

# **The Virginia Tech–USDA Forest Service Housing Commentary: Section I**

## **August 2021**



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Virginia Polytechnic Institute and State University

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# Table of Contents

|  |  |
|--|--|
| Slide 3: <a href="#"><u>Opening Remarks</u></a>                | Slide 49: <a href="#"><u>Region SF House Sales &amp; Price</u></a> |
| Slide 4: <a href="#"><u>Housing Scorecard</u></a>              | Slide 53: <a href="#"><u>New SF House Sales x Category</u></a>     |
| Slide 5: <a href="#"><u>USDA Housing Story Map</u></a>         | Slide 55: <a href="#"><u>New SF Sales-Population Ratio</u></a>     |
| Slide 6-8: <a href="#"><u>Wood Use in Construction</u></a>     | Slide 67: <a href="#"><u>Construction Spending</u></a>             |
| Slide 9: <a href="#"><u>New Housing Starts</u></a>             | Slide 70: <a href="#"><u>Construction Spending Shares</u></a>      |
| Slide 16: <a href="#"><u>Regional Housing Starts</u></a>       | Slide 73: <a href="#"><u>Retail Spending</u></a>                   |
| Slide 22: <a href="#"><u>New Housing Permits</u></a>           | Slide 75: <a href="#"><u>Remodeling</u></a>                        |
| Slide 25: <a href="#"><u>Regional New Housing Permits</u></a>  | Slide 76: <a href="#"><u>Existing House Sales</u></a>              |
| Slide 30: <a href="#"><u>Housing Under Construction</u></a>    | Slide 79: <a href="#"><u>U.S. Housing Prices &amp; Finance</u></a> |
| Slide 32: <a href="#"><u>Regional Under Construction</u></a>   | Slide 90: <a href="#"><u>Mortgage Finance &amp; Outlook</u></a>    |
| Slide 37: <a href="#"><u>Housing Completions</u></a>           | Slide 92: <a href="#"><u>Summary</u></a>                           |
| Slide 39: <a href="#"><u>Regional Housing Completions</u></a>  | Slide 93: <a href="#"><u>Virginia Tech Disclaimer</u></a>          |
| Slide 46: <a href="#"><u>New Housing Sales</u></a>             | Slide 94: <a href="#"><u>USDA Disclaimer</u></a>                   |
| Slide 47: <a href="#"><u>New Single-Family House Sales</u></a> |  |

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<http://woodproducts.sbio.vt.edu/housing-report>.

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# Opening Remarks

The month-over-month and year-over-year housing data for August were predominantly positive. Single-family starts were negative month-over-month and permits were negative year-over-year. Completions remained slowed due to the unavailability of building materials and products, among other factors. Thus, certain builders may be reluctant to start new projects while waiting to complete units under construction.

The October 15th Atlanta Fed GDPNow™ model forecast was an aggregate -6.6% for total residential investment spending. New private permanent site expenditures were projected at -11.1%; the improvement spending forecast was -7.4%; and the manufactured/mobile expenditures projection was 15.0% (all: quarterly log change and at a seasonally adjusted annual rate).<sup>1</sup>

“The monthly gain in residential [construction spending] was owed almost entirely to a 2.5% rise in home-improvement spending. Private single-family housing spending was down 0.7%, and multifamily slipped 0.8%. More time being spent at home, low interest rates, rising home equity and the dearth of homes available for sale has led to a surge in repair and remodel activity.”<sup>2</sup> – Charlie Dougherty, Economist, Wells Fargo Securities LLC.

This month’s commentary contains applicable housing data, remodeling commentary, and United States housing market observations. Section I contains relevant data, remodeling, and housing finance commentary. Section II includes regional Federal Reserve analysis, private firm indicators, and economic information.

Sources: <sup>1</sup> [www.frbatlanta.org/cqer/research/gdpnow.aspx](http://www.frbatlanta.org/cqer/research/gdpnow.aspx); 10/15/21;

<sup>2</sup> <https://www.forconstructionpros.com/economics/news/21747660/residential-gain-offset-by-nonresidential-loss-in-august-construction-spending>; 9/9/21

# August 2021

## Housing Scorecard

|   |   | M/M   | Y/Y     |
|---|---|-------|---------|
| Housing Starts                            | ▲ | 3.9%  | ▲ 17.4% |
| Single-Family (SF) Starts                 | ▼ | 2.8%  | ▲ 5.2%  |
| Multi-Family (MF) Starts*                 | ▲ | 20.6% | ▲ 52.7% |
| Housing Permits                           | ▲ | 5.6%  | ▲ 13.1% |
| SF Permits                                | ▲ | 0.2%  | ▼ 0.5%  |
| MF Permits*                               | ▲ | 15.3% | ▲ 43.7% |
| Housing Under Construction                | ▲ | 1.7%  | ▲ 15.8% |
| SF Under Construction                     | ▲ | 1.6%  | ▲ 32.7% |
| Housing Completions                       | ▼ | 4.5%  | ▲ 9.4%  |
| SF Completions                            | ▲ | 2.8%  | ▲ 8.5%  |
| New SF House Sales                        | ▲ | 1.5%  | ▲ 24.3% |
| Private Residential Construction Spending | ▲ | 0.4%  | ▼ 24.3% |
| SF Construction Spending                  | ▼ | 0.7%  | ▲ 38.3% |
| Existing House Sales <sup>1</sup>         | ▼ | 2.0%  | ▼ 1.5%  |

\* All multi-family (2 to 4 + ≥ 5-units)

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



# USDA Forest Service Housing Story Map

**USDA FOREST SERVICE HOUSING MARKET REVIEW**

Forest Products Laboratory, Economics, Statistics and Life Cycle Analysis Research

USDA

US

WELCOME

MONTHLY HOUSING BRIEFS AND COMMENTARIES

CONSTRUCTION DATA

HOUSING METRICS AND THE WOOD RESOURCE

RESOURCES AND REFERENCES

## USDA Forest Service Housing Market Review

### Housing's Importance

The total value of all homes in the U.S. in 2017 was estimated at \$31.8 trillion.<sup>1</sup>


The value of wood building materials consumed in new residential and remodeling construction was estimated at \$37.4 billion in 2018.<sup>2</sup>

Historic as well as current housing trends show that new, single-family construction is the greatest value-added wood products consuming sector and is a leading coincident economic indicator of the U.S. economy. The forest products sector helps sustain the social, economic, and ecological benefits of forest based industry in the United States. Product revenues sustain economic benefits that include jobs and income. Ecological and social benefits can be supported by timber revenue to landowners that help keep land in forests, and by forest treatments that can help maintain ecological functions. The degree to which the forest products sector helps sustain benefits is influenced by levels of demand and consumption of forest products and how technology, markets, and demand for timber translates into harvest of different species and sizes of trees in different regions.

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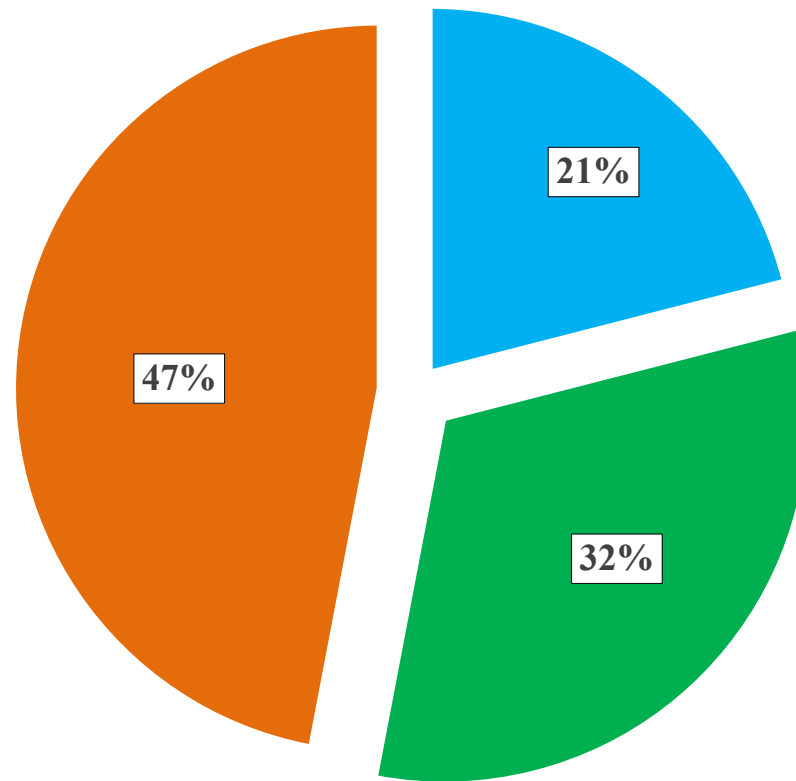
## USDA Forest Service Housing Market Review

Each story map's tab contains a compilation of housing information. The 'Construction Data' tab is interactive and allows one the capability to gather and view US Census-Construction data at the national or metropolitan statistical area (MSA) level.

The story map is available at the following link:

<https://www.arcgis.com/apps/MapSeries/index.html?appid=9553db0ea36140d28076399e898dc693>

# New Construction's Percentage of Wood Products Consumption

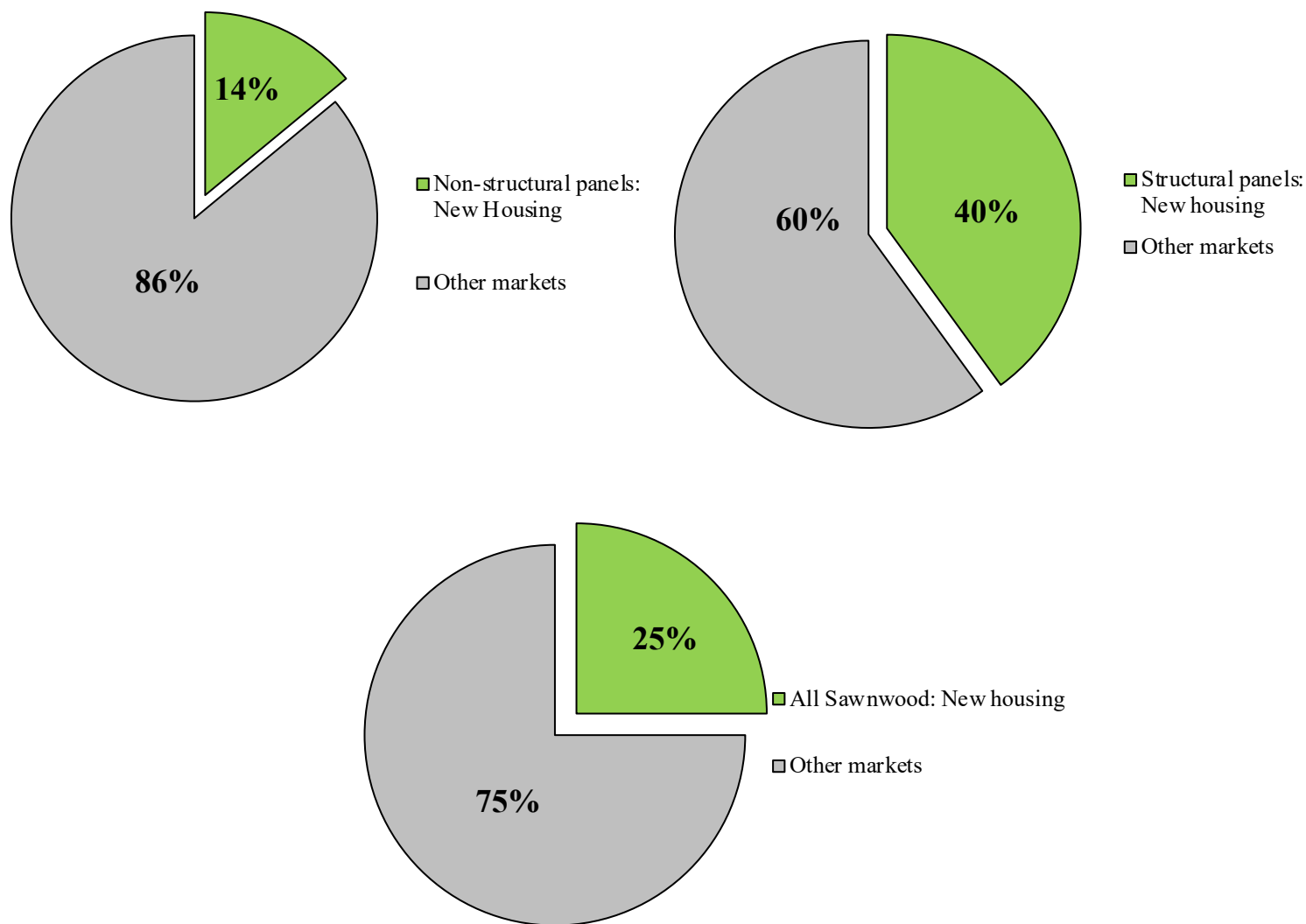


■ Non-structural panels

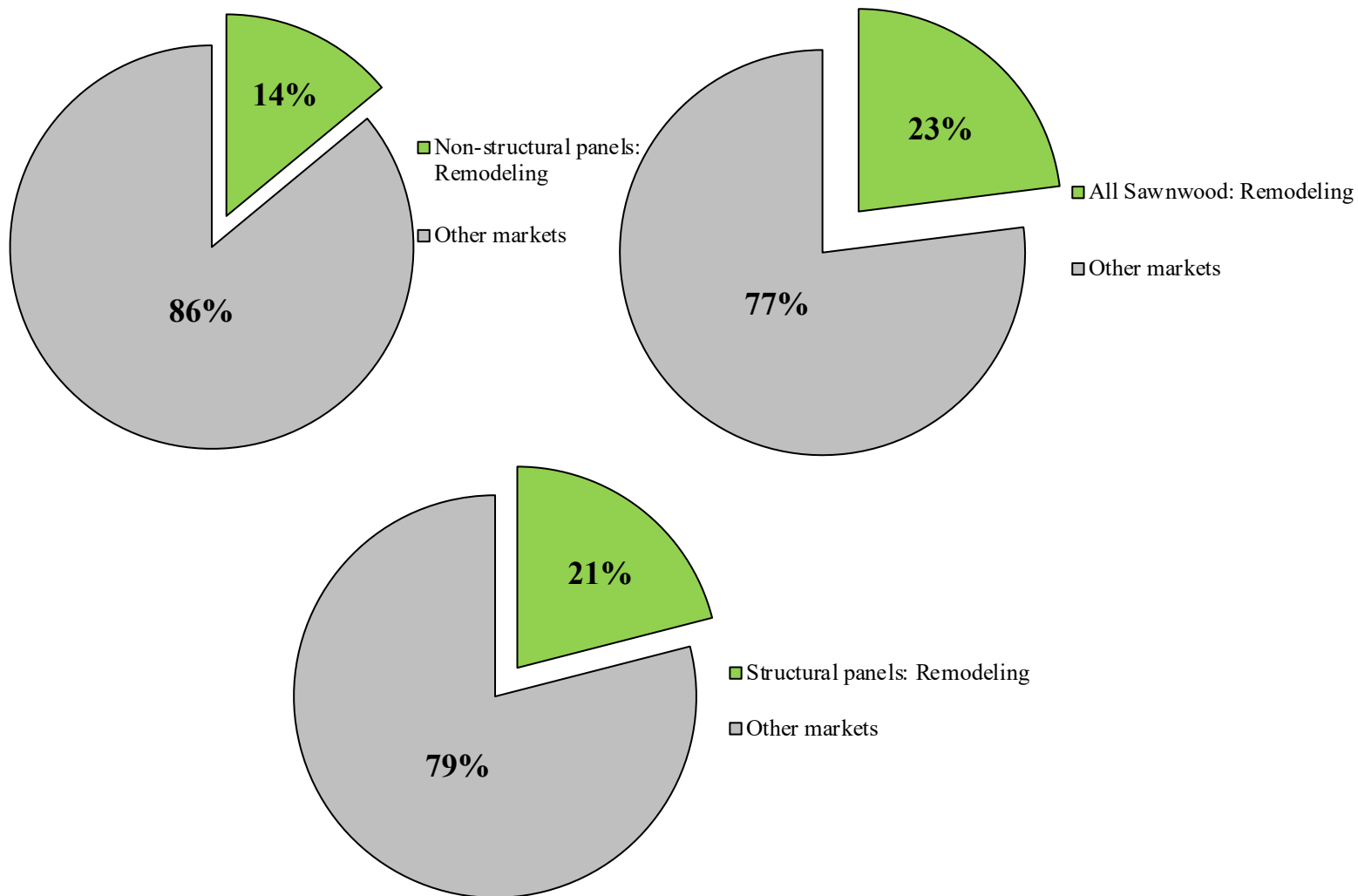
■ Total Sawnwood

■ Structural panels

# New SF Construction Percentage of Wood Products Consumption



# Repair and Remodeling's Percentage of Wood Products Consumption





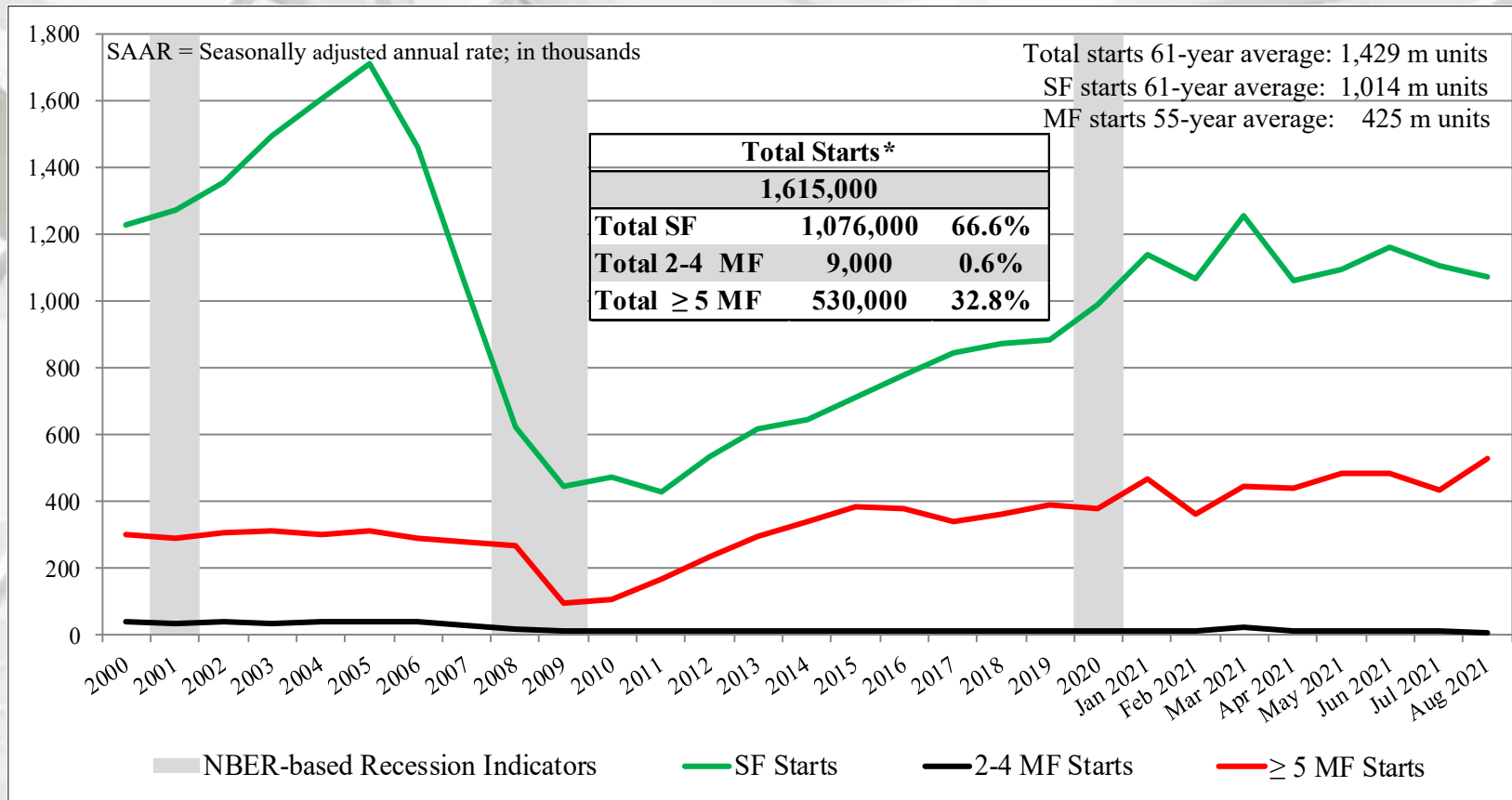
# New Housing Starts

|            | Total Starts* | SF Starts | MF 2-4 Starts** | MF ≥5 Starts |
|------------|---------------|-----------|-----------------|--------------|
| July       | 1,615,000     | 1,076,000 | 9,000           | 530,000      |
| June       | 1,554,000     | 1,107,000 | 11,000          | 436,000      |
| 2020       | 1,376,000     | 1,023,000 | 22,000          | 331,000      |
| M/M change | 3.9%          | -2.8%     | -18.2%          | 21.6%        |
| Y/Y change | 17.4%         | 5.2%      | -59.1%          | 60.1%        |

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

\*\* US DOC does not report 2 to 4 multi-family starts directly; this is an estimation  
((Total starts – (SF + 5-unit MF)).

# Total Housing Starts

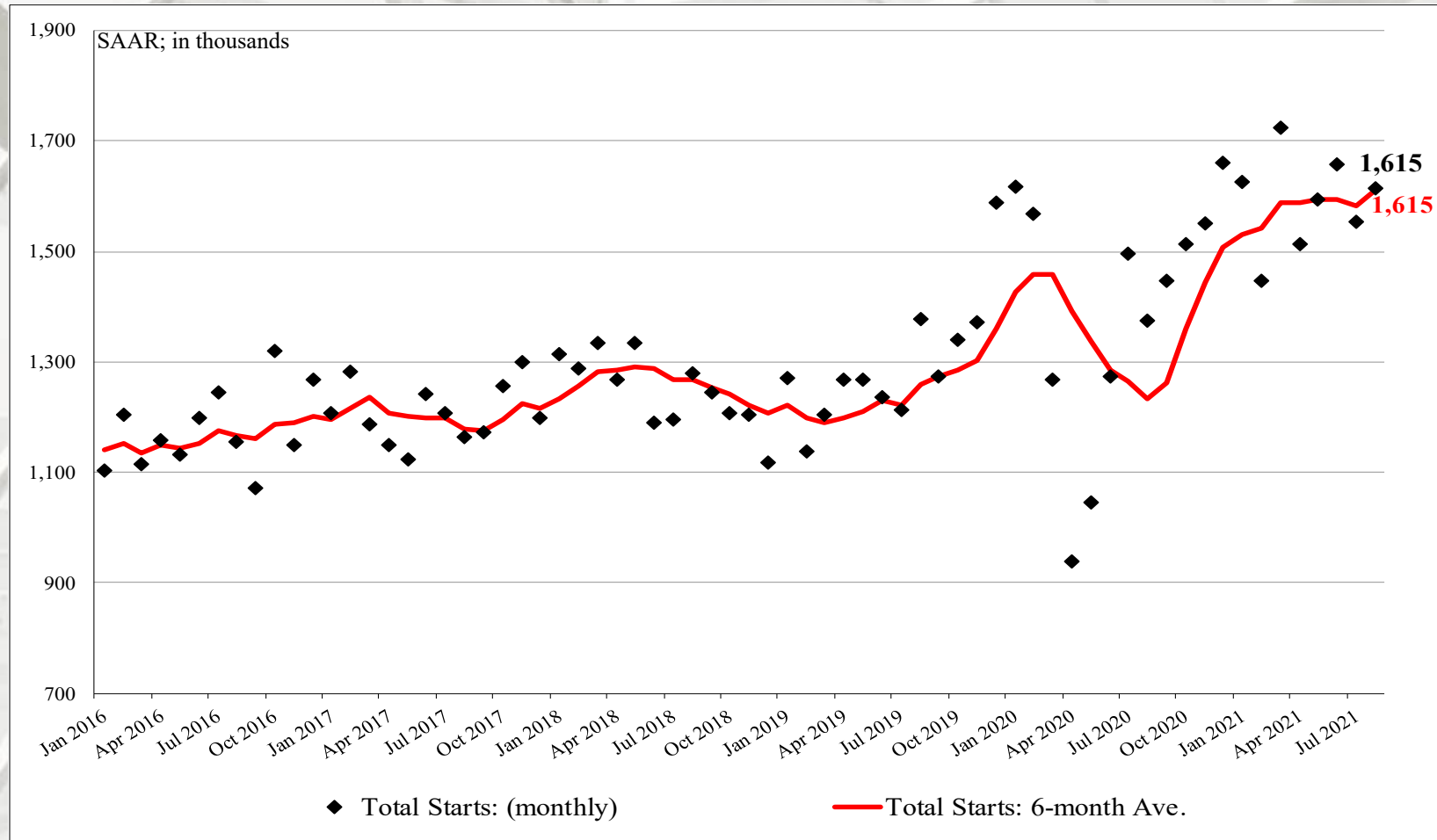


US DOC does not report 2 to 4 multi-family starts directly; this is an estimation:  $((\text{Total starts} - (\text{SF} + \geq \text{MF})))$ .

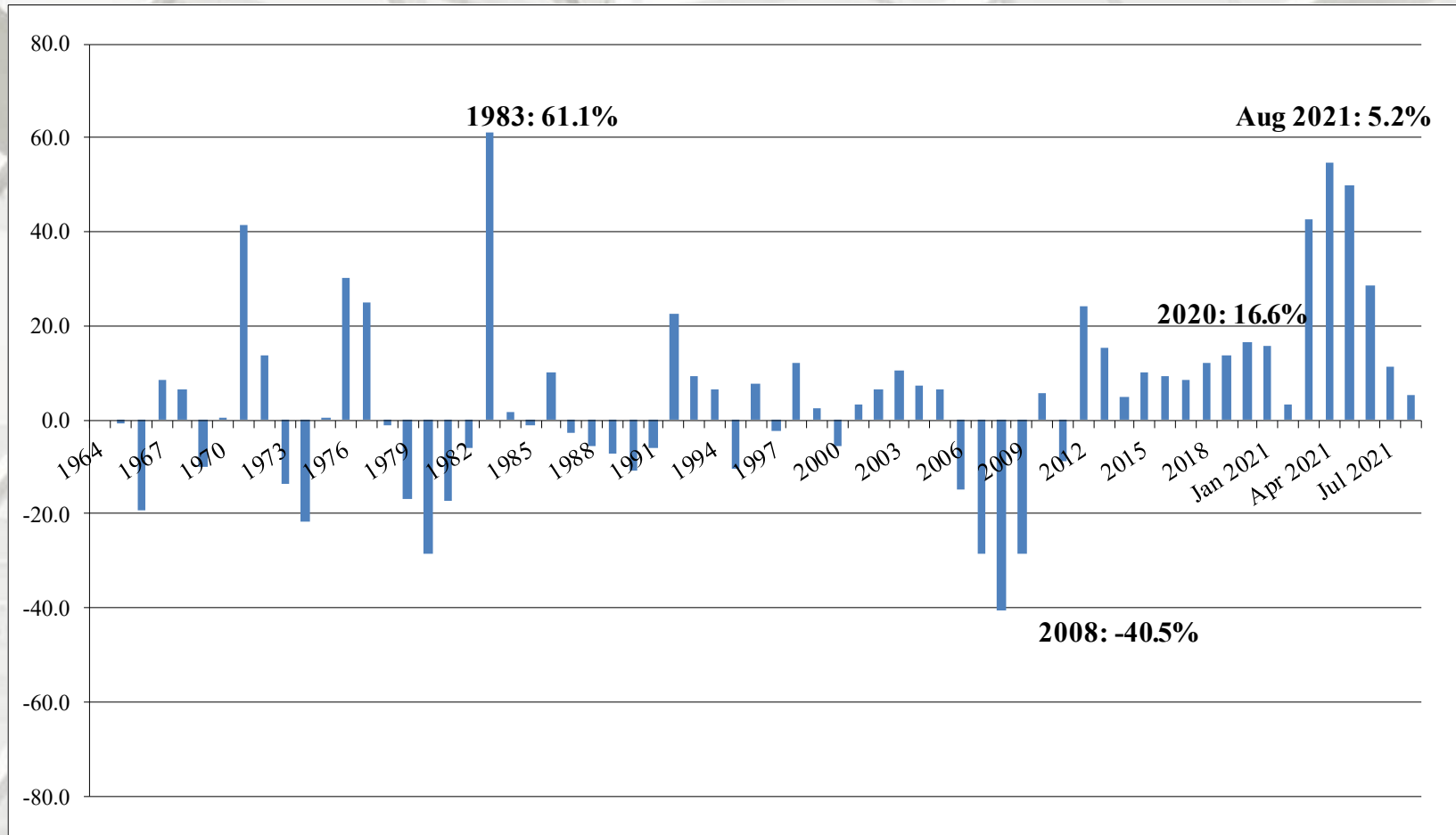
\* Percentage of total starts.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Total Housing Starts: Six-Month Average

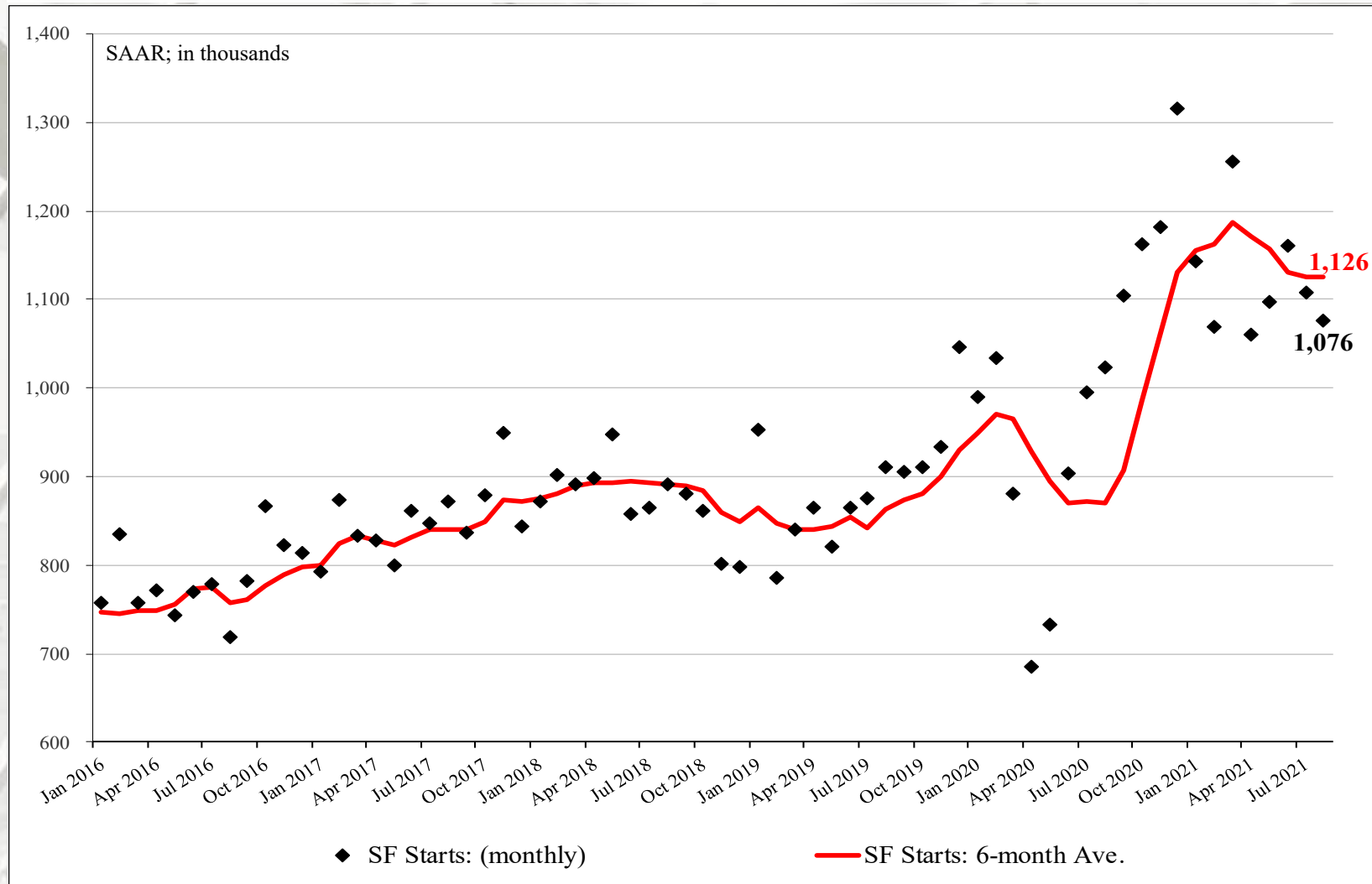


# SF Housing Starts: Year-over-Year Change

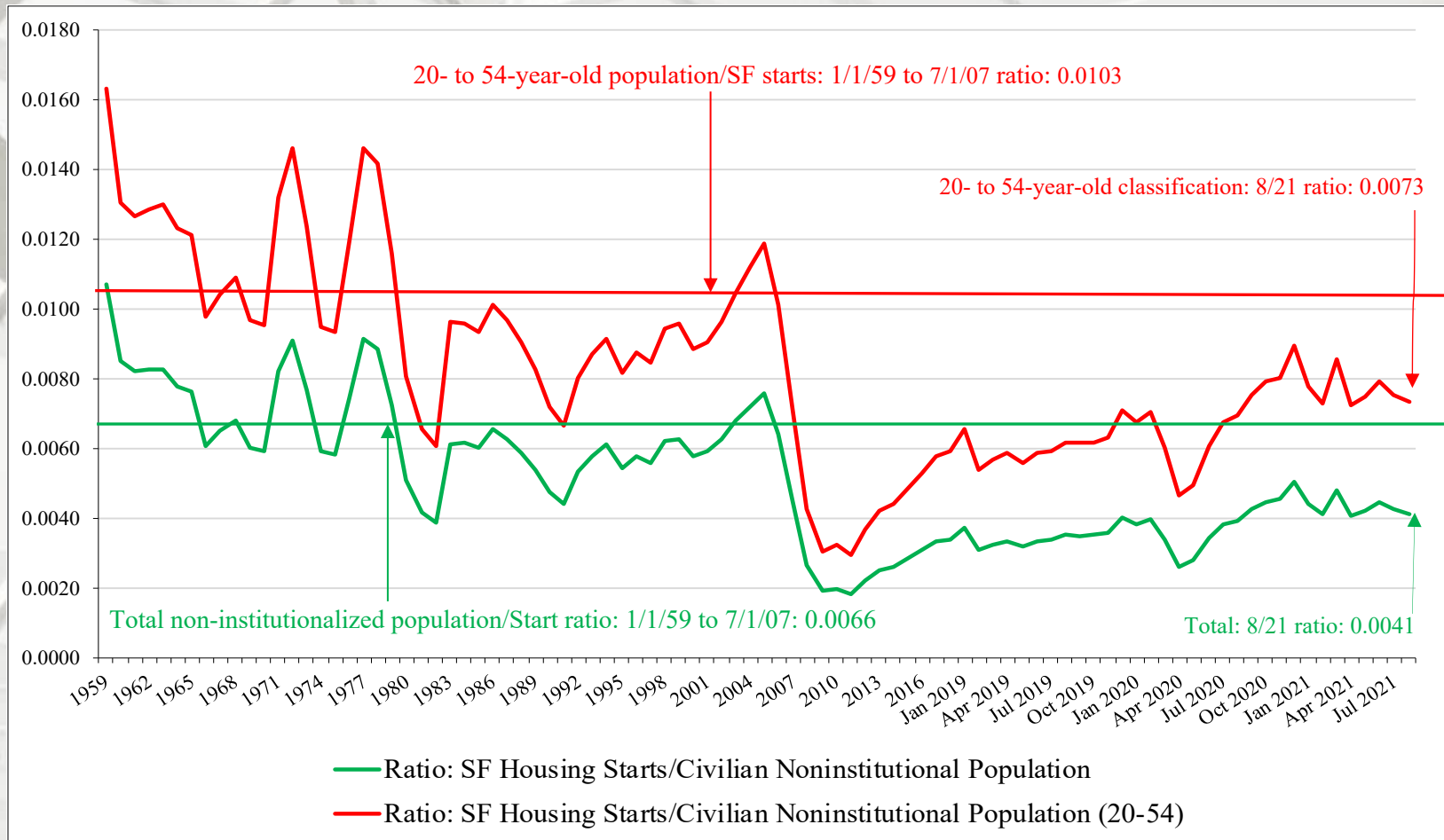




# SF Housing Starts: Six-Month Average



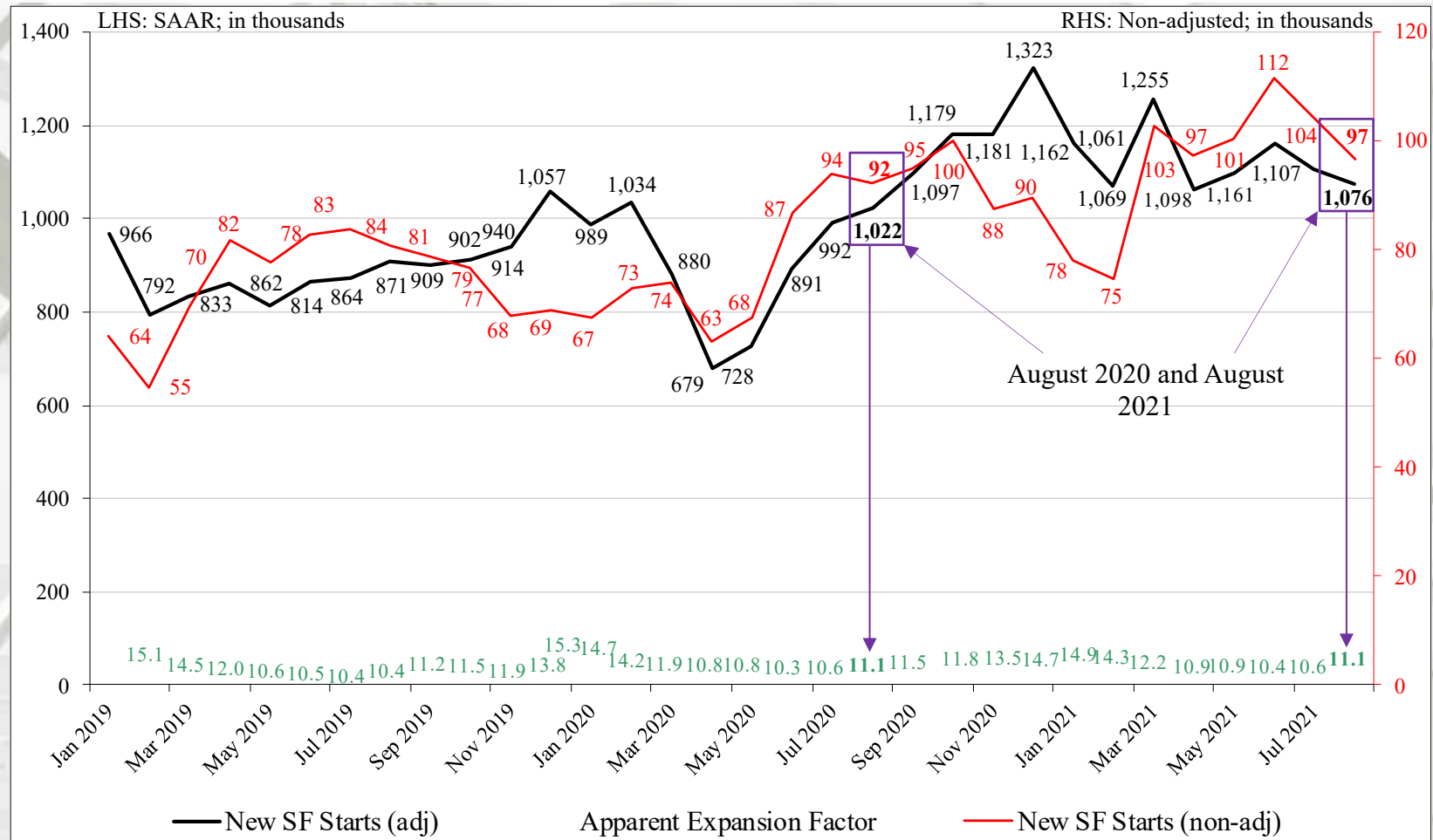
# New SF Starts



## New SF starts adjusted for the US population

From January 1959 to July 2007, the long-term ratio of the total US non-institutionalized population to new SF starts is 0.0066; in August 2021 it was 0.0041 – a slight decrease from July (0.0041). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in August 2021 was 0.0073 – also a decrease from July (0.0075). From a population worldview, new SF construction is less than what is necessary for changes in population (i.e., under-building).

# 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

# New Housing Starts by Region

|            | NE Total | NE SF   | NE MF** |
|------------|----------|---------|---------|
| July       | 179,000  | 64,000  | 115,000 |
| June       | 67,000   | 42,000  | 25,000  |
| 2020       | 87,000   | 59,000  | 28,000  |
| M/M change | 167.2%   | 52.4%   | 360.0%  |
| Y/Y change | 105.7%   | 8.5%    | 310.7%  |
|            | MW Total | MW SF   | MW MF   |
| July       | 206,000  | 126,000 | 80,000  |
| June       | 185,000  | 144,000 | 41,000  |
| 2020       | 241,000  | 158,000 | 83,000  |
| M/M change | 11.4%    | -12.5%  | 95.1%   |
| Y/Y change | -14.5%   | -20.3%  | -3.6%   |

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

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



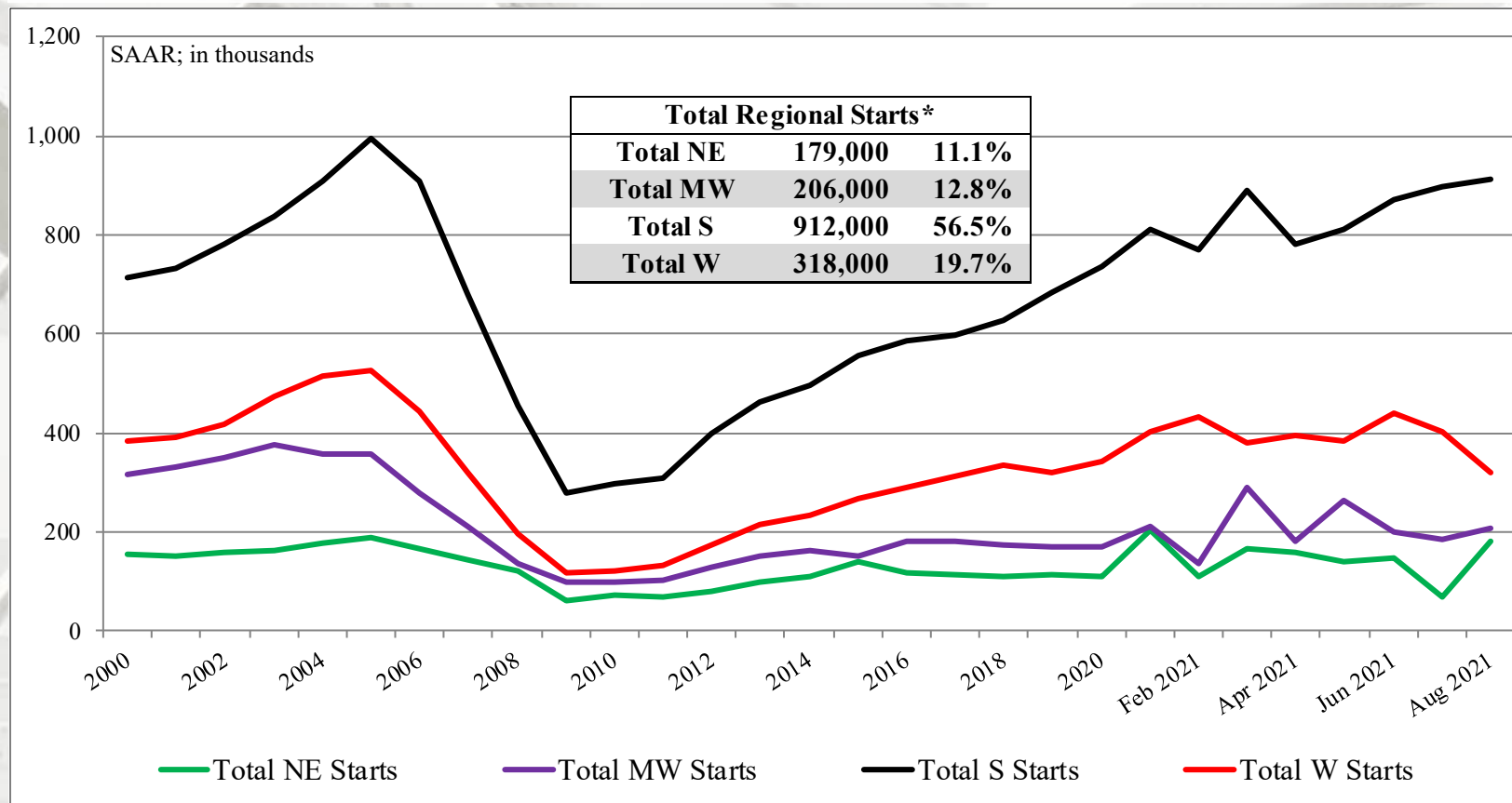
# New Housing Starts by Region

|            | <b>S Total</b> | <b>S SF</b> | <b>S MF**</b> |
|------------|----------------|-------------|---------------|
| July       | 912,000        | 684,000     | 228,000       |
| June       | 899,000        | 667,000     | 232,000       |
| 2020       | 706,000        | 552,000     | 154,000       |
| M/M change | 1.4%           | 2.5%        | -1.7%         |
| Y/Y change | 29.2%          | 23.9%       | 48.1%         |
|            | <b>W Total</b> | <b>W SF</b> | <b>W MF</b>   |
| July       | 318,000        | 202,000     | 116,000       |
| June       | 403,000        | 254,000     | 149,000       |
| 2020       | 342,000        | 254,000     | 88,000        |
| M/M change | -21.1%         | -20.5%      | -22.1%        |
| Y/Y change | -7.0%          | -20.5%      | 31.8%         |

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

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

# New Housing Starts by Region

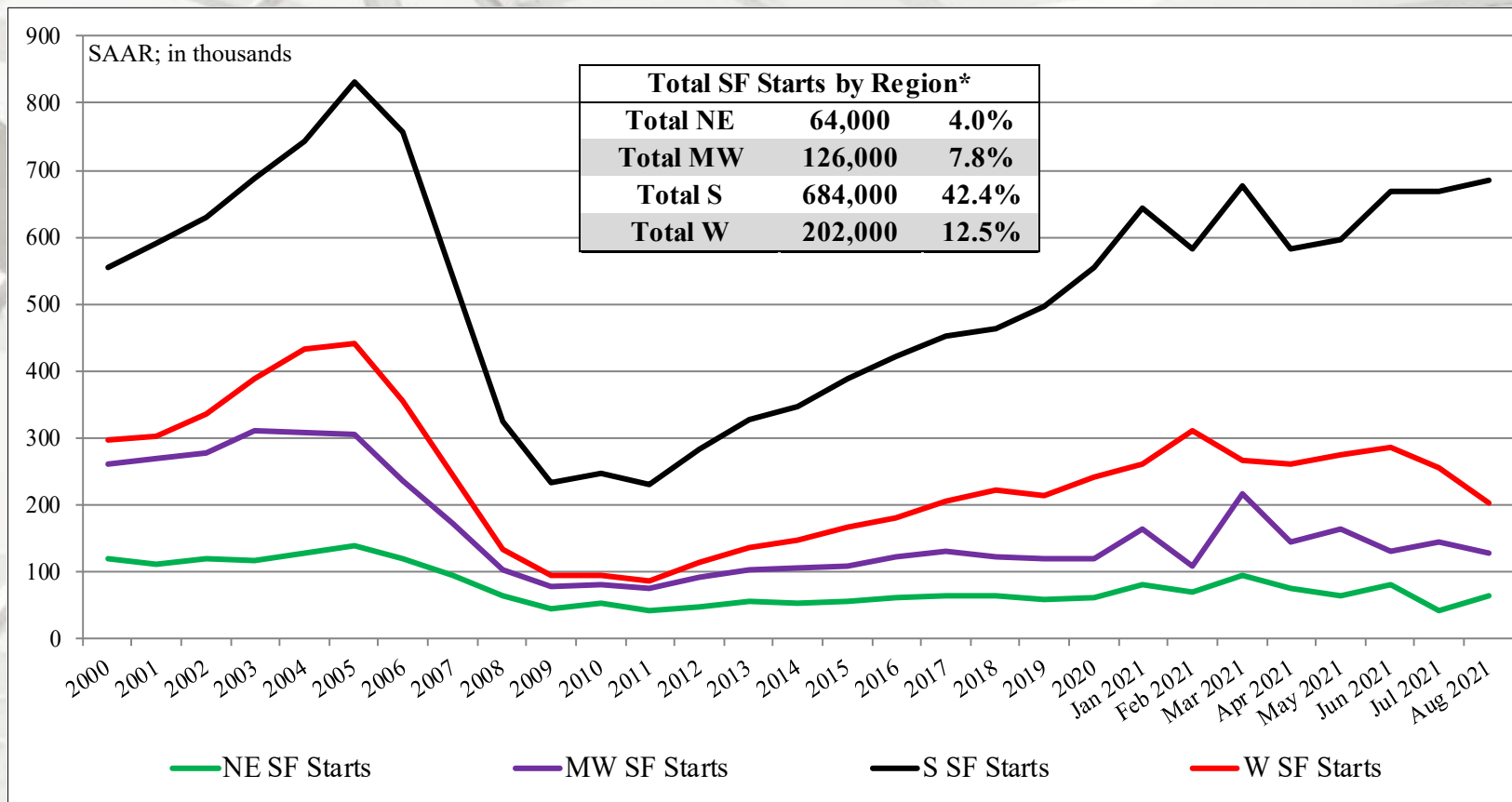


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.

# Total SF Housing Starts by Region

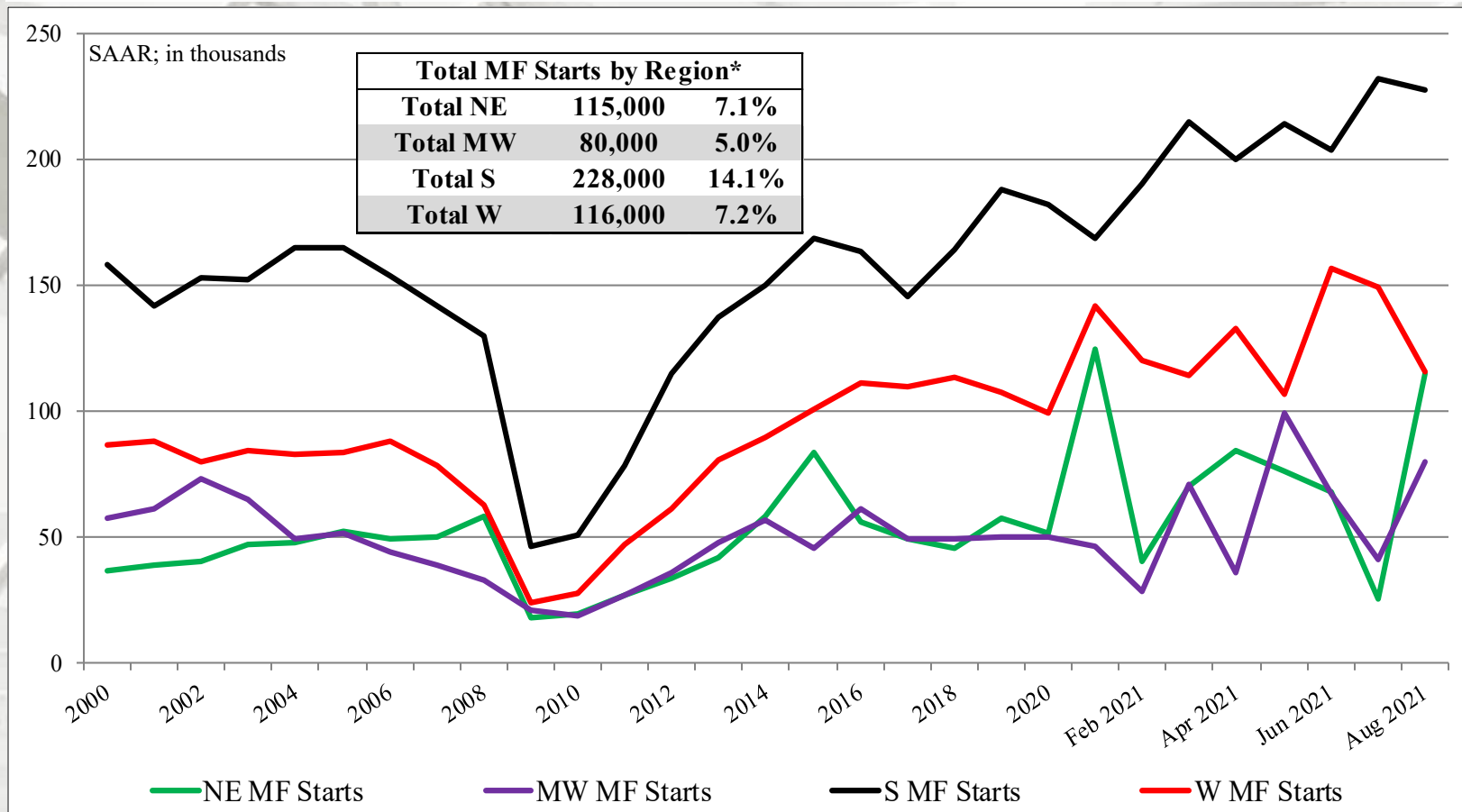


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.

# MF Housing Starts by Region



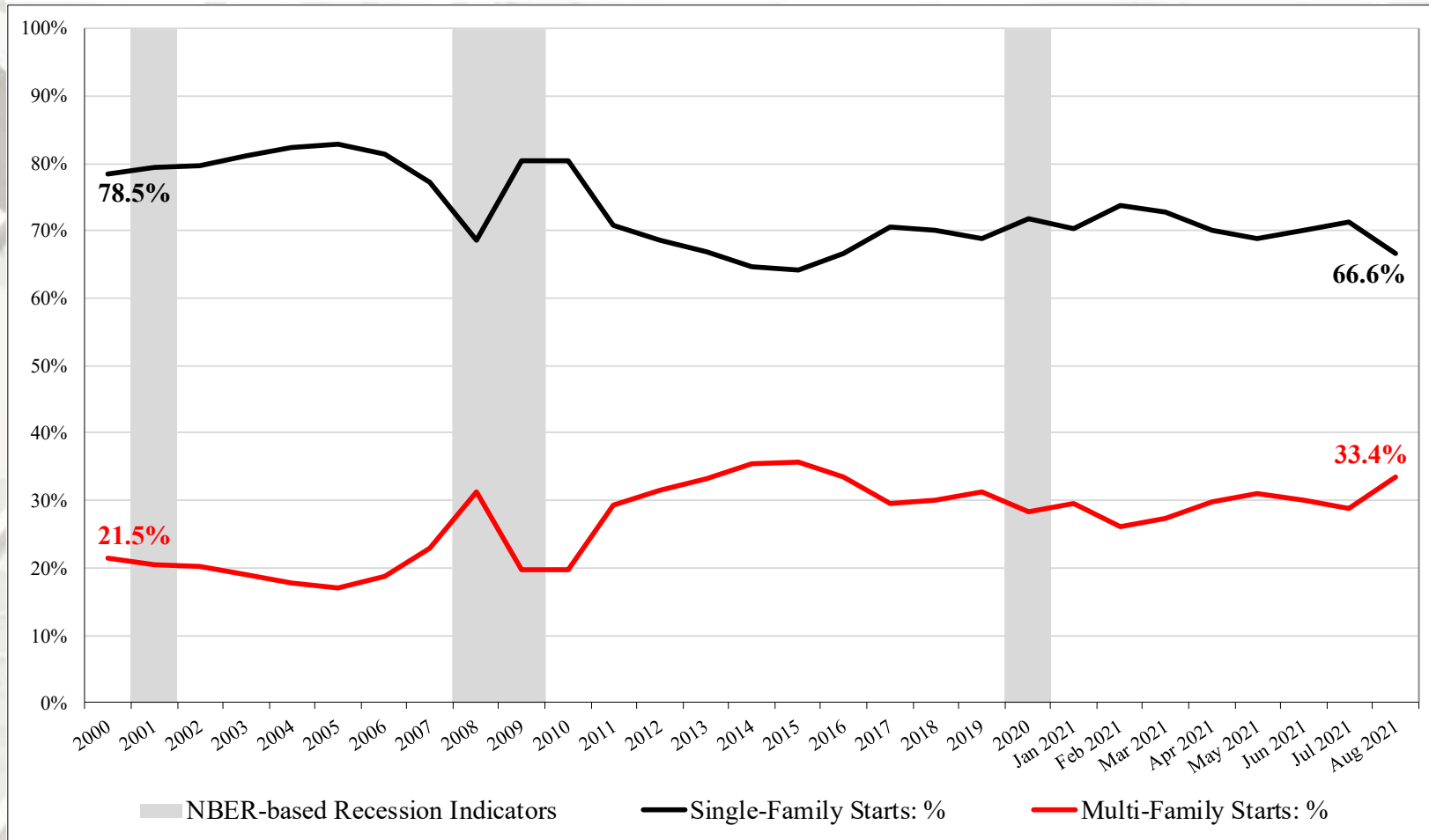
NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family starts directly; this is an estimation (Total starts – (SF + ≥ 5 MF starts)).

\* Percentage of total starts.



# SF vs. MF Housing Starts (%)



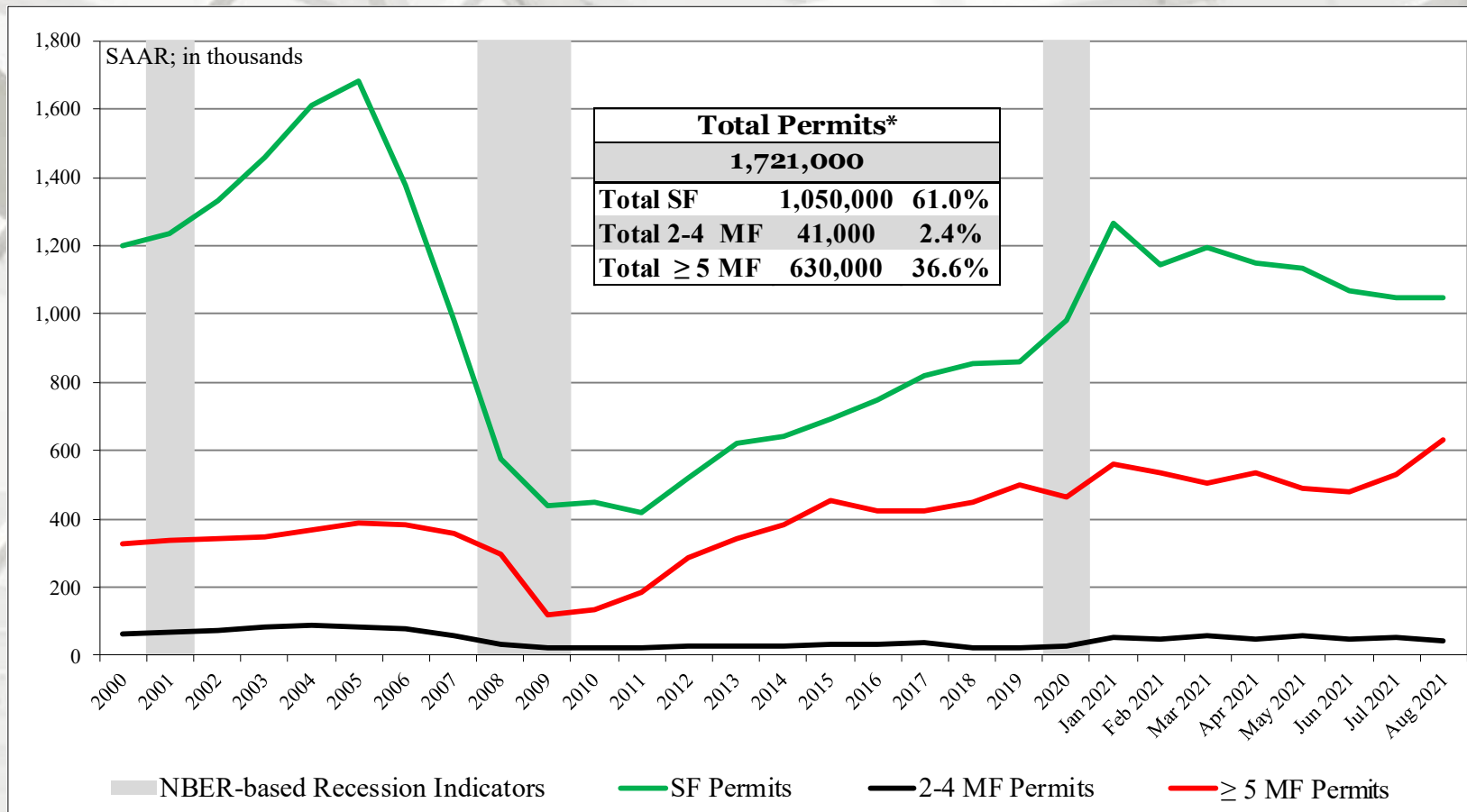
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Permits

|            | Total Permits* | SF Permits | MF 2-4 unit Permits | MF ≥ 5 unit Permits |
|------------|----------------|------------|---------------------|---------------------|
| August     | 1,721,000      | 1,050,000  | 41,000              | 630,000             |
| July       | 1,630,000      | 1,048,000  | 54,000              | 528,000             |
| 2020       | 1,522,000      | 1,055,000  | 53,000              | 414,000             |
| M/M change | 5.6%           | 0.2%       | -24.1%              | 19.3%               |
| Y/Y change | 13.1%          | -0.5%      | -22.6%              | 52.2%               |

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

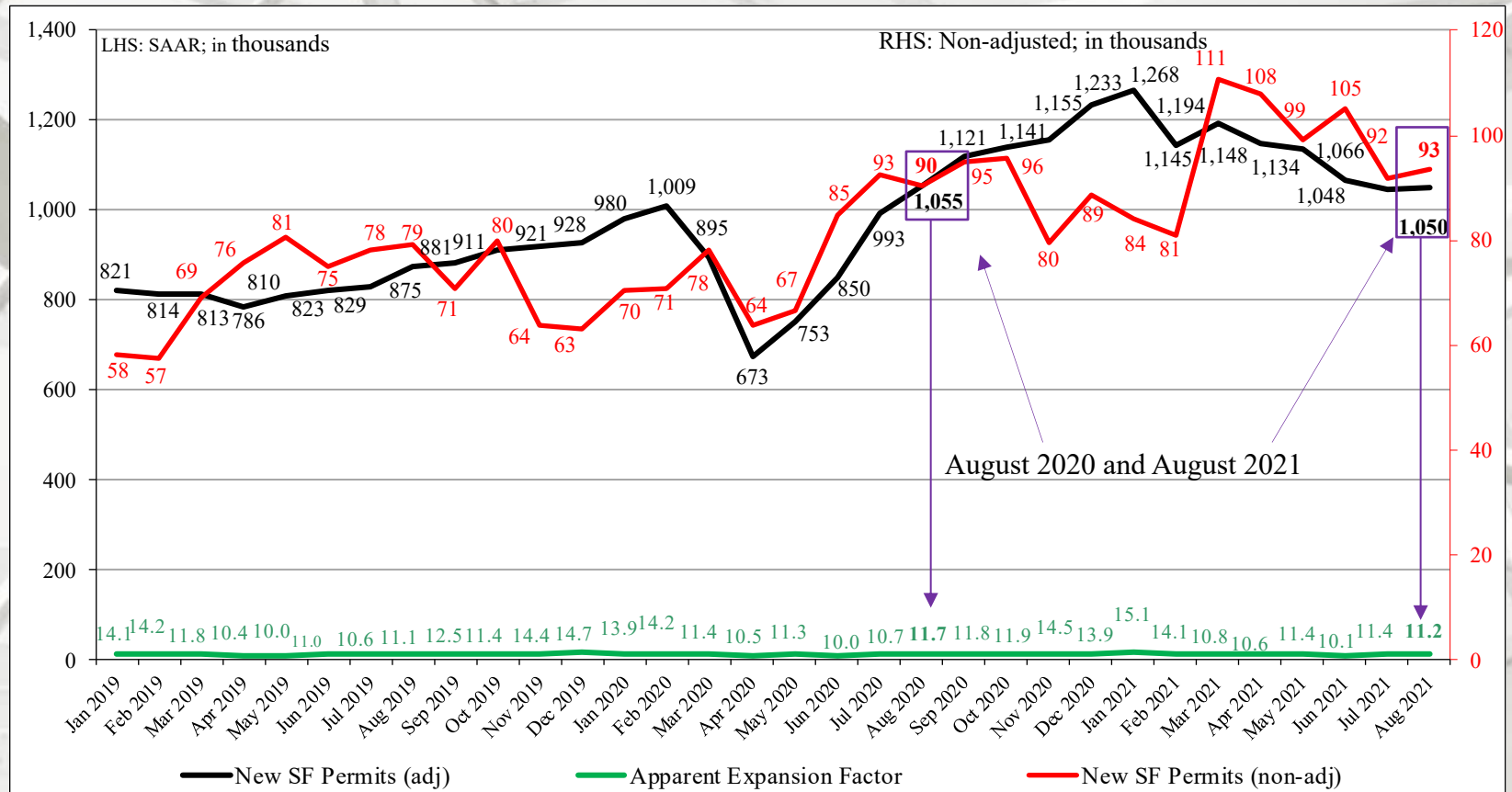
# Total New Housing Permits



\* Percentage of total permits.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Nominal & SAAR SF Permits



## Nominal and Adjusted New SF Monthly Permits

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

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



# New Housing Permits by Region

|            | NE Total* | NE SF   | NE MF** |
|------------|-----------|---------|---------|
| August     | 155,000   | 67,000  | 88,000  |
| July       | 130,000   | 58,000  | 72,000  |
| 2020       | 127,000   | 57,000  | 70,000  |
| M/M change | 19.2%     | 15.5%   | 22.2%   |
| Y/Y change | 22.0%     | 17.5%   | 25.7%   |
|            | MW Total* | MW SF   | MW MF** |
| August     | 217,000   | 126,000 | 91,000  |
| July       | 213,000   | 126,000 | 87,000  |
| 2020       | 195,000   | 136,000 | 59,000  |
| M/M change | 1.9%      | 0.0%    | 4.6%    |
| Y/Y change | 11.3%     | -7.4%   | 54.2%   |

NE = Northeast; MW = Midwest

\* All data are SAAR

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

# New Housing Permits by Region

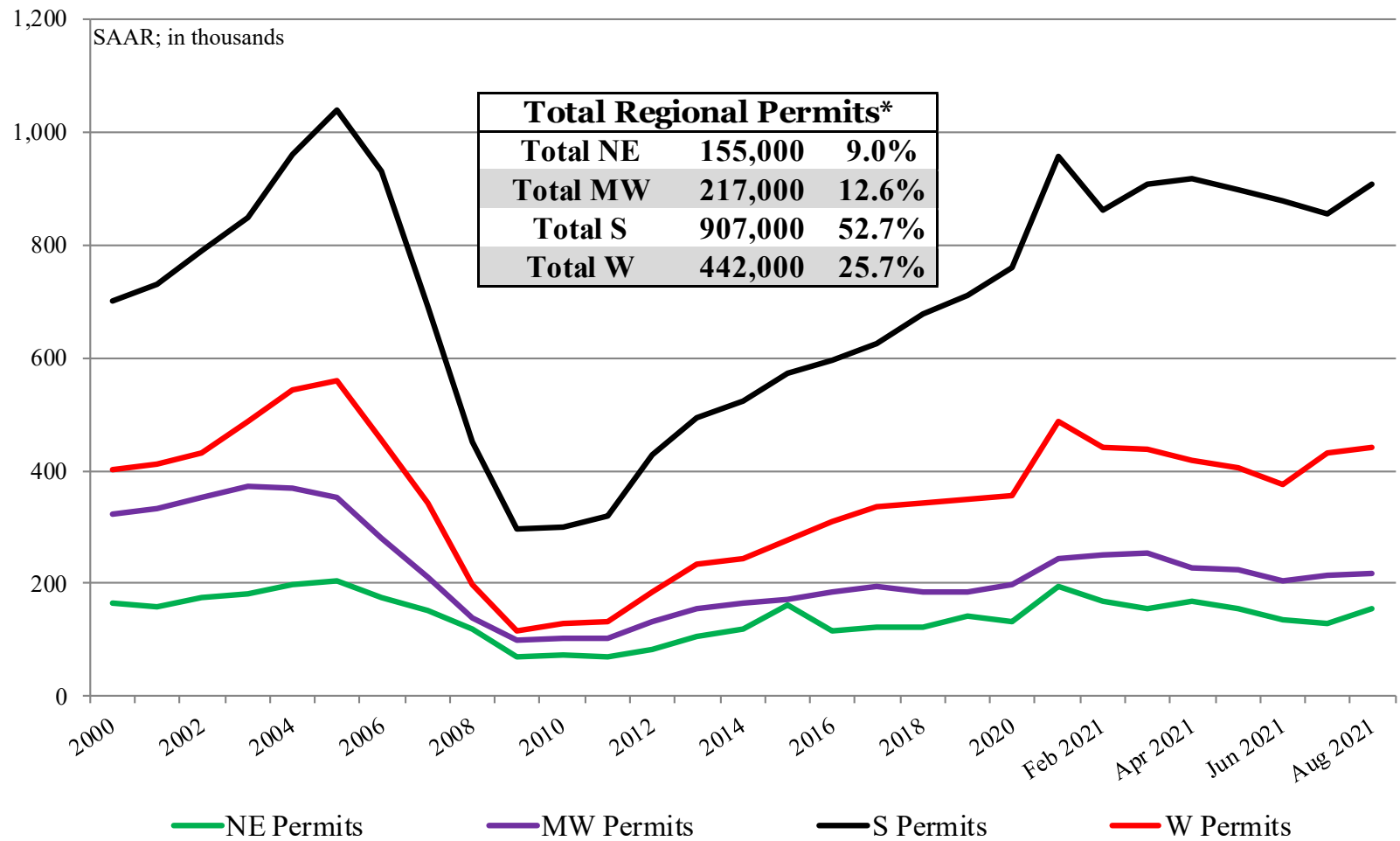
|            | <b>S Total*</b> | <b>S SF</b> | <b>S MF**</b> |
|------------|-----------------|-------------|---------------|
| August     | 907,000         | 608,000     | 299,000       |
| July       | 857,000         | 629,000     | 228,000       |
| 2020       | 823,000         | 618,000     | 205,000       |
| M/M change | 5.8%            | -3.3%       | 31.1%         |
| Y/Y change | 10.2%           | -1.6%       | 45.9%         |
|            | <b>W Total*</b> | <b>W SF</b> | <b>W MF**</b> |
| August     | 442,000         | 249,000     | 193,000       |
| July       | 430,000         | 235,000     | 195,000       |
| 2020       | 377,000         | 244,000     | 133,000       |
| M/M change | 2.8%            | 6.0%        | -1.0%         |
| Y/Y change | 17.2%           | 2.0%        | 45.1%         |

S = South; W = West

\* All data are SAAR

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

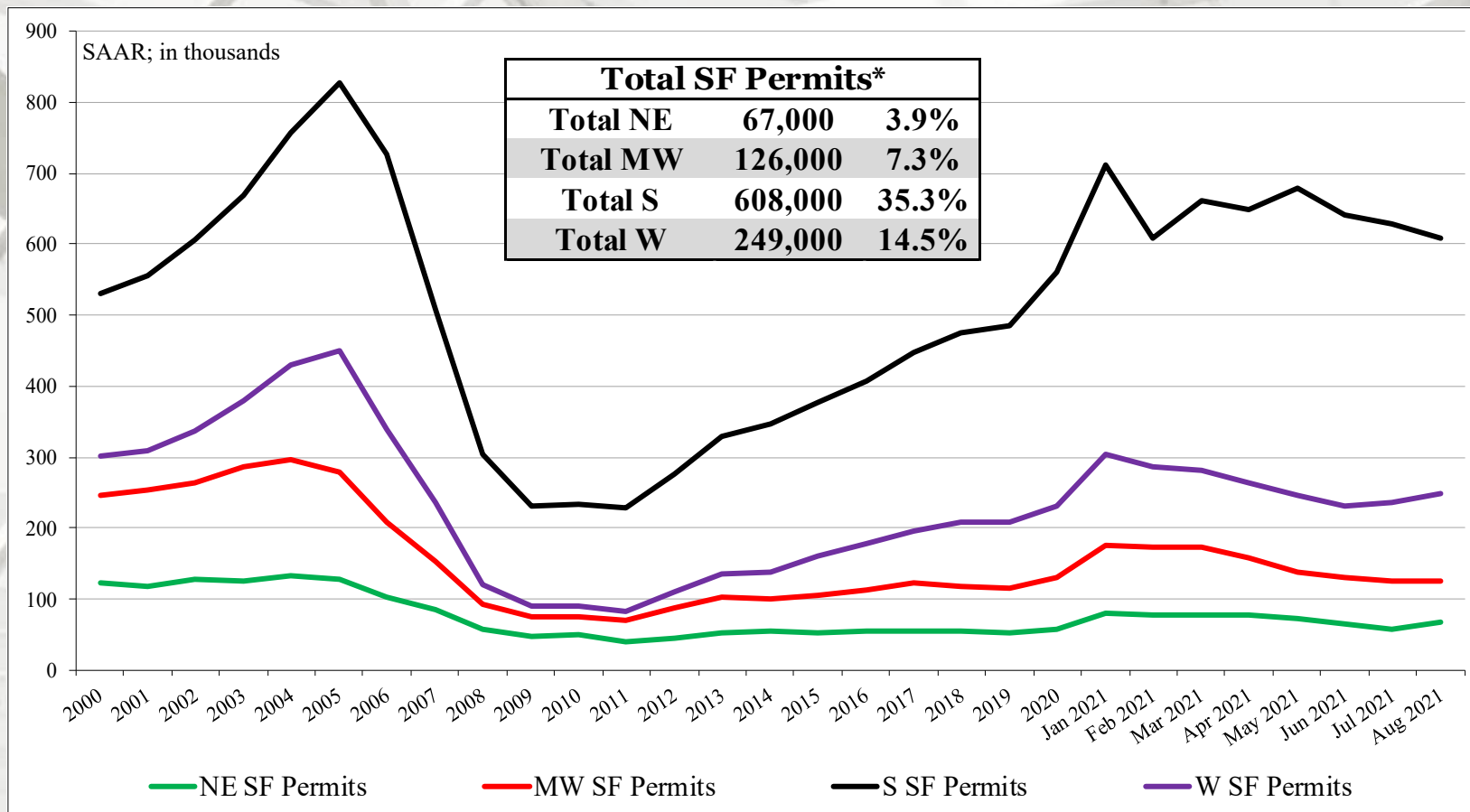
# Total Housing Permits by Region



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

\* Percentage of total permits.

# SF Housing Permits by Region

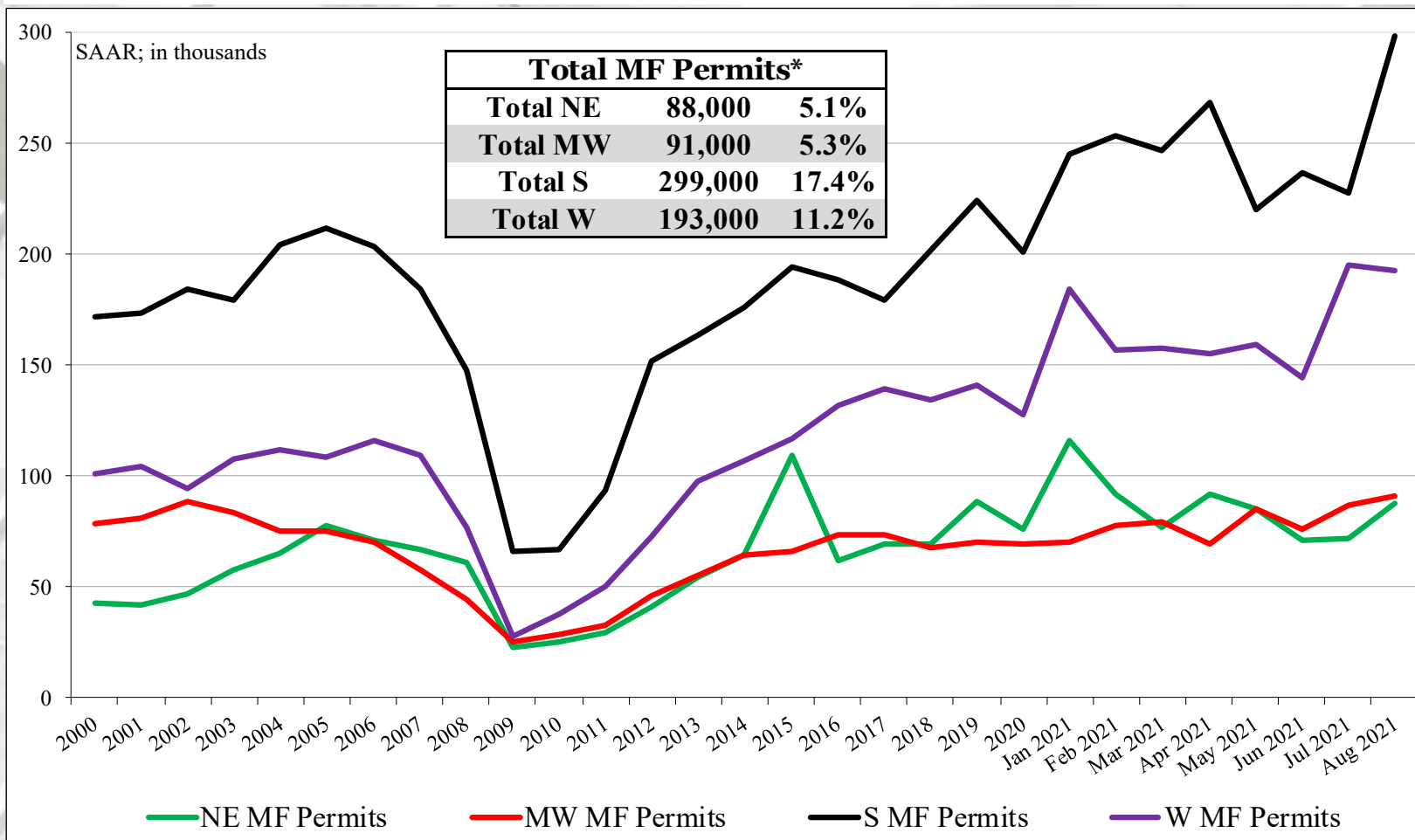


NE = Northeast, MW = Midwest, S = South, W = West

\* Percentage of total permits.



# MF Housing Permits by Region



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

\* Percentage of total permits.

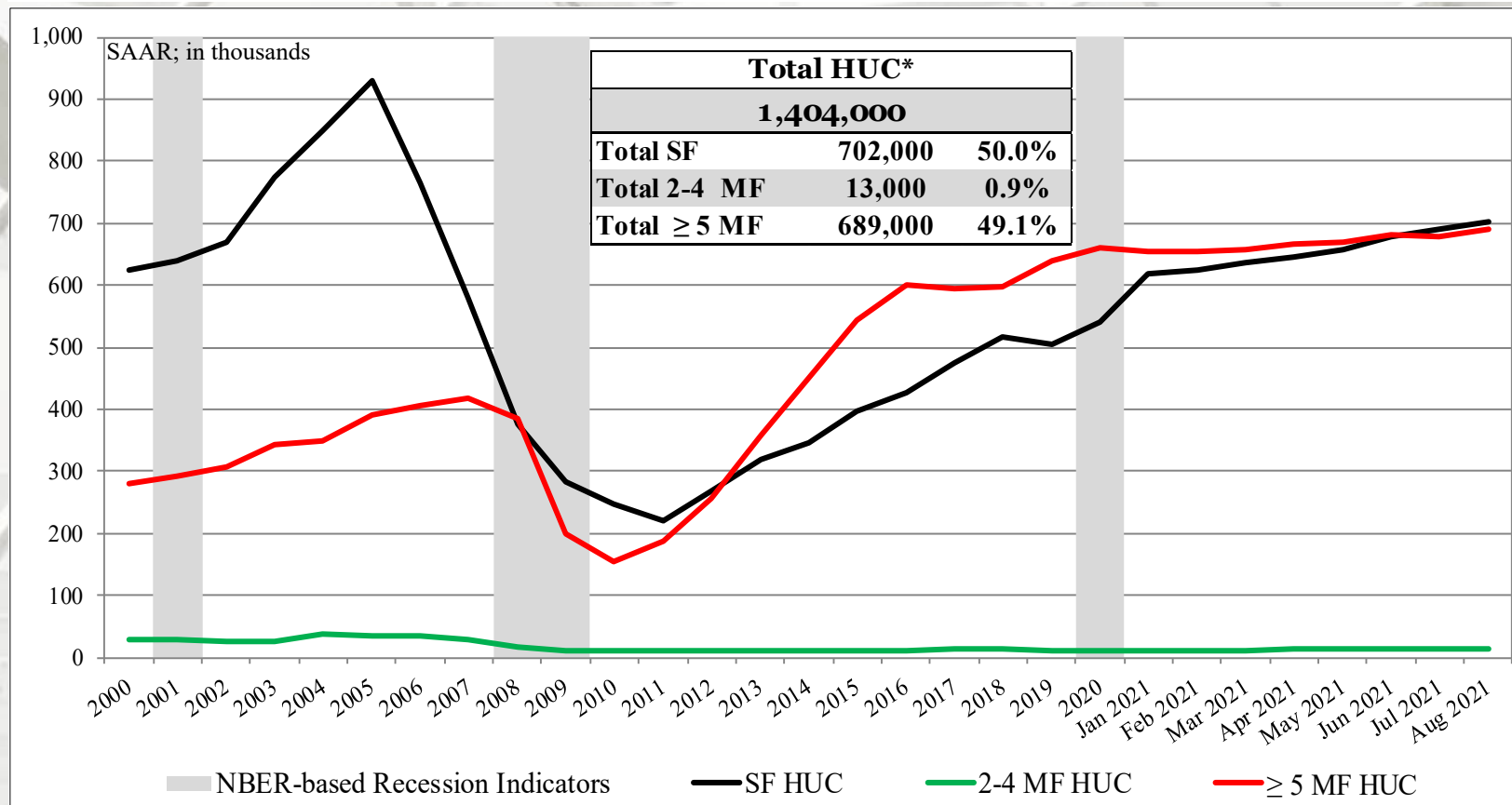
# New Housing Under Construction (HUC)

|            | Total Under Construction* | SF Under Construction | MF 2-4 unit** Under Construction | MF ≥ 5 unit Under Construction |
|------------|---------------------------|-----------------------|----------------------------------|--------------------------------|
| July       | 1,404,000                 | 702,000               | 13,000                           | 689,000                        |
| June       | 1,381,000                 | 691,000               | 13,000                           | 677,000                        |
| 2020       | 1,212,000                 | 529,000               | 11,000                           | 672,000                        |
| M/M change | 1.7%                      | 1.6%                  | 0.0%                             | 1.8%                           |
| Y/Y change | 15.8%                     | 32.7%                 | 18.2%                            | 2.5%                           |

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

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

# Total Housing Under Construction

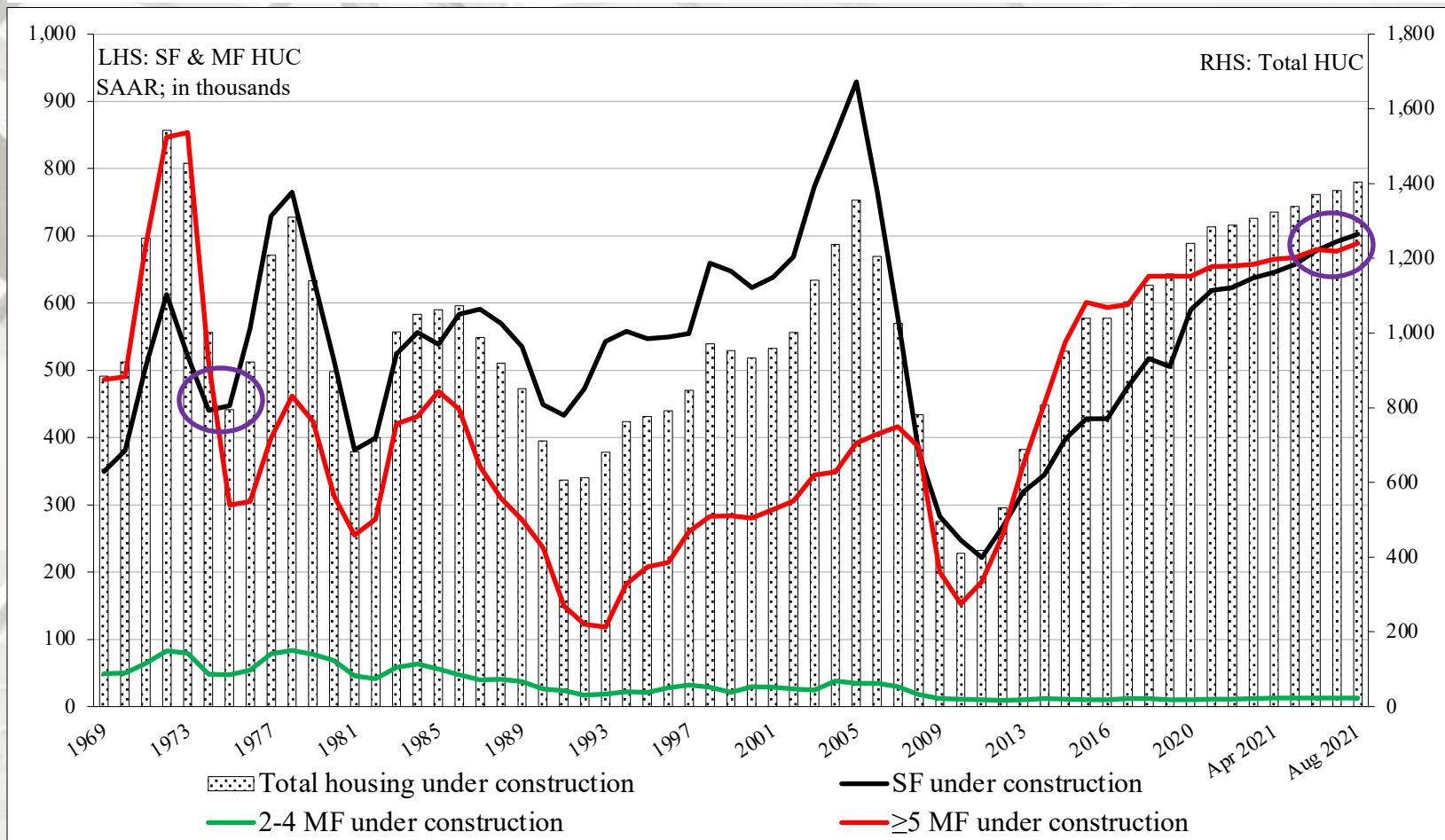


US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under constructions – (SF +  $\geq 5$  MF HUC)).

\* Percentage of total housing under construction units.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# Total Housing Under Construction



US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under constructions – (SF +  $\geq 5$  MF HUC)).

## A Housing Construction Turnover – A Reversion to the Mean?

From 1975 to 2008, SF HUC exceeded  $\geq 5$ -unit MF HUC. For the first-time since January of 2013, SF units under construction were greater than  $\geq 5$ -unit MF under construction. Since this past January, the divergence between SF and  $\geq 5$ -unit MF has been rapidly closing. The reasons for the difference are many, including builder margins, MF's recovery was faster, consumer affordability, etc. Hopefully, this is a budding trend, and it will continue.



# New Housing Under Construction by Region

|            | NE Total | NE SF  | NE MF** |
|------------|----------|--------|---------|
| July       | 196,000  | 60,000 | 136,000 |
| June       | 195,000  | 60,000 | 135,000 |
| 2020       | 175,000  | 55,000 | 120,000 |
| M/M change | 0.5%     | 0.0%   | 0.7%    |
| Y/Y change | 12.0%    | 9.1%   | 13.3%   |
|            | MW Total | MW SF  | MW MF   |
| July       | 181,000  | 98,000 | 83,000  |
| June       | 177,000  | 97,000 | 80,000  |
| 2020       | 159,000  | 79,000 | 80,000  |
| M/M change | 2.3%     | 1.0%   | 3.8%    |
| Y/Y change | 13.8%    | 24.1%  | 3.8%    |

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

\*\* US DOC does not report multi-family units under construction directly; this is an estimation  
(Total under construction – SF under construction).

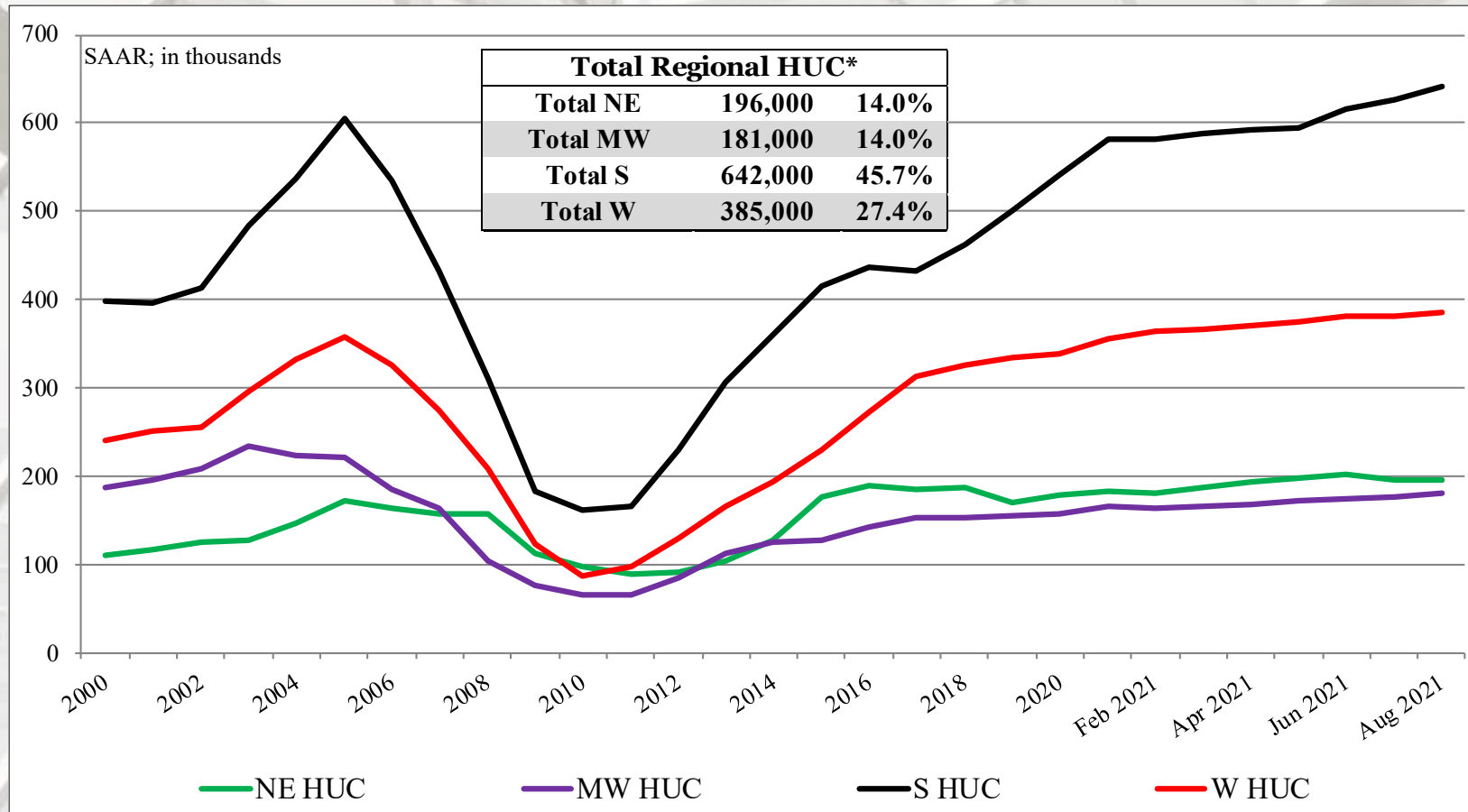
# New Housing Under Construction by Region

|            | <b>S Total</b> | <b>S SF</b> | <b>S MF**</b> |
|------------|----------------|-------------|---------------|
| July       | 642,000        | 364,000     | 278,000       |
| June       | 627,000        | 352,000     | 275,000       |
| 2020       | 543,000        | 253,000     | 290,000       |
| M/M change | 2.4%           | 3.4%        | 1.1%          |
| Y/Y change | 18.2%          | 43.9%       | -4.1%         |
|            | <b>W Total</b> | <b>W SF</b> | <b>W MF</b>   |
| July       | 385,000        | 180,000     | 205,000       |
| June       | 382,000        | 182,000     | 200,000       |
| 2020       | 335,000        | 142,000     | 193,000       |
| M/M change | 0.8%           | -1.1%       | 2.5%          |
| Y/Y change | 14.9%          | 26.8%       | 6.2%          |

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

\*\* US DOC does not report multi-family units under construction directly; this is an estimation  
(Total under construction – SF under construction).

# Total Housing Under Construction by Region

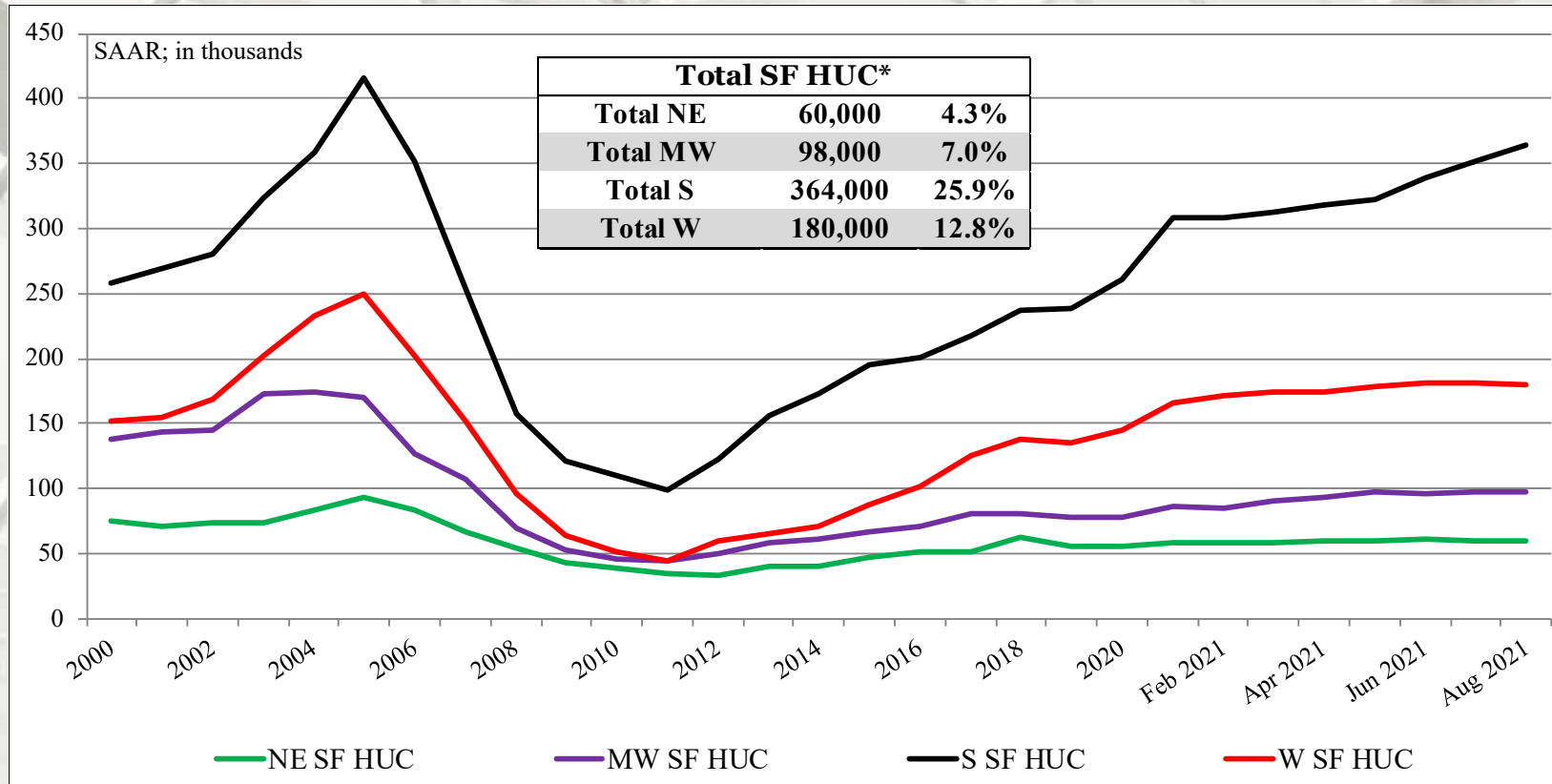


NE = Northeast, MW = Midwest, S = South, W = West

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.

# SF Housing Under Construction by Region



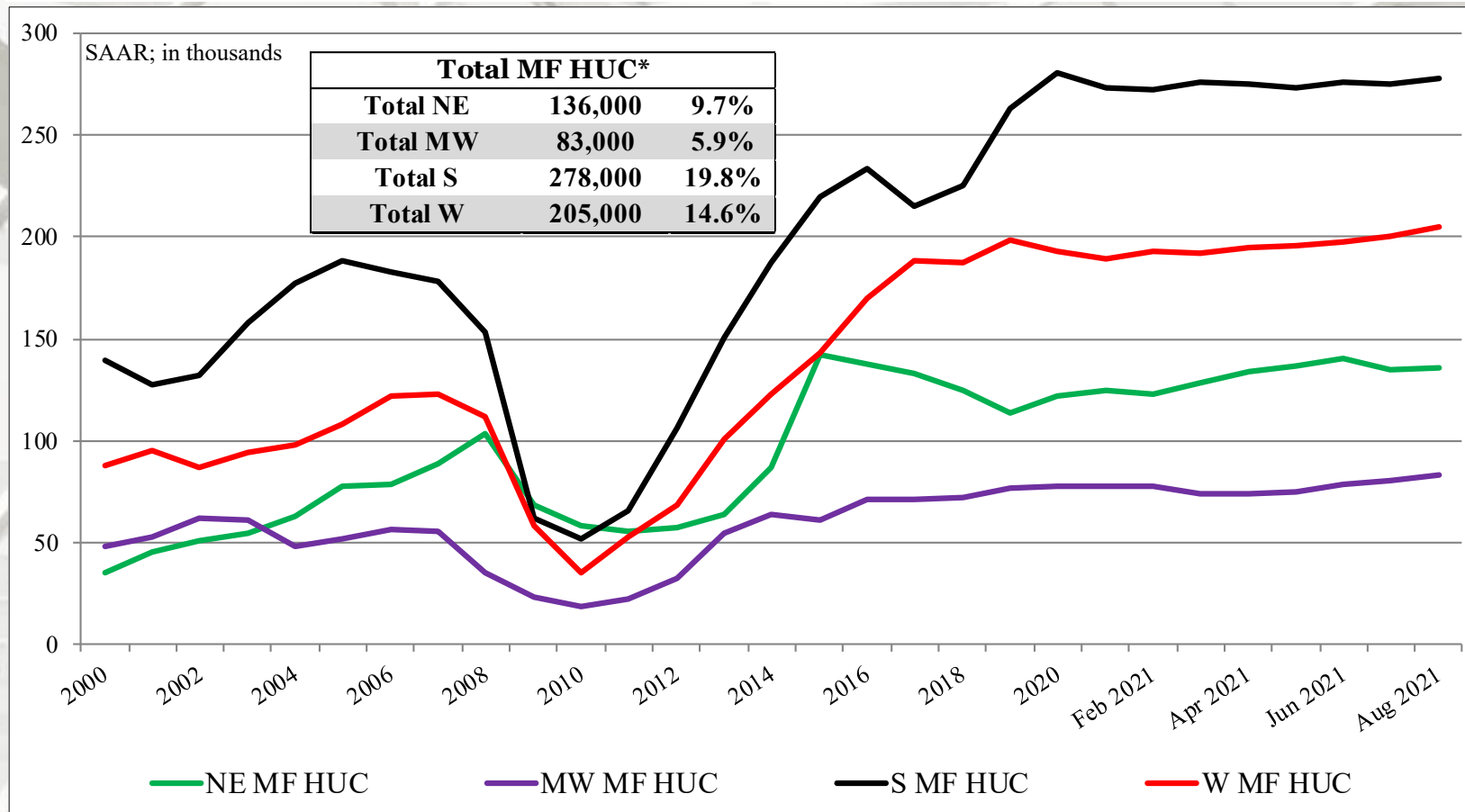
NE = Northeast, MW = Midwest, S = South, W = West.

US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.



# MF Housing Under Construction by Region



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

US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + ≥ 5 MF under construction)).

\* Percentage of total housing under construction units.

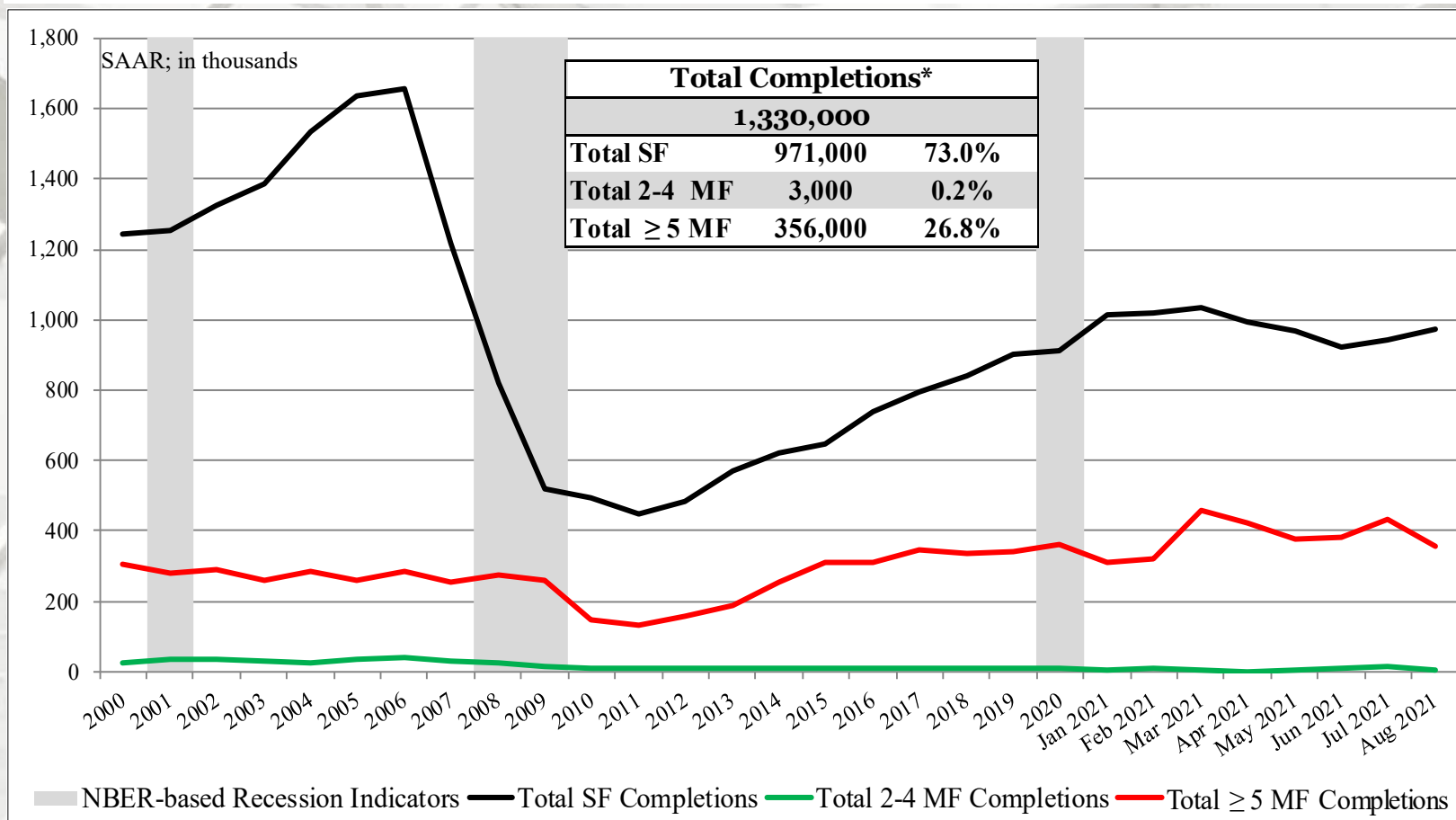
# New Housing Completions

|            | Total Completions* | SF Completions | MF 2-4 unit** Completions | MF ≥ 5 unit Completions |
|------------|--------------------|----------------|---------------------------|-------------------------|
| July       | 1,330,000          | 971,000        | 3,000                     | 356,000                 |
| June       | 1,392,000          | 945,000        | 14,000                    | 433,000                 |
| 2020       | 1,216,000          | 895,000        | 9,000                     | 312,000                 |
| M/M change | -4.5%              | 2.8%           | -78.6%                    | -17.8%                  |
| Y/Y change | 9.4%               | 8.5%           | -66.7%                    | 14.1%                   |

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

\*\* US DOC does not report multi-family completions directly; this is an estimation ((Total completions – (SF + ≥ 5-unit MF)).

# Total Housing Completions



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

\* Percentage of total housing completions

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New Housing Completions by Region

|            | NE Total | NE SF   | NE MF** |
|------------|----------|---------|---------|
| July       | 155,000  | 64,000  | 91,000  |
| June       | 112,000  | 58,000  | 54,000  |
| 2020       | 96,000   | 54,000  | 42,000  |
| M/M change | 38.4%    | 10.3%   | 68.5%   |
| Y/Y change | 61.5%    | 18.5%   | 116.7%  |
|            | MW Total | MW SF   | MW MF   |
| July       | 141,000  | 107,000 | 34,000  |
| June       | 185,000  | 121,000 | 64,000  |
| 2020       | 171,000  | 112,000 | 59,000  |
| M/M change | -23.8%   | -11.6%  | -46.9%  |
| Y/Y change | -17.5%   | -4.5%   | -42.4%  |

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



# New Housing Completions by Region

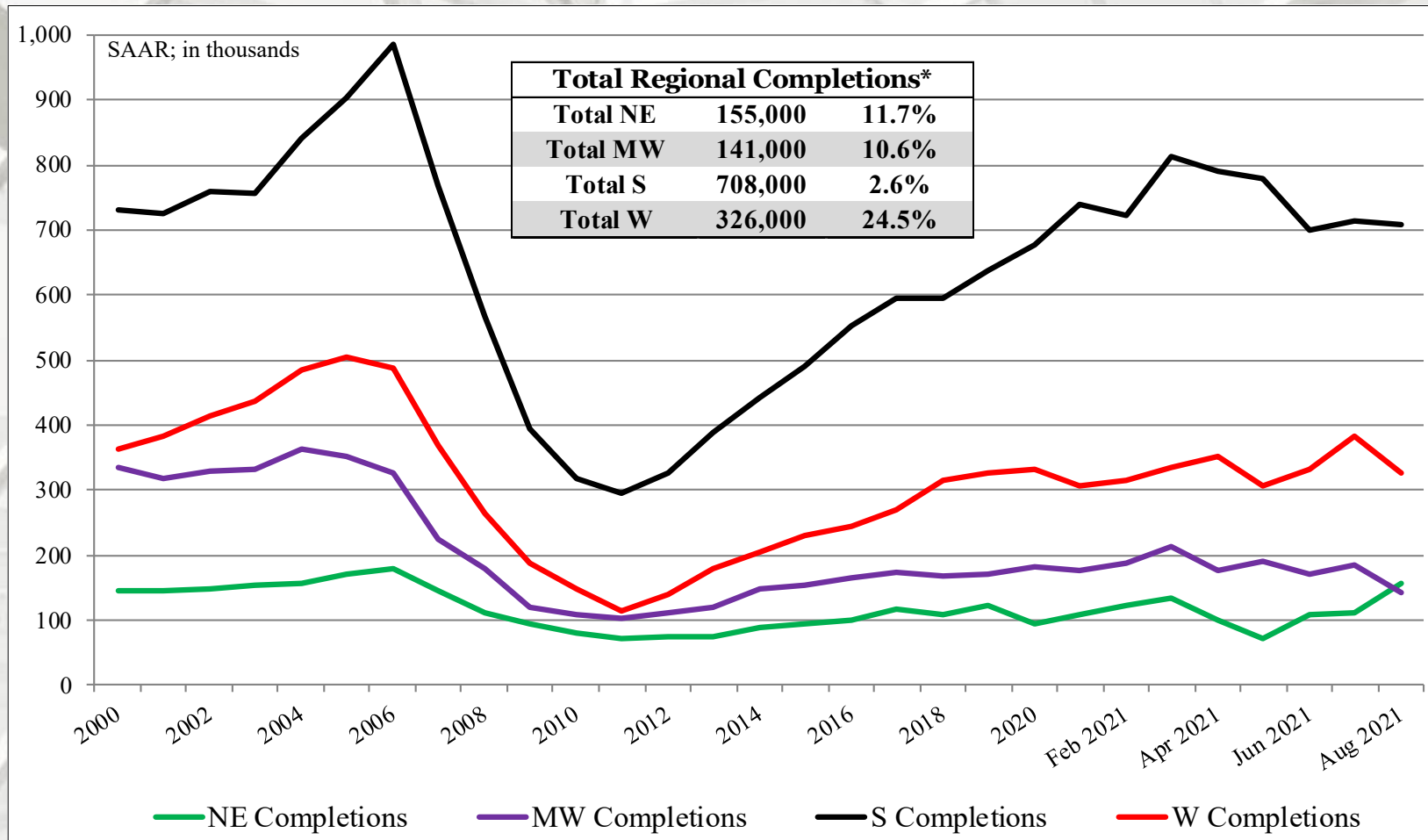
|            | <b>S Total</b> | <b>S SF</b> | <b>S MF**</b> |
|------------|----------------|-------------|---------------|
| July       | 708,000        | 549,000     | 159,000       |
| June       | 713,000        | 510,000     | 203,000       |
| 2020       | 611,000        | 481,000     | 130,000       |
| M/M change | -0.7%          | 7.6%        | -21.7%        |
| Y/Y change | 15.9%          | 14.1%       | 22.3%         |
|            | <b>W Total</b> | <b>W SF</b> | <b>W MF</b>   |
| July       | 326,000        | 251,000     | 75,000        |
| June       | 382,000        | 256,000     | 126,000       |
| 2020       | 338,000        | 248,000     | 90,000        |
| M/M change | -14.7%         | -2.0%       | -40.5%        |
| Y/Y change | -3.6%          | 1.2%        | -16.7%        |

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

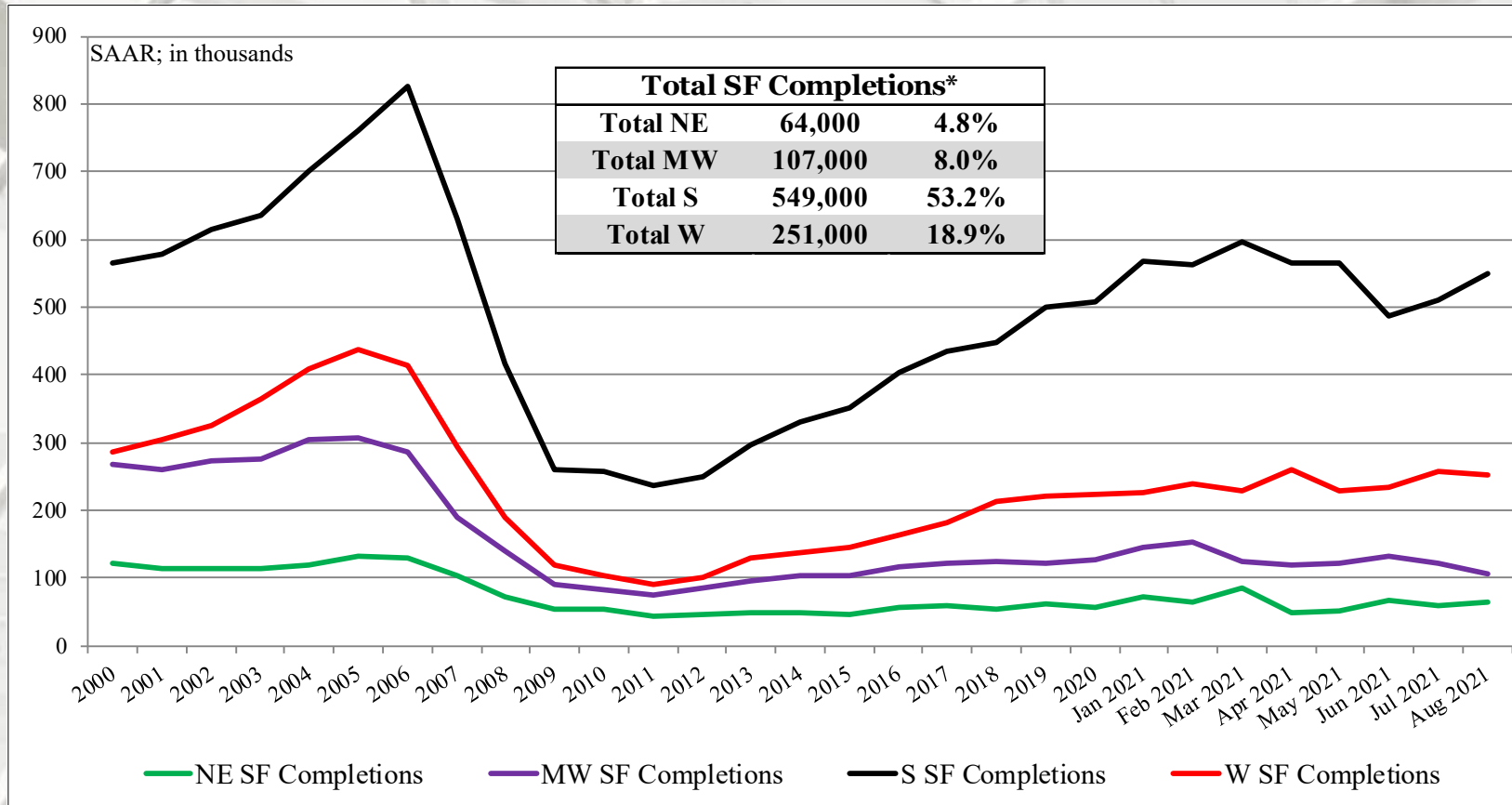
# Total Housing Completions by Region



All data are SAAR; NE = Northeast and MW = Midwest; S = South, W = West

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

# SF Housing Completions by Region

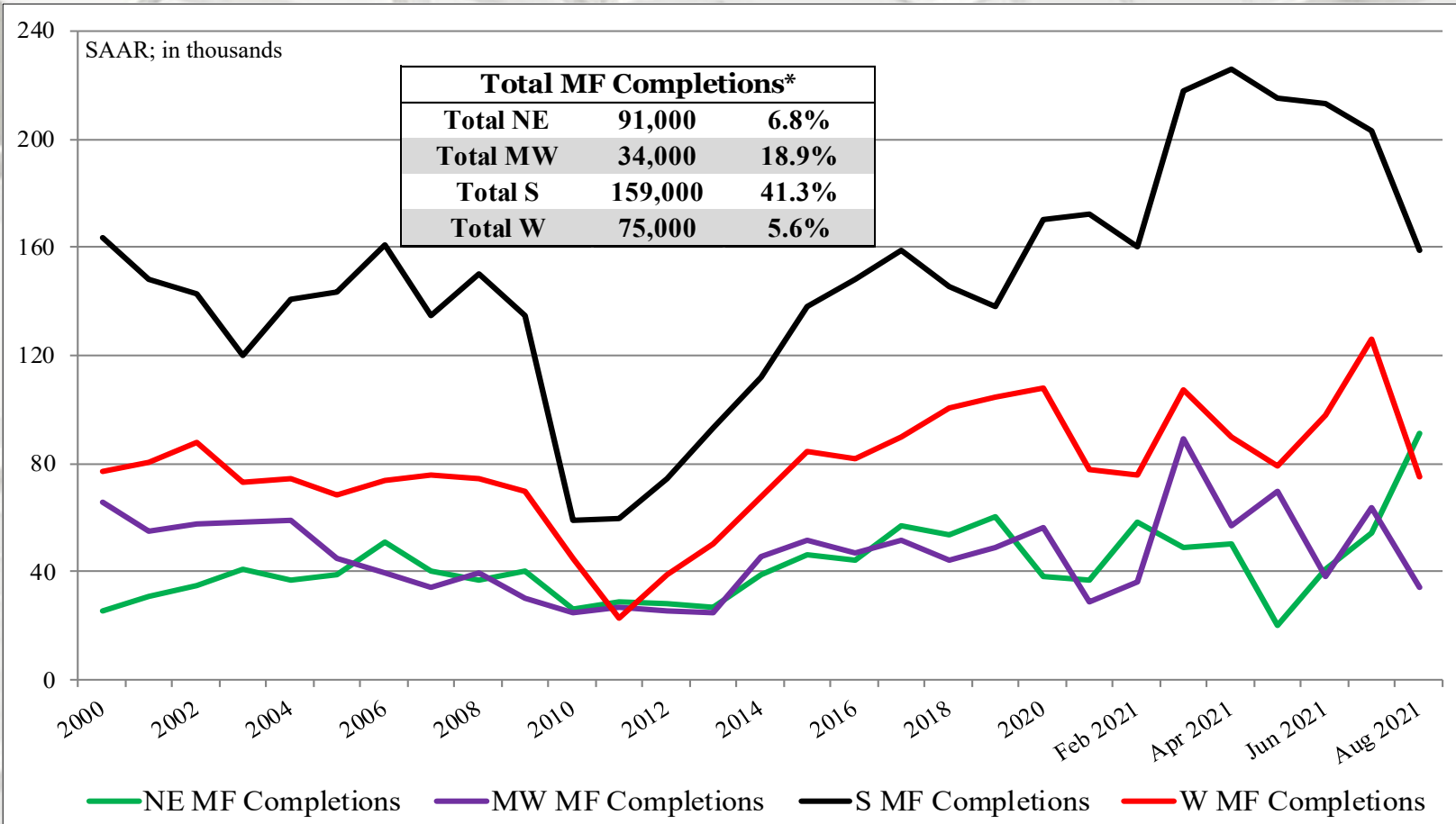


NE = Northeast, MW = Midwest, S = South, W = West

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

\* Percentage of total housing completions

# MF Housing Completions by Region

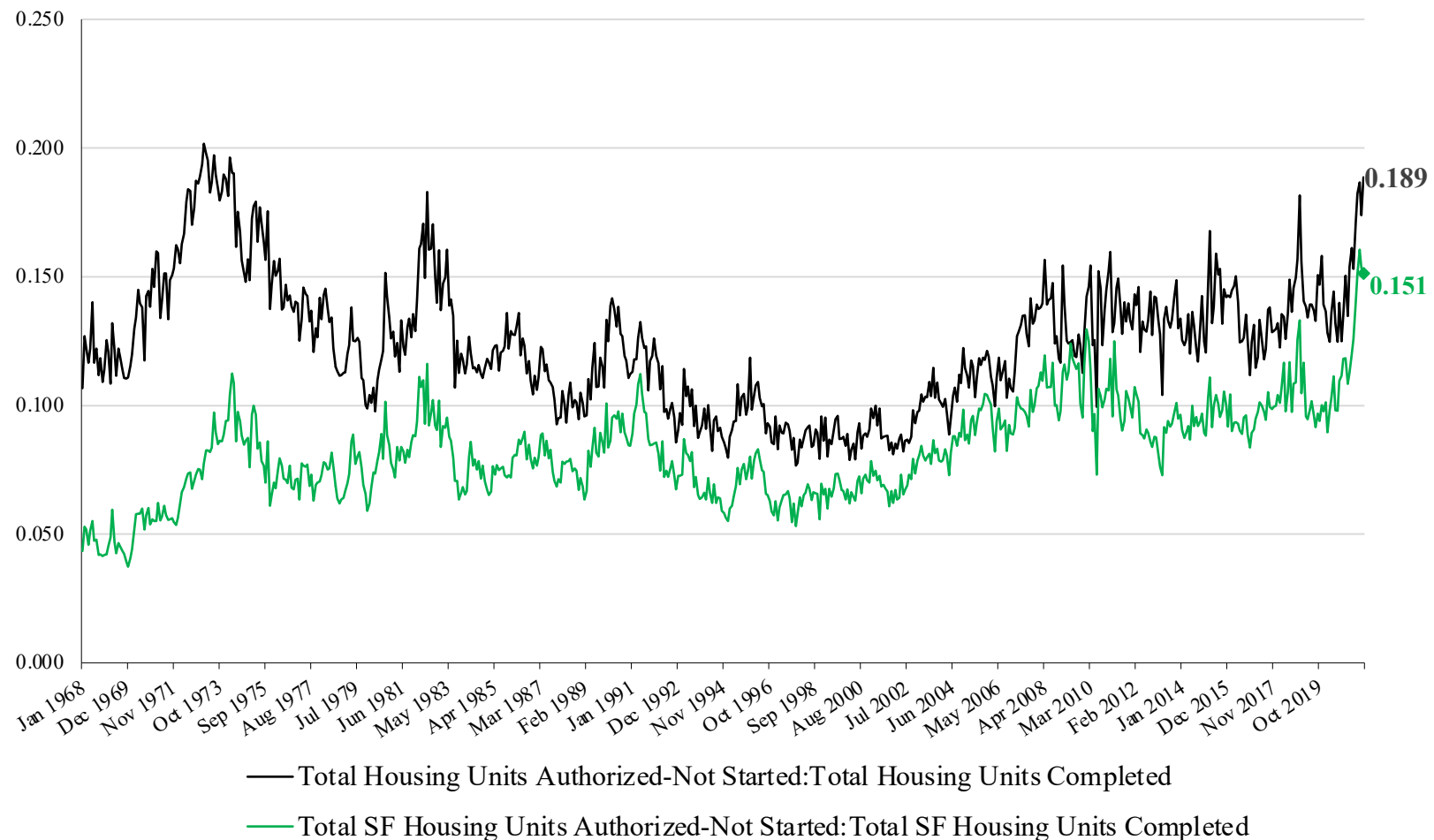


NE = Northeast, MW = Midwest, S = South, W = West

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

\* Percentage of total housing completions

## Ratio of Housing Units Authorized & Not Started to Housing Units Completed: M/M



### Authorized, Not Started to Housing Completions

The ratio of SF houses authorized-not started to SF completed is the greatest in the history of this data series. The total housing unit ratio is the greatest since February 1973 (0.202).

The primary reason is manufacturing supply chain disruptions – ranging from appliances to windows; labor, logistics, and local building regulations.



# New Single-Family House Sales

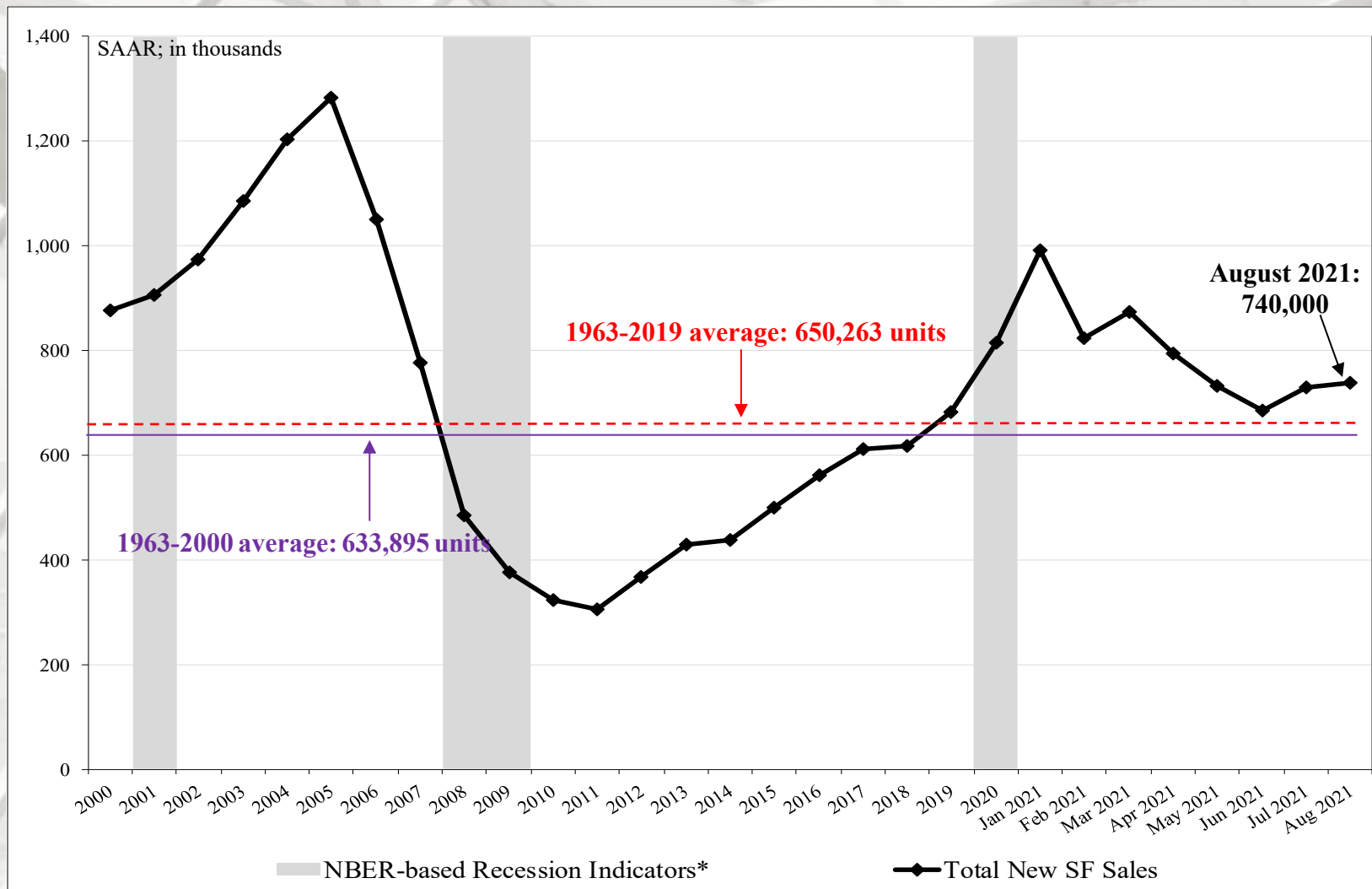
|            | New SF Sales* | Median Price | Mean Price | Month's Supply |
|------------|---------------|--------------|------------|----------------|
| August     | 740,000       | \$390,900    | \$443,200  | 6.1            |
| July       | 729,000       | \$390,900    | \$448,700  | 6.0            |
| 2020       | 977,000       | \$325,500    | \$386,300  | 3.5            |
| M/M change | 1.5%          | 0.0%         | -1.2%      | 1.7%           |
| Y/Y change | -24.3%        | 20.1%        | 14.7%      | 74.3%          |

\* All new sales data are presented at a seasonally adjusted annual rate (SAAR)<sup>1</sup> and housing prices are adjusted at irregular intervals<sup>2</sup>.

New SF sales were more than the consensus forecast<sup>3</sup> of 708 m (range: 670 m to 735 m). The past three month's new SF sales data also were revised:

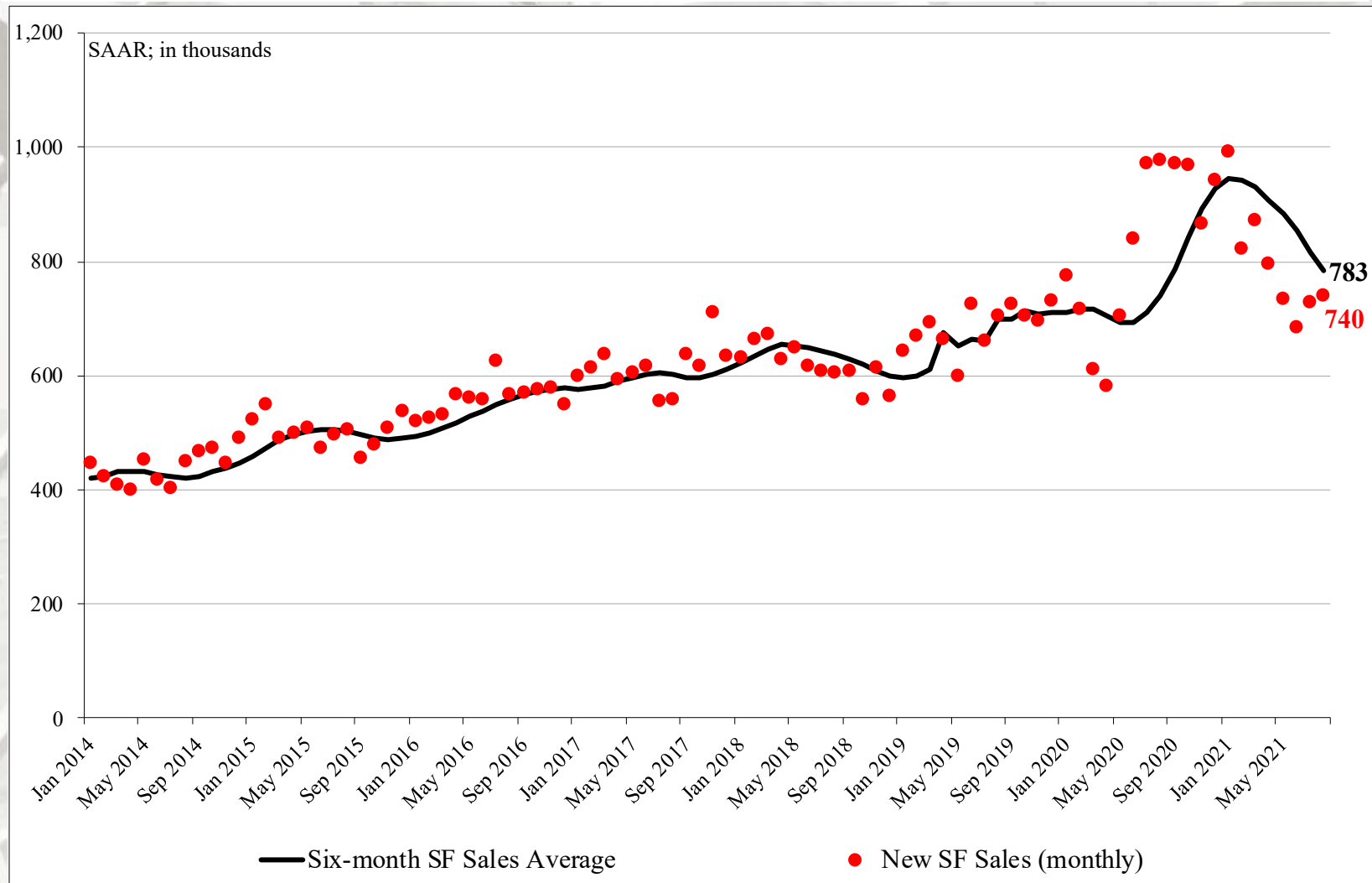
|               |                          |
|---------------|--------------------------|
| May initial:  | 769 m, revised to 733 m. |
| June initial: | 676 m, revised to 685 m. |
| July initial: | 708 m, revised to 729 m. |

# New SF House Sales



\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

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



# New SF House Sales by Region and Price Category

|            | NE     | MW     | S       | W       |
|------------|--------|--------|---------|---------|
| August     | 29,000 | 51,000 | 445,000 | 215,000 |
| July       | 23,000 | 74,000 | 420,000 | 212,000 |
| 2020       | 46,000 | 96,000 | 578,000 | 257,000 |
| M/M change | 26.1%  | -31.1% | 6.0%    | 1.4%    |
| Y/Y change | -37.0% | -46.9% | -23.0%  | -16.3%  |
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NE = Northeast; MW = Midwest; S = South; W = West

<sup>1</sup> All data are SAAR

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

<sup>3</sup> Detail August not add to total because of rounding.

<sup>4</sup> Housing prices are adjusted at irregular intervals.

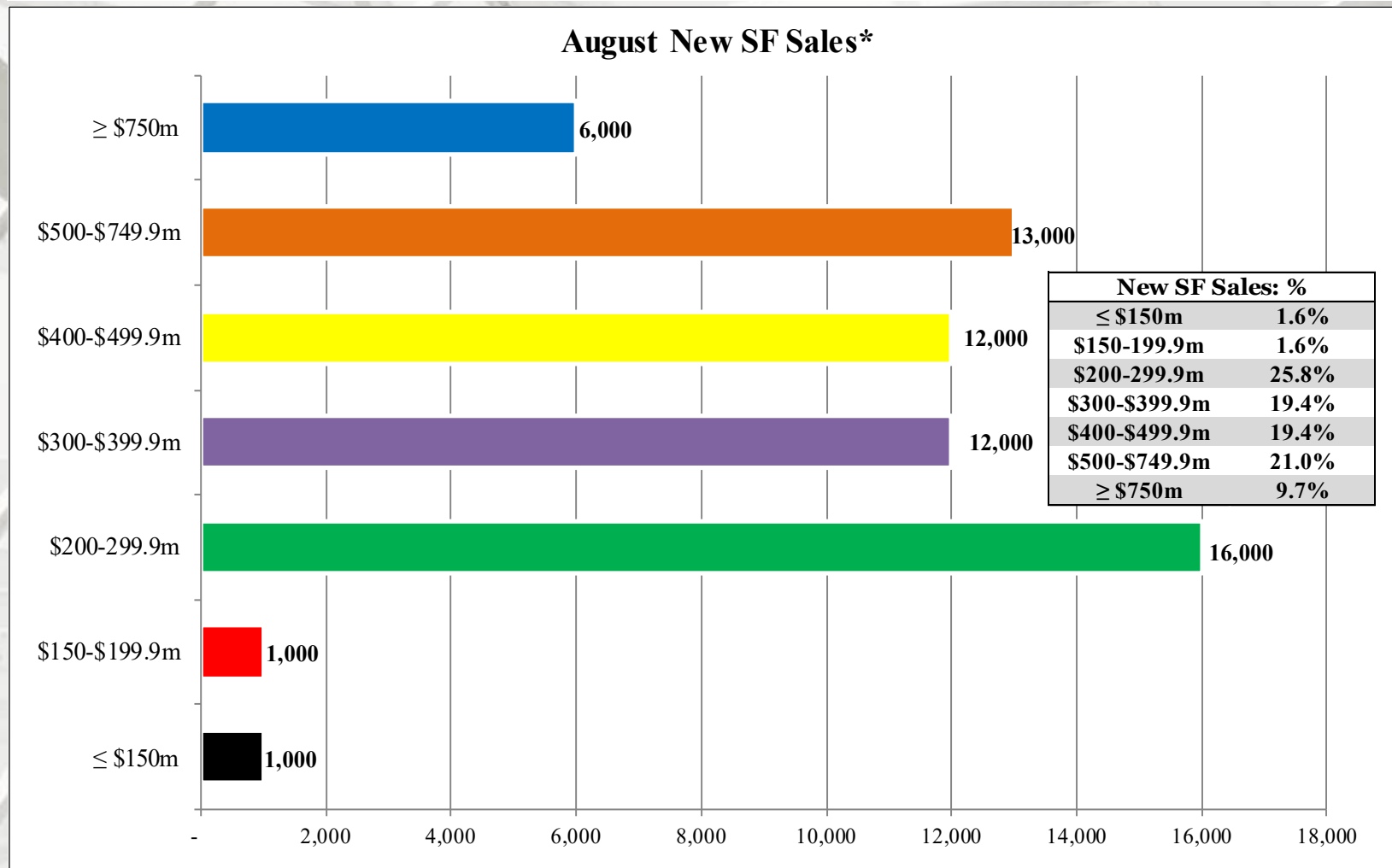
<sup>5</sup> Z = Less than 500 units or less than 0.5 percent

Sources: <sup>1,2,3</sup> <https://www.census.gov/construction/nrs/index.html>; 9/24/21;

<sup>4</sup> [https://www.census.gov/construction/cpi/pdf/descpi\\_sold.pdf](https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf)

[Return TOC](#)

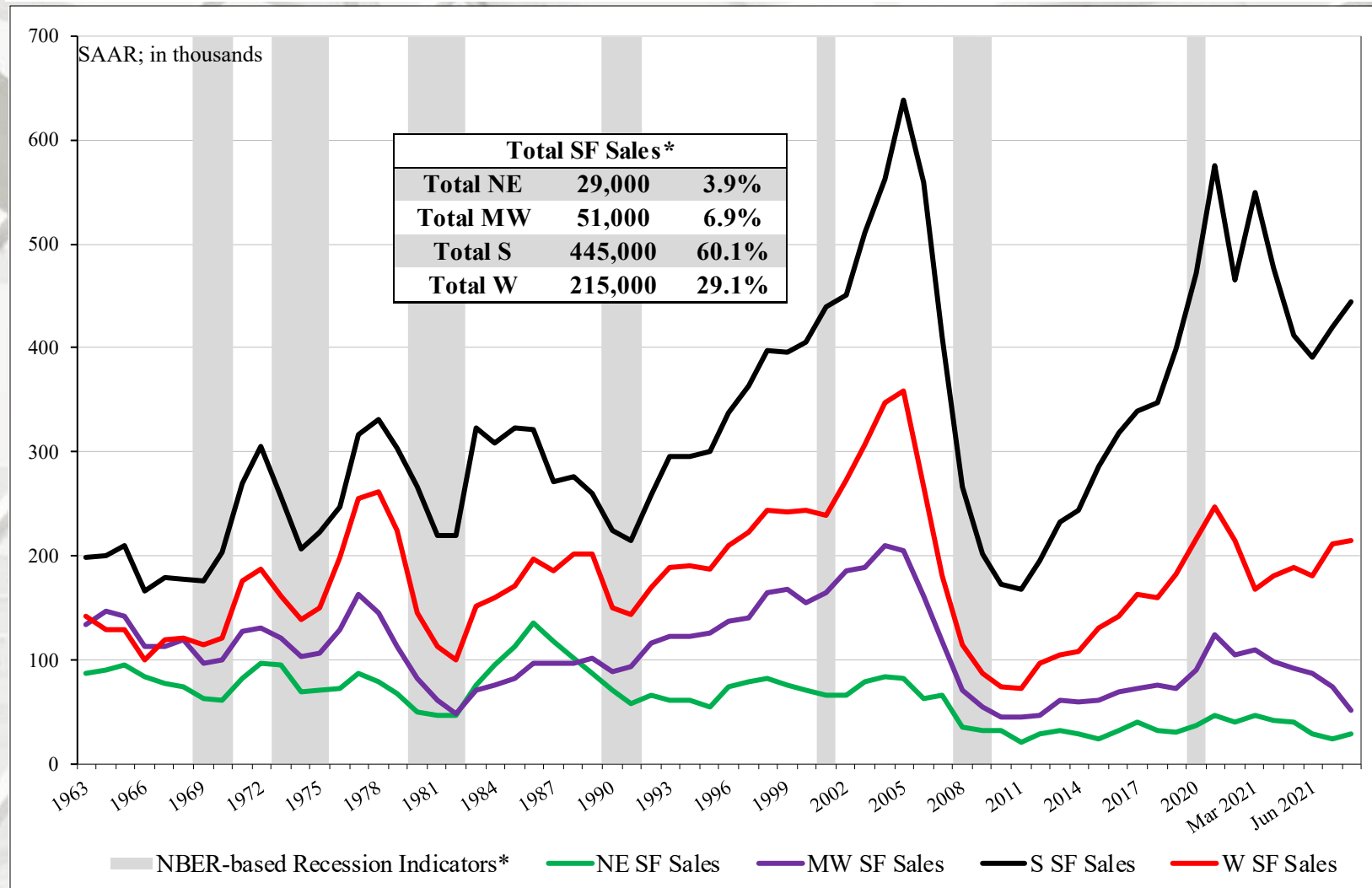
# New SF House Sales



\* Total new sales by price category and percent.



# New SF House Sales by Region

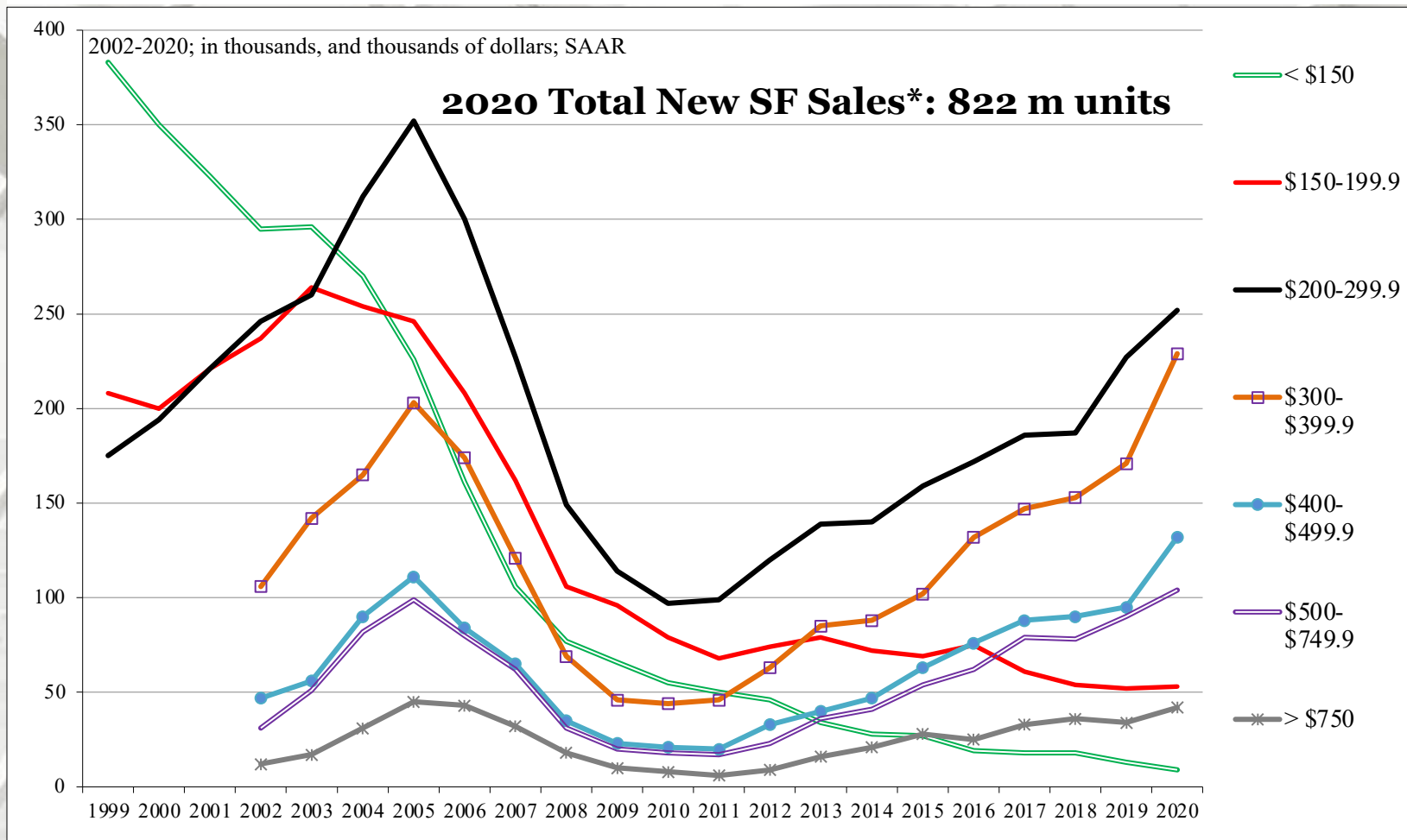


NE = Northeast; MW = Midwest; S = South; W = West

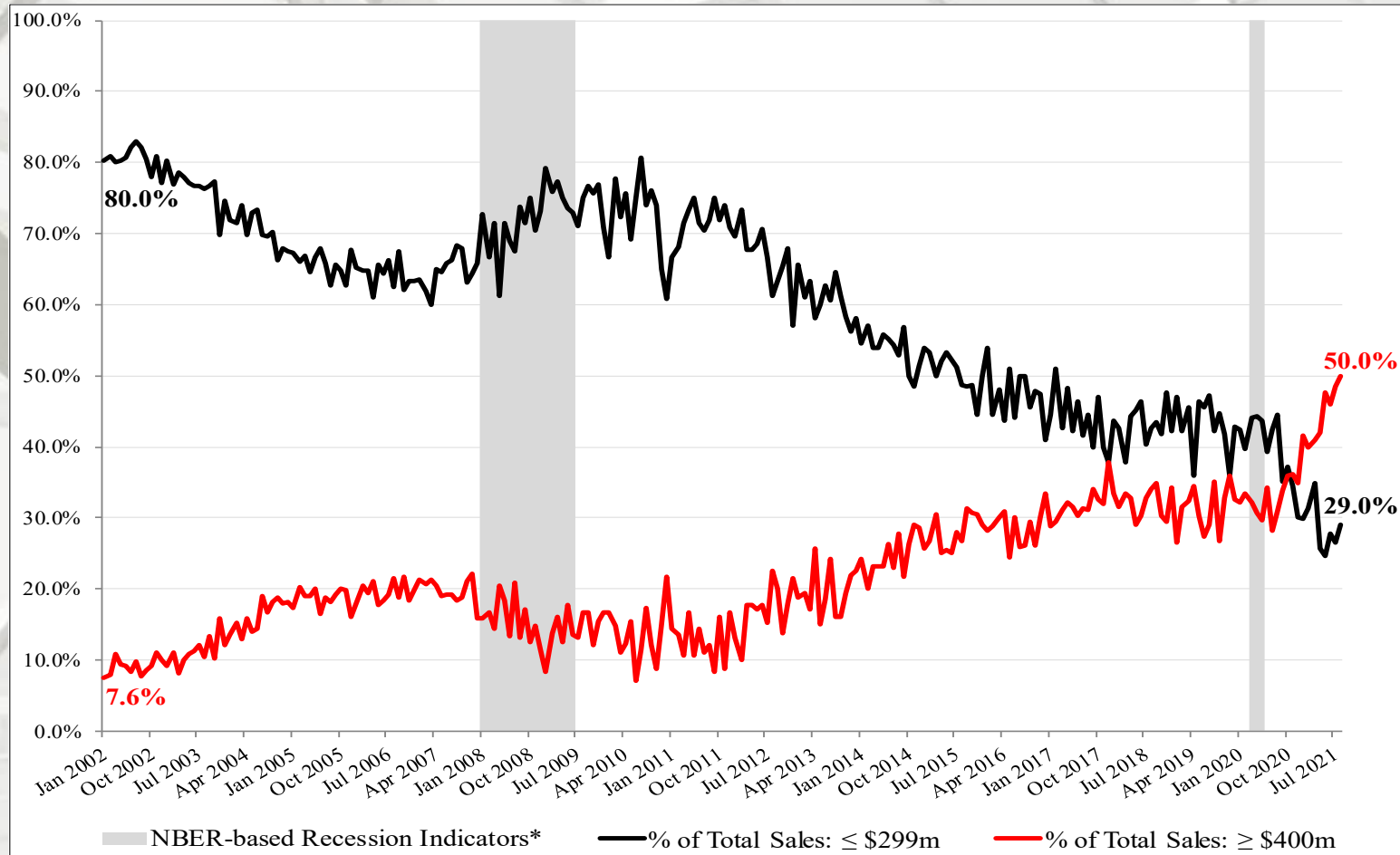
\* Percentage of total new sales.

\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF House Sales by Price Category



# New SF House Sales

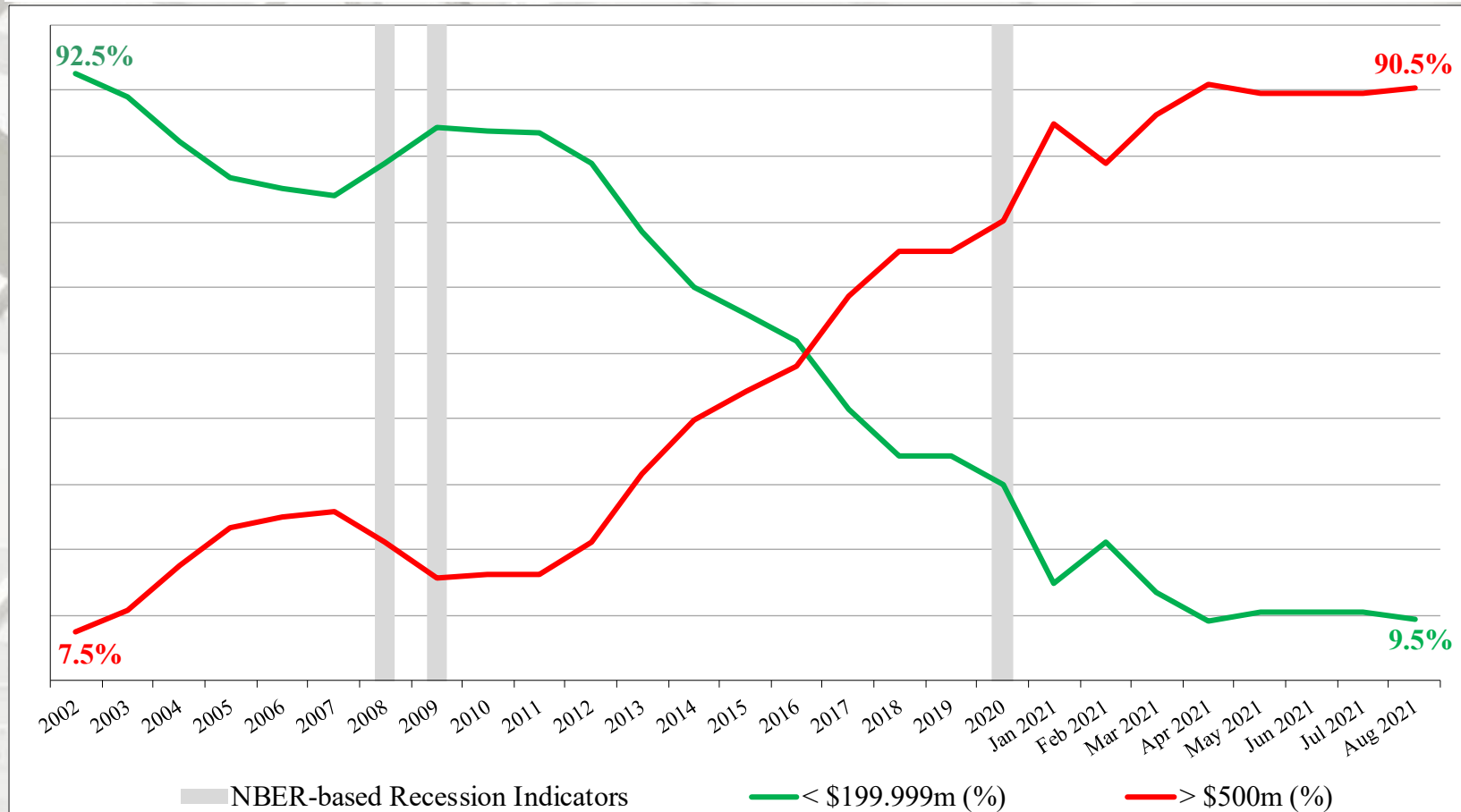


\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

## New SF Sales: ≤ \$299m and ≥ \$400m: 2002 – August 2021

The sales share of \$400 thousand plus SF houses is presented above<sup>1, 2</sup>. 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



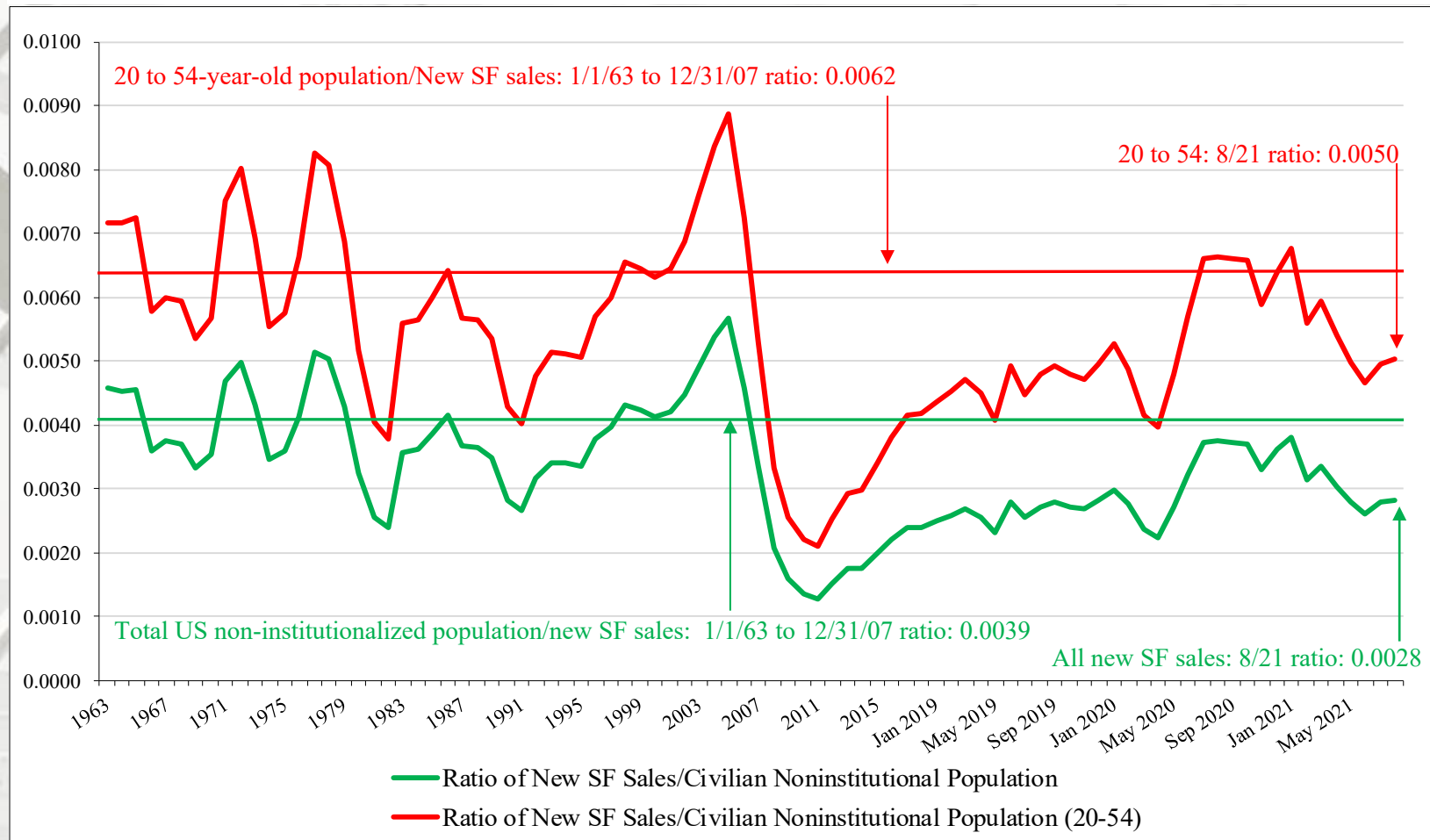
## New SF Sales: $\leq \$200m$ and $\geq \$500m$ : 2002 to August 2021

The number of  $\leq \$200$  thousand SF houses has declined dramatically since 2002<sup>1, 2</sup>. Subsequently, from 2012 onward, the  $\geq \$500$  thousand class has soared (on a percentage basis) in contrast to the  $\leq \$200m$  class. One of the most oft mentioned reasons for this occurrence is builder net margins.

Note: Sales values are not adjusted for inflation.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF House Sales

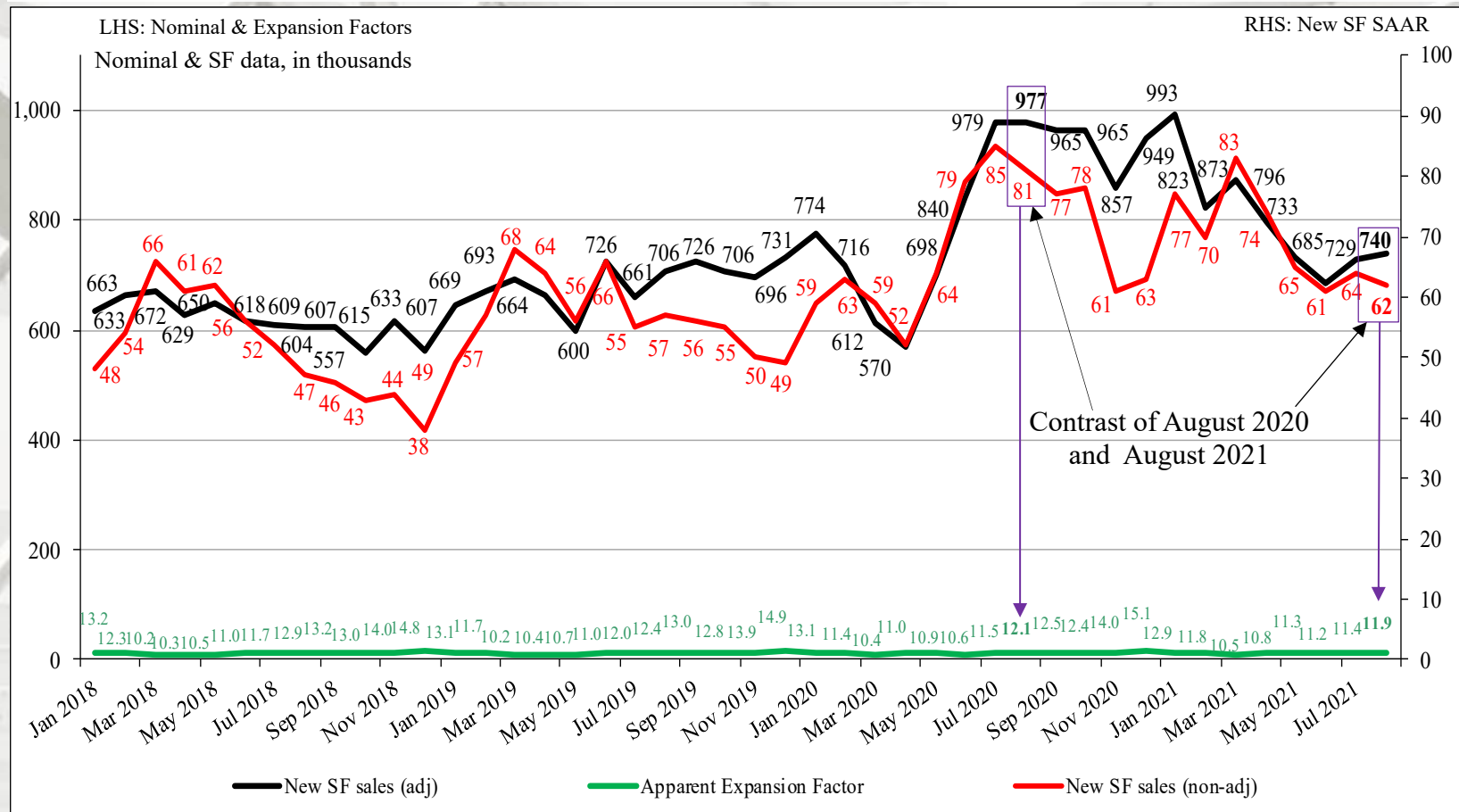


## New SF sales adjusted for the US population

From January 1963 to July 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in August 2021 it was 0.0028 – no change from July. The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0048; in August 2021 it was 0.0050 – also no change from July. All are non-adjusted data. New house sales for the 20 to 54 class exceeded population growth for the second time in more than a decade. From a total population world view, new sales remain less than the long-term average.



# Nominal vs. SAAR New SF House Sales



## Nominal and Adjusted New SF Monthly Sales

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

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

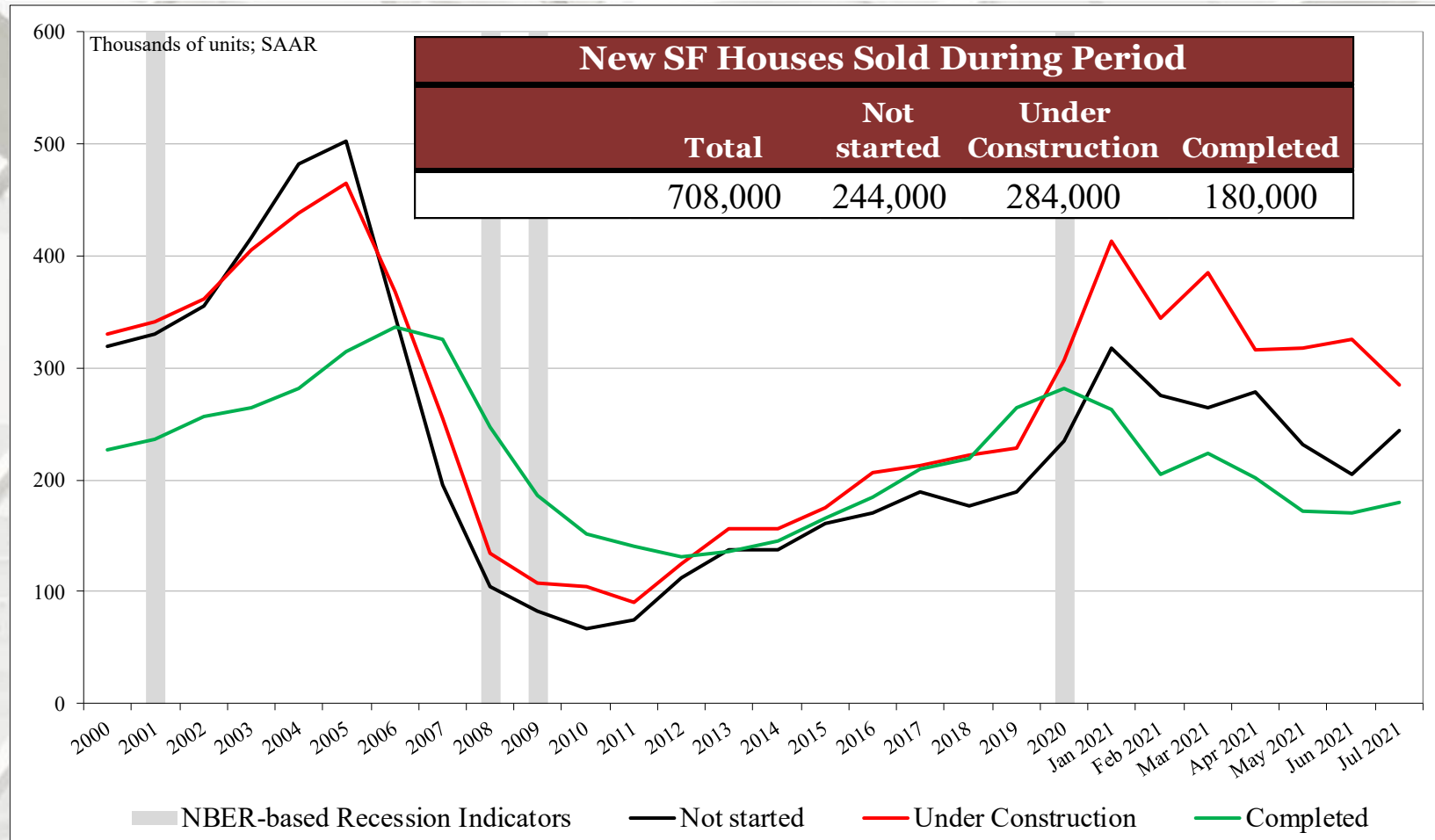
# New SF House Sales

## New SF Houses Sold During Period

|                  | Total   | Not started | Under Construction | Completed |
|------------------|---------|-------------|--------------------|-----------|
| July             | 708,000 | 244,000     | 284,000            | 180,000   |
| June             | 701,000 | 205,000     | 325,000            | 171,000   |
| 2020             | 972,000 | 273,000     | 347,000            | 352,000   |
| M/M change       | 1.0%    | 19.0%       | -12.6%             | 5.3%      |
| Y/Y change       | -27.2%  | -10.6%      | -18.2%             | -48.9%    |
| Total percentage |         | 34.5%       | 40.1%              | 25.4%     |

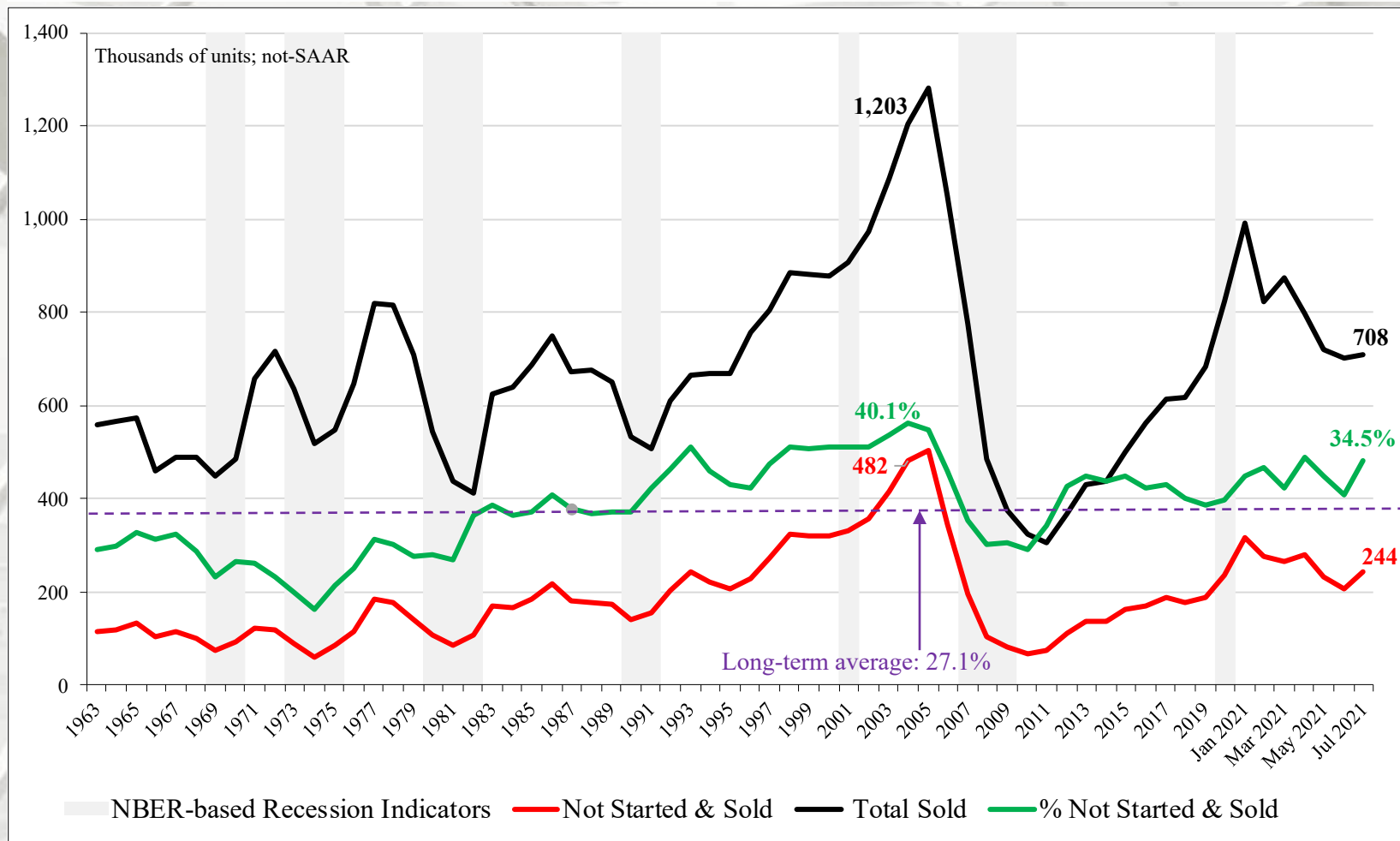
SAAR

# New SF House Sales: Sold During Period



\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

# New SF House Sales: Percentage Not Started & Sold During Period



Of the new houses sold in August (708 m), 34.5% (244 m) had not been started. The long-term average is 27.1%.

\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).



# New SF Houses for Sale at End of Period

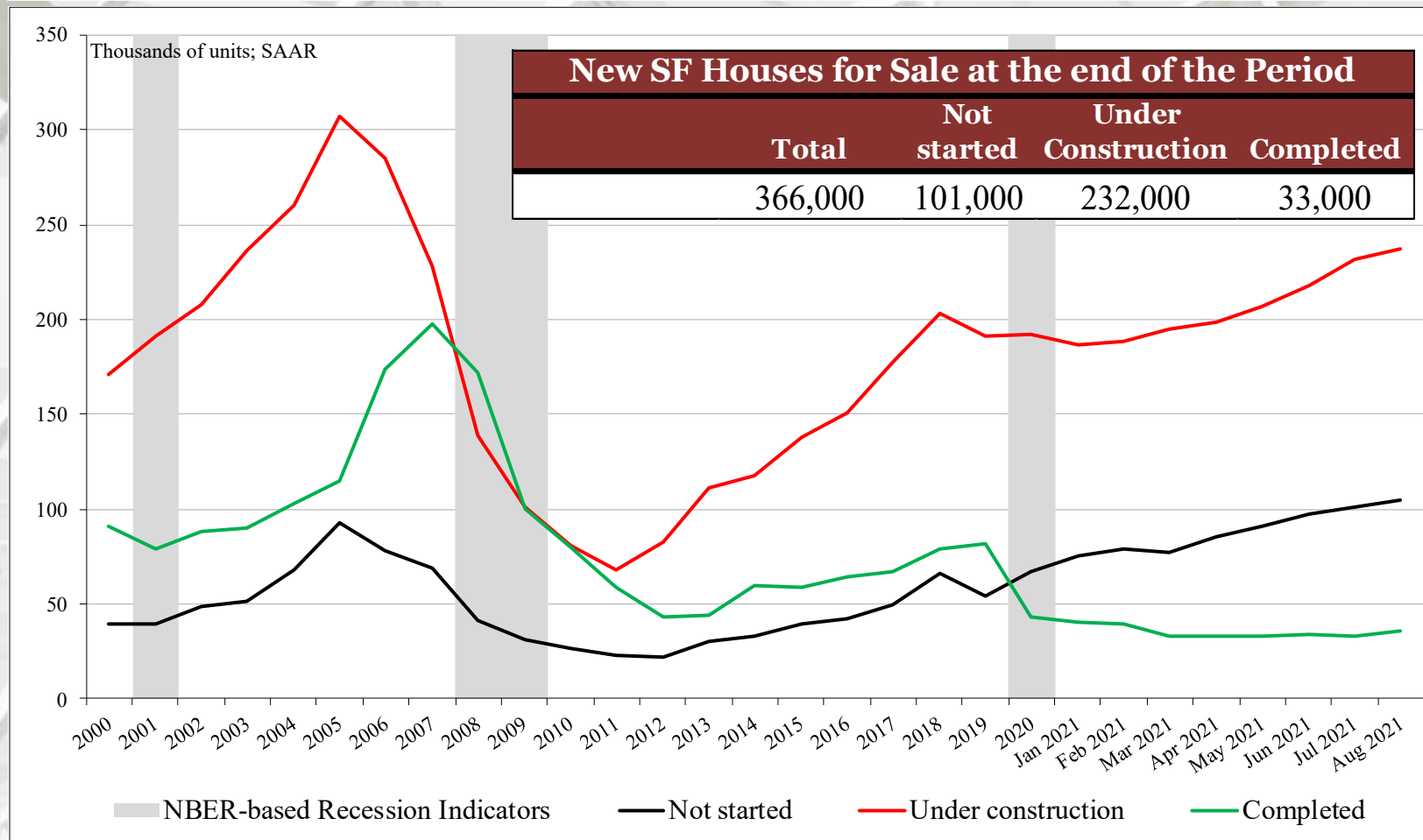
| New SF Houses for Sale at the end of the Period |         |             |                    |           |
|---|---------|-------------|--------------------|-----------|
|   | Total   | Not started | Under Construction | Completed |
| August  | 366,000 | 101,000     | 232,000            | 33,000    |
| July  | 349,000 | 97,000      | 218,000            | 33,000    |
| 2020  | 291,000 | 57,000      | 176,000            | 65,000    |
| M/M change                                      | 4.9%    | 4.1%        | 6.4%               | 0.0%      |
| Y/Y change                                      | 25.8%   | 77.2%       | 31.8%              | -49.2%    |
| Total percentage                                |         | 27.6%       | 63.4%              | 9.0%      |

Not SAAR

Of houses listed for sale (353m) in August, 10.2% (36m) have been built. In the 'ground had not been broken for construction' or 'not started' category, 105m (29.7%) were sold. This is an 84.2% increase from August 2020.



# New SF House Sales: For Sale at End of Period



NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

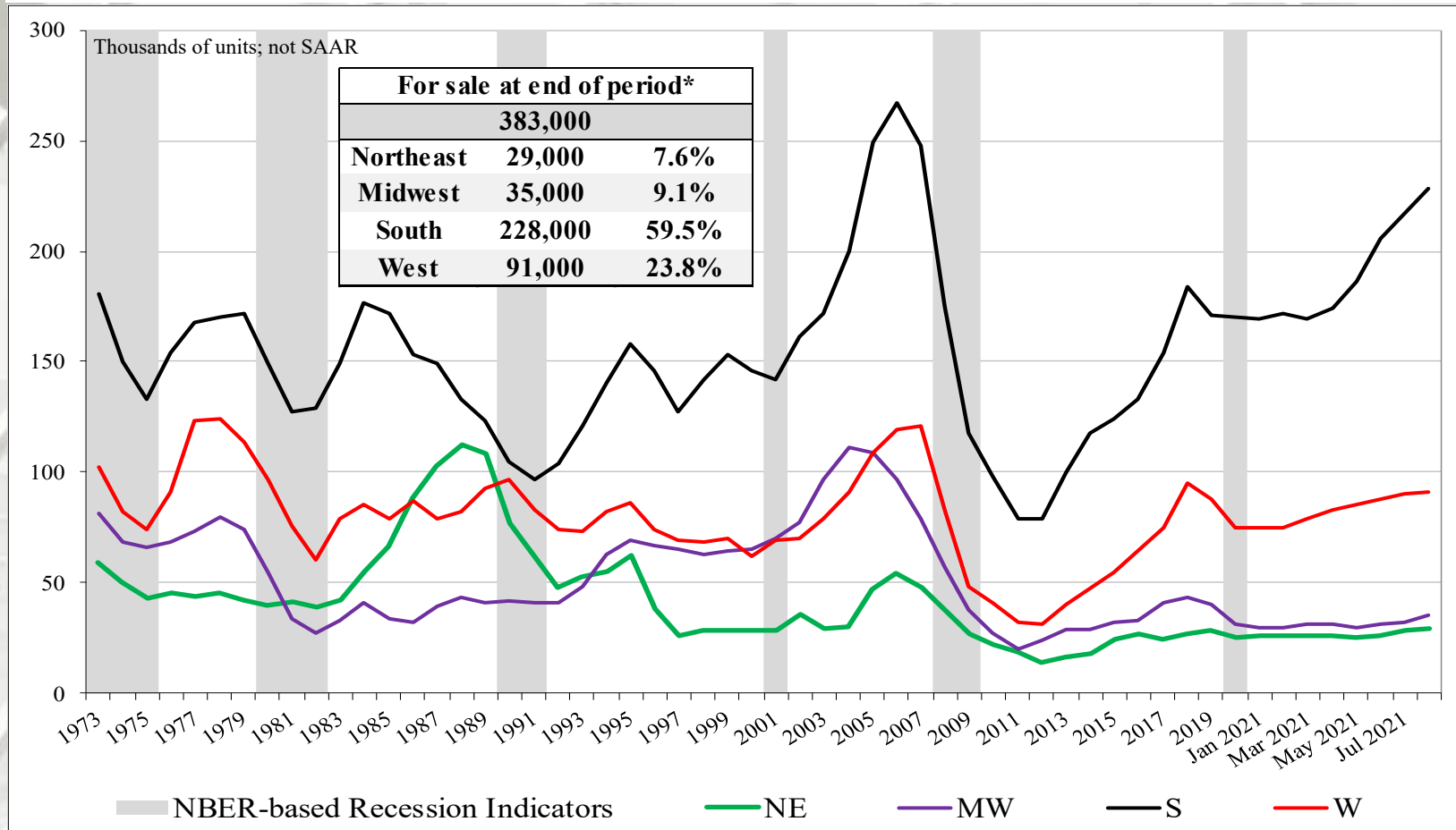
# New SF House Sales

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

|            | Total   | NE     | MW     | S       | W      |
|------------|---------|--------|--------|---------|--------|
| August     | 383,000 | 29,000 | 35,000 | 228,000 | 91,000 |
| July       | 366,000 | 28,000 | 32,000 | 217,000 | 90,000 |
| 2020       | 283,000 | 22,000 | 29,000 | 159,000 | 73,000 |
| M/M change | 4.6%    | 3.6%   | 9.4%   | 5.1%    | 1.1%   |
| Y/Y change | 35.3%   | 31.8%  | 20.7%  | 43.4%   | 24.7%  |

\* Not SAAR

# New SF Houses for Sale at End of Period by Region

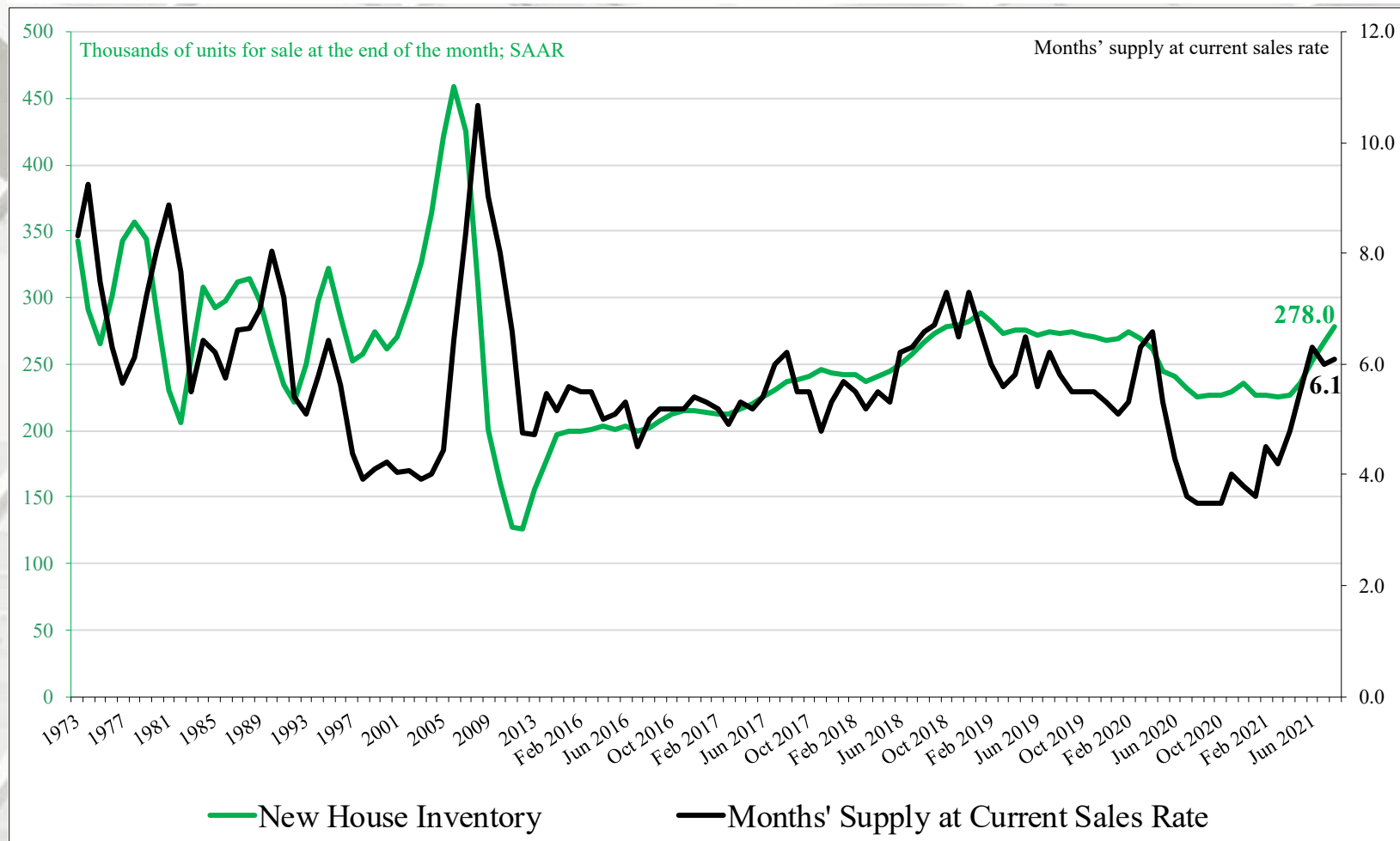


NE = Northeast; MW = Midwest; S = South; W = West

\* Percentage of new SF sales.

NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

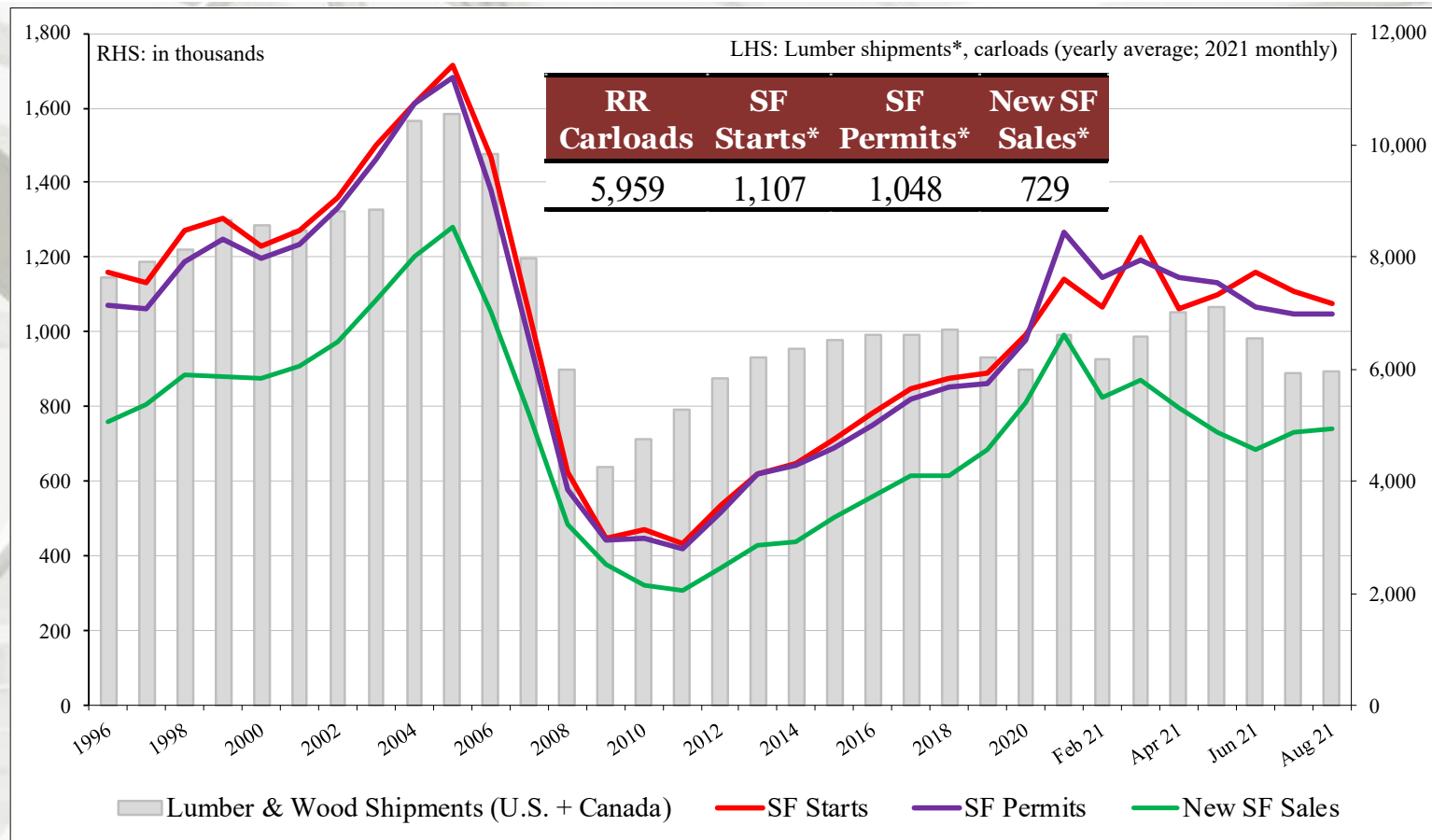
# Months' Supply and New House Inventory<sup>a</sup>



<sup>a</sup> New HUC + New House Completions (sales data only)

The months supply of new houses for sale was 6.2 at the end of August (SAAR).

# U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales

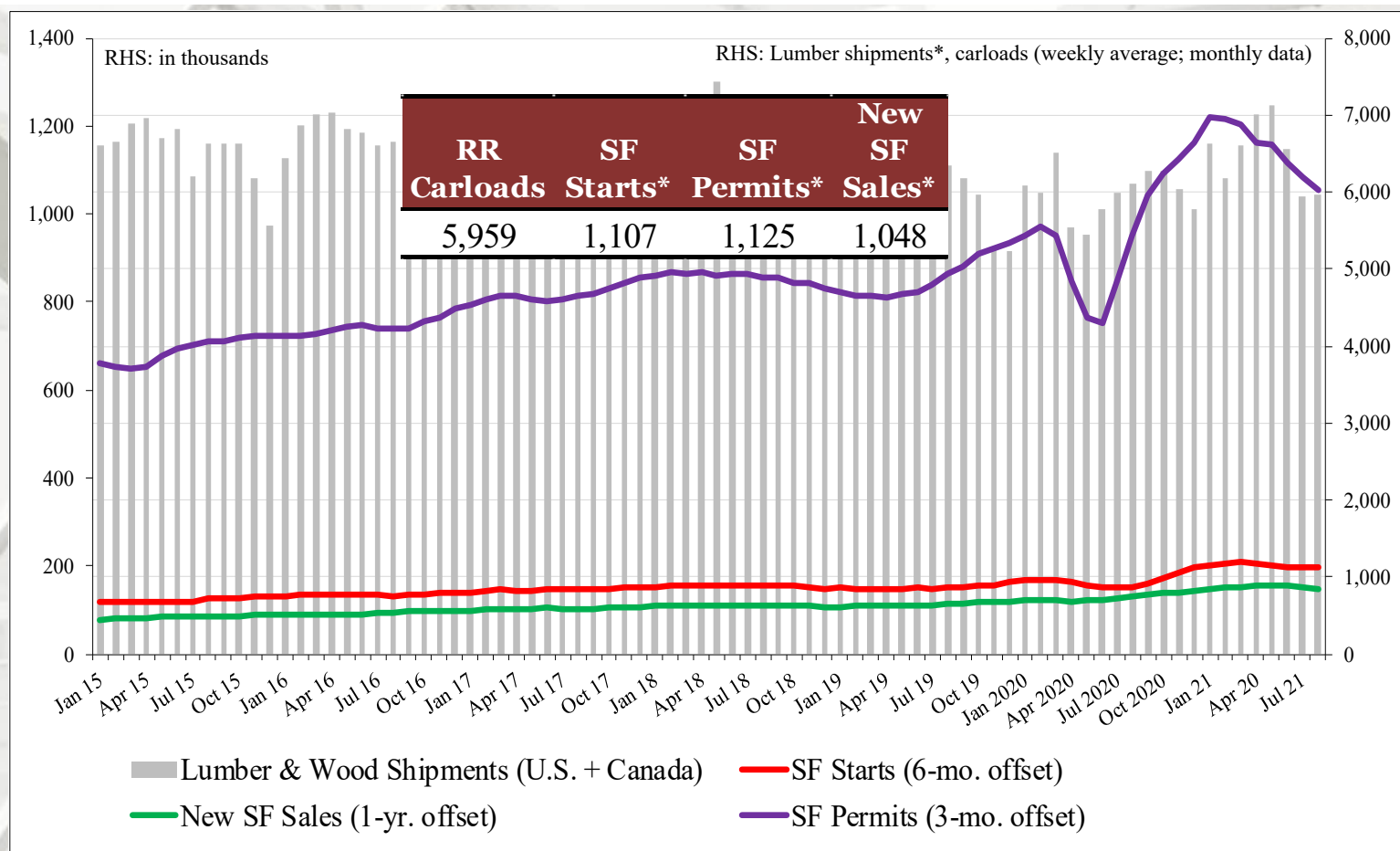


Carloads of Canadian + U.S. lumber and wood shipments to the U.S. are contrasted above to U.S. housing metrics. Annual SF starts, SF Permits, and New sales are compared to carload lumber and wood shipments. The intent is to learn if lumber shipments relate to future SF starts, SF permits, and new SF sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available. Note that 2021 data is on a monthly basis.

\* In thousands



# U.S.-Canada Lumber & Wood Shipments vs. SF Starts, Permits, and New Sales



Carloads of Canadian + U.S. lumber and wood shipments to the U.S. are contrasted above to U.S. housing metrics. SF starts are off-set 6-months (a typical time-frame from permit issuance to actual start); Permits are off-set 3-months; and New sales are off-set 1-year. The intent is to discern if lumber shipments relate to future SF starts, SF permits, and New sales. It is realized that lumber and wood products are trucked; however, to our knowledge comprehensive and timely trucking data is not available.

\* In thousands

# August 2021

## Construction Spending

|            | Total Private Residential* | SF        | MF        | Improvement** |
|------------|----------------------------|-----------|-----------|---------------|
| August     | \$786,589                  | \$413,449 | \$99,467  | \$273,673     |
| July       | \$783,521                  | \$416,184 | \$100,269 | \$267,068     |
| 2020       | \$632,725                  | \$298,903 | \$88,257  | \$245,565     |
| M/M change | 0.4%                       | -0.7%     | -0.8%     | 2.5%          |
| Y/Y change | 24.3%                      | 38.3%     | 12.7%     | 11.4%         |

\* millions.

\*\* 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\$.

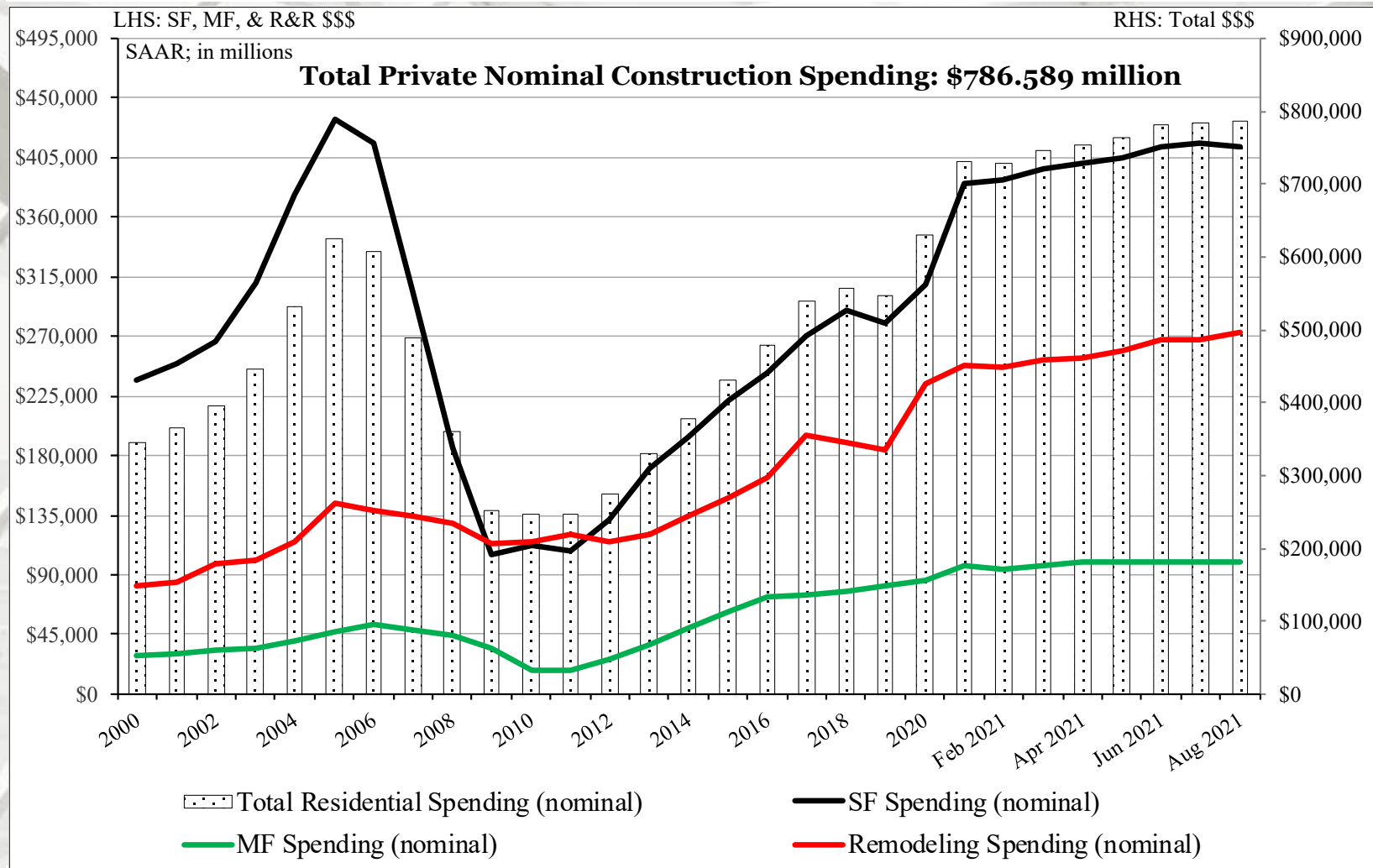
Total private residential construction spending includes new single-family, new multi-family, and improvement (AKA repair and remodeling) expenditures.

New single-family: new houses and town houses built to be sold or rented and units built by the owner or for the owner on contract. The classification excludes residential units in buildings that are primarily nonresidential. It also excludes manufactured housing and houseboats.

New multi-family includes new apartments and condominiums. The classification excludes residential units in buildings that are primarily nonresidential.

Improvements: Includes remodeling, additions, and major replacements to owner occupied properties subsequent to completion of original building. It includes construction of additional housing units in existing residential structures, finishing of basements and attics, modernization of kitchens, bathrooms, etc. Also included are improvements outside of residential structures, such as the addition of swimming pools and garages, and replacement of major equipment items such as water heaters, furnaces and central air-conditioners. Maintenance and repair work is not included.

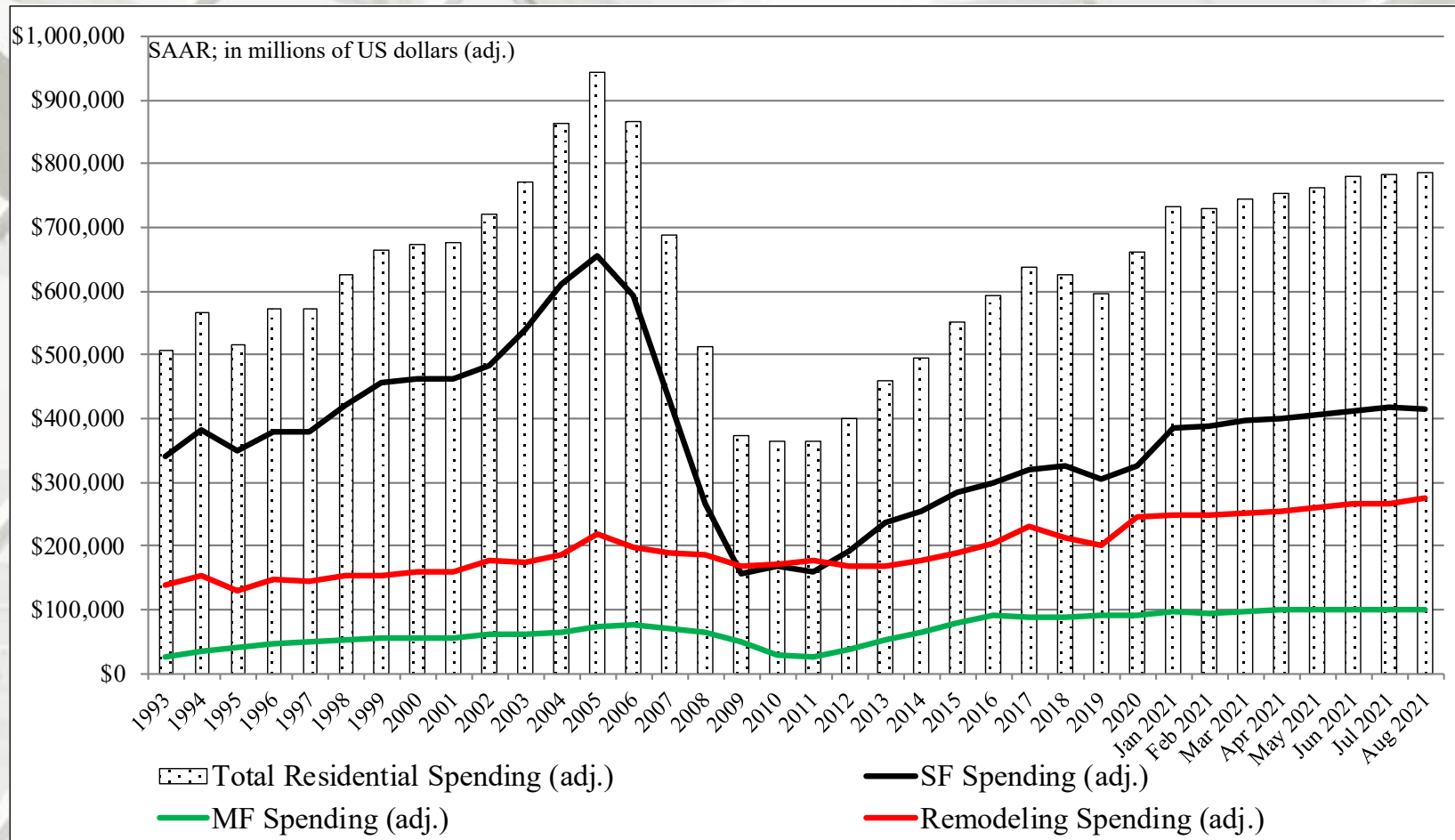
# Total Construction Spending (nominal): 2000 – August 2021



Reported in nominal US\$.

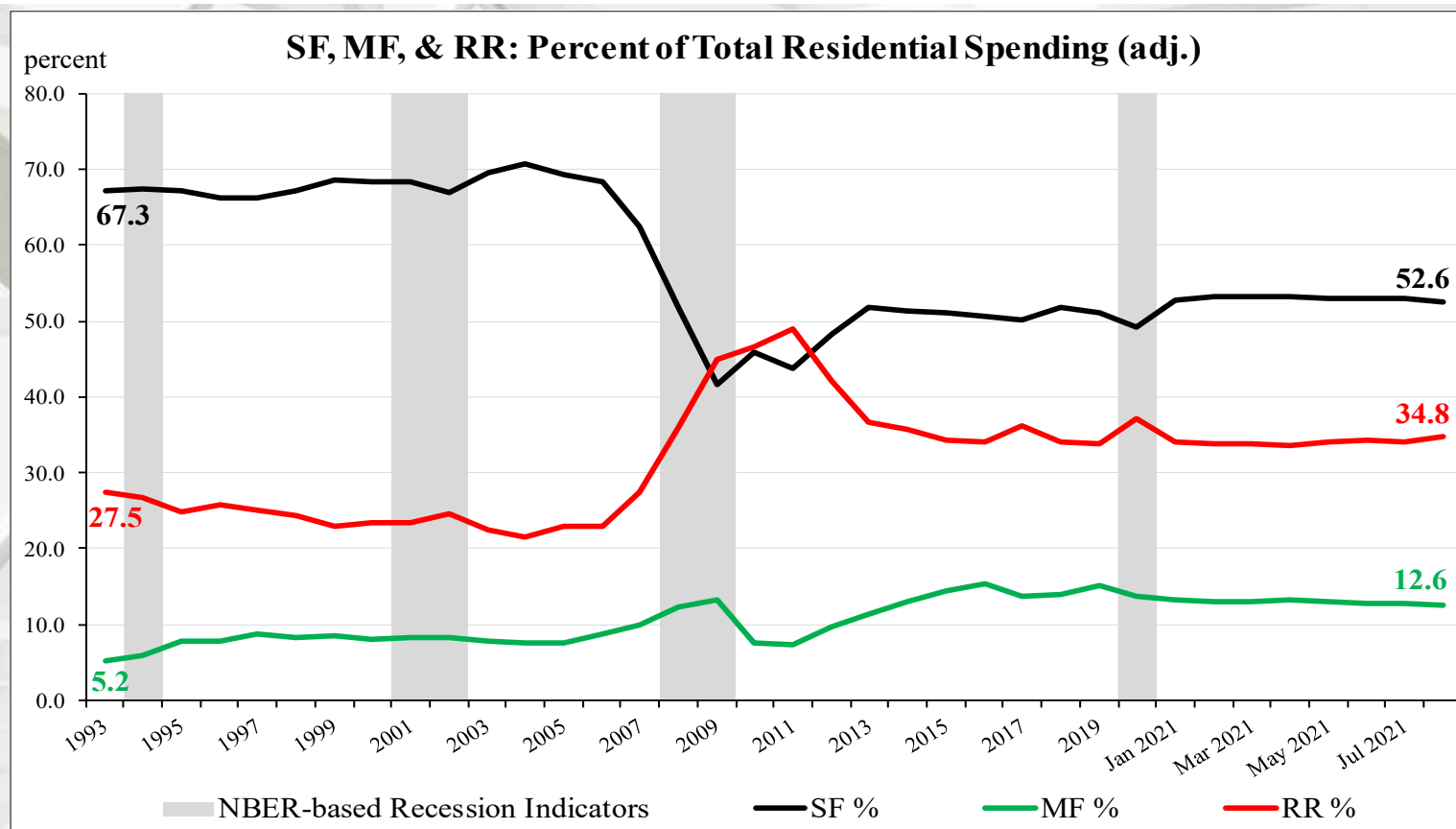
The US DOC does not report improvement spending directly, this is a monthly estimation for 2021.

# Total Construction Spending (adjusted): 1993-August 2021



Reported in adjusted US\$: 1993 – 2020 (adjusted for inflation, BEA Table 1.1.9); August 2021 reported in nominal US\$.

# Construction Spending Shares: 1993 to August 2021



## Total Residential Spending: 1993 through 2006

SF spending average: 69.2%

MF spending average: 7.5%

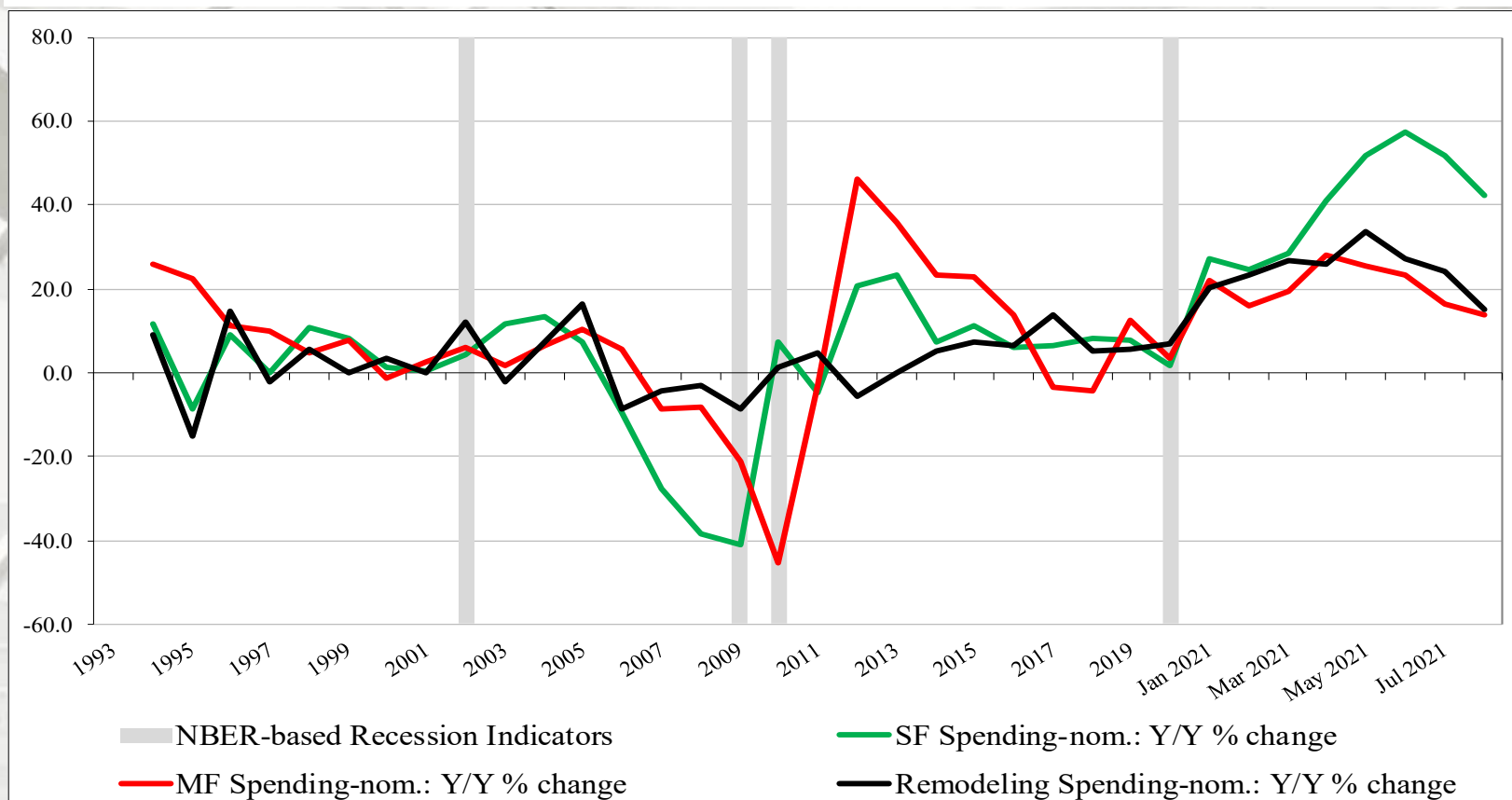
Residential remodeling (RR) spending average: 23.3 % (SAAR).

Note: 1993 to 2020 (adjusted for inflation, BEA Table 1.1.9); August 2021 reported in nominal US\$.

\* NBER based Recession Indicator Bar s for the United States from the Period following the Peak through the Trough (FRED, St. Louis).



# Adjusted Construction Spending: Y/Y Percentage Change, 1993 to August 2021



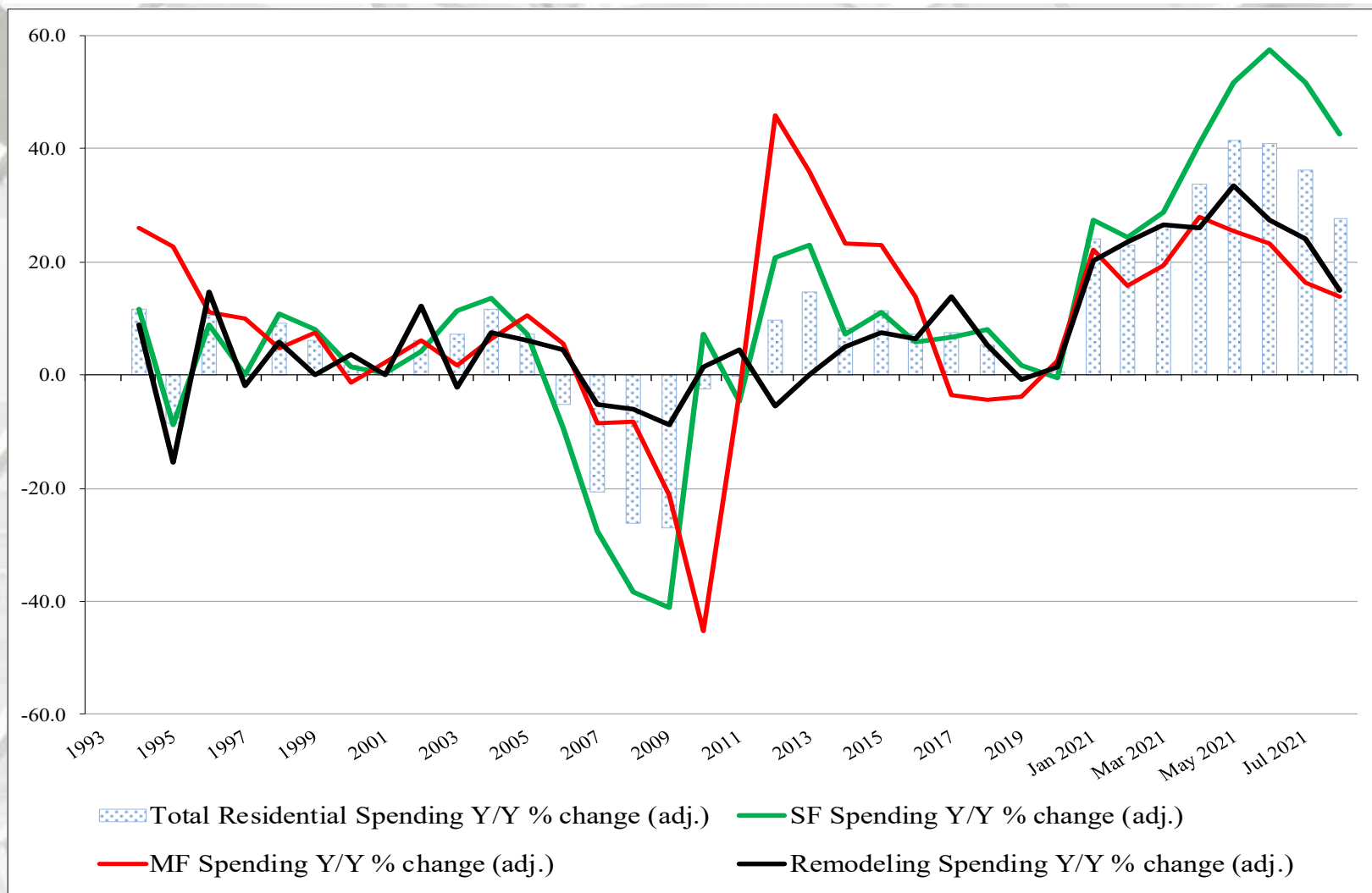
## Nominal Residential Construction Spending: Y/Y percentage change, 1993 to August 2021

Presented above is the percentage change of inflation adjusted Y/Y construction spending. SF, MF, and RR expenditures were positive on a percentage basis, year-over-year and month-over-month (August 2021 data reported in nominal dollars) – yet all are trending negatively.

\* NBER based Recession Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Sources: \* <https://fred.stlouisfed.org/series/USREC>, 6/24/21; <http://www.census.gov/construction/c30/pdf/privsa.pdf>; 10/1/21 and <http://www.bea.gov/iTable/iTable.cfm>; 6/24/21

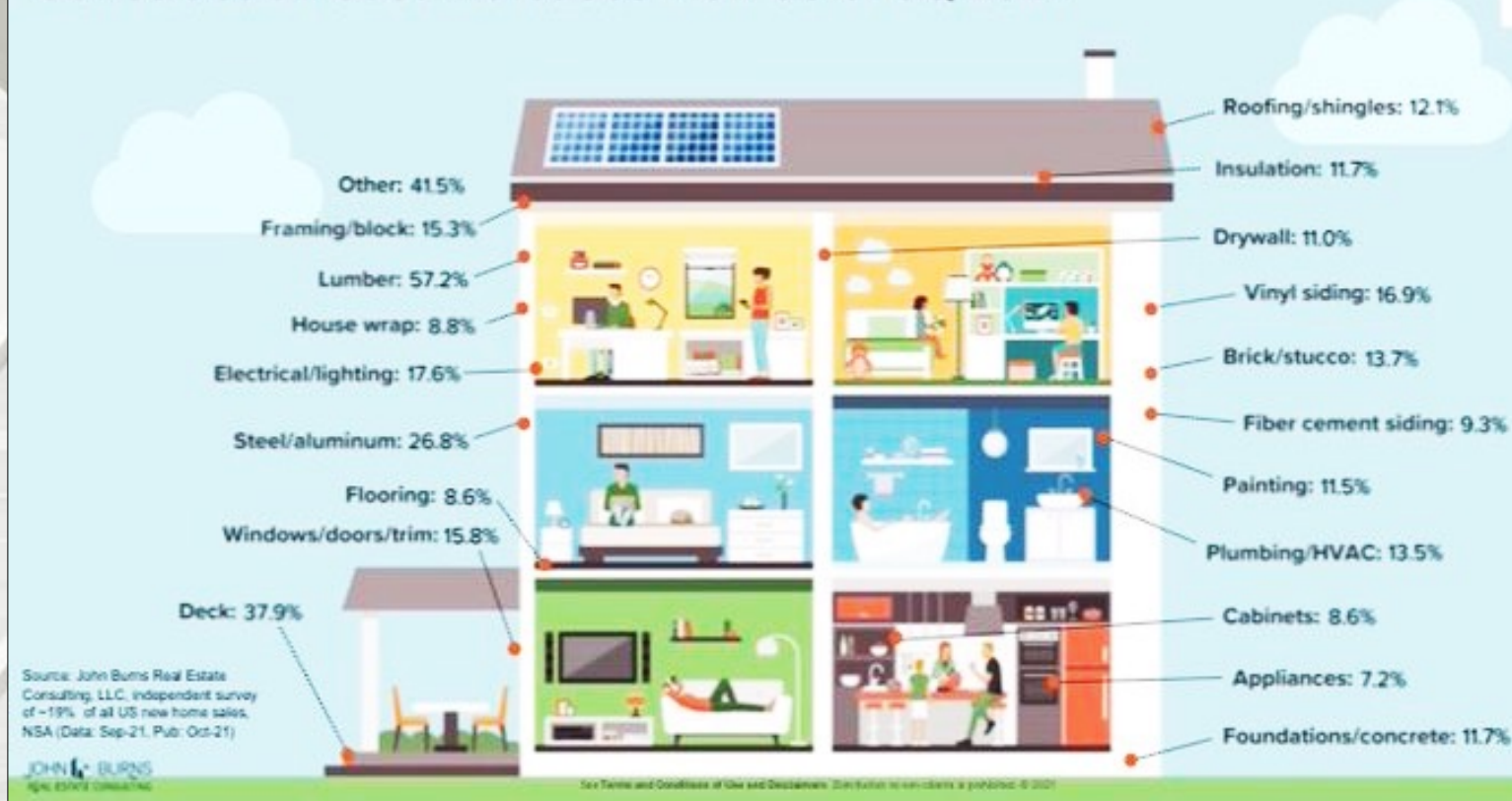
# Adjusted Construction Spending: Y/Y Percentage Change, 1993 to August 2021



# Construction Spending

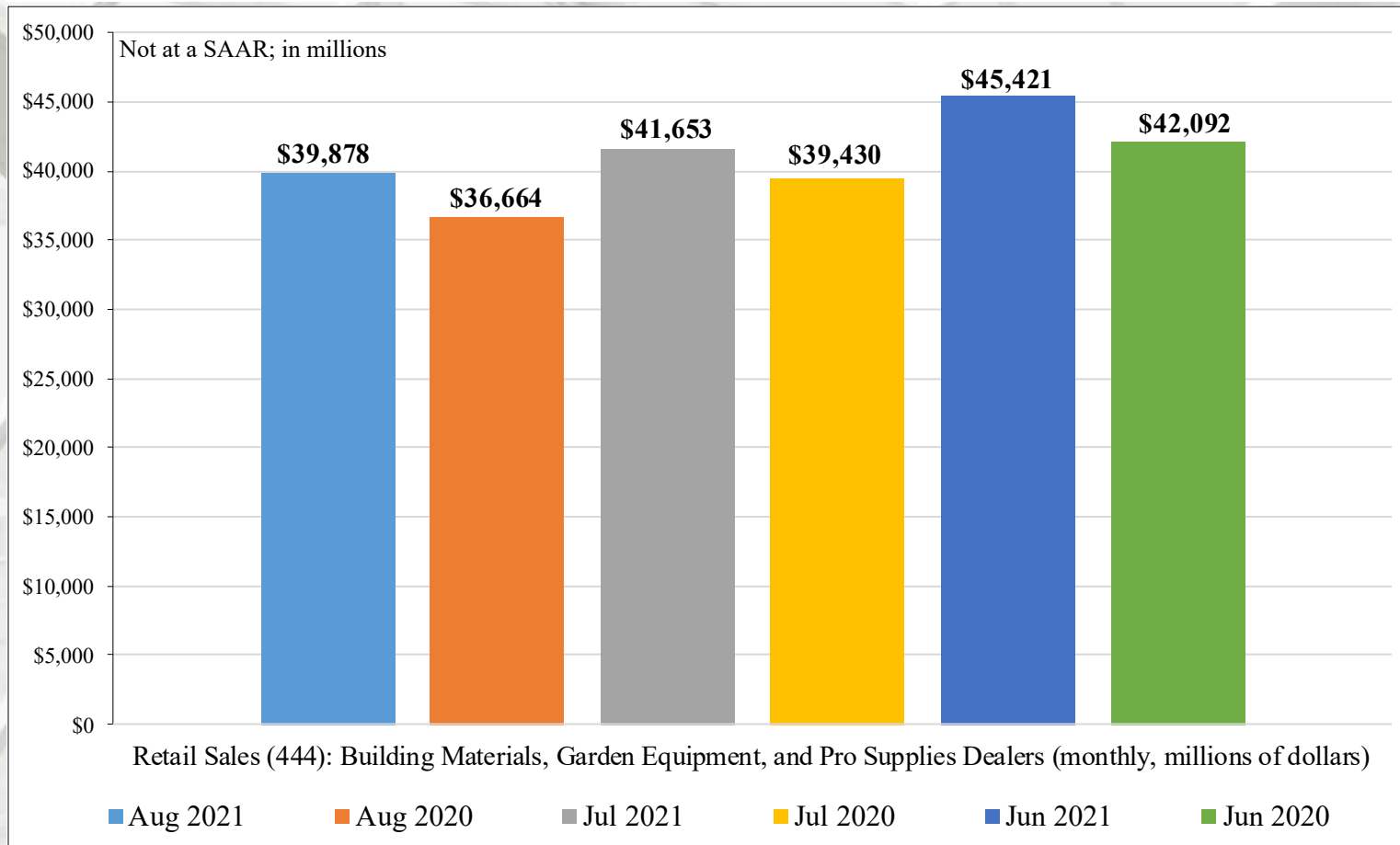
## New home construction costs: Q3 2021

### Construction cost increases YOY as of 3Q 2021



# Remodeling

## Retail Sales: Building materials, Garden Equipment, & PRO Supply Dealers



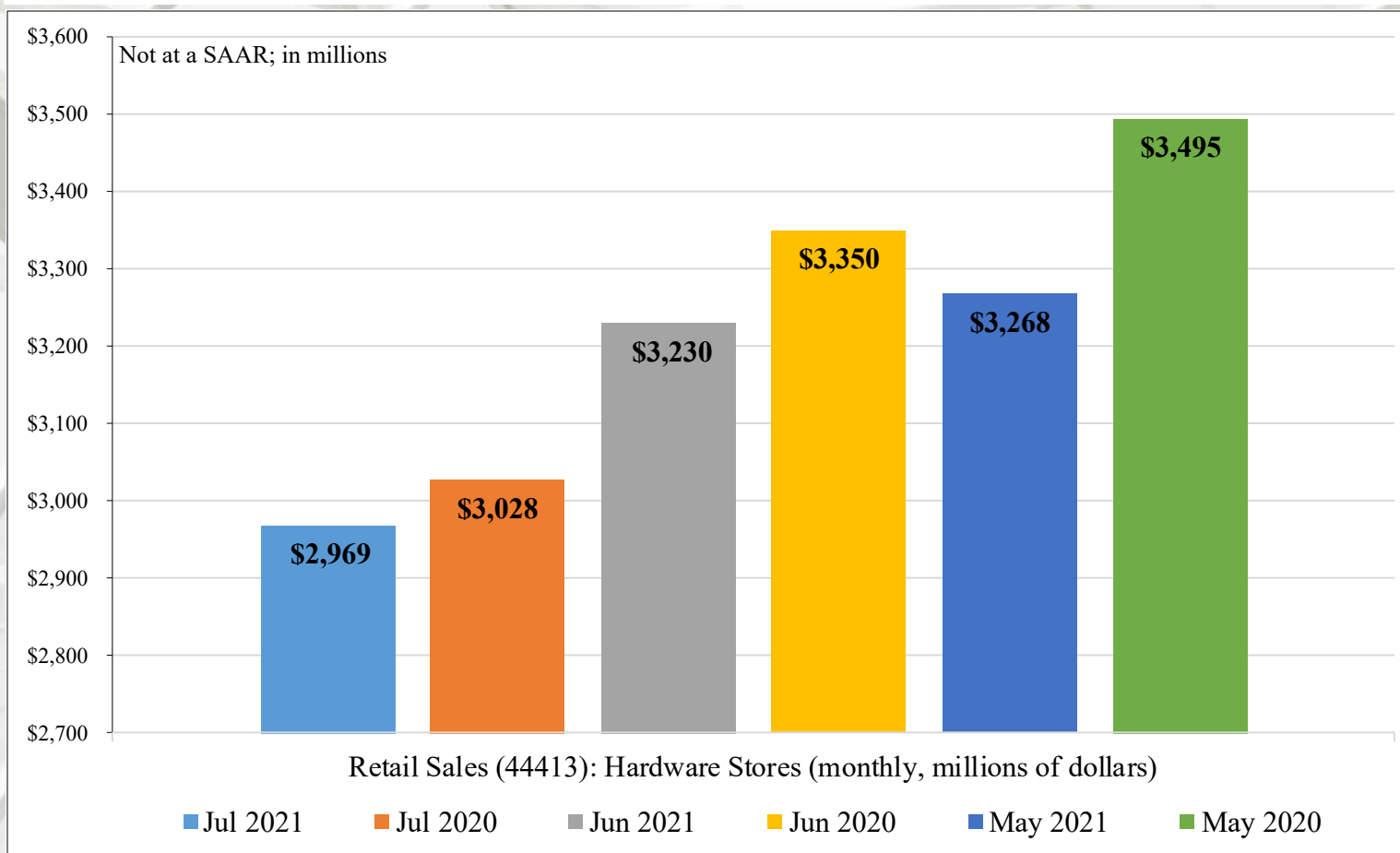
### Building materials, Garden Equipment, & PRO Supply Dealers: NAICS 444

NAICS 444 sales decreased 4.3% in August 2021 from June 2021 and improved 8.8% in August 2021 from August 2020 (on a non-adjusted basis).



# Remodeling

## Retail Sales: Hardware Stores



### Hardware Stores: NAICS 44413

NAICS 44413 retail sales decreased 1.2% in July 2021 from July 2021 and declined 1.9% in July 2021 from July 2020 (on a non-adjusted basis).



# Existing House Sales

## National Association of Realtors

August 2021 sales: 5.880 thousand

|            | Existing Sales | Median Price | Mean Price | Month's Supply |
|------------|----------------|--------------|------------|----------------|
| August     | 5,880,000      | \$356,700    | \$376,000  | 2.6            |
| July       | 6,000,000      | \$359,500    | \$378,400  | 2.6            |
| 2020       | 5,970,000      | \$310,400    | \$342,300  | 3.0            |
| M/M change | -2.0%          | -0.8%        | -0.6%      | 0.0%           |
| Y/Y change | -1.5%          | 14.9%        | 9.8%       | -13.3%         |

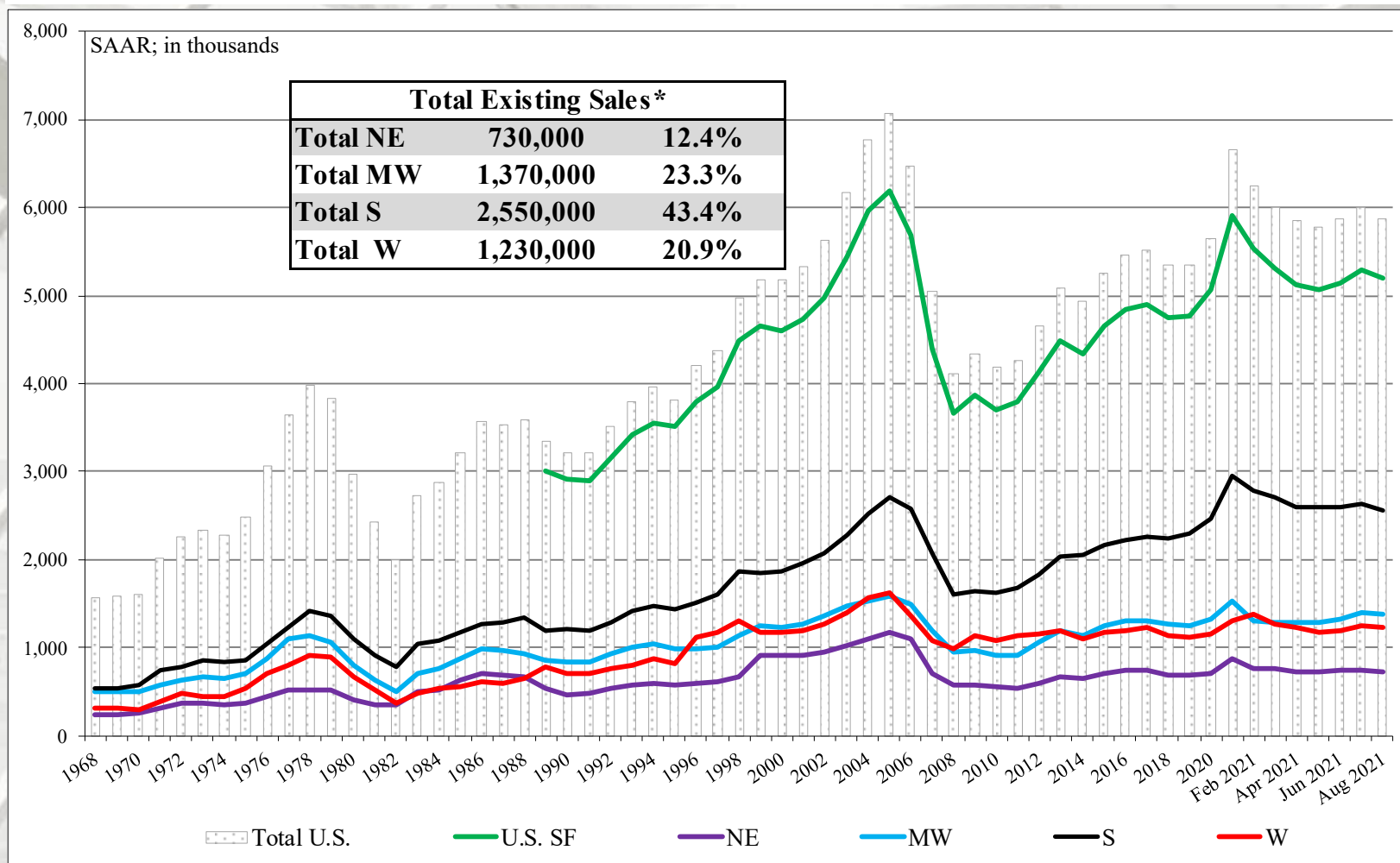
All sales data: SAAR

# Existing House Sales

|            | Existing<br>SF Sales | SF Median<br>Price | SF Mean<br>Price |           |
|------------|----------------------|--------------------|------------------|-----------|
| August     | 5,190,000            | \$363,800          | \$380,700        |           |
| July       | 5,290,000            | \$366,600          | \$383,200        |           |
| 2020       | 5,340,000            | \$314,800          | \$345,500        |           |
| M/M change | -1.9%                | -0.8%              | -0.7%            |           |
| Y/Y change | -2.8%                | 15.6%              | 10.2%            |           |
|            | NE                   | MW                 | S                | W         |
| August     | 730,000              | 1,370,000          | 2,550,000        | 1,230,000 |
| July       | 740,000              | 1,390,000          | 2,630,000        | 1,240,000 |
| 2020       | 750,000              | 1,400,000          | 2,570,000        | 1,250,000 |
| M/M change | -1.4%                | -1.4%              | -3.0%            | -0.8%     |
| Y/Y change | -2.7%                | -2.1%              | -0.8%            | -1.6%     |

All sales data: SAAR.

# Existing House Sales



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

\* Percentage of total existing sales.

# U.S. Housing Prices

## Federal Housing Finance Agency

### FHFA House Price Index Up 1.4 Percent in July; Up 19.2 Percent from Last Year

#### Significant Findings

“House prices rose nationwide in July, up **1.4 percent** from the previous month, according to the latest Federal Housing Finance Agency House Price Index (FHFA HPI®). House prices rose **19.2 percent** from July 2020 to July 2021. The previously reported 1.6 percent price change for June 2021 was revised upward to 1.7 percent.

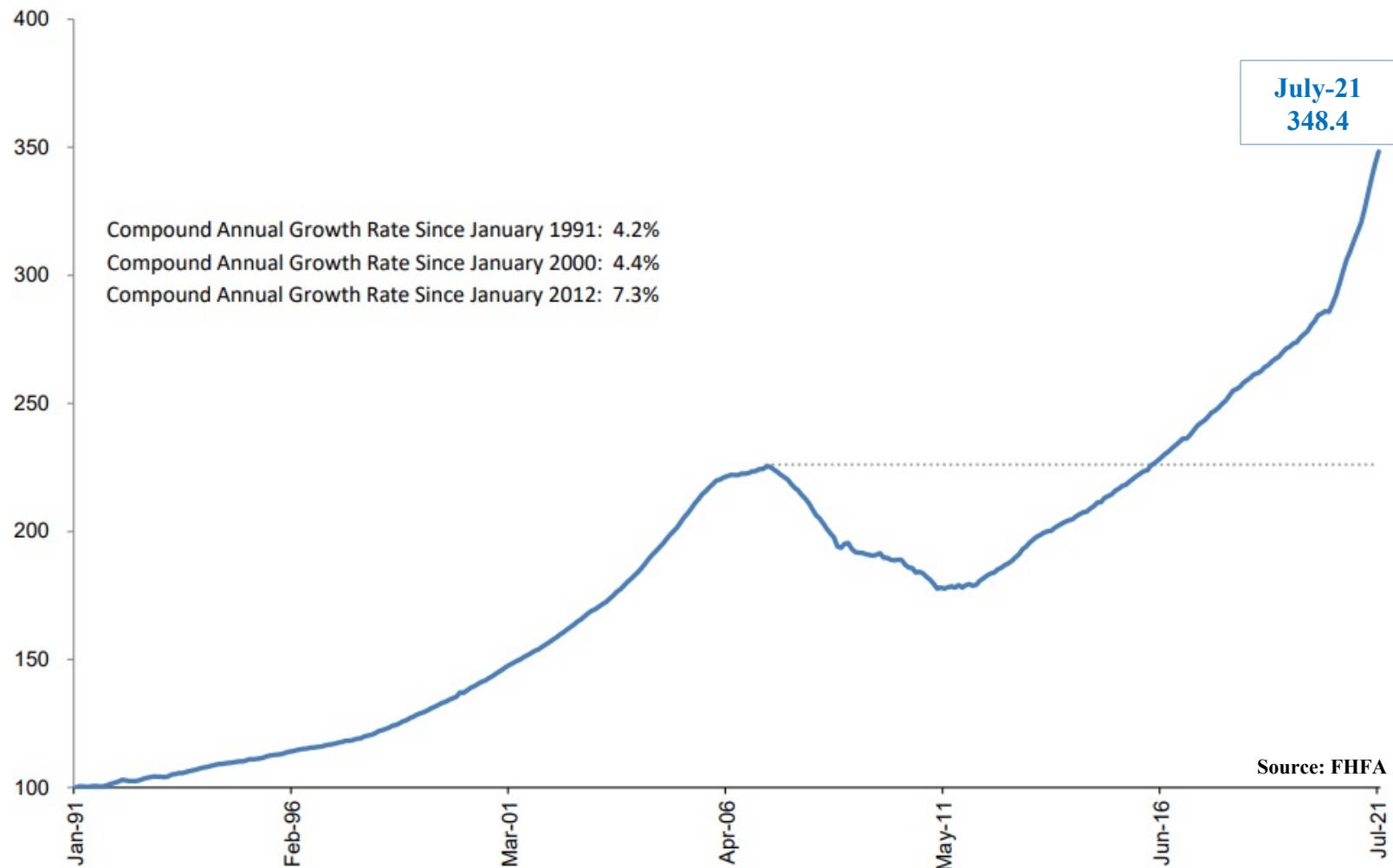
For the nine census divisions, seasonally adjusted monthly house price changes from June 2021 to July 2021 ranged from **+0.8 percent** in the West North Central division to **+1.9 percent** in the South Atlantic division. The 12-month changes ranged from **+15.6 percent** in the West North Central division to **+25.6 percent** in the Mountain division.” – Raffi Williams and Adam Russell, FHFA

“Record appreciation rates for the U.S. continued in July. Record appreciation rates for the U.S. continued in July.” – Dr. Lynn Fisher, Deputy Director, Division of Research and Statistics, FHFA



# U.S. Housing Prices

Monthly House Price Index for U.S. from January 1991 - Present  
Purchase-Only FHFA HPI® (Seasonally Adjusted, Nominal)





# U.S. Housing Prices

## **S&P CoreLogic Case-Shiller Index Shows Annual Home Price Gain Topped 18.6% in June**

“... Data for July 2021 show that home prices continue to increase across the U.S. More than 27 years of history are available for these data series, and can be accessed in full by going to [www.spdji.com](http://www.spdji.com).

### **Year-Over-Year**

The S&P CoreLogic Case-Shiller U.S. National Home Price NSA Index, covering all nine U.S. census divisions, reported a 19.7% annual gain in July, up from 18.7% in the previous month. The 10-City Composite annual increase came in at 19.1%, up from 18.5% in the previous month. The 20-City Composite posted a 19.9% year-over-year gain, up from 19.1% in the previous month.

Phoenix, San Diego, and Seattle reported the highest year-over-year gains among the 20 cities in July. Phoenix led the way with a 32.4% year-over-year price increase, followed by San Diego with a 27.8% increase and Seattle with a 25.5% increase. Seventeen of the 20 cities reported higher price increases in the year ending July 2021 versus the year ending June 2021.

### **Month-Over-Month**

“Before seasonal adjustment, the U.S. National Index posted an 1.6% month-over-month increase in July, while the 10-City and 20-City Composites both posted increases of 1.3% and 1.5%, respectively.

After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 1.5%, and the 10-City and 20-City Composites both posted increases of 1.4% and 1.5%, respectively. In July, all 20 cities reported increases before and after seasonal adjustments.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

# U.S. Housing Prices

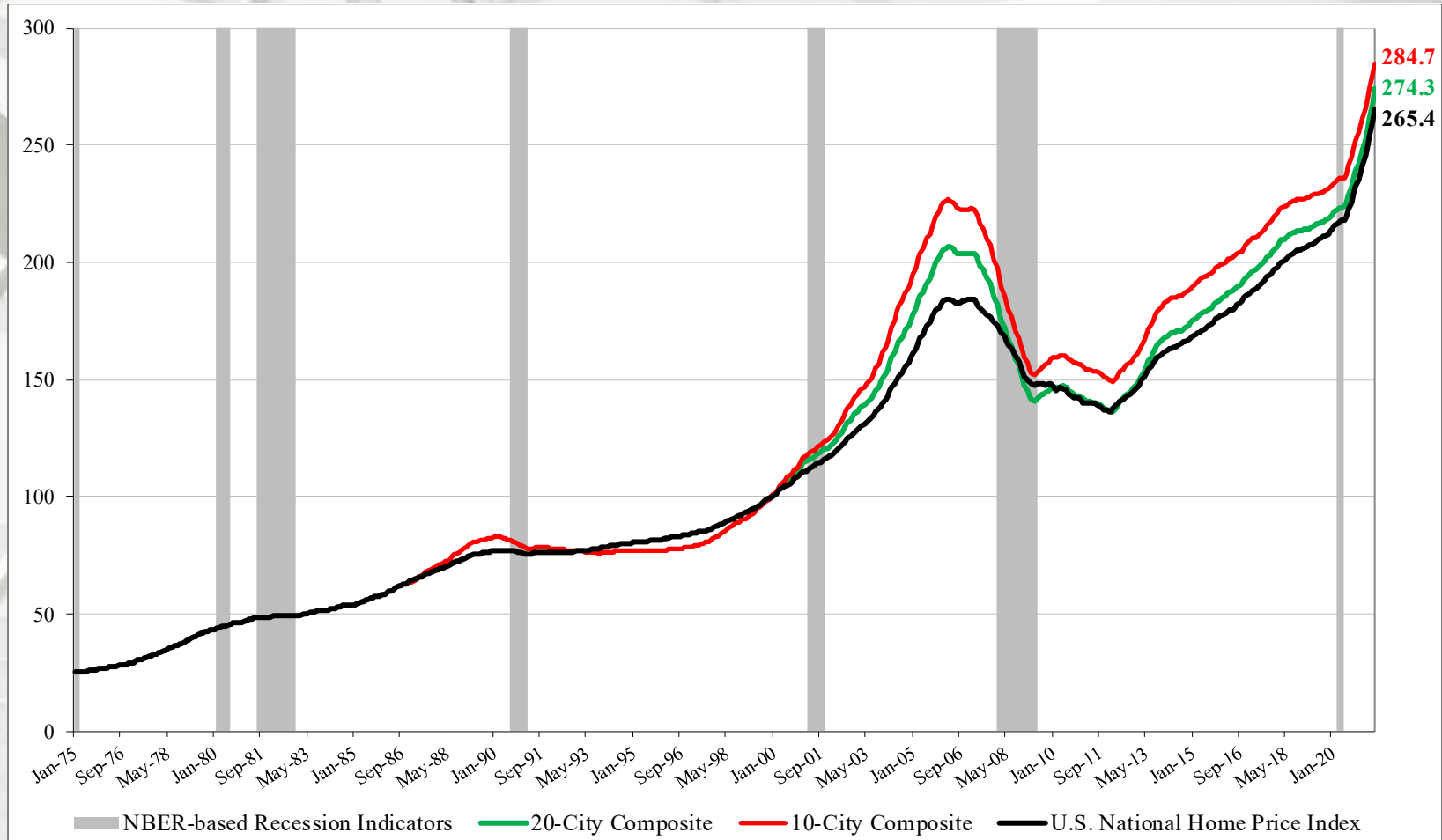
## **S&P CoreLogic Case-Shiller Index Reports Record High 19.7% Annual Home Price Gain in July Analysis**

“July 2021 is the fourth consecutive month in which the growth rate of housing prices set a record. The National Composite Index marked its fourteenth consecutive month of accelerating prices with a 19.7% gain from year-ago levels, up from 18.7% in June and 16.9% in May. This acceleration is also reflected in the 10- and 20-City Composites (up 19.1% and 19.9%, respectively). The last several months have been extraordinary not only in the level of price gains, but in the consistency of gains across the country. In July, all 20 cities rose, and 17 gained more in the 12 months ended in July than they had gained in the 12 months ended in June. Home prices in 19 of our 20 cities now stand at all-time highs, with the sole outlier (Chicago) only 0.3% below its 2006 peak. The National Composite, as well as the 10- and 20-City indices, are likewise at their all-time highs.

July’s 19.7% price gain for the National Composite is the highest reading in more than 30 years of S&P CoreLogic Case-Shiller data. This month, New York joined Boston, Charlotte, Cleveland, Dallas, Denver, and Seattle in recording their all-time highest 12-month gains. Price gains in all 20 cities were in the top quintile of historical performance; in 15 cities, price gains were in the top five percent of historical performance.

We have previously suggested that the strength in the U.S. housing market is being driven in part by a reaction to the COVID pandemic, as potential buyers move from urban apartments to suburban homes. July’s data are consistent with this hypothesis. This demand surge may simply represent an acceleration of purchases that would have occurred anyway over the next several years. Alternatively, there may have been a secular change in locational preferences, leading to a permanent shift in the demand curve for housing. More time and data will be required to analyze this question.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

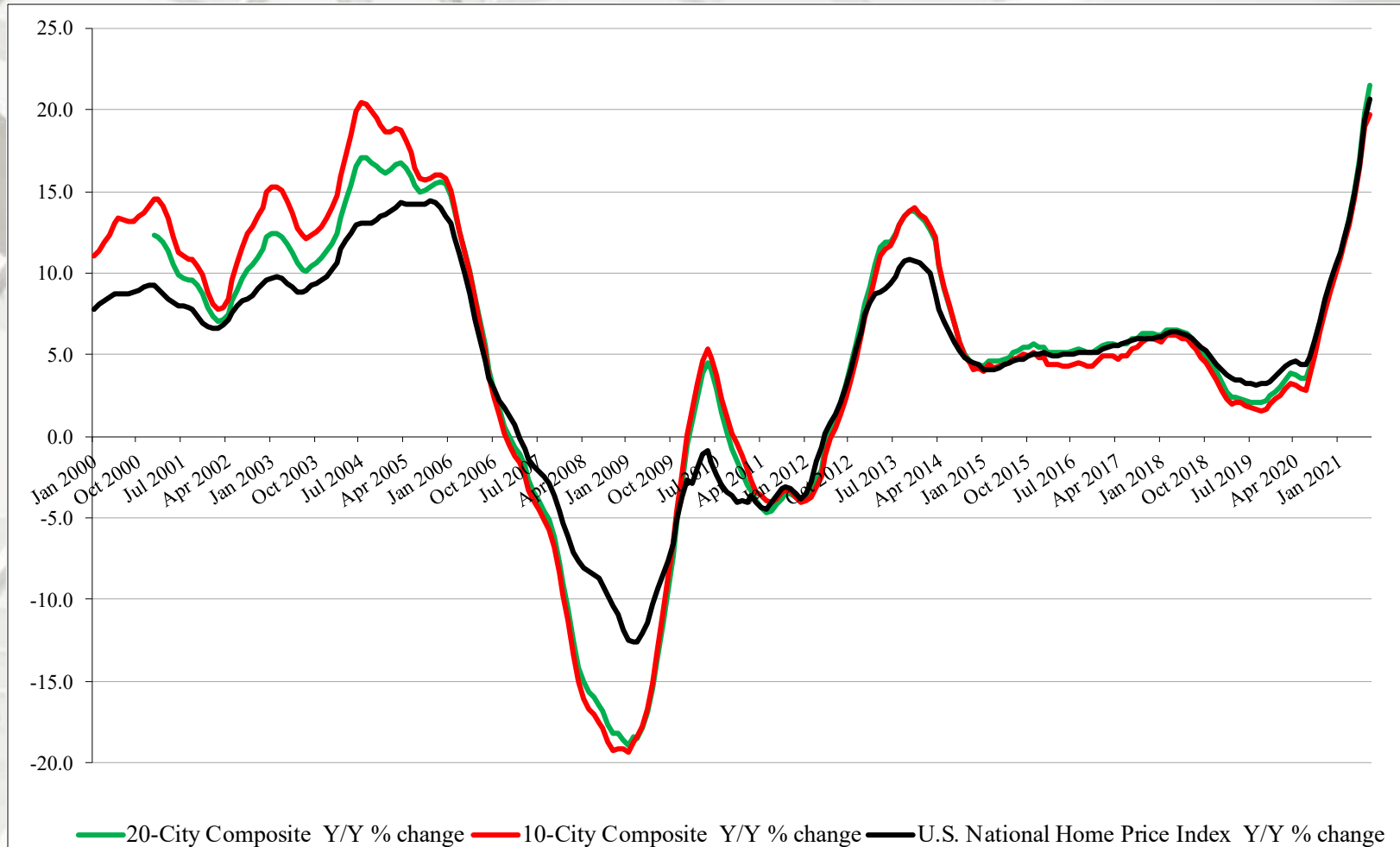
# S&P/Case-Shiller Home Price Indices



\* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

“Phoenix’s 32.4% increase led all cities for the 26th consecutive month, with San Diego (+27.8%) and Seattle (+25.5%) not far behind. As has been the case for the last several months, prices were strongest in the Southwest (+24.2%) and West (+23.7%), but every region logged double-digit gains and recorded all-time high rate increases.” – Craig J. Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

# S&P/Case-Shiller Home Price Indices

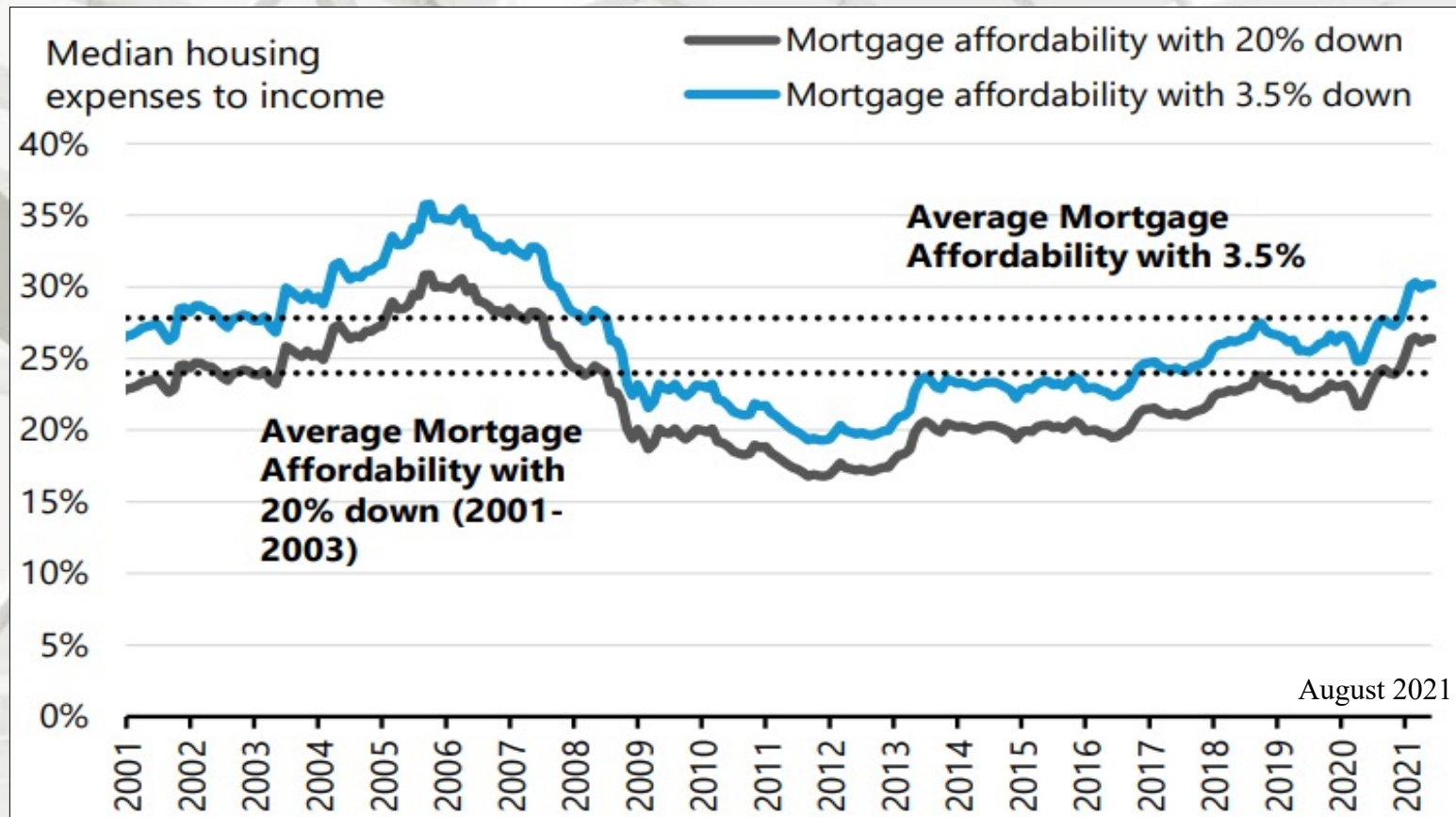


## Y/Y Price Change

From July 2020 to July 2021, the National Index increased 20.7%; the Ten-City by 19.7%, and the Twenty-City by 21.6%.



# Housing Affordability



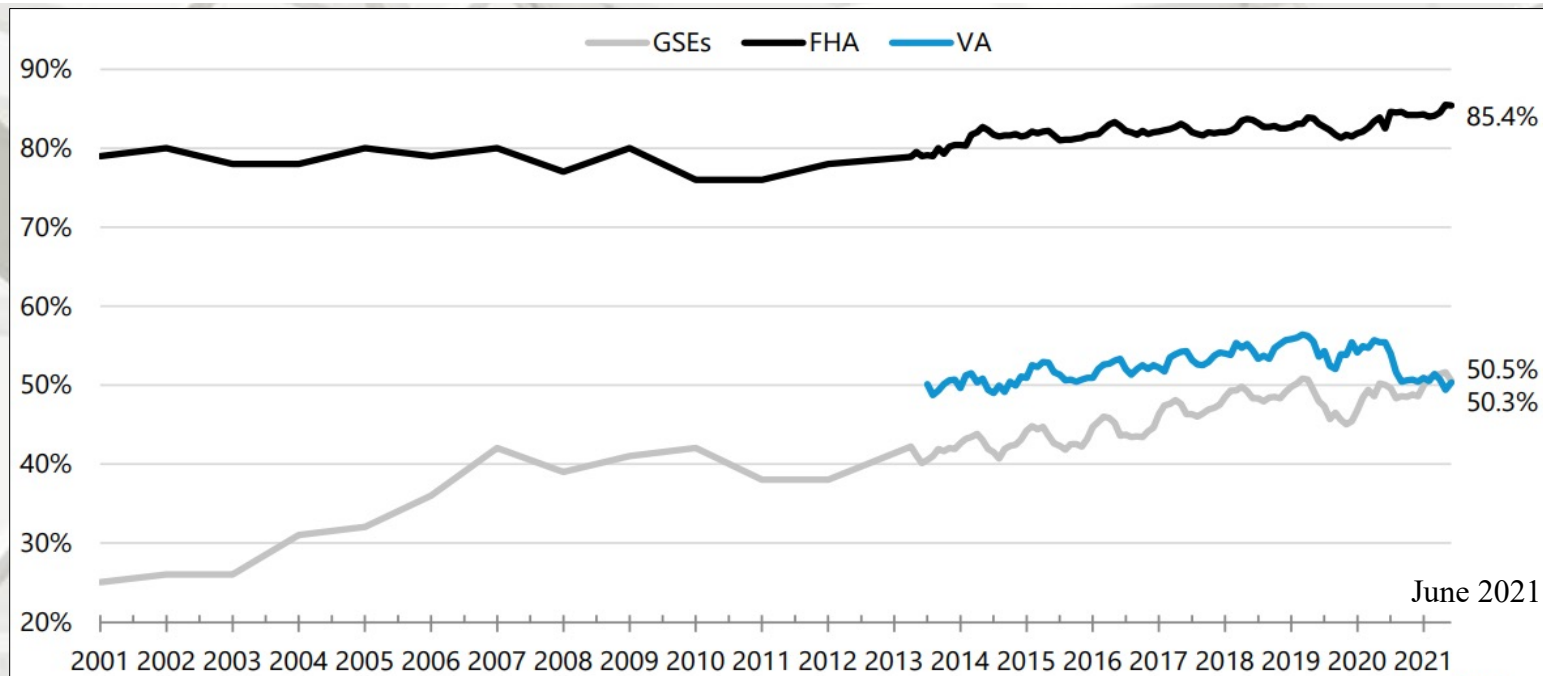
Urban Institute

## National Mortgage Affordability Over Time

“Despite historic low interest rates, increases in home prices have pushed affordability to the worst levels since 2008. As of August 2021, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 26.4 percent; with 3.5 percent down it is 30.2 percent. These numbers are well above the 2001-2003 median, and represent a sharp worsening in affordability over the past year. ...” – Laurie Goodman, Vice President, Urban Institute



# First-Time House Buyers



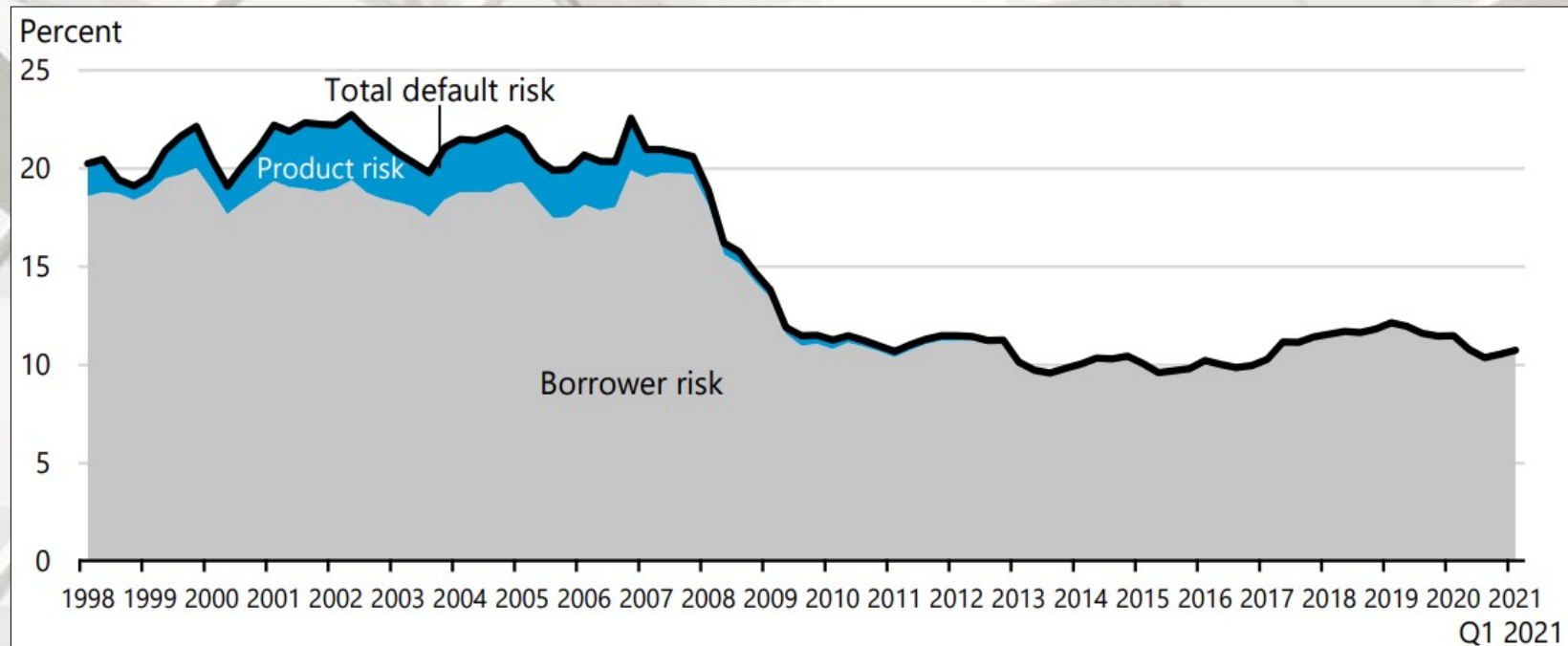
Sources: eMBS, Federal Housing Administration (FHA) and Urban Institute.

Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

## Urban Institute First-Time Home Buyer Share

“In June 2021, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 85.4 percent. The FTHB share of VA lending in June was 50.3 percent. The GSE FTHB share decreased in June relative to May, to 50.5 percent. The bottom table shows that based on mortgages originated in June 2021, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and have a higher LTV, thus paying a higher interest rate.” – Bing Lai, Research Associate, Housing Finance Policy Center

# U.S. Housing Finance



## Urban Institute Housing Credit Availability Index

“The total default risk the government loan channel is willing to take bottomed out at 9.6 percent in Q3 2013. It fluctuated in a narrow range above that number for three years. In the eleven quarters from Q4 2016 to Q1 2019, the risk in the government channel increased significantly from 9.9 to 12.1 percent but has since receded. After declining to 10.4 percent in Q3 2020 due to the pandemic, the government channel marginally increased risk to 10.8 percent in Q1 2021; still far below the pre-bubble level of 19 – 23 percent. ...” – Gideon Berger, Senior Policy Program Manager, Urban Institute

# U.S. Housing Finance

## Mortgage Bankers Association (MBA)

### Mortgage Credit Availability Increased in September

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

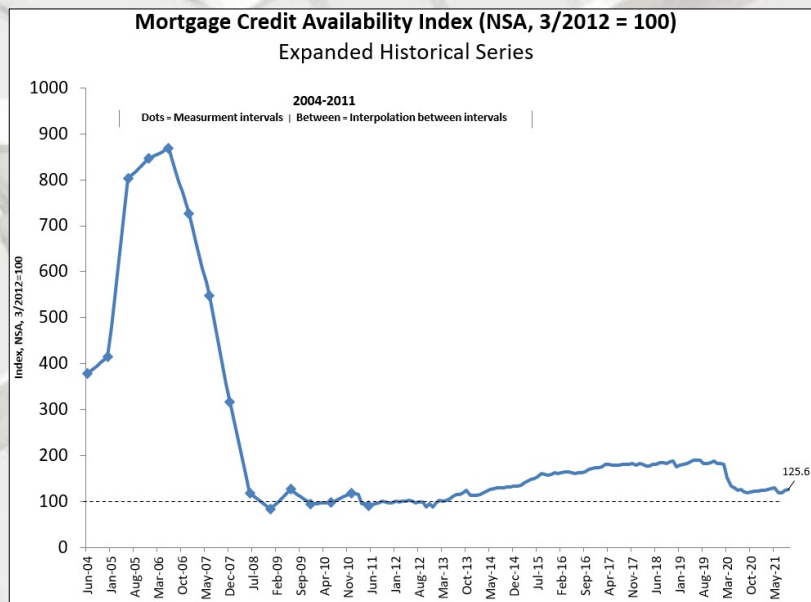
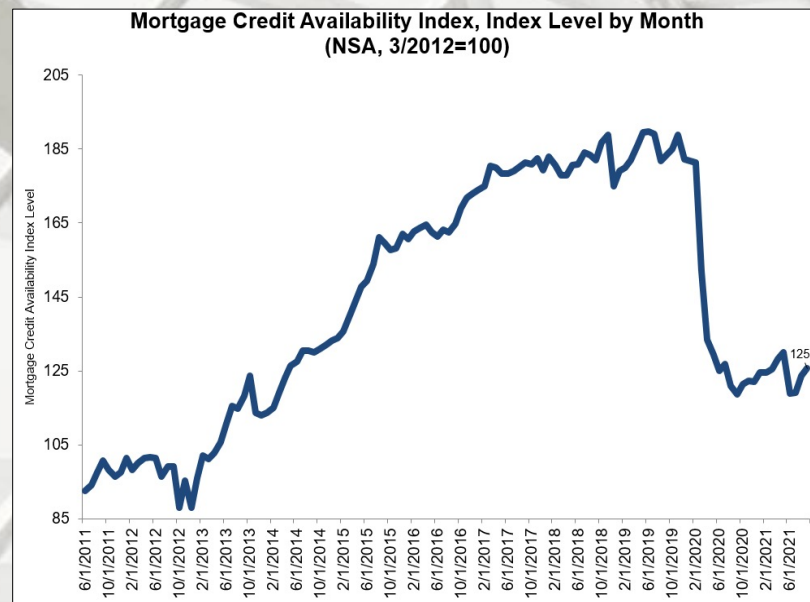
The MCAI rose by 1.5 percent to 125.6 in September. A decline in the MCAI indicates that lending standards are tightening, while increases in the index are indicative of loosening credit. The index was benchmarked to 100 in March 2012. The Conventional MCAI increased 4.5 percent, while the Government MCAI decreased by 0.7 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 5.8 percent, and the Conforming MCAI rose by 2.6 percent.

Mortgage credit availability grew for the third straight month in September, reaching its highest level since May 2021. Last month's expansion was driven by a 4.5 percent increase in the conventional index, while the government index slightly decreased. Even with increases in seven out of nine months thus far in 2021, total credit availability is still around 30 percent less than it was in February 2020 before the pandemic.

We are still seeing elevated rates of home-price appreciation and lenders are responding by offering a wider range of loans to accommodate qualified buyers. Jumbo credit availability increased almost 6 percent to its highest level since March 2020, with more loan programs for non-QM jumbos and loans catering to self-employed borrowers or those with non-traditional sources of income. The conforming index indicated a greater supply of loans for cash-out refinances, investor properties, and adjustable-rate mortgages (ARMs). Even as mortgage rates continue to rise, cash-out refinances remain an option for borrowers who have sufficient home equity and need additional cash.” – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

# U.S. Housing Finance

## Mortgage Credit Availability (MBA)



**Source:** Mortgage Bankers Association; Powered by Ellie Mae's AllRegs® Market Clarity®



# MBA Mortgage Finance Forecast

## MBA Mortgage Finance Forecast

September 21, 2021

|   | 2020   |        |        |        | 2021   |        |        |        | 2022   |        |        |        |        |        |        |        |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   | Q1     | Q2     | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     | Q1     | Q2     | Q3     | Q4     | 2020   | 2021   | 2022   | 2023   |
| <b>Housing Measures</b>                         |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Housing Starts (SAAR, Thous)                    | 1,485  | 1,086  | 1,440  | 1,575  | 1,599  | 1,586  | 1,591  | 1,585  | 1,594  | 1,650  | 1,690  | 1,683  | 1,397  | 1,590  | 1,654  | 1,705  |
| Single-Family                                   | 981    | 774    | 1,041  | 1,220  | 1,156  | 1,107  | 1,115  | 1,170  | 1,224  | 1,285  | 1,340  | 1,353  | 1,004  | 1,137  | 1,301  | 1,395  |
| Two or More                                     | 504    | 312    | 399    | 356    | 443    | 479    | 476    | 415    | 370    | 365    | 350    | 330    | 393    | 453    | 354    | 310    |
| Home Sales (SAAR, Thous)                        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Total Existing Homes                            | 5,483  | 4,313  | 6,137  | 6,777  | 6,303  | 5,830  | 5,971  | 6,215  | 6,340  | 6,462  | 6,580  | 6,592  | 5,678  | 6,080  | 6,493  | 6,653  |
| New Homes                                       | 703    | 708    | 973    | 926    | 896    | 728    | 760    | 833    | 903    | 976    | 1,006  | 1,067  | 828    | 804    | 988    | 1,092  |
| FHFA US House Price Index (YOY % Change)        | 6.2    | 5.7    | 8.0    | 10.9   | 12.7   | 17.4   | 13.4   | 11.6   | 10.4   | 9.5    | 7.9    | 6.2    | 10.9   | 11.6   | 6.2    | 5.3    |
| Median Price of Total Existing Homes (Thous \$) | 272    | 288    | 309    | 312    | 314    | 351    | 366    | 365    | 359    | 359    | 359    | 356    | 295.4  | 348.9  | 358.2  | 365.4  |
| Median Price of New Homes (Thous \$)            | 330    | 323    | 333    | 354    | 365    | 374    | 394    | 395    | 393    | 395    | 397    | 393    | 335.0  | 381.9  | 394.7  | 397.2  |
| <b>Interest Rates</b>                           |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 30-Year Fixed Rate Mortgage (%)                 | 3.5    | 3.2    | 3.0    | 2.8    | 2.9    | 3.0    | 2.8    | 3.1    | 3.4    | 3.6    | 3.8    | 4.0    | 2.8    | 3.1    | 4.0    | 4.3    |
| 10-Year Treasury Yield (%)                      | 1.4    | 0.7    | 0.6    | 0.9    | 1.3    | 1.6    | 1.3    | 1.6    | 1.8    | 1.9    | 2.2    | 2.3    | 0.9    | 1.6    | 2.3    | 2.5    |
| <b>Mortgage Originations</b>                    |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| Total 1- to 4-Family (Bil \$)                   | 601    | 996    | 1,154  | 1,357  | 1,094  | 1,050  | 915    | 679    | 534    | 645    | 605    | 594    | 4,108  | 3,738  | 2,378  | 2,471  |
| Purchase  | 266    | 360    | 432    | 424    | 320    | 460    | 417    | 406    | 358    | 485    | 448    | 438    | 1,482  | 1,603  | 1,729  | 1,830  |
| Refinance                                       | 335    | 636    | 721    | 933    | 774    | 590    | 498    | 273    | 176    | 160    | 157    | 156    | 2,625  | 2,135  | 649    | 641    |
| Refinance Share (%)                             | 56     | 64     | 63     | 69     | 71     | 56     | 54     | 40     | 33     | 25     | 26     | 26     | 64     | 57     | 27     | 26     |
| FHA Originations (Bil \$)                       |        |        |        |        |        |        |        |        |        |        |        |        | 311    | 282    | 156    | 168    |
| Total 1- to 4-Family (000s loans)               | 2,067  | 3,380  | 3,842  | 4,407  | 3,449  | 3,225  | 2,741  | 1,982  | 1,521  | 1,794  | 1,647  | 1,585  | 13,696 | 11,397 | 6,546  | 6,312  |
| Purchase  | 908    | 1,213  | 1,430  | 1,366  | 1,001  | 1,404  | 1,241  | 1,179  | 1,015  | 1,345  | 1,216  | 1,165  | 4,917  | 4,825  | 4,741  | 4,658  |
| Refinance                                       | 1,159  | 2,167  | 2,413  | 3,041  | 2,449  | 1,821  | 1,500  | 802    | 505    | 449    | 431    | 420    | 8,780  | 6,572  | 1,805  | 1,654  |
| Refinance Share (%)                             | 56     | 64     | 63     | 69     | 71     | 56     | 55     | 40     | 33     | 25     | 26     | 26     | 64     | 58     | 28     | 26     |
| <b>Mortgage Debt Outstanding</b>                |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |
| 1- to 4-Family (Bil \$)                         | 10,544 | 10,626 | 10,785 | 10,925 | 11,042 | 11,200 | 11,353 | 11,490 | 11,636 | 11,805 | 11,981 | 12,166 | 10,925 | 11,490 | 12,166 | 12,953 |

### Notes:

As of the Sep, 2021 forecast, the 2020 originations numbers have been revised based on the 2020 Home Mortgage Disclosure Act data. Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home equity loans. Mortgage rate forecast is based on Freddie Mac's 30-Yr fixed rate which is based on predominantly home purchase transactions. The 10-Year Treasury Yield and 30-Yr mortgage rate are the average for the quarter, but annual columns show Q4 values. The FHFA US House Price Index is the forecasted year over year percent change of the FHFA Purchase-Only House Price Index. Copyright 2021 Mortgage Bankers Association. All rights reserved. THE HISTORICAL DATA AND PROJECTIONS ARE PROVIDED "AS IS" WITH NO WARRANTIES OF ANY KIND.





# MBA Economic Forecast

## MBA Economic Forecast

September 21, 2021

|  | 2020   |        |        |        | 2021    |         |         |        | 2022    |         |         |         | 2020   | 2021    | 2022    | 2023    |
|--|--------|--------|--------|--------|---------|---------|---------|--------|---------|---------|---------|---------|--------|---------|---------|---------|
|  | Q1     | Q2     | Q3     | Q4     | Q1      | Q2      | Q3      | Q4     | Q1      | Q2      | Q3      | Q4      |        |         |         |         |
| <b>Percent Change, SAAR</b>              |        |        |        |        |         |         |         |        |         |         |         |         |        |         |         |         |
| Real Gross Domestic Product              | -5.1   | -31.2  | 33.8   | 4.5    | 6.3     | 6.6     | 5.1     | 6.3    | 4.9     | 3.7     | 3.2     | 2.5     | -2.3   | 6.1     | 3.6     | 2.0     |
| Personal Consumption Expenditures        | -6.9   | -33.4  | 41.4   | 3.4    | 11.4    | 11.9    | 2.2     | 3.4    | 2.2     | 2.1     | 2.1     | 2.1     | -2.4   | 7.1     | 2.1     | 2.0     |
| Business Fixed Investment                | -8.1   | -30.3  | 18.7   | 12.5   | 12.9    | 9.3     | 3.2     | 11.8   | 8.5     | 6.3     | 5.2     | 4.2     | -3.8   | 9.2     | 6.0     | 3.3     |
| Residential Investment                   | 20.4   | -30.7  | 59.9   | 34.4   | 13.3    | -11.5   | 1.0     | 0.8    | 3.0     | 4.1     | 6.2     | 3.1     | 15.7   | 0.5     | 4.1     | 2.0     |
| Govt. Consumption & Investment           | 3.7    | 3.9    | -2.1   | -0.5   | 4.2     | -1.9    | 2.5     | 1.9    | 2.7     | 1.7     | 1.8     | 1.2     | 1.2    | 1.7     | 1.8     | 1.5     |
| Net Exports (Bil. Chain 2012\$)          | -692.0 | -642.8 | -854.9 | -950.8 | -1033.0 | -1050.7 | -1031.7 | -995.1 | -1013.0 | -1019.0 | -1020.3 | -1011.5 | -785.1 | -1027.7 | -1016.0 | -1001.2 |
| Inventory Investment (Bil. Chain 2012\$) | -25.8  | -214.9 | 21.5   | 75.5   | -75.1   | -144.0  | -50.2   | 4.0    | 86.3    | 130.5   | 149.4   | 144.2   | -35.9  | -66.3   | 127.6   | 123.2   |
| Consumer Prices (YOY)                    | 2.1    | 0.4    | 1.3    | 1.2    | 1.9     | 4.8     | 5.1     | 4.8    | 4.5     | 2.9     | 2.2     | 2.7     | 1.2    | 4.8     | 2.7     | 2.1     |
| <b>Percent</b>                           |        |        |        |        |         |         |         |        |         |         |         |         |        |         |         |         |
| Unemployment Rate                        | 3.8    | 13.0   | 8.8    | 6.7    | 6.2     | 5.9     | 5.2     | 4.5    | 4.2     | 3.9     | 3.8     | 3.8     | 8.1    | 5.4     | 3.9     | 3.8     |
| Federal Funds Rate                       | 0.125  | 0.125  | 0.125  | 0.125  | 0.125   | 0.125   | 0.125   | 0.125  | 0.125   | 0.125   | 0.125   | 0.125   | 0.125  | 0.125   | 0.125   | 0.625   |
| 10-Year Treasury Yield                   | 1.4    | 0.7    | 0.6    | 0.9    | 1.3     | 1.6     | 1.3     | 1.6    | 1.8     | 1.9     | 2.2     | 2.3     | 0.9    | 1.6     | 2.3     | 2.5     |

### Notes:

The Fed Funds Rate forecast is shown as the mid point of the Fed Funds range at the end of the period.

All data except interest rates are seasonally adjusted

The 10-Year Treasury Yield is the average for the quarter, while the annual value is the Q4 value

Forecast produced with the assistance of the Macroeconomic Advisers' model

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# MBA

MORTGAGE BANKERS ASSOCIATION

# Summary

## **In conclusion:**

The month-over-month and year-over-year housing data for August were predominantly positive. Single-family starts were negative month-over-month and permits were negative year-over-year. Completions remained slowed due to the unavailability of building materials and products, among other factors. Thus, certain builders may be reluctant to start new projects while waiting to complete units under construction. The new SF housing construction sector is where the majority of value-added forest products are utilized, and this housing sector has ample room for improvement.

## **Pros:**

- 1) Historically low interest rates remain in place;
- 2) Select builders are beginning to focus on entry-level houses;

## **Cons:**

- 1) COVID-19;
- 2) Construction material and appliance constraints;
- 3) Logistics/Supply chains;
- 4) Lot availability and building regulations (according to several sources);
- 5) Laborer shortages in many sectors;
- 6) Household formations still lag historical averages;
- 7) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
- 8) Debt: Corporate, personal, government – United States and globally;
- 9) Other global uncertainties.

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