

Housing Report & Economic Situation: Analysis of current and forecasted demand for housing in North America and Europe

Timber Measurements Society,
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United States and International Housing

- Economic overview
- Canadian housing
- European housing
- United States housing
- Conclusion



The World Economy

- Europe's aggregate economy is improving, yet:
 - Brexit - ongoing
 - The migrant crisis remains
 - Germany and France relatively strong
 - Spain – an impressive rebound
 - Portugal, Greece, and some Eastern European countries still face challenges
- South America is struggling, Brazil remains in recession
- Australia, due to lackluster commodity markets, facing challenges
- China's economy has improved – but is it slowing?
- Debt: Government, corporate, personal



The United States Economy

- Overall economy is “solid.”
- Strong employment numbers, but the quality of jobs and salaries are a concern.
- New housing data has been “lackluster” since the Spring 2017 and remain at levels well below “normal.”
- Median household income has increased minimally, but is it enough to “spur” housing demand in the future?
- Challenges with debt (Federal, state, corporate, personal, student, & auto).
- Will the falling US dollar exchange rate improve our exports?

Canadian Housing

- Canada's economy improved in 2017, and is expected to improve in 2018 and 2019.
- Forecasts suggest modest housing demand and starts in Canada in 2018 and 2019.
- The Canadian new construction housing market is forecast at 190,00 to 201,000 in 2017 and is projected 180,000 to 187,000 in 2018.
- Policy makers have used a potent mix of federal, provincial and municipal rules in an effort to reign in overheated housing.

Canadian Housing





Canadian Housing

- “The Canadian housing market has in recent years been underpinned by healthy economic growth and an improving labour market.
- This support is going to continue over the medium term but the recently implemented changes to mortgage underwriting rules, higher rates, and an elevated supply pipeline will exert some downward pressure on activity and prices.
- Regionally, the picture is comparatively positive for the Atlantic Provinces, with the exception of Newfoundland and Labrador.”

Canadian Housing

- “Higher mortgage rates will lengthen the time needed for sales to recover in Alberta while also dampening activity in Manitoba and Saskatchewan.
- ...Quebec’s housing market will enjoy a relatively healthy performance over the forecast period...
- The initiation of the B20 guidelines coupled with higher rates will meaningfully weaken housing demand in the high-priced Toronto and Vancouver markets...
- Ultimately, we expect declining sales and flat prices this year before activity improves somewhat in 2019.”

Euroconstruct Region Housing

- Europe's house prices have recovered from the 2007-to-2009 financial crisis.
 - Austria, Belgium, Canada, and Germany – concerns of rapidly rising house prices.
 - In aggregate, OECD economies are improving – albeit incrementally. Under- and unemployment remains high in several OECD countries. As a result, the housing and construction markets have been slow to recover in the UNECE region.
- On a monetary basis, remodeling is the largest component of Euro-area residential construction.

Euroconstruct Region Housing

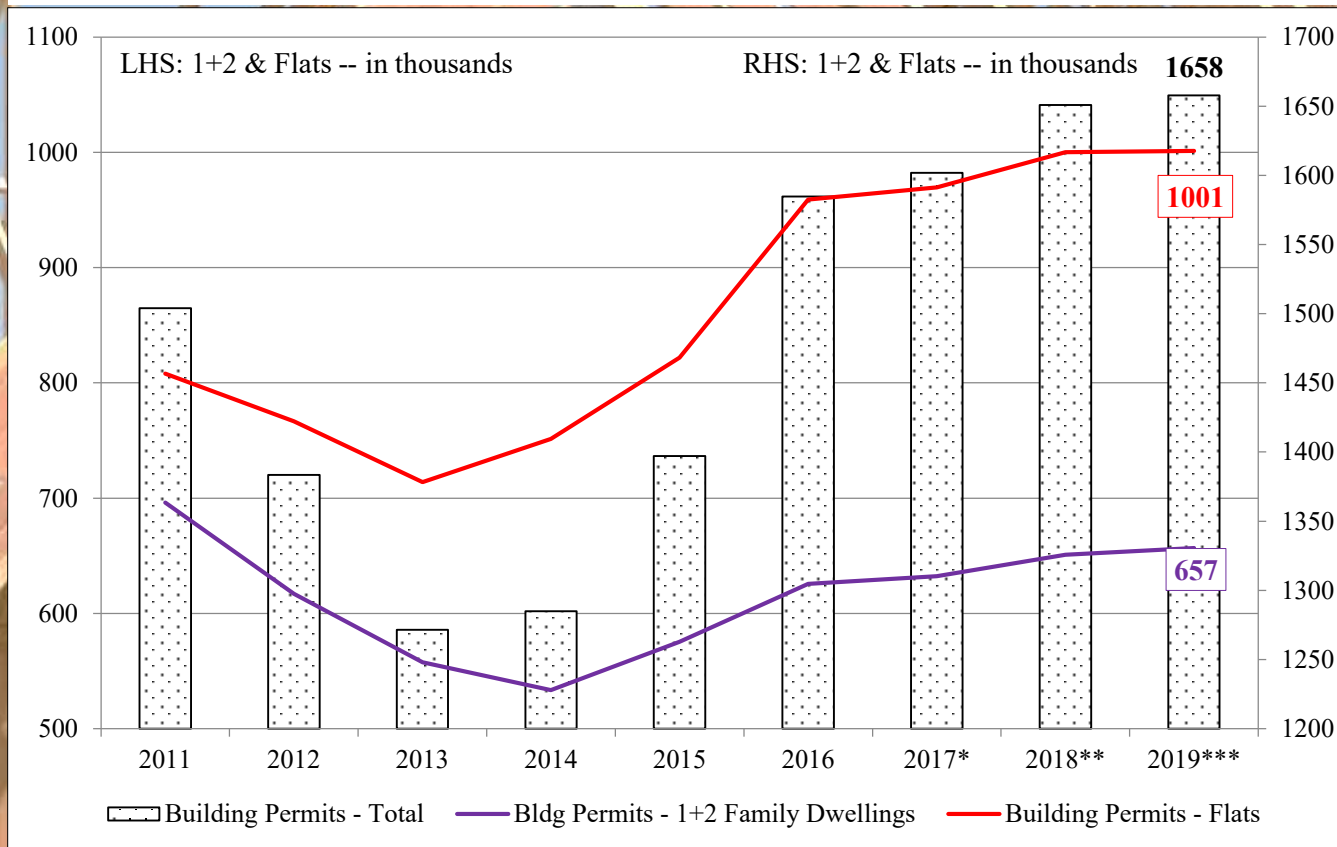
- New residential construction, however, is forecast to grow at a faster rate than remodeling in the immediate future.
- In 2016, residential construction comprised about 47% of total production (42% was new construction)...
- In the Euroconstruct region, the residential construction sector serves an estimated 472 million persons – who comprise 206 million households.
- The housing stock is about 233 million units, of which nearly 8% are second homes and 6% are vacant.
- Home ownership rates vary extensively between countries and regions.

Euroconstruct Region Housing

- 1.585 million new housing permits and 1.222 million new housing starts in the Euroconstruct region in 2016.
- New housing completions are forecast to increase but will vary by country.
- Renovation is a bright sector, particularly in western and northern Europe due to the housing age.
- Through 2019, new residential spending (new residential construction+ residential renovation) is forecast to increase by 2.6%...

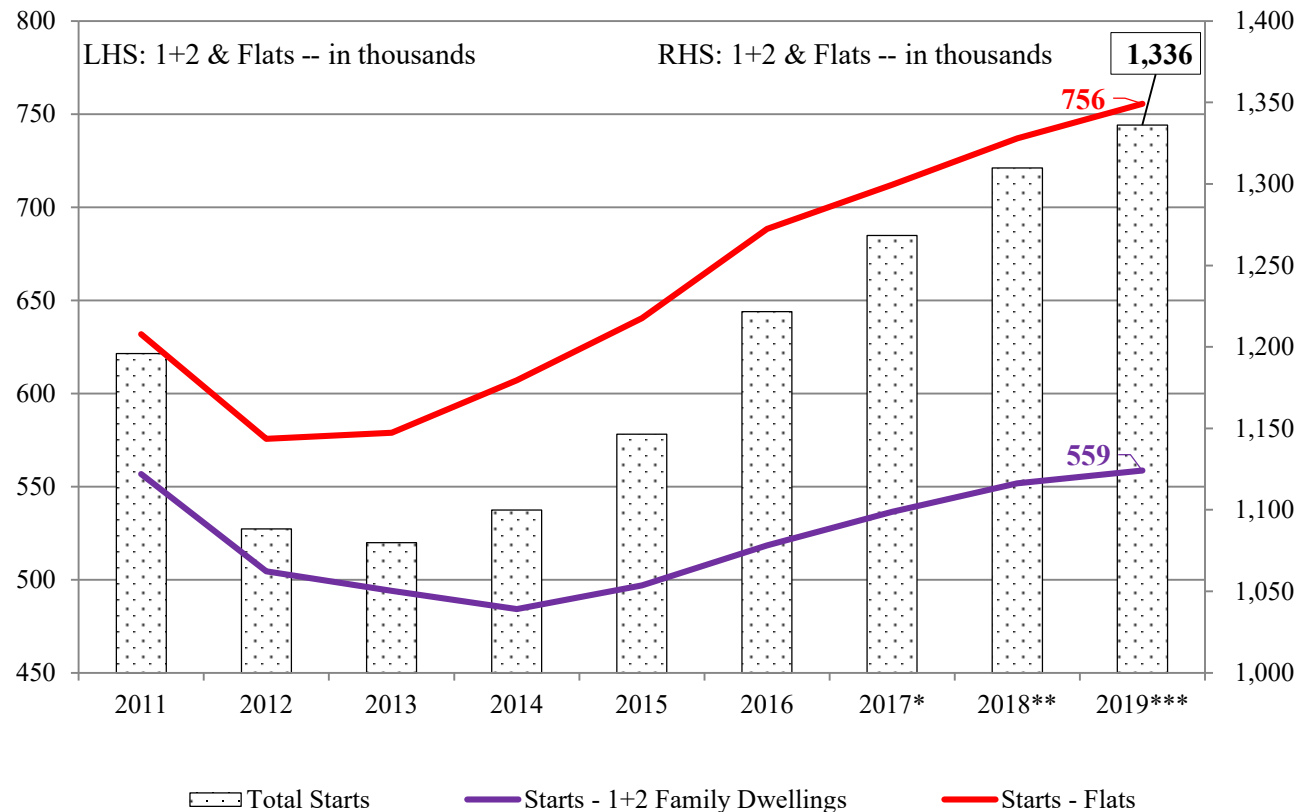
Euroconstruct Region Housing

Housing Permits, Euroconstruct region, 2011-2019



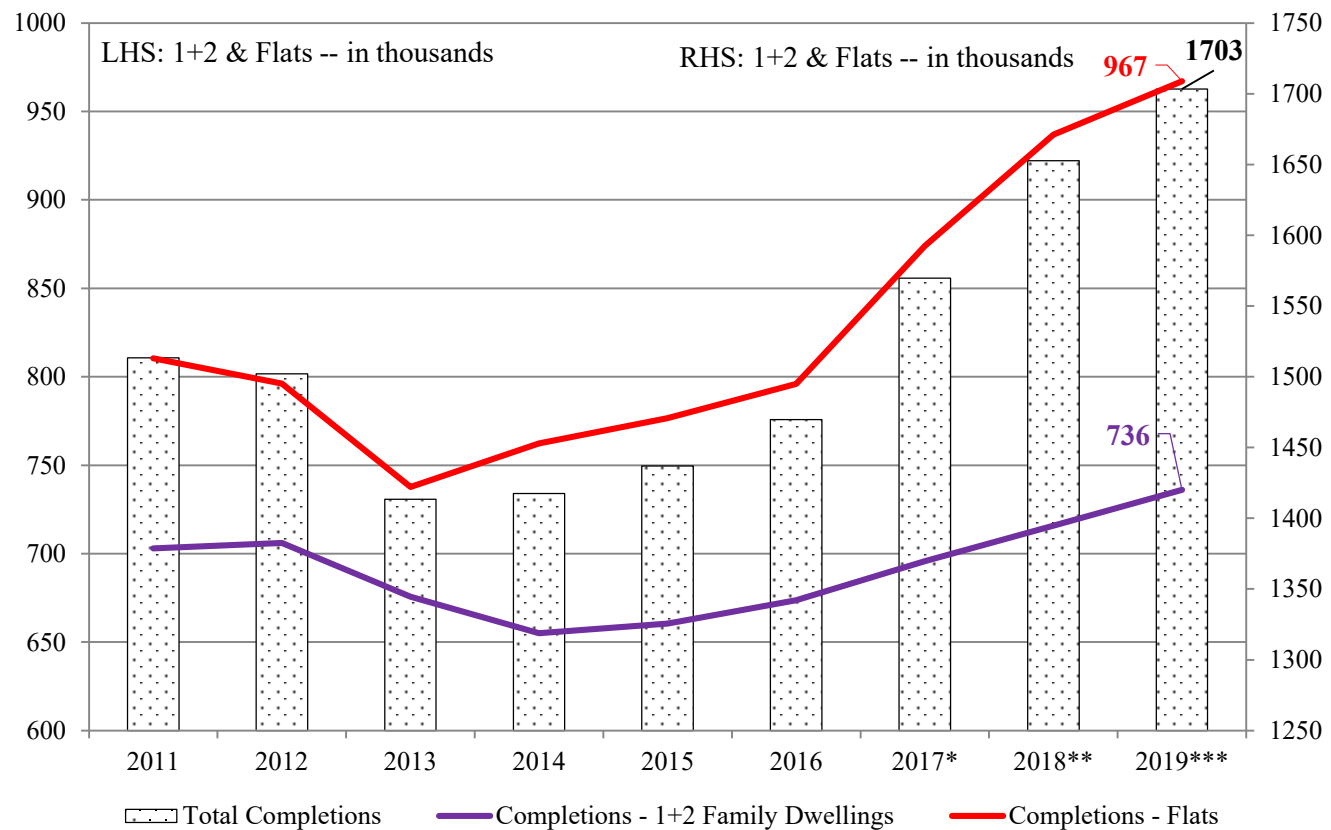
Euroconstruct Region Housing

Housing Starts, Euroconstruct region, 2011-2019



Euroconstruct Region Housing

Housing Completions, Euroconstruct region, 2011-2019



Euroconstruct Region Housing

Top five Euroconstruct region countries for
new construction and remodeling expenditures
(€ billions), 2016-2019

<i>Country</i>	<i>2016e</i>	<i>2017f</i>	<i>2018f</i>	<i>2019f</i>
<i>New construction</i>				
Germany	58.2	62.9	64.7	65.1
UK	48.3	50.5	51.7	52.6
France	39.3	43.1	45.8	46.6
Spain	25.1	27.6	29.4	30.9
Switzerland	21.2	21.3	21.4	21.4
<i>Remodelling</i>				
Germany	118.2	117.6	117.0	116.4
Italy	66.8	68.9	70.2	70.9
France	60.5	62.7	64.9	66.9
UK	39.3	38.7	38.5	38.5
Netherlands	18.1	18.9	19.3	19.6

Euroconstruct Region Housing

Swansong for the construction of 1+2 family homes in Germany

“...the construction of 1+2 family homes (“owner-occupied homes”) has been at a very low level for 10 years now.

...a shortage of land in many areas and a sharp increase in building costs has made the construction of new builds considerably more expensive.

...state subsidies have been cut significantly in recent years; and progressive demographic ageing is already creating major problems for the construction of owner-occupied homes.

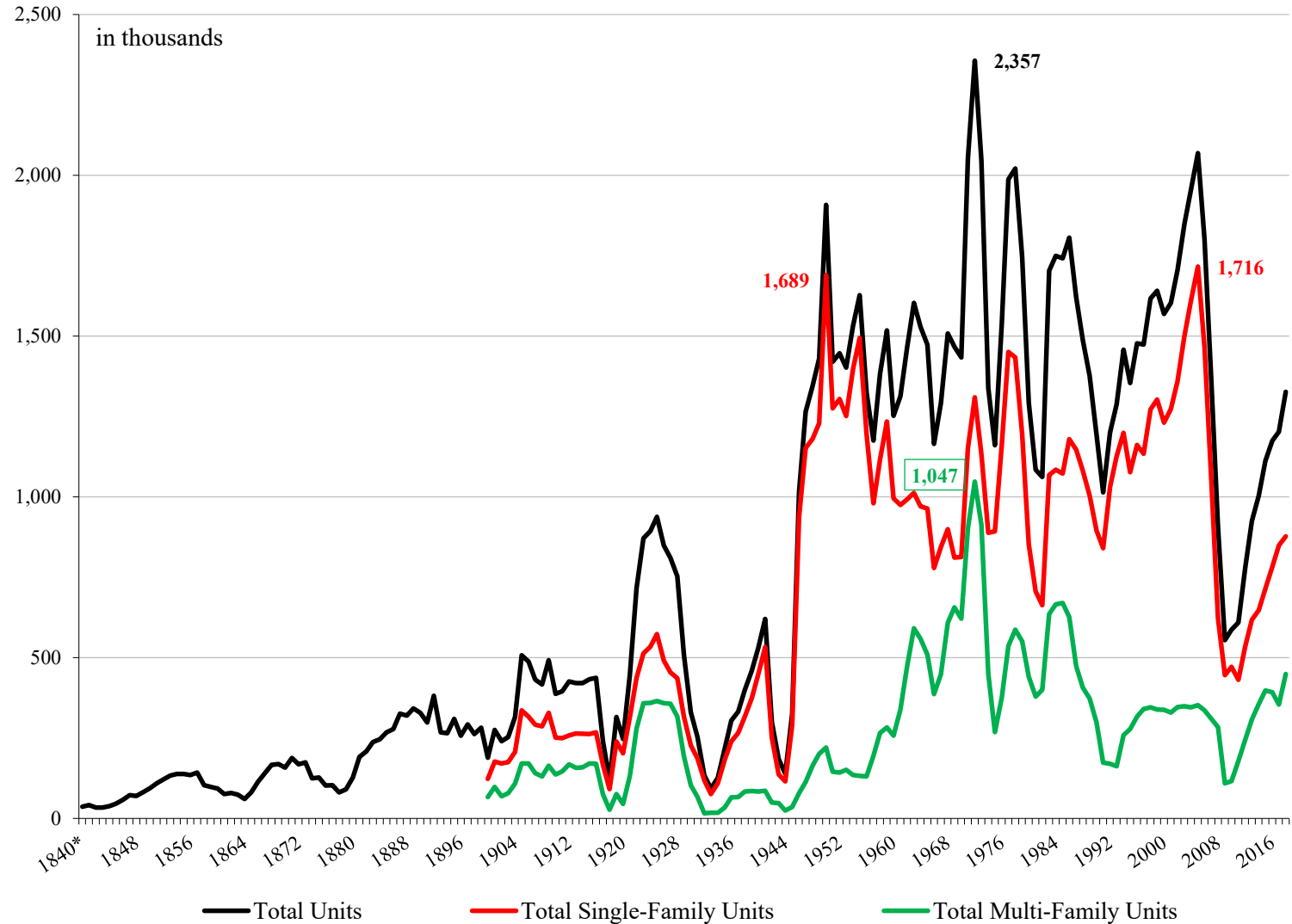
Looking ahead, the owner-occupier pool is expected to shrink further, while more ‘secondhand’ buildings come onto the market due to the rising volume of bequests.

Completion figures for dwellings in 1+2 family buildings can be expected to fall below the 100,000 unit benchmark in the long term as a result.” – Ludwig Dorffmeister, ifo Institute, Leibniz Institute for Economic Research at the University of Munich, EUROCONSTRUCT Germany

Source:

http://www.euroconstruct.org/ec/blog/2017_10?utm_source=2017_10_Newsletter&utm_medium=Newsletter&utm_term=Blog_October_17&utm_campaign=2017_10Blog; 10/12/17

United States Housing: 1840-2017





United States Housing

- Affordability, land, and carpenters remain as hindrances to a robust housing market.
- Regulatory environment often mentioned.
- Relatively few firms build “starter” houses.
- New housing square footage has declined some since Q4 2016
- Manufactured housing – lags far below historical highs
- Stagnant incomes (recent reports indicate this is changing for the better) & Debt

2018 Housing Forecasts*

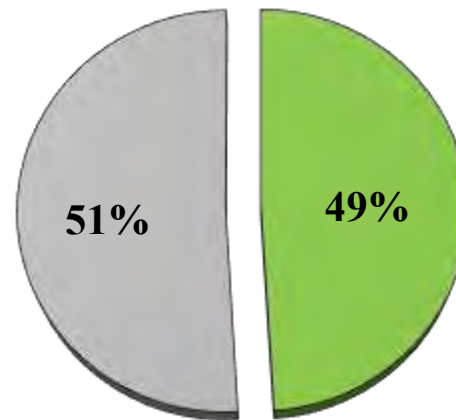
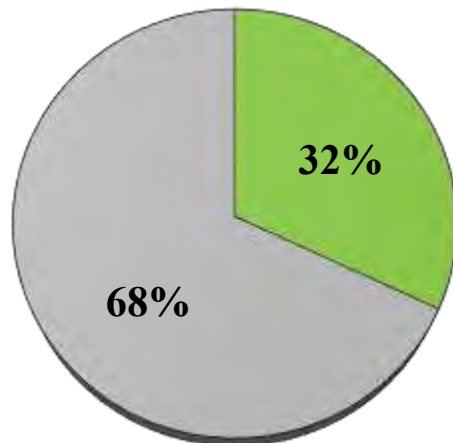
Total starts, range:	1,248 to 1,320	Median: 1,280
Single-family starts, range:	850 to 981	Median: 912
New house sales, range:	653 to 700	Median: 672

2017 Housing Forecasts*

Total starts, range:	1,170 to 1,500	Median: 1,271
Single-family starts, range:	795 to 893	Median: 856
New house sales, range:	610 to 680	Median: 642

* All in thousands of units

New Construction Percentage of Wood Products Consumption

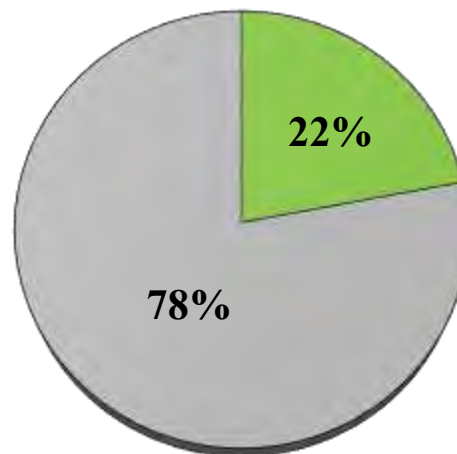


■ All Sawnwood: Total New Housing

■ Other sectors

■ Structural panels: Total New Housing

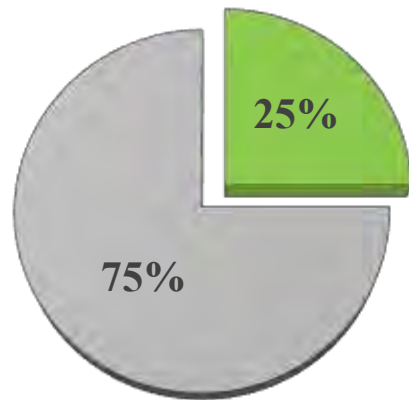
■ Other sectors



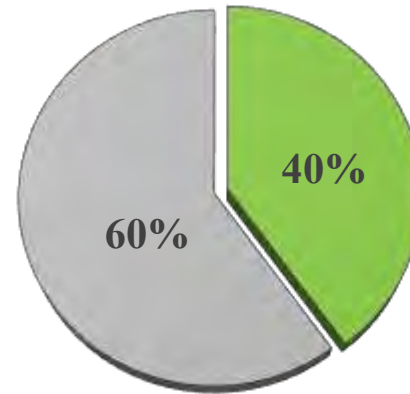
■ Non-structural panels: Total New Housing

■ Other sectors

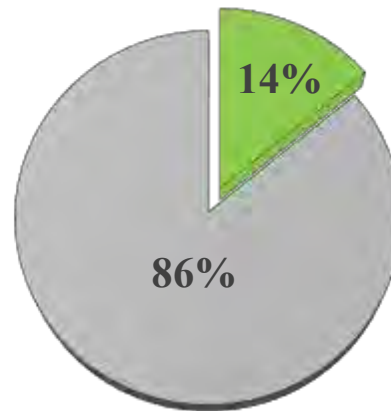
New SF Construction Percentage of Wood Products Consumption



■ All Sawnwood: New SF Housing ■ Other sectors

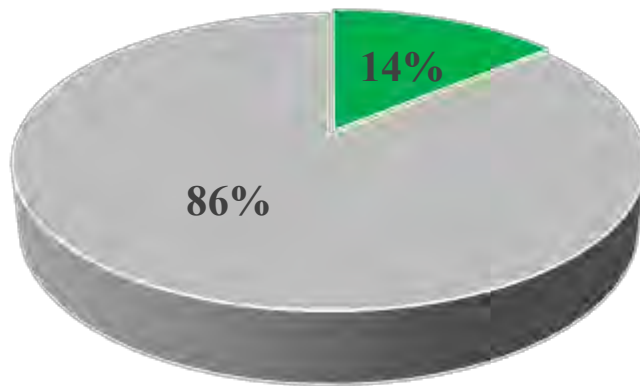


■ Structural panels: New SF Housing

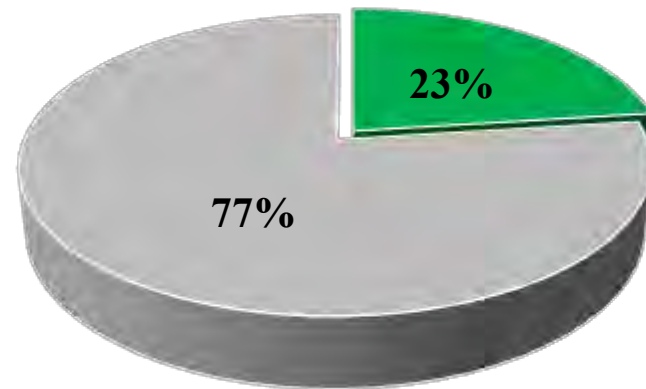


■ Non-structural panels: New SF Housing ■ Other sectors

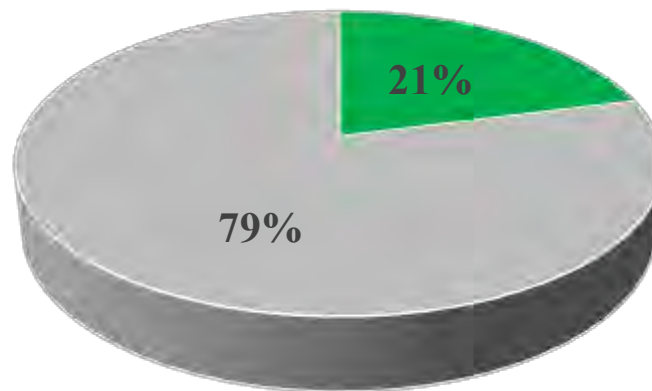
Repair and Remodeling's Percentage of Wood Products Consumption



■ Non-structural panels: RR ■ Other sectors



■ All Sawnwood: RR ■ Other sectors



■ Structural panels: RR ■ Other sectors

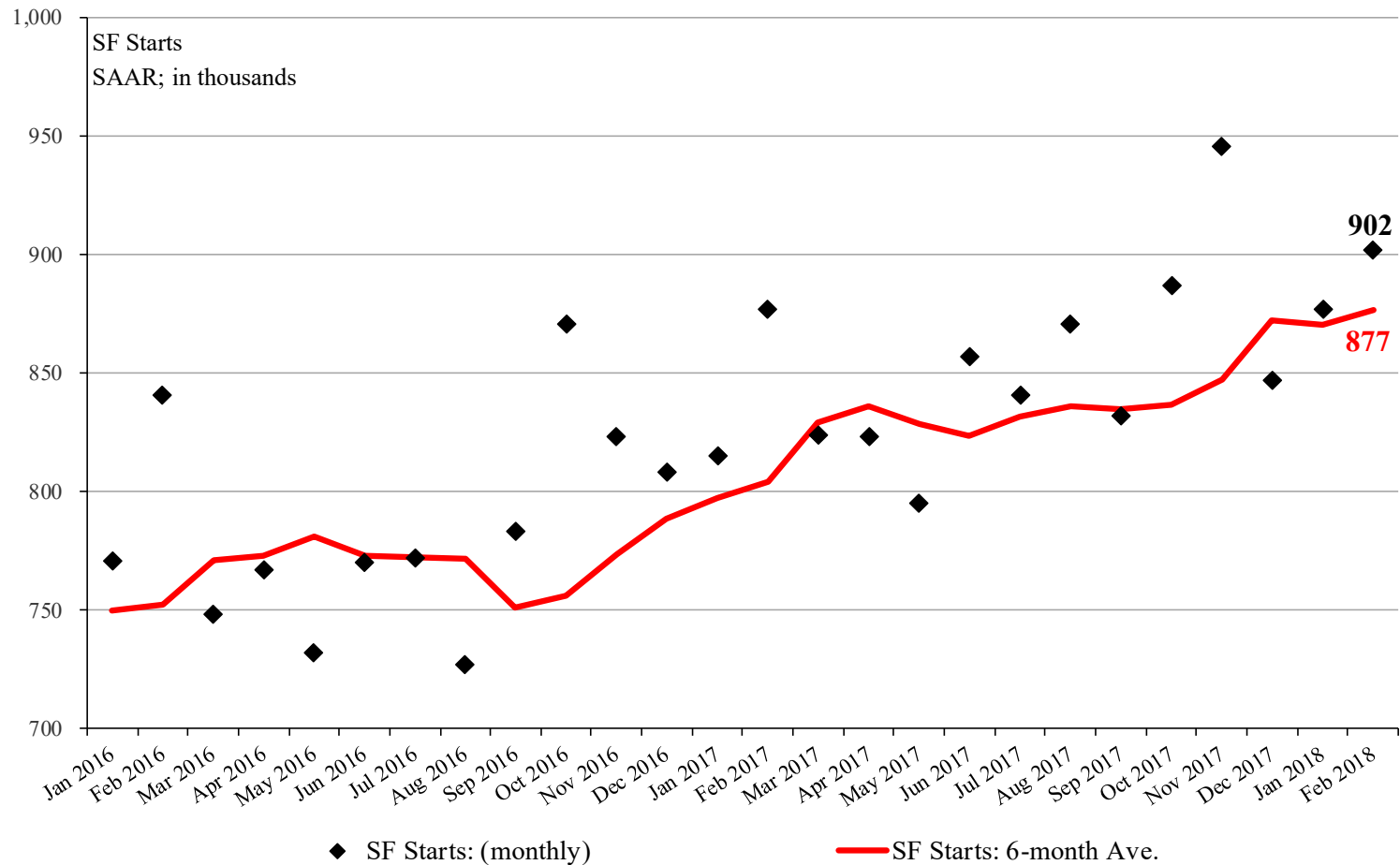
New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
February	1,236,000	902,000	17,000	317,000
January	1,329,000	877,000	12,000	440,000
2017	1,288,000	877,000	19,000	392,000
M/M change	-7.0	2.9	41.7	-28.0
Y/Y change	-4.0	2.9	-10.5	-19.1

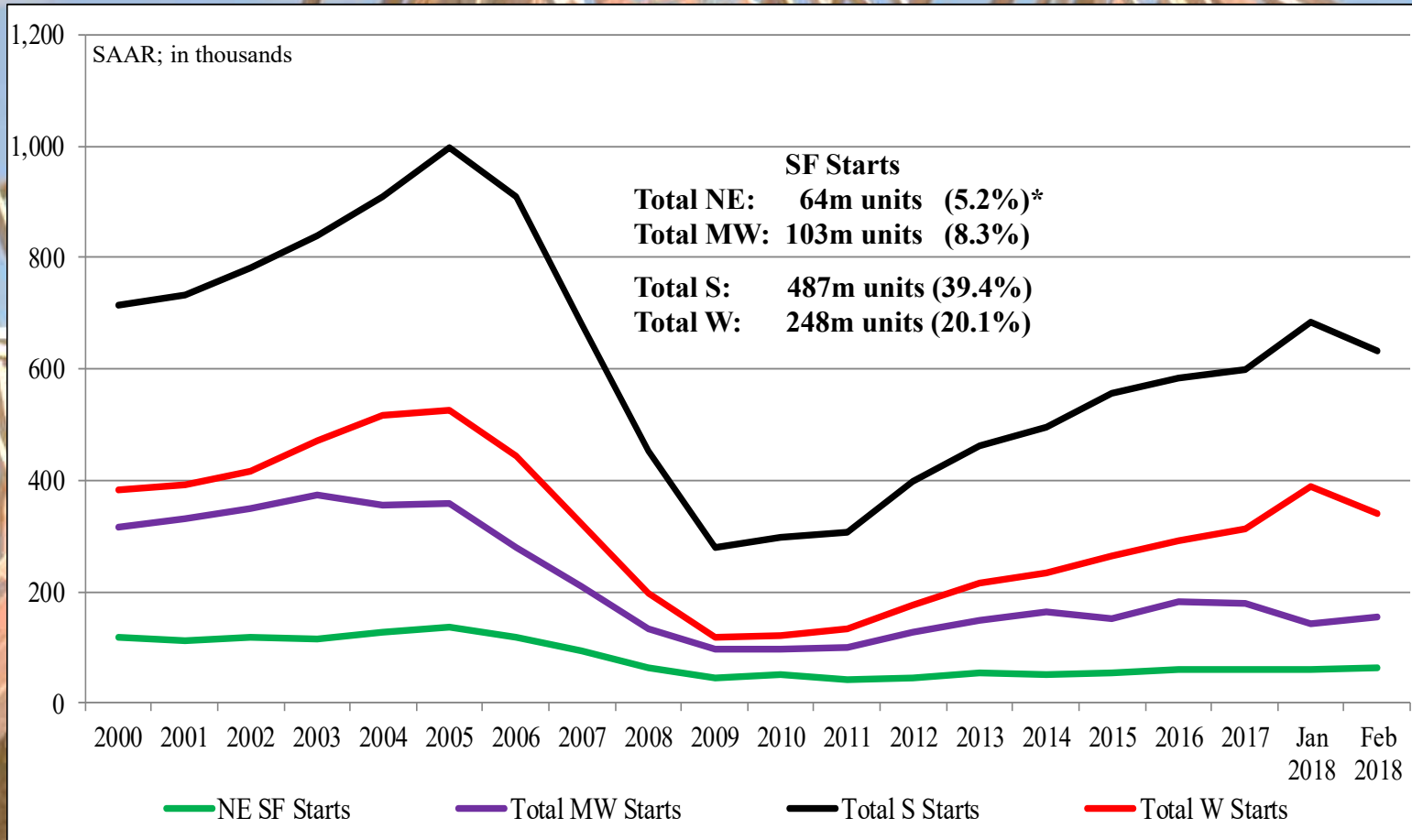
* All start data are presented at a seasonally adjusted annual rate (SAAR).

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

SF Housing Starts: Six-Month Average

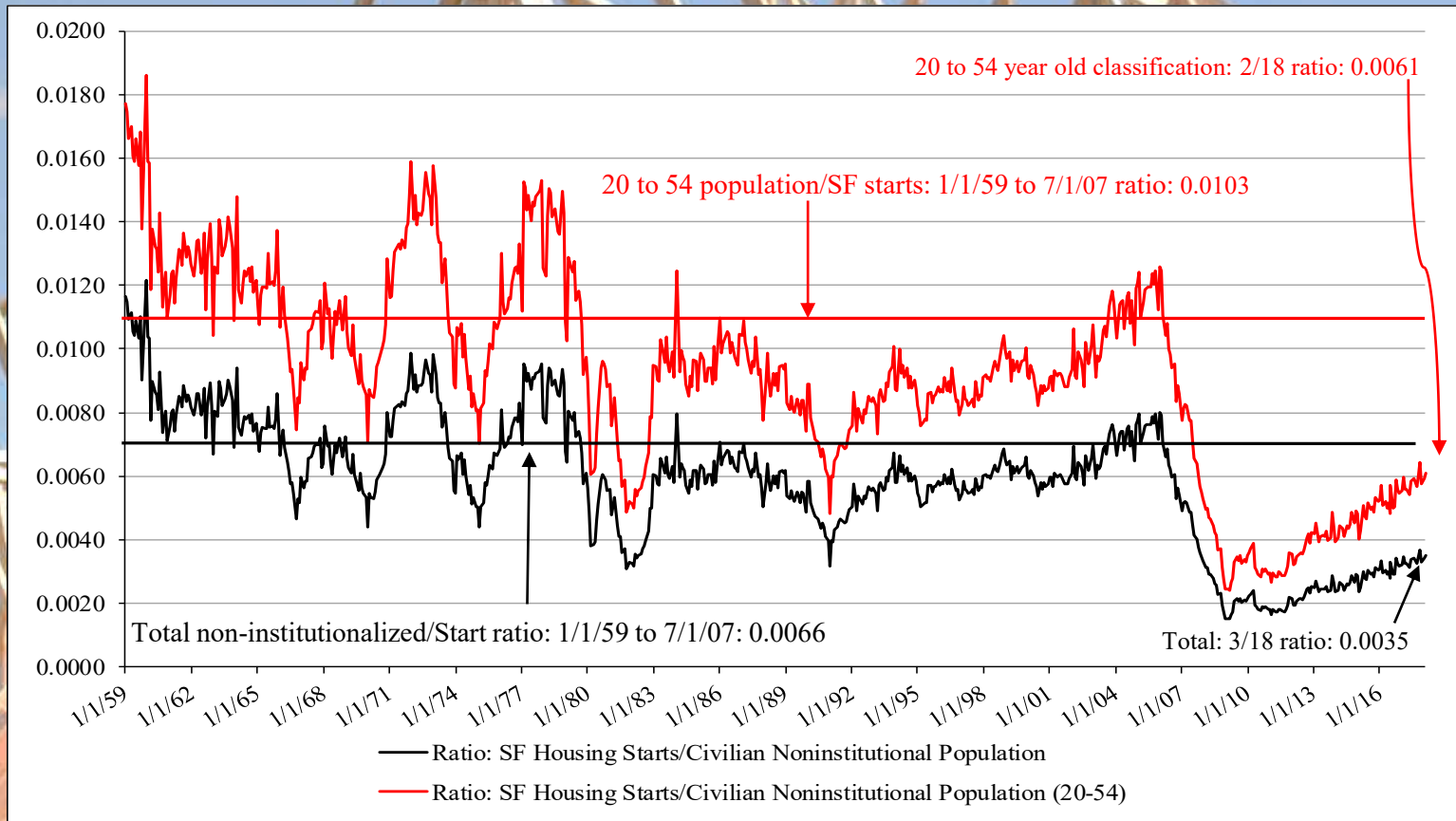


SF Housing Starts by Region



* Percentage of total starts.

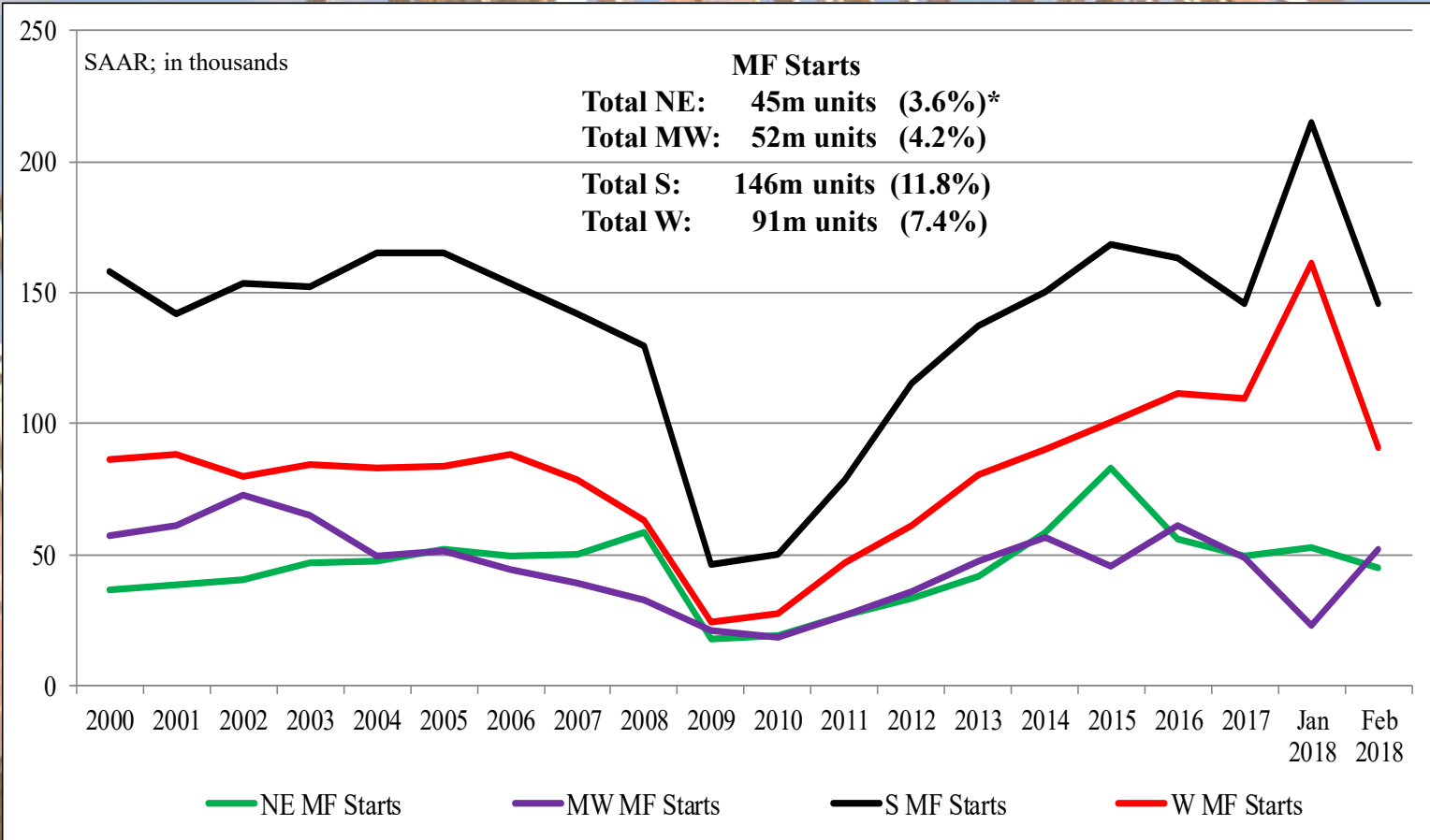
New SF Starts



New SF starts adjusted for the US population

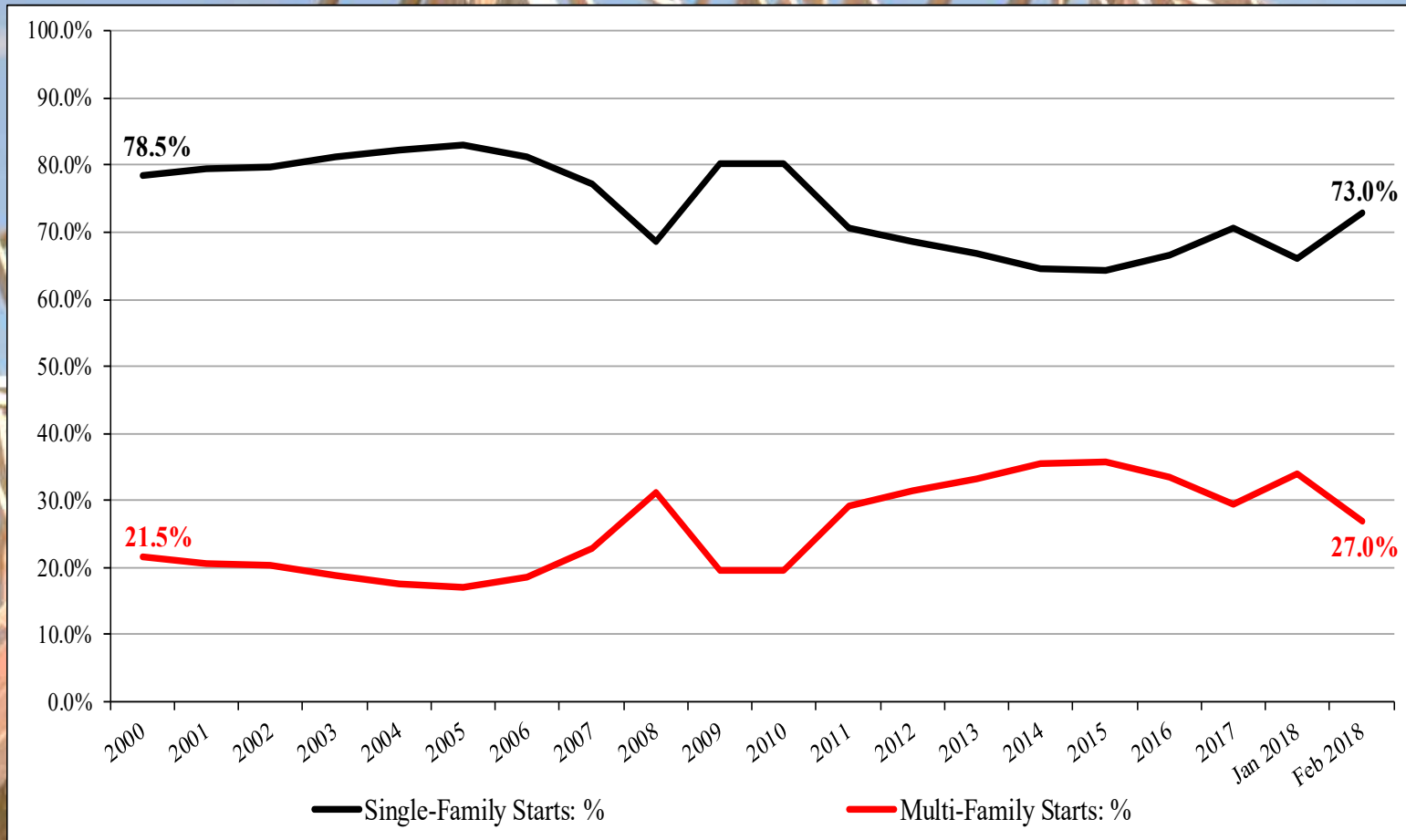
From February 1959 to July 2007, the long-term ratio of new SF starts to the total US non-institutionalized population was 0.0066; in February 2017 it was 0.0035 – an increase from January (0.0034). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in February 2017 it was 0.0061 – also an increase from January (0.0059). From a population worldview, construction is less than what is necessary for changes in population (i.e., under-building).

MF Housing Starts by Region



* Percentage of total starts.

SF & MF Housing Starts (%)

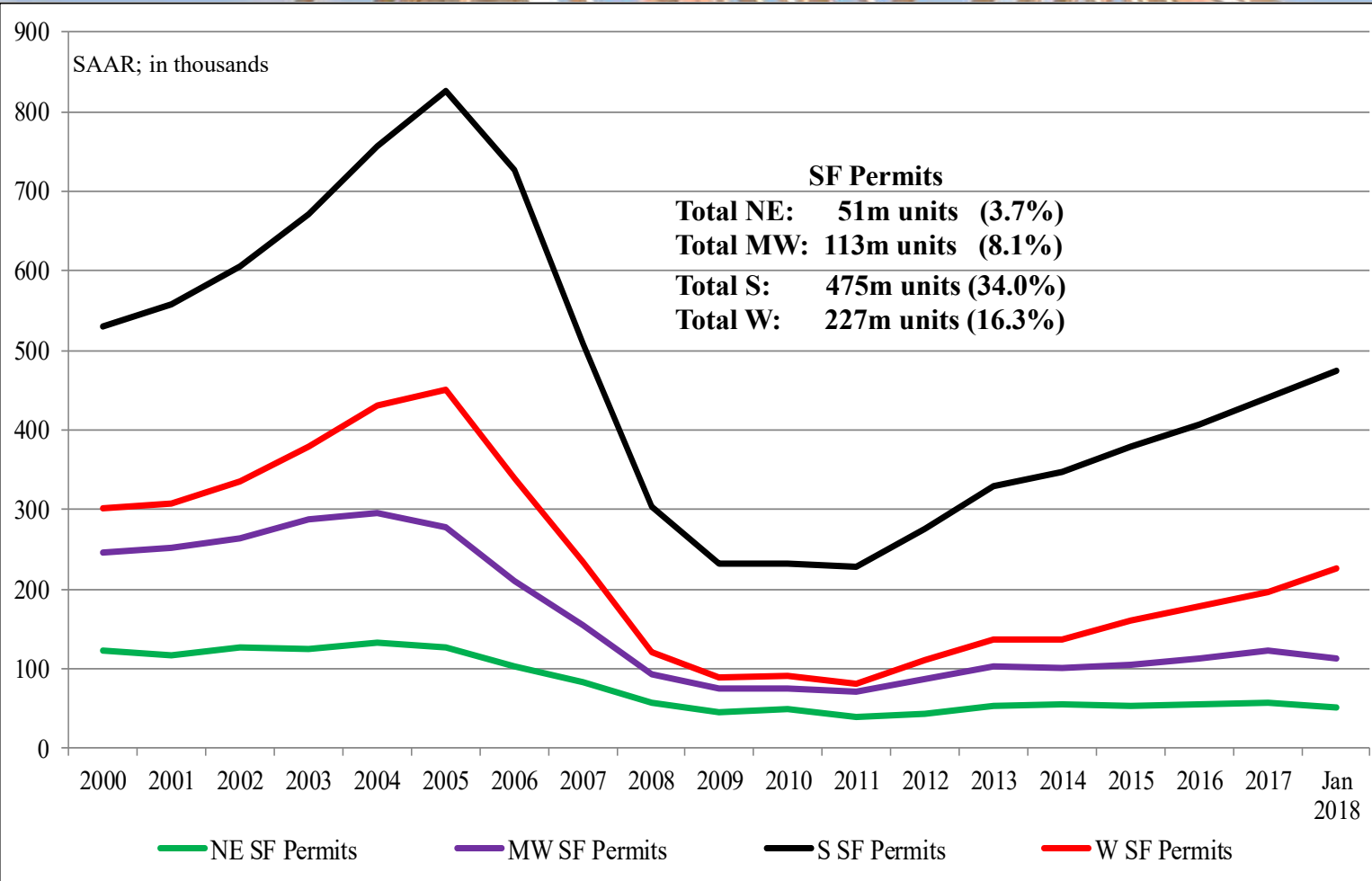


New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
February	1,298,000	872,000	41,000	385,000
January	1,377,000	877,000	48,000	452,000
2017	1,219,000	834,000	45,000	340,000
M/M change	-5.7%	-0.6%	-14.6%	-14.8%
Y/Y change	6.5%	4.6%	-8.9%	13.2%

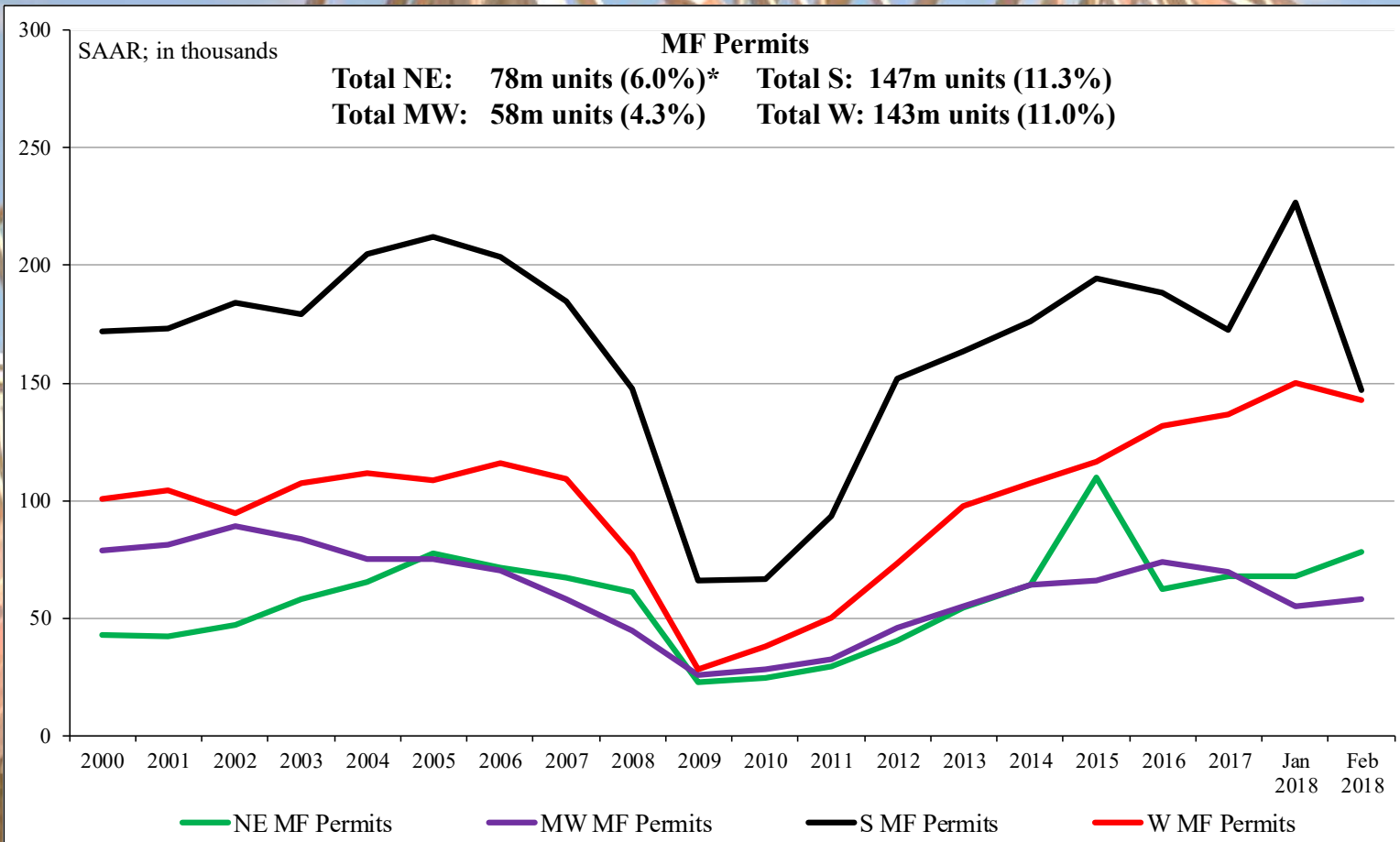
* All permit data are presented at a seasonally adjusted annual rate (SAAR).

SF Housing Permits by Region



* Percentage of total permits.

MF Housing Permits by Region

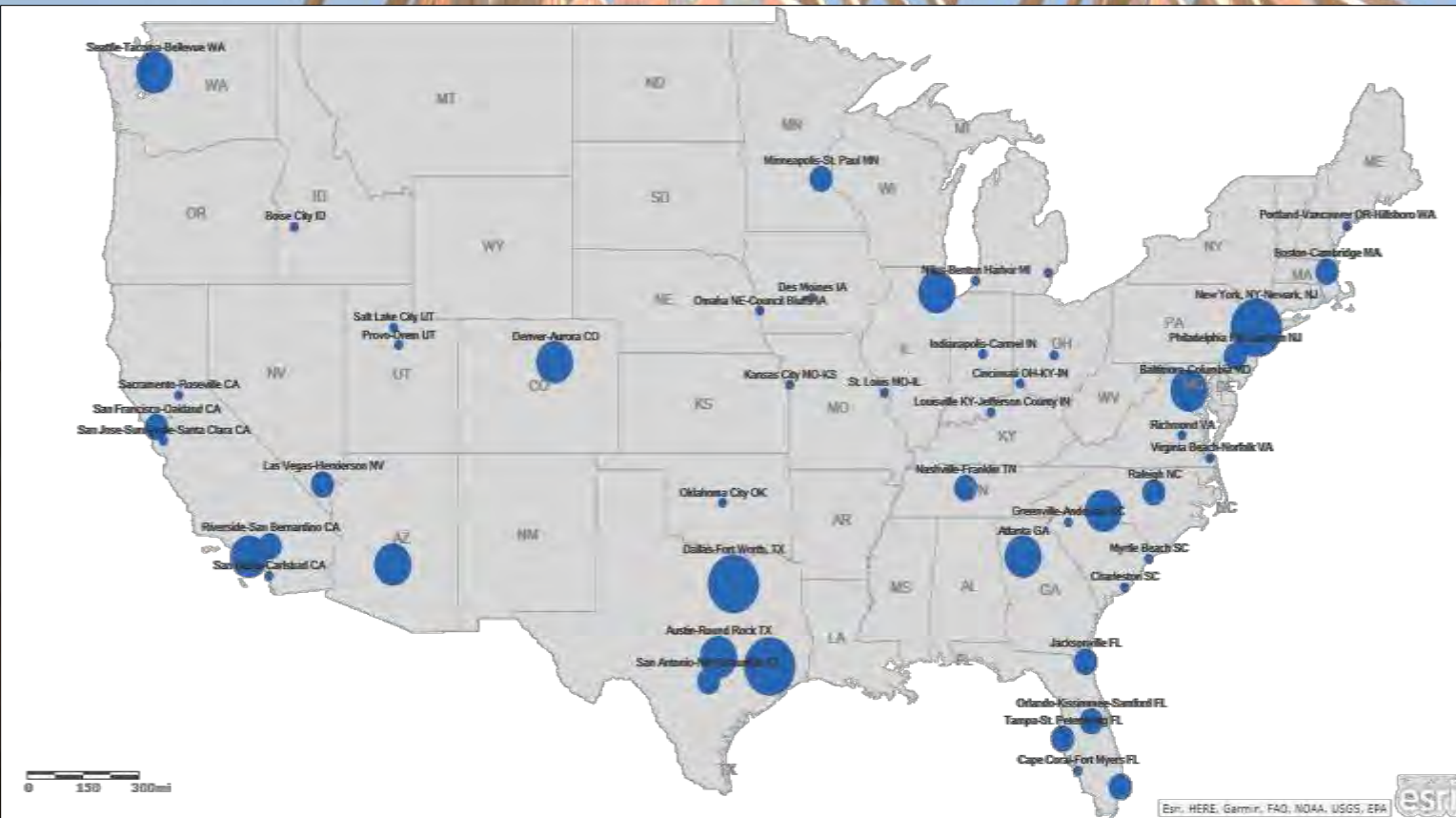


* Percentage of total permits.

Total Housing Permits Issued Top 50 Locations - 2017

Total Housing Permits			Total Housing Permits				
1	Dallas-Fort Worth TX	61,709	5.7%	26	San Diego-Carlsbad CA	10,415	1.0%
2	New York NY-Newark NJ	49,893	4.6%	27	Kansas City MO-KS	10,027	0.9%
3	Houston-The Woodlands TX	42,673	3.9%	28	Detroit-Warren-Dearborn MI	10,011	0.9%
4	Atlanta GA	32,890	3.0%	29	Sacramento-Roseville CA	9,429	0.9%
5	Los Angeles-Long Beach CA	31,198	2.9%	30	Columbus OH	8,759	0.8%
6	Phoenix-Mesa-Scottsdale AZ	29,653	2.7%	31	San Jose-Sunnyvale-Santa Clara CA	8,565	0.8%
7	Seattle-Tacoma-Bellevue WA	27,371	2.5%	32	Niles-Benton Harbor MI	8,171	0.7%
8	Washington-Arlington-Alexandria VA MD WV	26,429	2.4%	33	Indianapolis-Carmel IN	8,114	0.7%
9	Austin-Round Rock TX	25,803	2.4%	34	Boise City ID	7,889	0.7%
10	Denver-Aurora CO	22,547	2.1%	35	Myrtle Beach SC	7,479	0.7%
11	Chicago-Naperville IL	21,869	2.0%	36	Salt Lake City UT	7,423	0.7%
12	Charlotte NC	21,425	2.0%	37	Charleston SC	7,373	0.7%
13	Orlando-Kissimmee-Samford FL	19,432	1.8%	38	Provo-Orem UT	7,237	0.7%
14	Miami-Fort Lauderdale FL	19,296	1.8%	39	St. Louis MO-IL	7,191	0.7%
15	Nashville-Franklin TN	19,292	1.8%	40	Richmond VA	7,118	0.7%
16	San Francisco-Oakland CA	16,977	1.6%	41	Cape Coral-Fort Myers FL	6,943	0.6%
17	Boston-Cambridge MA	14,819	1.4%	42	Baltimore-Columbia MD	6,870	0.6%
18	Minneapolis-St. Paul MN	14,677	1.3%	43	Portland-Vancouver OR-Hillsboro WA	6,684	0.6%
19	Raleigh NC	14,213	1.3%	44	Cincinnati OH-KY-IN	6,311	0.6%
20	Riverside-San Bernardino CA	13,979	1.3%	45	Des Moines IA	6,109	0.6%
21	Las Vegas-Henderson NV	13,902	1.3%	46	Virginia Beach-Norfolk VA	6,095	0.6%
22	Philadelphia PA-Camden NJ	13,299	1.2%	47	Louisville KY-Jefferson County IN	5,746	0.5%
23	Jacksonville FL	12,954	1.2%	48	Oklahoma City OK	5,459	0.5%
24	Tampa-St. Petersburg FL	12,710	1.2%	49	Greenville-Anderson SC	5,403	0.5%
25	San Antonio-New Braunfels TX	12,509	1.1%	50	Omaha NE-Council Bluffs IA	4,974	0.5%

Total Housing Permits Issued Top 50 Locations - 2017

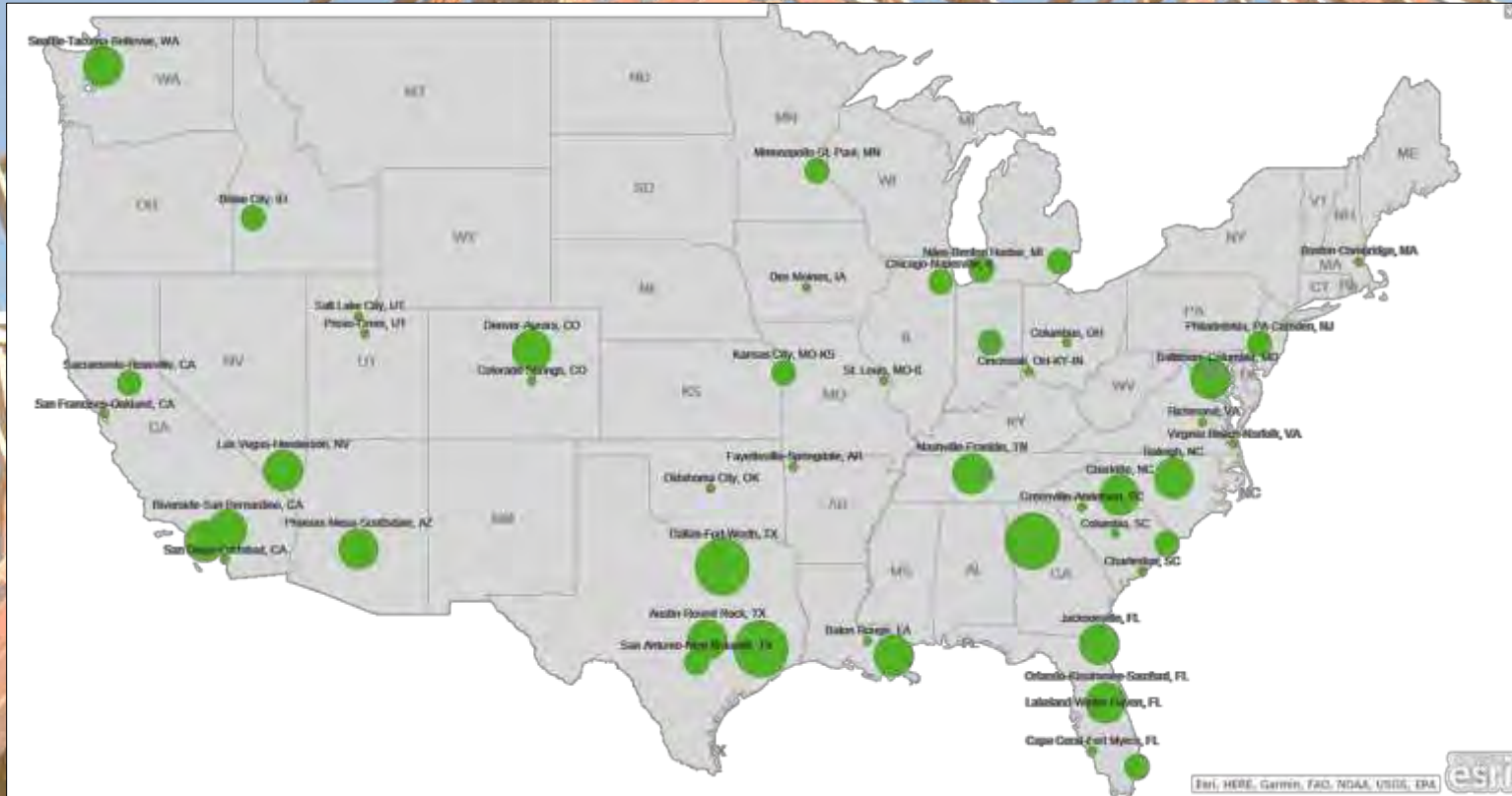


Top 50 MSAs – 71.3% and Top 51 to 100 – 14.5% of total permits. .
Combined: ~ 86 percent of U.S new housing permits.

Single-Family Housing Permits Issued Top 50 Locations - 2017

SF Housing Permits			SF Housing Permits		
1	Houston-The Woodlands TX	36,601 5.5%	26	Boise City ID	6,250 0.9%
2	Dallas-Fort Worth TX	34,210 5.1%	27	Indianapolis-Carmel IN	6,205 0.9%
3	Atlanta GA	24,849 3.7%	28	Niles-Benton Harbor MI	5,981 0.9%
4	Phoenix-Mesa-Scottsdale AZ	20,551 3.1%	29	Kansas City MO-KS	5,932 0.9%
5	Austin-Round Rock TX	15,206 2.3%	30	St. Louis MO-IL	5,538 0.8%
6	Orlando-Kissimmee-Samford FL	14,766 2.2%	31	Oklahoma City OK	5,167 0.8%
7	Charlotte NC	13,974 2.1%	32	Boston-Cambridge MA	5,093 0.8%
8	Washington-Arlington-Alexandria VA MD WV	13,968 2.1%	33	Provo-Orem UT	5,082 0.8%
9	Nashville-Franklin TN	12,625 1.9%	34	Baltimore-Columbia MD	5,005 0.8%
10	Denver-Aurora CO	10,937 1.6%	35	Salt Lake City UT	4,954 0.7%
11	Raleigh NC	10,785 1.6%	36	Cape Coral-Fort Myers FL	4,830 0.7%
12	Los Angeles-Long Beach CA	10,612 1.6%	37	San Francisco-Oakland CA	4,756 0.7%
13	New Orleans LA	10,549 1.6%	38	Charleston SC	4,710 0.7%
14	Riverside-San Bernardino CA	10,089 1.5%	39	Richmond VA	4,603 0.7%
15	Seattle-Tacoma-Bellevue WA	9,943 1.5%	40	Greenville-Anderson SC	4,427 0.7%
16	Jacksonville FL	9,829 1.5%	41	Cincinnati OH-KY-IN	4,425 0.7%
17	Las Vegas-Henderson NV	9,796 1.5%	42	Virginia Beach-Norfolk VA	4,287 0.6%
18	Minneapolis-St. Paul MN	8,673 1.3%	43	Columbus OH	4,166 0.6%
19	Chicago-Naperville IL	8,299 1.2%	44	Columbia SC	4,156 0.6%
20	San Antonio-New Braunfels TX	7,513 1.1%	45	San Diego-Carlsbad CA	4,058 0.6%
21	Philadelphia PA-Camden NJ	7,278 1.1%	46	Lakeland-Winter Haven FL	3,897 0.6%
22	Sacramento-Roseville CA	6,816 1.0%	47	Colorado Springs CO	3,852 0.6%
23	Detroit-Warren-Dearborn MI	6,771 1.0%	48	Des Moines IA	3,704 0.6%
24	Miami-Fort Lauderdale FL	6,642 1.0%	49	Baton Rouge LA	3,560 0.5%
25	Myrtle Beach SC	6,424 1.0%	50	Fayetteville-Springdale AR	3,469 0.5%

Single-Family Housing Permits Issued Top 50 Locations - 2017



Top 50 MSAs – 67.0% and Top 51 to 100 – 16.7% of total SF permits. .
Combined: ~ 84 percent of U.S new housing SF permits

Multi-Family Housing Permits Issued Top 50 Locations - 2017

MF Housing Permits			MF Housing Permits		
1	New York NY-Newark NJ	39,344 9.3%	26	Las Vegas-Henderson NV	4,106 1.0%
2	Dallas-Fort Worth TX	27,499 6.5%	27	Kansas City MO-KS	4,095 1.0%
3	Los Angeles-Long Beach CA	20,586 4.9%	28	Riverside-San Bernardino CA	3,890 0.9%
4	Seattle-Tacoma-Bellevue WA	17,428 4.1%	29	Raleigh NC	3,428 0.8%
5	Chicago-Naperville IL	13,570 3.2%	30	Detroit-Warren-Dearborn MI	3,240 0.8%
6	Miami-Fort Lauderdale FL	12,654 3.0%	31	Jacksonville FL	3,125 0.7%
7	Washington-Arlington-Alexandria VA MD WV	12,461 3.0%	32	Madison WI	3,025 0.7%
8	San Francisco-Oakland CA	12,221 2.9%	33	Charleston SC	2,663 0.6%
9	Denver-Aurora CO	11,610 2.8%	34	Sacramento-Roseville CA	2,613 0.6%
10	Austin-Round Rock TX	10,597 2.5%	35	Richmond VA	2,515 0.6%
11	Portland-Vancouver OR-Hillsboro WA	10,337 2.5%	36	Reno NV	2,473 0.6%
12	Boston-Cambridge MA	9,726 2.3%	37	Salt Lake City UT	2,469 0.6%
13	Phoenix-Mesa-Scottsdale AZ	9,102 2.2%	38	Des Moines IA	2,405 0.6%
14	Atlanta GA	8,041 1.9%	39	Louisville KY-Jefferson County IN	2,349 0.6%
15	Charlotte NC	7,451 1.8%	40	Niles-Benton Harbor MI	2,190 0.5%
16	Nashville-Franklin TN	6,667 1.6%	41	Provo-Orem UT	2,155 0.5%
17	San Diego-Carlsbad CA	6,357 1.5%	42	Cape Coral-Fort Myers FL	2,113 0.5%
18	Houston-The Woodlands TX	6,072 1.4%	43	Milwaukee-Waukesha WI	2,024 0.5%
19	Philadelphia PA-Camden NJ	6,021 1.4%	44	College Station-Bryan TX	1,928 0.5%
20	Minneapolis-St. Paul MN	6,004 1.4%	45	Indianapolis-Carmel IN	1,909 0.5%
21	San Jose-Sunnyvale-Santa Clara CA	5,947 1.4%	46	Spokane-Spokane Valley WA	1,904 0.5%
22	Tampa-St. Petersburg FL	5,641 1.3%	47	Cincinnati OH-KY-IN	1,886 0.4%
23	San Antonio-New Braunfels TX	4,996 1.2%	48	Baltimore-Columbia MD	1,865 0.4%
24	Orlando-Kissimmee-Samford FL	4,666 1.1%	49	Virginia Beach-Norfolk VA	1,808 0.4%
25	Columbus OH	4,593 1.1%	50	Omaha NE-Council Bluffs IA	1,802 0.4%

New Single-Family House Sales

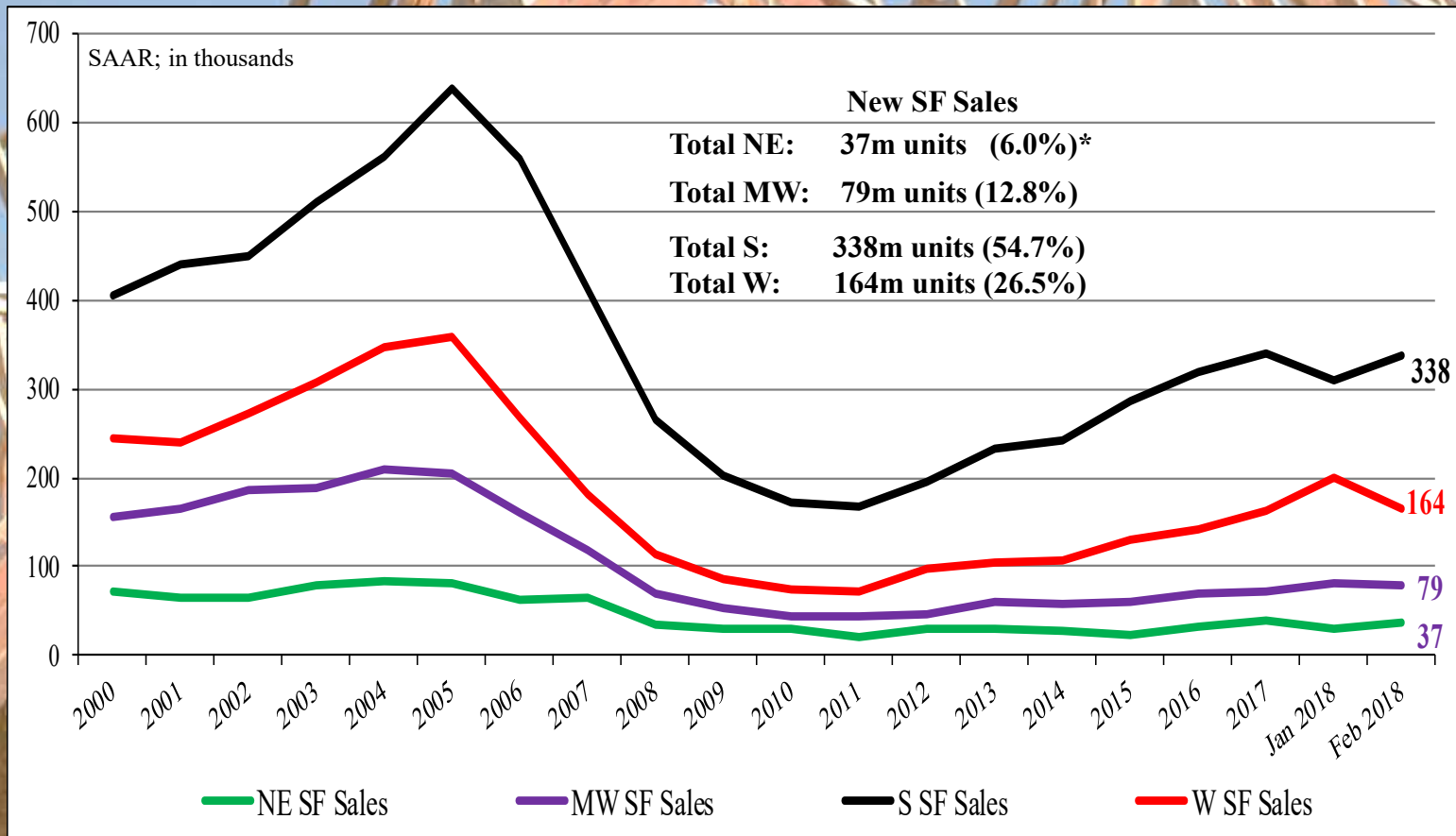
	New SF Sales*	Median Price	Mean Price	Month's Supply
February	618,000	\$326,800	\$376,700	5.9
January	622,000	\$324,900	\$377,100	5.8
2017	615,000	\$298,000	\$370,500	5.1
M/M change	-0.6%	0.6%	-0.1%	1.7%
Y/Y change	0.5%	0.0%	8.8%	-8.1%

* 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 minimally less than the consensus forecast (620 m)³, due to subpar sales in the South. The past three month's new SF sales data were revised substantially downward:

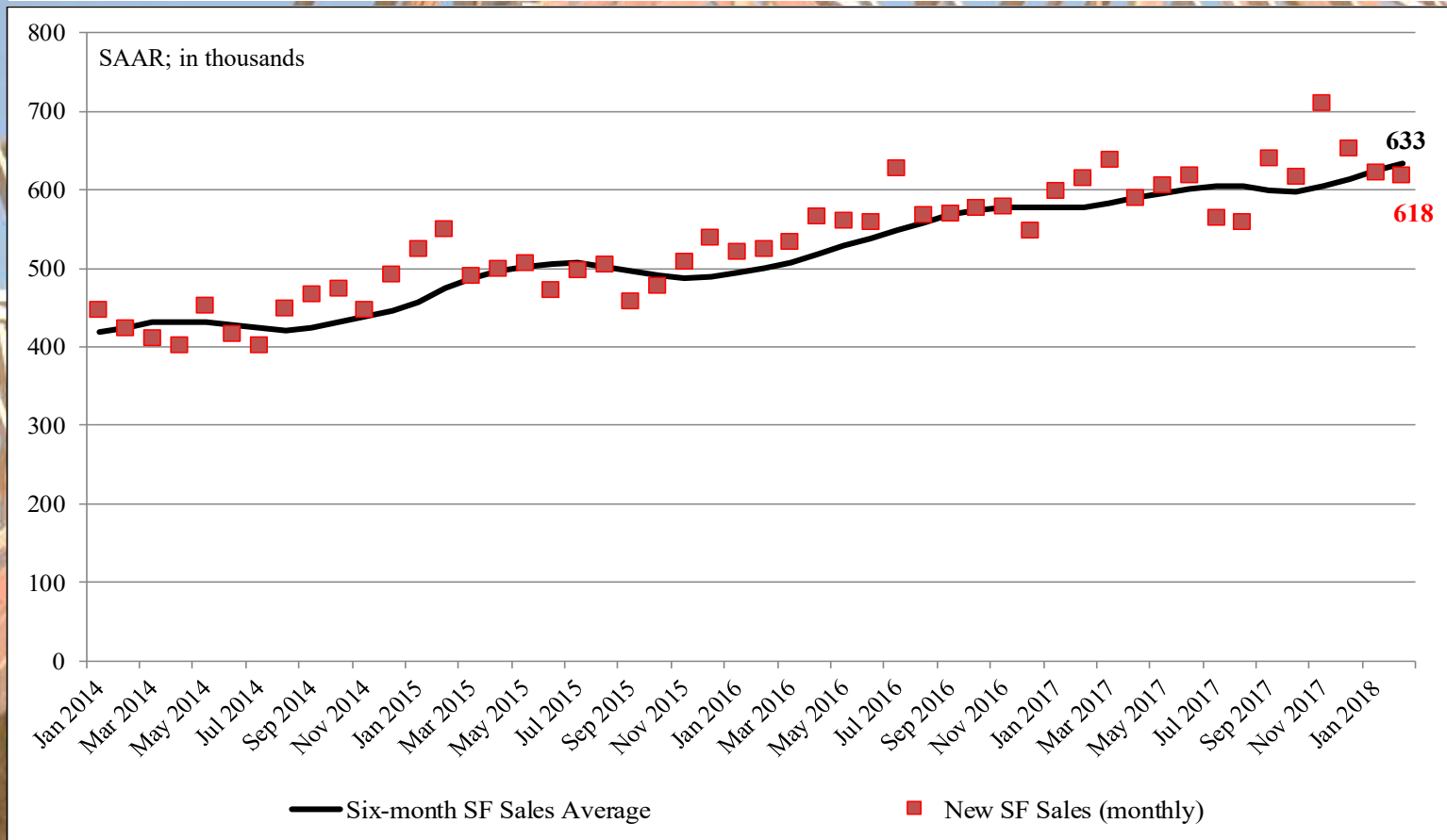
November initial:	733 m revised to 711 m;
December initial:	625 m revised to 653 m;
January initial:	593 m revised to 622 m.

New SF House Sales by Region

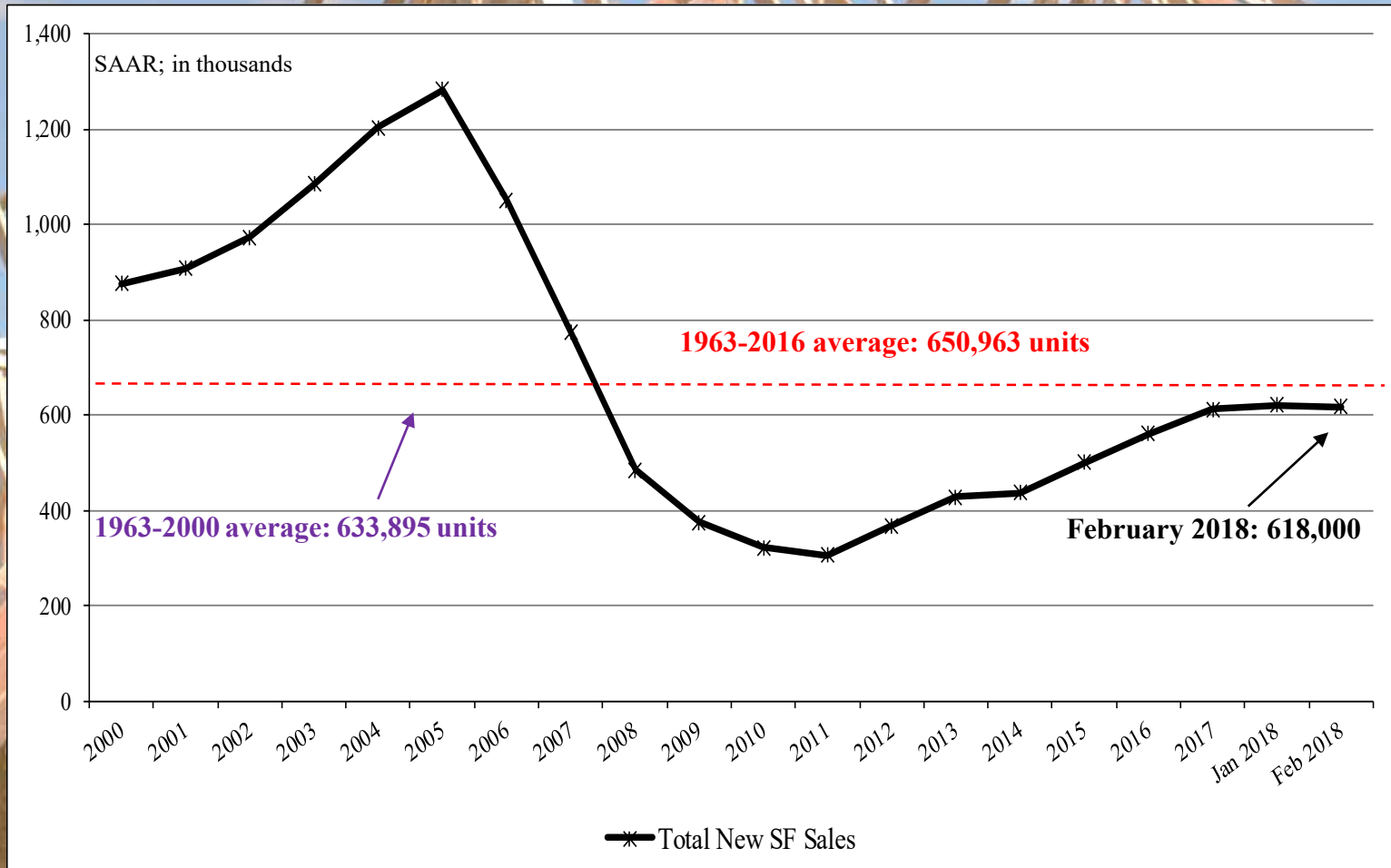


* Percentage of total new sales.

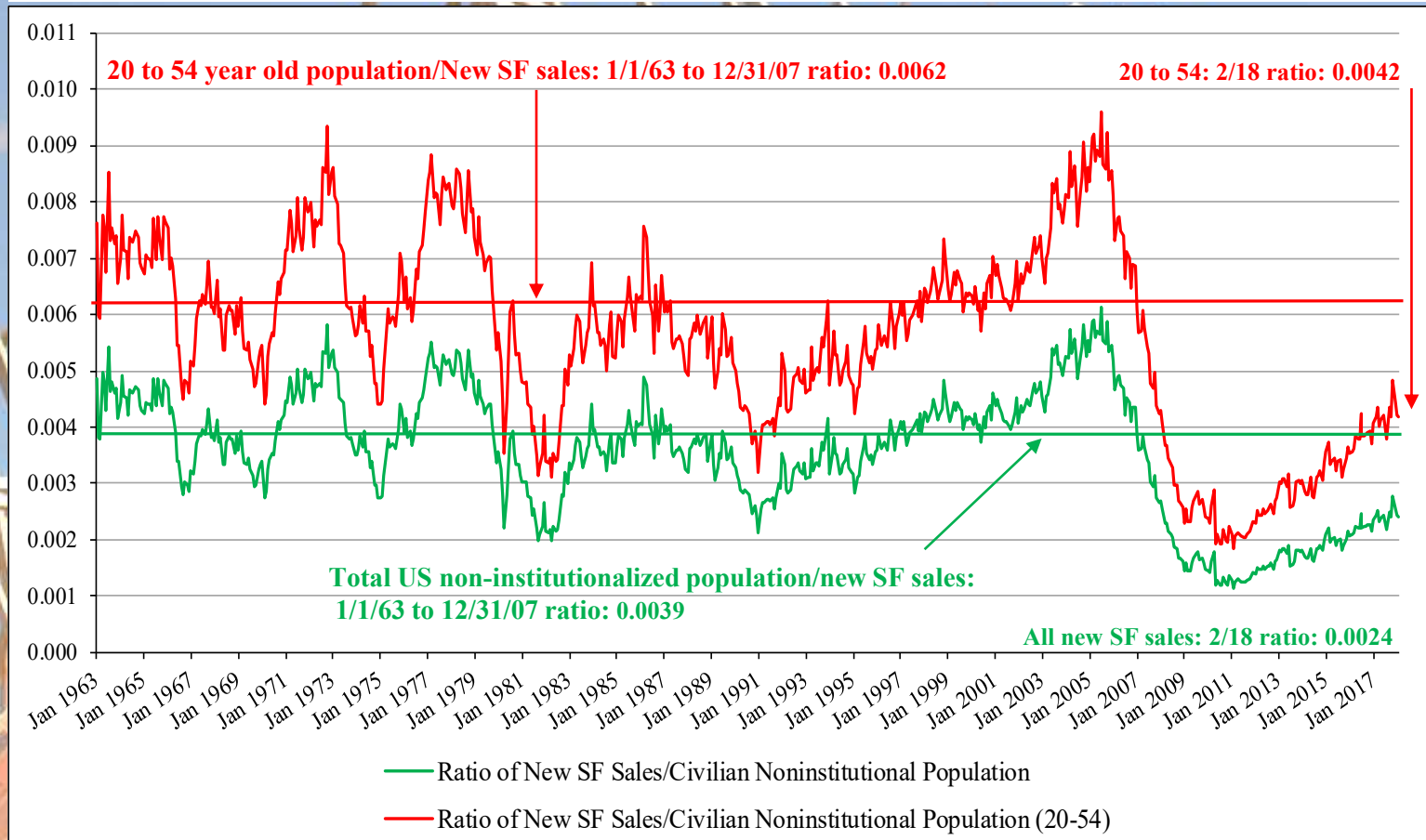
New SF Housing Sales: Six-month average & monthly



New SF House Sales



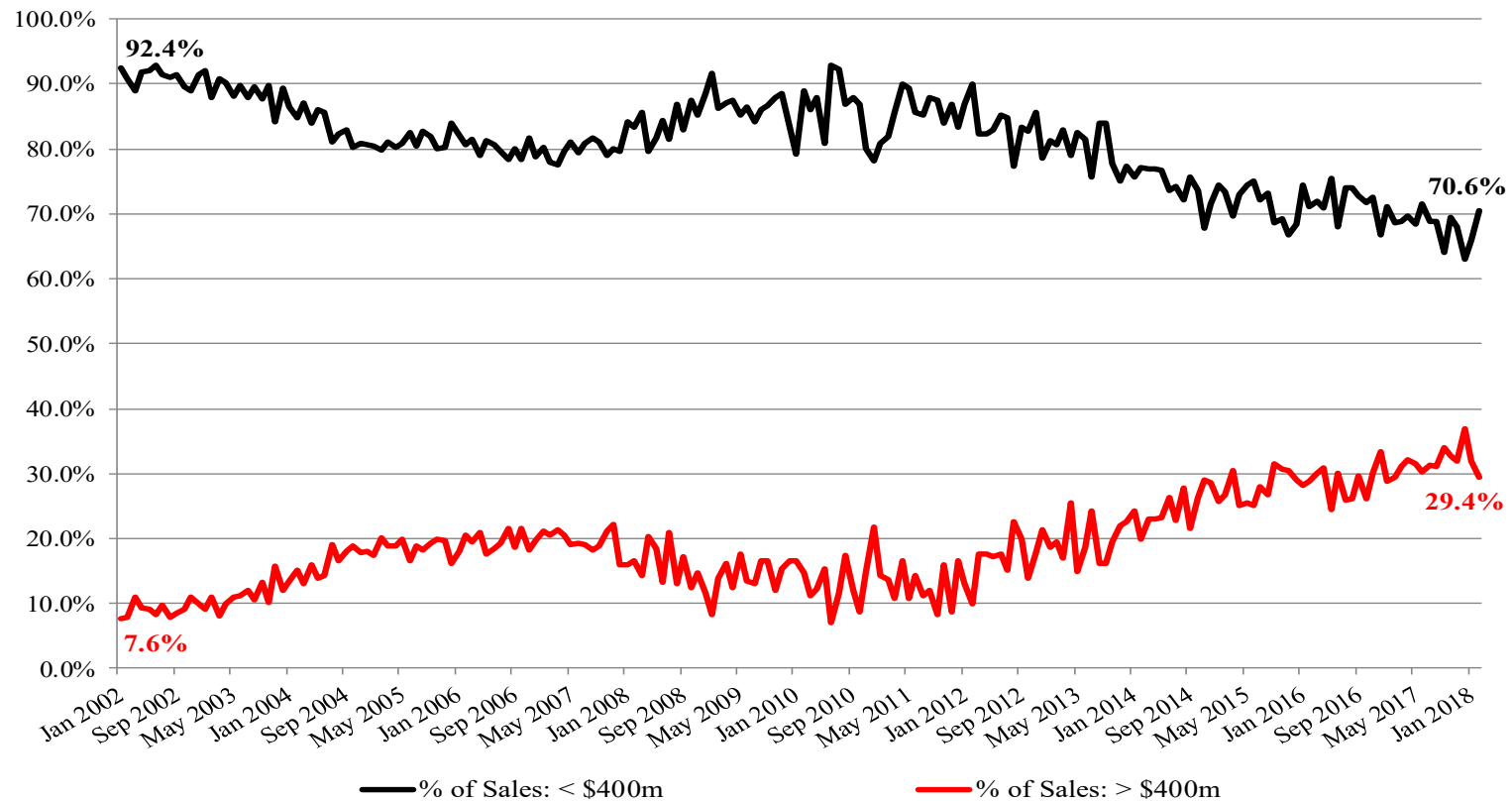
New SF House Sales



New SF sales adjusted for the US population

From February 1963 to November 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in February 2018 it was 0.0024 – no change from January. The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in February 2018 it was 0.0042 – also no change from January. All are non-adjusted data. From a population viewpoint, construction is less than what is necessary for changes in population (i.e., under-building).

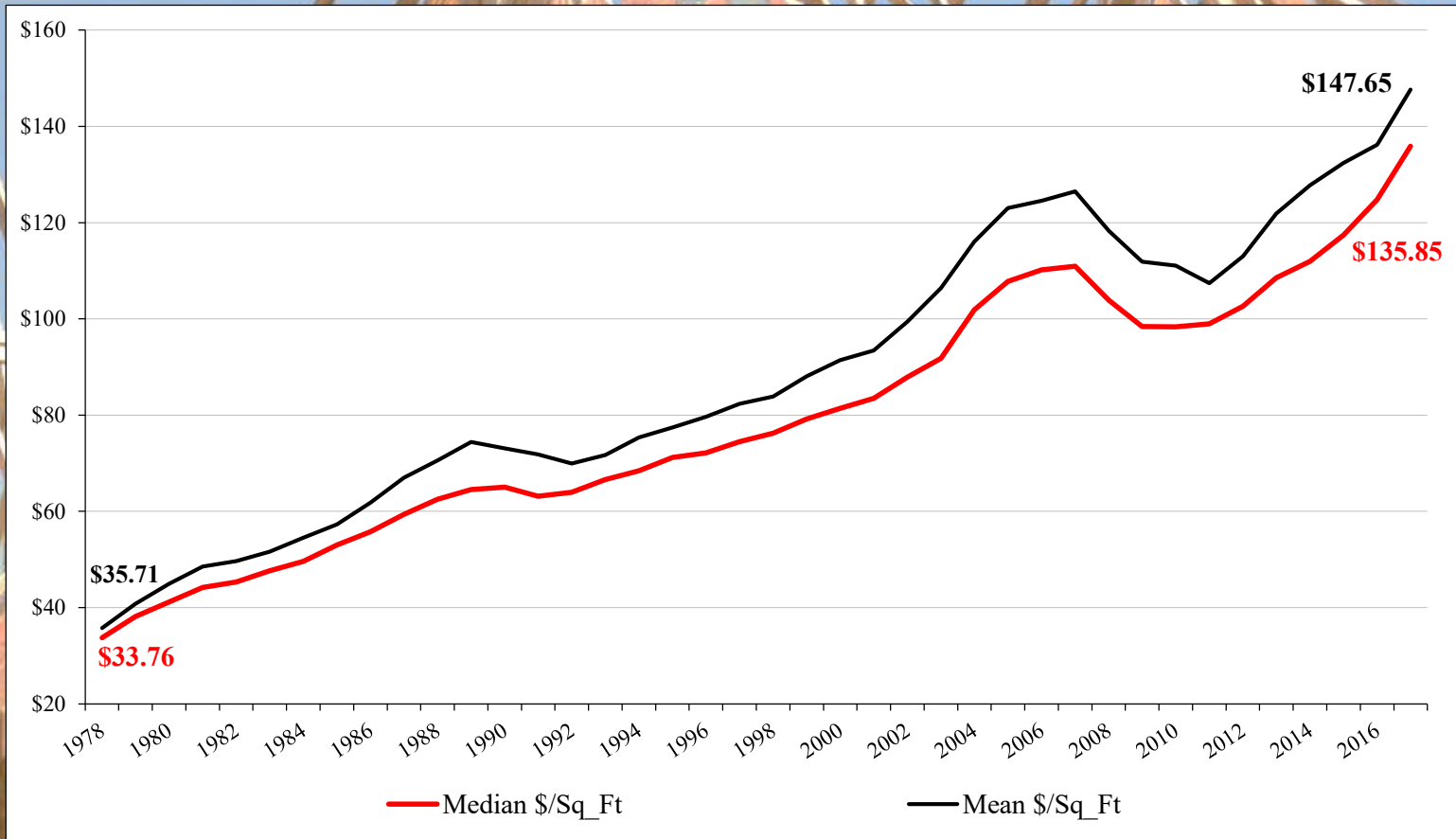
New SF House Sales



New SF Sales: 2002 – February 2018

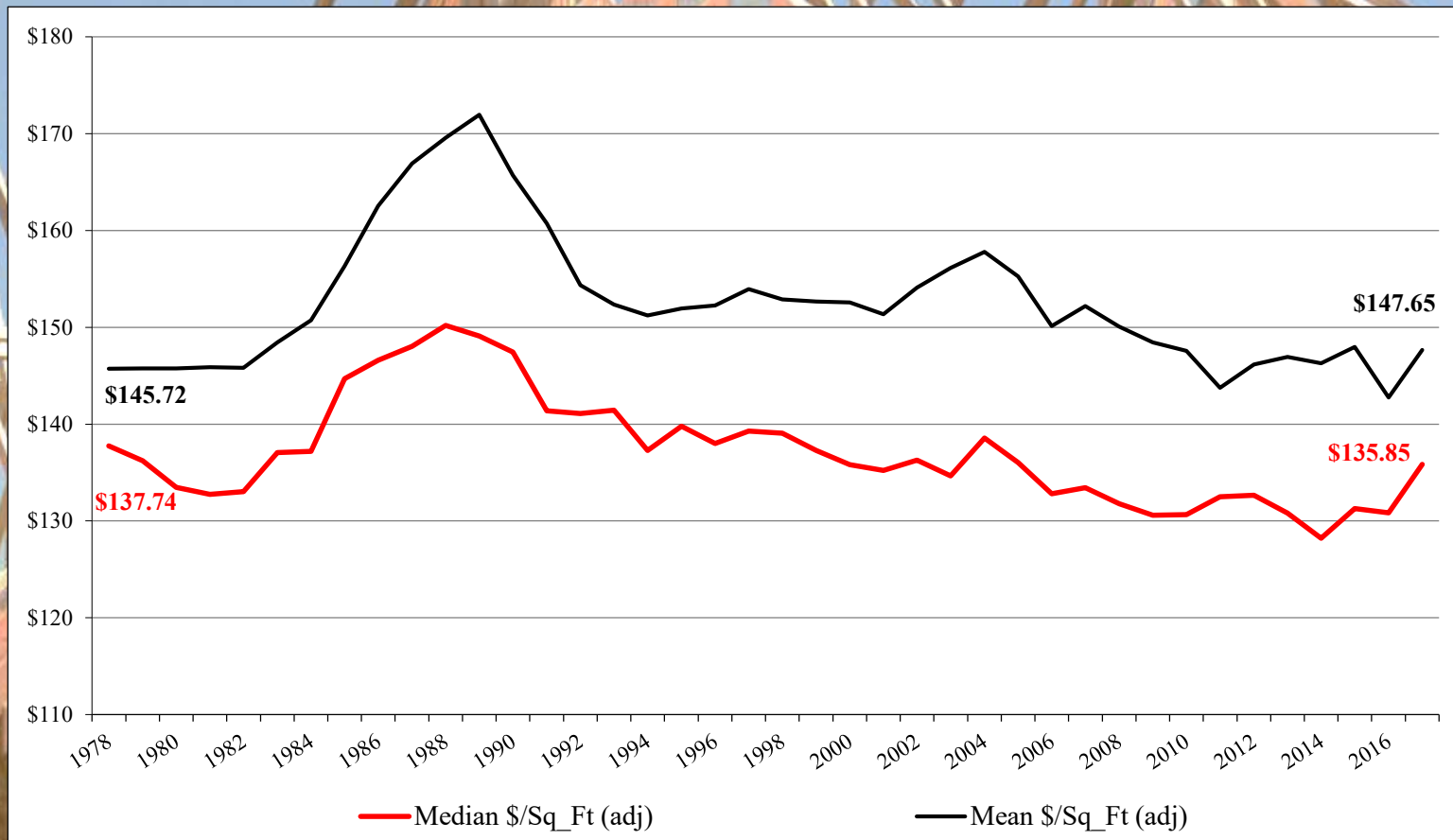
The sales share of \$400 thousand plus SF houses is presented above^{1,2}. Since the beginning of 2012, the upper priced houses have and are garnering a greater percentage of sales. A decreasing spread indicates that more high-end luxury homes are being sold. Several reasons are offered by industry analysts;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

New SF House Sales: Nominal Price per Square Foot



New Single-Family Housing Sold Including Lot Value

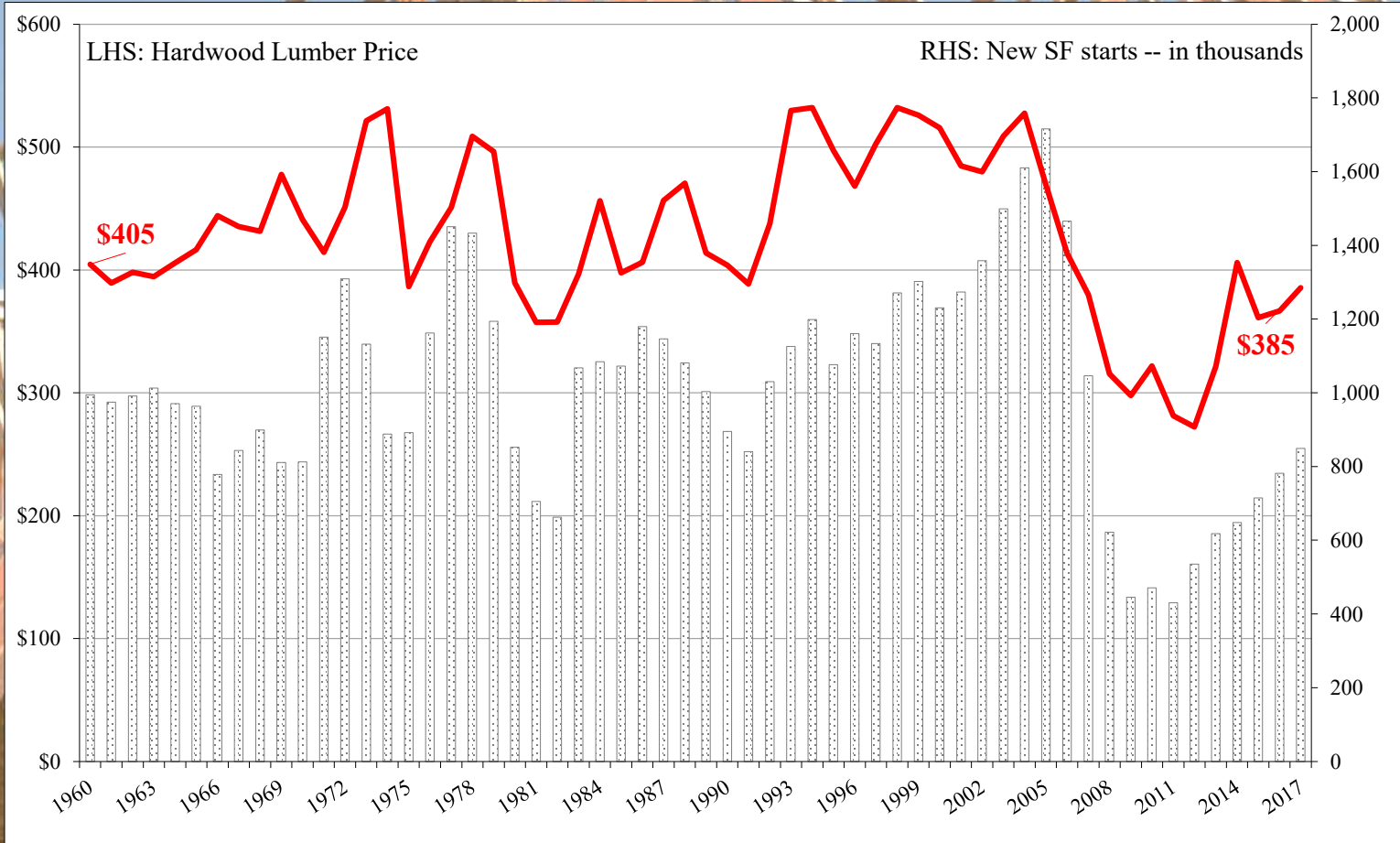
New SF House Sales: Adjusted Price per Square Foot



Price Deflator (Fisher) Index of New Single-Family Sold Including Lot Value

[2005 = 100.0. Index based on kinds of houses sold in 2005]

New SF House Sales & Adjusted #1C Hardwood Price



Hardwood prices courtesy of Bill Luppold – Research Economist, USDA Forest Service

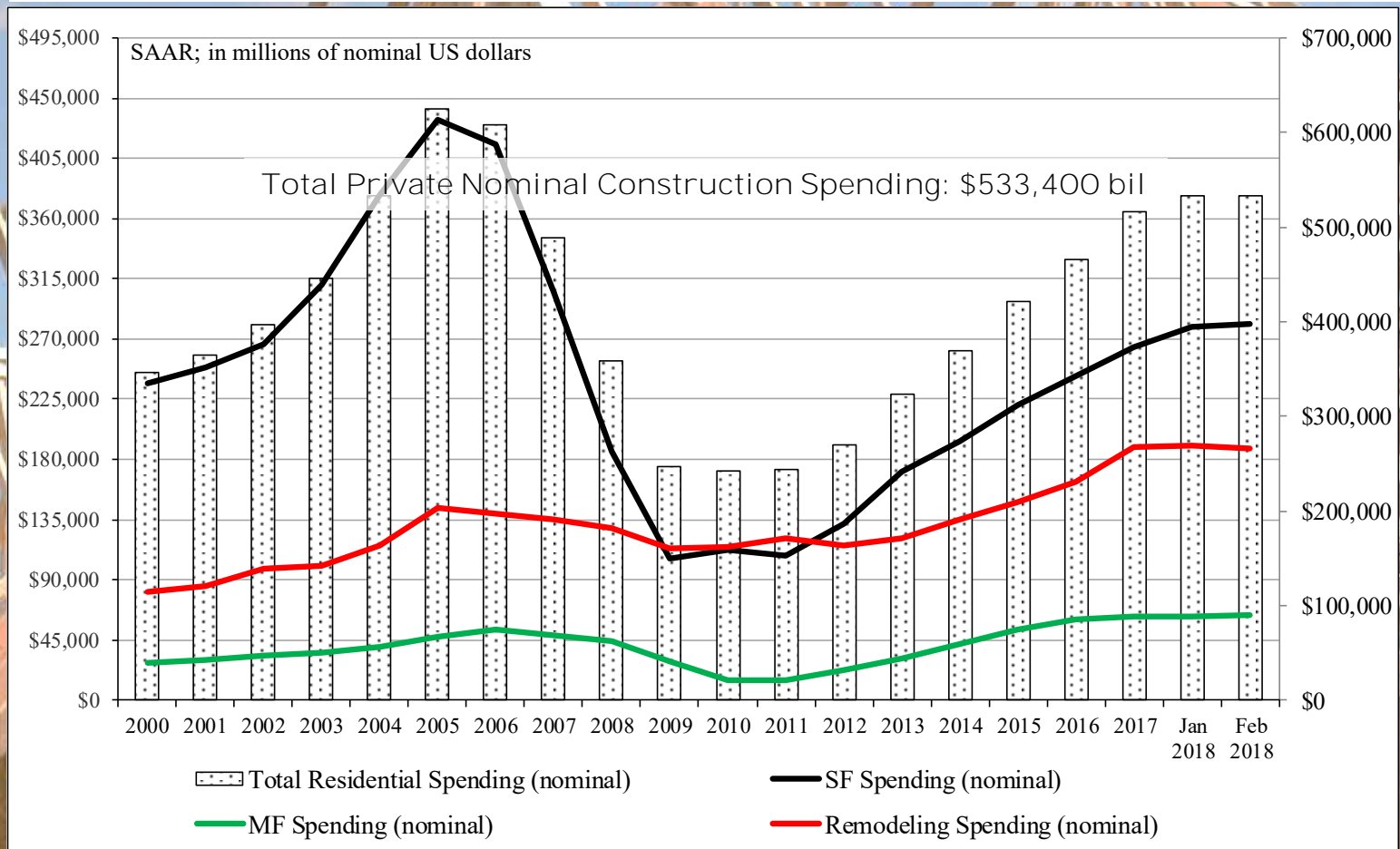
February 2018 Construction Spending

	Total Private Residential*	SF	MF	Improvement**
February	\$533,400	\$281,800	\$63,843	\$187,757
January	\$532,881	\$279,222	\$63,059	\$190,600
2017	\$505,716	\$257,385	\$63,244	\$185,087
M/M change	0.1%	0.9%	1.2%	-1.5%
Y/Y change	5.5%	9.5%	0.9%	1.4%

* 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\$.

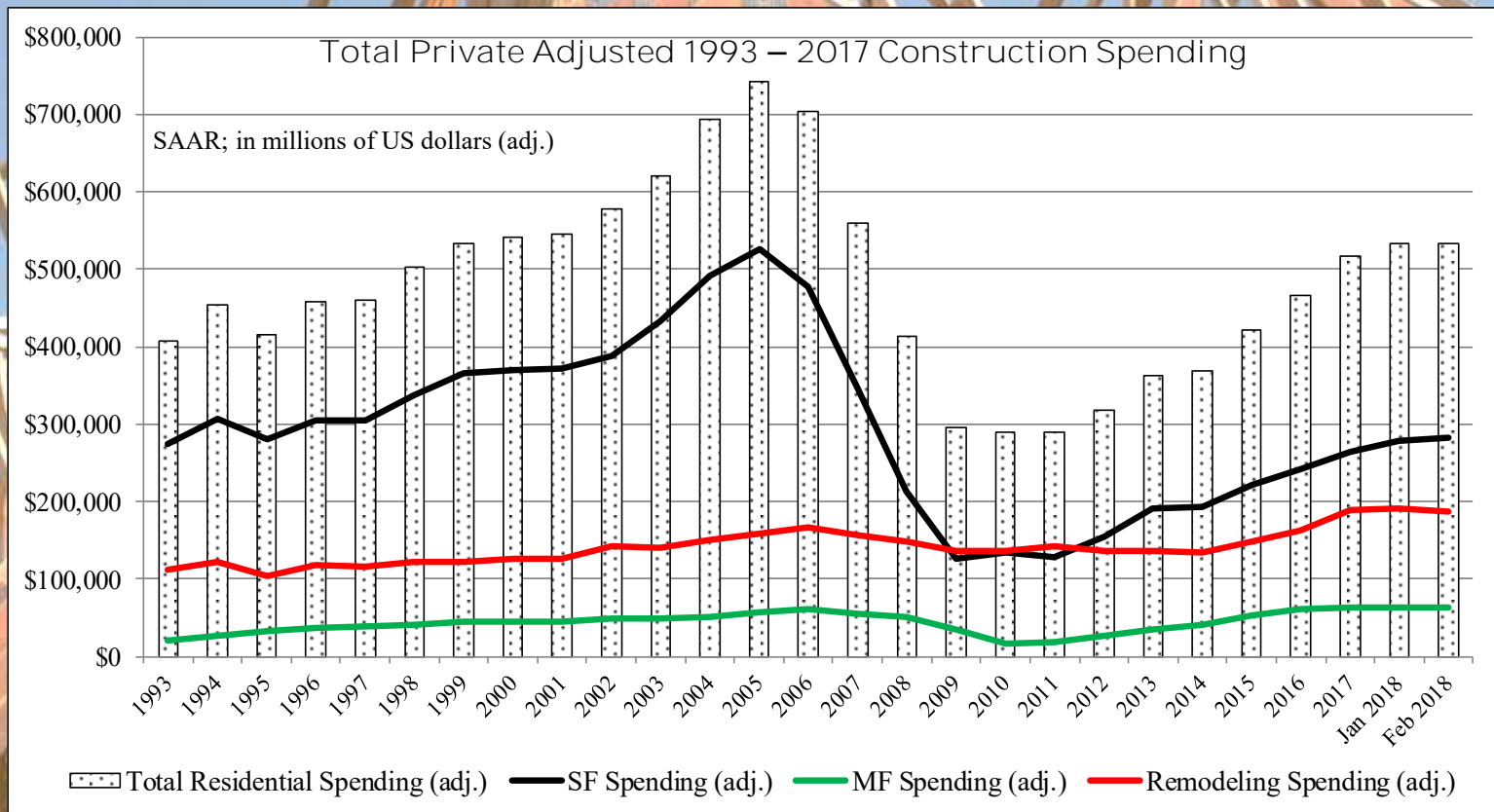
Total Construction Spending (nominal): 1993 – February 2018



Reported in nominal US\$.

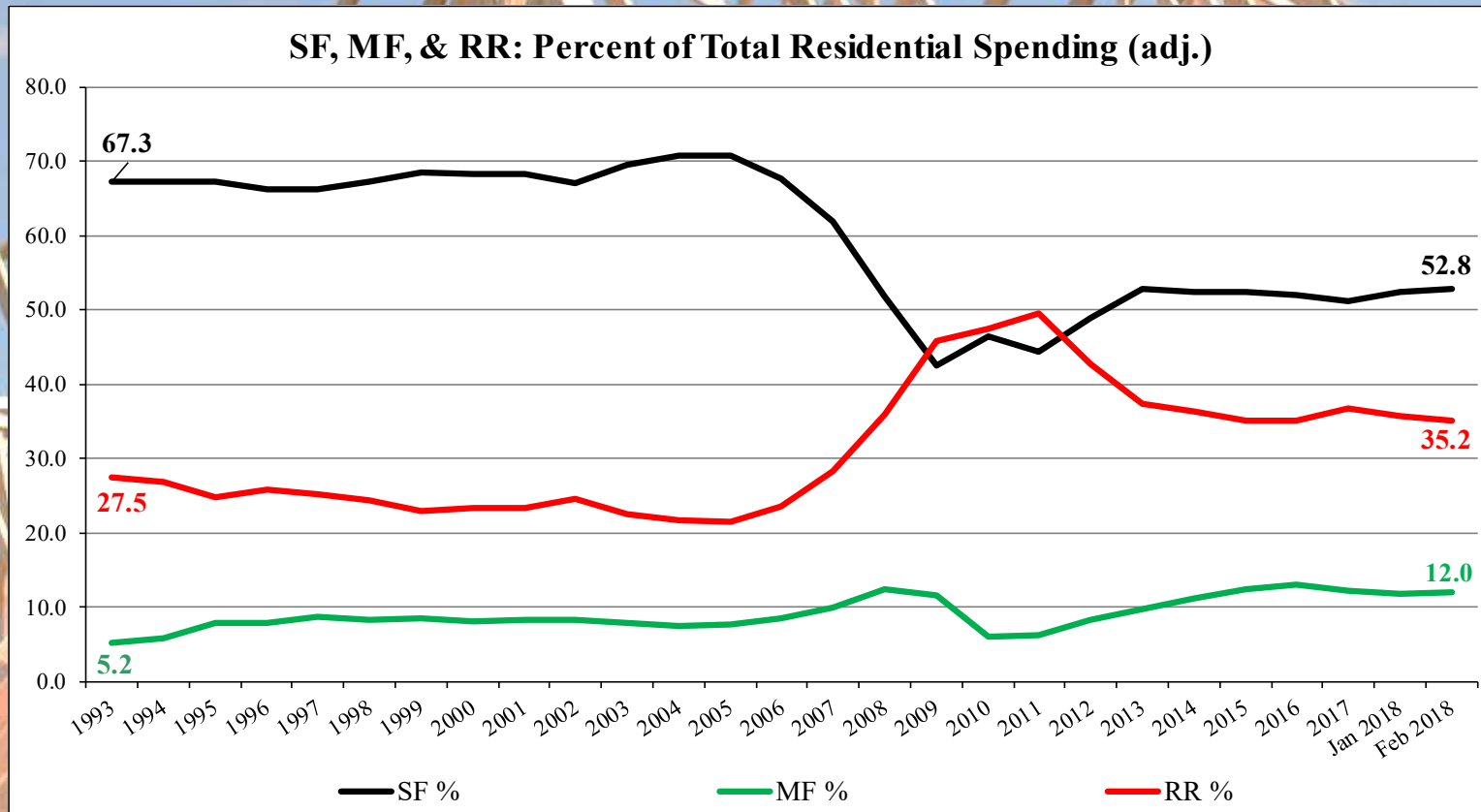
The US DOC does not report improvement spending directly, this is a monthly estimation for 2017.

Total Construction Spending (adjusted): 1993-2018*



Reported in adjusted US\$: 1993 – 2017 (adjusted for inflation, BEA Table 1.1.9); *July 2017 to February 2018 reported in nominal US\$.

Construction Spending Shares: 1993 to February 2018



Total Residential Spending: 1993 through 2006

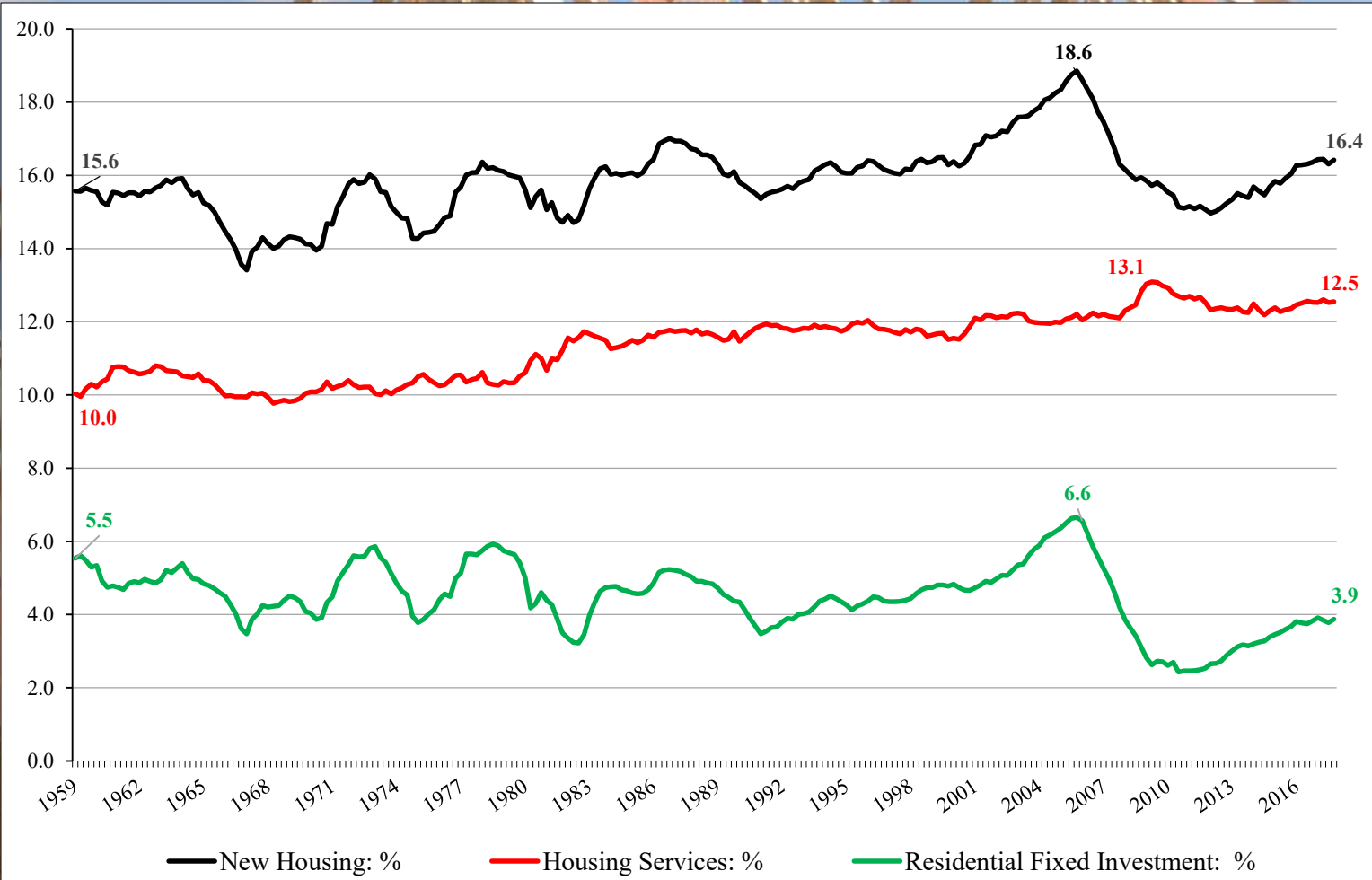
SF spending average: 69.2%

MF spending average: 7.5%

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

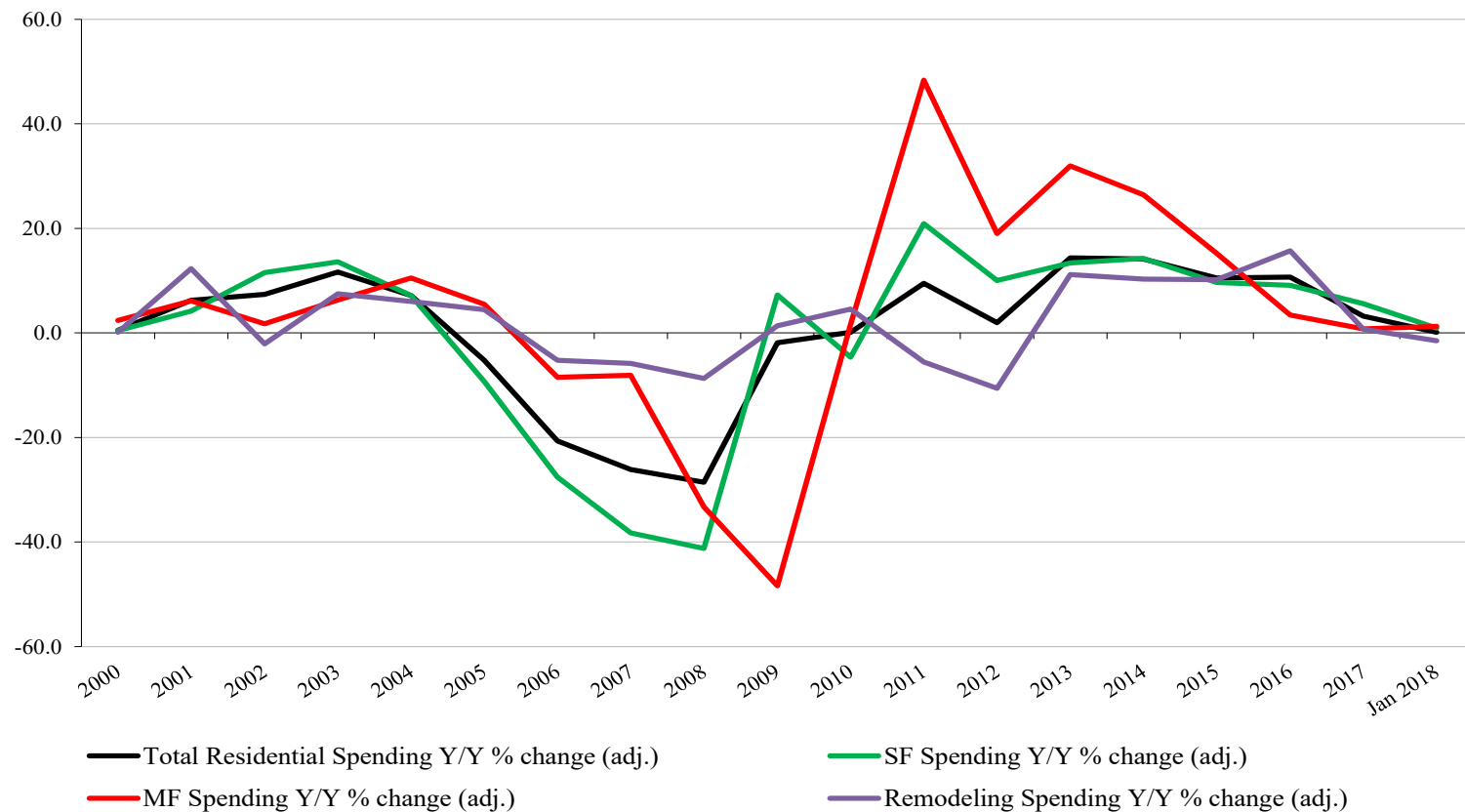
Note: 1993 to 2016 (adjusted for inflation, BEA Table 1.1.9); February-February 2017 reported in nominal US\$.

Construction Spending & GDP: 1959 to Q4 2017



Source: <http://www.bea.gov/iTable/iTable.cfm>

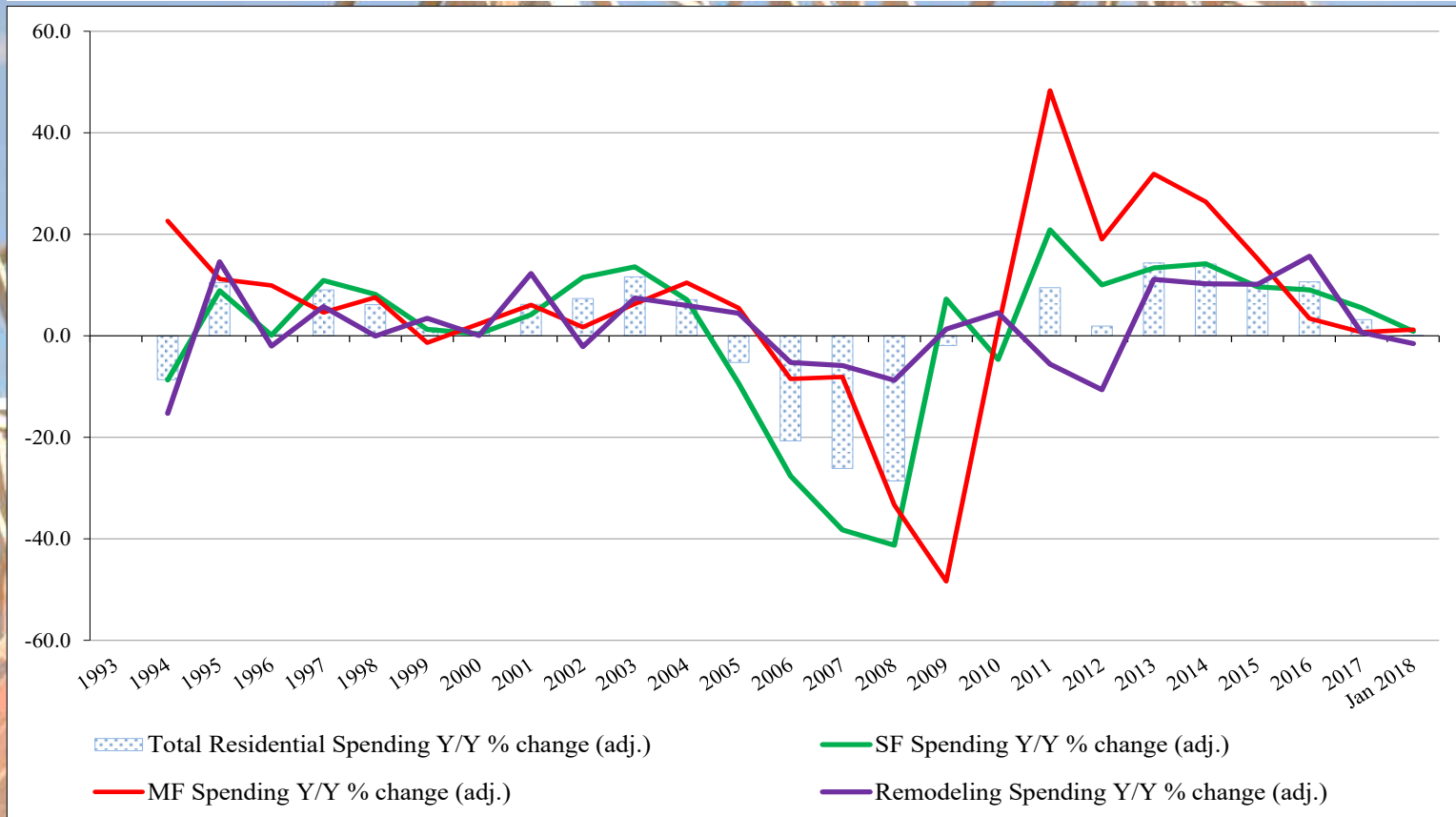
Adjusted Construction Spending: Y/Y Percentage Change, 1993 to February 2018



Residential Construction Spending: Percentage Change, 1993 to February 2018

Presented above is the percentage change of inflation adjusted Y/Y construction spending (1993-2016). Since mid-2015 MF and RR spending have been declining.

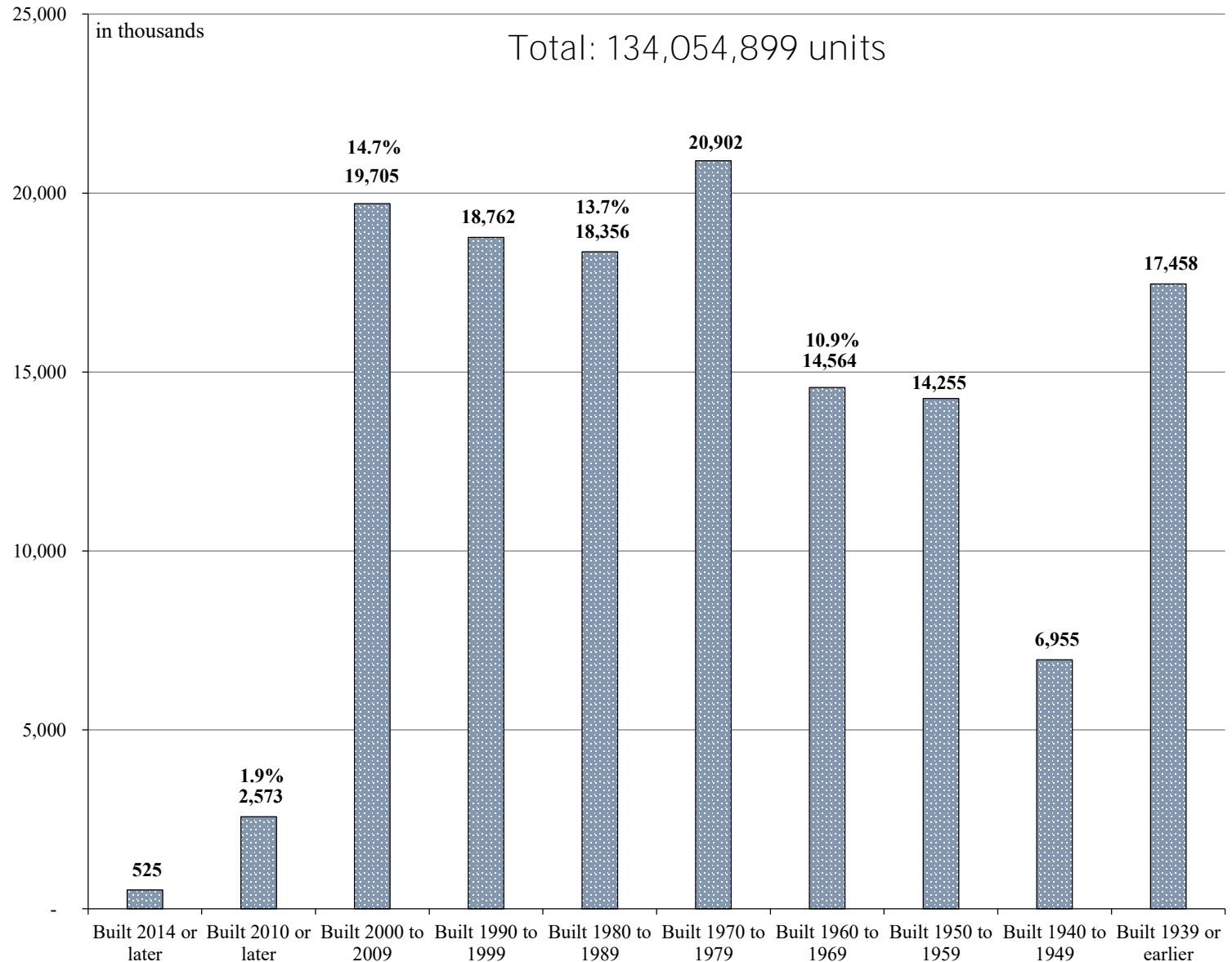
Total Adjusted Construction Spending: Y/Y Percentage Change, 1993 to February 2018



Residential Construction Spending: Percentage Change, 1993 to February 2018

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

United States Housing: Age



Source: American Community Survey-Census; 2/23/18

United States Housing: Age

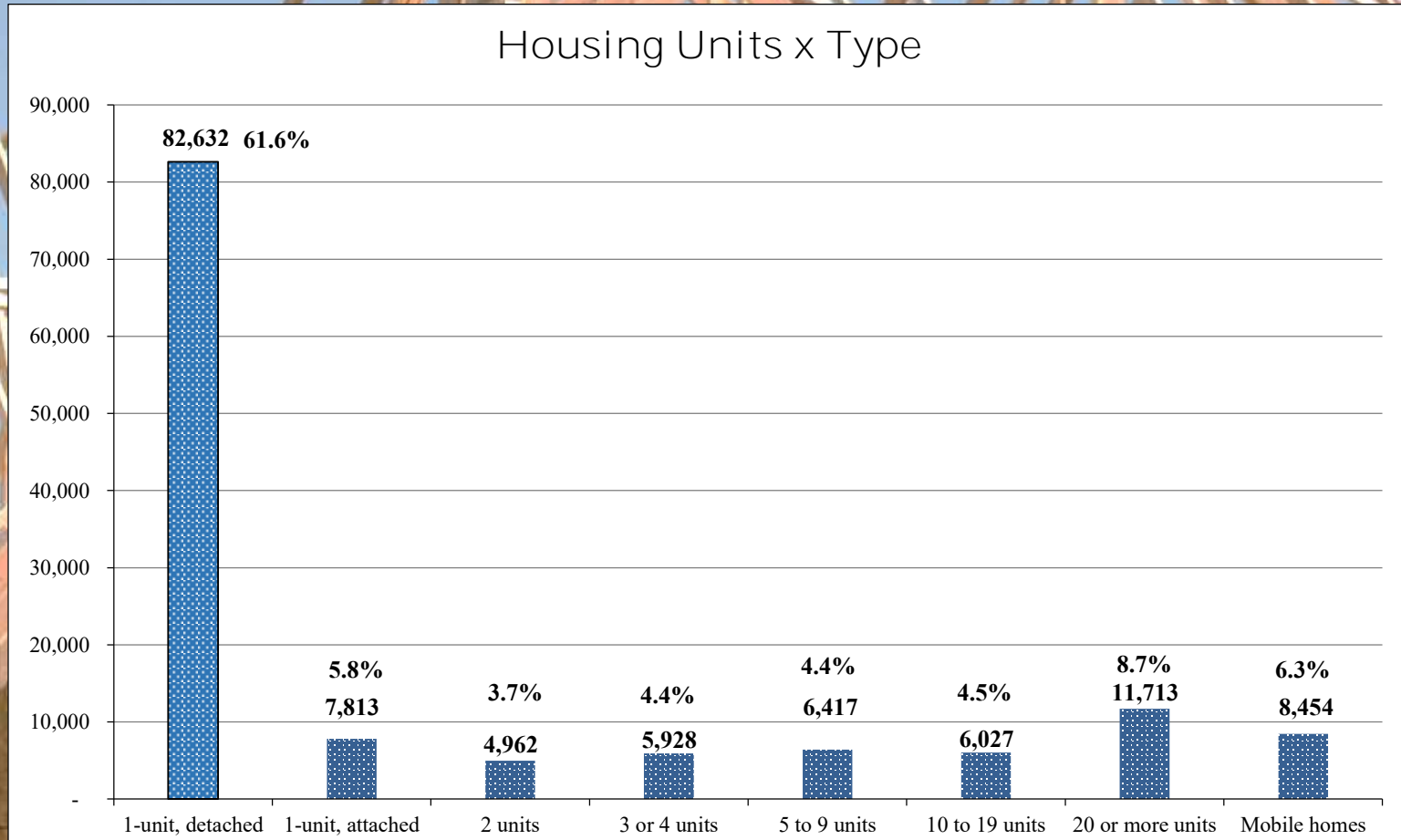
	Units	Percent
2015 to 2017*	3,181	2.8%
2010 to 2014	2,053	1.8%
2005 to 2009	7,622	6.8%
2000 to 2004	9,100	8.1%
1995 to 1999	8,656	7.7%
1990 to 1994	7,116	6.3%
1985 to 1989	8,927	7.9%
1980 to 1984	7,779	6.9%
1975 to 1979	13,760	12.2%
1970 to 1974	10,949	9.7%
1960 to 1969	15,145	13.4%
1940 to 1949	7,549	6.7%
1930 to 1939	5,660	5.0%
1920 to 1929	5,201	4.6%

**80.5 percent of houses
built before 2000!**

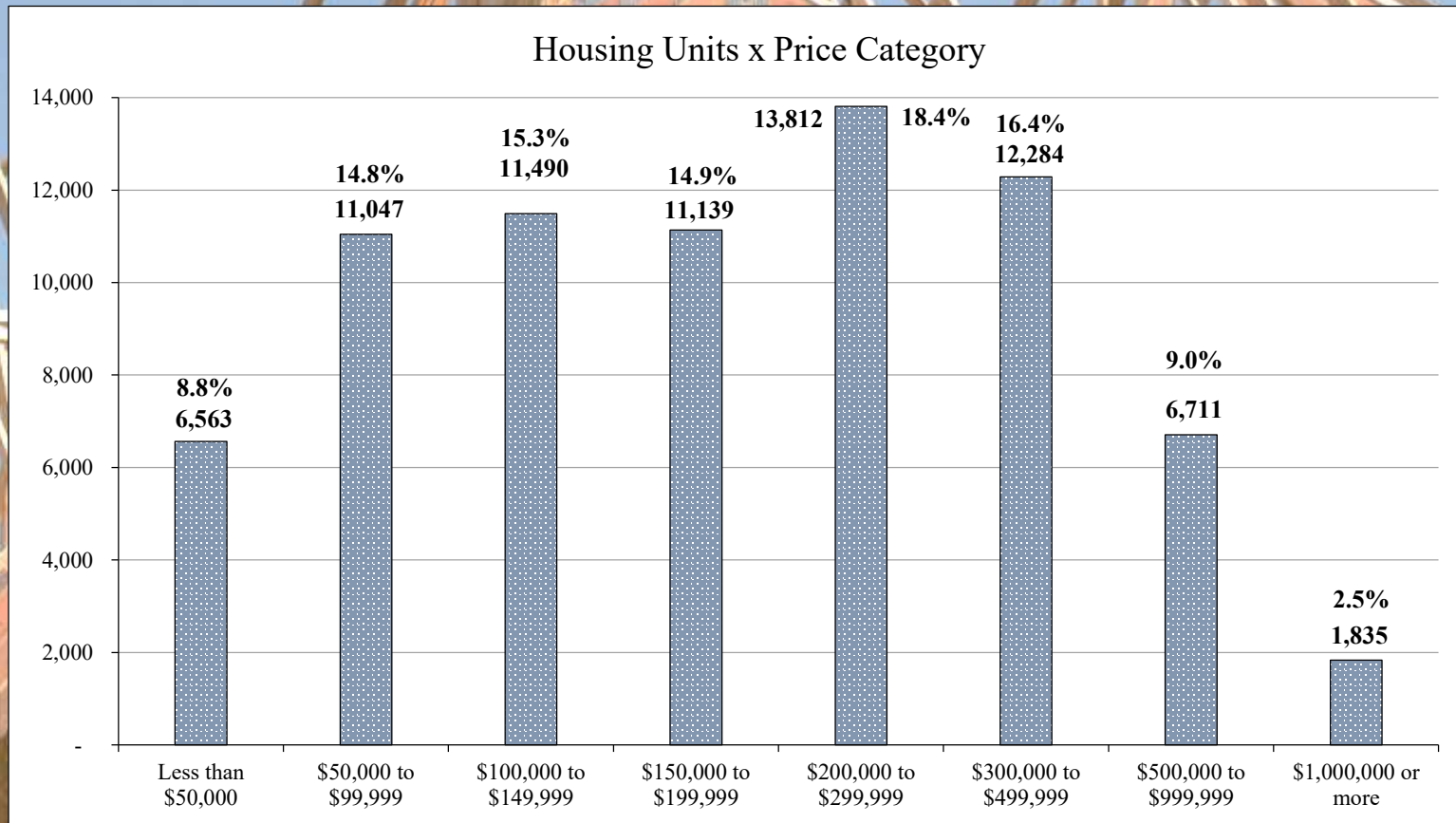
**58.6 percent built
before 1980**

* Number of completions: January 2015 to December 2017

United States Housing: Units X Structure Type



United States Housing: Units & Price



Wood Products & Housing

		2003	2006	2014
Framing				
Lumber & Beams – Softwood	MMBF	12,677	14,350	10,467
Engineered Wood	MMBF	153	283	108
Total, Framing	MMBF	12,830	14,633	10,565
Sheathing				
Plywood – Softwood	MMSF – 3/8”	3,323	3,899	1,558
OSB	MMSF – 3/8”	1,266	1,668	918
Total, Structural Panels	MMSF – 3/8”	4,589	5,566	2,476
Nonstructural Panels	MMSF – 3/8”	70	105	72
Total, Sheathing	MMSF – 3/8”	4,659	5,671	2,548
Millwork				
Lumber – Softwood	MMBF	2,760	2,882	3,081
Lumber – Hardwood	MMBF	2,754	4,374	4,157
Total Lumber	MMBF	5,514	7,256	7,238

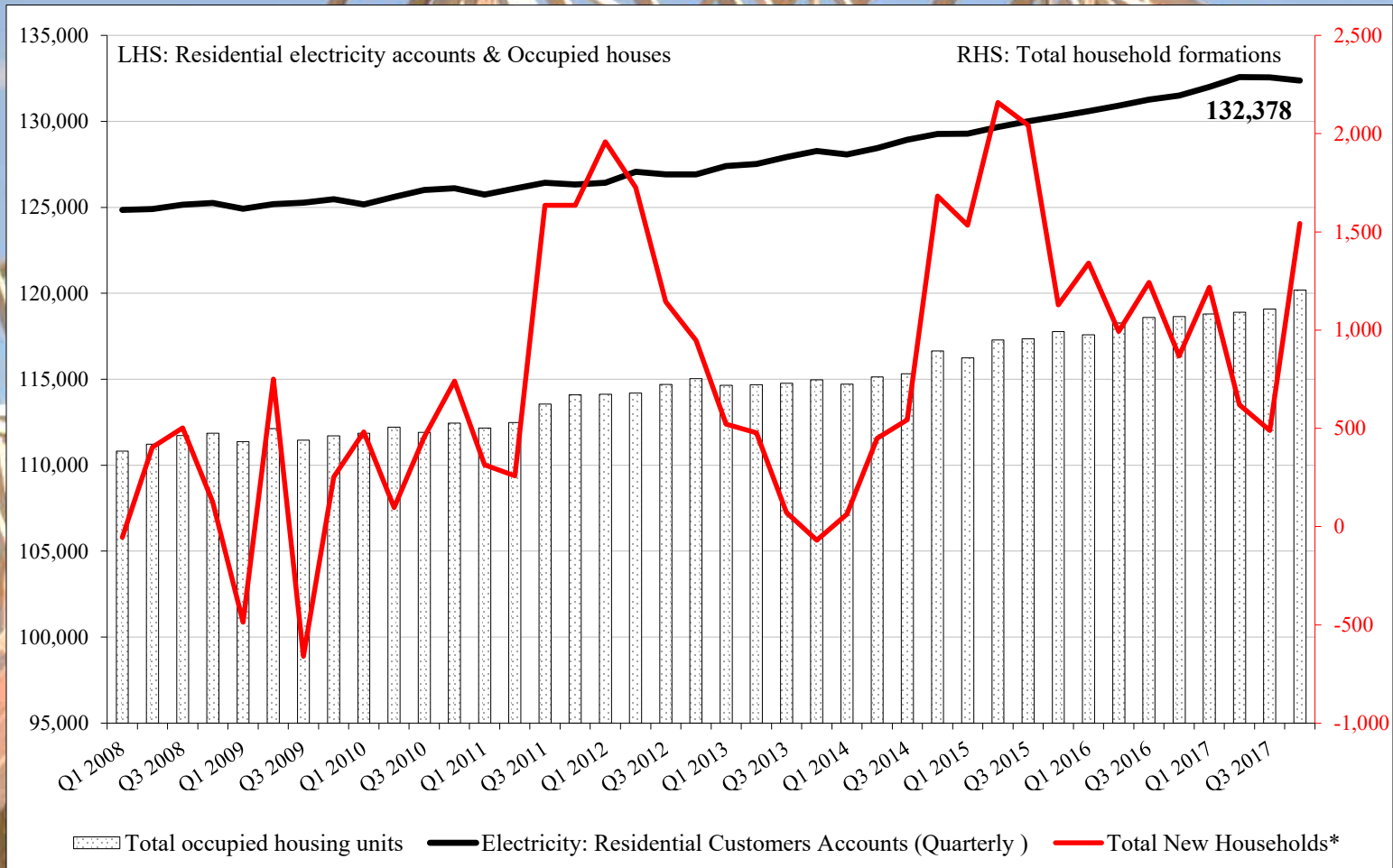
“Repair and remodeling of residential structures and properties has been a vital market for the use of wood products in the U.S. In fact, repair and remodeling applications are either the first or second largest market for a number of wood products, next to new residential construction.” – Joe Elling and David McKeever

Wood Products & Housing

		2003	2006	2014
Summary of All Users				
Lumber – Softwood	MMBF	15,437	17,232	13,548
Lumber – Hardwood	MMBF	2,754	4,374	4,157
Engineered Wood	MMBF	153	283	108
Total Lumber & Engineered Wood	MMBF	18,344	21,889	17,813
Total Structural Panels	MMSF – 3/8”	5,492	6,361	3,760
Plywood –Hardwood	MMSF – 3/8”	238	545	163
Other Nonstructural Panels	MMSF – 3/8”	1,243	1,869	1,929
Total Nonstructural Panels	MMSF – 3/8”	1,481	2,414	2,092

Source: Wood Products Used in Residential Repair and Remodeling United States 2014 (in review).

Home Ownership



Residential Electricity Sales vs. Household Formations

Since Q2 2008, residential electricity sales have totaled 7,520,651 and household formations totaled 3,145,000 – a difference of 4.4 million

Existing House Sales

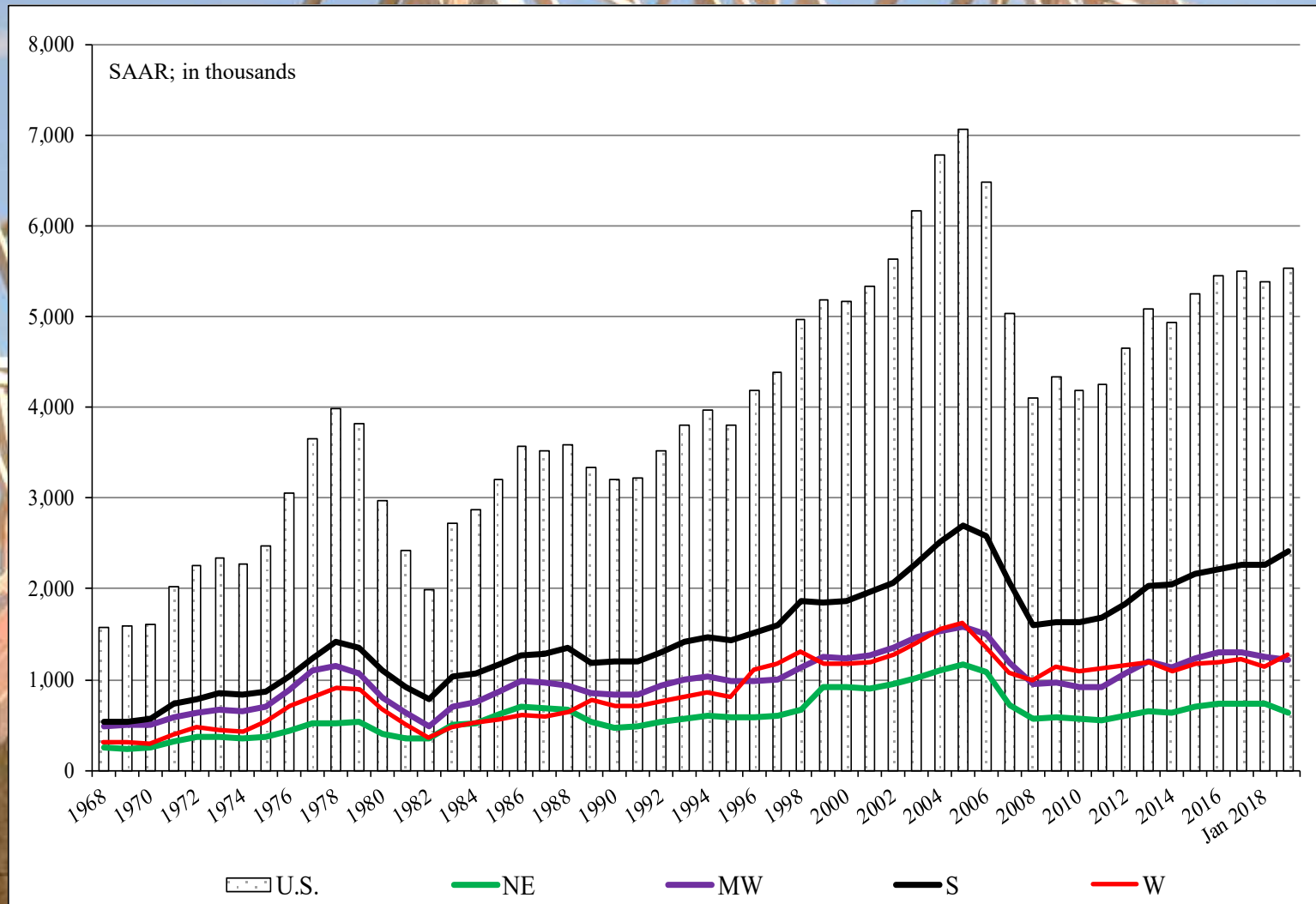
National Association of Realtors (NAR®)

February 2018 sales: 5.540 million

	Existing Sales*	Median Price	Mean Price	Month's Supply
February	5,540,000	\$241,700	\$281,200	3.4
January	5,380,000	\$240,800	\$282,600	3.4
2017	5,480,000	\$228,200	\$269,600	3.8
M/M	3.0%	0.4%	-0.5%	0.0%
Y/Y change	1.1%	5.9%	4.3%	-10.5%
	NE Sales	MW Sales	S Sales	W Sales
February	640,000	1,220,000	2,410,000	1,270,000
January	790,000	1,300,000	2,300,000	1,260,000
2017	690,000	1,220,000	2,330,000	1,240,000
M/M change	-19.0%	-6.2%	4.8%	0.8%
Y/Y change	-7.2%	0.0%	3.4%	2.4%

* All sales data: SAAR

Total Existing House Sales



Conclusions

United States, Canada, and the Euroconstruct region's housing market's – will they all keep grinding upward?

Perhaps

Exogenous factors disrupting the sluggishly increasing markets:

- Economic catastrophe
- Extreme weather event(s)
- International conflict

Questions?

Thank you

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