

The Virginia Tech – U.S. Forest Service

July 2016

Housing Commentary: Section I



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

Summary

In July, aggregate housing data were mixed; with several categories declining month-over-month and on a year-over-year basis. Seven categories recorded three percent or less increases. New single-family sales was the “Star” of July, increasing above its long-term historical average. In the expenditures category, single-family spending has decreased five consecutive months; remodeling expenditures increased month-over-month, yet are negative year-over-year. The Atlanta Fed GDPNow™ model projects residential investment spending, in Q3, to decrease at a 5.1 percent rate¹ (SAAR). Regionally, data were mixed across all sectors. From the depths of 2009, housing has improved; yet, only new single-family sales are greater than its historical average.

How is the 2016 housing market shaping up? According to Lindsey Piegza, Chief Economist at Stifel Fixed Income, “If you are looking for a silver lining in this recovery, housing comes to mind. We see positive upward momentum in new and existing home sales. Some would argue that the recent report showing a double-digit decline in existing home sales undermines that thesis, but we have to look at what the housing market has been doing from the longer-term perspective, and we do see a nice positive trend. Housing is no longer the drag on the economy as it was in the aftermath of the Great Recession, but it's also no longer the driver of the economy as it was before the recession.”²

This month’s commentary contains relevant housing data; data exploration; new and existing single-family housing; economics; and several slides addressing demographics. Section I contains data and commentary and Section II includes Federal Reserve analysis; private indicators; and demographic commentary. We hope you find this commentary beneficial.

Sources: ¹ <https://www.frbatlanta.org/-/media/Documents/cqer/researchcq/gdpnow/GDPTrackingModelDataAndForecasts.xlsx>; 9/9/16

² <http://seekingalpha.com/article/4002988-u-s-economy-hill-negative-gdp-recession-2019-chief-economist-lindsey-piegza>; 8/31/16

July 2016 Housing Scorecard

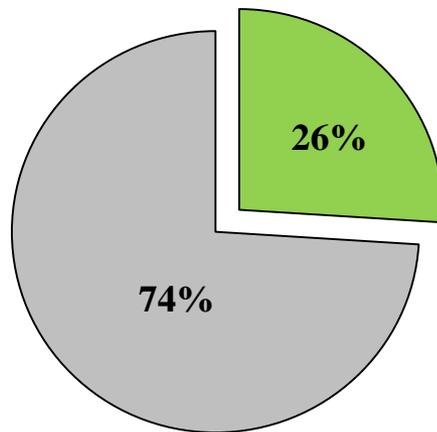
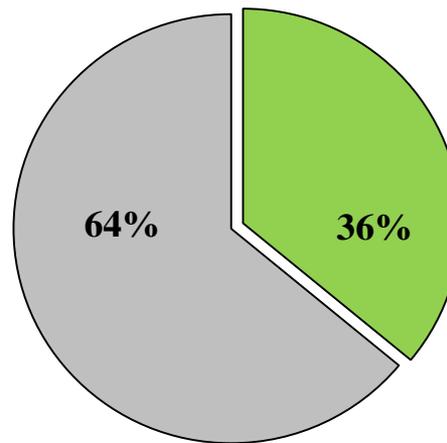
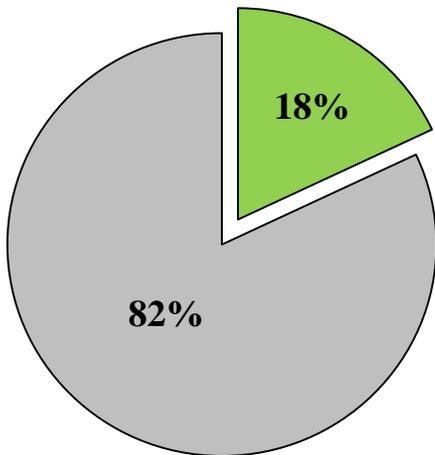
	M/M	Y/Y
Housing Starts	△ 2.1%	△ 5.6%
Single-Family Starts	△ 0.5%	△ 1.3%
Housing Permits	▽ 0.1%	△ 0.9%
Single-Family Permits	▽ 3.7%	△ 2.4%
Housing Completions	▽ 8.3%	△ 3.2%
New Single-Family House Sales	△ 12.4%	△ 31.3%
Existing House Sales ¹	▽ 3.2%	▽ 1.6%
Private Residential Construction Spending	△ 0.3%	△ 1.9%
Single-Family Construction Spending	▽ 0.2%	△ 1.7%

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

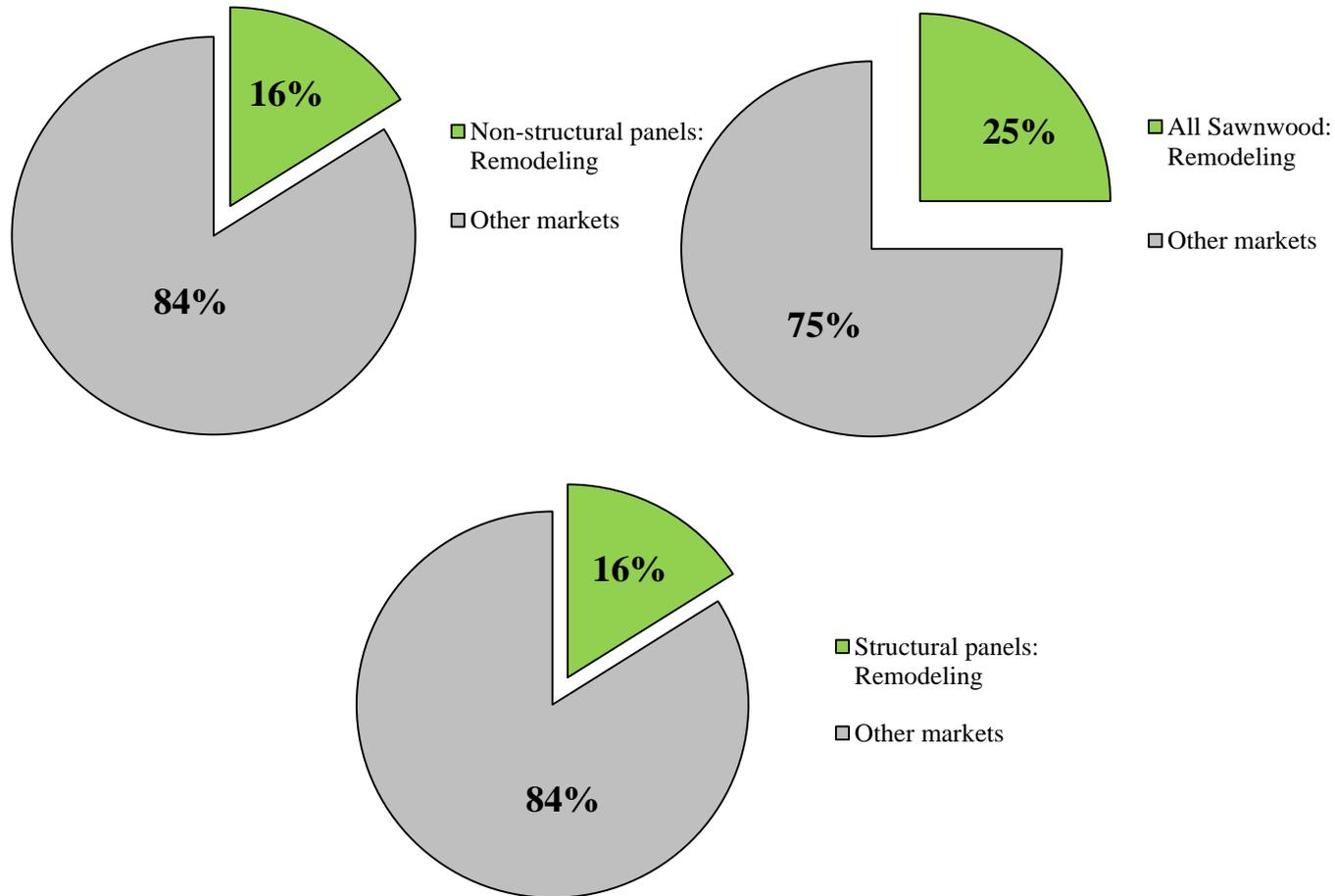
Source: U.S. Department of Commerce-Construction; ¹National Association of Realtors® (NAR®)

[Return TOC](#)

New Construction's Percentage of Wood Products Consumption



Repair and Remodeling's Percentage of Wood Products Consumption



2016 Forecasts

Aggregate Starts Forecast from January 2016

Total Starts: 1,283 million

Single-family: 811 thousand

Multi-family: 472 thousand

Recent Updated Forecasts (in thousands)

Organization	Total Starts	SF Starts	MF Starts	New SF Sales
Fannie Mae ¹	1,371	800	435	508
Freddie Mac ²	1,200	830	370	616
Metrostudy ³	1,180	813	367	
Mortgage Bankers Association ⁴	1,290	880	410	620
National Association of Homebuilders ⁵	1,179	793	386	580
Wells Fargo ⁶	1,210	810	400	580

Sources:

1-http://www.fanniemae.com/resources/file/research/emma/pdf/Housing_Forecast_081816.pdf;

2-http://www.freddie.mac.com/finance/report/20160815_the_return_of_the_2_trillion_dollar_mortgage_market.html;

3-http://www.builderonline.com/money/economics/118-million-housing-starts-projected-in-2016_o

4-<https://www.mba.org/news-research-and-resources/research-and-economics/forecasts-and-commentary/mortgage-finance-forecast-archives>;

5-<http://www.abc.org/Portals/1/Documents/2016%20Midyear%20ABC%20AIA%20NAHB%20Collab%20Econ%20Forecast%20Slides.pdf>

6-<https://www08.wellsfargomedia.com/assets/pdf/commercial/insights/economics/real-estate-and-housing/housing-chartbook-20160729.pdf>

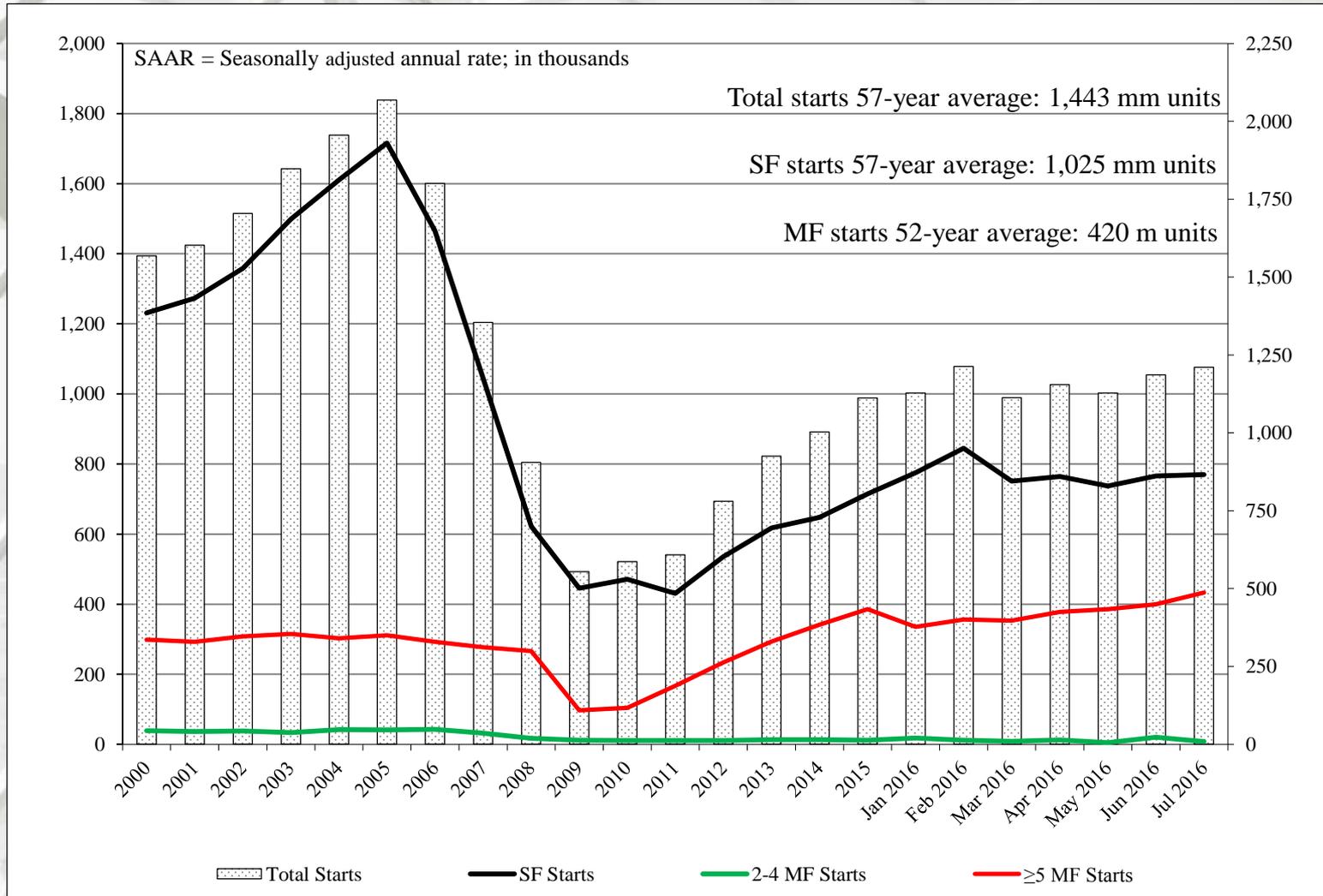
New Housing Starts

	Total Starts*	Single-Family (SF) Starts	Multifamily (MF) 2-4 unit** Starts	MF ≥ 5 unit Starts
July	1,211,000	770,000	8,000	433,000
June	1,186,000	766,000	20,000	400,000
2015	1,147,000	760,000	11,000	376,000
M/M change	2.1%	0.5%	-60.0%	8.3%
Y/Y change	5.6%	1.3%	-27.3%	15.2%

* 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



New Housing Starts by Region

	NE Total	NE SF	NE MF**
July	134,000	54,000	80,000
June	116,000	71,000	45,000
2015	159,000	71,000	88,000
M/M change	15.5%	-23.9%	77.8%
Y/Y change	-15.7%	-23.9%	-9.1%

	MW Total	MW SF	MW MF
July	175,000	112,000	63,000
June	171,000	115,000	56,000
2015	171,000	120,000	51,000
M/M change	2.3%	-2.6%	12.5%
Y/Y change	2.3%	-6.7%	23.5%

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

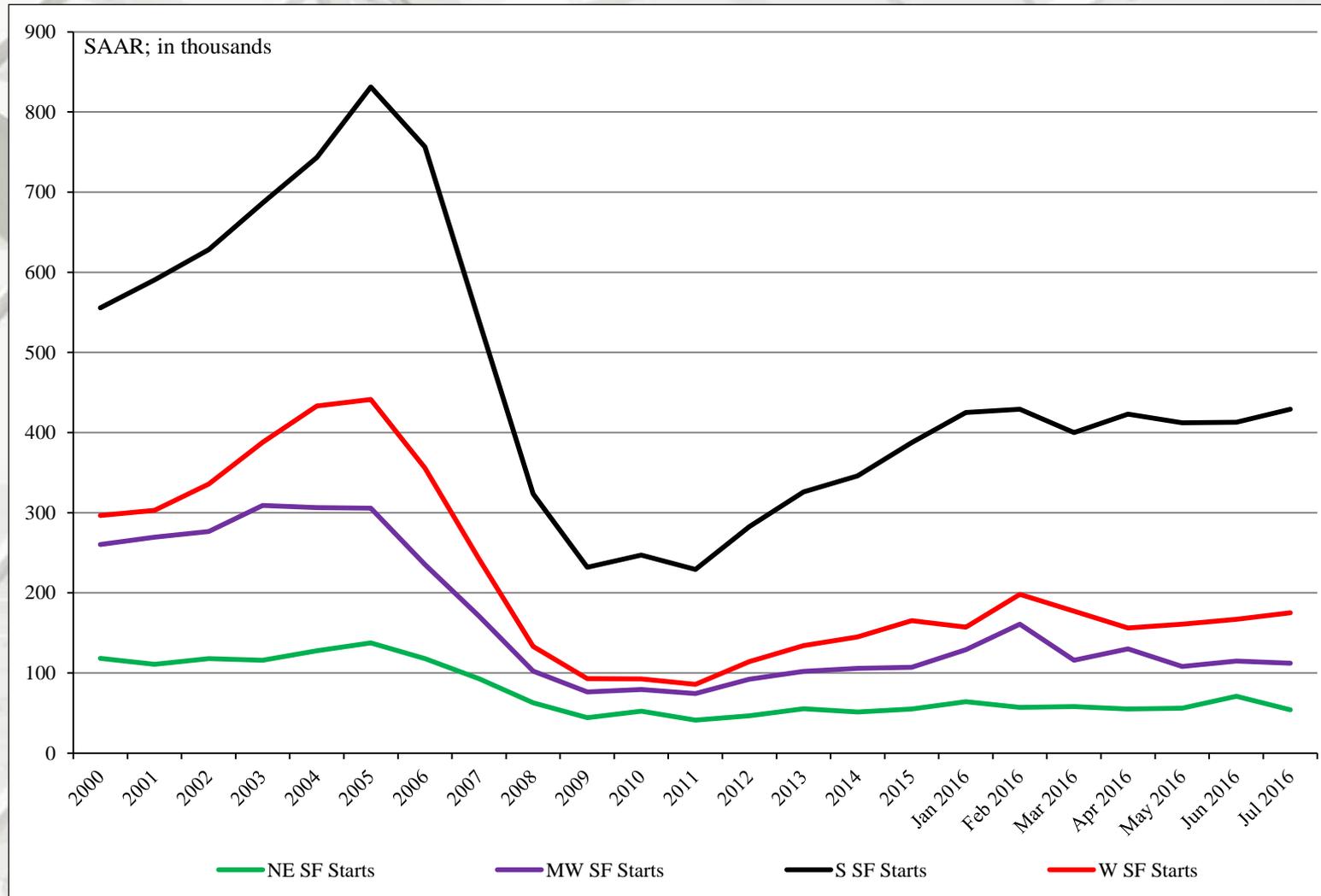
	S Total	S SF	S MF**
July	613,000	429,000	184,000
June	592,000	413,000	179,000
2015	552,000	390,000	162,000
M/M change	3.5%	3.9%	2.8%
Y/Y change	11.1%	10.0%	13.6%

	W Total	W SF	W MF
July	289,000	175,000	114,000
June	307,000	167,000	140,000
2015	265,000	179,000	86,000
M/M change	-5.9%	4.8%	-18.6%
Y/Y change	9.1%	-2.2%	32.6%

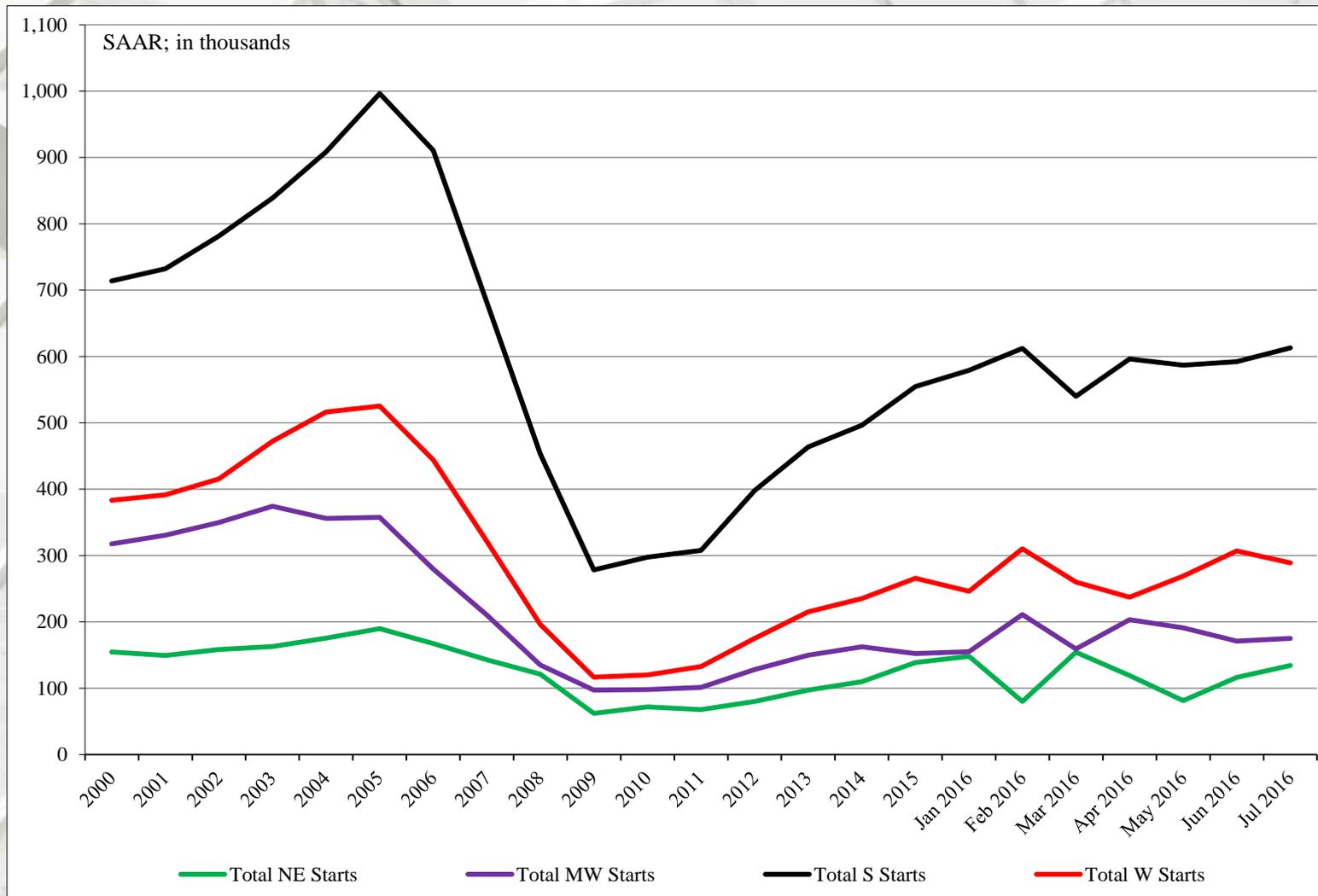
All data are SAAR; S = South and W = West.

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

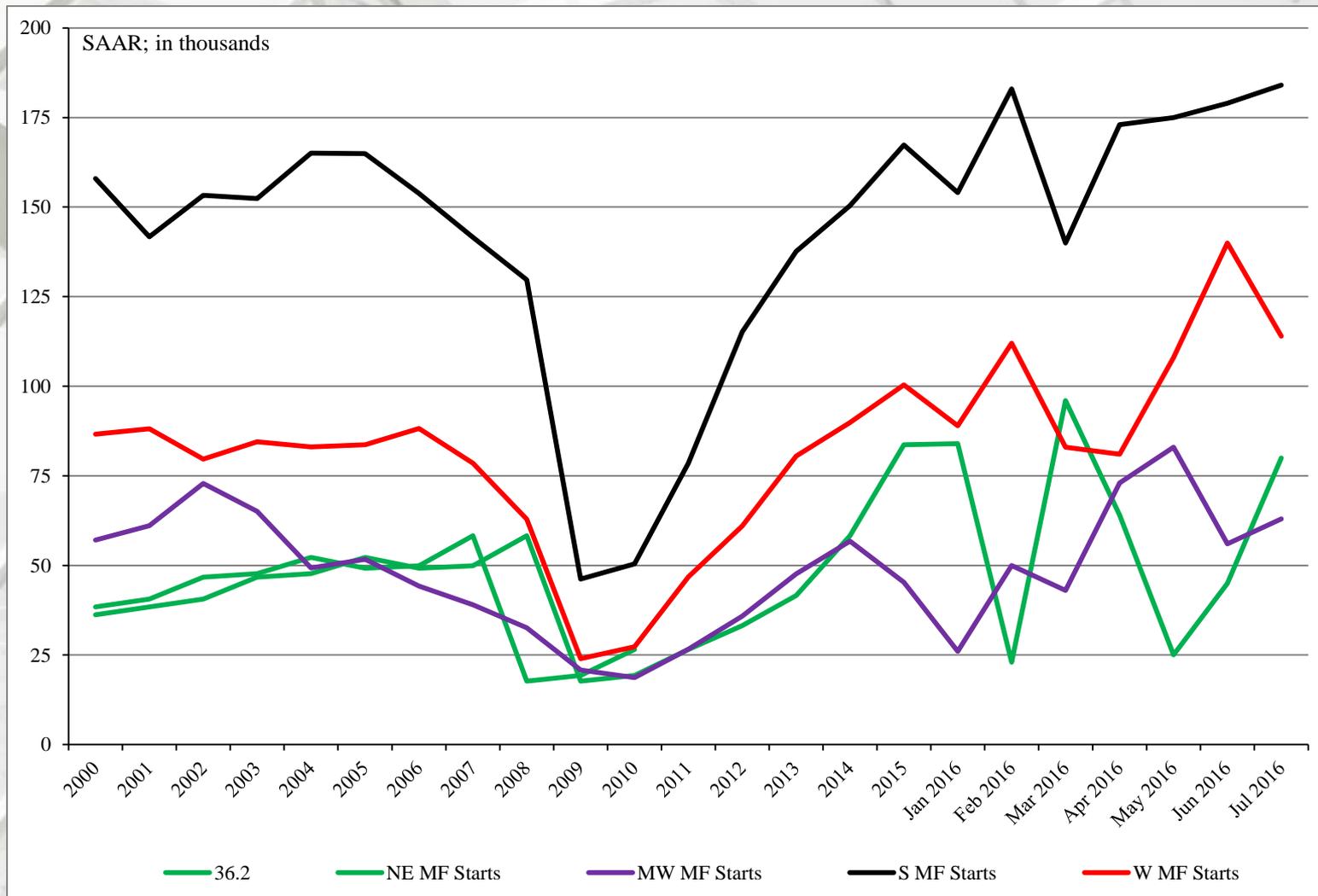
Total Housing Starts by Region



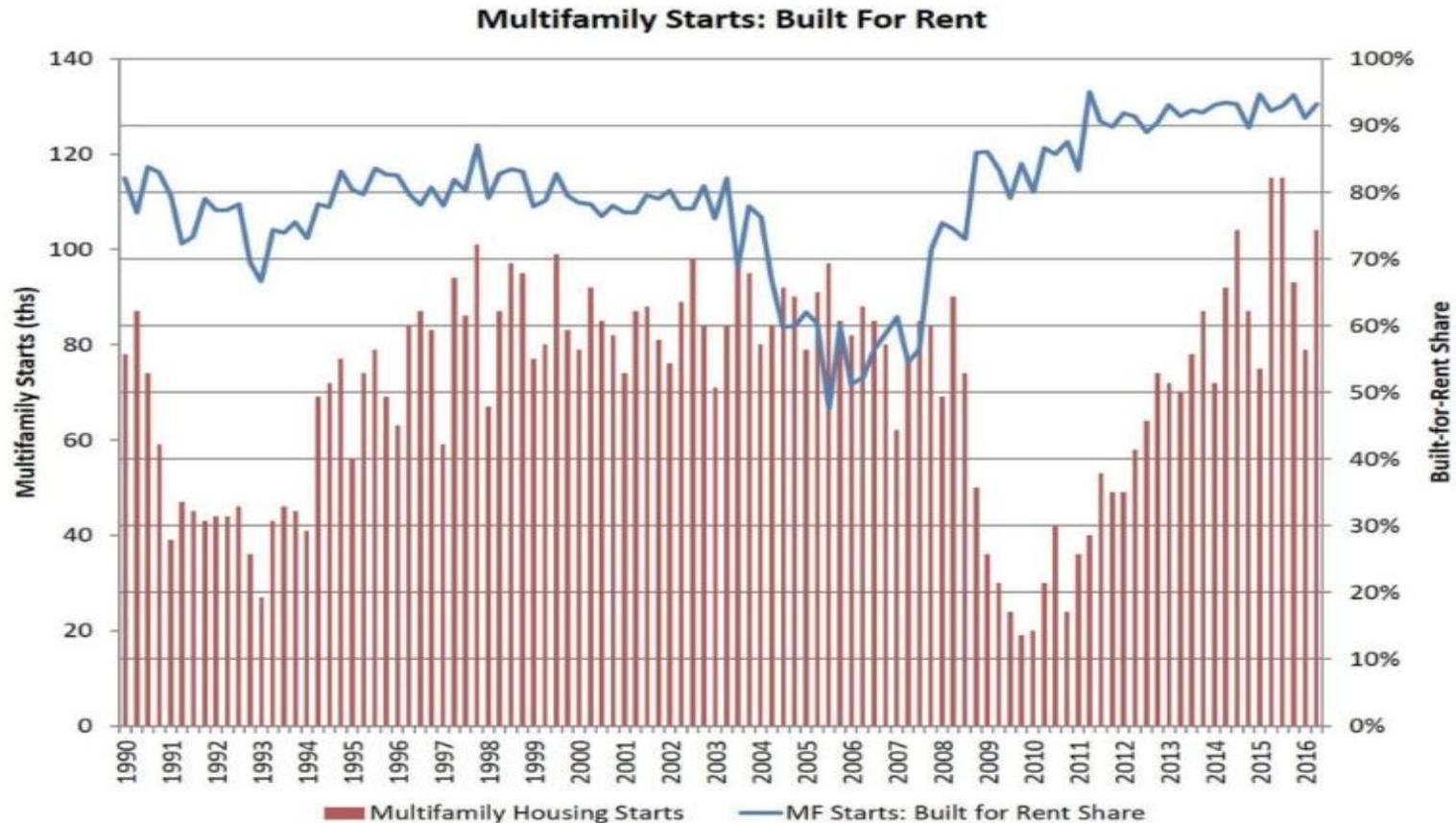
SF Housing Starts by Region



MF Housing Starts by Region

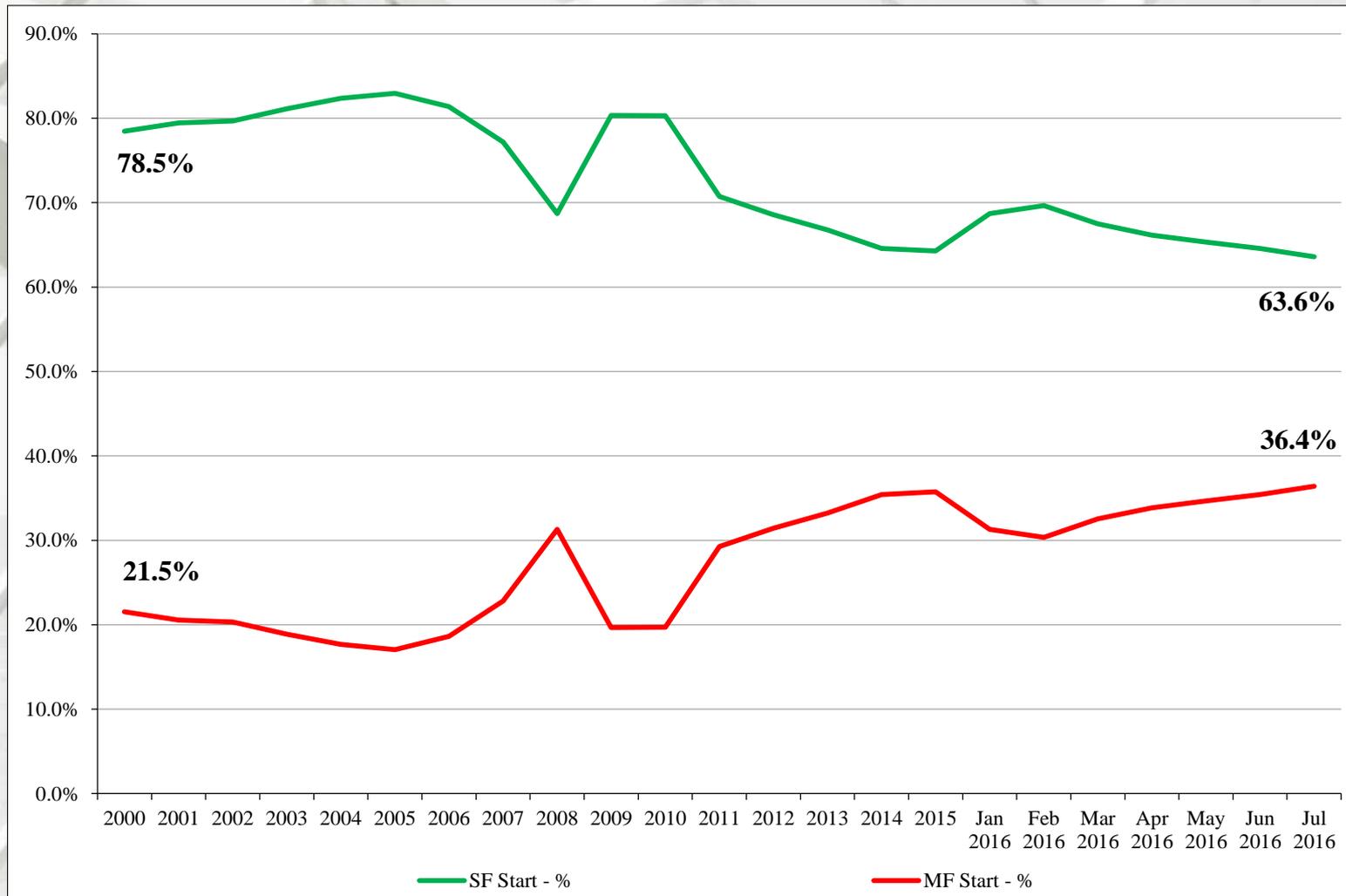


New Multifamily Rental Share Remains Strong

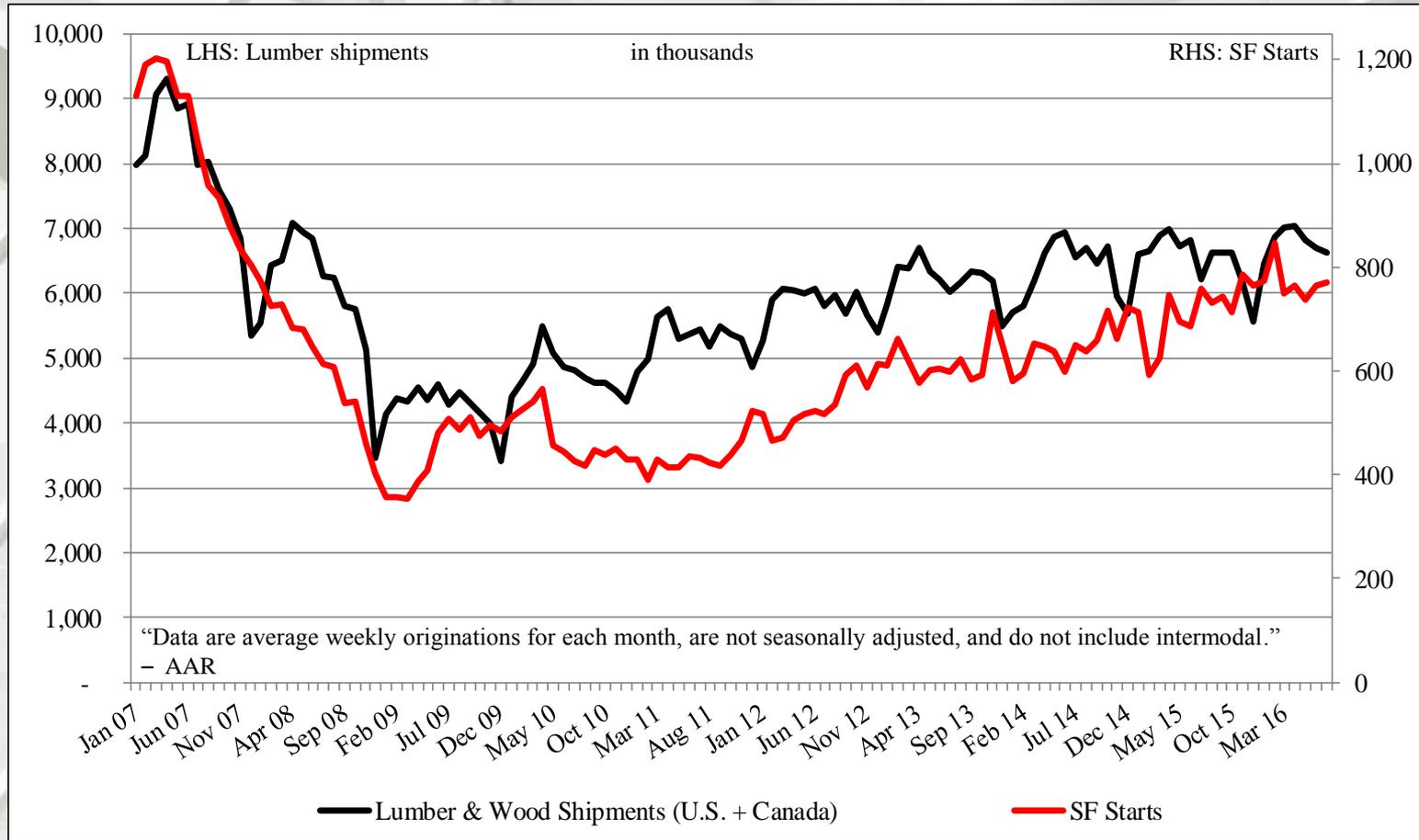


“The share of multifamily housing starts built for-rent fell to a historical low of 47% during the third quarter of 2005. It is currently (93%) above the approximate 80% share recorded during the 1980-2002 period due to elevated levels of rental demand.” – Robert Dietz, Chief Economist and Senior Vice President for Economics and Housing Policy, NAHB

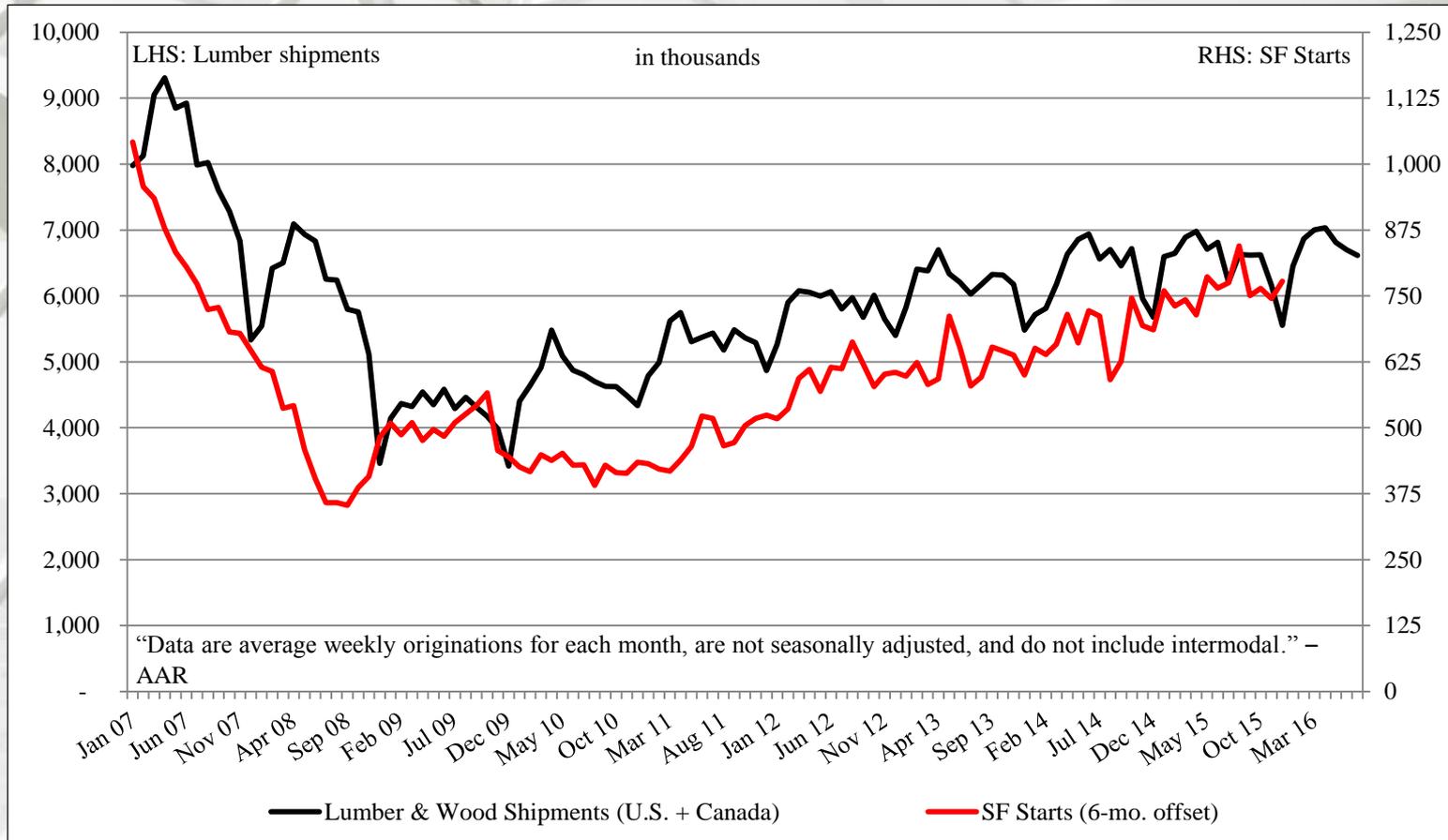
Housing Starts by Percent



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



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



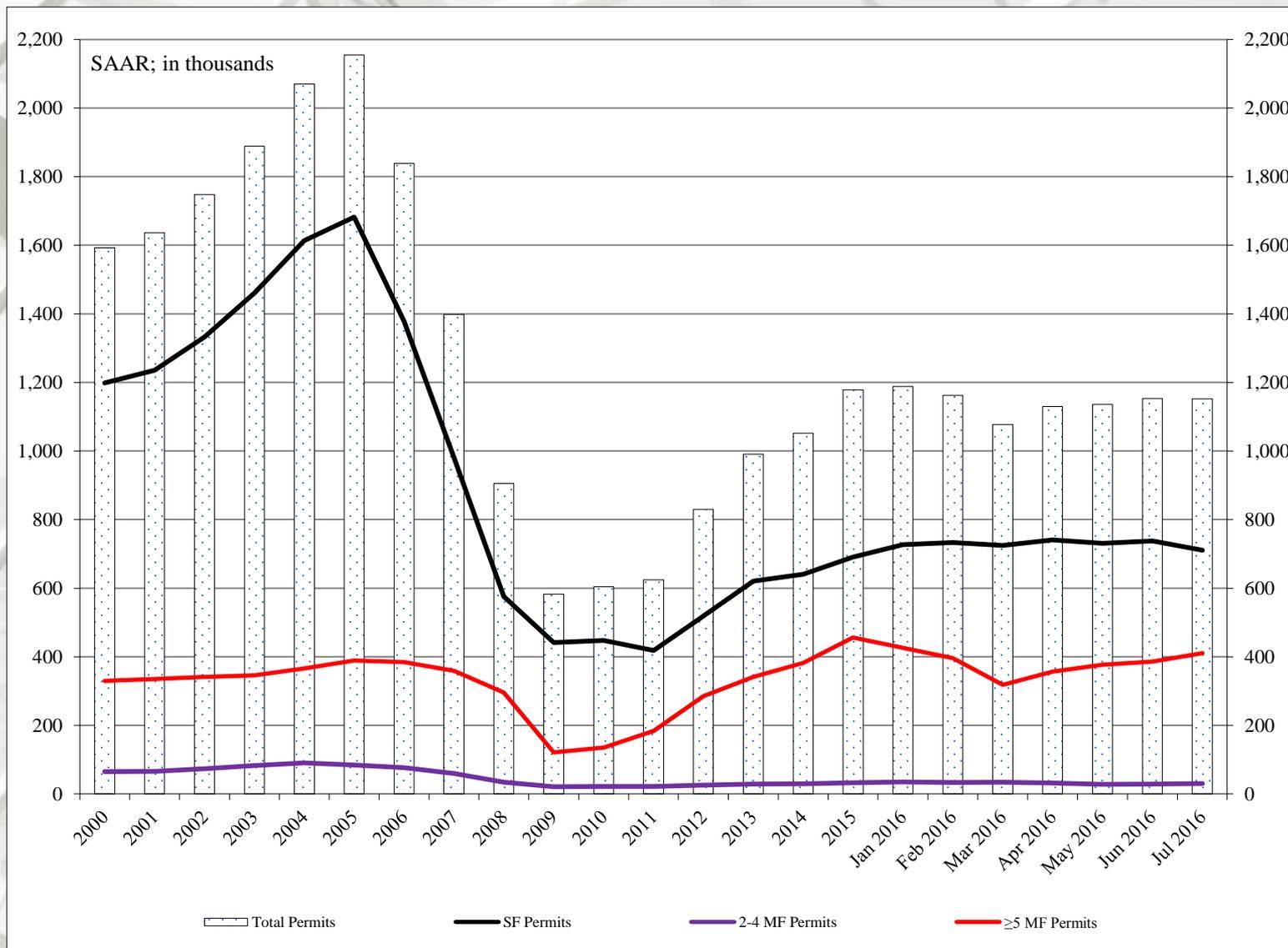
In this graph, January 2007 lumber shipments are contrasted with July 2007 SF starts, and continuing through July 2016 SF starts. The purpose is to discover if lumber shipments relate to future single-family starts. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
July	1,152,000	711,000	30,000	411,000
June	1,153,000	738,000	29,000	386,000
2015	1,142,000	694,000	30,000	418,000
M/M change	-0.1%	-3.7%	3.4%	6.5%
Y/Y change	0.9%	2.4%	0.0%	-1.7%

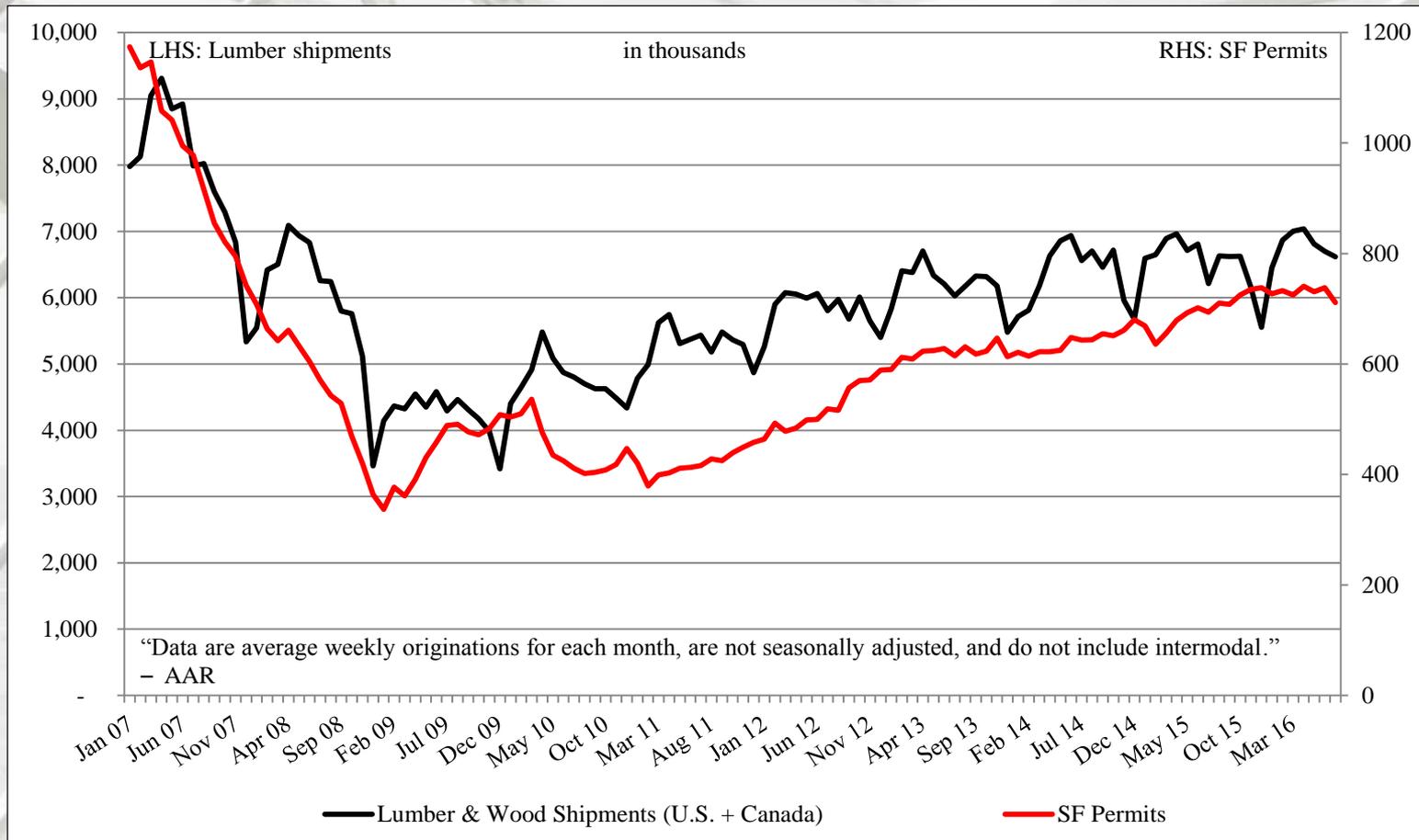
* All permit data are presented at a seasonally adjusted annual rate (SAAR).

Total New Housing Permits

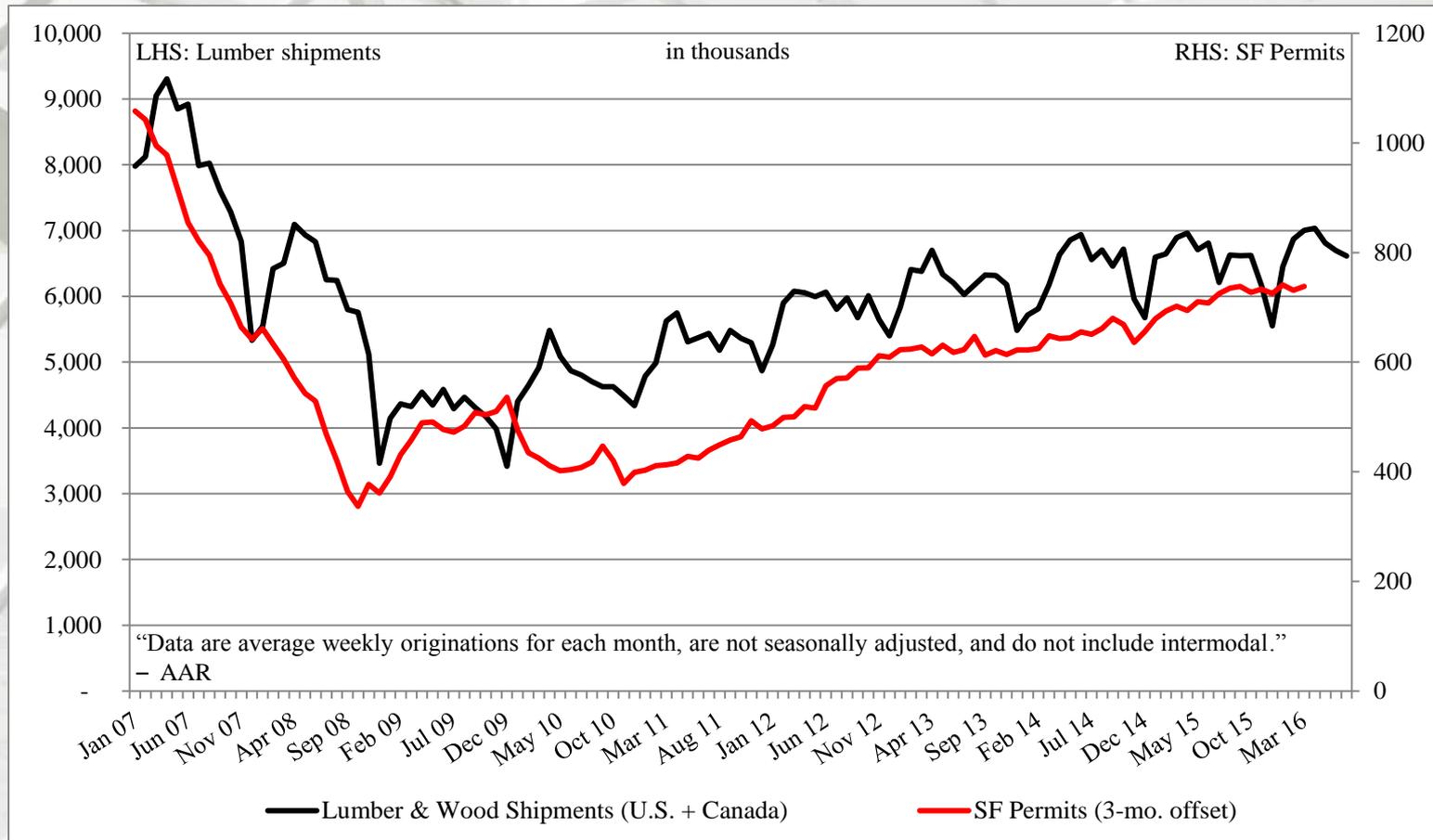


Source: <http://www.census.gov/construction/nrc/pdf/newresconst.pdf>; 8/16/16

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 March 2007 SF permits, and continuing through March 2016 SF permits. The purpose is to discover if lumber shipments relate to future single-family building permits. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

New Housing Permits by Region

	NE Total	NE SF	NE MF
July	97,000	51,000	46,000
June	108,000	58,000	50,000
2015	113,000	56,000	61,000
M/M change	-10.2%	-12.1%	-8.0%
Y/Y change	-14.2%	-8.9%	-24.6%

	MW Total	MW SF	MW MF
July	190,000	108,000	82,000
June	172,000	112,000	60,000
2015	172,000	108,000	63,000
M/M change	10.5%	-3.6%	36.7%
Y/Y change	10.5%	0.0%	30.2%

* All data are SAAR.

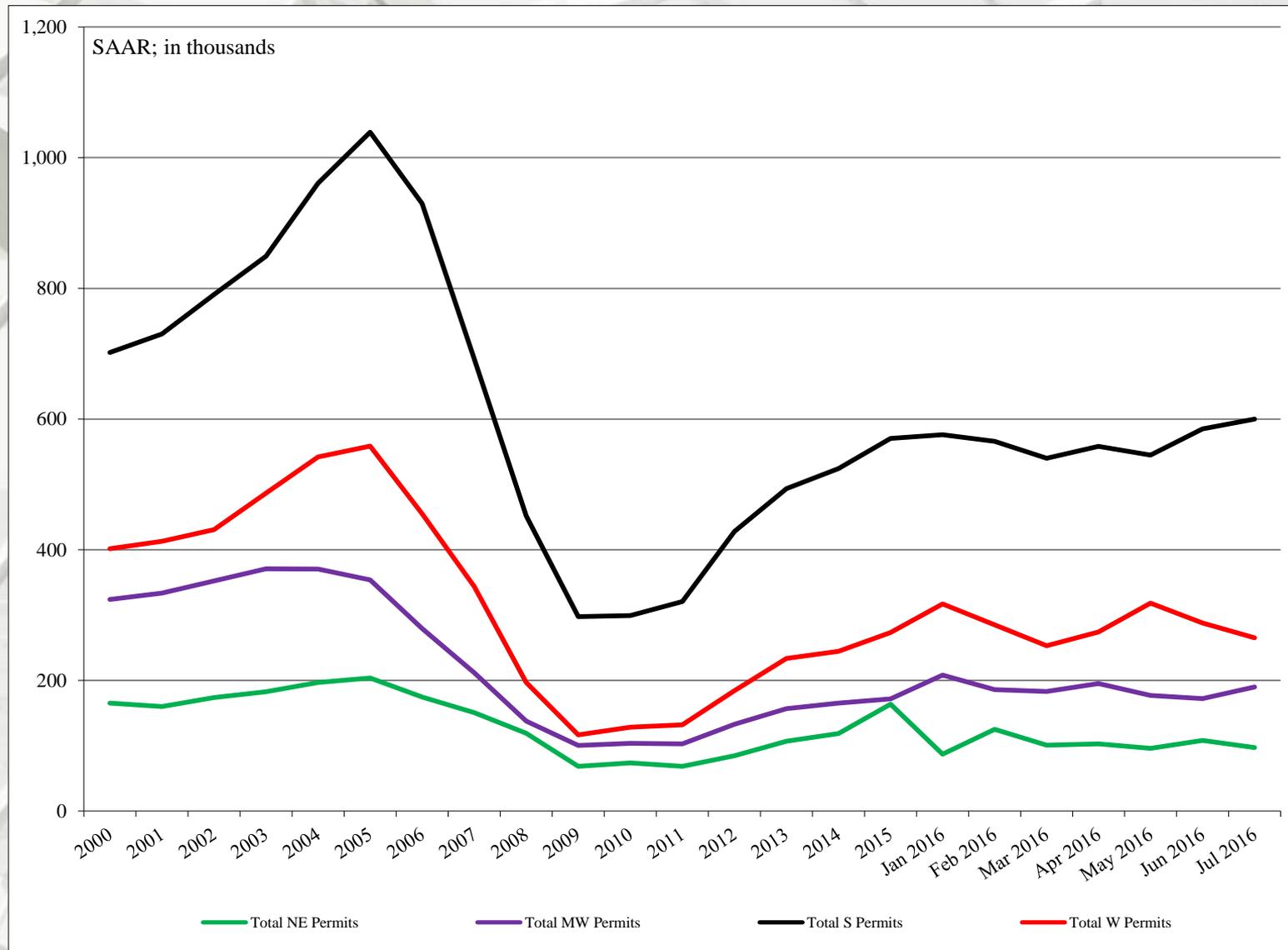
New Housing Permits by Region

	S Total	S SF	S MF
July	600,000	390,000	210,000
June	585,000	396,000	189,000
2015	587,000	371,000	211,000
M/M change	2.6%	-1.5%	11.1%
Y/Y change	2.2%	5.1%	-0.5%

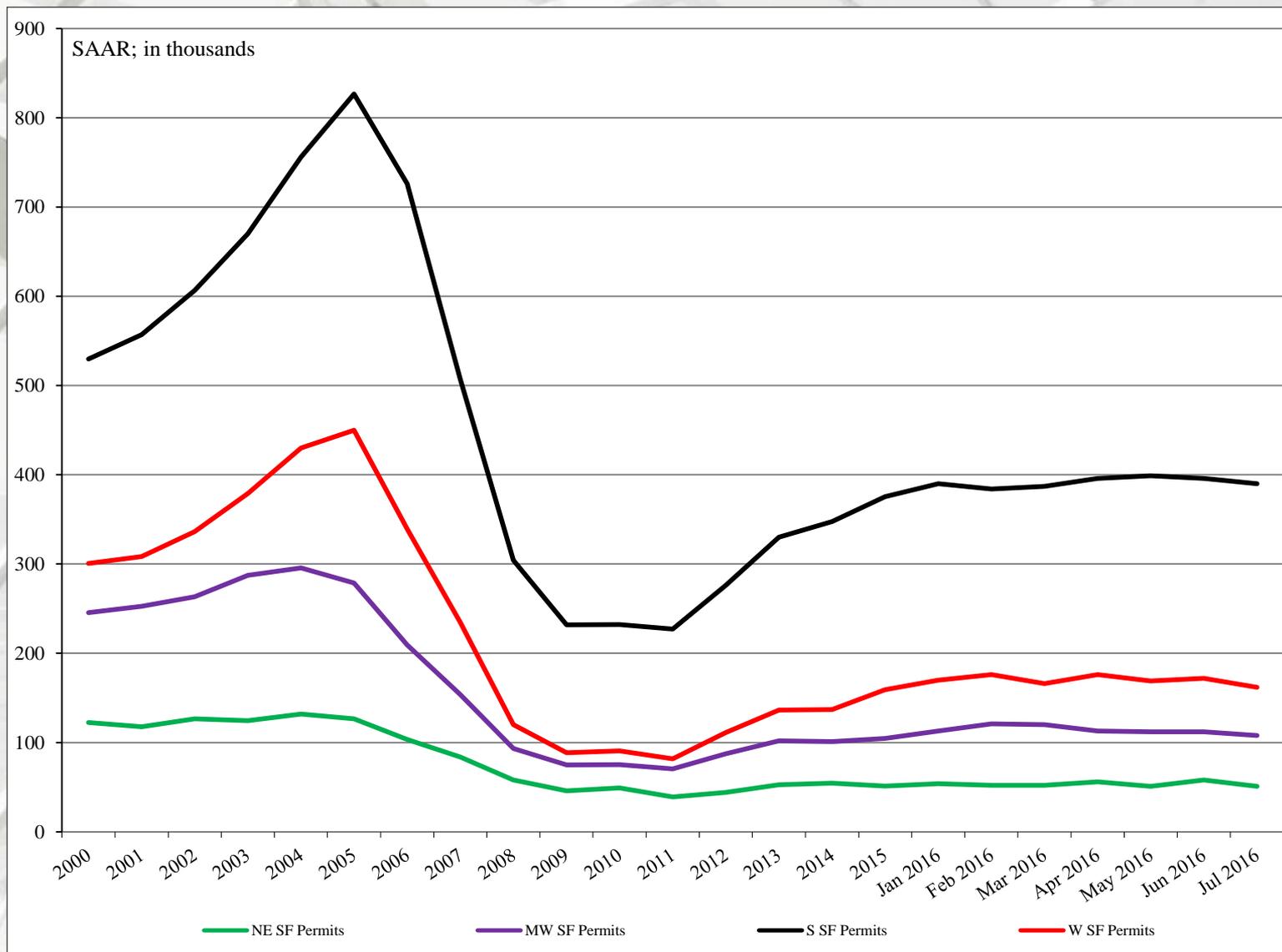
	W Total	W SF	W MF
July	265,000	162,000	103,000
June	288,000	172,000	116,000
2015	270,000	159,000	115,000
M/M change	-8.0%	-5.8%	-11.2%
Y/Y change	-1.9%	1.9%	-10.4%

* All data are SAAR.

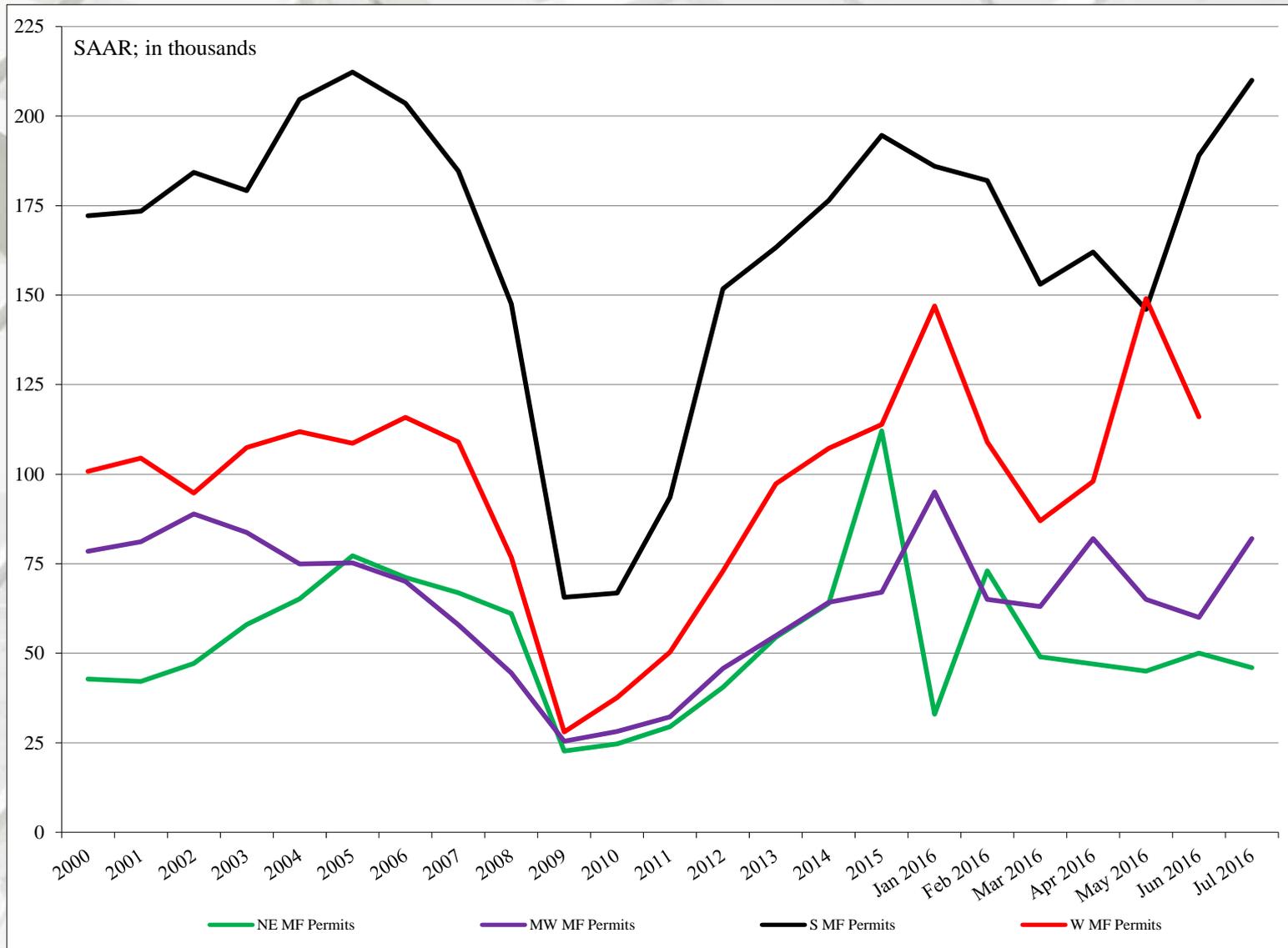
Total Housing Permits by Region



SF Housing Permits by Region



MF Housing Permits by Region



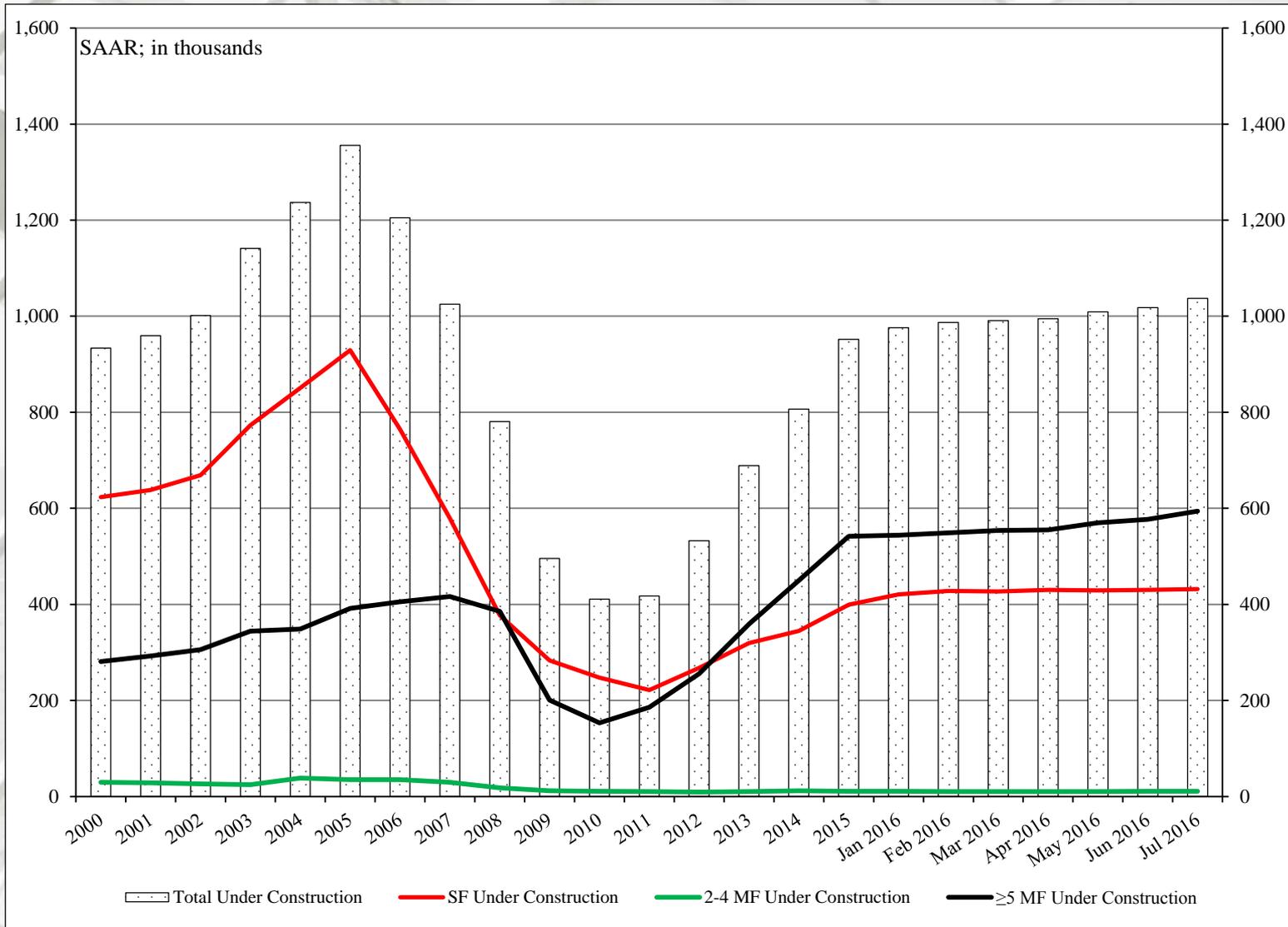
New Housing Under Construction

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ≥ 5 unit Under Construction
July	1,037,000	432,000	11,000	594,000
June	1,018,000	430,000	11,000	577,000
2015	906,000	387,000	12,000	507,000
M/M change	1.9%	0.5%	0.0%	2.9%
Y/Y change	14.5%	11.6%	-8.3%	17.2%

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



New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
July	194,000	51,000	143,000
June	188,000	50,000	138,000
2015	165,000	46,000	119,000
M/M change	3.2%	2.0%	3.6%
Y/Y change	17.6%	10.9%	20.2%

	MW Total	MW SF	MW MF
July	139,000	70,000	69,000
June	139,000	71,000	68,000
2015	127,000	65,000	62,000
M/M change	0.0%	-1.4%	1.5%
Y/Y change	9.4%	7.7%	11.3%

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

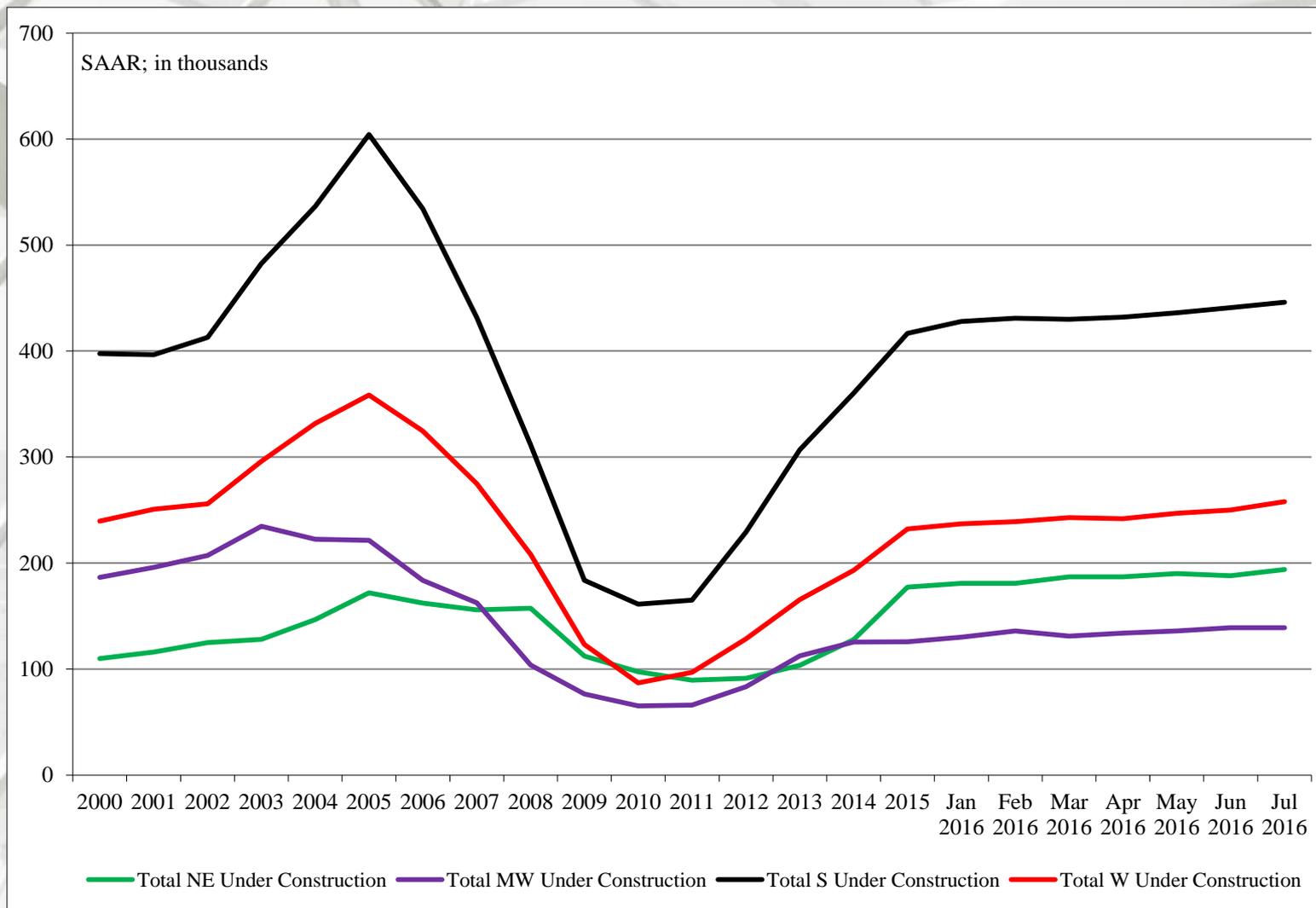
	S Total	S SF	S MF**
July	446,000	214,000	232,000
June	441,000	213,000	228,000
2015	386,000	188,000	198,000
M/M change	1.1%	0.5%	1.8%
Y/Y change	15.5%	13.8%	17.2%

	W Total	W SF	W MF
July	258,000	97,000	161,000
June	250,000	96,000	154,000
2015	228,000	88,000	140,000
M/M change	3.2%	1.0%	4.5%
Y/Y change	13.2%	10.2%	15.0%

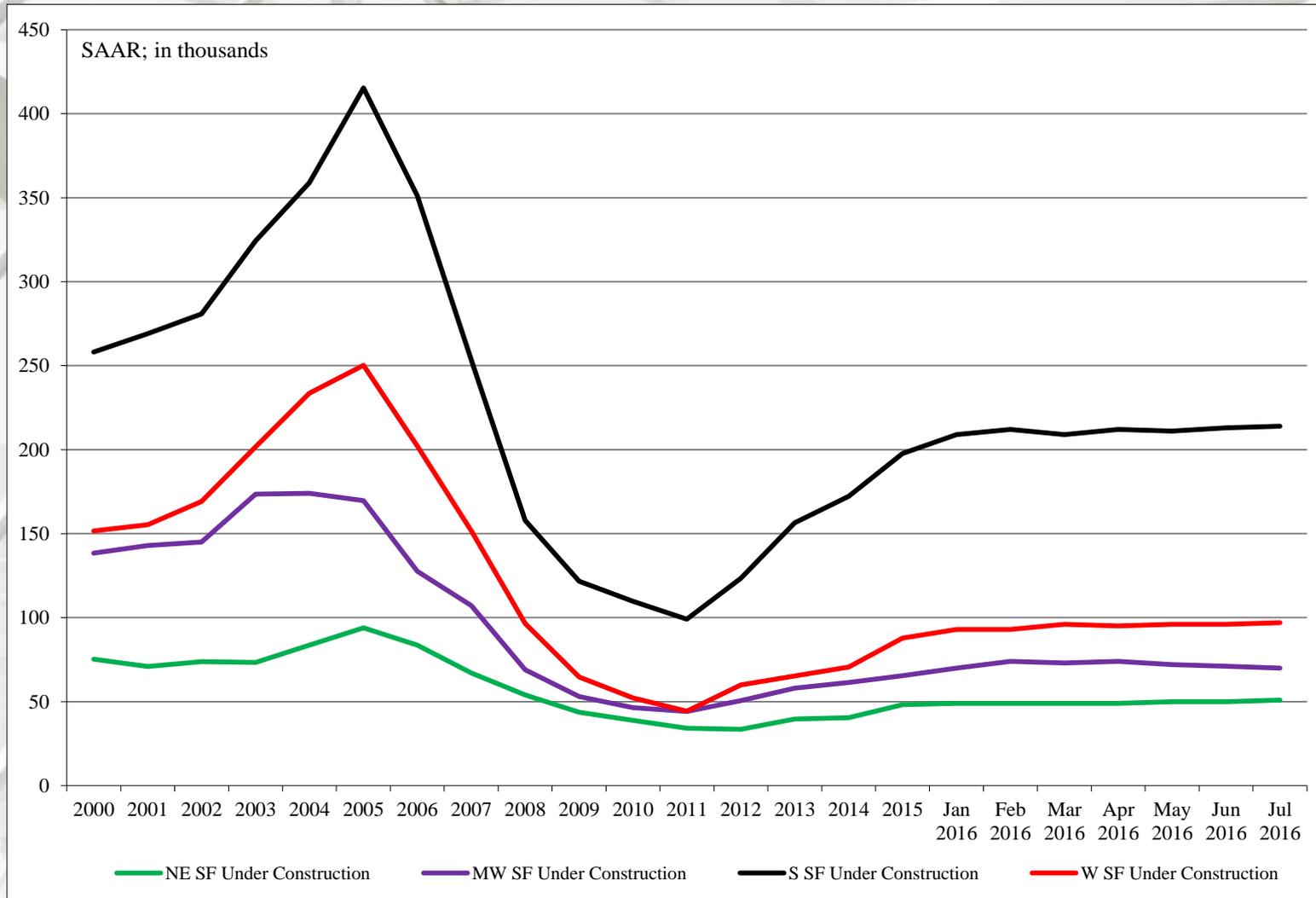
All data are SAAR; S = South and W = West.

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

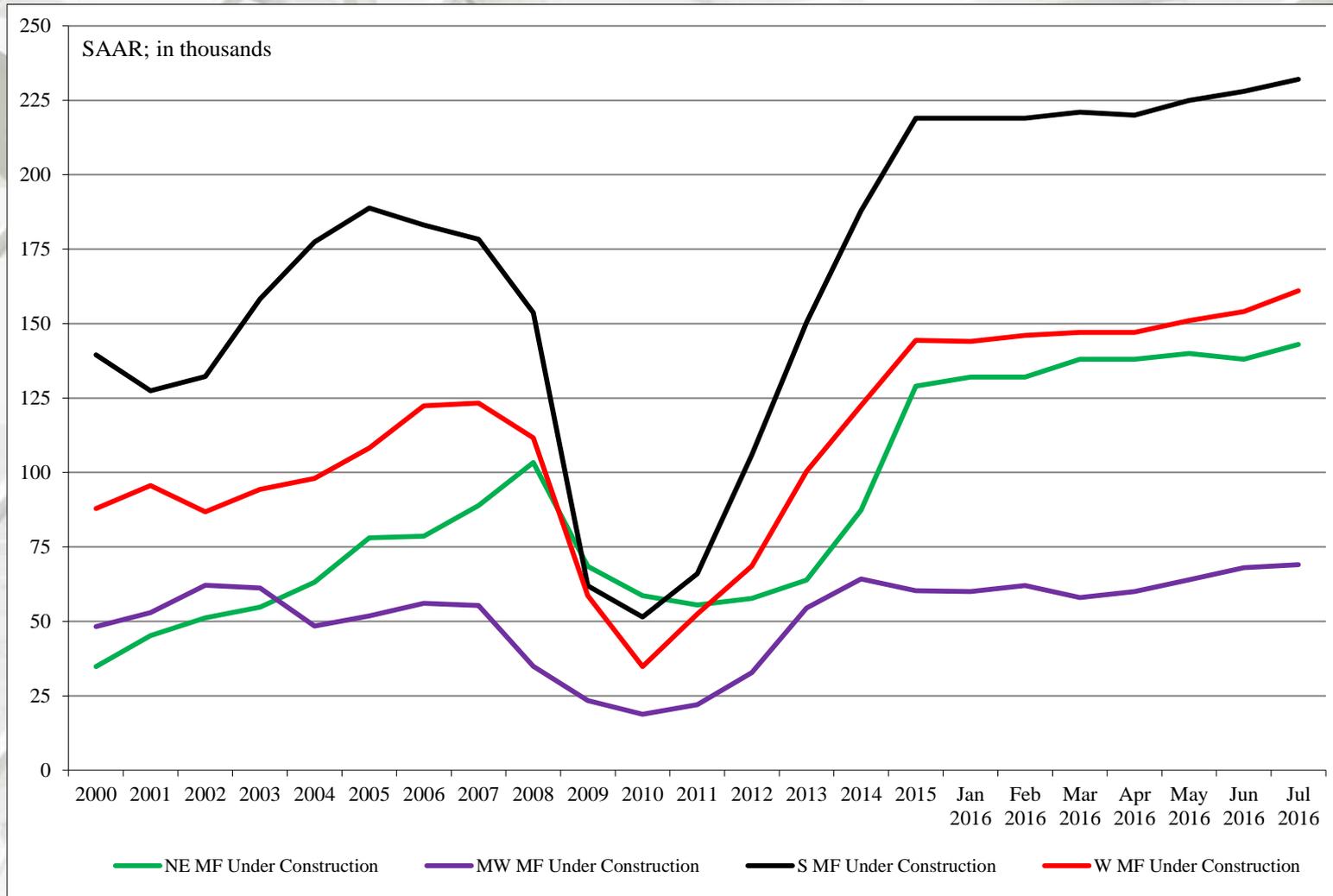
Total Housing Under Construction by Region



SF Housing Under Construction by Region



MF Housing Under Construction by Region



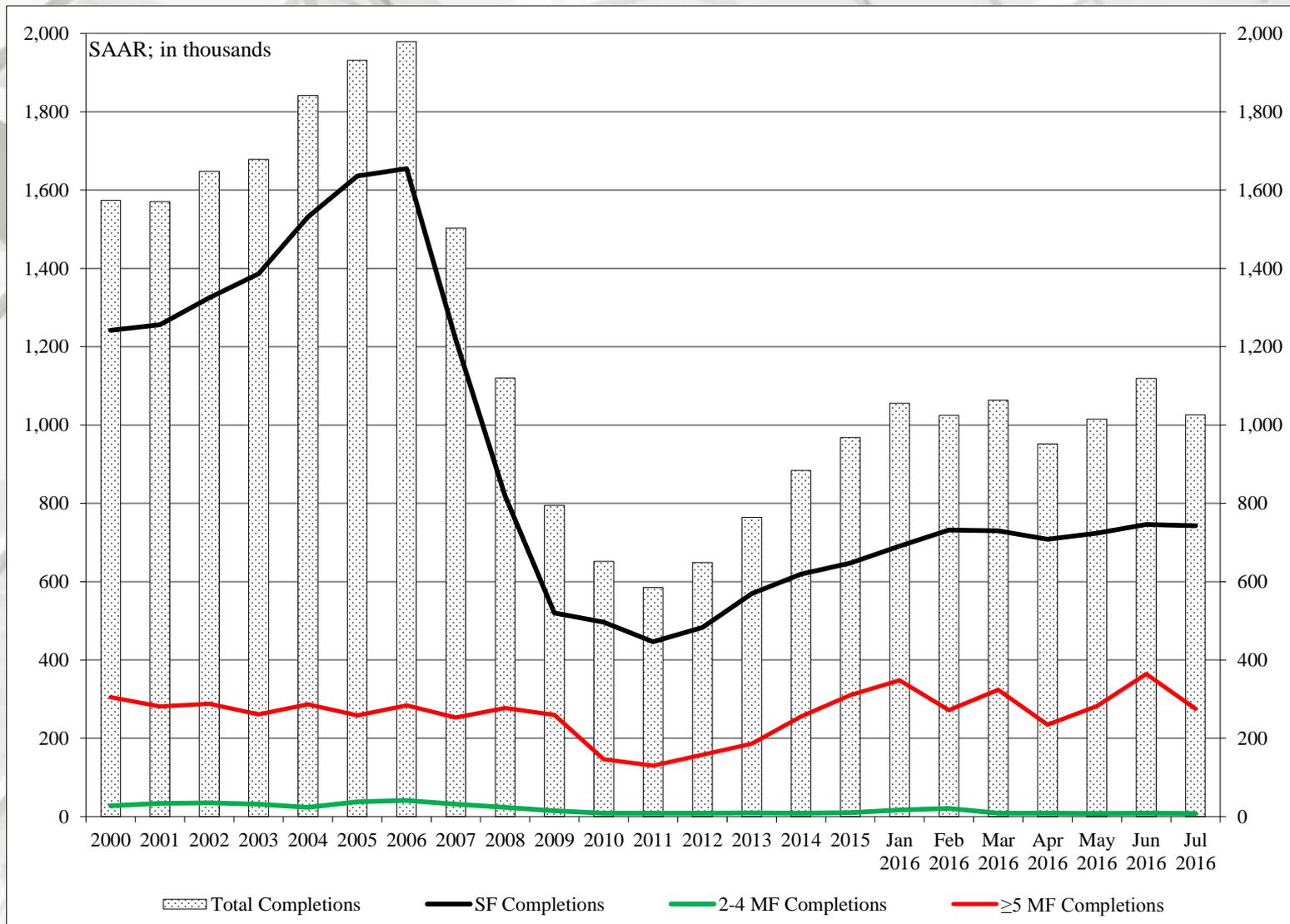
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit**	MF ≥ 5 unit Completions
July	1,026,000	743,000	8,000	275,000
June	1,119,000	746,000	9,000	364,000
2015	994,000	639,000	11,000	344,000
M/M change	-8.3%	-0.4%	-11.1%	-24.5%
Y/Y change	3.2%	16.3%	-27.3%	-20.1%

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



New Housing Completions by Region

	NE Total	NE SF	NE MF**
July	85,000	46,000	39,000
June	121,000	61,000	60,000
2015	90,000	46,000	44,000
M/M change	-29.8%	-24.6%	-35.0%
Y/Y change	-5.6%	0.0%	-11.4%

	MW Total	MW SF	MW MF
July	174,000	126,000	48,000
June	186,000	137,000	49,000
2015	171,000	101,000	70,000
M/M change	-6.5%	-8.0%	-2.0%
Y/Y change	1.8%	24.8%	-31.4%

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

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

New Housing Completions by Region

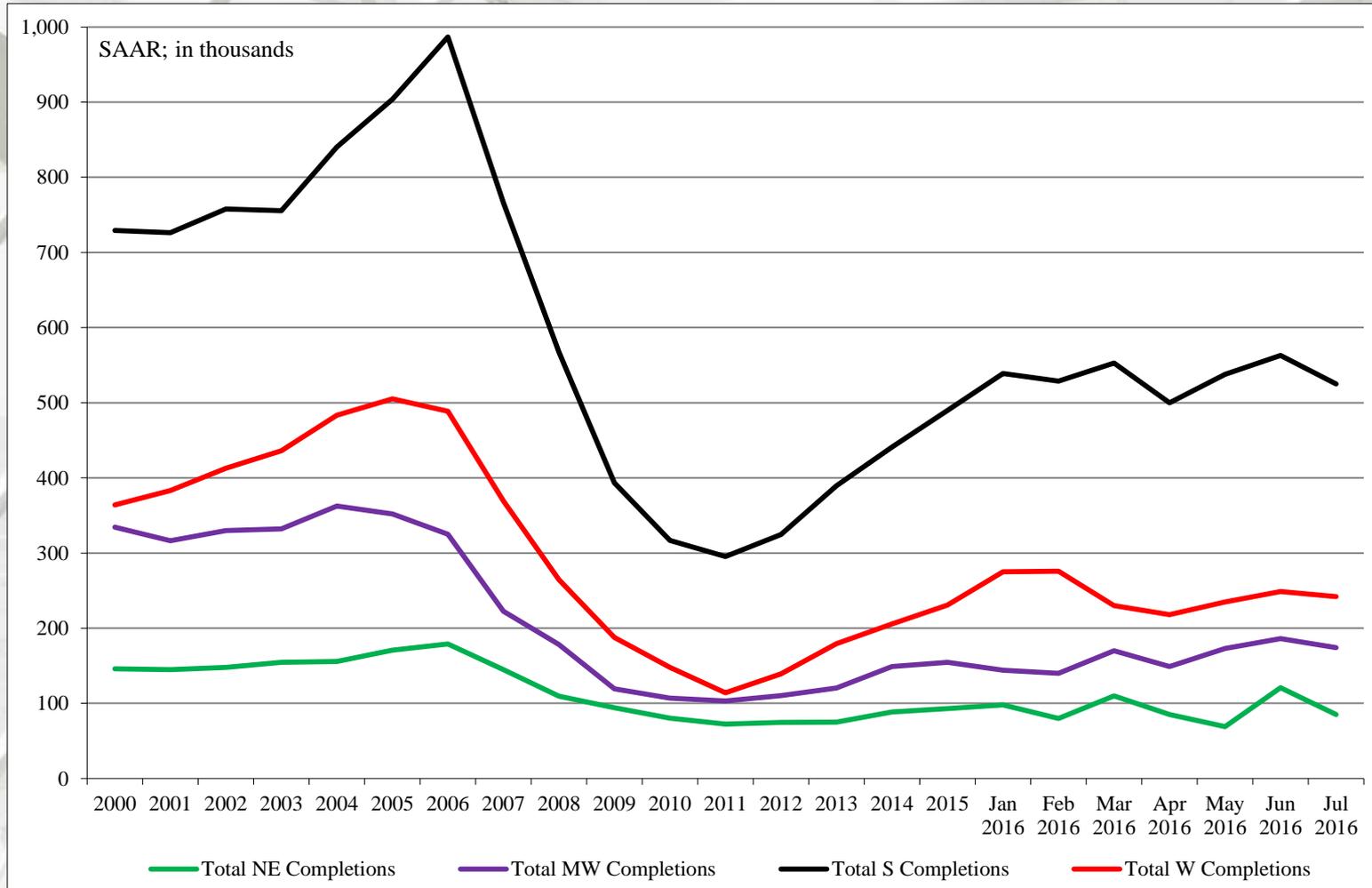
	S Total	S SF	S MF**
July	525,000	406,000	119,000
June	563,000	390,000	173,000
2015	510,000	335,000	175,000
M/M change	-6.7%	4.1%	-31.2%
Y/Y change	2.9%	21.2%	-32.0%

	W Total	W SF	W MF
July	242,000	165,000	77,000
June	249,000	158,000	91,000
2015	223,000	157,000	66,000
M/M change	-2.8%	4.4%	-15.4%
Y/Y change	8.5%	5.1%	16.7%

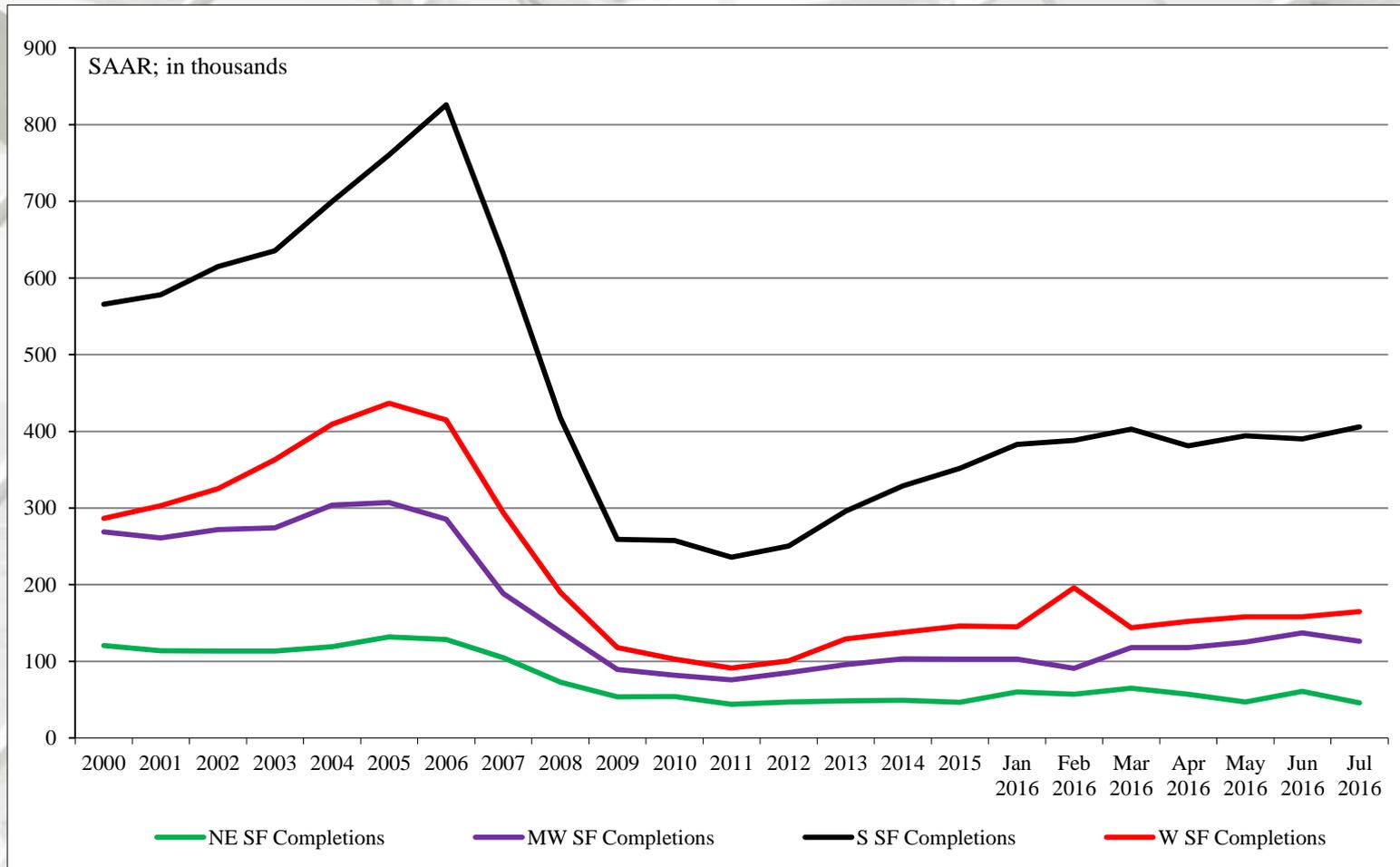
All data are SAAR; S = South and W = West.

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

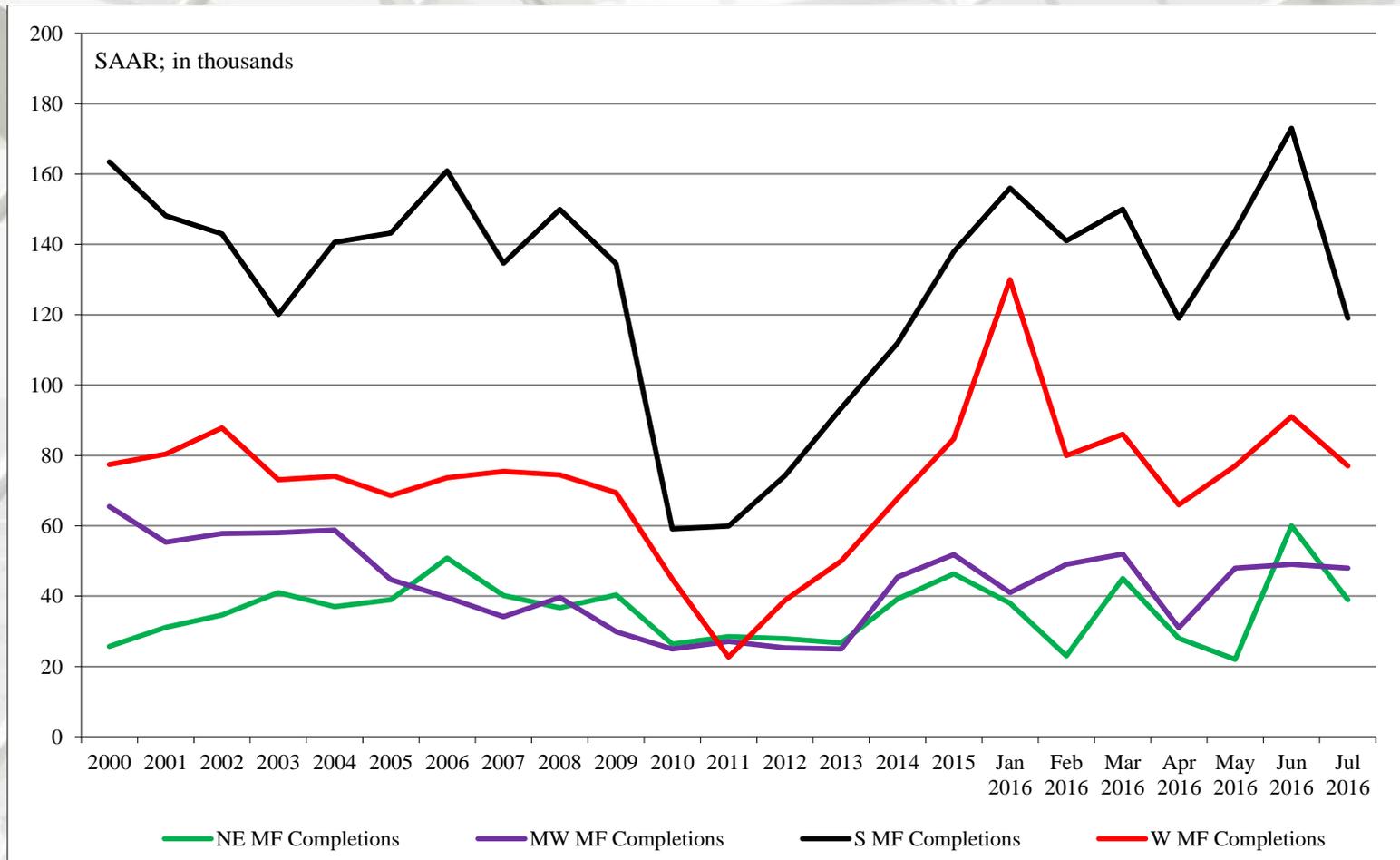
Total Housing Completions by Region



SF Housing Completions by Region



MF Housing Completions by Region

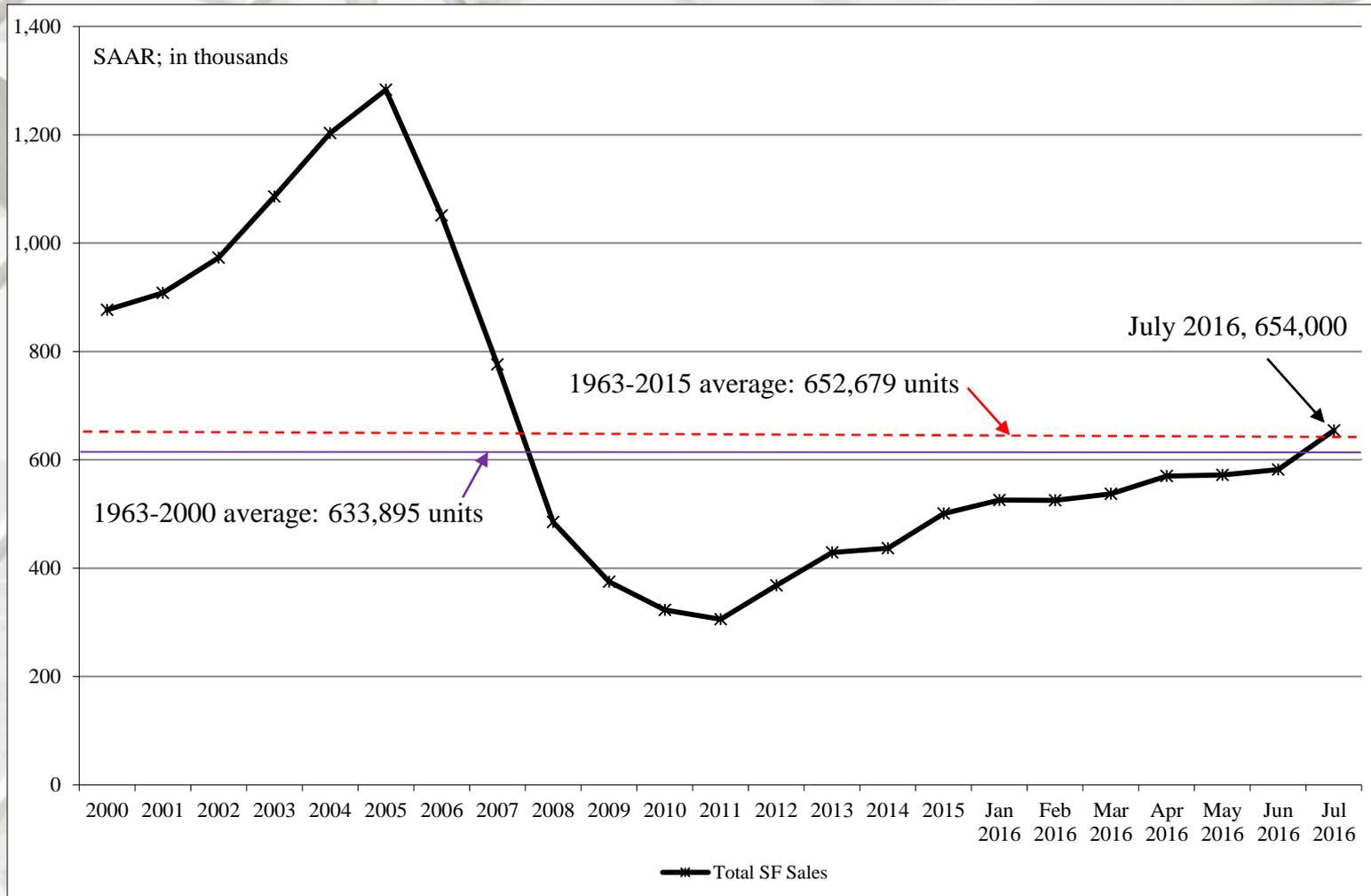


New Single-Family House Sales

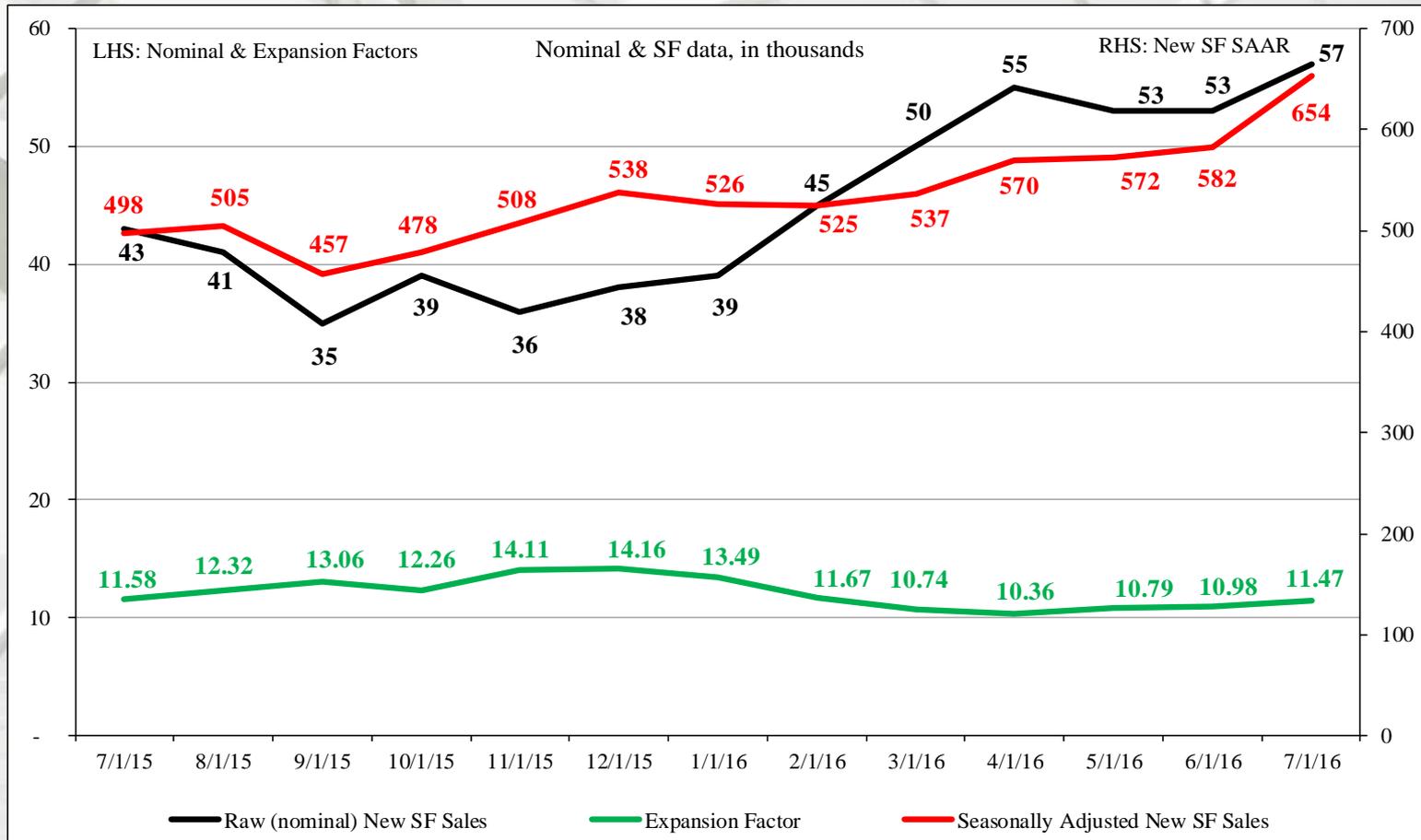
	New SF Sales*	Median Price	Mean Price	Month's Supply
July	654,000	\$294,600	\$355,800	4.3
June	582,000	\$310,500	\$353,500	4.9
2015	498,000	\$296,000	\$341,900	5.2
M/M change	12.4%	-5.1%	0.7%	-12.2%
Y/Y change	31.3%	-0.5%	4.1%	-17.3%

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

New SF House Sales



New SF House Sales

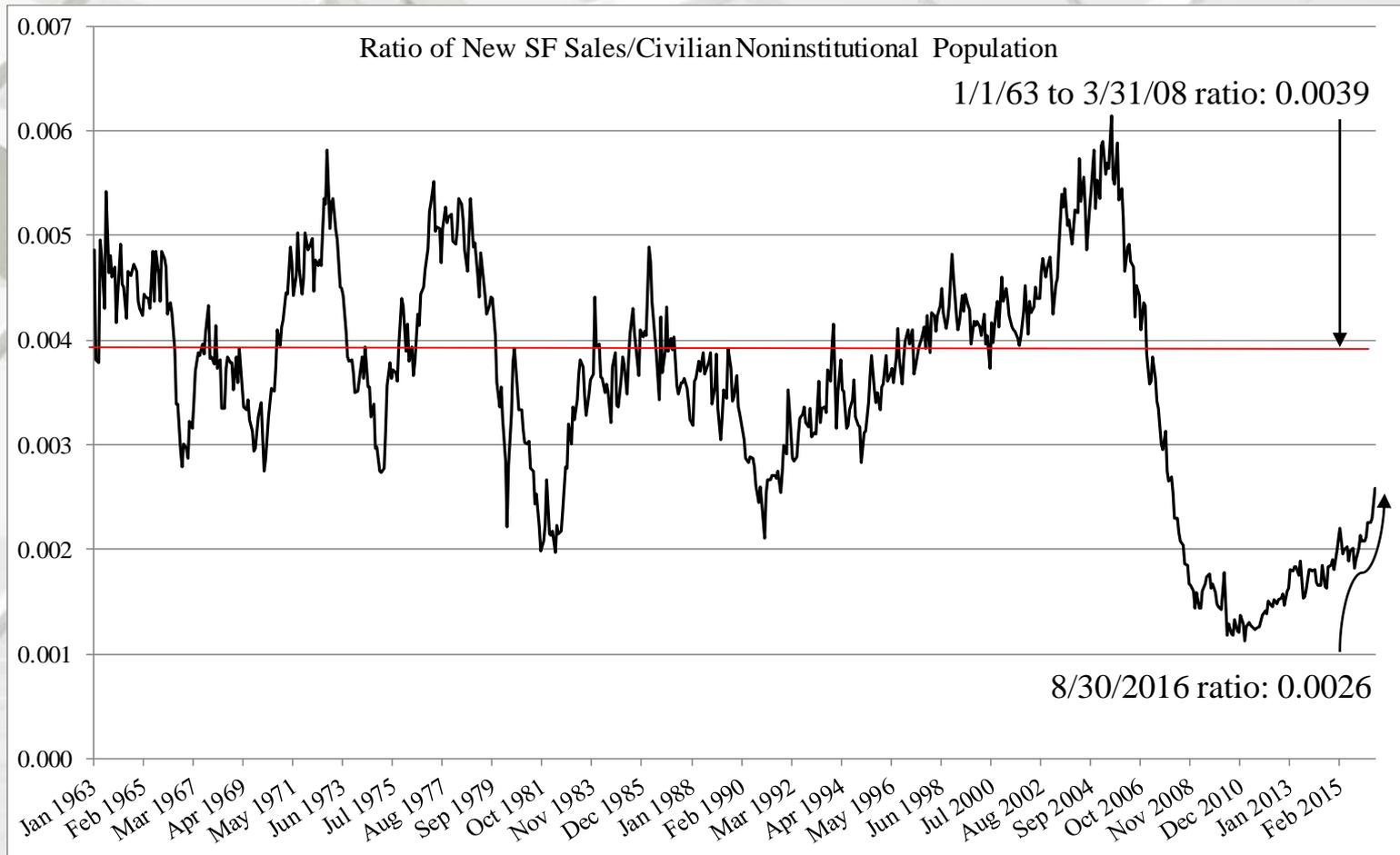


Nominal and Adjusted New SF Monthly Sales

Presented above is nominal (raw) new SF sales data contrasted against seasonally adjusted data.

The 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 December 2007, the long-term ratio of new house sales to the US population was 0.0039 – in July 2016 it was 0.0026 – a 13.0% change from June. 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
July	35,000	84,000	398,000	137,000
June	25,000	83,000	337,000	137,000
2015	28,000	62,000	285,000	123,000
M/M change	40.0%	1.2%	18.1%	0.0%
Y/Y change	25.0%	35.5%	39.6%	11.4%

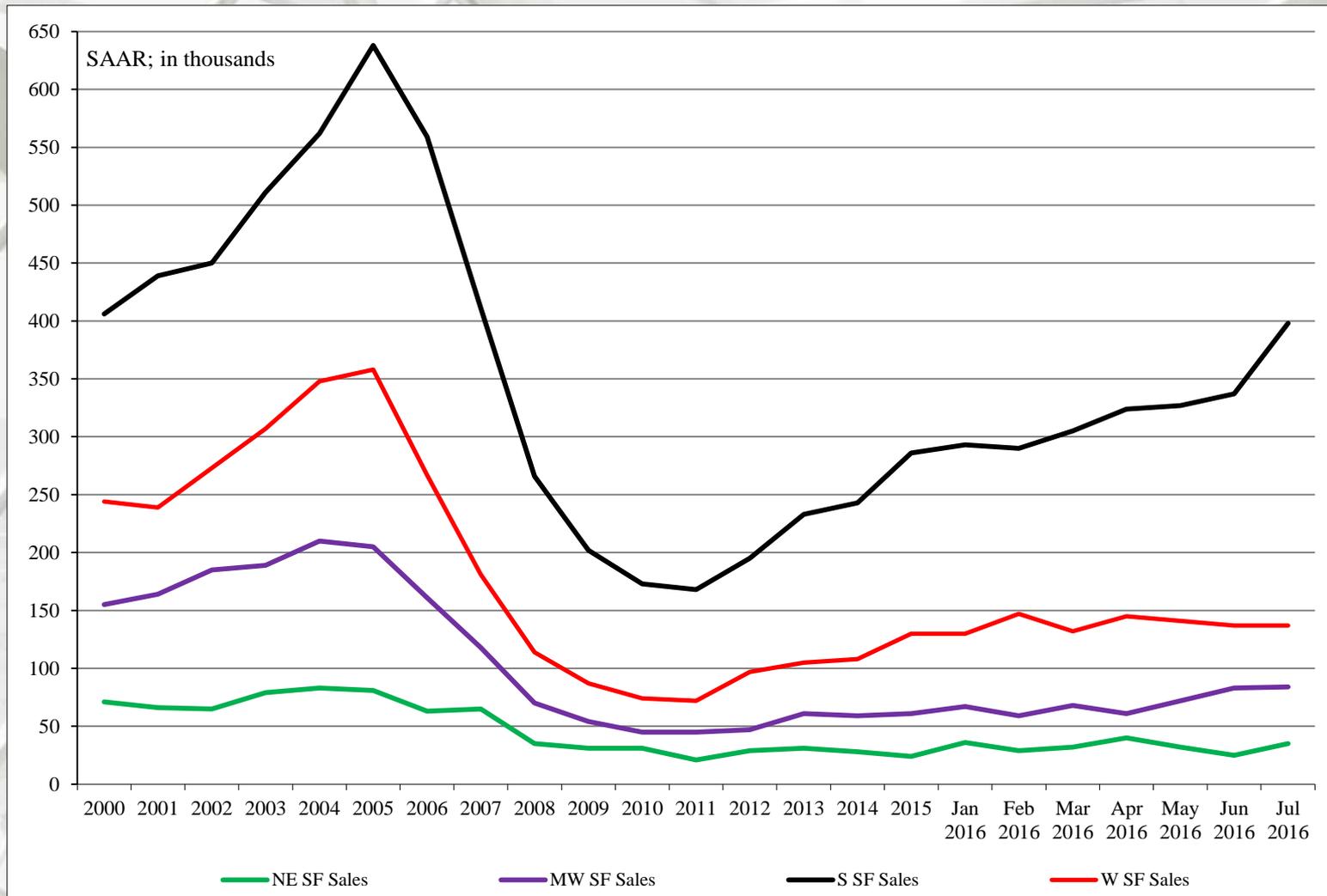
	< \$150m	\$150 - \$199.9m	\$200 - \$299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	> \$750m
July ^{1,2}	2,000	8,000	19,000	13,000	7,000	5,000	3,000
June	1,000	7,000	17,000	12,000	9,000	5,000	1,000
2015	3,000	6,000	13,000	9,000	6,000	4,000	2,000
M/M change	100.0%	14.3%	11.8%	8.3%	-22.2%	0.0%	200.0%
Y/Y change	-66.7%	16.7%	30.8%	33.3%	50.0%	25.0%	-50.0%

All data are SAAR.

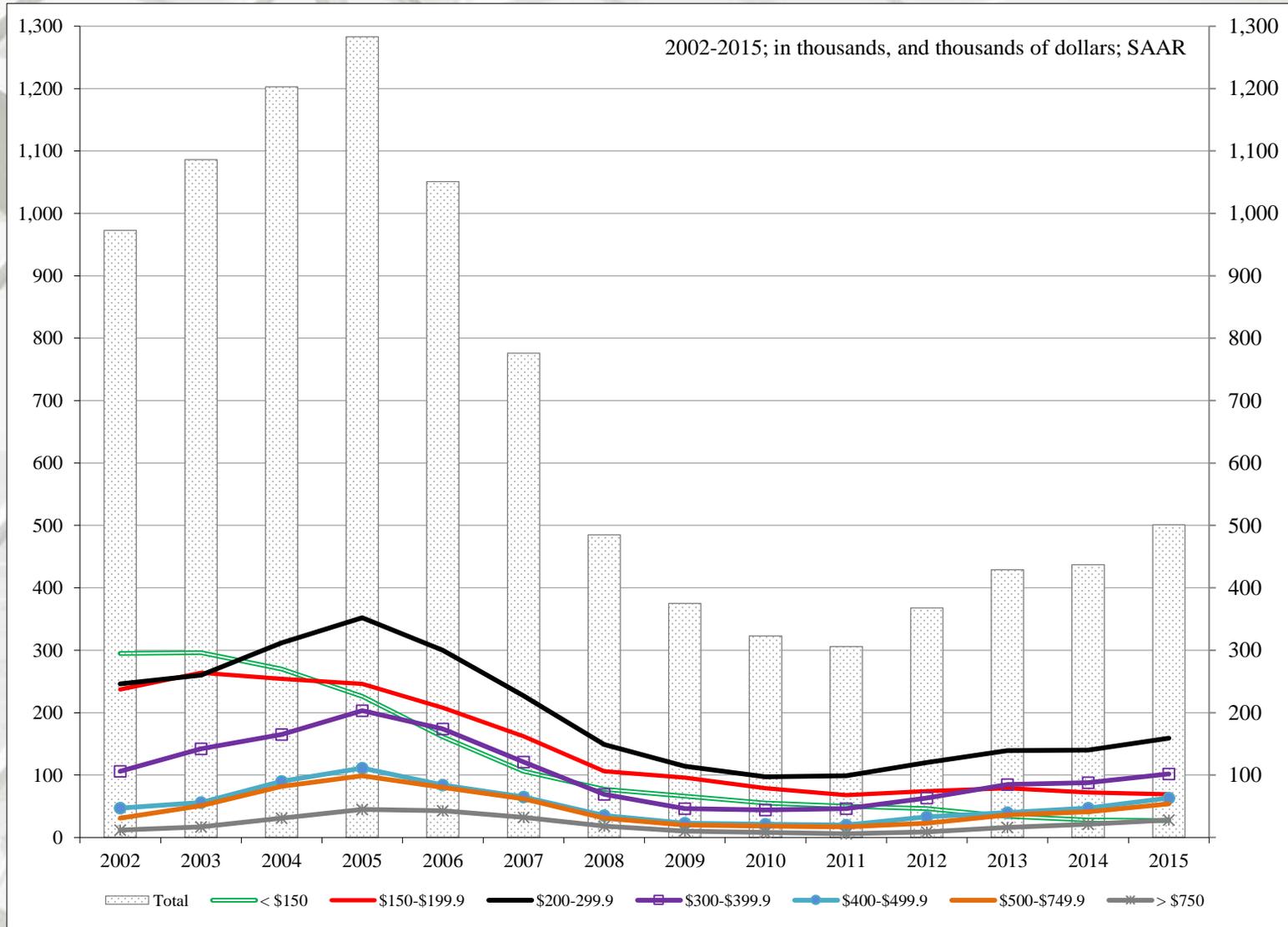
¹ Houses for which sales price were not reported have been distributed proportionally to those for which sales price was reported;

² Detail June not add to total because of rounding.

New SF House Sales by Region

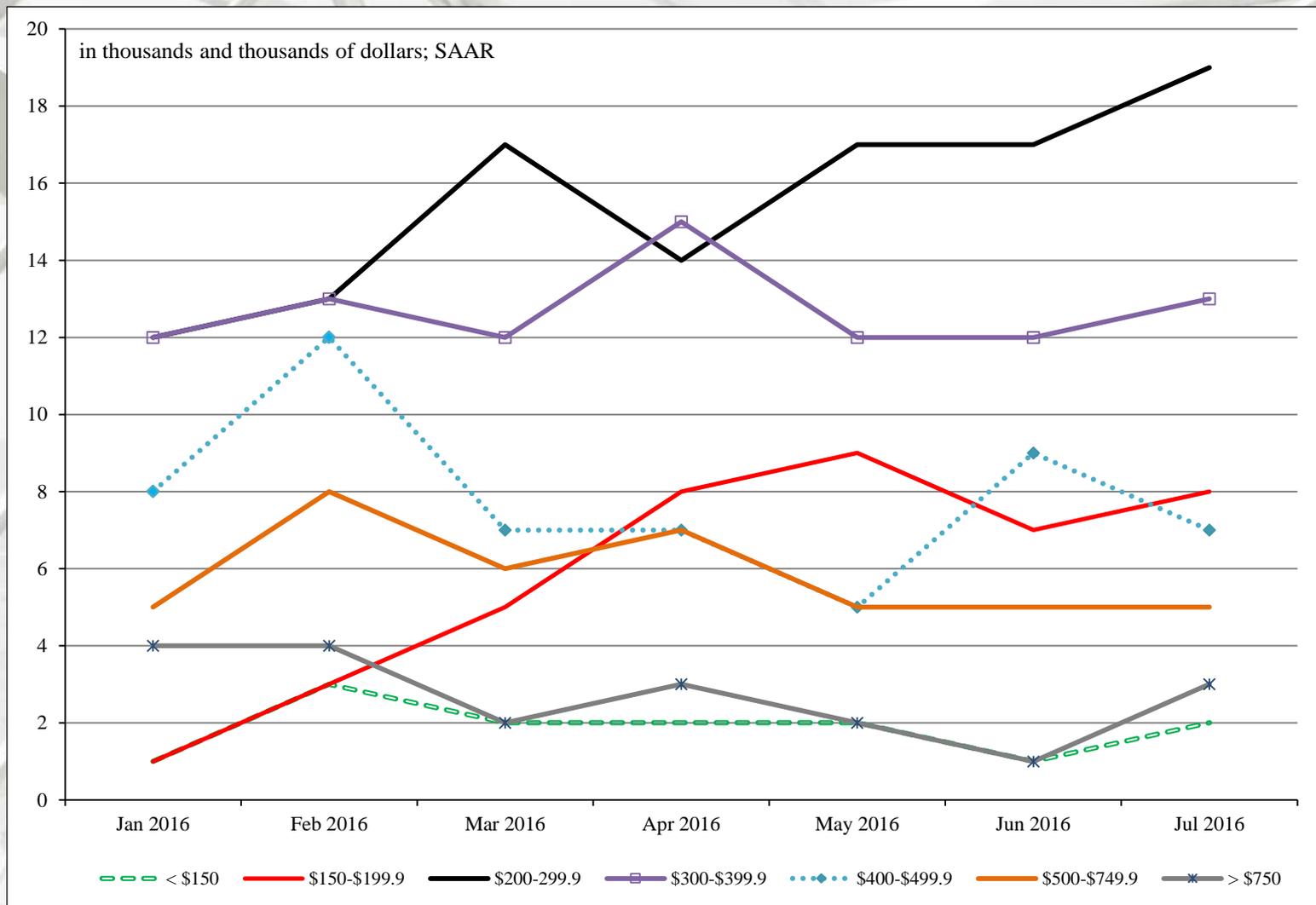


New SF House Sales by Price Category

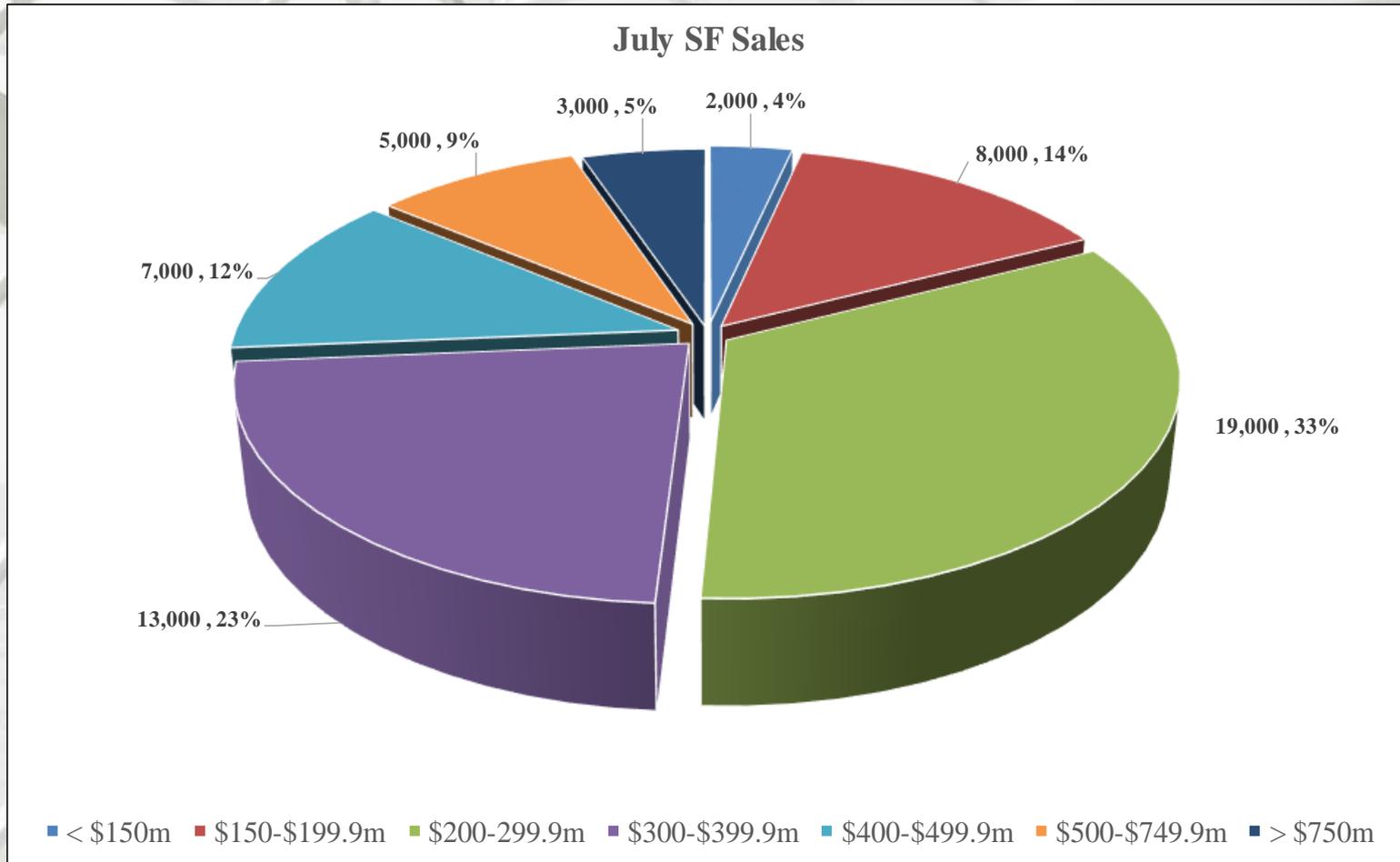


Source: <http://www.census.gov/construction/nrs/xls/newressales.xls>; 8/23/16

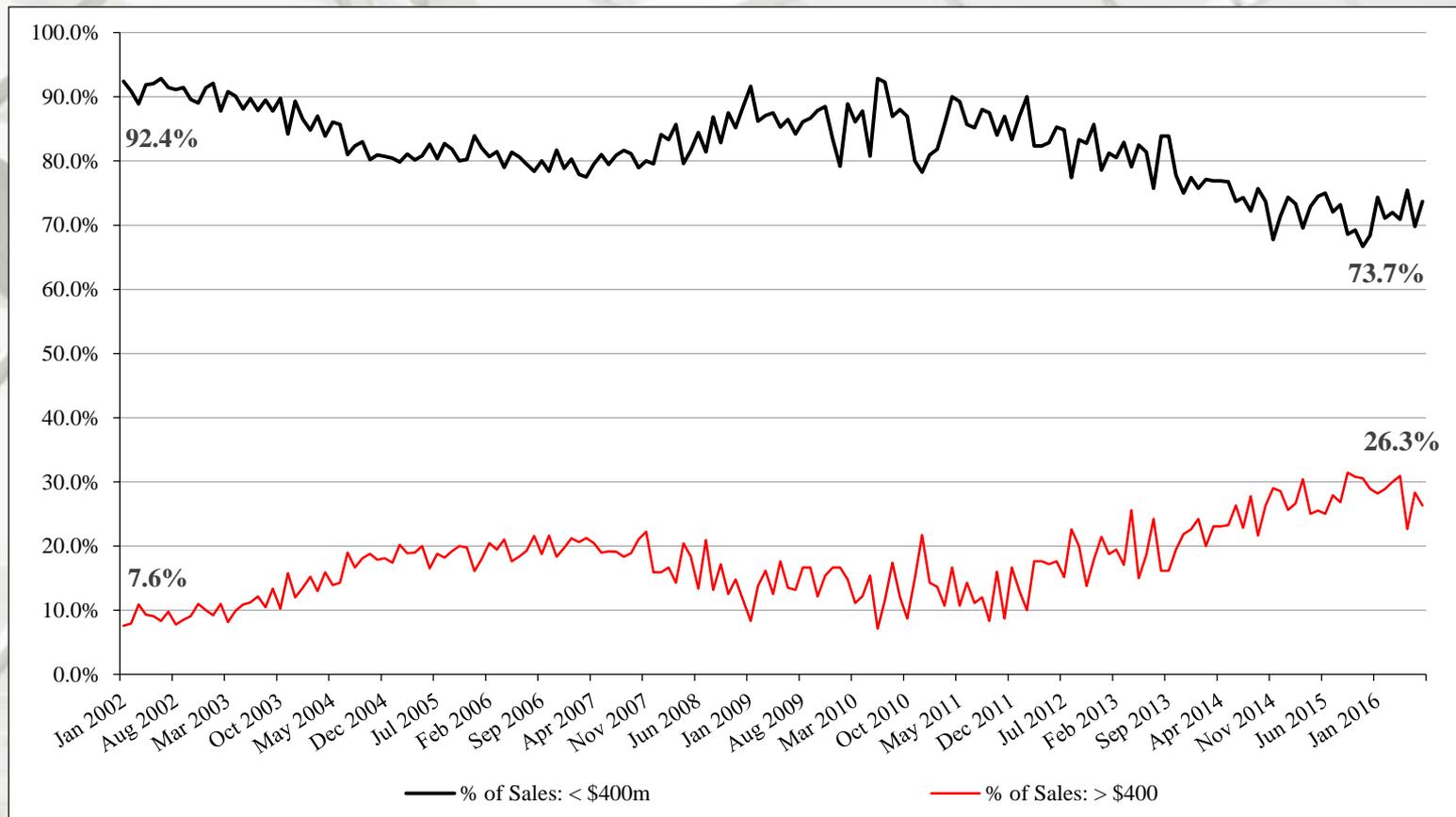
New SF House Sales by Price Category



New SF House Sales



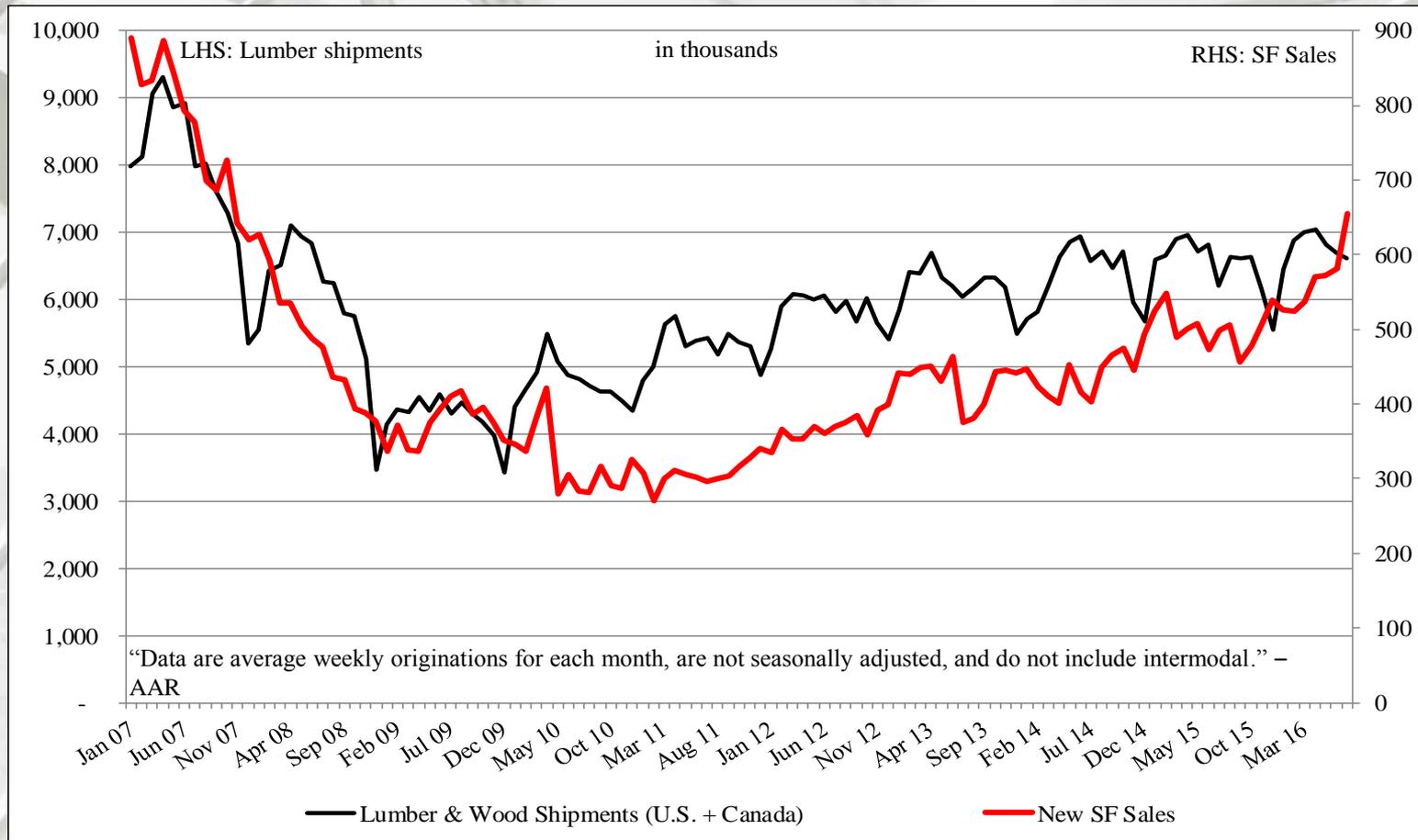
New SF House Sales



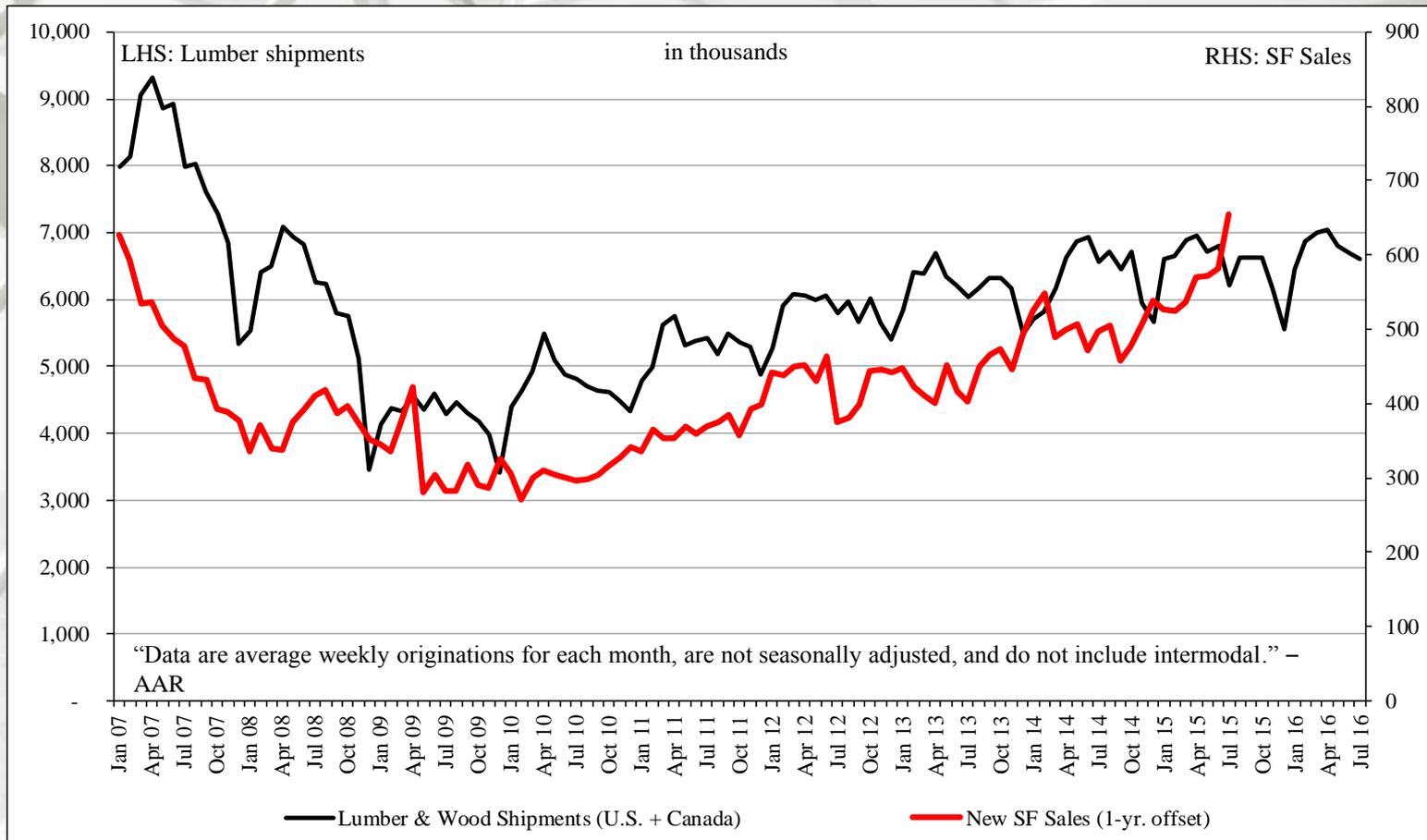
New SF Sales: 2002 – July 2016

The sales share of \$400 thousand plus SF houses is presented above. Since 2011, the upper priced houses have and are garnering a greater percentage of sales. 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 July 2016 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.

July 2016 Construction Spending

2016 July Total Private Residential Construction: \$445.5 billion (SAAR)

0.3% more than the revised June estimate of \$444.0 billion (SAAR)

1.9% greater than the July 2015 estimate of \$437.3 billion (SAAR)

July SF construction: \$238.1 billion (SAAR)

-0.2% less than June: \$238.5 billion (SAAR)

1.7% greater than July 2015: \$234.1 billion (SAAR)

July MF construction: \$59.8 billion (SAAR)

-0.6% less than June: \$60.1 billion (SAAR)

19.8% greater than July 2015: \$49.9 billion (SAAR)

July Improvement^C construction: \$147.5 billion (SAAR)

1.5% more than June: \$145.4 billion (SAAR)

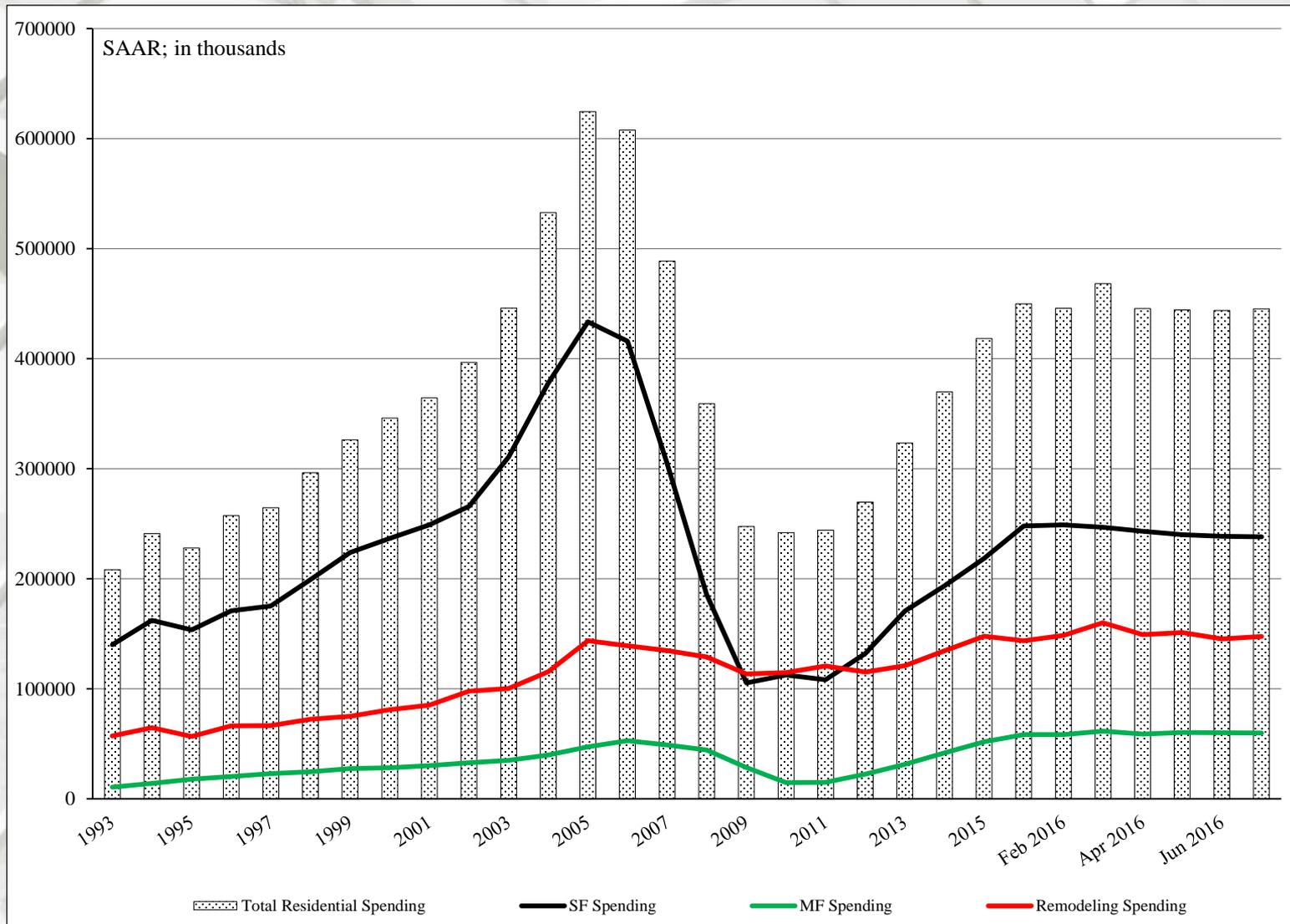
-3.9% less than July 2015: \$153.3 billion (SAAR)

^C The US DOC does not report improvement spending directly, this is an estimation:

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

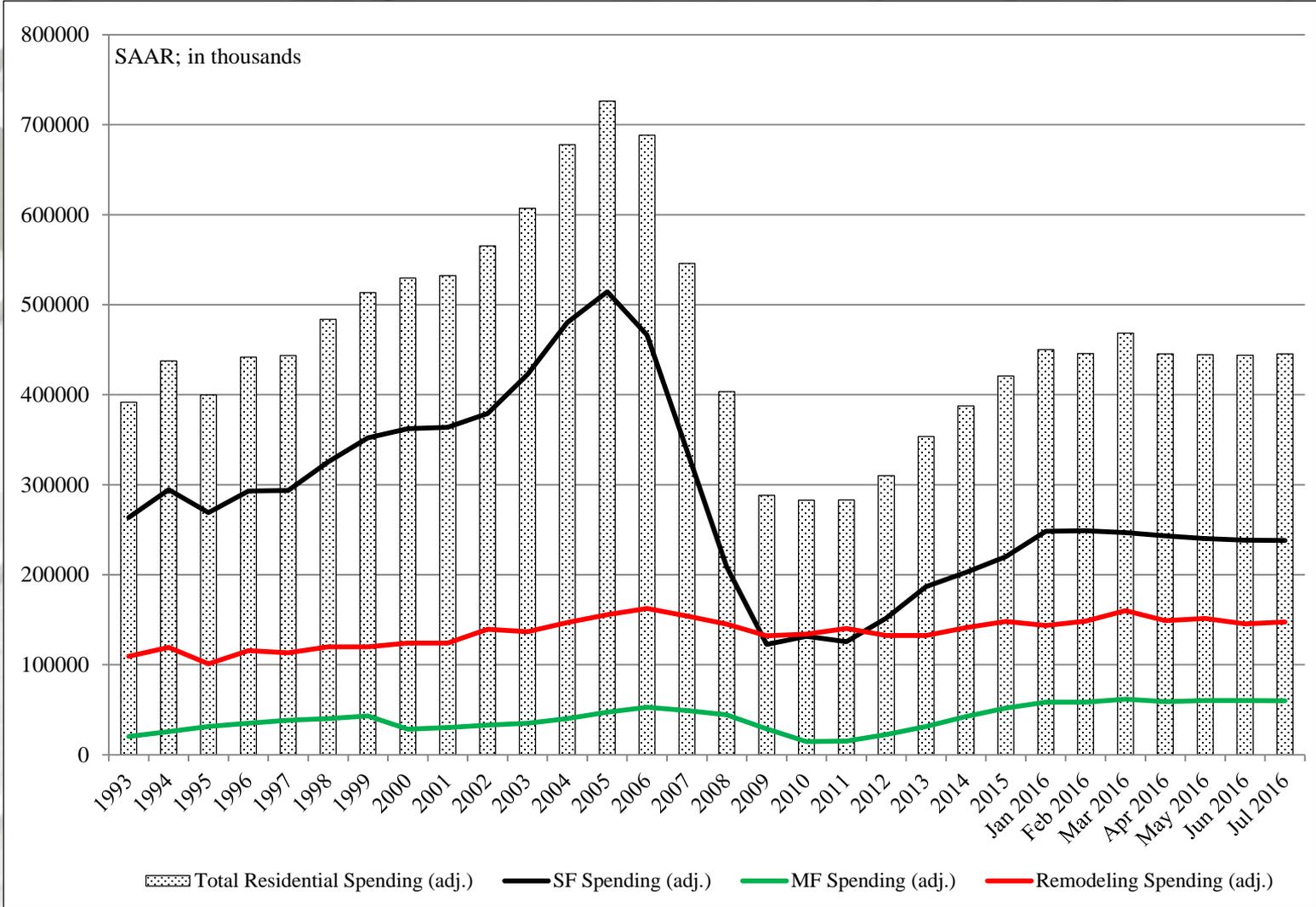
All data are SAARs and reported in nominal US\$.

Construction Spending (nominal): 1993-2016



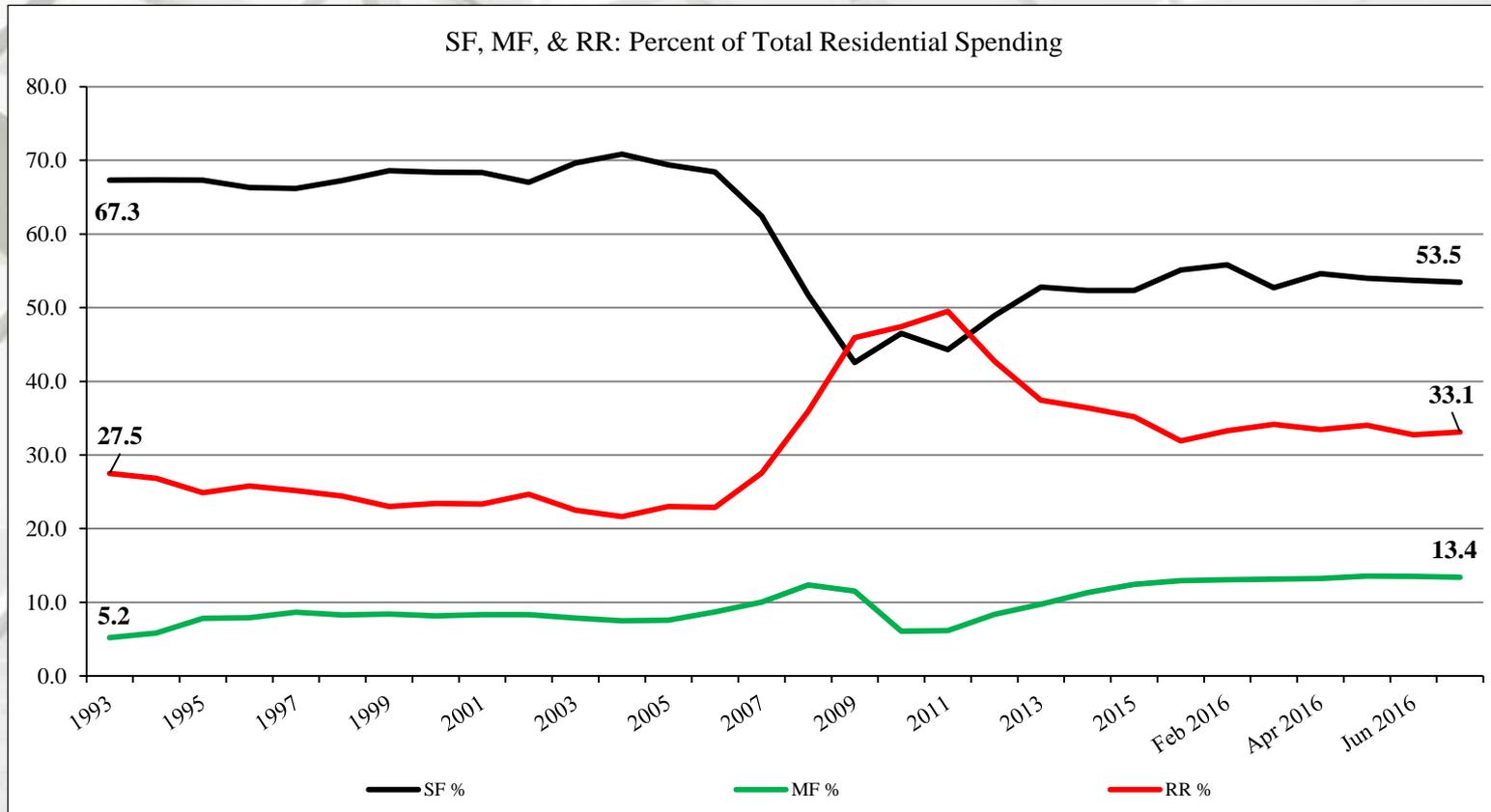
Reported in nominal US\$.

Construction Spending (adjusted): 1993-2016*



Reported in adjusted US\$: 1993 – 2015 (adjusted for inflation, BEA Table 1.1.9); *January-July 2016 reported in nominal US\$.

Construction Spending Shares: 1993 to July 2016



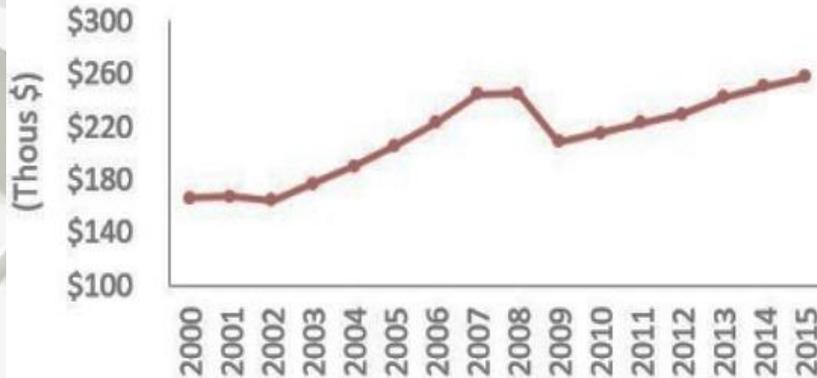
Total Residential Spending: 1993 through 2006

SF spending average: 69.2 %
 MF spending average: 7.5 %;
 RR spending average: 23.3 % (SAAR).

Note: 1993 to 2015 (adjusted for inflation, BEA Table 1.1.9); January-July 2016 reported in nominal US\$.

Construction Spending

U.S. Average Construction Cost of Single-Family Homes (2000 - 2015)



Source: Dodge Data & Analytics Residential Permit Database

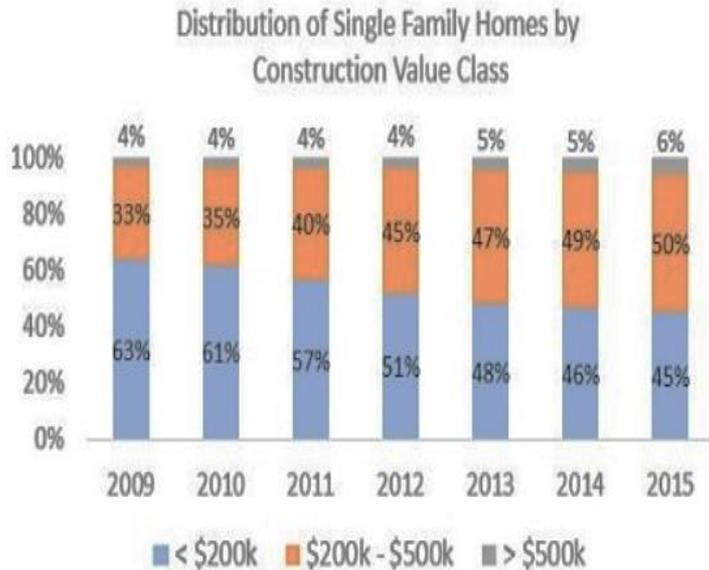
What's Behind the Rising Costs for Single Family Home Construction?

“Home ownership lies at the crux of the American dream and is heavily influenced by home prices and affordability. Because construction costs are one of the biggest elements impacting the price of new homes, the underlying trends in these costs are worth exploring. Dodge Data & Analytics has collected data on the average cost of construction (excluding land) for single-family housing from 2000-2015.”

“These data show that average housing construction costs, when measured in nominal (or current) dollars, rose at a healthy pace from 2003 through 2008 before dropping significantly during the 2009 financial crisis and recession. From 2010-2015, nominal dollar average housing construction costs then continued to increase, but at a much slower pace.

As new single family construction starts began to recover, the average single family home also became more expensive. Lower cost homes accounted for a decreasing share of the new housing market, while the share of higher-cost homes rose. Specifically, new homes with a construction cost between \$200,000 and \$500,000 increased significantly from just a third of activity in 2009 to fully half of homes built in 2015. The share of homes with construction value greater than \$500,000 has remained relatively small, but has nonetheless grown as well.” – Timothy Boothroyd, Manager of Product Consulting and Residential Analysis, and Pooja Kapoor, Senior Analyst, Dodge Data & Analytics

Construction Spending



Source: Dodge Data & Analytics Residential Permit Database

“In 2015, the Pacific region had the lowest share of single family homes constructed for under \$200K and the highest proportion of structures within the \$200K-\$500K range. Conversely, the East South Central had the highest percent of homes with a construction cost under \$200K and lowest share of homes costing \$200,000-\$500,000 in the U.S. Notably, New England and the Mid-Atlantic region had the highest proportion of homes constructed for above \$500,000. It comes as no surprise these two Northeastern regions have the highest proportion homes built for \$1 million or more. Nationally, less than 1% of new homes are within this cost range, but 3.3% of New England homes and 2.4% of Mid-Atlantic homes cost at least \$1 million.”

“Labor and materials are by far the largest part of construction costs and like with all commodities, their costs vary with the balance between supply and demand. As the supply of labor and materials increases, the cost declines and vice versa. From 2006-2008, the U.S. Bureau of Labor Statistics reports that the unemployment rate for skilled construction labor remained fairly stable in the single digits for the most part. It then climbed above 20% as the industry crumbled from 2009-2011 and reached a high of 27% in February 2010. This softness in construction employment – the sudden and dramatic availability of labor – likely resulted in driving down construction costs during this period. By contrast, the increase in housing construction and the tighter labor market during the recovery period (unemployment sunk to a low of 4.5% this past July) has contributed to higher construction costs, something that is likely to continue until the next downturn in housing.” – Timothy Boothroyd, Manager of Product Consulting and Residential Analysis, and Pooja Kapoor, Senior Analyst, Dodge Data & Analytics

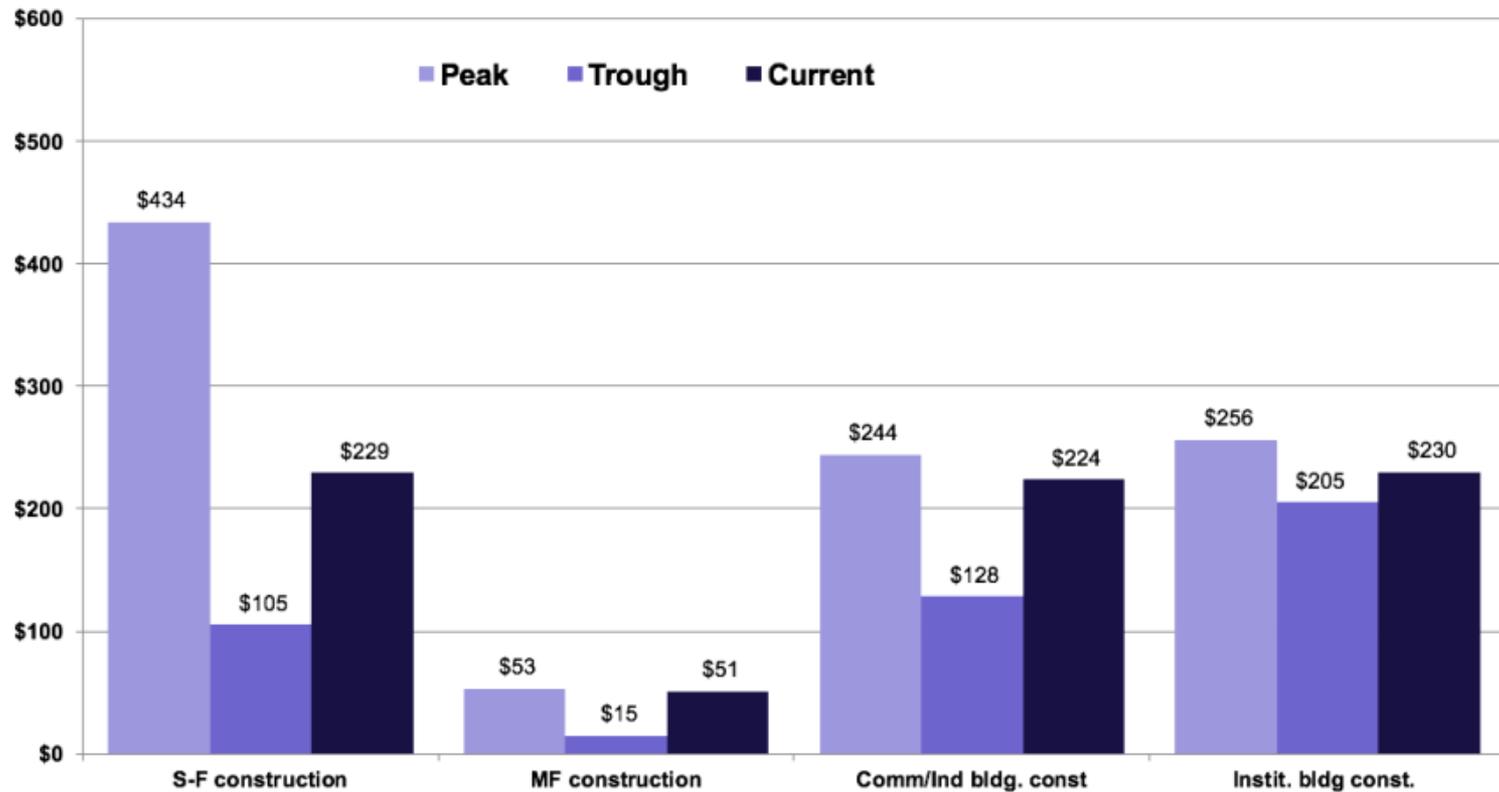
Construction Spending

What's Behind the Rising Costs for Single Family Home Construction?

“Material costs are the other important piece of overall housing costs. According to the Bureau of Labor Statistics, the producer price index for construction materials and components climbed at an average of 6-7% annually between 2004 and 2008, but then fell 1.2% in 2009 as a result of the sharp decline in housing starts and home sales that came with the recession. Materials prices have risen consistently since 2009, but by a more subdued 2% annual rate, reflecting the slower pace of growth for the housing market during this period.

Another reason for the subdued growth in materials costs lies with the use of substitute products. For example, to control overall cost, lower-cost products can be substituted for higher-cost products as overall materials costs rise. Dodge Data & Analytics provides research on product usage in both the new and replacement housing markets. Our research shows interesting patterns of how substitutes are used to control costs. For example, back in 2003, vinyl siding held a 25% share of the siding market, while the more expensive fiber cement siding material trailed behind at 22%. However, during the weakest point of the housing cycle (2009-2011), vinyl became the distinctly more dominant share at 33% in 2009-2010. As the housing market has improved, fiber cement has surged to a 29% share of the siding market, while vinyl siding has slipped to 24%. Clearly, construction costs rise along with construction materials, even though developers and general contractors try to make due with substitutes that may ease the pressure on costs.” – Timothy Boothroyd, Manager of Product Consulting and Residential Analysis, and Pooja Kapoor, Senior Analyst, Dodge Data & Analytics

Construction Spending



NAHB, AIA, and ABC Chief Economists Predict Ongoing Growth Through 2017

“...single-family housing is taking longer than every other sector to recover to peak levels—multifamily is now past-peak levels, and commercial/industrial, and institutional construction are well on the heels of peak levels.” – Kermit Baker, Chief Economist, American Institute of Architects

Existing House Sales

National Association of Realtors (NAR®)

July 2016 sales: 5.390 million houses sold (SAAR)

Distressed house sales: 5% of total sales –
(4% foreclosures and 1% short-sales);
6% in June and 7% in July 2015.

All-cash sales: 21% and 22% in June,
and 23% (July 2015).

Individual investors still purchase a considerable portion of
“all cash” sale houses – 11% in July;
11% in June and 13% in July 2015.

70% of investors paid cash in July.

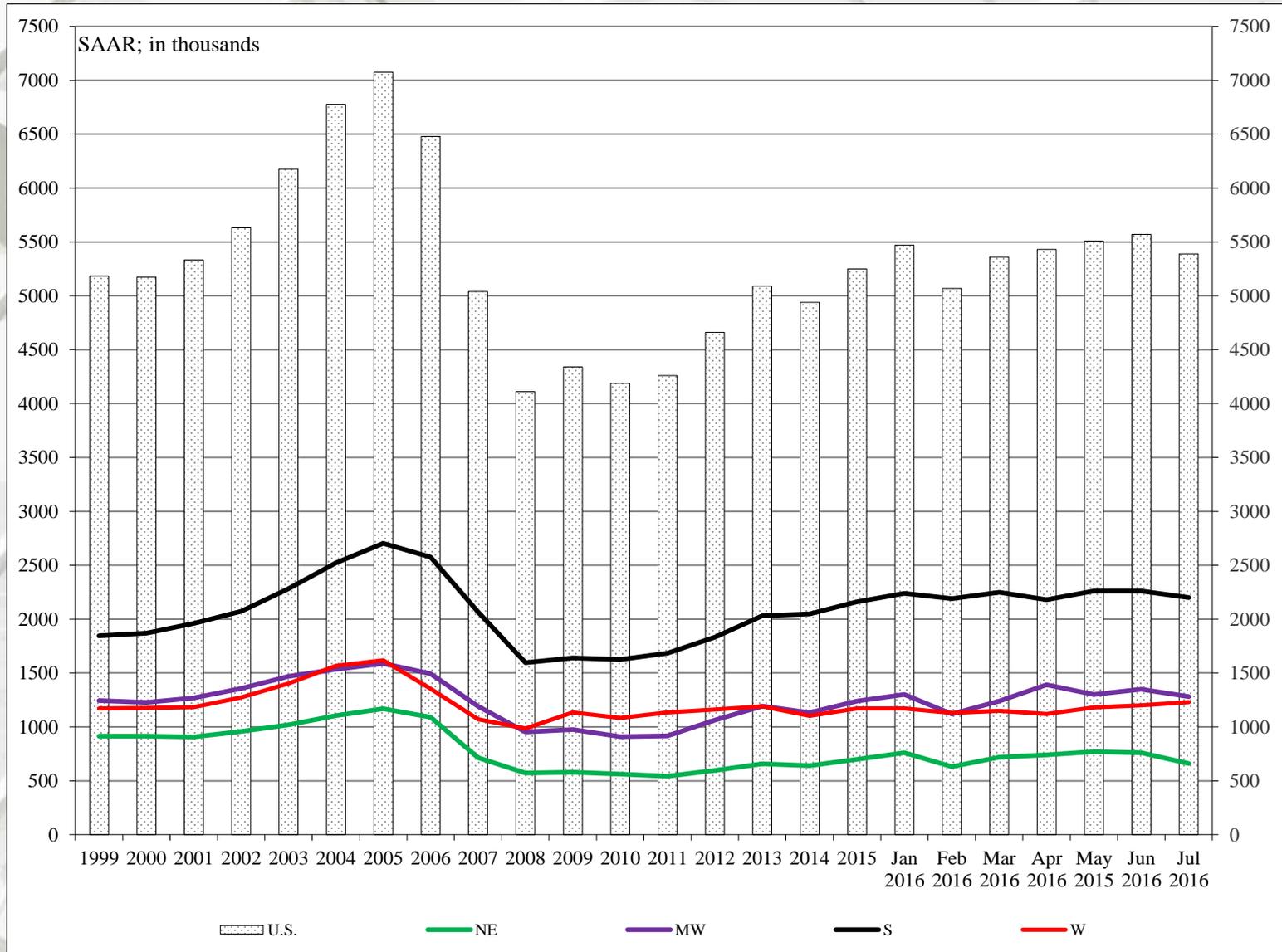
Existing House Sales

	Existing Sales*	Median Price	Mean Price	Month's Supply
July	5,390,000	\$285,900	4.7	4.7
June	5,570,000	\$289,800	4.5	4.6
2015	5,480,000	\$275,900	4.9	5.0
M/M change	-3.2%	-1.3%	4.4%	-2.1%
Y/Y change	-1.6%	3.6%	-4.1%	-8.0%

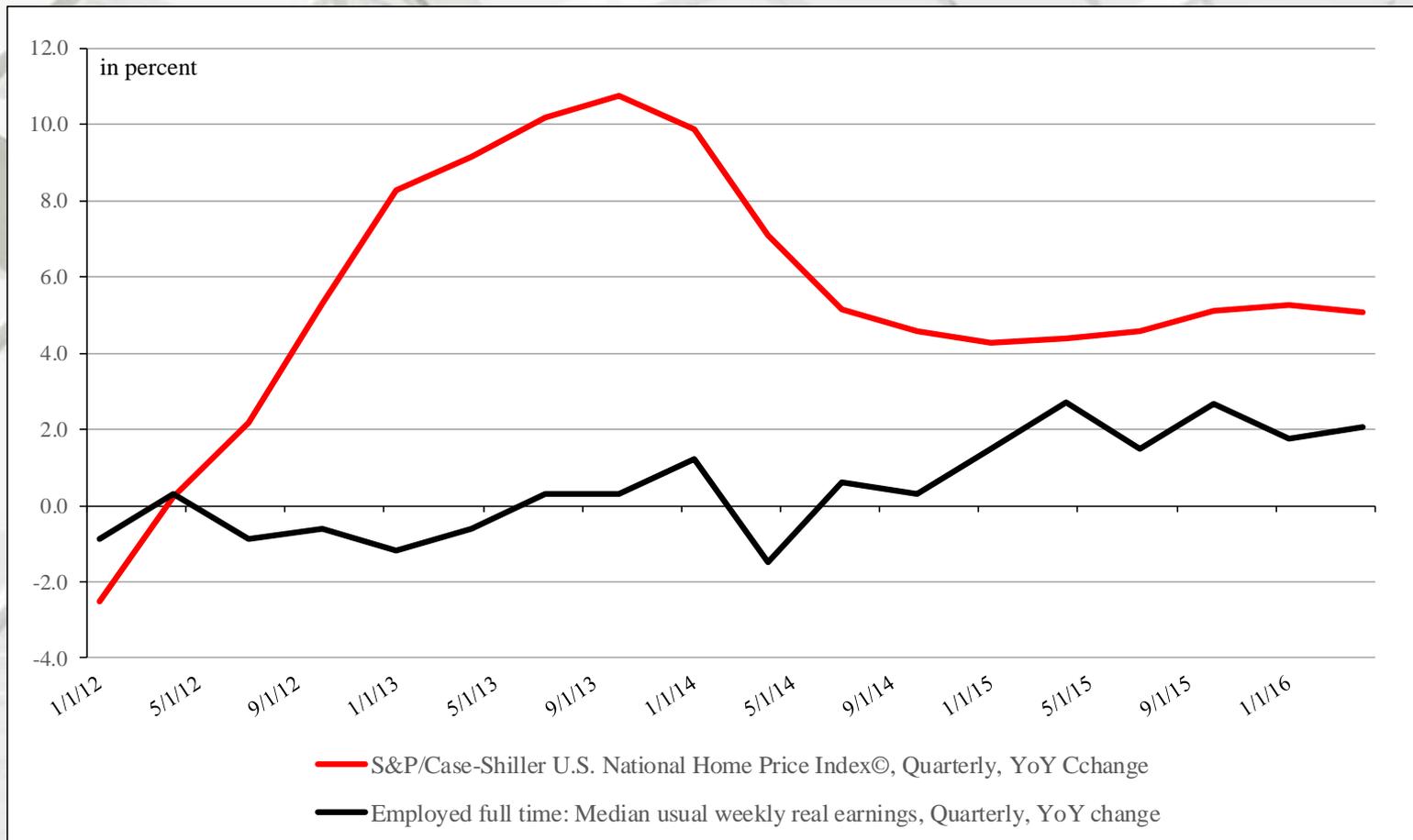
	NE Sales	MW Sales	S Sales	W Sales
July	660,000	1,280,000	2,200,000	1,230,000
June	760,000	1,350,000	2,260,000	1,200,000
2015	700,000	1,280,000	2,260,000	1,240,000
M/M change	-13.2%	-5.2%	-2.7%	2.5%
Y/Y change	-5.7%	0.0%	-2.7%	-0.8%

* All sales data: SAAR

Total Existing House Sales



United States House Sales



S&P Case-Shiller vs. Real Median Earnings

National Home Price Index[®] vs. Employed Full Time: Median Usual Weekly Real Earnings

In the past 3.5 years, house price gains have far exceeded wage increases. This beckons the question, how long can affordability remain positive? Even with below average interest rates.

FHFA: U.S. House Price Index

U.S. House Prices Rise 1.2 Percent in Second Quarter; Some Signs of Deceleration

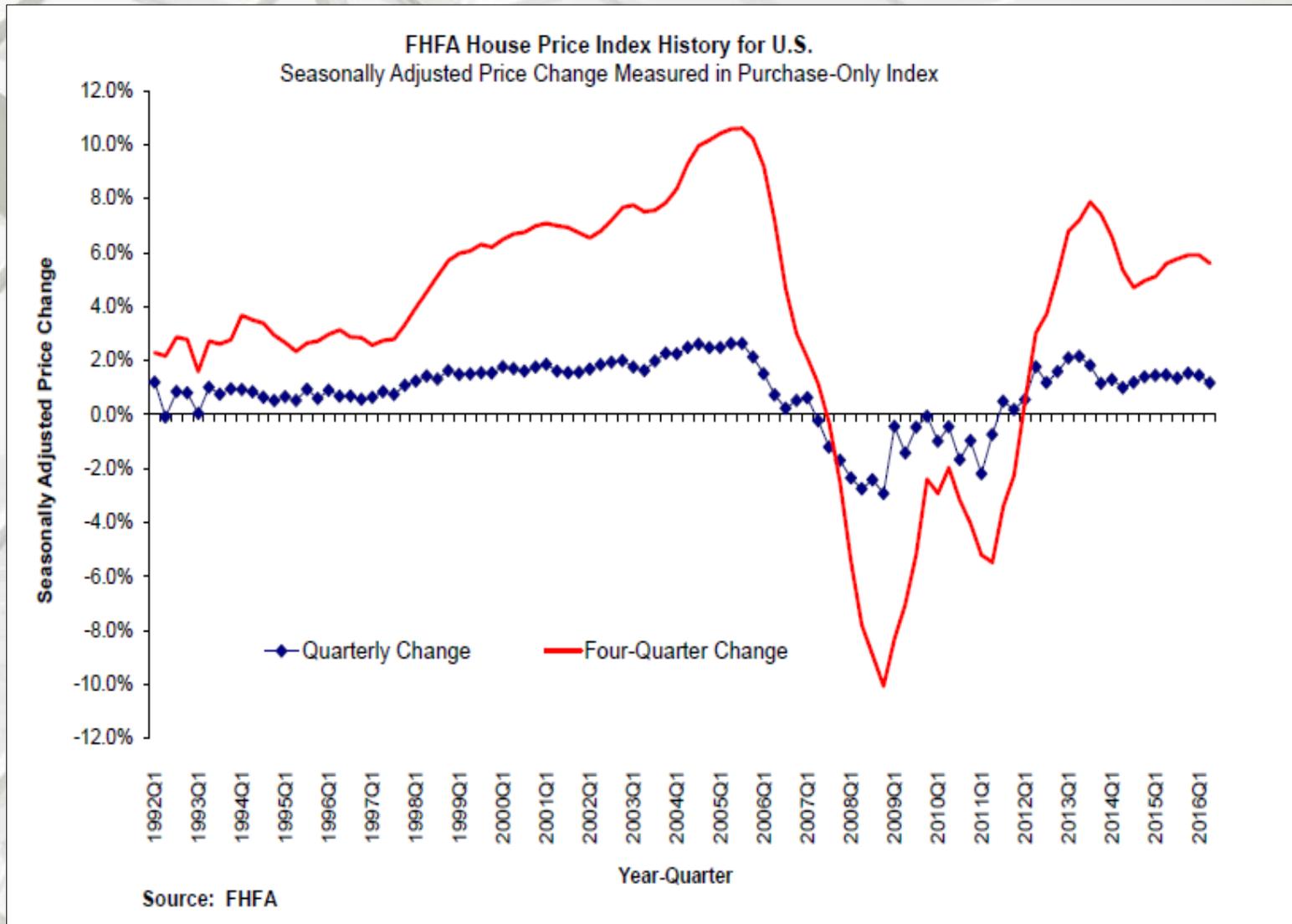
“U.S. house prices rose 1.2% in the second quarter of 2016 according to the Federal Housing Finance Agency (FHFA) House Price Index (HPI). House prices rose 5.6% from the second quarter of 2015 to the second quarter of 2016. FHFA’s seasonally adjusted monthly index for June was up 0.2% from May.

While the HPI rose 5.6% from the second quarter of 2015 to the second quarter of 2016, prices of other goods and services were nearly unchanged. The inflation-adjusted price of homes rose approximately 5.7% over the last year.

Four of the nine census regions posted month-over-month price drops, the highest a 0.4% loss in the Pacific region. New England and the East South Central regions each declined by 0.2% and the Middle Atlantic by 0.1%. The largest gains were in the Mountain region, up 0.6% for the month and 8.6% from a year earlier. All nine divisions were positive for year-over-year price changes.

Although the appreciation rate for the second quarter was of similar magnitude to what we’ve been seeing for several years now, a close look at the month-over-month price changes during the quarter reveals a potentially significant market shift. Our monthly price index indicates that in each of the three months of the quarter, the increase was only 0.2%. This is a much more modest pace of appreciation than we’ve seen in some time and most likely reflects accumulated pressures from significantly reduced home affordability.” – Andrew Leventis, Supervisory Economist, FHFA

FHFA: U.S. House Price Index



First-Time Purchasers

National Association of Realtors (NAR®)

32% of sales in July – 33% in June and 28% in July 2015.

Urban Institute

“In May 2016, the first-time homebuyer share of GSE purchase loans edged down to 44.6 percent. The FHA has always been more focused on first-time homebuyers, with its first-time homebuyer share hovering around 80 percent and now rose to 83.3 percent.” – Laurie Goodman et al., Codirector, Housing Finance Policy Center

Overall United States House Sales

Week of	Weekly	4-Week Avg.
8/14/16	1.0%	2.4%
8/21/16	-1.5%	2.2%
8/28/16	-4.2%	0.8%
9/4/16	-9.7%	-3.3%

Appraisal volume performs better than usual for Labor Day holiday

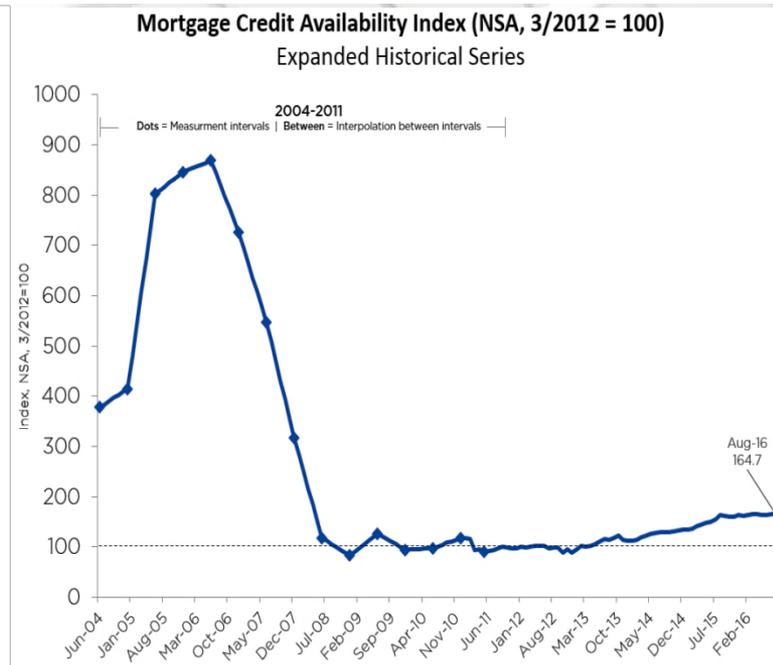
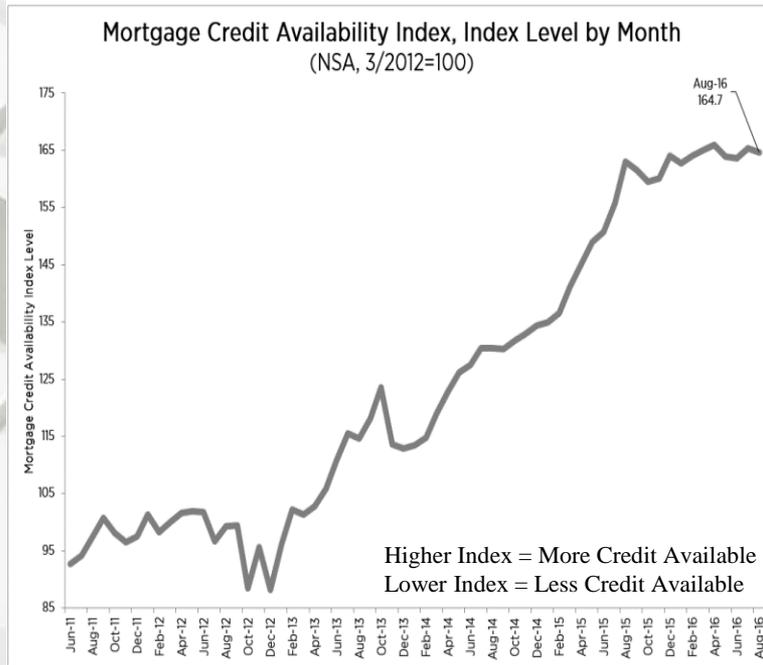
Four-week average falls into negative territory

“...appraisal volume dropped 9.7% for the week of Sept. 4, 2016.”

“With the holiday, the 4-week average dropped to -3.3% from a flat 0.8%. While this makes it down three weeks in a row, the less than average drop is encouraging.” – Kevin Golden, Director of Analytics, a la mode.

Appraisal volume is an indicator of market strength and has some advantages over mortgage applications. Fallout is less for appraisals since they are ordered later in the mortgage process after credit worthiness is determined and there are few multiple-orders.” – Brena Swanson, Digital Reporter, HousingWire.com

Mortgage Credit Availability



Mortgage Credit Availability Decreases in August

“The MCAI decreased 0.4 percent to 164.7 in August. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit.

Credit availability decreased slightly over the month, driven by one mid-sized investor closing their correspondent operations. Despite the loss of all of the programs associated with this investor, the Jumbo MCAI increased by 0.5 percent, indicating that credit conditions continue to ease among jumbo loan programs. The index was benchmarked to 100 in March 2012. Of the four component indices, the Jumbo and Government MCAIs saw the greatest increase in availability (both up 1.3 percent) over the month followed by the Conventional MCAI (up 0.7 percent), and the Conforming MCAI (up 0.1 percent).” – Lynn Fisher, Vice President of Research and Economics, Mortgage Bankers Association (MBA)

Summary

In summary:

The July housing data sent mixed signals. Single-family sales were much greater than expectations and the upper priced tier houses continued with strong increases. In the new sales category, the \$200-299,900 category recorded a much needed boost. The \$150,000 and less category still remains in doldrums. Residential construction spending was barely positive and single-family spending was negative in July (monthly basis). Existing sales decreased marginally – yet, they are greater than the early 2000s.

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

Pros:

- 1) Historically low interest rates are still in effect;
- 2) As a result, housing affordability is good for most of – but not all of the U.S.;
- 3) Household formations improved in 2016; yet, 100% of the formations were in renter-occupied households (owner-occupied decreased by 22,000) (occupied housing data from the Current Population/Housing Vacancy surveys);
- 4) Select builders are beginning to focus on entry-level houses.

Cons:

- 1) Lot availability and building regulations (according to several sources);
- 2) Mortgage credit availability – according to some analysts;
- 3) Changing attitudes towards SF ownership and as stated by some – “gentrification”;
- 4) Job creation is improving and consistent but some economists question the quantity and types of jobs being created;
- 5) Stagnant real median household incomes;
- 6) Global uncertainty?

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