

The Virginia Tech – U.S. Forest Service

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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 October, aggregate monthly housing data, based on a month-over-month comparison, were decidedly positive. New housing starts rebounded sharply from September. Yet, new single-family house sales were negative on a month-over-month and single-family construction spending was negative year-over-year. New single-family sales have been mixed for the past few months. The December 9th Atlanta Fed GDPNow™ model projects aggregate residential investment spending to increase at a 10.7 percent seasonally adjusted annual rate; new residential investment spending was estimated to rise 12.4 percent; and improvements were projected to increase 4.3 percent in 2016.¹ Regionally, data were mixed across all sectors.

“...In the heyday of 2005–2006, the [housing] sector contributed, on average, 33.4 percent to nominal fixed investment in the economy and 6.3 percent to nominal gross domestic product (GDP). Those figures fell sharply after 2008 before edging up to 23.3 percent and 3.8 percent, respectively, this year, still lower than the average for the last 35 years. The failure of these figures to reach pre-recession levels, however, is likely due more to the scale of the housing bubble leading up to the Great Recession than to an unnaturally slow pace of recovery.

That said, not everything is going back to the way it was. Two trends have emerged that differentiate the current situation from the pre-bubble period: Homeownership rates remain on the decline, and new construction is more heavily weighted toward multifamily buildings. If they continue, these trends could influence the outcome of important policy discussions on topics as diverse as tax reform and transportation planning.²” – Dr. Patricia Buckley, Managing Director for Economics, and Akrur Barua, Economist, Deloitte Services LP.

This month’s commentary contains pertinent housing data; data exploration; new and existing single-family housing; economics; and 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>; 12/9/16

² <https://dupress.deloitte.com/dup-us-en/economy/issues-by-the-numbers/paradigm-shifts-amid-us-housing-market-recovery.html>; 11/6/16

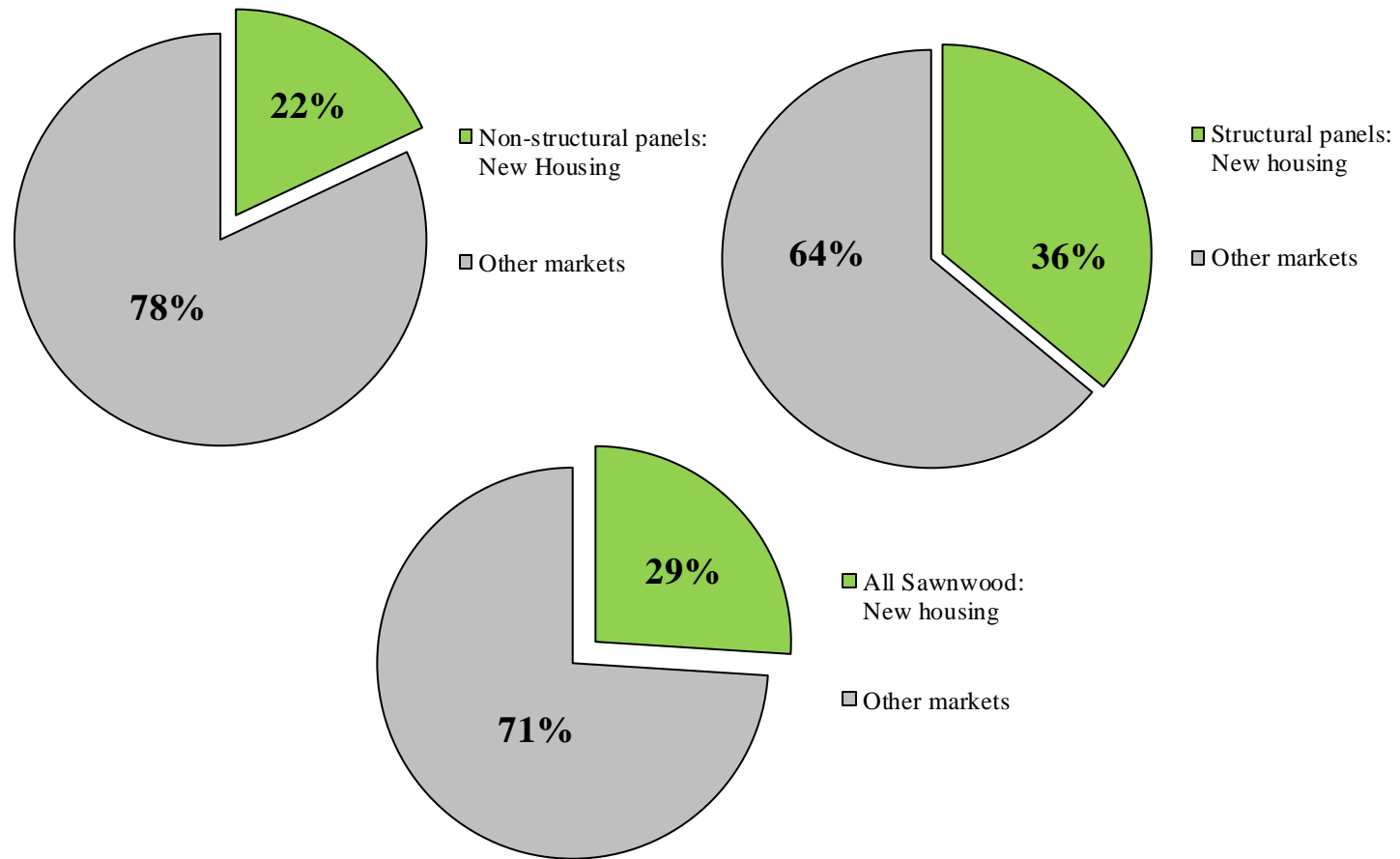
October 2016

Housing Scorecard

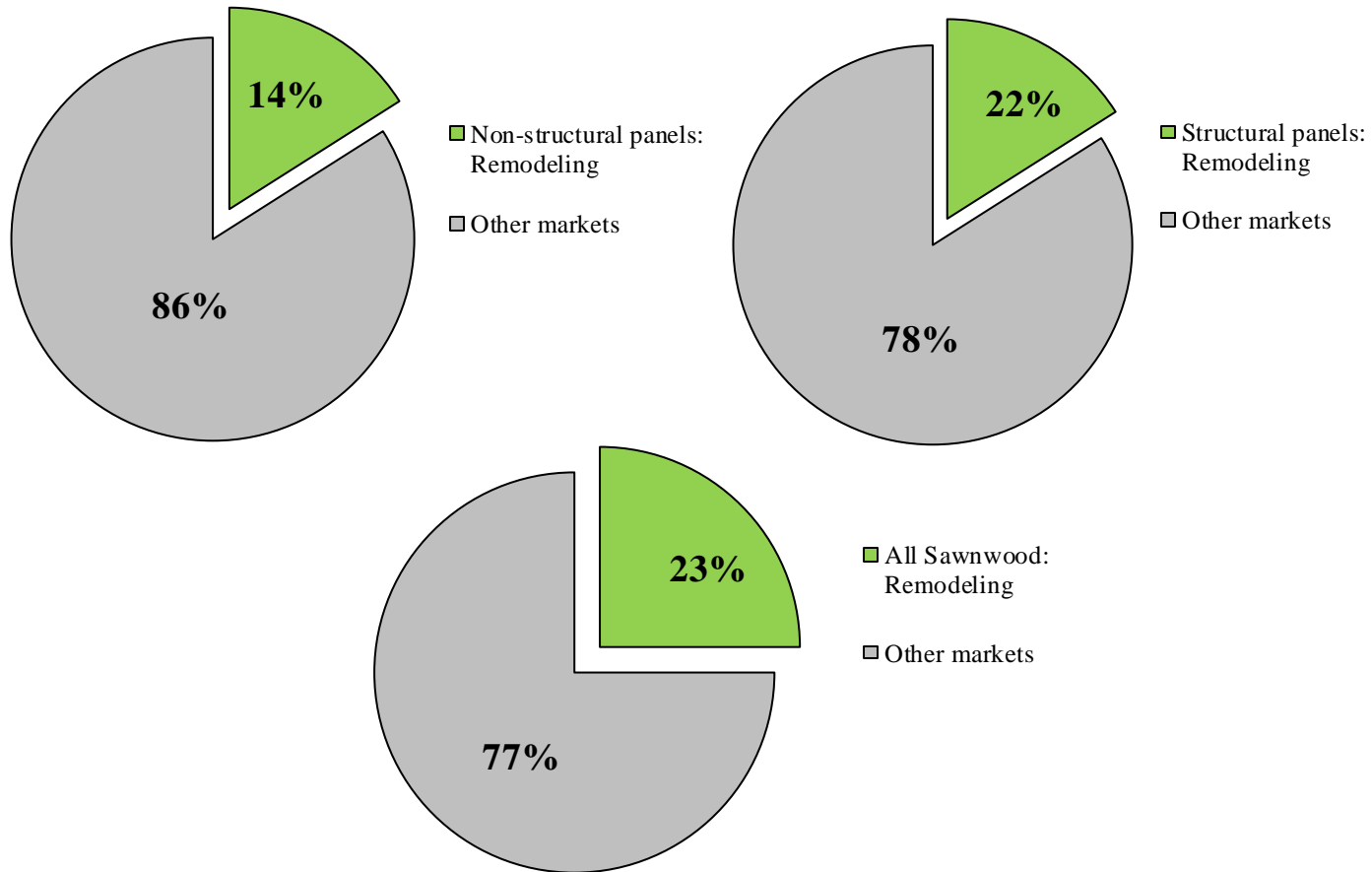
	M/M	Y/Y
Housing Starts	△ 25.5%	△ 23.3%
Single-Family Starts	△ 10.7%	△ 21.7%
Housing Permits	△ 0.3%	△ 4.6%
Single-Family Permits	△ 2.7%	△ 5.1%
Housing Completions	△ 5.5%	△ 7.2%
New Single-Family House Sales	▽ 1.9%	△ 17.8%
Private Residential Construction Spending	△ 1.6%	△ 4.7%
Single-Family Construction Spending	△ 2.8%	▽ 1.6%
Existing House Sales ¹	△ 2.0%	△ 5.9%

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



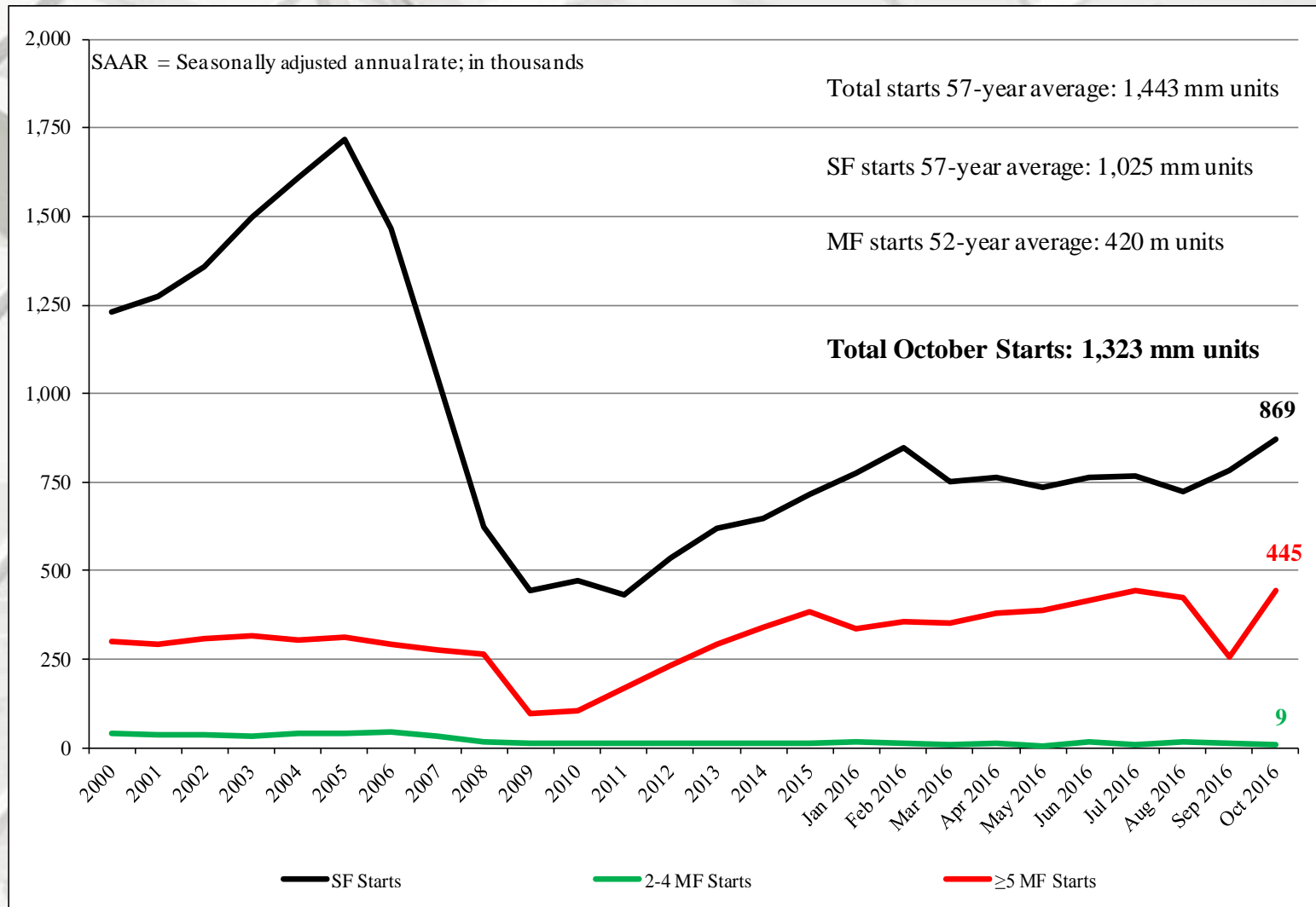
New Housing Starts

	Total Starts	SF Starts	MF 2-4 Starts	MF ≥5 Starts
October	1,323,000	869,000	9,000	445,000
September	1,054,000	785,000	14,000	255,000
2015	1,073,000	714,000	11,000	347,000
M/M change	25.5%	10.7%	-35.7%	74.5%
Y/Y change	23.3%	21.7%	-18.2%	28.2%

* 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**
October	139,000	69,000	70,000
September	96,000	62,000	34,000
2015	136,000	59,000	77,000
M/M change	44.8%	11.3%	105.9%
Y/Y change	2.2%	16.9%	-9.1%

	MW Total	MW SF	MW MF
October	219,000	123,000	96,000
September	152,000	116,000	36,000
2015	176,000	116,000	60,000
M/M change	44.1%	6.0%	166.7%
Y/Y change	24.4%	6.0%	60.0%

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).

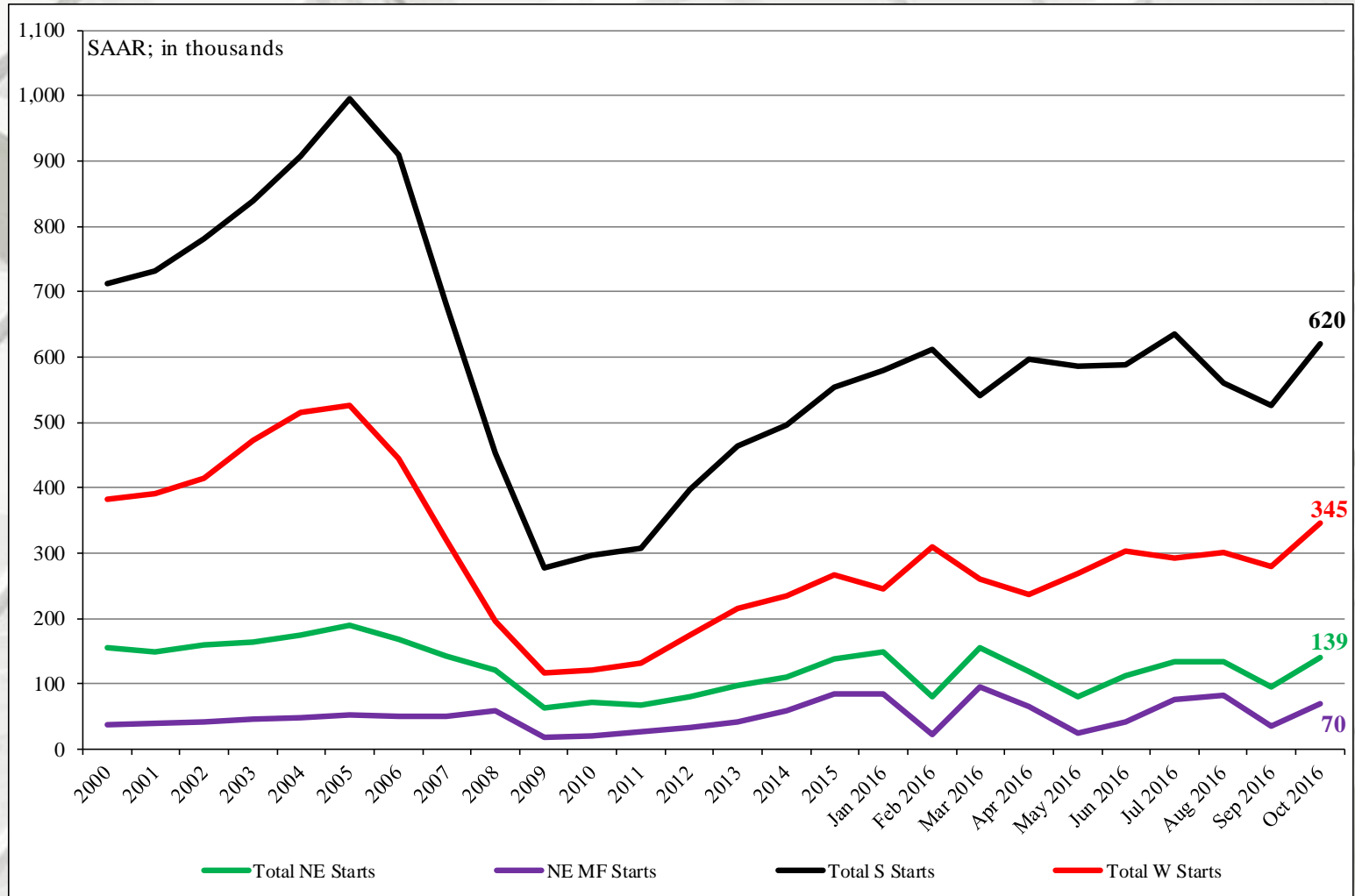
New Housing Starts by Region

	S Total	S SF	S MF**
October	620,000	454,000	166,000
September	526,000	423,000	103,000
2015	515,000	374,000	141,000
M/M change	17.9%	7.3%	61.2%
Y/Y change	20.4%	21.4%	17.7%
	W Total	W SF	W MF
October	345,000	223,000	122,000
September	280,000	184,000	96,000
2015	246,000	165,000	81,000
M/M change	23.2%	21.2%	27.1%
Y/Y change	40.2%	35.2%	50.6%

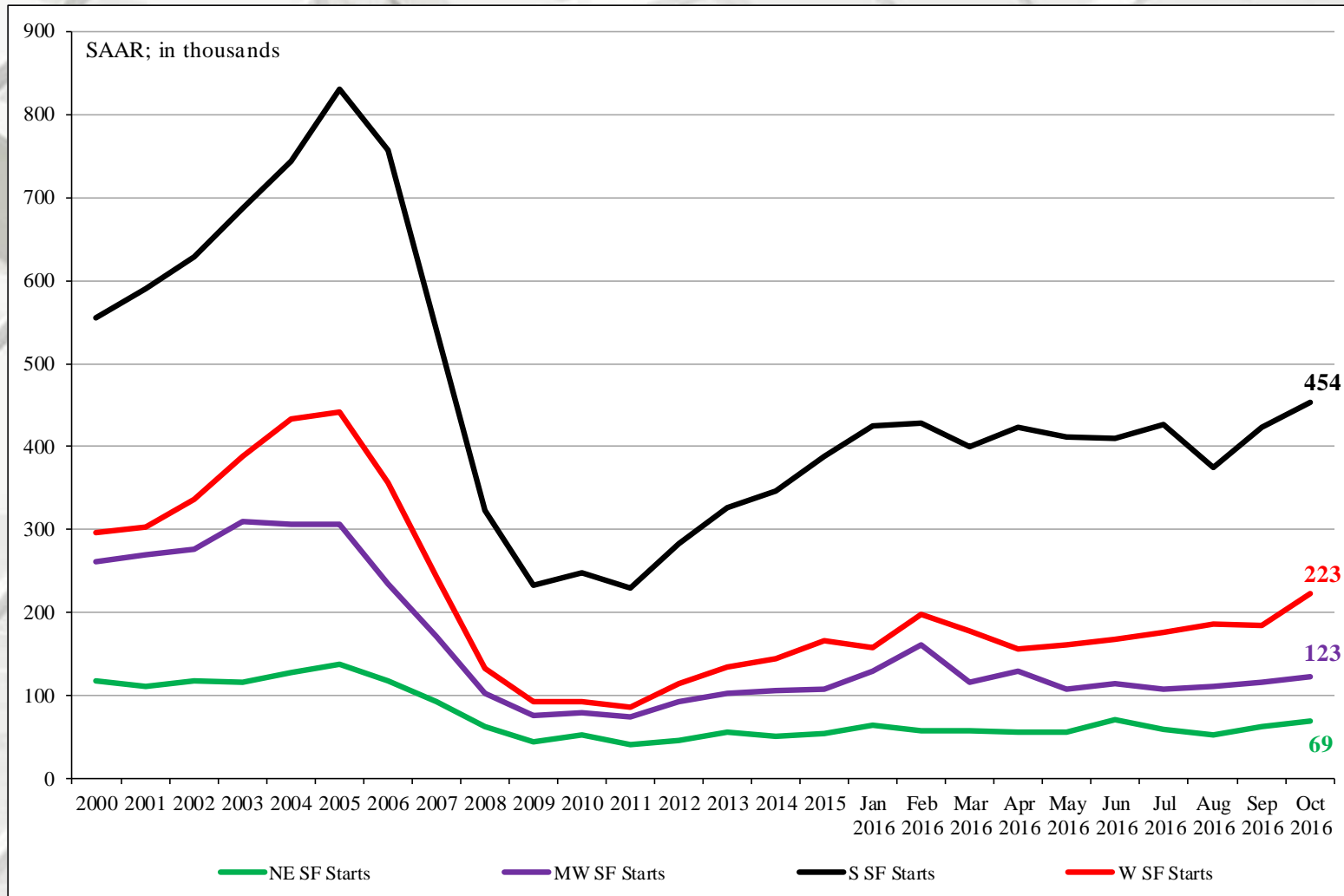
All data are SAAR; S = South and W = West.

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

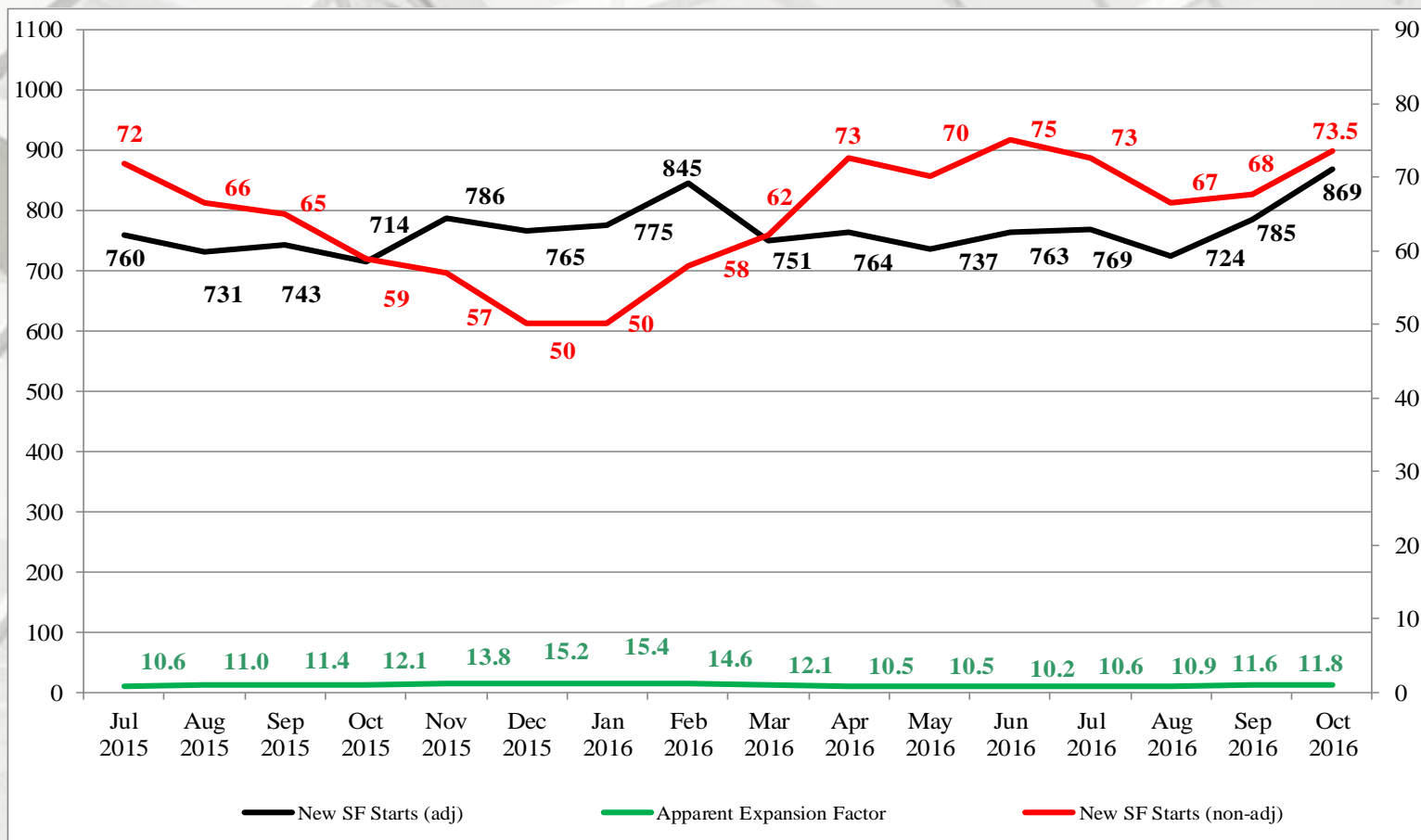
Total Housing Starts by Region



SF Housing Starts by Region



Nominal & SAAR SF Housing Starts

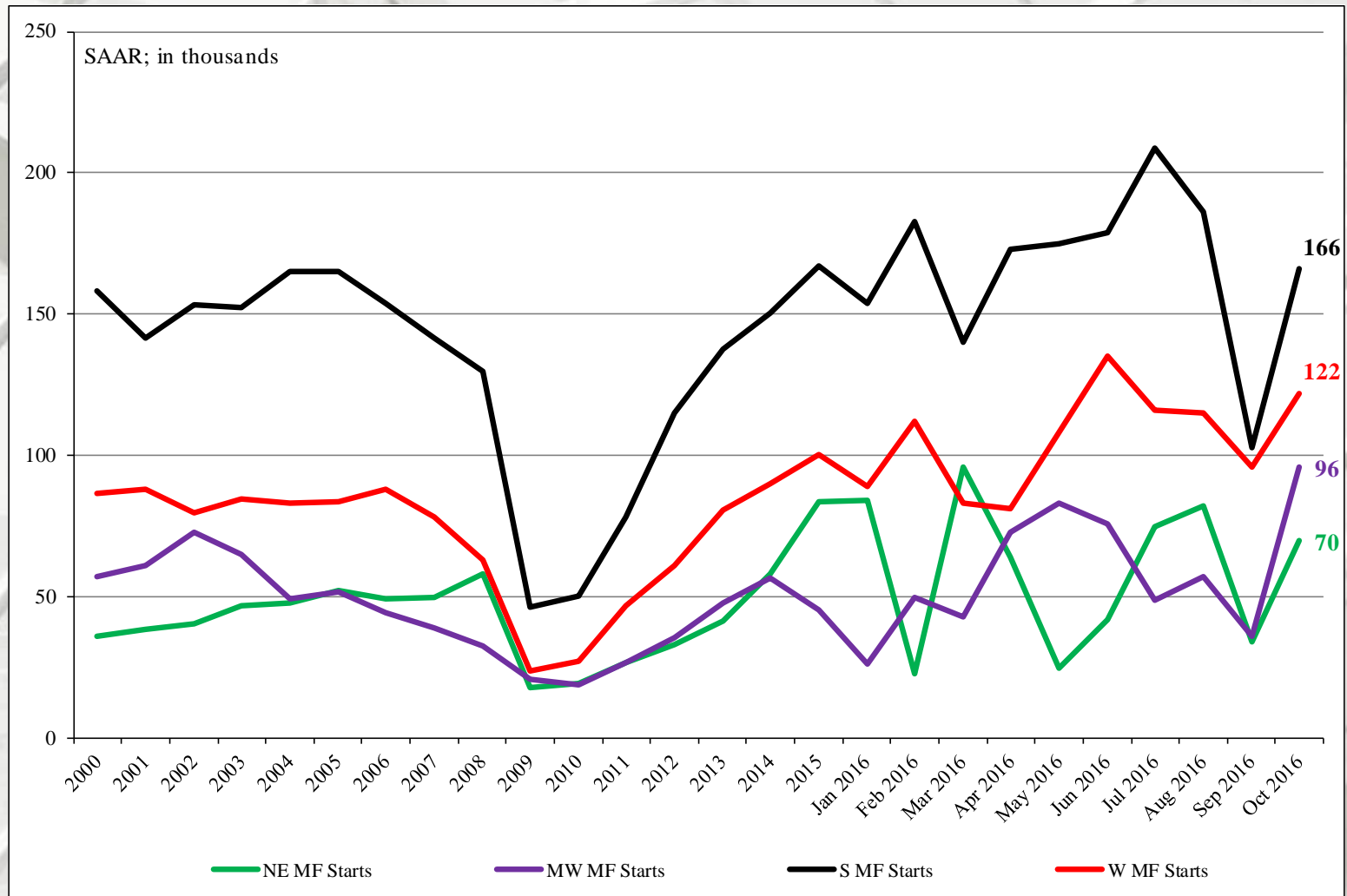


Nominal and Adjusted New SF Monthly Sales

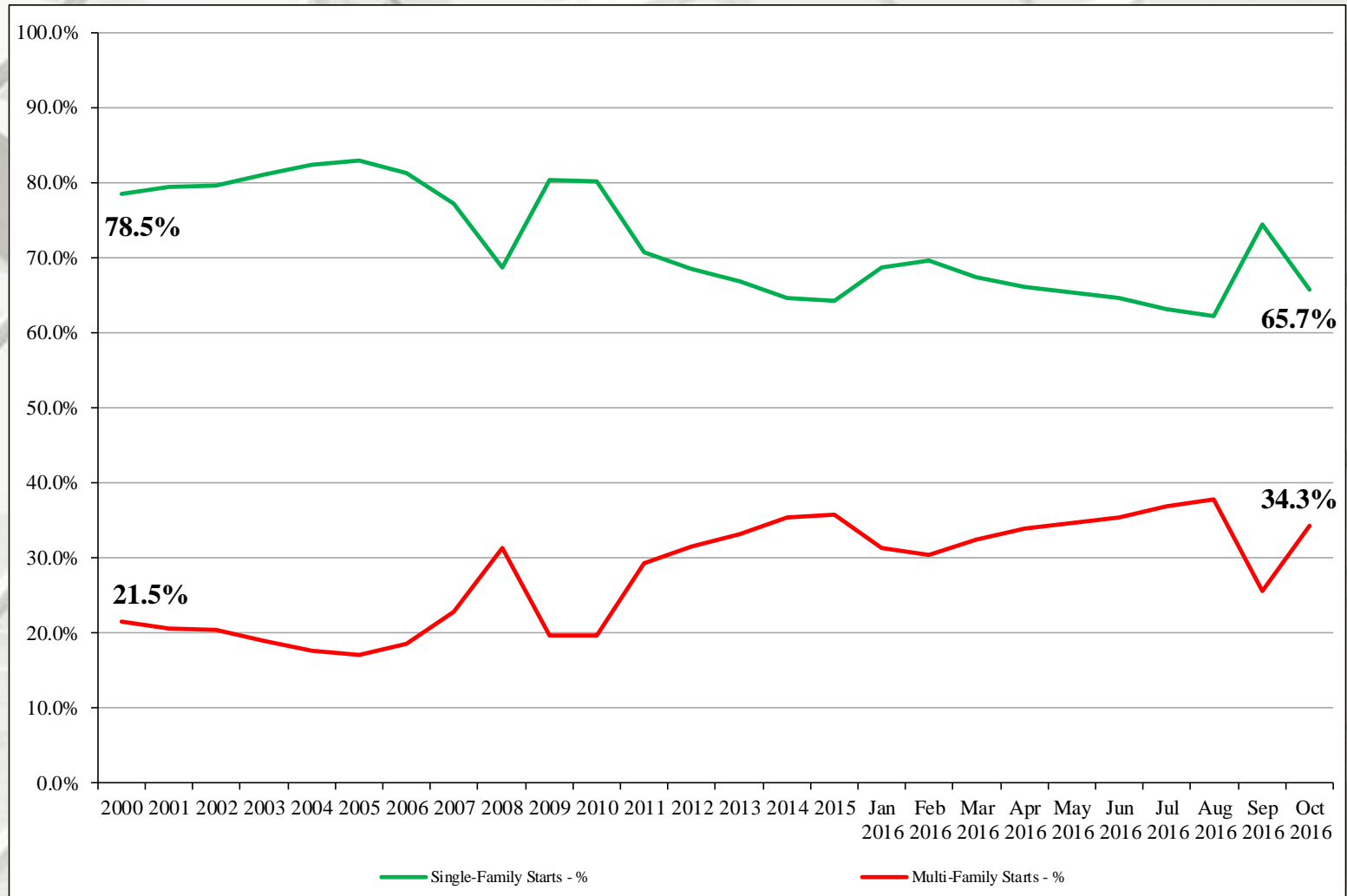
Presented above is nominal (non-adjusted) new SF start data contrasted against SAAR data.

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

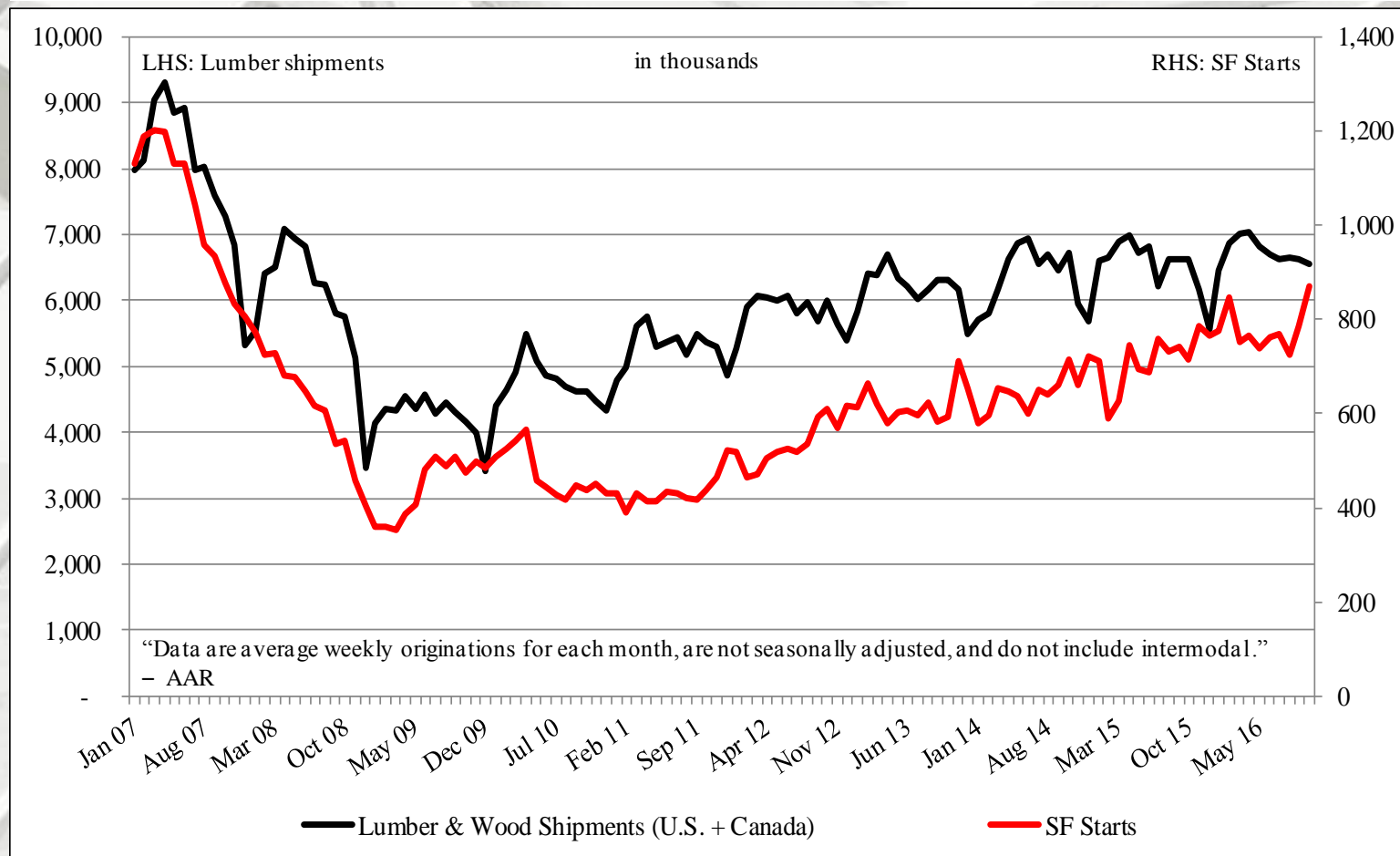
MF Housing Starts by Region



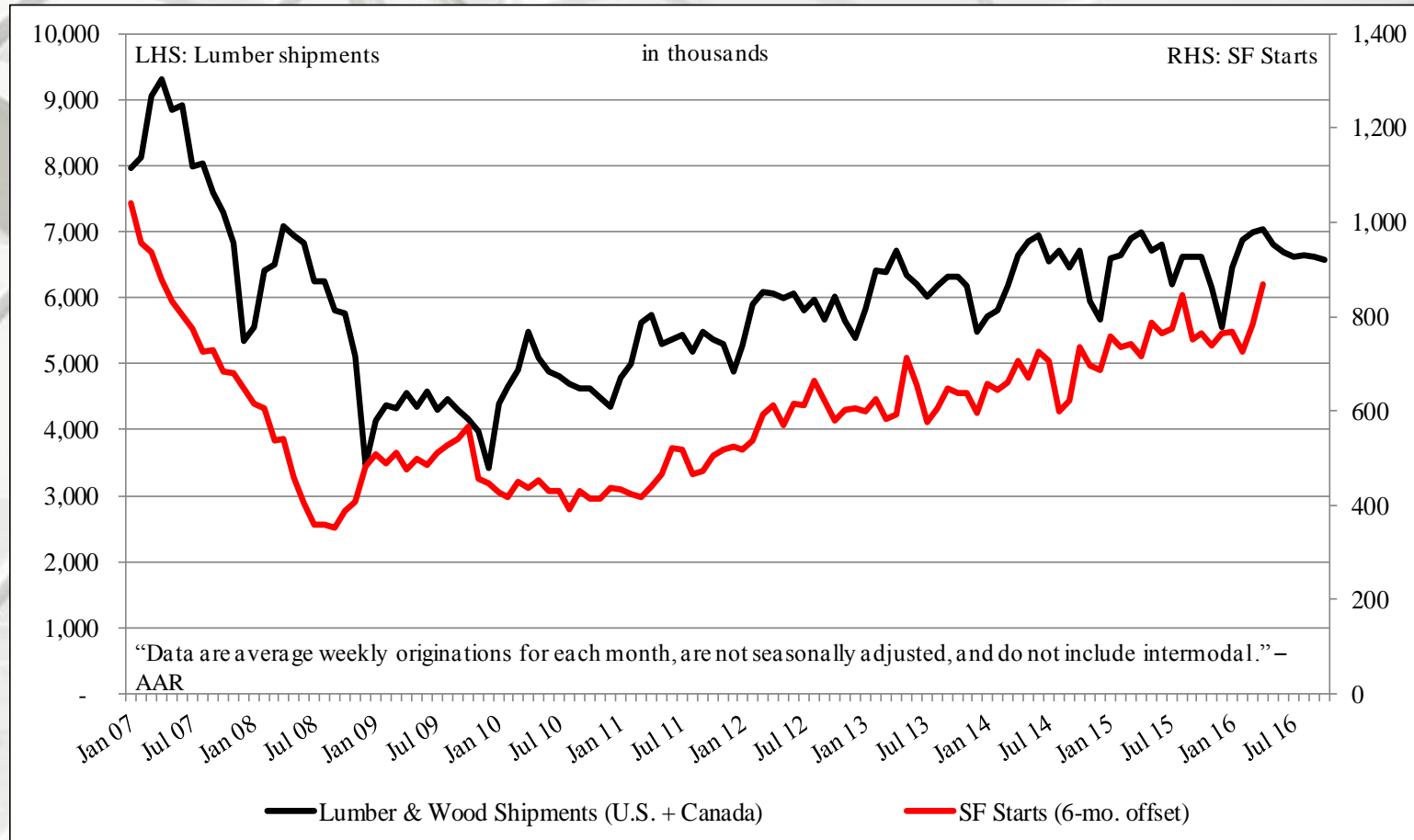
Housing Starts by Percent



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

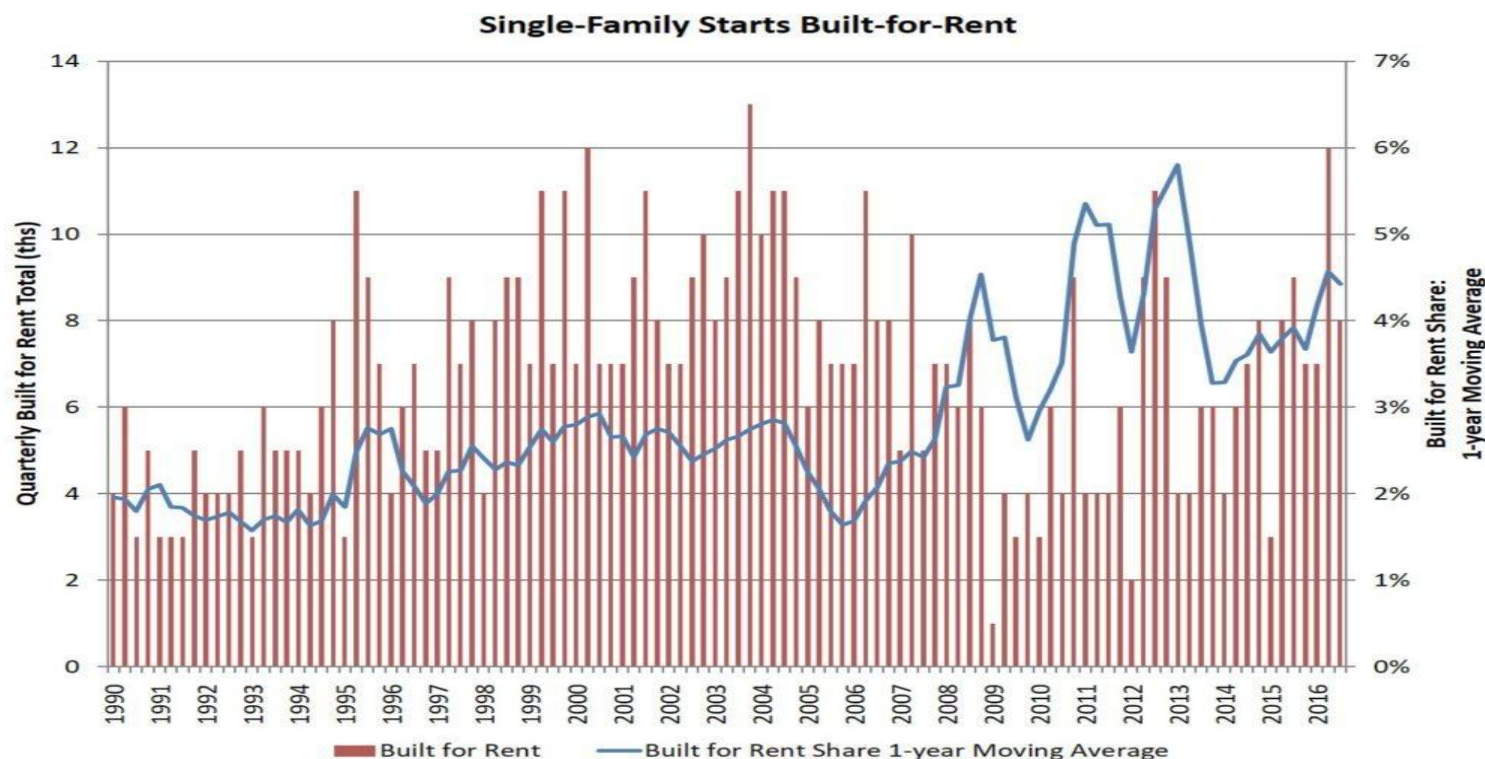


Railroad Lumber & Wood Shipments vs. U.S. SF Housing Starts: 6-month Offset



In this graph, January 2007 lumber shipments are contrasted with October 2007 SF starts, and continuing through October 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.

Single-Family Built-for-Rent Construction



“The number of single-family homes built-for-rent posted gains over the last year. However, the built-for-rent market is a small portion of the total single-family development, so care must be taken when identifying trends.

For the last four quarters, single-family built-for-rent starts totaled 34,000 homes. This marks positive growth over the 28,000 estimated for the four quarters prior. This class of single-family construction excludes homes that are sold to another party for rental purposes. It only includes homes built and held for rental purposes.” – Robert Dietz, Chief Economist and Senior Vice President for Economics and Housing Policy, NAHB

Single-Family Built-for-Rent Construction

“According to data from the Census Bureau’s Quarterly Starts and Completions by Purpose and Design and NAHB analysis, the market share of single-family homes built-for-rent, as measured on a one-year moving average, stood at 4.4% of total starts as of the third quarter of 2016. Given the small size of the market segment, the quarter-to-quarter movements are not typically statistically significant. The current market share remains higher than the historical average of 2.8% but is down from the 5.8% reading registered at the start of 2013.

With the onset of the Great Recession and the ongoing [declines in the homeownership rate](#), the share of built-for-rent homes rose. Despite the current elevated market concentration, the total number of single-family starts built-for-rent remains low in terms of the total building market. However, after falling during 2013, the market share has grown over the past year.

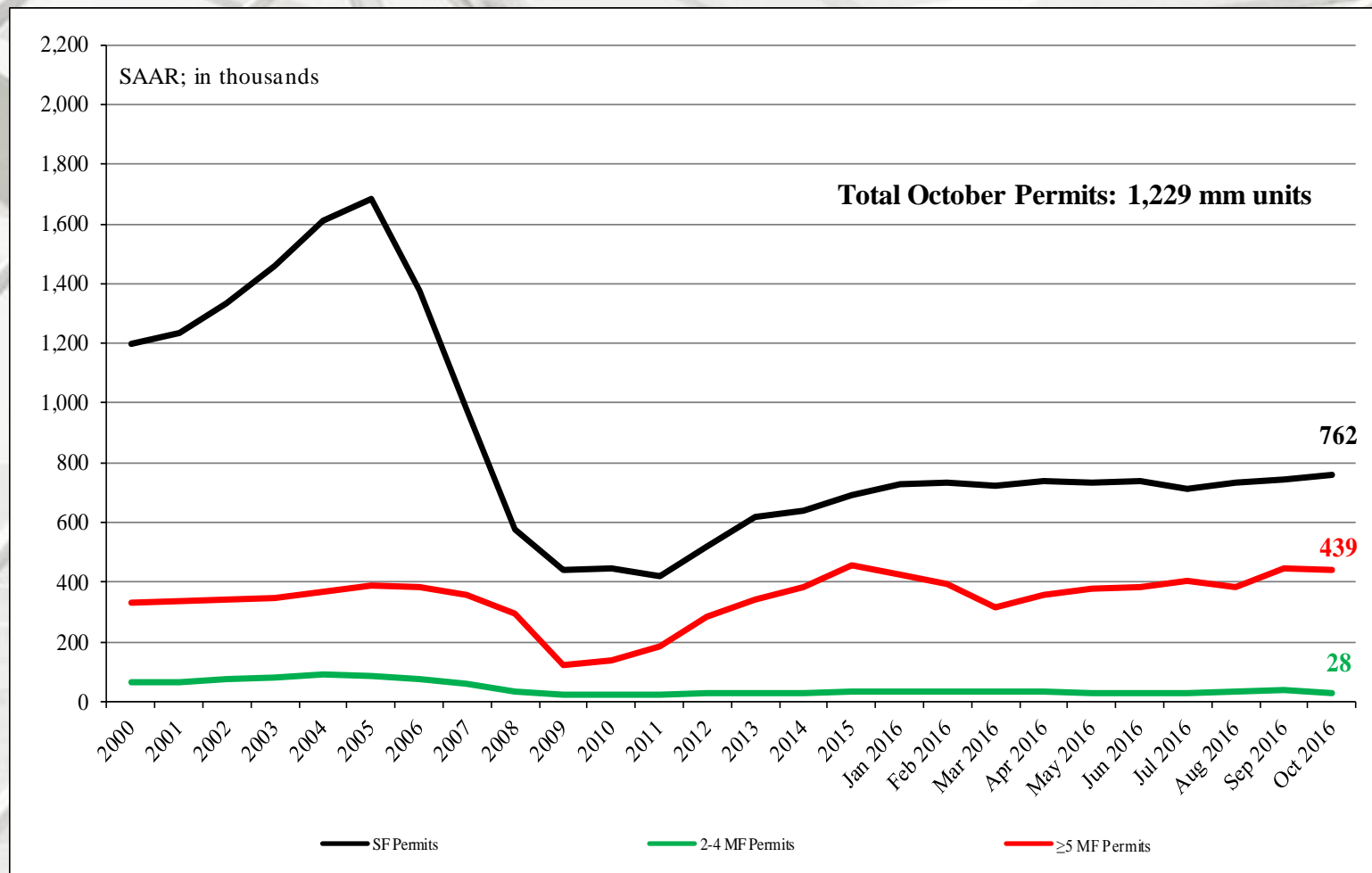
Of course, the built-for-rent share of single-family homes is considerably smaller than the single-family home portion of the rental housing stock, which is [35% according to the 2013 American Community Survey](#). As homes age, they are more likely to be rented. Thus, the primary source of single-family rental homes is not construction but the existing housing stock.” – Robert Dietz, Chief Economist and Senior Vice President for Economics and Housing Policy, NAHB

New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
October	1,229,000	762,000	28,000	439,000
September	1,225,000	742,000	36,000	447,000
2015	1,175,000	725,000	35,000	415,000
M/M change	0.3	2.7	-22.2	-1.8
Y/Y change	4.6	5.1	-20.0	5.8

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

Total New Housing Permits



New Housing Permits by Region

	NE Total	NE SF	NE MF
October	105,000	57,000	48,000
September	133,000	53,000	80,000
2015	130,000	54,000	76,000
M/M change	-21.1	7.5	-40.0
Y/Y change	-19.2	5.6	-36.8
	MW Total	MW SF	MW MF
October	204,000	114,000	90,000
September	182,000	116,000	66,000
2015	176,000	106,000	69,000
M/M change	12.1	-1.7	36.4
Y/Y change	15.9	7.5	30.4

* All data are SAAR.

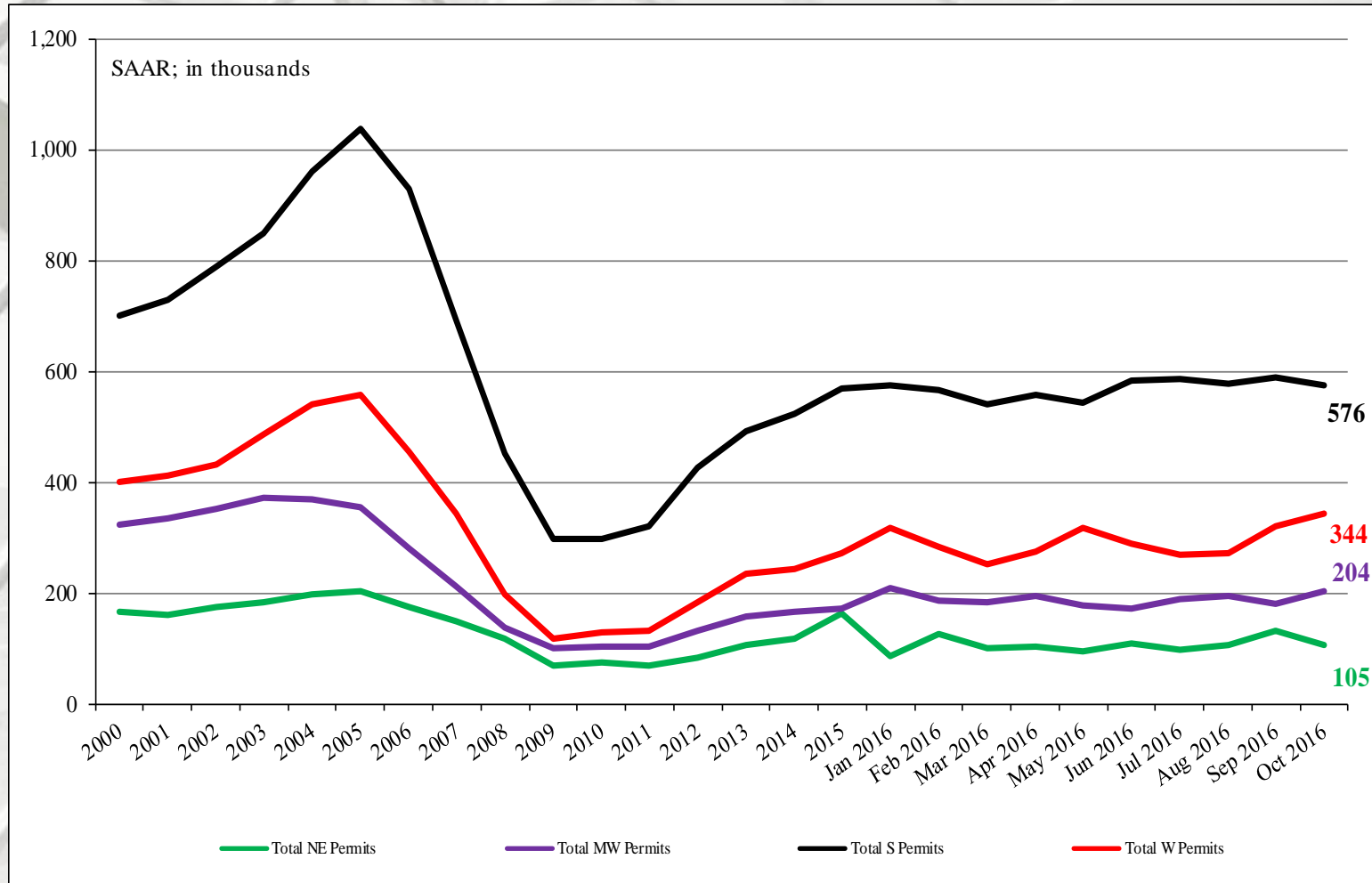
New Housing Permits by Region

	S Total	S SF	S MF
October	576,000	408,000	168,000
September	590,000	403,000	187,000
2015	601,000	400,000	201,000
M/M change	-2.4	1.2	-10.2
Y/Y change	-4.2	2.0	-16.4

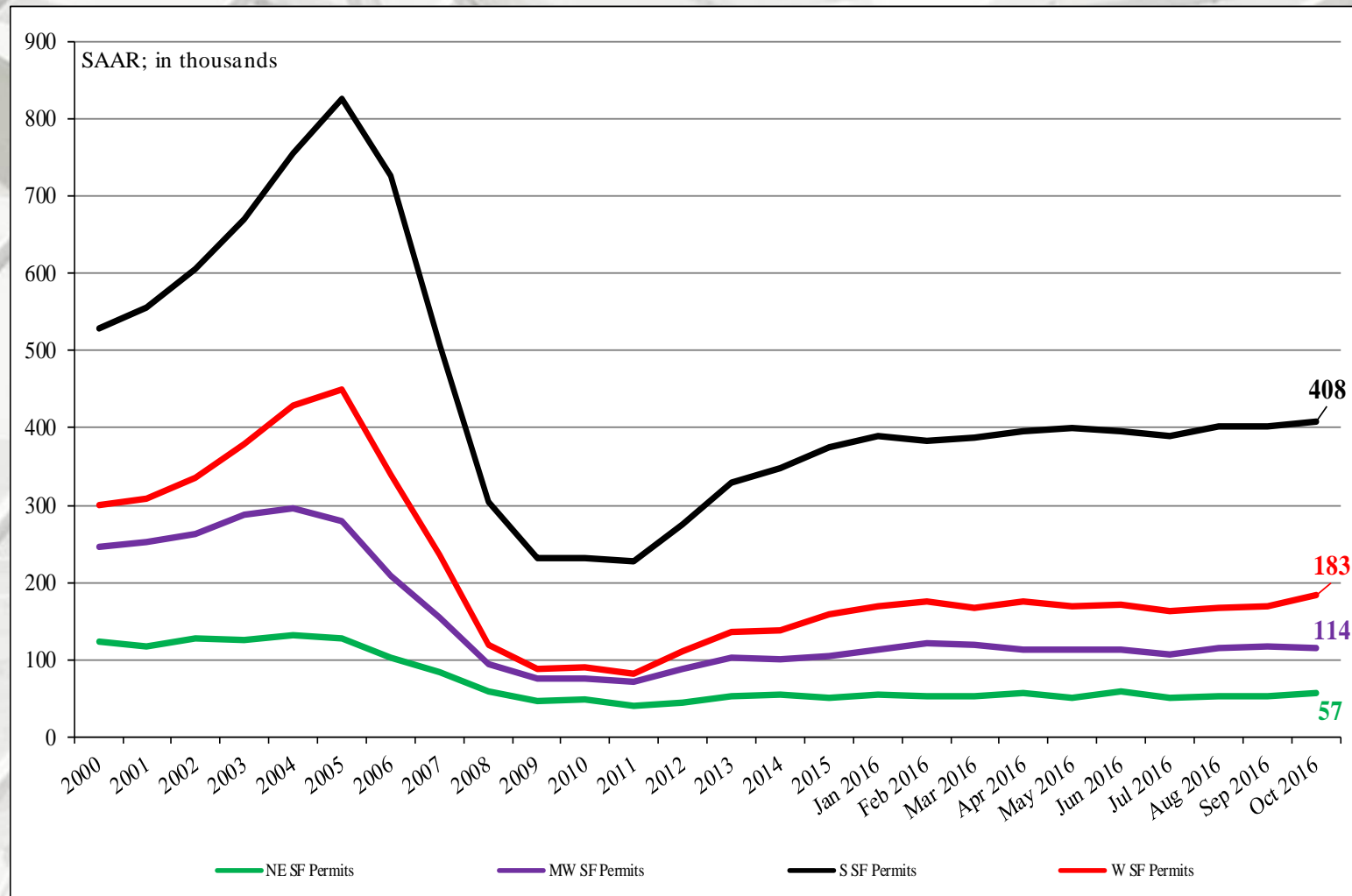
	W Total	W SF	W MF
October	344,000	183,000	161,000
September	320,000	170,000	150,000
2015	268,000	165,000	103,000
M/M change	7.5	7.6	7.3
Y/Y change	28.4	10.9	56.3

* All data are SAAR.

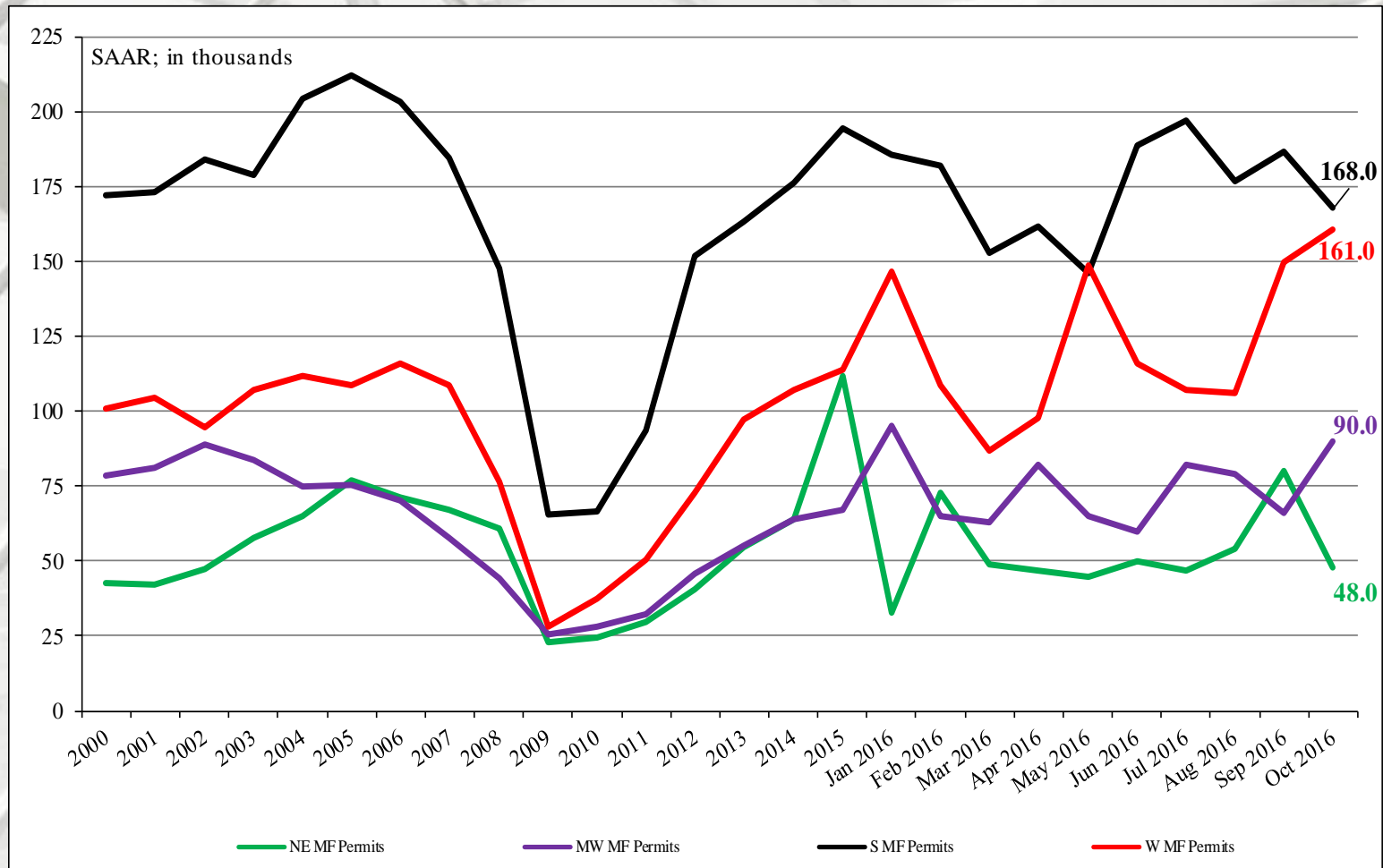
Total Housing Permits by Region



SF Housing Permits by Region



MF Housing Permits by Region



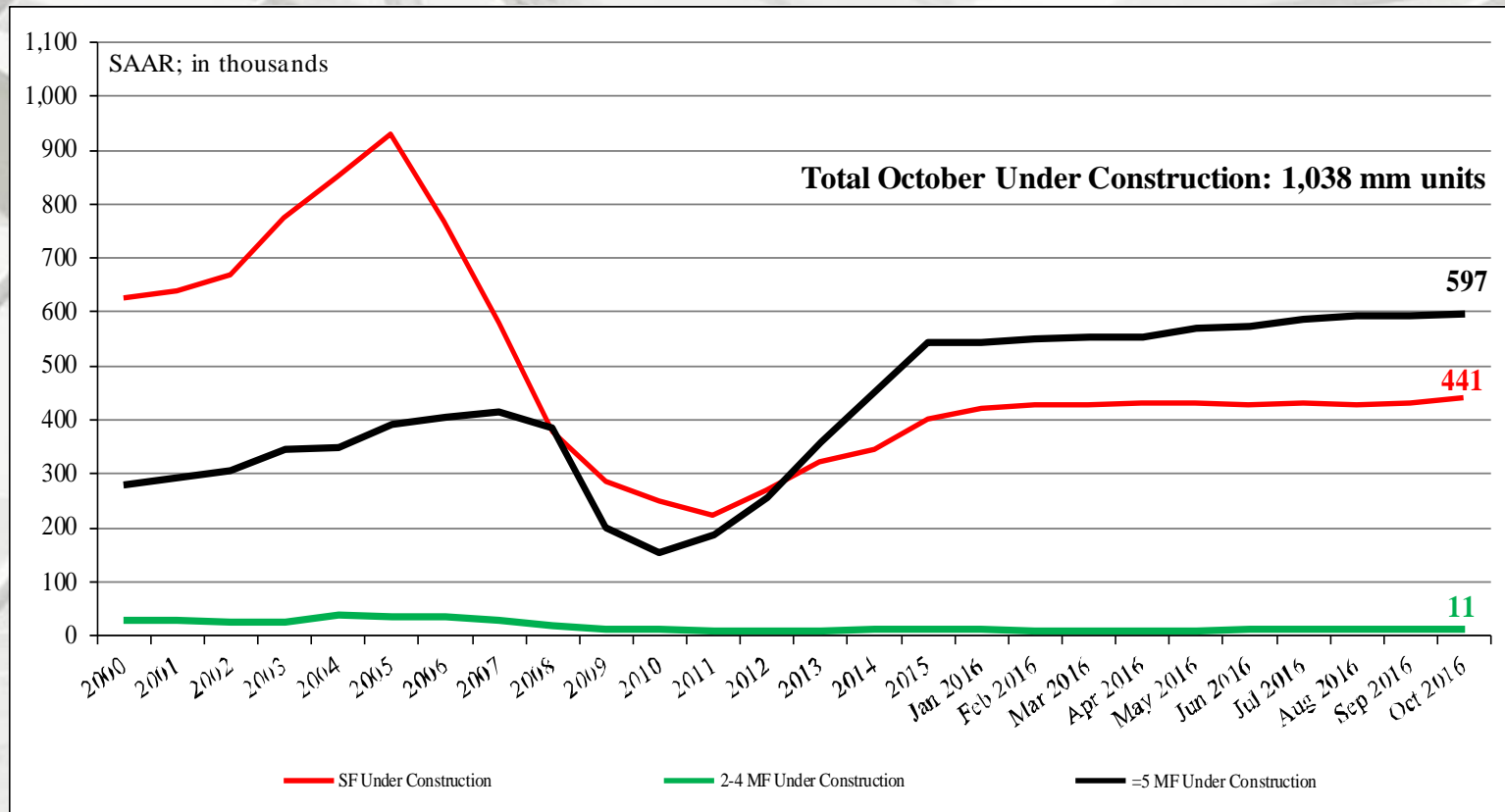
New Housing Under Construction

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ? 5 unit Under Construction
October	1,049,000	441,000	11,000	597,000
September	1,035,000	431,000	11,000	593,000
2015	943,000	404,000	11,000	528,000
M/M change	1.4%	2.3%	0.0%	0.7%
Y/Y change	11.2%	9.2%	0.0%	13.1%

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



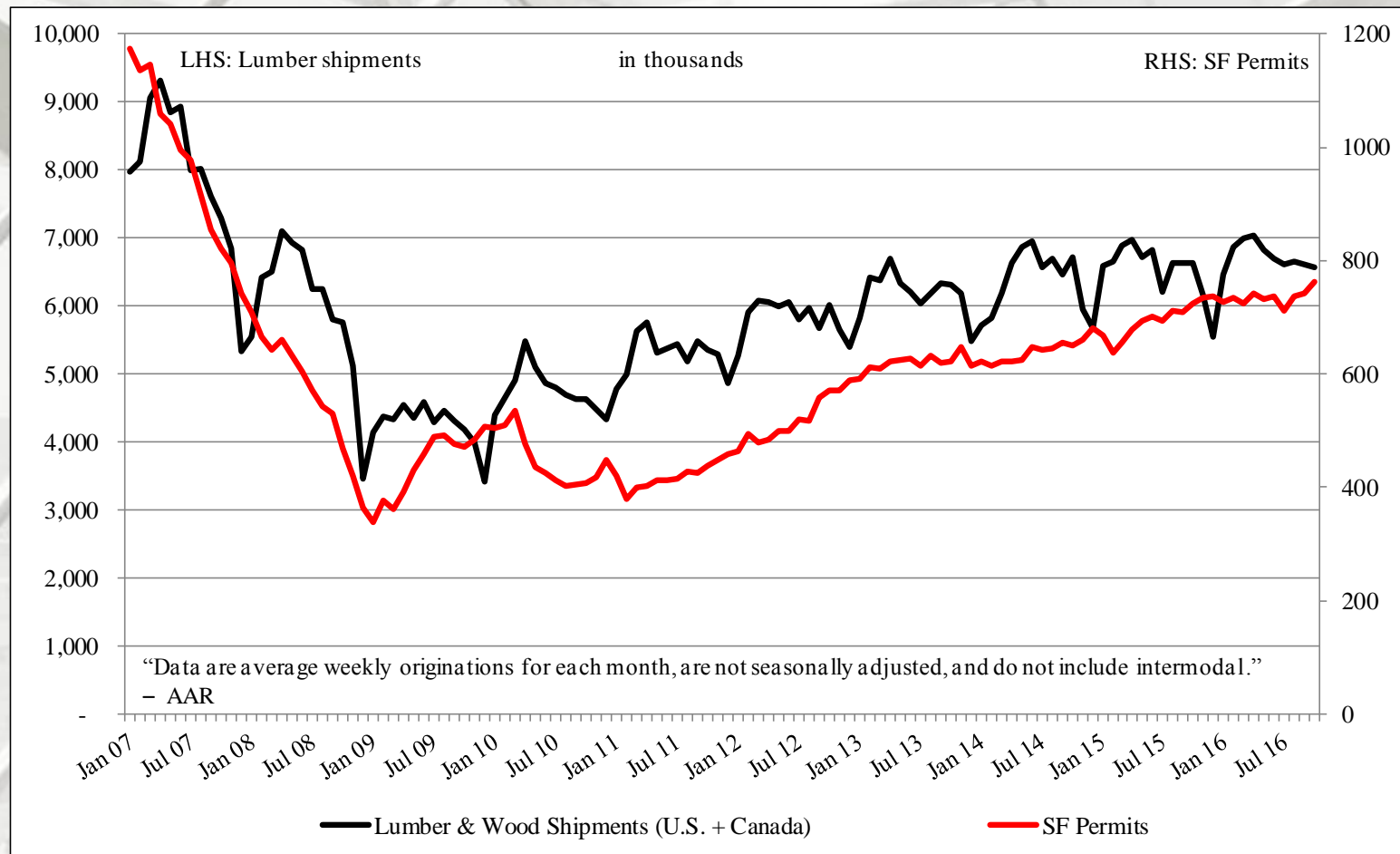
New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
October	191,000	51,000	140,000
September	190,000	49,000	141,000
2015	172,000	47,000	125,000
M/M change	0.5%	4.1%	-0.7%
Y/Y change	11.0%	8.5%	12.0%
	MW Total	MW SF	MW MF
October	143,000	72,000	71,000
September	141,000	72,000	69,000
2015	123,000	66,000	57,000
M/M change	1.4%	0.0%	2.9%
Y/Y change	16.3%	9.1%	24.6%

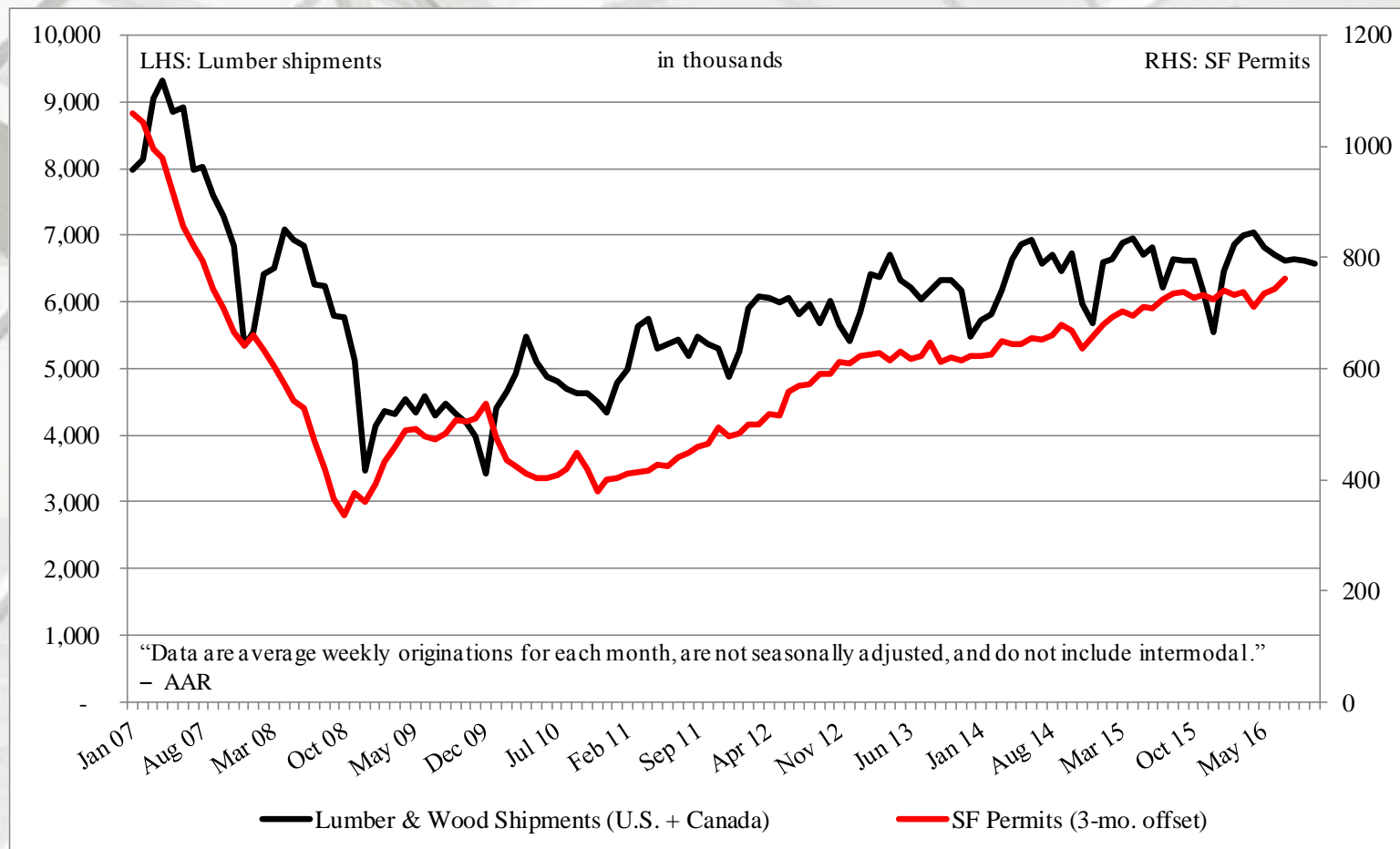
All data are SAAR; NE = Northeast and MW = Midwest.

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

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 October 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.

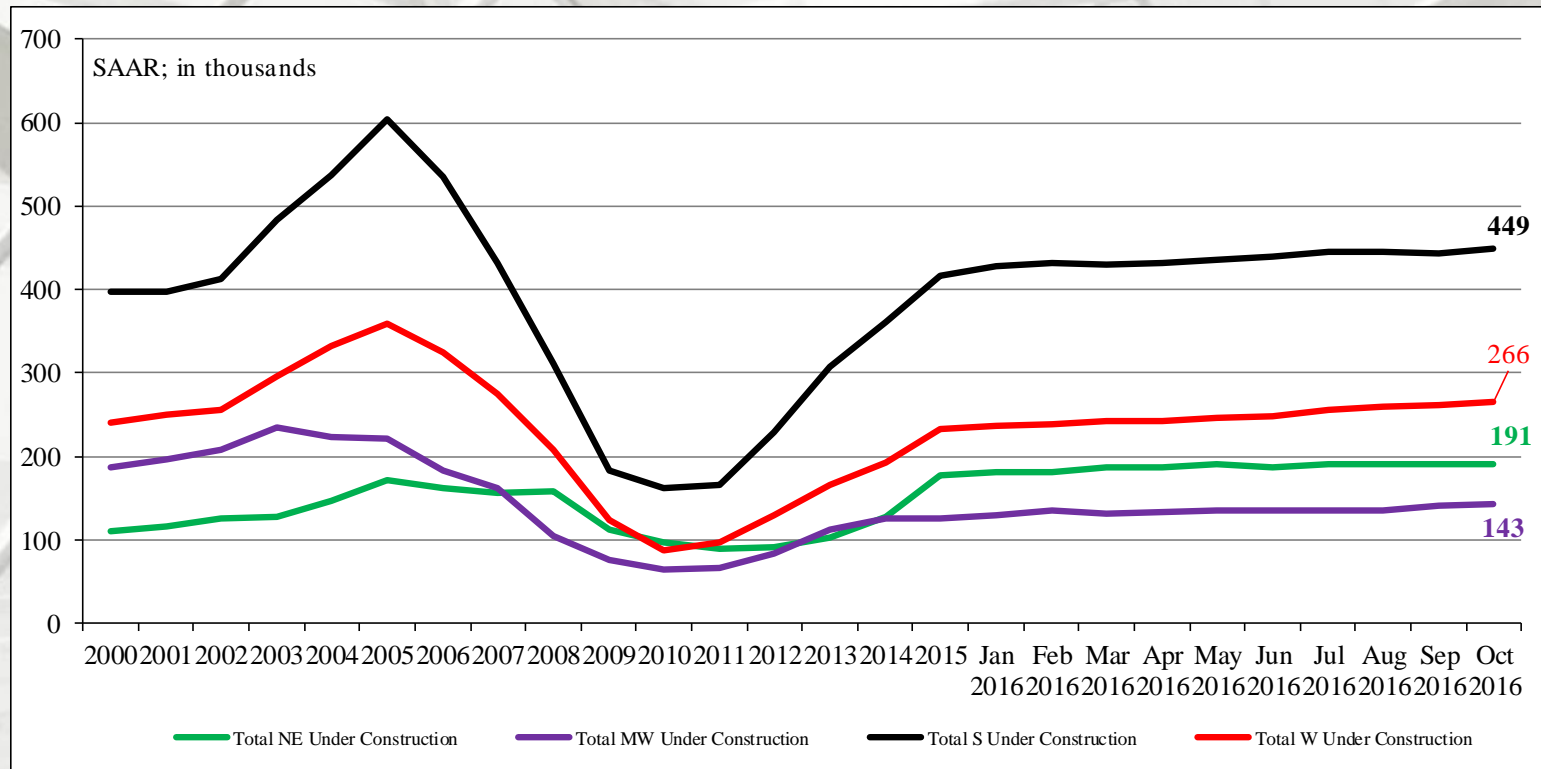
New Housing Under Construction by Region

	S Total	S SF	S MF**
October	449,000	213,000	236,000
September	443,000	210,000	233,000
2015	411,000	202,000	209,000
M/M change	1.4%	1.4%	1.3%
Y/Y change	9.2%	5.4%	12.9%
	W Total	W SF	W MF
October	266,000	105,000	161,000
September	261,000	100,000	161,000
2015	237,000	89,000	148,000
M/M change	1.9%	5.0%	0.0%
Y/Y change	12.2%	18.0%	8.8%

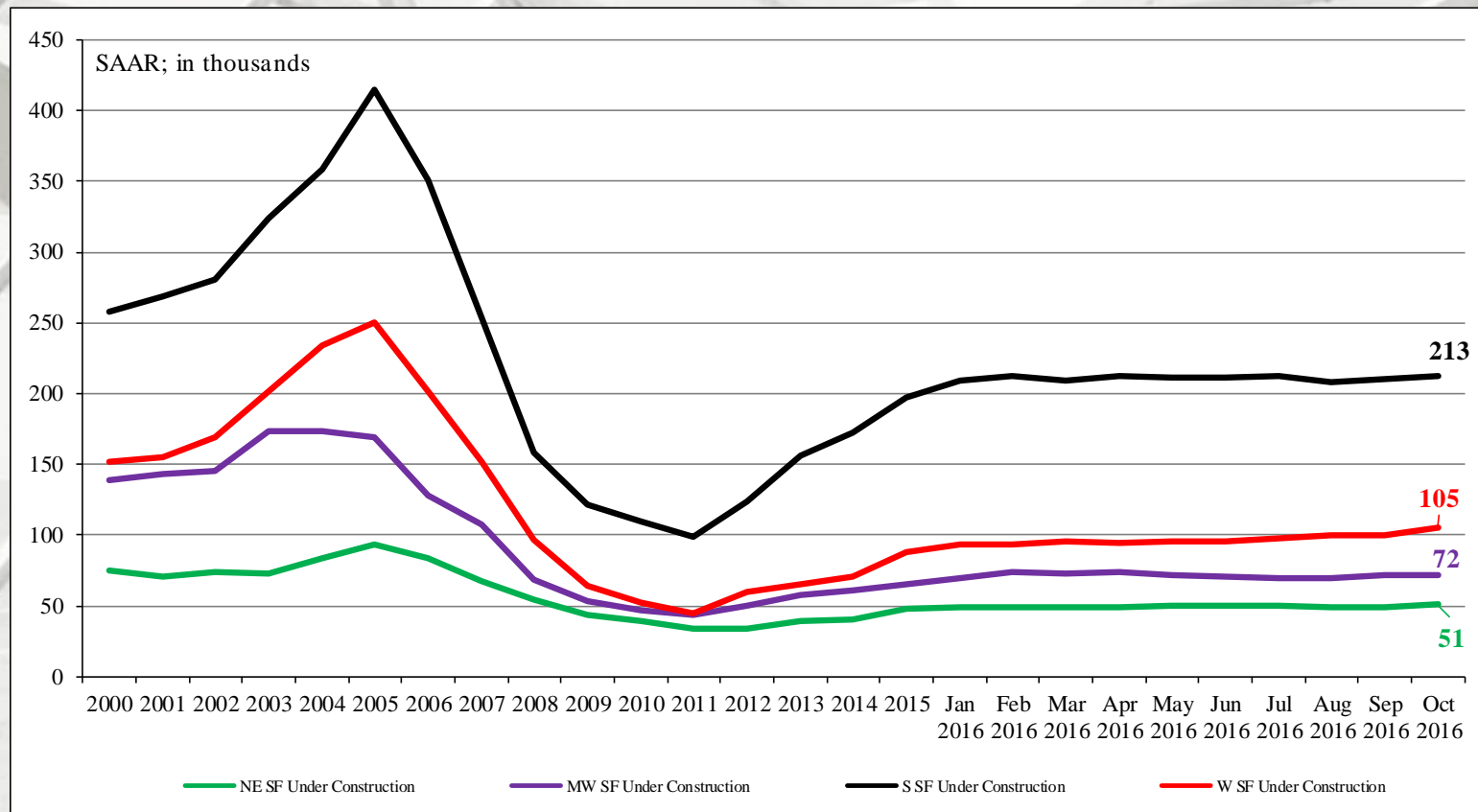
All data are SAAR; S = South and W = West.

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

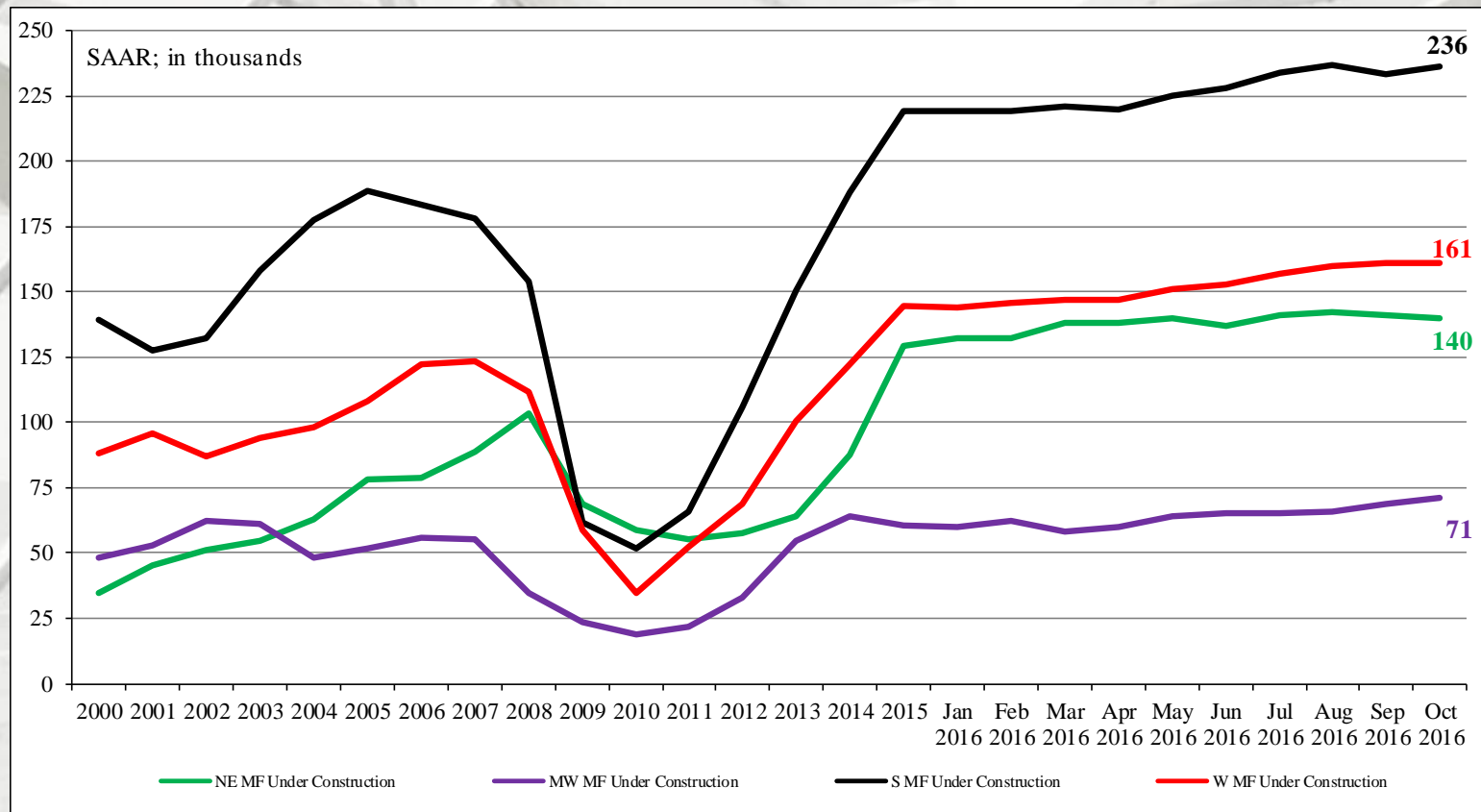
Total Housing Under Construction by Region



SF Housing Under Construction by Region



MF Housing Under Construction by Region



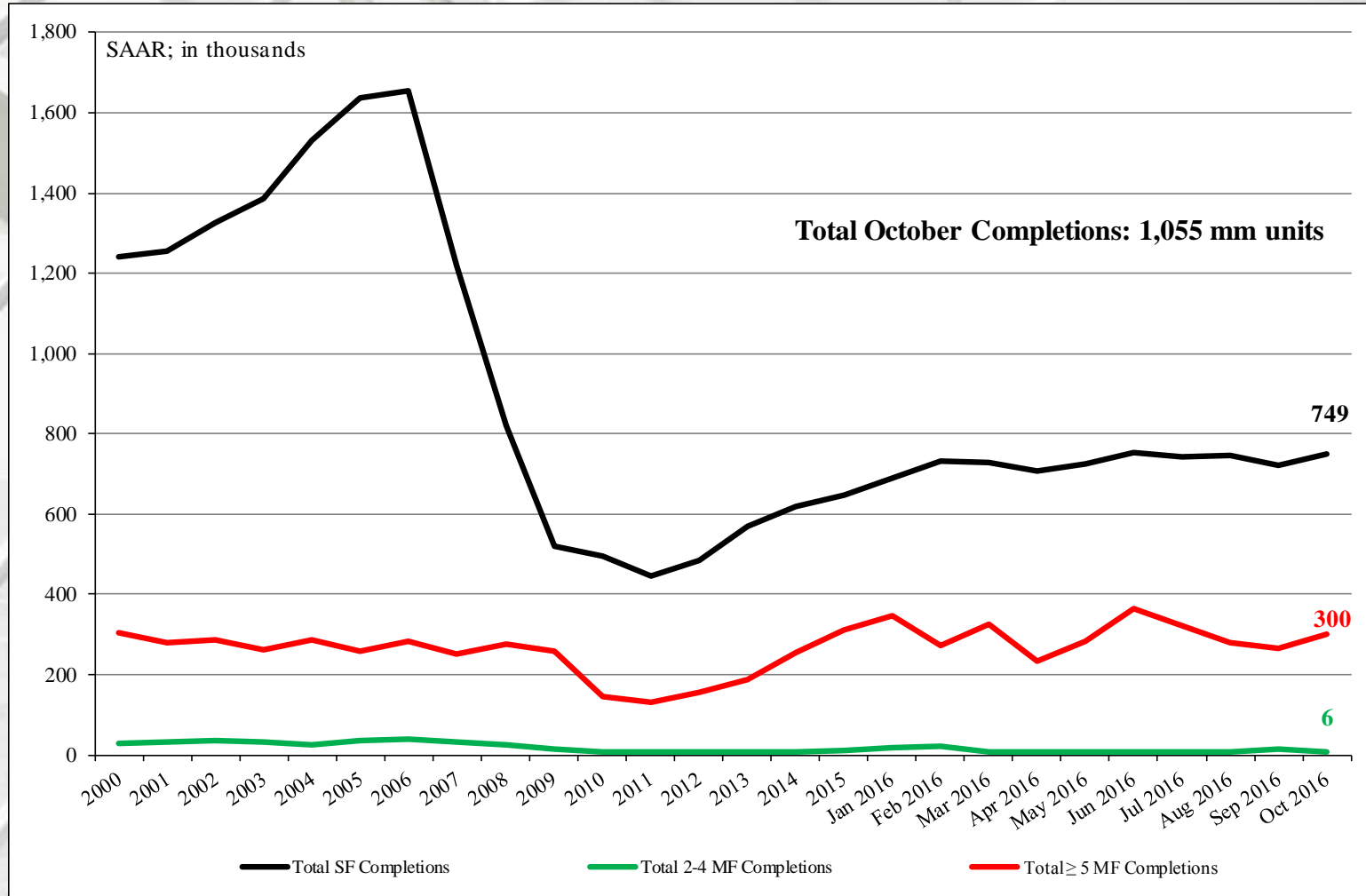
New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit** Completions	MF ≥ 5 unit Completions
October	1,055,000	749,000	6,000	300,000
September	1,000,000	721,000	13,000	266,000
2015	984,000	640,000	9,000	335,000
M/M change	5.5%	3.9%	-53.8%	12.8%
Y/Y change	7.2%	17.0%	-33.3%	-10.4%

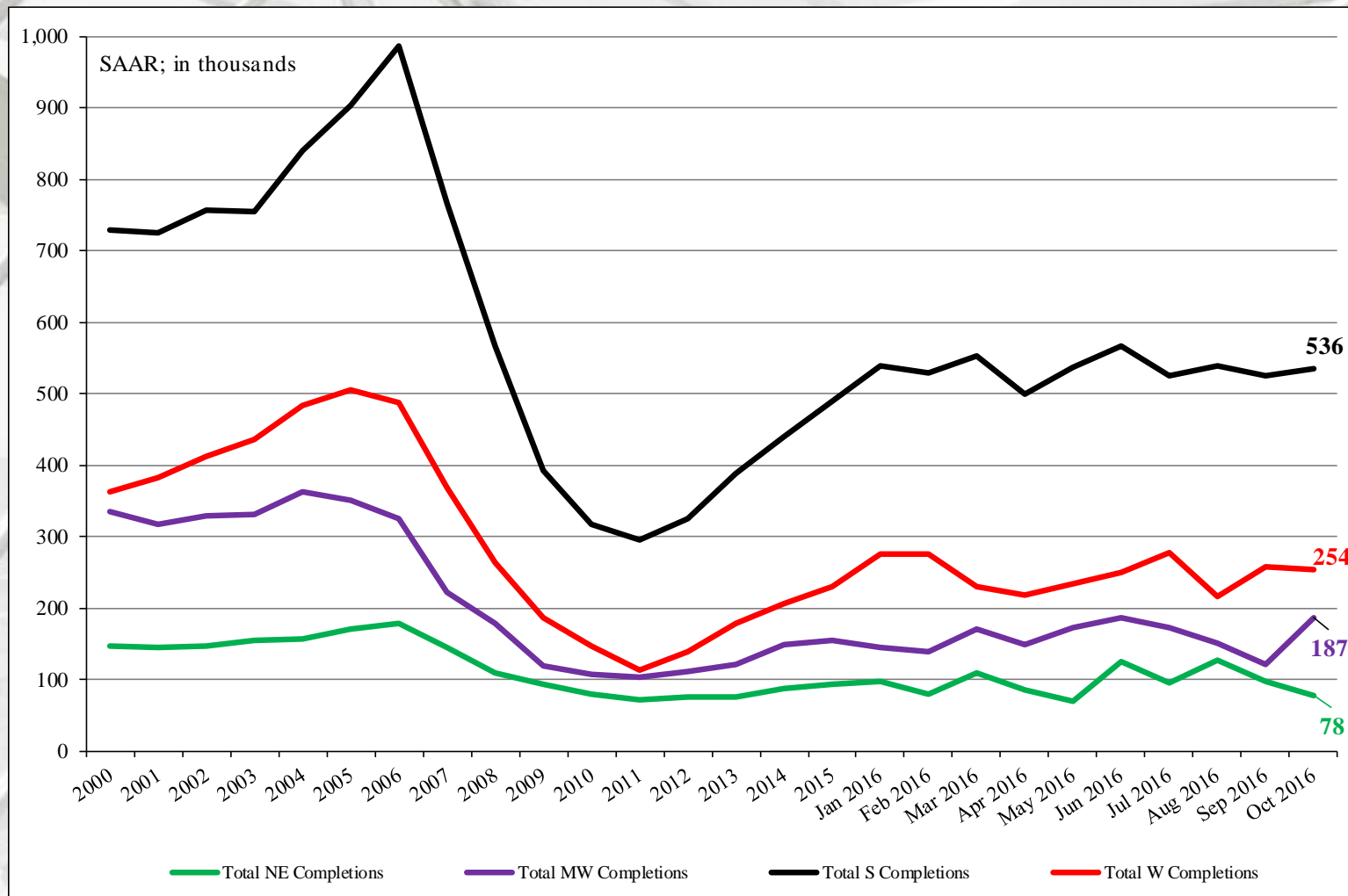
All completion data are presented at a seasonally adjusted annual rate (SAAR).

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

Total Housing Completions



New Housing Completions by Region



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).

Total Housing Completions by Region

	NE Total	NE SF	NE MF**
October	78,000	49,000	29,000
September	97,000	56,000	41,000
2015	116,000	48,000	68,000
M/M change	-19.6%	-12.5%	-29.3%
Y/Y change	-32.8%	2.1%	-57.4%

	MW Total	MW SF	MW MF
October	187,000	122,000	65,000
September	121,000	107,000	14,000
2015	154,000	100,000	54,000
M/M change	54.5%	14.0%	364.3%
Y/Y change	21.4%	22.0%	20.4%

New Housing Completions by Region

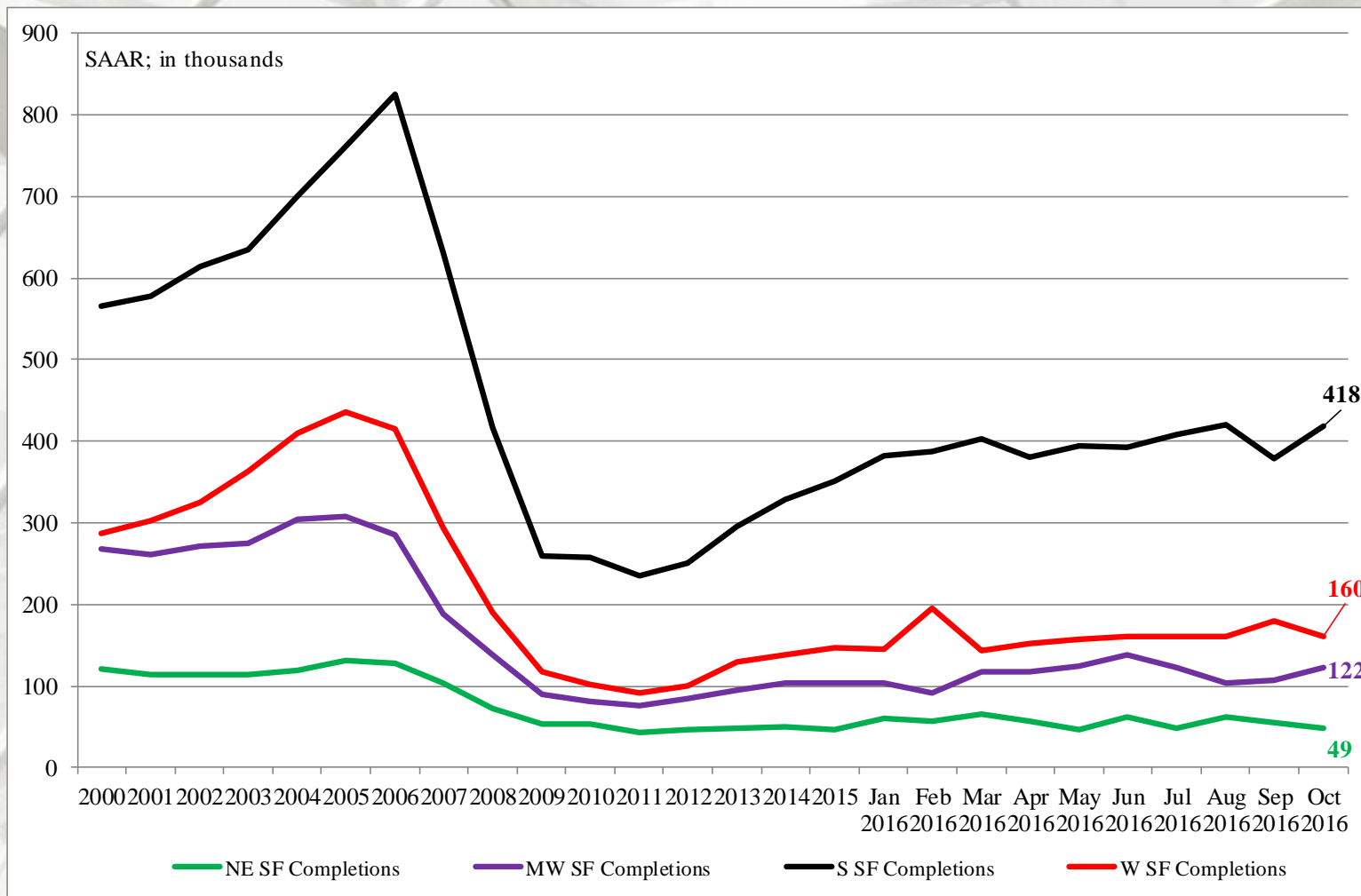
	S Total	S SF	S MF**
October	536,000	418,000	118,000
September	525,000	379,000	146,000
2015	487,000	343,000	144,000
M/M change	2.1%	10.3%	-19.2%
Y/Y change	10.1%	21.9%	-18.1%

	W Total	W SF	W MF
October	254,000	160,000	94,000
September	257,000	179,000	78,000
2015	227,000	149,000	78,000
M/M change	-1.2%	-10.6%	20.5%
Y/Y change	11.9%	7.4%	20.5%

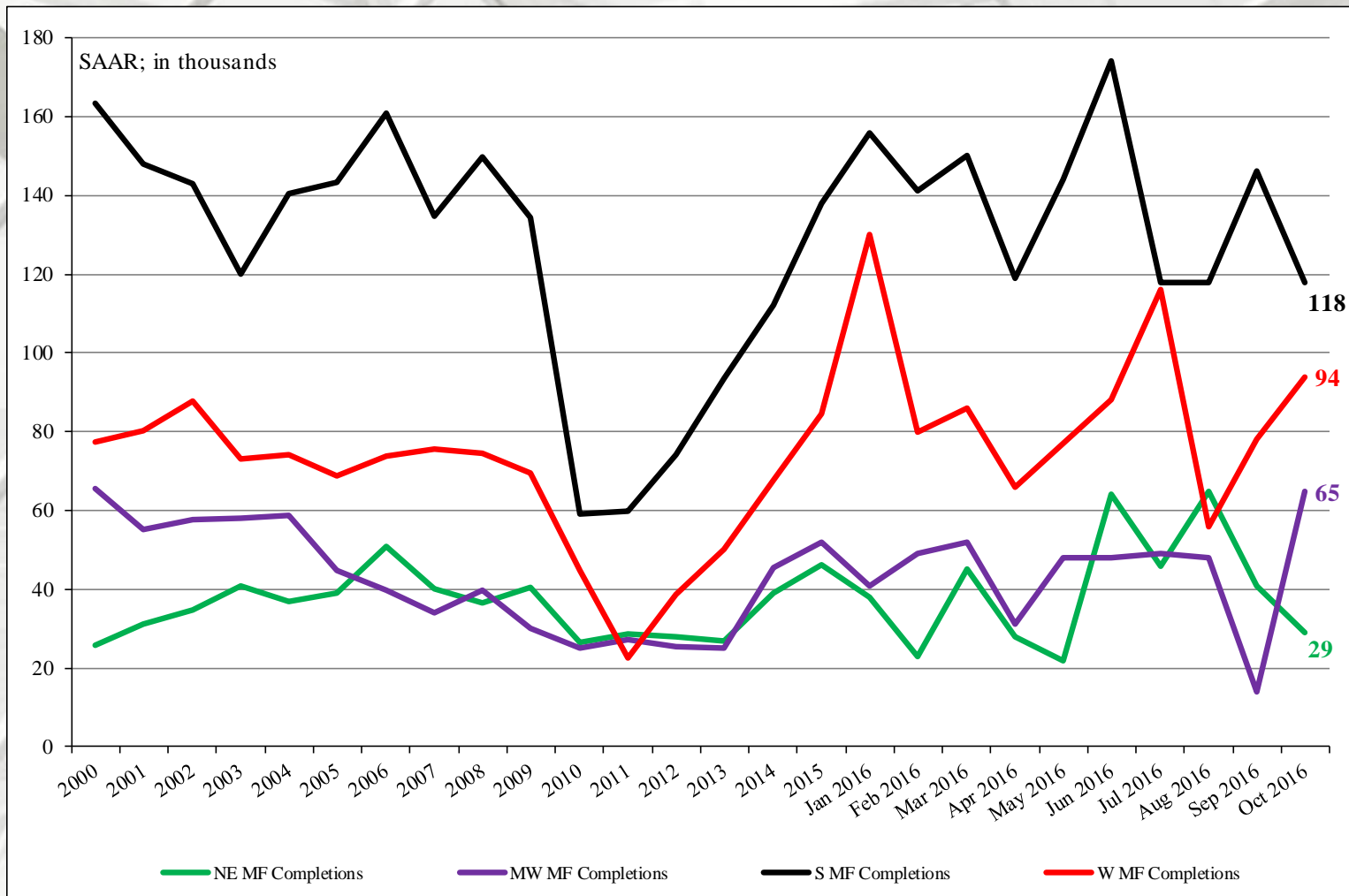
All data are SAAR; S = South and W = West.

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

SF Housing Completions by Region



MF Housing Completions by Region

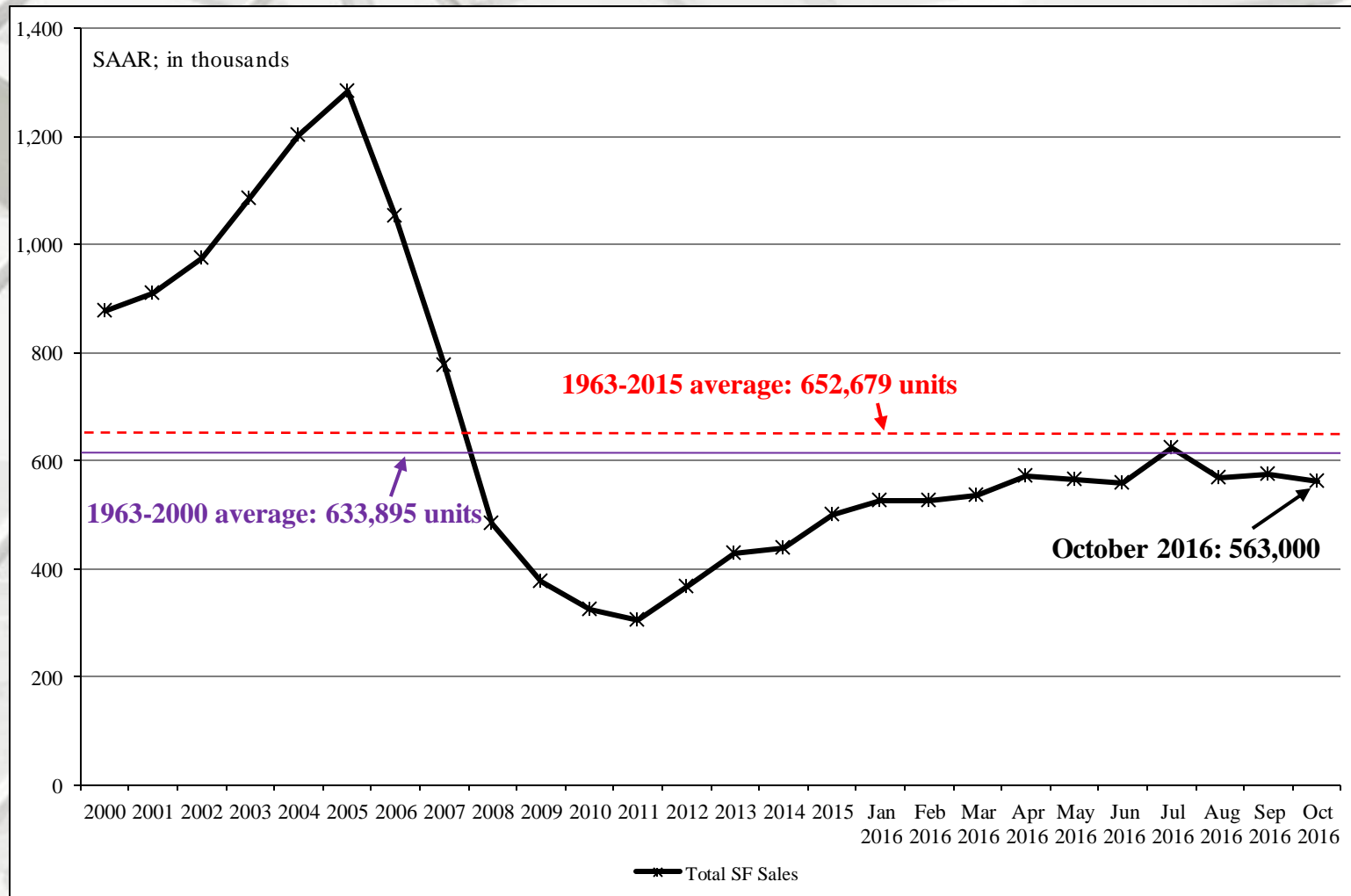


New Single-Family House Sales

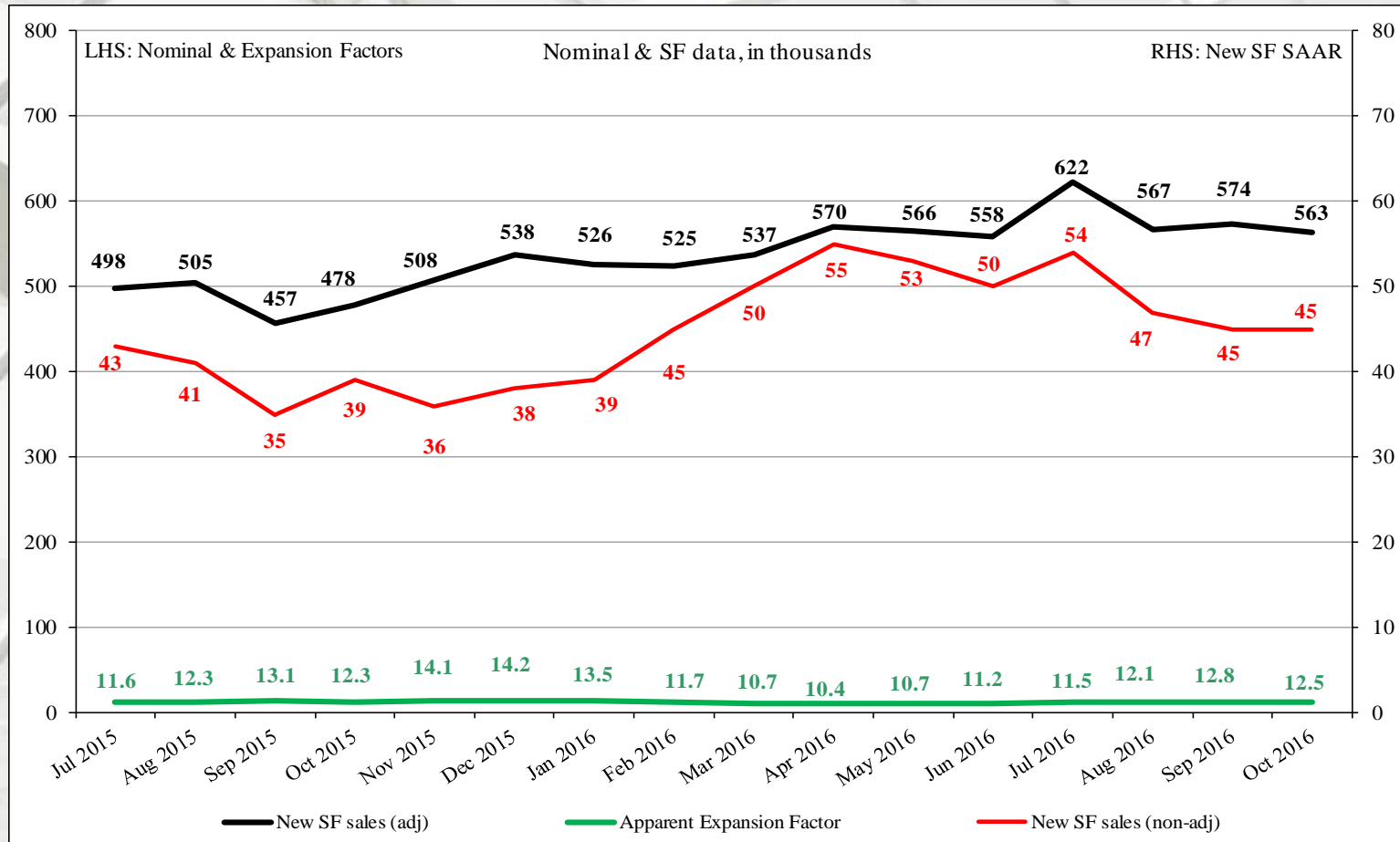
	New SF Sales*	Median Price	Mean Price	Month's Supply
October	563,000	\$295,000	\$355,000	5.1
September	574,000	\$314,100	\$364,100	5.0
2015	478,000	\$304,500	\$354,900	5.2
M/M change	-1.9%	6.5%	2.6%	-2.0%
Y/Y change	17.8%	2.1%	-1.0%	-13.8%

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

New SF House Sales



New SF House Sales

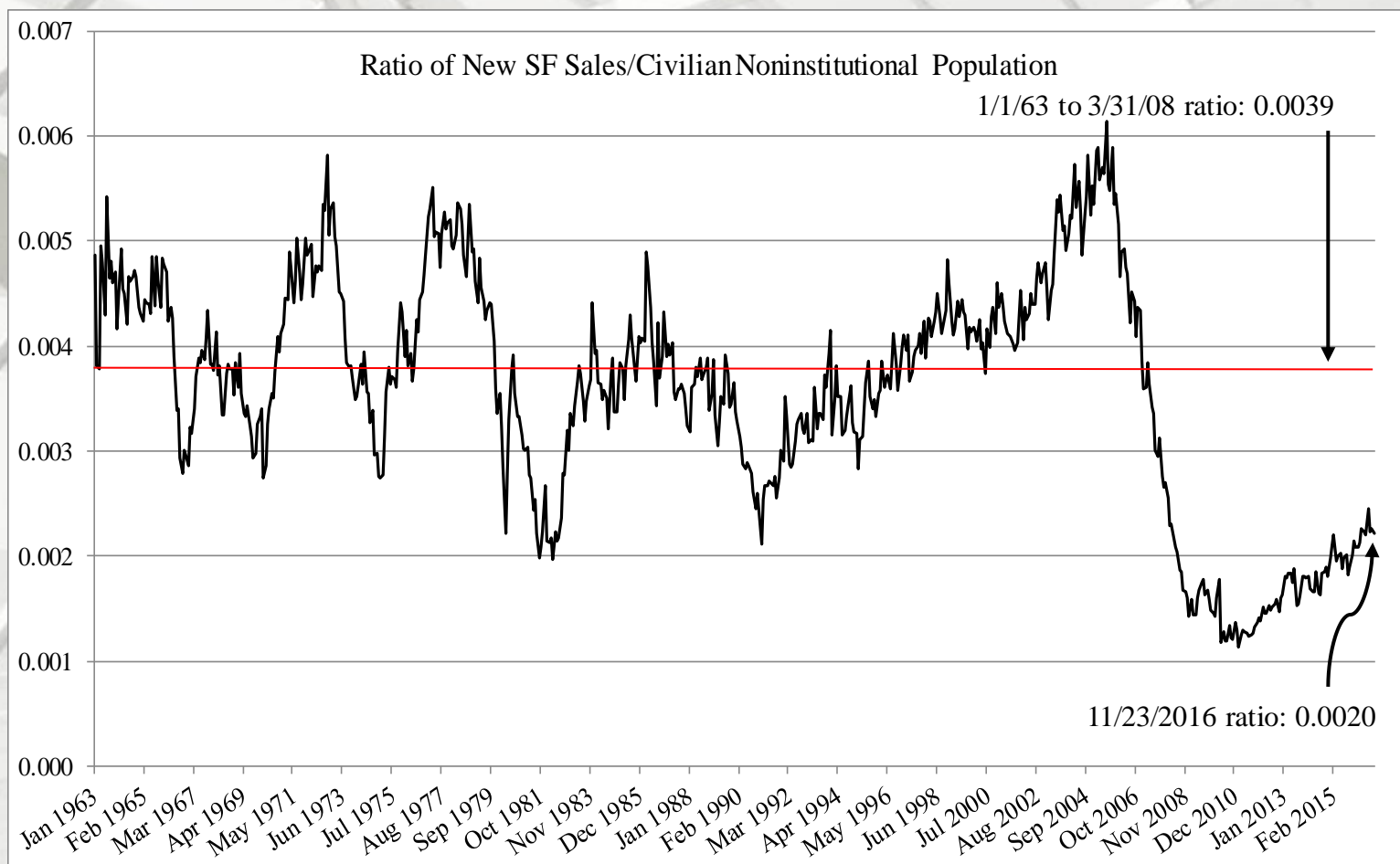


Nominal and Adjusted New SF Monthly Sales

Presented above is nominal (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 December 2007, the long-term ratio of new house sales to the US population was 0.0039 – in October 2016 it was 0.0020 – a minimal decrease from September. 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	30,000	63,000	322,000	148,000
September	33,000	73,000	332,000	136,000
2015	32,000	58,000	273,000	115,000
M/M change	-9.1%	-13.7%	-3.0%	8.8%
Y/Y change	-6.3%	8.6%	17.9%	28.7%

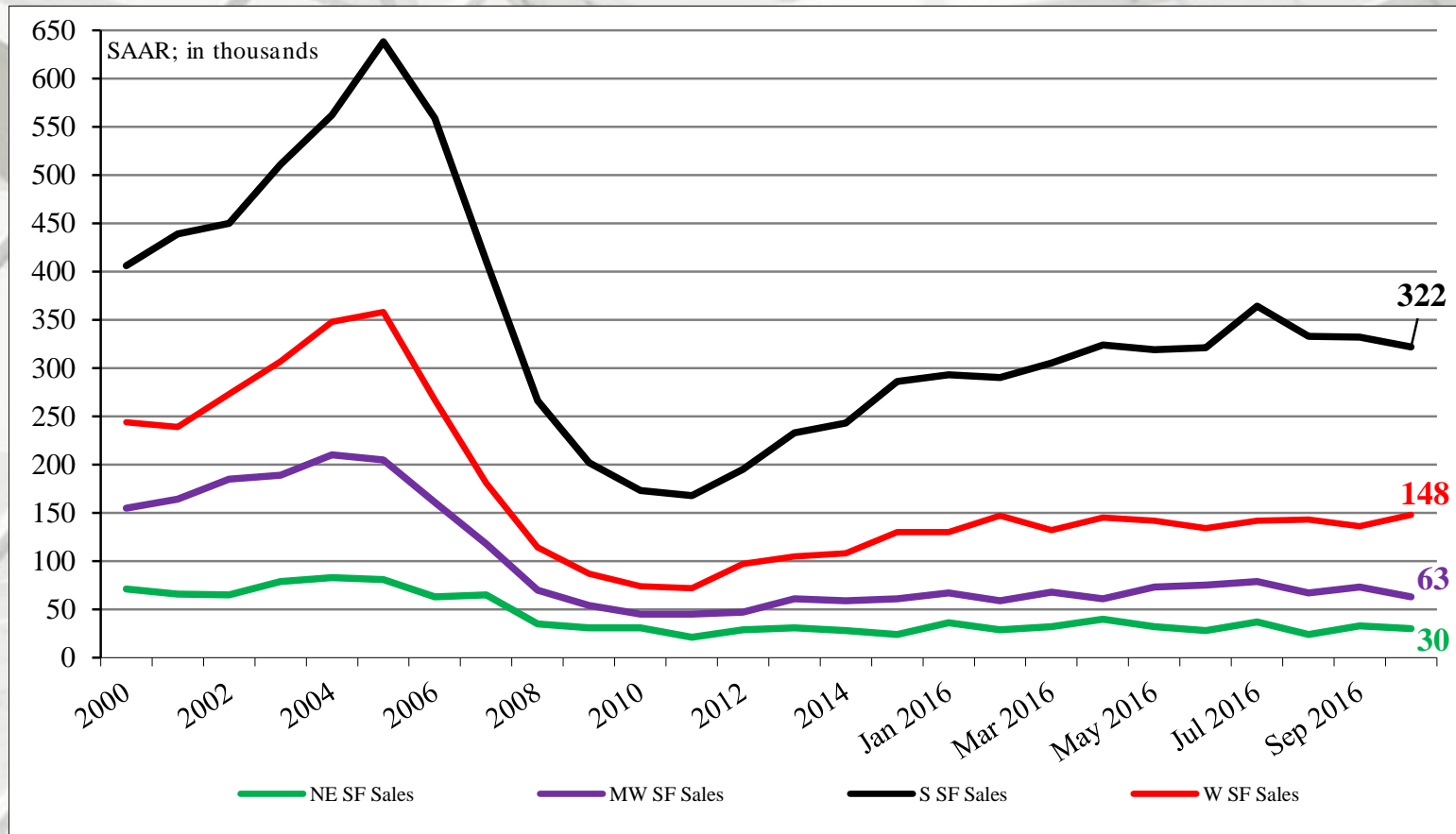
	≤ \$150m	\$150 - \$199.9m	\$200 - 299.9m	\$300 - \$399.9m	\$400 - \$499.9m	\$500 - \$749.9m	≥ \$750m
October ^{1,2}	2,000	8,000	12,000	12,000	5,000	4,000	2,000
September	1,000	5,000	13,000	12,000	6,000	5,000	2,000
2015	2,000	4,000	13,000	8,000	5,000	5,000	2,000
M/M change	100.0%	60.0%	-7.7%	0.0%	-16.7%	-20.0%	0.0%
Y/Y change	0.0%	100.0%	-7.7%	50.0%	0.0%	-20.0%	0.0%

All data are SAAR.

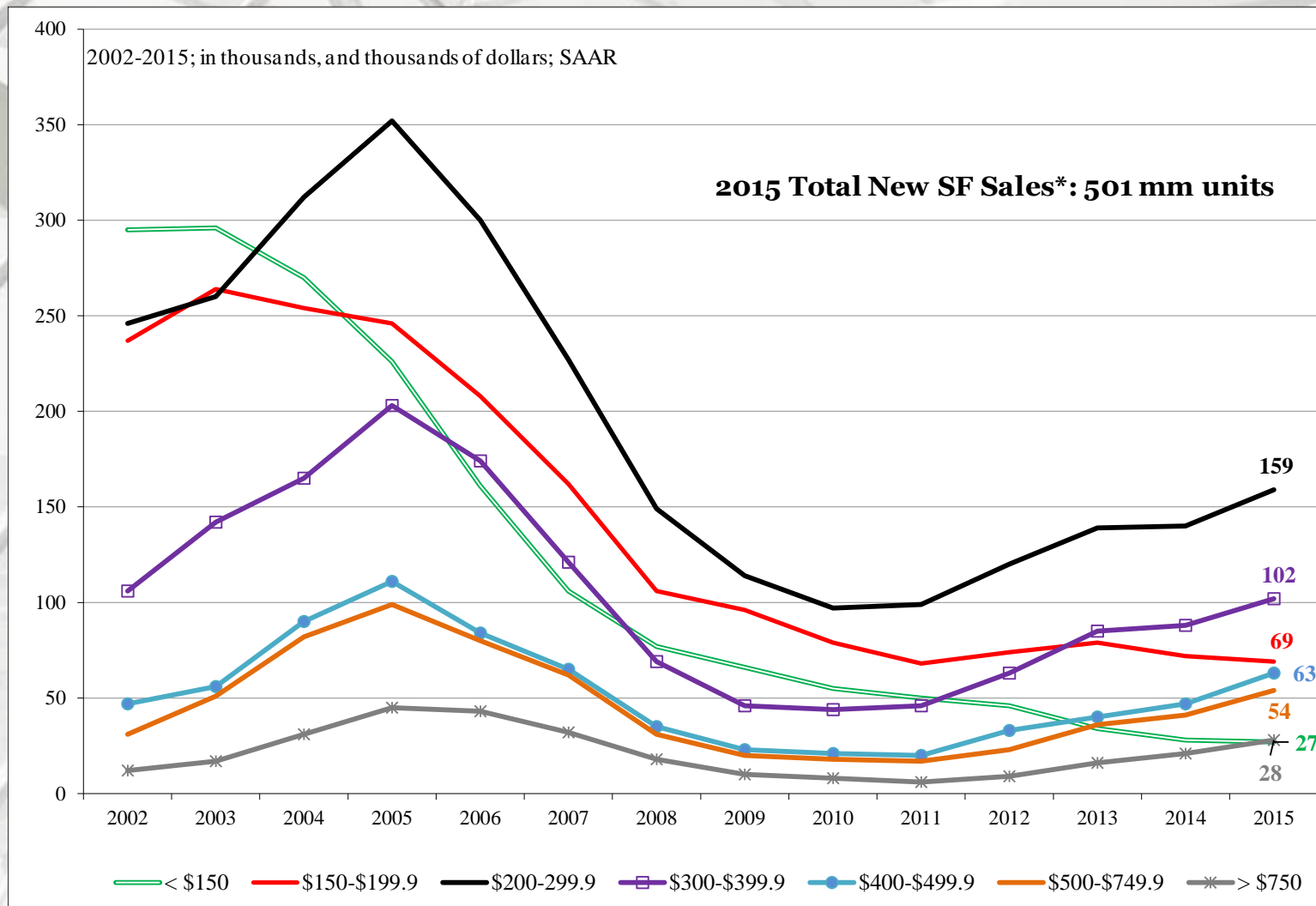
¹ Houses for which sales price were not reported have been distributed proportionally to those for which sales price was reported;

² Detail June not add to total because of rounding.

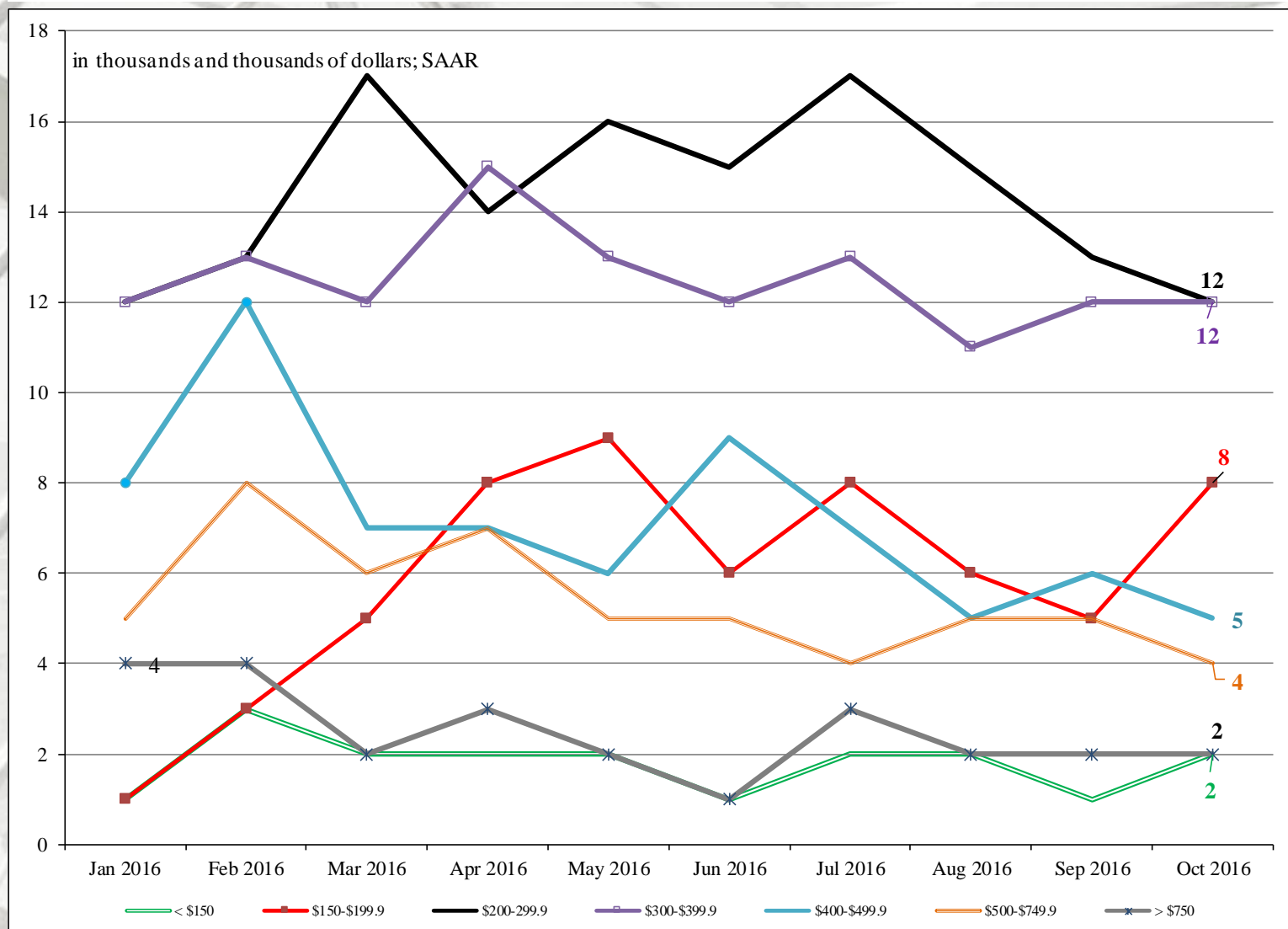
New SF House Sales by Region



New SF House Sales by Price Category

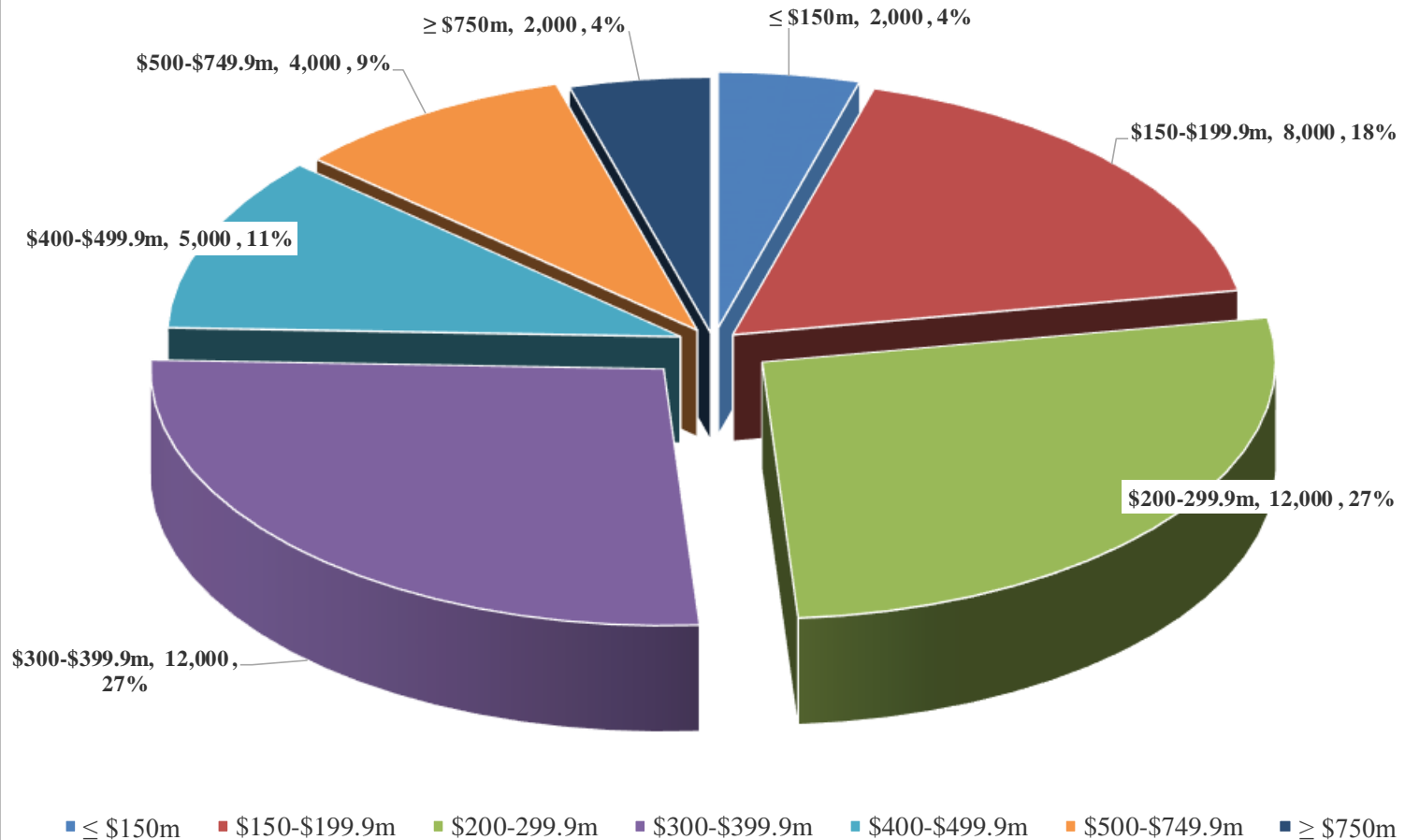


New SF House Sales by Price Category

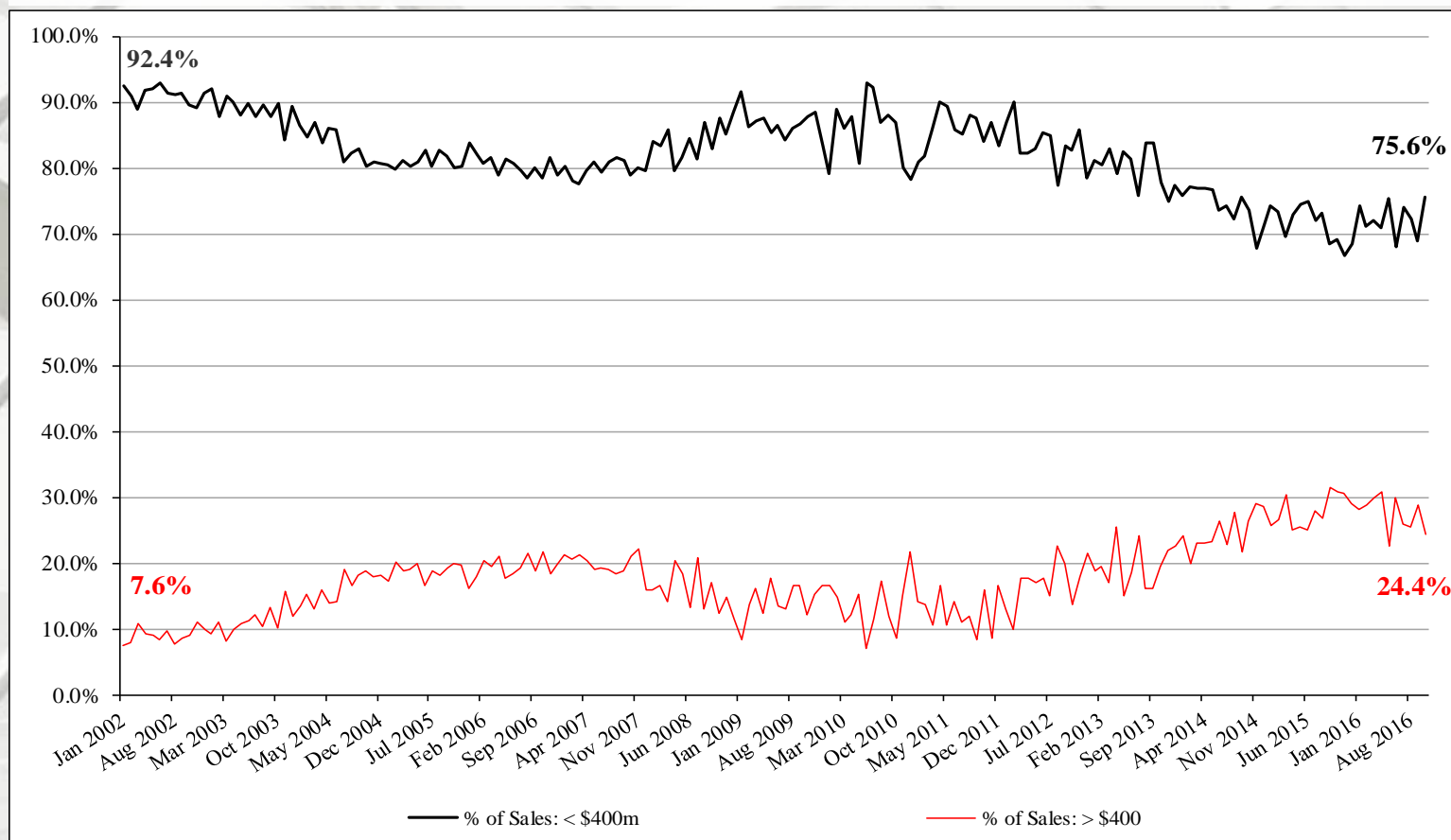


New SF House Sales

October SF Sales



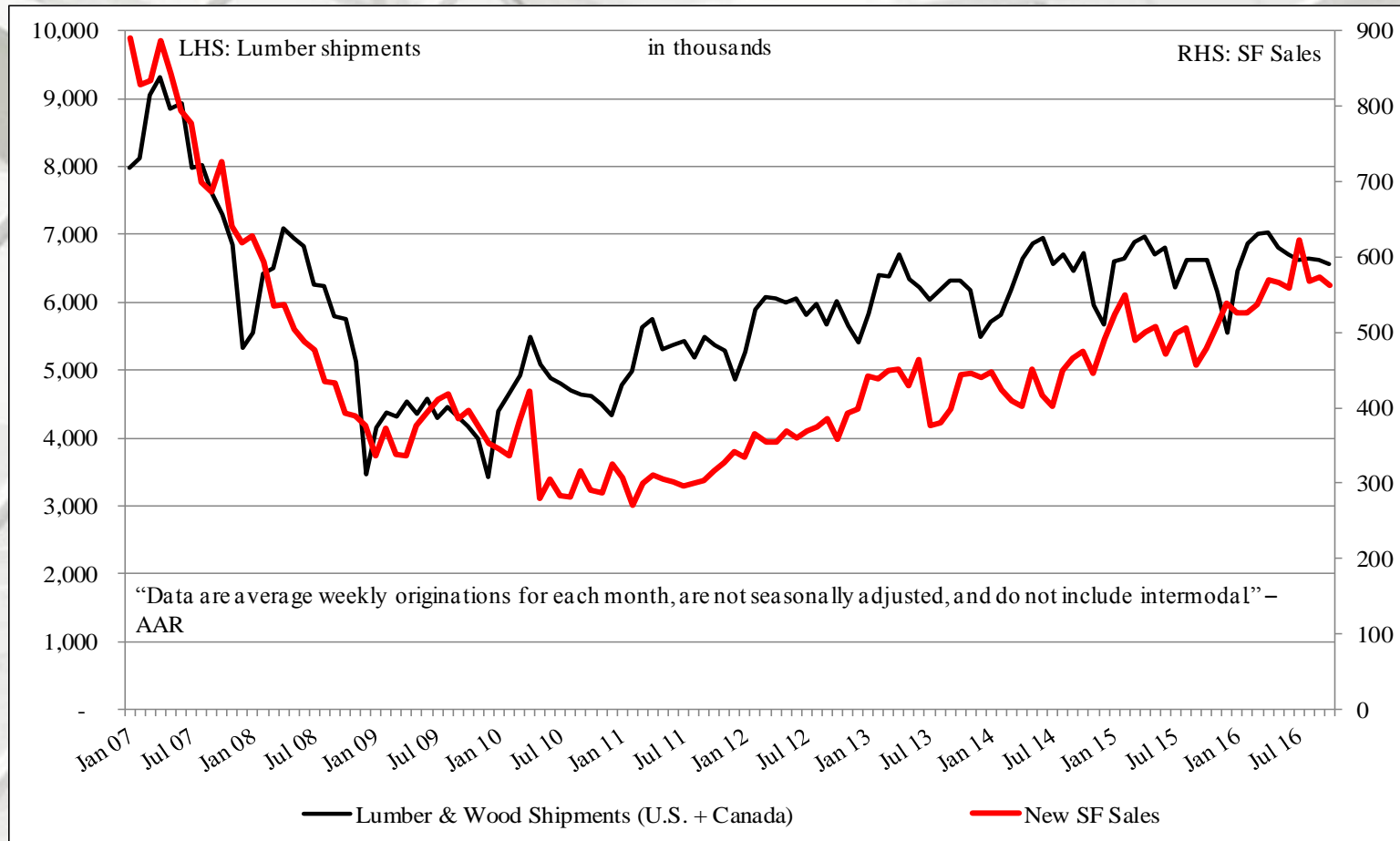
New SF House Sales



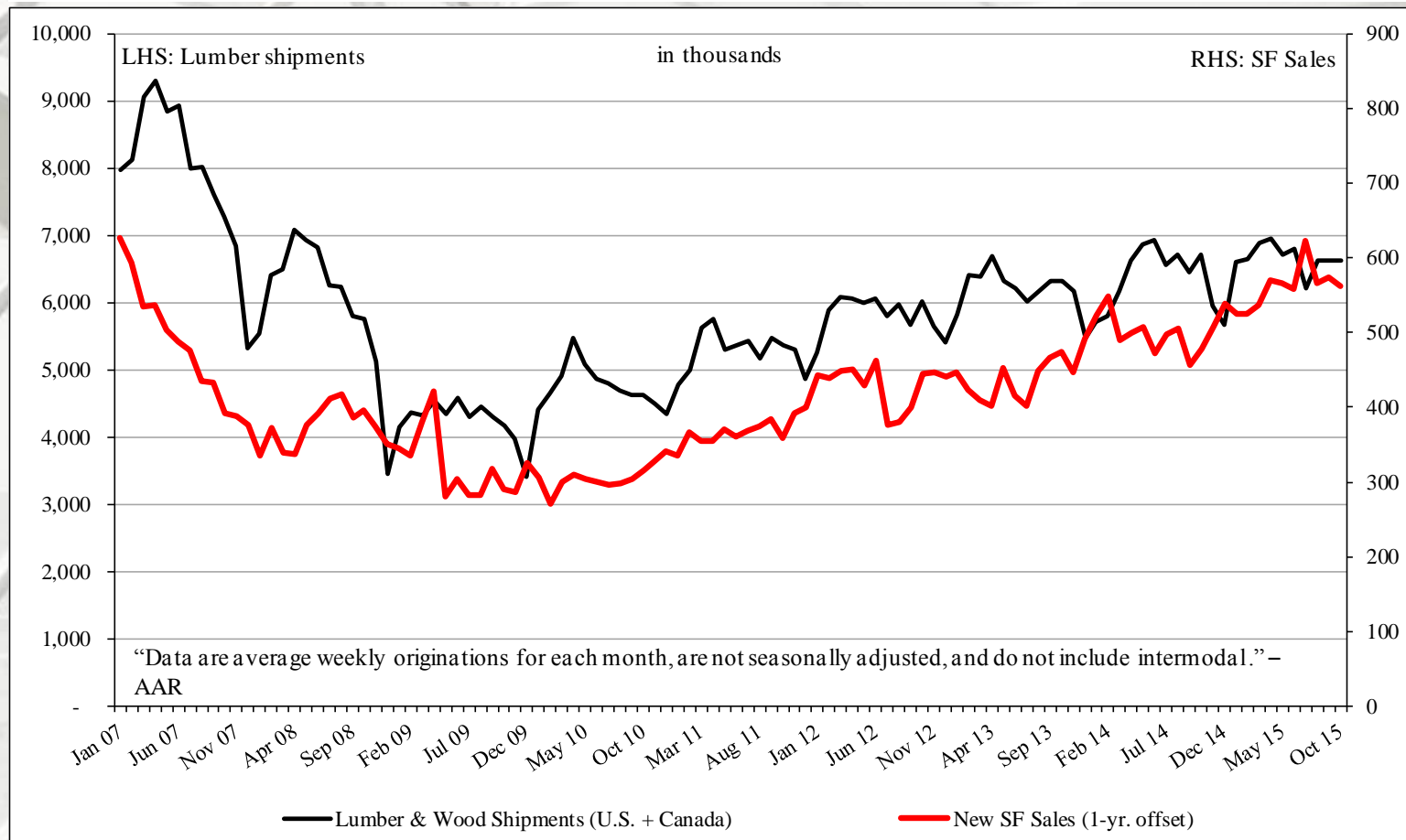
New SF Sales: 2002 – October 2016

The sales share of \$400 thousand plus SF houses is presented above. Since the beginning of 2012, 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 October 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.

October 2016

Construction Spending

2016 October Total Private Residential Construction:
\$466.2 billion (SAAR)

1.6% more than the revised September estimate of \$458.8 billion (SAAR)
4.7% greater than the October 2015 estimate of \$445.4 billion (SAAR)

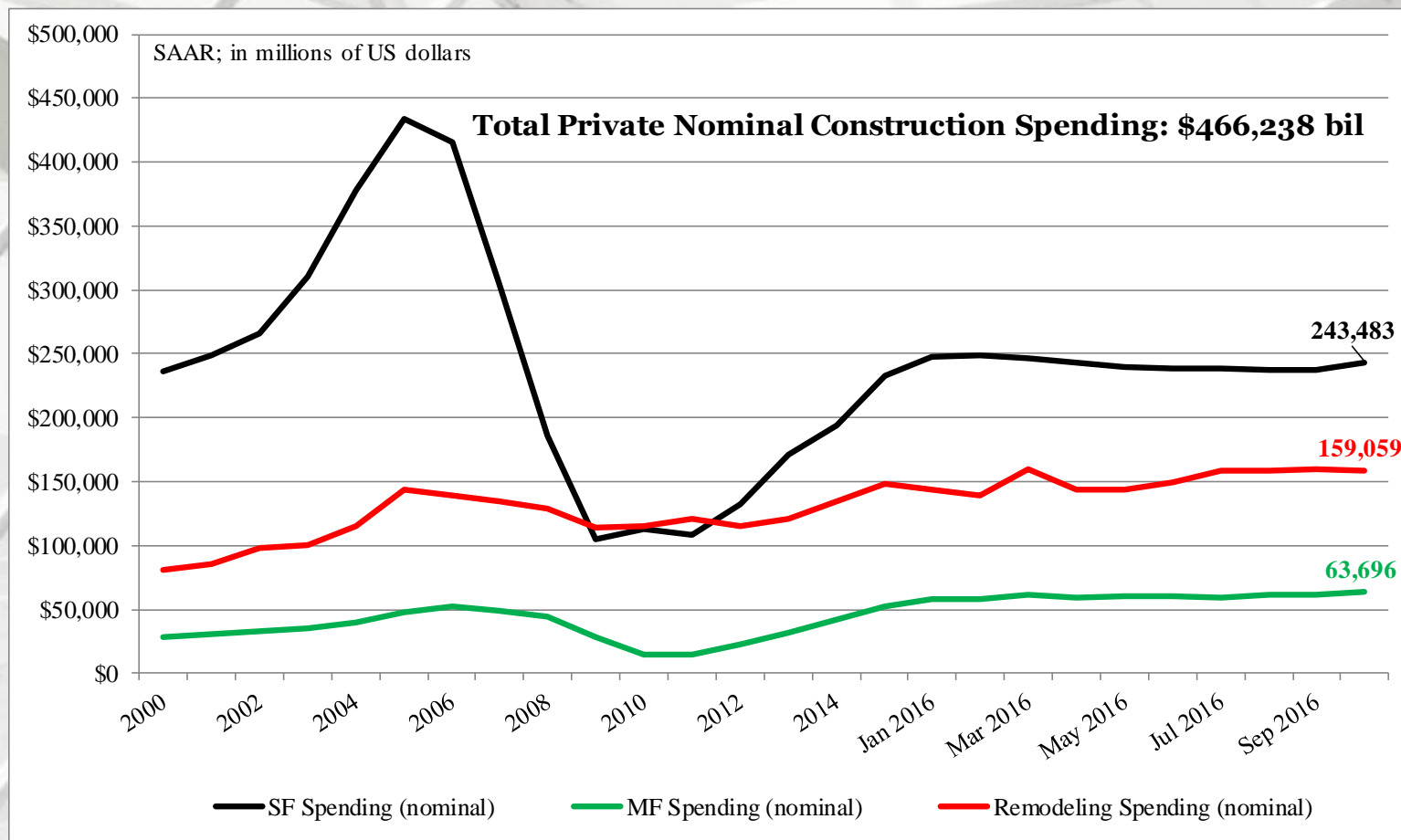
October SF construction: \$243.5 billion (SAAR)
2.8% more than September: \$236.8 billion (SAAR)
-1.6% less than October 2015: \$243.5 billion (SAAR)

October MF construction: \$63.7 billion (SAAR)
2.8% more than September: \$61.9 billion (SAAR)
11.4% greater than October 2015: \$57.2 billion (SAAR)

October Improvement^C construction: \$159.1 billion (SAAR)
-0.6% less than September: \$159.9 billion (SAAR)
13.0% more than October 2015: \$140.7 billion (SAAR)

^C The US DOC does not report improvement spending directly, this is a monthly estimation for 2016:
((Total Private Spending – (SF spending + MF spending)).
All data are SAARs and reported in nominal US\$.

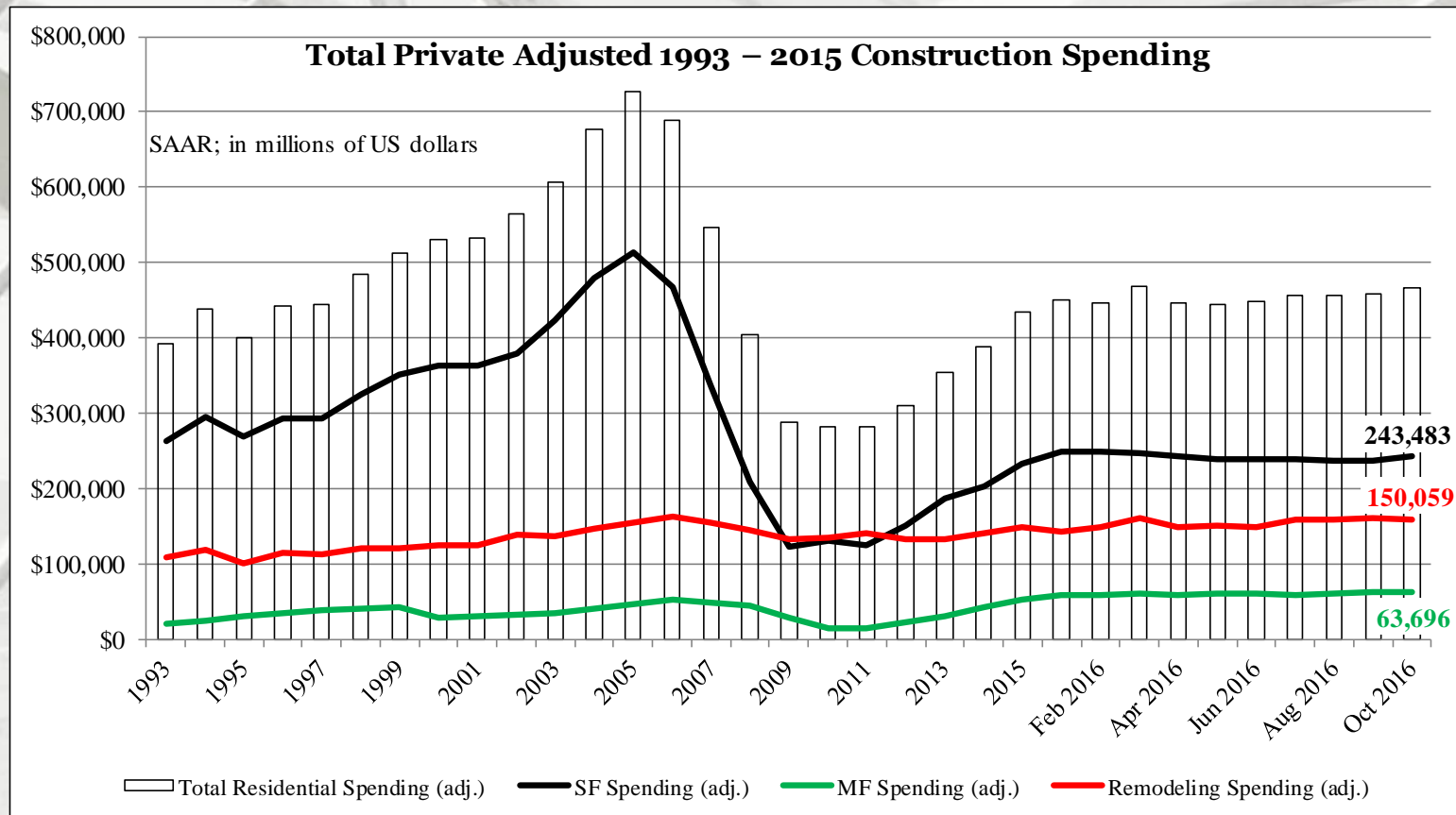
Total Construction Spending (nominal): 1993 – October 2016



Reported in nominal US\$.

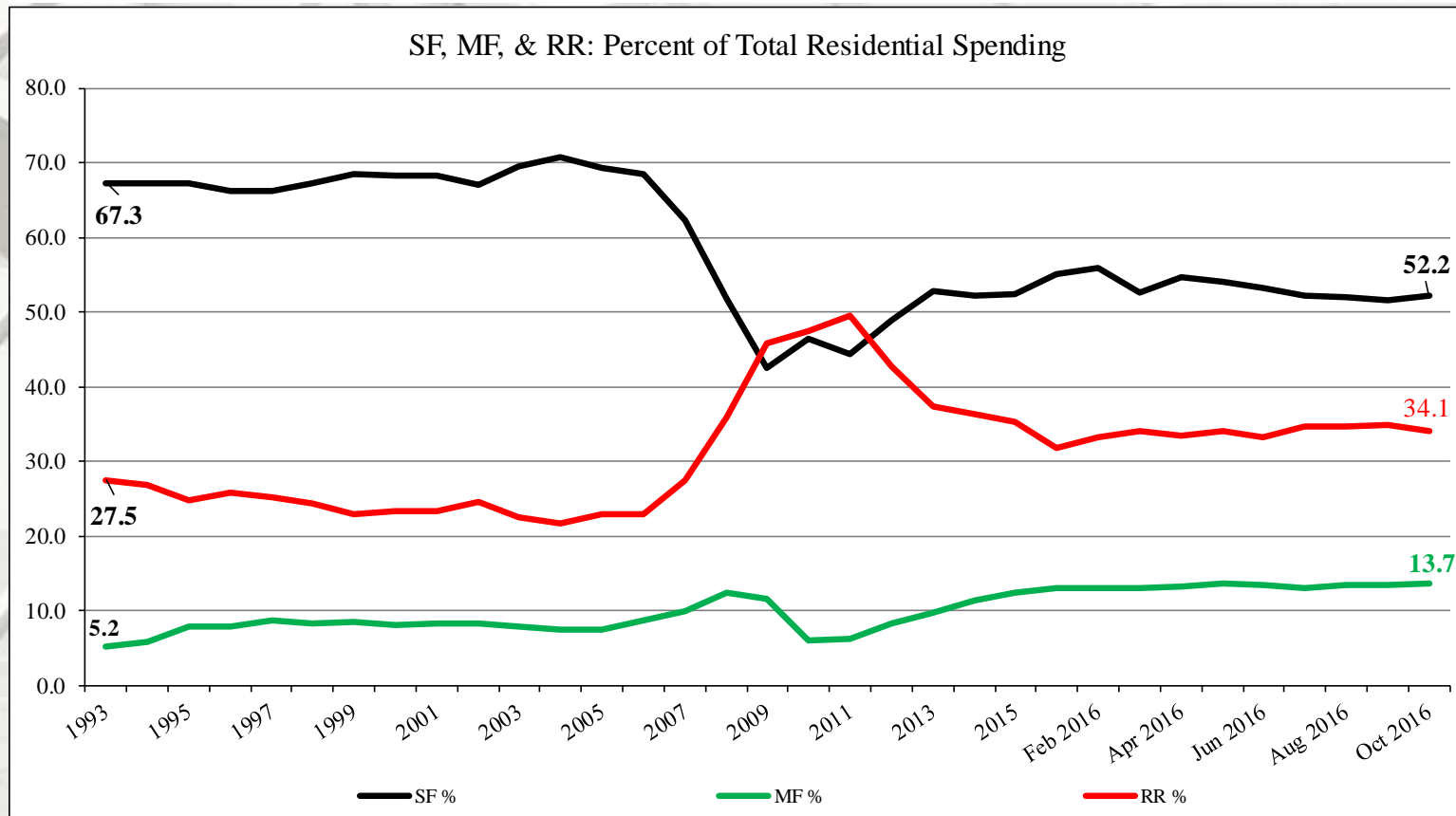
The US DOC does not report improvement spending directly, this is a monthly estimation for 2016.

Total Construction Spending (adjusted): 1993-2016*



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

Construction Spending Shares: 1993 to October 2016



Total Residential Spending: 1993 through 2006

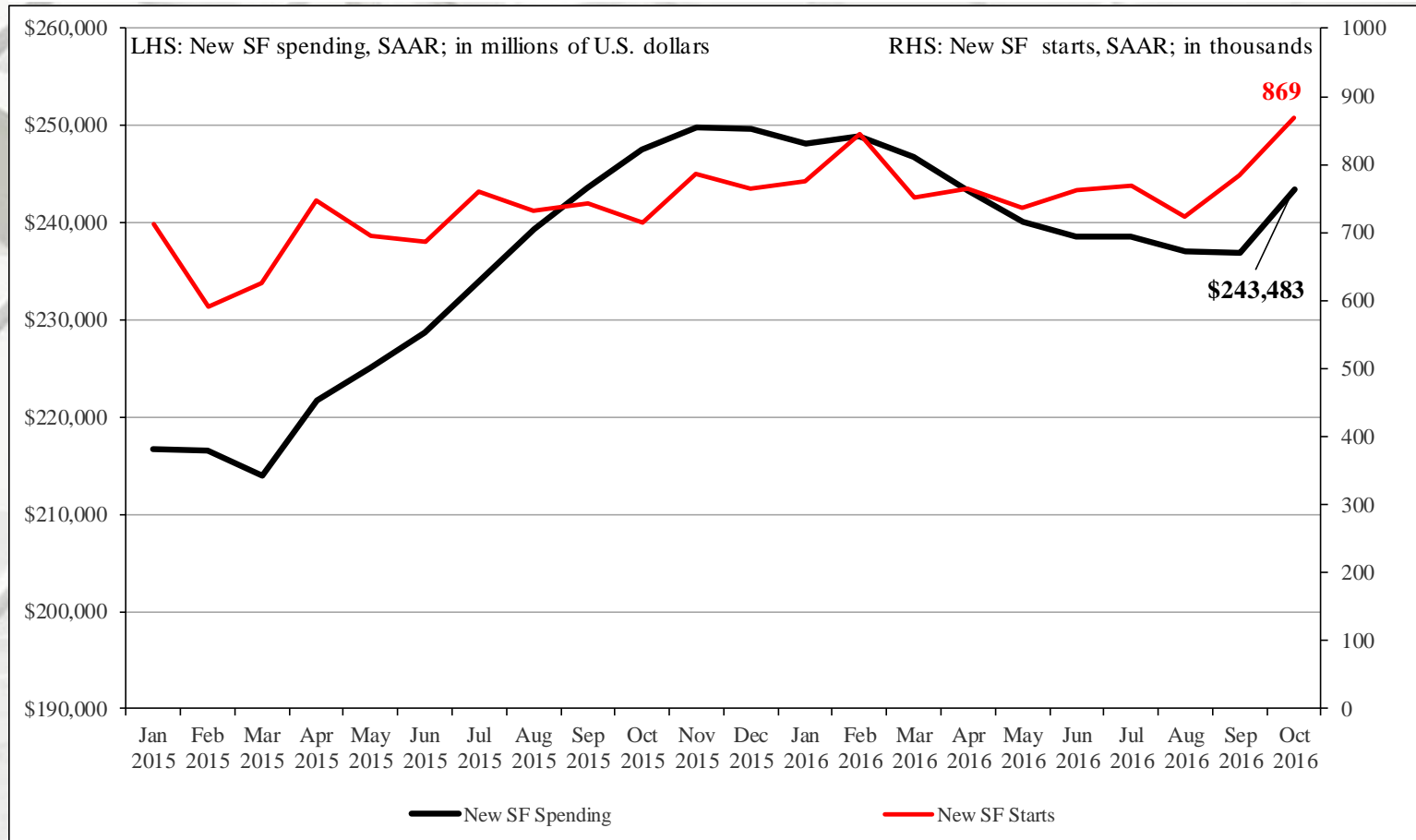
SF spending average: 69.2 %

MF spending average: 7.5 %;

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

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

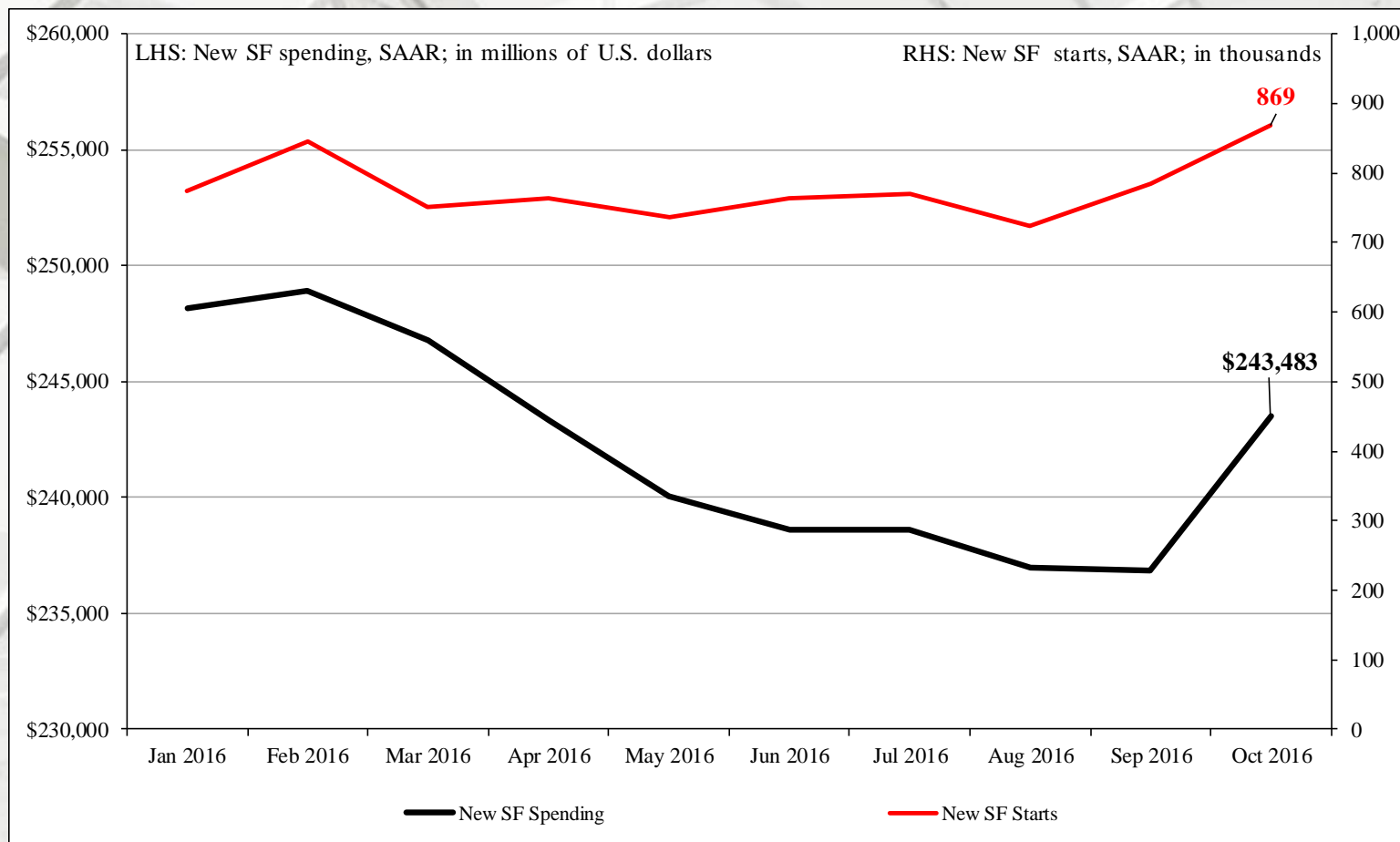
Construction Spending & Starts: 2010 to October 2016



New SF Residential contrasted against New SF Starts: 2010 through 2016

In the above graph, new SF construction spending is compared to new SF starts. Generally, as SF starts increase so does spending. However, there are other factors involved: house size, amenities, lot price, location, etc. Note that 2016 spending is reported in nominal dollars.

Construction Spending & Starts: 2016



New SF Residential contrasted against New SF Starts: 2016

As presented above, the decline in spending decoupled from starts in October. Given that it is one-month of data, we should pay attention to this relationship going forward. Note that 2016 spending is reported in nominal dollars.

Remodeling

123 Million Home Improvement Projects

“American homeowners tackled 123 million home improvement projects in the past two years, according to the 2015 American Housing Survey. The 62 percent majority of projects were done by professionals (median expense \$2,000) and 38 percent were do-it-yourselfers (median expense \$600). These are the 10 most common projects and their median expense... .” – Cheryl Russell, Editorial Director, New Strategist Press

Number of professional home improvement projects (and median expense)

- 3. Flooring/carpeting: 7.2 million (\$2,246)
- 5. Windows/doors: 5.6 million (\$2,000)
- 7. Bath remodel: 3.4 million (\$5,000)

Number of do-it-yourself home improvement projects (and median expense)

- 2. Flooring/carpeting: 4.8 million (\$800)
- 5. Bath remodel: 3.1 million (\$1,500)
- 6. Windows/doors: 3.1 million (\$600)
- 7. Kitchen remodel: 2.1 million (\$3,000)
- 8. Fencing/walls: 2.1 million (\$600)

Existing House Sales

National Association of Realtors (NAR®)

October 2016 sales: 5.600 million houses sold (SAAR)

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

All-cash sales: 22% and 21% in September,
and 24% (October 2015).

Individual investors still purchase a considerable portion of
“all cash” sale houses – 13% in October;
14% in August and 13% in October 2015.
61% of investors paid cash in October.

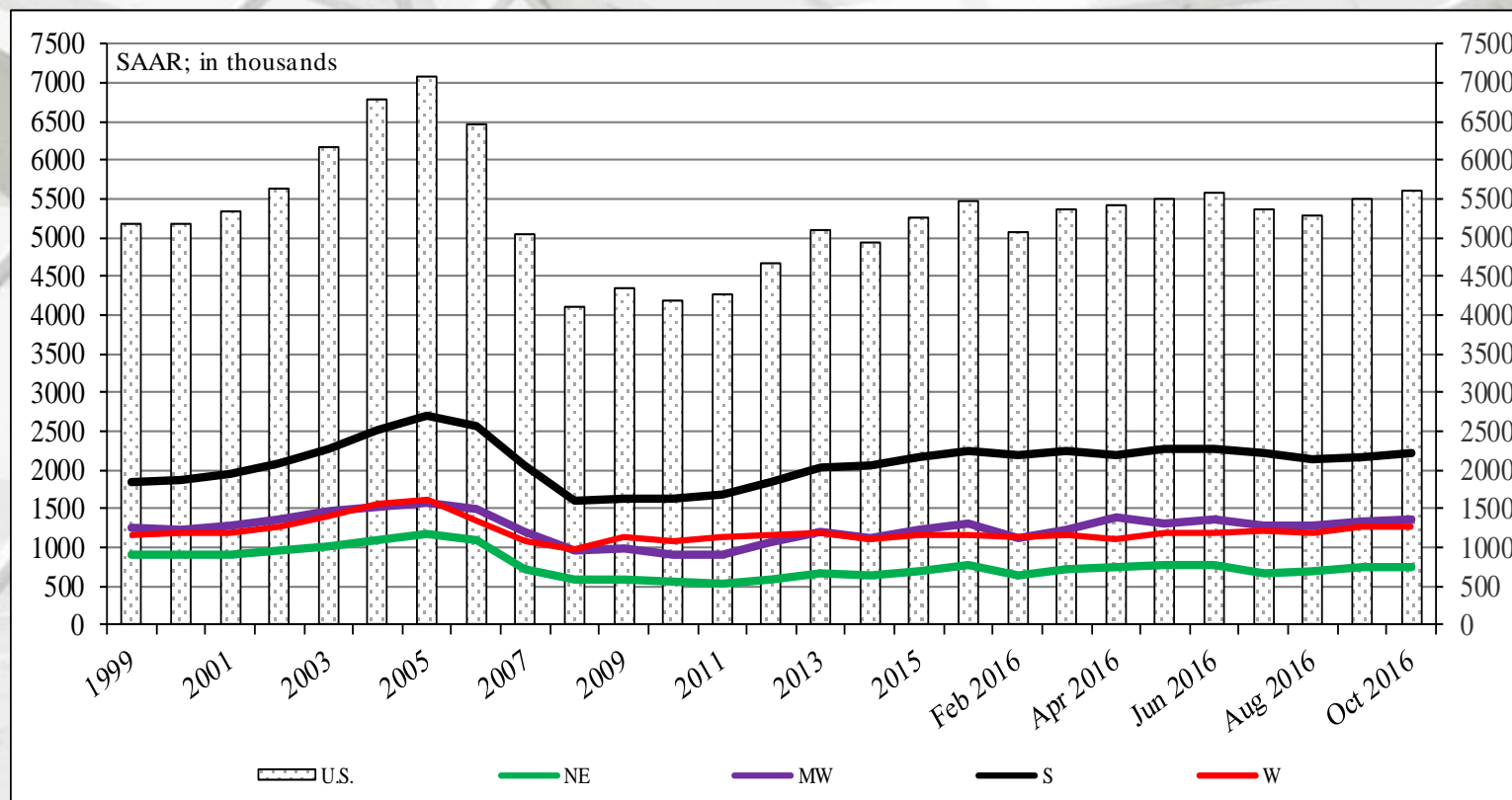
Existing House Sales

	Existing Sales*	Median Price	Mean Price	Month's Supply
October	5,600,000	\$232,200	\$274,300	4.3
September	5,490,000	\$235,300	\$277,100	4.4
2015	5,290,000	\$219,100	\$262,700	4.8
M/M change	2.0%	-1.3%	-1.0%	-2.3%
Y/Y change	5.9%	6.1%	4.4%	-10.4%

	NE Sales	MW Sales	S Sales	W Sales
September	750,000	1,360,000	2,220,000	1,270,000
August	740,000	1,330,000	2,160,000	1,260,000
2015	740,000	1,280,000	2,120,000	1,150,000
M/M change	1.4%	2.3%	2.8%	0.8%
Y/Y change	1.4%	6.3%	4.7%	10.4%

* All sales data: SAAR

Total Existing House Sales



Total Existing House Sales

Percent Change in Sales From a Year Ago by Price Range



House Sales

Wall Street Has It Wrong: Luxury Home Sales Increasing

“Luxury home sales have increased, contrary to the opinions of most Wall Street analysts and press reports. Here are the facts:

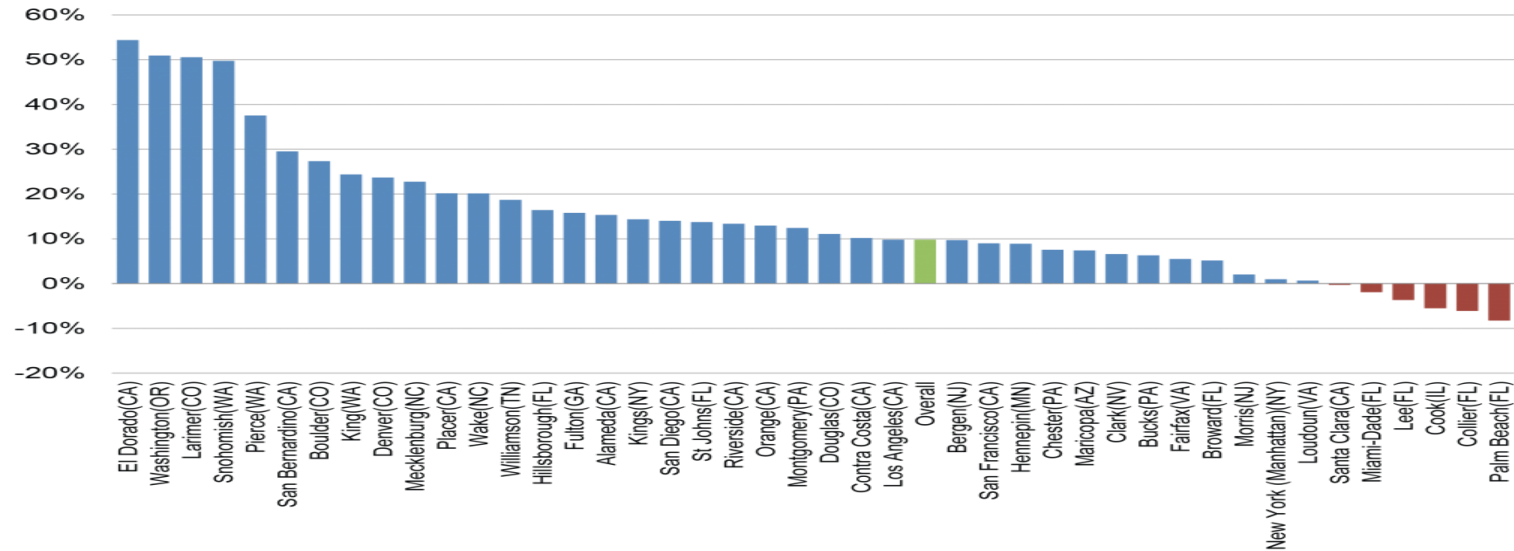
- Sales of homes priced above \$600,000 have risen in 37 of the 43 counties where we purchased the data.
- Home sales above \$600,000 in the last 12 months exceed sales in the prior 12 months by 10%.
- Home sales in Q3 2016 exceeded sales in Q3 2015 by 5%.
- Sales have increased in every price increment from \$600,000 to \$1.5 million+.

See the charts below – and then our explanation of why Wall Street has it wrong.” – John Burns, CEO, John Burns Real Estate Consulting LLC

House Sales

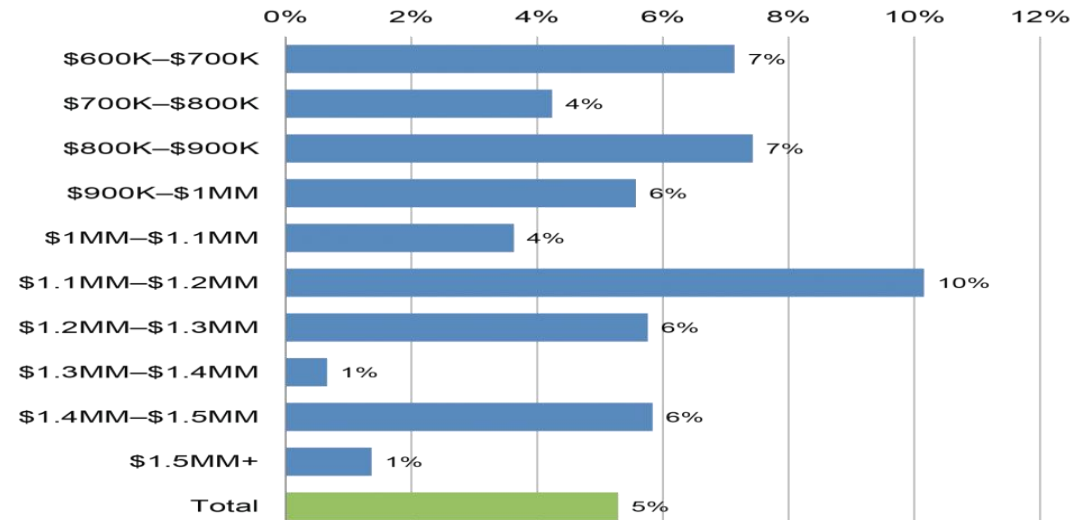
YOY Sales above \$600K

12-month rolling total (new and existing)



YOY Sales Change

Q316 vs. Q315



House Sales

Why Is the Common Perception Wrong?

“A confluence of five high-profile events has conspired to give the wrong perception:

1. **New disclosure laws.** Foreign-buyer activity has slowed in two high-profile markets, Manhattan and Miami, due to threat of enforcement of [new disclosure laws that began in 2016](#).
2. **High-profile Florida second-home markets.** High-priced homes have indeed slowed in two of the highest-profile second home markets in the country, Naples (Collier County) and Palm Beach. These are two of the six counties where sales have declined.
3. **Fortune article on Greenwich, CT.** The sales slowdown in high-profile Greenwich, CT, was featured in [Fortune magazine](#). The article included some very misleading headlines about a national luxury slowdown that were supported only by the fact that prices have appreciated 5% at the high end compared to more appreciation at lower prices.
4. **Increased \$1 million new-home supply.** New-home sales have slowed in a few new-home markets due to a surge in competitive supply. Coupling this surge in supply, builders have pushed prices too high in comparison to the resale competition due to rising costs.
5. **Improving entry-level sales.** Entry-level sales are also improving at a faster rate than higher-priced home sales. Indeed, the market for lower-priced homes is stronger, but that does not mean that luxury sales are struggling.

Summary

In conclusion, luxury home sales continue to increase. Entry-level home sales continue to increase even faster.” – John Burns, CEO, John Burns Real Estate Consulting LLC

Current Housing Market

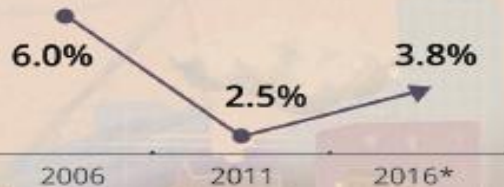
Deloitte.
University Press

Issues by the Numbers, November 2016

The US housing market recovery:
The past is not prologue

WHILE THE US HOUSING MARKET IS RECOVERING ...

Residential fixed investment as a percentage of nominal GDP¹



Homes foreclosed per 10,000 homes (NSA)²

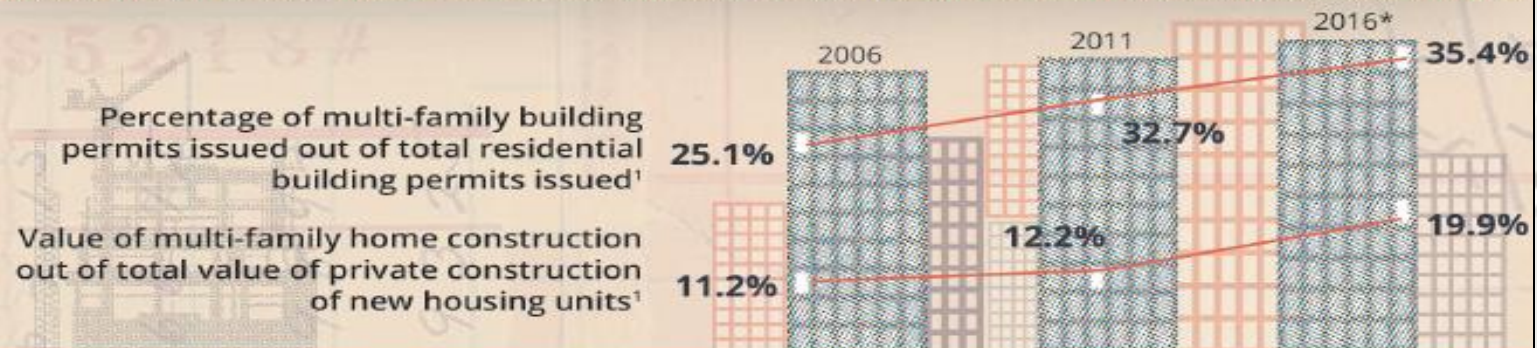


... HOMEOWNERSHIP IS DECLINING AND RENTING IS ON THE RISE ...



Current Housing Market

... AND DEMAND FOR MULTI-FAMILY HOMES IS GROWING.



IMPLICATIONS



TAXATION

As fewer people choose or are able to purchase a home, the mortgage interest deduction might come under increased scrutiny in tax reform discussion.



URBAN PLANNING AND SERVICES

Certain fast-growing cities such as Seattle and San Diego will need to consider how to serve the increased population density that comes with large increases in multi-family homes.



INDUSTRIES TIED TO THE HOUSING MARKET

With the shift to more multi-family and more renters, producers of goods and services relating to housing will also be impacted—this covers everything from insurance to appliances and lawn equipment.

*Data from Q2 2016.

¹Source: US Census Bureau.

²Source: Zillow.

Deloitte University Press | dupress.deloitte.com

2017 Outlook

The Outlook for 2017

In 2017, we expect to see some additional interest rate increases following the recent movements. Much like in 2013, we expect housing markets to respond negatively to higher rates. Higher mortgage rates will drive down homebuyer affordability, dampening demand and weakening home sales, softening house price growth, and slowing the growth in new home construction. Mortgage market activity will be significantly reduced by higher rates. Exhibit 2 below summarizes our forecast for 2016 and 2017.” – Freddie Mac Economic & Housing Research, Economic & Housing Research Group

EXHIBIT 2

Forecasted changes in housing market activity (2016 to 2017)

Variable	2016 (E)	2017 (F)	Change 2016 to 2017
10-year Treasury (% , 4th quarter)	2.3	2.9	+ 0.6 pp
30-year Fixed Mortgage (% , 4th quarter)	3.8	4.2	+ 0.4 pp
Housing Starts (Full year, millions)	1.16	1.26	+ 0.1 pp +8%
Total Home Sales (Full year, millions)	5.97	5.75	+ 0.1 pp +8%
Annual House Price Change (%)	5.9	4.7	+ 0.1 pp +8%
Refinance Mortgage Originations (Full year, \$ trillions)	0.9	0.4	+ 0.1 pp +8%

Source: Freddie Mac November 2016 Economic Outlook

2017 Outlook

The Outlook for 2017

Housing market activity cools off

“Rising interest rates will exacerbate growing affordability challenges in many markets. Even prior to the recent interest rate movements, we’ve seen housing market activity start to level off, with single-family housing starts flat lining for most of 2016 and existing home sales starting to lose some momentum. Regardless, 2016 will still end up being the best year for home sales in a decade, but 2017 will be hard pressed to match those levels.

With limited new supply coming online, new home sales will only increase slightly, and existing home sales are likely to decline next year as affordability becomes a challenge. We expect total housing starts will reach 1.16 million in 2016. For 2017, higher mortgage rates will slow the pace to about 1.26 million starts, still far short of long-run demand of 1.6 to 1.7 million units.

Total home sales will decline about 220,000 units from 2016 to 2017. New homes sales will rise, but not enough to offset declines in existing home sales.

Home price momentum keeps price growth in 2017

Home prices have been rising at about a 6 percent annual pace for the past two years. Higher mortgage rates will contribute to moderation in house price growth. We expect to see house price appreciation rise at about a 4.7 percent annual rate in 2017.” – Freddie Mac Economic & Housing Research, Economic & Housing Research Group

2017 Outlook

The Outlook for 2017

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2017 Outlook

The Outlook for 2017

Mortgage originations get crushed

“While housing market activity will be able to weather slightly higher rates without a major correction, mortgage activity will be dramatically impacted by higher rates, particularly refinance originations. From 2013 to 2014, single-family refinance mortgage originations declined 54 percent following the Taper Talk rate increases. This time around, we anticipate refinance originations will decline by 53 percent from 2016 to 2017. Total mortgage originations will equal \$1.5 trillion in 2017, down from \$1.7 trillion in our October forecast.” – Freddie Mac Economic & Housing Research, Economic & Housing Research Group

Forecast Snapshot (November 2016)

Summary (annualized)	2015	2016	2017
30-year PMMS (%)	3.9	3.7	4.1
Total home sales (M)	5.75	5.97	5.75
House price growth (%)	6.1	5.9	4.7
Total originations (\$B)	1,750	2,000	1,505

First-Time Purchasers

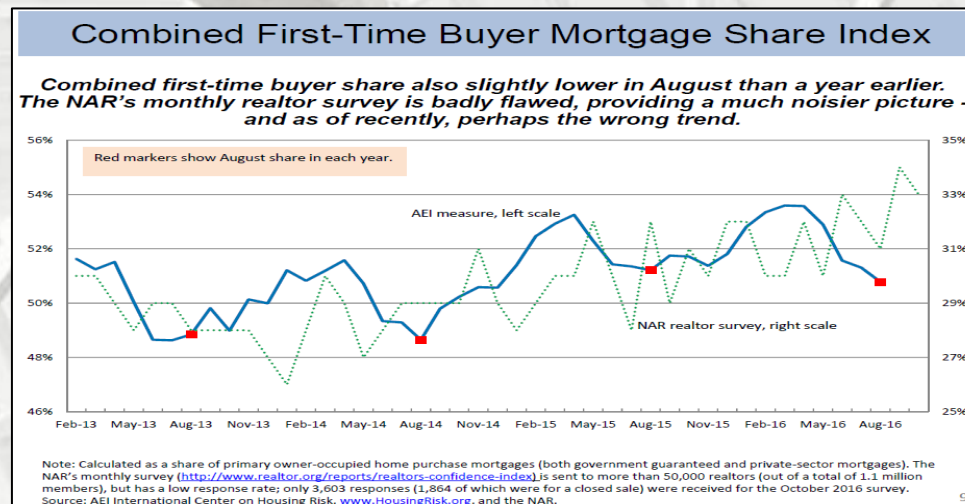
National Association of Realtors (NAR®)

33% of sales in October 2016– 34% in September 2016 and 31% in October 2015.

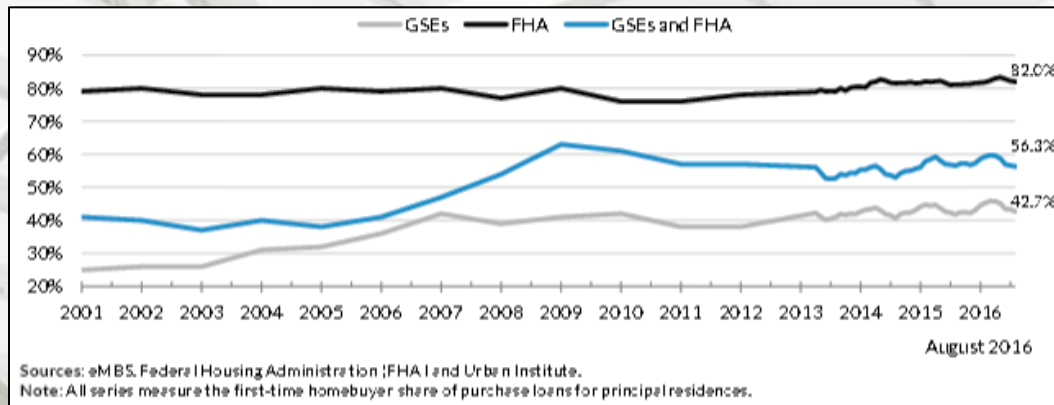
American Enterprise Institute International Center on Housing Risk

“Contrary to news reports, the first-time buyer is alive and well in today’s home purchase market. Over the past year, first-time buyer share eased slightly, accounting for 56.2 percent of primary owner-occupied home purchase mortgages with a government guarantee, down from 56.7 percent in August 2015. This is due to even faster volume growth from repeat buyers.

The First-Time Buyer Mortgage Risk Index (FBMRI) for Agency purchase loans stood at 15.6% in August, unchanged from a year earlier. The Agency FBMRI is 6.4 ppts. higher than the repeat buyer MRI, up 6.0 ppts. from a year earlier. Setting a series high, FHA’s First-Time Buyer NMRI stood at 24.8% in July, up 1.0 ppt. from a year earlier.” – Edward Pinto, Codirector, Tobias Peter, Scholar, American Enterprise Institute International Center on Housing Risk



First-Time Purchasers



Urban Institute

“In August 2016, the first-time homebuyer share of GSE purchase loans continued to decline to 42.7 percent. The FHA has always been more focused on first-time homebuyers, with its first-time homebuyer share hovering around 80 percent and now stood at 82.0 percent in August 2016, down from the peak of 83.3 percent in May 2016. The bottom table shows that based on mortgages originated in August 2016, 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.” – Laurie Goodman et al., Codirector, Housing Finance Policy Center

Inside Mortgage Finance: Campbell/Inside Mortgage Finance HousingPulse Tracking Survey

“First-time homebuyers had a 34.8 percent share of purchases in October, based on a three-month moving average. That was the lowest share for first-timers since August 2014. Moreover, the first-time homebuyer share has declined for four consecutive months. Back in May, the reading was 40.4 percent.” – Brandon Ivey, Editor, Inside Mortgage Finance

United States House Sales

Week of	Weekly	4-Week Avg.
10/30/16	-2.9%	-0.2%
11/6/16	-0.8%	-0.3%
11/13/16	2.5%	-0.1%
11/20/16	-30.3%	-8.3%

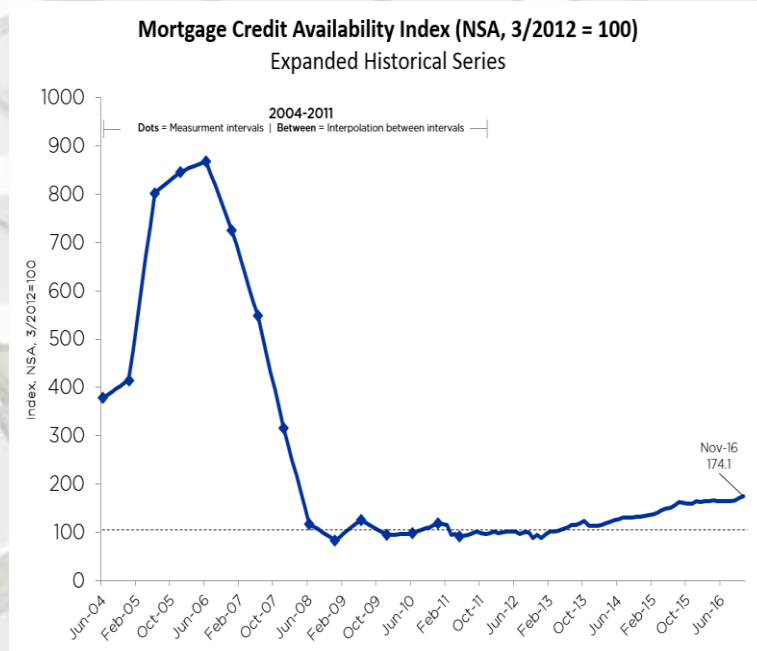
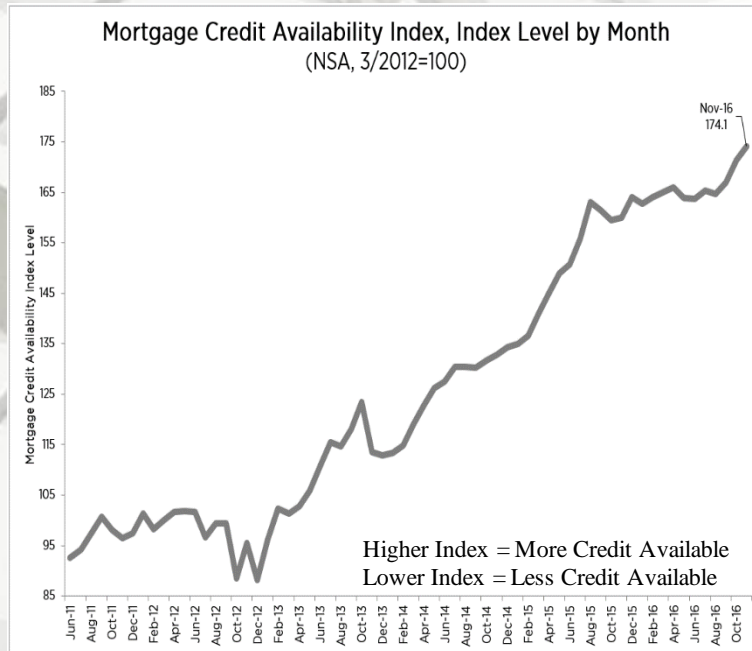
As expected, appraisal volume plummets after Thanksgiving holiday

Housing market moves into the holidays

“Appraisal volume, to no surprise, tumbled in the latest report due to the Thanksgiving holiday. For the week of Nov. 20, appraisal volume plummeted 30.3%, according to the latest National Appraisal Volume Index from a la mode, which is provided exclusively to HousingWire.

However, to put this in perspective, a la mode noted that appraisal volume averages a 30.6% drop for the week, so this year is right in line with expectations. The significant decline comes after last week’s positive report when appraisal volume finally posted an increase after weeks of decline. The holiday did skew the 4-week average down to -8.3%, which will take a month to drop off.” – Brena Swanson, Digital Reporter, HousingWire.com

Mortgage Credit Availability

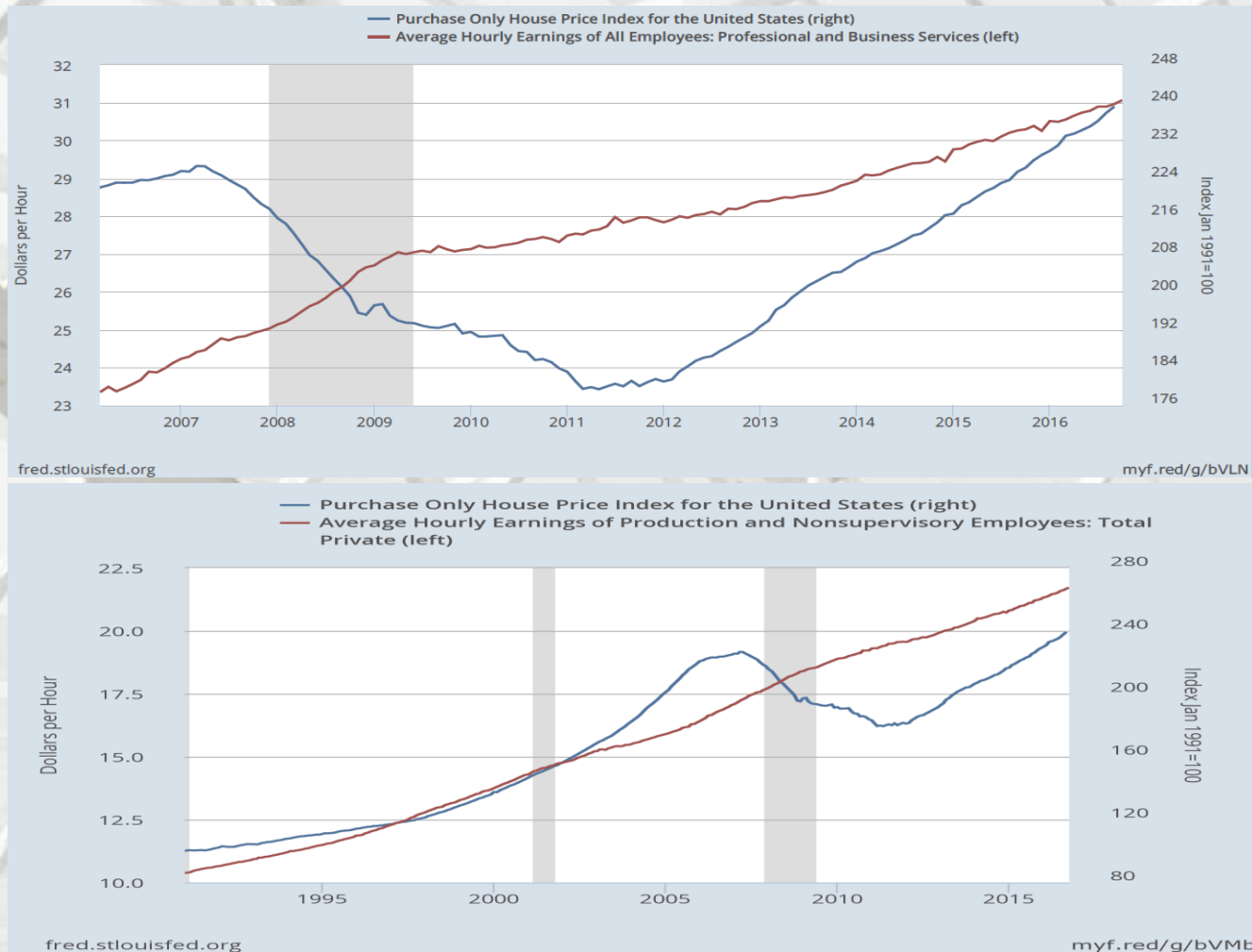


Mortgage Credit Availability Increases in November

“The MCAI increased 1.6 percent to 174.1 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 Conforming MCAI saw the greatest increase in availability over the month (up 2.2 percent), followed by the Government MCAI (up 1.8 percent), the Conventional MCAI (up 1.5 percent), and the Jumbo MCAI (up 0.8 percent).”

“Mortgage credit availability increased for the third consecutive month in November, driven by increased availability of conventional low down payment and streamlined refinance loan programs.” – Lynn Fisher, Vice President of Research and Economics, Mortgage Bankers Association (MBA)

Housing Affordability



Average Hourly Earnings & Purchase Only House Price Index

For the every day American, housing affordability is problematic. As presented above, affordability is much better for the professional – business sector (top) as compared to the production – non-supervisory sector (bottom).

Summary

In summary:

The October housing data were mostly positive. however, new SF housing sales have been mixed for the past three months. New SF sales decreased; the lower-priced categories ($< \$200,000$) improved but were less than the combined $\geq \$400,000$ categories. These lower-price tier categories need consistent improvement for the new construction to drive the overall housing construction market forward and upward. Existing sales increased slightly – 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, though incrementally rising;
- 2) As a result, housing affordability is good for most of – but not all of the U.S.;
- 3) According to the CP/A survey, real median incomes increased by 5.7% in 2015;
- 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) Debt: Corporate; personal; government – here and globally.
- 6) Will apparent global bank problems such as Duestche (Germany) and Monte dei Paschi di Siena (Italy) affect the global economy?
- 7) Other global uncertainties.

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