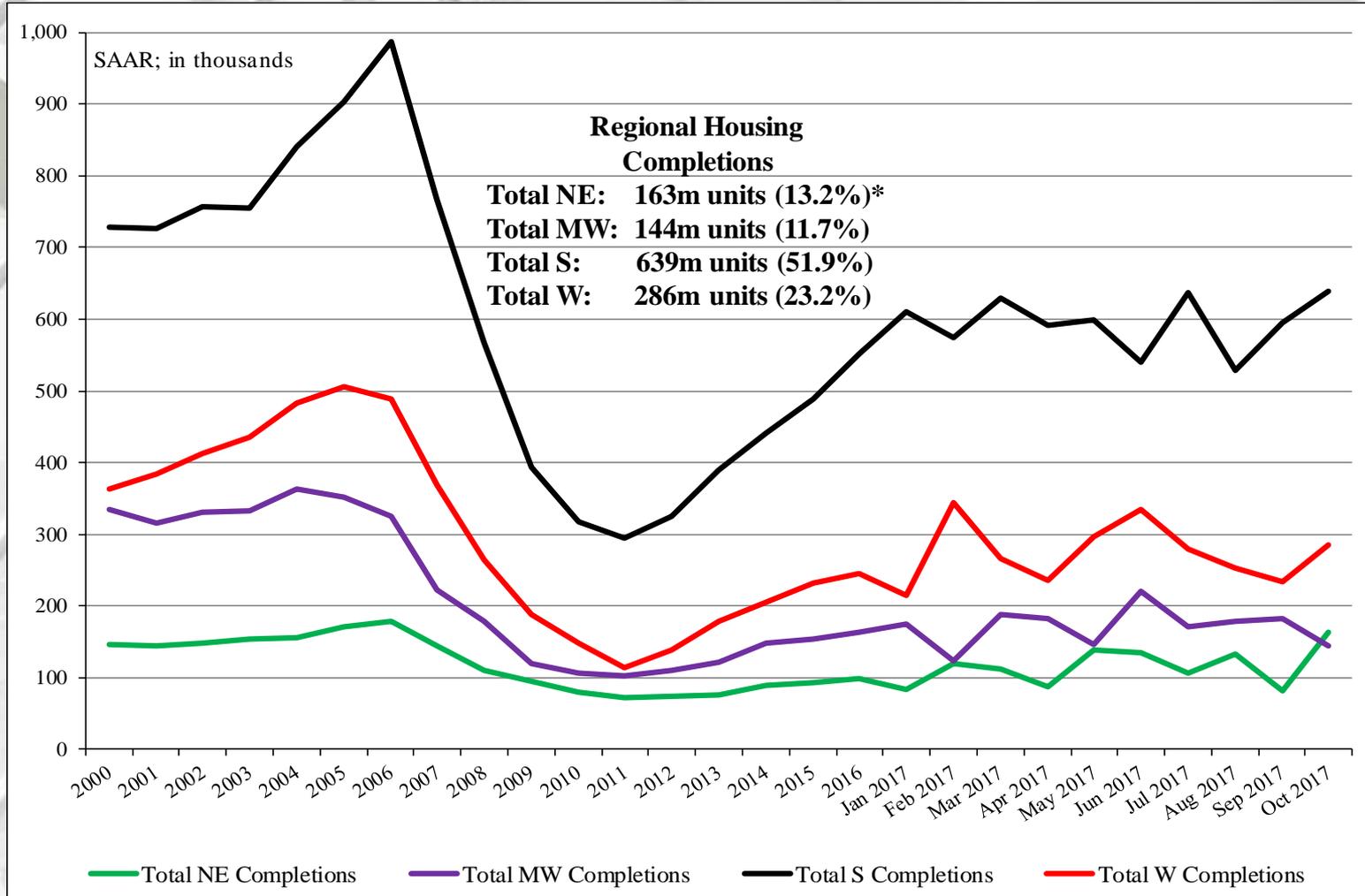
Total Housing Completions by Region

	S Total	S SF	S MF**
October	639,000	421,000	218,000
September	596,000	427,000	169,000
2016	538,000	424,000	114,000
M/M change	7.2%	-1.4%	29.0%
Y/Y change	18.8%	-0.7%	91.2%
	W Total	W SF	W MF
October	286,000	179,000	107,000
September	234,000	180,000	54,000
2016	258,000	162,000	96,000
M/M change	22.2%	-0.6%	98.1%
Y/Y change	10.9%	10.5%	11.5%

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

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

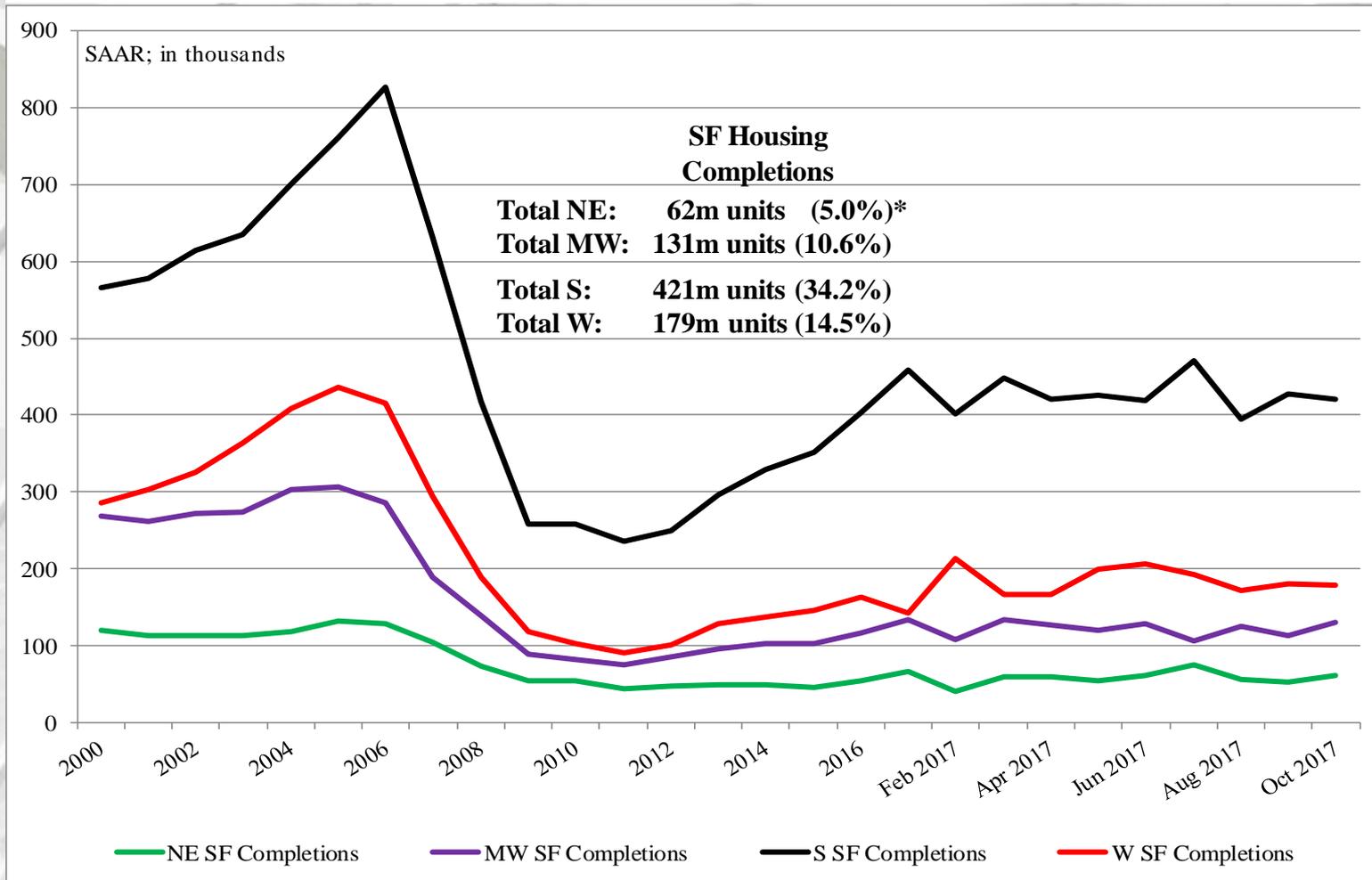
New Housing Completions by Region



All data are SAAR; NE = Northeast and MW = Midwest; * Percentage of total housing completions.

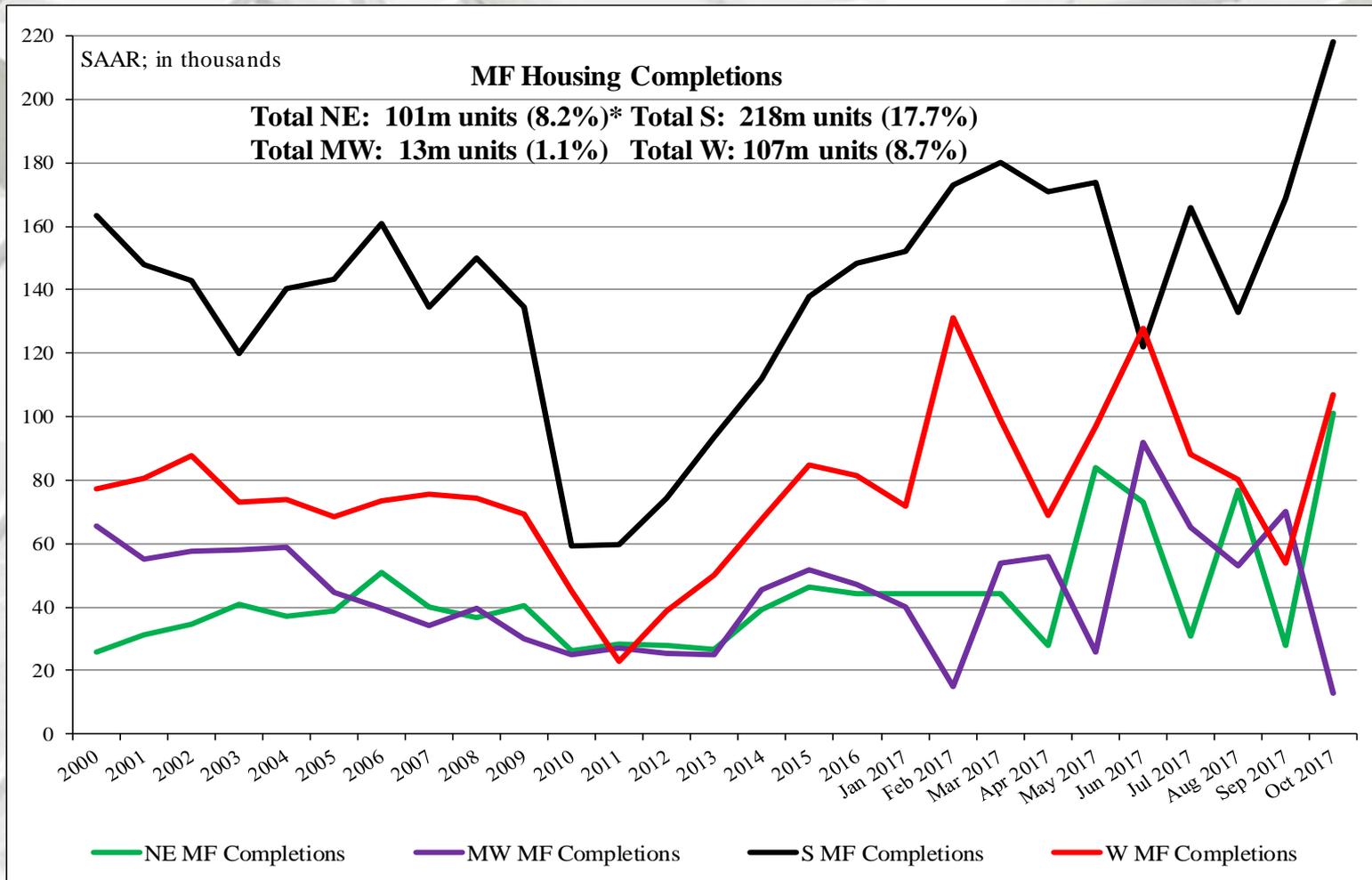
** US DOC does not report multifamily completions directly, this is an estimation (Total completions – SF completions).

SF Housing Completions by Region



* Percentage of total housing completions.

MF Housing Completions by Region



* Percentage of total housing completions.

New Single-Family House Sales

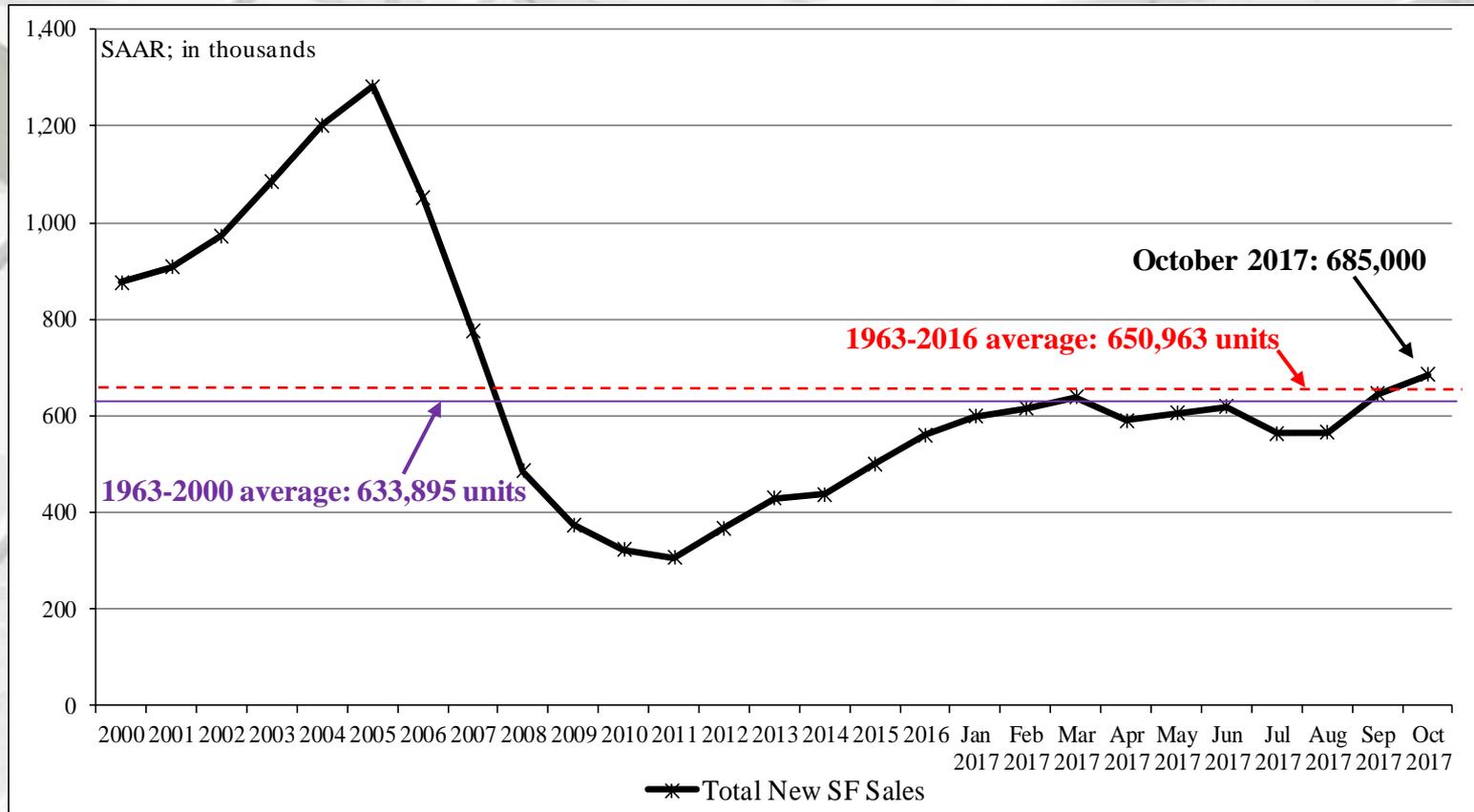
	New SF Sales*	Median Price	Mean Price	Month's Supply
October	685,000	\$312,800	\$400,200	4.9
September	645,000	\$324,900	\$381,100	5.2
2016	577,000	\$302,800	\$352,200	5.2
M/M change	6.2%	-3.7%	5.0%	-5.8%
Y/Y change	18.7%	3.3%	13.6%	-5.8%

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

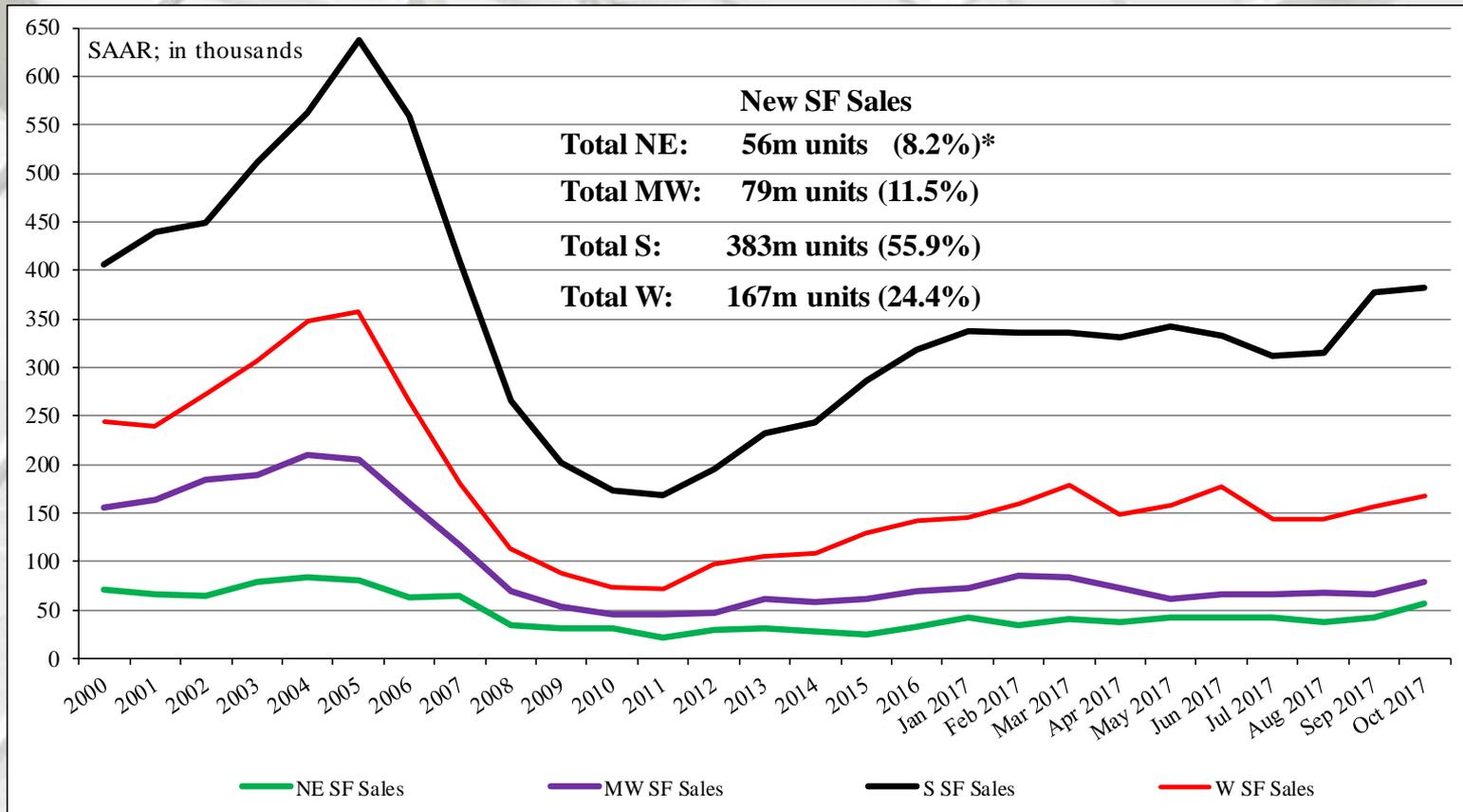
New SF sales were much greater than the consensus forecast (620 m)³, primarily due to increased sales in the NE, MW, and the W. The past three month's new SF sales data were revised:

July initial: 582 m revised to 564 m;
 August initial: 561 m revised to 565 m;
 September initial: 667 m revised to 645 m.

New SF House Sales

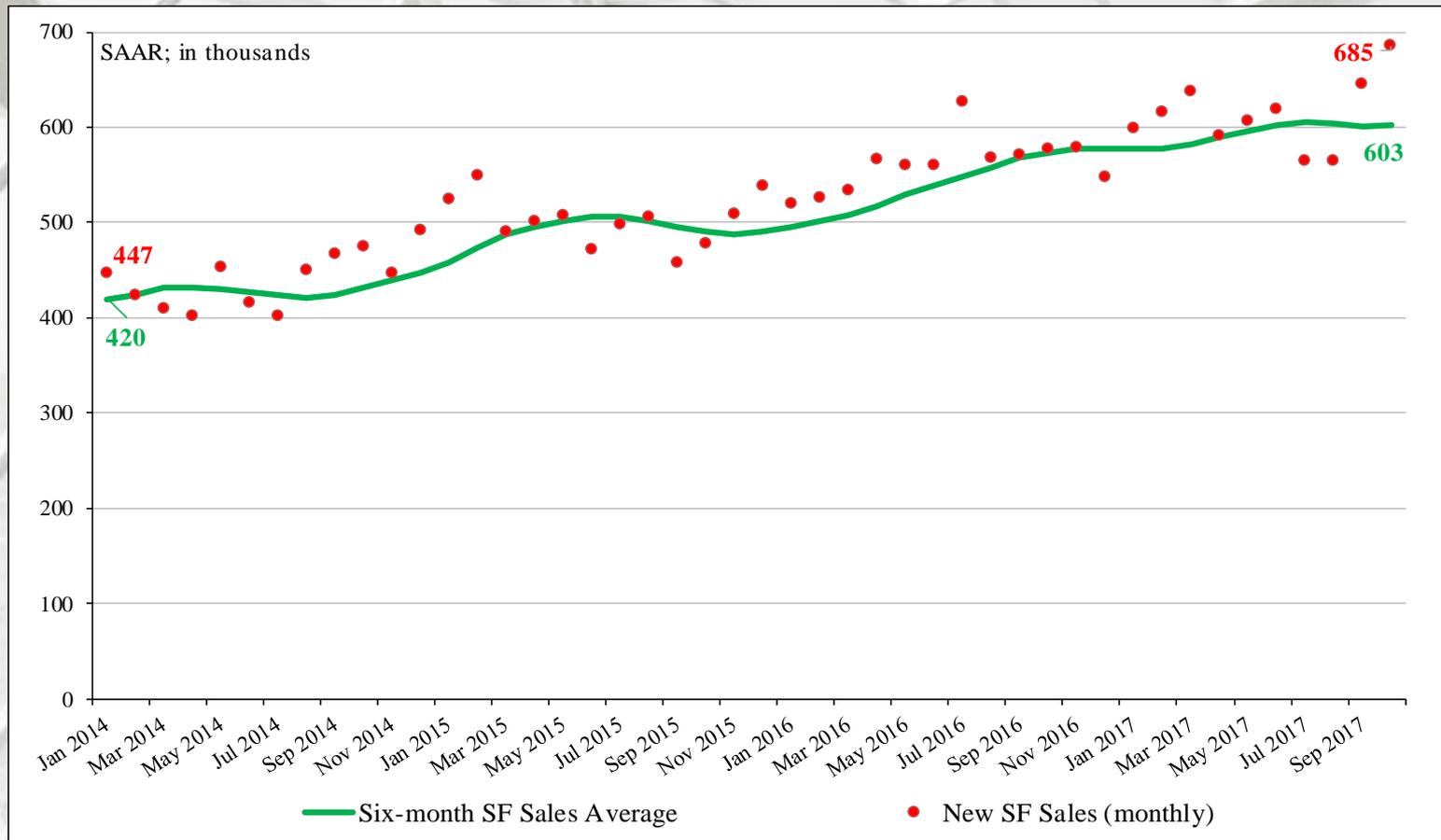


New SF House Sales by Region

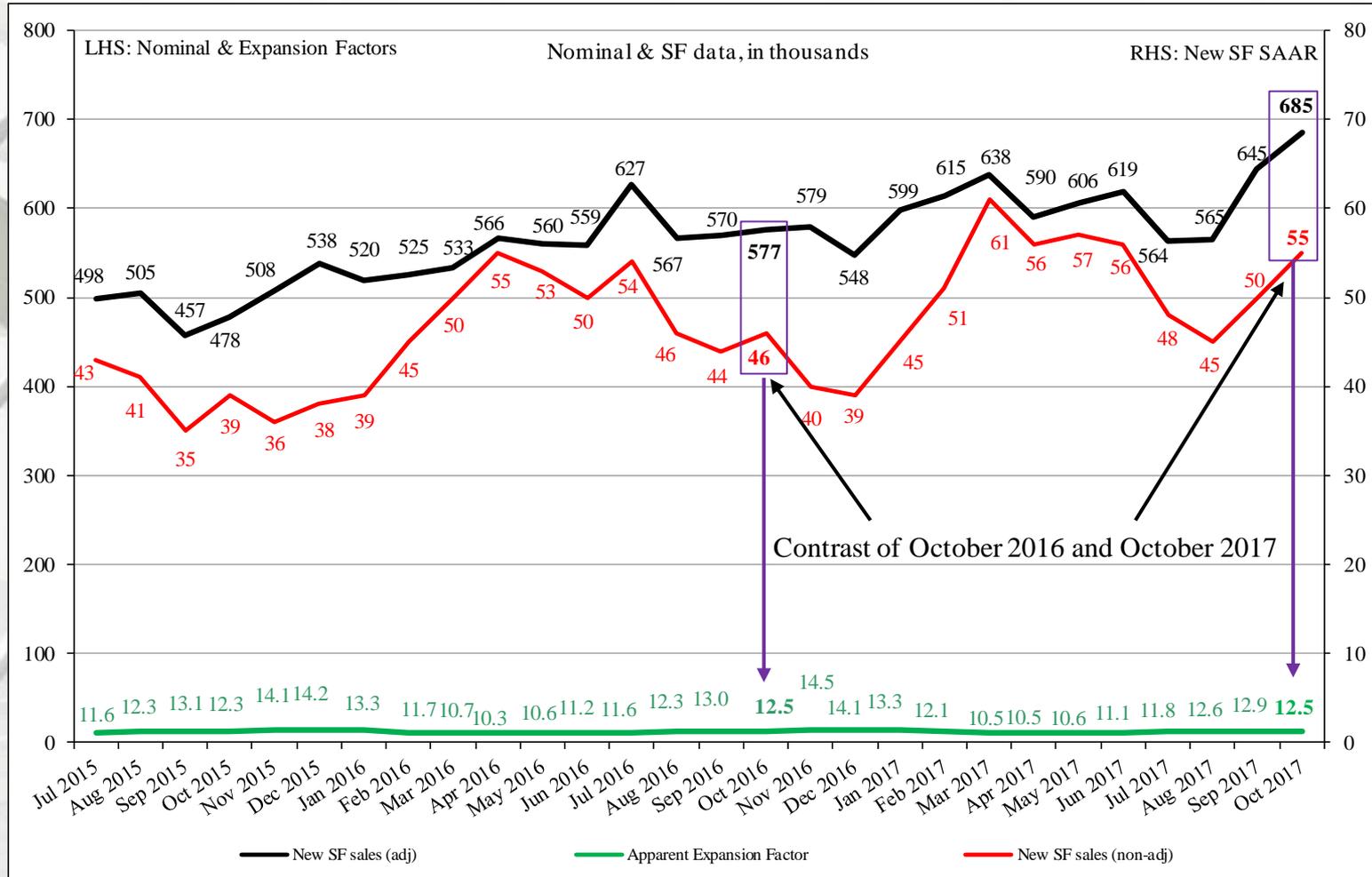


* Percentage of total new sales.

New SF Housing Sales: Six-month average & monthly



Nominal vs. SAAR New SF House Sales

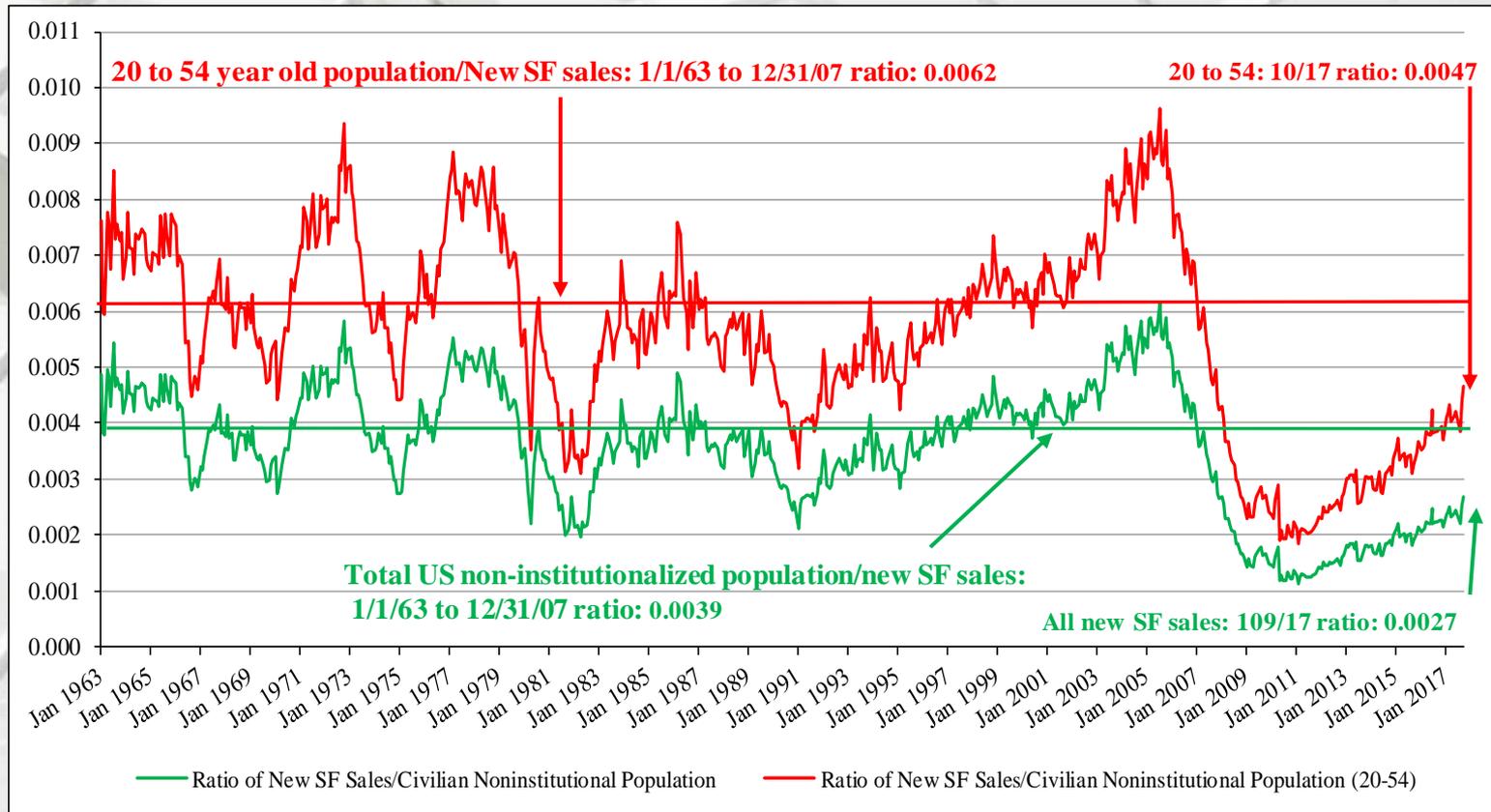


Nominal and Adjusted New SF Monthly Sales

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 sales adjusted for the US population

From January 1963 to October 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in October 2017 it was 0.0027 – an increase from September (0.0025). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in October 2017 it was 0.0047 – also an increase from September (0.00454). All are non-adjusted data. From a population viewpoint, construction is less than what is necessary for changes in population (i.e., under-building).

New SF House Sales by Region and Price Category

	NE SF Sales	MW SF Sales	S SF Sales	W SF Sales			
October	56,000	79,000	383,000	167,000			
September	43,000	67,000	378,000	157,000			
2016	34,000	68,000	336,000	139,000			
M/M change	30.2%	17.9%	1.3%	6.4%			
Y/Y change	64.7%	16.2%	14.0%	20.1%			
	\$150 - ≤ \$150m	\$200 - \$199.9m 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m	
October ^{1,2,3,4}	2,000	5,000	19,000	11,000	9,000	6,000	4,000
September	2,000	5,000	15,000	13,000	7,000	7,000	2,000
2016	1,000	7,000	14,000	11,000	7,000	4,000	1,000
M/M change	0.0%	0.0%	26.7%	-15.4%	28.6%	-14.3%	100.0%
Y/Y change	100.0%	-28.6%	35.7%	0.0%	28.6%	50.0%	300.0%

¹ All data are SAAR

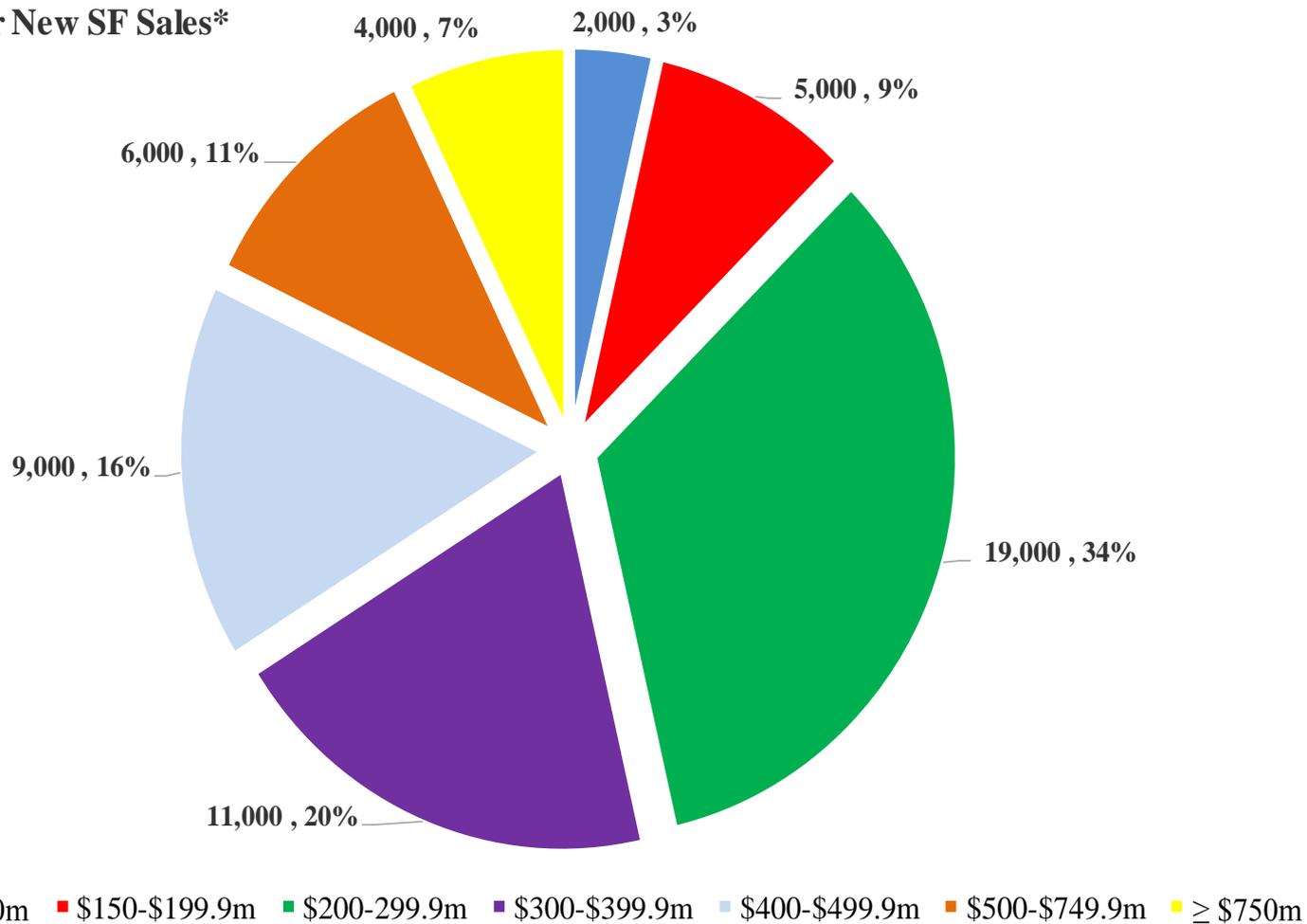
² Houses for which sales price were not reported have been distributed proportionally to those for which sales price was reported;

³ Detail may not add to total because of rounding.

⁴ Housing prices are adjusted at irregular intervals.

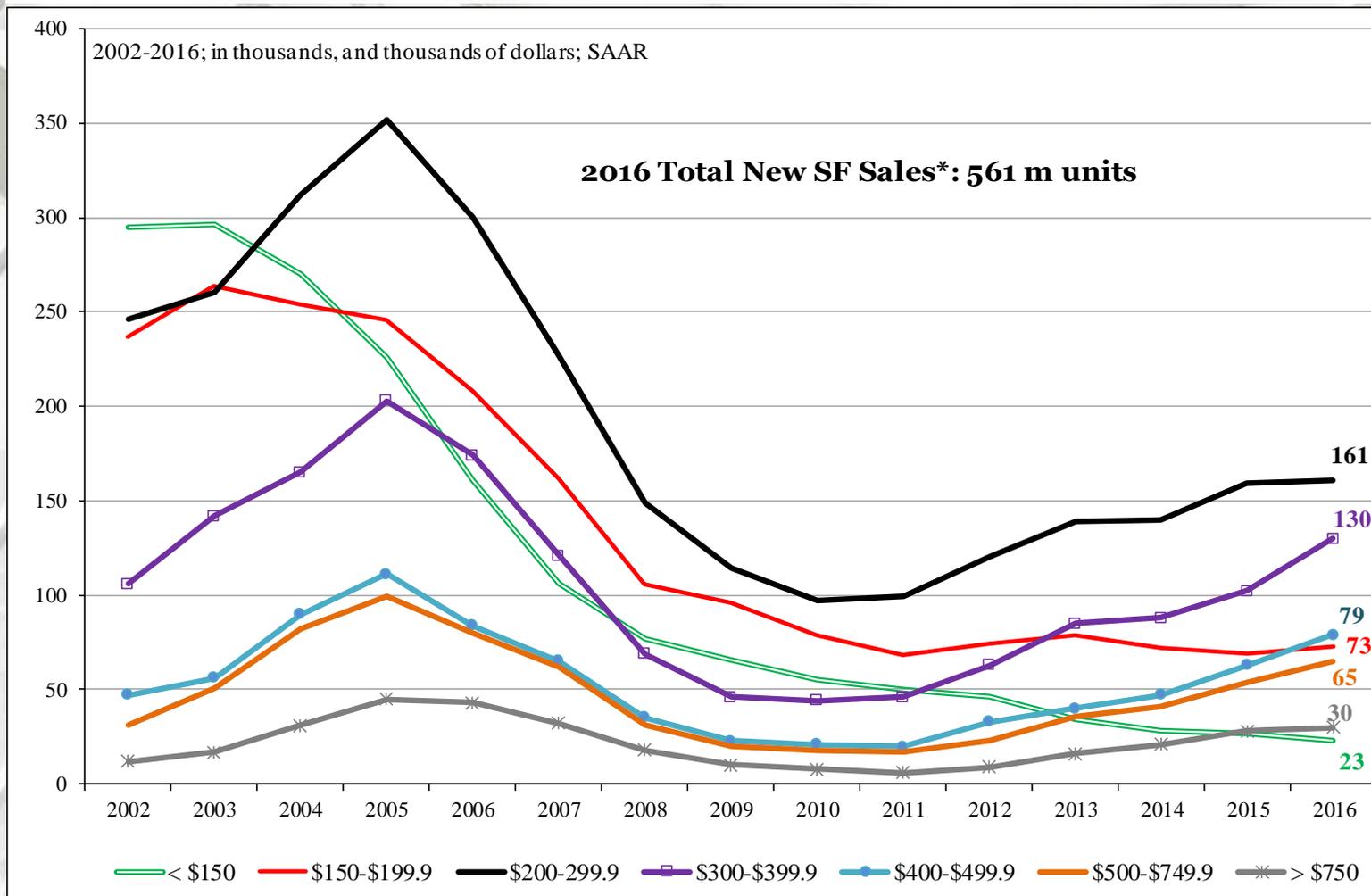
New SF House Sales

October New SF Sales*



* Total and percent of new sales by price category.

New SF House Sales by Price Category



New SF House Sales

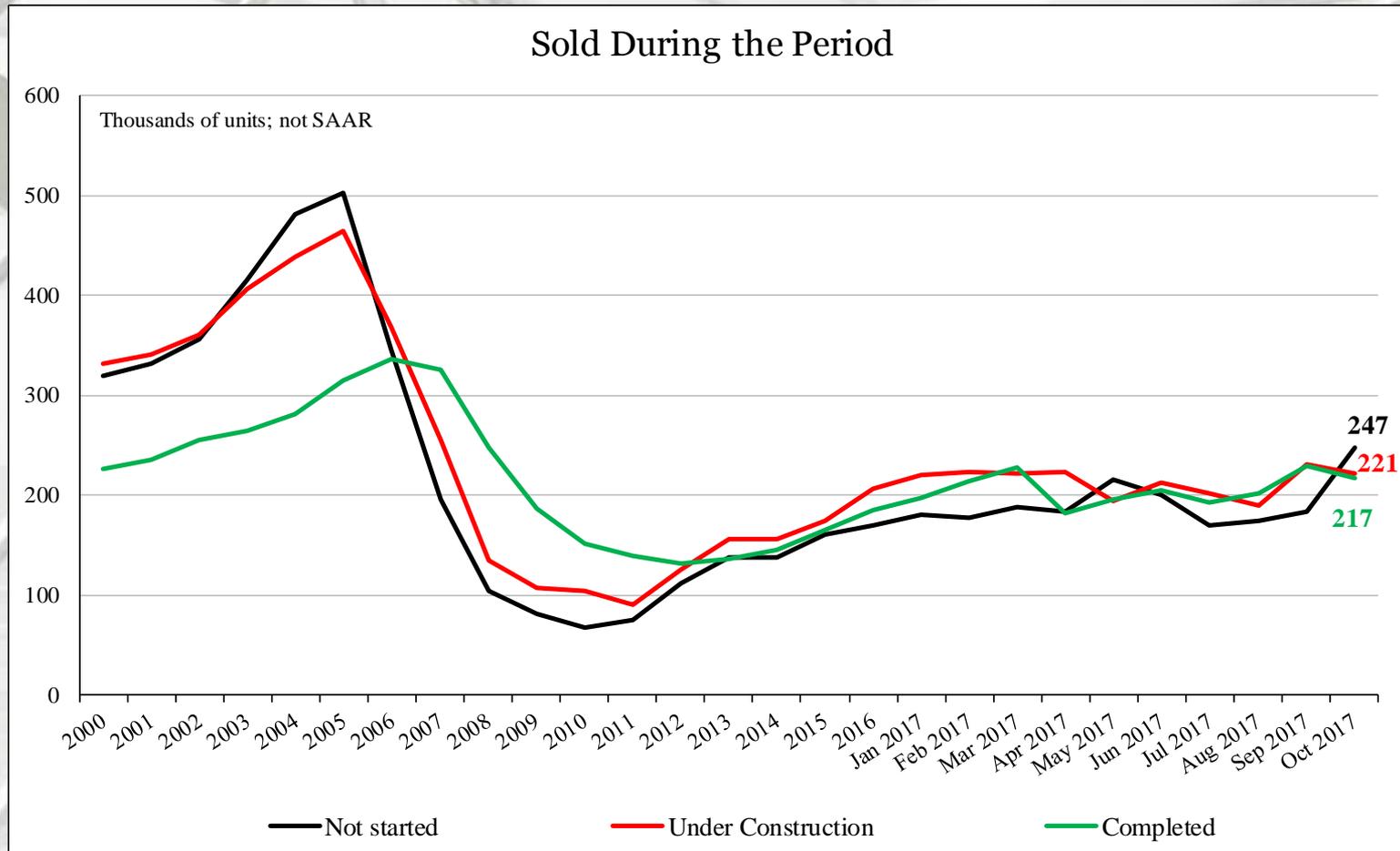
New SF Houses Sold During Period

	Total	Not started	Under Construction	Completed
October	685,000	247,000	221,000	217,000
September	645,000	184,000	231,000	230,000
2016	577,000	191,000	185,000	201,000
M/M change	6.2%	34.2%	-4.3%	-5.7%
Y/Y change	18.7%	29.3%	19.5%	8.0%
Total percentage		36.1%	32.3%	31.7%

New SF Houses Sold During Period

In October 2017, a substantial portion of new sales – 36.1% – had not been started. Viewing the graph on the following slide, one can see that October new SF sales appears to be an anomaly.

New SF House Sales

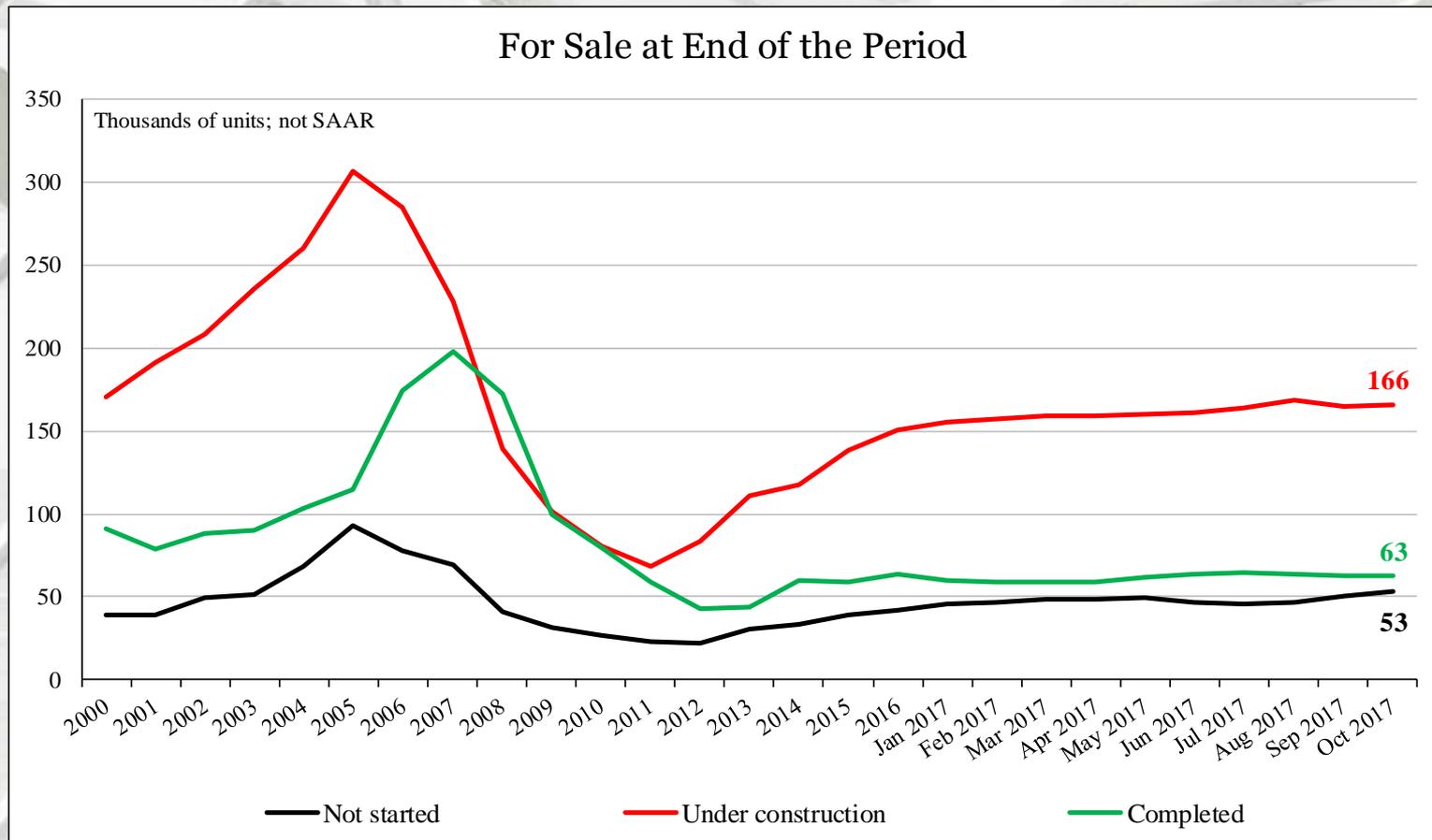


New SF House Sales

New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
October	282,000	53,000	166,000	63,000
September	278,000	50,000	165,000	63,000
2016	248,000	37,000	152,000	59,000
M/M change	1.4%	6.0%	0.6%	0.0%
Y/Y change	13.7%	43.2%	9.2%	6.8%
Total percentage		18.8%	58.9%	22.3%

New SF House Sales

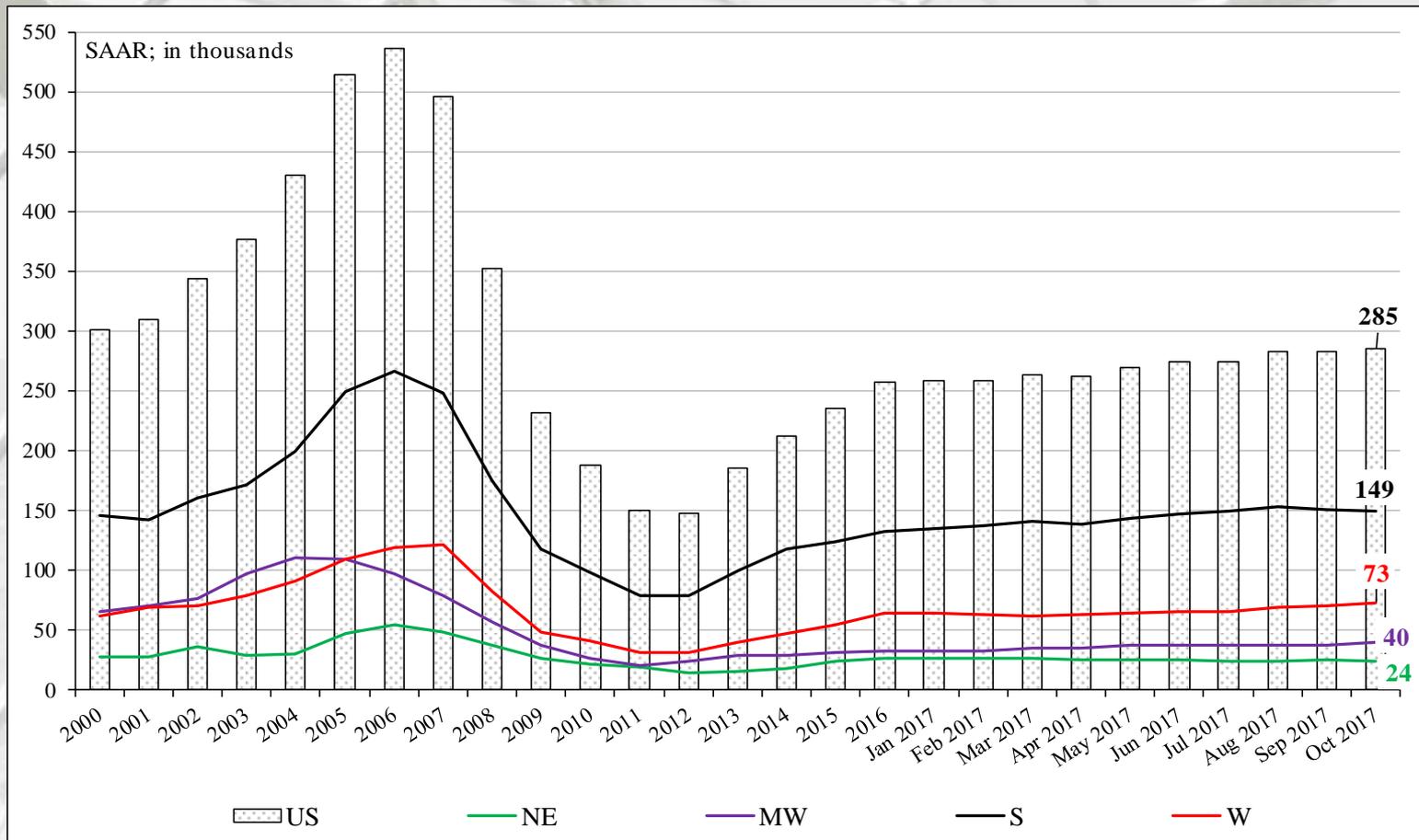


New SF House Sales

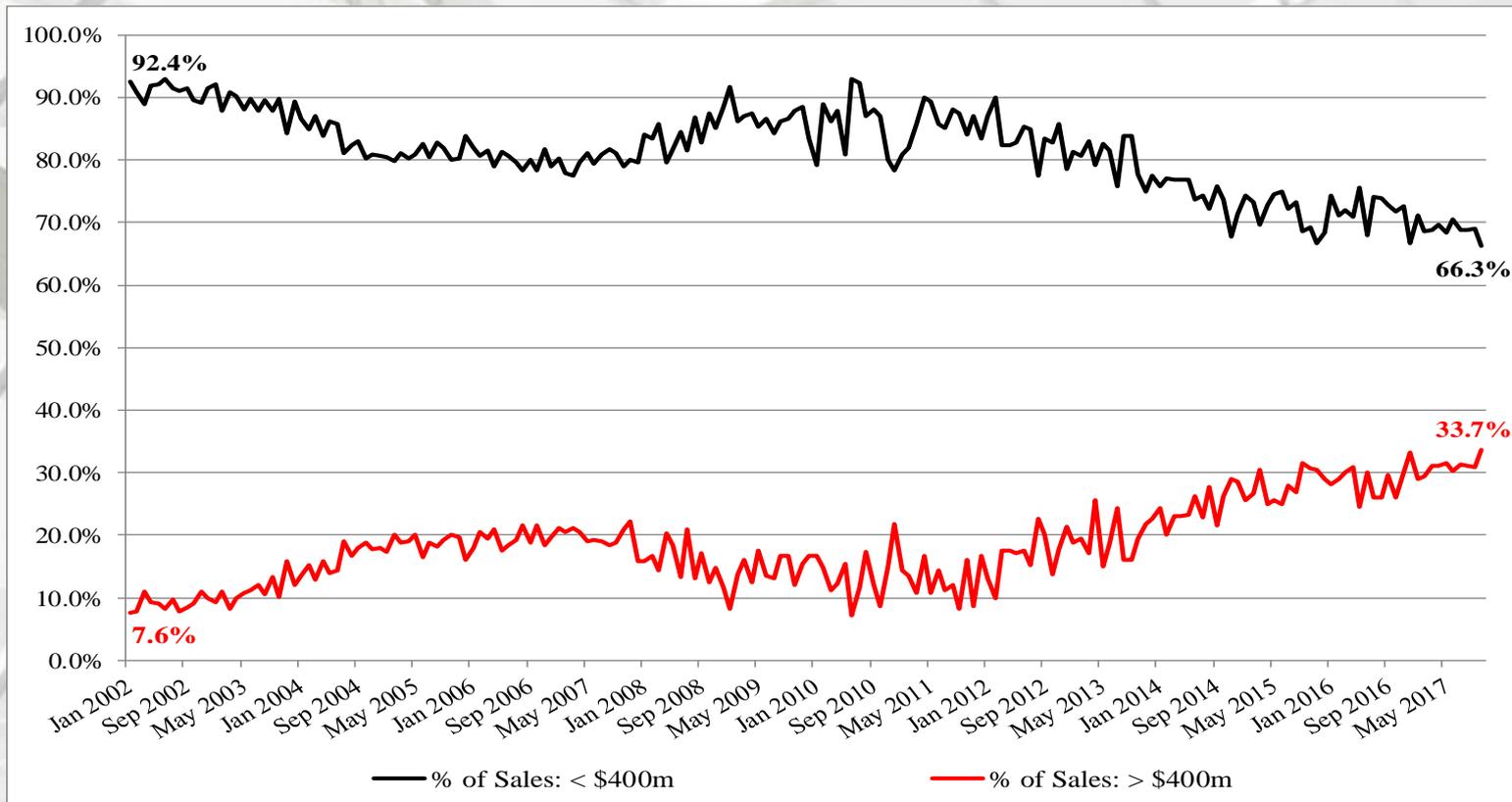
New SF Houses for Sale at the end of the Period by Region

	Total	NE	MW	S	W
October	285,000	24,000	40,000	149,000	73,000
September	283,000	25,000	38,000	151,000	70,000
2016	250,000	27,000	32,000	130,000	61,000
M/M change	0.7%	-4.0%	5.3%	-1.3%	4.3%
Y/Y change	14.0%	-11.1%	25.0%	14.6%	19.7%

New SF Houses Sale at End of Period by Region



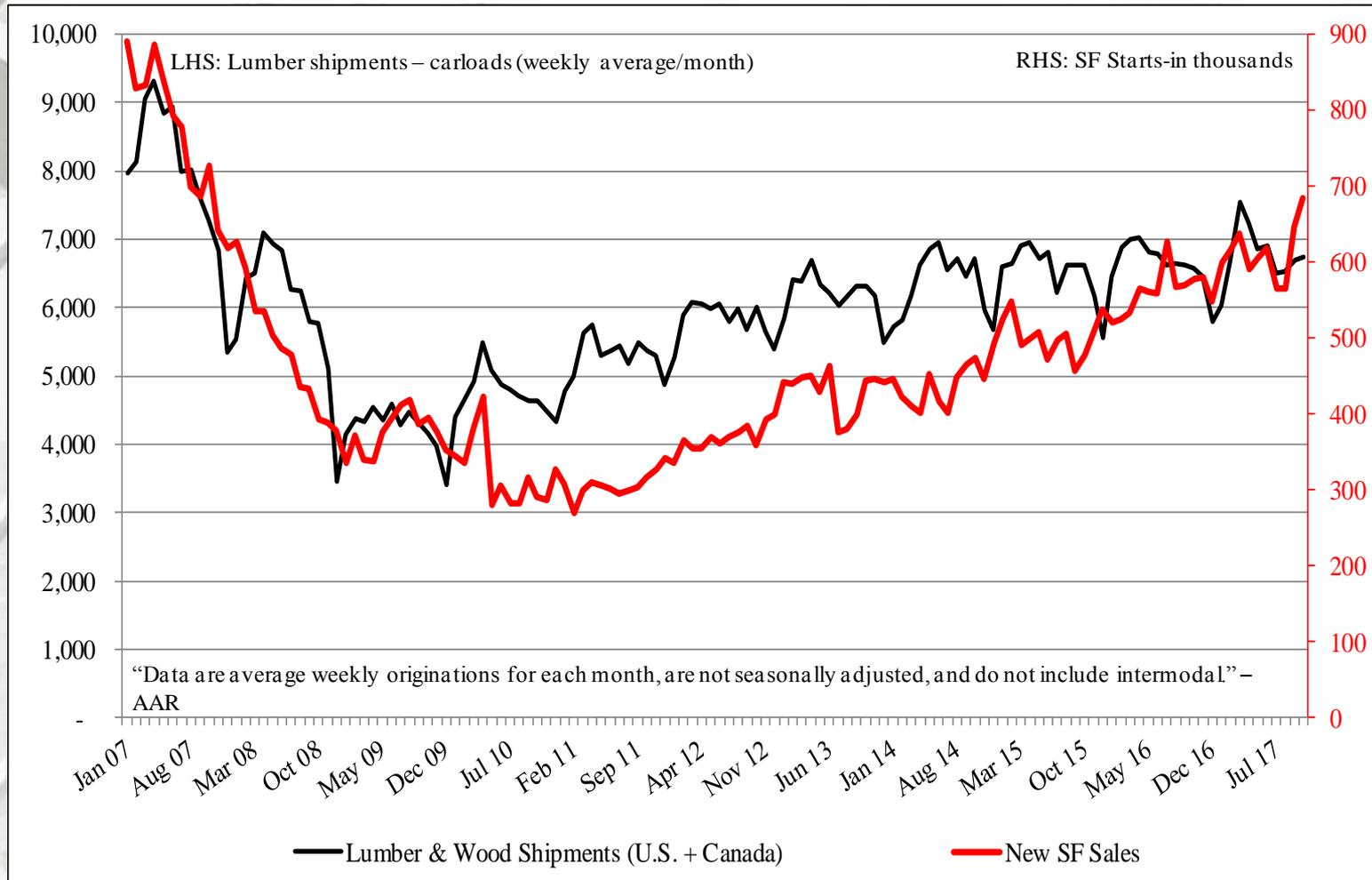
New SF House Sales



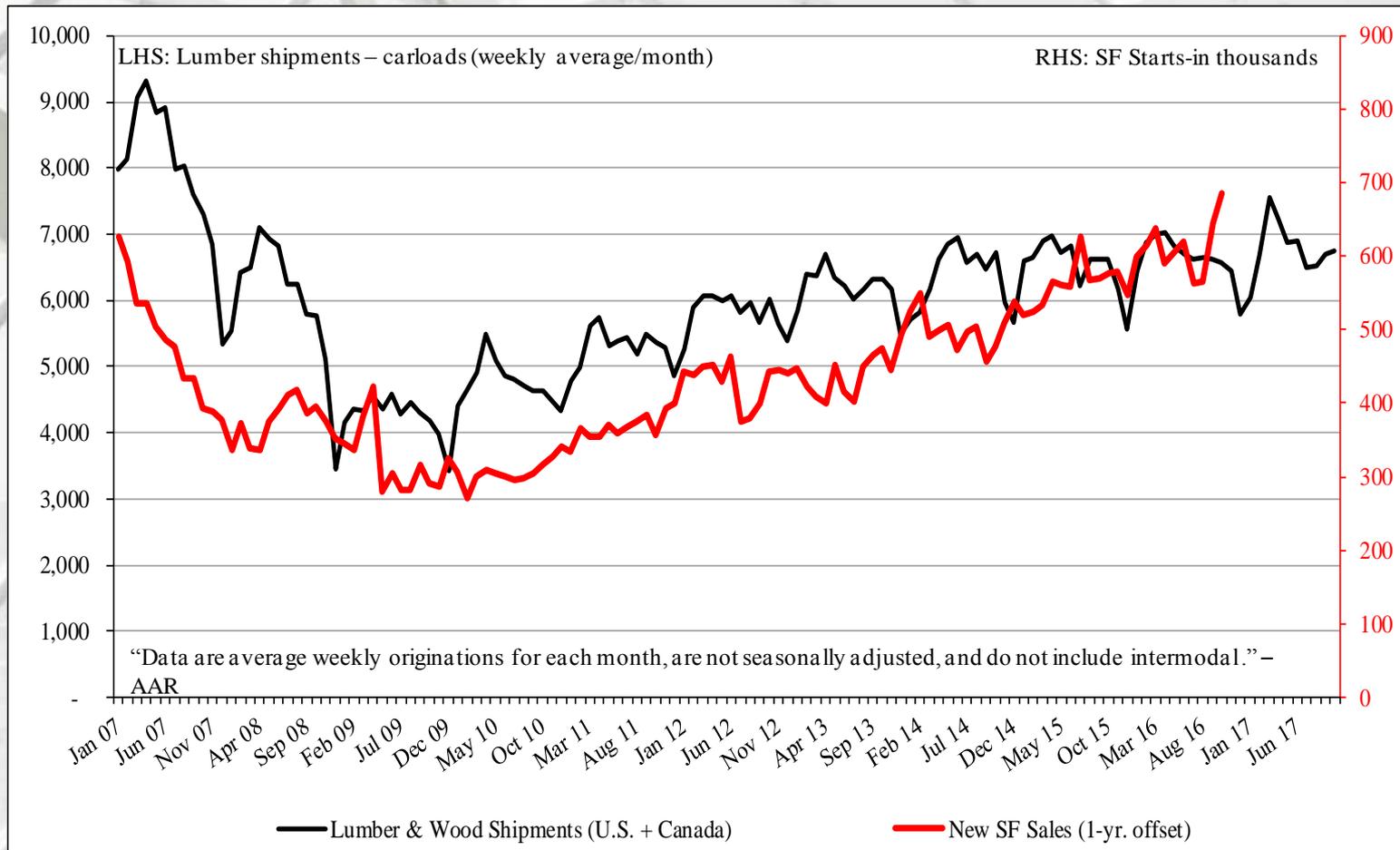
New SF Sales: 2002 – October 2017

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. The wider the spread, the more high-end luxury homes were 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.

Railroad Lumber & Wood Shipments vs. U.S. New SF House Sales



Railroad Lumber & Wood Shipments vs. U.S. New SF House Sales: 1-year offset



In this graph, initially January 2007 lumber shipments are contrasted with January 2008 new SF sales through October 2017 new SF sales. The purpose is to discover if lumber shipments relate to future new SF house sales. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

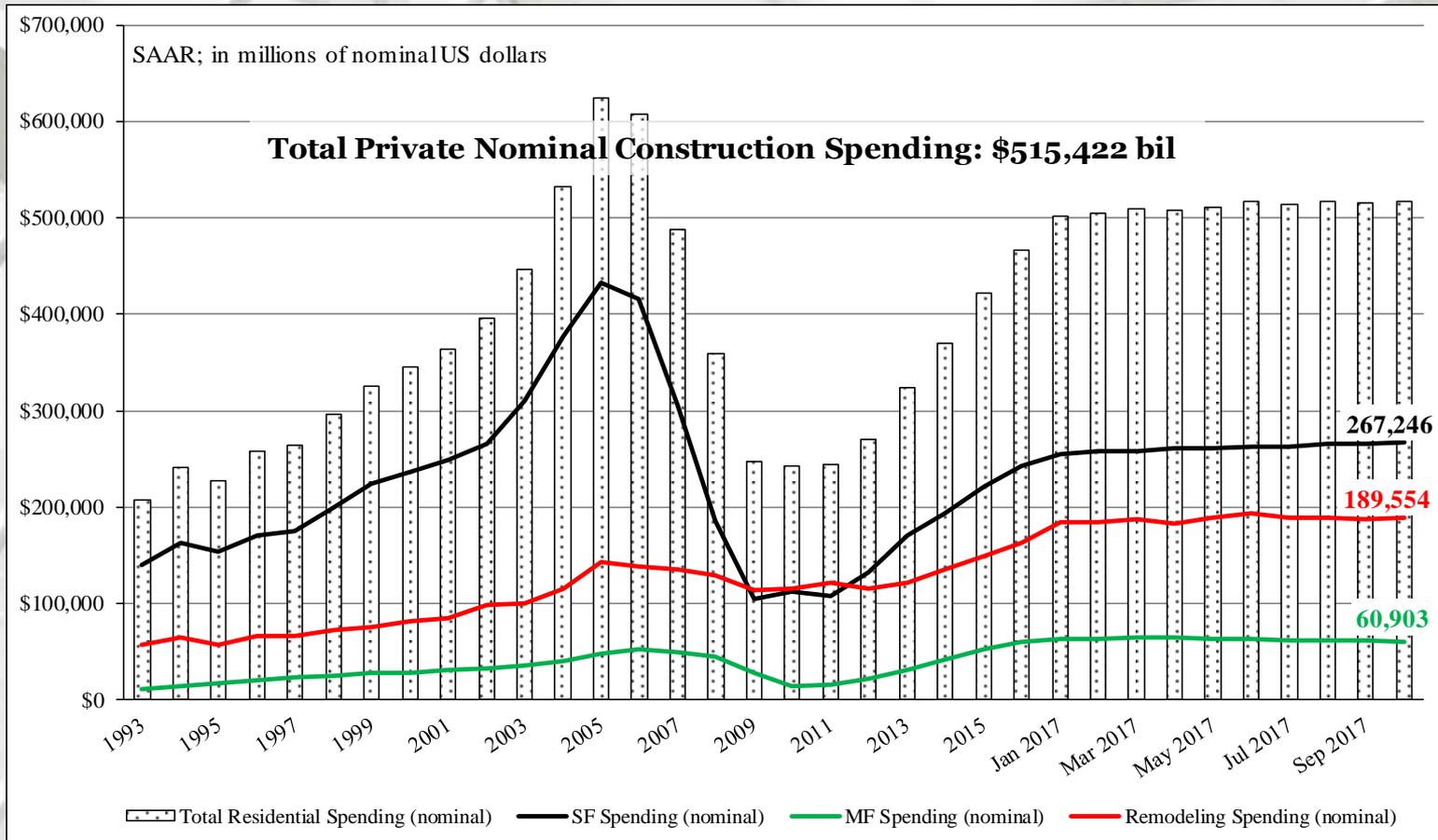
October 2017 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
October	\$517,703	\$267,246	\$60,903	\$189,554
September	\$515,409	\$266,474	\$61,912	\$187,023
2016	\$482,029	\$245,398	\$62,177	\$174,454
M/M change	0.4%	0.3%	-1.6%	1.4%
Y/Y change	7.4%	8.9%	-2.0%	8.7%

* Millions

** The US DOC does not report improvement spending directly, this is a monthly estimation for 2017:
((Total Private Spending – (SF spending + MF spending)).
All data are SAARs and reported in nominal US\$.

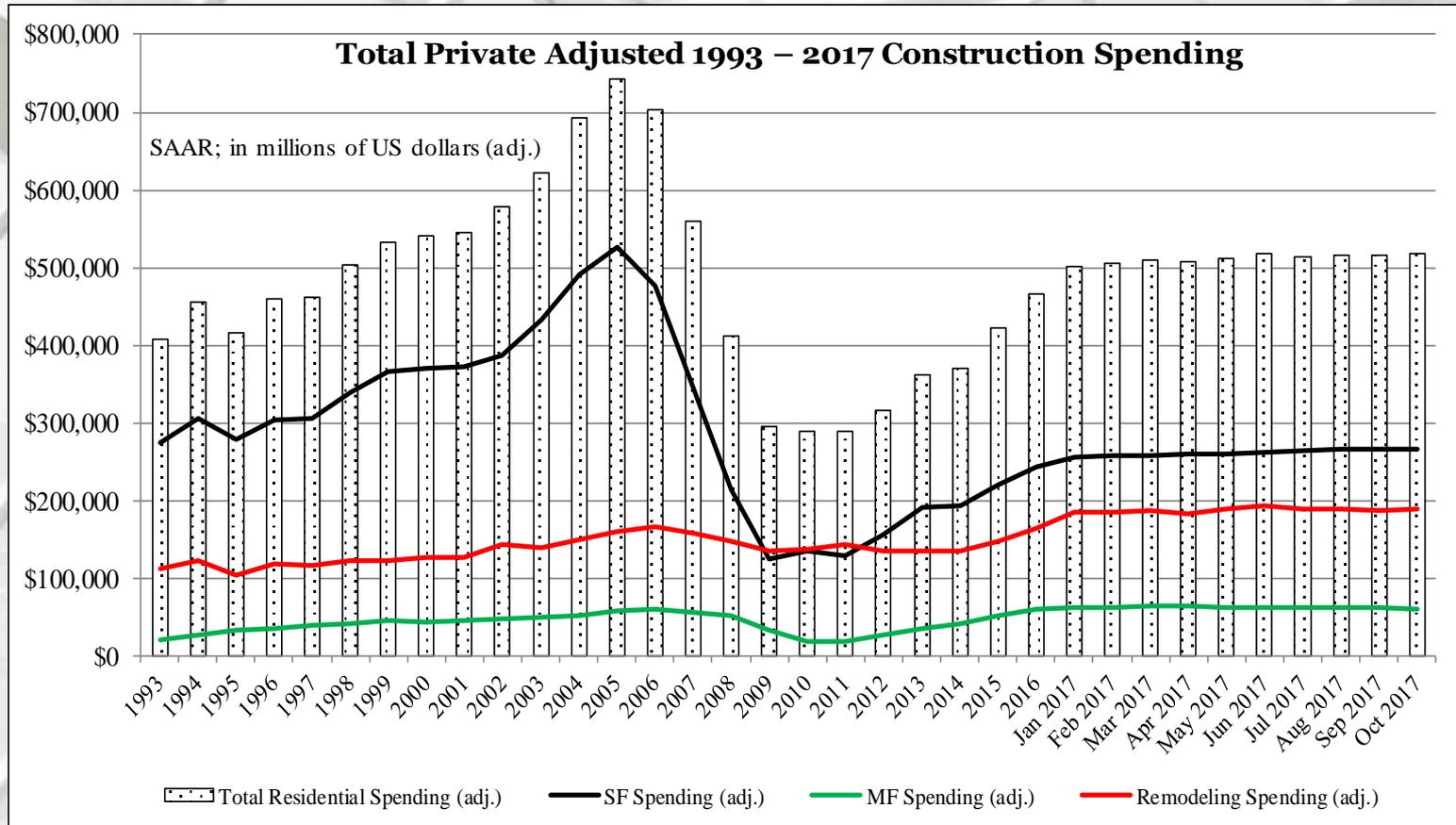
Total Construction Spending (nominal): 1993 – October 2017



Reported in nominal US\$.

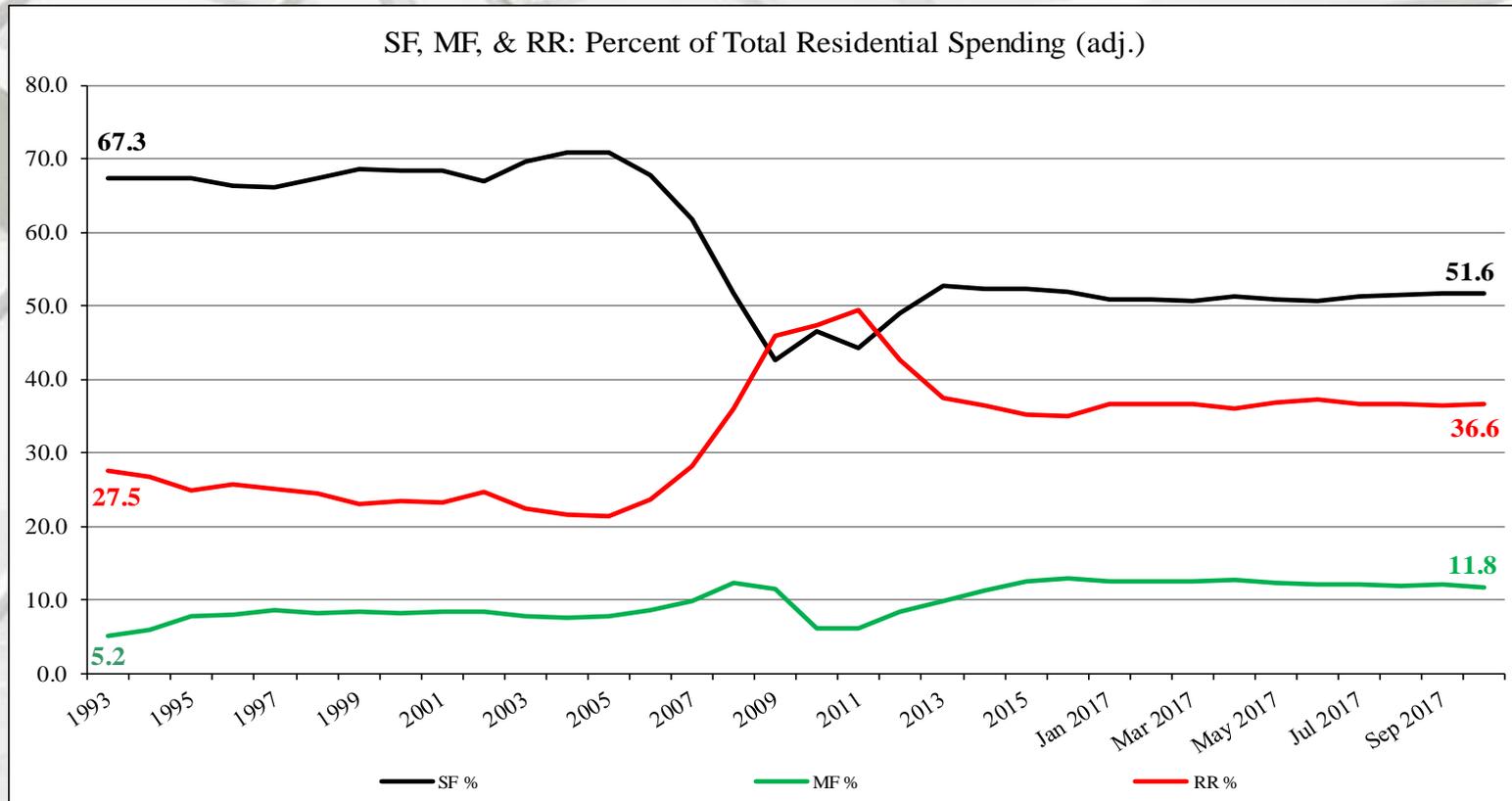
The US DOC does not report improvement spending directly, this is a monthly estimation for 2017.

Total Construction Spending (adjusted): 1993-2017*



Reported in adjusted US\$: 1993 – 2016 (adjusted for inflation, BEA Table 1.1.9); *January-October 2017 reported in nominal US\$.

Construction Spending Shares: 1993 to October 2017



Total Residential Spending: 1993 through 2006

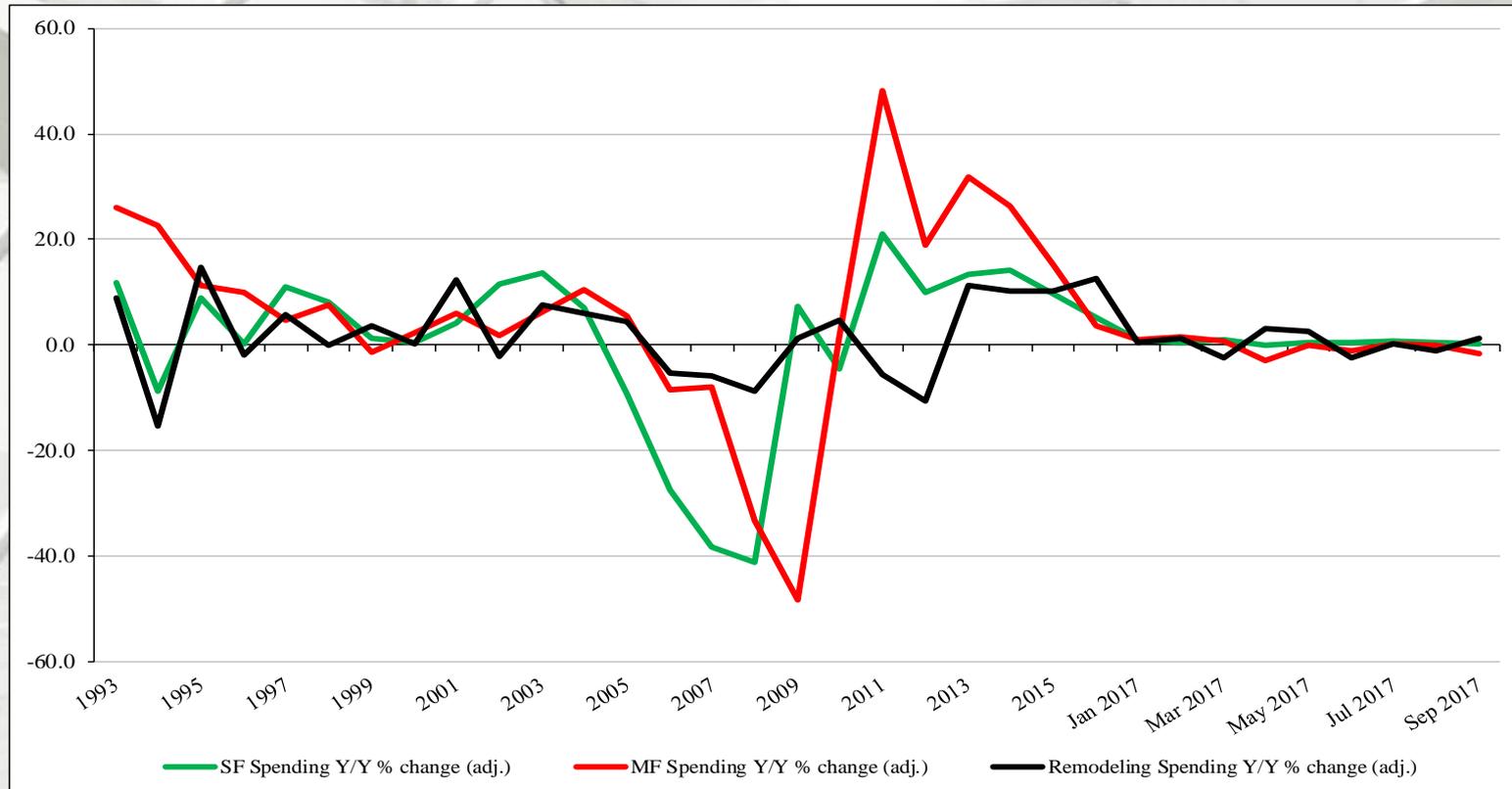
SF spending average: 69.2%

MF spending average: 7.5 %

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

Note: 1993 to 2016 (adjusted for inflation, BEA Table 1.1.9); January-October 2017 reported in nominal US\$.

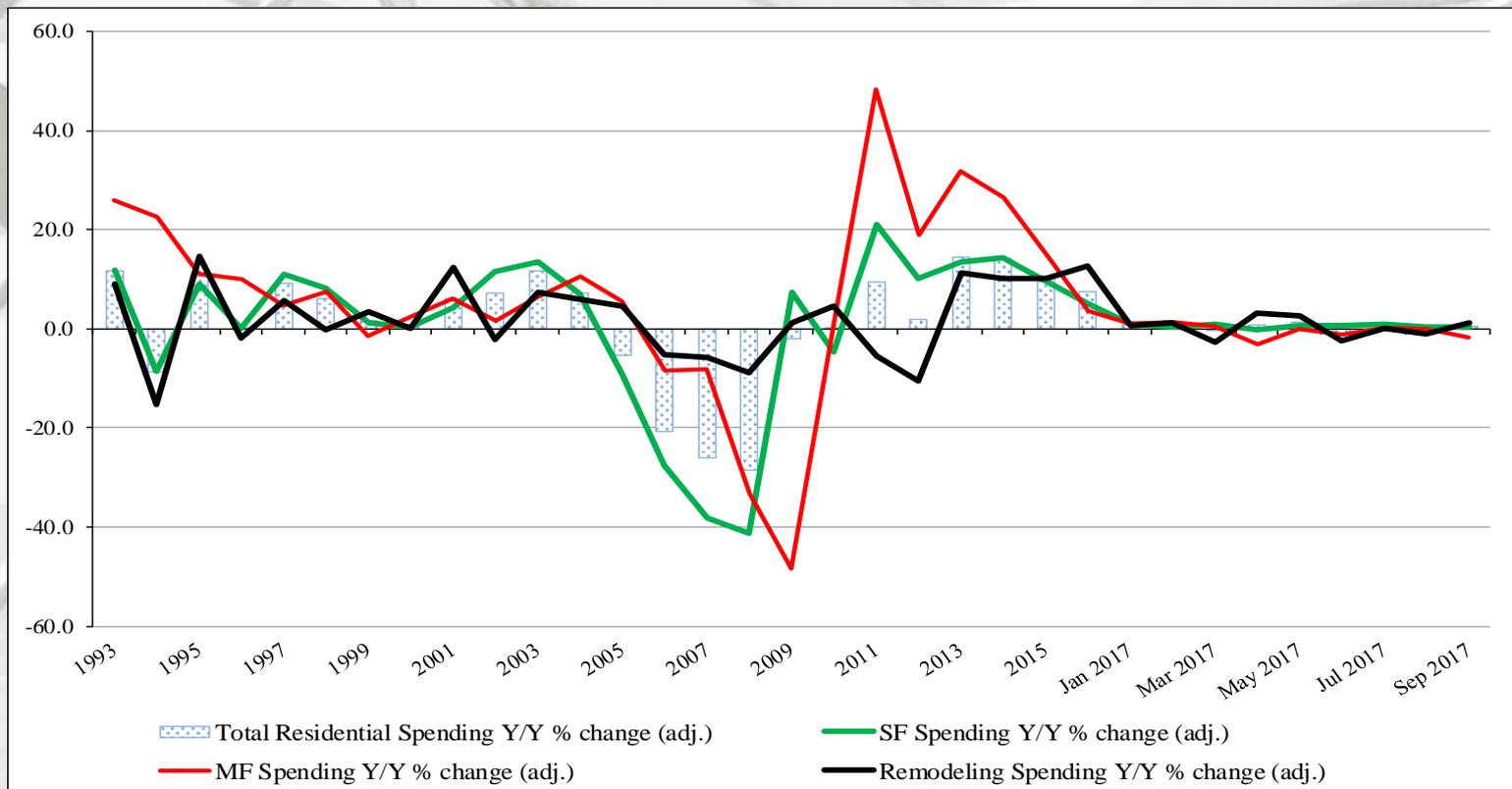
Adjusted Construction Spending: Y/Y Percentage Change, 1993 to October 2017



Residential Construction Spending: Percentage Change, 1993 to October 2017

Presented above is the percentage change of inflation adjusted Y/Y construction spending (1993-2016). Since mid-2015 – MF and RR spending are in an apparent flat-line trend.

Total Adjusted Construction Spending: Y/Y Percentage Change, 1993 to October 2017



Residential Construction Spending: Percentage Change, 1993 to October 2017

The questions remain: Is construction spending normalizing? Has housing stalled? Or, are there alternative explanations? The percentage change in construction spending has been flat and/or declining since the beginning of 2017.

Remodeling

Business Confidence High and Q4 Expectations Strong for Home Renovation Professionals, Houzz Study Finds

Labor shortages driving cost increases and project delays for homeowners; Study also surfaces impact of Hurricanes Harvey and Irma on local renovators

“[Houzz Inc.](#), the leading platform for home remodeling and design, today released the Q3 2017 Houzz Renovation Barometer, which tracks confidence in the home renovation market among industry professionals. The Q3 2017 Barometer reflected high quarter-over-quarter confidence for all industry sectors including architects, designers, general contractors (GCs)/remodelers, design-build, specialty building/renovation and specialty landscape/outdoor, with readings of 62* or higher. Expectations for Q4 are strong across all sectors.

Coupled with this positive business outlook are persistent labor shortages, as reported by 78 percent of GCs, remodelers and design-build firms. For homeowners, this translates to higher costs and longer project timelines. Fifty-six percent of renovation firms report increasing costs of subcontractors in Q3 2017 (versus 53 percent in Q3 2016) and 54 percent report increasing project lengths (versus 50 percent in Q3 2016) due to labor shortages.

The Houzz Renovation Barometer Backlog Index increased slightly from Q2 2017 to Q3 2017, with project backlogs of five to eight weeks on average across sectors, reflecting significant wait times before companies can take on new projects. General contractors (GCs), remodelers and design-build companies have the longest average backlogs (7.1 and 7.7 weeks, respectively).” – Houzz

Existing House Sales

National Association of Realtors (NAR®)

October 2017 sales: 5.480 million (SAAR)

	Existing Sales*	Median Price	Mean Price	Month's Supply
October	5,480,000	\$247,000	\$288,400	3.9
September	5,370,000	\$247,600	\$289,600	4.2
2016	5,530,000	\$234,100	\$275,500	4.4
M/M change	2.0%	-0.2%	-0.4%	-7.1%
Y/Y change	-0.9%	5.5%	4.7%	-11.4%

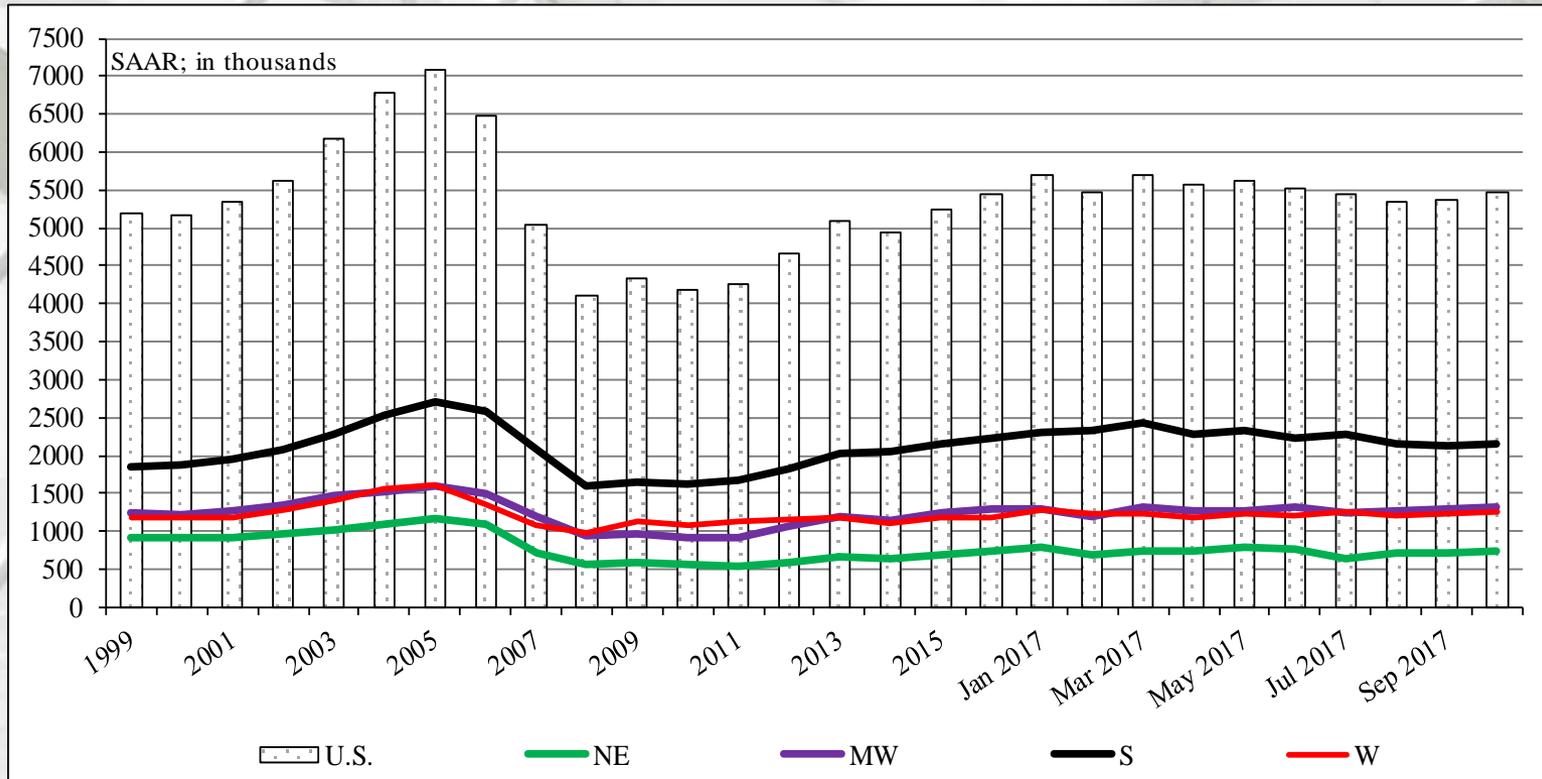
* All sales data: SAAR

Existing House Sales

	NE Sales	MW Sales	S Sales	W Sales
October	740,000	1,310,000	2,160,000	1,270,000
September	710,000	1,300,000	2,120,000	1,240,000
2016	740,000	1,330,000	2,200,000	1,260,000
M/M change	4.2%	0.8%	1.9%	2.4%
Y/Y change	0.0%	-1.5%	-1.8%	0.8%

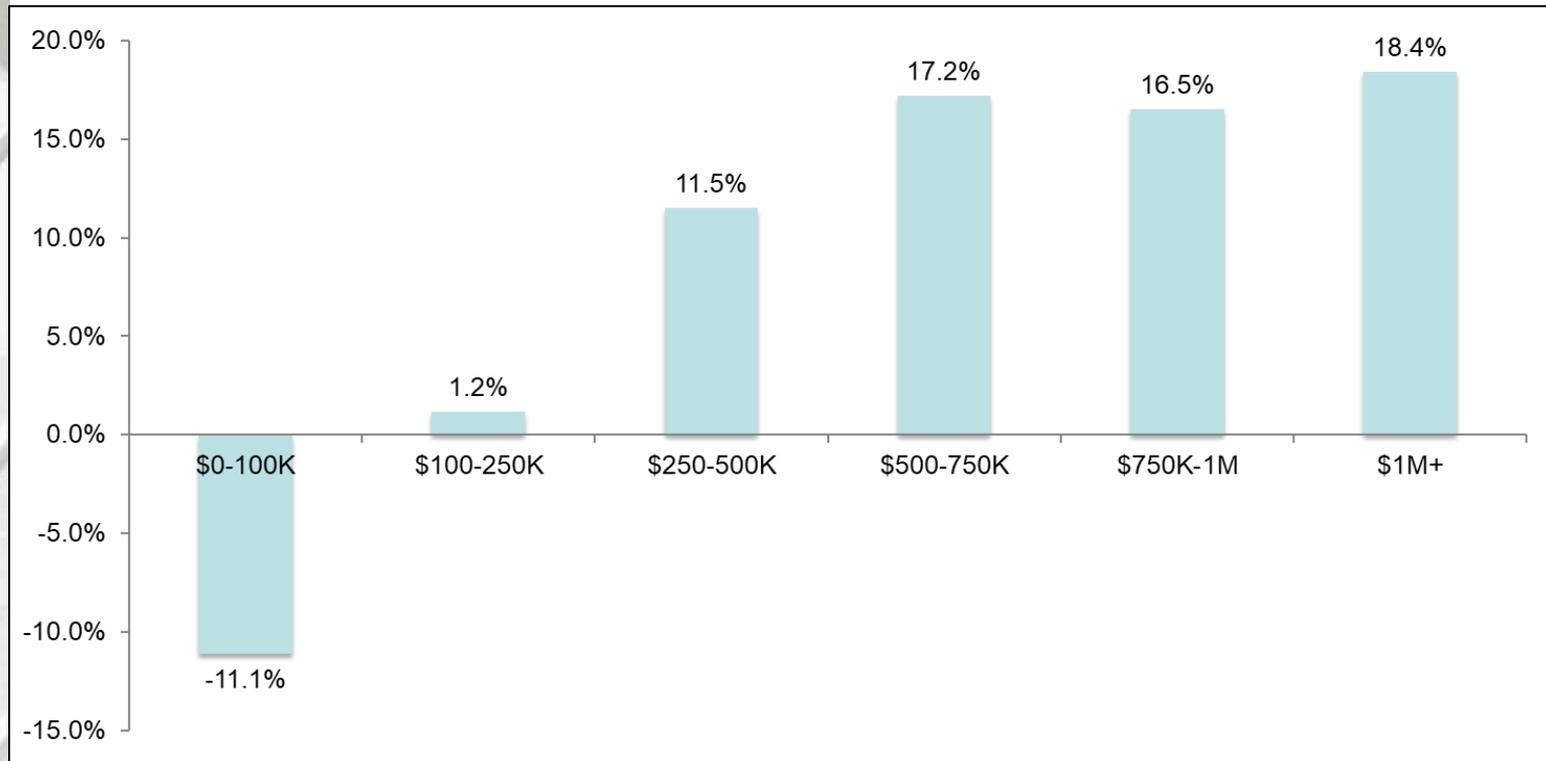
	Distressed House Sales	Foreclosures	Short-Sales	All-Cash Sales	Individual Investor Purchases
October	4%	3%	1%	20%	13%
September	4%	3%	1%	20%	15%
2016	5%	4%	1%	22%	13%

Total Existing House Sales



Changes in Existing House Sales

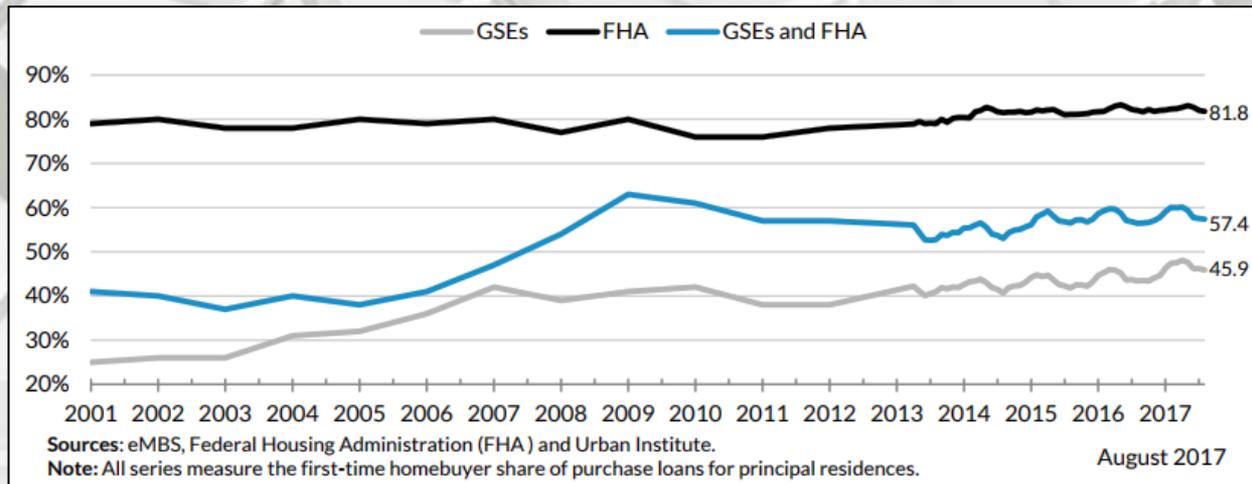
Percent Change in Sales From a Year Ago by Price Range



First-Time Purchasers

National Association of Realtors (NAR®)

32% of sales in October 2017 – 29% in August 2017, and 33% in October 2016¹



Urban Institute

“In August 2017, the first-time homebuyer share of GSE purchase loans fell for the fourth consecutive month to 45.9 percent, after hitting the highest level in recent history in April (48.1 percent). The FHA has always been more focused on first-time homebuyers, with its first-time homebuyer share hovering around 80 percent; it stood at 81.8 percent in August 2017. ... based on mortgages originated in August 2017, the average first-time homebuyer was more likely than an average repeat buyer to take out a smaller loan and have a lower credit score and higher LTV and DTI, thus requiring a higher interest rate.”² – Laurie Goodman, *et al.*, Co-director, Housing Finance Policy Center

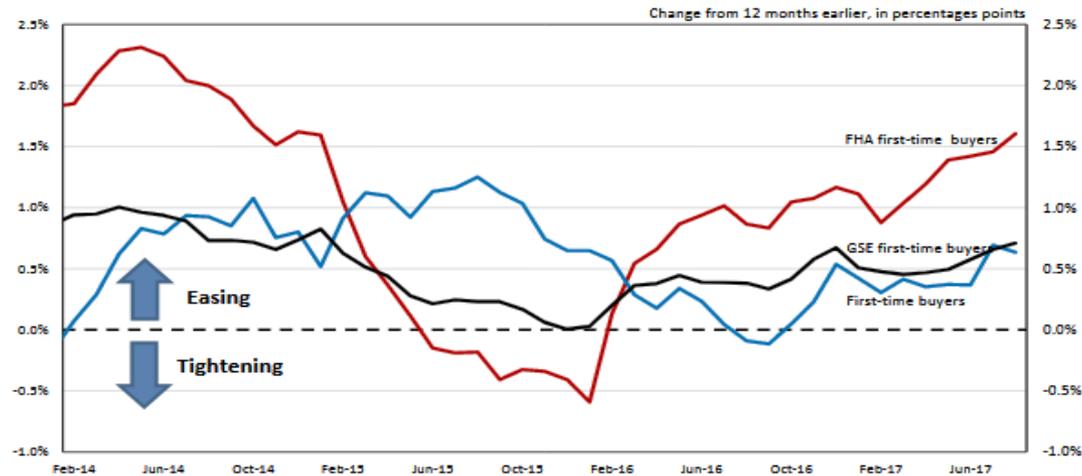
Sources: ¹ <https://www.nar.realtor/newsroom/existing-home-sales-grow-20-percent-in-october>; 11/21/17;

² <https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-november-2017>; 11/27/17

First-Time Purchasers

FTB Purchase Loan NMRI: Credit Easing Resumes

The First-time Buyer MRI continued to increase. Setting a new series high, FHA's First-time Buyer MRI stood at 26.5% in August, up 1.6 ppts from a year earlier. With individual agencies easing credit standards and continued home price escalation, we expect higher FBMRIs in the coming months.



Note: Includes all types of NMRI purchase loans (primary owner-occupied, second home, and investor loans).
Source: AEI Center on Housing Markets and Finance, www.HousingRisk.org.

AEI International Center on Housing Risk

“First-Time Buyer (FTB) mortgage risk and volume both increased in August, helping FTBs overcome supply concerns and rising prices. The FTB National Mortgage Risk Index for August was up .6 percentage point(ppt) from a year ago, while FTB volume by count rose 3% from already elevated levels a year ago. Compared to August 2013, first-time buyer volume has leaped 42%, while FTB risk has increased by 3 ppts. All this points to the fundamental problem in the housing market today: Too much demand, enabled by increasing leverage, is chasing a limited supply, all of which is driving up house prices.” – Edward Pinto, AEI International Center on Housing Risk

First-Time Purchasers

Genworth Mortgage Insurance's

First-Time Homebuyer Market Report 12.17

“There are four key takeaways from this quarter’s report:

- The first-time homebuyer market continues to grow, despite a slowdown in overall home sales.
- Purchase mortgages, especially those with less than a 20 percent down payment, continue to grow.
- The supply of new single-family homes priced under \$250,000 is not growing.
- Low down payment mortgage loans for first-time homebuyers continue to expand, led by the private mortgage insurance industry.

What does the report tell us about the current housing cycle?

The first-time homebuyer market is growing much faster than other buyer segments in the housing market, thus defining the current housing cycle. This trend first emerged in 2015 and growth in the first-time homebuyer market has represented 85 percent of the growth in single-family home sales. This trend has continued into the third quarter. The sustained growth in the first-time homebuyer market means that not only has it recovered to its historical level, but that it is historically high in number and as a percentage of home sales. A strong economy with full employment for those in primary household formation ages (between 25 and 44), and historically low interest rates, has provided a firm economic foundation. The Millennials’ entry into the housing market, and the delayed purchase over the previous 10 years, also contributed to its rapid growth in the past two years.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

First-Time Purchasers

Genworth Mortgage Insurance's First-Time Homebuyer Market Report

What does the report tell us about the current housing cycle?

“The growing clout of first-time homebuyers has transformed the mortgage market. The number of homebuyers taking out mortgage financing is growing faster than repeat homebuyers across all mortgage segments – leading to an increase in the mix of first-time homebuyers. Low down payment mortgages, which help potential first-time homebuyers without much savings, are growing. The private mortgage insurance industry has helped to facilitate the rebound of the first-time buyer market and will likely become the largest source of credit enhancement for first-time homebuyers based on the current trajectory.

In the housing market, the growing presence of first-time homebuyers is beginning to show up in rising homeownership rates among younger households. They have a long way to go before getting back to their historical levels and differences among homebuyers matter to understanding the housing market. First-time homebuyers are buying their first home to get more value than just a financial return – that’s why they can outbid other buyers in their price range.

The large influx of first-time homebuyers is creating a unique challenge in the housing market. Unlike repeat buyers, first-time homebuyers do not have a home to buy and sell at the same time. Their presence is an important reason why housing inventory has been declining, while sales and price growth have been up. Compounding this challenge is that rising demand from potential first-time homebuyers has not been met by a large increase in affordable new homes.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

First-Time Purchasers

Genworth Mortgage Insurance's First-Time Homebuyer Market Report

What does the report tell us about the current housing cycle?

“The potential demand for new single-family homes priced under \$250,000 — a price point chosen by many first-time homebuyers — is increasing by hundreds of thousands of units a year, but remains unmet. The mix of that price segment is, in fact, down compared to 2011. This disconnect between first-time homebuyer demand and supply means that home price gains will continue.

While many forecasters are predicting a slower pace of home price growth, we see that as an unlikely scenario in 2018. In fact, our expectation that the conforming loan limit would rise to around \$450,000 in 2018 was already **fulfilled** even before the release of this report. In addition to rising home prices, we also expect some potential homebuyers facing less urgency in making a buying decision to stay on the sidelines or pursue other options such as hiring contractors to upgrade. The pullback of repeat homebuyers this quarter shows that the supply shortage is hurting buyers and limiting the growth of the housing market.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

First-Time Purchasers

Genworth Mortgage Insurance's First-Time Homebuyer Market Report

Key Findings:

1. “In the third quarter, first-time homebuyers purchased 601,000 single-family homes (fig. 1), the most since the third quarter of 2000. It accounted for 40 percent of all single-family homes sold (fig. 3), and 56 percent of all purchase mortgages originated (fig. 4).
2. After more than two years of strong growth, the first-time homebuyer market is now much larger than its historical annual average of 1.8 million units in home sales (fig. 2). In contrast, the repeat homebuyer market has been largely flat since 2013 (fig. 7).
3. The first-time homebuyer market again grew faster than both purchase originations and overall home sales. The first-time homebuyer market was up six percent year-over-year, while repeat buyers fell five percent (fig. 5). In the mortgage market, growth in the number of first-time homebuyers also exceeded growth in repeat buyers (fig. 6). The decline in the repeat buyer market resulted in lower total home sales compared to the prior year, the first year-over-year decline in home sales in three years.
4. Purchase origination grew faster than home sales during the third quarter, as cash sales declined more than the overall market, and the first-time homebuyer market grew faster than the overall market. Faster purchase origination growth over home sales has been a constant trend since 2012 (fig. 8). The purchase mortgage loan count was up one percent from a year ago during the third quarter, compared to a decline of one percent in single-family home sales for the quarter. Year-to-date, the number of purchase loans are up five percent from last year, while home sales are up two percent.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

First-Time Purchasers

Genworth Mortgage Insurance's First-Time Homebuyer Market Report

5. “New homes priced under \$250,000, which is the key price segment for first-time homebuyers, were flat. Homebuilders reported faster sales growth in new single-family homes priced between \$200,000 and \$250,000, which is up 20 percent from a year ago (table 2, fig. 16). But that growth came at the expense of homes priced below \$200,000. Growth in new home sales was concentrated in the \$300,000 and above price segment, which will add overall supply to the housing market and benefit first-time homebuyers indirectly. But compared to prior housing cycles, this will result in a slower increase in housing supply and more home price growth, which means that the overall housing market should remain a seller’s market. Lower sales to repeat buyers, if sustained, could reduce housing demand, alleviate inventory pressure, and ease home price growth.
6. The single-family housing market continues to experience insufficient supply of homes for sale. During the third quarter, the supply of existing homes for sale averaged 4.2 months, down from 4.6 months a year ago (fig. 15).
7. The lack of housing supply has led to accelerating home prices. Year-to-date, home price appreciation as measured by the Federal Housing Finance Agency (FHFA) home price index for purchase loans accelerated to 6.7 percent growth, up from 6.1 percent growth a year ago (fig. 17).
8. Since first-time homebuyers represent the transition of housing demand from rental to owner-occupied housing, strong first-time homebuyer demand is beginning to lift homeownership rates, especially for households headed by younger adults. In the third quarter, home ownership rates among households headed by people under 35, and between 35 and 44 years, saw the largest gains (fig. 9). But even after these recent gains, they remain well below historically normal levels. This suggests that the first-time homebuyer market will likely remain strong in the coming years.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

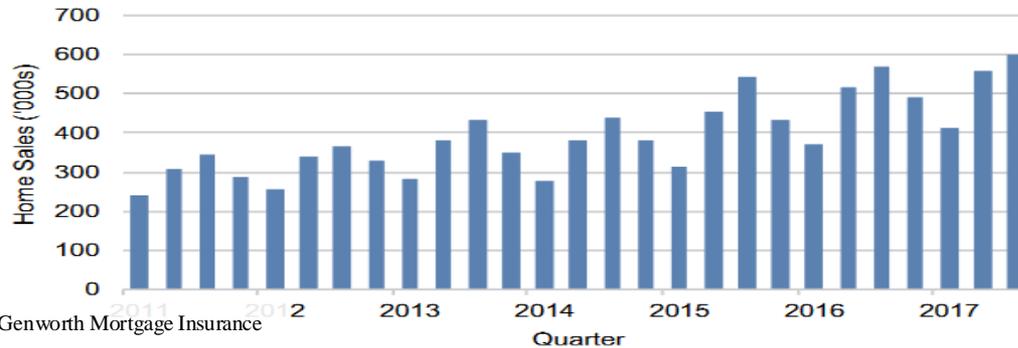
First-Time Purchasers

Genworth Mortgage Insurance's First-Time Homebuyer Market Report

9. “Within the mortgage market, first-time homebuyers have historically relied on lower down payment mortgages, defined as those with a combined loan-to-value ratio (LTV) of 80 percent or higher. When buying a home, 78 percent of first-time homebuyers used a low down payment mortgage, while 22 percent used a high down payment mortgage in the third quarter (fig. 11).
10. The number of first-time homebuyers increased across the down payment spectrum in the third quarter. Low down payment mortgages financed 467,000 home sales to first-time home buyers, up five percent from a year ago (table. 1, fig. 10) and the second highest quarter after the third quarter of 1999. High down payment mortgage products financed 135,000 home sales to first-time homebuyers, up 10 percent from a year ago.
11. Among low down payment mortgage products, private mortgage insurance again reported the fastest growth in first-time homebuyers, as more lenders and borrowers embraced 97 LTV products. The private mortgage insurance industry insured loans to 181,000 first-time home buyers during the third quarter (fig. 12). This represented an increase of 19 percent from a year ago (table. 1) and just below the previous peak in the second quarter of 2007. The private mortgage insurance industry is also the segment of the mortgage market that has seen the biggest increase in the mix of first-time homebuyers in the current housing cycle (fig. 13). In contrast, six percent fewer first-time homebuyers used mortgages backed by the FHA. While the FHA remains the single-largest source of financing for first-time homebuyers at 197,000 loans for the quarter (fig. 12), private mortgage insurance will take over that role in the near future, assuming that the current trend continues. To underscore the strength of the first-time homebuyer segment in the low down payment mortgage market, both VA and USDA reported a double-digit increase in first-time homebuyers for the third quarter.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

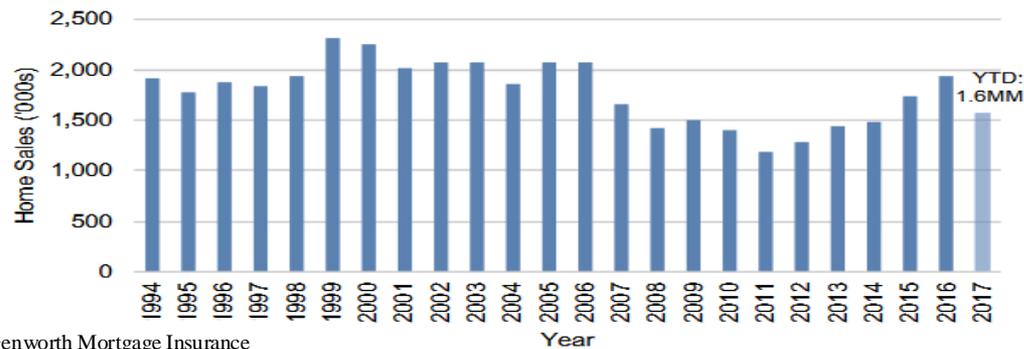
First-Time Purchasers

Fig. 1 First-Time Homebuyer Market—Quarterly



Source: Genworth Mortgage Insurance

Fig. 2 First-Time Homebuyer Market—Annual



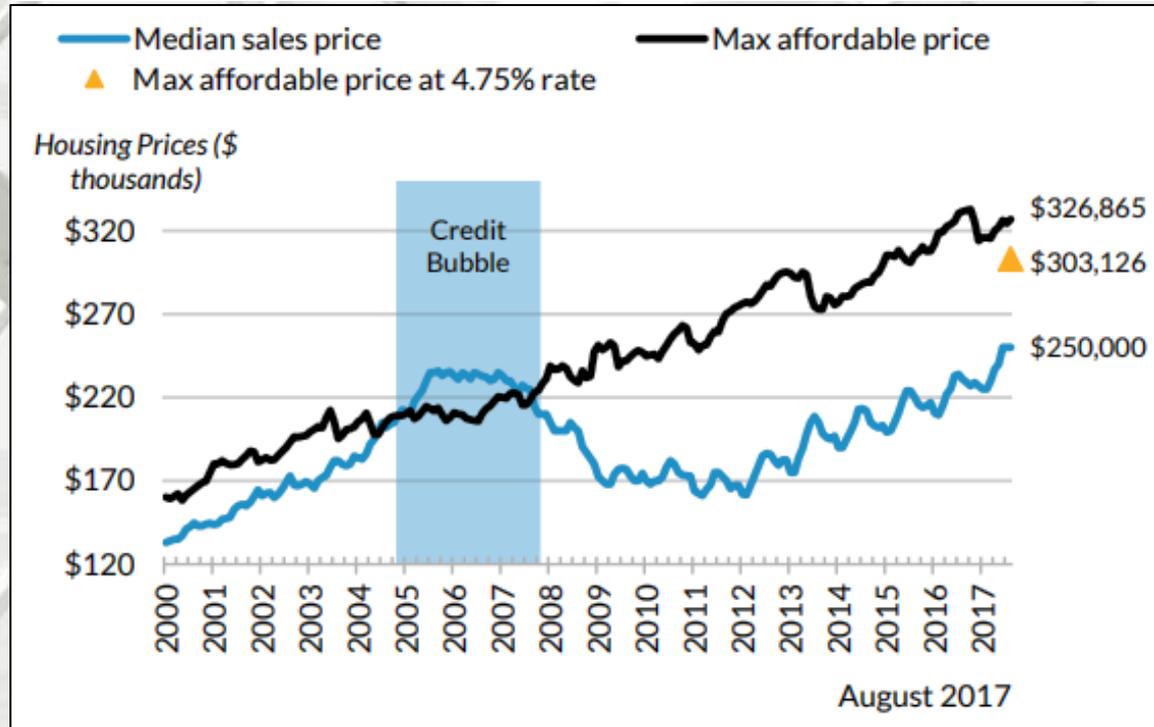
Source: Genworth Mortgage Insurance

Genworth Mortgage Insurance’s First-Time Homebuyer Market Report

- “Government lending programs remained very large in the first-time homebuyer market. During the third quarter, government lending programs represented 46 percent of the first-time homebuyer market (fig. 14). The footprint of government lending programs in the purchase market and in the first-time homebuyer market segment have expanded sharply over the last 10 years from 20 percent of the first-time homebuyer market.” – Tian Liu, Chief Economist, Genworth Mortgage Insurance

Housing Affordability

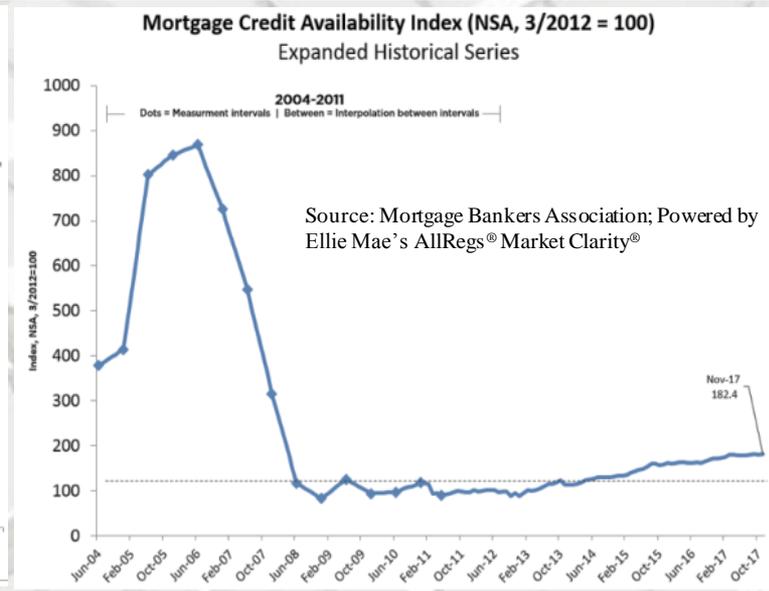
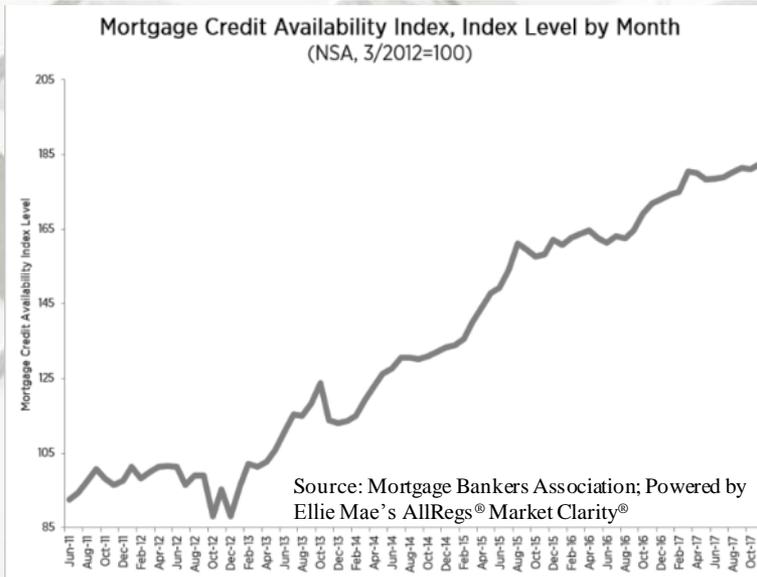
National Housing Affordability Over Time



Urban Institute

“Home prices are still very affordable by historic standards, despite increases over the last four years and the recent interest rate hike. Even if interest rates rise to 4.75 percent, affordability would still be at the long term historical average.” – Bing Lai, Research Associate, Housing Finance Policy Center

Mortgage Credit Availability

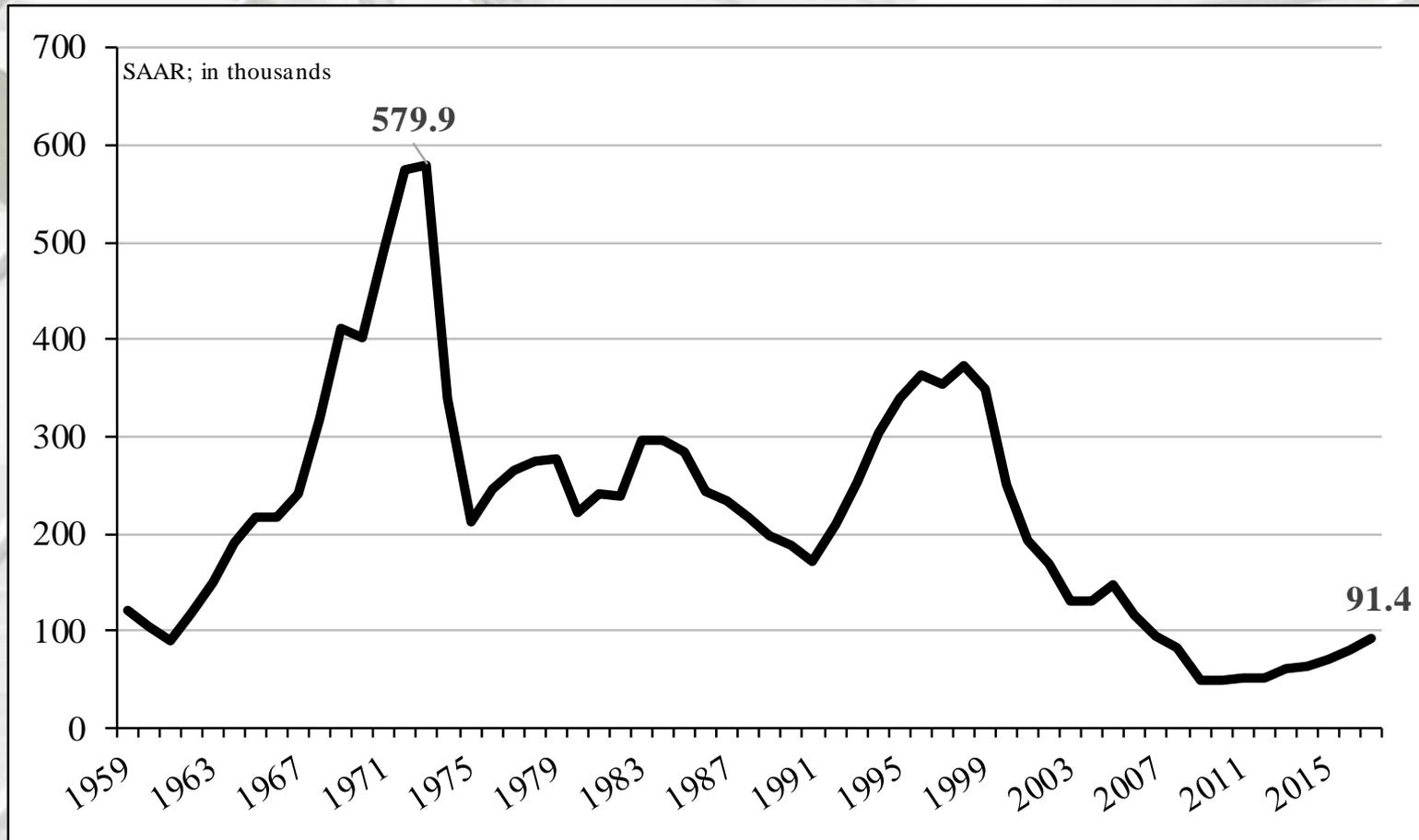


Mortgage Credit Availability Increases in November

“Mortgage credit availability increased slightly in November according to the Mortgage Credit Availability Index (MCAI) The MCAI increased 0.8 percent to 182.4 in November. 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. Of the four component indices, the Jumbo MCAI saw the greatest increase in availability over the month (up 3.8 percent), followed by the Conventional MCAI (up 2.8 percent), and the Conforming MCAI (up 1.8 percent). The Government MCAI (down 0.7 percent) decreased from last month.

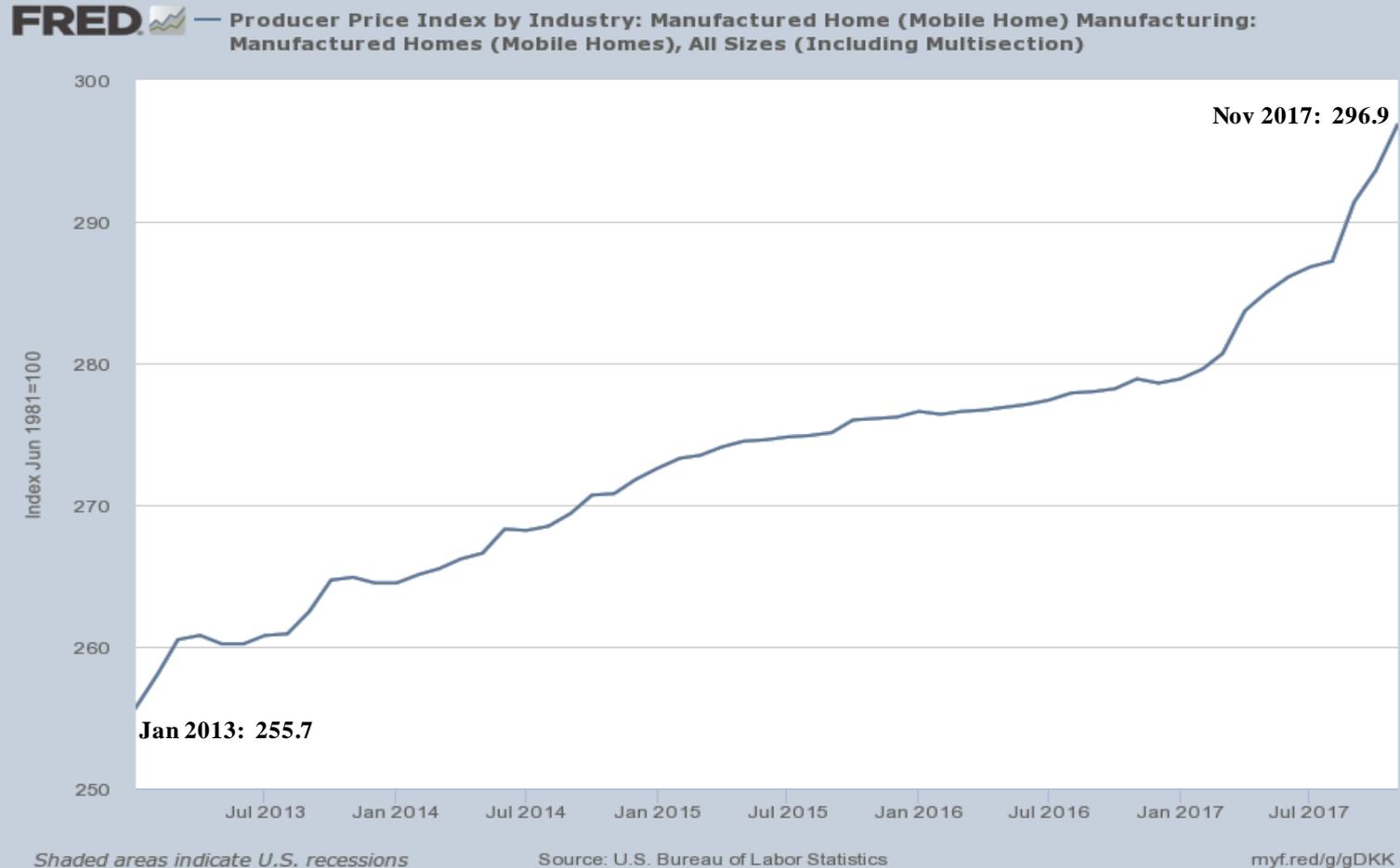
Mortgage credit availability increased in November driven by a net increase in investor offerings. While the number of offerings for government backed programs (FHA/VA/USDA) declined modestly, conventional offerings increased more strongly over the month among both jumbo and conforming programs.” – Lynn Fisher, Vice President of Research and Economics, MBA

Mobile Home Come Back?



Mobile Home Shipments: 1959 to October 2017

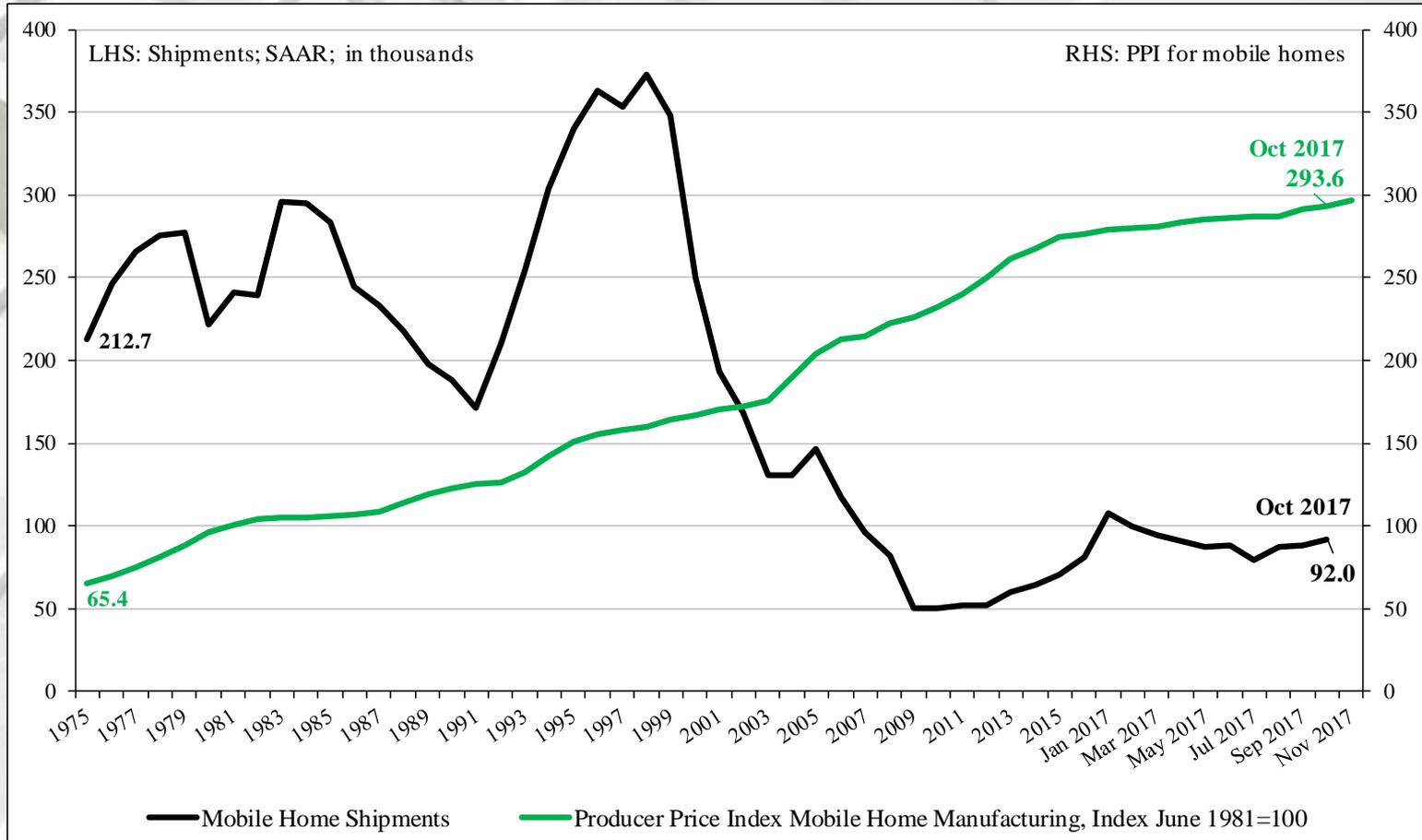
Mobile Home Come Back?



Mobile Home Price Index

Price increases in the past few months have accelerated rapidly. The lack of housing inventory for sale is one explanation for the rapid rise in the price index.

Mobile Home Come Back?



Mobile Home Shipments & Price Index

While mobile home shipments have improved since 2012, the mobile home producer price index has out-paced shipment gains. Will increased mobile home production follow?

Summary

In summary:

In October, the U.S. housing market remained flat, as many indicators posted minimal increases on a month-over-month basis. New SF sales were robust on a month-over-month basis. Monthly construction spending is anemic, as SF and improvement expenditures were barely positive on a month-over-month basis. Once more, new SF lower-priced tier house sales were well less than historical averages. It warrants repeating, the market needs consistent improvement in this category to influence the housing construction market upward.

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

Pros:

- 1) Historically low interest rates are still in effect, though in aggregate rates are incrementally rising (future Fed actions may indirectly cause *i*-rates to rise);
- 2) As a result, housing affordability is good for many in the U.S. – but not all of the U.S.;
- 3) Select builders are beginning to focus on entry-level houses.

Cons:

- 1) Lot availability and building regulations (according to several sources);
- 2) Household formations are still lagging historical averages;
- 3) Changing attitudes towards SF ownership;
- 4) Gentrification;
- 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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