# The Virginia Tech – U.S. Forest Service
# February 2019
# Housing Commentary: Section I


**Urs Buehlmann**
Department of Sustainable Biomaterials
College of Natural Resources & Environment
Virginia Tech
Blacksburg, VA
540.231.9759
buehlmann@gmail.com

**Delton Alderman**
Forest Products Marketing Unit
Forest Products Laboratory
U.S. Forest Service
Madison, WI
304.431.2734
dalderman@fs.fed.us



2018 Virginia Polytechnic Institute and State University CNRE-51NP





Return TOC

# Table of Contents



This report is a free monthly service of Virginia Tech. Past issues are available at: http://woodproducts.sbio.vt.edu/housing-report.

To request the commentary, please email: buehlmann@gmail.com or dalderman@fs.fed.us

Return TOC

# Opening Remarks

The weather in many regions of the United States in February was bleak. Housing data reported for February mirrored the weather – dreary. However, it is a winter month and past history suggests February has not been a strong month for construction, or sales. Total and single-family starts declined substantially on a monthly and a yearly bases. Single-family and total housing permits also were uninspiring. Housing under construction, completions, and new single-family sales also were mixed. The one bright data point was monthly existing sales, which rebounded substantially on a monthly basis. New construction expenditures were tepid as well. The April 12th Atlanta Fed GDPNow™ model for Q1 2019 projects an aggregate 4.0% increase for residential investment spending. New private permanent site expenditures were projected at a 7.5% decrease; the improvement spending forecast was a 7.2% increase; and the manufactured/mobile housing projection was a 15.4% increase (all: quarterly log change and seasonally adjusted annual rate)[1].

"There have been persistent declines across key housing indicators for four consecutive months. However, we anticipate some economic relief as we head into 2019's spring home buying season. Mortgage rates have reached recent lows leading to increased potential for home sales, which is oftentimes followed by a surge in remodeling activity. The performance of single-family housing authorizations, maintenance, and remodeling activity through this next season will shed light on whether declines in the housing market will spread to the broader economy."[2] – Holly Tachovsky, CEO, BuildFax

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

Sources: [1] www.frbatlanta.org/cqer/research/gdpnow.aspx; 4/12/19;
[2] https://www.buildfax.com/buildfax-housing-health-report-february-2019/; 3/18/19

Return TOC

# February 2019
# Housing Scorecard

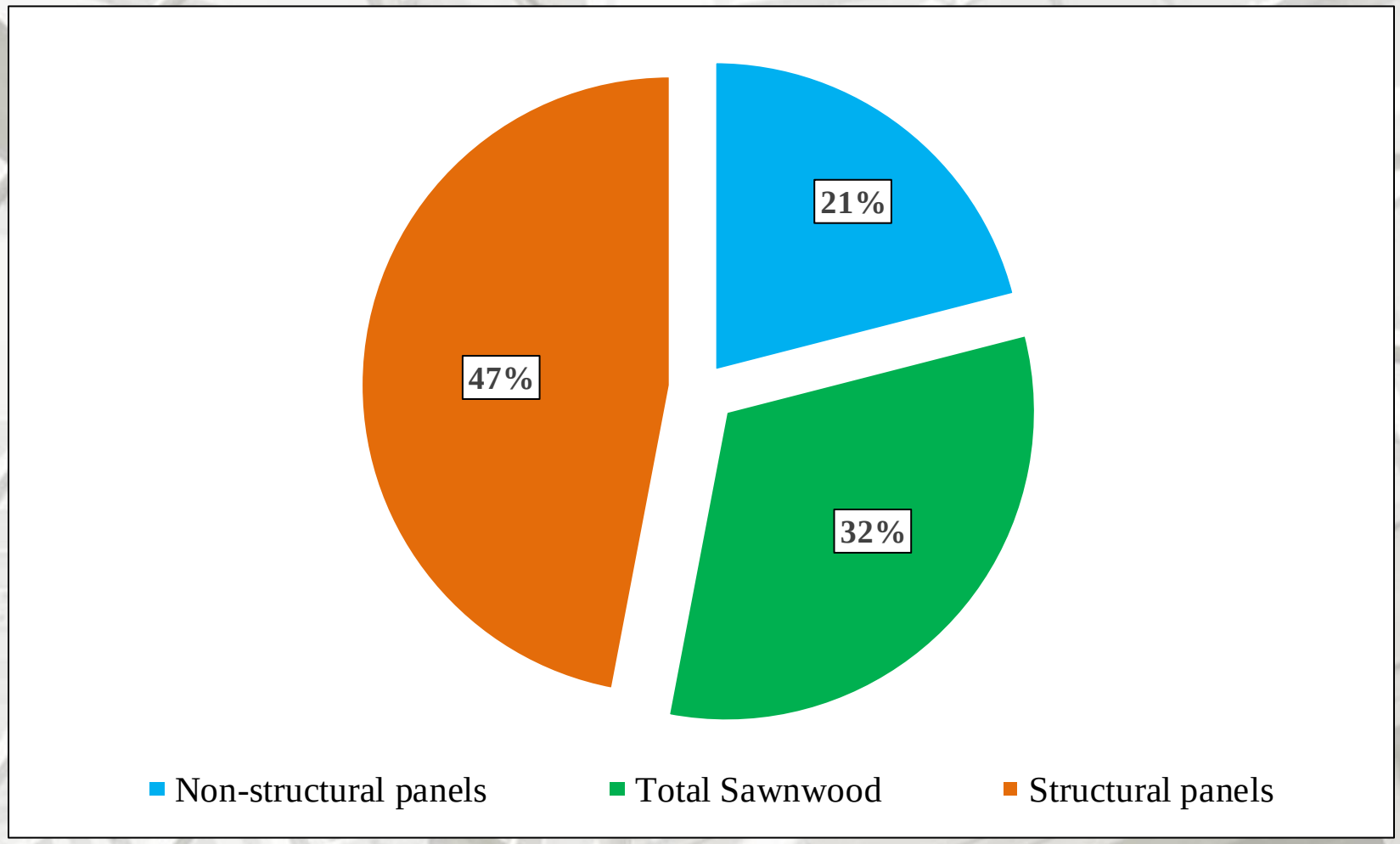
| | M/M | Y/Y |
|---|---|---|
| Housing Starts | ▽ 8.7% | ▽ 9.9% |
| Single-Family (SF) Starts | ▽ 17.0% | ▽ 10.6% |
| Housing Permits | ▽ 1.6% | ▽ 2.0% |
| SF Permits | NC | ▽ 7.3% |
| Housing Under Construction | ▽ 0.9% | △ 2.6% |
| SF Under Construction | NC | △ 8.2% |
| Housing Completions | △ 4.5% | △ 1.1% |
| SF Completions | ▽ 10.0% | ▽ 7.5% |
| New SF House Sales | △ 4.9% | △ 0.6% |
| Private Residential Construction Spending | △ 0.7% | ▽ 3.4% |
| SF Construction Spending | ▽ 1.1% | ▽ 7.1% |
| Existing House Sales[1] | △ 11.8% | ▽ 1.8% |

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

Sources: U.S. Department of Commerce-Construction; [1] FRED: Federal Reserve Bank of St. Louis

Return TOC

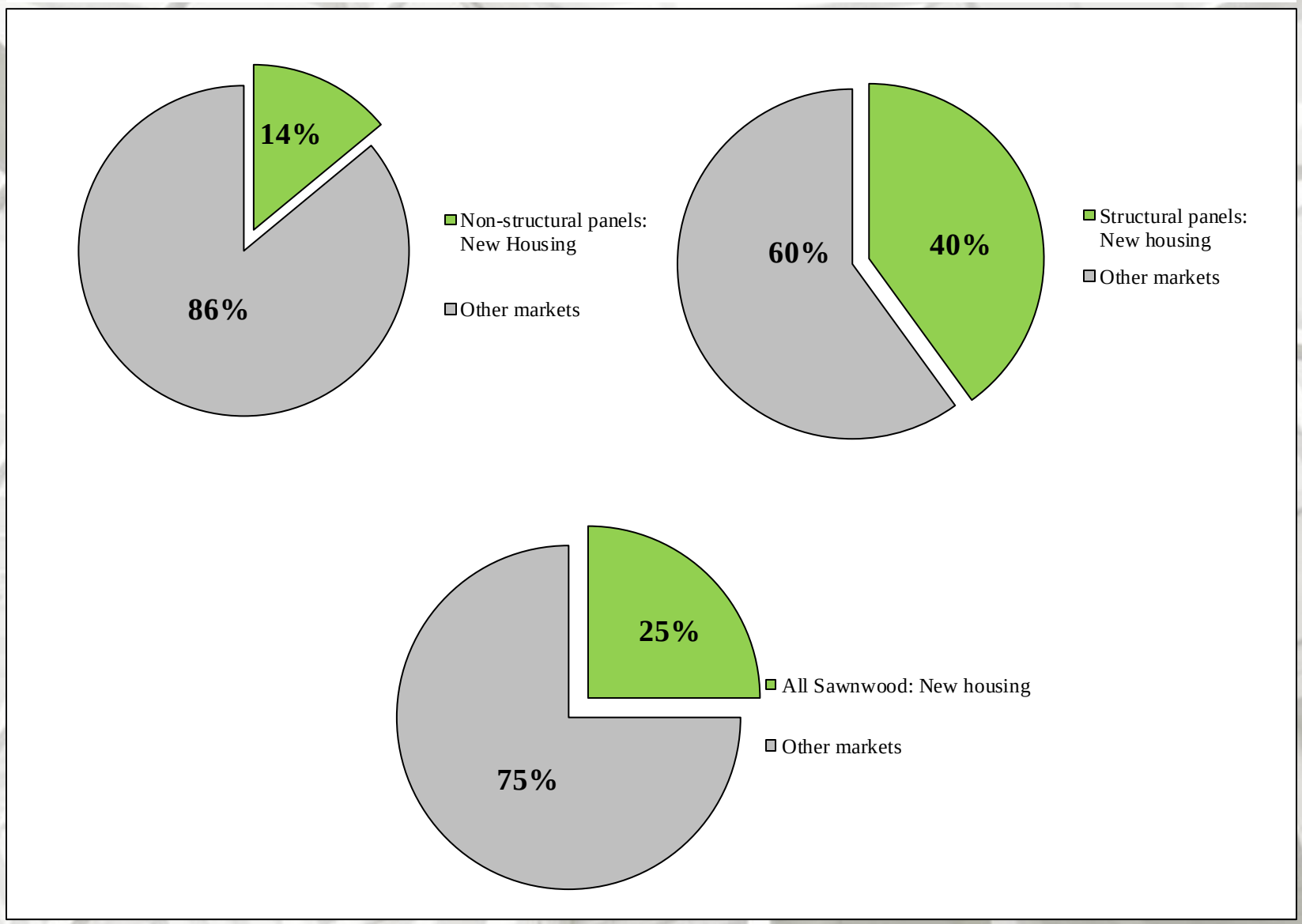
# New Construction's Percentage of Wood Products Consumption




Source: USDA Forest Service. Howard, J. and D. McKeever. 2017. U.S. Forest Products Annual Market Review and Prospects, 2013-2017

Return TOC

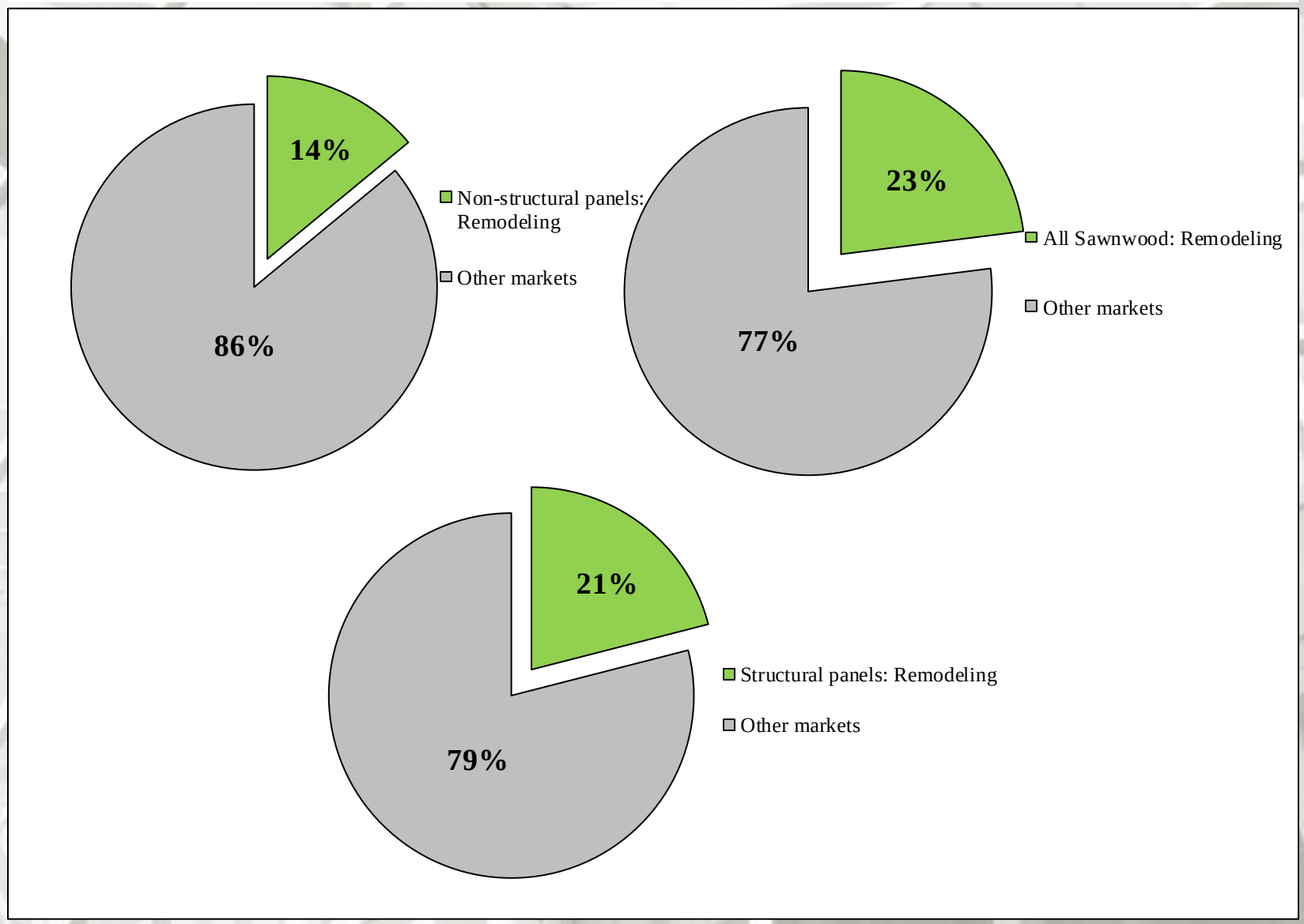
# New SF Construction Percentage of Wood Products Consumption




Source: USDA Forest Service. Howard, J. and D. McKeever. 2017. U.S. Forest Products Annual Market Review and Prospects, 2013-2017

Return TOC

# Repair and Remodeling's Percentage of Wood Products Consumption




Source: USDA Forest Service. Howard, J. and D. McKeever. 2017. U.S. Forest Products Annual Market Review and Prospects, 2013-2017

Return TOC

# New Housing Starts

| | Total Starts* | SF Starts | MF 2-4 Starts** | MF ≥5 Starts |
|---|---|---|---|---|
| February | 1,162,000 | 805,000 | 5,000 | 352,000 |
| January | 1,273,000 | 970,000 | 18,000 | 285,000 |
| 2018 | 1,290,000 | 900,000 | 18,000 | 372,000 |
| M/M change | -8.7 | -17.0 | -72.2 | 23.5 |
| Y/Y change | -9.9 | -10.6 | -72.2 | -5.4 |

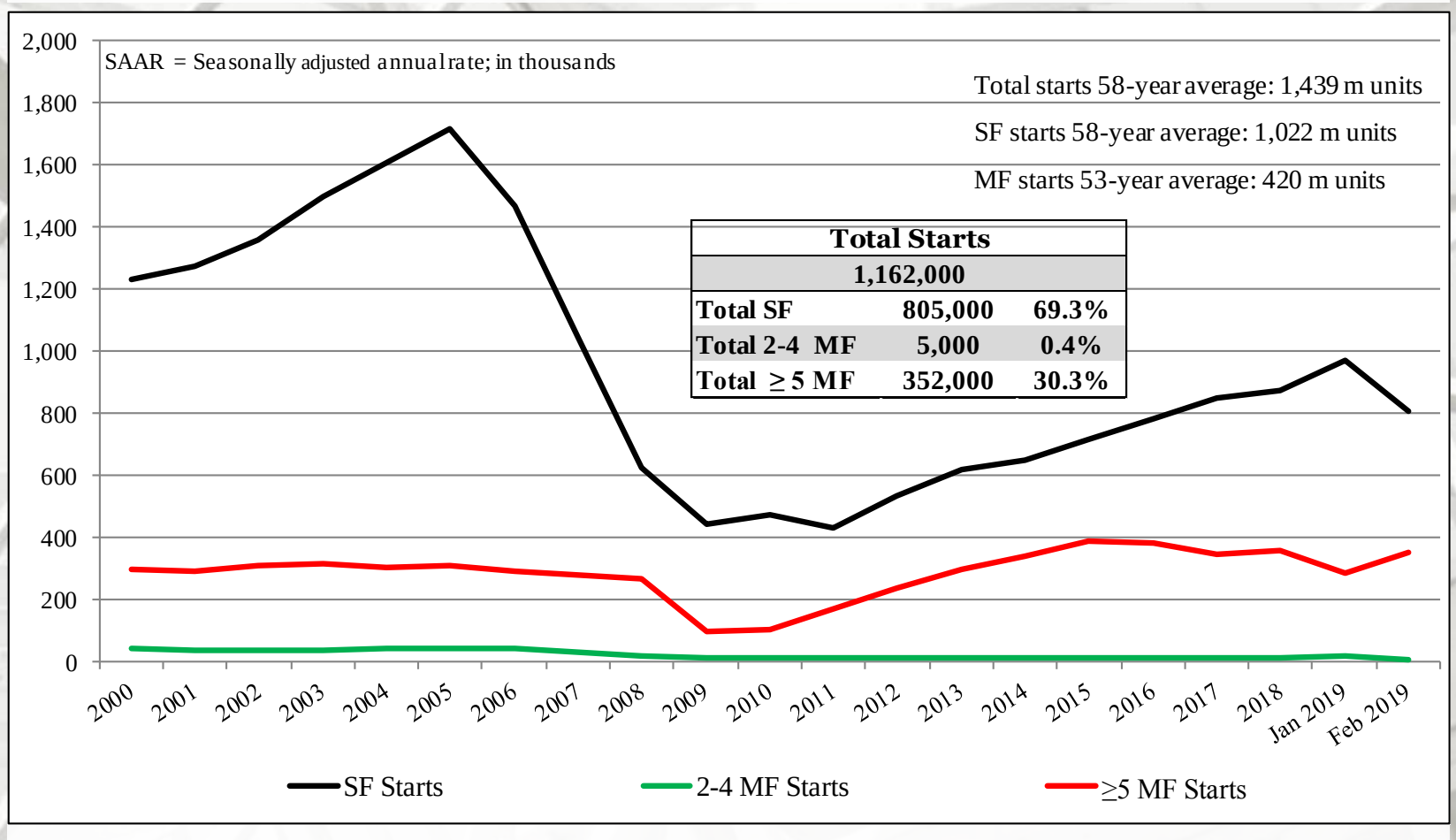
* All start data are presented at a seasonally adjusted annual rate (SAAR).

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Starts



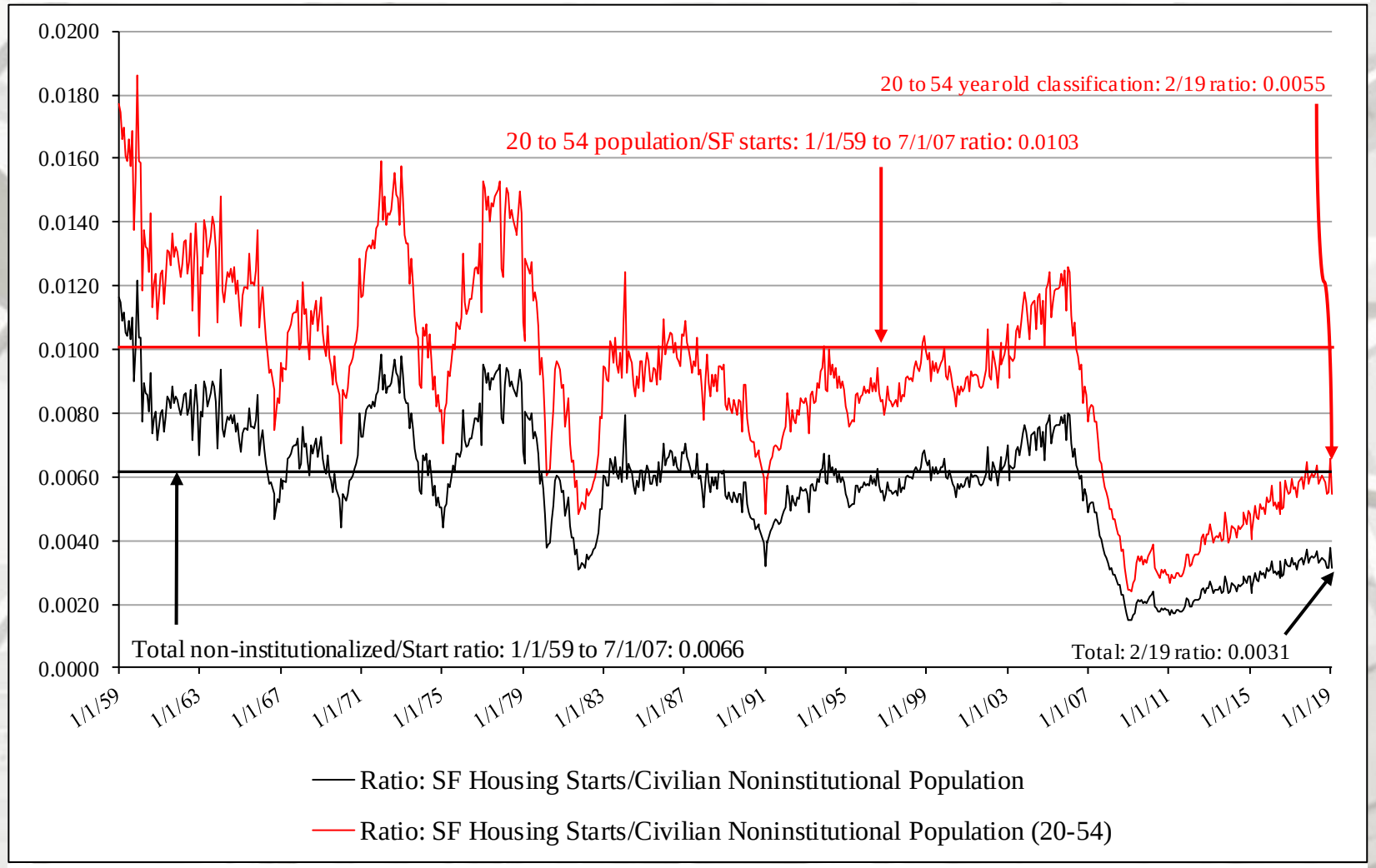

US DOC does not report 2 to 4 multifamily starts directly, this is an estimation: ((Total starts – (SF + Total MF)).

* Percentage of total starts.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New SF Starts



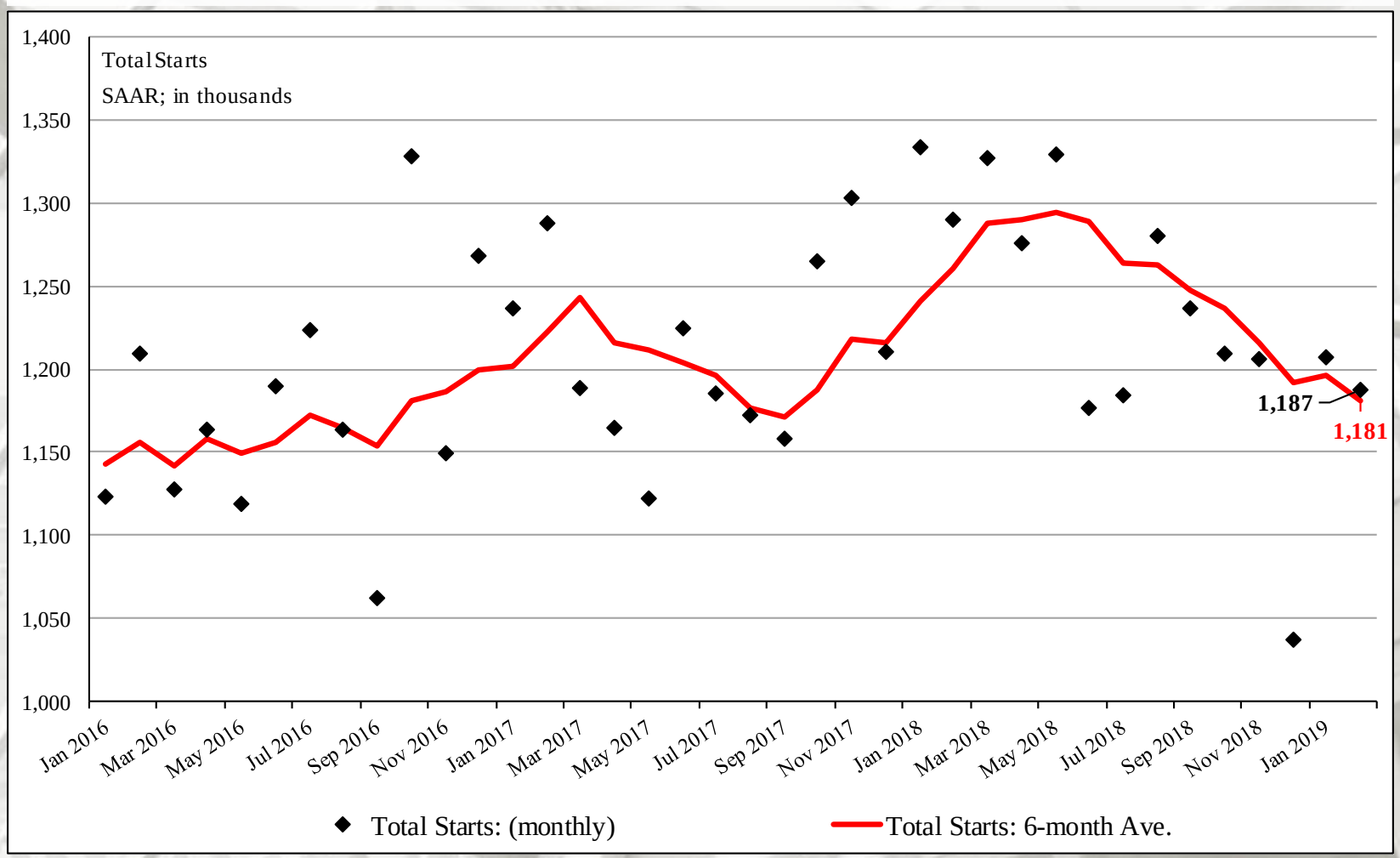

## New SF starts adjusted for the US population

From February 1959 to February 2007, the long-term ratio of new SF starts to the total US non-institutionalized population was 0.0066; in February 2019 it was 0.0031 – a decrease from January (0.0038). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in February 2018 was 0.0055 – also a decrease from January (0.0066). From a population worldview, new SF construction is less than what is necessary for changes in population (i.e., under-building).

Sources: http://www.census.gov/construction/nrc/pdf/newresconst.pdff and The Federal Reserve Bank of St. Louis; 3/26/19

Return TOC

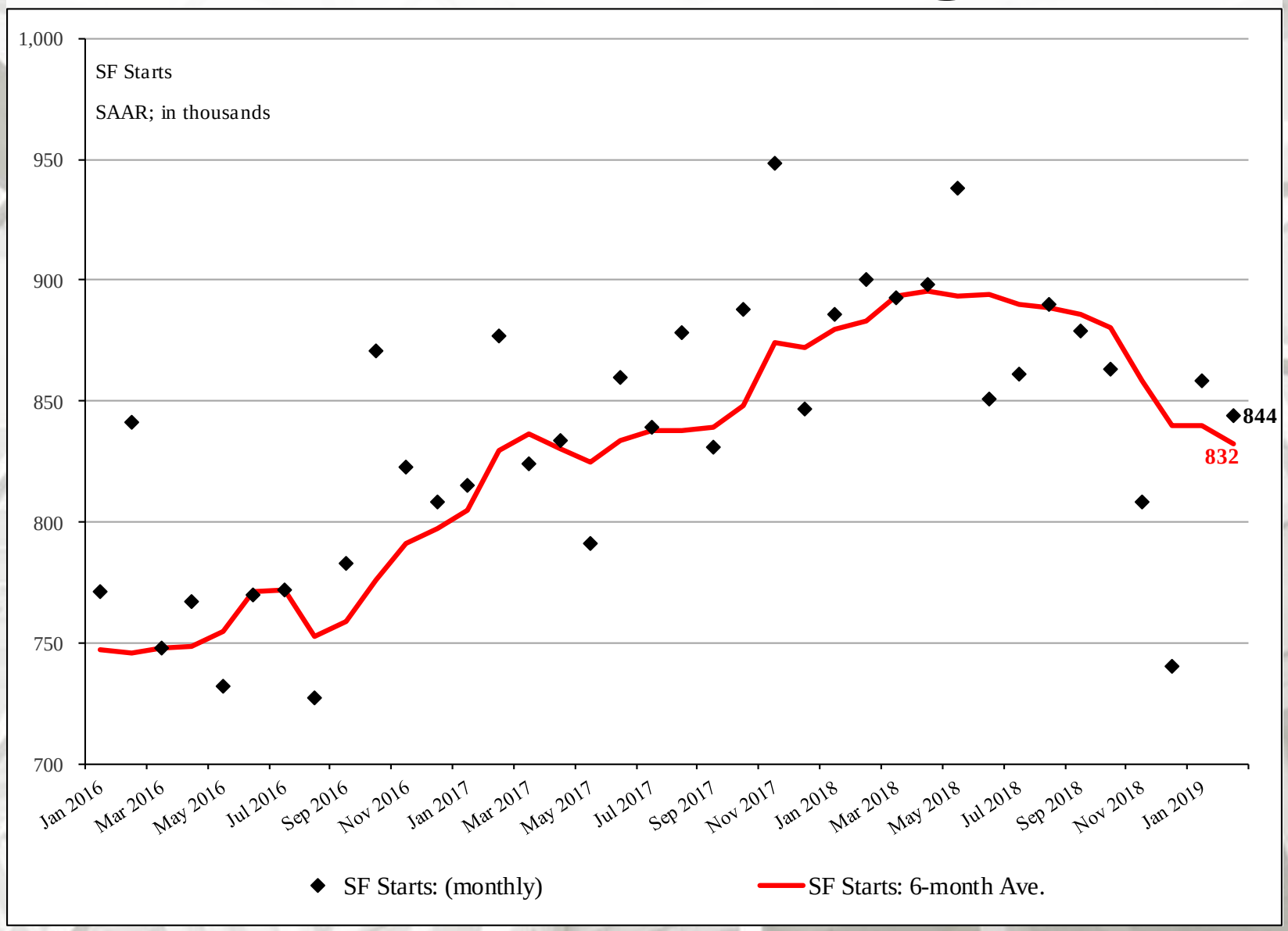
# Total Housing Starts: Six-Month Average




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

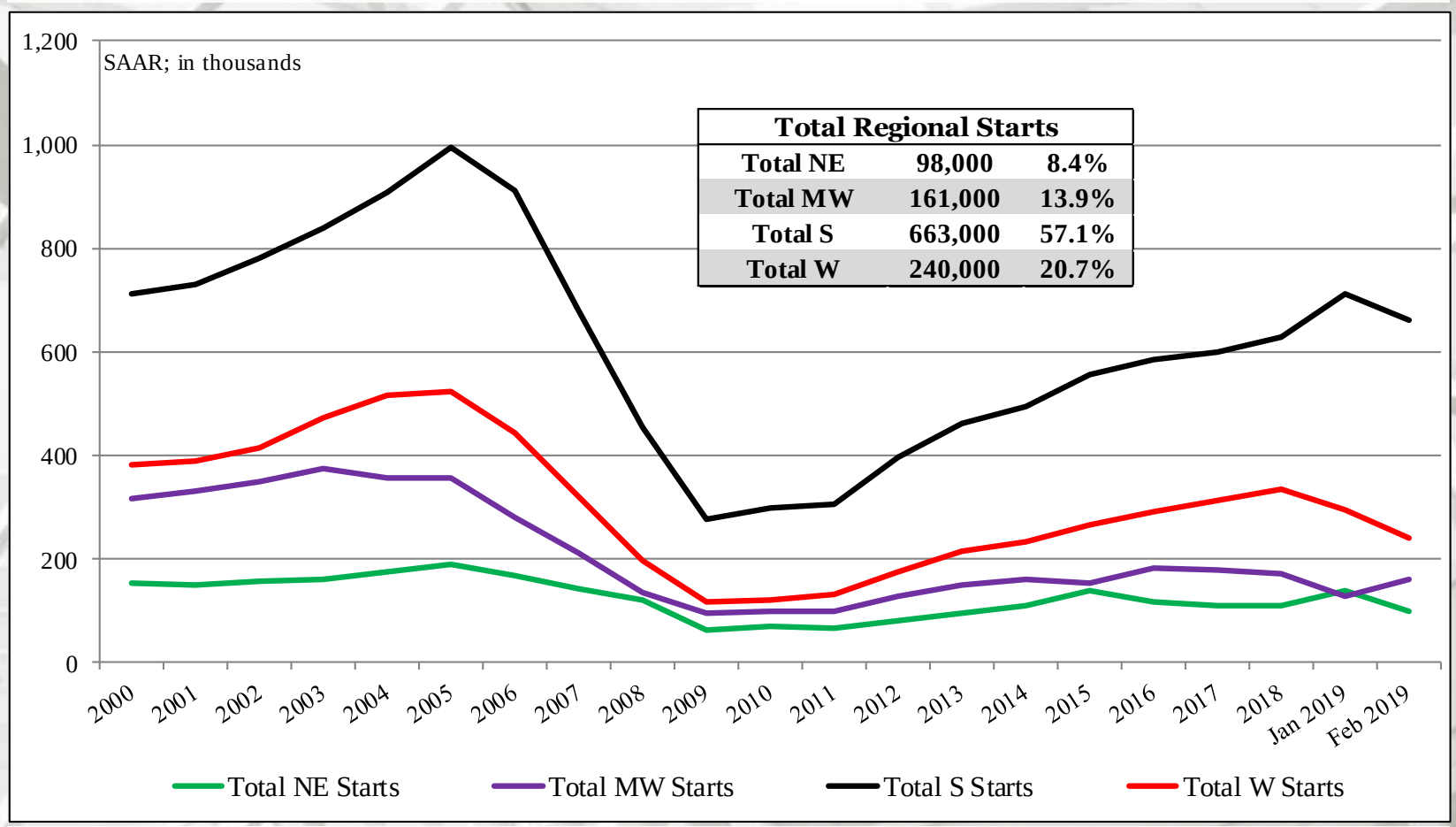
# SF Housing Starts: Six-Month Average




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Starts by Region




NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total starts.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Starts by Region

| | NE Total | NE SF | NE MF** |
|---|---|---|---|
| February | 98,000 | 47,000 | 51,000 |
| January | 139,000 | 81,000 | 58,000 |
| 2018 | 132,000 | 65,000 | 67,000 |
| M/M change | -29.5 | -42.0 | -12.1 |
| Y/Y change | -25.8 | -27.7 | -23.9 |
| | **MW Total** | **MW SF** | **MW MF** |
| February | 161,000 | 110,000 | 51,000 |
| January | 127,000 | 120,000 | 7,000 |
| 2018 | 154,000 | 109,000 | 45,000 |
| M/M change | 26.8 | -8.3 | 628.6 |
| Y/Y change | 4.5 | 0.9 | 13.3 |

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Starts by Region

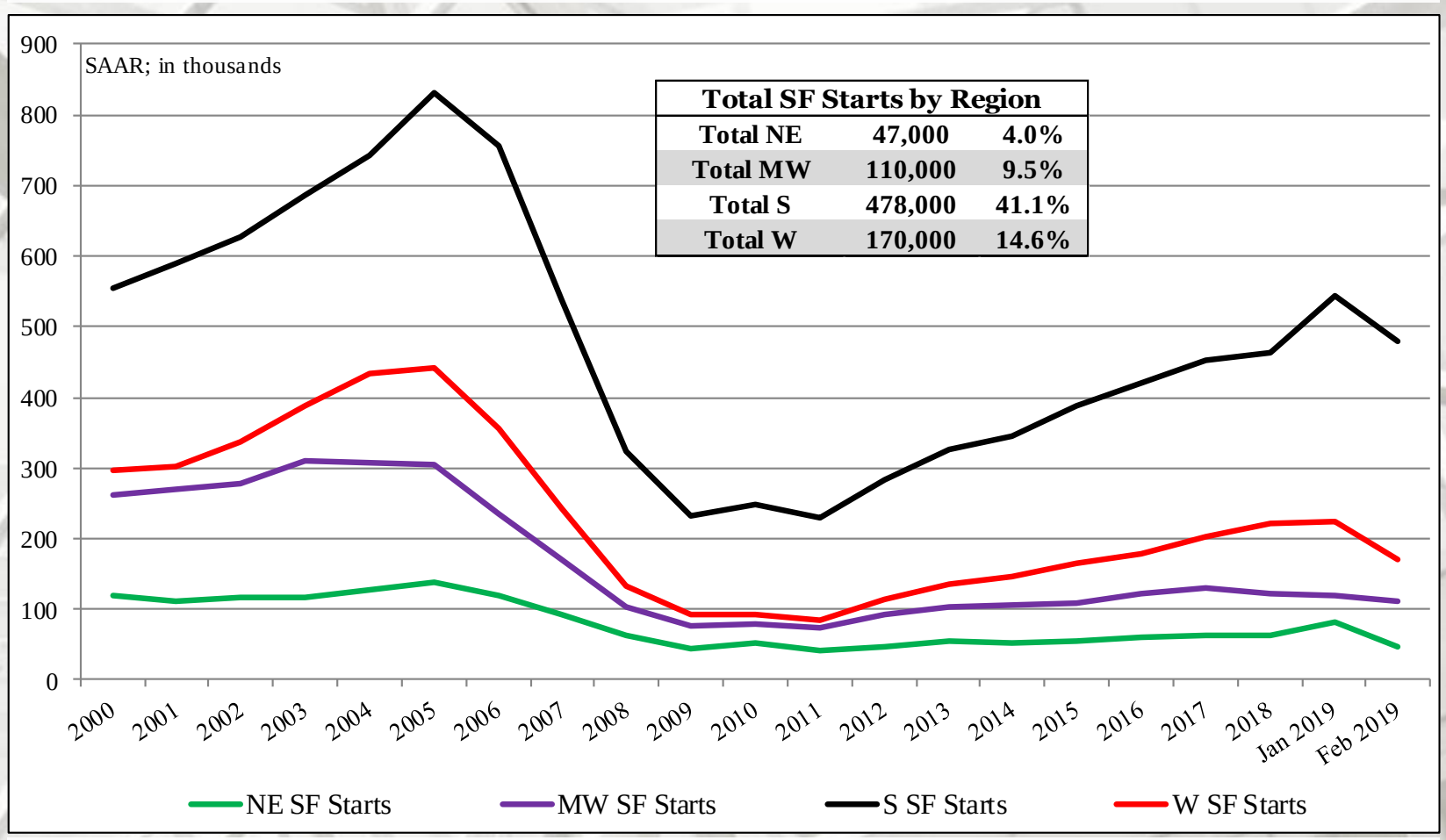
| | S Total | S SF | S MF** |
|---|---|---|---|
| February | 663,000 | 478,000 | 185,000 |
| January | 711,000 | 544,000 | 167,000 |
| 2017 | 615,000 | 476,000 | 139,000 |
| M/M change | -6.8 | -12.1 | 10.8 |
| Y/Y change | 7.8 | 0.4 | 33.1 |
| | **W Total** | **W SF** | **W MF** |
| February | 240,000 | 170,000 | 70,000 |
| January | 296,000 | 225,000 | 71,000 |
| 2018 | 389,000 | 250,000 | 139,000 |
| M/M change | -18.9 | -24.4 | -1.4 |
| Y/Y change | -38.3 | -32.0 | -49.6 |

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total SF Housing Starts by Region




| Total SF Starts by Region | | |
|---|---|---|
| Total NE | 47,000 | 4.0% |
| Total MW | 110,000 | 9.5% |
| Total S | 478,000 | 41.1% |
| Total W | 170,000 | 14.6% |

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

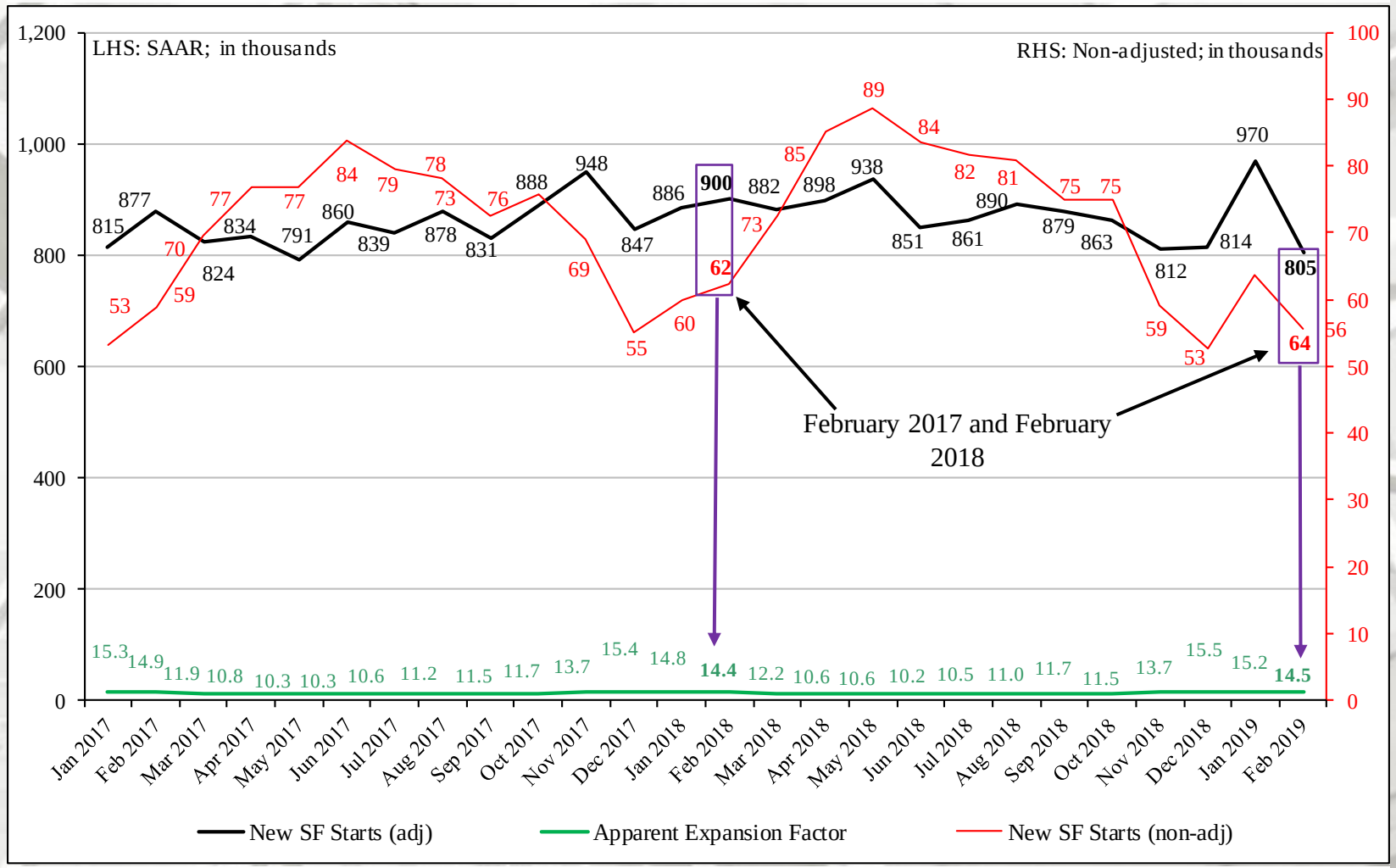
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total starts.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Nominal & SAAR SF Starts




## Nominal and Adjusted New SF Monthly Starts

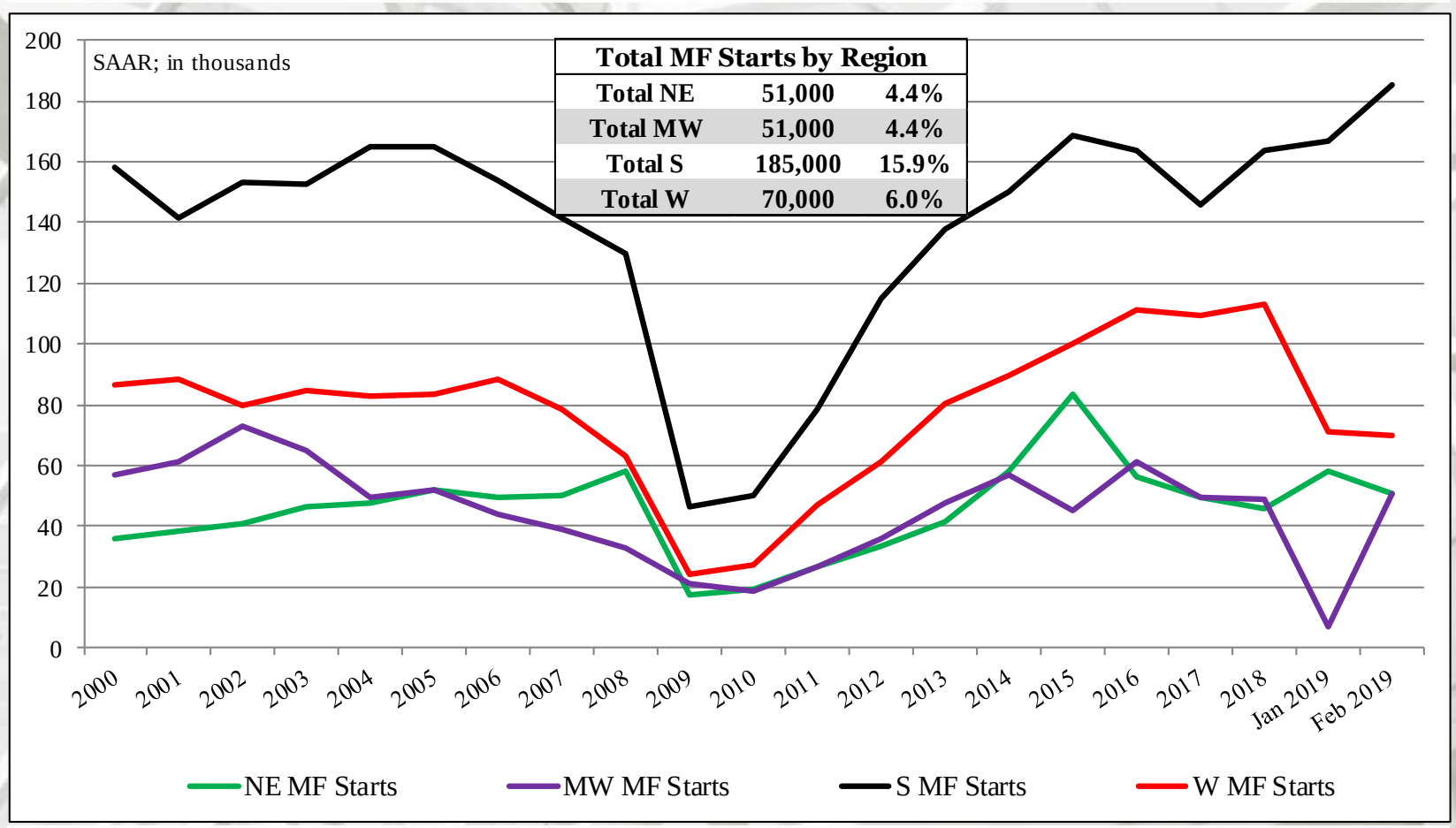
Presented above is nominal (non-adjusted) new SF start data contrasted against SAAR data.

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# MF Housing Starts by Region



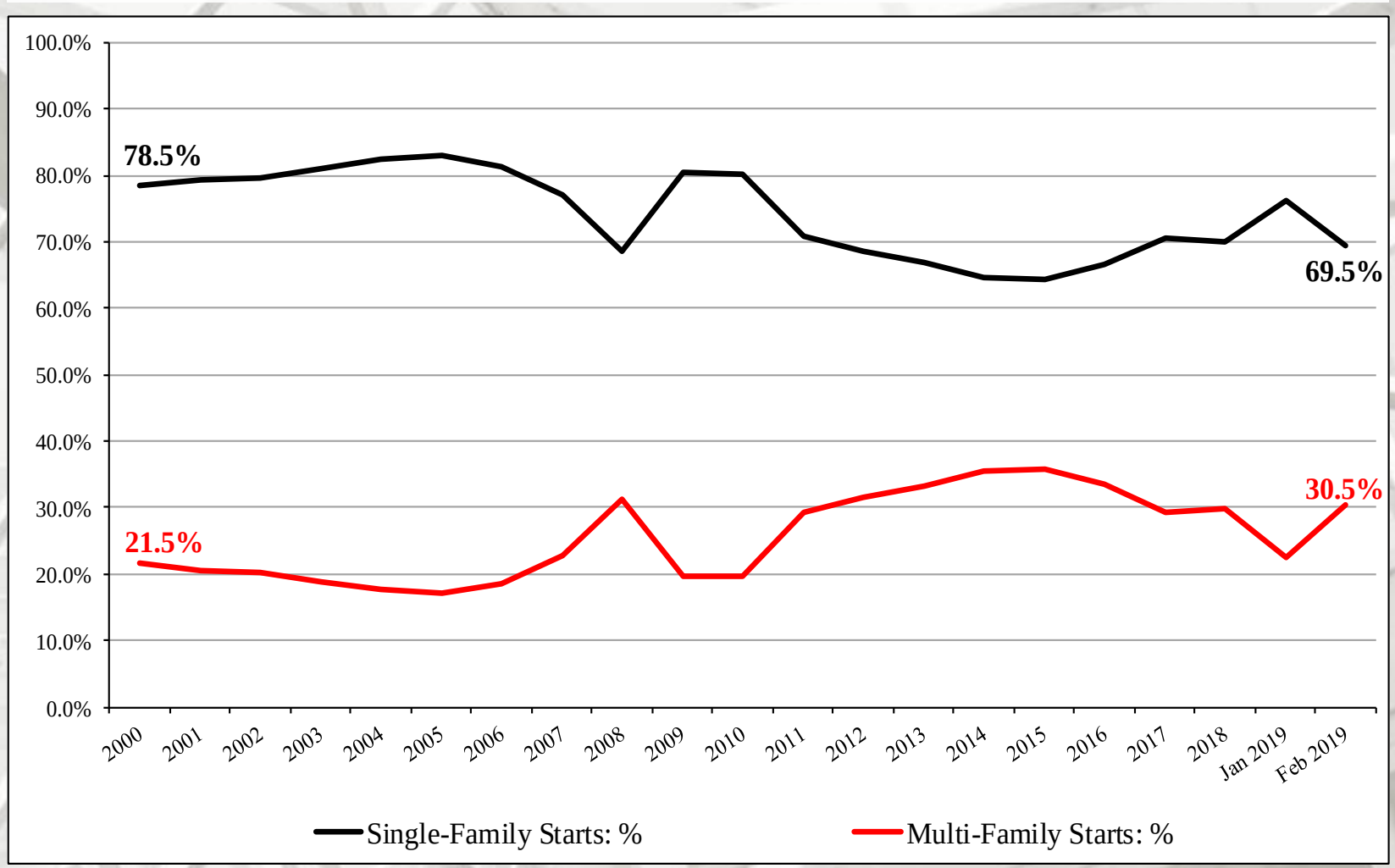

NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total starts.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

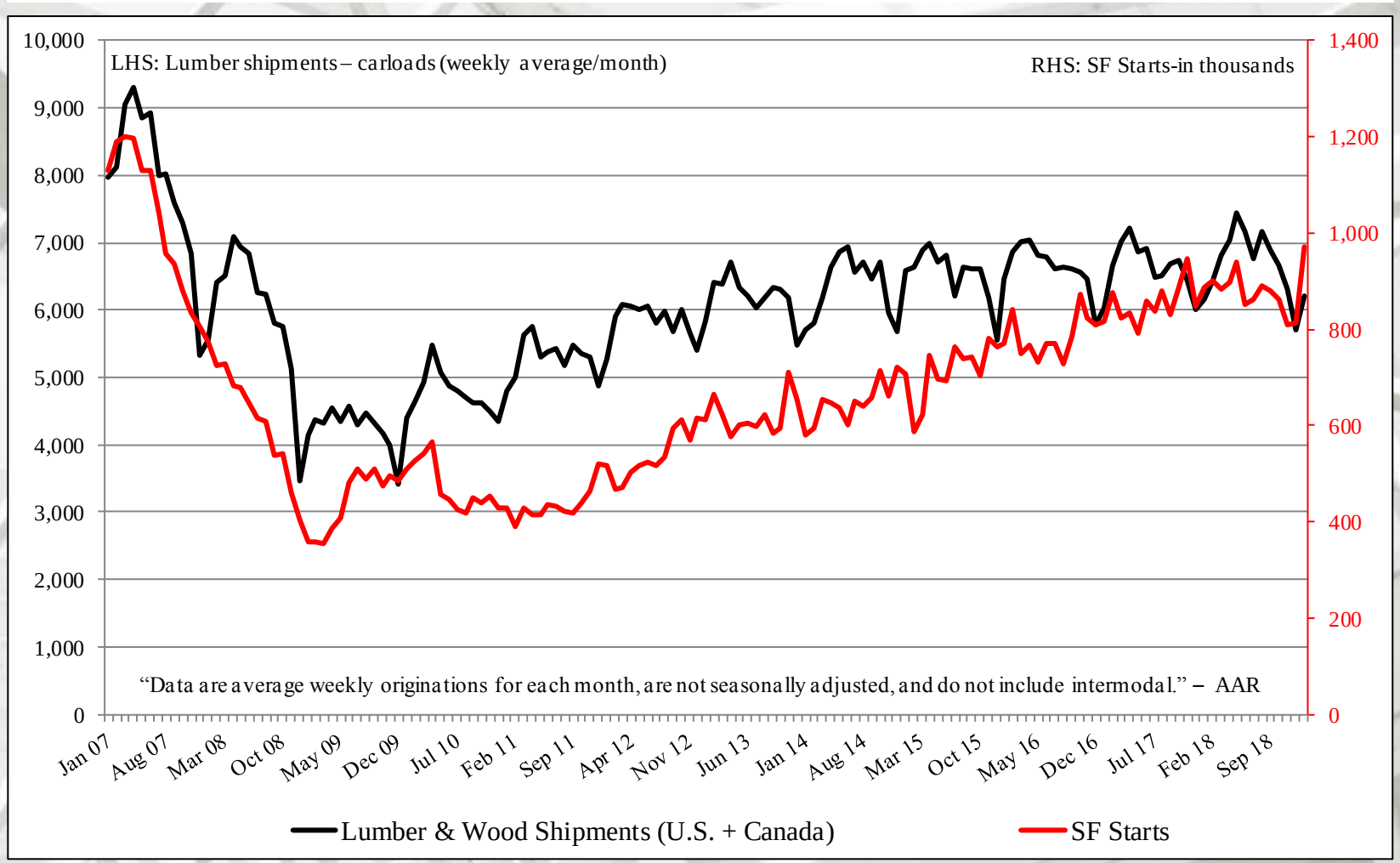
# SF vs. MF Housing Starts (%)




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

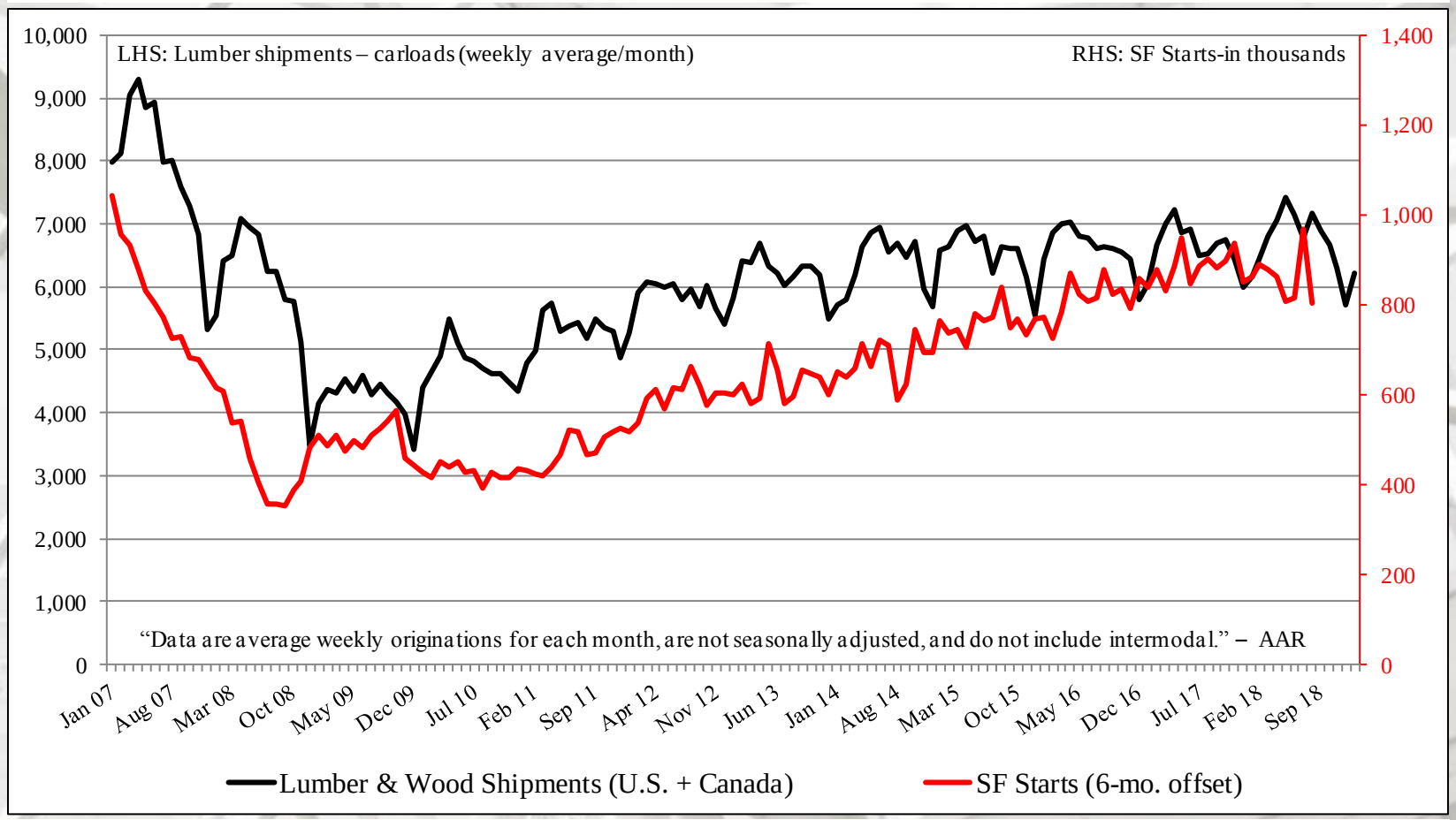
# Railroad Lumber & Wood Shipments vs. U.S. SF Housing Starts




Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 2/7/19; U.S. DOC-Construction; 3/26/19

Return TOC

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




In this graph, February 2007 lumber shipments are contrasted with February 2007 SF starts, and continuing through February 2019 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.

Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 2/7/19; U.S. DOC-Construction; 3/26/19

Return TOC

# New Housing Permits

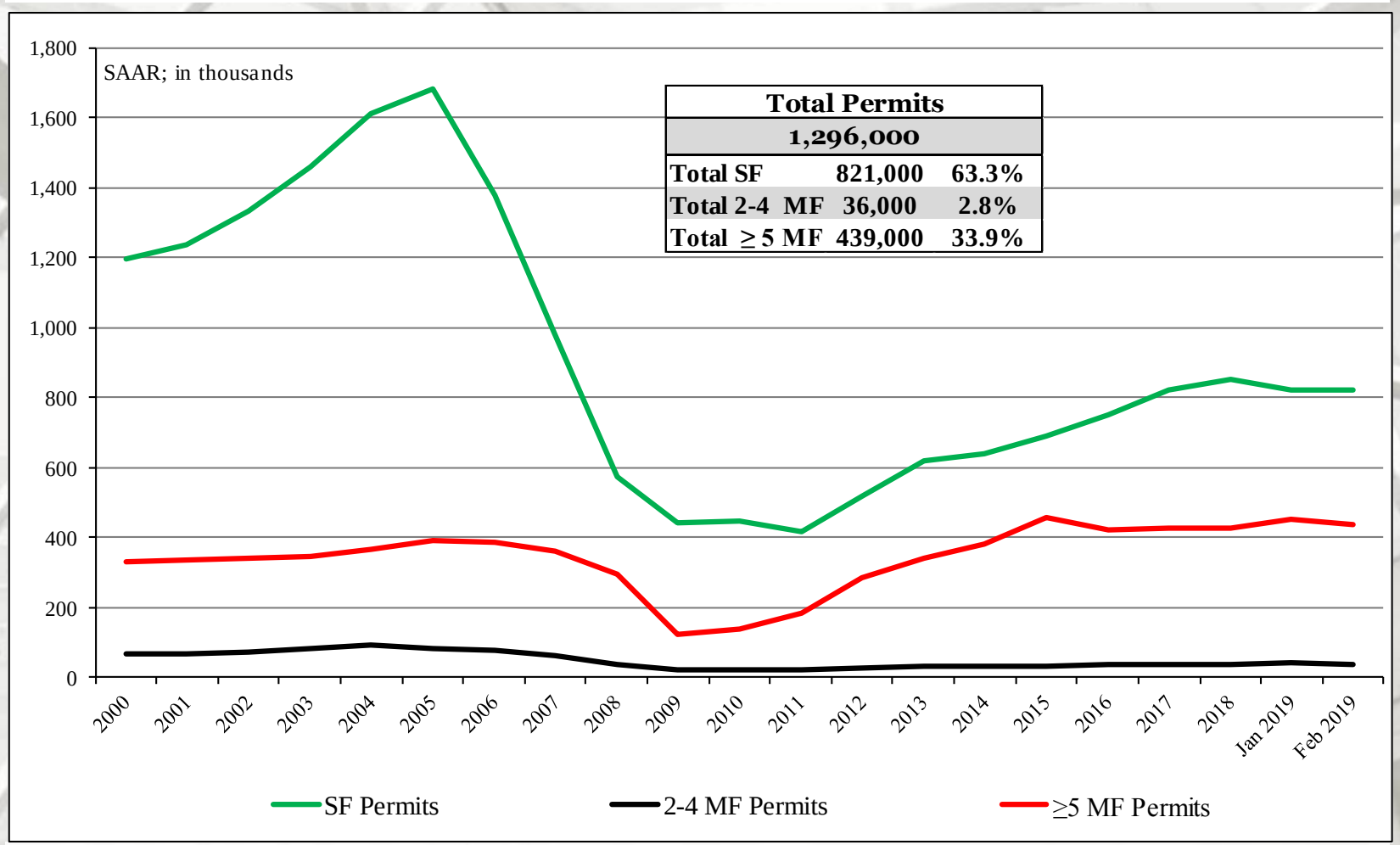
| | Total Permits* | SF Permits | MF 2-4 unit Permits | MF ≥ 5 unit Permits |
|---|---|---|---|---|
| February | 1,296,000 | 821,000 | 36,000 | 439,000 |
| January | 1,317,000 | 821,000 | 44,000 | 452,000 |
| 2018 | 1,323,000 | 886,000 | 46,000 | 391,000 |
| M/M change | -1.6 | 0.0 | -18.2 | -2.9 |
| Y/Y change | -2.0 | -7.3 | -21.7 | 12.3 |

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total New Housing Permits




| Total Permits | | |
|---|---|---|
| 1,296,000 | | |
| Total SF | 821,000 | 63.3% |
| Total 2-4 MF | 36,000 | 2.8% |
| Total ≥ 5 MF | 439,000 | 33.9% |

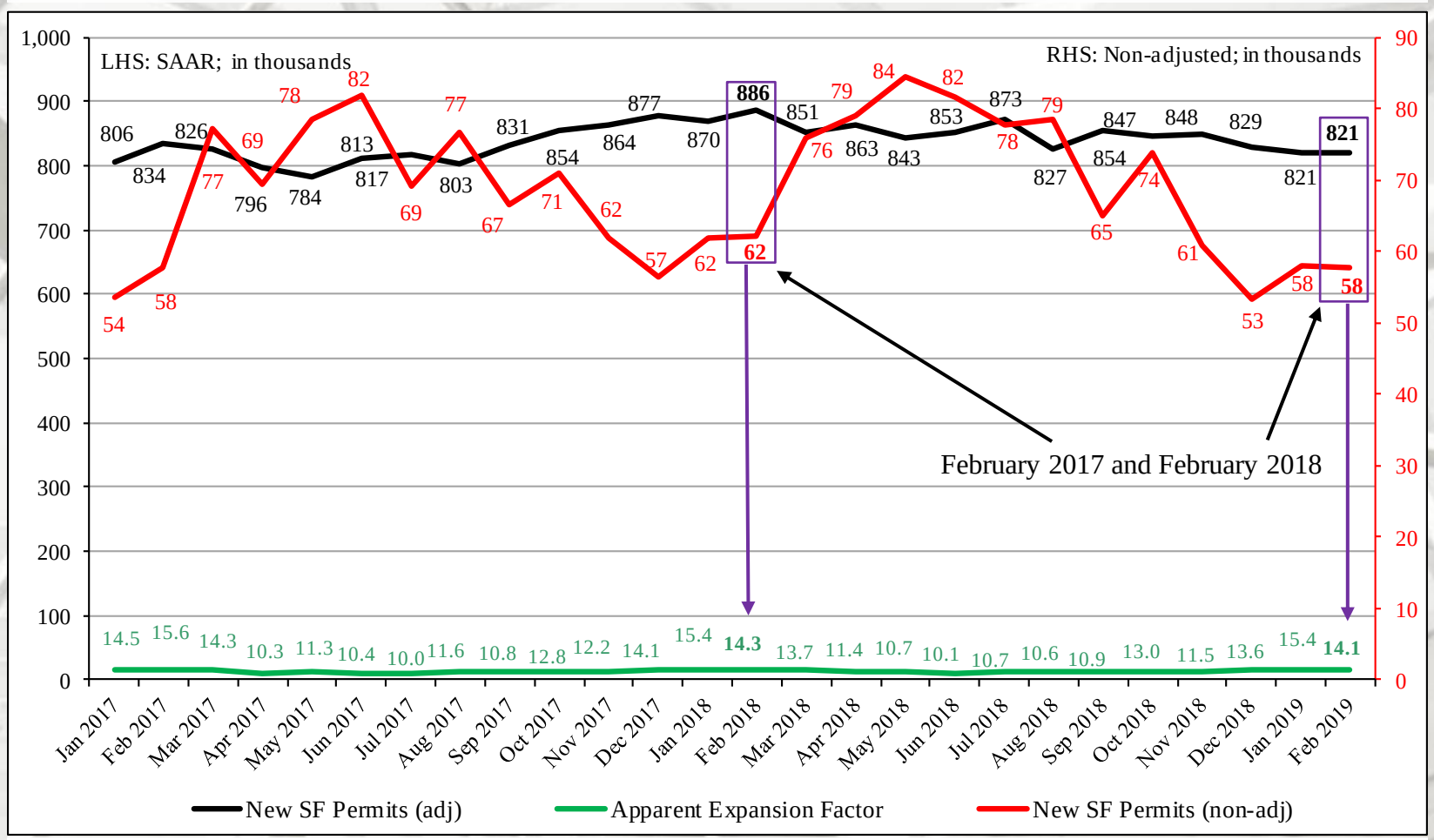
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total permits.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Nominal & SAAR SF Permits




## Nominal and Adjusted New SF Monthly Permits

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

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Permits by Region

| | NE Total* | NE SF | NE MF** |
|---|---|---|---|
| February | 137,000 | 64,000 | 73,000 |
| January | 135,000 | 55,000 | 80,000 |
| 2018 | 145,000 | 63,000 | 82,000 |
| M/M change | 1.5 | 16.4 | -8.8 |
| Y/Y change | -5.5 | 1.6 | -11.0 |
| | **MW Total*** | **MW SF** | **MW MF**** |
| January | 188,000 | 105,000 | 83,000 |
| December | 186,000 | 114,000 | 72,000 |
| 2018 | 192,000 | 127,000 | 65,000 |
| M/M change | 1.1 | -7.9 | 15.3 |
| Y/Y change | -2.1 | -17.3 | 27.7 |

NE = Northeast; ME = Midwest
* All data are SAAR
** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Permits by Region

| | S Total* | S SF | S MF** |
|---|---|---|---|
| January | 683,000 | 458,000 | 225,000 |
| December | 657,000 | 455,000 | 202,000 |
| 2018 | 617,000 | 471,000 | 146,000 |
| M/M change | 4.0 | 0.7 | 11.4 |
| Y/Y change | 10.7 | -2.8 | 54.1 |

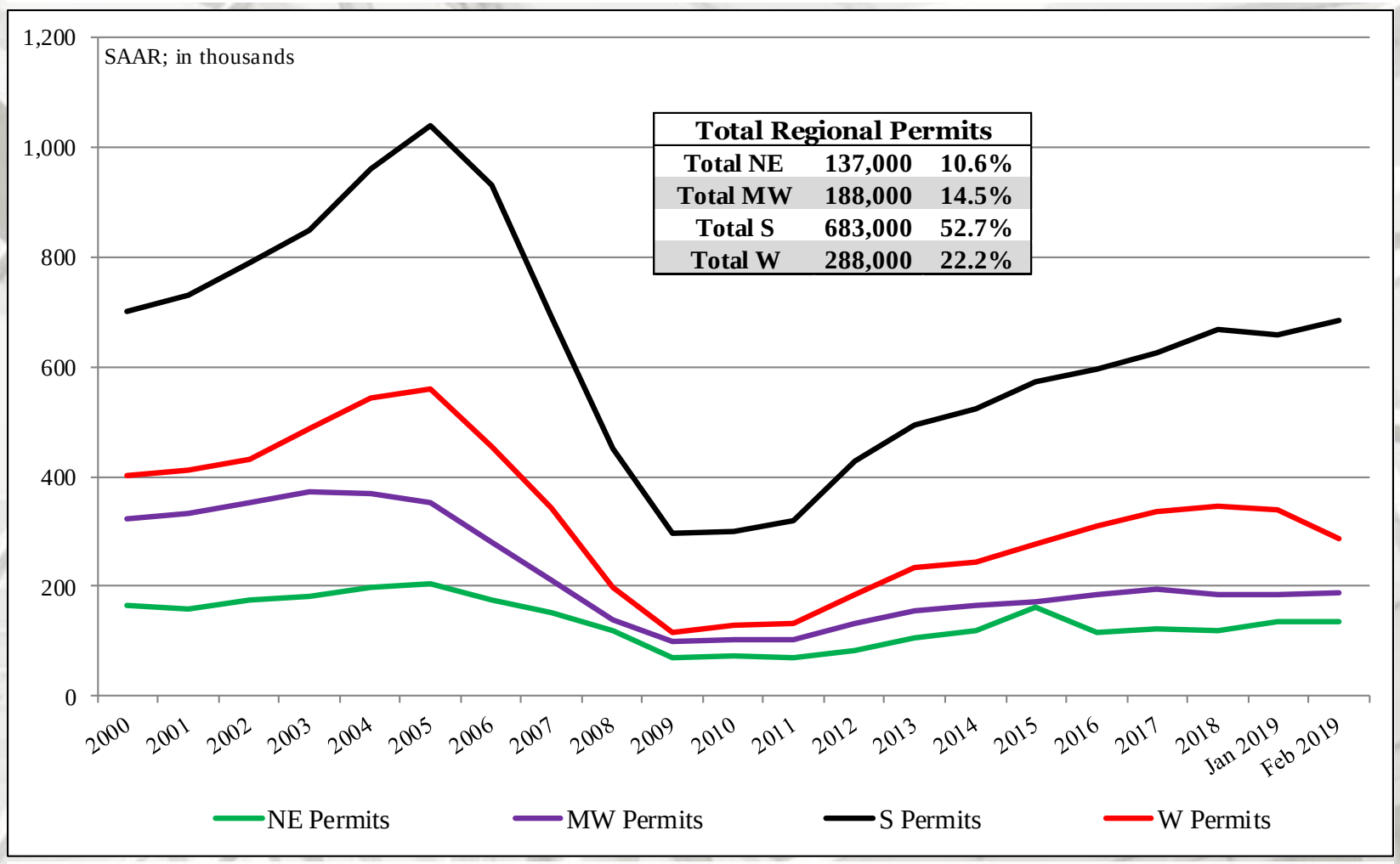
| | W Total* | W SF | W MF** |
|---|---|---|---|
| January | 288,000 | 194,000 | 94,000 |
| December | 339,000 | 197,000 | 142,000 |
| 2018 | 369,000 | 225,000 | 144,000 |
| M/M change | -15.0 | -1.5 | -33.8 |
| Y/Y change | -22.0 | -13.8 | -34.7 |

S = South; W = West
* All data are SAAR
** US DOC does not report multifamily starts directly, this is an estimation (Total starts – SF starts).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Permits by Region




| Total Regional Permits | | |
|---|---|---|
| Total NE | 137,000 | 10.6% |
| Total MW | 188,000 | 14.5% |
| Total S | 683,000 | 52.7% |
| Total W | 288,000 | 22.2% |

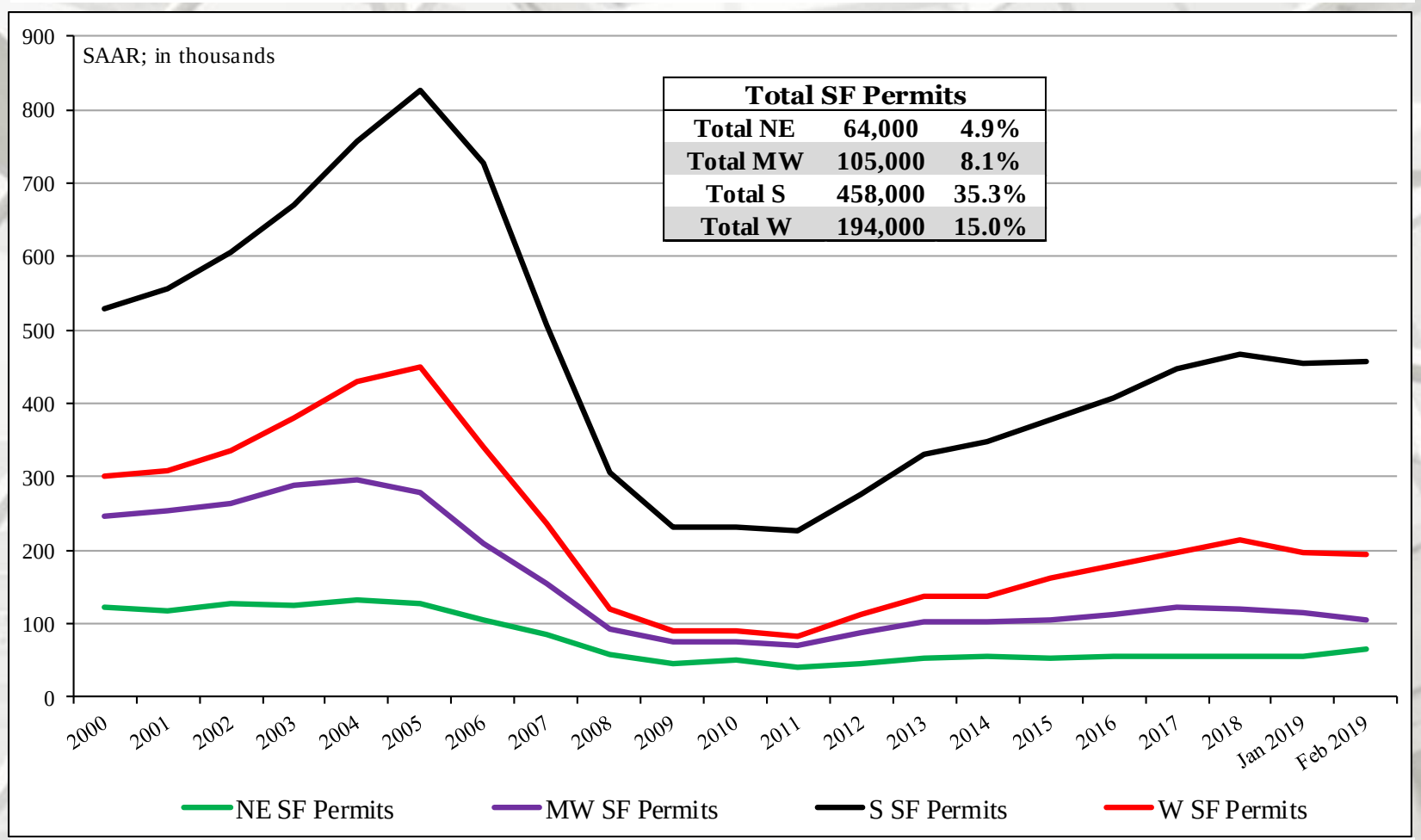
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total permits.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# SF Housing Permits by Region




| Total SF Permits | | |
|---|---|---|
| Total NE | 64,000 | 4.9% |
| Total MW | 105,000 | 8.1% |
| Total S | 458,000 | 35.3% |
| Total W | 194,000 | 15.0% |

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

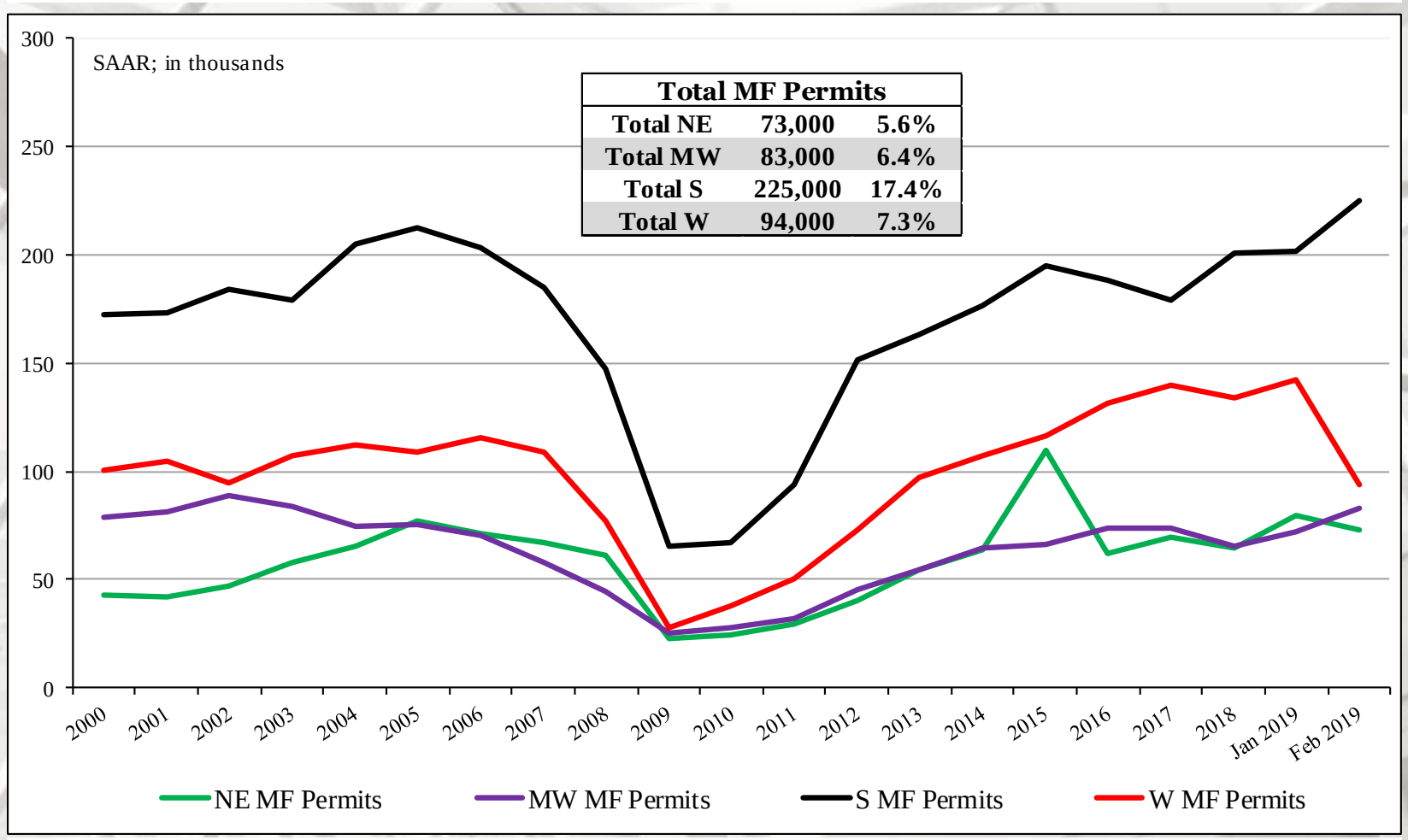
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total permits.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# MF Housing Permits by Region



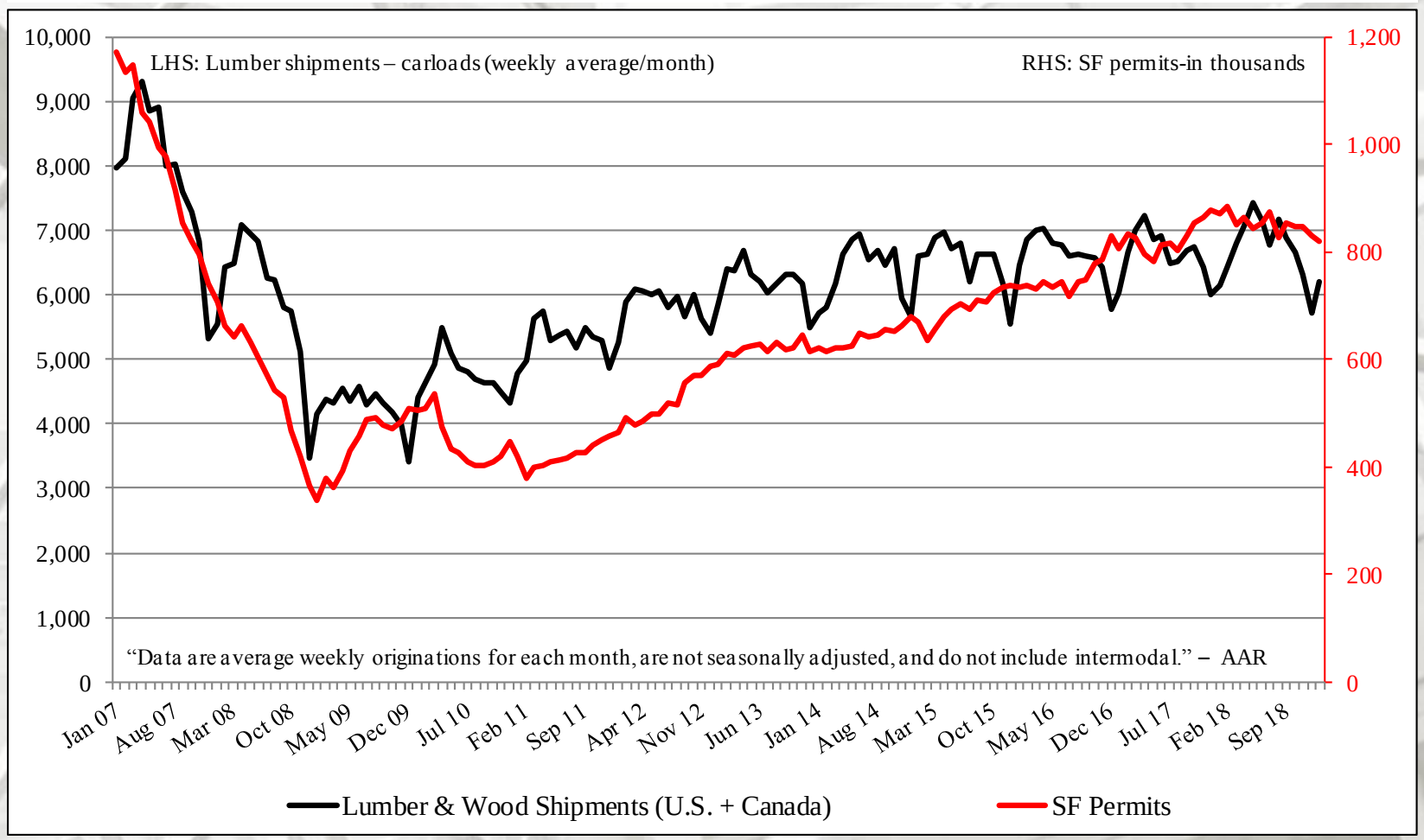

NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total permits.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

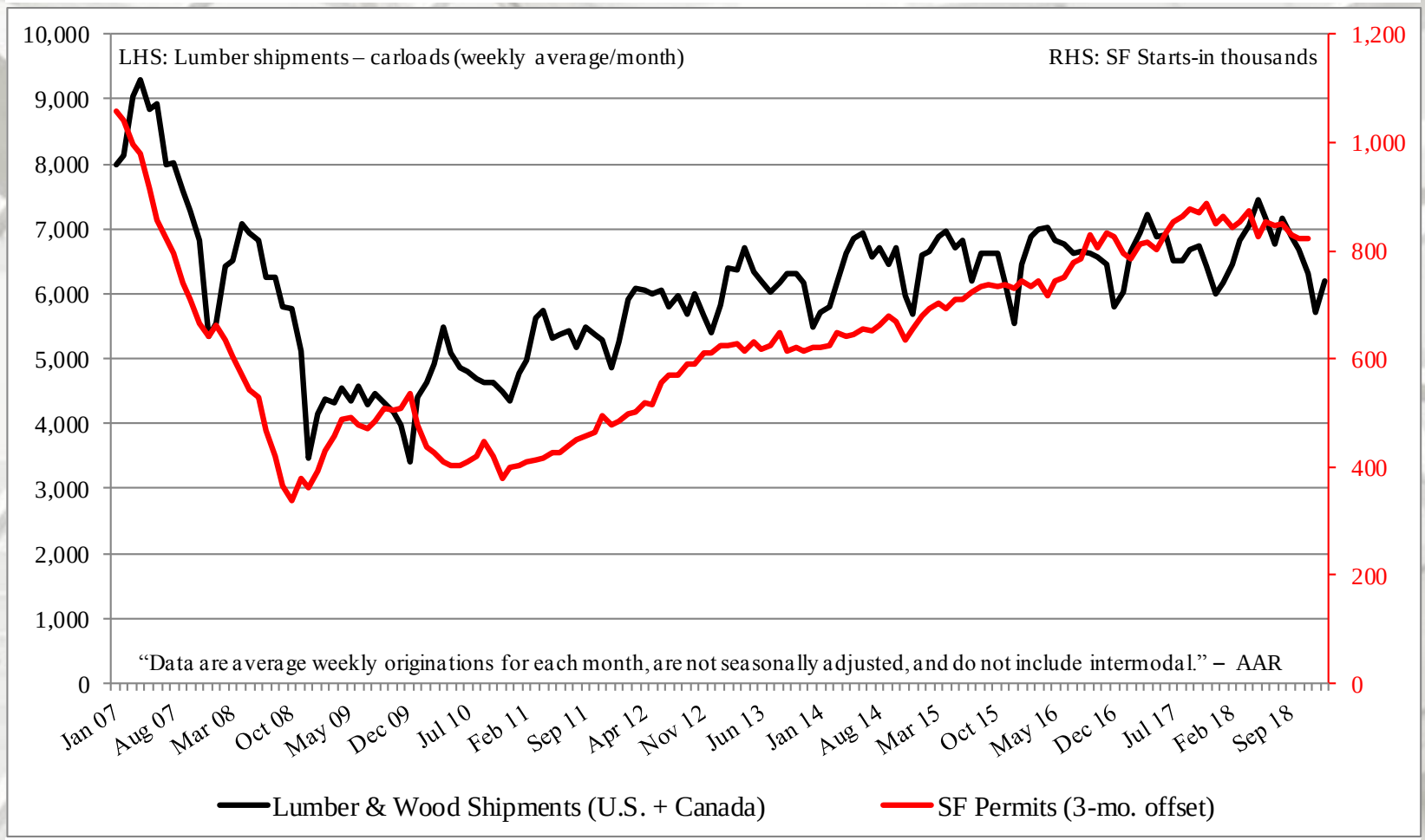
# Railroad Lumber & Wood Shipments vs. U.S. SF Housing Permits




Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 2/7/19; U.S. DOC-Construction; 3/26/19

Return TOC

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




In this graph, February 2007 lumber shipments are contrasted with February 2007 SF permits, continuing through February 2019. The purpose is to discover if lumber shipments relate to future single-family permits. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 2/7/19; U.S. DOC-Construction; 3/26/19

Return TOC

# New Housing Under Construction (HUC)

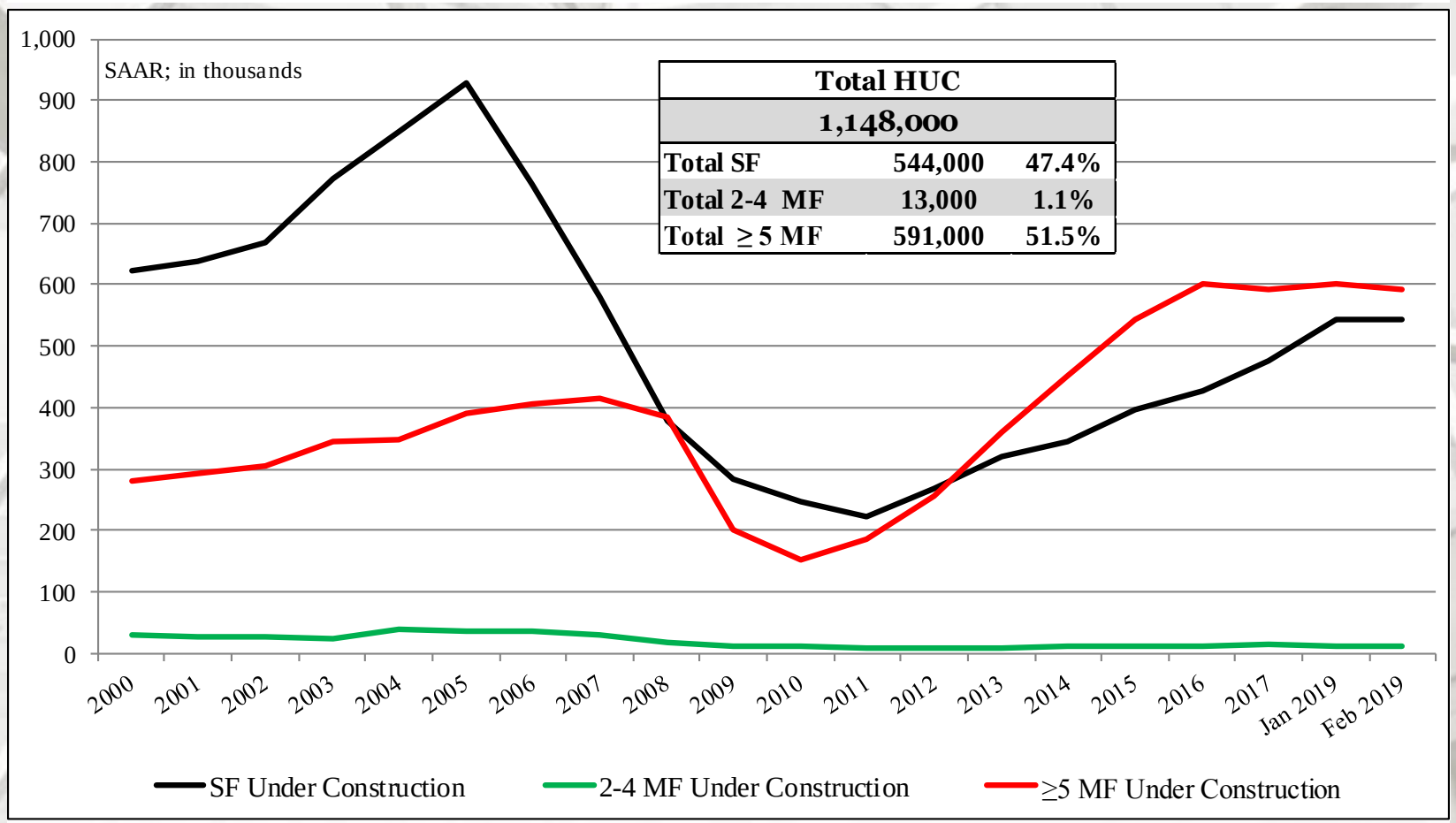
| | Total Under Construction* | SF Under Construction | MF 2-4 unit** Under Construction | MF ≥ 5 unit Under Construction |
|---|---|---|---|---|
| Febuary | 1,148,000 | 544,000 | 13,000 | 591,000 |
| January | 1,159,000 | 544,000 | 13,000 | 602,000 |
| 2018 | 1,119,000 | 503,000 | 11,000 | 605,000 |
| M/M change | -0.9 | 0.0 | 0.0 | -1.8 |
| Y/Y change | 2.6 | 8.2 | 18.2 | -2.3 |

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)).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Under Construction




US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Under Construction by Region

| | NE Total | NE SF | NE MF** |
|---|---|---|---|
| February | 189,000 | 65,000 | 124,000 |
| January | 191,000 | 65,000 | 126,000 |
| 2018 | 189,000 | 52,000 | 137,000 |
| M/M change | -1.0 | 0.0 | -1.6 |
| Y/Y change | 0.0 | 25.0 | -9.5 |
| | **MW Total** | **MW SF** | **MW MF** |
| February | 155,000 | 82,000 | 73,000 |
| January | 155,000 | 83,000 | 72,000 |
| 2018 | 152,000 | 80,000 | 72,000 |
| M/M change | 0.0 | -1.2 | 1.4 |
| Y/Y change | 2.0 | 2.5 | 1.4 |

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Under Construction by Region

| | S Total | S SF | S MF** |
|---|---|---|---|
| February | 483,000 | 254,000 | 229,000 |
| January | 486,000 | 254,000 | 232,000 |
| 2018 | 451,000 | 234,000 | 217,000 |
| M/M change | -0.6 | 0.0 | -1.3 |
| Y/Y change | 7.1 | 8.5 | 5.5 |
| | **W Total** | **W SF** | **W MF** |
| February | 321,000 | 143,000 | 178,000 |
| January | 327,000 | 142,000 | 185,000 |
| 2018 | 327,000 | 137,000 | 190,000 |
| M/M change | -1.8 | 0.7 | -3.8 |
| Y/Y change | -1.8 | 4.4 | -6.3 |

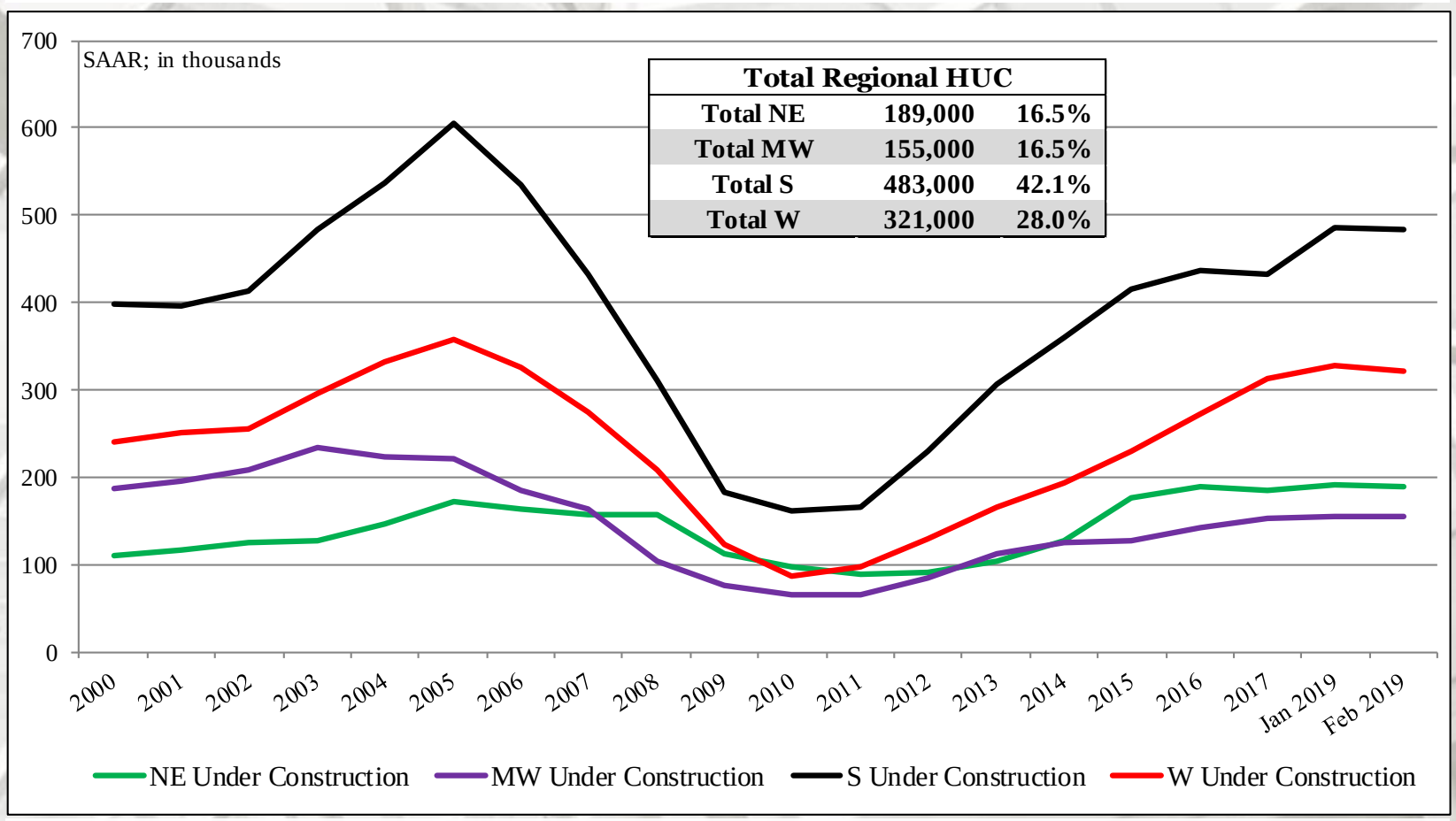
All data are SAAR; S = South and W = West.

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Under Construction by Region




| Total Regional HUC | | |
|---|---|---|
| Total NE | 189,000 | 16.5% |
| Total MW | 155,000 | 16.5% |
| Total S | 483,000 | 42.1% |
| Total W | 321,000 | 28.0% |

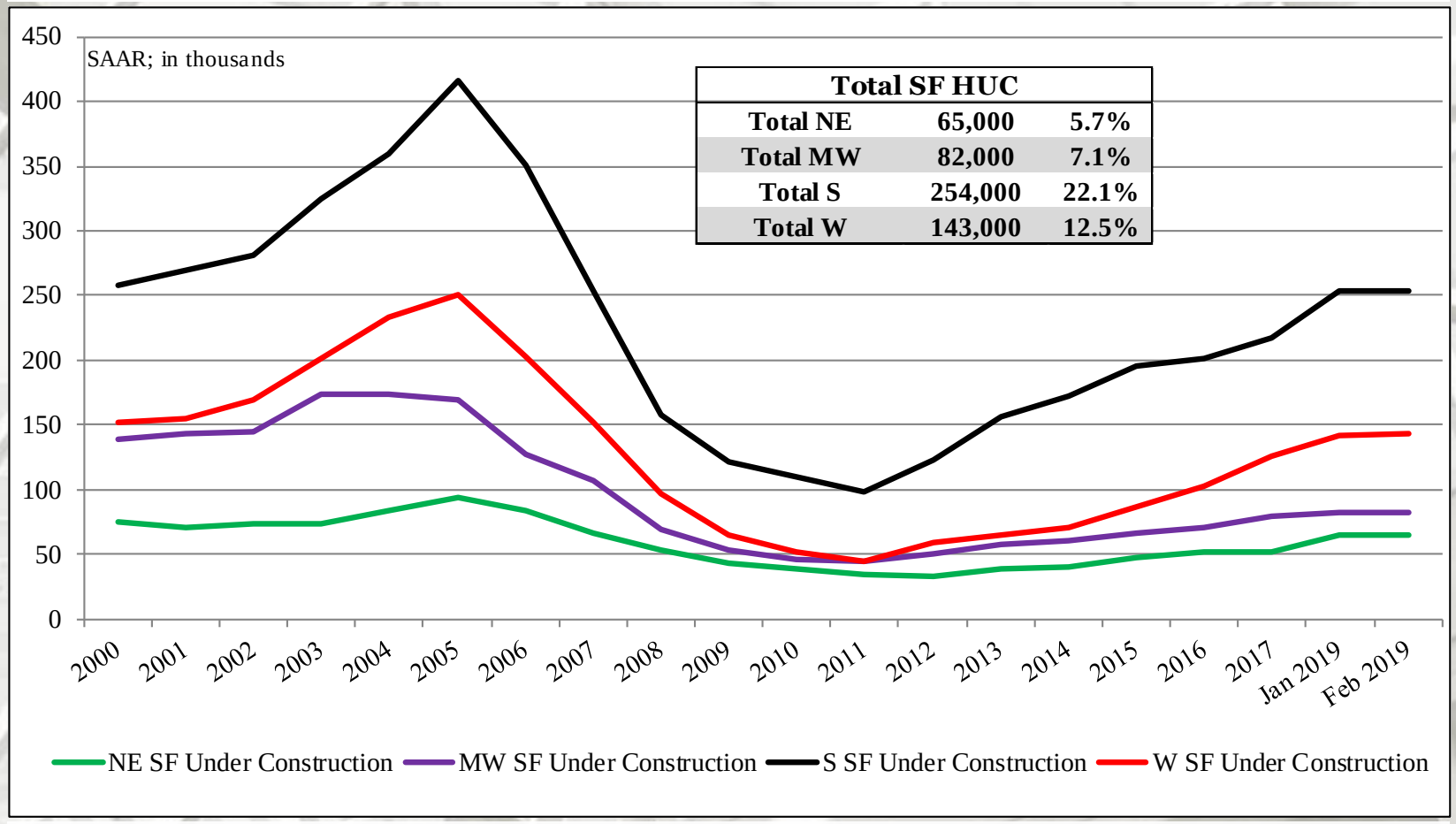
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# SF Housing Under Construction by Region




| Total SF HUC | | |
|---|---|---|
| Total NE | 65,000 | 5.7% |
| Total MW | 82,000 | 7.1% |
| Total S | 254,000 | 22.1% |
| Total W | 143,000 | 12.5% |

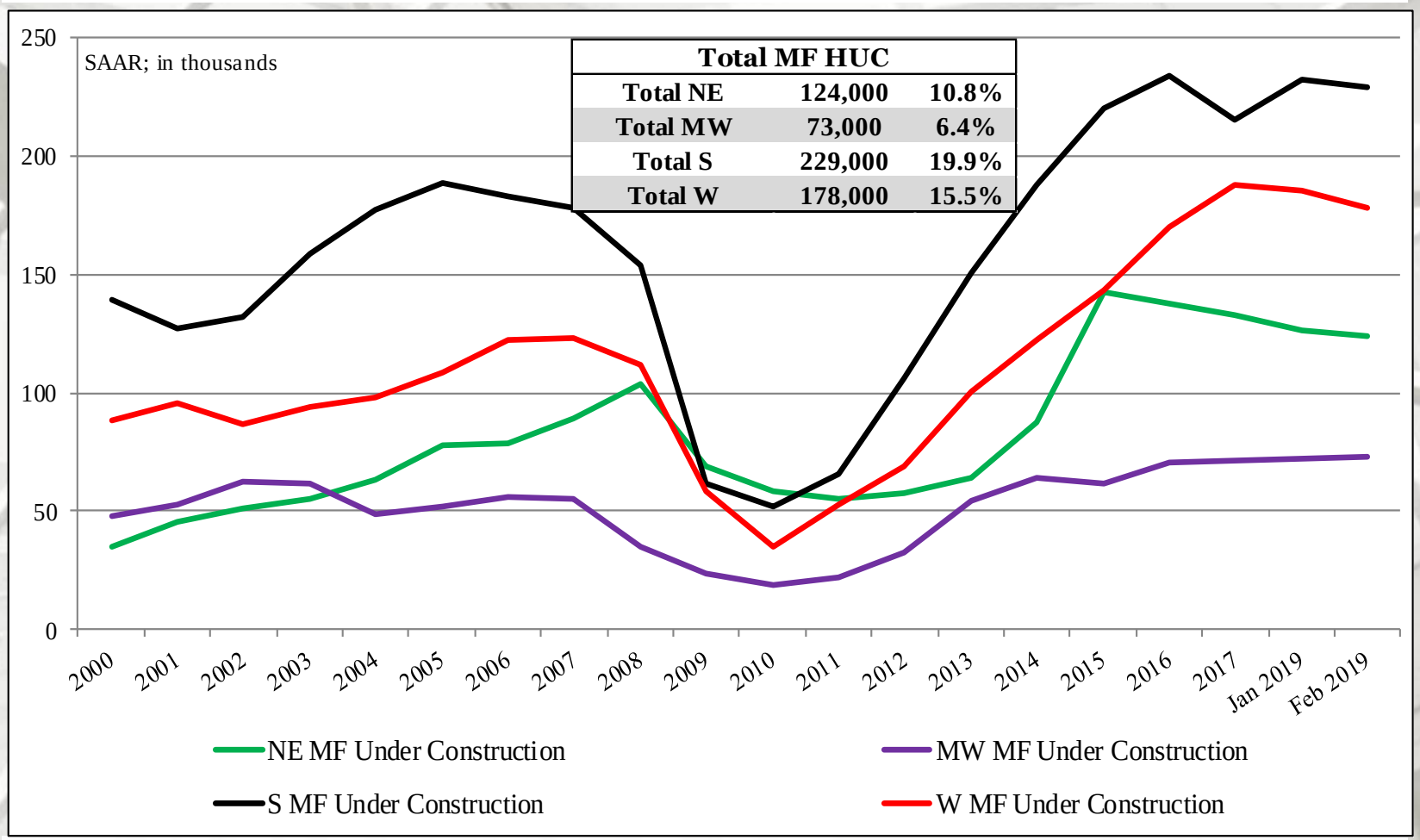
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# MF Housing Under Construction by Region




| Total MF HUC | | |
|---|---|---|
| Total NE | 124,000 | 10.8% |
| Total MW | 73,000 | 6.4% |
| Total S | 229,000 | 19.9% |
| Total W | 178,000 | 15.5% |

NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Completions

| | Total Completions* | SF Completions | MF 2-4 unit** Completions | MF ≥ 5 unit Completions |
|---|---|---|---|---|
| February | 1,303,000 | 816,000 | 14,000 | 473,000 |
| January | 1,247,000 | 907,000 | 3,000 | 337,000 |
| 2018 | 1,289,000 | 882,000 | 7,000 | 400,000 |
| M/M change | 4.5% | -10.0% | 366.7% | 40.4% |
| Y/Y change | 1.1% | -7.5% | 100.0% | 18.3% |

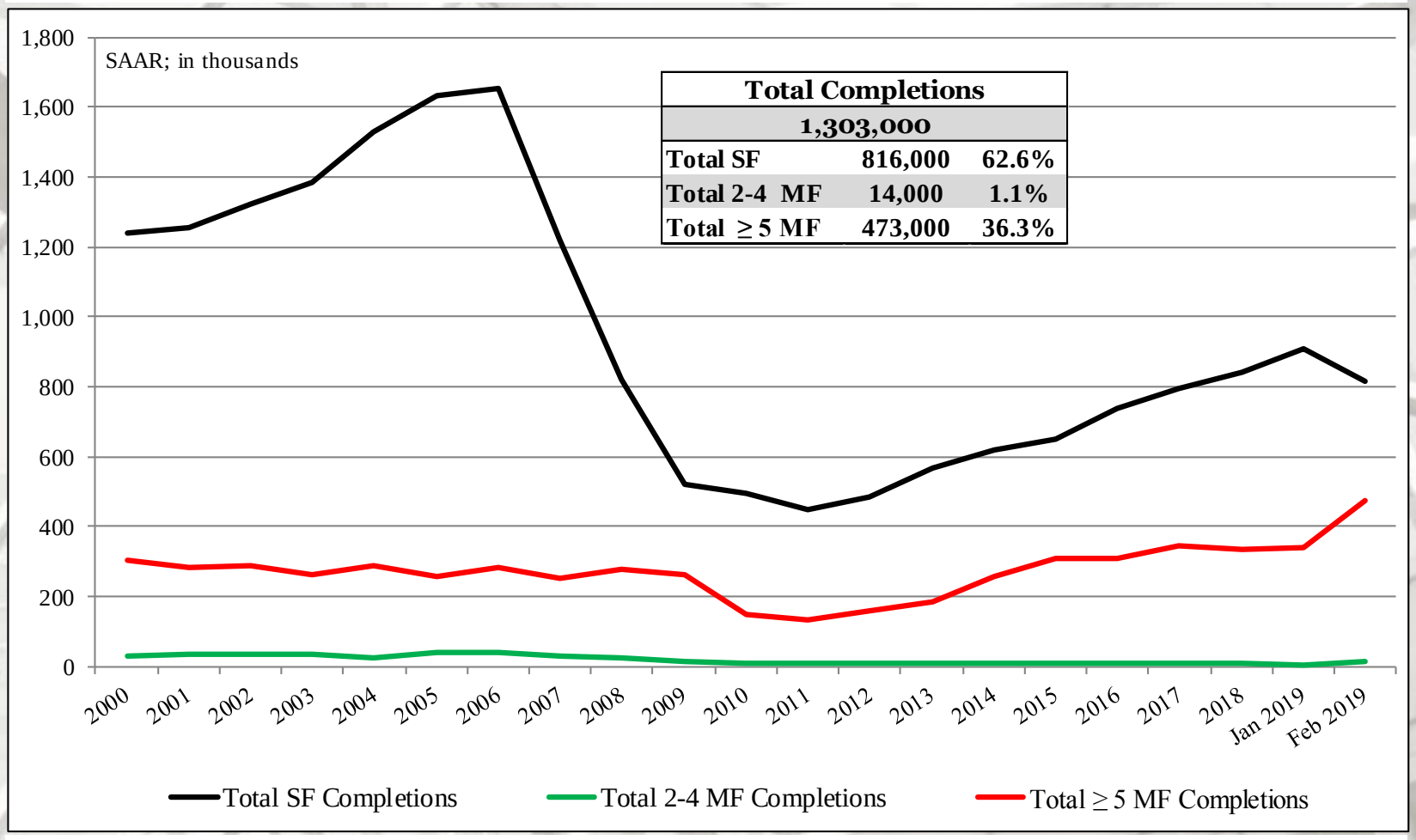
* All completion data are presented at a seasonally adjusted annual rate (SAAR).

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Completions




| Total Completions | | |
|---|---|---|
| 1,303,000 | | |
| Total SF | 816,000 | 62.6% |
| Total 2-4 MF | 14,000 | 1.1% |
| Total ≥ 5 MF | 473,000 | 36.3% |

US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Completions by Region

| | NE Total | NE SF | NE MF** |
|---|---|---|---|
| February | 116,000 | 57,000 | 59,000 |
| January | 126,000 | 49,000 | 77,000 |
| 2018 | 138,000 | 69,000 | 69,000 |
| M/M change | -7.9% | 16.3% | -23.4% |
| Y/Y change | -15.9% | -17.4% | -14.5% |
| | **MW Total** | **MW SF** | **MW MF** |
| February | 162,000 | 129,000 | 33,000 |
| January | 133,000 | 115,000 | 18,000 |
| 2018 | 160,000 | 129,000 | 31,000 |
| M/M change | 21.8% | 12.2% | 83.3% |
| Y/Y change | 1.3% | 0.0% | 6.5% |

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Housing Completions by Region

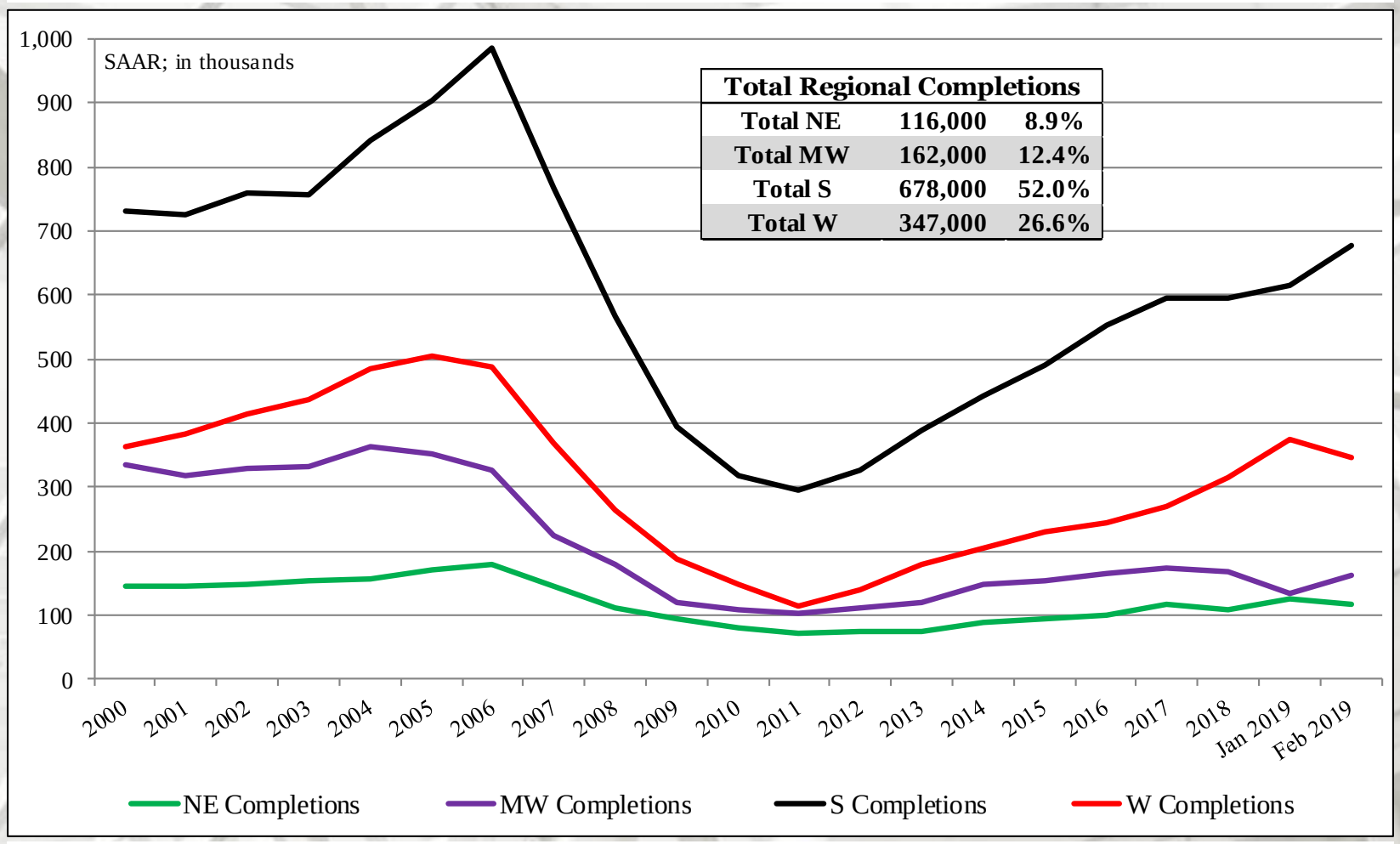
| | S Total | S SF | S MF** |
|---|---|---|---|
| February | 678,000 | 456,000 | 222,000 |
| January | 615,000 | 481,000 | 134,000 |
| 2018 | 655,000 | 462,000 | 193,000 |
| M/M change | 10.2% | -5.2% | 65.7% |
| Y/Y change | 3.5% | -1.3% | 15.0% |
| | **W Total** | **W SF** | **W MF** |
| February | 347,000 | 174,000 | 173,000 |
| January | 373,000 | 262,000 | 111,000 |
| 2018 | 336,000 | 222,000 | 114,000 |
| M/M change | -7.0% | -33.6% | 55.9% |
| Y/Y change | 3.3% | -21.6% | 51.8% |

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# Total Housing Completions by Region




| Total Regional Completions | | |
|---|---|---|
| Total NE | 116,000 | 8.9% |
| Total MW | 162,000 | 12.4% |
| Total S | 678,000 | 52.0% |
| Total W | 347,000 | 26.6% |

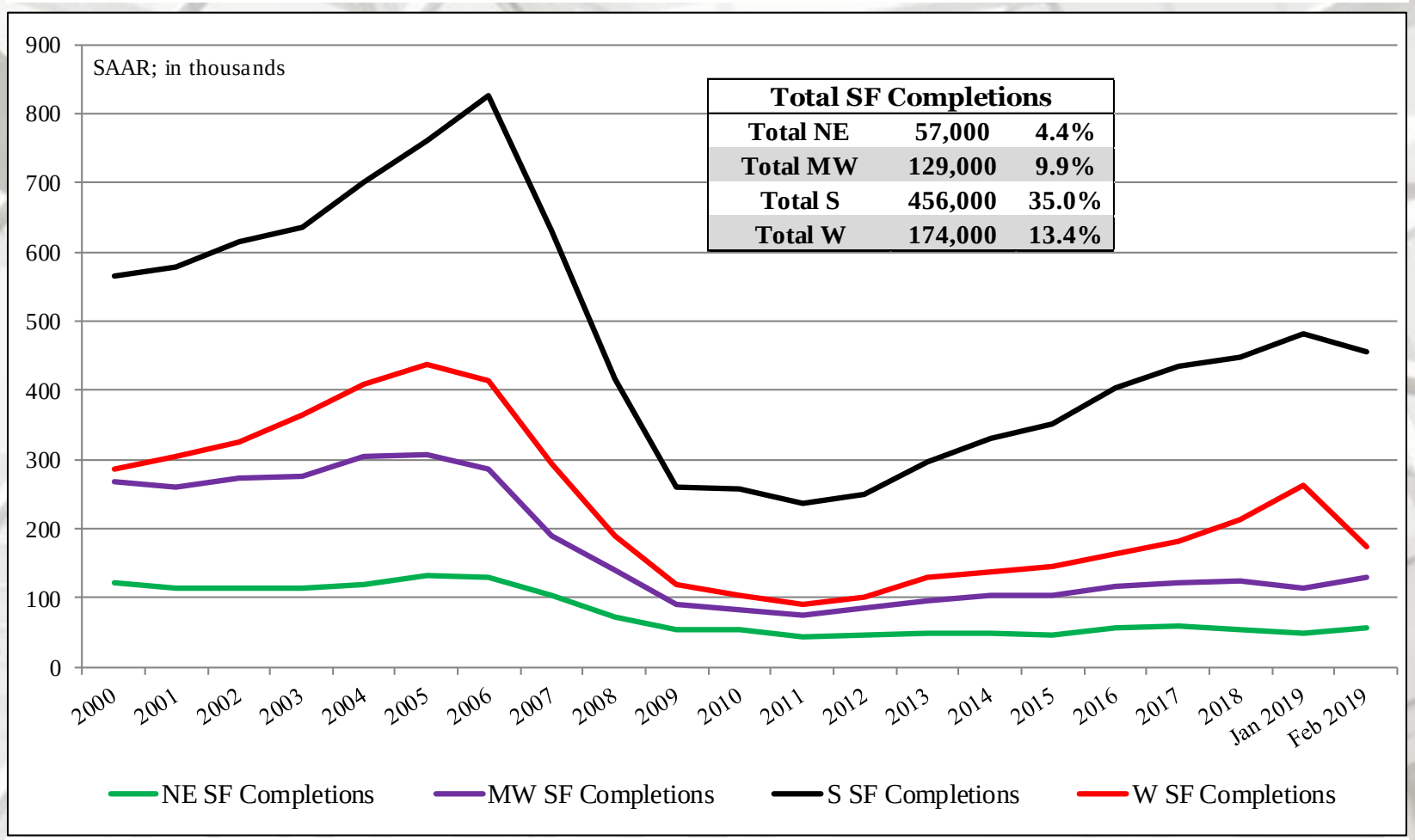
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# SF Housing Completions by Region




| Total SF Completions | | |
|---|---|---|
| Total NE | 57,000 | 4.4% |
| Total MW | 129,000 | 9.9% |
| Total S | 456,000 | 35.0% |
| Total W | 174,000 | 13.4% |

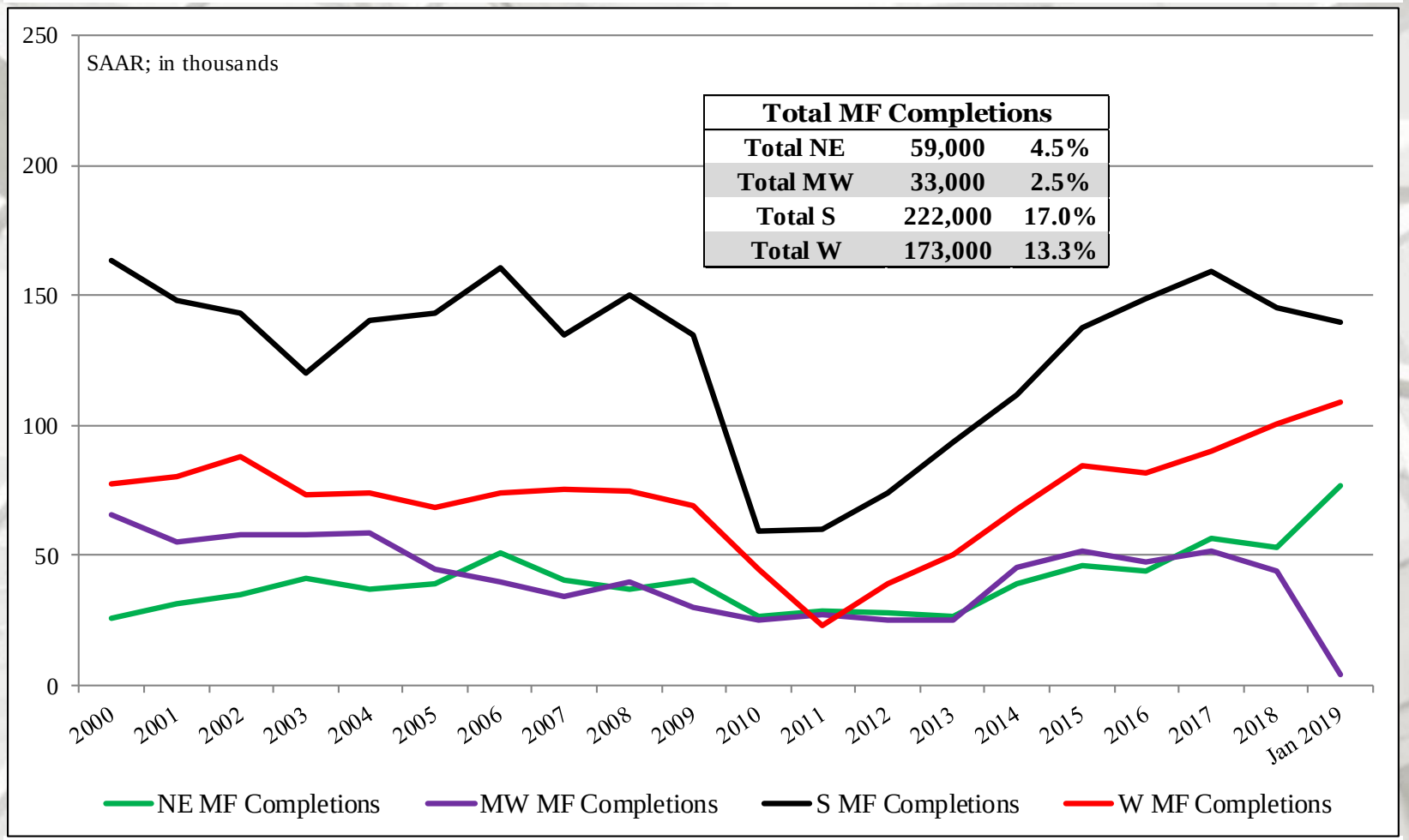
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# MF Housing Completions by Region




| Total MF Completions | | |
|---|---|---|
| Total NE | 59,000 | 4.5% |
| Total MW | 33,000 | 2.5% |
| Total S | 222,000 | 17.0% |
| Total W | 173,000 | 13.3% |

NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly, this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/26/19

Return TOC

# New Single-Family House Sales

| | New SF Sales* | Median Price | Mean Price | Month's Supply |
|---|---|---|---|---|
| February | 667,000 | $315,300 | $379,600 | 5.9 |
| January | 636,000 | $303,900 | $358,000 | 7.1 |
| 2018 | 663,000 | $327,200 | $373,600 | 5.4 |
| M/M change | 4.9% | 3.8% | 6.0% | -16.9% |
| Y/Y change | 0.6% | -3.6% | 1.6% | 9.3% |

* All new sales data are presented at a seasonally adjusted annual rate (SAAR)[1] and housing prices are adjusted at irregular intervals[2].

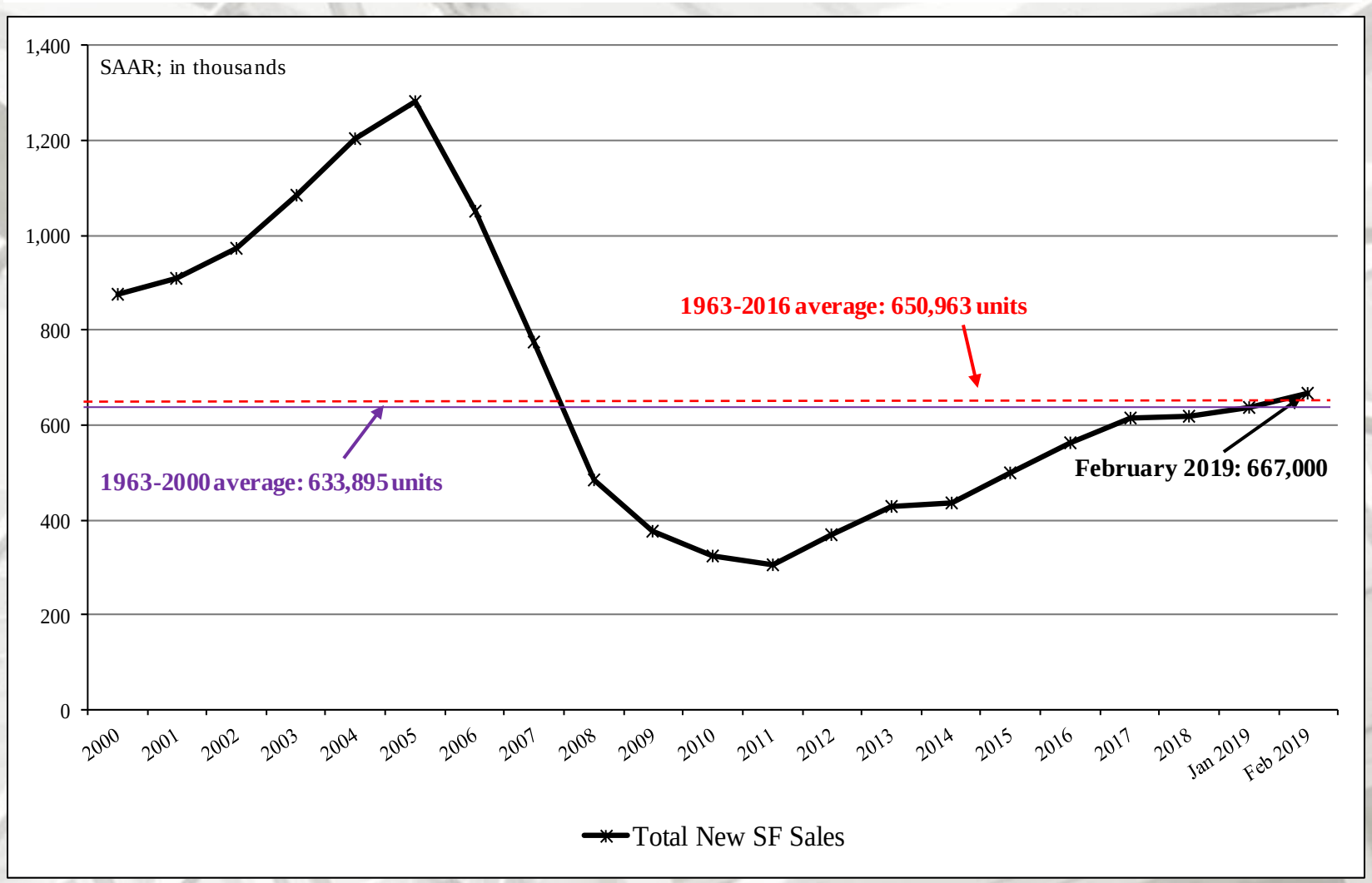
New SF sales were greater than the consensus forecast[3] of 636 m. The past three month's new SF sales data also were revised:

| | |
|---|---|
| November initial: | 657 m revised to 612 m; |
| December initial: | 621 m revised to 588 m; |
| January initial: | 607 m revised to 636 m. |

Sources: [1]http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf
[3] http://us.econoday.com/; 3/29/19

Return TOC

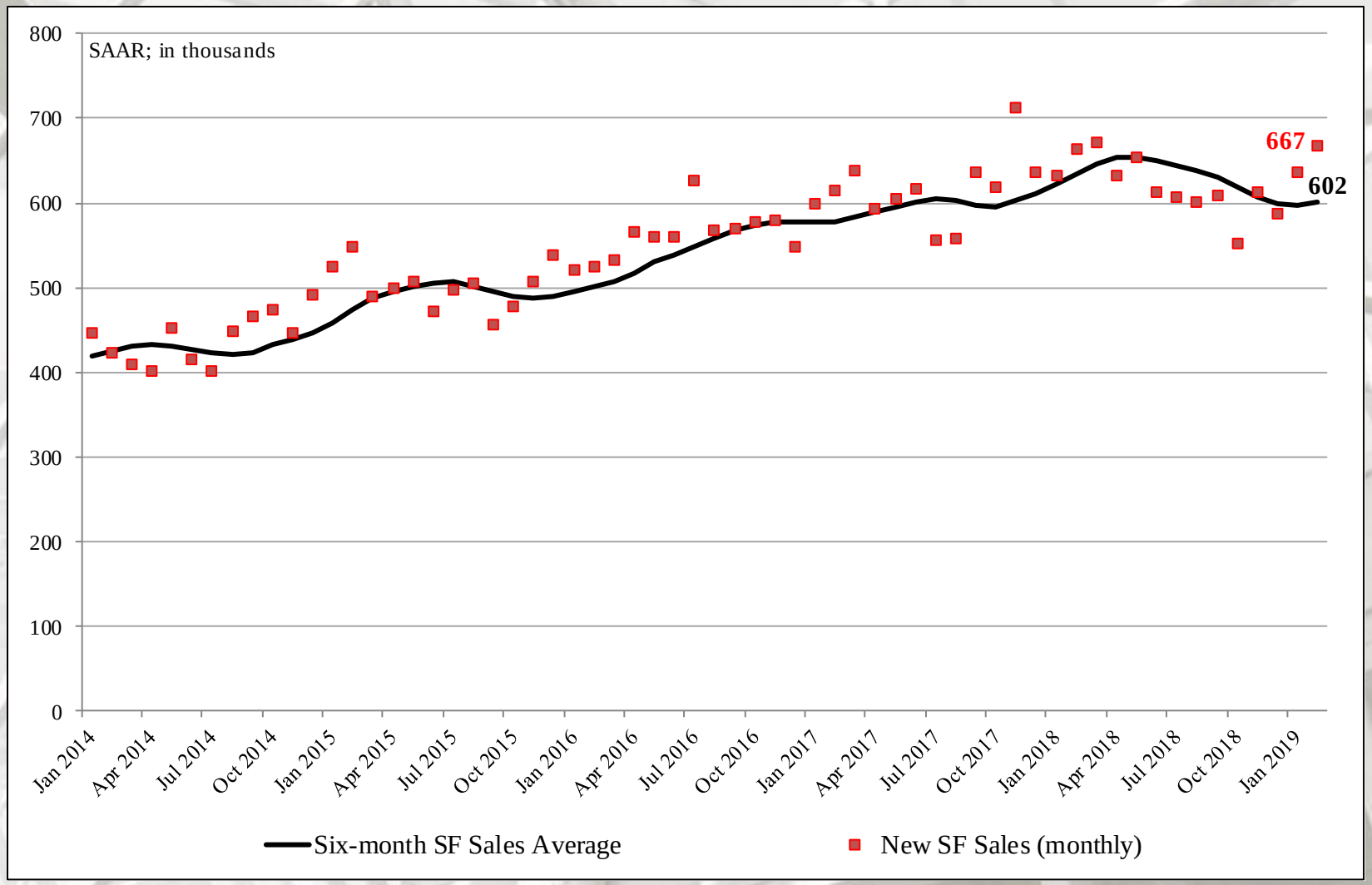
# New SF House Sales




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF Housing Sales: Six-month average & monthly




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales by Region and Price Category

| | NE | MW | S | W |
|---|---|---|---|---|
| February | 33,000 | 77,000 | 391,000 | 166,000 |
| January | 26,000 | 60,000 | 384,000 | 166,000 |
| 2018 | 46,000 | 80,000 | 366,000 | 171,000 |
| M/M change | 26.9% | 28.3% | 1.8% | 0.0% |
| Y/Y change | -28.3% | -3.8% | 6.8% | -2.9% |

| | ≤ $150m | $150 - $199.9m | $200 - 299.9m | $300 - $399.9m | $400 - $499.9m | $500 - $749.9m | ≥ $750m |
|---|---|---|---|---|---|---|---|
| Febuary[1,2,3,4] | 1,000 | 3,000 | 19,000 | 12,000 | 6,000 | 5,000 | 2,000 |
| January | 2,000 | 3,000 | 12,000 | 10,000 | 7,000 | 5,000 | 1,000 |
| 2018 | 2,000 | 6,000 | 13,000 | 12,000 | 7,000 | 7,000 | 2,000 |
| M/M change | 100.0% | 66.7% | 5.3% | 16.7% | 16.7% | 20.0% | 0.0% |
| Y/Y change | 0.0% | 25.0% | 17.6% | 0.0% | 0.0% | -14.3% | -33.3% |
| New SF sales: % | 2.0% | 6.1% | 38.8% | 24.5% | 12.2% | 10.2% | 4.1% |

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

[1] All data are SAAR

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

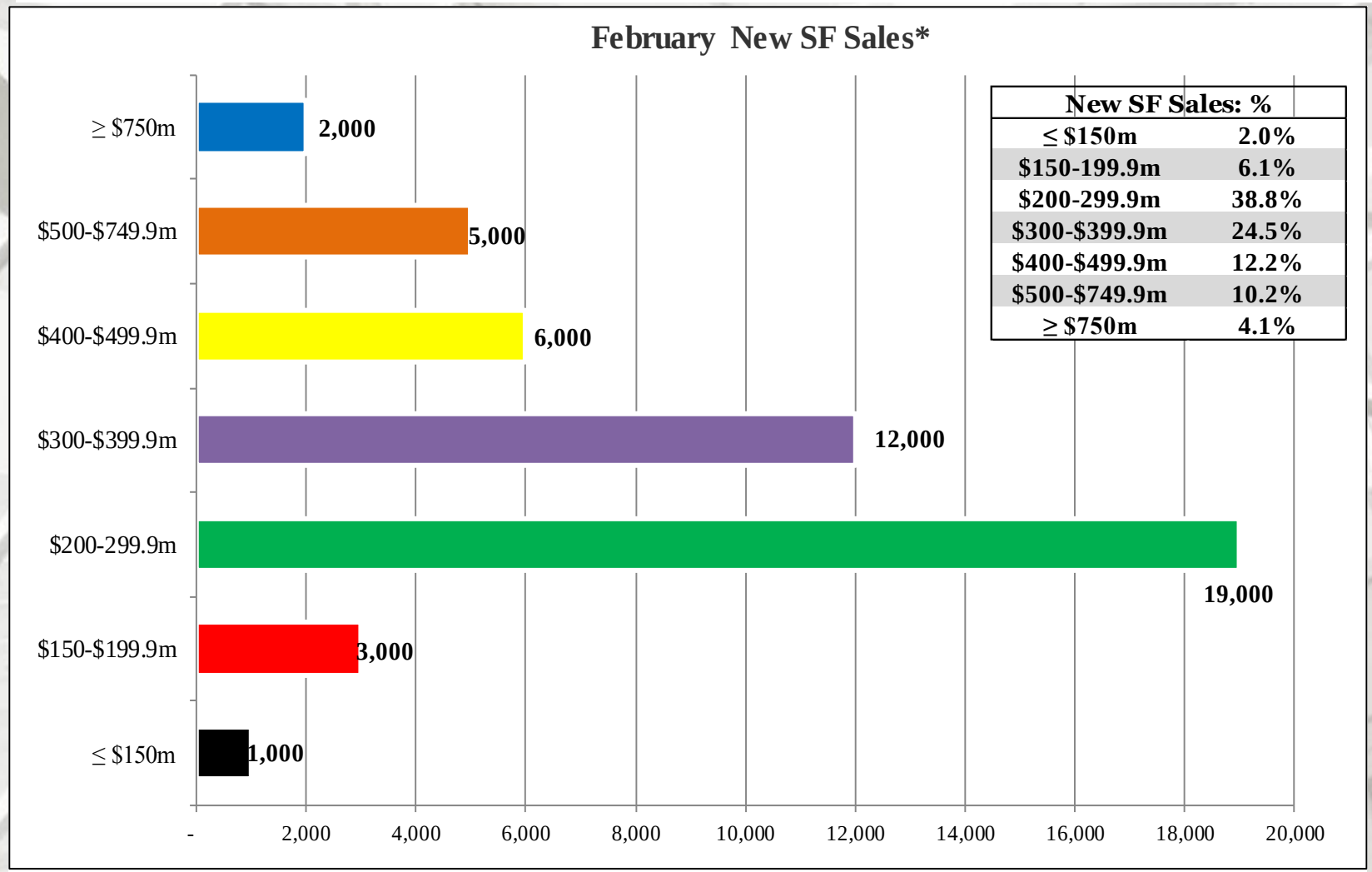
[3] Detail may not add to total because of rounding.

[4] Housing prices are adjusted at irregular intervals.

Sources: [1,2,3] http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19;
[4]https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

Return TOC

# New SF House Sales



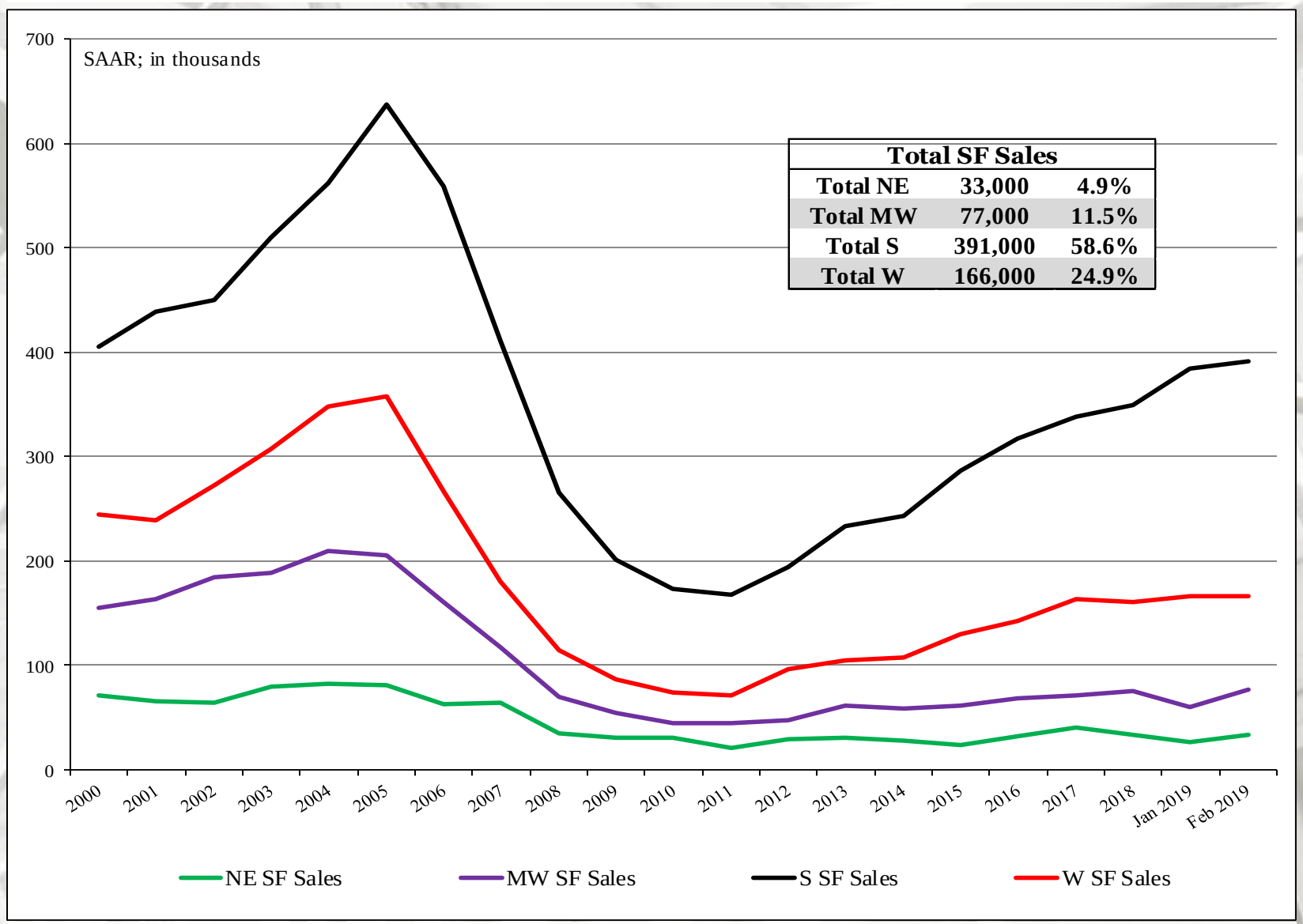

| New SF Sales: % | |
|---|---|
| ≤ $150m | 2.0% |
| $150-199.9m | 6.1% |
| $200-299.9m | 38.8% |
| $300-$399.9m | 24.5% |
| $400-$499.9m | 12.2% |
| $500-$749.9m | 10.2% |
| ≥ $750m | 4.1% |

* Total new sales by price category and percent.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales by Region



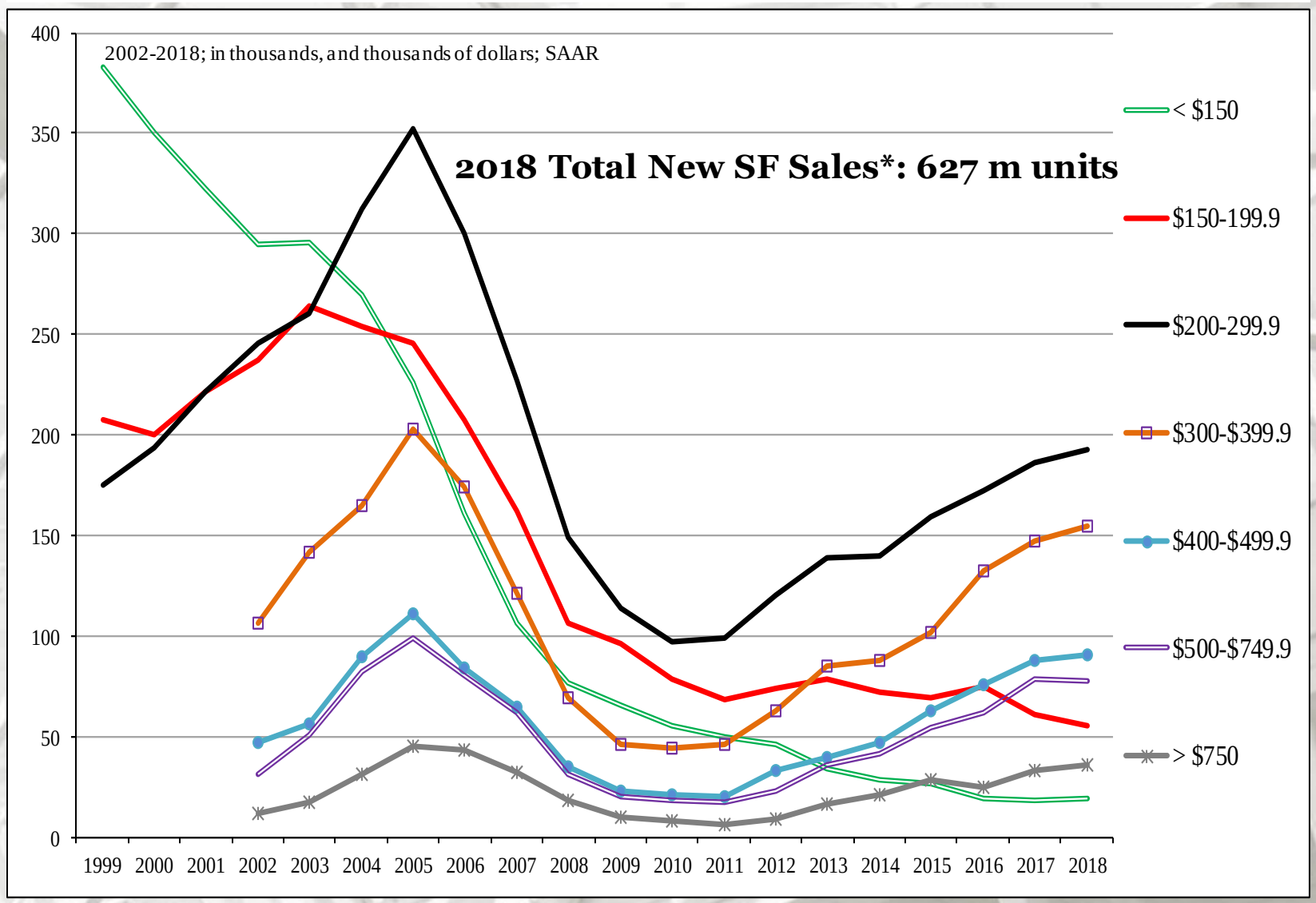

| Total SF Sales | | |
|---|---|---|
| Total NE | 33,000 | 4.9% |
| Total MW | 77,000 | 11.5% |
| Total S | 391,000 | 58.6% |
| Total W | 166,000 | 24.9% |

NE = Northeast; MW = Midwest; S = South; W = West
* Percentage of total new sales.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

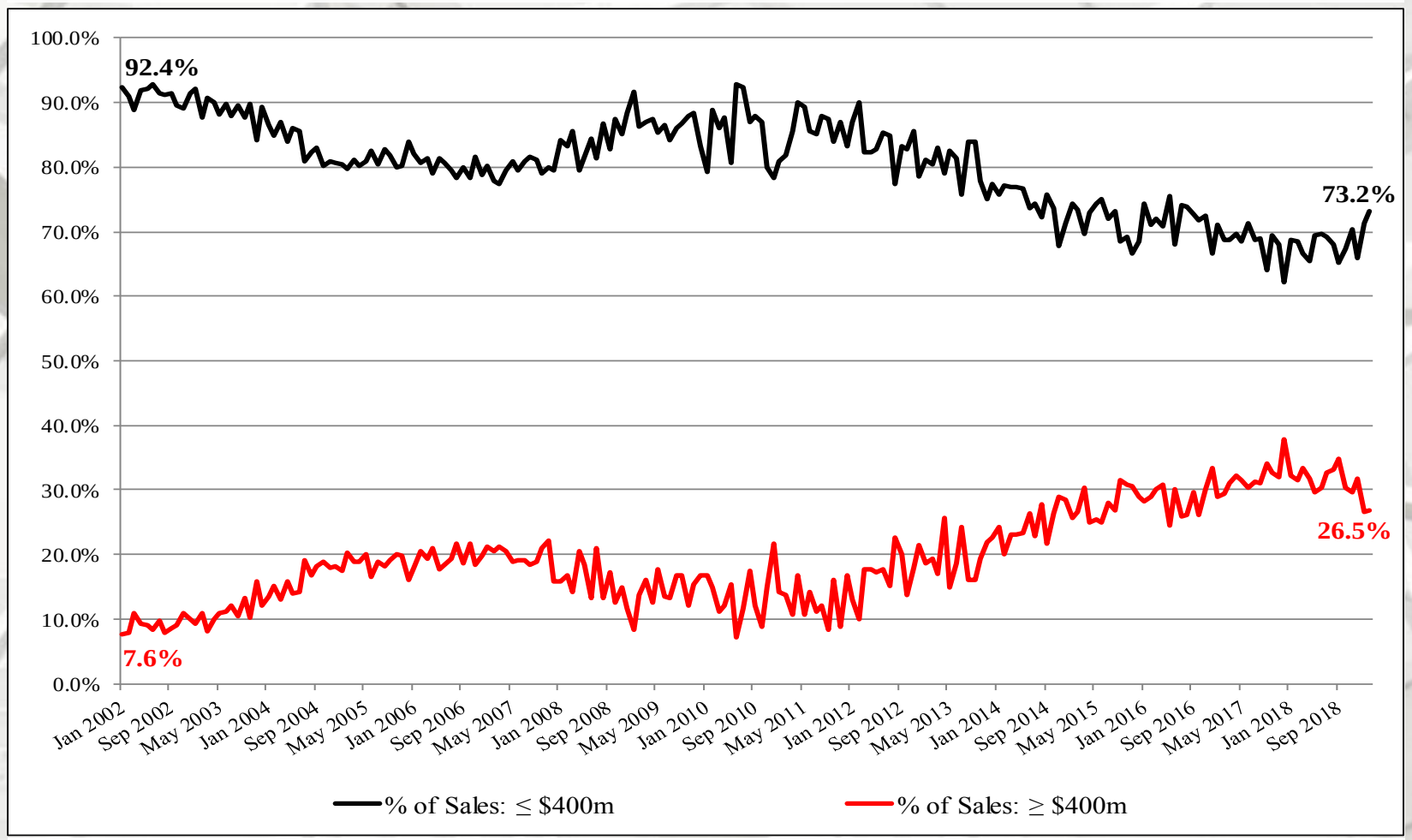
# New SF House Sales by Price Category




Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales




**New SF Sales $400m houses: 2002 – February 2019**

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

Source: [1] http://www.census.gov/construction/nrc/pdf/newresconst.pdf; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 3/29/19

Return TOC

# New SF House Sales


**New SF Sales: ≤ $ 200m and ≥ $500m: 2002 to February 2019**

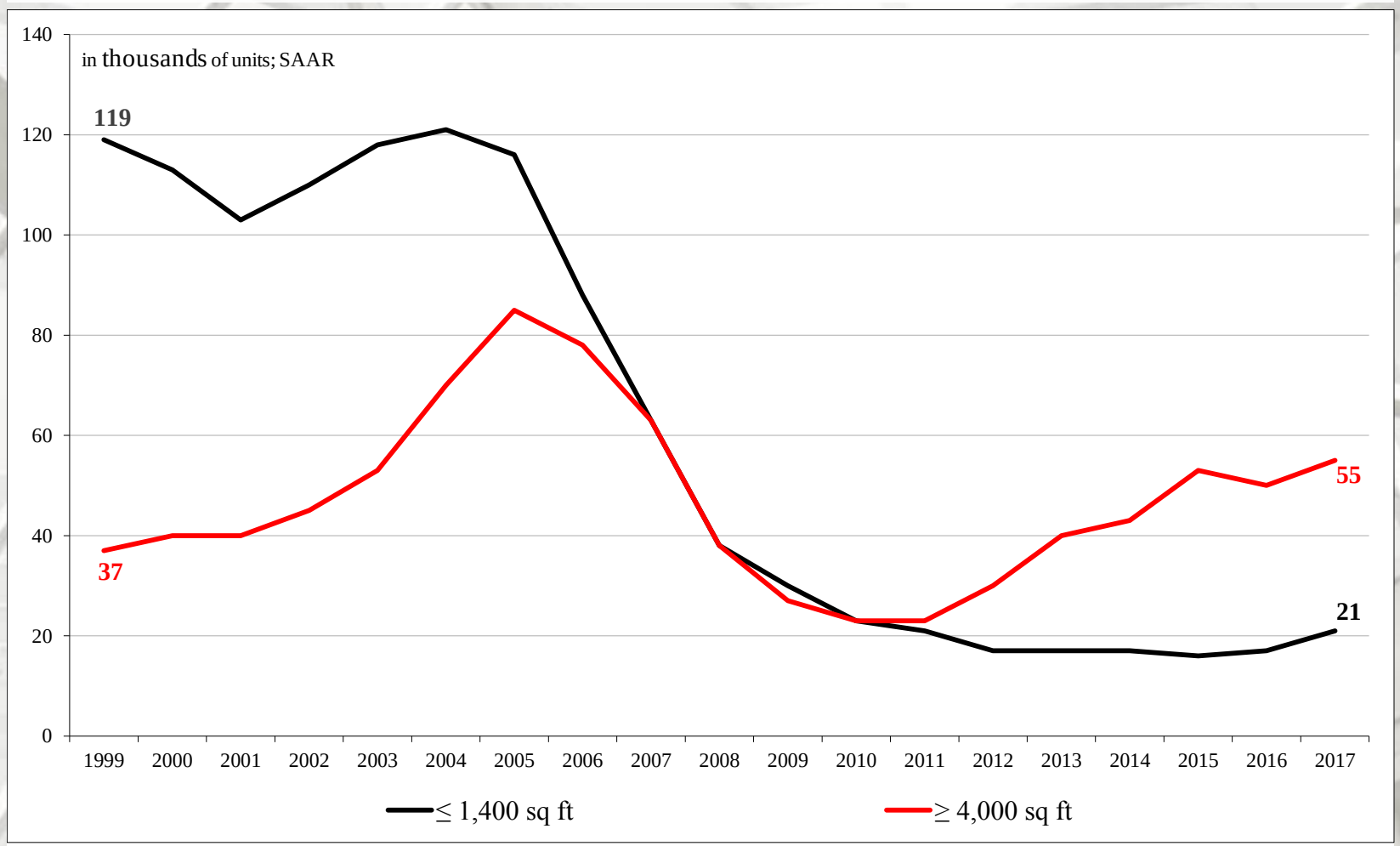
The number of ≤ $200 thousand plus SF houses has declined dramatically since 2002 [1, 2]. Subsequently, from 2012 onward, the ≥ $500 thousand class has soared (on a percentage basis) in contrast to the ≤ $200m class. One of the most oft mentioned reasons for this occurrence is builder net margins.

Note: Sales values are not adjusted for inflation.

Source: [1] http://www.census.gov/construction/nrc/pdf/newresconst.pdf; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 3/29/19

Return TOC

# New SF House Sales by Square Feet of Floor Area



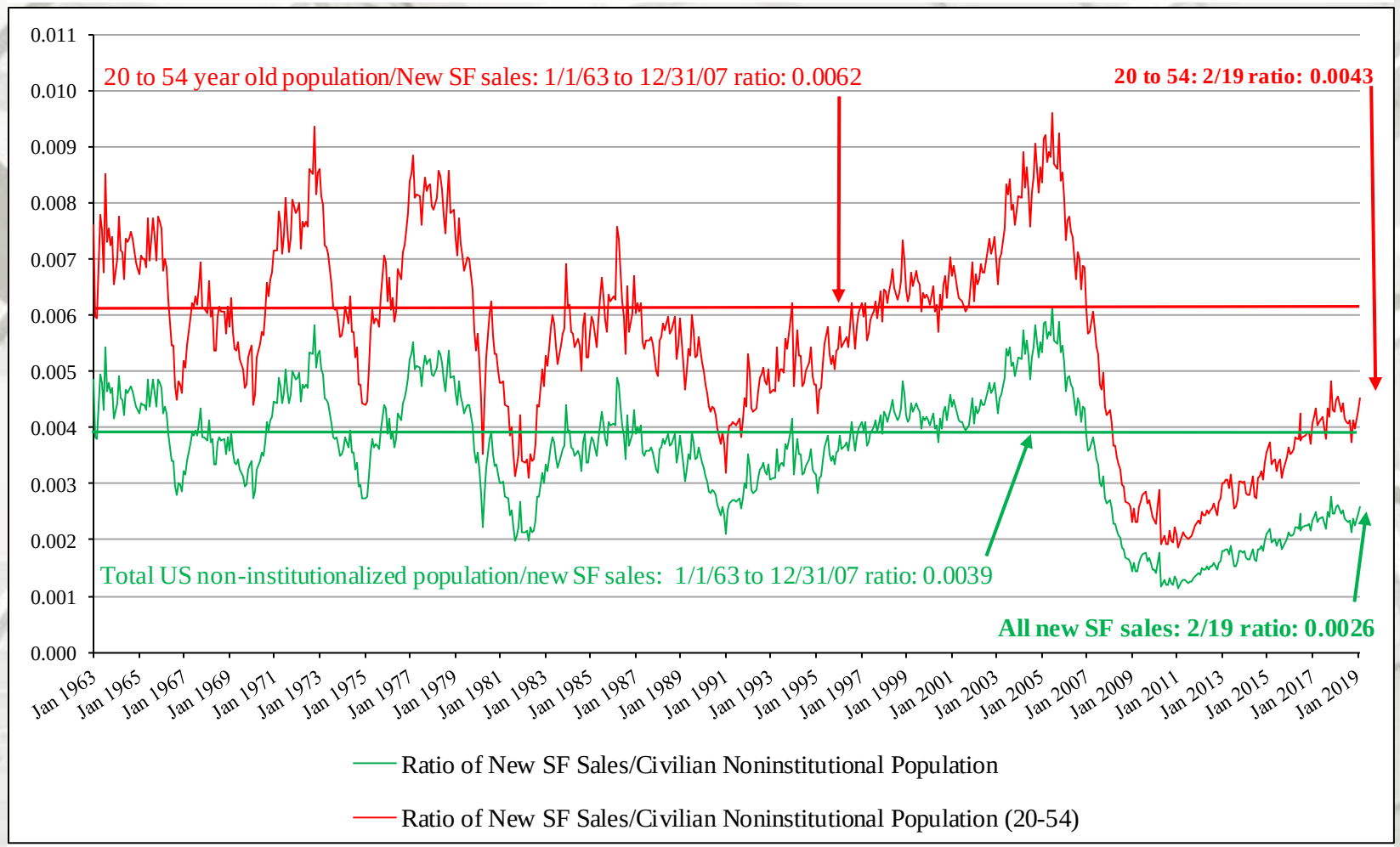

**New SF Sales: ≤ 1,400 square feet and ≥ 4,000 square feet: 1999 to 2017**

The number of SF houses sold (≥4,000 sq ft) has risen dramatically since 2010. Some of the most oft mentioned reasons for this is builder net margins; regulations, and finance availability.

Source: https://www.census.gov/construction/chars/pdf/soldsquarefeet.pdf ; 11/28/18

Return TOC

# New SF House Sales



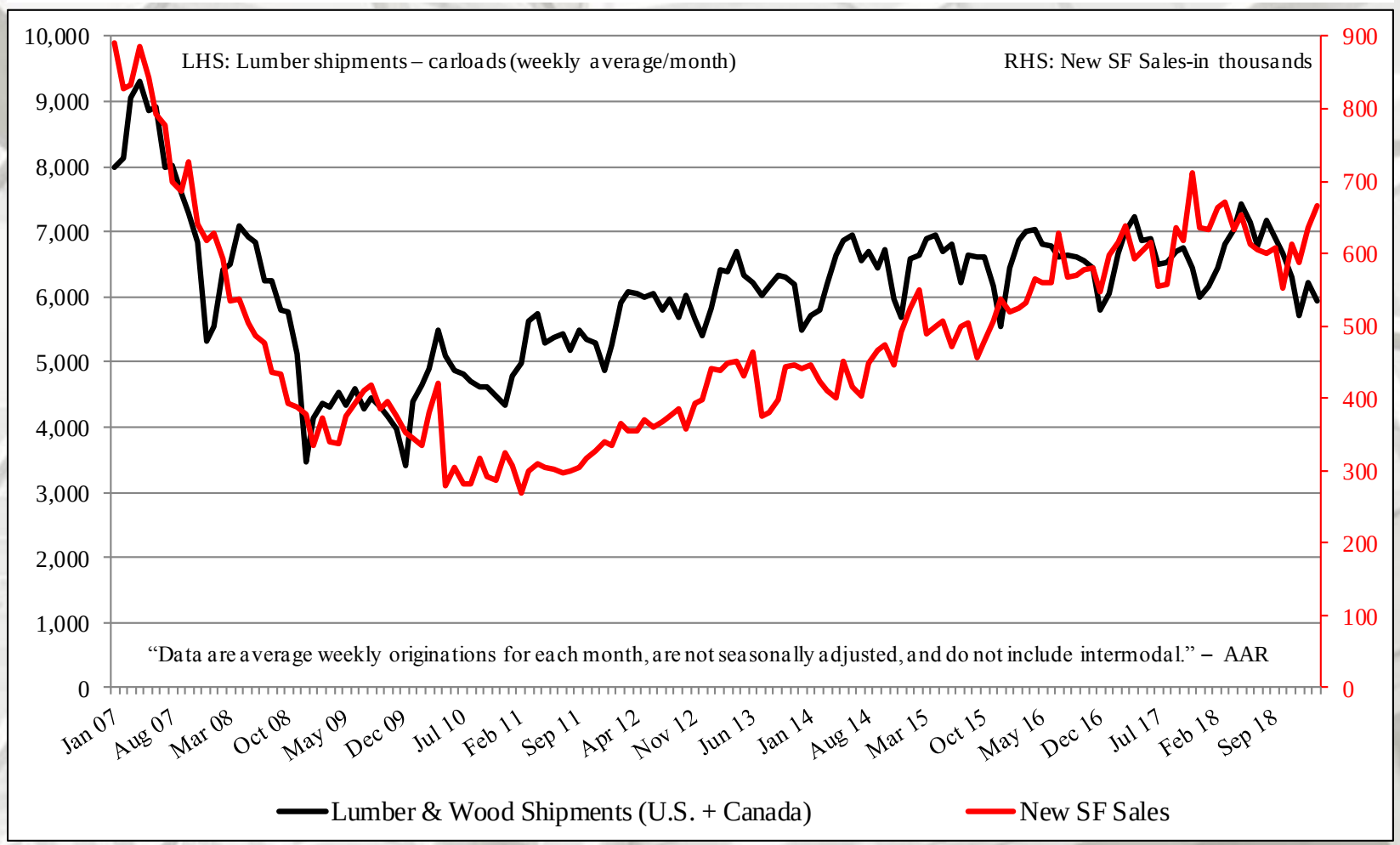

## New SF sales adjusted for the US population

From February 1963 to February 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in February 2019 it was 0.0026 – an increase from January (0.0025). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in February 2019 it was 0.0045 – also an increase from January (0.0043). All are non-adjusted data. From a population viewpoint, construction is less than what is necessary for changes in the population (i.e., under-building).

Sources: http://www.census.gov/construction/nrc/pdf/newresconst.pdff and The Federal Reserve Bank of St. Louis; 3/29/19

Return TOC

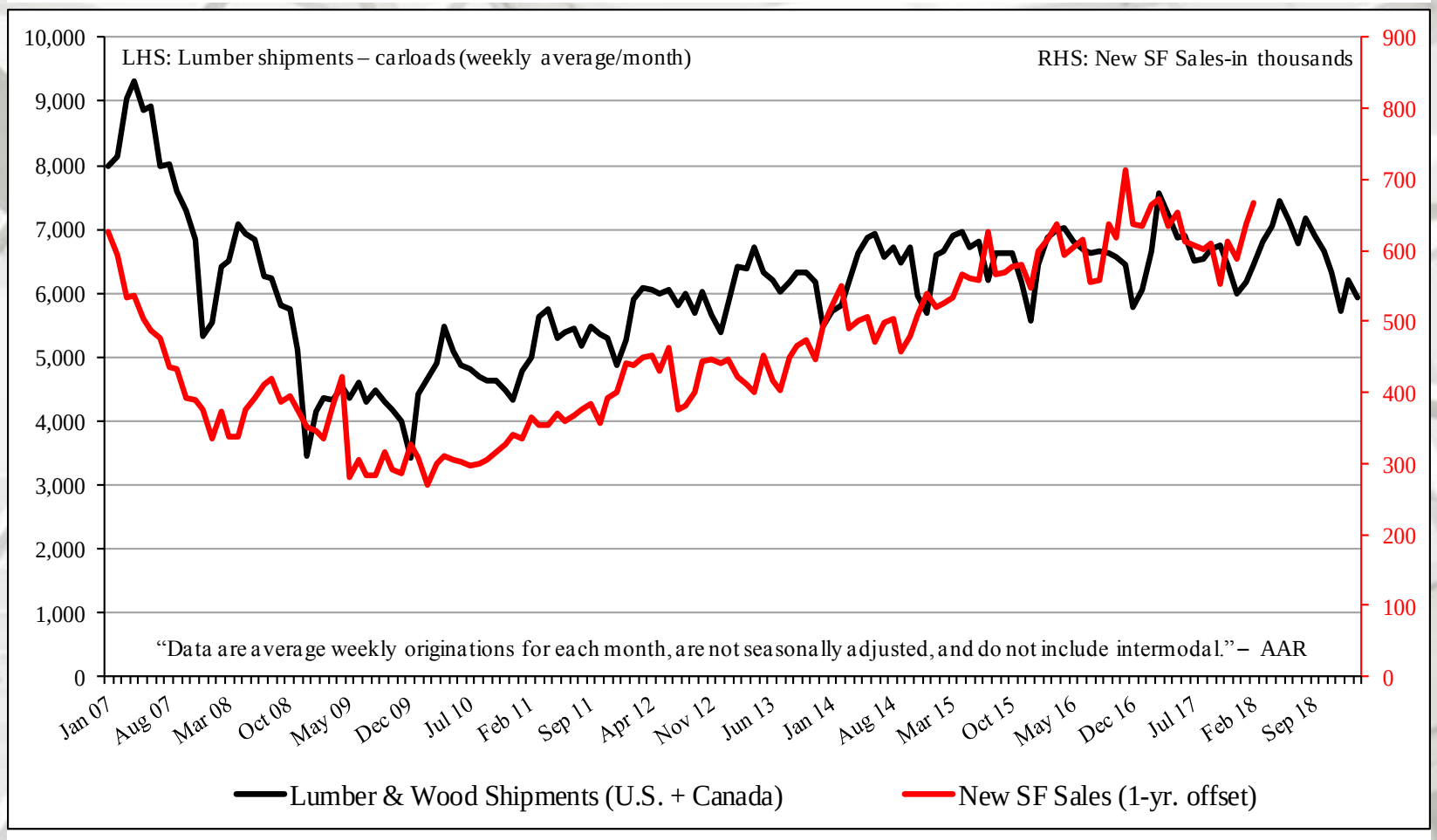
# Railroad Lumber & Wood Shipments vs. U.S. SF House Sales




Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 3/7/19; U.S. DOC-Construction; 3/29/19

Return TOC

# Railroad Lumber & Wood Shipments vs. U.S. SF Housing Sales: 1-year Offset

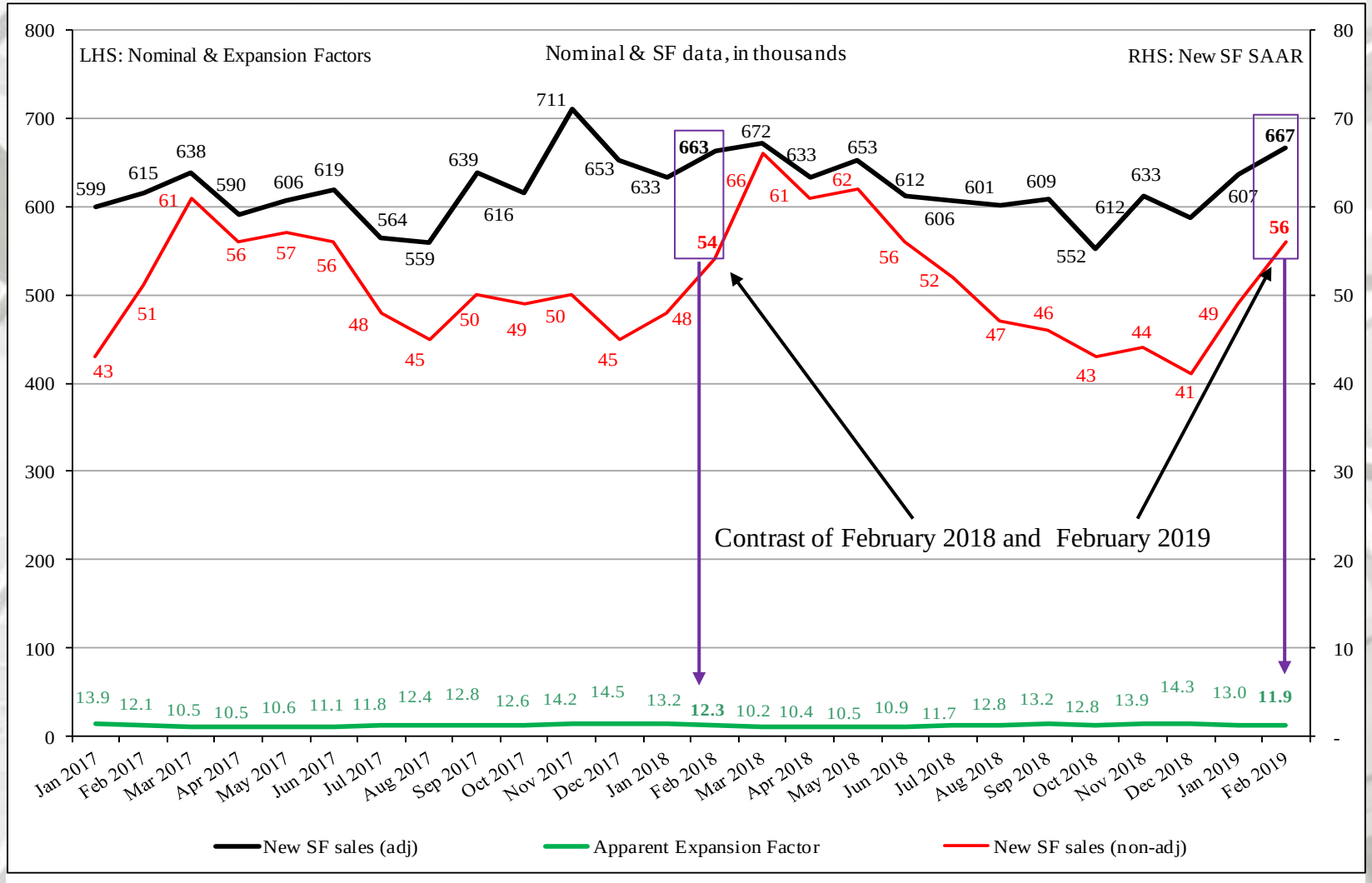



In this graph, February 2007 lumber shipments are contrasted with February 2008 SF sales, and continuing through February 2019. The purpose is to discover if lumber shipments relate to future single-family sales. Also, it is realized that lumber and wood products are trucked; however, to our knowledge comprehensive trucking data is not available.

Sources: Association of American Railroads (AAR), *Rail Time Indicators* report 3/7/19; U.S. DOC-Construction; 3/29/19

Return TOC

# Nominal vs. SAAR New SF House Sales




## Nominal and Adjusted New SF Monthly Sales

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

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales

| New SF Houses Sold During Period | | | | |
|---|---|---|---|---|
| | Total | Not started | Under Construction | Completed |
| February | 667,000 | 197,000 | 217,000 | 253,000 |
| January | 636,000 | 173,000 | 215,000 | 248,000 |
| 2018 | 663,000 | 198,000 | 239,000 | 226,000 |
| M/M change | 4.9% | 13.9% | 0.9% | 2.0% |
| Y/Y change | 0.6% | -0.5% | -9.2% | 11.9% |
| Total percentage | | 29.5% | 32.5% | 37.9% |

## New SF Houses Sold During Period

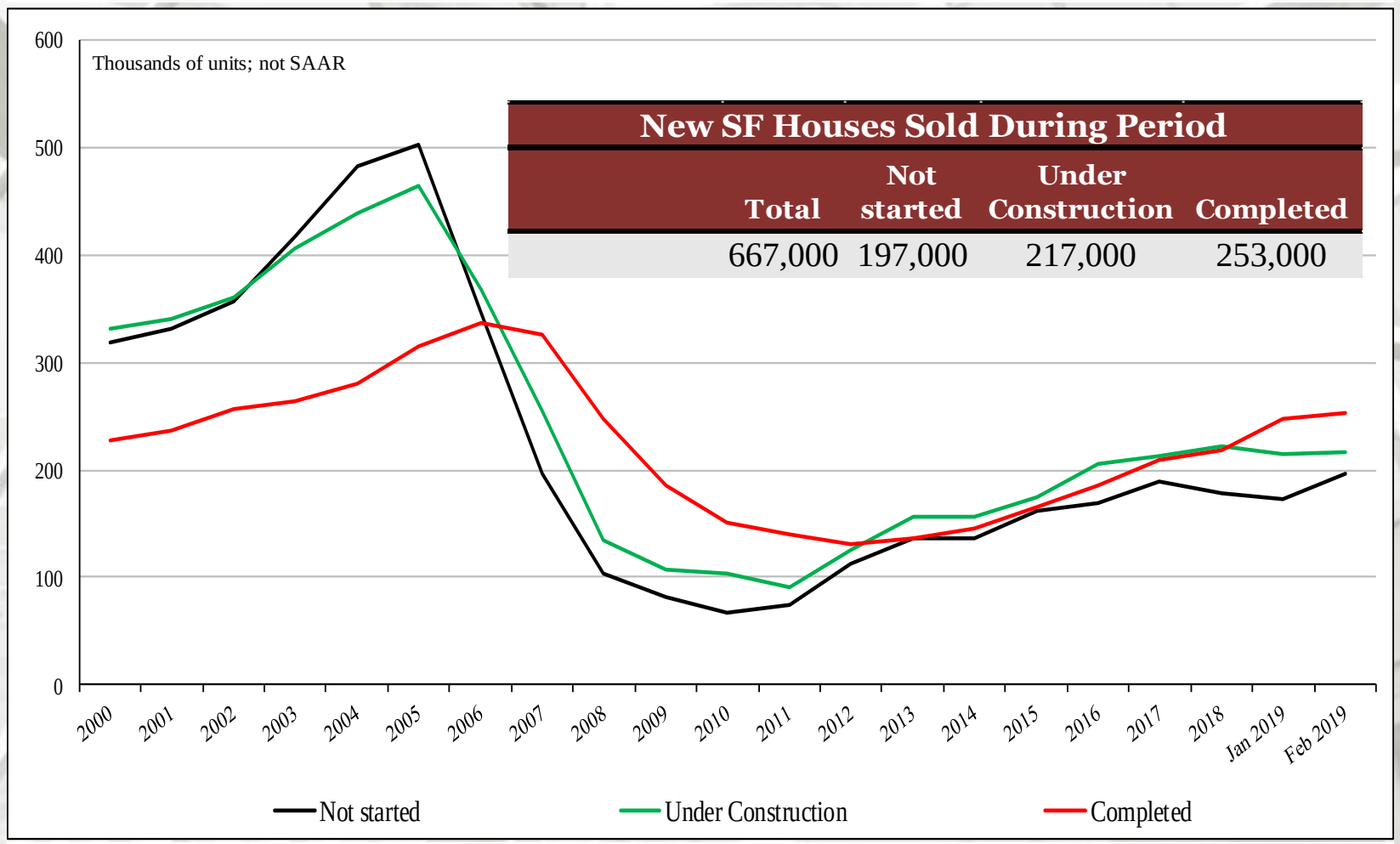
In February 2018, a substantial portion of new sales, 29.5% – have not been started; a decrease from January.

* Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales




| New SF Houses Sold During Period | | | |
|---|---|---|---|
| Total | Not started | Under Construction | Completed |
| 667,000 | 197,000 | 217,000 | 253,000 |

Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales

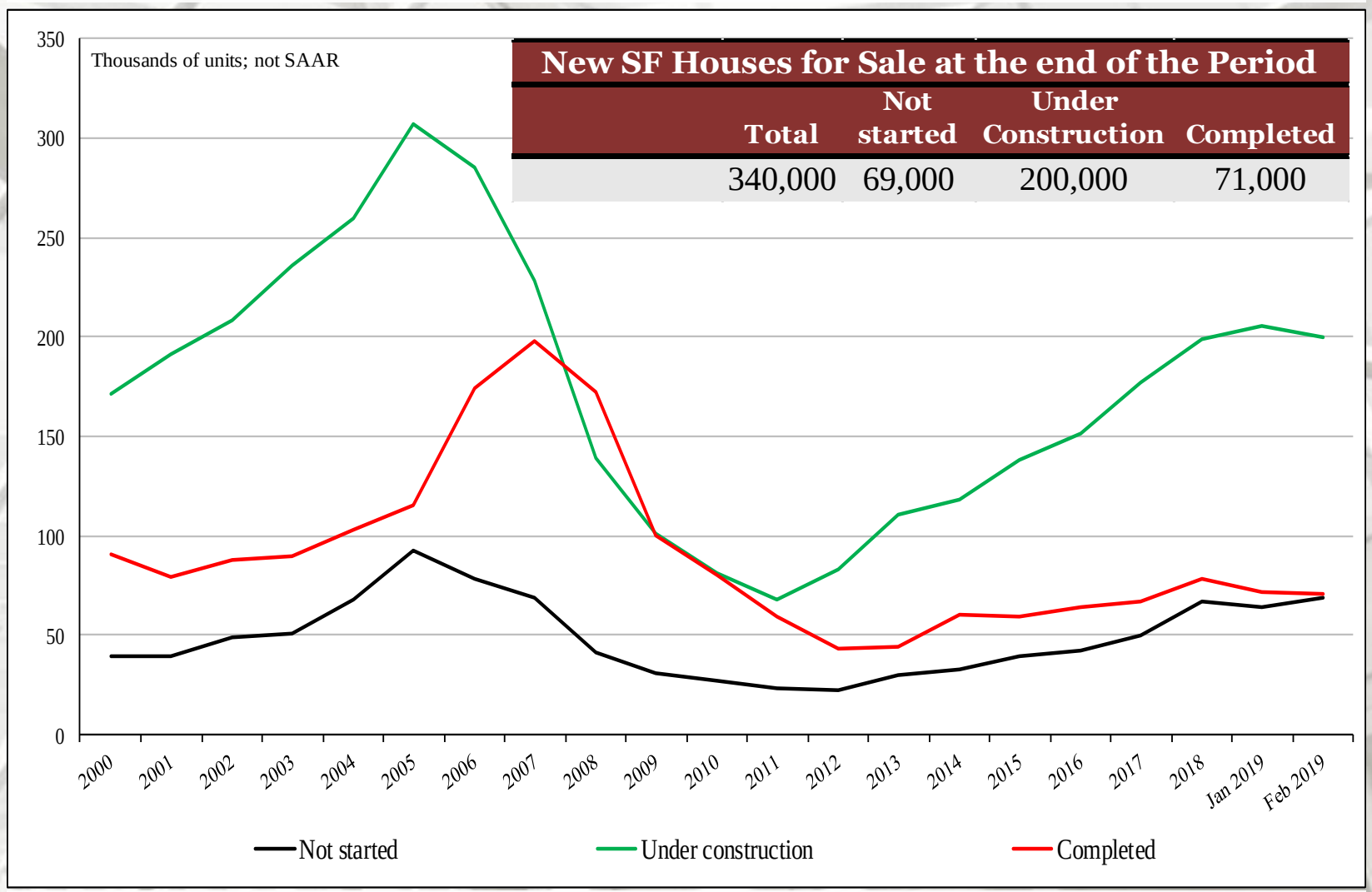
| New SF Houses for Sale at the end of the Period | | | | |
|---|---|---|---|---|
| | Total | Not started | Under Construction | Completed |
| February | 340,000 | 69,000 | 200,000 | 71,000 |
| January | 342,000 | 64,000 | 206,000 | 72,000 |
| 2018 | 300,000 | 54,000 | 184,000 | 62,000 |
| M/M change | -0.6% | 7.8% | -2.9% | -1.4% |
| Y/Y change | 13.3% | 27.8% | 8.7% | 14.5% |
| Total percentage | | 20.3% | 58.8% | 20.9% |

Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales




| New SF Houses for Sale at the end of the Period | | | |
|---|---|---|---|
| Total | Not started | Under Construction | Completed |
| 340,000 | 69,000 | 200,000 | 71,000 |

Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF House Sales

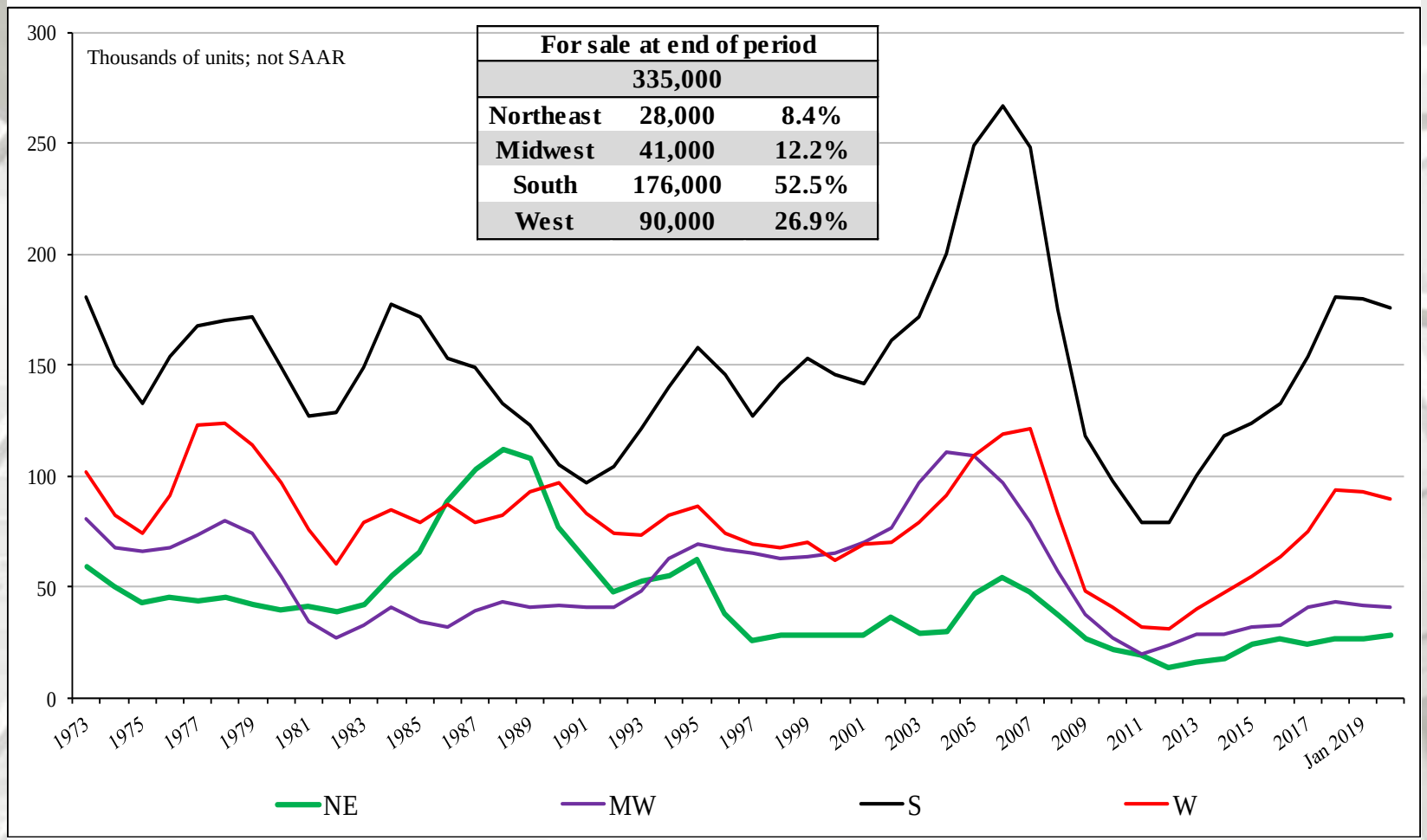
| New SF Houses for Sale at the end of the Period by Region* | | | | | |
|---|---|---|---|---|---|
| | Total | NE | MW | S | W |
| February | 335,000 | 28,000 | 41,000 | 176,000 | 90,000 |
| January | 343,000 | 27,000 | 42,000 | 180,000 | 93,000 |
| 2018 | 295,000 | 23,000 | 39,000 | 158,000 | 75,000 |
| M/M change | -2.3% | 3.7% | -2.4% | -2.2% | -3.2% |
| Y/Y change | 13.6% | 21.7% | 5.1% | 11.4% | 20.0% |

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# New SF Houses Sale at End of Period by Region




| For sale at end of period | | |
|---|---|---|
| 335,000 | | |
| Northeast | 28,000 | 8.4% |
| Midwest | 41,000 | 12.2% |
| South | 176,000 | 52.5% |
| West | 90,000 | 26.9% |

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 3/29/19

Return TOC

# February 2019
# Construction Spending

| | Total Private Residential* | SF | MF | Improvement** |
|---|---|---|---|---|
| February | $540,897 | $267,179 | $65,274 | $208,444 |
| January | $536,941 | $270,133 | $65,557 | $201,251 |
| 2018 | $560,173 | $287,710 | $60,745 | $211,718 |
| M/M change | 0.7% | -1.1% | -0.4% | 3.6% |
| Y/Y change | -3.4% | -7.1% | 7.5% | -1.5% |

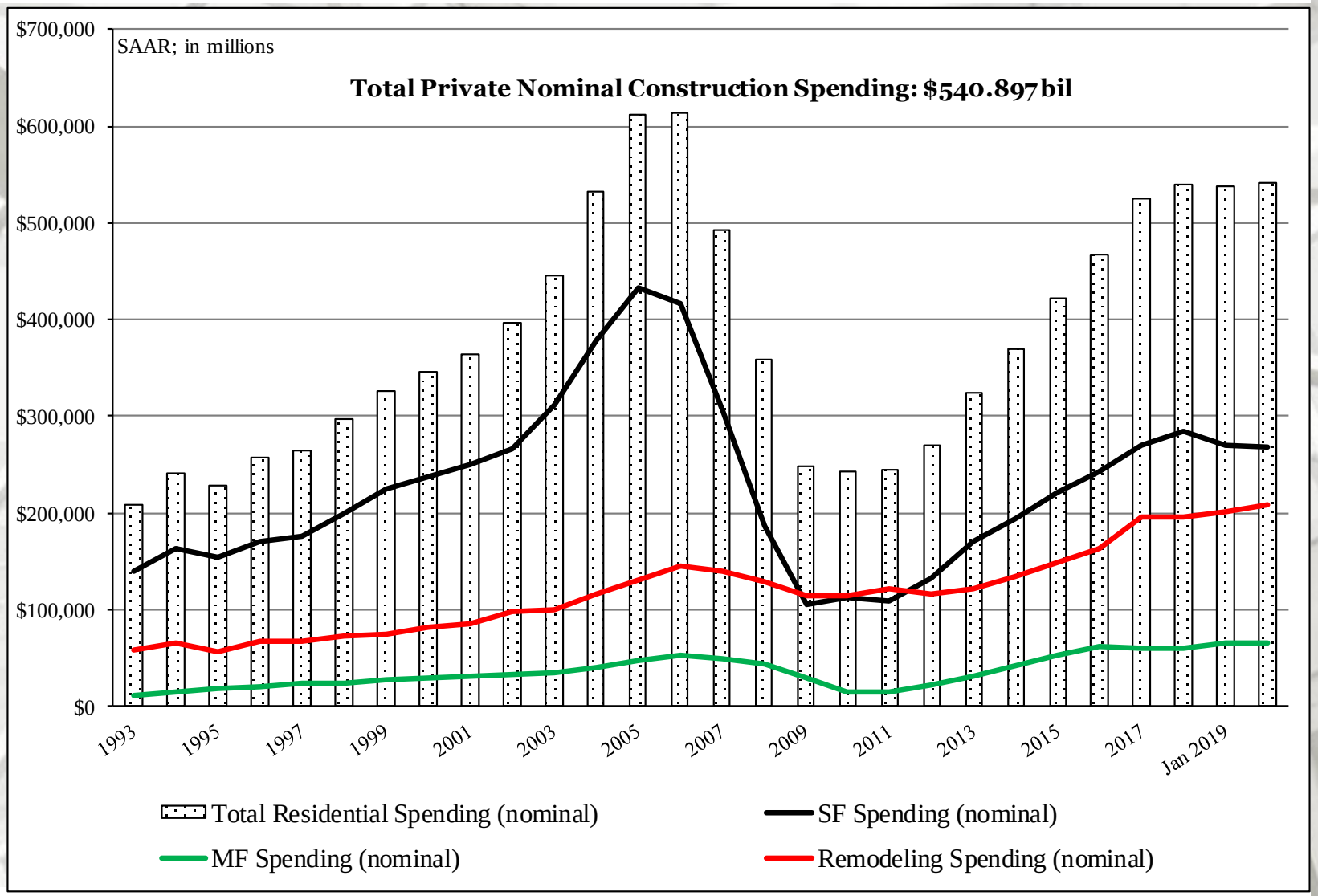
* billion.
** The US DOC does not report improvement spending directly, this is a monthly estimation: ((Total Private Spending – (SF spending + MF spending)).

All data are SAARs and reported in nominal US$.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 4/1/19

Return TOC

# Total Construction Spending (nominal): 1993 – February 2019

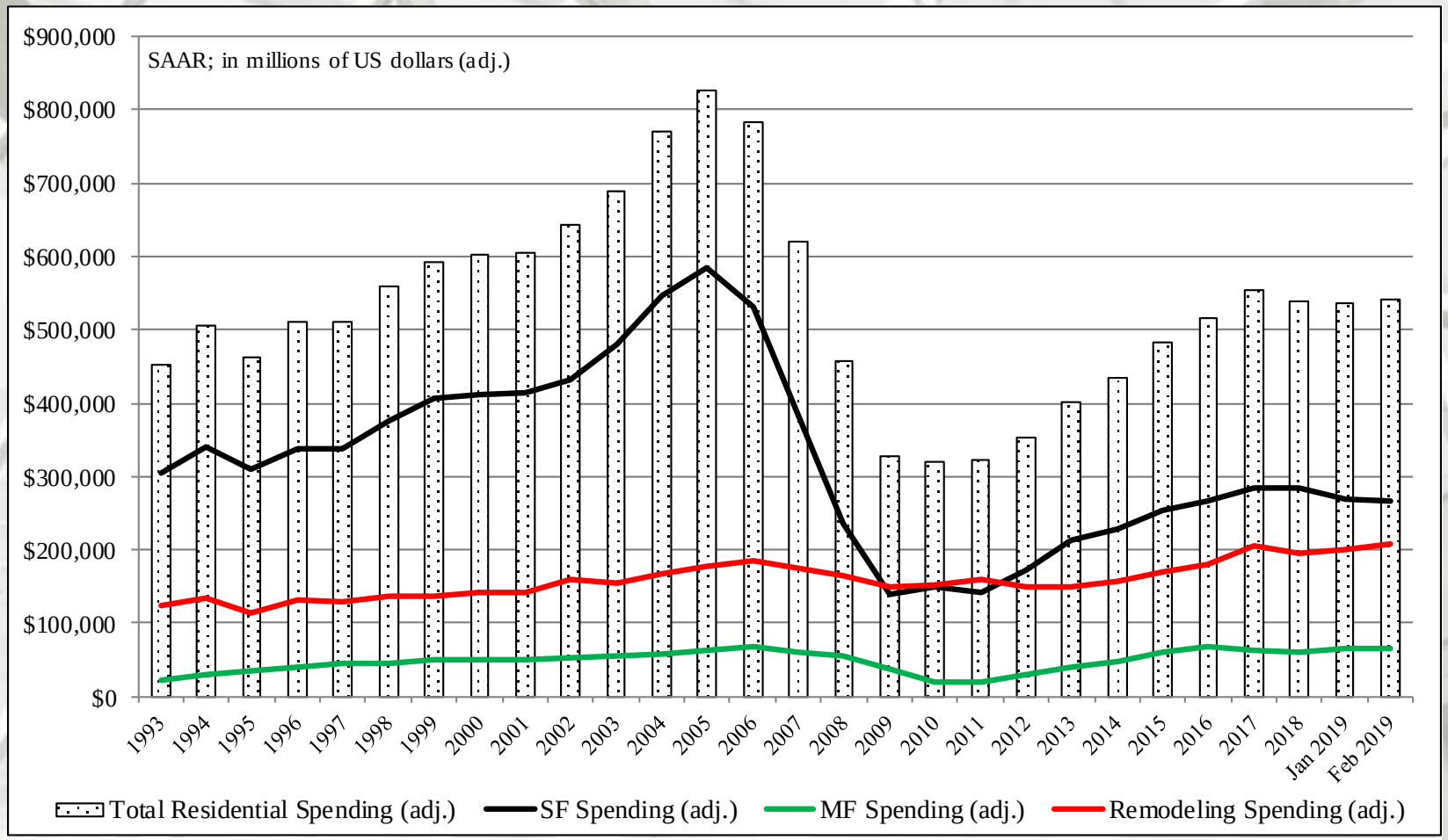



Reported in nominal US$.
The US DOC does not report improvement spending directly, this is a monthly estimation for 2018.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 4/1/19

Return TOC

# Total Construction Spending (adjusted): 1993-2019*

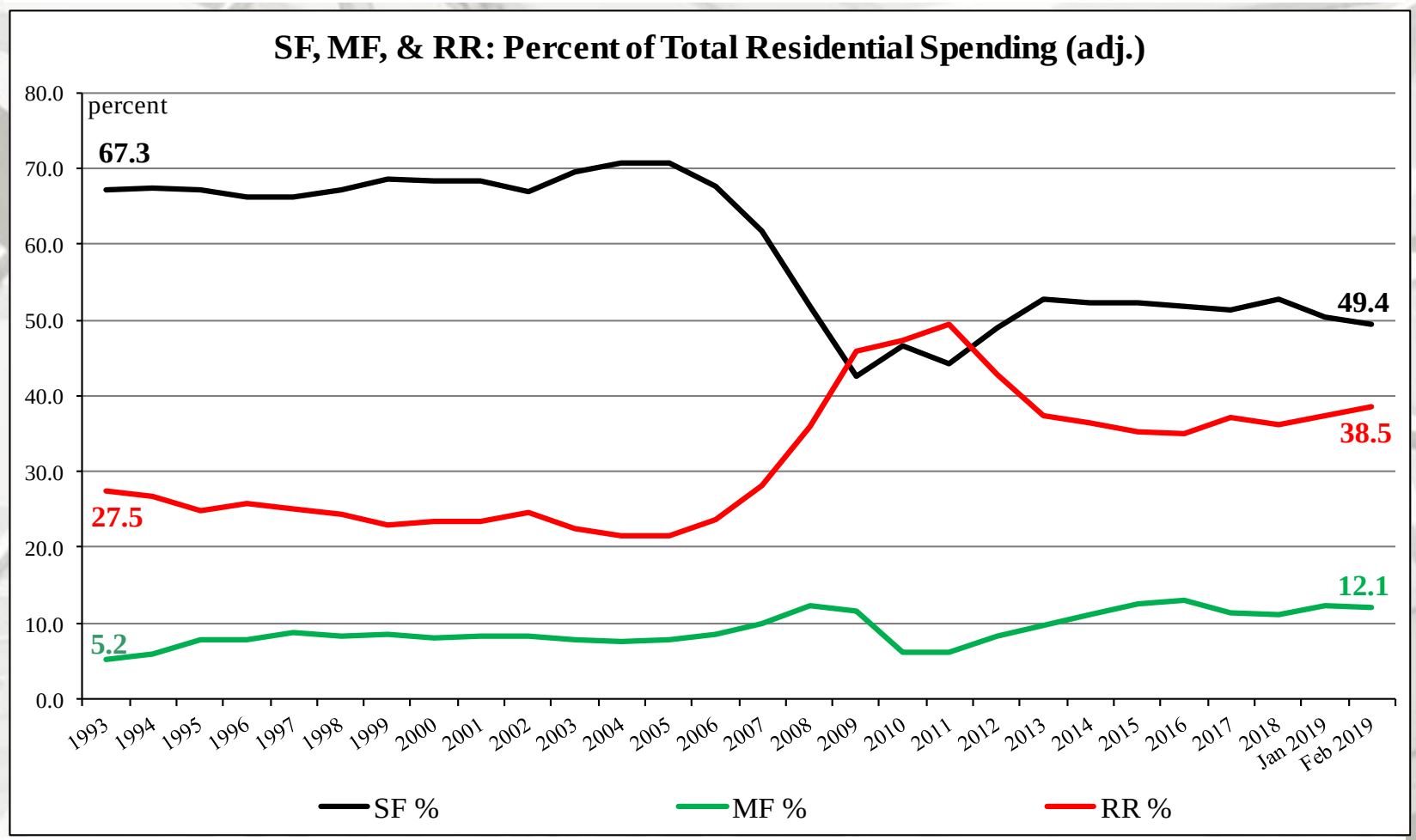



Reported in adjusted US$: 1993 – 2018 (adjusted for inflation, BEA Table 1.1.9); *February 2019 reported in nominal US$.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 4/1/19

Return TOC

# Construction Spending Shares: 1993 to February 2019




**Total Residential Spending: 1993 through 2006**

SF spending average: 69.2%

MF spending average: 7.5%

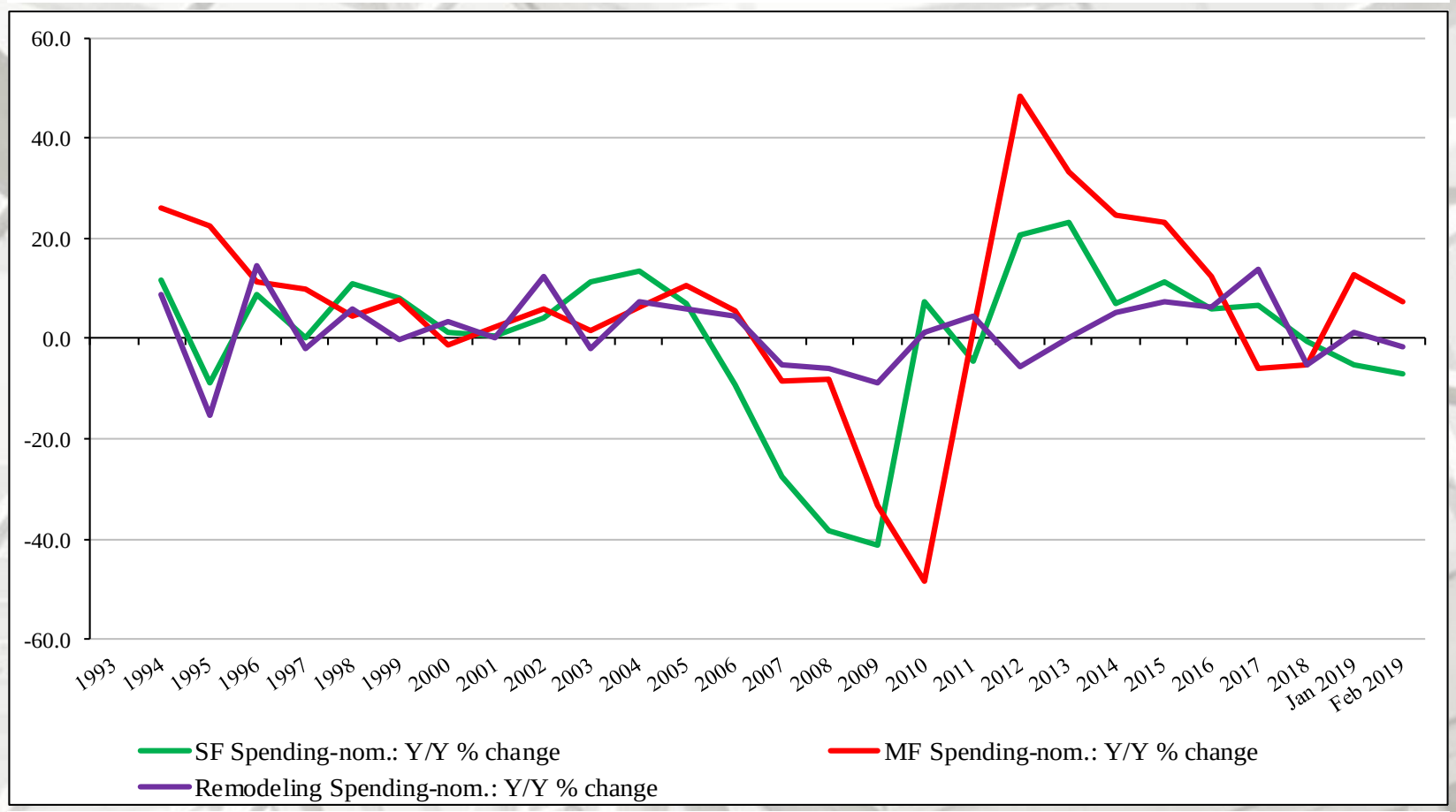
Residential remodeling (RR) spending average: 23.3% (SAAR).

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

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf and http://www.bea.gov/iTable/iTable.cfm; 4/1/19

Return TOC

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



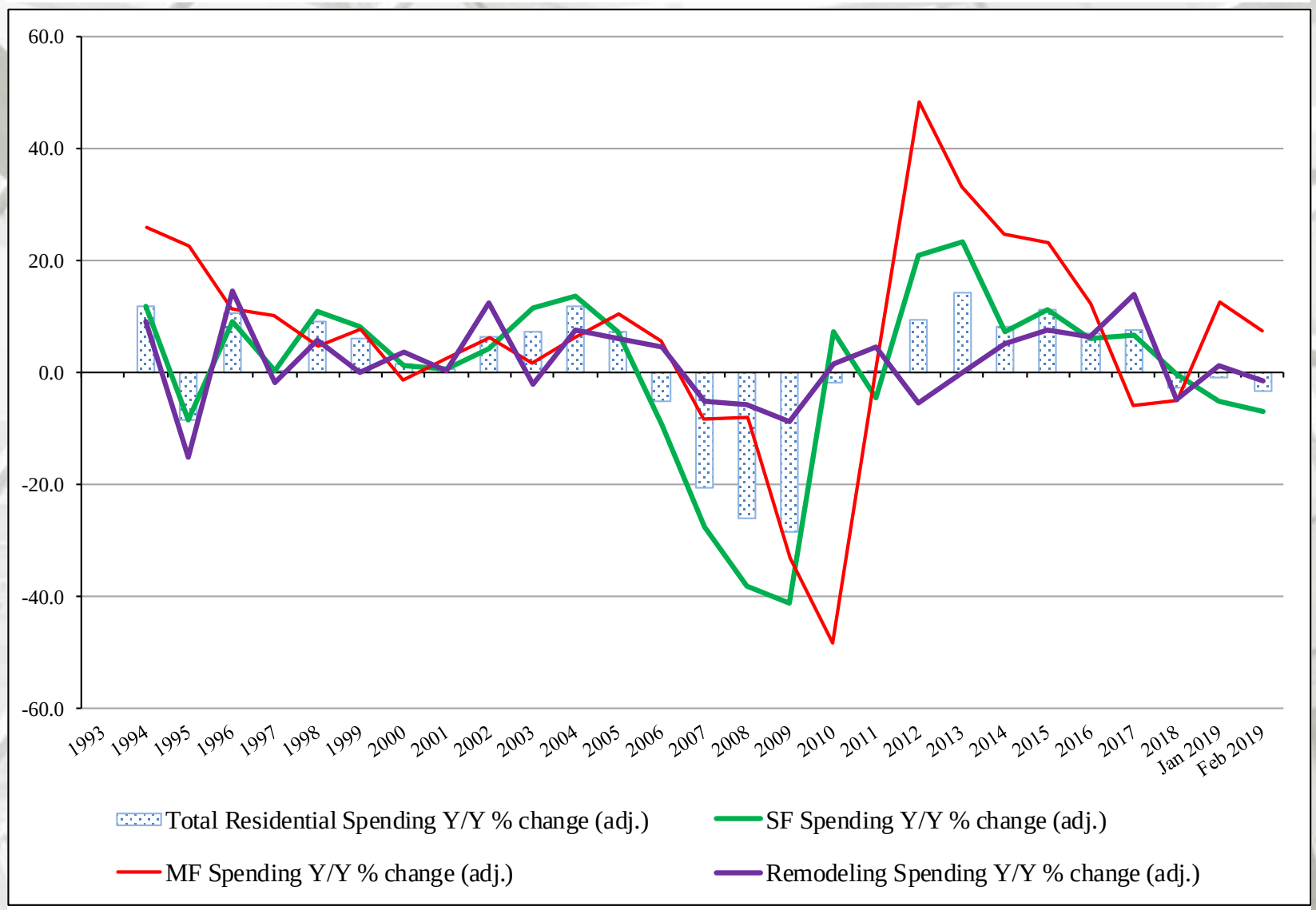

**Nominal Residential Construction Spending: Y/Y percentage change, 1993 to February 2019**

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

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 4/1/19

Return TOC

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

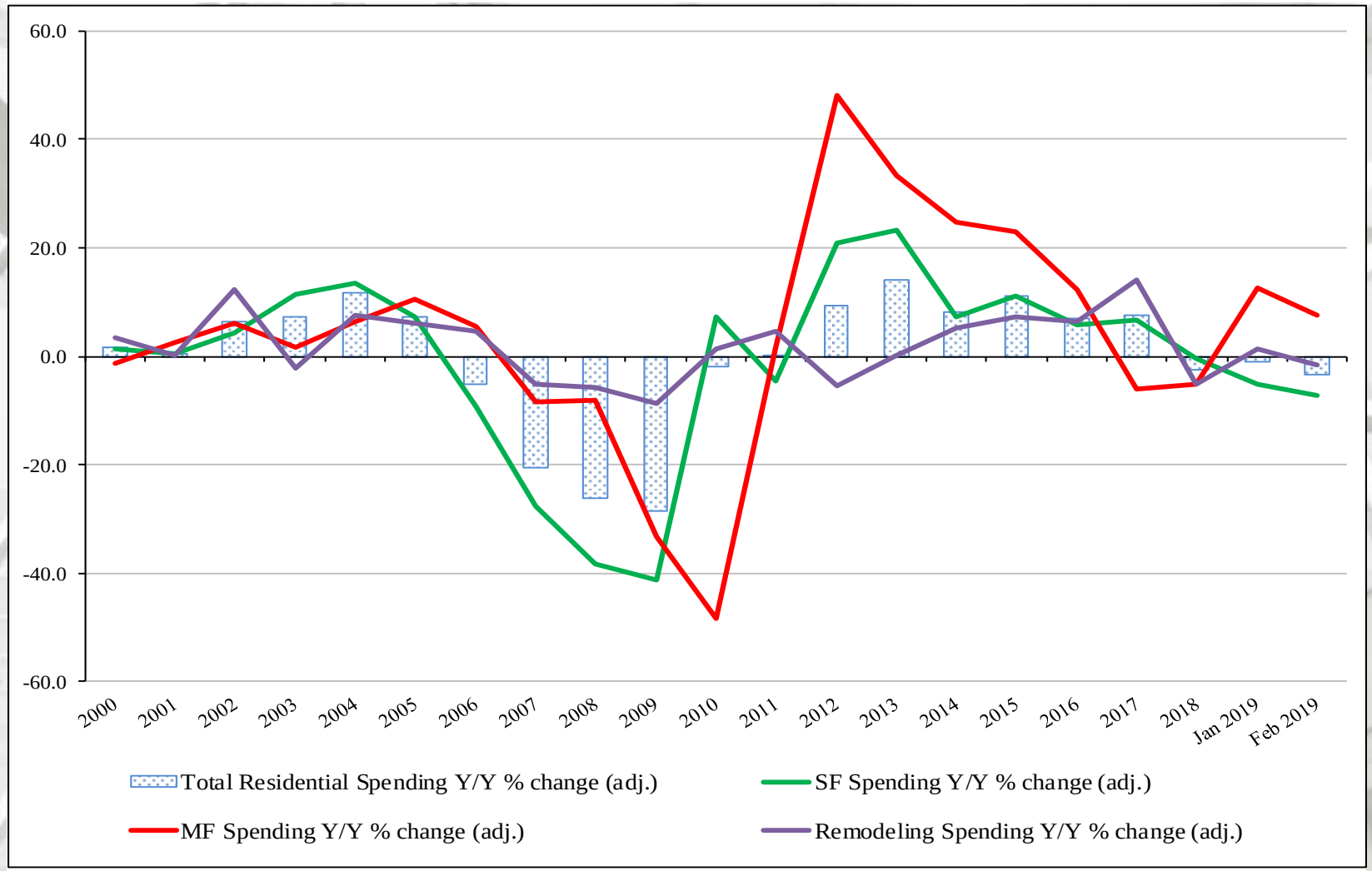



Adjusted dollar values; except 2019 data – reported in nominal dollars.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf and http://www.bea.gov/iTable/iTable.cfm; 4/1/19

Return TOC

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




**Y/Y percentage change, 1993 to February 2019**

All expenditures were declined in February, with only MF spending remaining positive. 2019 data reported in nominal dollars.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf and http://www.bea.gov/iTable/iTable.cfm; 4/1/19

Return TOC

# Remodeling

## Remodeling Outlook Remains Positive for 2019, RRI Finds

Index posted strong year-to-year increase, however moderate gains are expected over the next 24 months.

"Big ticket residential remodeling activity nationwide in the fourth quarter of 2018 rose 4.8% from the year-earlier period, Metrostudy announced in their release of the latest Residential Remodeling Index (RRI). The index reached an all-time high of 116.7 in the quarter, a 0.8% increase from the third quarter of 2018.

The RRI value means that the economic conditions known to influence remodeling activity are 16.7% better than the old peak in early 2007, just before the Great Recession. The growth of the RRI from the third quarter marks the 27th consecutive quarter of year-over-year growth for the index.

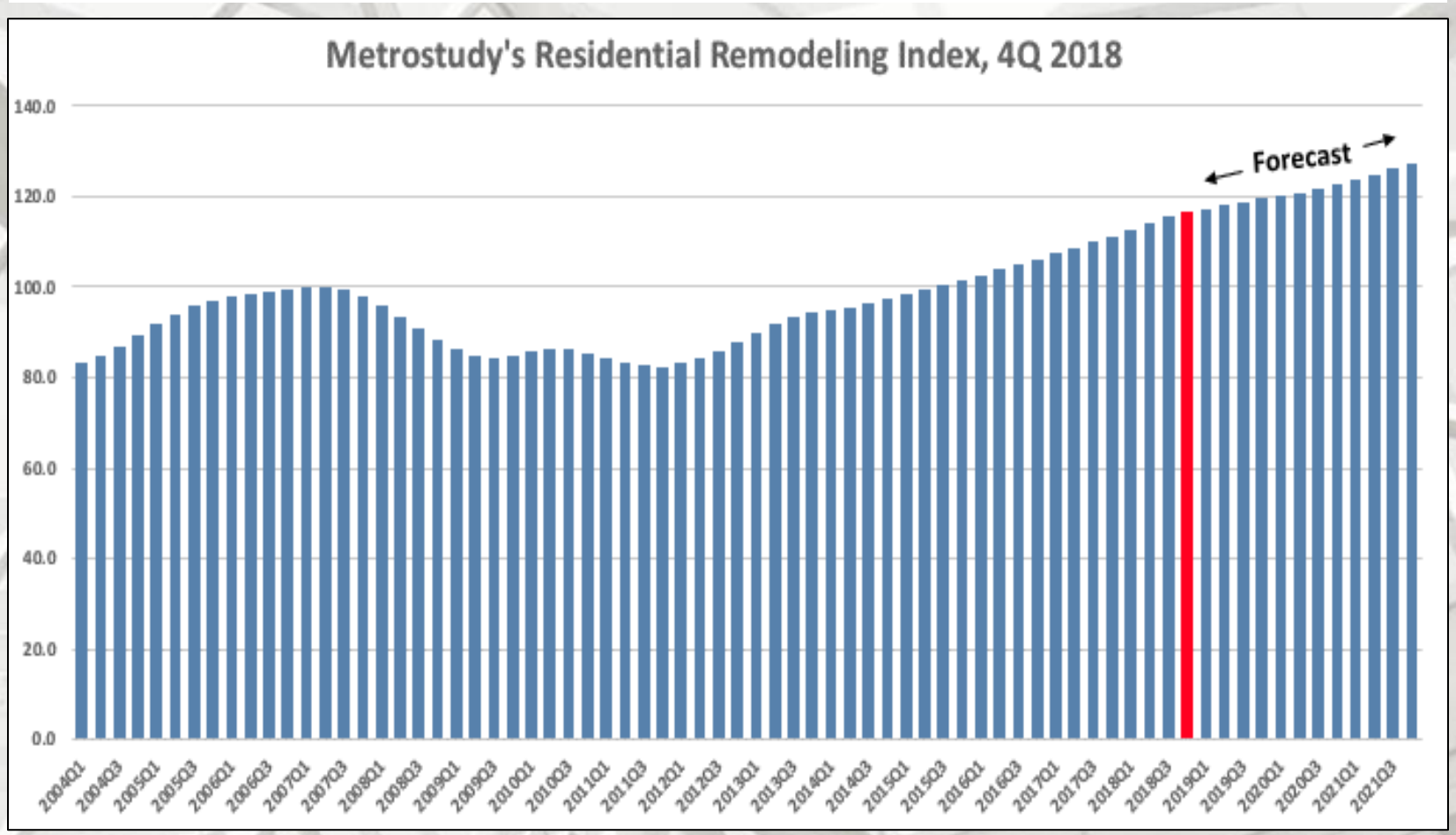
The forecast projects continued growth in the RRI over the next several years, but growth in 2019 and 2020 is expected to be at slower rates compared to the past several years of the index. The moderate gains projected will be closely tied to the maturation of the housing cycle, according to Metrostudy." – Vincent Salandro, Assistant Editor, Remodeling

"The remodeling market remains busy as the nation continues to see strong job growth and record levels of home equity, especially in equity rich coastal markets. We expect continued growth for the industry in 2019, with some stabilization, mostly due to the slowing in existing home sales, which will sap some potential." – Mark Boud, Chief Economist, Metrostudy

Source: https://www.remodeling.hw.net/benchmarks/economic-outlook-rri/remodeling-outlook-remains-positive-for-2019-rri-finds_o; 2/19/19

Return TOC

# Remodeling




Source: https://www.remodeling.hw.net/benchmarks/economic-outlook-rri/remodeling-outlook-remains-positive-for-2019-rri-finds_o; 2/19/19

Return TOC

# Existing House Sales

**National Association of Realtors**
**February 2019 sales: 5.510 thousand**

| | Existing Sales* | Median Price | Mean Price | Month's Supply |
|---|---|---|---|---|
| February | 5,510,000 | $249,500 | $288,200 | 3.5 |
| January | 4,930,000 | $249,300 | $288,100 | 3.9 |
| 2018 | 5,610,000 | $240,800 | $280,600 | 3.4 |
| M/M | 11.8% | 0.1% | 0.0% | -10.3% |
| Y/Y change | -1.8% | 3.6% | 2.7% | 2.9% |

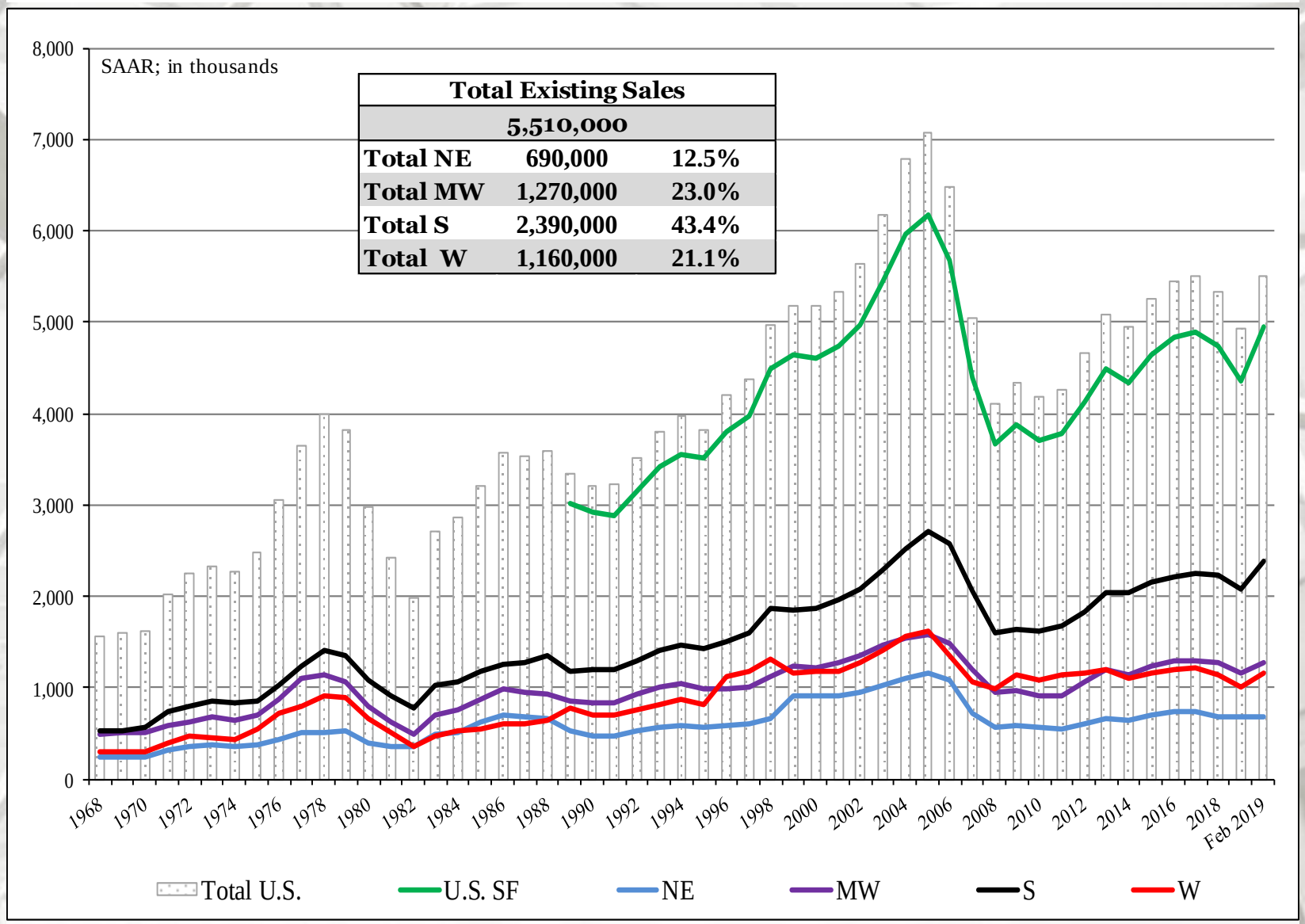
| | Existing SF Sales* | SF Median Price | SF Mean Price |
|---|---|---|---|
| February | 4,940,000 | $251,400 | $289,000 |
| January | 4,360,000 | $251,200 | $288,900 |
| 2018 | 5,010,000 | $242,600 | $281,300 |
| M/M change | 13.3% | 0.1% | 0.0% |
| Y/Y change | -1.4% | 3.6% | 2.7% |

* All sales data: SAAR

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 3/21/19

Return TOC

# Existing House Sales

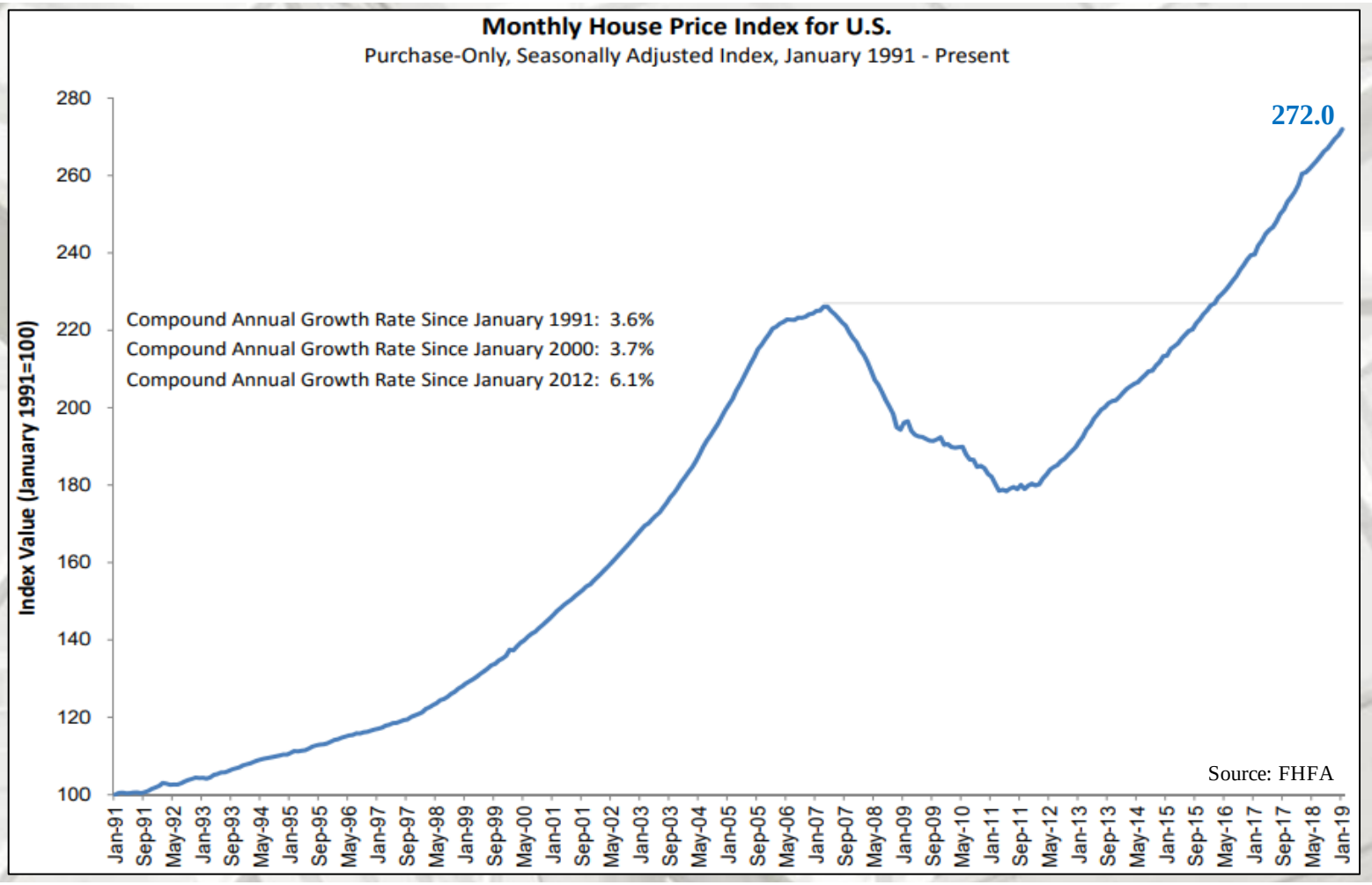



NE = Northeast; MW = Midwest; S = South; W = West

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 3/21/19

Return TOC

# U.S. Housing Prices




## FHFA House Price Index Up 0.6 Percent in January; Up 5.6 Percent from Last Year

"U.S. house prices rose in January, up **0.6 percent** from the previous month, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI). The previously reported 0.3 percent increase for December 2018 remained unchanged. From January 2018 to January 2019, house prices were up 5.6 percent." – Stefanie Johnson and Corinne Russell, FHFA

Source: https://www.fhfa.gov//Media/PublicAffairs/Pages/FHFA-House-Price-Index-Up-0pt6-Percent-in-January.aspx; 3/26/19

Return to TOC

# U.S. Housing Prices

"The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 4.3% annual gain in January, down from 4.6% in the previous month. The 10-City Composite annual increase came in at 3.2%, down from 3.7% in the previous month. The 20-City Composite posted a 3.6% year-over-year gain, down from 4.1% in the previous month.

## S&P CoreLogic Case-Shiller Index Shows Annual Gains Lowest Since 2015

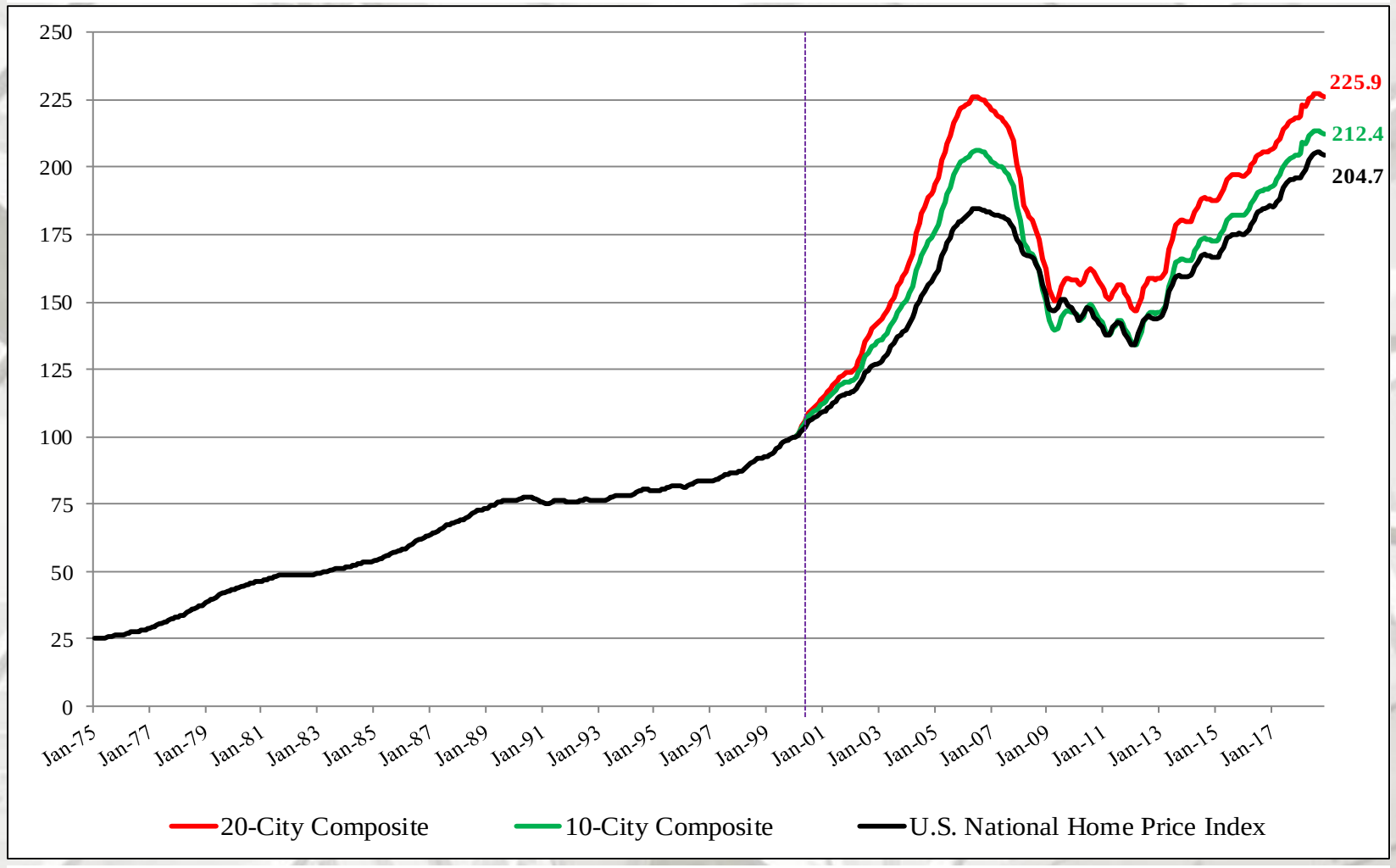
Home price gains continue to shrink. In the year to January, the S&P CoreLogic Case-Shiller National Index rose 4.3%, two percentage points slower than its pace in January 2018. The last time it advanced this slowly was April 2015. In 16 of the 20 cities tracked, price gains were smaller in January 2019 than in January 2018. Only Phoenix saw any appreciable acceleration. Some cities where prices surged in 2017-2018 now face much smaller increases: in Seattle, annual price gains dropped from 12.8% to 4.1% from January 2018 to January 2019. San Francisco saw annual price increases shrink from 10.2% to 1.8% over the same time period. Mortgage rates are as important as prices for many home buyers.

Mortgage rates climbed from 3.95% in January 2018 to a peak of 4.95% in November 2018. Since then, rates have dropped to 4.28% as of mid-March. Sales of existing single-family homes slid gently downward from the 2017 fourth quarter until January of this year before jumping higher in February 2019. Home sales annual rate dropped from 5 million units in February 2018 to 4.36 million units in January 2019 before popping to 4.94 in February. It remains to be seen if recent low mortgage rates and smaller price gains can sustain improved home sales." – David Blitzer, Managing Director and Chairman of the Index Committee, S&P Dow Jones Indices

Source: https://www.spice-indices.com/idpfiles/spice-assets/resources/public/documents/897961_cshomeprice-release-0326.pdf; 3/26/19

Return to TOC

# S&P/Case-Shiller Home Price Indices

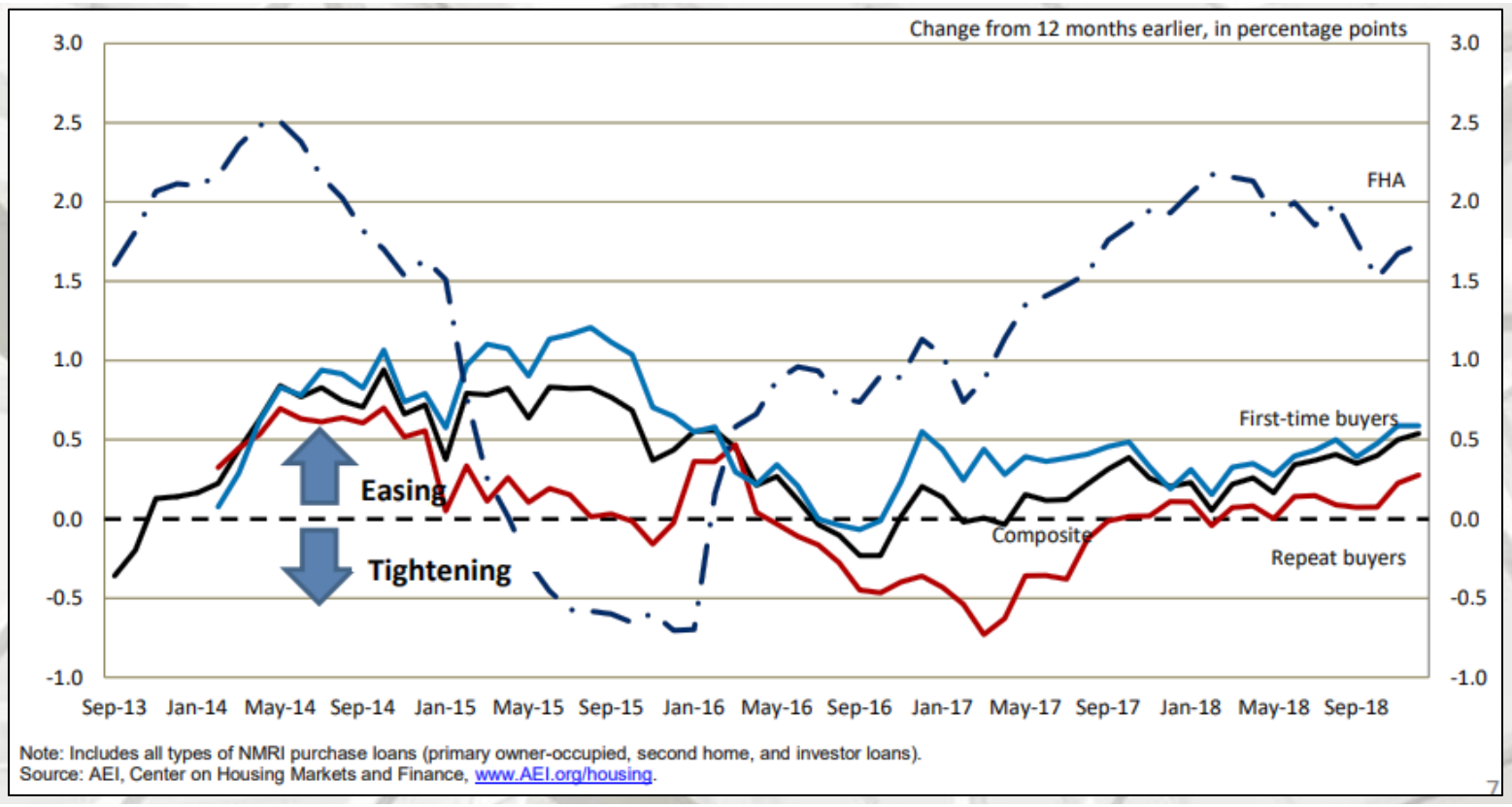



"Las Vegas, Phoenix and Minneapolis reported the highest year-over-year gains among the 20 cities. In January, Las Vegas led the way with a 10.5% year-over-year price increase, followed by Phoenix with a 7.5% increase and Minneapolis with a 5.1% increase. Only one of the 20 cities reported greater price increases in the year ending January 2019 versus the year ending December 2018." – Soogyung Jordan, Global Head of Communications, S&P CoreLogic

Source: https://www.spice-indices.com/idpfiles/spice-assets/resources/public/documents/897961_cshomeprice-release-0326.pdf; 3/26/19

Return to TOC

# First-Time House Buyers



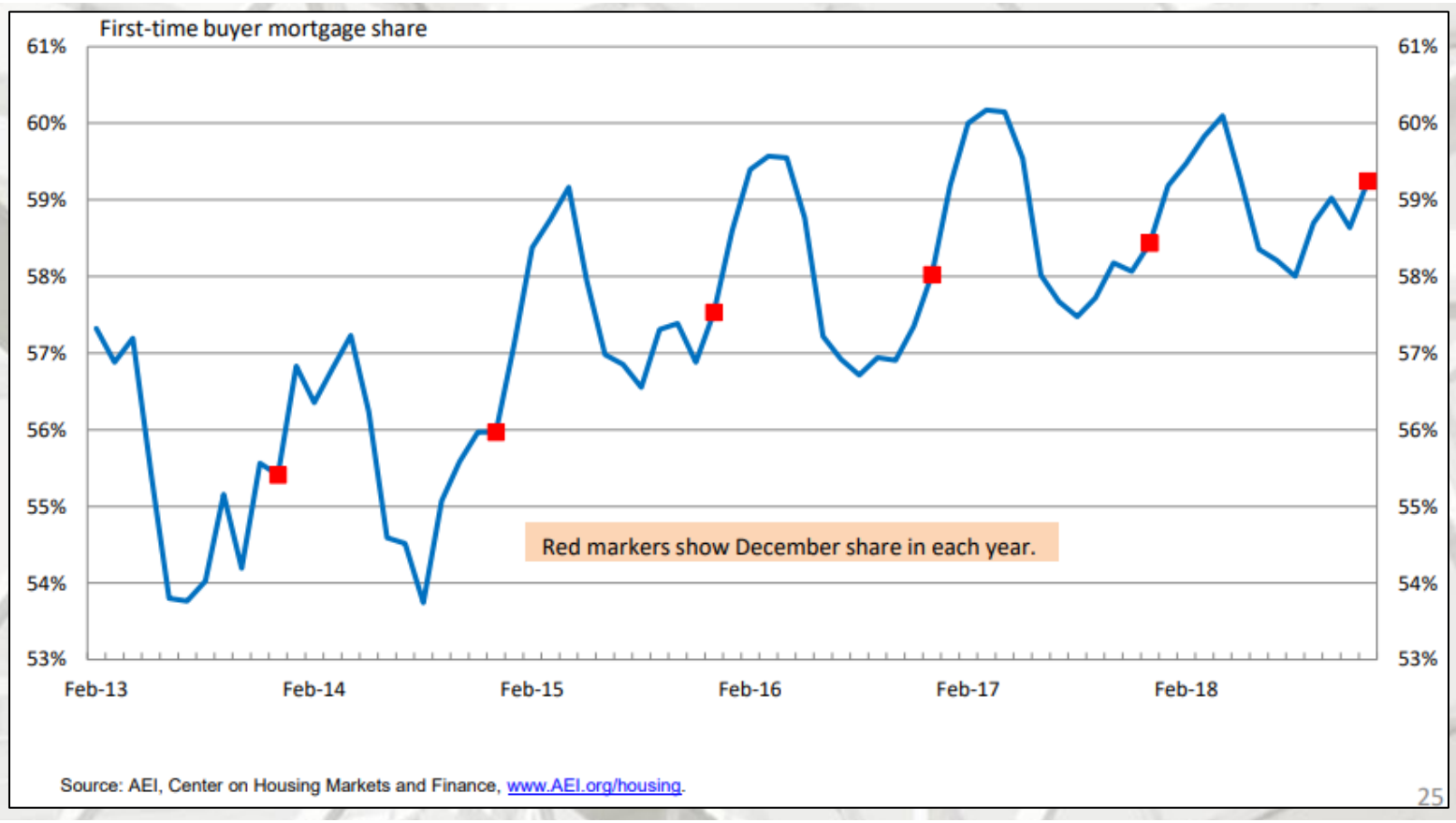

## Credit Easing = Punchbowl Spiking Continues, Led by FHA

"The Composite NMRI for purchase loans increased from already elevated levels a year ago. For FHA, the index is rising at a rate of 1.7% year-over-year. First-time buyers have consistently been taking on greater leverage and default risk, which has helped fuel accelerating house price growth for entry-level homes. Higher default risk combined with unsustainable home price increases will lead to unnecessarily high default rates during the eventual market correction." – Edward Pinto and Tobias Peter, AEI Center on Housing Markets and Finance

Sources: https://hello.aei.org/rs/475-PBQ-971/images/HMI-Briefing-presentation-04-01-19-FINAL-v2.pdf; 4/1/19

Return TOC

# First-Time House Buyers



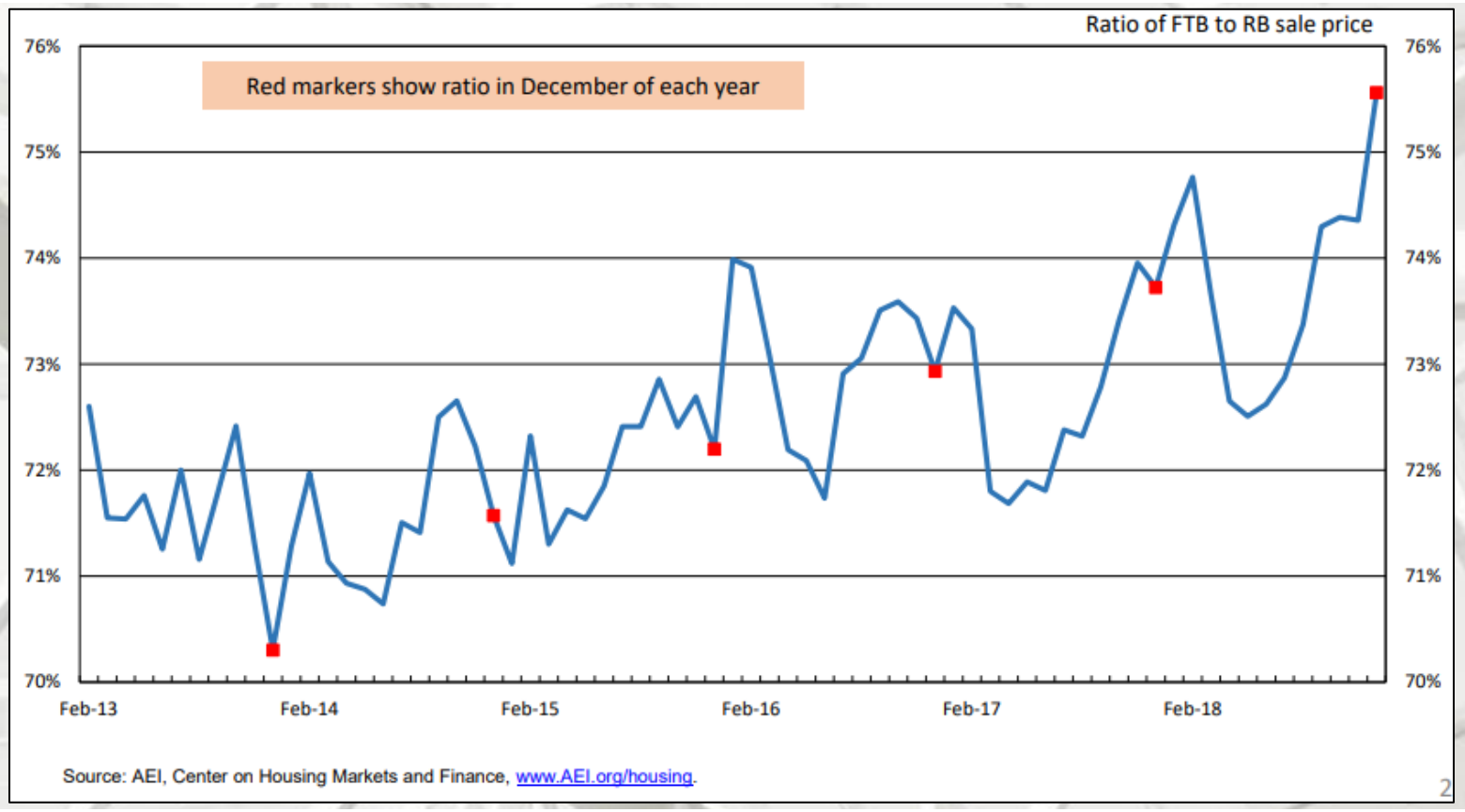

## Agency First-Time Buyer Mortgage Share

"The Agency First-Time Buyer Mortgage Share Index (FBMSI) for December 2018 stood at 59.2%, up 0.8 ppt and setting a new series' high for the month of December. Compared to five years ago, the FBMSI is up 3.8 ppts. from 55.4%. It appears that the index has increased from its already high level due to repeat buyers' greater sensitivity to higher rates."
– Edward Pinto and Tobias Peter, AEI Center on Housing Markets and Finance

Sources: https://hello.aei.org/rs/475-PBQ-971/images/HMI-Briefing-presentation-04-01-19-FINAL-v2.pdf; 4/1/19

Return TOC

# First-Time House Buyers



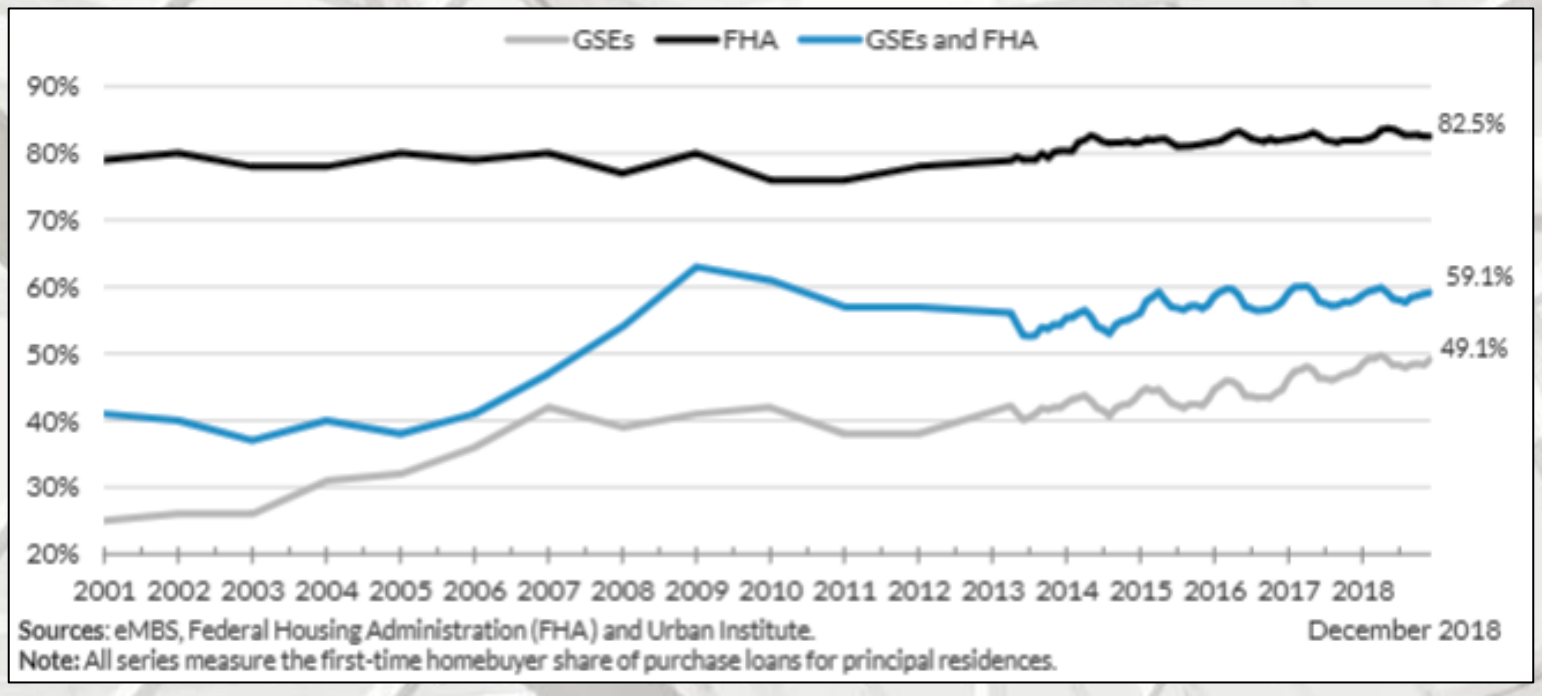

## Ratio of Sales Price for First-time to Repeat Buyers

"The trend upward is towards higher first-time buyer (FTB) prices relative to repeat buyers (RBs). FTBs have access to the leverage punchbowl, thereby greatly reducing the tendency to make downward quality adjustments to offset rapid home price appreciation. RBs without access to this punchbowl, tend to make downward quality adjustments to offset home price appreciation. This adds to demand at lower price tiers. " – Edward Pinto and Tobias Peter, AEI Center on Housing Markets and Finance

Sources: https://hello.aei.org/rs/475-PBQ-971/images/HMI-Briefing-presentation-04-01-19-FINAL-v2.pdf; 4/1/19

Return TOC

# First-Time House Buyers




## Urban Institute

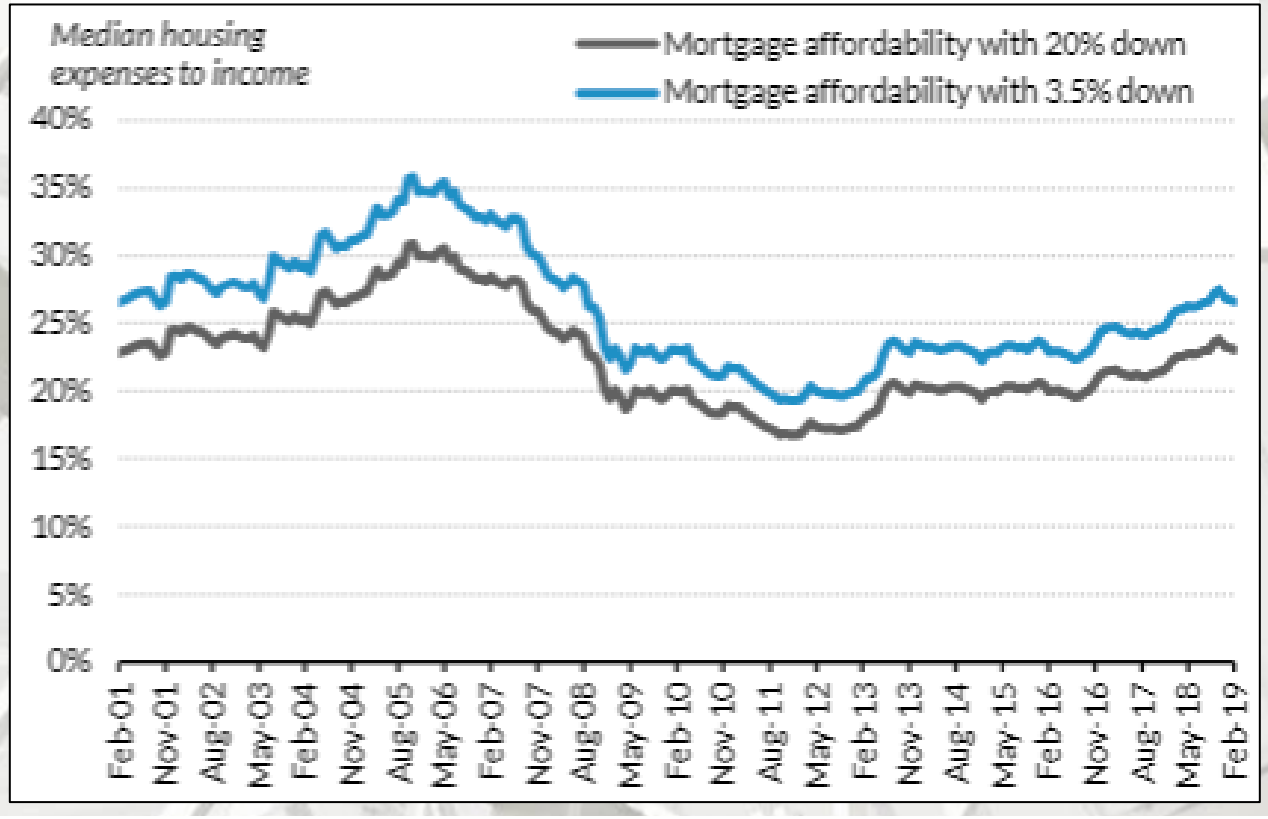
"In December 2018, the first time homebuyer (FTHB) share of purchase loans increased very slightly for conventional mortgages and remained flat for FHA mortgages compared to the previous month. The FTHB share for FHA, which has always been more focused on first time homebuyers, stood at 82.5 percent in December 2018. The GSE FTHB share in December 2018 was 49.1 percent. …based on mortgages originated in December 2018, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and higher LTV and higher DTI, thus paying a higher interest rate."-- Bing Lai, Research Associate, Housing Finance Policy Center

Sources: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-march-2019; 3/27/19

Return TOC

# Housing Affordability

## National Housing Affordability Over Time



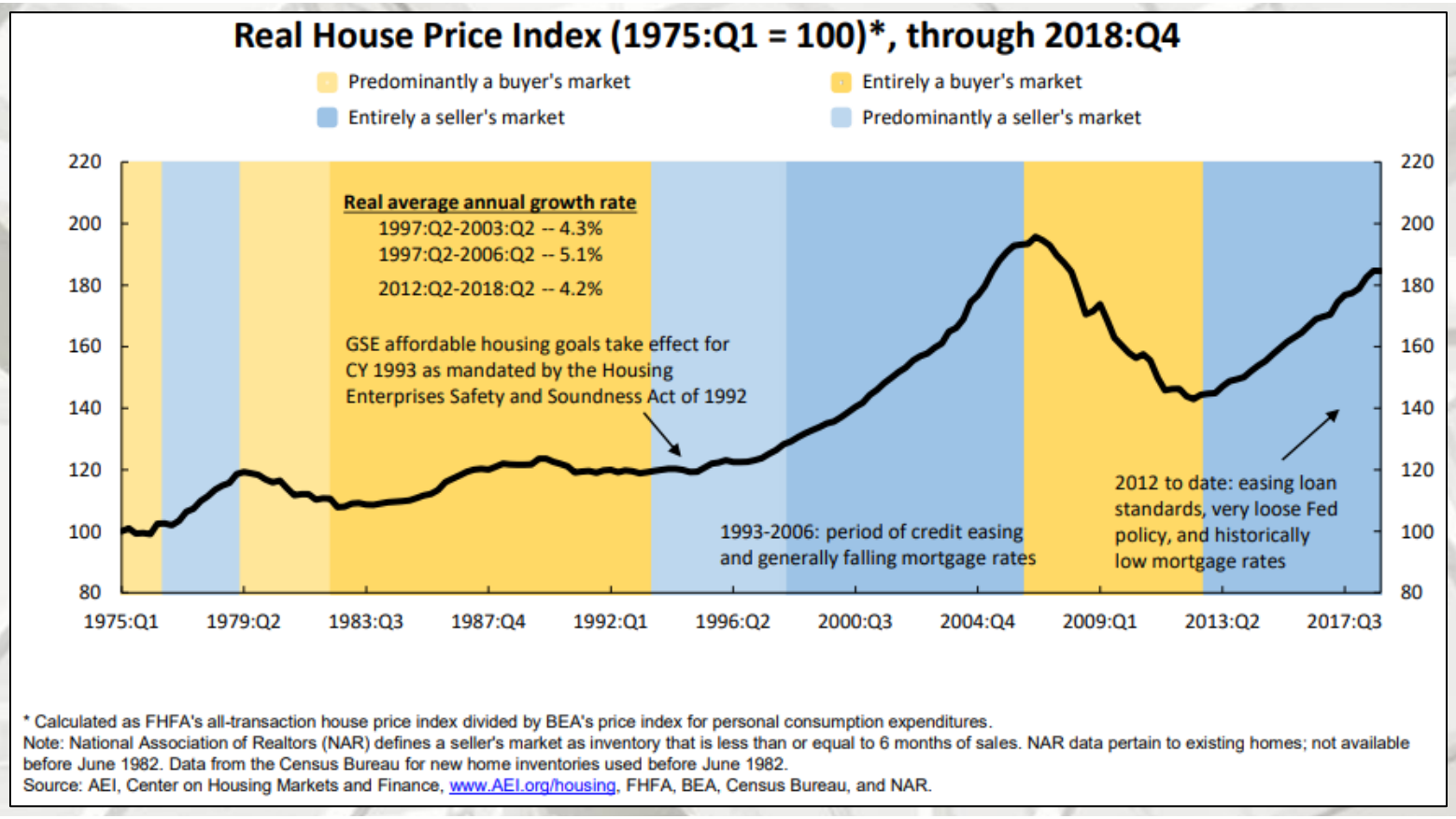

## Urban Institute

"Home prices remain affordable by historical standards, despite price increases over the last 6.5 years and interest rate increases. As of February 2019, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 23.1 percent; with 3.5 down, it is 26.6 percent. As of February, the median housing expenses to income ratio was slightly lower than the 2001-2003 average. As shown in the picture, mortgage affordability varies widely by MSA."– Bing Lai, Research Associate, Housing Finance Policy Center

Sources: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-march-2019; 3/27/19

Return TOC

# Housing Affordability




## Unforgiving Home Price Cycles: Booms Fueled by Increasing Leverage in a Seller's Market, Followed by Mean Reversion

"Fueled by growing loan leverage and tight supplies, real home prices have increased 29% since the early 2012 trough. Contrary to prevailing view, post-crisis underwriting/regulatory changes promote rather than constrain a boom. The pattern is similar to the initial years of the price boom that began in 1998. If it continues, the risk of a serious house price correction increases." – Edward Pinto and Tobias Peter, Center on Housing Markets and Finance, AEI

Sources: https://hello.aei.org/rs/475-PBQ-971/images/HMI-Briefing-presentation-04-01-19-FINAL-v2.pdf; 4/1/19

Return TOC

# Mortgage Credit Availability

## Mortgage Credit Availability Increased in March

"Mortgage credit availability increased in March according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) which analyzes data from Ellie Mae's AllRegs® Market Clarity® business information tool.

The MCAI rose 1.1 percent to 182.1 in March. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI increased (3.6 percent), while the Government MCAI declined (1.2 percent). Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 5.2 percent, while the Conforming MCAI increased by 1.4 percent.

Credit availability increased in March, primarily due to a spike in jumbo mortgage offerings. The jumbo sub-index increased 5 percent and reached its highest level since last November, as the recent decline in mortgage rates led to a jump in refinances from borrowers with larger loans. The credit supply for government loans decreased in March, as investors continue to reduce FHA and VA streamline refi offerings." – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

Source: https://www.mba.org/news-research-and-resources/research-and-economics/single-family-research/mortgage-credit-availability-index; 4/4/19

Return TOC

# Summary

## In summary:

February's housing data was bleak and categorically mixed. Total and single-family starts declined substantially on a monthly and a yearly bases. Single-family and total housing permits also were uninspiring and indicated declines. Housing under construction, completions, and new single-family sales also were mixed. The one bright data point was monthly existing sales, which rebounded substantially on a monthly basis. New SF construction expenditures were tepid as well.

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

## Pros:

1) Historically low interest rates are still in place, though in aggregate rates are incrementally rising;
2) Housing affordability shows minimal improvement;
3) Select builders are beginning to focus on entry-level houses.

## Cons:

1) Lot availability and building regulations (according to several sources);
2) Laborer shortage;
3) Household formations still lag historical averages;
4) Changing attitudes towards SF ownership;
5) Job creation is improving and consistent but some economists question the quantity and types of jobs being created;
6) Debt: Corporate, personal, government – United States and globally;
7) Other global uncertainties.

Return TOC

# Virginia Tech Disclaimer

## Disclaimer of Non-endorsement

Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not constitute or imply its endorsement, recommendation, or favoring by Virginia Tech. The views and opinions of authors expressed herein do not necessarily state or reflect those of Virginia Tech, and shall not be used for advertising or product endorsement purposes.

## Disclaimer of Liability

With respect to documents sent out or made available from this server, neither Virginia Tech nor any of its employees, makes any warranty, expressed or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

## Disclaimer for External Links

The appearance of external hyperlinks does not constitute endorsement by Virginia Tech of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, Virginia Tech does not exercise any editorial control over the information you February find at these locations. All links are provided with the intent of meeting the mission of Virginia Tech's web site. Please let us know about existing external links you believe are inappropriate and about specific additional external links you believe ought to be included.

## Nondiscrimination Notice

Virginia Tech prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the author. Virginia Tech is an equal opportunity provider and employer.

Return TOC

# U.S. Department of Agriculture Disclaimer

## Disclaimer of Non-endorsement

Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwis e, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government, and shall not be used for advertising or product endorsement purposes.

## Disclaimer of Liability

With respect to documents available from this server, neither the United States Government nor any of its employees, makes an y warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes an y legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

## Disclaimer for External Links

The appearance of external hyperlinks does not constitute endorsement by the U.S. Department of Agriculture of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, the Department does not exerci se any editorial control over the information you February find at these locations. All links are provided with the intent of meetin g the mission of the Department and the Forest Service web site. Please let us know about existing external links you believe are inappropriate and about specific additional external links you believe ought to be included.

## Nondiscrimination Notice

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, c olor, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexu al orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternativ e means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202.720.2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call 800.795.3272 (voice) or 202.720.6382 (TDD). The USDA is an equal opportunity provider and employer.

Return TOC