The Virginia Tech–USDA Forest Service Housing Commentary: Section I
March 2021

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To request the commentary, please email: buehlmann@gmail.com or delton.r.alderman@usda.gov

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Opening Remarks

Aggregate March housing data were overwhelmingly positive in March. Total March housing starts achieved their greatest level in 15-years; specifically, since July 2006. Total- and single-family permits rebounded strongly as well. Houses under construction and housing completions also attained their highest-levels in 13-years. New single-family house sales recorded significant gains. Existing house sales were negative month-over-month and housing doyens attributed this to a lack of inventory. Total- and single-family construction spending were positive month-over-month and year-over-year. In sum, private residential spending hit the highest rate in eight-years.

The May 14th Atlanta Fed GDPNow™ model forecast was an aggregate 17.6% increase for total residential investment spending for Q2 2021. New private permanent site expenditures were projected at 16.2%; the improvement spending forecast was 12.0%; and the manufactured/mobile expenditures projection was 18.5% (all: quarterly log change and at a seasonally adjusted annual rate). [1]

"Even before the COVID-19 pandemic and current recession, the housing market was facing a substantial supply shortage and that deficit has grown. In 2018, we estimated that there was a housing supply shortage of approximately 2.5 million units, meaning that the U.S. economy was about 2.5 million units below what was needed to match long-term demand. Using the same methodology, we estimate that the housing shortage increased to 3.8 million units by the end of 2020. A continued increase in a housing shortage is extremely unusual; typically, in a recession, housing demand declines and supply rises, causing inventory to rise above the long-term trend."[2] – Sam Khater, Vice President and Chief Economist, Economic & Housing Research Group; Freddie Mac.

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, demographic, and economic information.

Sources: [1] www.frbatlanta.org/cqer/research/gdpnow.aspx; 5/14/21;
[2] http://www.freddiemac.com/perspectives/sam_khater/20210415_single_family_shortage.page; 4/15/21

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March 2021
Housing Scorecard

	M/M	Y/Y
Housing Starts	▲ 19.4%	▲ 37.0%
Single-Family (SF) Starts	▲ 15.3%	▲ 40.7%
Multi-Family (MF) Starts*	▲ 30.8%	▲ 28.8%
Housing Permits	▲ 2.3%	▲ 29.7%
SF Permits	▲ 4.7%	▲ 35.7%
MF Permits*	▼ 2.6%	▲ 18.4%
Housing Under Construction	▲ 0.8%	▲ 7.3%
SF Under Construction	▲ 1.6%	▲ 19.3%
Housing Completions	▲ 16.6%	▲ 23.4%
SF Completions	▲ 5.3%	▲ 21.2%
New SF House Sales	▲ 20.7%	▲ 66.8%
Private Residential Construction Spending	▲ 1.7%	▲ 23.3%
SF Construction Spending	▲ 2.0%	▲ 26.7%
Existing House Sales[1]	▼ 3.7%	▲ 12.3%

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

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

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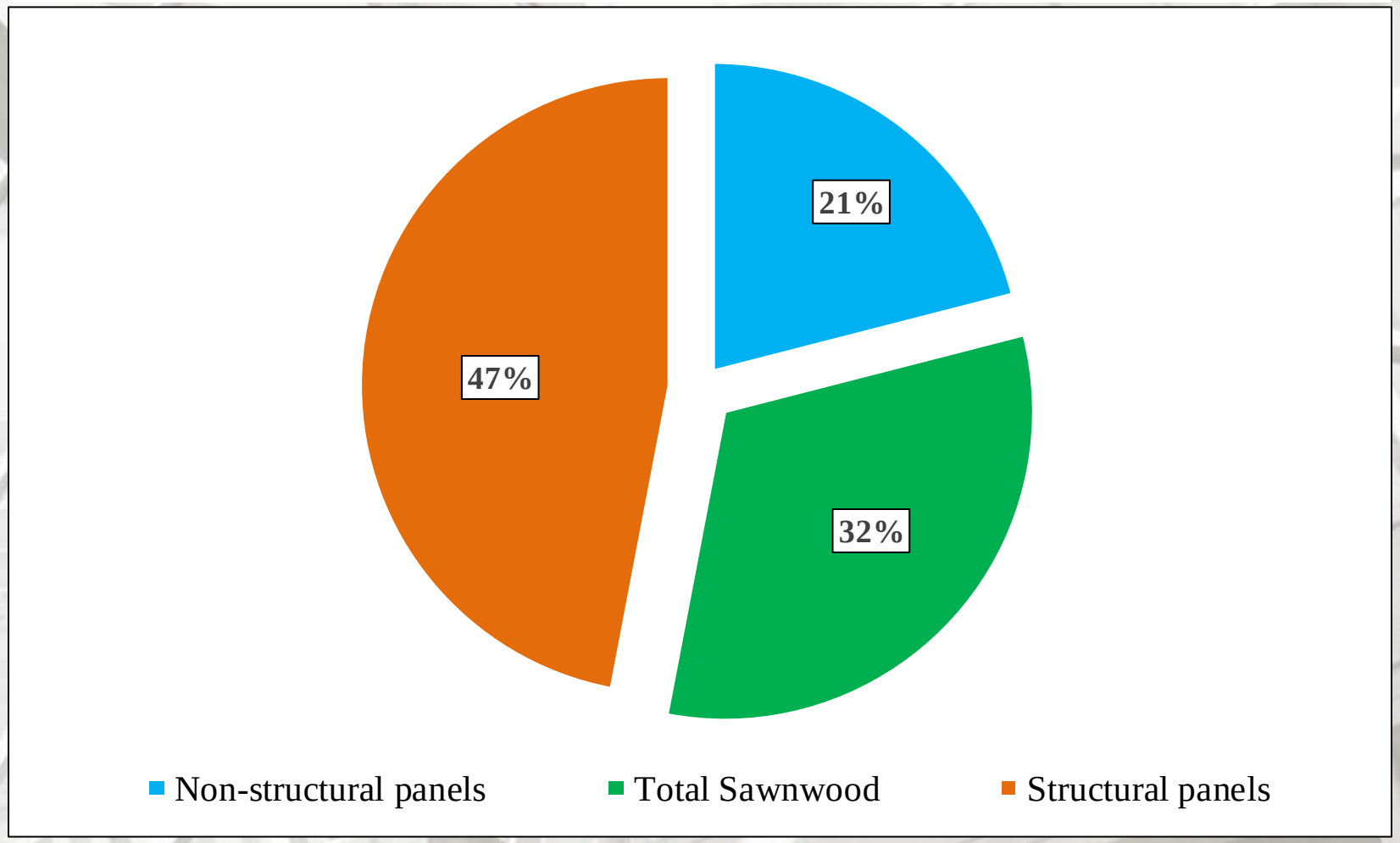
New Construction's Percentage of Wood Products Consumption



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

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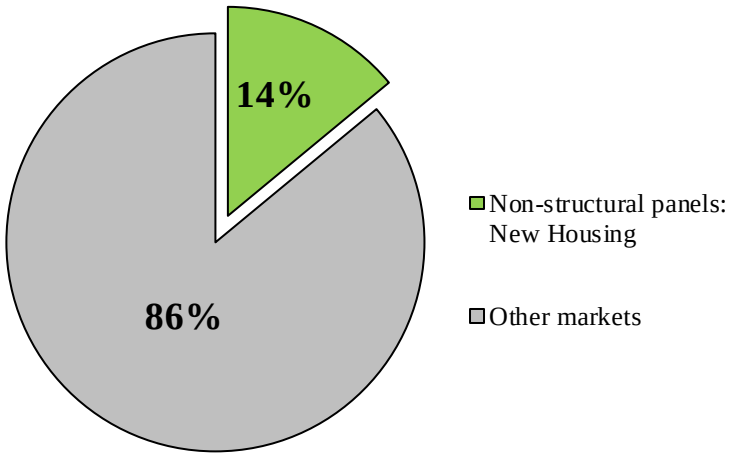
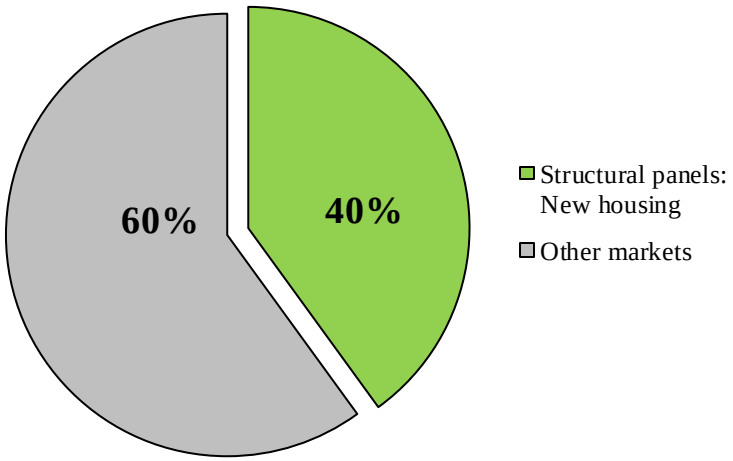
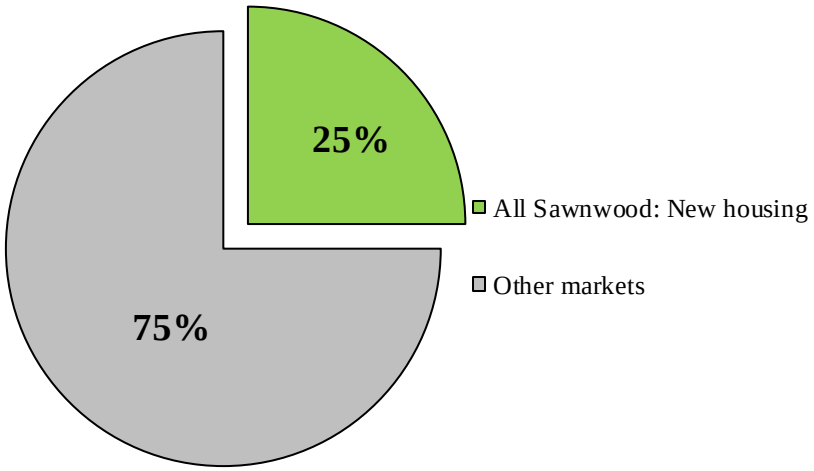
New SF Construction Percentage of Wood Products Consumption







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

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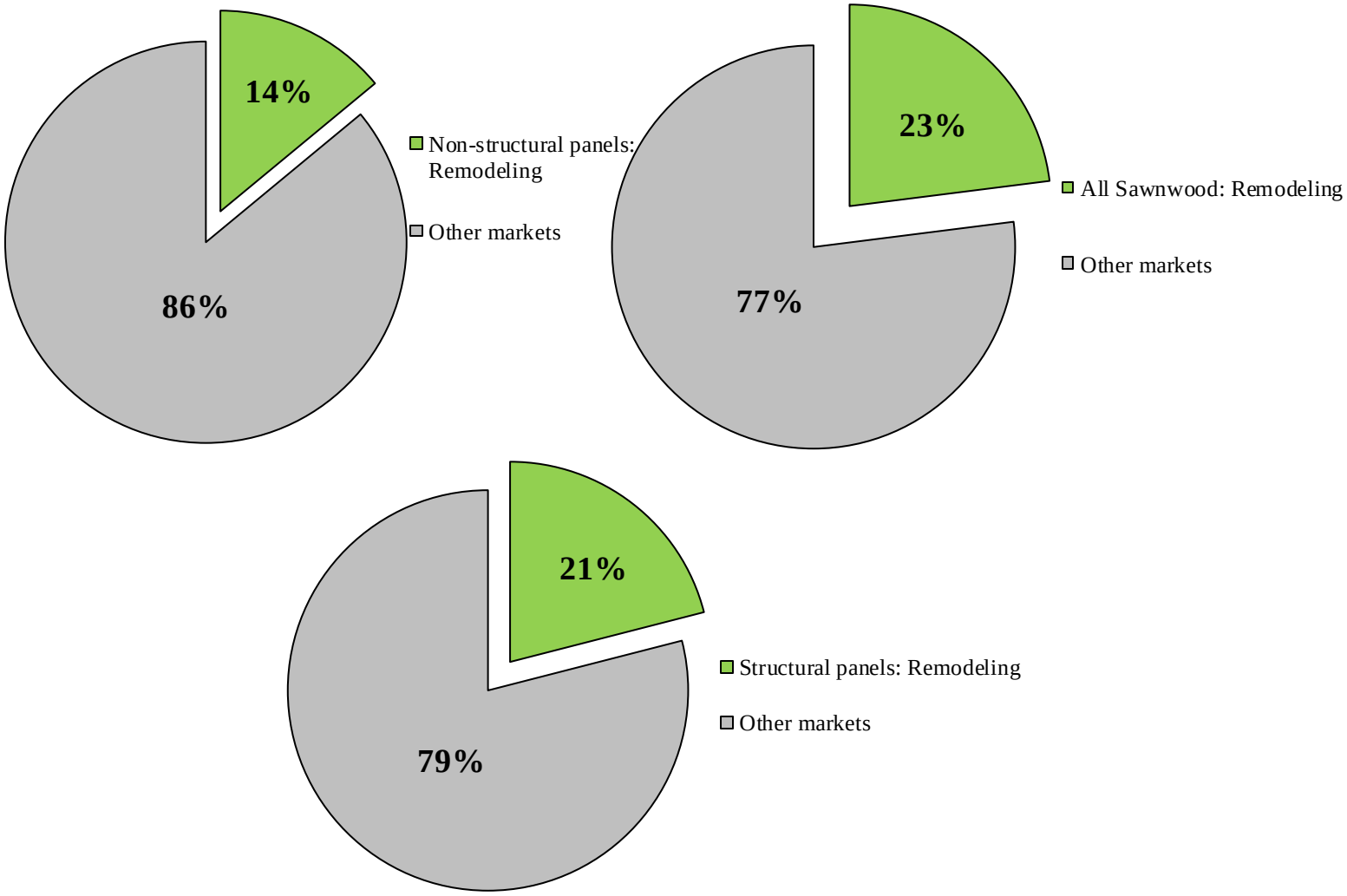
Repair and Remodeling's Percentage of Wood Products Consumption



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

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New Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
March	1,739,000	1,238,000	24,000	477,000
February	1,457,000	1,074,000	16,000	367,000
2020	1,269,000	880,000	13,000	376,000
M/M change	19.4%	15.3%	50.0%	30.0%
Y/Y change	37.0%	40.7%	84.6%	26.9%

* 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)).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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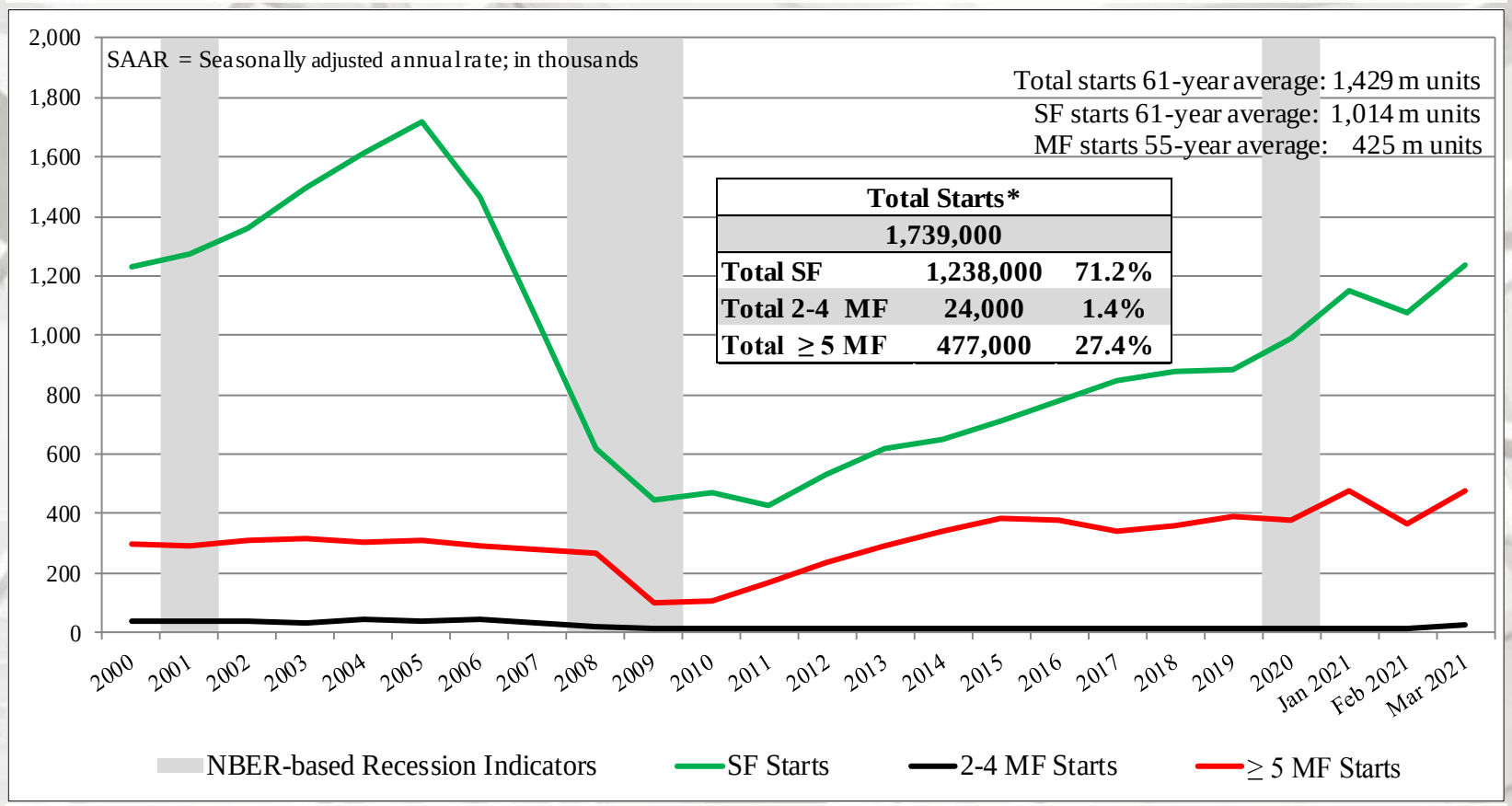
Total Housing Starts



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

Sources: https://fred.stlouisfed.org/series/USREC, 3/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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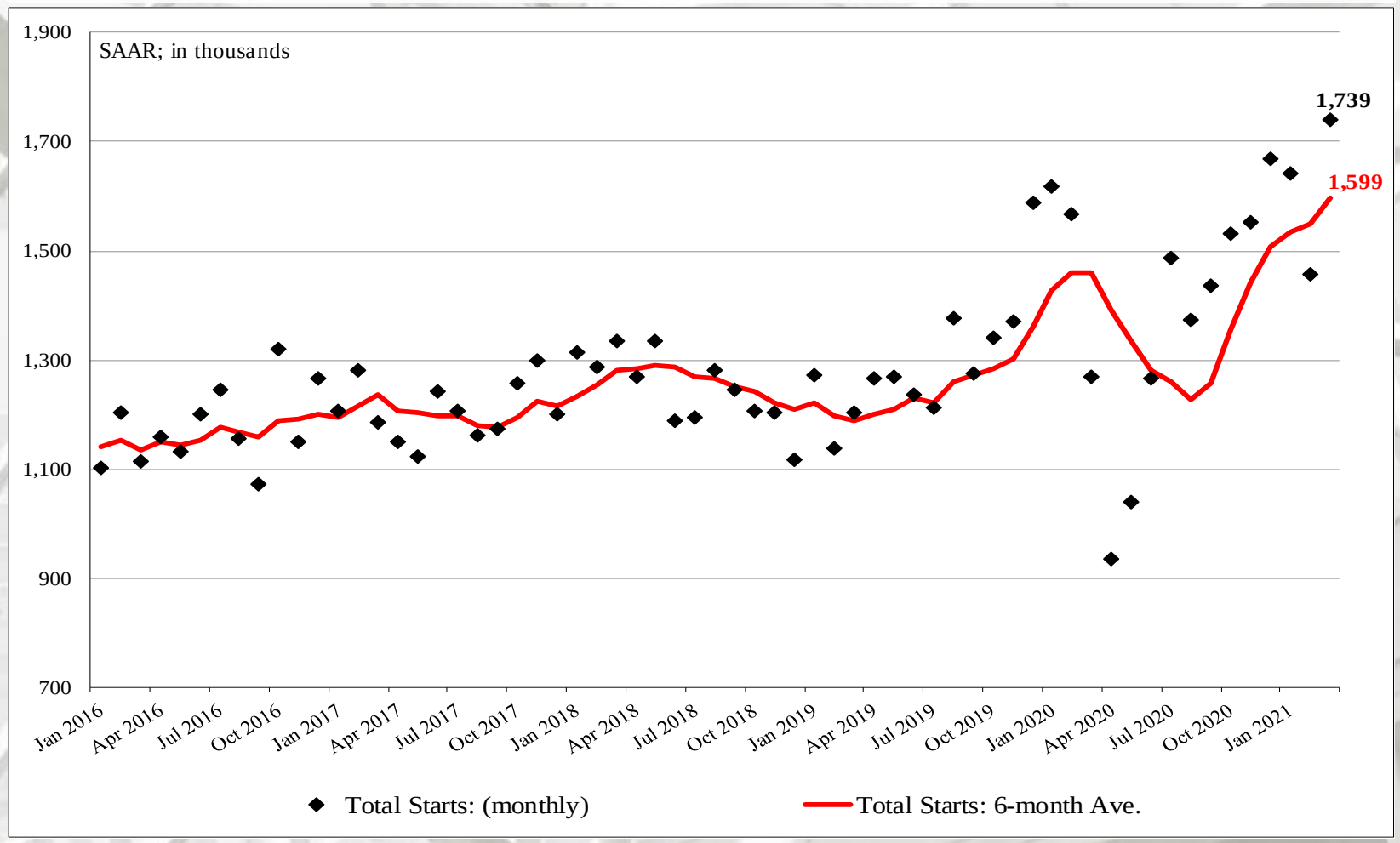
Total Housing Starts: Six-Month Average



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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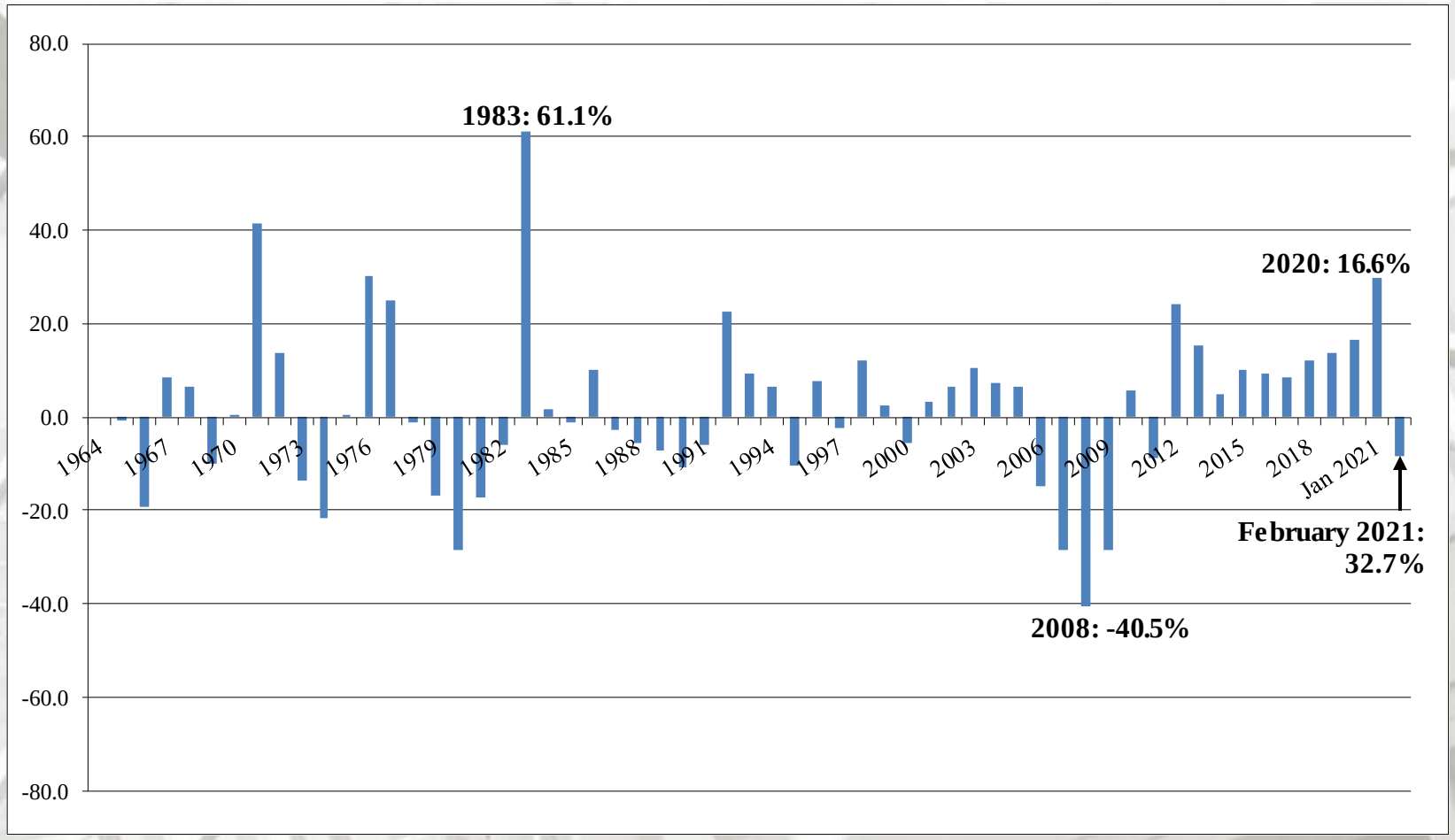
SF Housing Starts: Year-over-Year Change



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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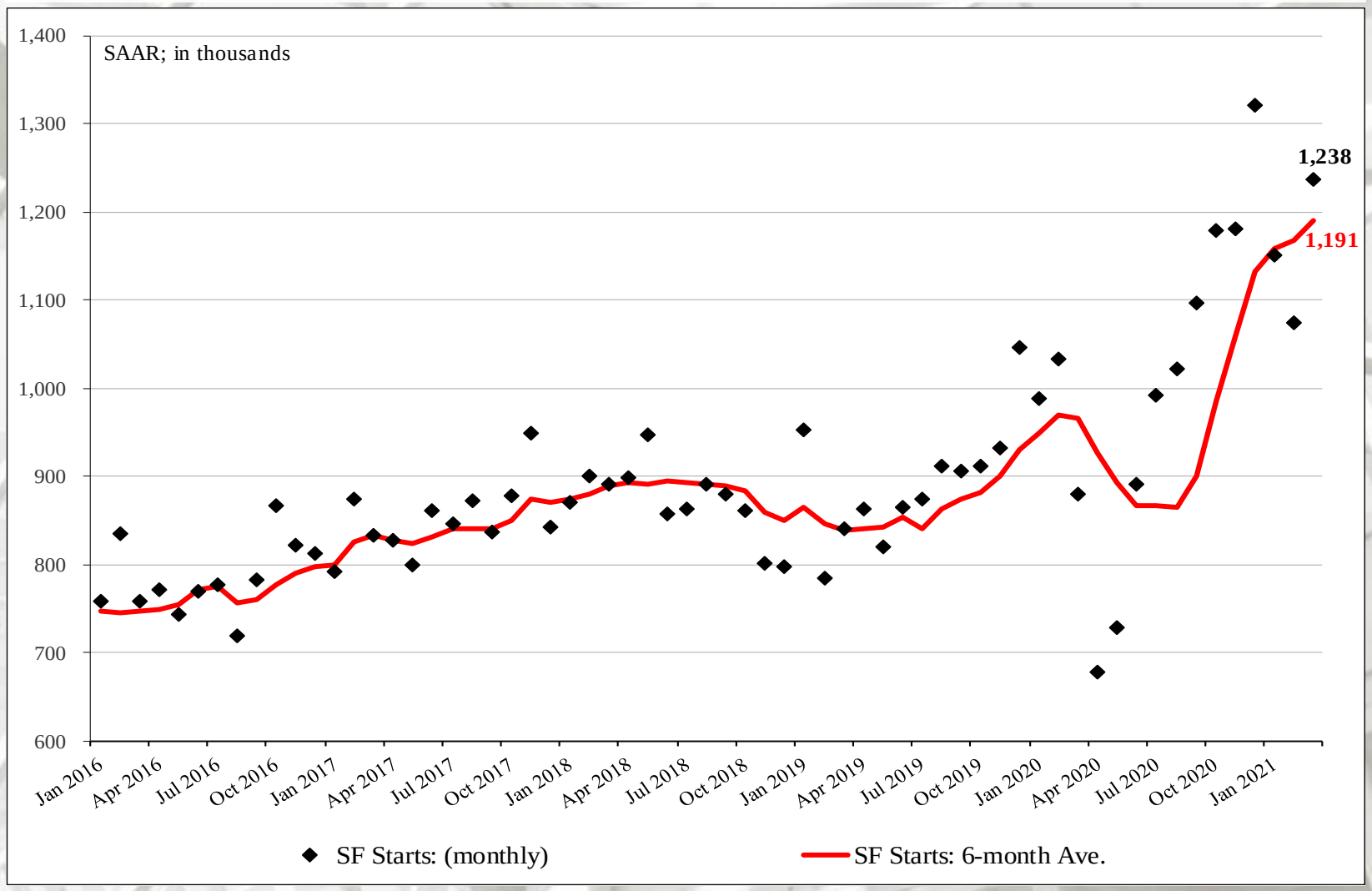
SF Housing Starts: Six-Month Average



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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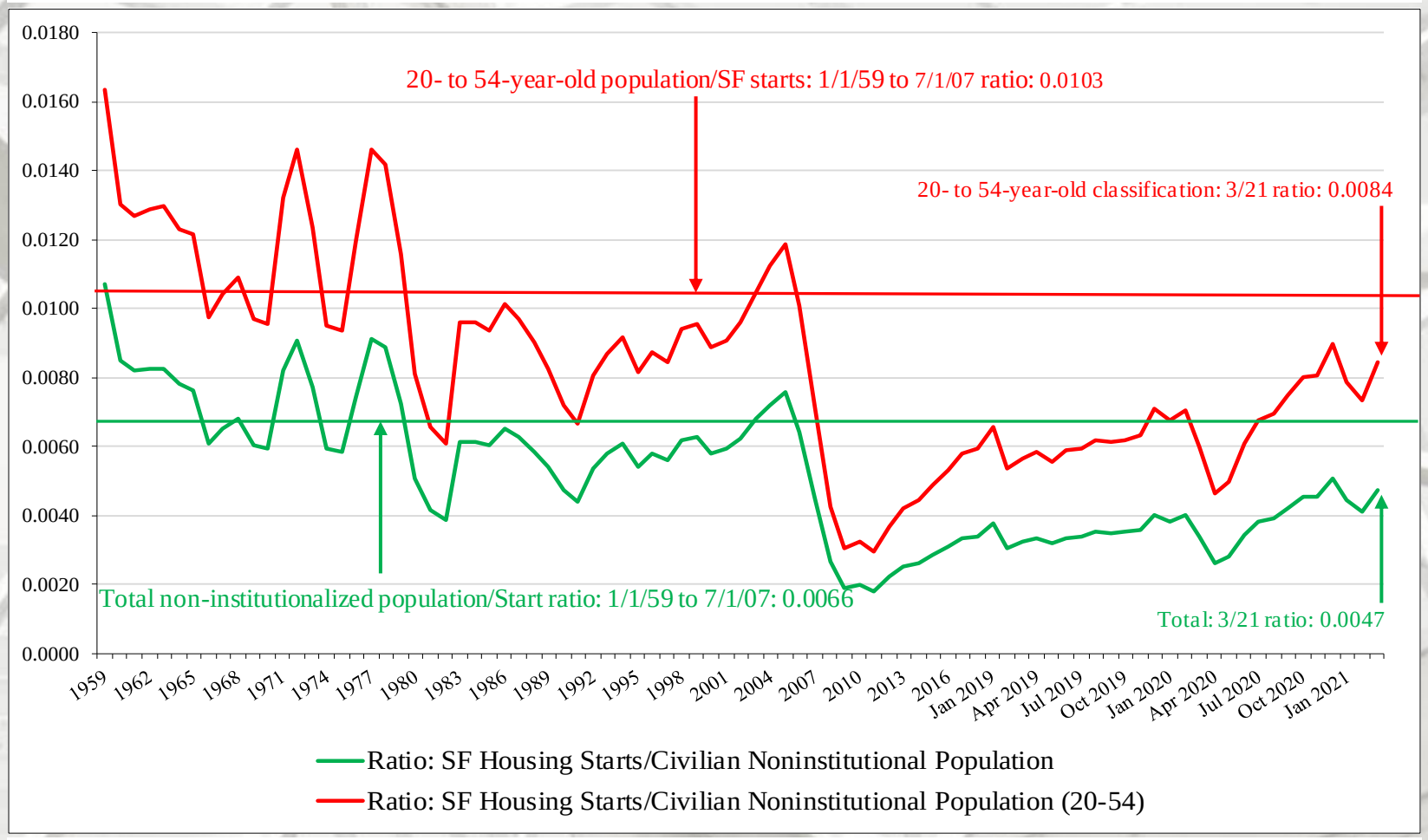
New SF Starts



New SF starts adjusted for the US population

From March 1959 to July 2007, the long-term ratio of the total US non-institutionalized population to new SF starts is 0.0066; in March 2021 it was 0.0047 – an increase from January (0.0041). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in March 2021 was 0.00841 – also an increase from January (0.0073). 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; 4/16/21

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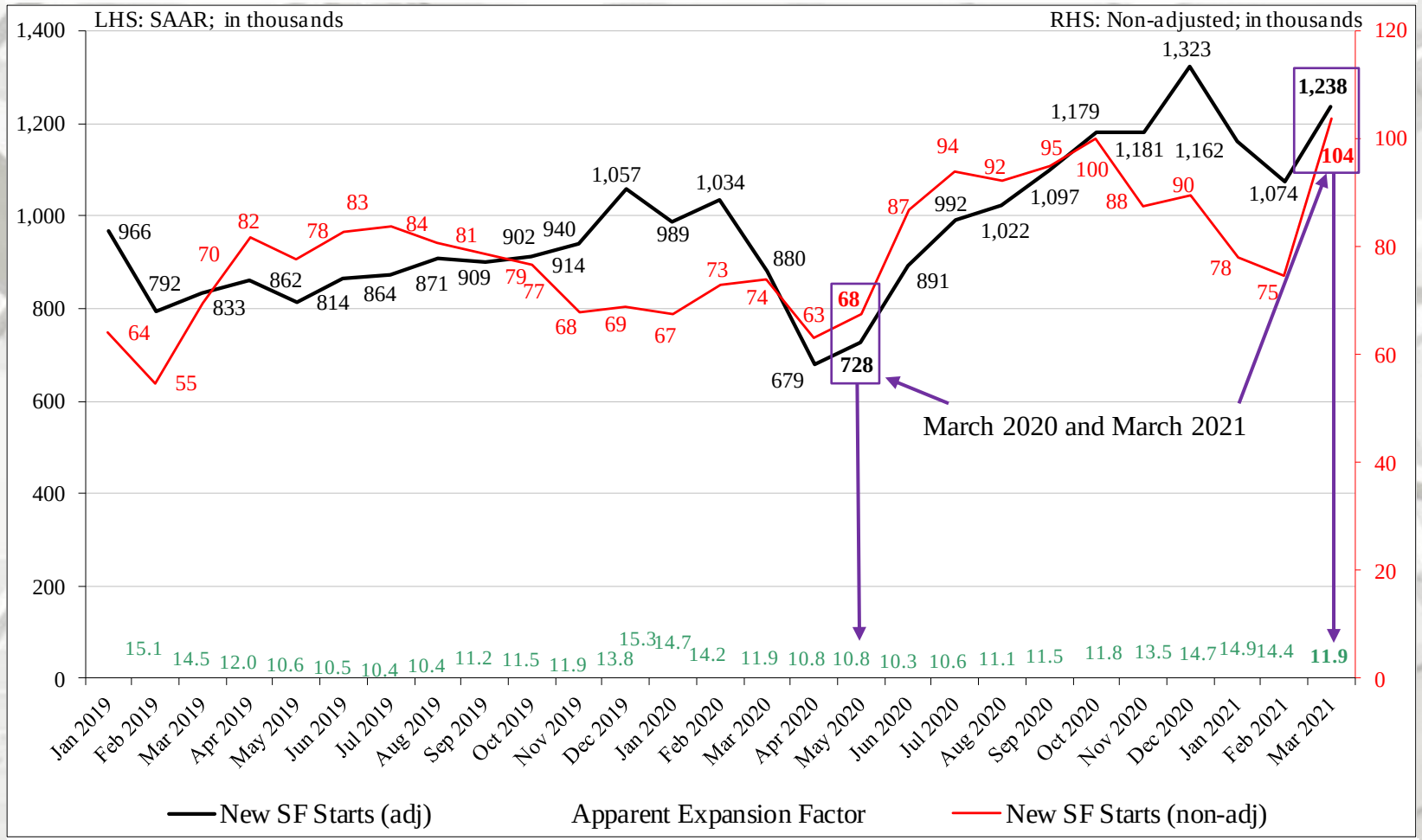
Nominal & SAAR SF Starts



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; 4/16/21

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New Housing Starts by Region

	NE Total	NE SF	NE MF**
March	182,000	90,000	92,000
February	111,000	70,000	41,000
2020	84,000	58,000	26,000
M/M change	64.0%	28.6%	124.4%
Y/Y change	116.7%	55.2%	253.8%

	MW Total	MW SF	MW MF
March	303,000	232,000	71,000
February	136,000	111,000	25,000
2020	162,000	117,000	45,000
M/M change	122.8%	109.0%	184.0%
Y/Y change	87.0%	98.3%	57.8%

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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New Housing Starts by Region

	S Total	S SF	S MF**
March	874,000	639,000	235,000
February	770,000	576,000	194,000
2020	705,000	461,000	244,000
M/M change	13.5%	10.9%	21.1%
Y/Y change	24.0%	38.6%	-3.7%

	W Total	W SF	W MF
March	380,000	277,000	103,000
February	440,000	317,000	123,000
2020	318,000	244,000	74,000
M/M change	-13.6%	-12.6%	-16.3%
Y/Y change	19.5%	13.5%	39.2%

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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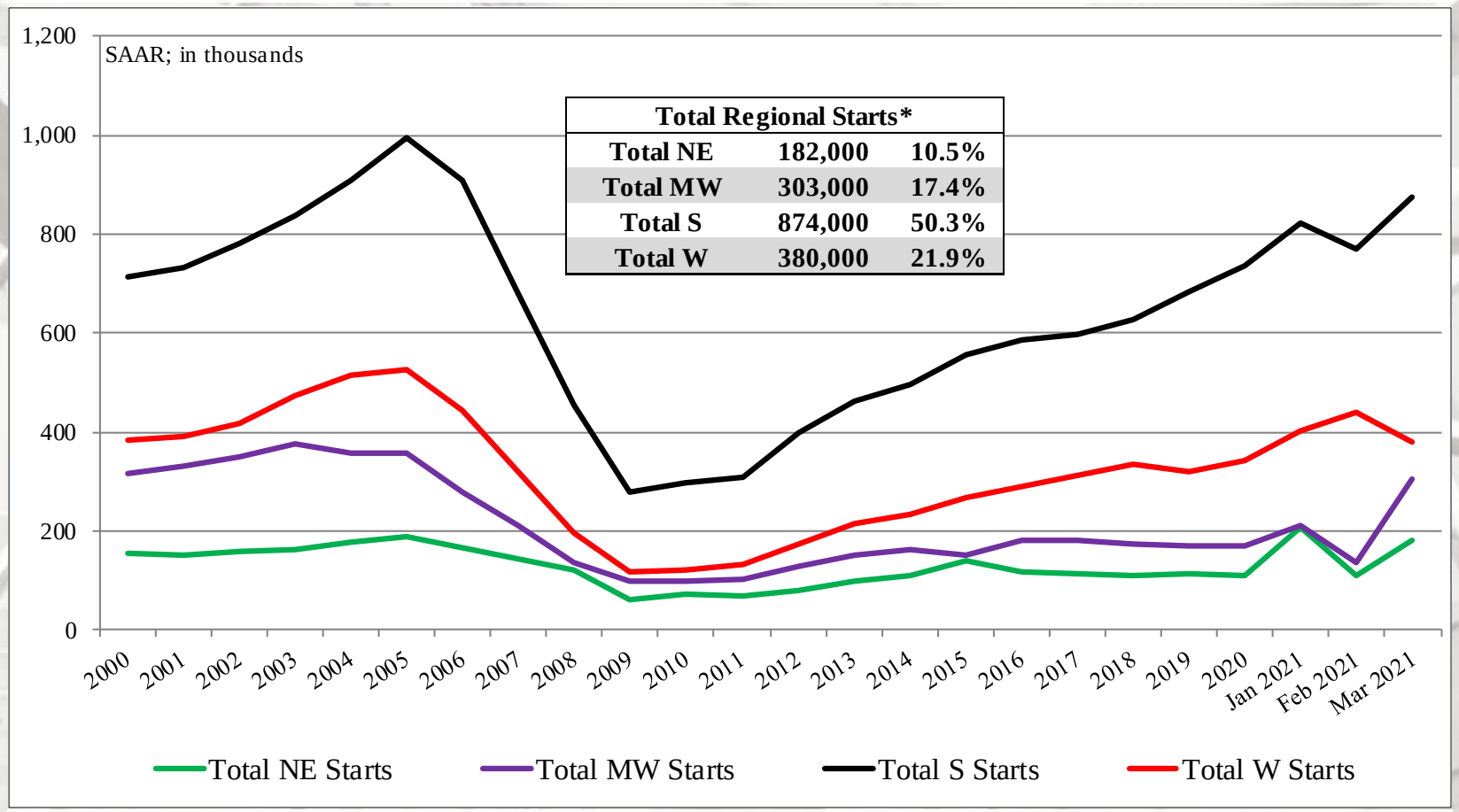
New Housing Starts by Region



Total Regional Starts*		
Total NE	182,000	10.5%
Total MW	303,000	17.4%
Total S	874,000	50.3%
Total W	380,000	21.9%

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.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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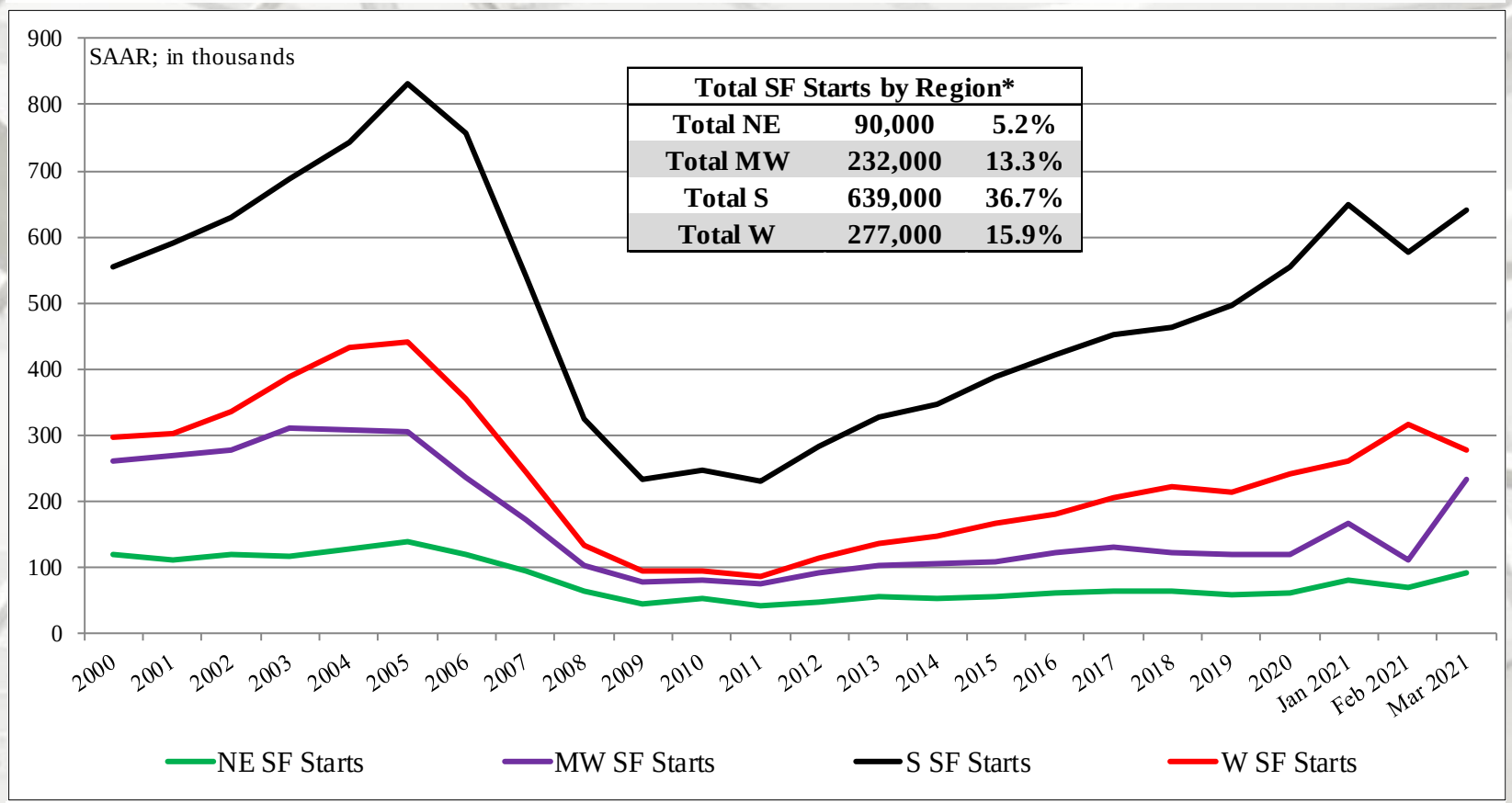
Total SF Housing Starts by Region



Total SF Starts by Region*		
Total NE	90,000	5.2%
Total MW	232,000	13.3%
Total S	639,000	36.7%
Total W	277,000	15.9%

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.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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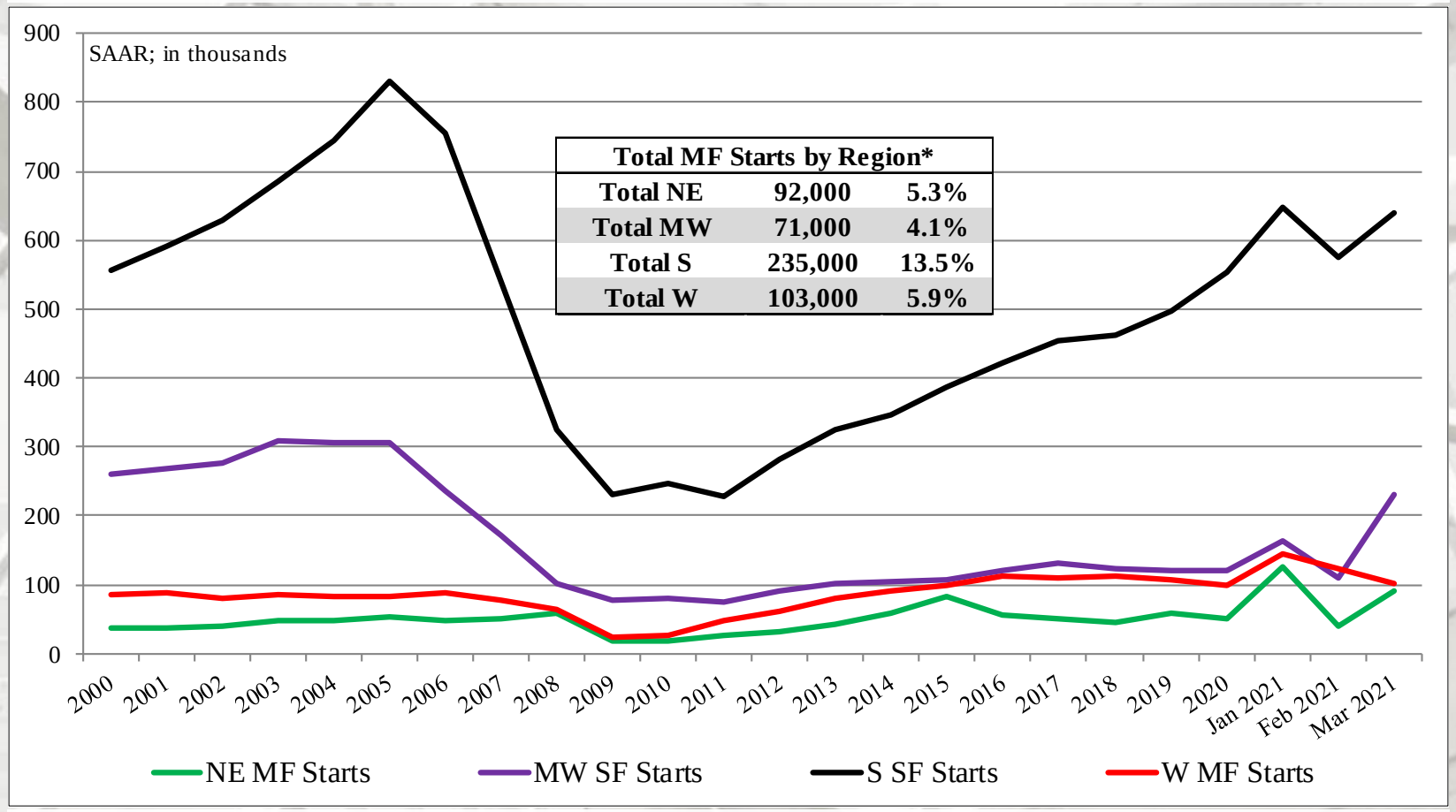
MF Housing Starts by Region



Total MF Starts by Region*		
Total NE	92,000	5.3%
Total MW	71,000	4.1%
Total S	235,000	13.5%
Total W	103,000	5.9%

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.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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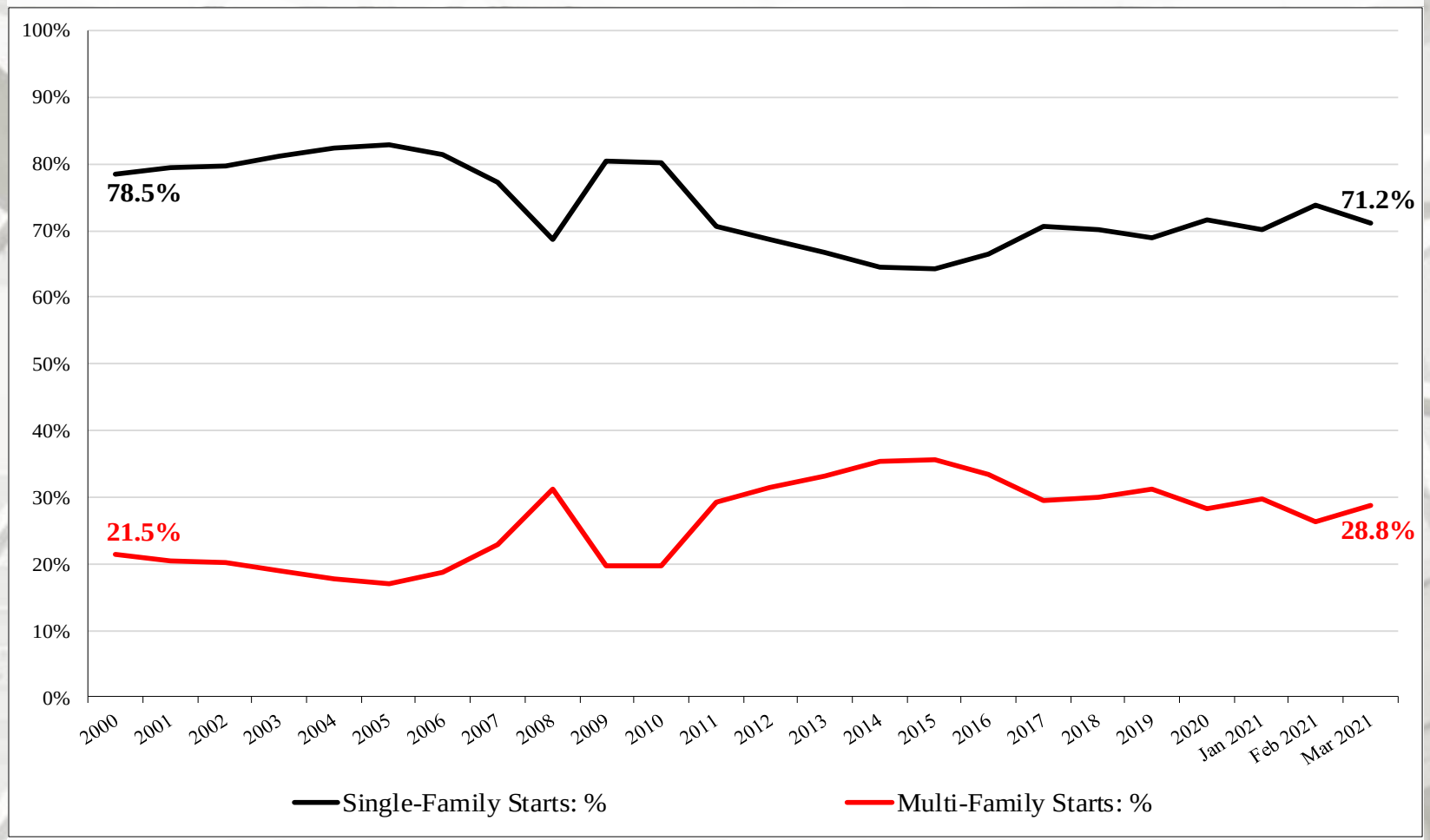
SF vs. MF Housing Starts (%)



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

Sources: https://fred.stlouisfed.org/series/USREC, 3/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
March	1,759,000	1,200,000	57,000	502,000
February	1,720,000	1,146,000	47,000	527,000
2020	1,356,000	884,000	46,000	426,000
M/M change	2.3%	4.7%	21.3%	-4.7%
Y/Y change	29.7%	35.7%	23.9%	17.8%

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

Source: https://www.census.gov/construction/bps/; 4/23/21

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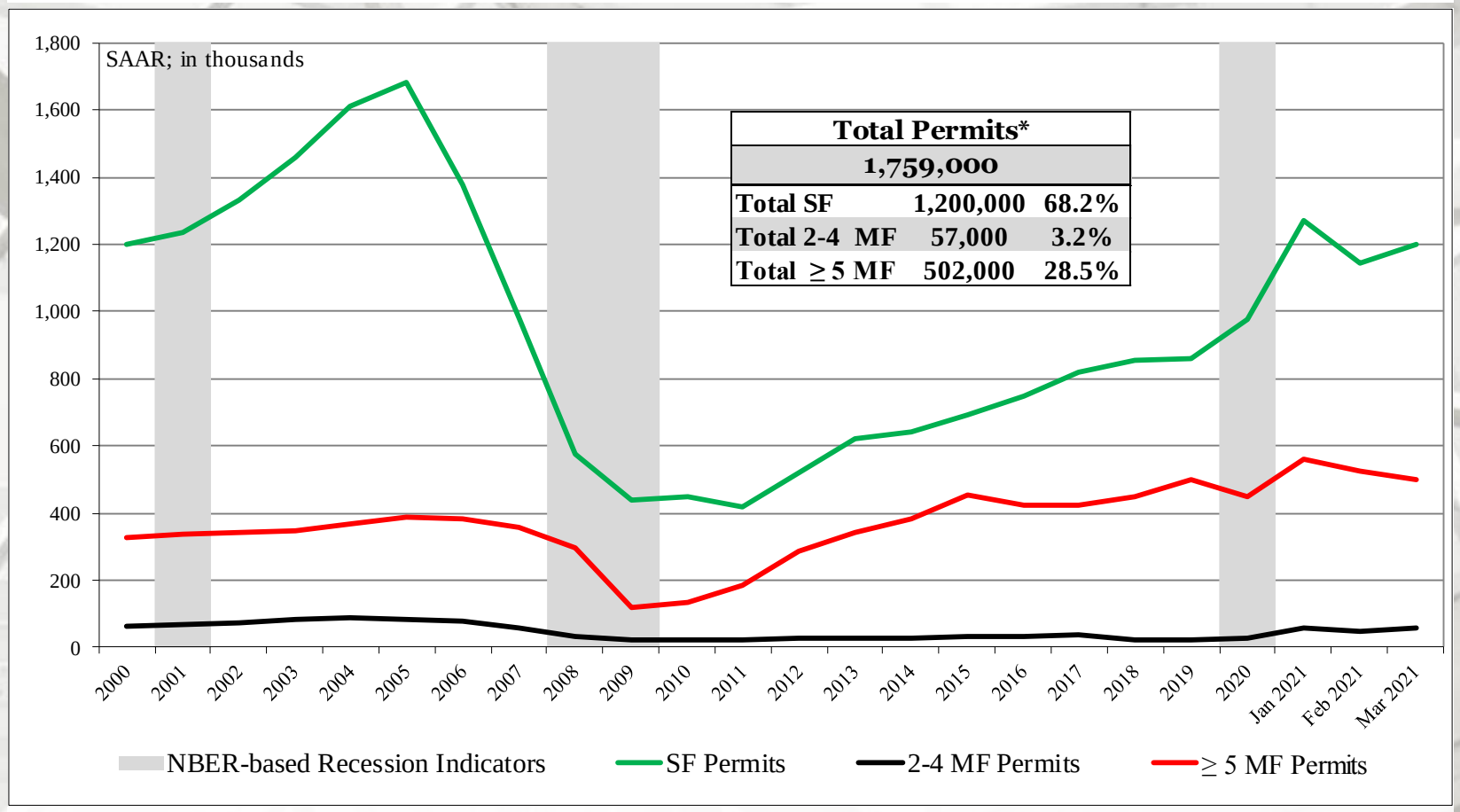
Total New Housing Permits



Total Permits*		
1,759,000		
Total SF	1,200,000	68.2%
Total 2-4 MF	57,000	3.2%
Total ≥ 5 MF	502,000	28.5%

* 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).

Sources: https://fred.stlouisfed.org/series/USREC, 3/1/21; https://www.census.gov/construction/bps/; 4/23/21

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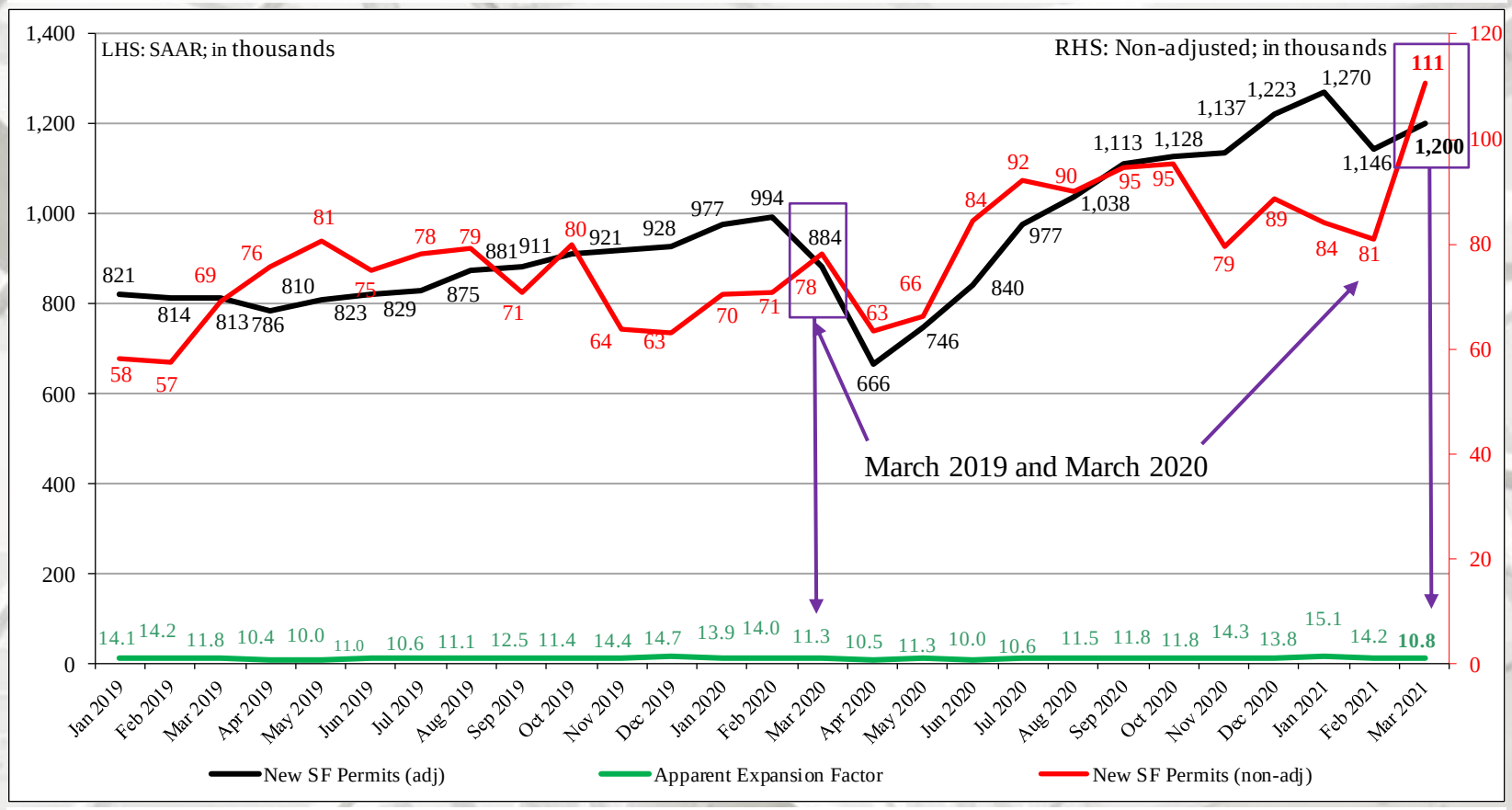
Nominal & SAAR SF Permits



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: https://www.census.gov/construction/bps/; 4/23/21

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New Housing Permits by Region

	NE Total*	NE SF	NE MF**
March	158,000	78,000	80,000
February	174,000	78,000	96,000
2020	112,000	55,000	57,000
M/M change	-9.2%	0.0%	-16.7%
Y/Y change	41.1%	41.8%	40.4%

	MW Total*	MW SF	MW MF**
March	254,000	174,000	80,000
February	249,000	173,000	76,000
2020	174,000	111,000	63,000
M/M change	2.0%	0.6%	5.3%
Y/Y change	46.0%	56.8%	27.0%

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).

Source: https://www.census.gov/construction/bps/; 4/23/21

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New Housing Permits by Region

	S Total*	S SF	S MF**
March	912,000	664,000	248,000
February	860,000	613,000	247,000
2020	723,000	513,000	210,000
M/M change	6.0%	8.3%	0.4%
Y/Y change	26.1%	29.4%	18.1%

	W Total*	W SF	W MF**
March	435,000	284,000	151,000
February	437,000	282,000	155,000
2020	347,000	205,000	142,000
M/M change	-0.5%	0.7%	-2.6%
Y/Y change	25.4%	38.5%	6.3%

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).

Source: https://www.census.gov/construction/bps/; 4/23/21

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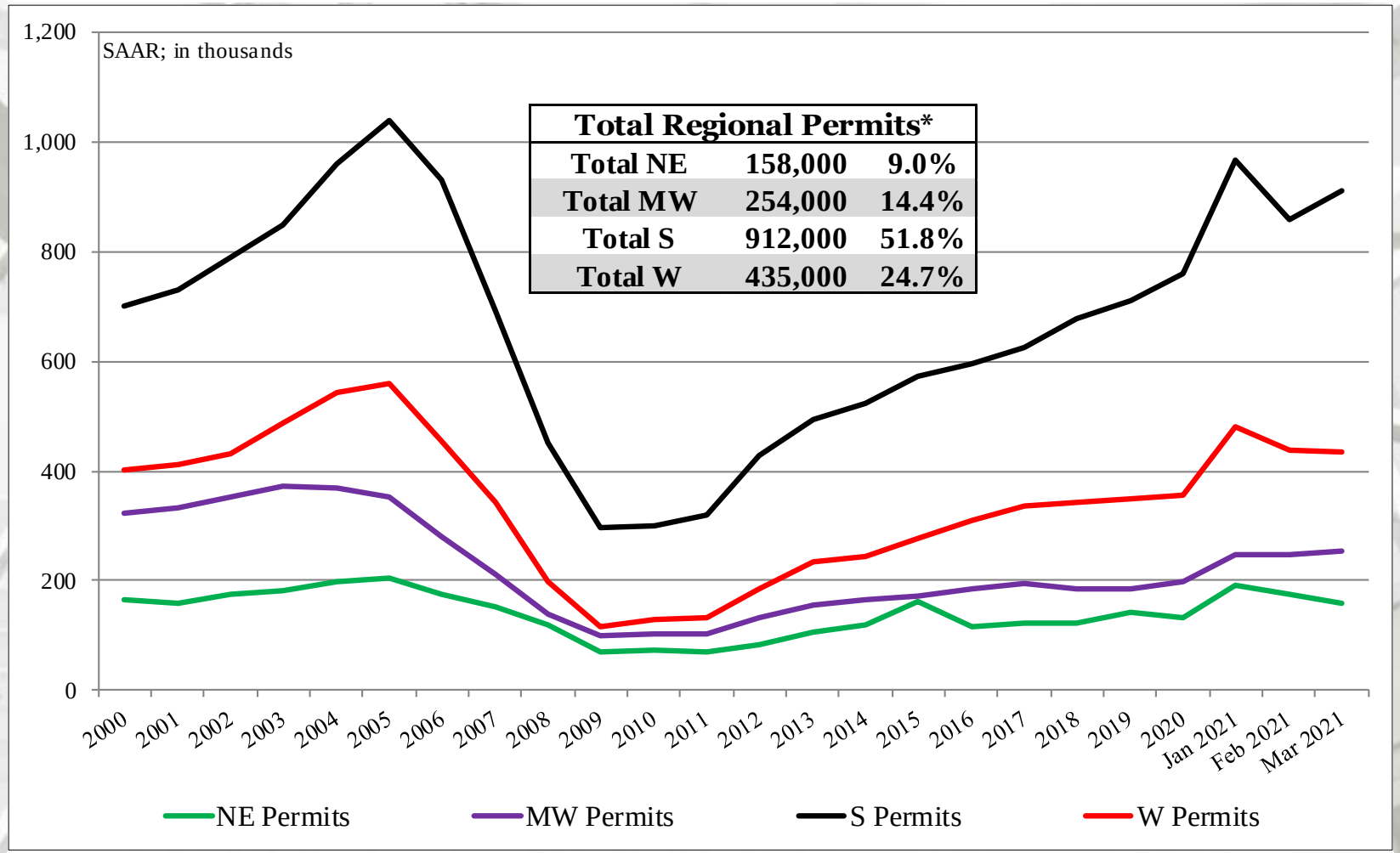
Total Housing Permits by Region



Total Regional Permits*		
Total NE	158,000	9.0%
Total MW	254,000	14.4%
Total S	912,000	51.8%
Total W	435,000	24.7%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 4/23/21

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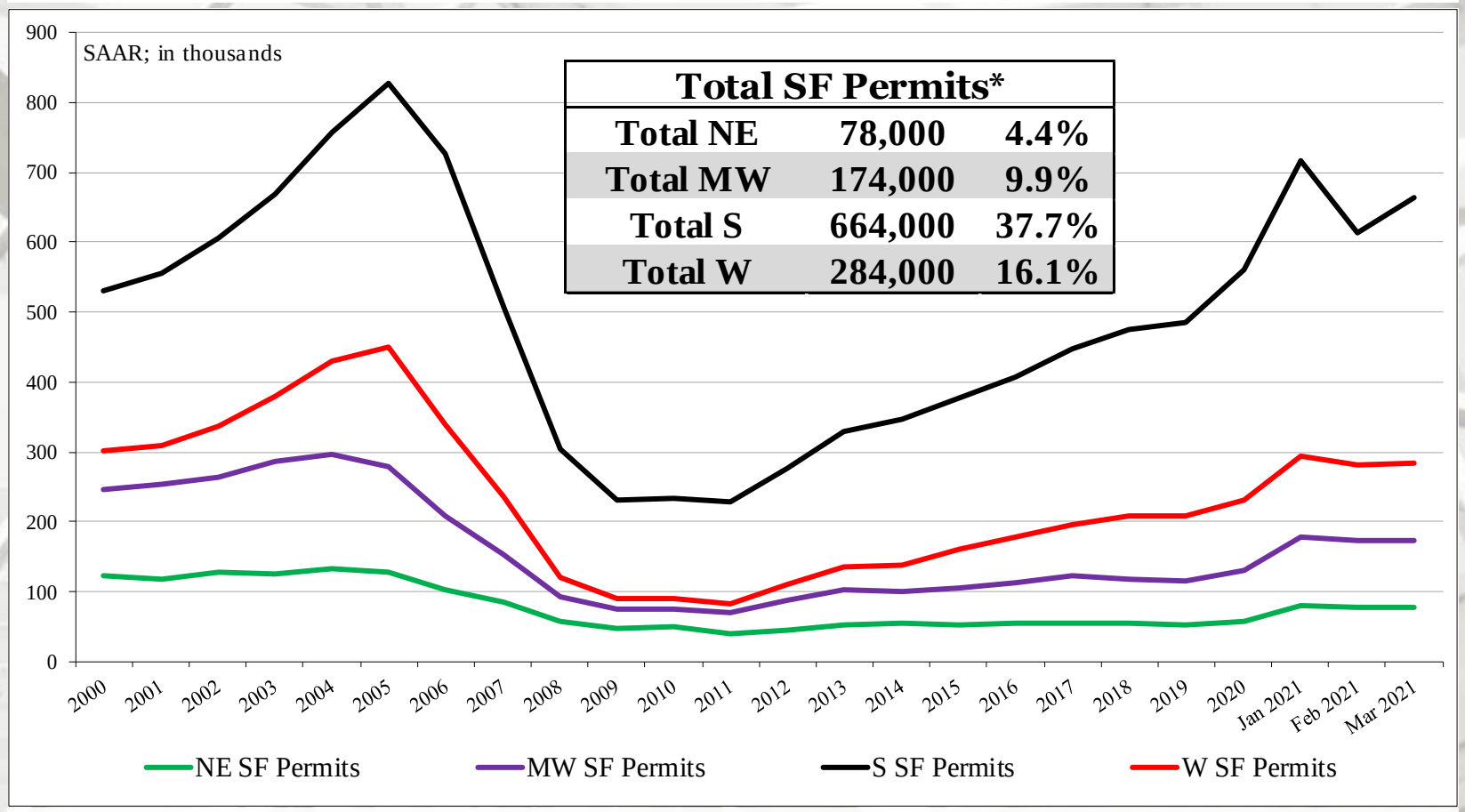
SF Housing Permits by Region



Total SF Permits*		
Total NE	78,000	4.4%
Total MW	174,000	9.9%
Total S	664,000	37.7%
Total W	284,000	16.1%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 4/23/21

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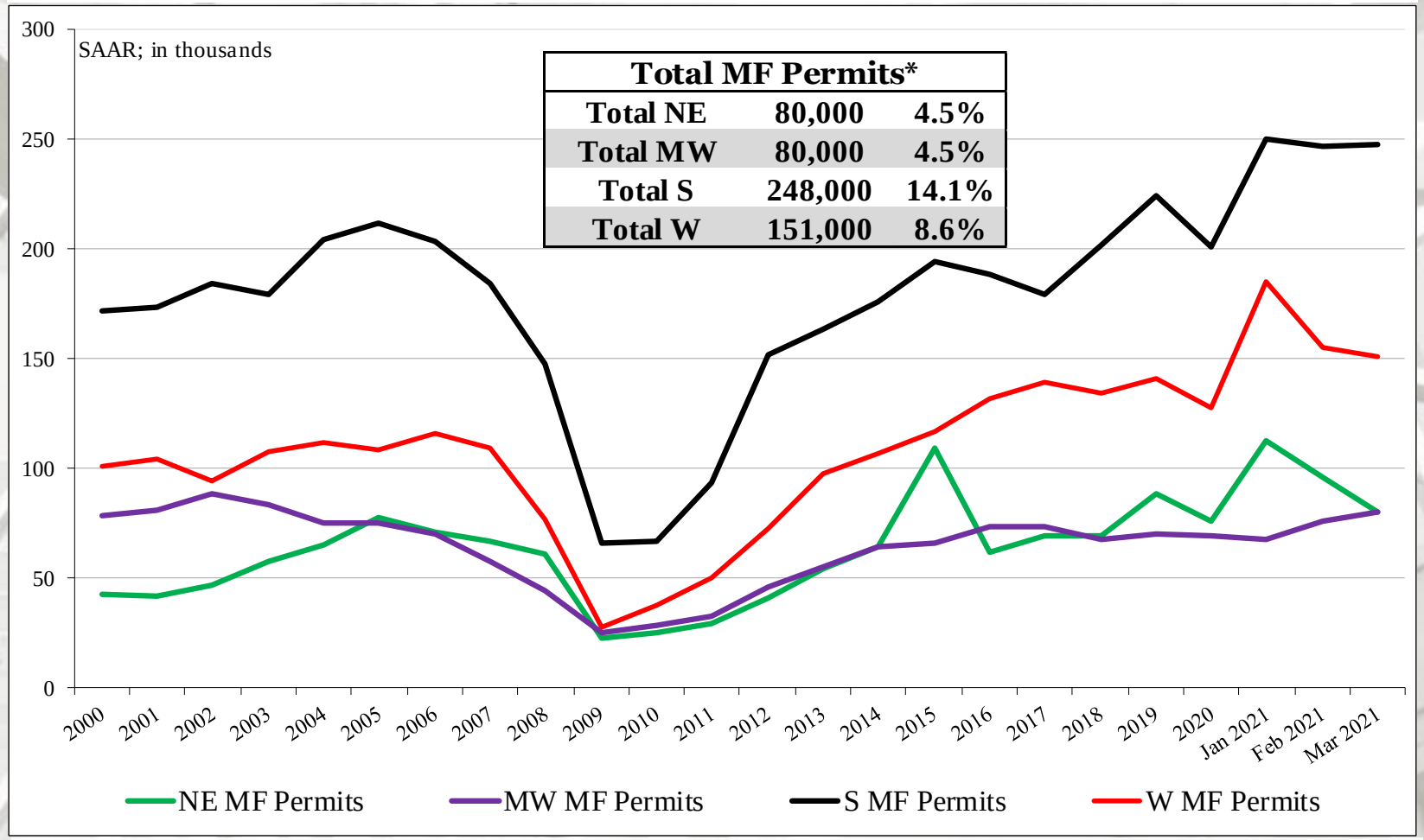
MF Housing Permits by Region



Total MF Permits*		
Total NE	80,000	4.5%
Total MW	80,000	4.5%
Total S	248,000	14.1%
Total W	151,000	8.6%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 4/23/21

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New Housing Under Construction (HUC)

	Total Under Construction*	SF Under Construction	MF 2-4 unit** Under Construction	MF ≥ 5 unit Under Construction
March	1,306,000	636,000	12,000	658,000
February	1,296,000	626,000	11,000	659,000
2020	1,217,000	533,000	13,000	671,000
M/M change	0.8%	1.6%	9.1%	-0.2%
Y/Y change	7.3%	19.3%	-7.7%	-1.9%

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)).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

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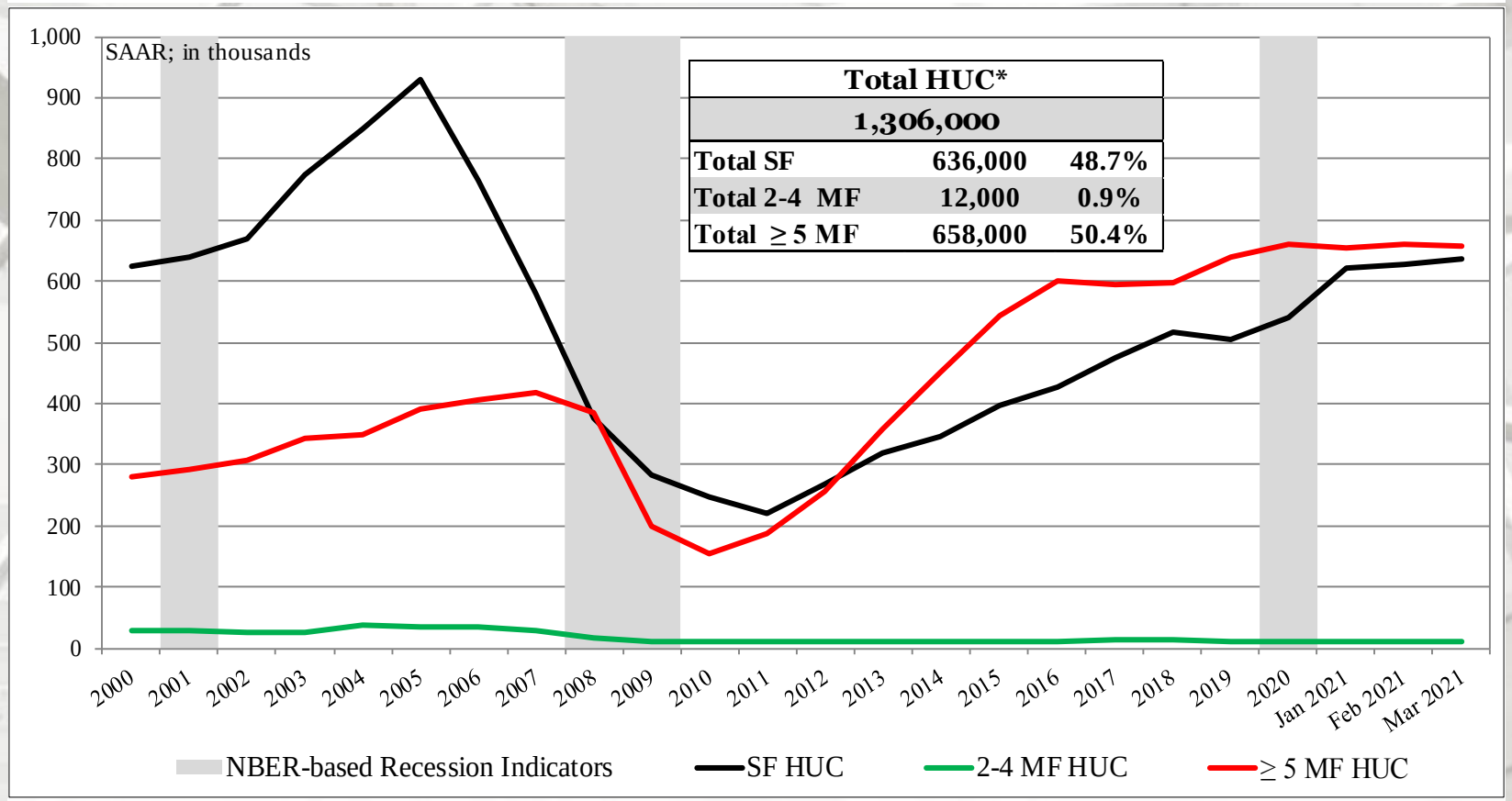
Total Housing Under Construction



Total HUC*		
1,306,000		
Total SF	636,000	48.7%
Total 2-4 MF	12,000	0.9%
Total ≥ 5 MF	658,000	50.4%

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

* 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).

Sources: https://fred.stlouisfed.org/series/USREC, 2/28/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
March	184,000	58,000	126,000
February	183,000	58,000	125,000
2020	179,000	56,000	123,000
M/M change	0.5%	0.0%	0.8%
Y/Y change	2.8%	3.6%	2.4%

	MW Total	MW SF	MW MF
March	167,000	91,000	76,000
February	162,000	85,000	77,000
2020	154,000	77,000	77,000
M/M change	3.1%	7.1%	-1.3%
Y/Y change	8.4%	18.2%	-1.3%

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

New Housing Under Construction by Region

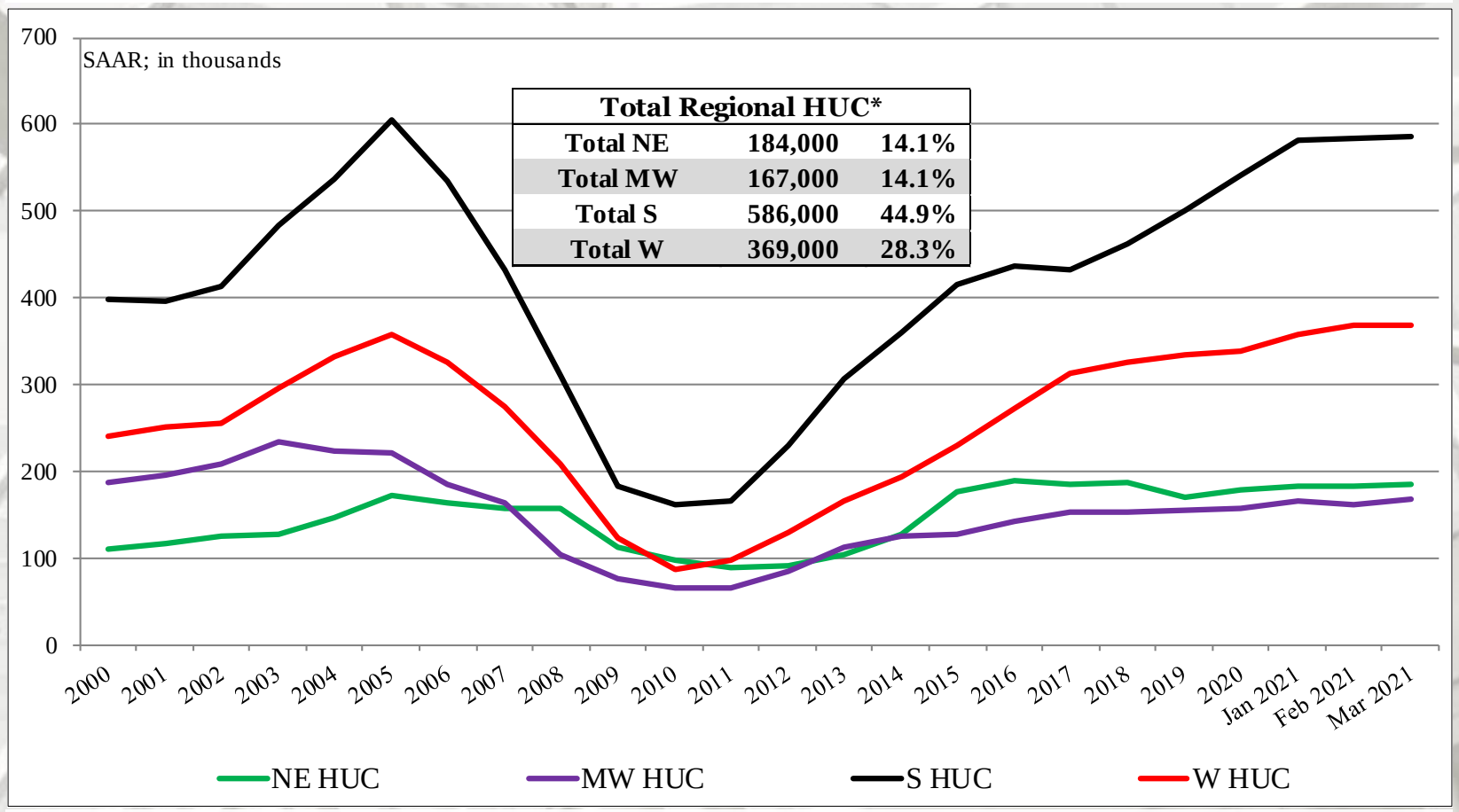
	S Total	S SF	S MF**
March	586,000	310,000	276,000
February	583,000	309,000	274,000
2020	539,000	255,000	284,000
M/M change	0.5%	0.3%	0.7%
Y/Y change	8.7%	21.6%	-2.8%
	W Total	**W SF**	**W MF**
March	369,000	177,000	192,000
February	368,000	174,000	194,000
2020	345,000	145,000	200,000
M/M change	0.3%	1.7%	-1.0%
Y/Y change	7.0%	22.1%	-4.0%

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

Total Housing Under Construction by Region



Total Regional HUC*		
Total NE	184,000	14.1%
Total MW	167,000	14.1%
Total S	586,000	44.9%
Total W	369,000	28.3%

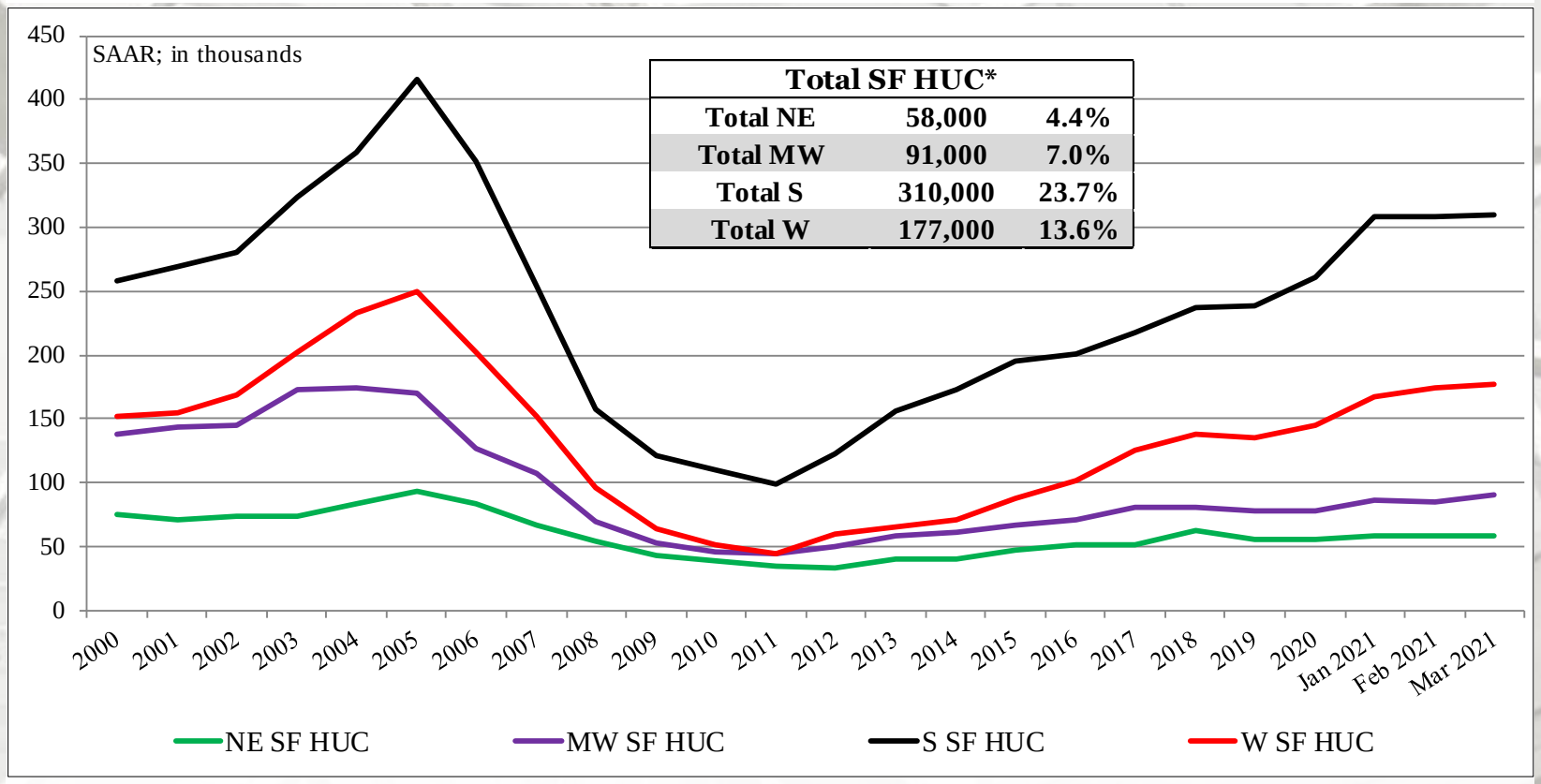
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family under construction directly; this is an estimation (Total under construction – (SF + ≥ 5 MF under construction).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

SF Housing Under Construction by Region



Total SF HUC*		
Total NE	58,000	4.4%
Total MW	91,000	7.0%
Total S	310,000	23.7%
Total W	177,000	13.6%

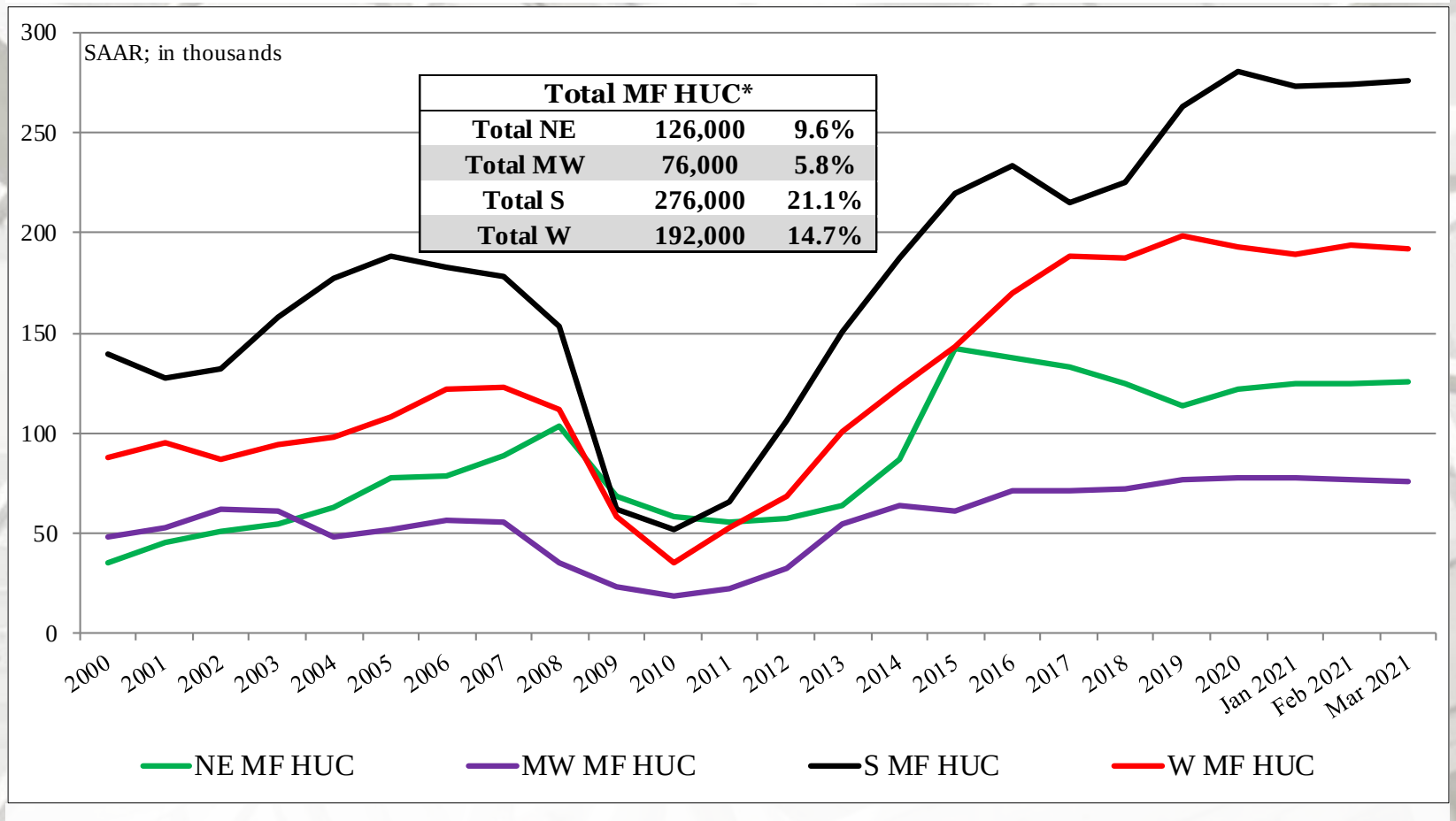
NE = Northeast, MW = Midwest, S = South, W = West.
US DOC does not report 2 to 4 multi-family under construction directly, this is an estimation (Total under construction – (SF + ≥ 5 MF under construction).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

MF Housing Under Construction by Region



Total MF HUC*		
Total NE	126,000	9.6%
Total MW	76,000	5.8%
Total S	276,000	21.1%
Total W	192,000	14.7%

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.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit** Completions	MF ≥ 5 unit Completions
March	1,580,000	1,099,000	5,000	476,000
February	1,355,000	1,044,000	10,000	301,000
2020	1,280,000	907,000	8,000	365,000
M/M change	16.6%	5.3%	-50.0%	58.1%
Y/Y change	23.4%	21.2%	-37.5%	30.4%

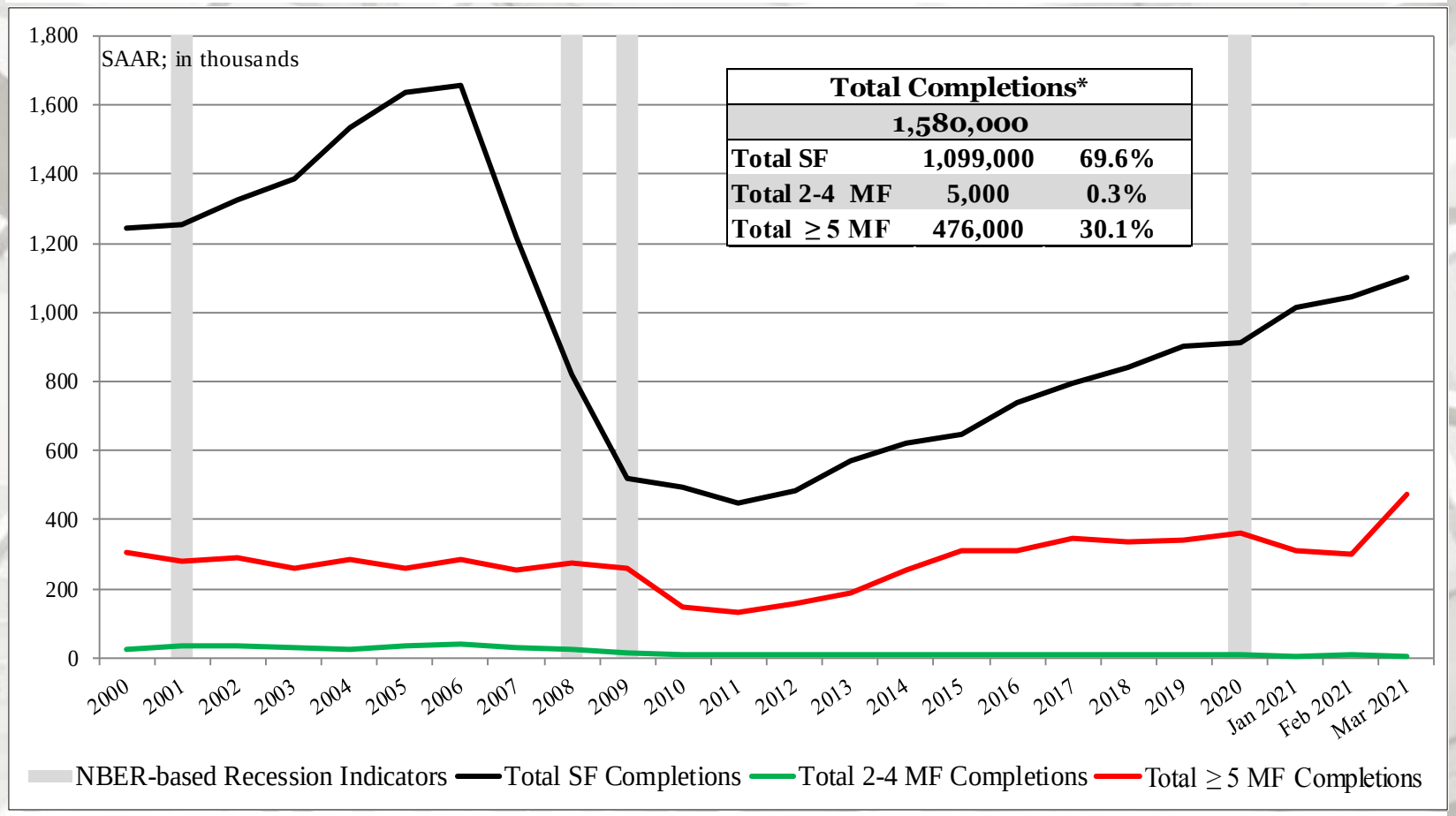
* All completion data are presented at a seasonally adjusted annual rate (SAAR).

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

Total Housing Completions



Total Completions*		
1,580,000		
Total SF	1,099,000	69.6%
Total 2-4 MF	5,000	0.3%
Total ≥ 5 MF	476,000	30.1%

** 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).

Sources: https://fred.stlouisfed.org/series/USREC, 3/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

New Housing Completions by Region

	NE Total	NE SF	NE MF**
March	142,000	81,000	61,000
February	109,000	65,000	44,000
2020	78,000	46,000	32,000
M/M change	30.3%	24.6%	38.6%
Y/Y change	82.1%	76.1%	90.6%
	MW Total	**MW SF**	**MW MF**
March	227,000	128,000	99,000
February	193,000	157,000	36,000
2020	202,000	131,000	71,000
M/M change	17.6%	-18.5%	175.0%
Y/Y change	12.4%	-2.3%	39.4%

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; 4/16/21

Return TOC

New Housing Completions by Region

	S Total	S SF	S MF**
March	865,000	655,000	210,000
February	740,000	578,000	162,000
2020	706,000	524,000	182,000
M/M change	16.9%	13.3%	29.6%
Y/Y change	22.5%	25.0%	15.4%
	W Total	**W SF**	**W MF**
March	346,000	235,000	111,000
February	313,000	244,000	69,000
2020	294,000	206,000	88,000
M/M change	10.5%	-3.7%	60.9%
Y/Y change	17.7%	14.1%	26.1%

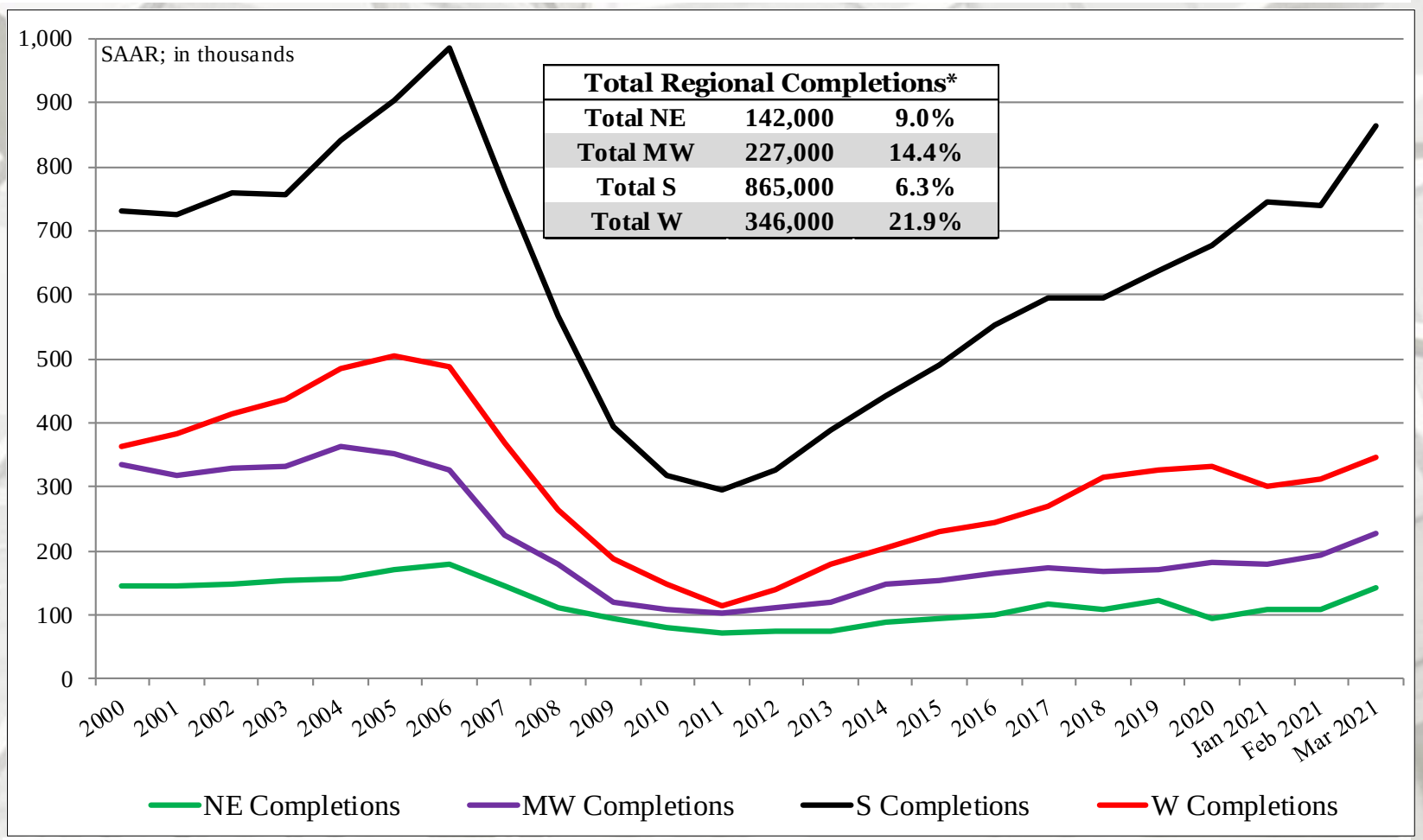
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

Total Housing Completions by Region



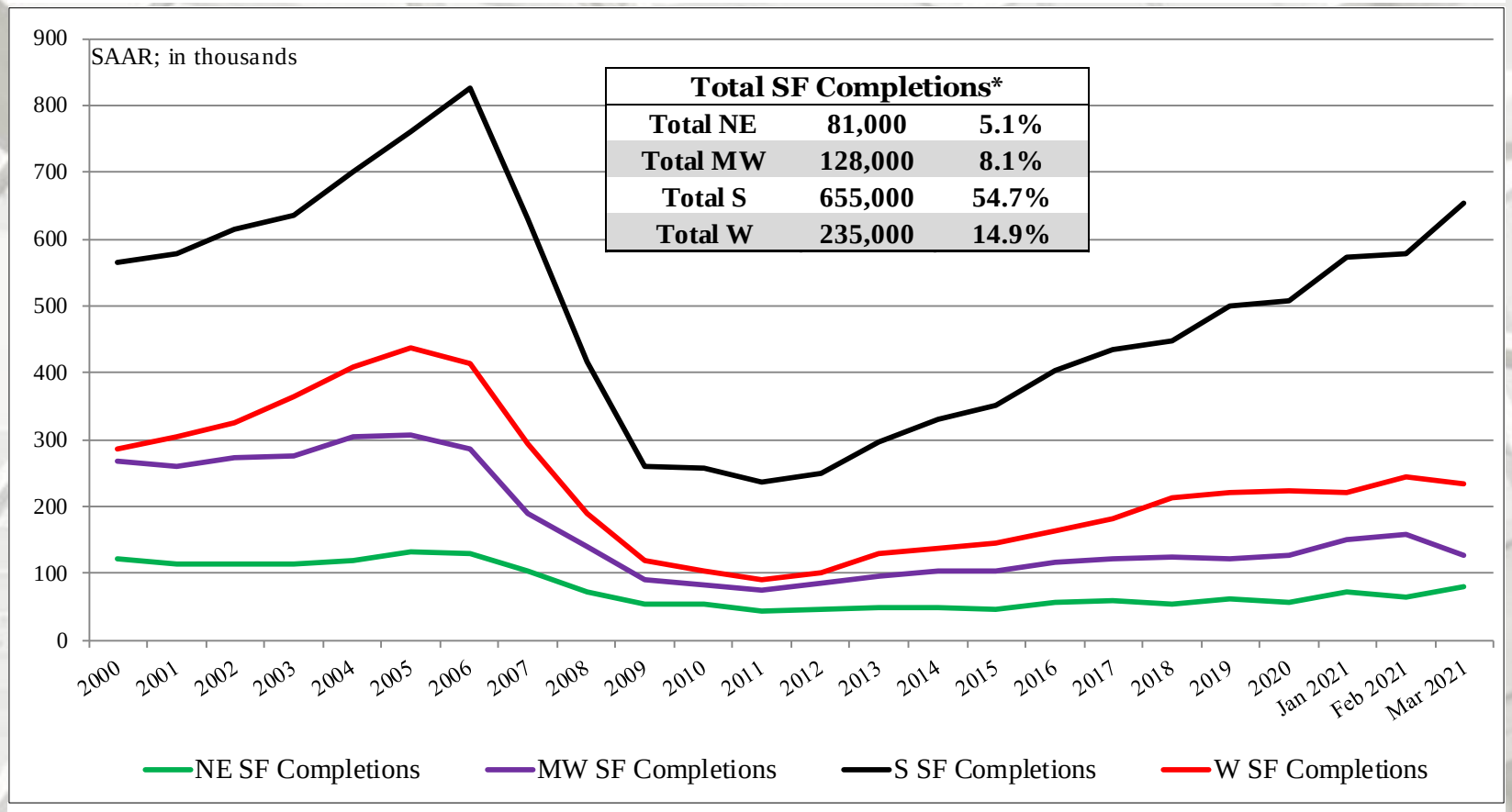
Total Regional Completions*		
Total NE	142,000	9.0%
Total MW	227,000	14.4%
Total S	865,000	6.3%
Total W	346,000	21.9%

All data are SAAR; NE = Northeast and MW = MidwestS = South, W = West
** US DOC does not report multi-family unit completions directly; this is an estimation (Total completions – SF completions).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

SF Housing Completions by Region



Total SF Completions*		
Total NE	81,000	5.1%
Total MW	128,000	8.1%
Total S	655,000	54.7%
Total W	235,000	14.9%

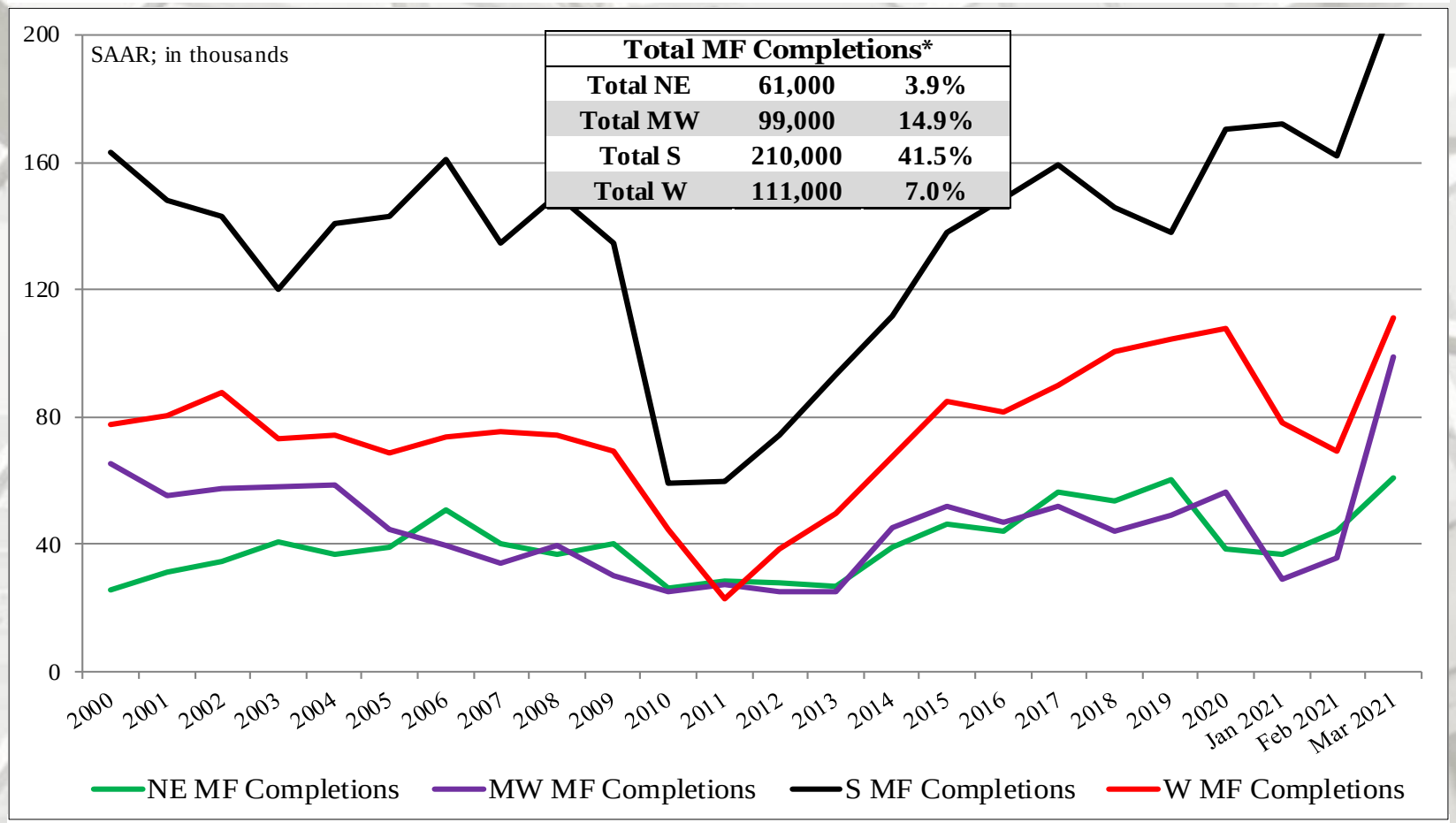
NE = Northeast, MW = Midwest, S = South, W = West
US DOC does not report 2 to 4 multi-family completions directly; this is an estimation (Total completions – SF completions).

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

MF Housing Completions by Region



Total MF Completions*		
Total NE	61,000	3.9%
Total MW	99,000	14.9%
Total S	210,000	41.5%
Total W	111,000	7.0%

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 completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/16/21

Return TOC

New Single-Family House Sales

	New SF Sales*	Median Price	Mean Price	Month's Supply
March	1,021,000	$330,800	$397,800	3.6
February	846,000	$345,900	$394,300	4.4
2020	612,000	$328,200	$375,400	6.5
M/M change	20.7%	-4.4%	0.9%	-18.2%
Y/Y change	66.8%	0.8%	6.0%	-44.6%

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

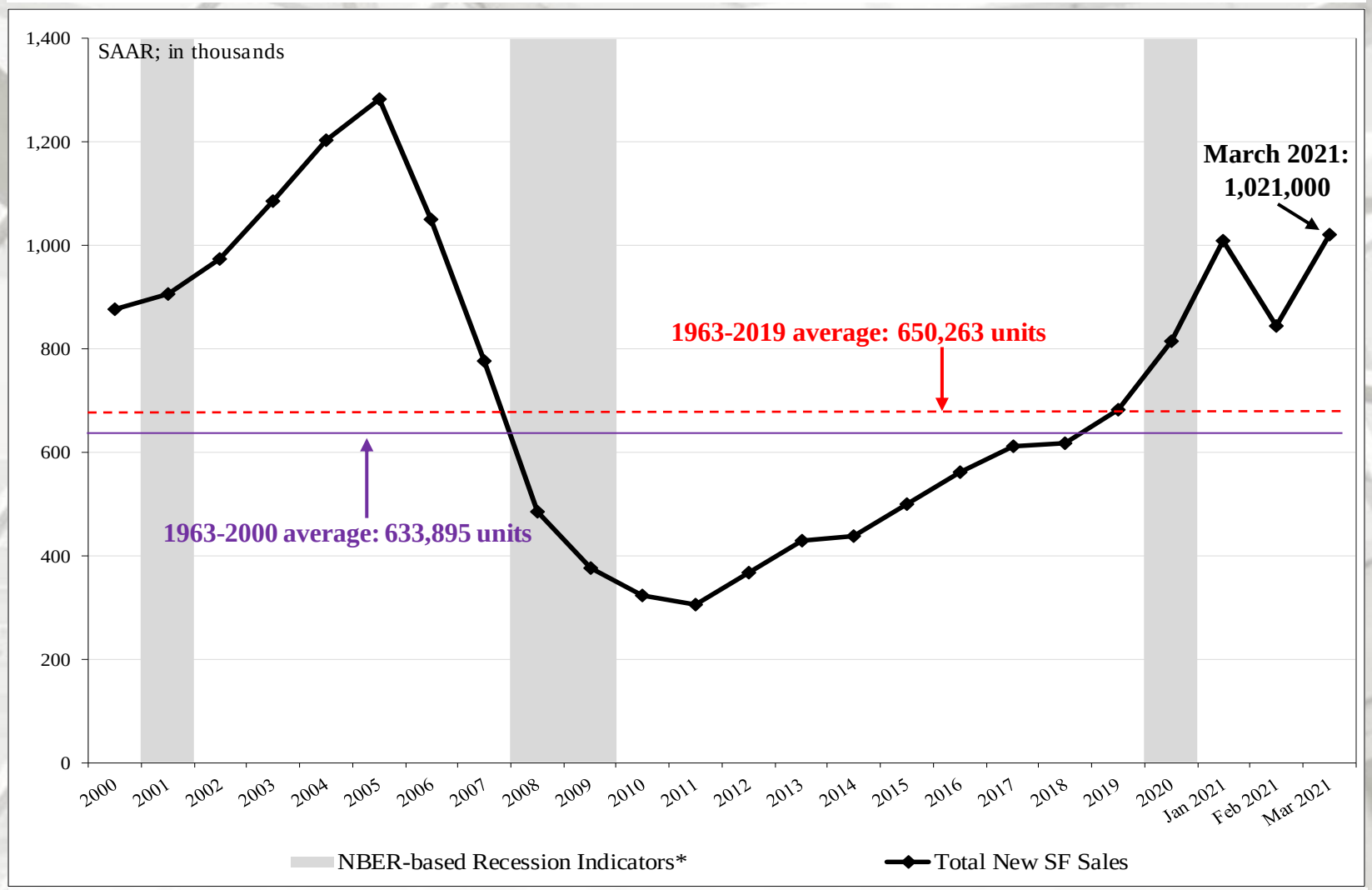
New SF sales were substantially more than the consensus forecast[3] of 887 m (range: 820 m to 950 m). The past three month's new SF sales data also were revised:

December initial:	842 m, revised to 949 m;
January initial:	923 m, revised to 1,010 m.
February initial:	775 m, revised to 846 m.

Sources: [1] https://www.census.gov/construction/nrs/index.html; 4/23/21; [2] https://www.census.gov/construction/nrs/pdf/newressales.pdf
[3] http://us.econoday.com/; 4/23/21

Return TOC

New SF House Sales

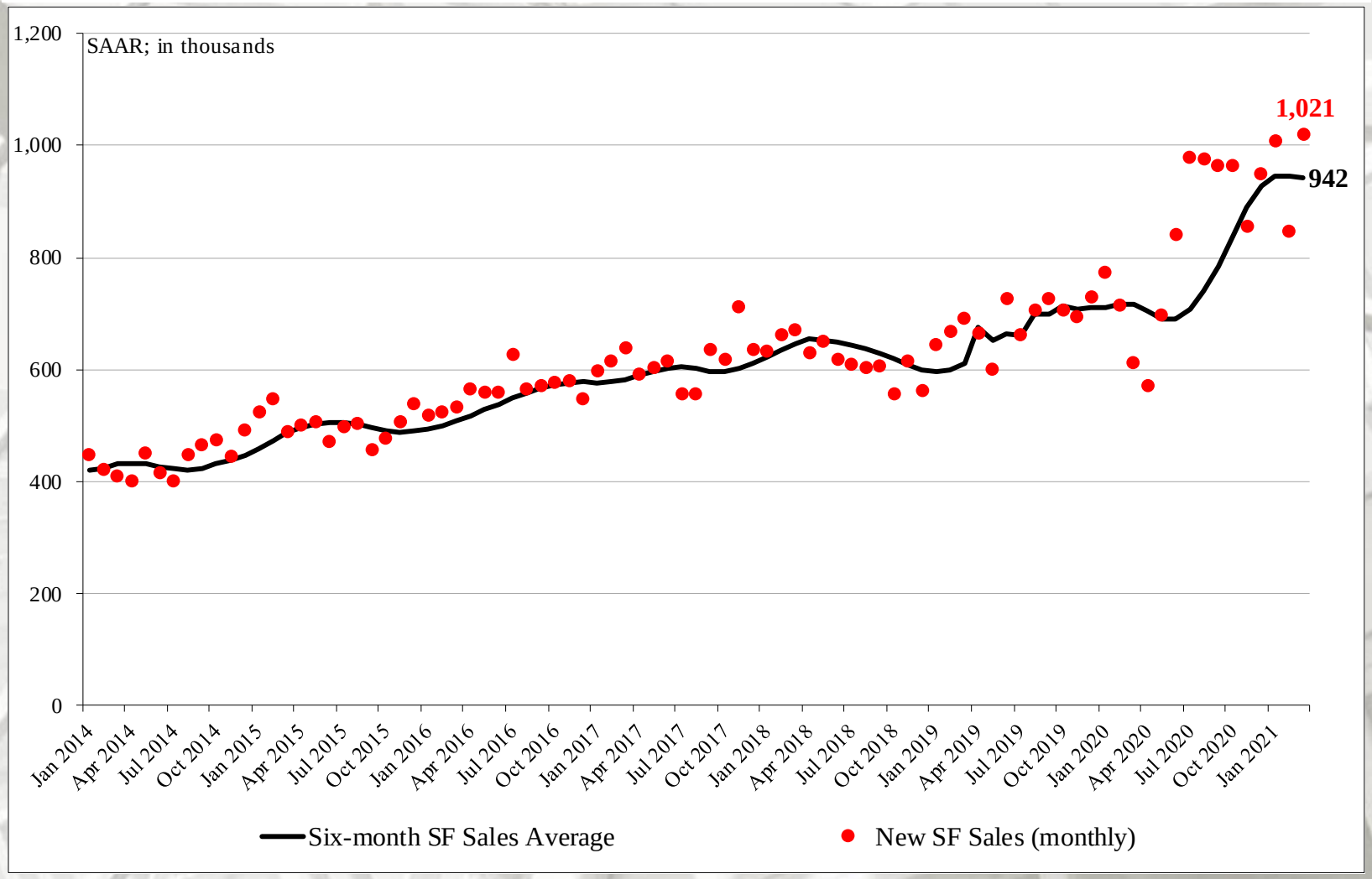


* NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Sources: https://fred.stlouisfed.org/series/USREC, 3/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF Housing Sales: Six-month average & monthly



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF House Sales by Region and Price Category

	NE	MW	S	W
March	48,000	132,000	694,000	147,000
February	40,000	101,000	495,000	210,000
2020	23,000	74,000	365,000	150,000
M/M change	20.0%	30.7%	40.2%	-30.0%
Y/Y change	108.7%	78.4%	90.1%	-2.0%

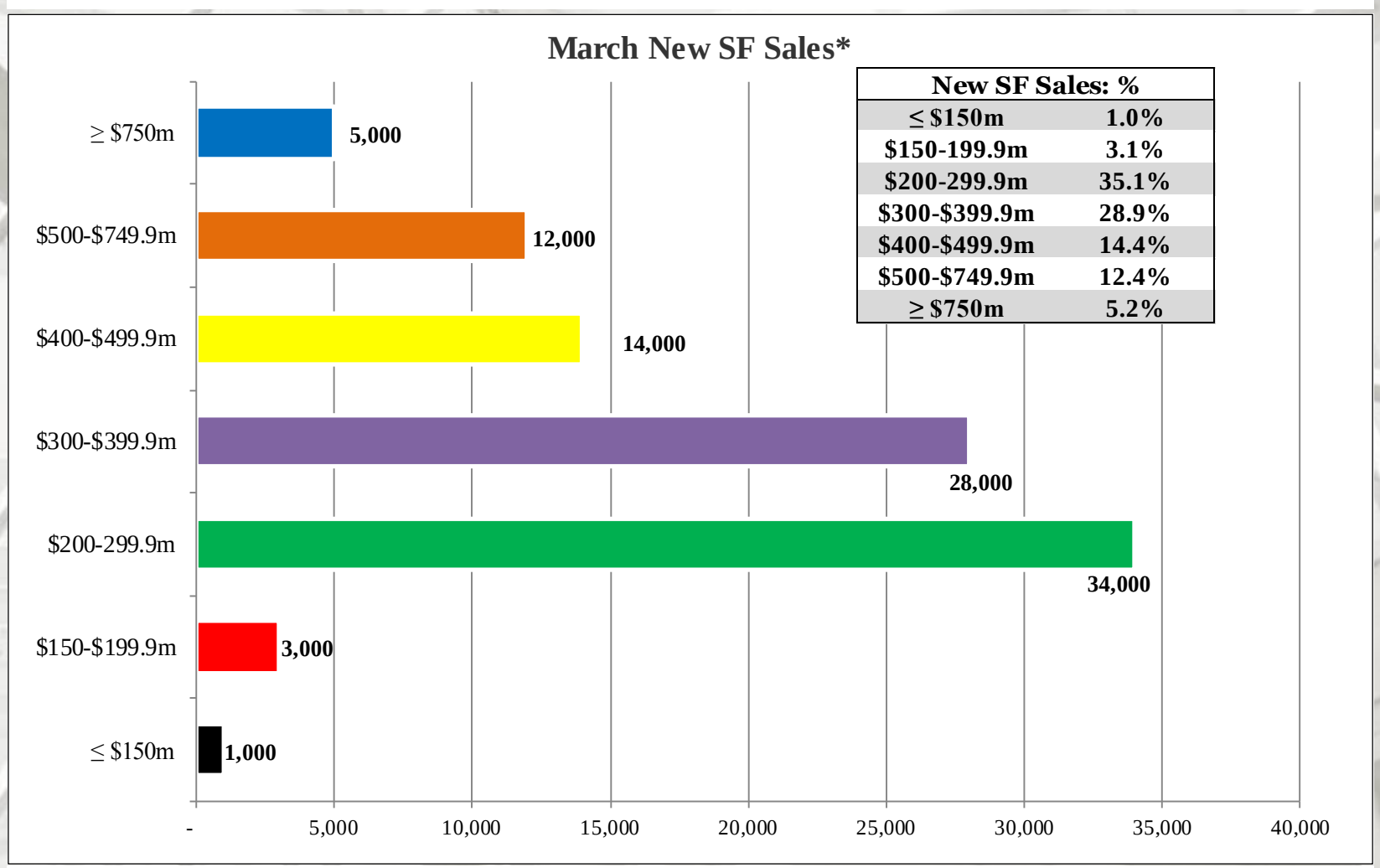
	≤ $150m	$150 - $199.9m	$200 - 299.9m	$300 - $399.9m	$400 - $499.9m	$500 - $749.9m	≥ $750m
March[1,2,3,4]	1,000	3,000	34,000	28,000	14,000	12,000	5,000
February	1,000	4,000	20,000	20,000	11,000	10,000	4,000
2020	1,000	5,000	20,000	15,000	9,000	7,000	3,000
M/M change	0.0%	-25.0%	70.0%	40.0%	27.3%	20.0%	25.0%
Y/Y change	0.0%	-40.0%	70.0%	86.7%	55.6%	71.4%	66.7%
New SF sales: %	1.0%	3.1%	35.1%	28.9%	14.4%	12.4%	5.2%

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 March not add to total because of rounding.
[4] Housing prices are adjusted at irregular intervals.
[5] Z = Less than 500 units or less than 0.5 percent

Sources: [1,2,3] https://www.census.gov/construction/nrs/index.html; 4/23/21;
[4]https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

Return TOC

New SF House Sales



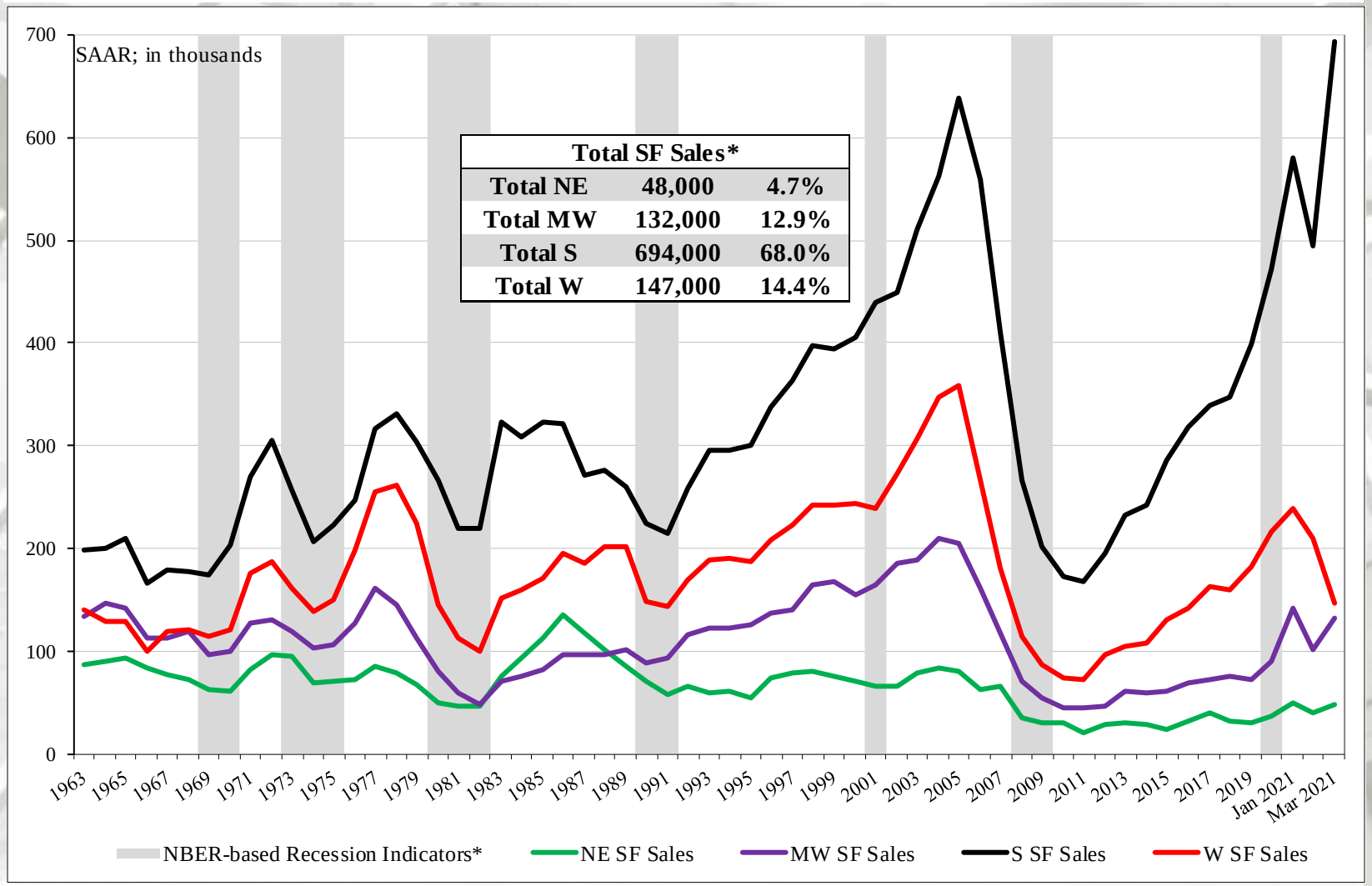
New SF Sales: %	
≤ $150m	1.0%
$150-199.9m	3.1%
$200-299.9m	35.1%
$300-$399.9m	28.9%
$400-$499.9m	14.4%
$500-$749.9m	12.4%
≥ $750m	5.2%

* Total new sales by price category and percent.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF House Sales by Region



Total SF Sales*		
Total NE	48,000	4.7%
Total MW	132,000	12.9%
Total S	694,000	68.0%
Total W	147,000	14.4%

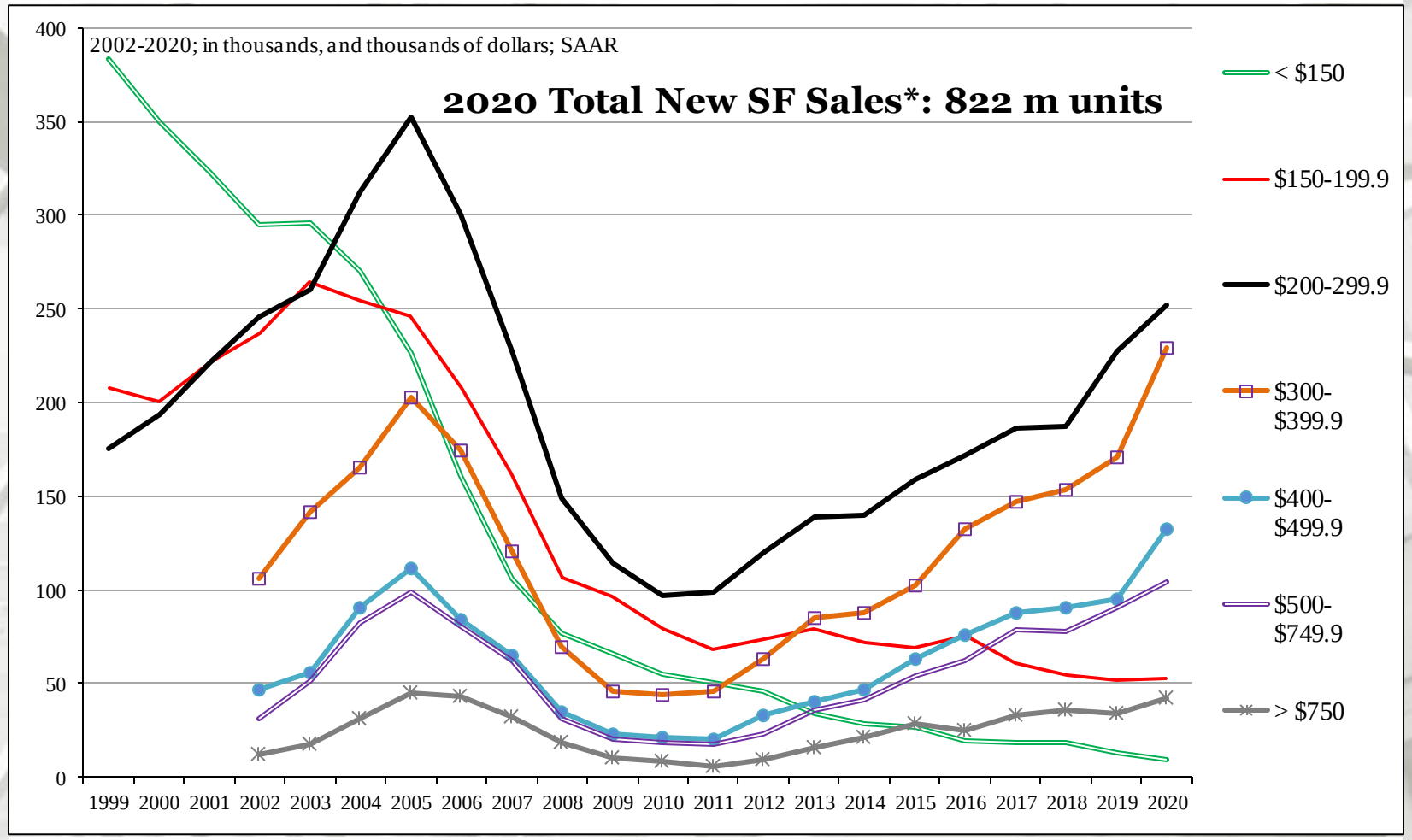
NE = Northeast; MW = Midwest; S = South; W = West
* Percentage of total new sales.

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF House Sales by Price Category



* Sales tallied by price category, nominal dollars.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

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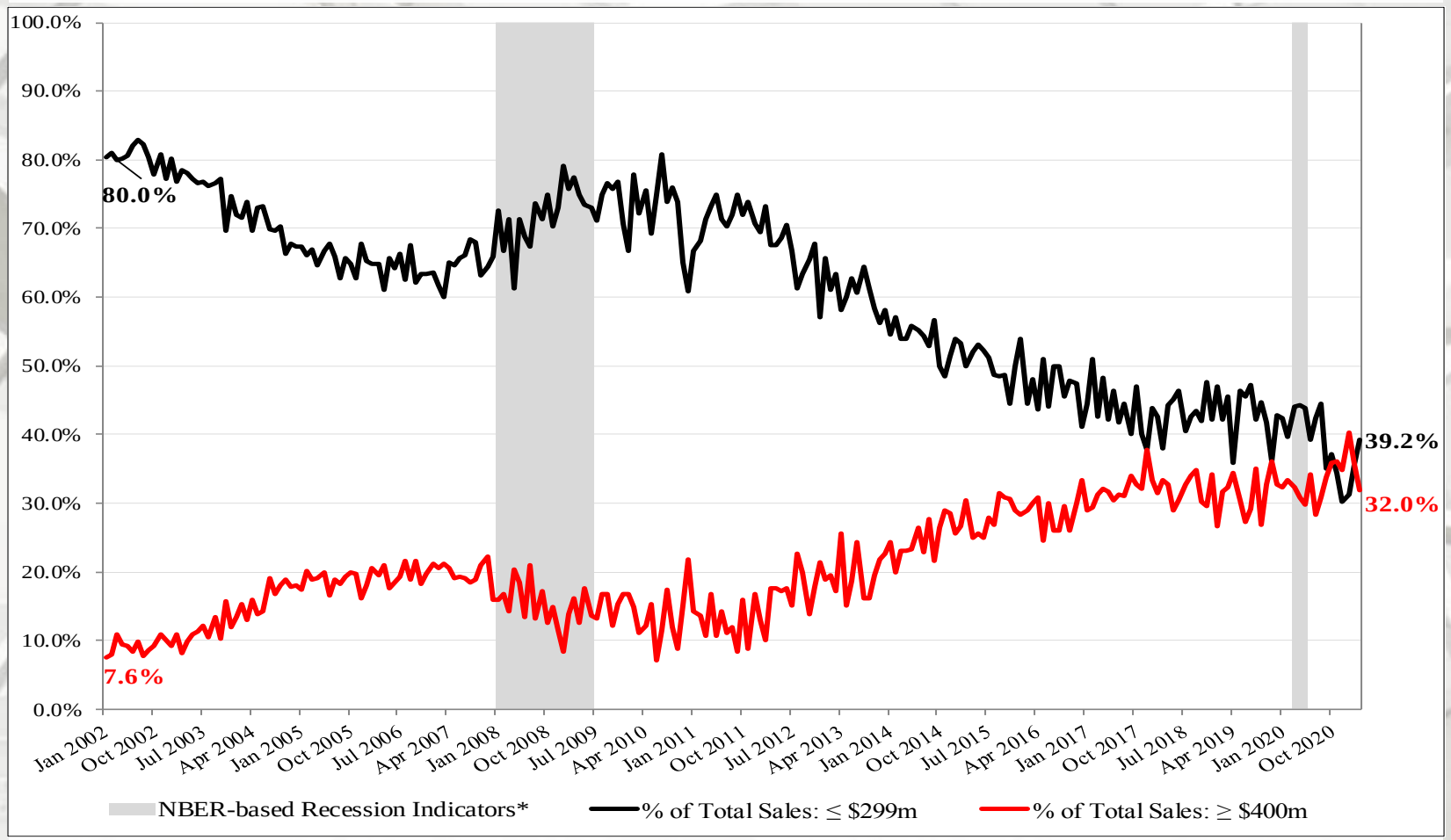
New SF House Sales



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

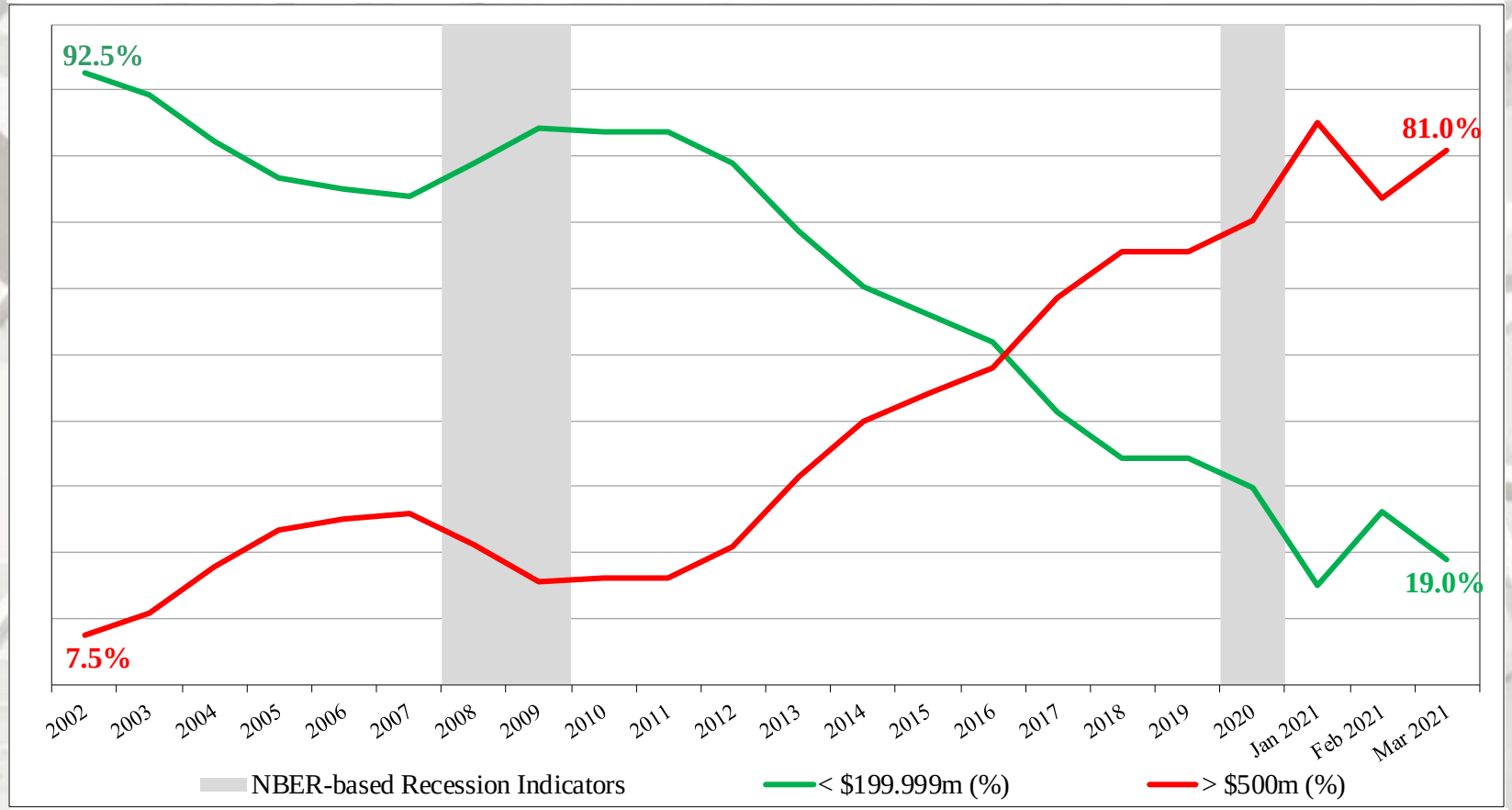
New SF Sales: ≤ $299m and ≥ $400m: 2002 – March 2021

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] https://www.census.gov/construction/nrs/index.html; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 4/23/21

Return TOC

New SF House Sales



New SF Sales: ≤ $ 200m and ≥ $500m: 2002 to March 2021

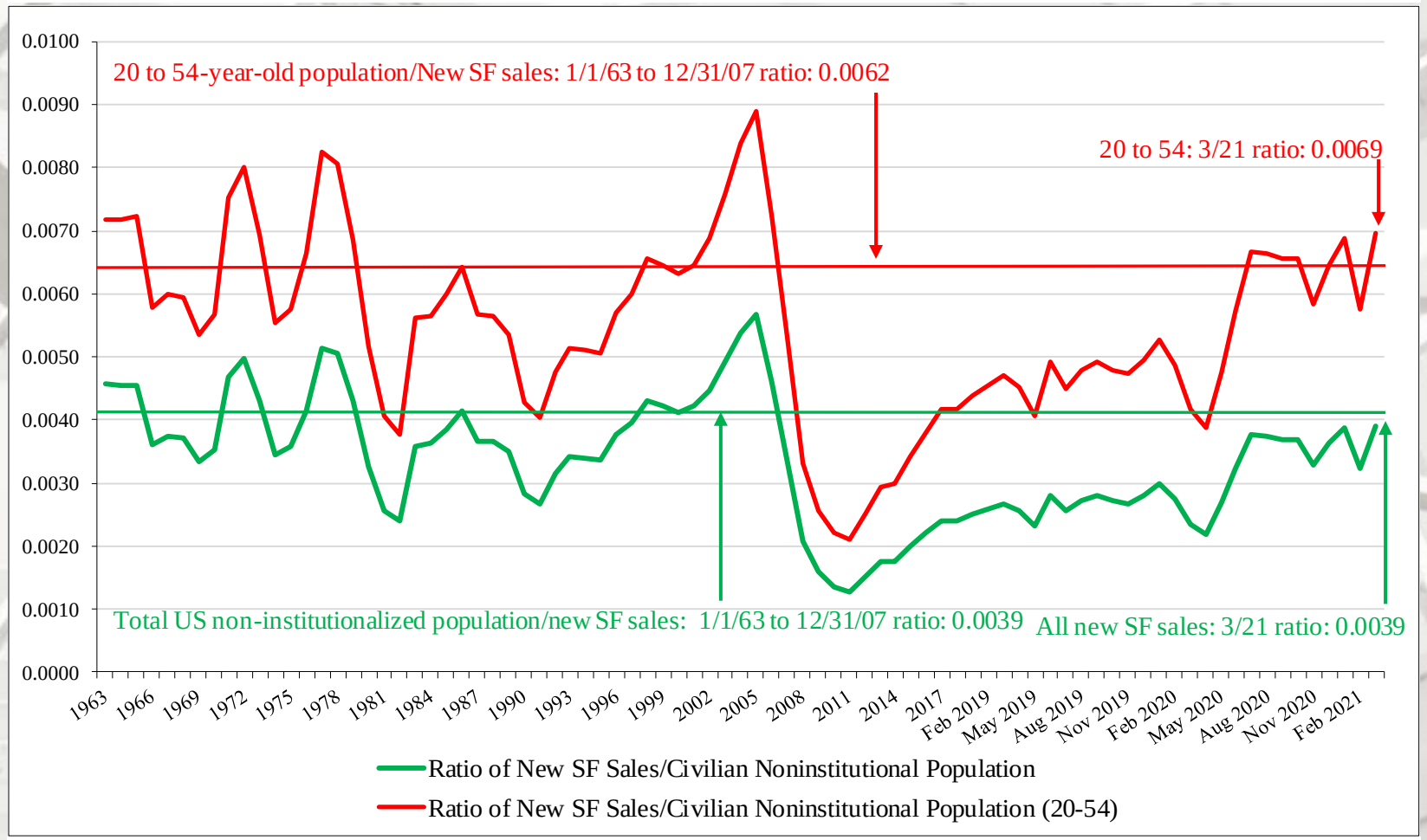
The number of ≤ $200 thousand SF houses has declined dramatically since 2002[1,2]. Subsequently, from 2012 onward, the ≥ $500 thousand class has soared (on a percentage basis) in contrast to the ≤ $200m class. One of the most oft mentioned reasons for this occurrence is builder net margins.

Note: Sales values are not adjusted for inflation.
NBER based Recession Indicator Bars for the United States from the Period following the Peak through the Trough (FRED, St. Louis).

Source: [1] https://www.census.gov/construction/nrs/index.html; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 4/23/21

Return TOC

New SF House Sales



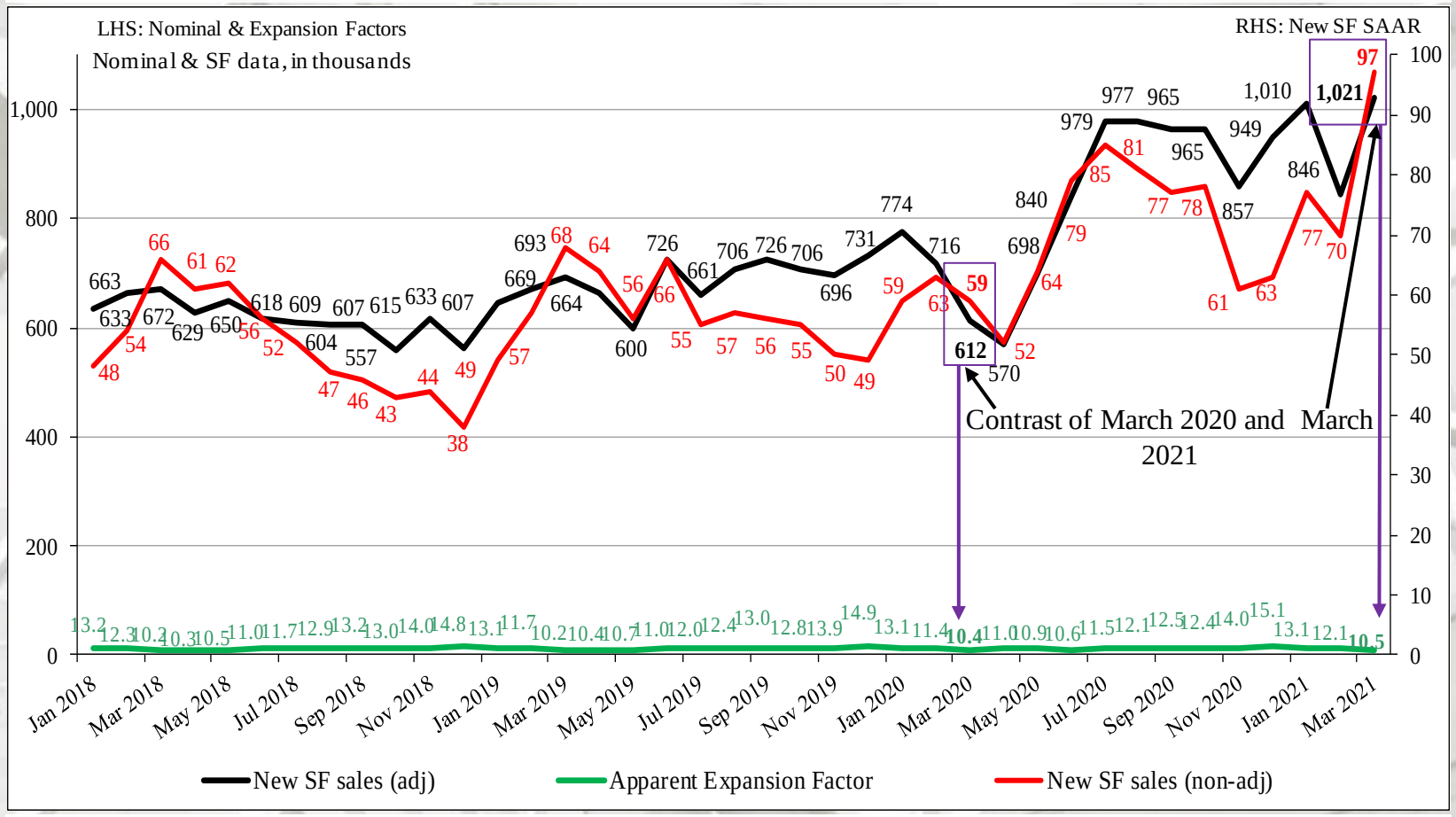
New SF sales adjusted for the US population

From March 1963 to March 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in March 2021 it was 0.0039 – an increase from February (0.0032). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in March 2021 it was 0.0069 – also an increase from February (0.0058). 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.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

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; 4/23/21

Return TOC

New SF House Sales

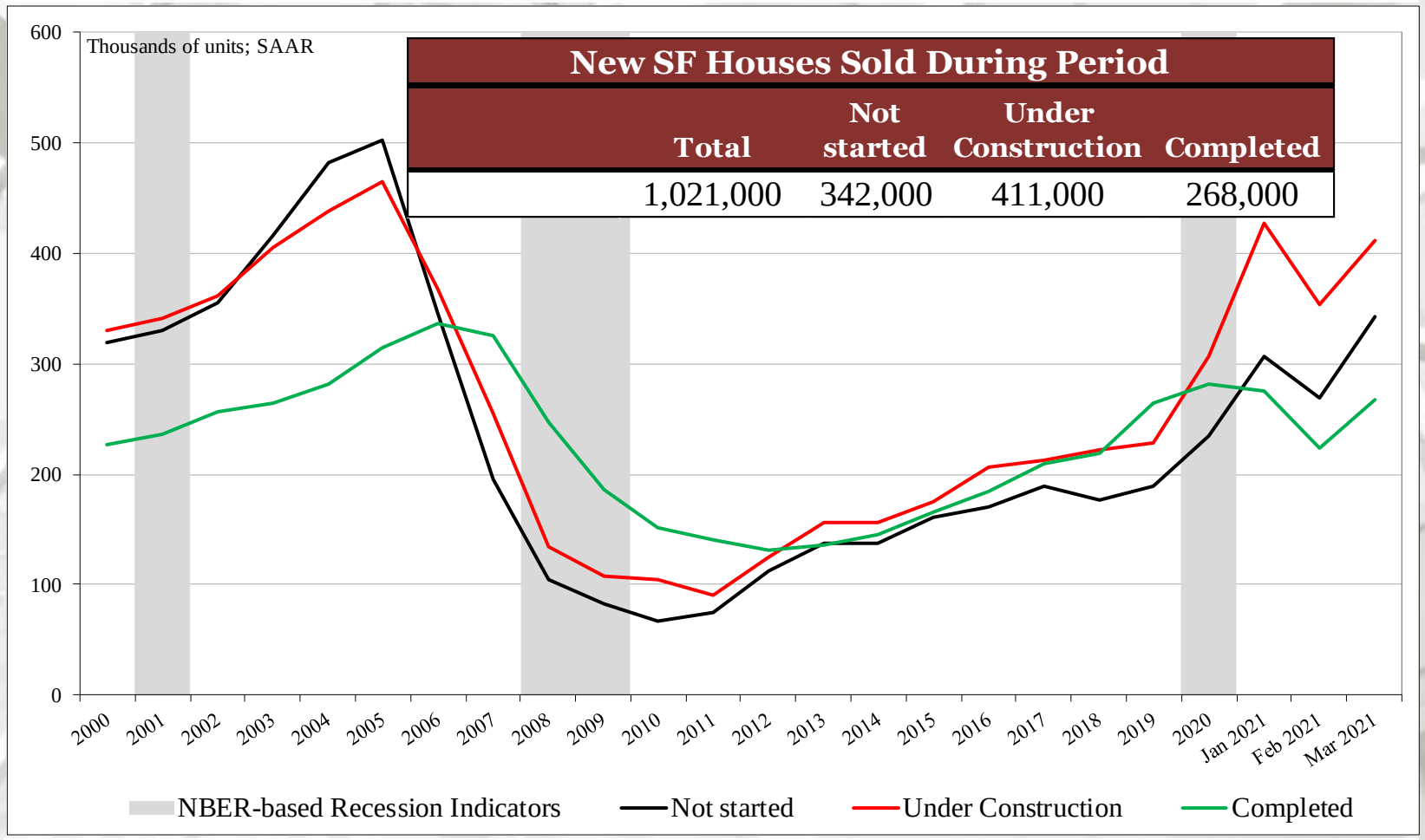
New SF Houses Sold During Period				
	Total	Not started	Under Construction	Completed
March	1,021,000	342,000	411,000	268,000
February	846,000	269,000	353,000	224,000
2020	612,000	138,000	220,000	254,000
M/M change	20.7%	27.1%	16.4%	19.6%
Y/Y change	66.8%	147.8%	86.8%	5.5%
Total percentage		33.5%	40.3%	26.2%

SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF House Sales: Sold During Period



New SF Houses Sold During Period			
Total	Not started	Under Construction	Completed
1,021,000	342,000	411,000	268,000

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF Houses for Sale at End of Period

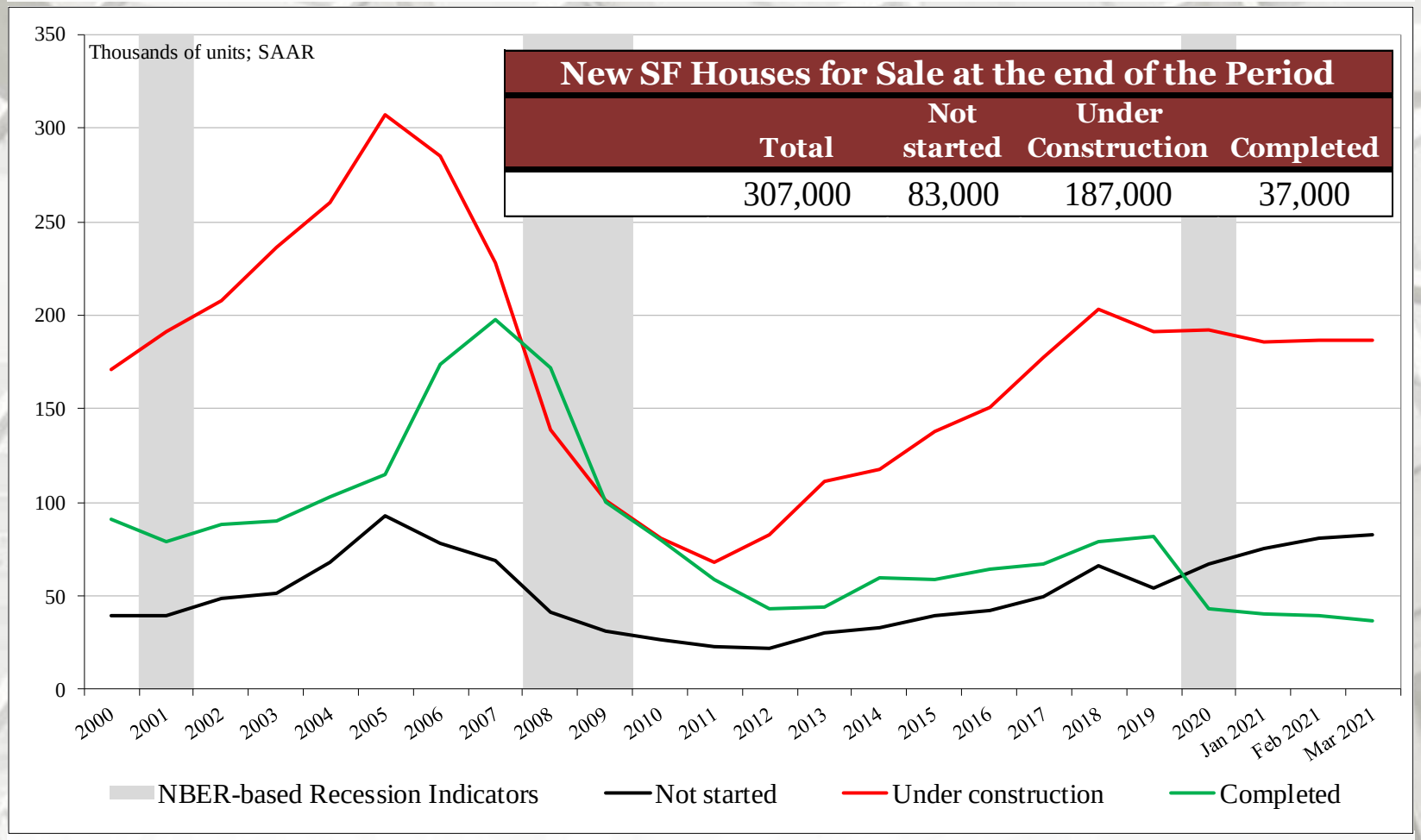
New SF Houses for Sale at the end of the Period				
	Total	Not started	Under Construction	Completed
March	307,000	83,000	187,000	37,000
February	307,000	81,000	187,000	39,000
2020	330,000	58,000	197,000	75,000
M/M change	0.0%	2.5%	0.0%	-5.1%
Y/Y change	-7.0%	43.1%	-5.1%	-50.7%
Total percentage		27.0%	60.9%	12.1%

Of houses listed for sale (307m) in March, 12.0% (37m) have been built. Lastly, 83m (27.0%) were offerings in which the ground has not been broken for construction.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF House Sales: For Sale at End of Period



New SF Houses for Sale at the end of the Period			
Total	Not started	Under Construction	Completed
307,000	83,000	187,000	37,000

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

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New SF House Sales

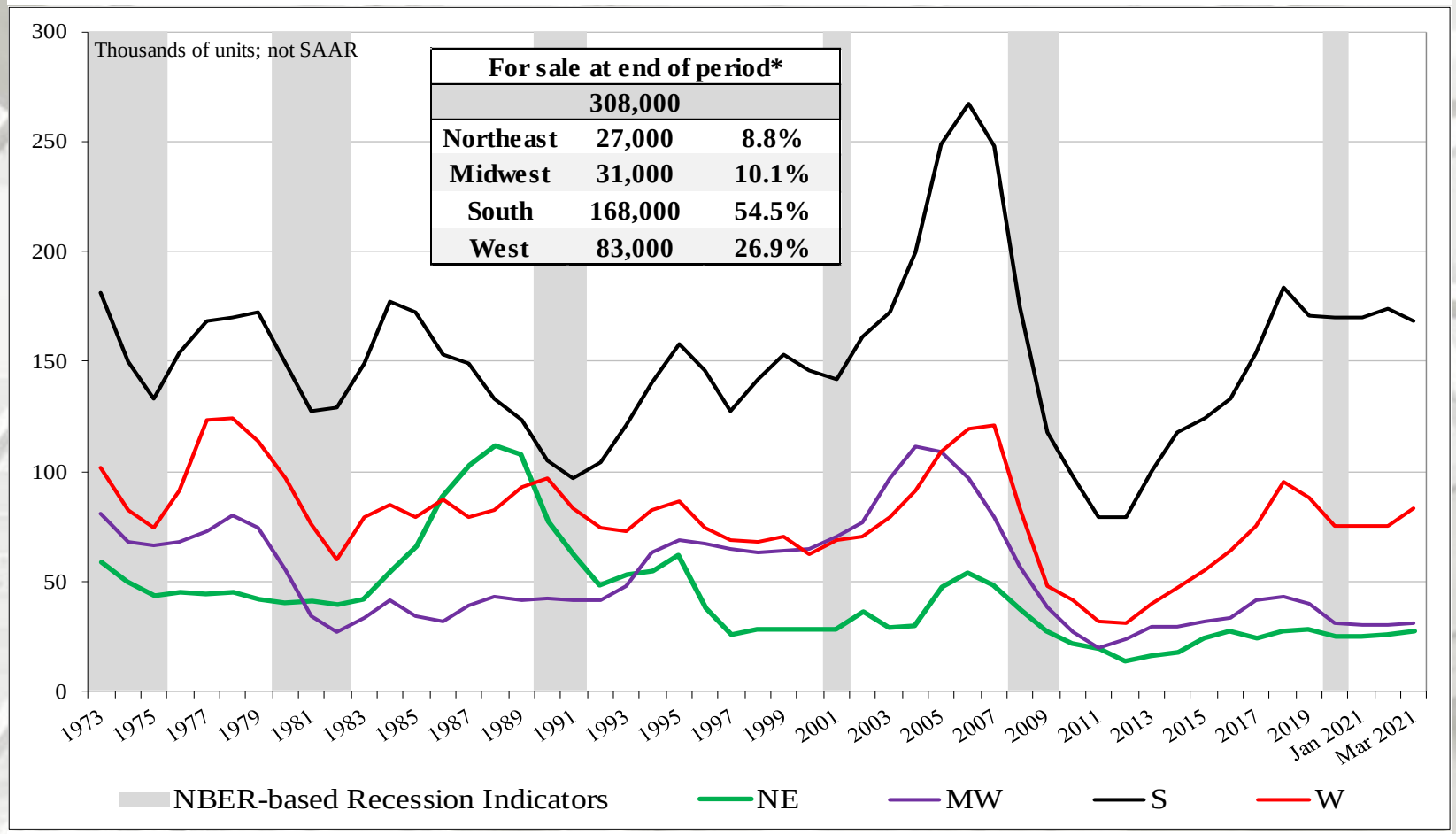
New SF Houses for Sale at the end of the Period by Region*					
	Total	NE	MW	S	W
March	308,000	27,000	31,000	168,000	83,000
February	305,000	26,000	30,000	174,000	75,000
2020	328,000	27,000	36,000	181,000	85,000
M/M change	1.0%	3.8%	3.3%	-3.4%	10.7%
Y/Y change	-6.1%	0.0%	-13.9%	-7.2%	-2.4%

* Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New SF Houses for Sale at End of Period by Region



For sale at end of period*		
308,000		
Northeast	27,000	8.8%
Midwest	31,000	10.1%
South	168,000	54.5%
West	83,000	26.9%

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).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

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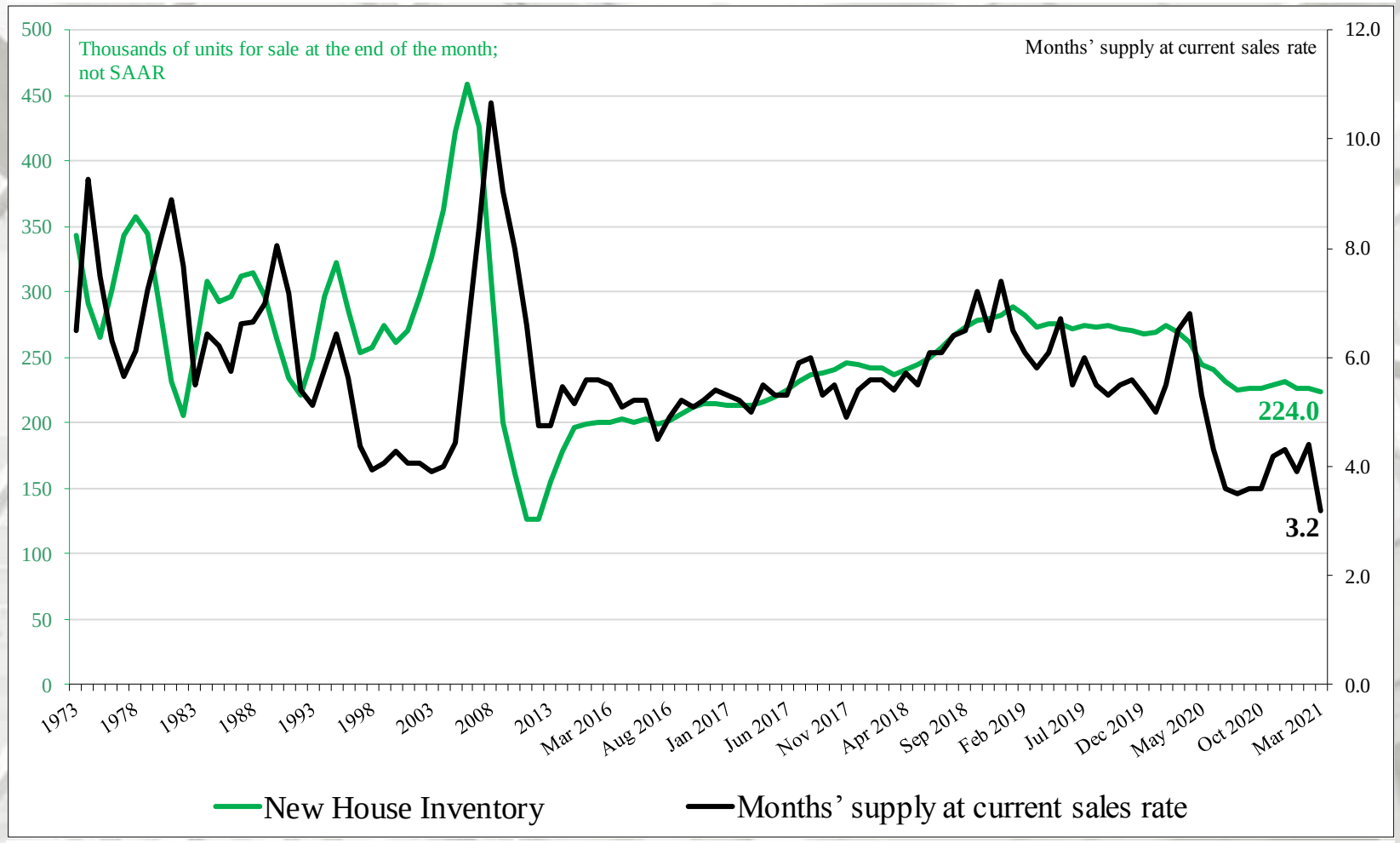
Months' Supply and New House Inventory[a]



[a] New HUC + New House Completions (sales data only)

The months supply of new houses for sale was 3.2 months in March.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 4/23/21

Return TOC

New House Sales

Mortgage Bankers Association

MBA Chart of the Week

"This week's MBA Chart of the Week examines the year-over-year growth in purchase loan applications by loan size since 2018.

The high and increasing growth trends in applications for larger loans (over $625,000) that became pronounced in 2019 continued in the second half of 2020 (following the V-shaped COVID dip). While the acceleration appears to have stalled in 2021, the growth rates in February remained high – at 42% and 55% for the $625,000-$766,000 and the $766,000-plus loan size buckets, respectively. Indeed, the share of these two groups, which made up 8% of purchase applications three years ago, now accounts for over 15%.

The dynamics for purchase loan applications between $300,000 and $510,000 (green line) have followed a similar trend as the larger ($625,000+) loans, although at lower growth levels. These loans accounted for about 21% of the purchase loan applications at the start of 2018, but as of this February, their share reached almost 32%. The red line, which depicts the growth for the $150,000-$300,000 bucket, also exhibits an analogous (but lower) growth pattern. This bucket remains the largest, with a 35% percent share of purchase applications in February 2021, albeit down from over 40% at the start of 2018.

The blue line shows the pattern for purchase loan applications of up to $150,000. These (small-dollar mortgage) loans are regularly considered important for families to be able to purchase affordable homes, subsequently benefitting from homeownership and its associated wealth accumulation. However, their share is shrinking, with negative growth for most of the last three years (except for the second half of 2020). As of February, this bucket accounted for 15% of purchase loan applications – down from approximately 25% three years ago." – Joel Kan, Associate Vice President of Economic and Industry Forecasting and Edward Seiler, Executive Director, MBA

Source: https://s3141176.t.en25.com/e/es; 4/23/21

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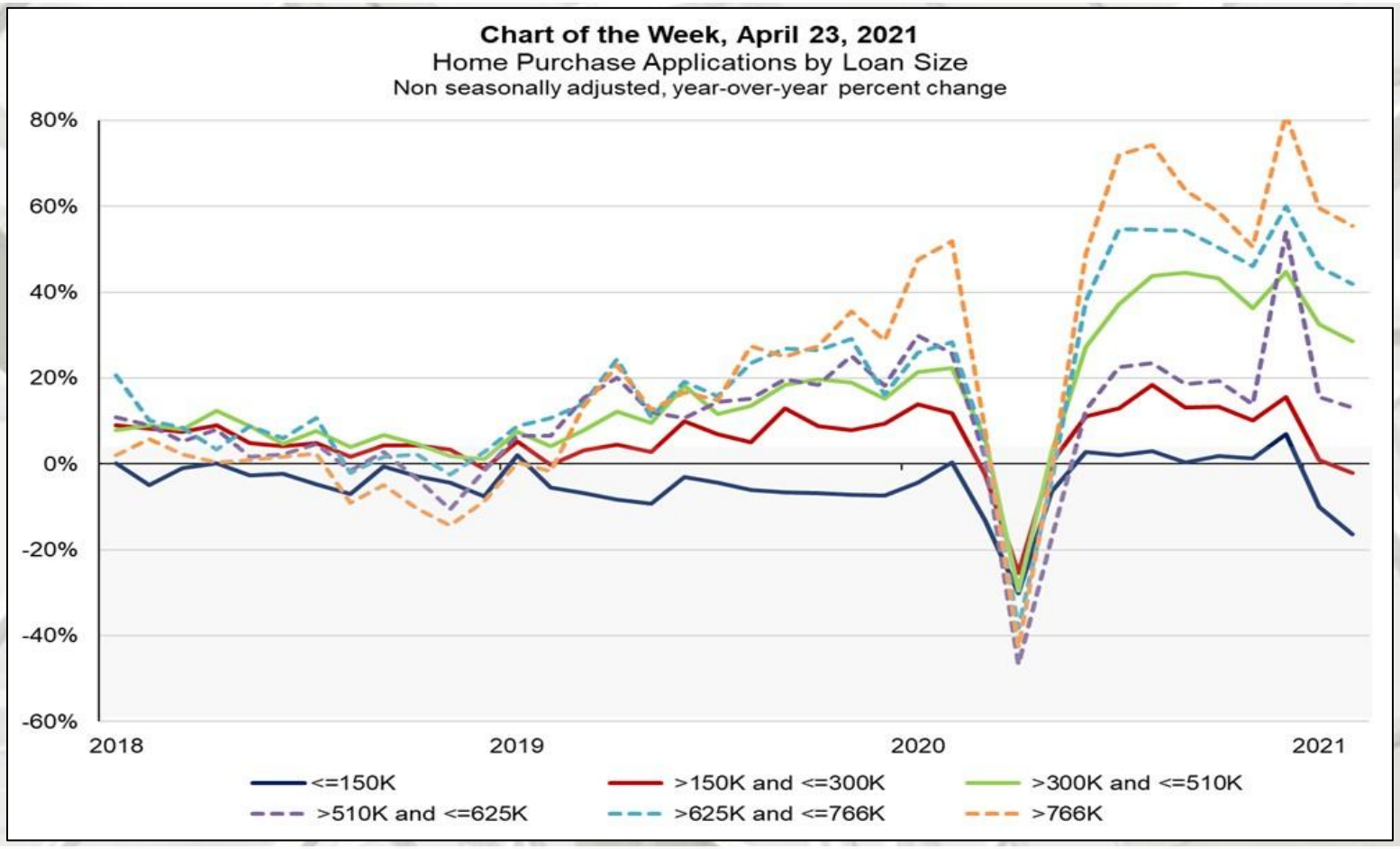
New House Sales



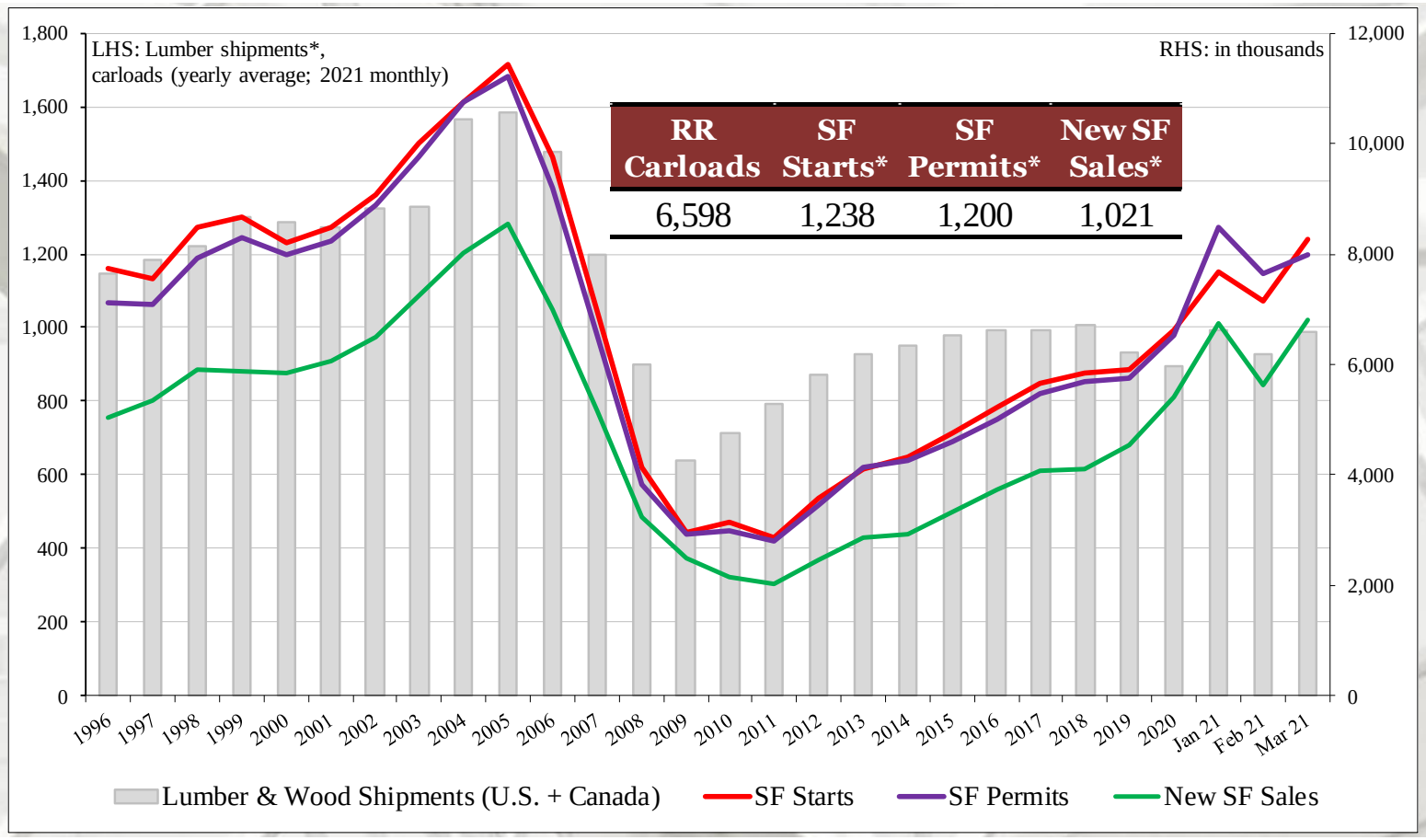
Mortgage Bankers Association

"From the chart, the smallest two loan size tiers lag in growth when compared to the high-loan size categories. Even before the pandemic, the supply of lower priced, entry-level homes was tight. This continues to persist, even as home builders have done their best to increase production. Buyers in these loan size tiers are likely more price sensitive and the accelerating home price gains have likely contributed to the slower growth, even when these lower-priced homes do come on the market." – Joel Kan, Associate Vice President of Economic and Industry Forecasting, Edward Seiler, Executive Director, MBA

Source: https://s3141176.t.en25.com/e/es; 4/23/21

Return TOC

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



RR Carloads	SF Starts*	SF Permits*	New SF Sales*
6,598	1,238	1,200	1,021

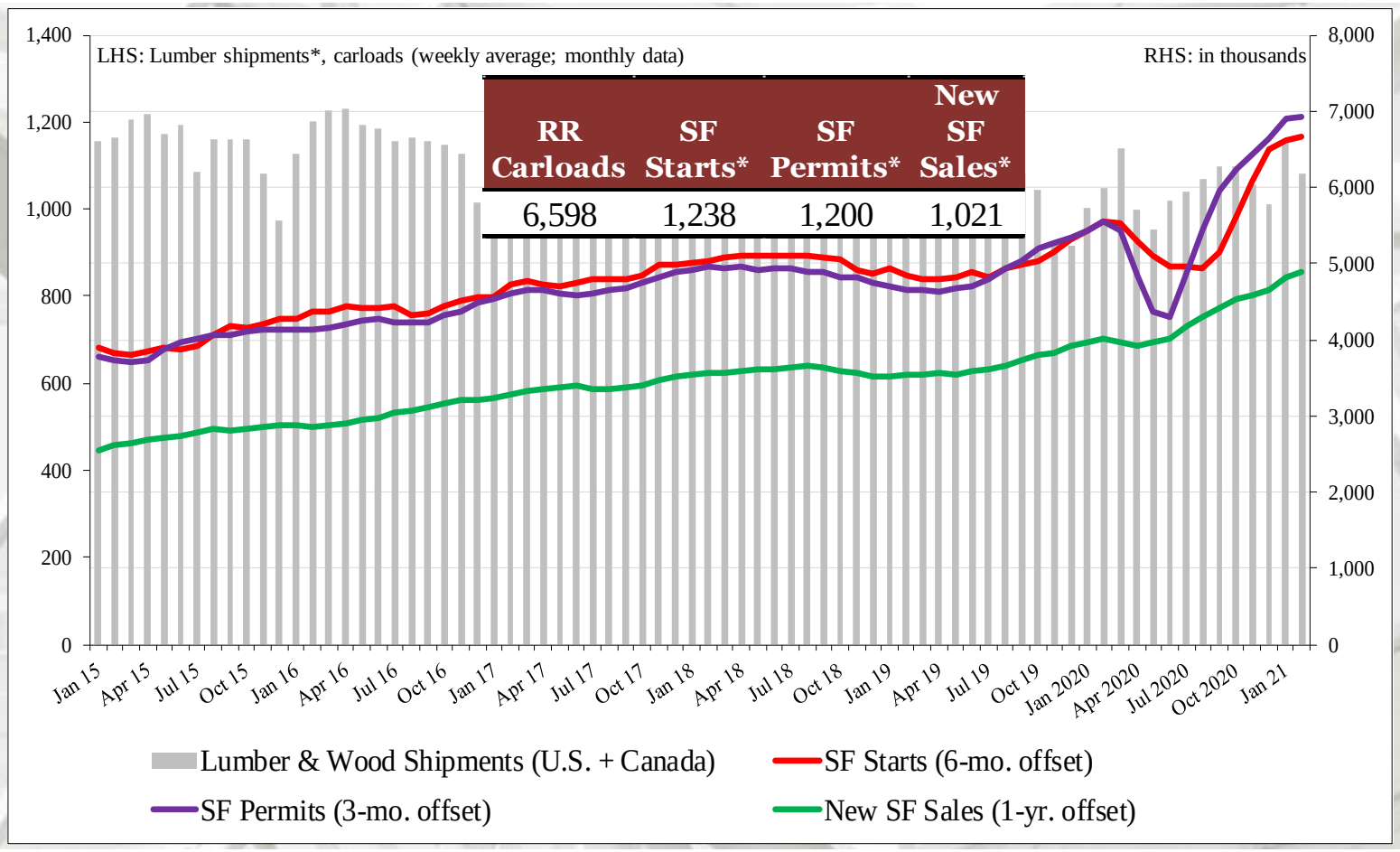
Carloads of Canadian + U.S. lumber and wood shipments to the U.S. are contrasted above to U.S. housing metrics. Annual SF starts, SF Permits, and New sales are compared to carload lumber and wood shipments. The intent is to learn if lumber shipments relate to future SF starts, SF permits, and new SF 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

Sources: *Association of American Railroads, *Rail Time Indicators* report-March 2021; http://www.census.gov/construction/; 4/16/21 & 4/23/21

Return TOC

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

Sources: *Association of American Railroads, *Rail Time Indicators* report-March 2021; http://www.census.gov/construction/; 4/16/21; & 4/23/21

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March 2021
Construction Spending

	Total Private Residential*	SF	MF	Improvement**
March	$725,245	$389,922	$93,453	$241,870
February	$713,056	$382,202	$93,721	$237,133
2020	$588,060	$307,696	$81,575	$198,789
M/M change	1.7%	2.0%	-0.3%	2.0%
Y/Y change	23.3%	26.7%	14.6%	21.7%

* billions.
** 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.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21

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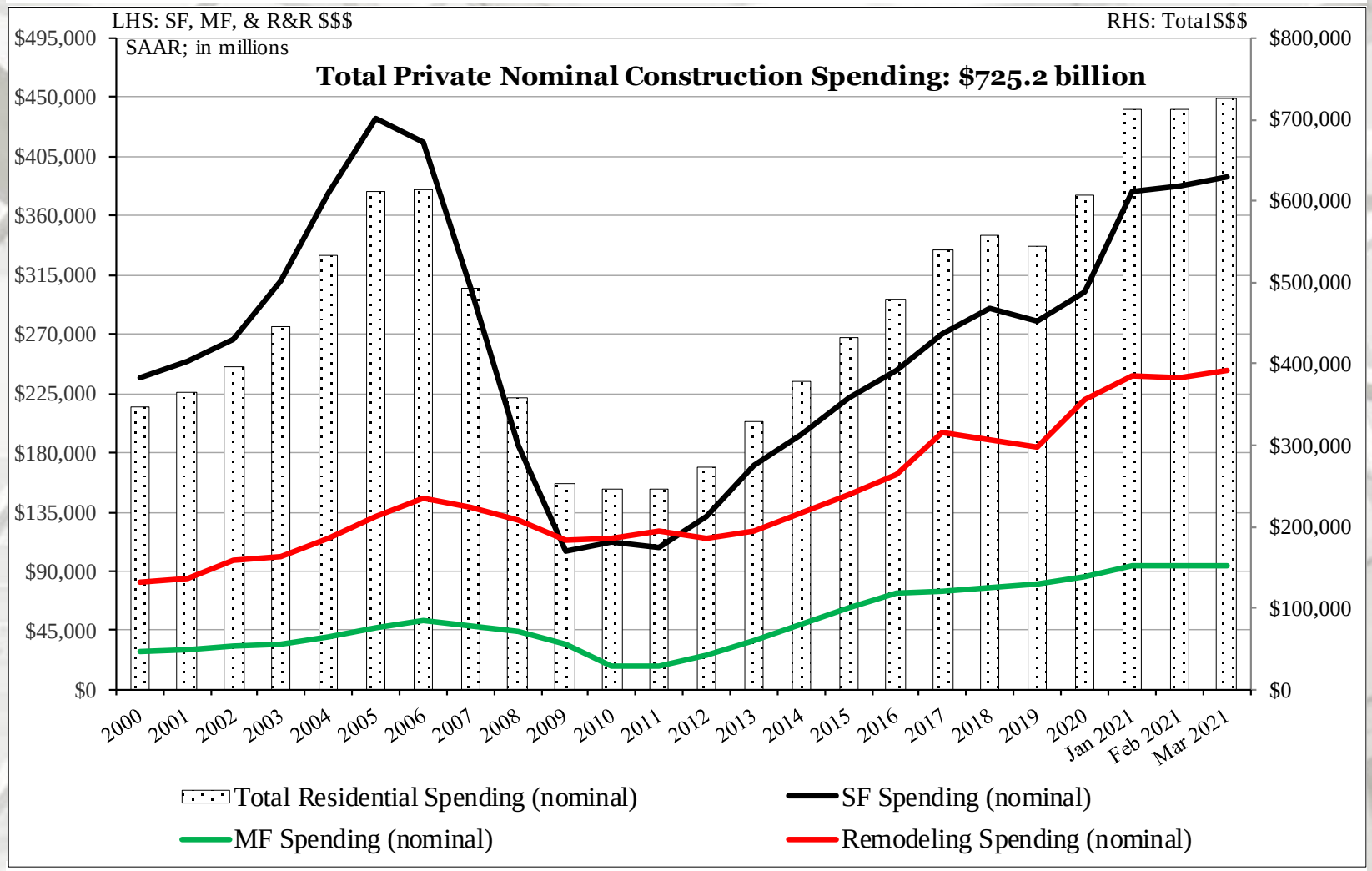
Total Construction Spending (nominal): 2000 – March 2021

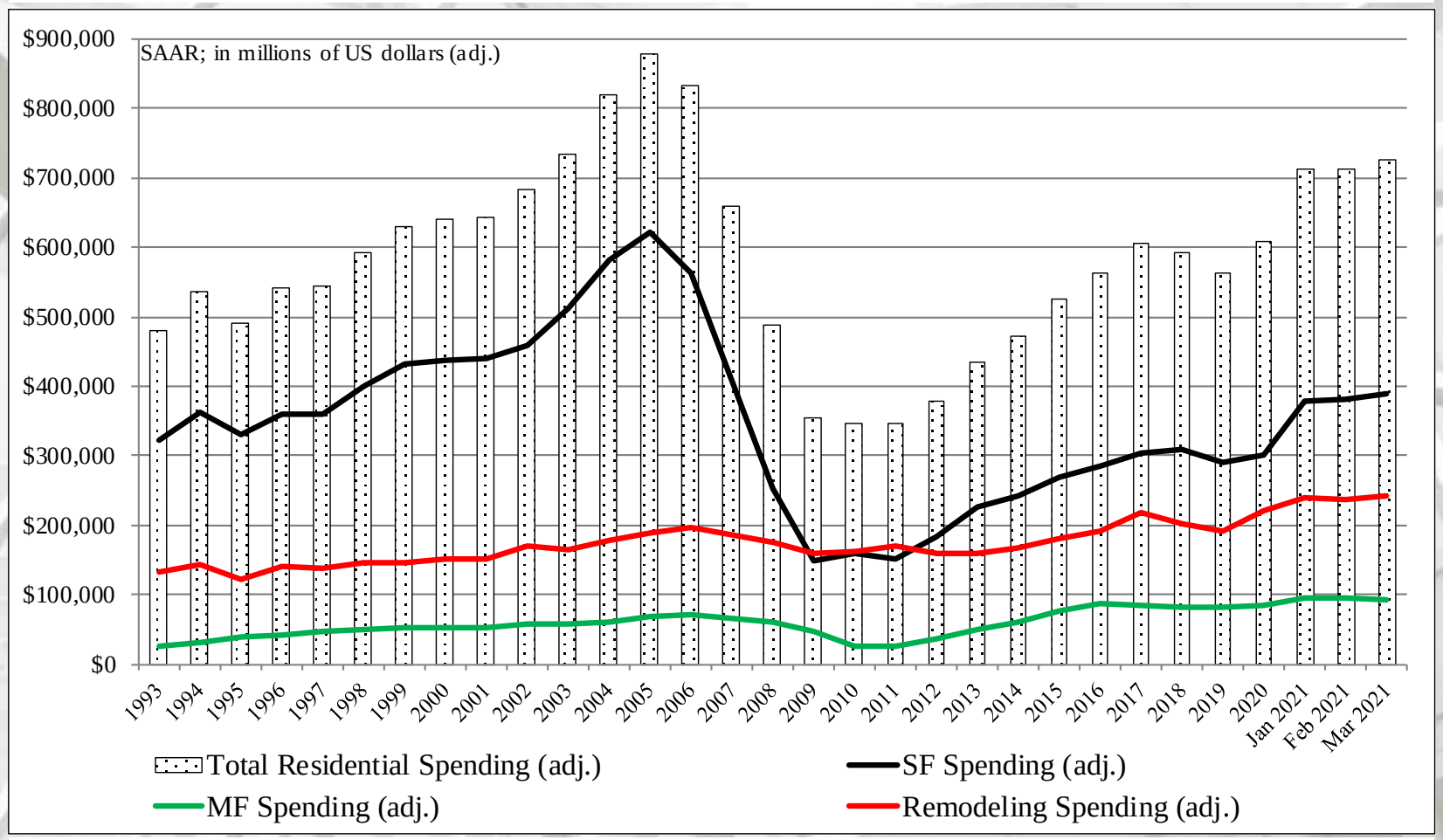


Reported in nominal US$.
The US DOC does not report improvement spending directly, this is a monthly estimation for 2020.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21

Return TOC

Total Construction Spending (adjusted): 1993-March 2021



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

Sources: * http://www.bea.gov/iTable/iTable.cfm; 3/1/21; http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21

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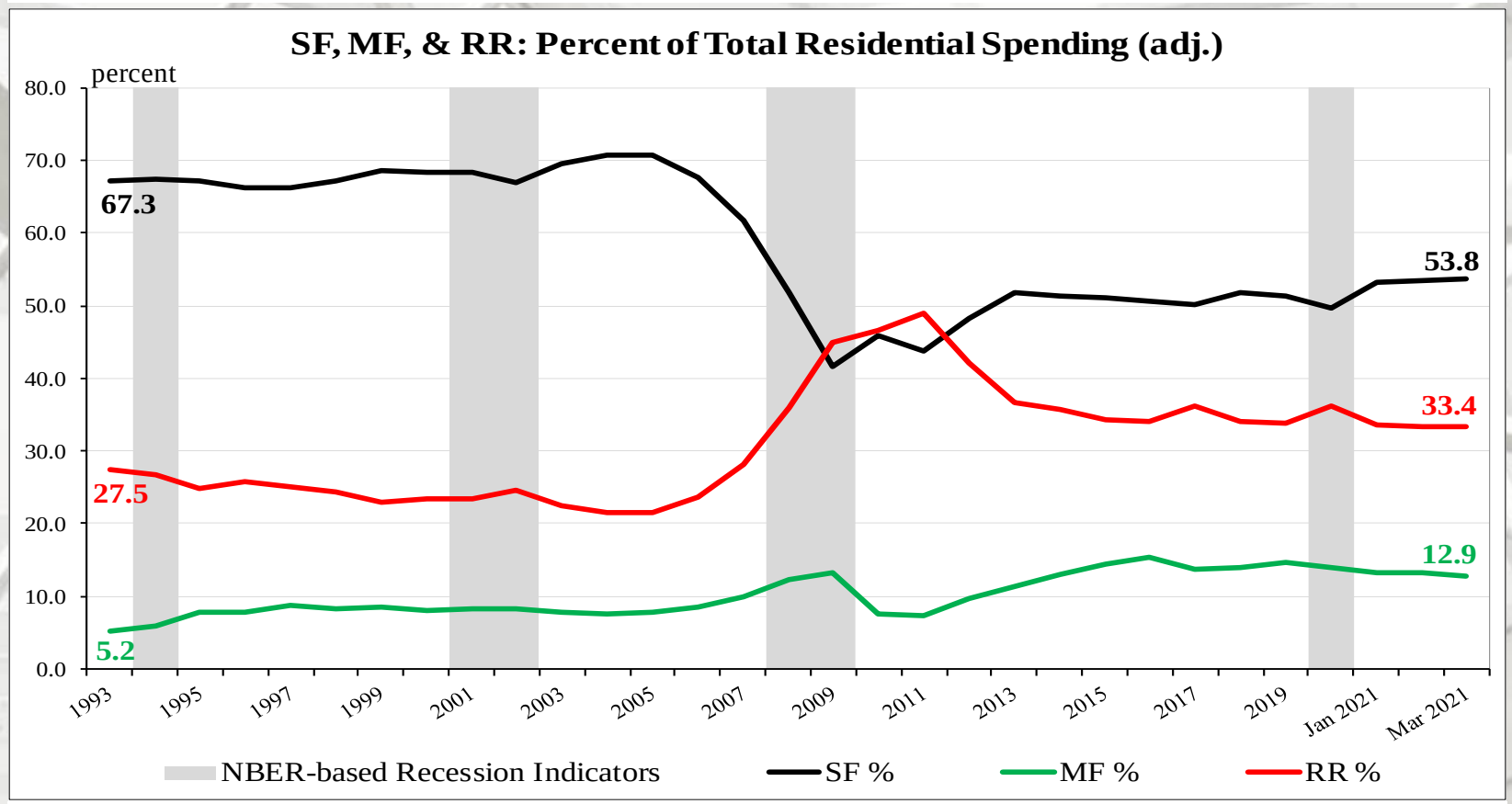
Construction Spending Shares: 1993 to March 2021



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); March 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).

Sources: * https://fred.stlouisfed.org/series/USREC, 3/1/21; http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21 a nd http://www.bea.gov/iTable/iTable.cfm; 3/1/21

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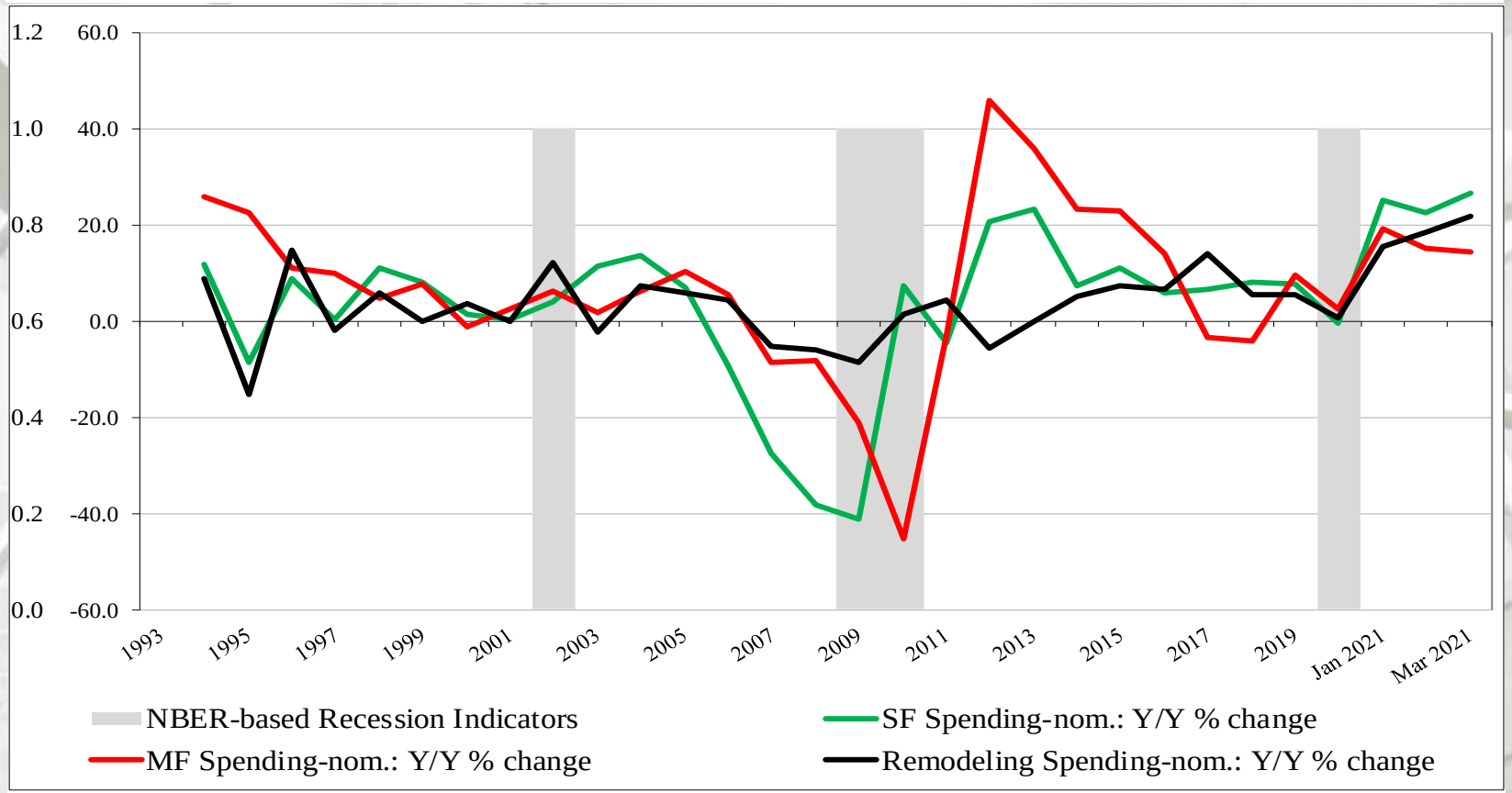
Adjusted Construction Spending: Y/Y Percentage Change, 1993 to March 2021



Nominal Residential Construction Spending: Y/Y percentage change, 1993 to March 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 (March 2021 data reported in nominal dollars).

* 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, 3/1/21; http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21 and http://www.bea.gov/iTable/iTable.cfm; 3/1/21

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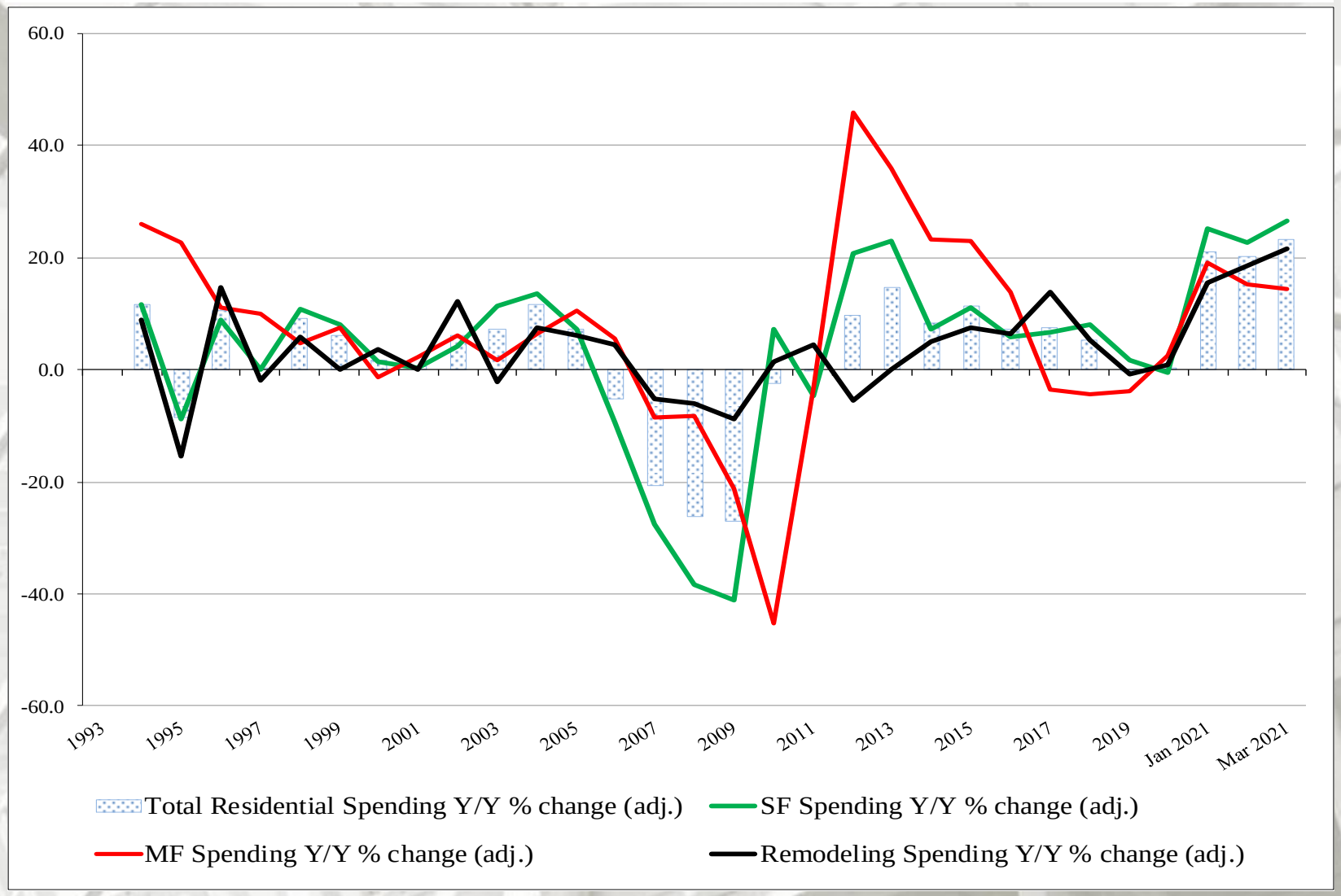
Adjusted Construction Spending: Y/Y Percentage Change, 1993 to March 2021



Sources: http://www.census.gov/construction/c30/pdf/privsa.pdf; 5/3/21 and http://www.bea.gov/iTable/iTable.cfm; 3/1/21

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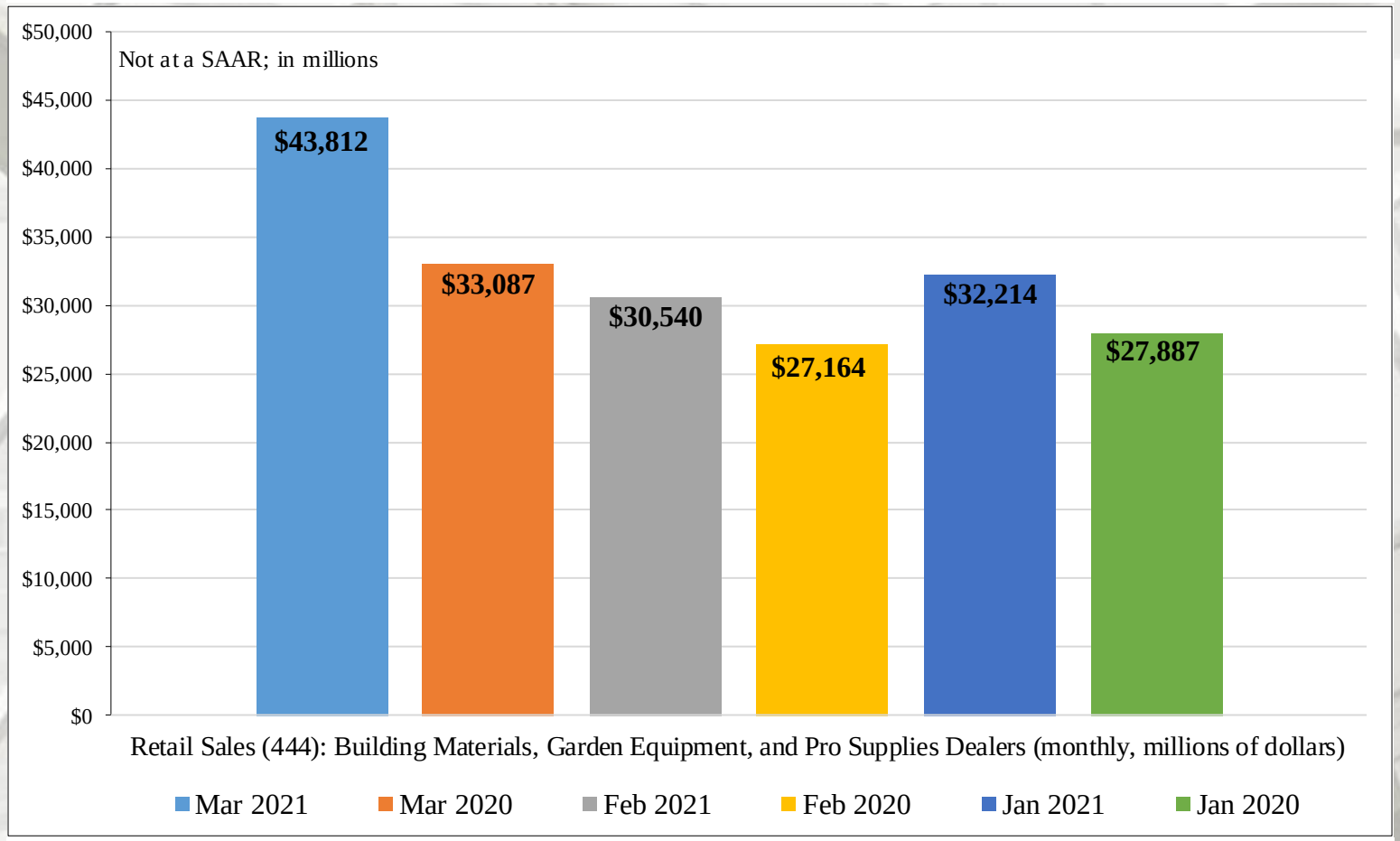
Remodeling

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



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

NAICS 444 sales increased 43.5% from February 2021 to March 2021 and improved 32.4% from March 2020 to March 2021 (on a non-adjusted basis).

Source: https://www.census.gov/retail/index.html; 5/3/21

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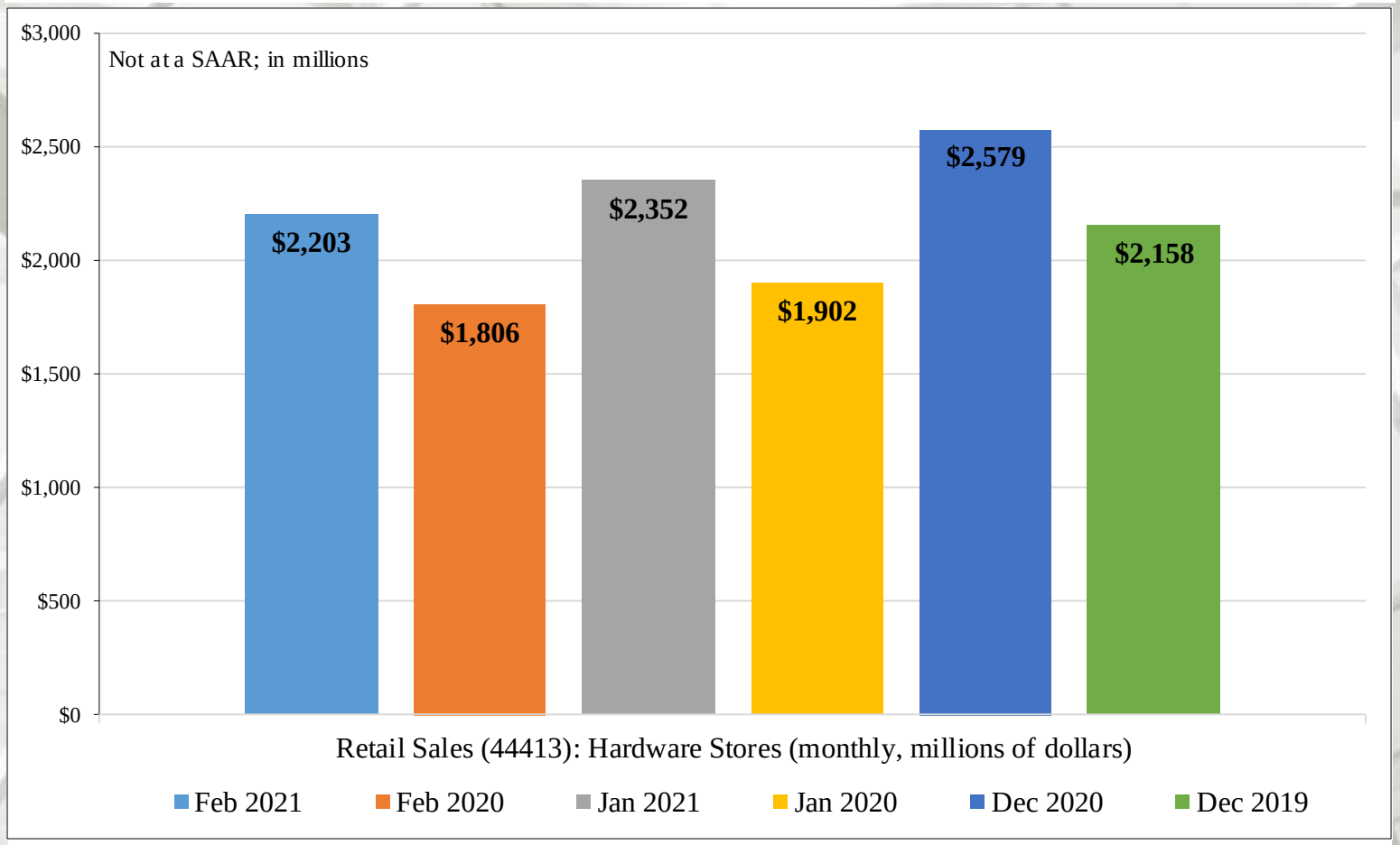
Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales decreased 6.3% from January 2021 to February 2021 and improved 22.0% from February 2020 to February 2021 (on a non-adjusted basis).

Source: https://www.census.gov/retail/index.html; 5/3/21

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Remodeling

Joint Center for Housing Studies of Harvard University

Remodeling Upturn To Carry Into 2022

"Growth in improvement and repair expenditures to owner-occupied homes is expected to remain solid throughout the year and into 2022, according to our latest Leading Indicator of Remodeling Activity (LIRA). The LIRA projects a healthy pace of mid-single digit gains in annual home renovation and repair spending this year, with 4.8 percent growth by the first quarter of next year.

With a financial boost from recent federal stimulus payments and strong house price appreciation, homeowners are continuing to invest in the upkeep and improvement of their homes. This lift in incomes and ongoing strength of the housing market are providing homeowners incentives to make even greater investments in their homes this year.

Although the recent surge in DIY activity is slackening as the economy continues to open up, homeowners are undertaking larger discretionary renovations that had been deferred during the pandemic. A shift to more professional projects should boost annual homeowner remodeling expenditures to $370 billion by early next year." – Abbe Will, Research Associate and Associate Project Director of the Remodeling Futures Program, Joint Center For Housing Studies

https://www.jchs.harvard.edu/blog/remodeling-upturn-carry-2022; 4/15/21

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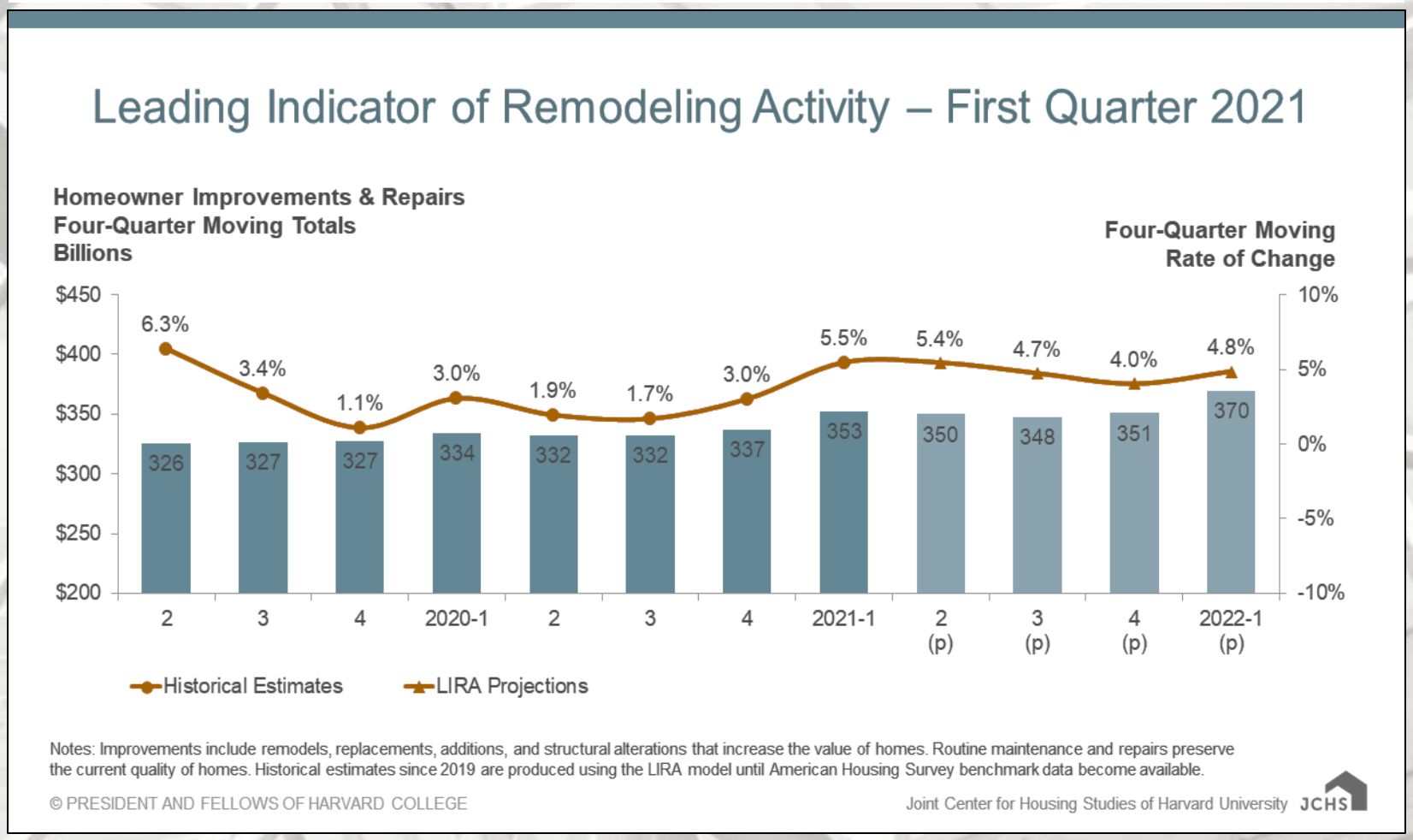
Remodeling



https://www.jchs.harvard.edu/blog/remodeling-upturn-carry-2022; 4/15/21

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Remodeling

Home Improvement Research Institute

The Home Improvement Product Market Is Exceeding Its Forecast

"The Home Improvement Research Institute (HIRI) partners with IHS Markit to develop an annual U.S. Size of Market Report. The current report is based on the most recent IHS economics forecast of the U.S. economy and looks at what to expect in the market through 2025.

Due to rapidly falling COVID-19 infection rates and states' widespread relaxation of containment measures, as well as an accelerated vaccination campaign, an update to this macroeconomic forecast has been published. Some of the upward movement reflects major elements of a $1.9 trillion stimulus package passed by Congress including the third round of stimulus checks, an extension of emergency unemployment programs and benefits, major funding for COVID-19 mitigation efforts, and significant aid to state and local governments, and schools.

"All [of these improvements] have boosted consumer confidence and the housing market in particular," said IHS Markit Global Construction Director Scott Hazelton, who has more than 30 years of industry research experience. "Home improvement spending growth will moderate from 13.8% in 2020 to 9.9% in 2021, but spending by contractors will actually improve year over year as households feel more comfortable with contractors in their home."" – Home Improvement Research Institute

Source: https://www.hiri.org/index.php; 4/22/21

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Remodeling

Home Improvement Research Institute

"Here are some of the key takeaways from the report.

National economic outlook

- Rapidly falling COVID-19 infection rates, states' relaxation of containment measures, and an accelerated vaccination campaign will allow a gradual recovery in spending on services currently restrained by social distancing.
- Real GDP grew by 4% in the last quarter of 2020, 1 percentage point faster than our recent projections.
- Despite an additional $1.9 trillion fiscal stimulus, inflation in core personal consumption expenditures remains below 2% through mid-2024.
- While we expect fiscal stimulus efforts to fade next year, the GDP is predicted to grow 4.1% in 2022.

Home Improvement products market outlook

- Good news: The updated forecast features an improved outlook for the home improvement market. The total home improvement market (in nominal dollars) is projected to grow by a strong 9.9% in 2021.
- Sales of home improvement products in 2020 were higher than estimated in our August outlook. The total home improvement market grew by 13.8% to $460 billion – 5.1% higher than our previous estimate.
- The housing market also gained speed in the second half of 2020. Overall, existing-home sales increased 6.5% last year, an increase of 11.2% relative to our forecast in August.
- We expect growth in home improvement product sales to ease in 2022, as many homeowners completed projects in 2020 or will do so this year.

Scott says that although the boom cannot last forever, a continuing strong economy suggests that further growth of 5.7% is attainable in 2022." – Home Improvement Research Institute

Source: https://www.hiri.org/index.php; 4/22/21

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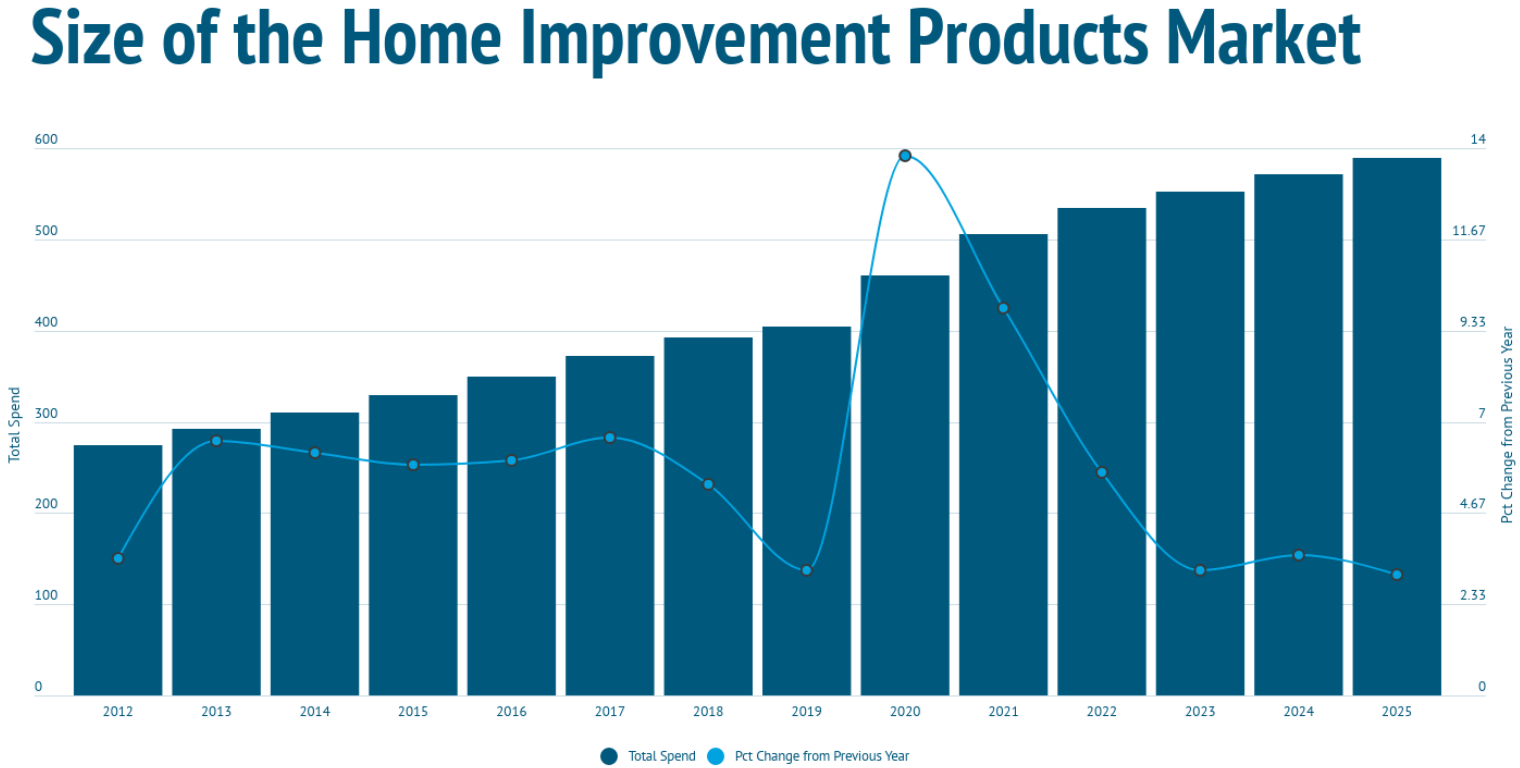
Remodeling

Home Improvement Research Institute



Source: https://www.hiri.org/index.php; 4/22/21

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Existing House Sales

National Association of Realtors

March 2021 sales: 6.010 thousand

	Existing Sales	Median Price	Mean Price	Month's Supply
March	6,010,000	$329,100	$355,200	2.1
February	6,240,000	$310,700	$342,100	2.0
2020	5,350,000	$280,700	$316,100	3.3
M/M change	-3.7%	5.9%	3.8%	5.0%
Y/Y change	12.3%	17.2%	12.4%	-36.4%

All sales data: SAAR

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 4/22/21

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Existing House Sales

	Existing SF Sales	SF Median Price	SF Mean Price
March	5,300,000	$334,500	$358,800
February	5,540,000	$315,100	$345,300
2020	4,800,000	$282,600	$317,000
M/M change	-4.3%	5.9%	3.9%
Y/Y change	10.4%	18.4%	13.2%

	NE	MW	S	W
March	760,000	1,280,000	2,700,000	1,270,000
February	770,000	1,310,000	2,780,000	1,380,000
2020	650,000	1,270,000	2,330,000	1,100,000
M/M change	-1.3%	-2.3%	-2.9%	-8.0%
Y/Y change	16.9%	0.8%	15.9%	15.5%

All sales data: SAAR.

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 4/22/21

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U.S. House Sales

Mortgage Bankers Association

MBA Forecast: Purchase Originations on Pace to Increase 16 Percent to Record $1.67 Trillion in 2021

"The Mortgage Bankers Association (MBA) announced today at its **Spring Conference and Expo 2021** that purchase originations are on track to grow 16.4% to a new record of $1.67 trillion in 2021.

"The housing market is incredibly strong this year, with robust housing demand in nearly every part of the country, driven by the improving economy, households seeking more indoor and outdoor space, millennials reaching their prime homebuying years, and still low mortgage rates," said Mike Fratantoni, Chief Economist and Senior Vice President for Research and Industry Technology. "A lack of supply is the biggest hurdle to an even larger increase in home sales. The widening imbalance of supply and demand is driving up home-price growth and eroding affordability – especially for entry-level buyers."

After last year's record $3.83 trillion in mortgage originations, MBA forecasts volume to fall 14% this year to $3.28 trillion, which would still be the third-highest total ever. Mortgage rates are expected to continue rising to around 3.7%, contributing to a further slowdown in refinance demand. Refinance originations are expected to fall by 33% to $1.62 trillion.

"Refinance volume has already trailed off because of the steep climb in mortgage rates since January," said Fratantoni. "Mortgage lenders should continue to prepare for the transition to a strong purchase market and slowing refinance activity."

According to Fratantoni, the American Rescue Plan and vaccine rollout will continue to provide a lift to the economy, households, and businesses through the summer. He expects economic growth to jump to 6.5% this year, a vast improvement from the pandemic-induced contraction of 2.4% in 2020.

"The economy will continue to recover, with rapid job growth, particularly in the hardest-hit, service sectors of the economy," said Fratantoni. "The job growth is certainly positive, but this environment sets the stage for higher mortgage rates and faster inflation. However, if housing inventory levels improve and help to keep affordability in check, home sales should remain strong into 2022."" – Adam DeSanctis, MBA

Source: https://s3141176.t.en25.com/e/es; 4/23/21

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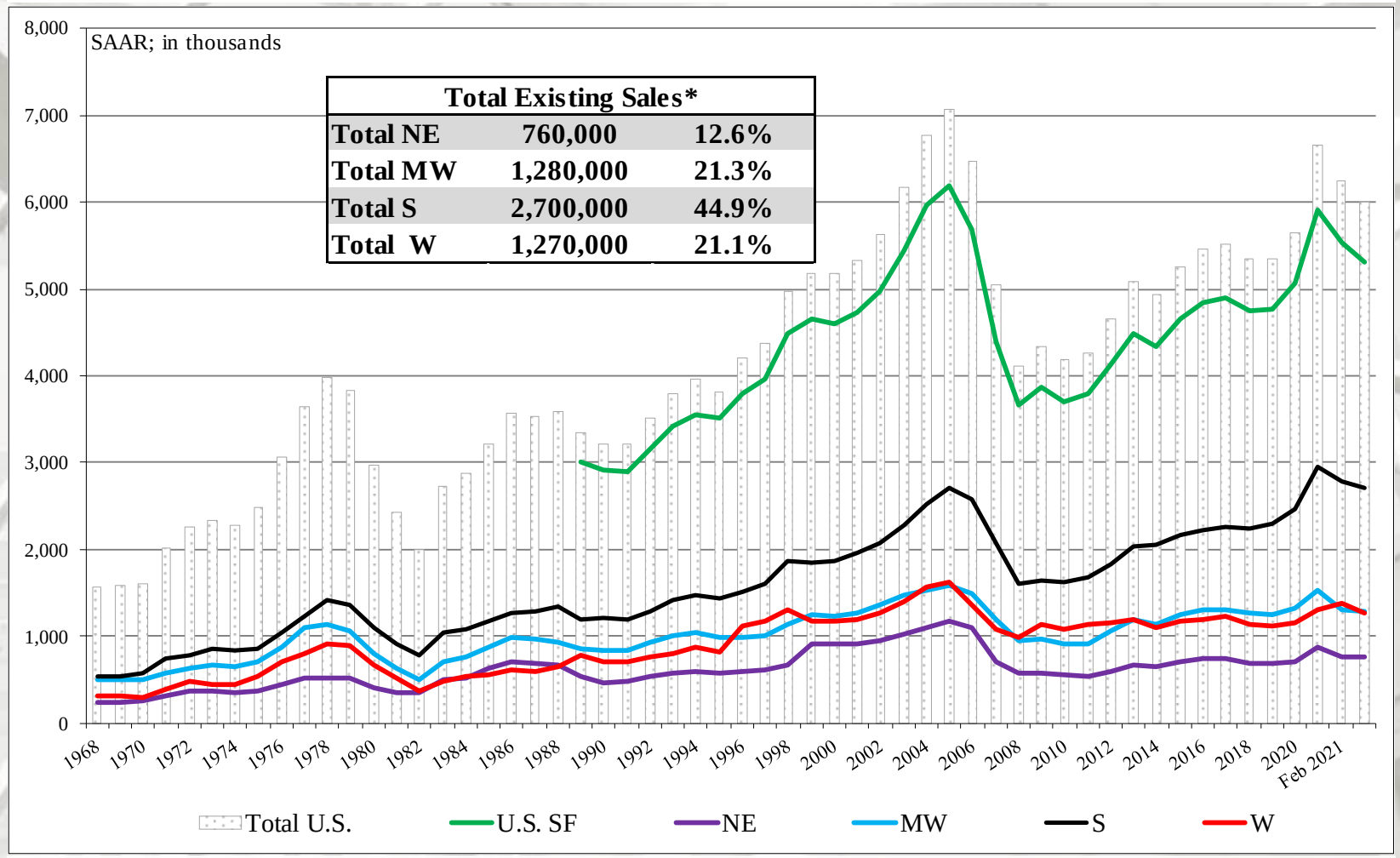
Existing House Sales



Total Existing Sales*		
Total NE	760,000	12.6%
Total MW	1,280,000	21.3%
Total S	2,700,000	44.9%
Total W	1,270,000	21.1%

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

* Percentage of total existing sales.

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 4/22/21

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U.S. Housing Prices

Federal Housing Finance Agency

FHFA House Price Index Up 0.9 Percent in February; Up 12.2 Percent from Last Year

Significant Findings

"House prices rose nationwide in February, up **0.9 percent** from the previous month, according to the latest Federal Housing Finance Agency House Price Index (FHFA HPI®). House prices rose **12.2 percent** from February 2020 to February 2021. The previously reported 1.0 percent price change for January 2021 remained unchanged.

For the **nine census divisions**, seasonally adjusted monthly house price changes from January 2021 to February 2021 ranged from **+0.3 percent** in the Middle Atlantic division to **+1.6 percent** in the Mountain division. The 12-month changes ranged from **+10.5 percent** in the West North Central division to **+15.4 percent** in the Mountain division." – Raffi Williams and Adam Russell, FHFA

"Annual house price growth achieved a new record high in February. The 12.2 percent gain represents an increase of $35,000 for a median-priced home that sold a year ago at $290,000 in the Enterprises' data." – Dr. Lynn Fisher, Deputy Director of the Division of Research and Statistics, FHFA

Source: https://www.fhfa.gov//AboutUs/Reports/Pages/US-HPI-April-2021.aspx; 4/27/21

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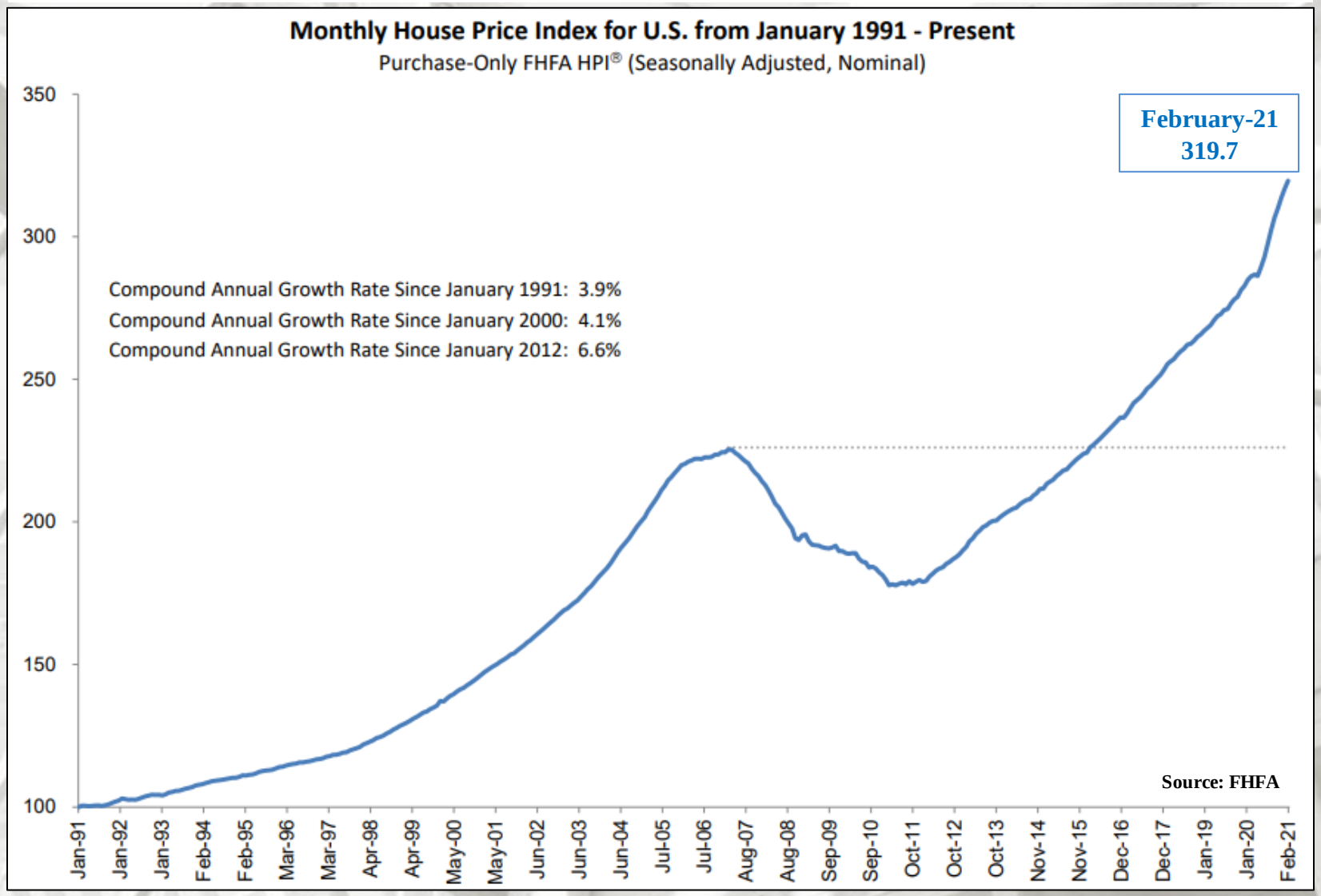
U.S. Housing Prices



Source: https://www.fhfa.gov//AboutUs/Reports/Pages/US-HPI-April-2021.aspx; 4/27/21

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U.S. Housing Prices

S&P CoreLogic Case-Shiller Index Reports 12.0% Annual Home Price Gain in February 2021

"…Data for February 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.

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 12.0% annual gain in February, up from 11.2% in the previous month. The 10-City Composite annual increase came in at 11.7%, up from 10.9% in the previous month. The 20-City Composite posted an 11.9% year-over-year gain, up from 11.1% in the previous month.

Phoenix, San Diego, and Seattle reported the highest year-over-year gains among the 20 cities in February. Phoenix led the way with a 17.4% year-over-year price increase, followed by San Diego with a 17.0% increase and Seattle with a 15.4% increase. Nineteen of the 20 cities reported higher price increases in the year ending February 2021 versus the year ending January 2021.

Month-Over-Month

"Before seasonal adjustment, the U.S. National Index posted an 1.1% month-over-month increase, while the 10-City and 20-City Composites both posted increases of 1.1% and 1.2% respectively in February. After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 1.1%, and the 10-City and 20-City Composites both posted increases of 1.1% and 1.2% respectively as well. In February, 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

Source: https://www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/sp-corelogic-case-shiller-composite/#overview/; 4/27/21

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U.S. Housing Prices

S&P CoreLogic Case-Shiller Index

Analysis

"Strong home price gains continued in February 2021. The National Composite Index marked its ninth month of accelerating prices with a 12.0% gain from year-ago levels, up from 11.2% in January. This acceleration is also reflected in the 10- and 20-City Composites (up 11.7% and 11.9%, respectively). The market's strength continues to be broadly-based: all 20 cities rose, and 19 cities gained more in the 12 months ended in February than they had gained in the 12 months ended in January.

More than 30 years of S&P CoreLogic Case-Shiller data help us to put February's results into historical context. The National Composite's 12.0% gain is the highest recorded since February 2006, exactly 15 years ago, and lies comfortably in the top decile of historical performance. Housing's strength is reflected across all 20 cities; February's price gains in every city are above that city's median level, and rank in the top quartile of all reports in 18 cities.

These data remain consistent with the hypothesis that COVID has encouraged potential buyers to move from urban apartments to suburban homes. This demand may represent buyers who accelerated purchases that would have happened anyway over the next several years. Alternatively, there may have been a secular change in preferences, leading to a permanent shift in the demand curve for housing. Future data will be required to analyze this question." – Craig Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

Source: https://www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/sp-corelogic-case-shiller-composite/#overview/; 4/27/21

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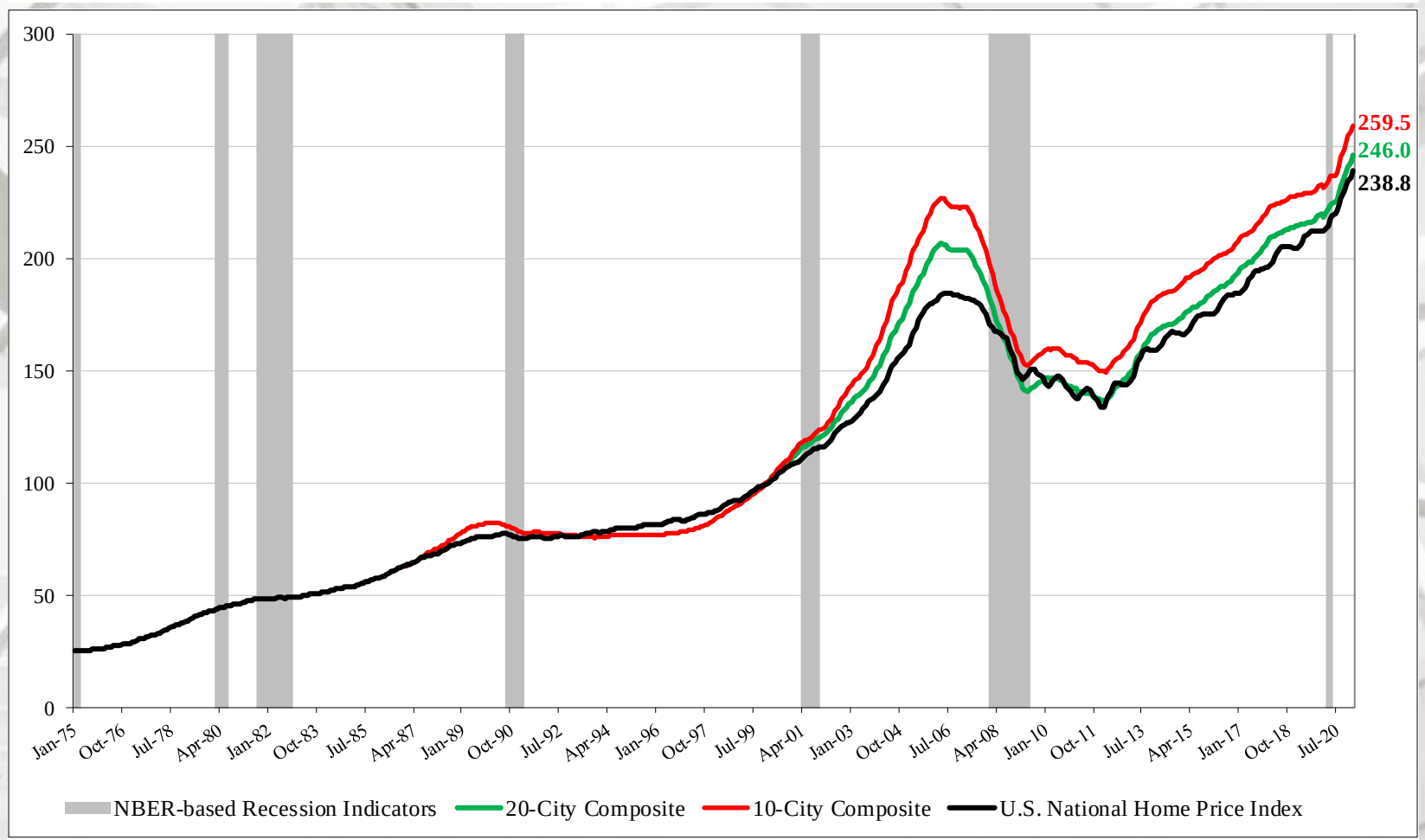
S&P/Case-Shiller Home Price Indices



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

"Phoenix's 17.4% increase led all cities for the 21st consecutive month, with San Diego (+17.0%) and Seattle (+15.4%) close behind. Although prices were strongest in the West (+13.0%) and Southwest (+12.9%), every region logged double-digit gains." – Craig Lazzara, Managing Director and Global Head of Index Investment Strategy, S&P Dow Jones Indices

Source: https://www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller/sp-corelogic-case-shiller-composite/#overview/; 4/27/21

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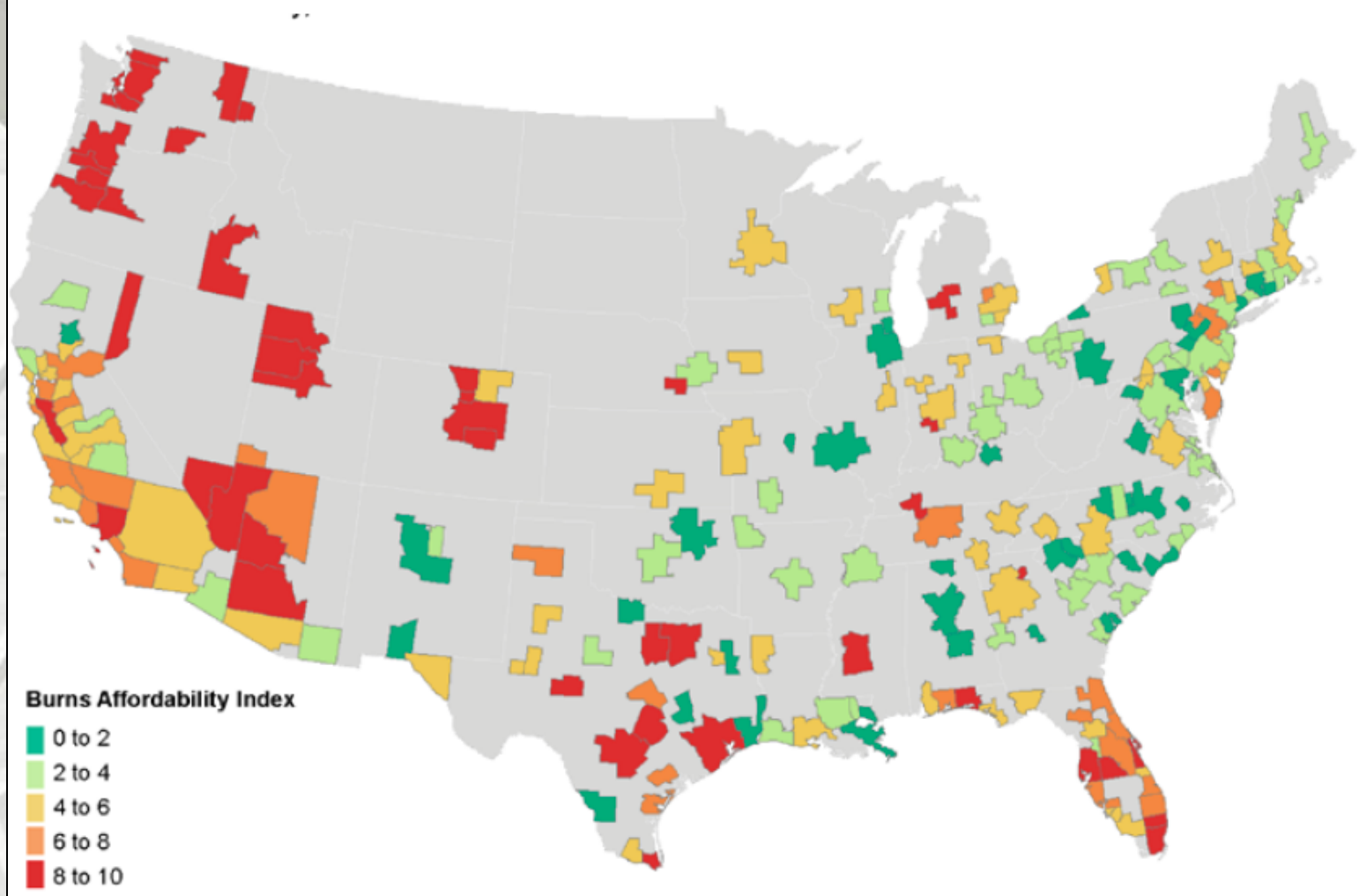
U.S. Housing Affordability & Prices

John Burns Real Estate Consulting

Burns Affordability Index™ by Metro

Based on our 10-point Burns Affordability Index, 0–1 represents the 10% most affodable months in the market's history, and 9–10 reflects the 10% least affordable months. 5 is the median.



Source: John Burns Real Estate Consulting, LLC (Data: Feb-21, Pub: Mar-21)

Source: https://twitter.com/johnburnsjbrec/status/1385571794468450304/photo/1; 4/23/21

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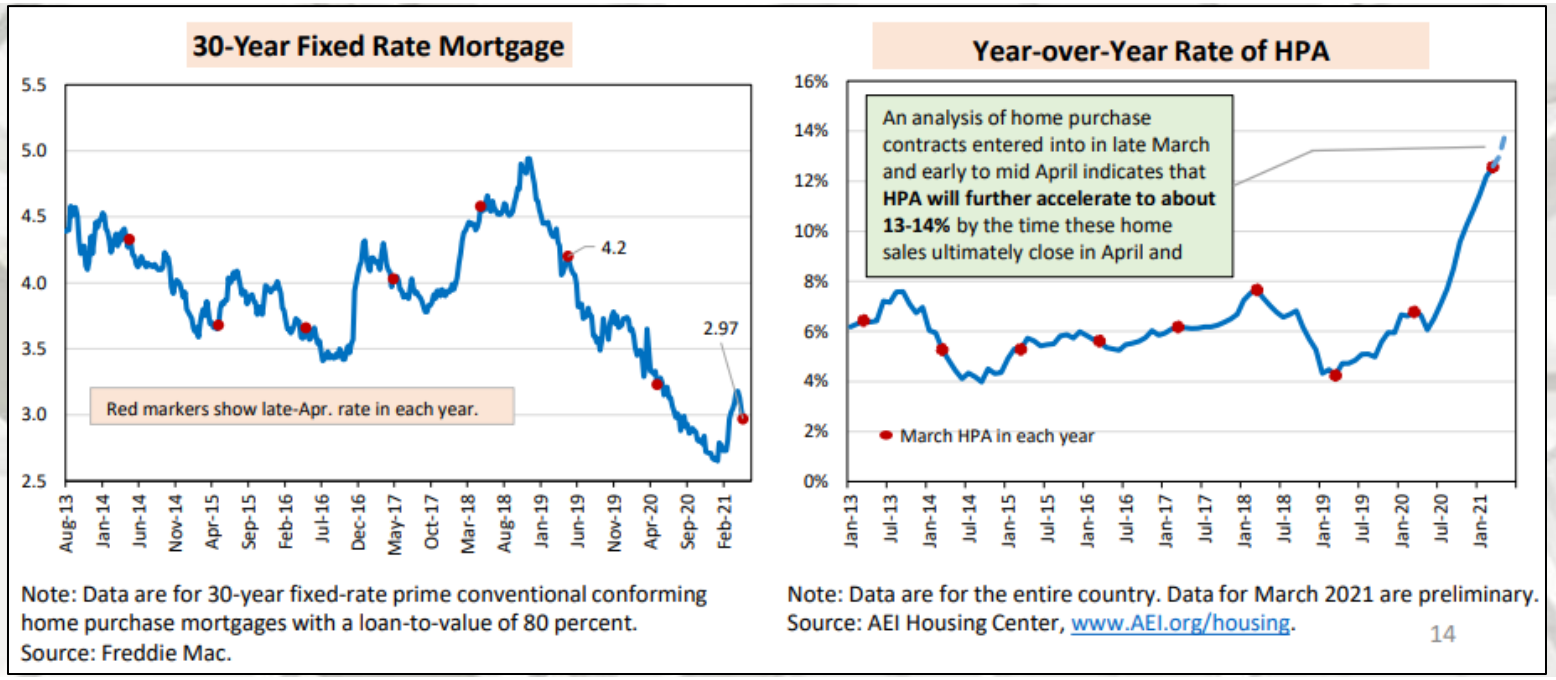
U.S. Housing Affordability & Prices



Note: Data are for 30-year fixed-rate prime conventional conforming home purchase mortgages with a loan-to-value of 80 percent.
Source: Freddie Mac.

Note: Data are for the entire country. Data for March 2021 are preliminary.
Source: AEI Housing Center, www.AEI.org/housing.

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AEI Housing Center

For the 2nd time in 20 years the Fed's Monetary Punchbowl is Fueling Rampant Home Price Appreciation, Resulting in a Disparate Impact

"Mortgage rates dropping from 10% in 1990 to 6% in 2007, along with policy-induced credit easing, led to a massive home price boom and bust, with millions of foreclosures for low income families.

Since 2012 rates have dropped from 4.5% to under 3%. Combined with policy induced credit loosening, a lack of supply, and WFH, the result has been a second massive home price boom. Preliminary national HPA rate for March 2021 was 12.6%, up from 6.8% a year ago. With prices increasing much faster than incomes, the Fed's policy will have a disparate impact. Higher income households will be able to take advantage of WFH to improve their housing situation, while low income ones will be increasingly crowded out of home buying. This disparate impact will likely be long lasting as today's high HPA will become incorporated into future price levels, which will slow gains in racial integration and further increase socio-economic stratification." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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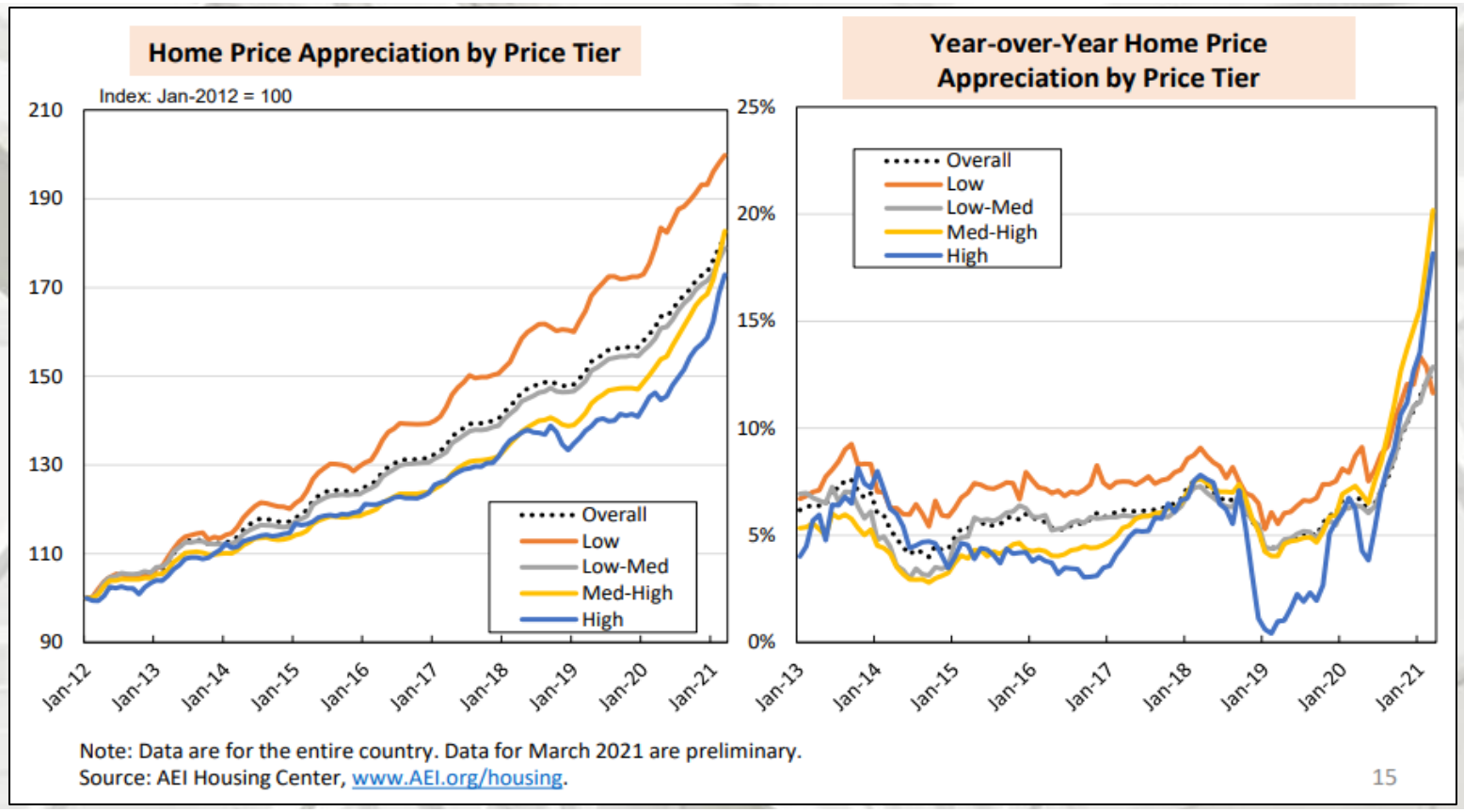
U.S. Housing Affordability & Prices



AEI Housing Center
Home Price Appreciation by Price Tier

"Since 2012 a large gap in HPA has developed between the lower and upper end of the market (left panel). Preliminary numbers for March 2021 indicate that the low price tier continued to have strong HPA, although the med-high and high price tiers, which are more dependent on the monetary punch bowl, are showing the strongest rates of appreciation. This is a trend reversal, since historically the low price tier has shown the fastest y-o-y HPA." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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U.S. Housing Affordability & Prices

AEI Housing Center

Market Fundamentals and Home Price Appreciation

"Since 2012, home price appreciation (HPA) has increased 2-3 times the rate of market fundamentals. While this is usually unsustainable over the long run, the current boom may be different:

- Higher income workers, who have greater opportunities to Work from Home (WFH), are able to profit from arbitrage opportunities offered by vastly different home prices across metros and regions.
    - Nearly ¼ of US households live in metros with an average median home price/median household income ratio of 6.9, while the rest of the country has a ratio of 3.3. And WFH buyer incomes are high.
    - Example: in March 2012, the median sales price of a San Jose home was $1,300,000 (10X the median household income of $131,000) compared to $350,000 in Phoenix (~5X the median income of $68,000).
- Lower income (LI) households have slower income growth, were hit harder by the pandemic, and have less ability to take advantage of WFH.
    - "*Driving until you qualify*" is no longer a viable solution, as LI buyers are out-bid by WFH buyers.
    - With few arbitrage opportunities, housing standards and home ownerships decreases as these households are increasingly priced out of the market.
    - This is a no win. At today's low rates, prices just get further out of reach. If rates go up and HPA slows, monthly payments get further out of reach as prices reflect past increases." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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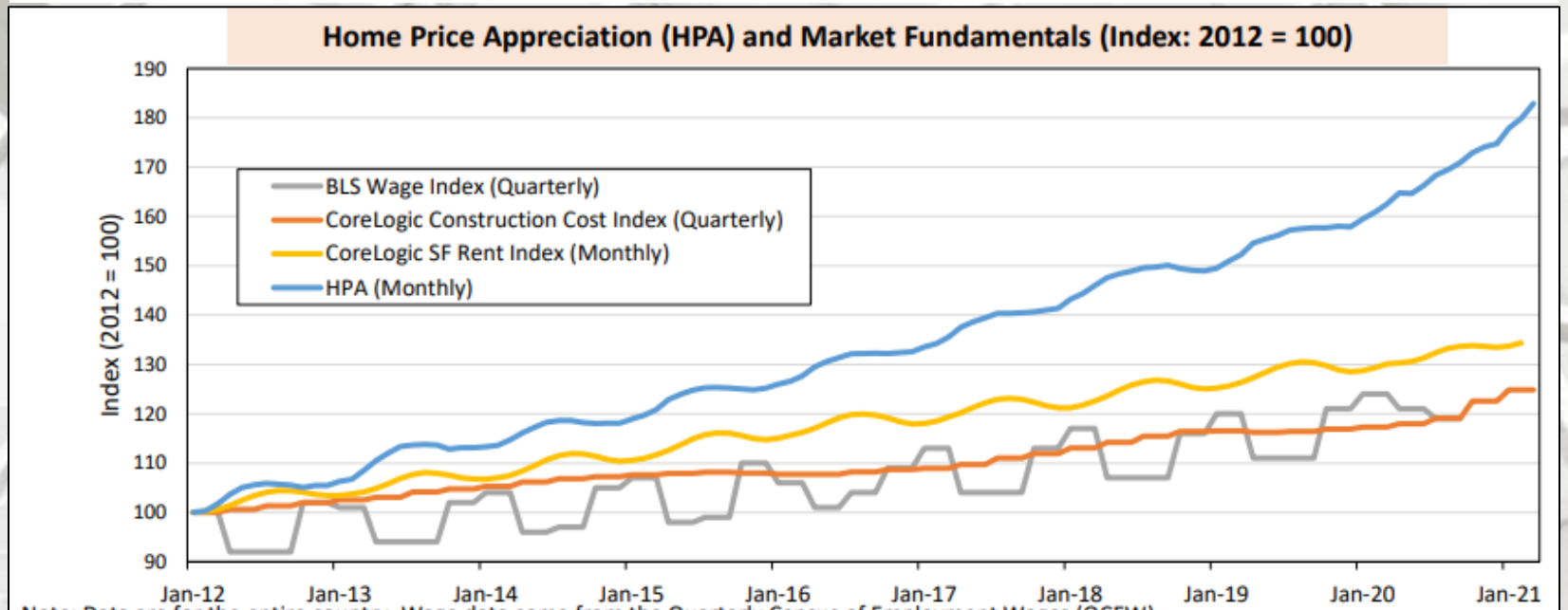
U.S. Housing Affordability & Prices

AEI Housing Center

Market Fundamentals and Home Price Appreciation



Note: Data are for the entire country. Wage data come from the Quarterly Census of Employment Wages (QCEW).
Source: CoreLogic, BLS, and AEI Housing Center, www.AEI.org/housing.

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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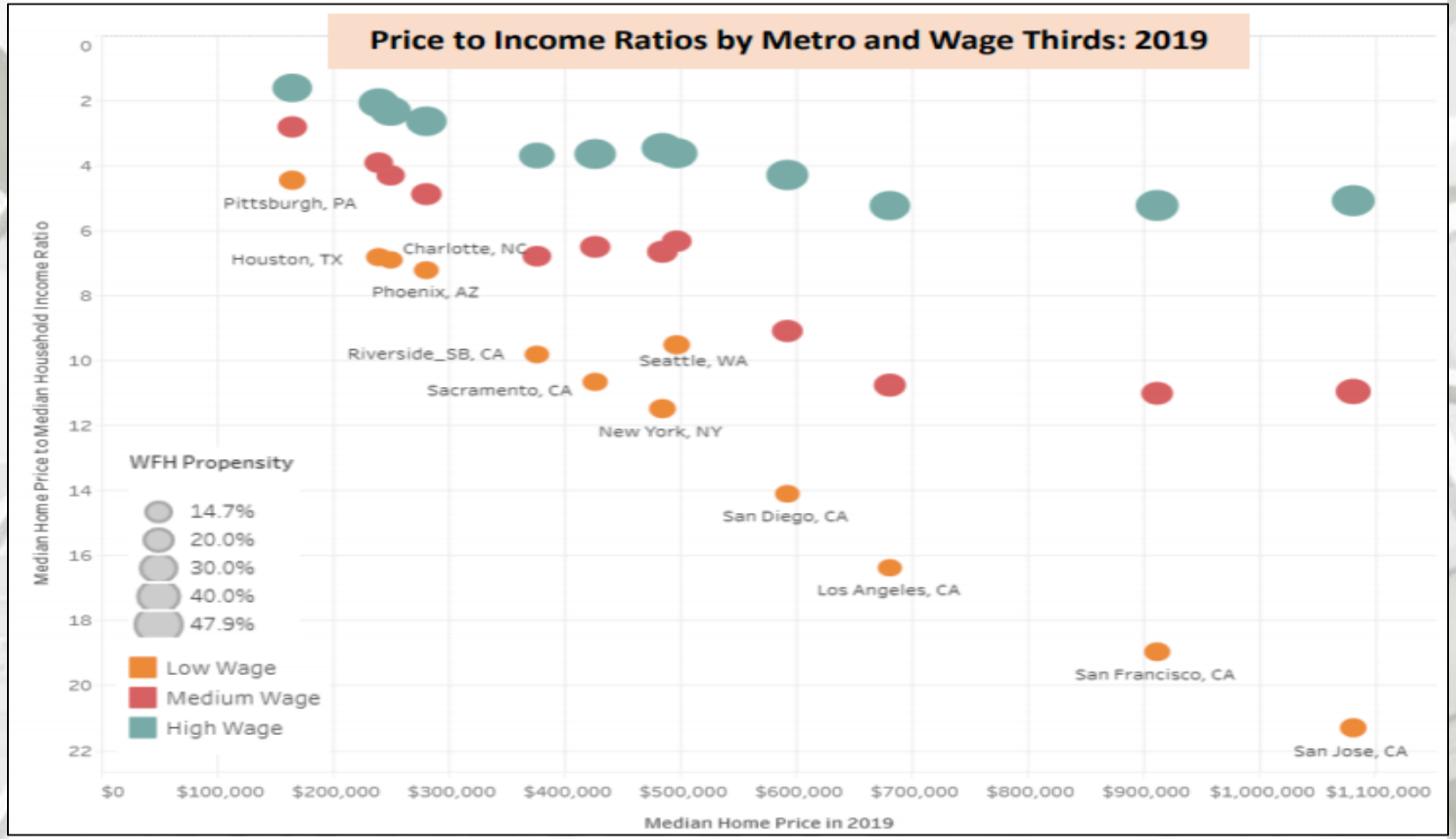
U.S. Housing Affordability

AEI Housing Center

The Worsening Affordability Problem and Its Disparate Impact



Methodology: We first create wage thirds based on the median wage for occupational subcategories from the BLS Occupational Data Employment Statistics OES. Each wage third contains roughly the same number of employees in each metro. Then multiply the median household income by 150%, which, according to Census Bureau data, is roughly the average multiplier for a household with a second wage earner. For the 2022 data, we project the median income by applying the respective growth rate for each wage third from 2018-2019 to the 2019 result for each projection year. Median home prices come from an Automated Valuation Model (AVM) for each single family property. The 2012 value applies a 5% home price appreciation to the Dec. 2011 AVM, which was roughly the national home price growth rate in 2012. For 2019, we use the Dec. 2019 AVM without any adjustment. For 2022, we project the median home price by applying the average of the AEI metro specific home price growth rate for Nov. and Dec. 2020 to the Dec. 2019 AVM for each projection year. Data on the Work from Home (WFH) propensity come from a BLS report, which reports occupation specific abilities to telework and take-up rate of telework using the 2017/2018 American Time Use Survey. Our projected WFH propensity is the average of ability to telework and take-up rate. We calculate the WFH propensity for each wage third at the metro level based on the occupation specific classification, which we map to a wage third. Source: BLS Occupational Data Employment Statistics and BLS Report: Work from Home propensity.

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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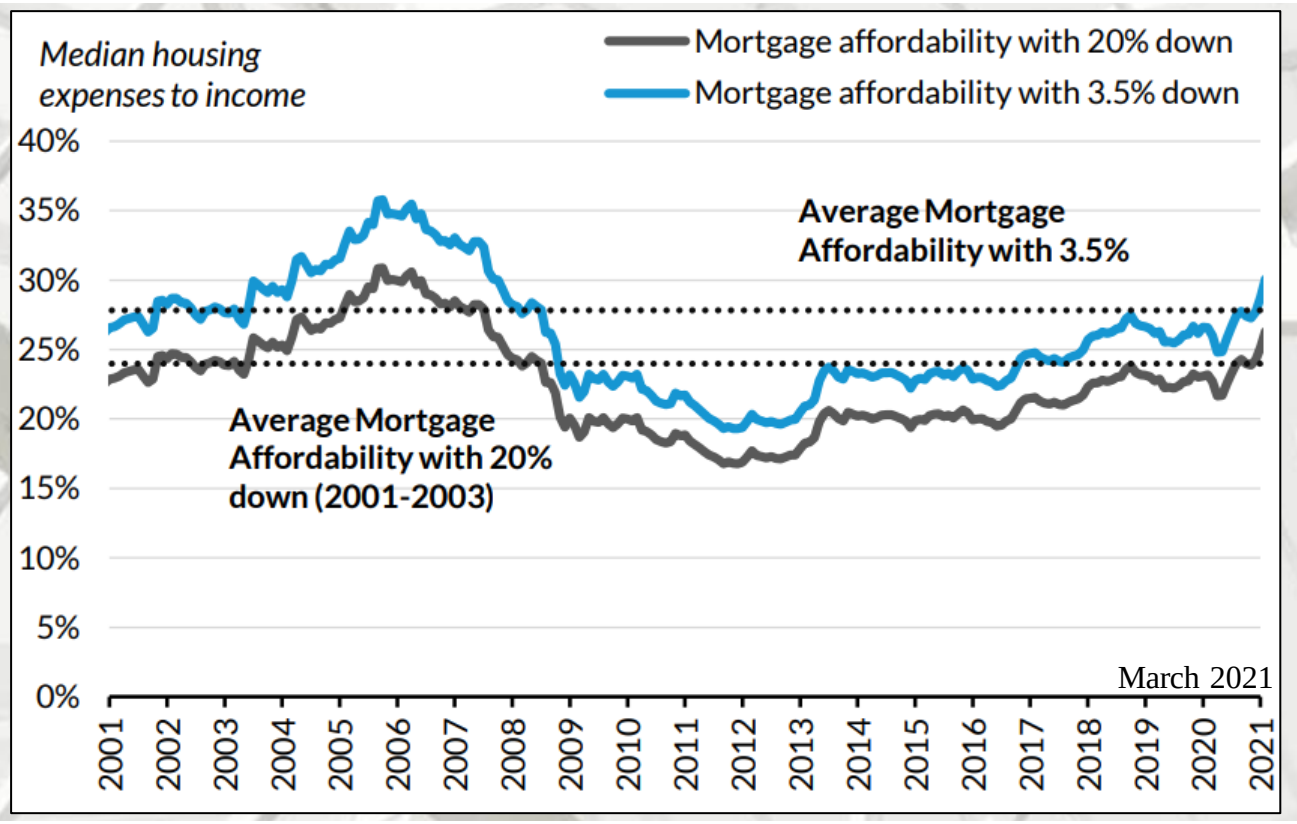
Housing Affordability



Urban Institute

National Mortgage Affordability Over Time

"Despite price increases over the last 8 years, home prices are near average affordability levels, as interest rates are now near generational lows. As of March 2021, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 26.3 percent; with 3.5 down, it is 30.0 percent. These numbers are very close to the 2001-2003 median, and represent a sharp decrease in affordability in recent months. The last time we were at this affordability level was in February of 2019, and before that, in 2008. ... " – Laurie Goodman, Vice President, Urban Institute

Source: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-april-2021; 4/27/21

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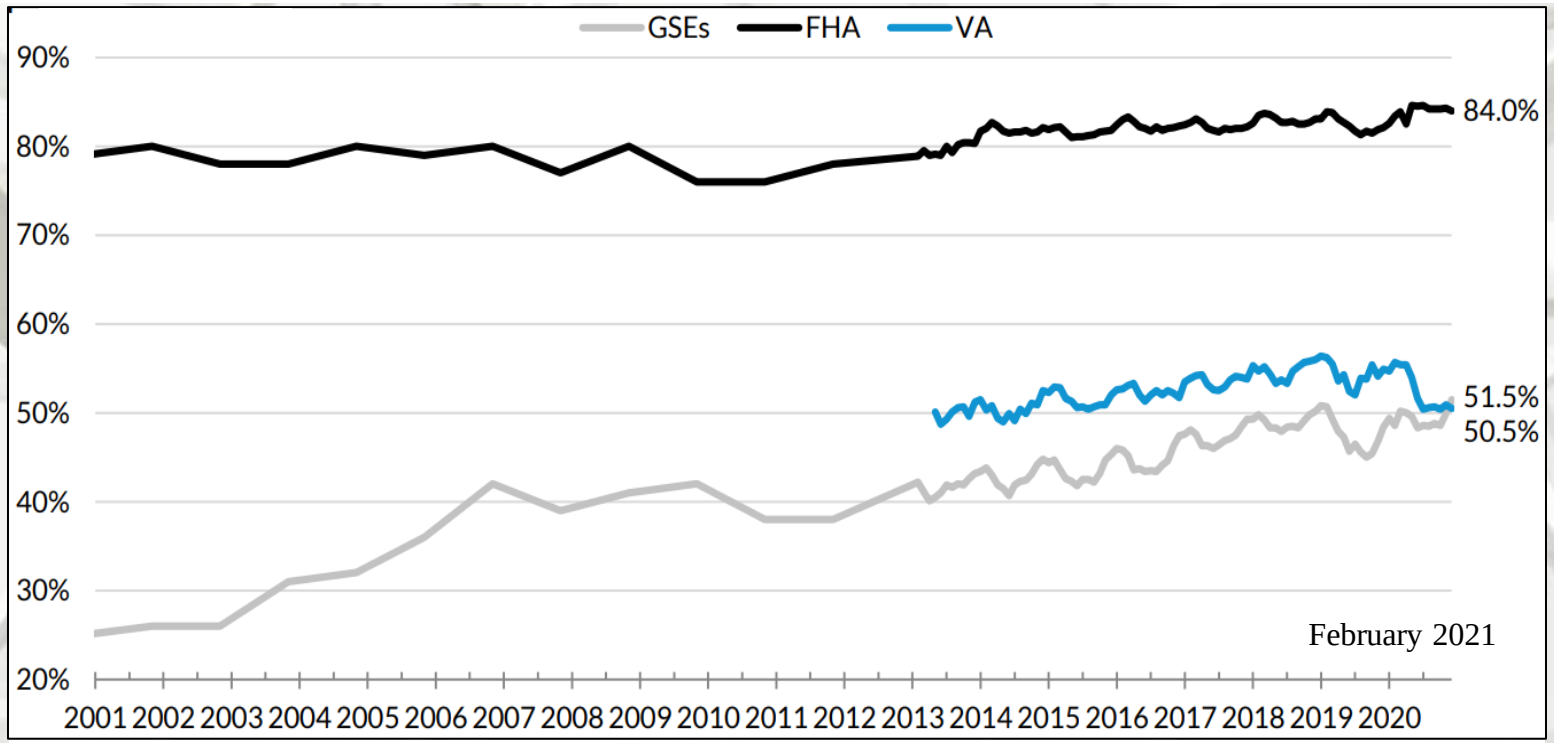
First-Time House Buyers



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 February 2021, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.0 percent. The FTHB share of VA lending in February was 50.5 percent. The GSE FTHB share remained stable in February relative to January, at 51.5 percent. The bottom table shows that based on mortgages originated in February 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

Source: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-april-2021; 4/27/21

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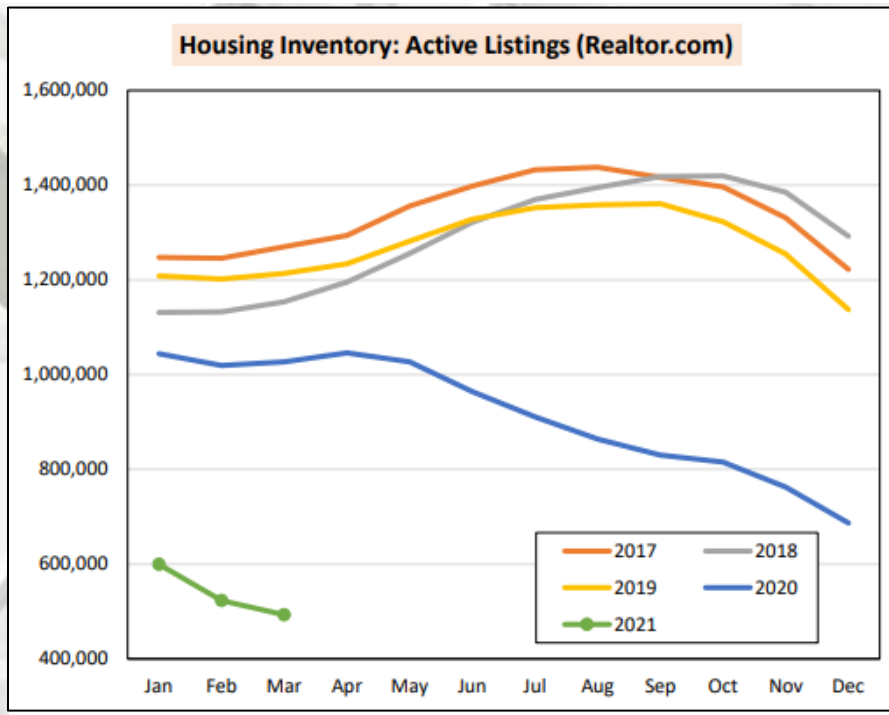
U.S. Housing Supply



Year-over-Year Change in Active Listings (March 2021)			
Density Quintile	Nation	LA	NYC
All	-57%	-43%	-24%
1 (least)	-67%	-59%	-43%
2	-63%	-47%	-41%
3	-62%	-35%	-20%
4	-56%	-15%	11%
5 (most)	-21%	5%	34%

Year-over-Year Change in Active Listings by Price Tier (March 2021)				
Overall	Low	Low-Med	Med-High	High
-49%	-56%	-56%	-56%	-46%

Sources: Realtor.com, Census Bureau, and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center
Supply Is Being Depleted

"Supply is at an all time low in 2021 and is most depleted in less dense areas. For the foreseeable future, it will be difficult to replenish or increase supply: (i) baby boomers are tending to stay put more, (ii) it takes time to acquire land, entitle, and build even in places like North Carolina and Texas, (iii) adding supply will face the usual difficulties in the Northeast and much of the West, & (iv) new construction supply has fallen from 6.5 months in March 2020 to 3.6 months (SA) in March 2021." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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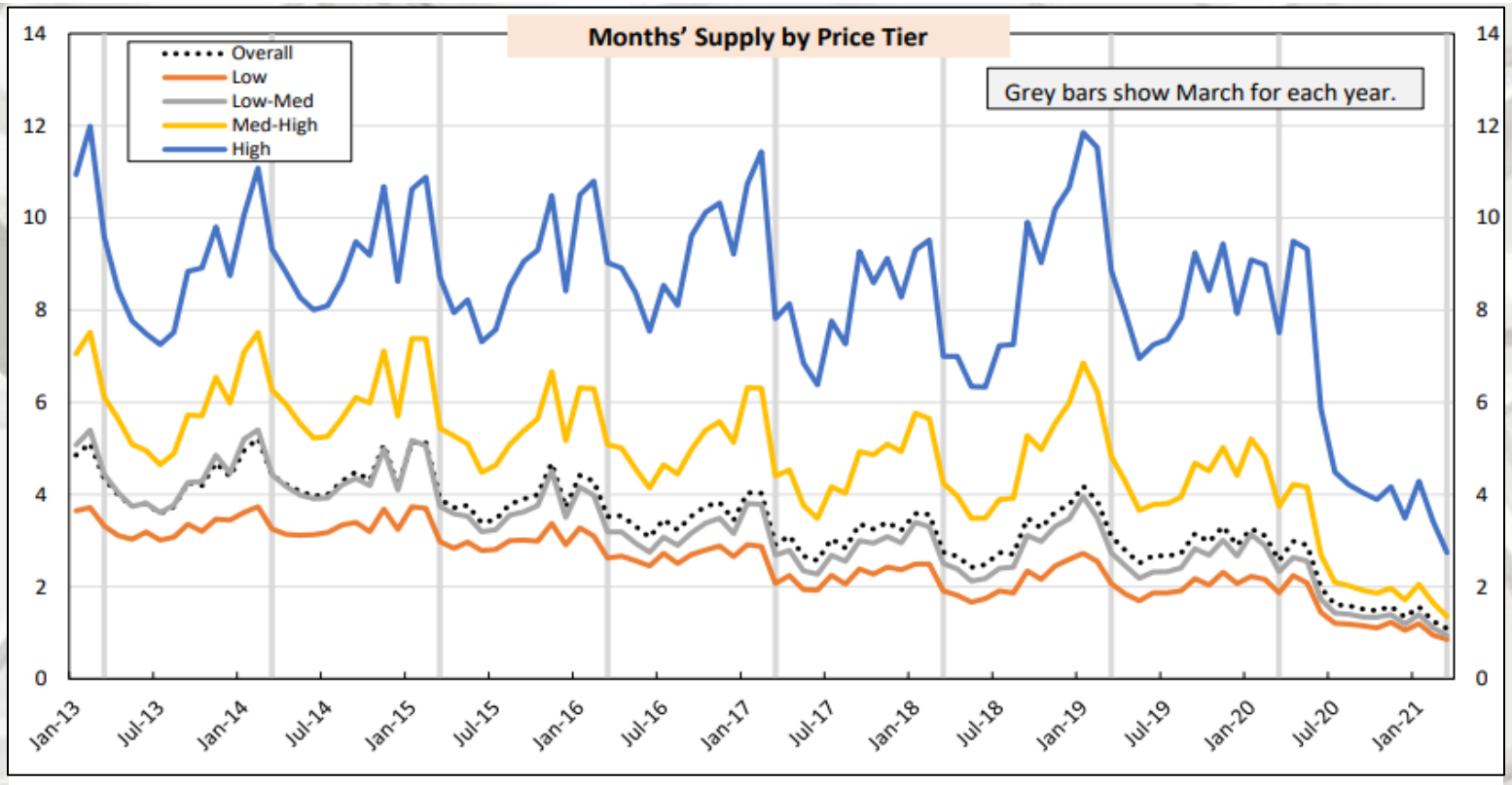
Housing Supply



Note: Months' supply measures how long it would take for the existing level of inventory to be sold off at the current sale'space. While the listings data come from the MLS, the sales numbers come from the public records
Sources: Realtor.com, Zillow, and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center
Months' Supply by Price Tiers

"Starting with June 2020, months' supply started to drop precipitously across all price tiers. In March 2021, overall months' supply stood at 1.1 months. While supply remains lowest in the low (0.9 months) and low-med tiers (0.9 months), the drop in the med-high and high price tiers are especially noteworthy. The high tier has fallen from 7.5 months in March 2020 to 2.7 months in March 2021 and med-high tier has fallen from 3.7 to 1.4." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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U.S. Housing Market

Zonda

New-home Lot Inventory Drops 24.2% YOY to New Lows

Zonda's New Home Lot Supply Index fell to 49 in Q1, down 10.1% from the previous quarter.

"New-home lot supply has tightened considerably across the U.S., according to Zonda. Its latest New Home Lot Supply Index came in at 49 for the first quarter of 2021, down 10.1% from the fourth quarter of 2020 and 24.2% from the first quarter of 2020.

At the market level, lot supply trended below Q1 2020 levels in nearly every top market. All top markets remain "significantly undersupplied," with New Home LSI readings of 75 or below.

"The race to acquire lots is on as builders continue working to quickly get more homes on the ground," says Ali Wolf, chief economist at Zonda. "Competition for lots is fierce, but demand is showing no signs of letting up, which is encouraging more building."

Los Angeles, San Francisco, and Baltimore are the markets where lot supply tightened the most on a year-over-year basis. All three remain the tightest overall for lot supply of the major markets. Zonda attributes this tight lot supply to rising demand for for-sale product combined with topography issues and NIMBY influences.

"The silver lining in today's extreme lot shortage is that it should be short-lived," says Wolf. "Builders have been aggressively buying land in different stages of development, and many of these lots will turn into homes for sale in the coming year or two."" – Sam Khater, Vice President and Chief Economist, Economic & Housing Research; Freddie Mac

Source: https://www.builderonline.com/data-analysis/new-home-lot-inventory-drops-24-2-yoy-to-new-lows_o; 5/45/21

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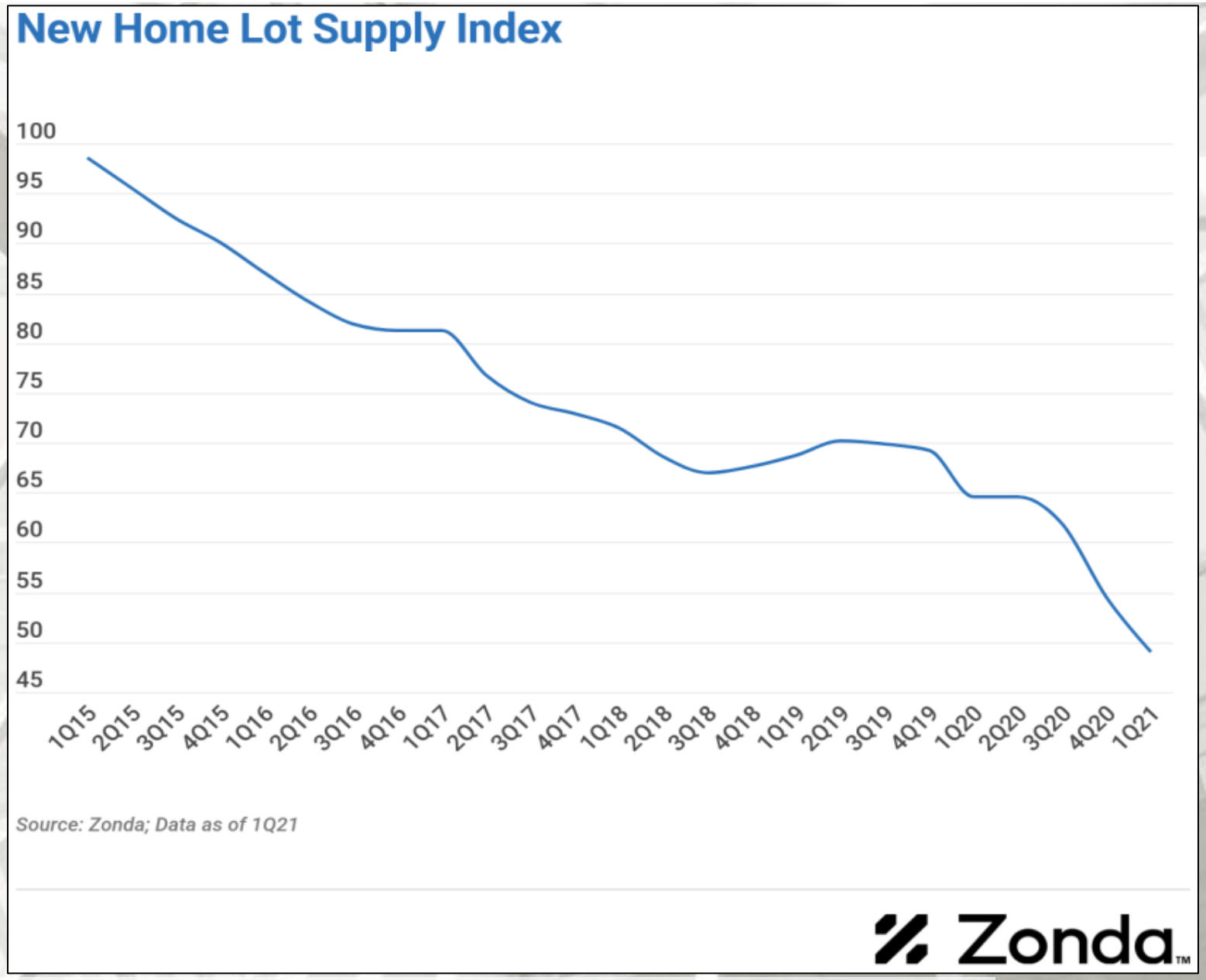
U.S. Housing Market



Source: https://www.builderonline.com/data-analysis/new-home-lot-inventory-drops-24-2-yoy-to-new-lows_o; 5/45/21

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U.S. Housing Market

Freddie Mac

One of the Most Important Challenges our Industry will Face: The Significant Shortage of Starter Homes

"While the economy is improving since the emergence of the pandemic, there are still some areas of concern. For example, several industries, such as retail, hospitality and tourism, remain fragile. Supply overhangs and shortages continue to affect the economy. And unfortunately, the housing market is among the industries where fundamental shortages exist.

Even before the COVID-19 pandemic and current recession, the housing market was facing a substantial supply shortage and that deficit has grown. In 2018, we estimated that there was a housing supply shortage of approximately 2.5 million units, meaning that the U.S. economy was about 2.5 million units below what was needed to match long-term demand. Using the same methodology, we estimate that the housing shortage increased to 3.8 million units by the end of 2020. A continued increase in a housing shortage is extremely unusual; typically, in a recession, housing demand declines and supply rises, causing inventory to rise above the long-term trend.

The main driver of the housing shortfall has been the long-term decline in the construction of single-family homes, which we document in two Insights: The Housing Supply Shortage: State of the States and The Major Challenge of U.S. Housing Supply. That decline has resulted in the decrease in supply of entry-level single-family homes or, "starter homes."" – Sam Khater, Vice President and Chief Economist, Economic & Housing Research; Freddie Mac

Source: http://www.freddiemac.com/perspectives/sam_khater/20210415_single_family_shortage.page; 4/15/21

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U.S. Housing Market

Freddie Mac

One of the Most Important Challenges our Industry will Face: The Significant Shortage of Starter Homes

"In the late 1970s, the construction of new entry-level homes averaged 418,000 units per year (Figure 1). During the 1980s, mortgage rates increased dramatically, rising from an average of 8.9% to 12.7%. As a result, entry-level housing supply fell by more than 100,000 units to 314,000.

In the 1990s, a decline in mortgage rates led to a surge in purchase demand of new single-family construction, which reached a 20-year high by 1999. However, while new construction was high, entry-level supply continued to decline, dropping to 207,000 units a year during the 1990s.

The 2000s experienced a substantial rise in new housing supply in response to then record low mortgage rates and new subprime and Alt-A products that led to record home purchase demand. Despite this demand and a rise in single-family total supply, entry-level supply continued a downward trajectory, declining to 150,000 units a year. Even at its cyclical peak during the 2000s, entry-level supply reached only 186,000 in 2004 – the same year that homeownership peaked. The fact that the homeownership rate peaked the same year as entry-level supply is indicative of the strong impact that entry-level supply has on homeownership. Very simply, renters can't buy houses that don't exist.

During the 2010s, new entry-level supply decreased further to 55,000 units a year and for 2020 alone, we estimate that there were 65,000 new entry-level homes completed. In the span of five decades, entry level construction fell from 418,000 units per year in the late 1970s to 65,000 in 2020." – Sam Khater, Vice President and Chief Economist, Economic & Housing Research; Freddie Mac

Source: http://www.freddiemac.com/perspectives/sam_khater/20210415_single_family_shortage.page; 4/15/21

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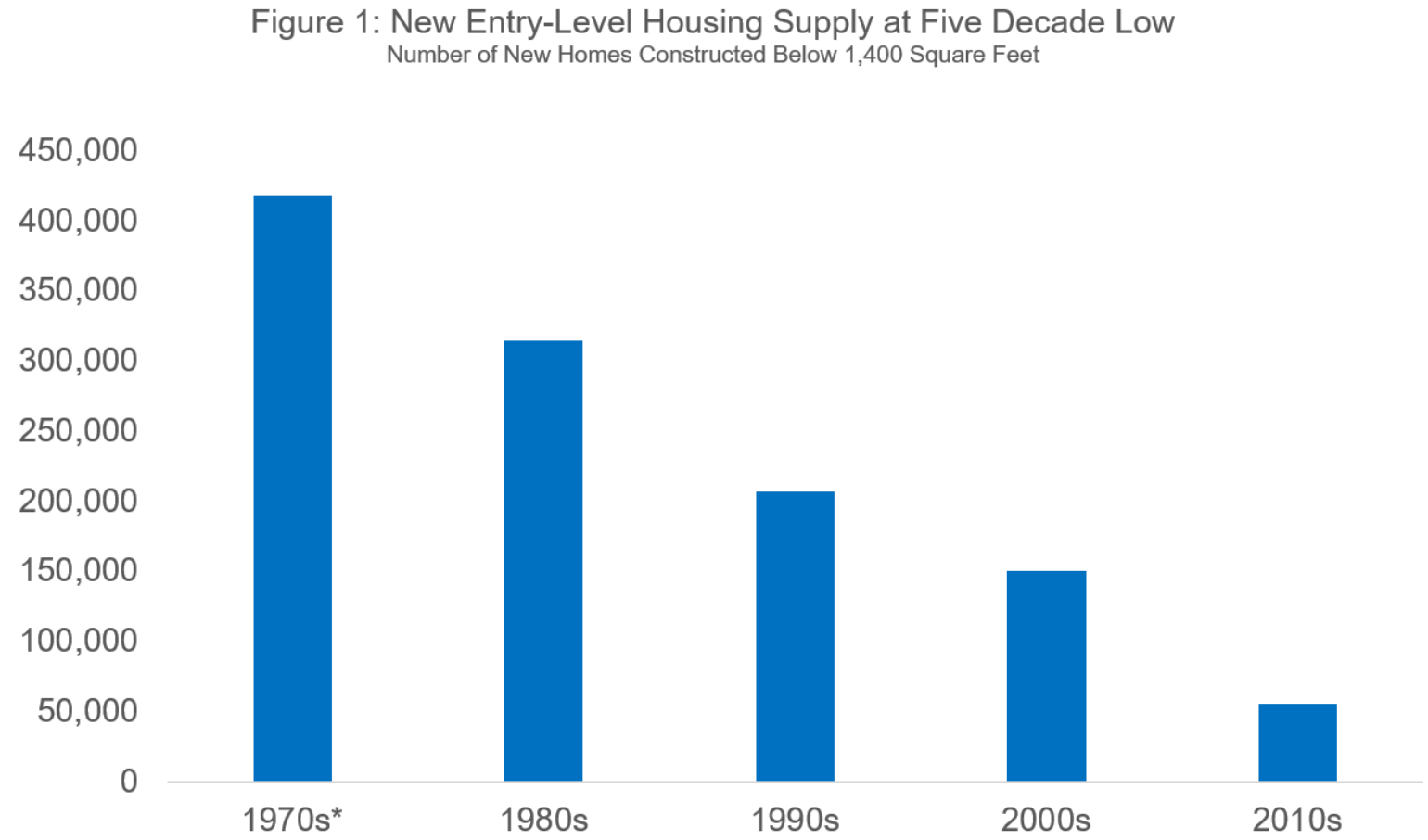
U.S. Housing Market



Source: Bureau of the Census. *Due to data limitations, represents 1976 to 1979 only

[1] We define entry-level homes as homes with 1,400 square feet or less. The median single-family home had about 2,300 square feet in 2019 according to the U.S. Department of Census.

[2] https://miblog.genworth.com/first-time-homebuyer-market-report/

Source: http://www.freddiemac.com/perspectives/sam_khater/20210415_single_family_shortage.page; 4/15/21

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U.S. Housing Market

Freddie Mac

One of the Most Important Challenges our Industry will Face: The Significant Shortage of Starter Homes

"While in 2020 only 65,000 entry-level homes were completed, there were 2.38 million first-time home buyers that purchased homes. Not all renters looking to purchase their first home were in the market for entry-level homes, however the large disparity illustrates the significant and rapidly widening gap between entry-level supply and demand.

As we navigate our way through the year and get beyond the pandemic, we expect the housing supply shortage to continue to be one of the largest obstacles to inclusive economic growth in the U.S. Simply put, we must build more single-family entry-level housing to address this shortage, which has strong implications for the wealth, health and stability of American communities.

Even though Freddie Mac does not finance the construction of homes, we are committed to working with the industry to help lower the costs of housing overall. Our continuous support in all economic climates, and in markets that might otherwise be neglected, provides stability to the housing market and helps low- and moderate-income families rent, buy and keep homes they can afford. Additionally, we are working to find new ways to incentivize greater investment and bring diverse sources of capital to the market. We're also doing our part when it comes to serving our mission: First-time home buyers represented 46% of new single-family purchase loans in 2020 while more than 650,000 single-family loans we financed were affordable to low- and very low-income households. … " – Sam Khater, Vice President and Chief Economist, Economic & Housing Research; Freddie Mac

Source: http://www.freddiemac.com/perspectives/sam_khater/20210415_single_family_shortage.page; 4/15/21

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U.S. Housing Market

Forbes

Developer Aims To Have 35 Modular Housing Factories Across The Country Building Net Positive Homes

"Building fast is a huge benefit in today's housing environment. All builders are looking for that competitive edge; and this builder is not only building fast, but also is delivering net positive homes.

After more than thirty years as a general contractor in the construction industry, John Rowland decided it was time for positive change. He became president and co-founder of S2A Modular, a California-based modular building company, with the goal of making a big impact on the archaic world of construction by making it faster, less expensive and more environmentally friendly.

In 2015 and 2016, he built two prototype homes, which was exactly what he needed to understand he wasn't going to accomplish what he needed to without doing it in a factory.

After committing to factory construction, Rowland has spent just three years creating very ambitious expansion plans.

Rowland is building 35 net positive, green, carbon neutral manufacturing facilities across the country, including facilities in Wisconsin, Texas, California and Florida, and stretching outside the US into Canada, Haiti and Puerto Rico, with the first factory going live outside San Jose, CA, late this summer. He isn't just building any manufacturing facilities either, the plants are net zero energy, just like the homes that will come out of them. Every factory will have the same footprint and sustainability goals.

Rowland believes that in year one, each factory will be able to build 500 homes, and after that the investment in the construction of the factory is already paid off. Each factory takes six months to build with prefabricated, carbon neutral parts from a facility in Florida. The parts are shipped to the destination and assembled in 50 days." – Jennifer Castenson, Contributor, Forbes

Source: https://www.forbes.com/sites/jennifercastenson/2021/04/13/developer-aims-to-have-35-modular-housing-factories-across-the-country-building-net-positive-homes; 4/13/21

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U.S. Housing Market

Forbes

Developer Aims To Have 35 Modular Housing Factories Across The Country Building Net Positive Homes

"There are multiple lines in a factory and each line takes about 100 skilled employees to run, resulting in a finished unit coming off the line every two hours. Realistically, Rowland anticipates that in the first year, a factory running only one shift could produce 500 homes, growing to 750 homes in the second year; and to 1,000 homes in the third year.

If the factories run more than one shift, the capacity would be about 2,000 units per year from each factory. So, with 35 facilities, Rowland is ramping up to between 35,000 and 70,000 homes per year around 2025.

On top of all that, his first carbon neutral factory is net positive and produces $178,000 in revenue from extra power. Rowland is applying that same innovative process management and engineering prowess for the homes constructed inside the factory.

"Very little happens at the job site," he said. "Ninety percent of the home is completed in the factory – MEP, cabinets, showers, toilets, lights are all installed. On site is the buttoning up of sections and finish work on the marriage lines. Usually, all site work is completed within four weeks. Sometimes we do flooring on site."

The indoor construction environment protects the work from unpredictable weather elements, plus there are other efficiencies that Rowland has built into the process. For instance, in a conventional build, contractors and trades wait for inspectors to come and sign off various times in the process, creating bottlenecks. The S2A facilities have inspectors on location three days per week, keeping the line moving at the two-hour pace." – Jennifer Castenson, Contributor, Forbes

Source: https://www.forbes.com/sites/jennifercastenson/2021/04/13/developer-aims-to-have-35-modular-housing-factories-across-the-country-building-net-positive-homes; 4/13/21

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U.S. Housing Market

Forbes

Developer Aims To Have 35 Modular Housing Factories Across The Country Building Net Positive Homes

""The biggest thing that you see from a factory is time," Rowland said. "It could take nine months to a year on site and you have to start and stop in between trades and inspections, theft, vandalism. If you take all of those indoors, you can avoid all of it, and you can build 365 days per year. We plan to keep a six-week backlog, but once a home goes into production, it's on a truck to the job site within two weeks."

All these efficiencies add up.

"On vertical construction, it is about 10% less than what it cost to build conventionally on the retail side," Rowland said. "For a developer building hundreds of homes, the savings on the carrying costs also would be huge."

Going Above and Beyond: Net Positive Homes

Reflecting on what he has created, Rowland describes S2A as a technology company that uses modular in order to avoid the delays that typical builders experience.

"A traditional modular company will build a different product, but we don't feel competition from other modular companies," Rowland said. "We didn't set out to build the same thing. We have the lowest voltage, lowest amperage product on the planet that uses organic product. Traditional modular companies don't run that way."

S2A has been able to achieve net positive energy in a prototype home located in Southern California. The home uses graphene solar panels by FreeVolt, two Tesla Powerwalls, high-efficiency appliances, low-voltage lighting and proprietary engineering. Since it was brought online, the home has been generating significantly more energy than it uses and is contributing that energy back to the grid." – Jennifer Castenson, Contributor, Forbes

Source: https://www.forbes.com/sites/jennifercastenson/2021/04/13/developer-aims-to-have-35-modular-housing-factories-across-the-country-building-net-positive-homes; 4/13/21

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U.S. Housing Market

Forbes

Developer Aims To Have 35 Modular Housing Factories Across The Country Building Net Positive Homes

"Rowland is shaping his ideas with strategic, exclusive relationships with these suppliers to create product that isn't off the shelf. After he decided he wanted a home that ran on batteries, he worked with Tesla to engineer the right solution without trenching, conduits or metal. The 2,000-square-foot prototype home has two Tesla Powerwall batteries and 18 solar panels to achieve net positive. Graphene material is incorporated into the solar panels and has 20 worldwide patents to produce 33% more power than competitive panels, and they have a smaller footprint.

S2A also is avoiding some of the current supply challenges right now because it creates its own organic building materials.

"We wanted a healthier, holistic way to build the homes," Rowland said. "The interior of the homes is completely covered with organic, hemp-based material instead of gypsum. The stucco and finishes are made with organic material, which is mold and termite resistant, fire proof. It also lowers the transmission of CO2."

The Finished Product

S2A is involved in a number of projects at the moment, from accessory dwelling units (ADUs) to tiny homes, and to 55-plus to custom luxury. Across the board the aim is to provide homes that contribute to the grid and that use organic materials.

The company is building a community of 55-plus homes now, called Bahia Village, so focused on making the homes affordable for these buyers on a fixed income. These 1,000-square-foot homes have two bedrooms, two baths and are completely free of energy and gas bills." – Jennifer Castenson, Contributor, Forbes

Source: https://www.forbes.com/sites/jennifercastenson/2021/04/13/developer-aims-to-have-35-modular-housing-factories-across-the-country-building-net-positive-homes; 4/13/21

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U.S. Housing Market

Forbes

Developer Aims To Have 35 Modular Housing Factories Across The Country Building Net Positive Homes

"On the tiny home side, S2A is building 150 homes in Patterson, CA, just outside of San Jose. The homes are about 450 square feet, have rooftop decks and outdoor space and start at $199,000 in an area where the average home list price is above $440,000 according to Stephen Smiley, senior vice president of advisory at housing research and analytics group Zonda.

S2A is decking out its custom luxury home line, GreenLuxHomes, with a single, proprietary app that will allow residents to control systems like HVAC, lighting, appliances, entertainment and more.

Finally, the company is rolling out a full line of ADUs called LuxMods, designed as small, stand-alone buildings that can be used as home offices, yoga studios, man caves, she sheds, and other types of ADUs. The ADUs will be built to the same standard as all S2A homes, but are designed to be placed on existing properties in back yards or land adjacent to an existing structure." – Jennifer Castenson, Contributor, Forbes

Source: https://www.forbes.com/sites/jennifercastenson/2021/04/13/developer-aims-to-have-35-modular-housing-factories-across-the-country-building-net-positive-homes; 4/13/21

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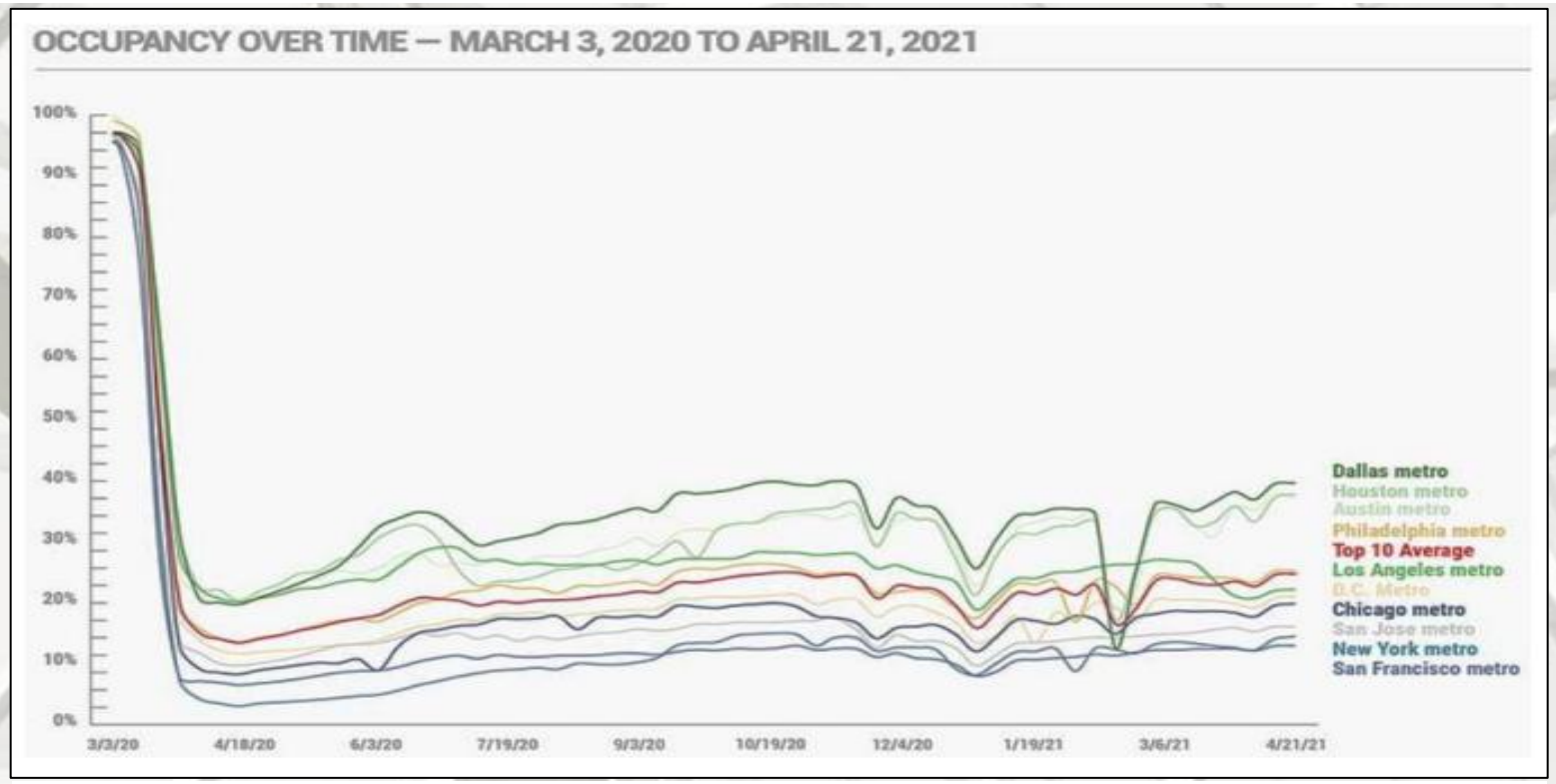

Note: Office Occupancy Rate reflects unique authorized user entries among Kastle's business partners in each metro relative to a preCOVID baseline, averaged weekly.
Sources: Kastle System (https://www.kastle.com/safety-wellness/getting-america-back-to-work/#workplace-barometer) and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center
Work From Home Trend Continues in Top Metros

"Office Occupancy data suggests that despite the accelerated vaccination rollout, foot traffic in the Northeast and the West are unlikely to catch up with the rest of the country until the office activity rebounds. Office worker occupancy remains at only about 20% (average of 10 large metros). In week 16 2021, Dallas, Houston and Austin led the way at 40%, while New York, San Jose and San Francisco were lagging far behind at around 15%." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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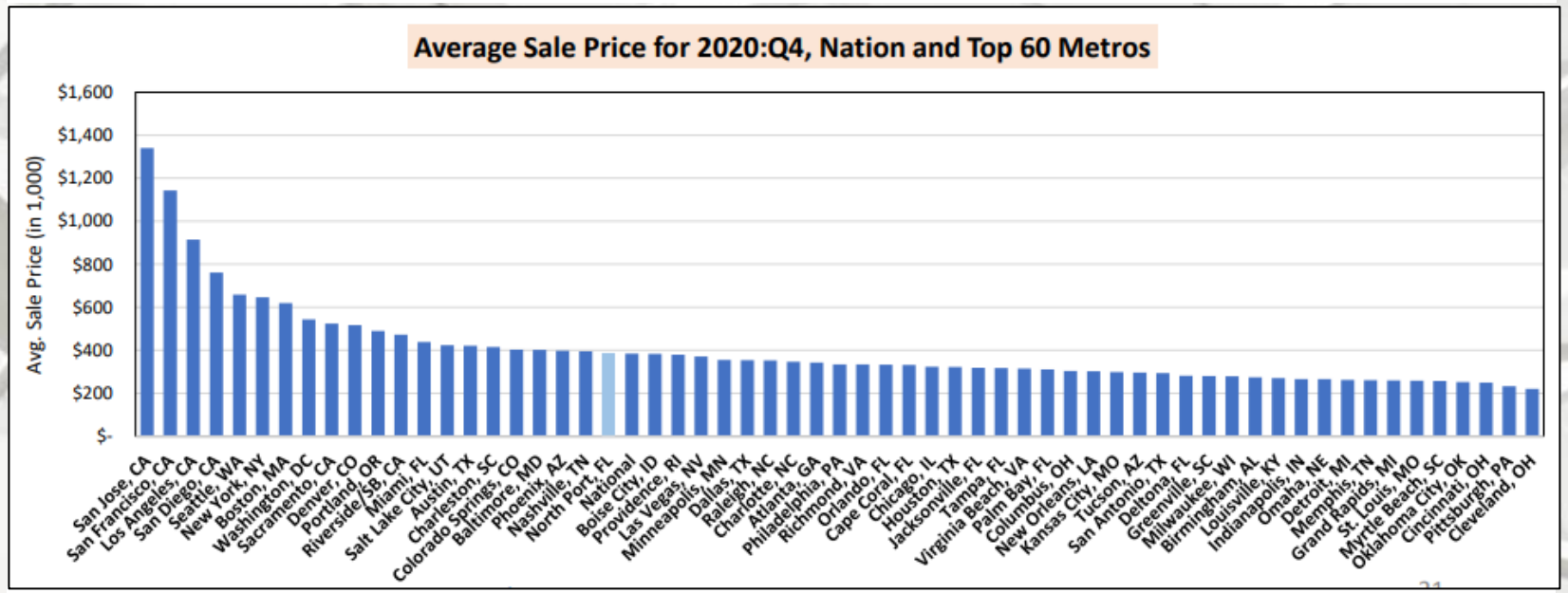

Source: AEI Housing Center, www.AEI.org/housing.

AEI Housing Center

A Change in Utility due to Work From Home

"The attraction of lower prices in these metros is fueling a growing influx of residents from higher-priced California areas due to a desire for more space as more people work from home. They become the marginal buyers setting higher market prices for all.

The following core principle regarding the relationship between sales price and intrinsic value has never been more relevant and may help explain why this time may be different:

"If a new utility does not arise, [sales] prices may advance and recede, while intrinsic values do not change. If a new utility arises, both [sales] prices and intrinsic values will alter their levels." (Hurd, The Principles of City Land Values, 1903).

Thus the change in utility makes current levels of home prices are generally sustainable, buoyed by the arbitrage opportunity and the higher incomes of migrating WFH buyers." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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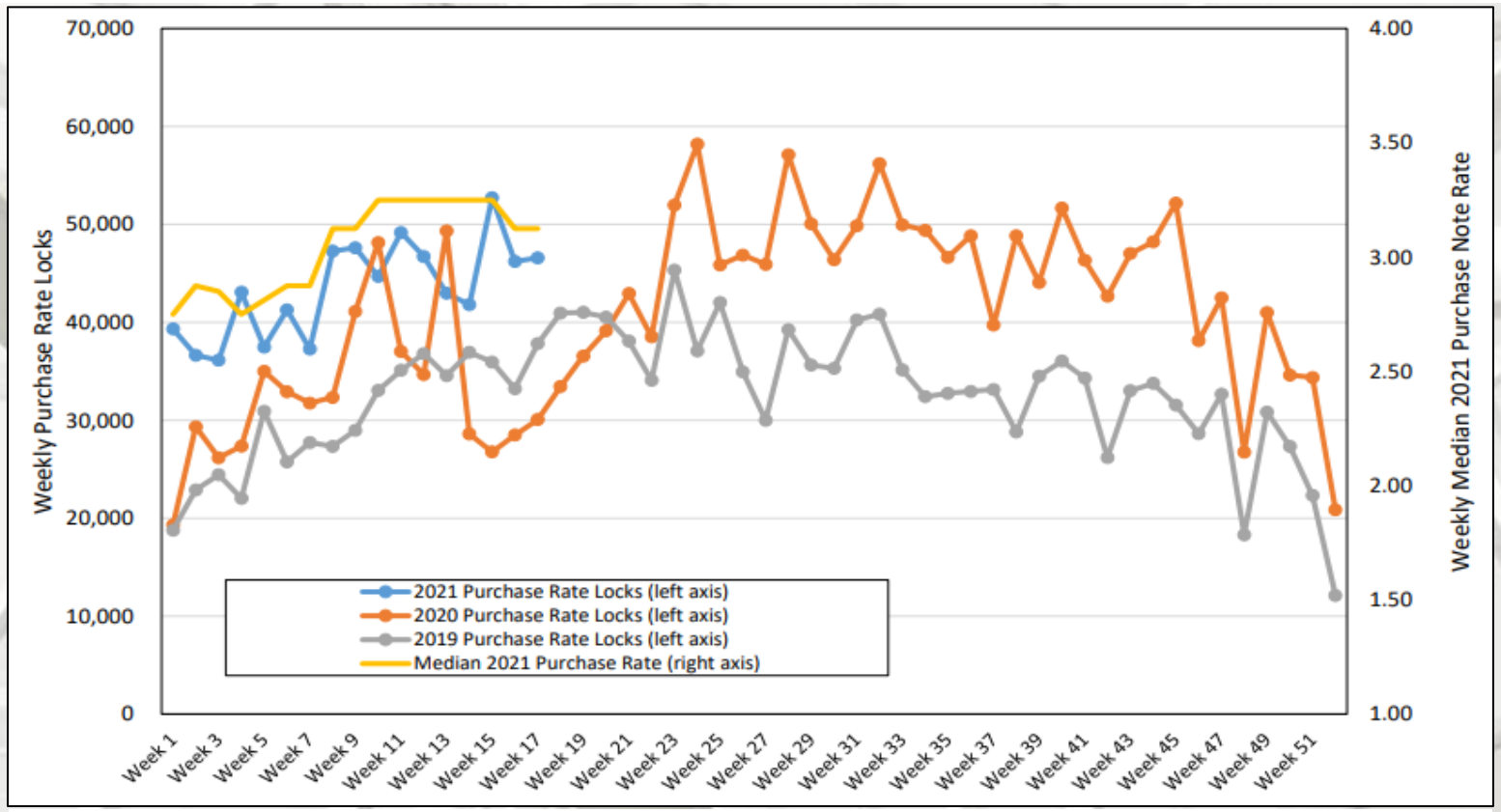
U.S. Housing Finance



Note: Rate locks are limited to lenders who joined Optimal Blue Dec. 2018 or earlier.
Source: Optimal Blue and AEI Housing Center, www.AEI.org/housing.

AEI Housing Center

Purchase Activity Outlook with Rising Rates

"Despite somewhat higher mortgage rates, purchase activity continued strongly in the beginning of 2021. Counts are up 32% for the first 17 weeks of 2021 over 2020 and 46% over 2019. Note that week 17 refers to April 24-30." – Edward Pinto, Resident Fellow; Director and Tobias Peter, Research Fellow and Director of Research, AEI Housing Center

Source: https://www.aei.org/housing/housing-market-indicators/; 5/3/21

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U.S. Housing Finance

Mortgage Bankers Association (MBA)

Mortgage Credit Availability Increased in April

"Mortgage credit availability increased in April 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 2.2 percent to 128.1 in April. 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 4.8 percent, while the Government MCAI increased by 0.1 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 6.9 percent, and the Conforming MCAI rose by 12.6 percent.

Credit availability rose in April, fueled by a 5 percent increase in conventional mortgage credit, as well as an expansion in agency programs for ARMs and high-balance loans. The conforming and jumbo loan indices jumped 7 percent and 13 percent, respectively. The uptick in credit supply comes as the housing market and economy continue to strengthen. One trend that has developed in recent months is the rising demand for ARMs, driven by higher rates for fixed mortgages and faster home-price appreciation. One trend that has developed in recent months is the rising demand for ARMs, driven by higher rates for fixed mortgages and faster home-price appreciation. Despite this month's increase, mortgage credit supply has not returned to pre-pandemic levels, given the over 2 million loans still in forbearance." – Joel Kan, Associate Vice President of Economic and Industry Forecasting, MBA

Source: www.mba.org/news-research-and-resources/research-and-economics/single-family-research/mortgage-credit-availability-index; 5/11/21

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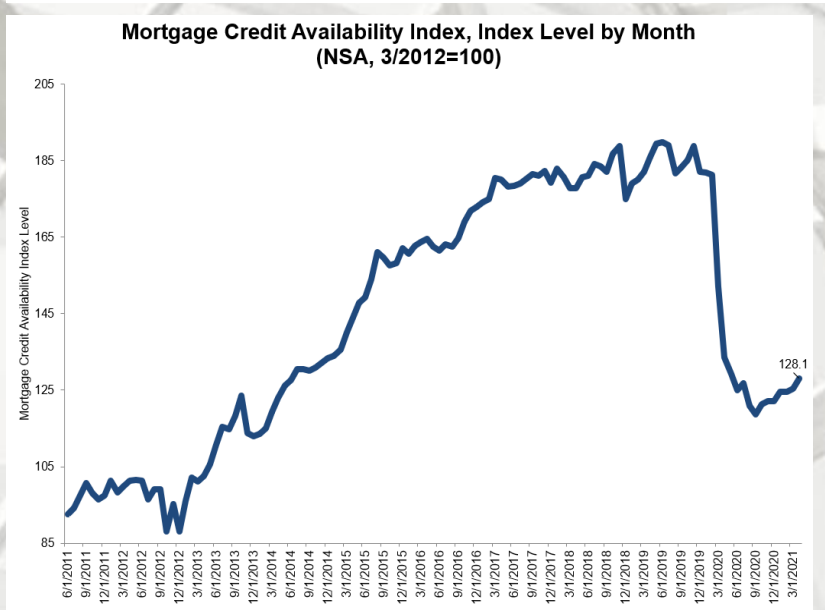
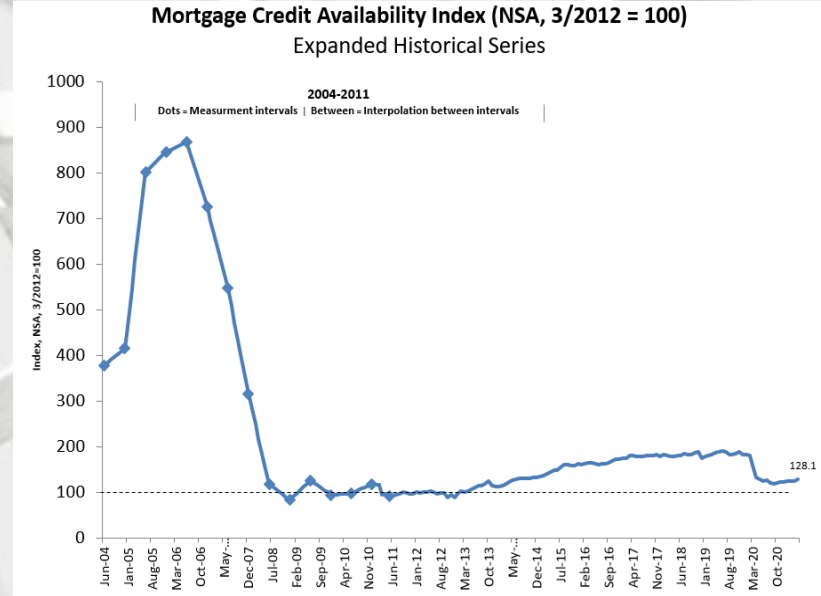
U.S. Housing Finance
Mortgage Credit Availability (MBA)





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

Source: www.mba.org/news-research-and-resources/research-and-economics/single-family-research/mortgage-credit-availability-index; 5/11/21

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MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

April 22, 2021

	2020				2021				2022							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022	2023
Housing Measures																
Housing Starts (SAAR, Thous)	1,484	1,079	1,432	1,584	1,613	1,589	1,585	1,592	1,593	1,628	1,636	1,646	1,395	1,595	1,626	1,625
Single-Family	968	766	1,037	1,227	1,155	1,207	1,228	1,246	1,268	1,292	1,316	1,324	1,000	1,209	1,300	1,320
Two or More	517	313	395	357	458	382	357	346	325	336	320	322	396	386	326	305
Home Sales (SAAR, Thous)																
Total Existing Homes	5,483	4,313	6,137	6,777	6,353	6,326	6,341	6,390	6,393	6,424	6,456	6,492	5,678	6,353	6,441	6,534
New Homes	701	703	973	873	894	912	942	966	986	1,010	1,024	1,031	813	929	1,013	1,047
FHFA US House Price Index (YOY % Change)	6.2	5.7	8.0	10.9	9.8	10.2	10.4	10.3	10.0	9.5	9.0	8.4	10.9	10.3	8.4	6.0
Median Price of Total Existing Homes (Thous $)	272.4	288.3	309.2	311.7	309.7	313.6	308.7	310.5	310.8	311.3	311.9	312.5	295.4	304.7	311.0	310.9
Median Price of New Homes (Thous $)	329.6	322.8	331.9	335.6	350.3	349.6	343.6	346.1	347.9	349.3	350.8	352.4	330.0	335.1	341.8	344.8
Interest Rates																
30-Year Fixed Rate Mortgage (%)	3.5	3.2	3.0	2.8	2.9	3.4	3.6	3.7	3.9	4.1	4.3	4.4	2.8	3.7	4.4	5.0
10-Year Treasury Yield (%)	1.4	0.7	0.6	0.9	1.3	1.8	1.9	2.0	2.1	2.3	2.5	2.6	0.9	2.0	2.6	3.2
Mortgage Originations																
Total 1- to 4-Family (Bil $)	563	928	1,076	1,261	1,094	974	638	578	512	610	605	586	3,828	3,284	2,313	2,295
Purchase	257	348	418	410	320	472	443	433	362	469	463	446	1,433	1,668	1,740	1,775
Refinance	306	580	658	851	774	502	195	145	150	141	142	140	2,395	1,616	573	520
Refinance Share (%)	54	63	61	67	71	52	31	25	29	23	23	24	63	49	25	23
FHA Originations (Bil $)													350	260	179	160
Total 1- to 4-Family (000s loans)	1,869	3,052	3,497	3,578	3,231	2,902	1,871	1,634	1,422	1,698	1,638	1,530	11,996	9,637	6,288	5,850
Purchase	891	1,203	1,427	1,343	1,000	1,465	1,331	1,248	1,029	1,329	1,277	1,187	4,864	5,045	4,822	4,606
Refinance	978	1,848	2,070	2,235	2,230	1,437	540	385	393	368	361	343	7,132	4,592	1,466	1,244
Refinance Share (%)	52	61	59	62	69	50	29	24	28	22	22	22	59	48	23	21
Mortgage Debt Outstanding																
1- to 4-Family (Bil $)	10,775	10,875	10,984	11,135	11,297	11,442	11,596	11,755	11,916	12,081	12,254	12,424	11,135	11,755	12,424	13,100

Notes:

Housing starts and home sales are seasonally adjusted at annual rate.

Total existing home sales include condos and co-ops.

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.

Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home equity loans.

The FHFA US House Price Index is the forecasted year over year percent change of the FHFA Purchase-Only House Price Index.

The mortgage debt outstanding forecast is for 1-4 unit mortgage debt and excludes home equity loans. Annual MDO numbers reflect EOP values.

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Source: https://img03.en25.com/Web/MortgageBankersAssociation/%7Bce4c087c-0a77-45f8-9d46-b9baa1d408d3%7D_Mortgage_Finance_Forecast_Apr_2021.pdf; 4/22/21

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MBA Economic Forecast

MBA Economic Forecast

April 22, 2021

	2020				2021				2022							
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2020	2021	2022	2023
Percent Change, SAAR																
Real Gross Domestic Product	-5.0	-31.4	33.4	4.3	5.4	8.4	7.3	4.7	3.7	2.5	2.3	1.7	-2.4	6.5	2.5	1.5
Personal Consumption Expenditures	-6.9	-33.2	41.0	2.3	9.2	6.7	5.9	5.8	4.0	3.2	2.4	2.0	-2.7	6.9	2.9	1.4
Business Fixed Investment	-6.7	-27.2	22.9	13.1	6.7	5.3	10.0	7.0	6.0	4.3	4.0	3.9	-1.4	7.2	4.6	3.0
Residential Investment	19.0	-35.6	63.0	36.6	11.7	9.0	0.4	0.3	0.2	1.2	2.0	1.8	14.3	5.2	1.3	0.9
Govt. Consumption & Investment	1.3	2.5	-4.8	-0.8	8.5	7.7	0.0	-0.6	0.7	-2.2	-0.1	-0.6	-0.5	3.8	-0.6	0.2
Net Exports (Bil. Chain 2012$)	-650.7	-649.0	-859.6	-948.3	-1004.8	-1042.2	-1080.4	-1119.1	-1116.8	-1096.8	-1070.6	-1054.8	-776.9	-1061.6	-1084.7	-1014.0
Inventory Investment (Bil. Chain 2012$)	-68.8	-244.0	-3.1	52.8	-59.0	23.2	142.1	171.7	169.6	155.4	133.1	111.2	-65.8	69.5	142.3	85.7
Consumer Prices (YOY)	2.1	0.4	1.3	1.2	1.9	3.2	2.5	2.2	2.0	2.2	2.2	2.3	1.2	2.2	2.3	2.4
Percent																
Unemployment Rate	3.8	13.0	8.8	6.7	6.2	5.5	4.8	4.5	4.4	4.3	4.3	4.2	8.1	5.3	4.3	4.1
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	1.7	1.9	2.0	2.1	2.3	2.5	2.6	0.9	2.0	2.6	3.2

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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Summary

In conclusion:

Aggregate March housing data were overwhelmingly positive in March. Total March housing starts achieved their greatest level in 15-years; specifically, since July 2006. Total- and single-family permits rebounded strongly as well. Houses under construction and housing completions also attained their highest-levels in 13-years. New single-family house sales recorded significant gains. Existing house sales were negative month-over-month and housing doyens attributed this to a lack of inventory. Total- and single-family construction spending were positive month-over-month and year-over-year. In sum, private residential spending hit the highest rate in eight-years.

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;
3) Housing affordability indicates improvement;

Cons:

1) COVID19;
2) Construction material constraints;
3) Lot availability and building regulations (according to several sources);
4) Laborer shortages;
5) Household formations still lag historical averages;
6) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
7) Debt: Corporate, personal, government – United States and globally;
8) Other global uncertainties.

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