The Virginia Tech–USDA Forest Service Housing Commentary: Section I
September 2024

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2024 Virginia Polytechnic Institute and State University VCE-ANR

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

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

Opening Remarks

Housing data, in aggregate, month-over-month were negative and year-over-year, were slightly positive. On a month-over-month basis single-family starts; new house sales; and total and single-family spending were positive. Year-over-year, single-family starts; housing completions; construction spending, and new house sales were positive. Existing house sales continued their decline (at a more sluggish rate than after the Great Recession). The influence of mortgage rates is evident, as aggregate costs have decreased affordability, and the "lock-in" effect have obfuscated sales.

The November 15th Atlanta Fed GDPNow™ total residential investment spending forecast is -1.2% for Q4 2024. Quarterly log change for new private permanent site expenditures were projected at -3.6%; the improvement spending forecast was 3.6%; and the manufactured/mobile home expenditures projection was -0.9% (all: quarterly log change and at a seasonally adjusted annual rate).[1]

"Affordable housing has been at the forefront of this election cycle because so many people are struggling to see how they will ever become home owners – especially those from younger generations. With home prices at record highs and mortgage rates remaining elevated, renting is increasingly the only viable choice for many young people and families. Building more homes will help address that, but we also have to recognize that Gen Z and future generations may not view home ownership as a life goal and the rentership rate may continue to rise for years to come." – Sheharyar Bokhari, Senior Economist; Redfin

This month's commentary contains 2024 housing forecasts, applicable housing data, remodeling commentary, and United States housing market observations. Section I contains relevant data, remodeling, and housing finance commentary. Section II includes regional Federal Reserve analysis, private firm indicators, and demographic/economic information.

Sources: [1] www.frbatlanta.org/cqer/research/gdpnow.aspx; 11/15/24
[2] https://www.redfin.com/news/renter-household-growth-q3-2024/; 11/5/24

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September 2024
Housing Scorecard

		M/M		Y/Y
Housing Starts	▼	0.5%	▼	0.7%
Single-Family (SF) Starts	▲	2.7%	▲	5.5%
Multi-Family (MF) Starts*	▼	9.4%	▼	16.2%
Housing Permits	▼	3.1%	▼	5.9%
SF Permits	▼	0.4%	▼	1.9%
MF Permits*	▼	8.2%	▼	13.3%
Housing Under Construction	▼	1.9%	▼	11.7%
SF Under Construction	▼	0.3%	▼	4.5%
Housing Completions	▼	-5.7%	▲	14.6%
SF Completions	▼	2.7%	▲	1.6%
New SF House Sales	▲	4.1%	▲	6.3%
Private Residential Construction Spending	▲	0.2%	▲	4.1%
SF Construction Spending	▲	0.4%	▲	0.9%
Existing House Sales[1]	▼	1.0%	▼	3.5%

* 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 Housing Starts

	Total Starts*	SF Starts	MF 2-4 Starts**	MF ≥5 Starts
September	1,354,000	1,027,000	10,000	317,000
August	1,361,000	1,000,000	29,000	332,000
2023	1,363,000	973,000	14,000	376,000
M/M change	-0.5%	2.7%	-65.5%	-4.5%
Y/Y change	-0.7%	5.5%	-28.6%	-15.7%

* 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; 10/18/24

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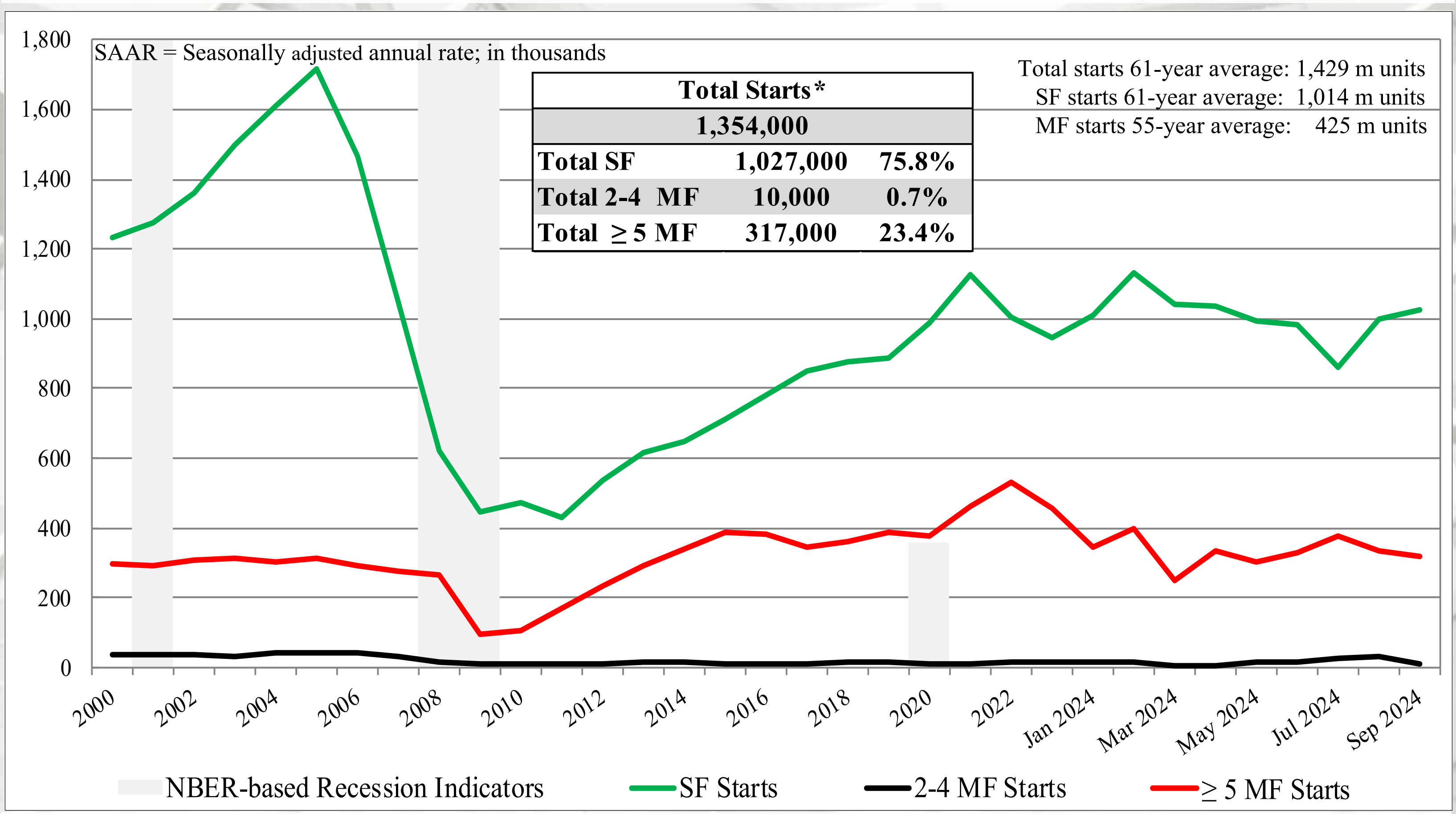
Total Housing Starts



The US DOC does not report 2 to 4 multi-family starts directly; this is an estimation: (Total starts – (SF + 5-unit 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, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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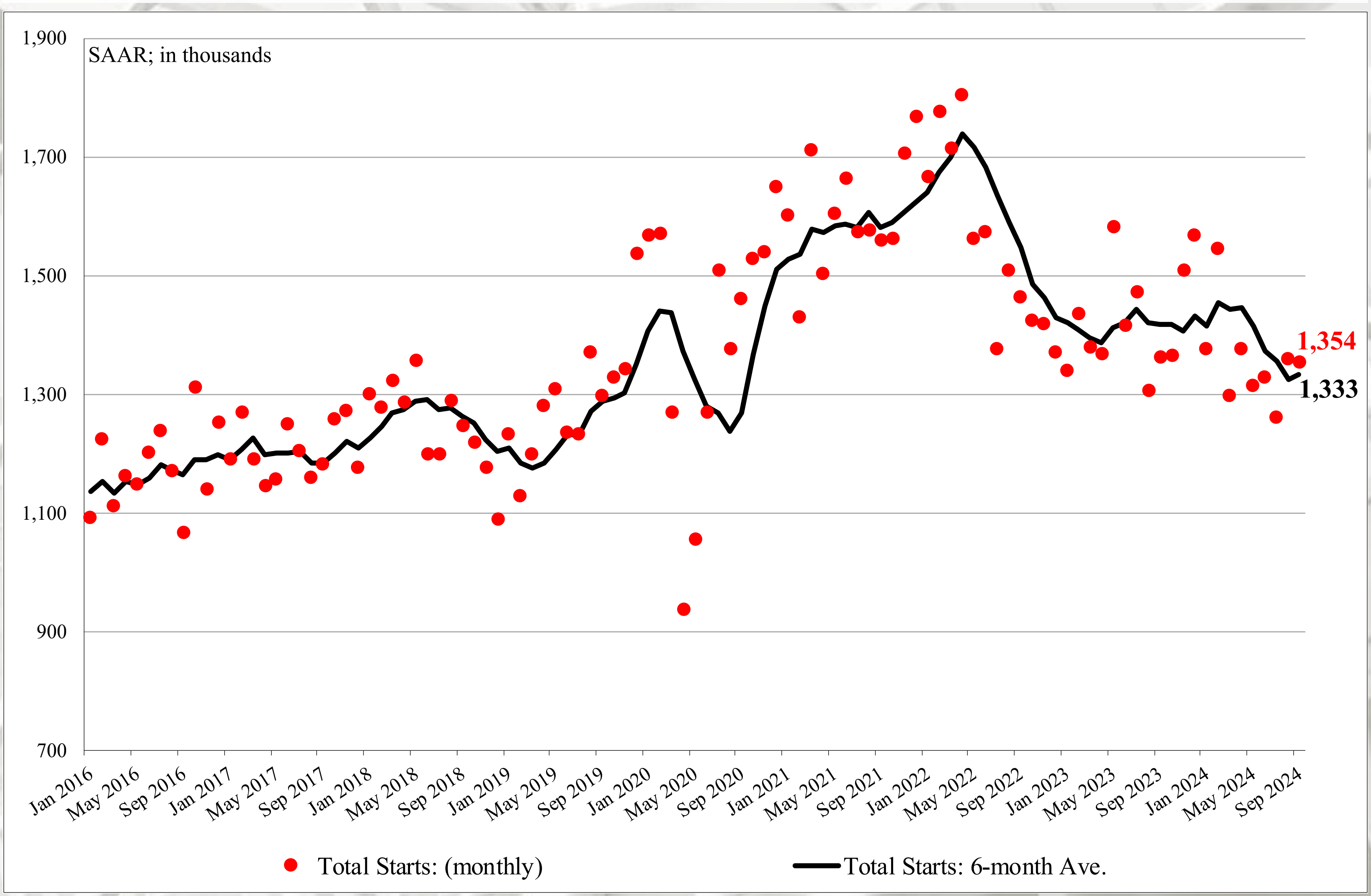
Total Housing Starts: Six-Month Moving Average



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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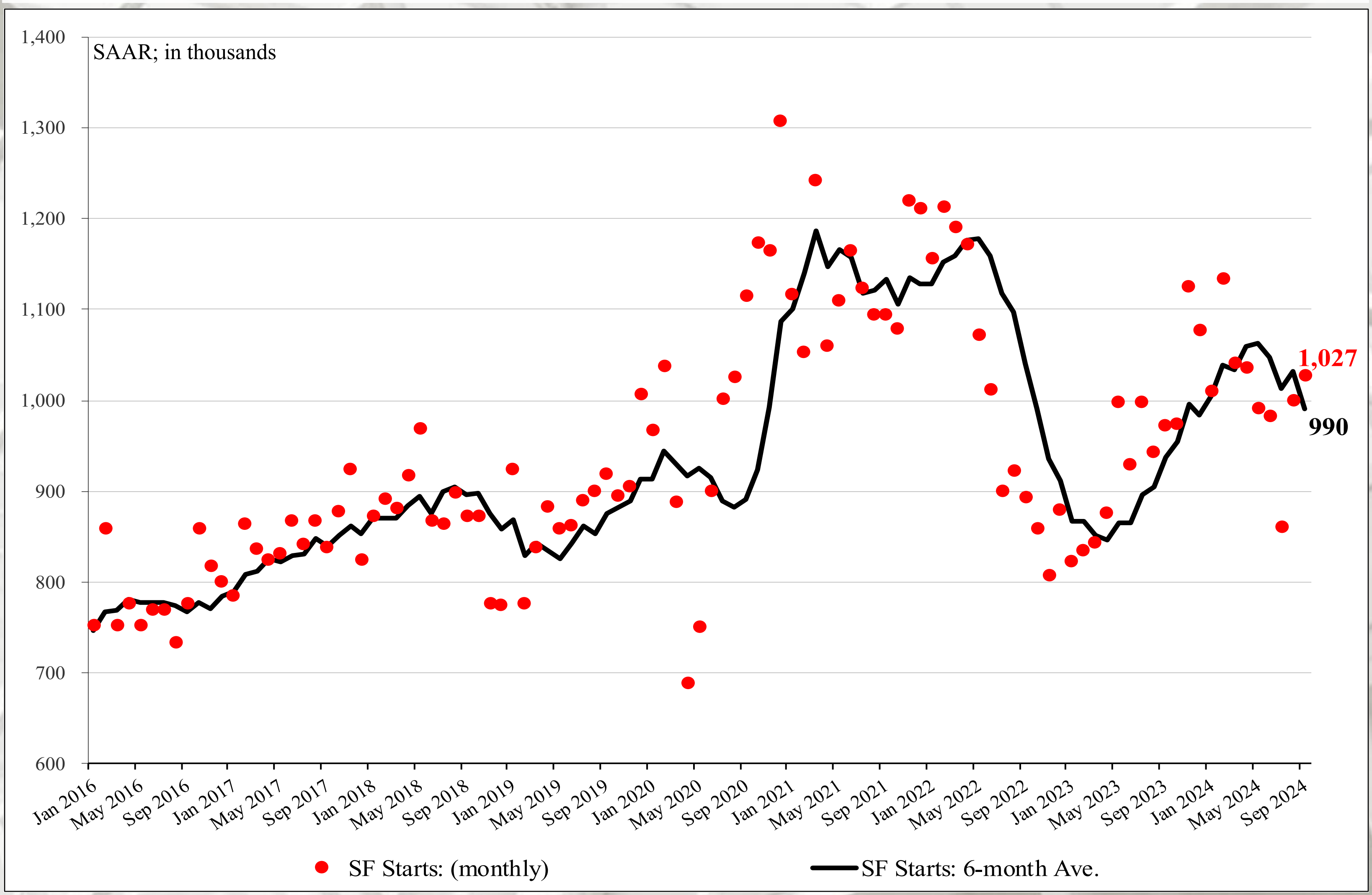
SF Housing Starts: Six-Month Moving Average



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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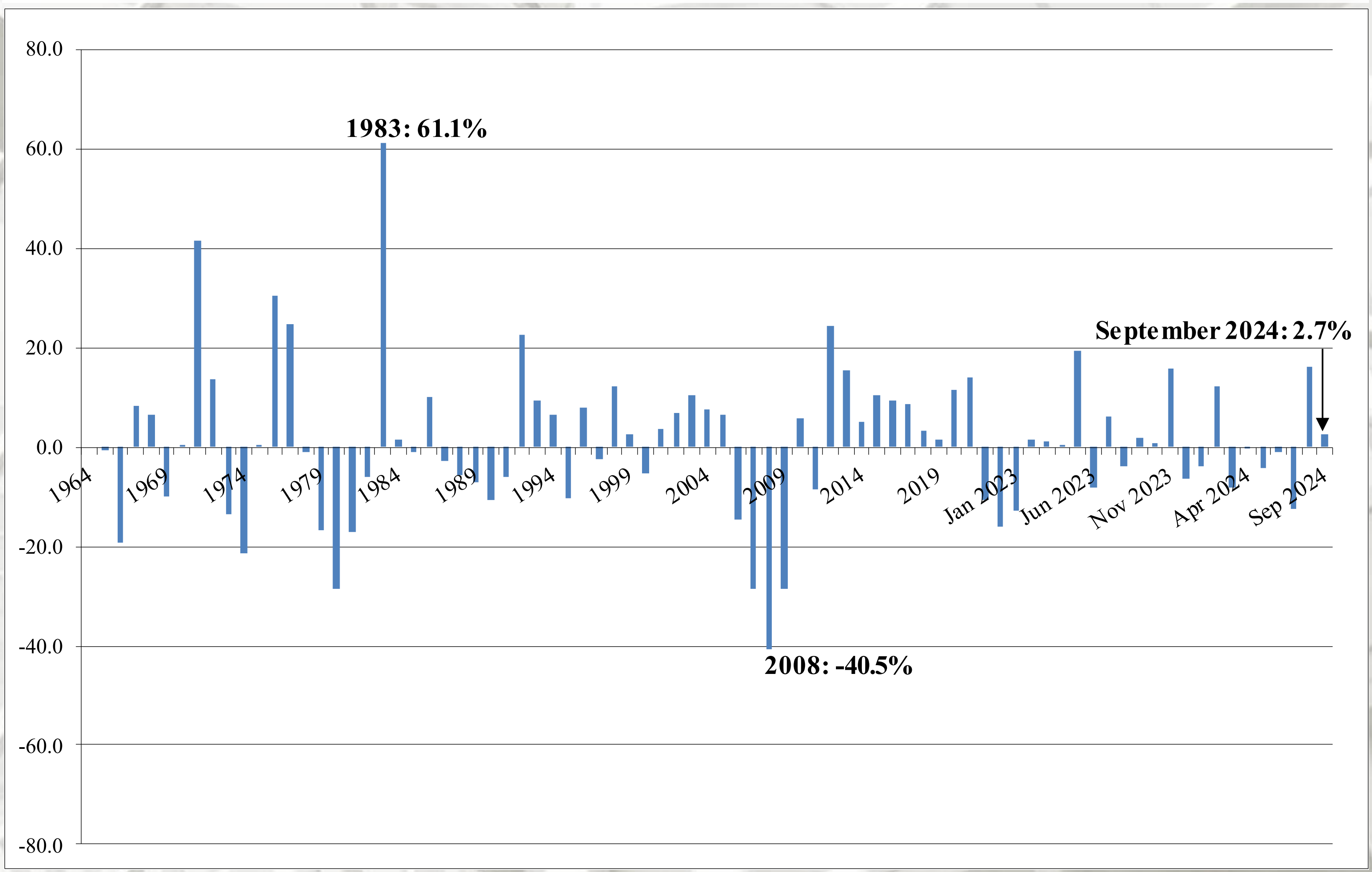
SF Housing Starts: Year-over-Year Change (%)



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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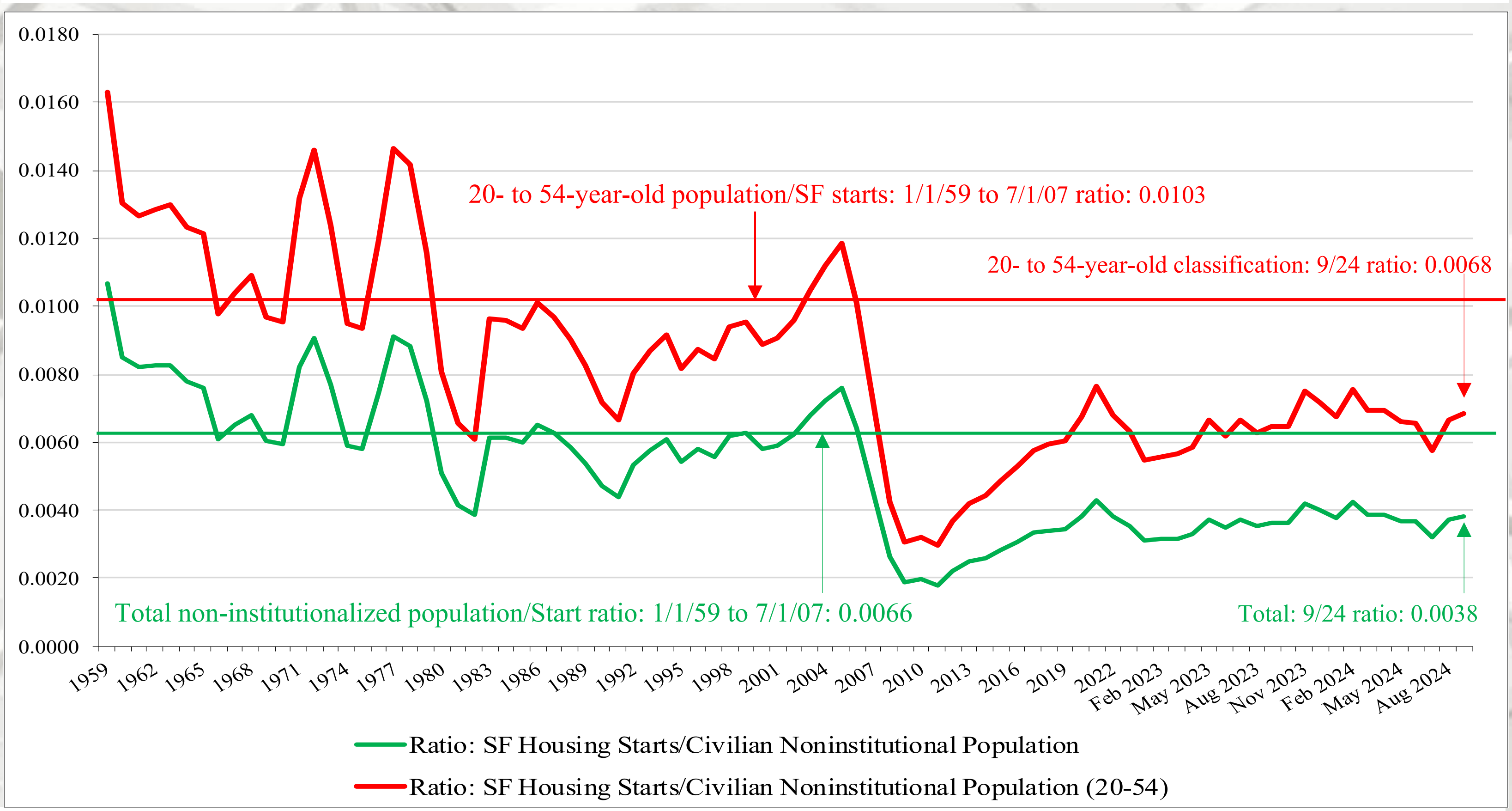
New SF Starts



New SF starts adjusted for the US population

From September 1959 to September 2007, the long-term ratio of new SF starts to the total US non-institutionalized population is 0.0066. In September 2024 it was 0.0038 – an increase from October (0.0037). The long-term ratio of non-institutionalized population, aged 20 to 54 is 0.0103; in October 2024 it was 0.0068 – also an improvement from September (0.0067). New SF construction in both age categories is less than what is necessary for changes in the population (i.e., under-building).

Note some studies report normalized long-term demand at 900,000 to 1,000,000 new SF house starts per year – beginning in 2025 through 2050.

Sources: http://www.census.gov/construction/nrc/pdf/newresconst.pdff and The Federal Reserve Bank of St. Louis; 10/18/24

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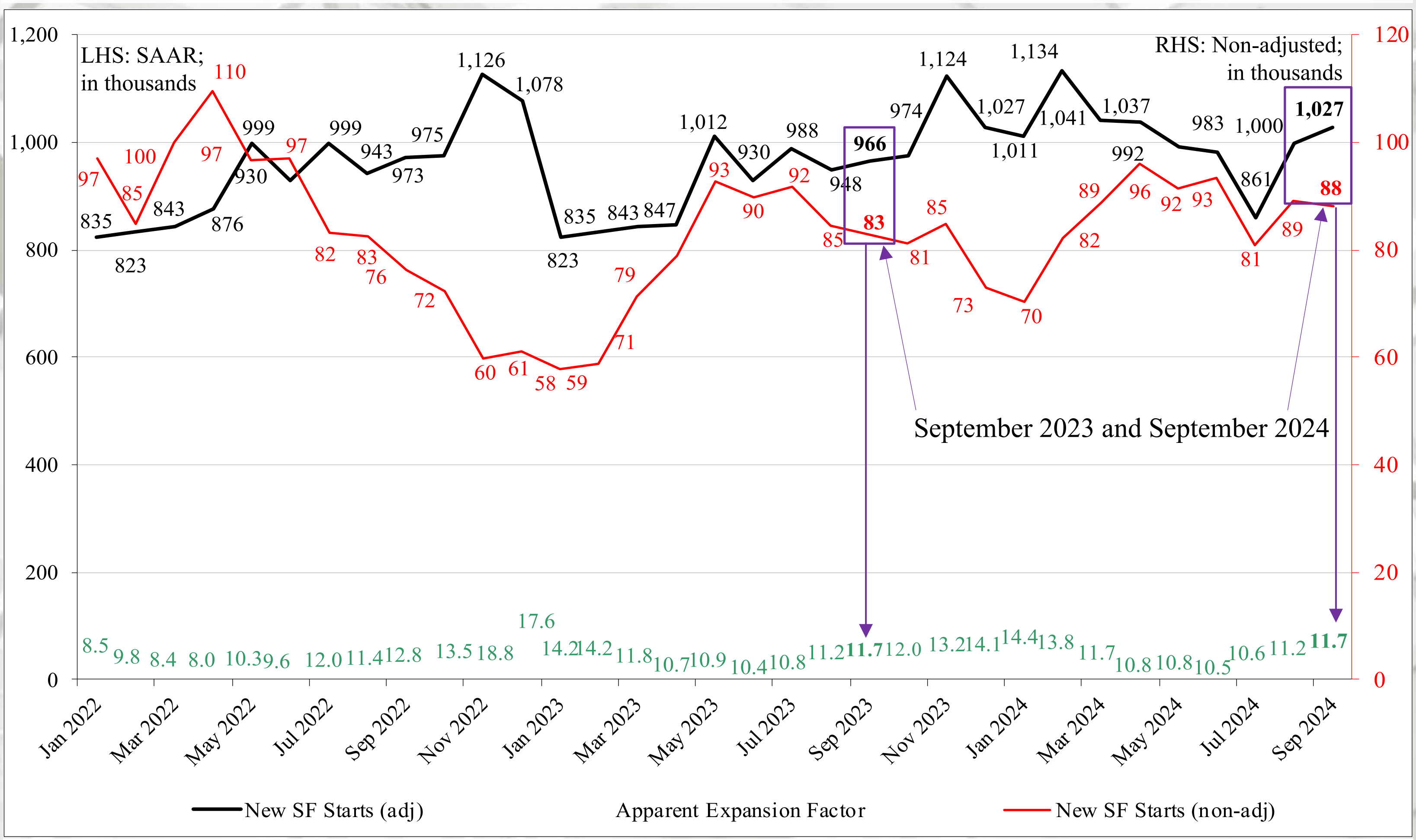
Nominal & SAAR SF Starts



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; 10/18/24

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New Housing Starts by Region

	NE Total	NE SF	NE MF**
September	180,000	94,000	86,000
August	114,000	85,000	29,000
2023	86,000	53,000	33,000
M/M change	57.9%	10.6%	196.6%
Y/Y change	109.3%	77.4%	160.6%

	MW Total	MW SF	MW MF
September	179,000	121,000	58,000
August	197,000	135,000	62,000
2023	191,000	117,000	74,000
M/M change	-9.1%	-10.4%	-6.5%
Y/Y change	-6.3%	3.4%	-21.6%

All data are SAAR; NE = Northeast and MW = Midwest.
** US DOC does not report multi-family starts directly; this is an estimation (Total starts – SF starts).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Housing Starts by Region

	S Total	S SF	S MF**
September	738,000	601,000	137,000
August	764,000	564,000	200,000
2023	790,000	590,000	200,000
M/M change	-3.4%	6.6%	-31.5%
Y/Y change	-6.6%	1.9%	-31.5%

	W Total	W SF	W MF
September	257,000	211,000	46,000
August	286,000	216,000	70,000
2023	296,000	213,000	83,000
M/M change	-10.1%	-2.3%	-34.3%
Y/Y change	-13.2%	-0.9%	-44.6%

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; 10/18/24

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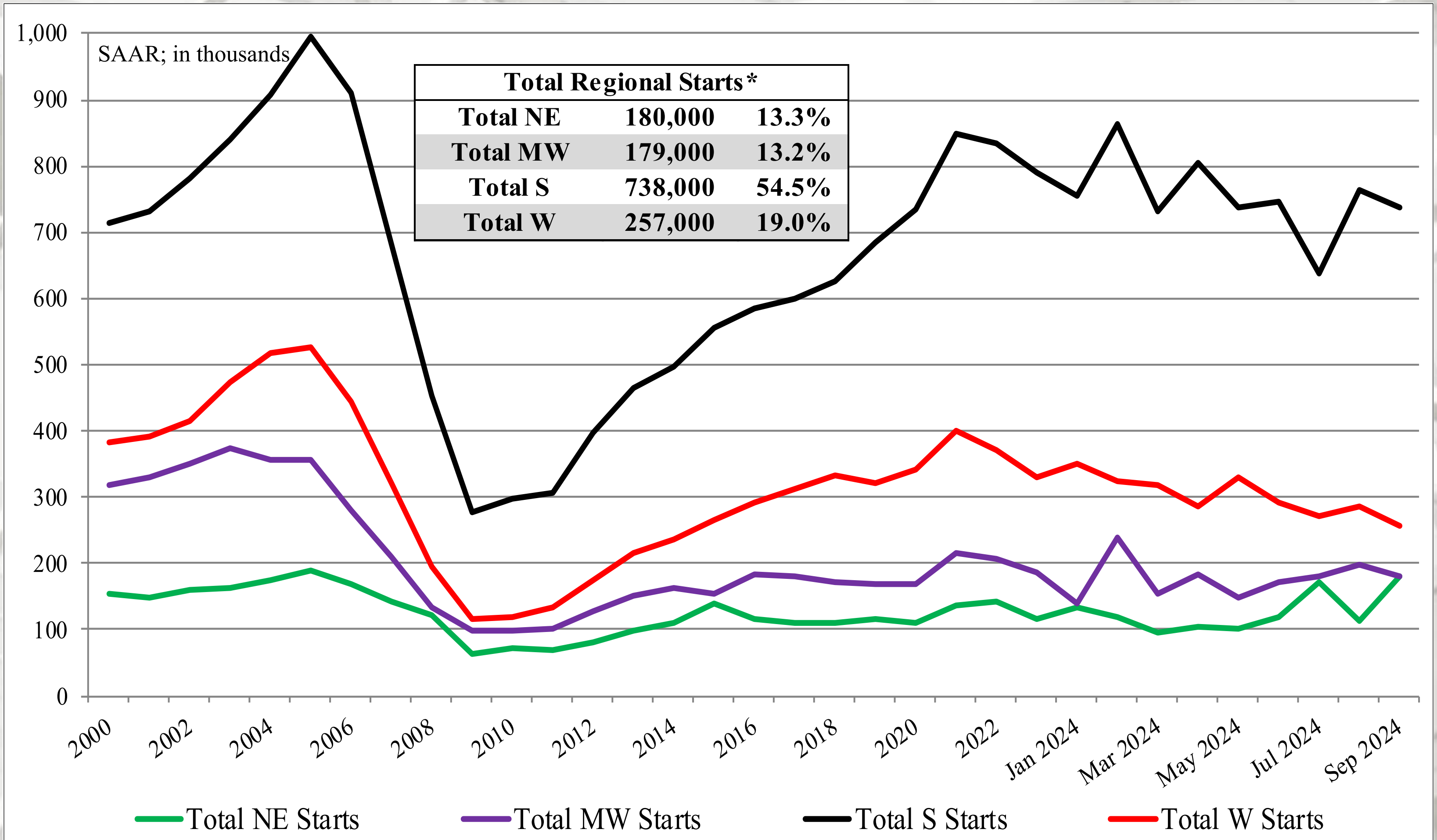
New Housing Starts by Region



Total Regional Starts*		
Total NE	180,000	13.3%
Total MW	179,000	13.2%
Total S	738,000	54.5%
Total W	257,000	19.0%

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; 10/18/24

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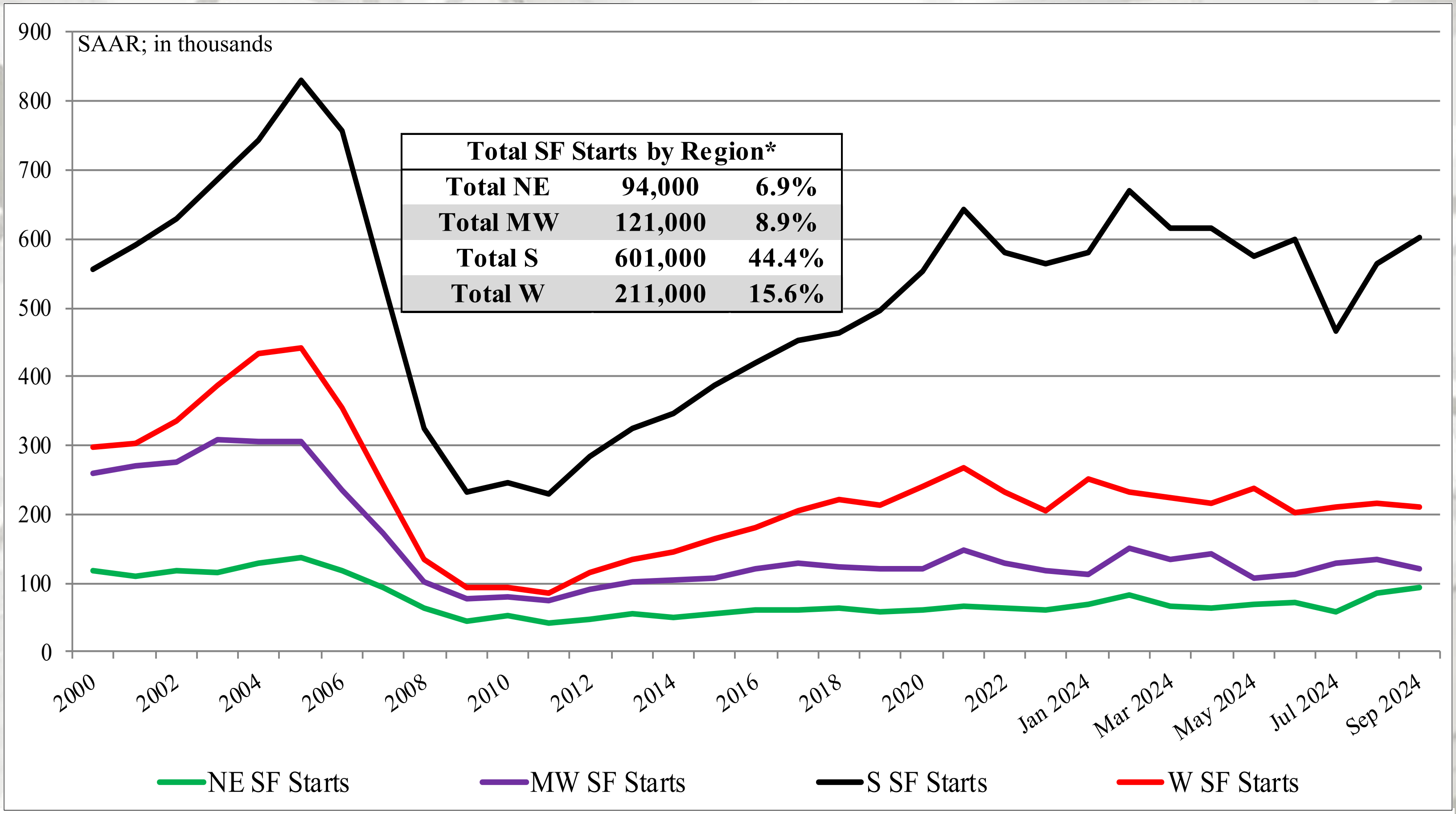
Total SF Housing Starts by Region



Total SF Starts by Region*		
Total NE	94,000	6.9%
Total MW	121,000	8.9%
Total S	601,000	44.4%
Total W	211,000	15.6%

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; 10/18/24

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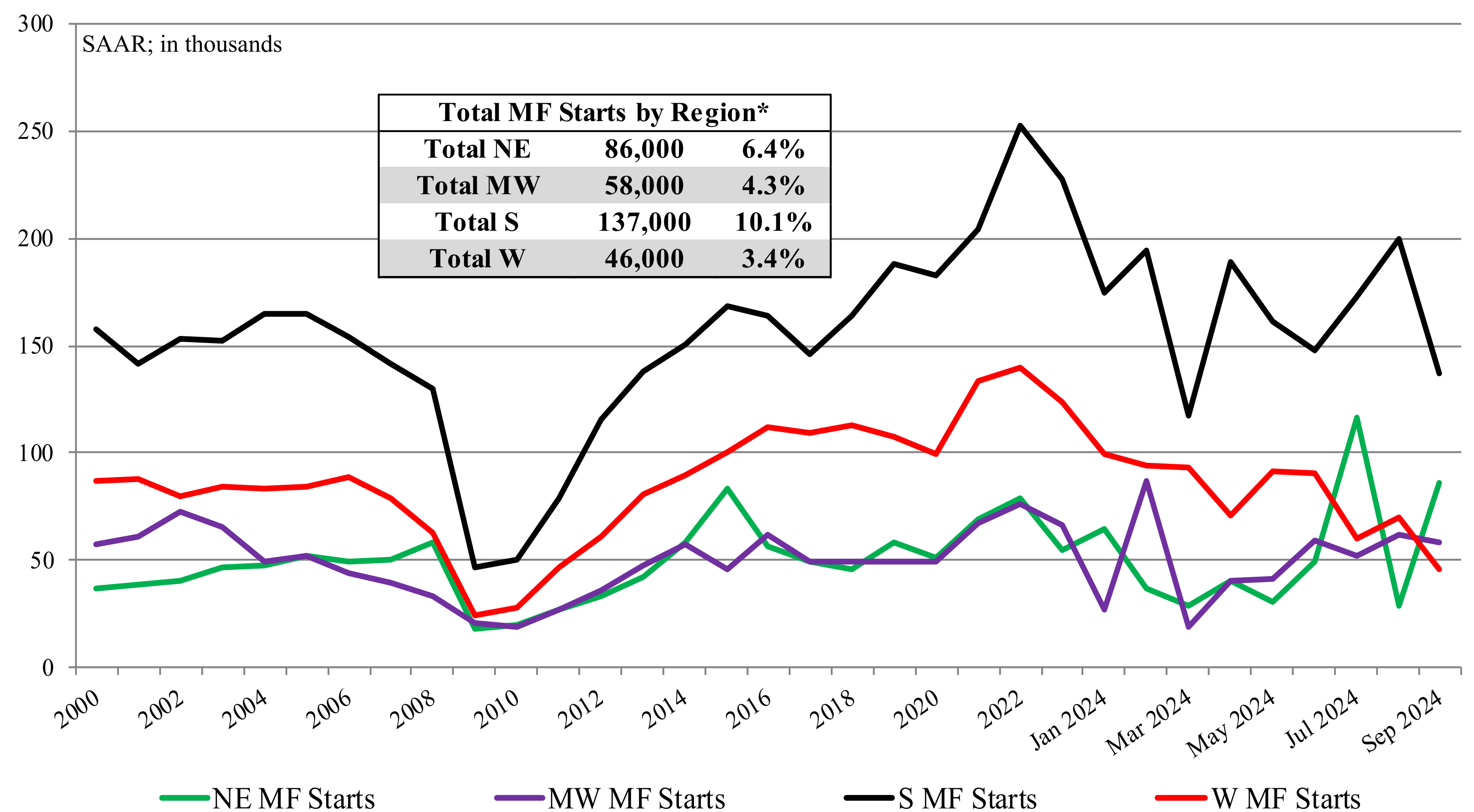
MF Housing Starts by Region



Total MF Starts by Region*		
Total NE	86,000	6.4%
Total MW	58,000	4.3%
Total S	137,000	10.1%
Total W	46,000	3.4%

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; 10/18/24

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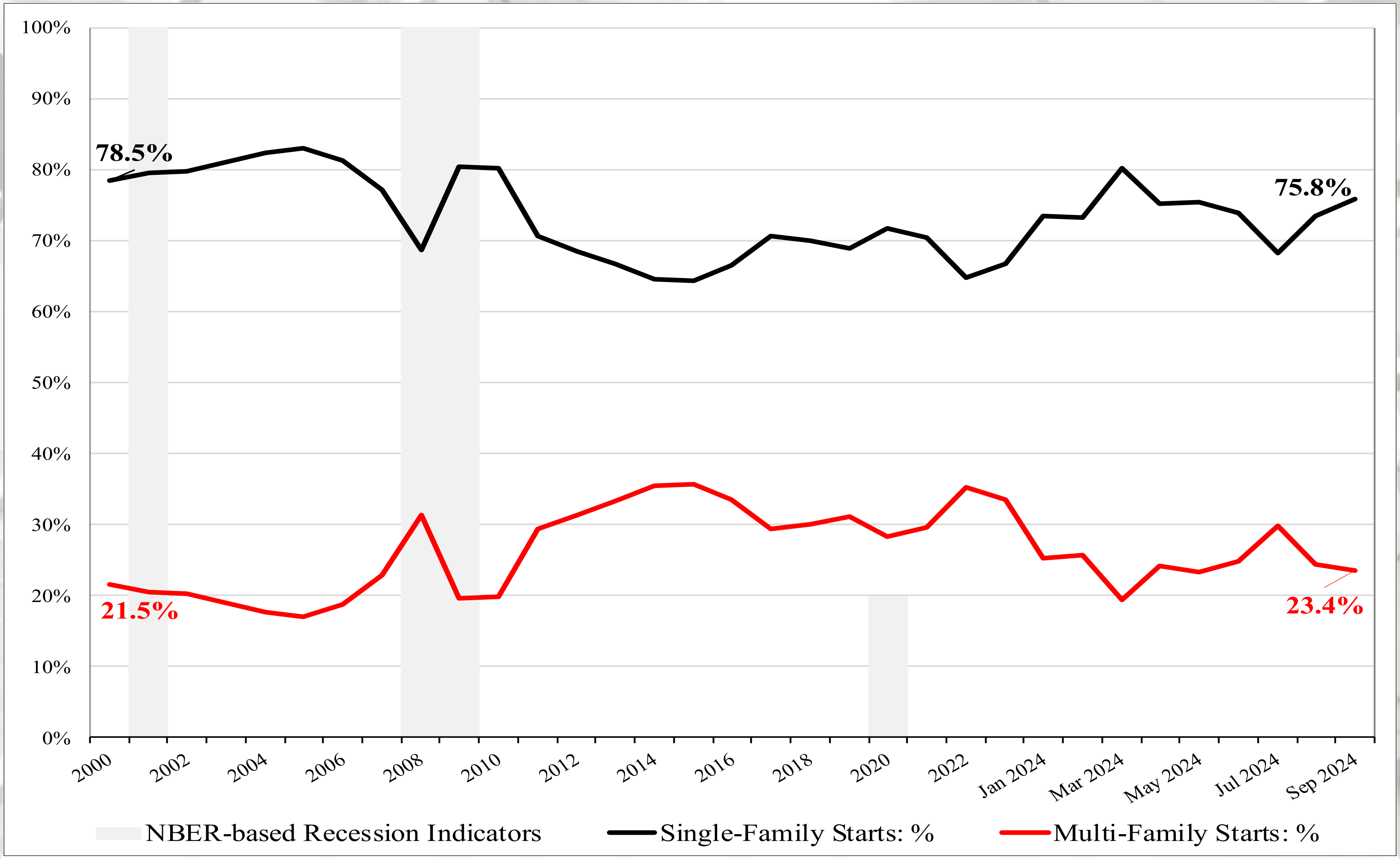
SF vs. MF Housing Starts (%)



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, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Housing Permits

	Total Permits*	SF Permits	MF 2-4 unit Permits	MF ≥ 5 unit Permits
September	1,425,000	963,000	57,000	405,000
August	1,470,000	967,000	57,000	446,000
2023	1,515,000	982,000	51,000	482,000
M/M change	-3.1%	-0.4%	0.0%	-9.2%
Y/Y change	-5.9%	-1.9%	11.8%	-16.0%

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

Source: https://www.census.gov/construction/bps/; 10/24/24

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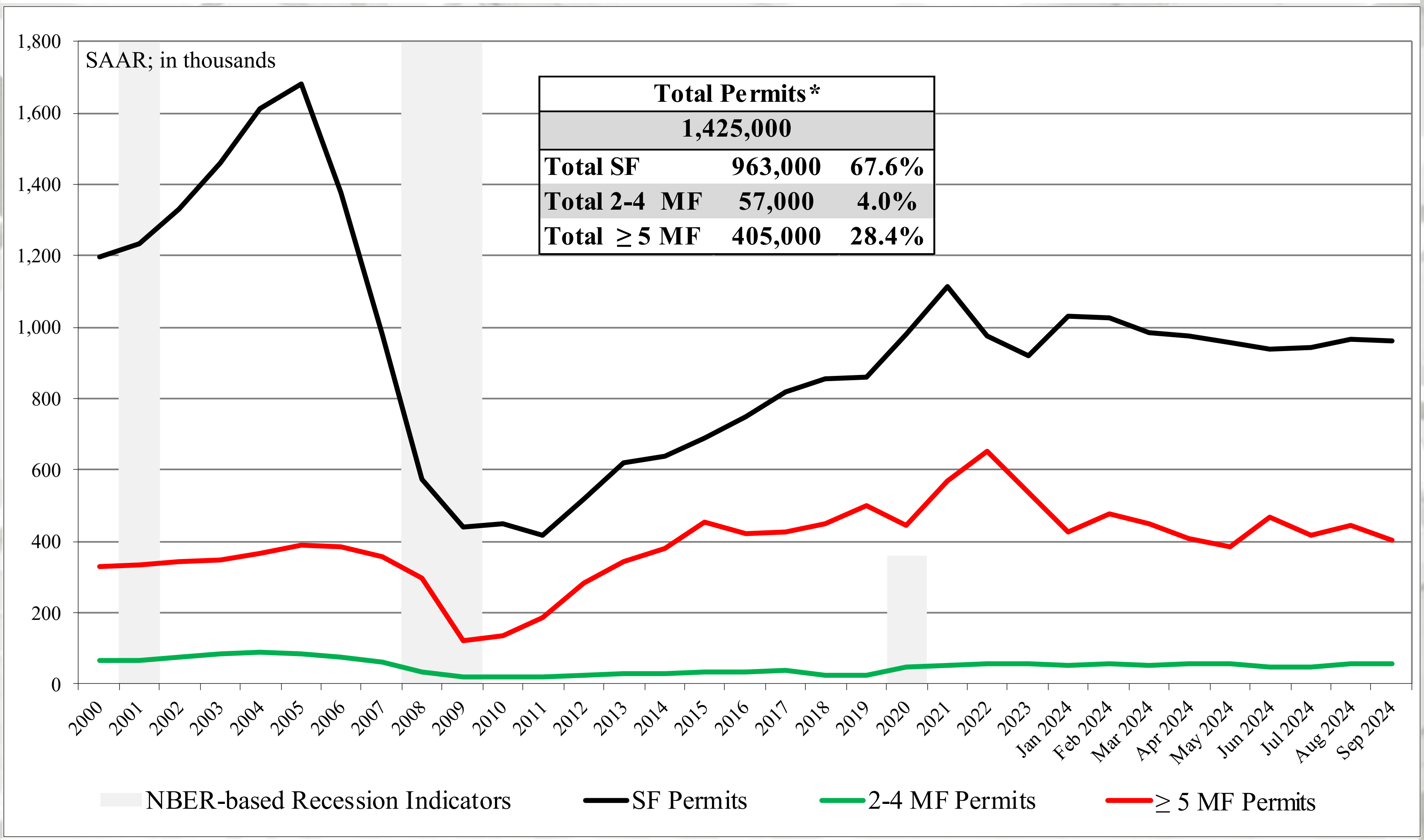
Total New Housing Permits



* Percentage of total permits.

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

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; https://www.census.gov/construction/bps/; 10/24/24

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New Housing Permits by Region

	NE Total*	NE SF	NE MF**
September	127,000	60,000	67,000
August	145,000	65,000	80,000
2023	129,000	54,000	75,000
M/M change	-12.4%	-7.7%	-16.3%
Y/Y change	-1.6%	11.1%	-10.7%

	MW Total*	MW SF	MW MF**
September	201,000	129,000	72,000
August	206,000	122,000	84,000
2023	199,000	120,000	79,000
M/M change	-2.4%	5.7%	-14.3%
Y/Y change	1.0%	7.5%	-8.9%

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/; 10/24/24

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New Housing Permits by Region

	S Total*	S SF	S MF**
September	766,000	555,000	211,000
August	815,000	575,000	240,000
2023	841,000	603,000	238,000
M/M change	-6.0%	-3.5%	-12.1%
Y/Y change	-8.9%	-8.0%	-11.3%

	W Total*	W SF	W MF**
September	331,000	219,000	112,000
August	304,000	205,000	99,000
2023	346,000	205,000	141,000
M/M change	8.9%	6.8%	13.1%
Y/Y change	-4.3%	6.8%	-20.6%

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/; 10/24/24

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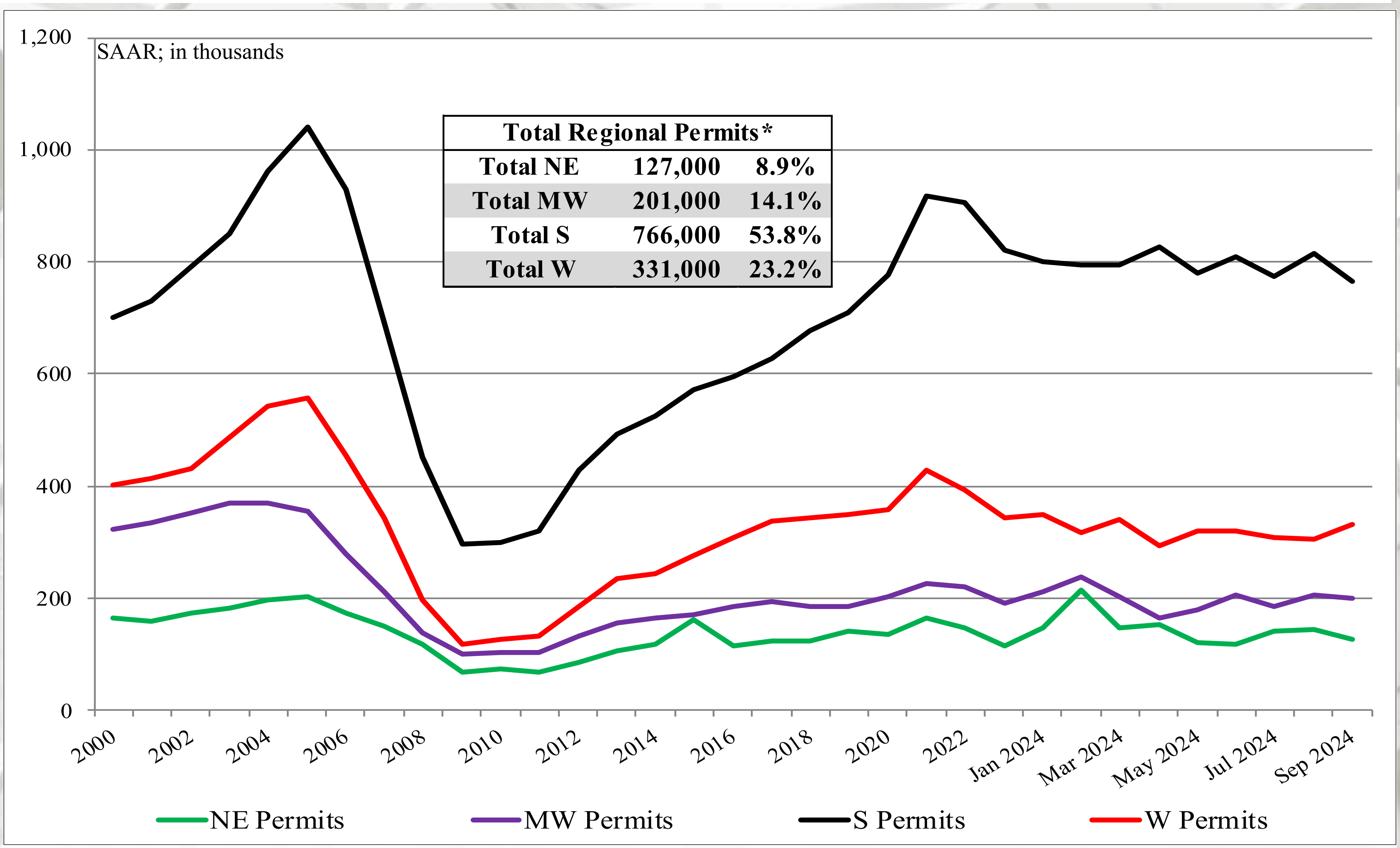
Total Housing Permits by Region



Total Regional Permits*		
Total NE	127,000	8.9%
Total MW	201,000	14.1%
Total S	766,000	53.8%
Total W	331,000	23.2%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 10/24/24

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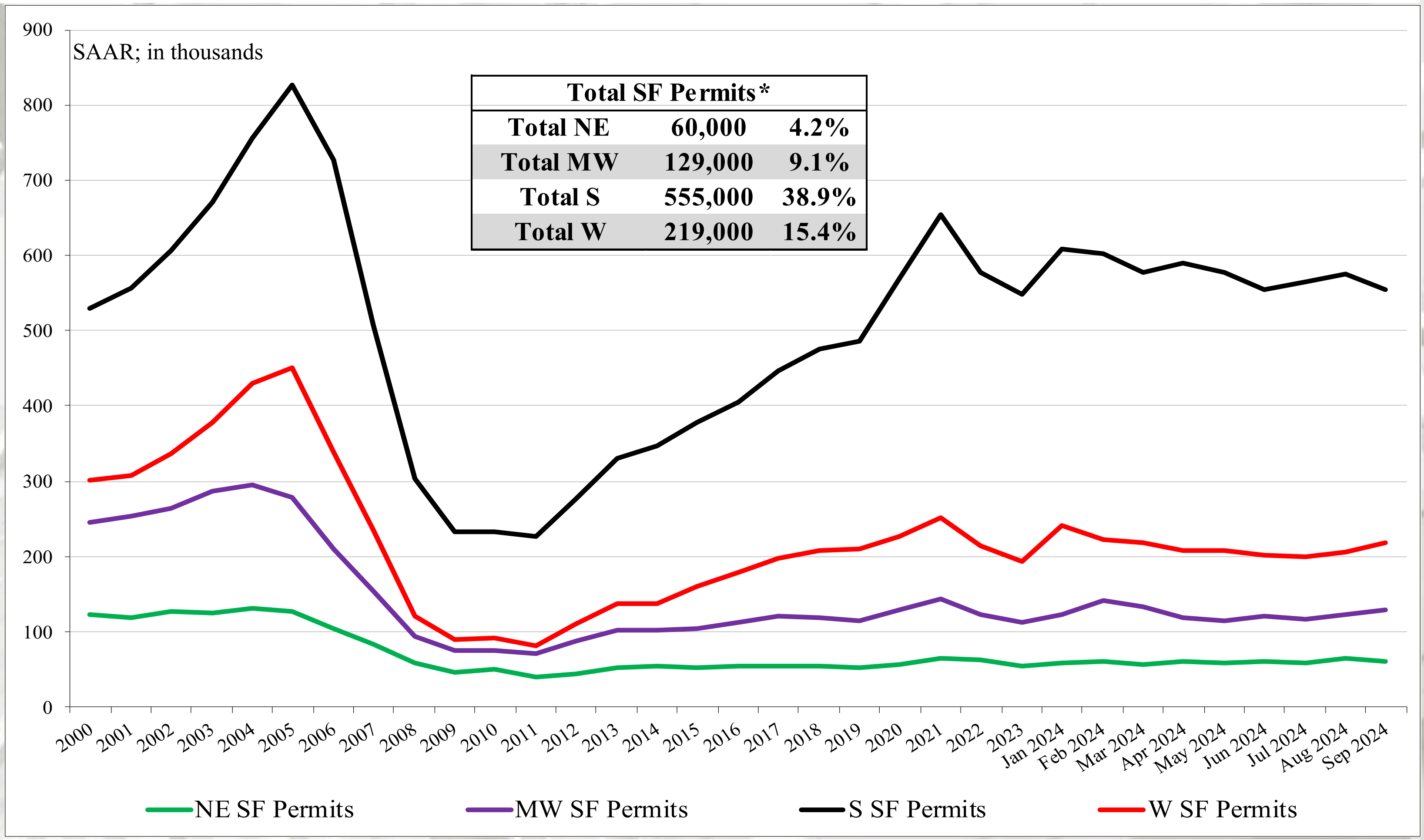
SF Housing Permits by Region



Total SF Permits*		
Total NE	60,000	4.2%
Total MW	129,000	9.1%
Total S	555,000	38.9%
Total W	219,000	15.4%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 10/24/24

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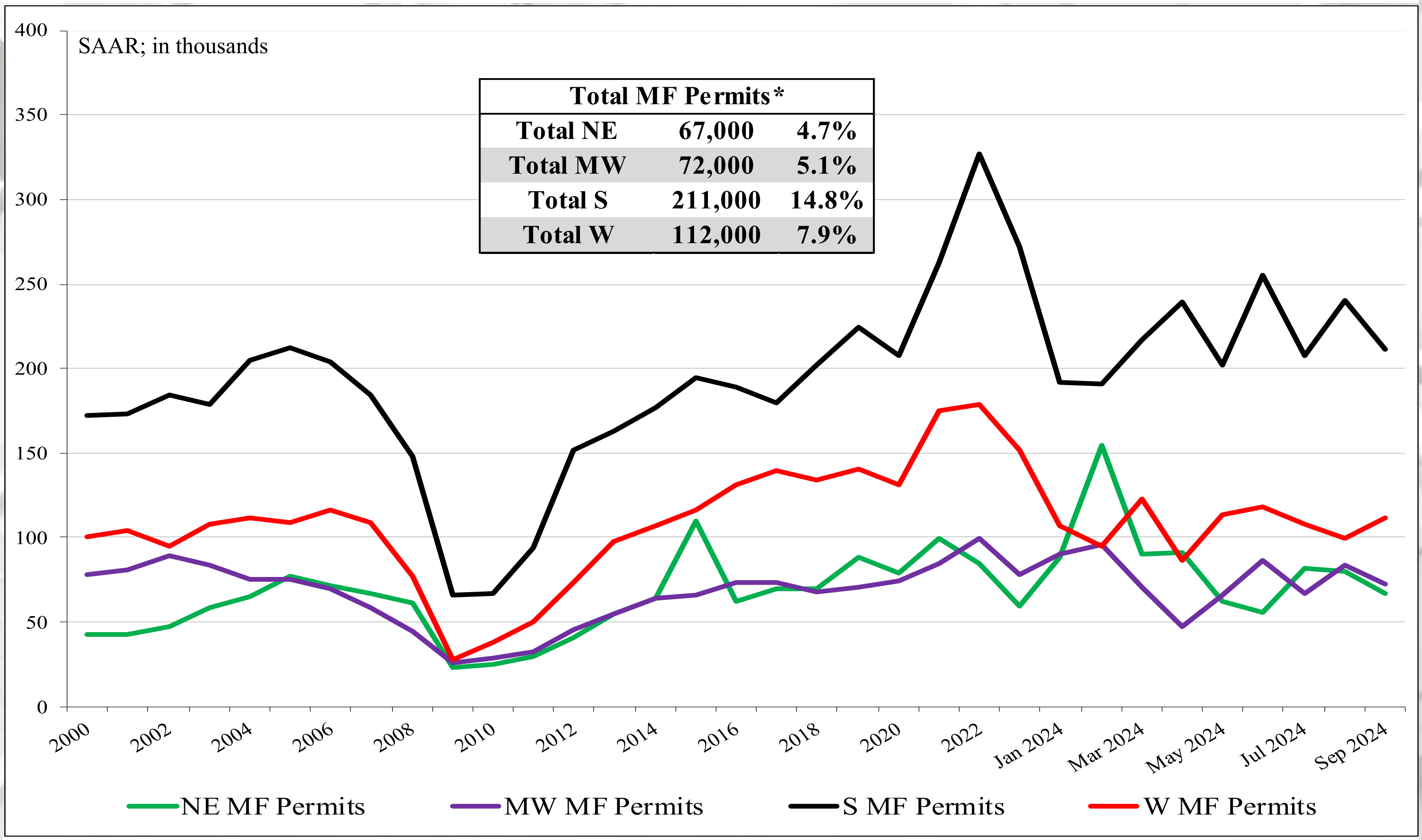
MF Housing Permits by Region



Total MF Permits*		
Total NE	67,000	4.7%
Total MW	72,000	5.1%
Total S	211,000	14.8%
Total W	112,000	7.9%

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

* Percentage of total permits.

Source: https://www.census.gov/construction/bps/; 10/24/24

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New Housing Under Construction (HUC)

	Total HUC	SF HUC	MF 2-4 unit** HUC	MF ≥ 5 unit HUC
September	1,484,000	642,000	17,000	825,000
August	1,512,000	640,000	17,000	855,000
2023	1,680,000	672,000	17,000	991,000
M/M change	-1.9%	0.3%	0.0%	-3.5%
Y/Y change	-11.7%	-4.5%	0.0%	-16.8%

All housing under construction (HUC) 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; 10/18/24

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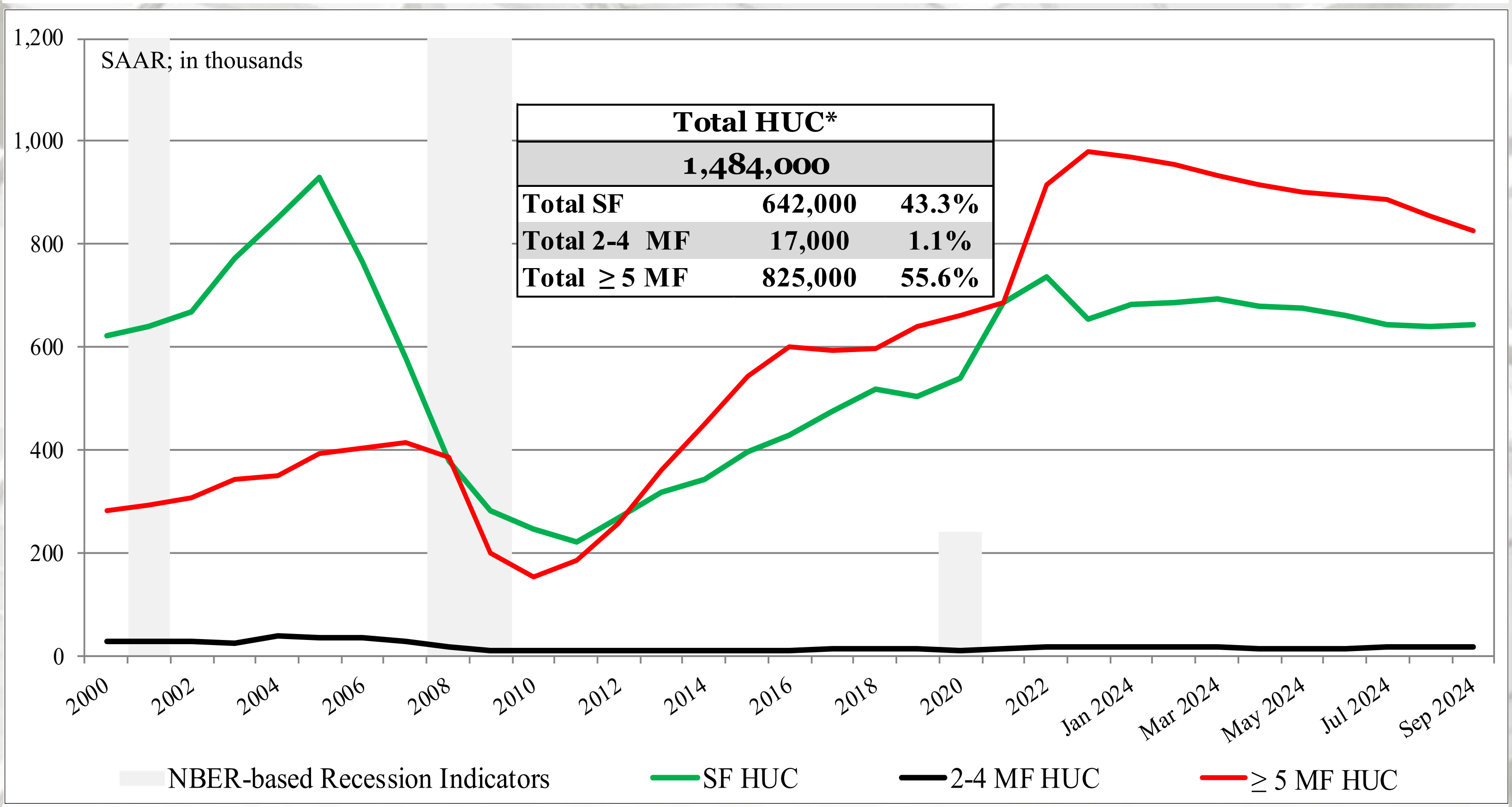
Total Housing Under Construction



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

* Percentage of total housing under construction units.

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

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Housing Under Construction by Region

	NE Total	NE SF	NE MF**
September	220,000	67,000	153,000
August	224,000	65,000	159,000
2023	212,000	65,000	147,000
M/M change	-1.8%	3.1%	-3.8%
Y/Y change	3.8%	3.1%	4.1%

	MW Total	MW SF	MW MF
September	176,000	84,000	92,000
August	178,000	85,000	93,000
2023	210,000	87,000	123,000
M/M change	-1.1%	-1.2%	-1.1%
Y/Y change	-16.2%	-3.4%	-25.2%

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; 10/18/24

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New Housing Under Construction by Region

	S Total	S SF	S MF**
September	680,000	327,000	353,000
August	688,000	325,000	363,000
2023	791,000	353,000	438,000
M/M change	-1.2%	0.6%	-2.8%
Y/Y change	-14.0%	-7.4%	-19.4%
	W Total	**W SF**	**W MF**
September	408,000	164,000	244,000
August	422,000	165,000	257,000
2023	467,000	167,000	300,000
M/M change	-3.3%	-0.6%	-5.1%
Y/Y change	-12.6%	-1.8%	-18.7%

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; 10/18/24

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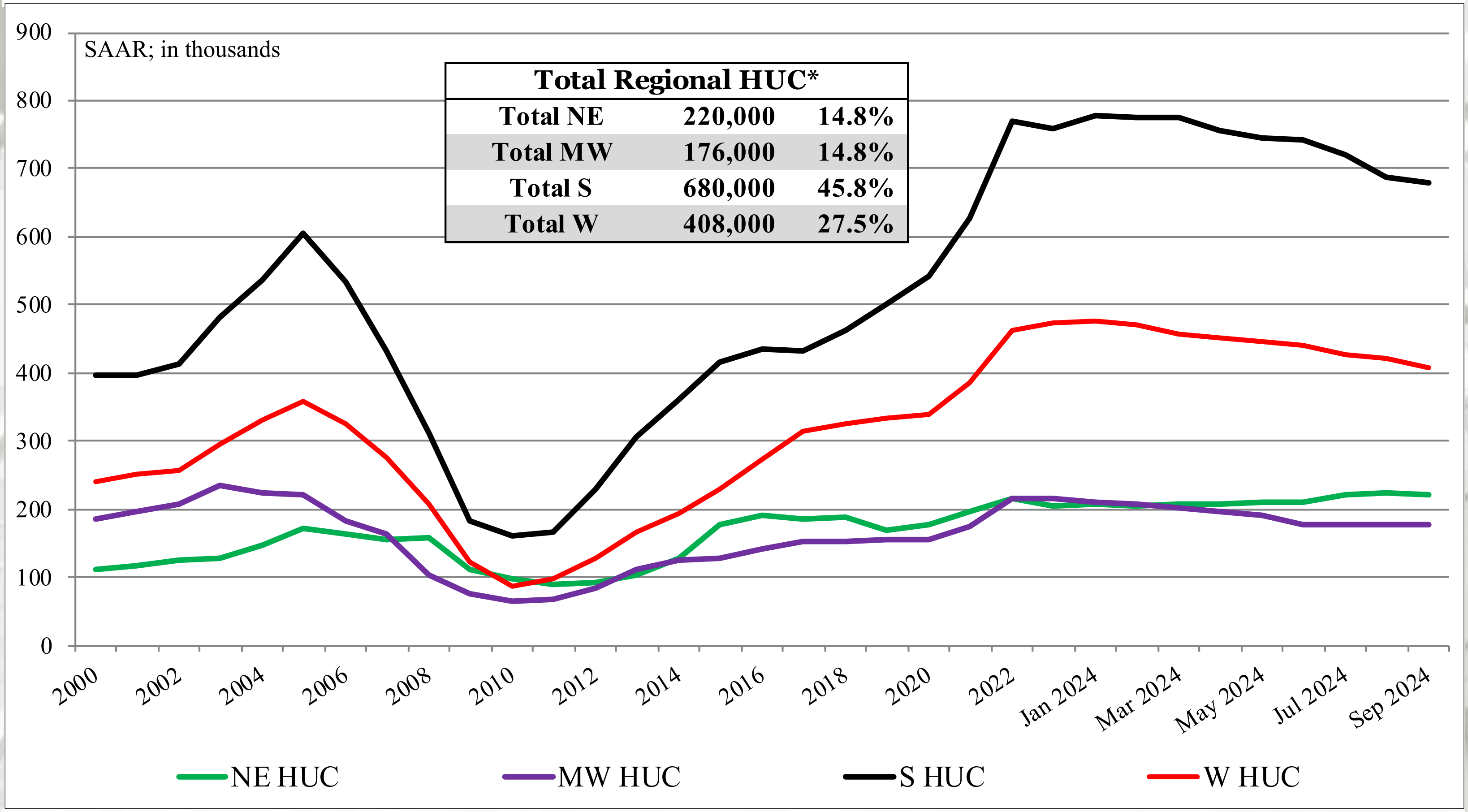
Total Housing Under Construction by Region



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

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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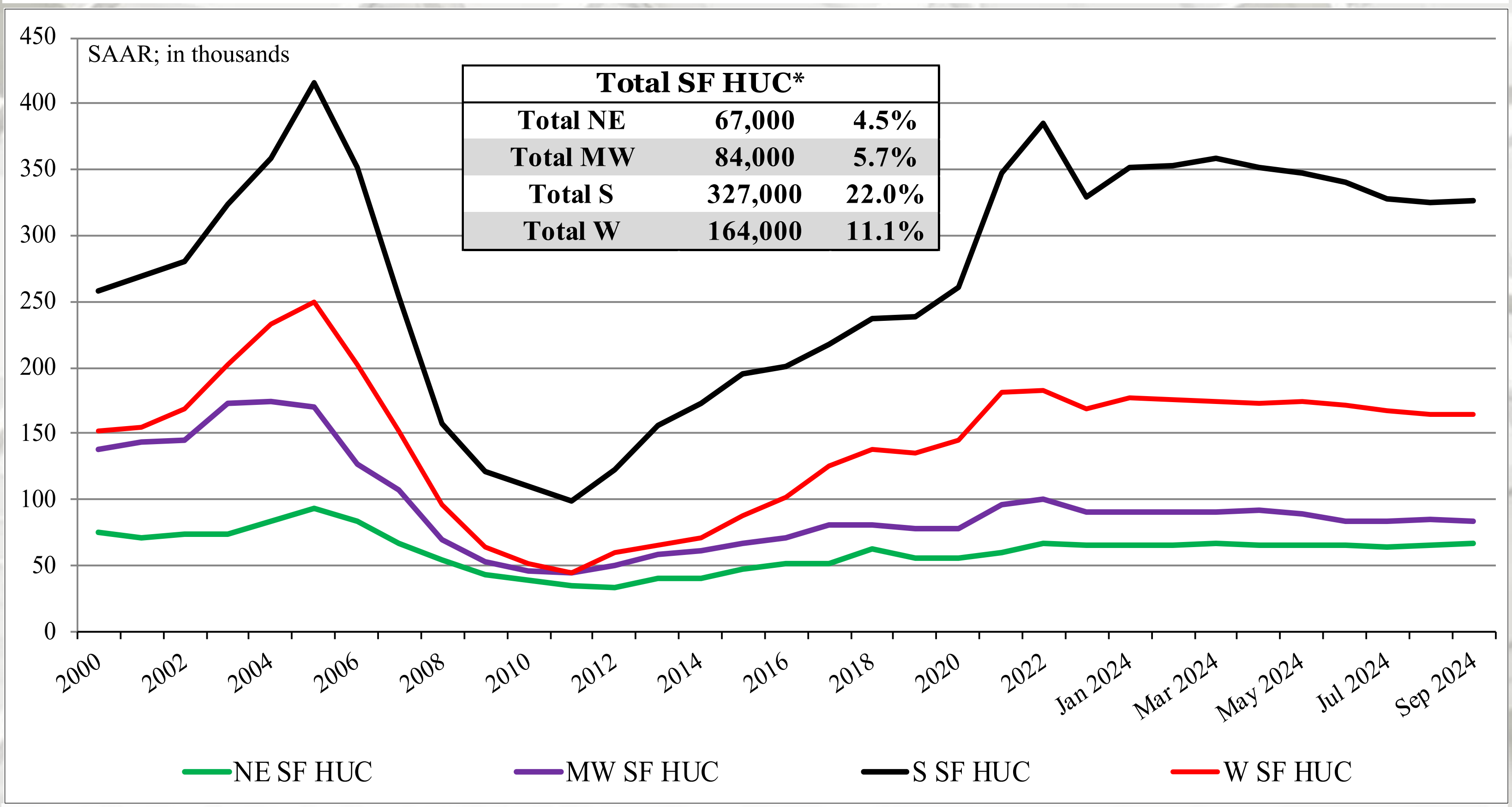
SF Housing Under Construction by Region



Total SF HUC*		
Total NE	67,000	4.5%
Total MW	84,000	5.7%
Total S	327,000	22.0%
Total W	164,000	11.1%

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-unit MF under construction).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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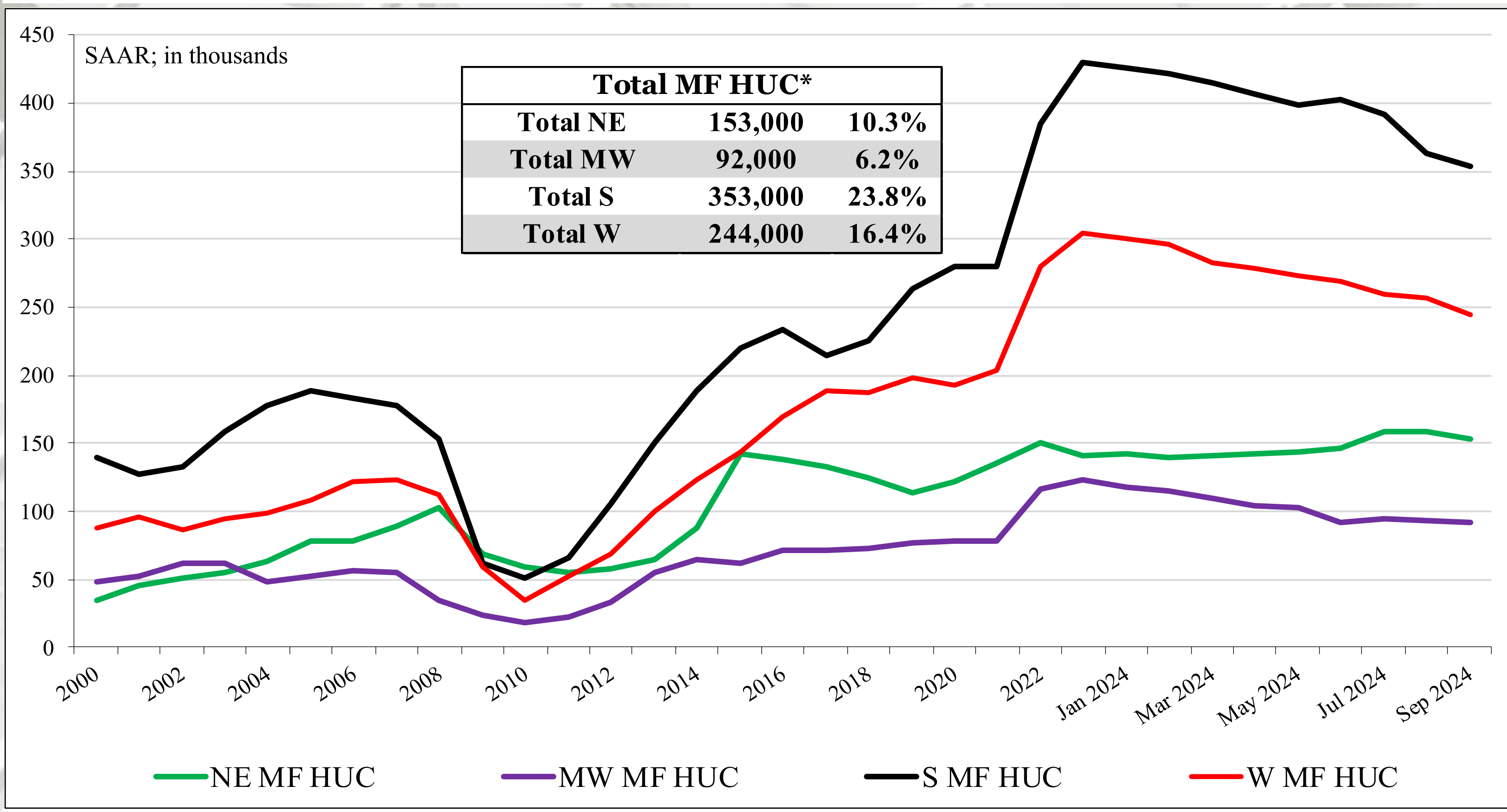
MF Housing Under Construction by Region



Total MF HUC*		
Total NE	153,000	10.3%
Total MW	92,000	6.2%
Total S	353,000	23.8%
Total W	244,000	16.4%

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-unit MF under construction).

* Percentage of total housing under construction units.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Housing Completions

	Total Completions*	SF Completions	MF 2-4 unit** Completions	MF ≥ 5 unit Completions
September	1,680,000	1,000,000	9,000	671,000
August	1,781,000	1,028,000	18,000	735,000
2023	1,466,000	984,000	9,000	473,000
M/M change	-5.7%	-2.7%	-50.0%	-8.7%
Y/Y change	14.6%	1.6%	0.0%	41.9%

* 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; 10/18/24

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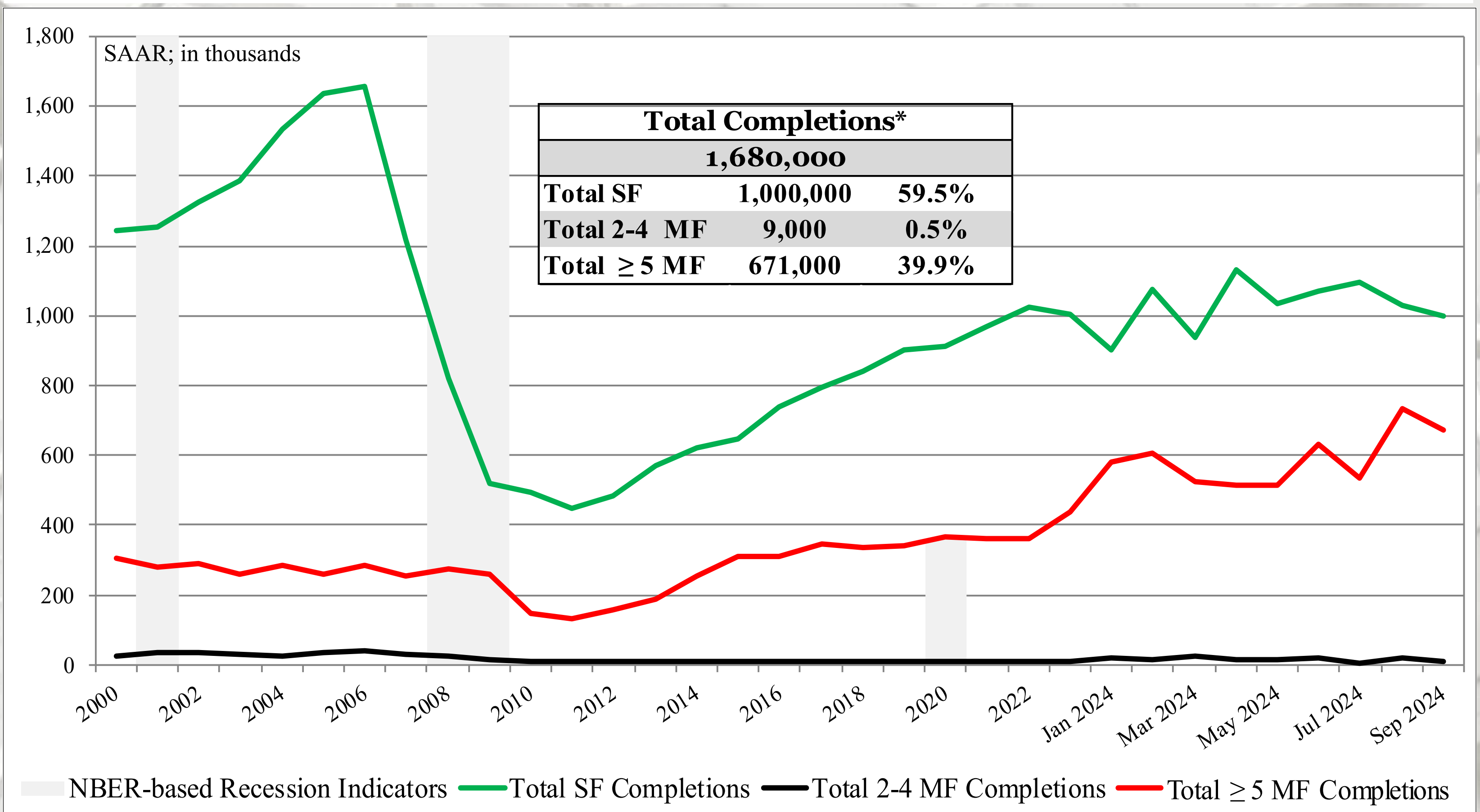
Total Housing Completions



Total Completions*		
1,680,000		
Total SF	1,000,000	59.5%
Total 2-4 MF	9,000	0.5%
Total ≥ 5 MF	671,000	39.9%

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, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

Return TOC

New Housing Completions by Region

	NE Total	NE SF	NE MF**
September	196,000	72,000	124,000
August	126,000	63,000	63,000
2023	102,000	47,000	55,000
M/M change	55.6%	14.3%	96.8%
Y/Y change	92.2%	53.2%	125.5%

	MW Total	MW SF	MW MF**
September	191,000	128,000	63,000
August	205,000	131,000	74,000
2023	185,000	116,000	69,000
M/M change	-6.8%	-2.3%	-14.9%
Y/Y change	3.2%	10.3%	-8.7%

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

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Housing Completions by Region

	S Total	S SF	S MF**
September	857,000	573,000	284,000
August	1,093,000	605,000	488,000
2023	831,000	619,000	212,000
M/M change	-21.6%	-5.3%	-41.8%
Y/Y change	3.1%	-7.4%	34.0%

	W Total	W SF	W MF**
September	436,000	227,000	209,000
August	357,000	229,000	128,000
2023	348,000	202,000	146,000
M/M change	22.1%	-0.9%	63.3%
Y/Y change	25.3%	12.4%	43.2%

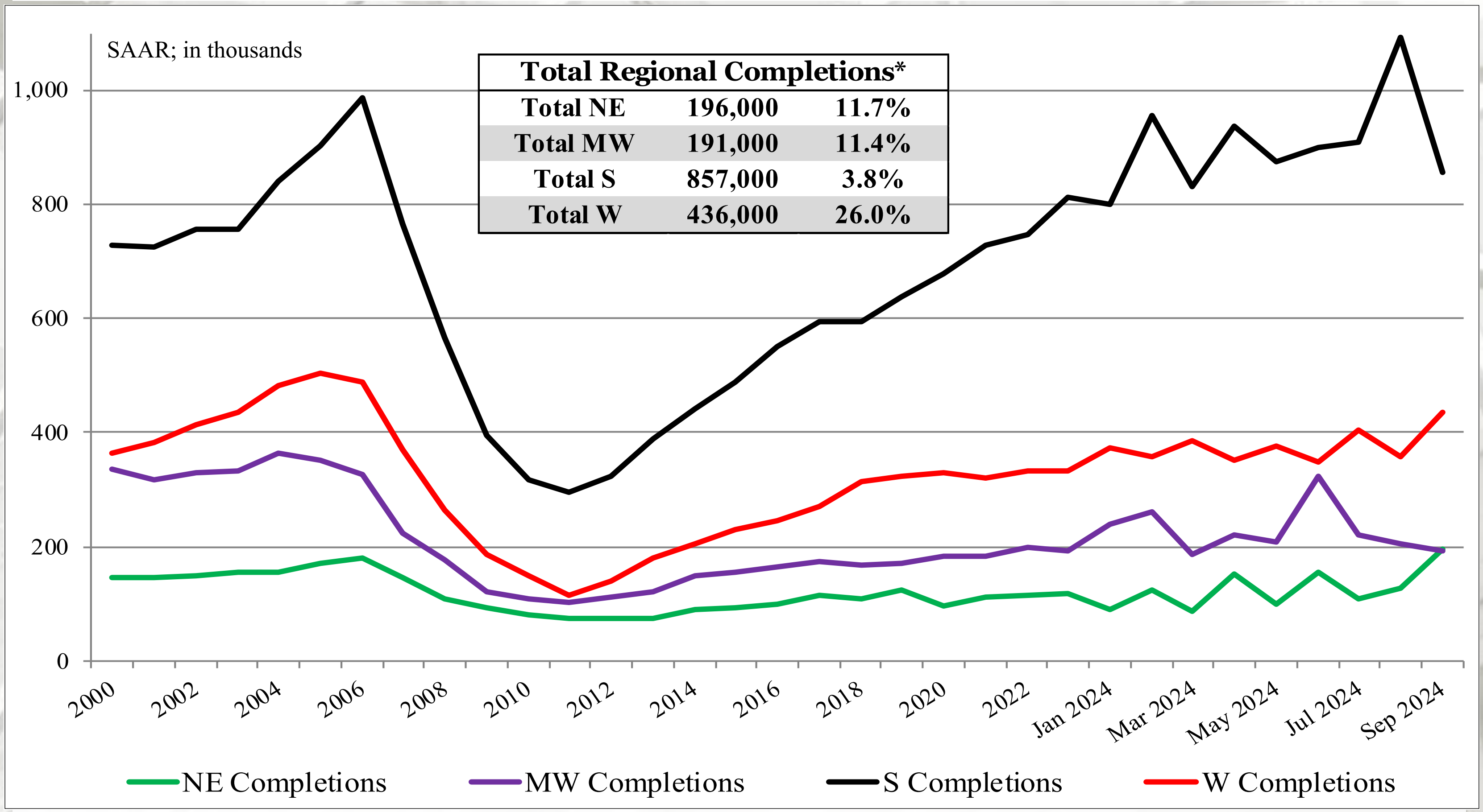
NE = Northeast, MW = Midwest, S = South, W = West

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

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

Return TOC

Total Housing Completions by Region



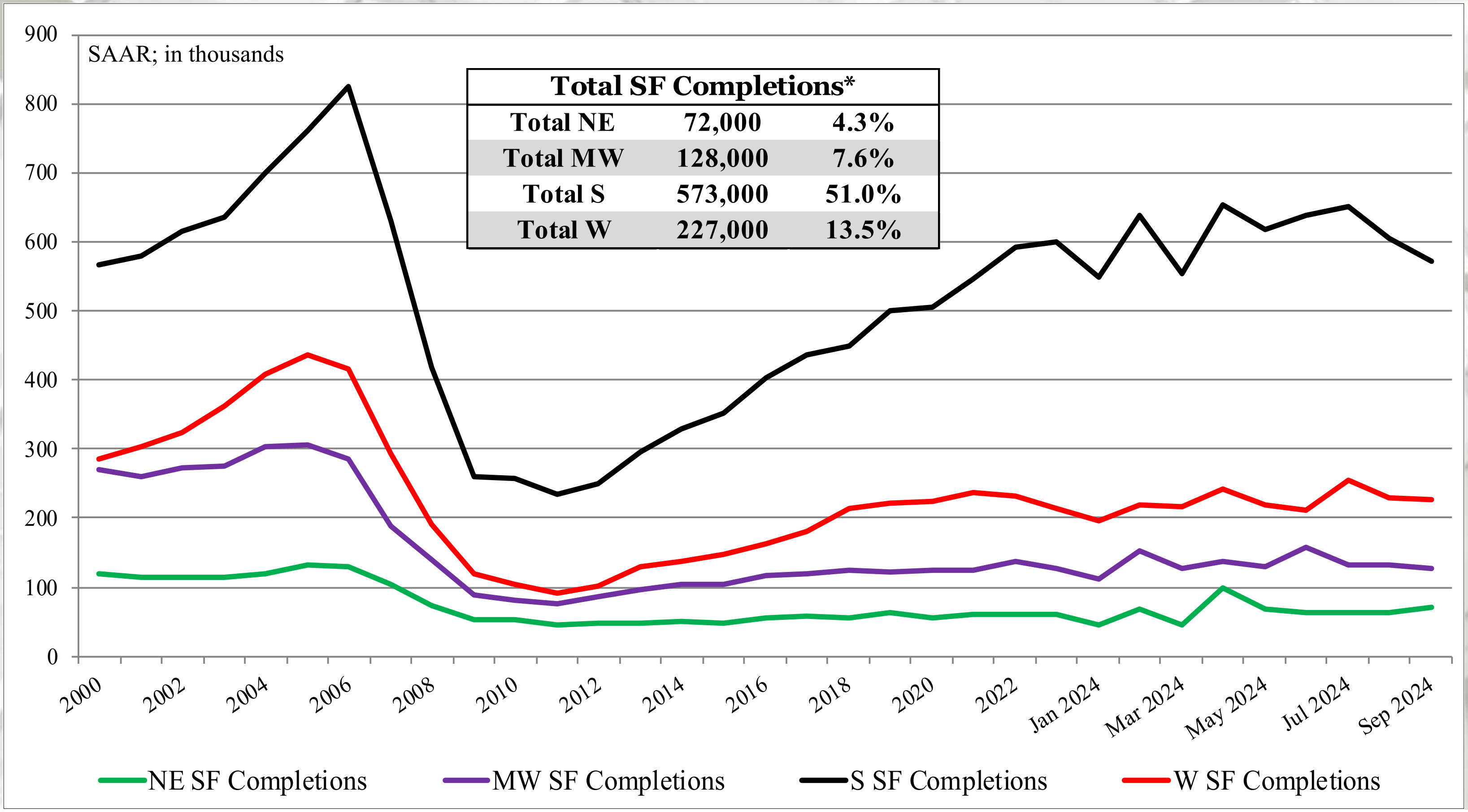
Total Regional Completions*		
Total NE	196,000	11.7%
Total MW	191,000	11.4%
Total S	857,000	3.8%
Total W	436,000	26.0%

All data are SAAR; NE = Northeast and MW = Midwest; S = South, W = West
* Percentage of total housing completions.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

Return TOC

SF Housing Completions by Region



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

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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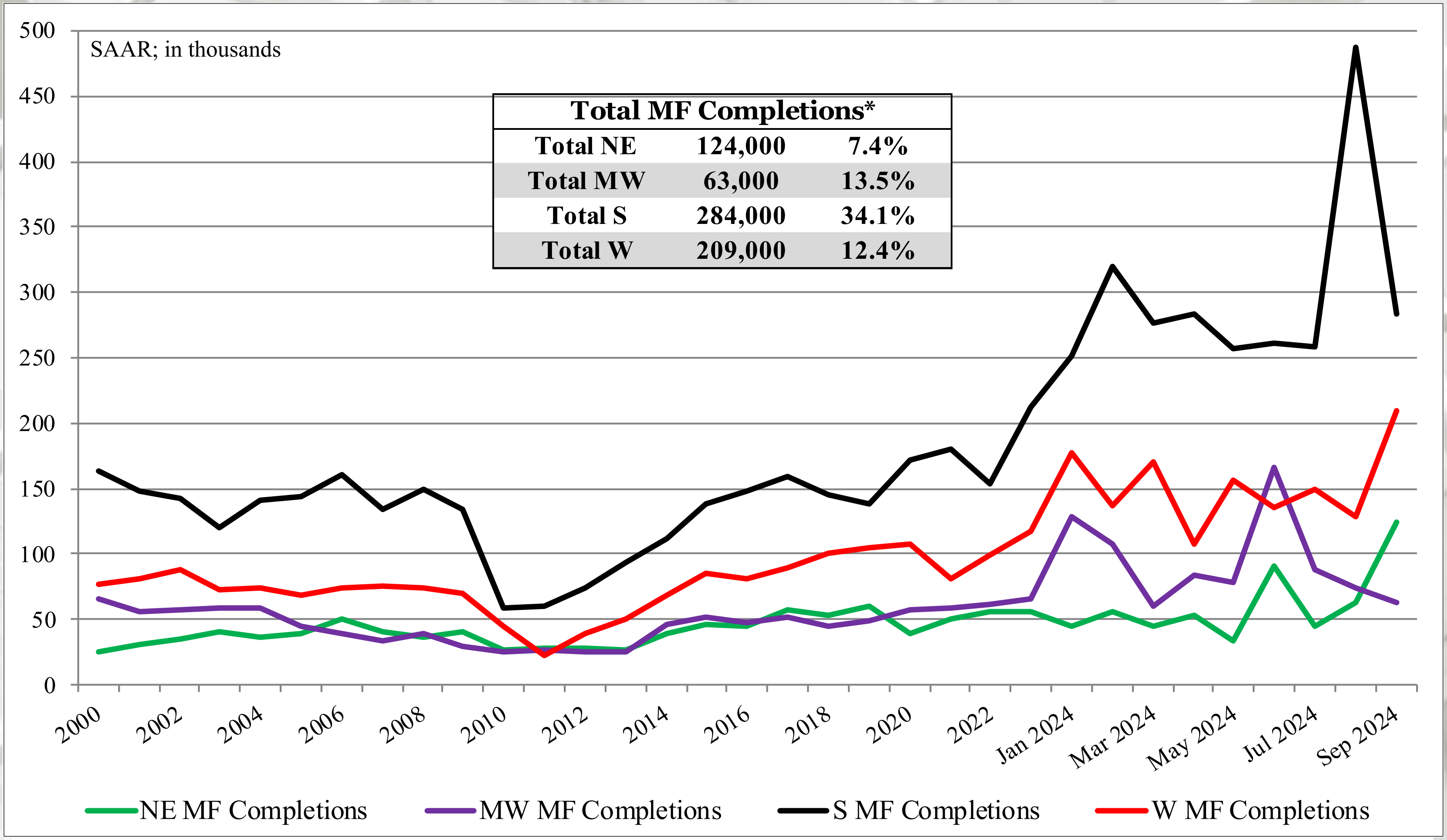
MF Housing Completions by Region



Total MF Completions*		
Total NE	124,000	7.4%
Total MW	63,000	13.5%
Total S	284,000	34.1%
Total W	209,000	12.4%

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

* Percentage of total housing completions

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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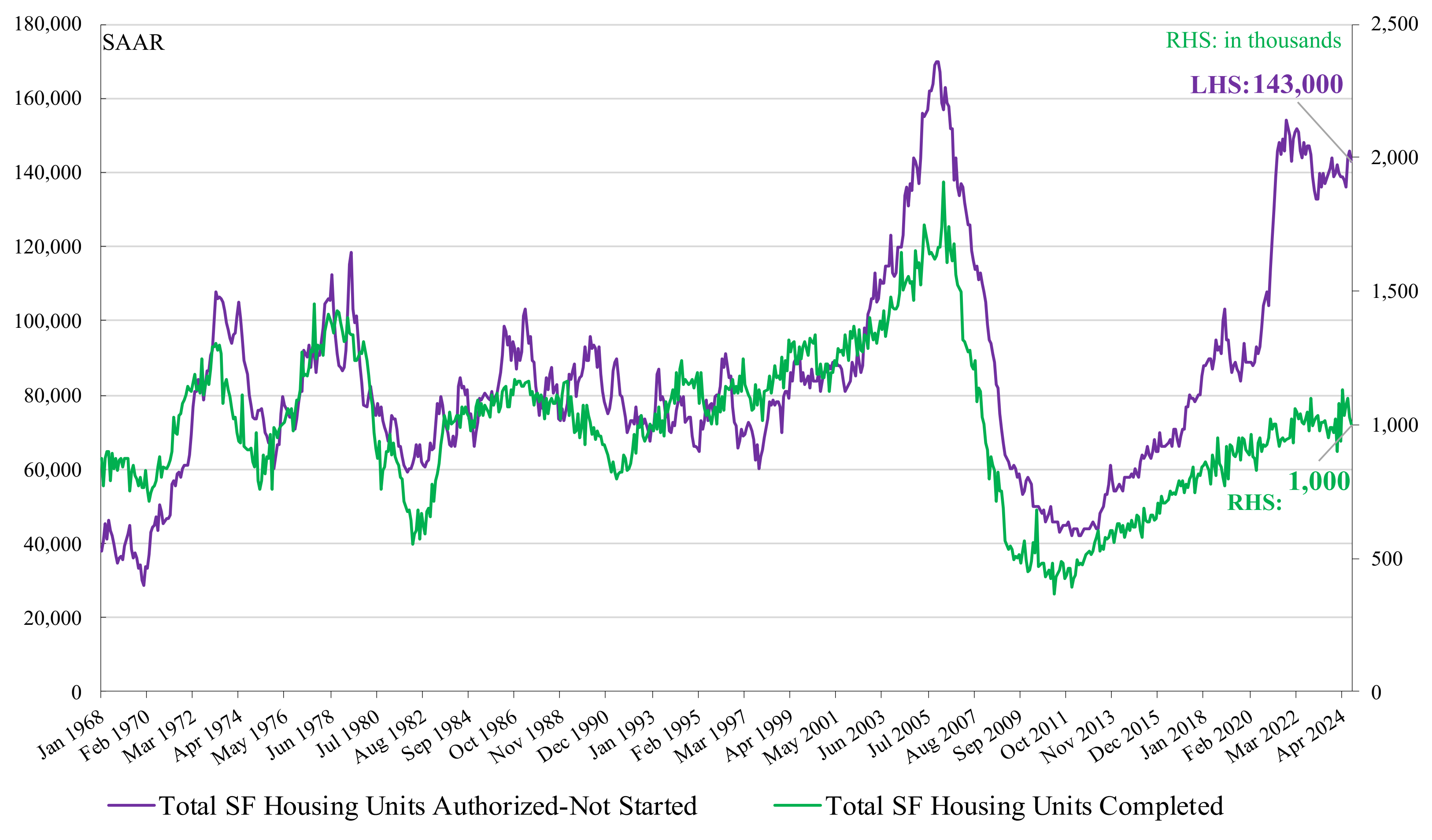
Comparison of SF Units Authorized & Not Started to SF Housing Units Completed



Authorized, Not Started vs. Housing Completions

Total authorized units "not" started was 285,000 in September, an increase from July (281,000), and SF authorized units "not" started were 148,000 units in September, an increase from July (144,000). Total completions and SF unit completions decreased M/M.

The primary reason currently is reduced demand, and in combination with lingering manufacturing supply chain disruptions –ranging from appliances to windows; labor, logistics, and local building regulations.

Sources: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/18/24

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New Single-Family House Sales

	New SF Sales*	Median Price	Mean Price	Month's Supply
September	738,000	$426,300	$501,000	7.6
August	709,000	$410,900	$486,500	7.9
2023	694,000	$426,100	$515,000	7.5
M/M change	4.1%	3.7%	3.0%	-3.8%
Y/Y change	6.3%	0.0%	-2.7%	1.3%

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

New SF sales were greater than the consensus forecast[3] of 718 m; range 700 m to 735 m.
The past three month's new SF sales data also were revised:

June initial: 617 m, revised to 672 m.
July initial: 739 m, revised to 726 m.
August initial: 716 m, revised to 709 m.

Sources: [1] https://www.census.gov/construction/nrs/index.html; 6/24/21; [2] https://www.census.gov/construction/nrs/pdf/newressales.pdf; 10/24/24
[3] http://us.econoday.com; 10/24/24

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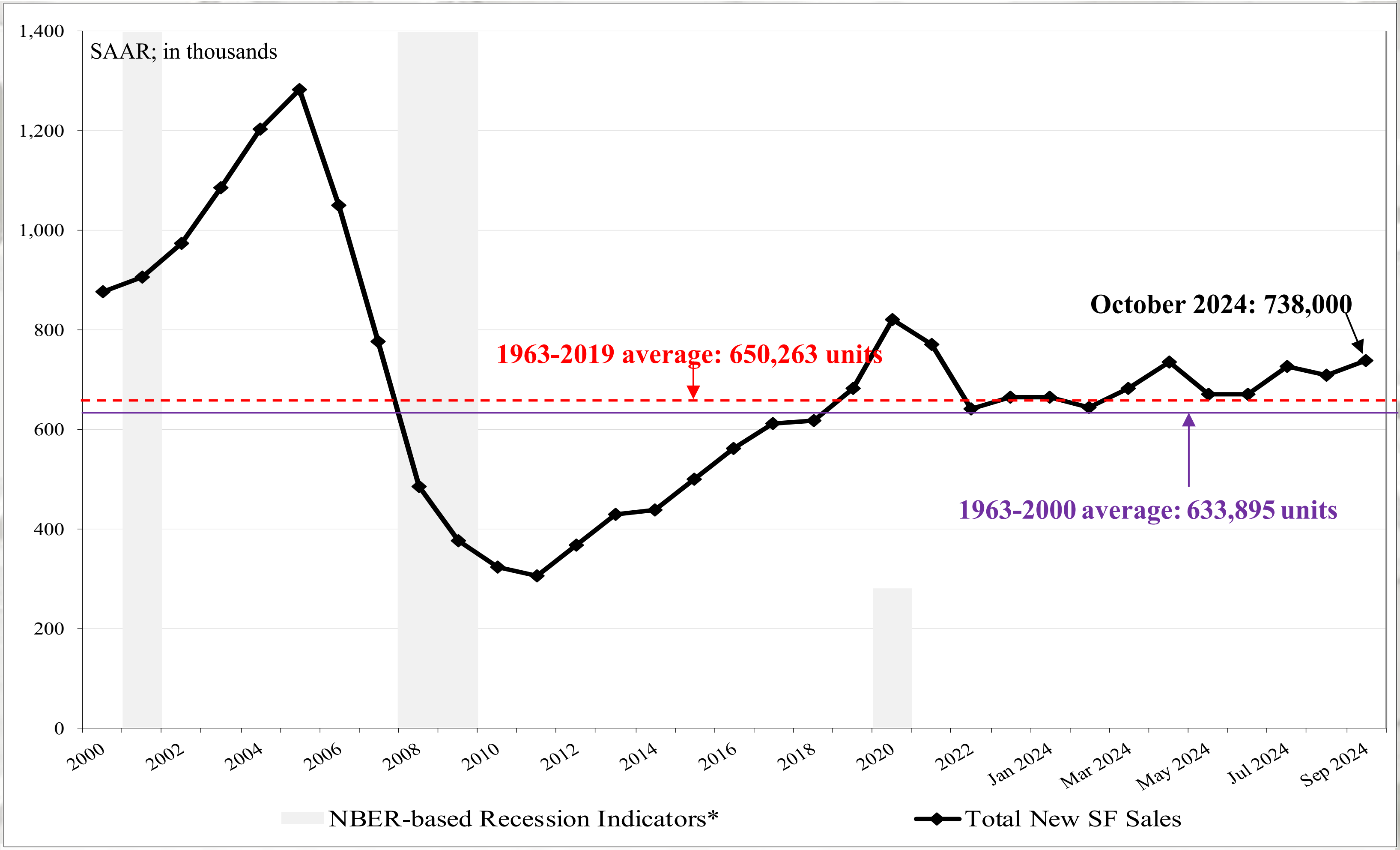
New SF House Sales



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

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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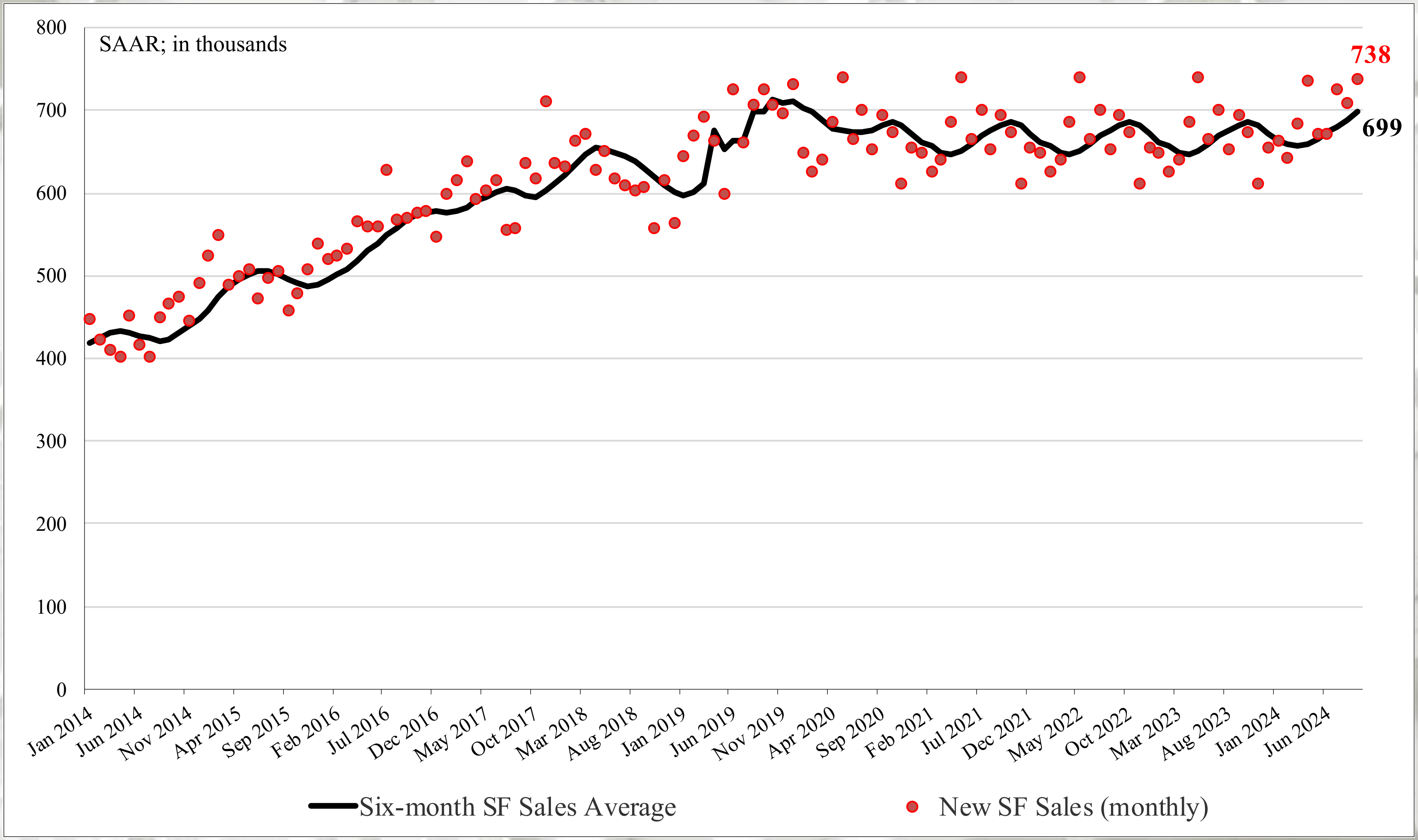
New SF Housing Sales: Six-month average & monthly



Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24.

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New SF House Sales by Region and Price Category

	NE	MW	S	W
September	28,000	77,000	477,000	156,000
August	23,000	79,000	451,000	156,000
2023	36,000	67,000	416,000	175,000
M/M change	21.7%	-2.5%	5.8%	0.0%
Y/Y change	-22.2%	14.9%	14.7%	-10.9%

	< $300m	$300m-$399m	$400m-$499m	$500m-$599m	$600m-$799m	$800m-$999m	≥ $1mm
September[1,2,3,4]	10,000	17,000	12,000	9,000	7,000	3,000	2,000
August[1,2,3,4]	9,000	17,000	11,000	7,000	7,000	2,000	2,000
2023	8,000	16,000	8,000	16,000	10,000	14,000	7,000
M/M change	11.1%	0.0%	9.1%	28.6%	0.0%	50.0%	0.0%
Y/Y change	25.0%	6.3%	50.0%	-43.8%	-30.0%	-78.6%	-71.4%
% of New SF sales	13.8%	29.3%	22.4%	12.1%	12.1%	5.2%	6.9%

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 September 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; 10/24/24; [4]https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf

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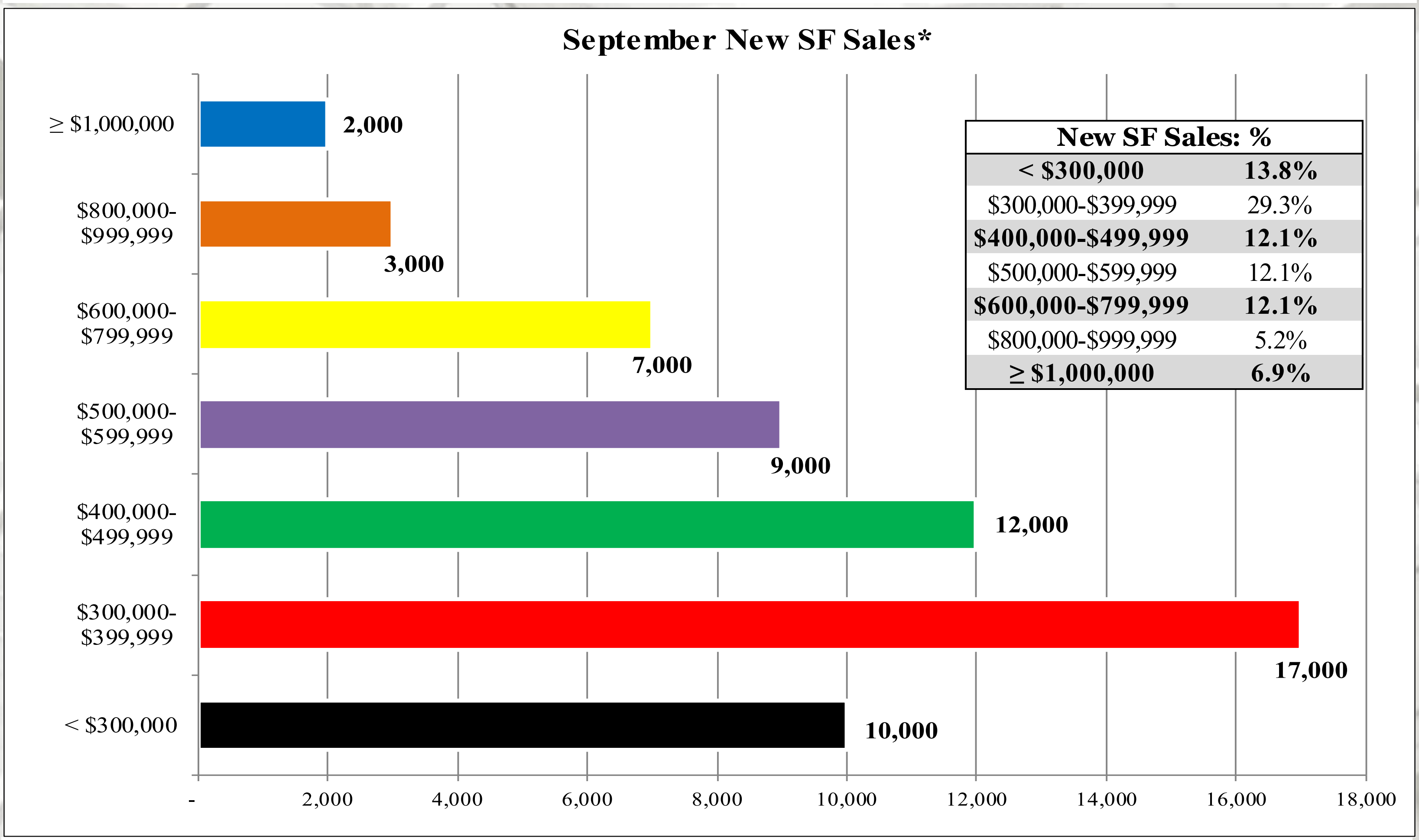
New SF House Sales



New SF Sales: %	
< $300,000	**13.8%**
$300,000-$399,999	29.3%
$400,000-$499,999	**12.1%**
$500,000-$599,999	12.1%
$600,000-$799,999	**12.1%**
$800,000-$999,999	5.2%
≥ $1,000,000	**6.9%**

* Total new sales by price category and percent.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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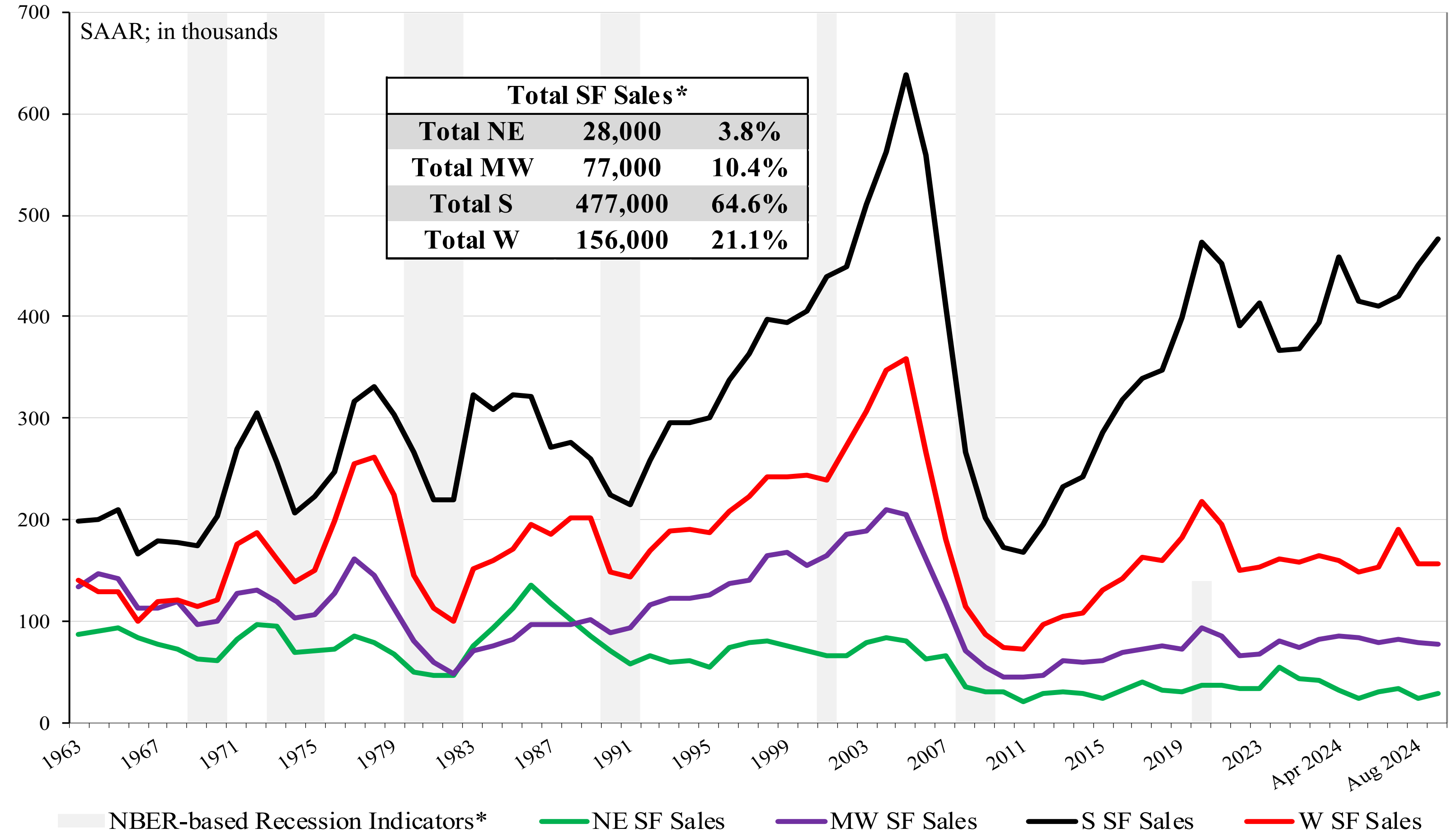
New SF House Sales by Region



Total SF Sales*		
Total NE	28,000	3.8%
Total MW	77,000	10.4%
Total S	477,000	64.6%
Total W	156,000	21.1%

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).

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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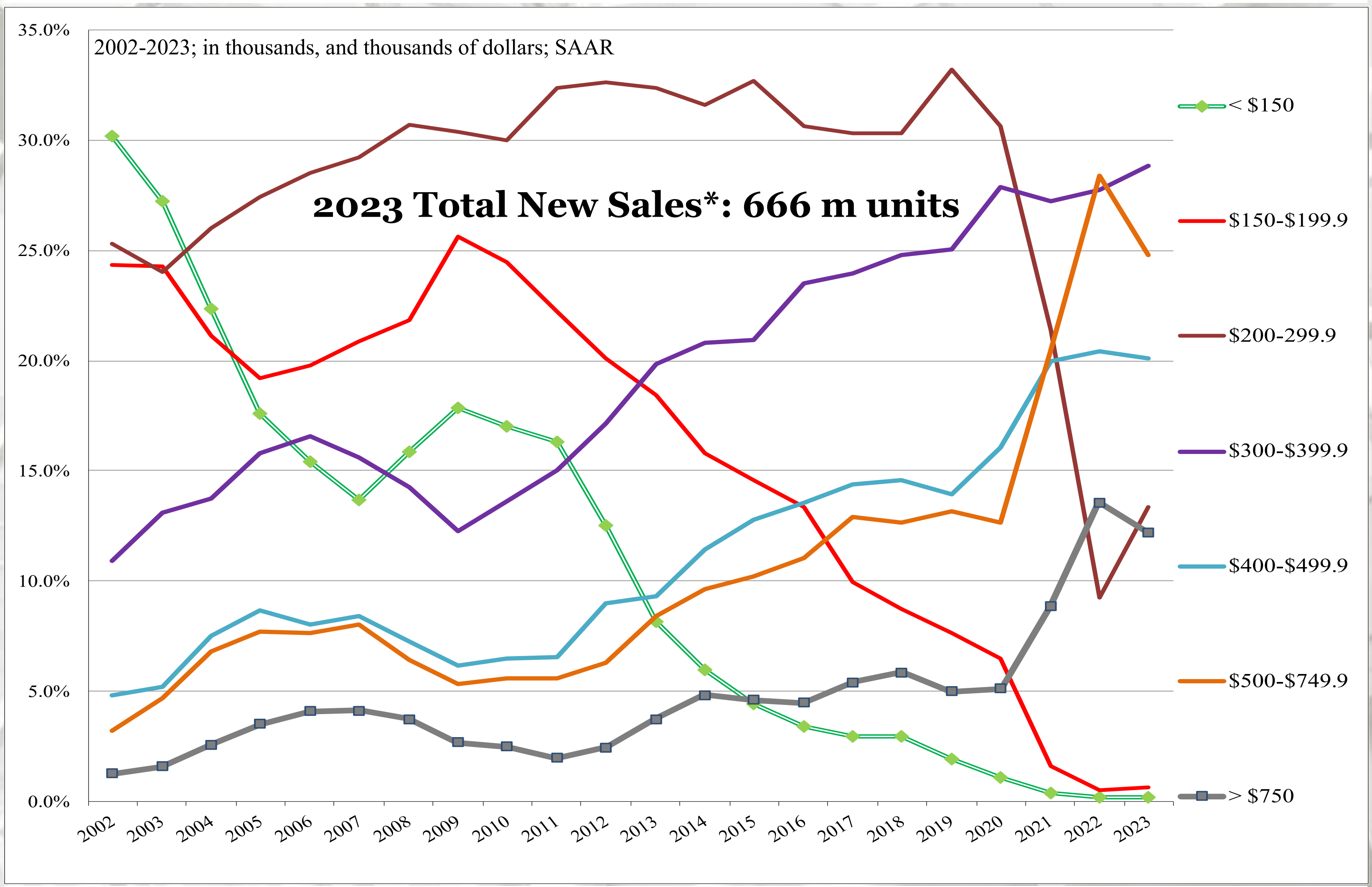
New SF House Sales by Price Category



* Sales tallied by price category, nominal dollars.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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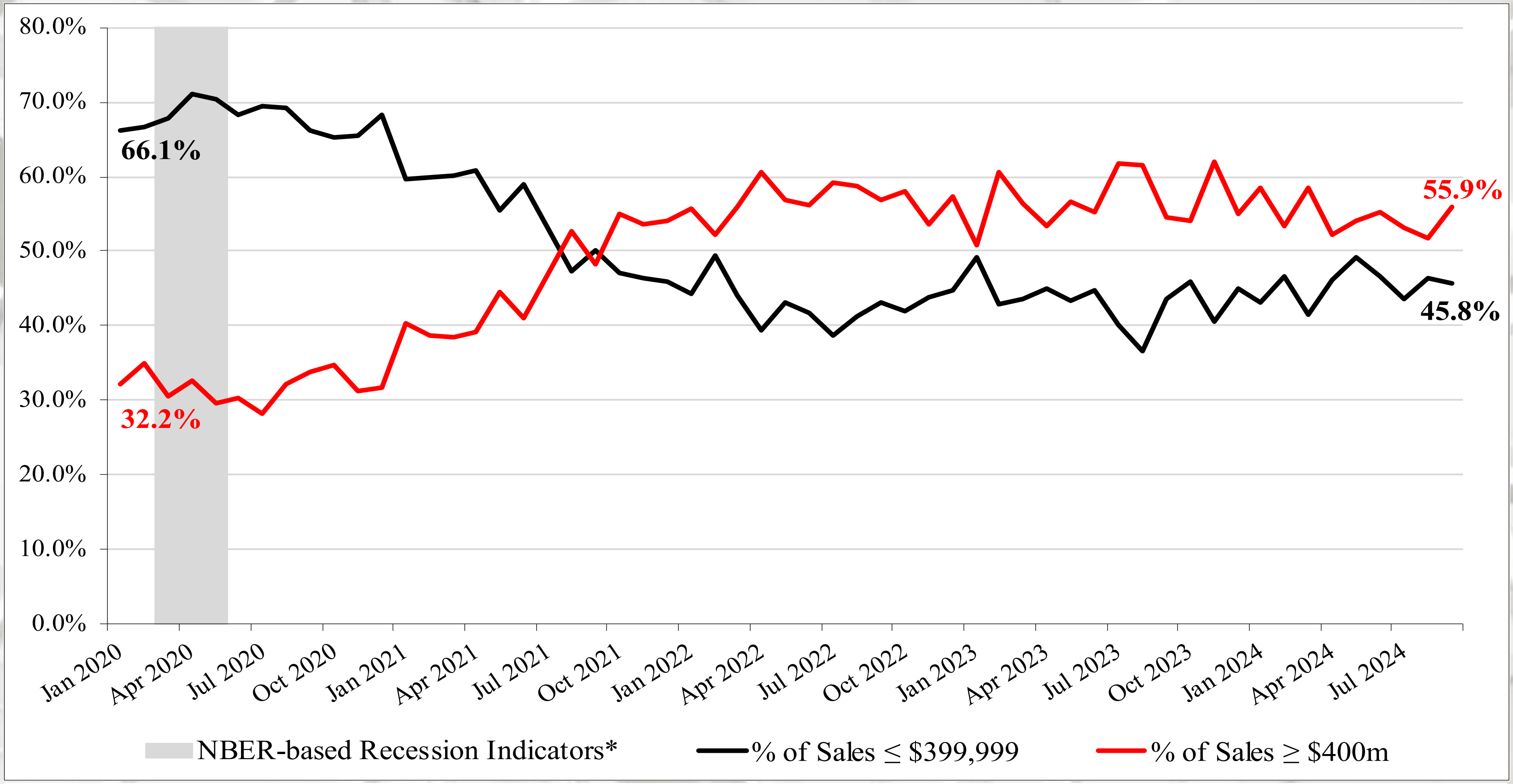
New SF House Sales



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

New SF Sales: < $399.9 m and > $400 m: 2020 – September 2024

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.

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; [1] https://www.census.gov/construction/nrs/index.html; [2] https://www.census.gov/construction/cpi/pdf/descpi_sold.pdf 10/24/24

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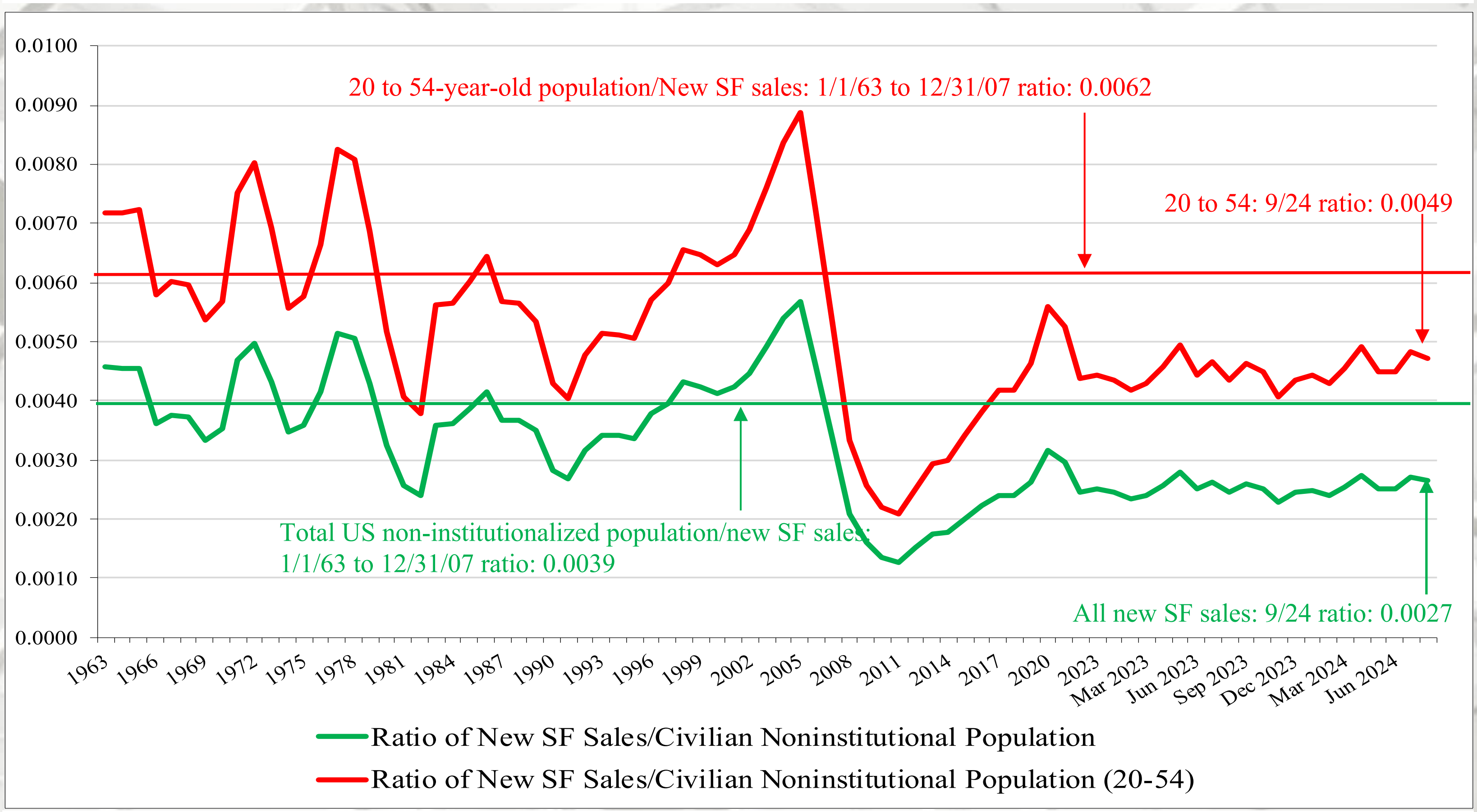
New SF House Sales



New SF sales adjusted for the US population

From September 1963 to September 2007, the long-term ratio of new house sales to the total US non-institutionalized population was 0.0039; in September 2024 it was 0.0027 – decreasing from August (0.0026). The non-institutionalized population, aged 20 to 54 long-term ratio is 0.0062; in September 2024 it was 0.0048 – also a decrease from August (0.0047). All are non-adjusted data. From a non-institutionalized population world view, new sales remain less than the long-term average.

On a long-term basis, some studies peg normalized long-term demand at 900,000 to 1,000,000 new SF house sales per year beginning in 2025 through 2050.

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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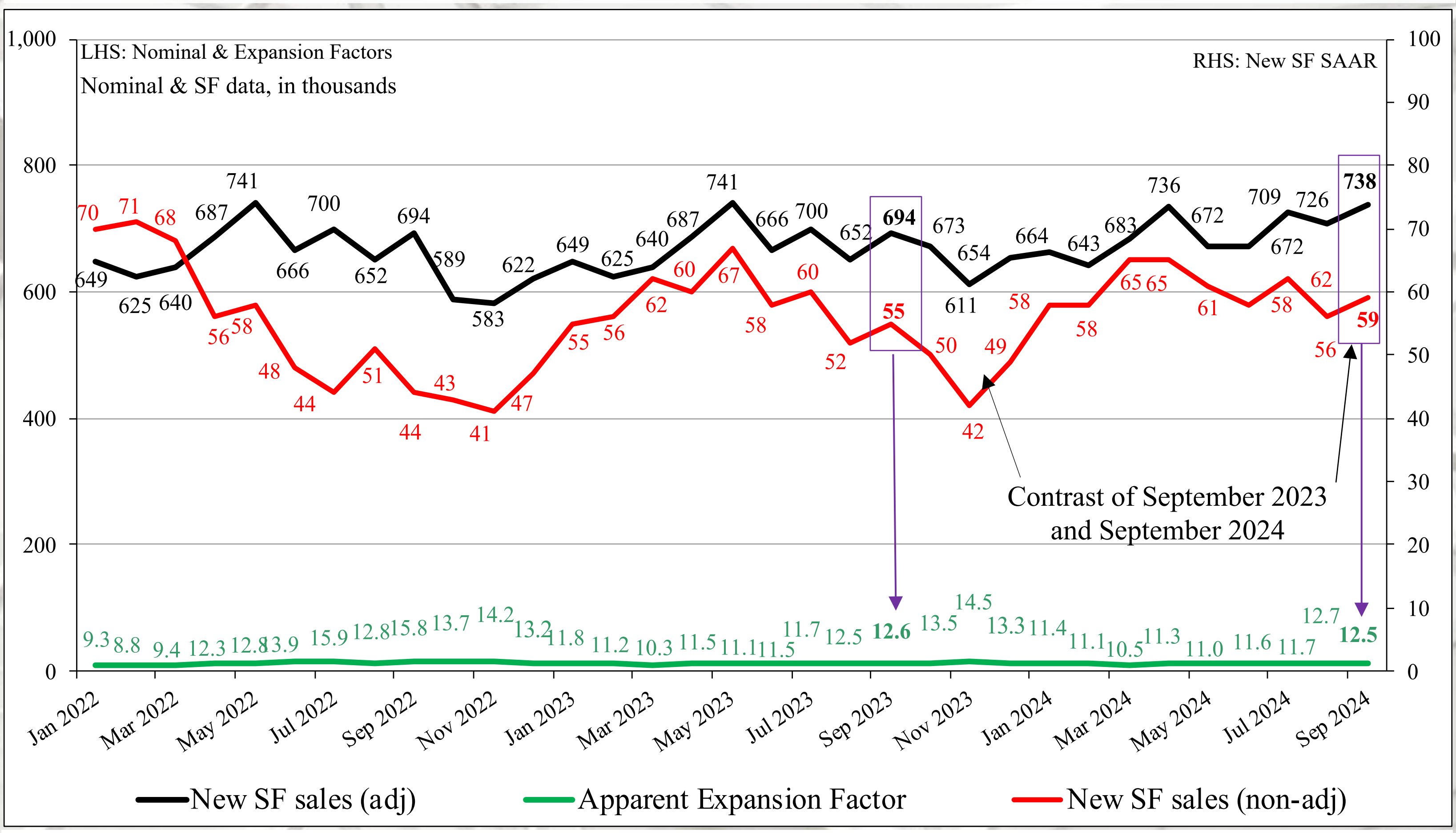
Nominal vs. SAAR New SF House Sales



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; 10/24/24

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New SF House Sales

New SF Houses Sold During Period				
	Total	Not started	Under Construction	Completed
September	738,000	115,000	279,000	344,000
August	709,000	98,000	235,000	376,000
2023	435,000	99,000	263,000	73,000
M/M change	4.1%	17.3%	18.7%	-8.5%
Y/Y change	69.7%	16.2%	6.1%	371.2%
Total percentage		15.6%	37.8%	46.6%

All data is SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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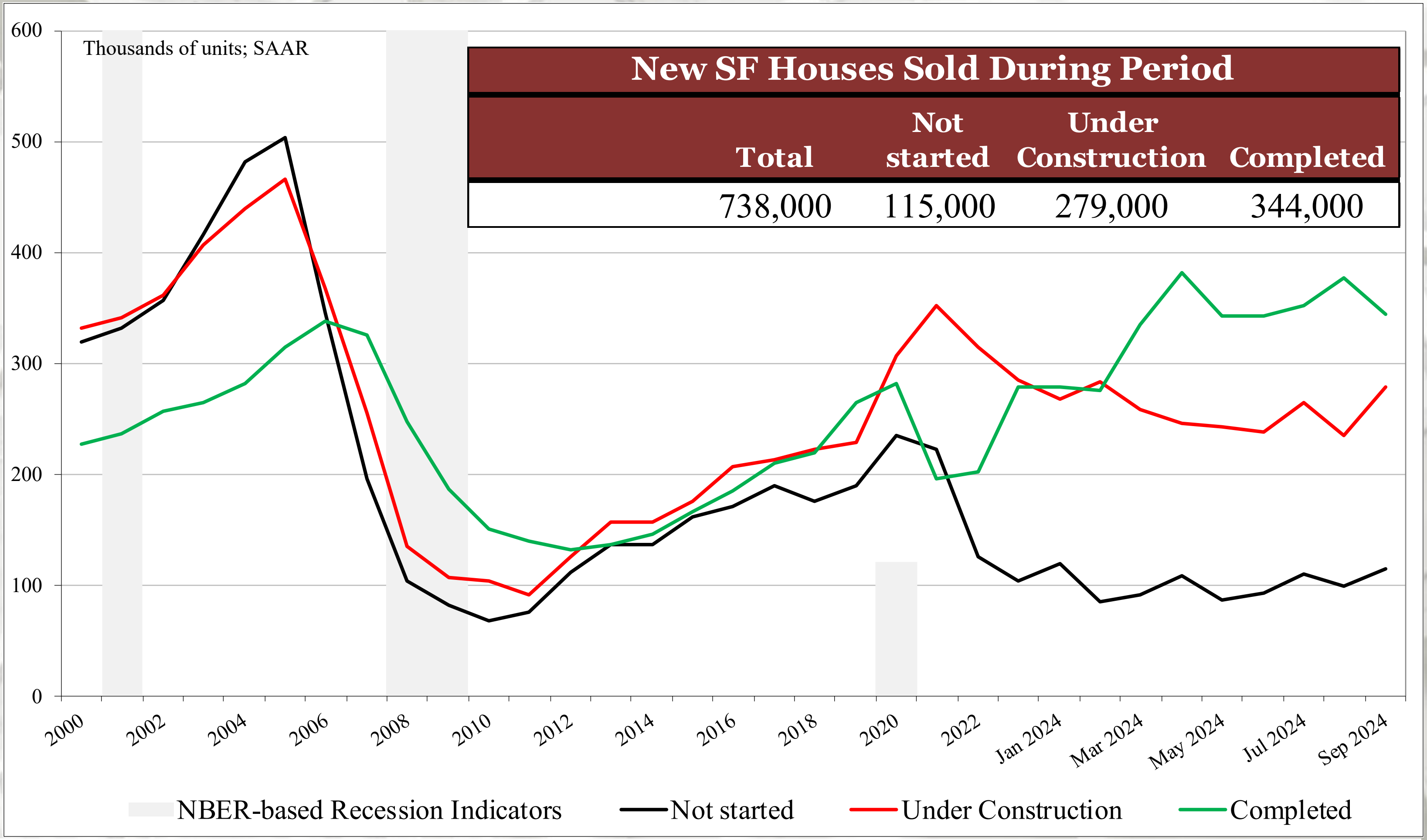
New SF House Sales: Sold During Period



New SF Houses Sold During Period

Total	Not started	Under Construction	Completed
738,000	115,000	279,000	344,000

* 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, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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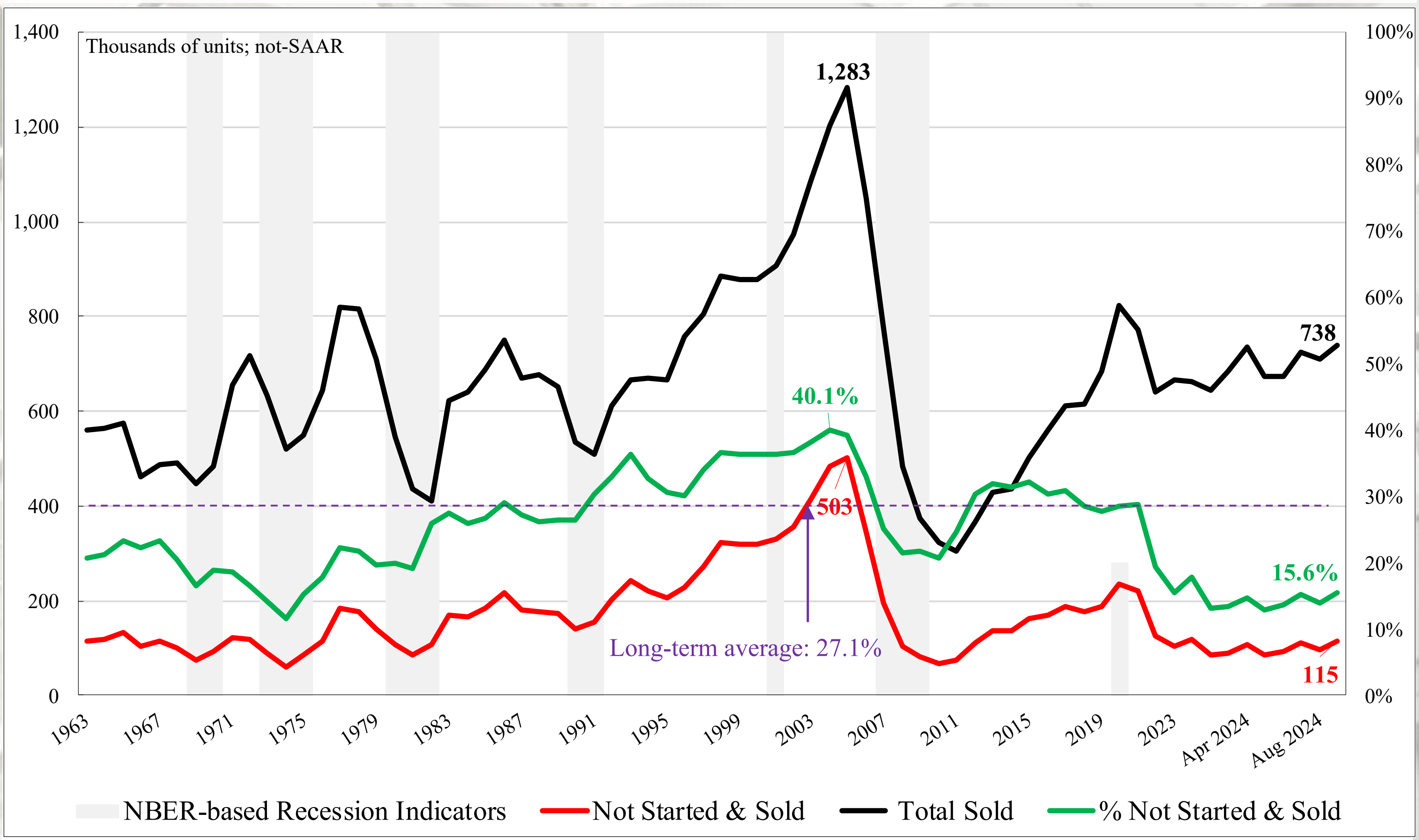
New SF House Sales: Percentage Not Started & Sold During Period



Of the new houses sold in September (738 m), 15.6% (115 m) had not been started and sold. The long-term average is 27.1%.

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

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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New SF Houses for Sale

New SF Houses for Sale at the end of the Period by Region*					
	Total	NE	MW	S	W
September	473,000	26,000	45,000	292,000	111,000
August	472,000	27,000	42,000	295,000	109,000
2023	440,000	30,000	44,000	265,000	101,000
M/M change	0.2%	-3.7%	7.1%	-1.0%	1.8%
Y/Y change	7.5%	-13.3%	2.3%	10.2%	9.9%

* Not SAAR

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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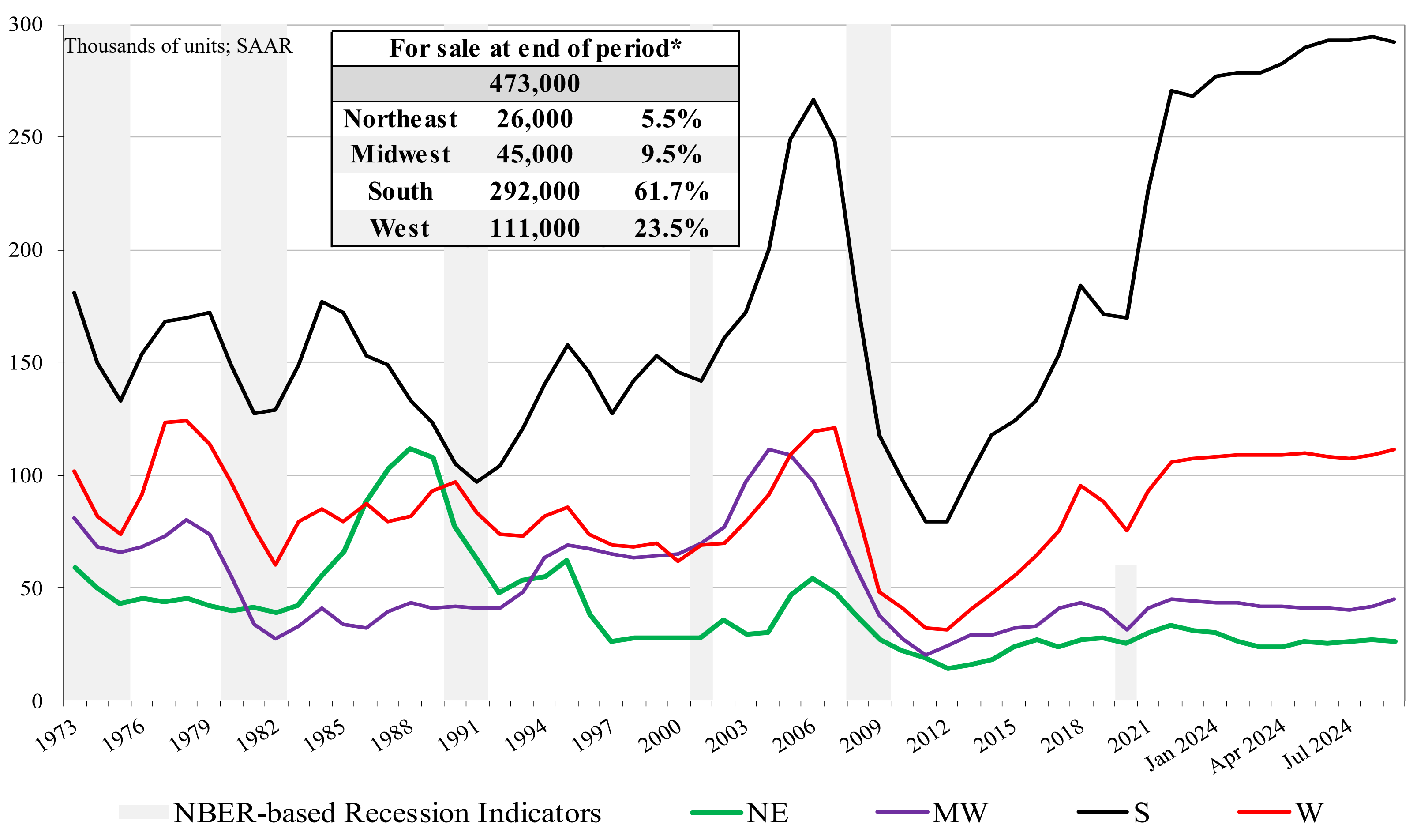
New SF House Sales:
For sale at end of period by Region



For sale at end of period*		
473,000		
Northeast	26,000	5.5%
Midwest	45,000	9.5%
South	292,000	61.7%
West	111,000	23.5%

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

* Percentage of total for sale at end of period.

Sources: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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New SF House Sales

New SF Houses Sold During Period				
	Total	Not started	Under Construction	Completed
September	738,000	115,000	279,000	344,000
August	709,000	98,000	235,000	376,000
2023	435,000	99,000	263,000	73,000
M/M change	4.1%	17.3%	18.7%	-8.5%
Y/Y change	69.7%	16.2%	6.1%	371.2%
Total percentage		15.6%	37.8%	46.6%

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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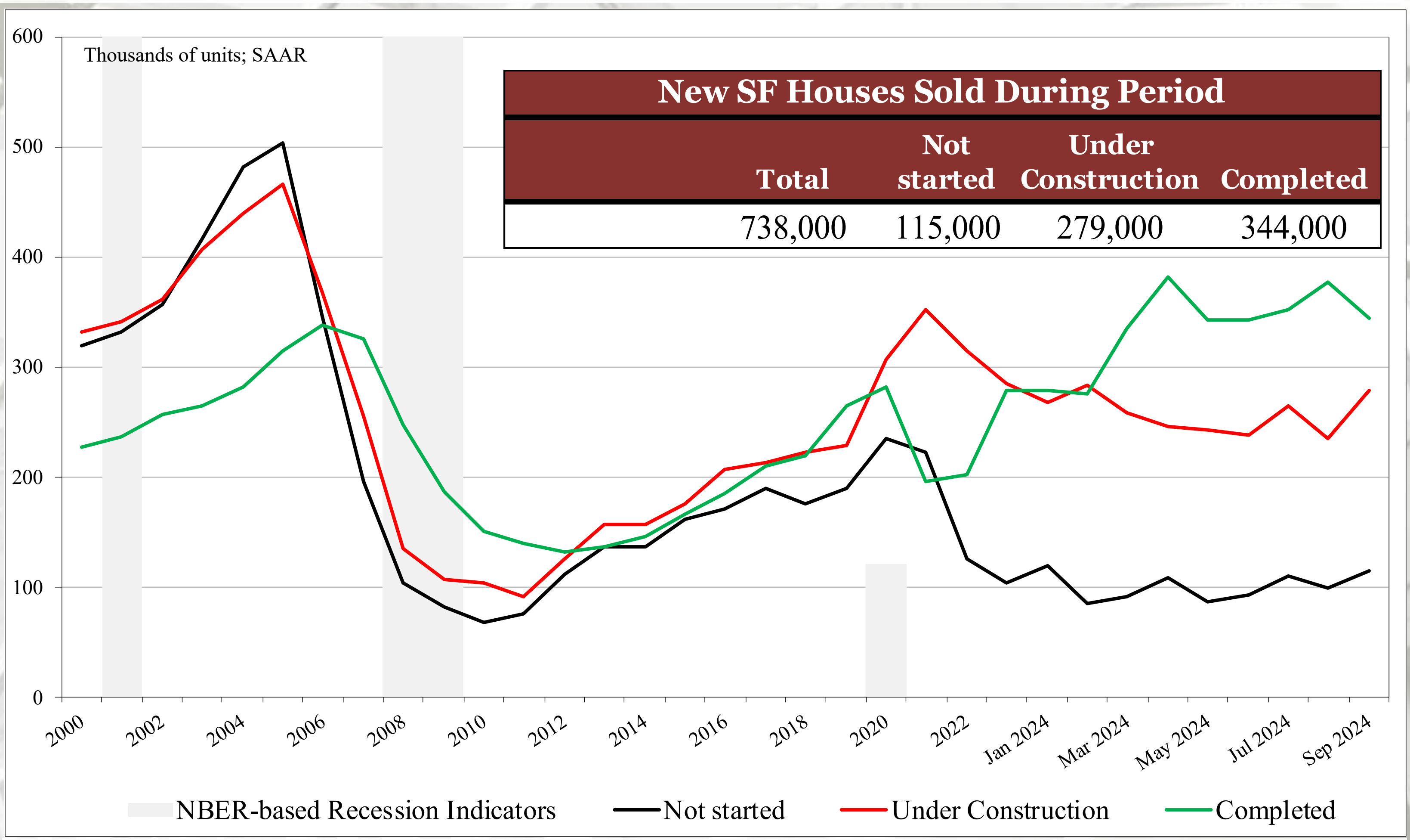
New SF House Sales: For Sale at End of Period



New SF Houses Sold During Period			
Total	Not started	Under Construction	Completed
738,000	115,000	279,000	344,000

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, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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New SF House Sales

New SF Houses for Sale at the end of the Period

	Total	Not started	Under Construction	Completed
September	470,000	104,000	258,000	108,000
August	468,000	98,000	264,000	106,000
2023	435,000	99,000	263,000	73,000
M/M change	0.4%	6.1%	-2.3%	1.9%
Y/Y change	8.0%	5.1%	-1.9%	47.9%
Total percentage		22.1%	54.9%	23.0%

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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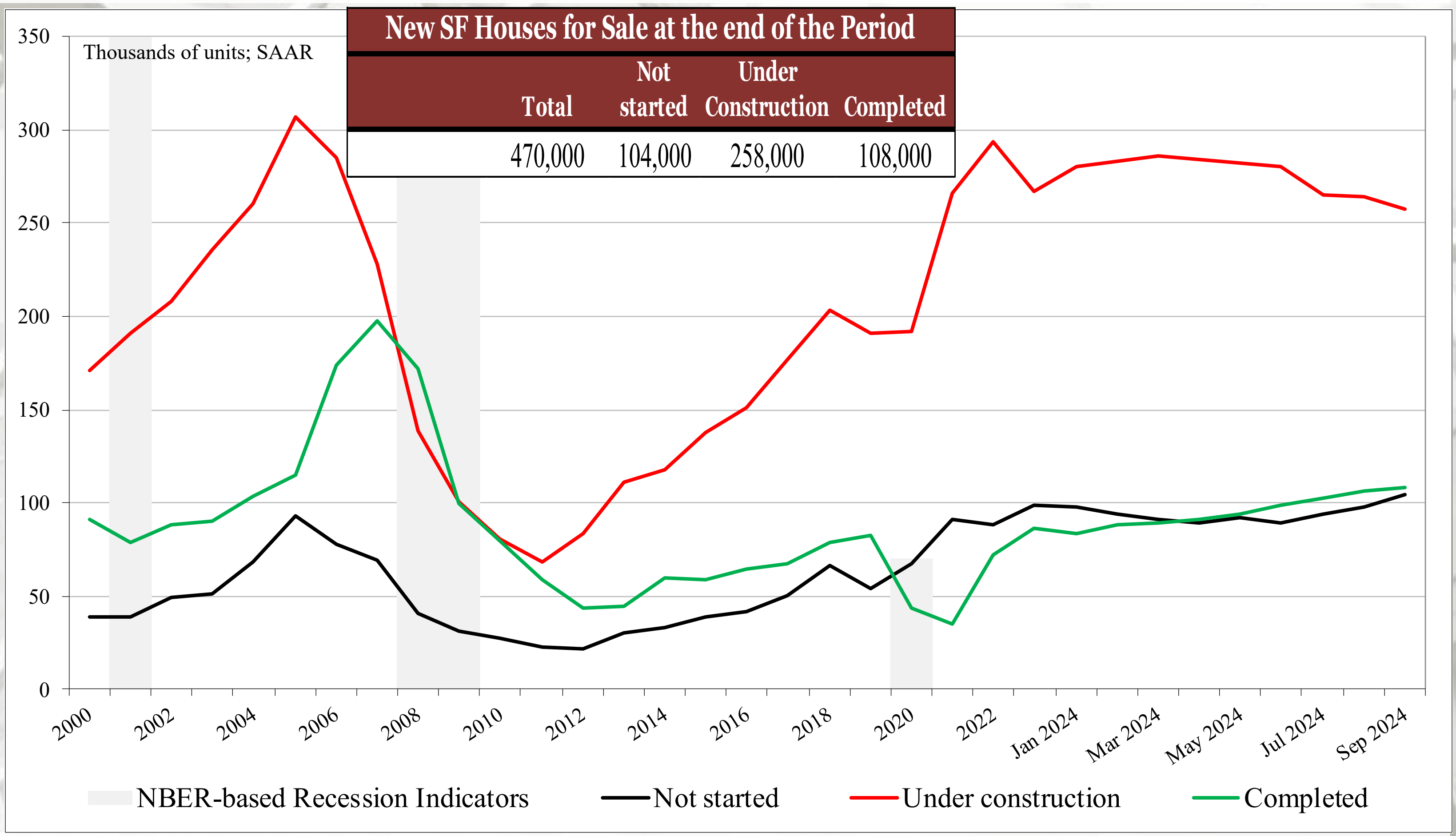
New SF House Sales: For Sale at End of Period



New SF Houses for Sale at the end of the Period

Total	Not started	Under Construction	Completed
470,000	104,000	258,000	108,000

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

Source: https://fred.stlouisfed.org/series/USREC, 6/1/21; http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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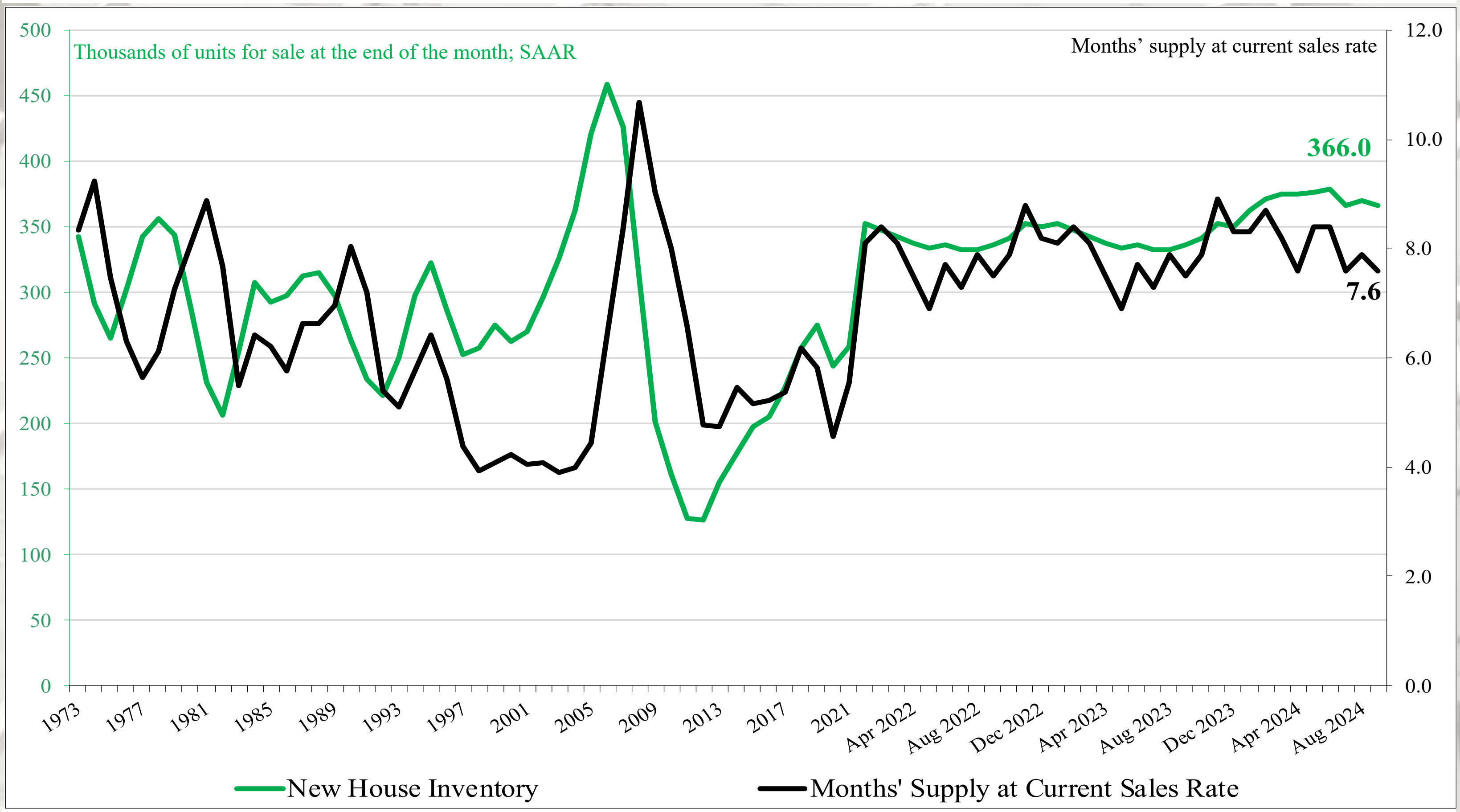
Months' Supply and New House Inventory[a]



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

The months' supply of new houses at current sales rate at the end of September was 7.6, greater than the historically preferred number of five- to six-months (SAAR).

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/24/24

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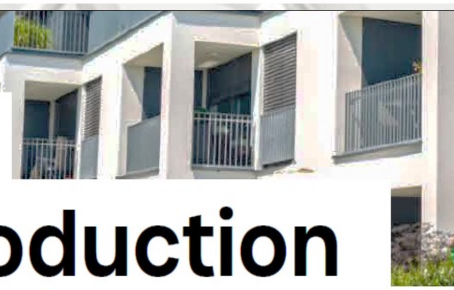
U.S. Housing Market

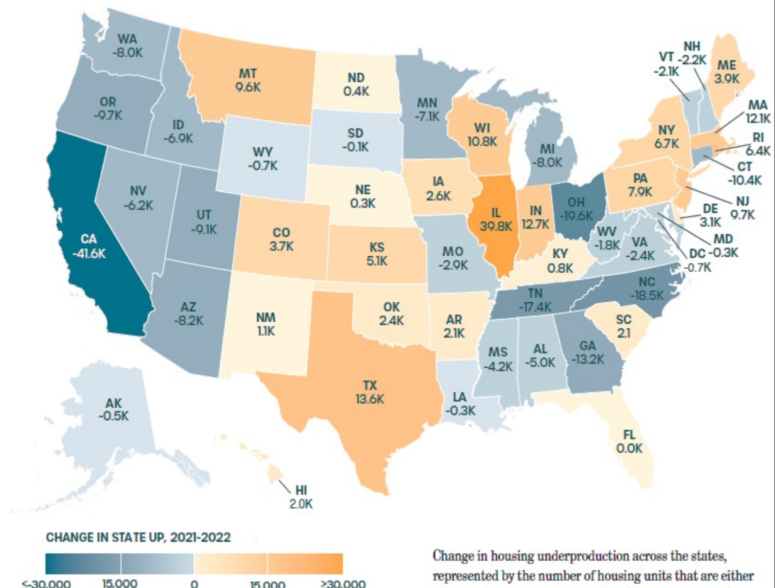


Housing Underproduction in the U.S. 2024

For the first time since we began measuring housing underproduction in 2012, the gap between the housing we have and the housing we need narrowed, moving from 3.89 to 3.85 million. While the total number of missing units decreased, a regional look at the improvement suggests larger dynamics may be at play. This report looks into the root causes of the housing shortage plaguing the country, exploring regional trends of improvement in the West, and worsening underproduction in the middle of country.

Total Housing Underproduction by Place 2012-2022

In 2021, low interest rates and increased demand due to new household formation during the pandemic resulted in a 15-year high for new home permits issued. Over the period from 2021 to 2022, housing unit completions increased by 3.3%. The 50,000 unit decrease in housing underproduction over the same period resulted from increased housing production and the continuation of pandemic-related migration patterns as people adjusted to a new hybrid work environment.



Change in housing underproduction across the states, represented by the number of housing units that are either reducing housing underproduction (negative numbers) or increasing housing underproduction (positive numbers).

Every state in the West showed marginal improvements in housing underproduction, but from the Rockies to the Mississippi River, housing underproduction is almost uniformly worsening.

Source: https://upforgrowth.org/wp-content/uploads/2024/10/2024_Housing-Underproduction-in-the-U.S.-Report_Final-c-1.pdf; 10/29/24

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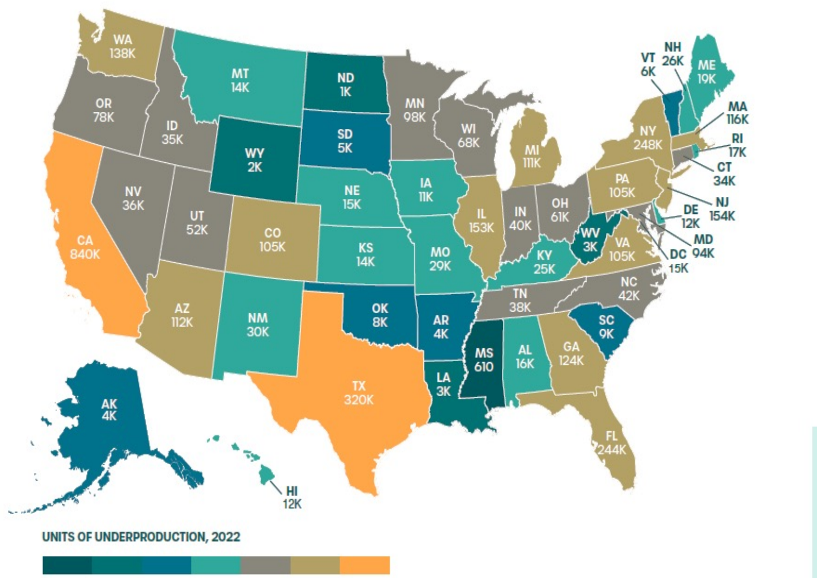
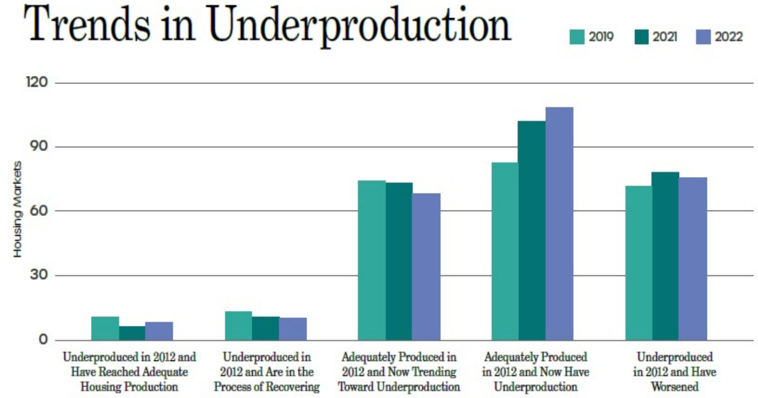
U.S. Housing Market



Trends in Underproduction



Housing Underproduction persists across geographies and typologies of place.
Underproduction is present in all 50 states and the District of Columbia. It is present in urban, suburban, and rural areas.

There are national and regional dynamics at play.
Underproduction decreased in 26 states and 28 of the top 50 underproduced metros. Where and why those improvements occurred yields clues about

National Housing Underproduction

2012	2019
1.65 Million	3.79 Million
2021	**2022**
3.89 Million	3.85 Million

Metro Areas Experiencing Underproduction

Metropolitan Markets Since 2012

77 markets have worsened.
25% of total | down from **25.6%** in 2021

110 markets have fallen into underproduction.
35.6% of total | up from **33.3%** in 2021

69 markets are trending toward underproduction.
22.3% of total | down from **23.9%** in 2021

9 underproduced markets reached adequate housing production.
3% of total | up from **2.3%** in 2021

11 underproduced markets are recovering.
3.6% of total | the same as 2021

33 markets that adequately produced continued to meet or exceed housing needs through 2021.
10.7% of total | down from **11.3%** in 2021

What is housing underproduction?

Source: https://upforgrowth.org/wp-content/uploads/2024/10/2024_Housing-Underproduction-in-the-U.S.-Report_Final-c-1.pdf; 10/29/24

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September 2024 Construction Spending

	Total Private Residential*	SF*	MF*	Improvement**
September	$913,632	$418,867	$127,045	$367,720
August	$912,186	$417,229	$127,171	$367,786
2023	$877,629	$415,287	$138,249	$324,093
M/M change	0.2%	0.4%	-0.1%	0.0%
Y/Y change	4.1%	0.9%	-8.1%	13.5%

* Millions of dollars.
** 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.

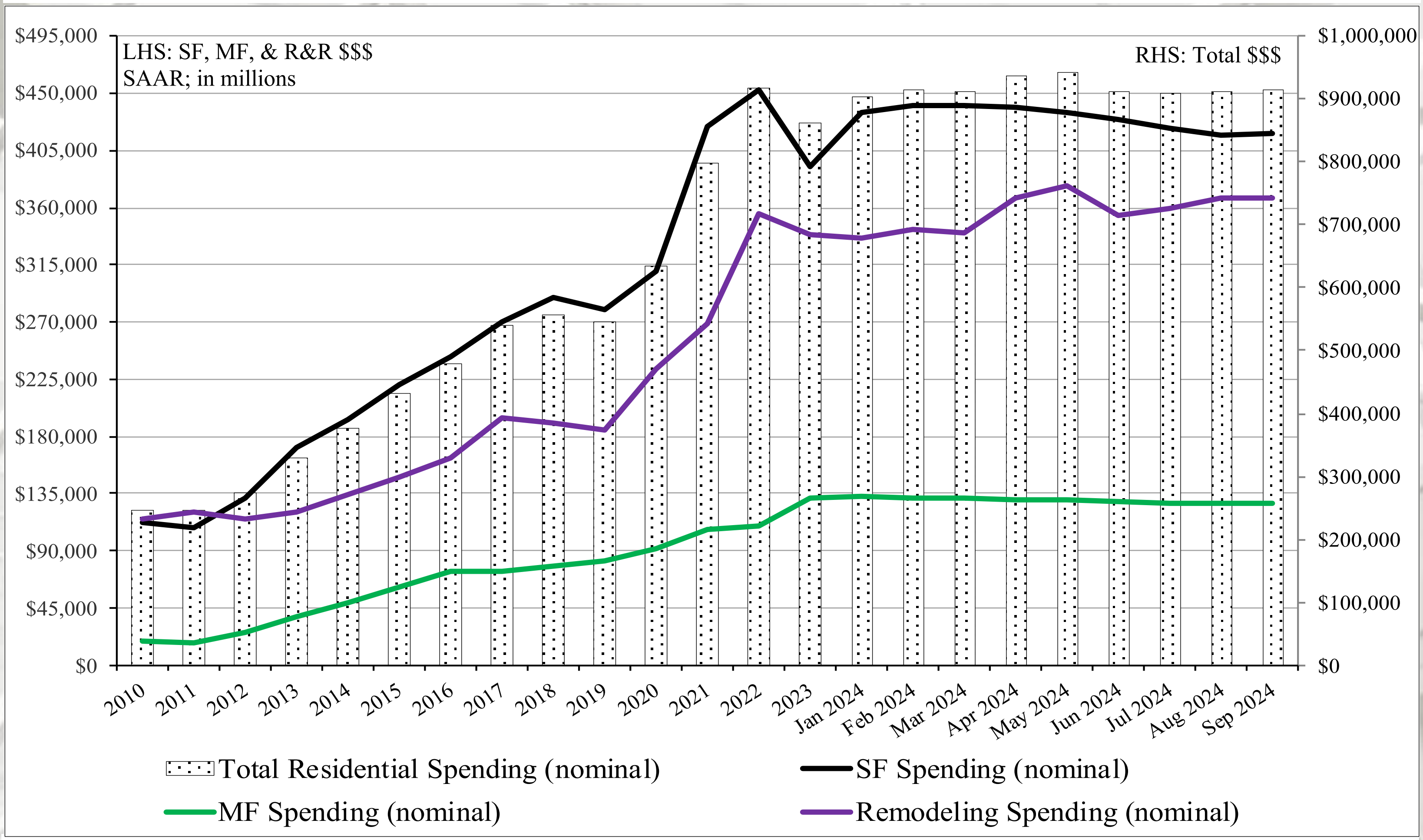
New multi-family includes new apartments and condominiums. The classification excludes residential units in buildings that are primarily nonresidential.

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; 11/1/24

Return TOC

Total Construction Spending (nominal): 2000 – September 2024



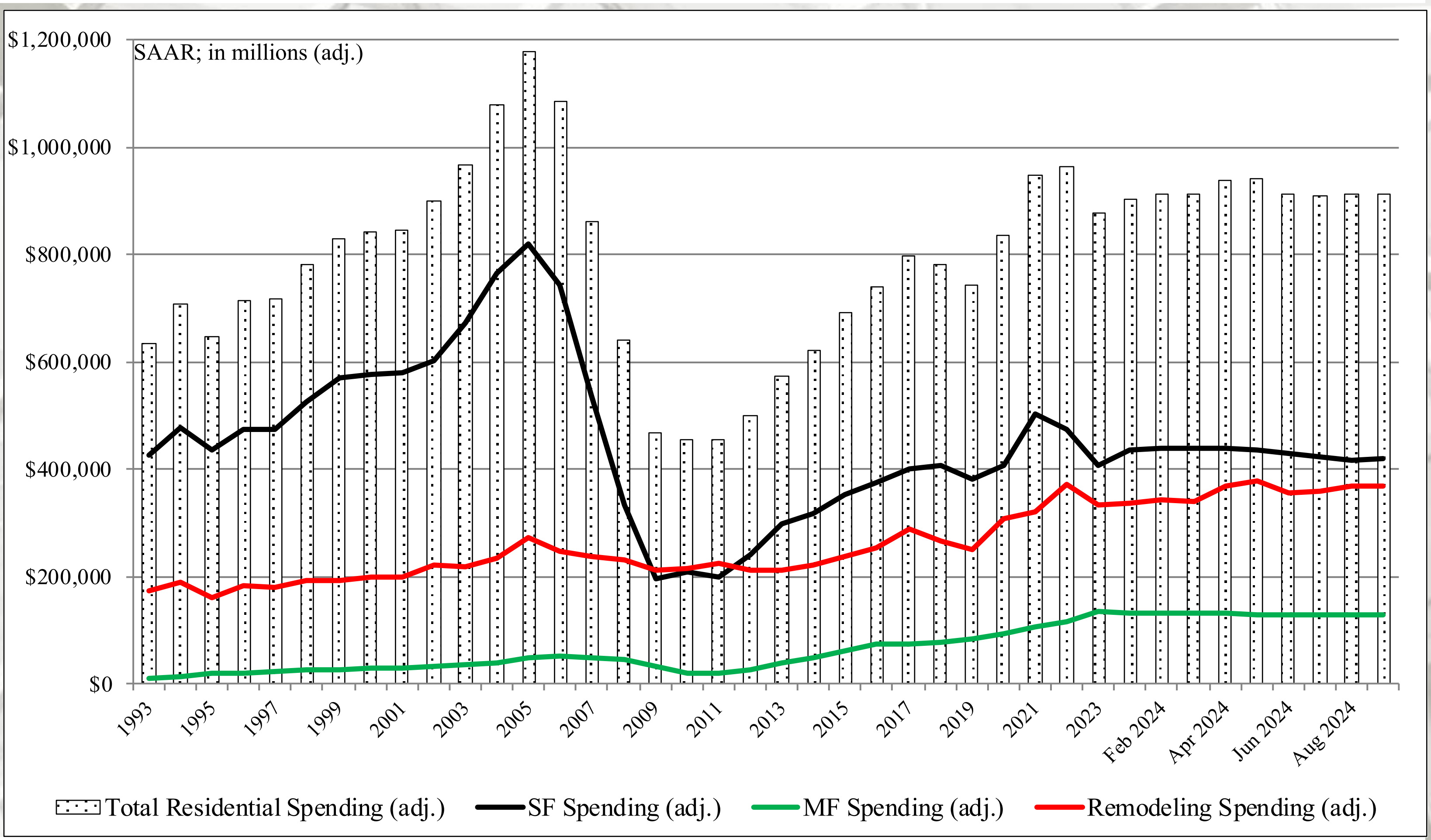
Reported in nominal US$.

The US DOC does not report improvement spending directly, this is a monthly estimation for 2024.

Source: http://www.census.gov/construction/c30/pdf/privsa.pdf; 11/1/24

Return TOC

Total Construction Spending (adjusted): 1993 – September 2024



Reported in adjusted $US: 1993 – 2023 (adjusted for inflation, BEA Table 1.1.9); September 2024 reported in nominal US$.

Sources: * http://www.bea.gov/iTable/iTable.cfm; 11/1/24; http://www.census.gov/construction/c30/pdf/privsa.pdf; 8/1/2024

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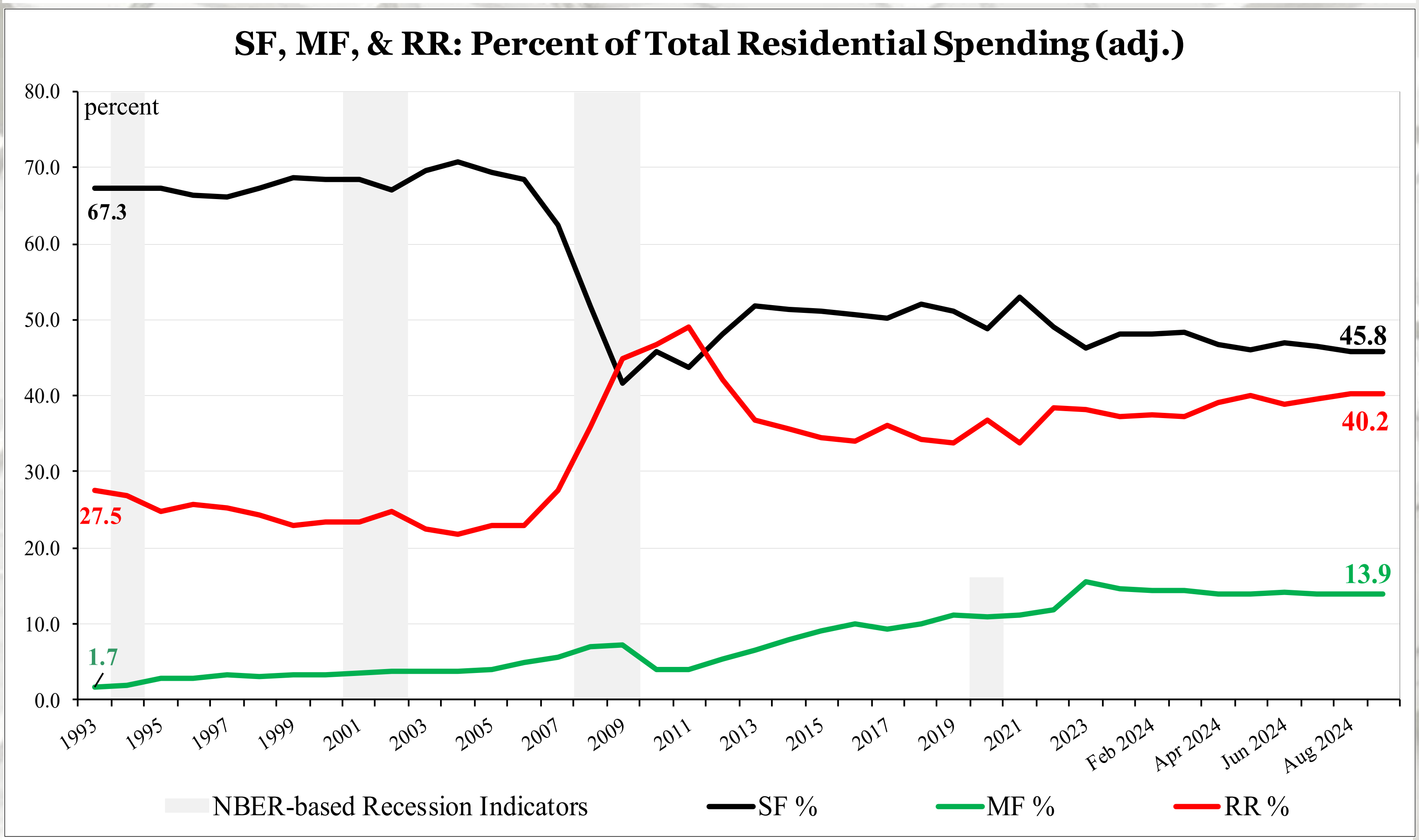
Construction Spending Shares: 1993 – September 2024



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

Sources: *https://fred.stlouisfed.org/series/USREC, 6/21/21; http://www.census.gov/construction/c30/pdf/privsa.pdf; 11/1/24 and http://www.bea.gov/iTable/iTable.cfm; 9/3/24

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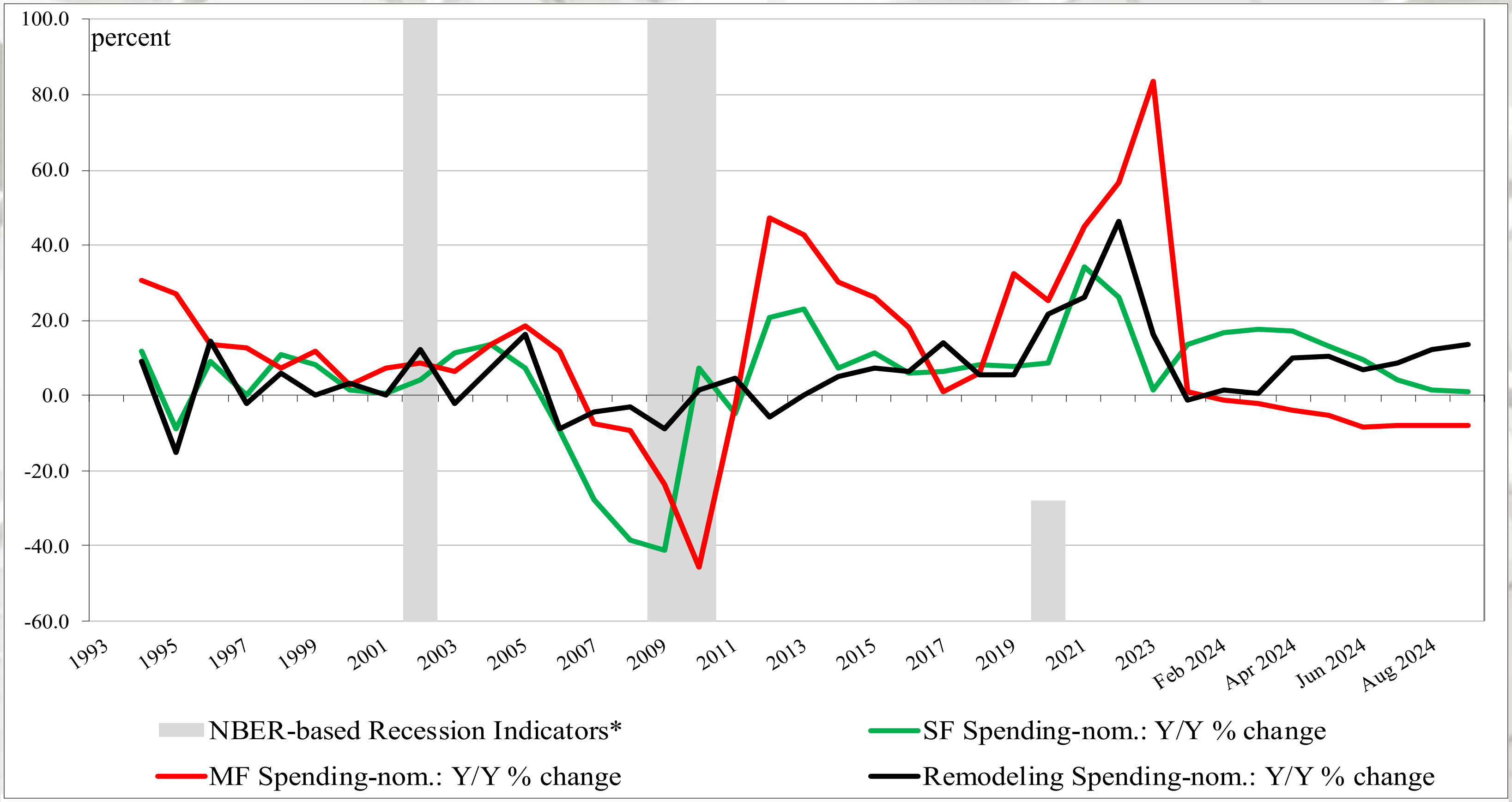
Construction Spending: Y/Y Percentage Change



Nominal Residential Construction Spending:
Y/Y percentage change, 1993 to September 2024

Presented above is the percentage change of Y/Y construction spending. SF and RR expenditures were positive on a percentage basis, year-over-year (September 2024 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, 6/21/21; http://www.census.gov/construction/c30/pdf/privsa.pdf; 11/1/24 and http://www.bea.gov/iTable/iTable.cfm; 9/3/24

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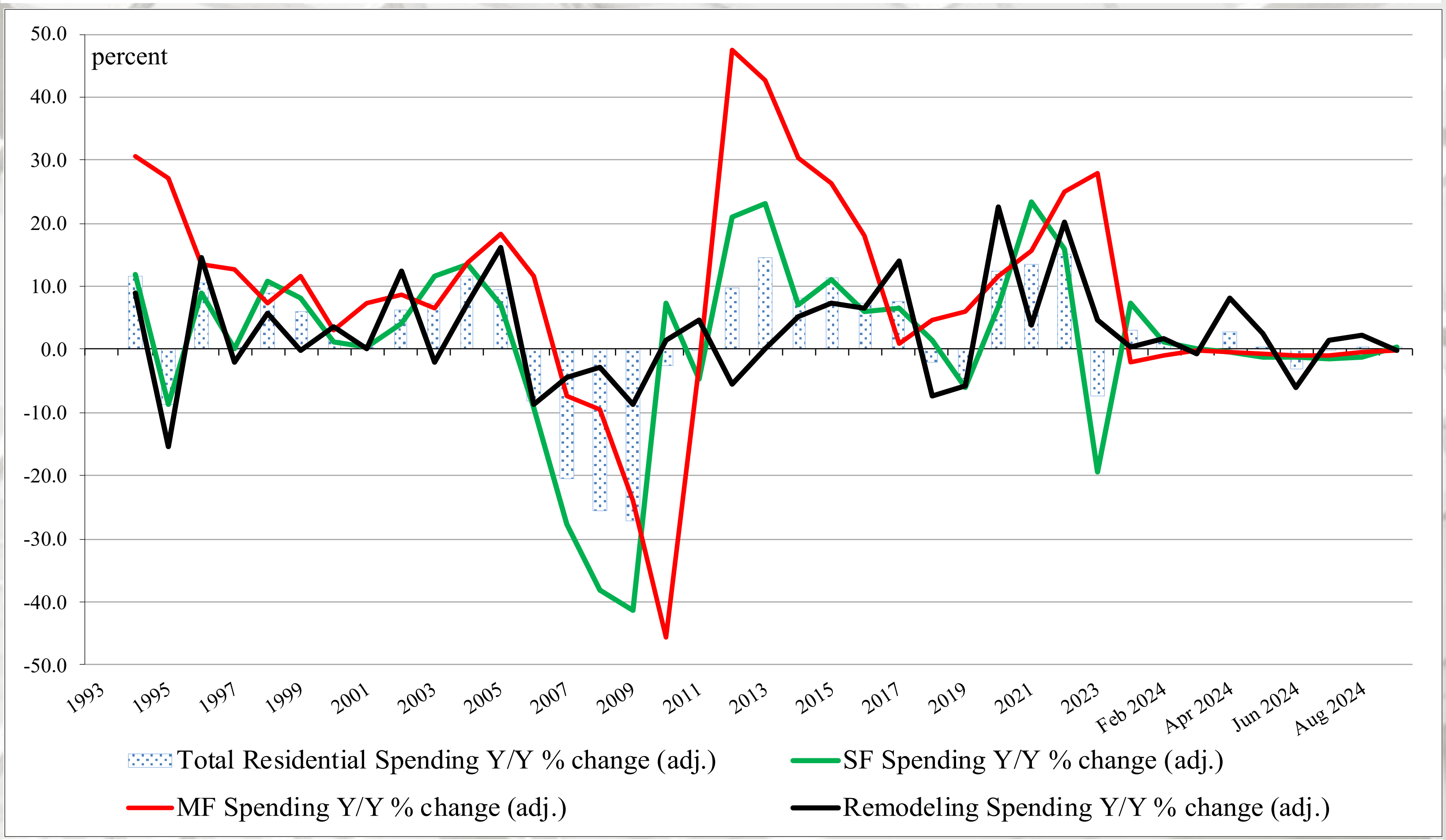
Adjusted Construction Spending, Y/Y Percentage Change: 1993 to September 2024



Adjusted Residential Construction Spending: Y/Y percentage change, 1993 to September 2024

Sources: http://www.census.gov/construction/c30/pdf/privsa.pdf; 11/1/24 and http://www.bea.gov/iTable/iTable.cfm; 9/3/24

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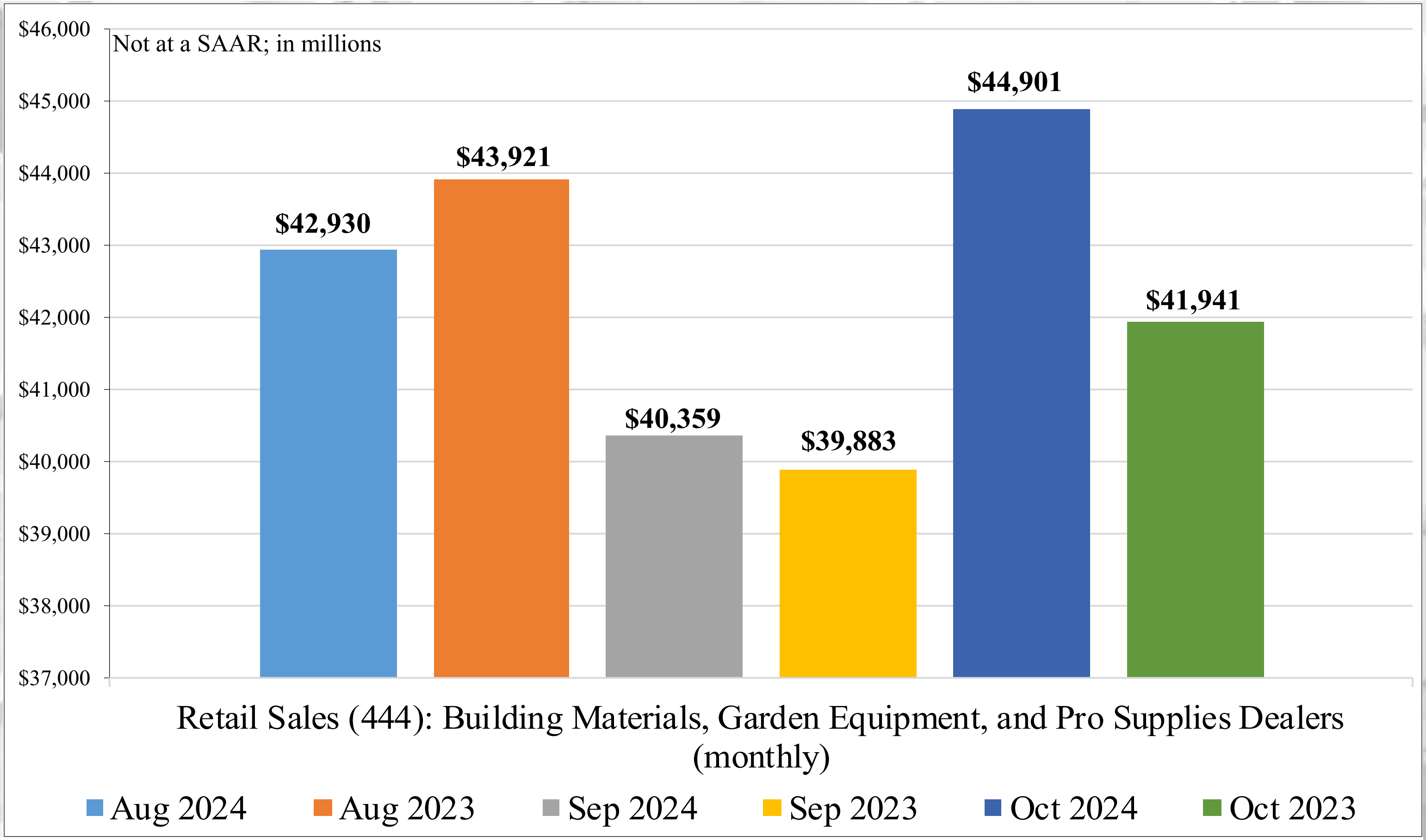
Remodeling

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



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

NAICS 444 sales increased 11.3% in October 2024 from September 2024 and improved 7.1% Y/Y (nominal basis).

Source: https://www.census.gov/retail/index.html; 11/15/24

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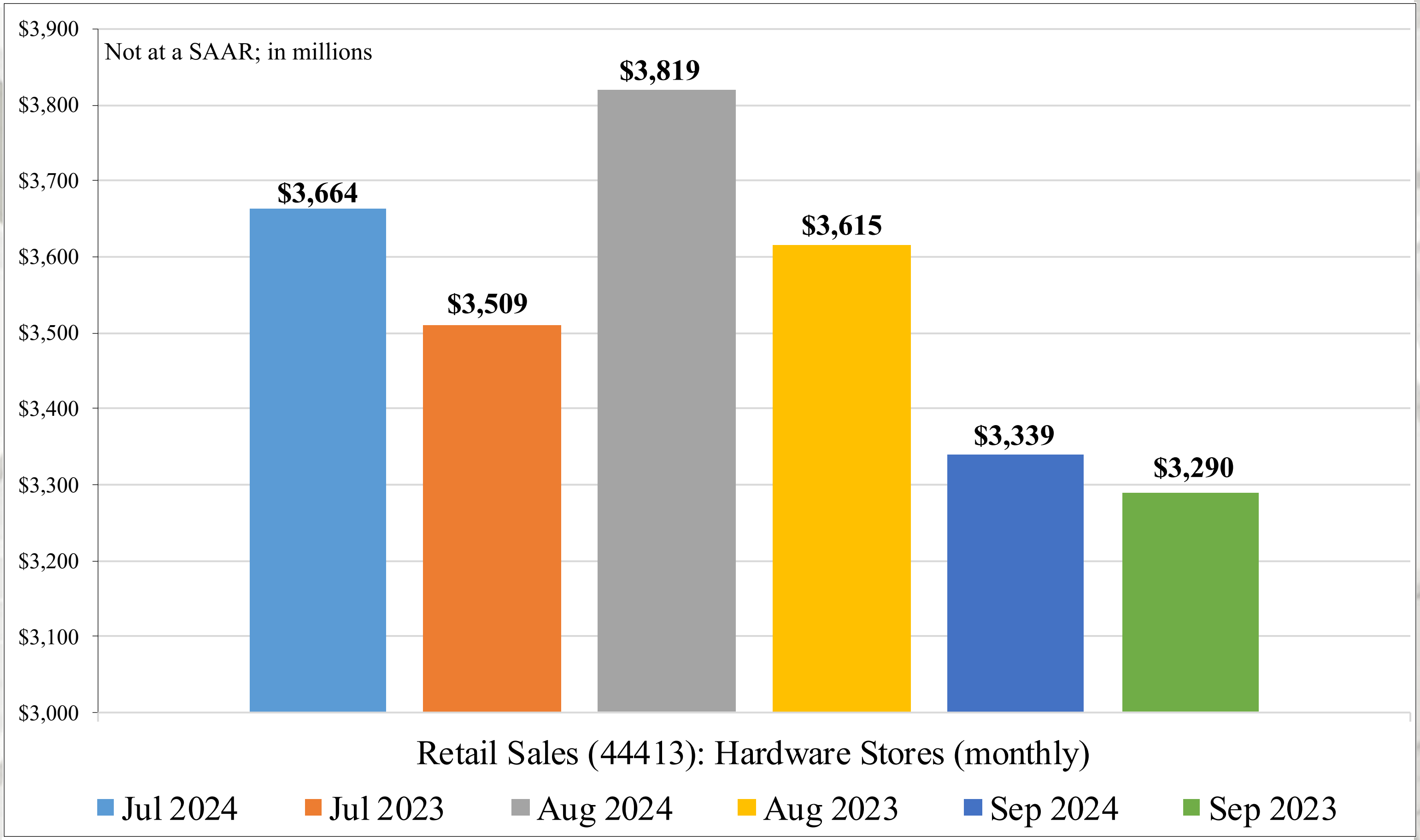
Remodeling

Retail Sales: Hardware Stores



Hardware Stores: NAICS 44413

NAICS 44413 retail sales decreased 12.6% in September 2024 from August 2024 and improved 1.5% Y/Y (nominal basis).

Source: https://www.census.gov/retail/index.html; 11/17/24

Remodeling

John Burns Research and Consulting, LLC

U.S. Remodeler Index: Market Cools Slightly in Q3 of 2024

"Across the United States, professional remodelers' project completions held steady at an increase of one percent YOY growth. The Midwest and Northeast regions posted the strongest remodeling completions growth, increasing by three and two percent respectively. This statistic reflects the YOY change in the number of completed remodeling projects averaged across all remodelers.

Four Key Takeaways from the Q3 U.S.R.I. Report

- The high price of building materials and interest rates drove project deferrals and are key impediments to growth, as identified by professional remodelers.
- Consumers traded down to lower-cost options in categories such as flooring and cabinets in response to affordability challenges. Remodels to accommodate multigenerational live became more common in response to the escalating cost of homeownership.
- Remodelers reported increased activity in the custom mid- to higher-end remodeling segments. Wealthier clients less sensitive to interest rates and costs continue to support the remodeling market.
- Remodelers were optimistic about the future.   Anticipated lower interest rates and a resolution to the causes of consumer uncertainty drove optimism for industry growth." – Qualified Remodeler

Source: https://sola-images.s3.us-west-2.amazonaws.com/wp-content/uploads/2024/10/23122229/QR-Burns-US-Remodeler-Index_Public-1.pdf; 10/23/24

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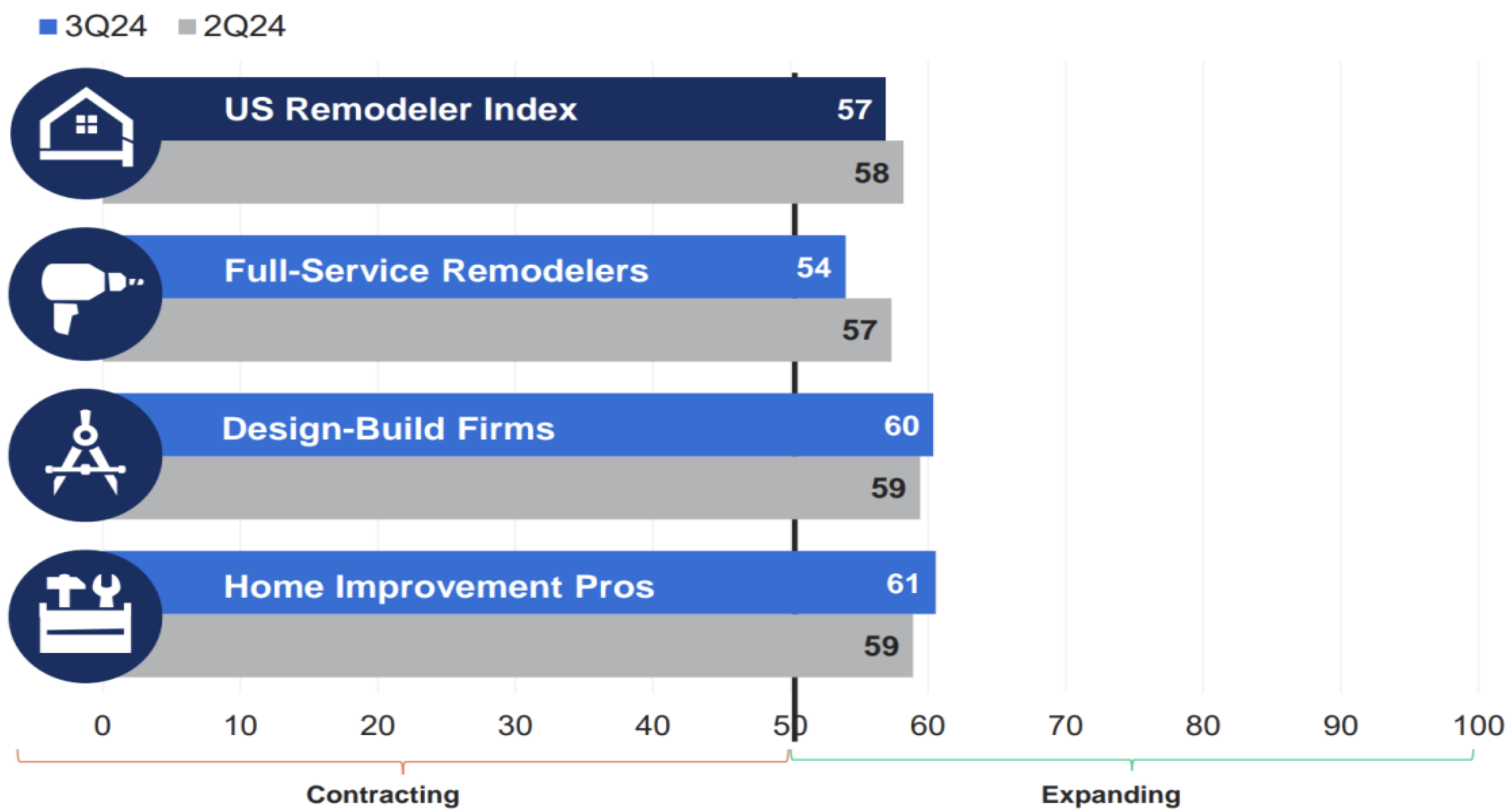
Remodeling

US Remodeler Index (USRI, 3Q24)

The USRI is a composite diffusion index measuring current project growth, consumer demand, and near-term project growth expectations among US professional remodelers.



Source: https://sola-images.s3.us-west-2.amazonaws.com/wp-content/uploads/2024/10/23122229/QR-Burns-US-Remodeler-Index_Public-1.pdf; 10/23/24

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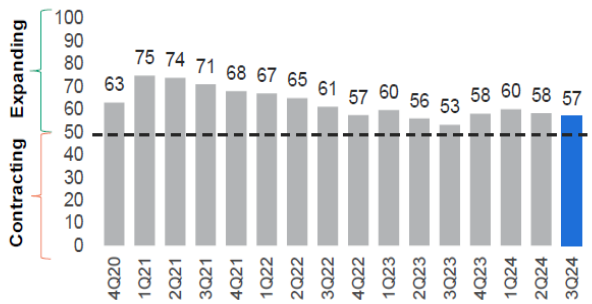
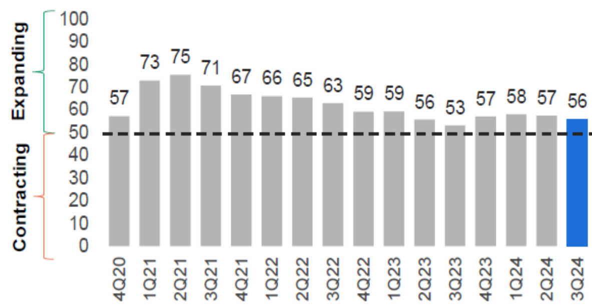
Remodeling

The 3Q24 US Remodeler Index decreased 1 point to 57, compared to 2Q24. High interest rates, cost inflation, and consumer uncertainty drove deferrals and smaller project sizes.

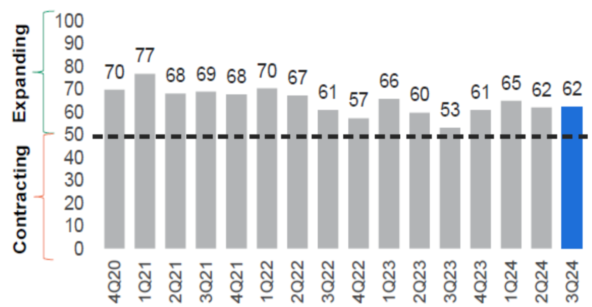
US Remodeler Index



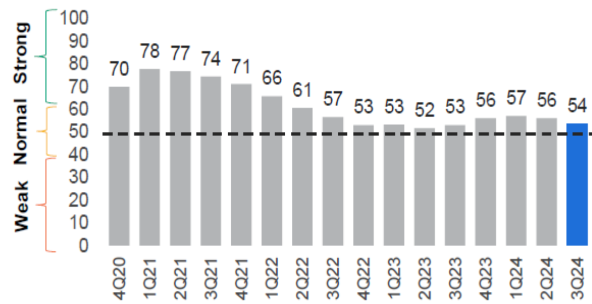
Current Remodeling Activity Gauge



Near-Term Remodeling Activity Gauge (Next 3 Mos.)



Remodeling Demand Meter



Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 3Q24, Pub: Oct-24)

JOHN BURNS RESEARCH & CONSULTING Qualified Remodeler

Source: https://sola-images.s3.us-west-2.amazonaws.com/wp-content/uploads/2024/10/23122229/QR-Burns-US-Remodeler-Index_Public-1.pdf; 10/23/24

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Remodeling

Key 3Q24 professional remodeling takeaways by industry segment

Full-Service Remodelers

- Higher interest rates and project cost inflation reduced project size and scope.
- Flat YOY in 3Q24 project completions (previously **+1%**)
- 42% say project backlogs are smaller than 1 year ago (previously 38%).
- We expect **+0.8%** revenue growth for full-year 2024 (previously **+2.5%**).

Design-Build Firms

- Beneficiary of steady to increased activity in the custom mid to higher-end remodeling sector, less impacted by prices and interest rates.
- **+2% YOY** growth in 3Q24 project completions (previously **+2%**)
- 38% say project backlogs are smaller than 1 year ago (previously 36%).
- We expect **+1.9%** revenue growth for full-year 2024 (previously **+3.2%**).

Home Improvement Pros

- Cautious consumers restrain stronger remodeling growth. Optimistic as resolution to causes of uncertainty (interest rates path and conclusion of the presidential election) is near.
- **+3% YOY** growth in 2Q24 project completions (previously **+2%**)
- 41% say project backlogs are smaller than a year ago (previously 37%).
- We expect **+7.0%** revenue growth for full-year 2024 (previously **+4.1%**).

Note: Full-service remodelers offer a broad range of repair, remodeling, and home improvement services, including kitchen and bath remodeling/trades. Design-build firms offer design and construction remodeling services, primarily whole-home remodels and additions. Home improvement professionals include specialty contractors marketing windows, roofing, siding, decking, bath replacements, etc.

Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 3Q24, Pub: Oct-24)

JOHN BURNS RESEARCH & CONSULTING | Qualified Remodeler

Source: https://sola-images.s3.us-west-2.amazonaws.com/wp-content/uploads/2024/10/23122229/QR-Burns-US-Remodeler-Index_Public-1.pdf; 10/23/24

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Remodeling

4 big professional remodeling takeaways from the latest US Remodeler Index survey

1 High building materials prices and interest rates drive project deferrals.

The holding pattern for large discretionary remodels continues. High building materials prices and cost of financing are key impediments to growth consistently identified by professional remodelers.

2 Households are responding to persistent affordability challenges.

Remodelers noted consumers are trading down to lower-cost options in categories, such as flooring and cabinets, in response to affordability challenges. Remodels to accommodate multigenerational living are becoming more common in response to the escalating cost of homeownership.

3 The remodeling market has shifted to the wealthy.

Remodelers noted increased activity in the custom mid- to higher-end remodeling segments—modernizing and expanding living spaces. Wealthier households, who tend to be less interest rate and cost sensitive, continue to spend in today's economic environment.

4 Remodelers are optimistic about the future.

Lower interest rates on the horizon and a resolution to the causes of consumer uncertainty (such as moving past the presidential election) are driving optimism among Professional remodelers. A widening spread between the USRI current- and near-term conditions components is consistent with this optimistic view of stronger growth in the coming quarters.

Sources: Qualified Remodeler; John Burns Research and Consulting, LLC (Data: 3Q24, Pub: Oct-24)

JOHN BURNS RESEARCH & CONSULTING

Qualified Remodeler

Source: https://sola-images.s3.us-west-2.amazonaws.com/wp-content/uploads/2024/10/23122229/QR-Burns-US-Remodeler-Index_Public-1.pdf; 10/23/24

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Existing House Sales

National Association of Realtors®

	Existing Sales	Median Price	Month's Supply
September	3,840,000	$404,500	4.3
August	3,880,000	$414,200	4.2
2023	3,980,000	$392,800	3.4
M/M change	-1.0%	-2.3%	2.4%
Y/Y change	-3.5%	3.0%	26.5%

All sales data: SAAR

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 10/23/24

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Existing House Sales

	NE	MW	S	W
September	460,000	900,000	1,720,000	760,000
August	480,000	920,000	1,750,000	730,000
2023	490,000	950,000	1,820,000	720,000
M/M change	-4.2%	-2.2%	-1.7%	4.1%
Y/Y change	-6.1%	-5.3%	-5.5%	5.6%

	Existing SF Sales	SF Median Price
September	3,470,000	$404,500
August	3,490,000	$414,200
2023	3,550,000	$397,400
M/M change	-0.6%	-2.3%
Y/Y change	-2.3%	1.8%

All sales data: SAAR.

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 10/23/24

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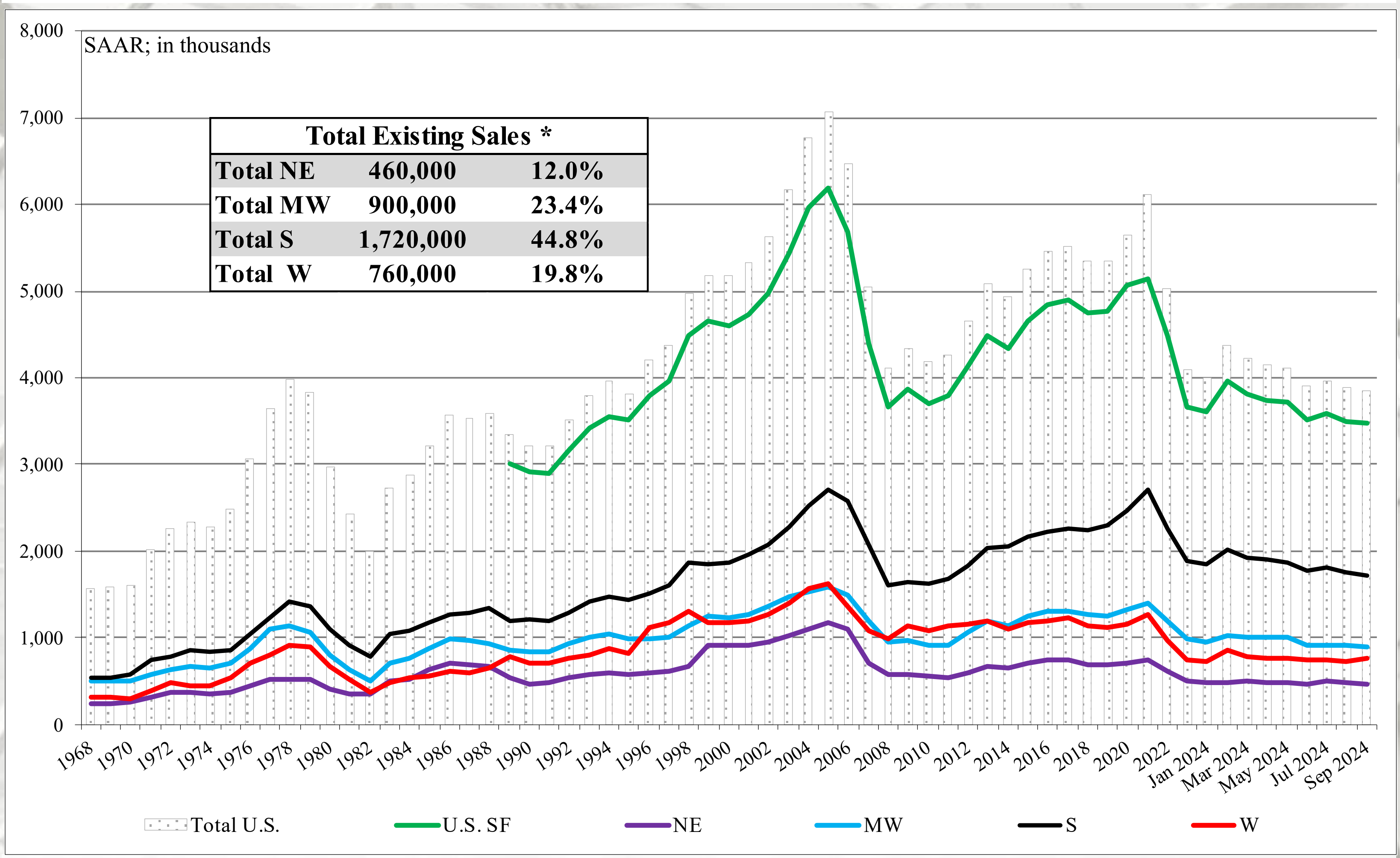
Existing House Sales



Total Existing Sales *		
Total NE	460,000	12.0%
Total MW	900,000	23.4%
Total S	1,720,000	44.8%
Total W	760,000	19.8%

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

Source: https://fred.stlouisfed.org/series/EXHOSLUSM495S; 10/23/24

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U.S. Housing Prices

Federal Housing Finance Agency

U.S. House Price Index

FHFA House Price Index Up 0.3 Percent in August; Up 4.2 Percent from Last Year

Significant Findings

"U.S. house prices rose **0.3 percent** in August, according to the Federal Housing Finance Agency (FHFA) seasonally adjusted monthly House Price Index (HPI®). House prices rose **4.2 percent** from August 2023 to August 2024. The previously reported 0.1 percent price increase in July was revised upward to 0.2 percent.

For the nine census divisions, seasonally adjusted monthly price changes from July 2024 to August 2024 ranged from -0.1 percent in the East North Central and New England divisions to **+0.9 percent** in the West North Central division. The 12-month changes were all positive, ranging from **+2.4 percent** in the West South-Central division to **+6.3 percent** in the East North Central division." – Adam Russell, FHFA

"House price appreciation in the United States remained modest for the sixth consecutive month. The slow but continued house price growth and the effect of locked-in interest rates led to persistent housing affordability challenges." – Dr. Anju Vajja, Deputy Director Division of Research and Statistics, FHFA

Source: https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx; 10/29/24

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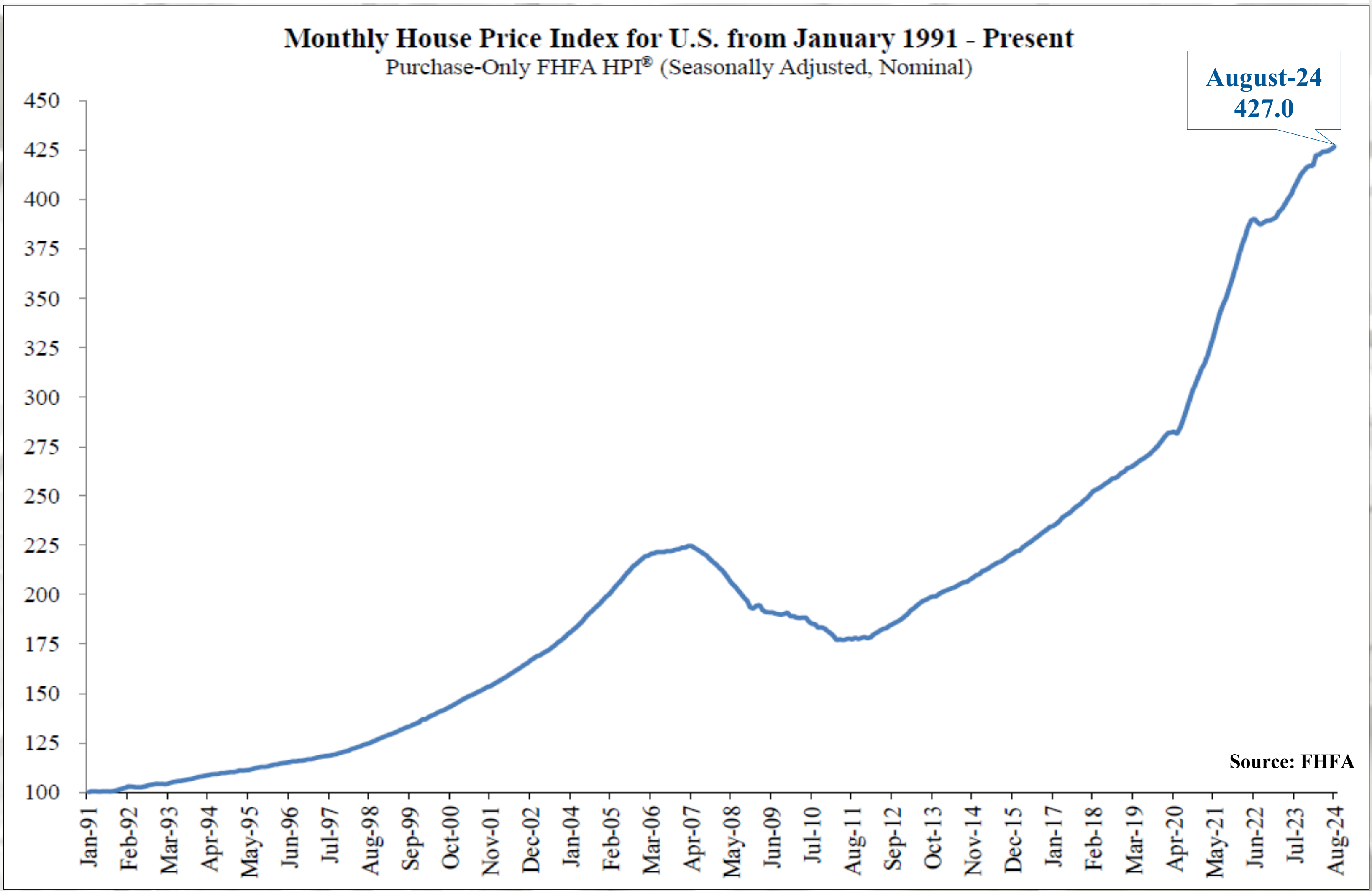
U.S. Housing Prices



Source: https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index.aspx; 10/29/24

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U.S. Housing Prices

S&P CoreLogic Case-Shiller Index Records 4.2% Annual Gain in August 2024

"S&P Dow Jones Indices (S&P DJI) released the August 2024 results for the S&P CoreLogic Case-Shiller Indices. The leading measure of U.S. home prices recorded a 4.2% annual gain in August 2024, a slight decrease from previous levels in 2024. More than 27 years of history are available for the data series and can be accessed in full by going to www.spglobal.com/spdji/en/index-family/indicators/sp-corelogic-case-shiller.

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 4.2% annual return for August, down from a 4.8% annual gain in the previous month. The 10-City Composite saw an annual increase of 6.0%, down from a 6.8% annual increase in the previous month. The 20-City Composite posted a year-over-year increase of 5.2%, dropping from a 5.9% increase in the previous month. New York again reported the highest annual gain among the 20 cities with an 8.1% increase in August, followed by Las Vegas and Chicago with annual increases of 7.3% and 7.2%, respectively. Denver posted the smallest year-over-year growth of 0.7%. .

Month-Over-Month

The pre-seasonally adjusted U.S. National Index, 20-City Composite, and 10-City Composite upward trends reversed in August, with a -0.1% drop for the national index, and the 20-City and 10-City Composites saw -0.3% and -0.4% returns for this month, respectively.

After seasonal adjustment, the U.S. National Index posted a month-over-month increase of 0.3%, while the 20-City and 10-City Composite reported a monthly rise of 0.4% and 0.3%, respectively." – Brian D. Luke, Head of Commodities, Real & Digital Assets, S&P DJI

Source: https://www.spglobal.com/spdji/en/index-announcements/article/sp-corelogic-case-shiller-index-records-42-annual-gain-in-august-2024; 10/29/24

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U.S. Housing Prices

S&P CoreLogic Case-Shiller Index

Analysis

"Home price growth is beginning to show signs of strain, recording the slowest annual gain since mortgage rates peaked in 2023. As students went back to school, home price shoppers appeared less willing to push the index higher than in the summer months. Prices continue to decelerate for the past six months, pushing appreciation rates below their long-run average of 4.8%. After smoothing for seasonality in the data, home prices continued to reach all-time highs, for the 15th month in a row.

Regionally, all markets continue to remain positive, barely. Denver posted the slowest annual gain of all markets this year, dropping below Portland for the first time since the spring. The Northeast remains the best performing region, with the strongest gains for over a year. Currently, only New York, Las Vegas, and Chicago markets are at an all-time high. Comparing average gains of traditional red and blue states highlight a slight advantage for home price markets of blue states. With stronger gains in the Northeast and West than the South, blue states have outperformed red states dating back to July 2023." – Brian D. Luke, Head of Commodities, Real & Digital Assets, S&P DJI

Source: https://www.spglobal.com/spdji/en/index-announcements/article/sp-corelogic-case-shiller-index-records-42-annual-gain-in-august-2024; 10/29/24

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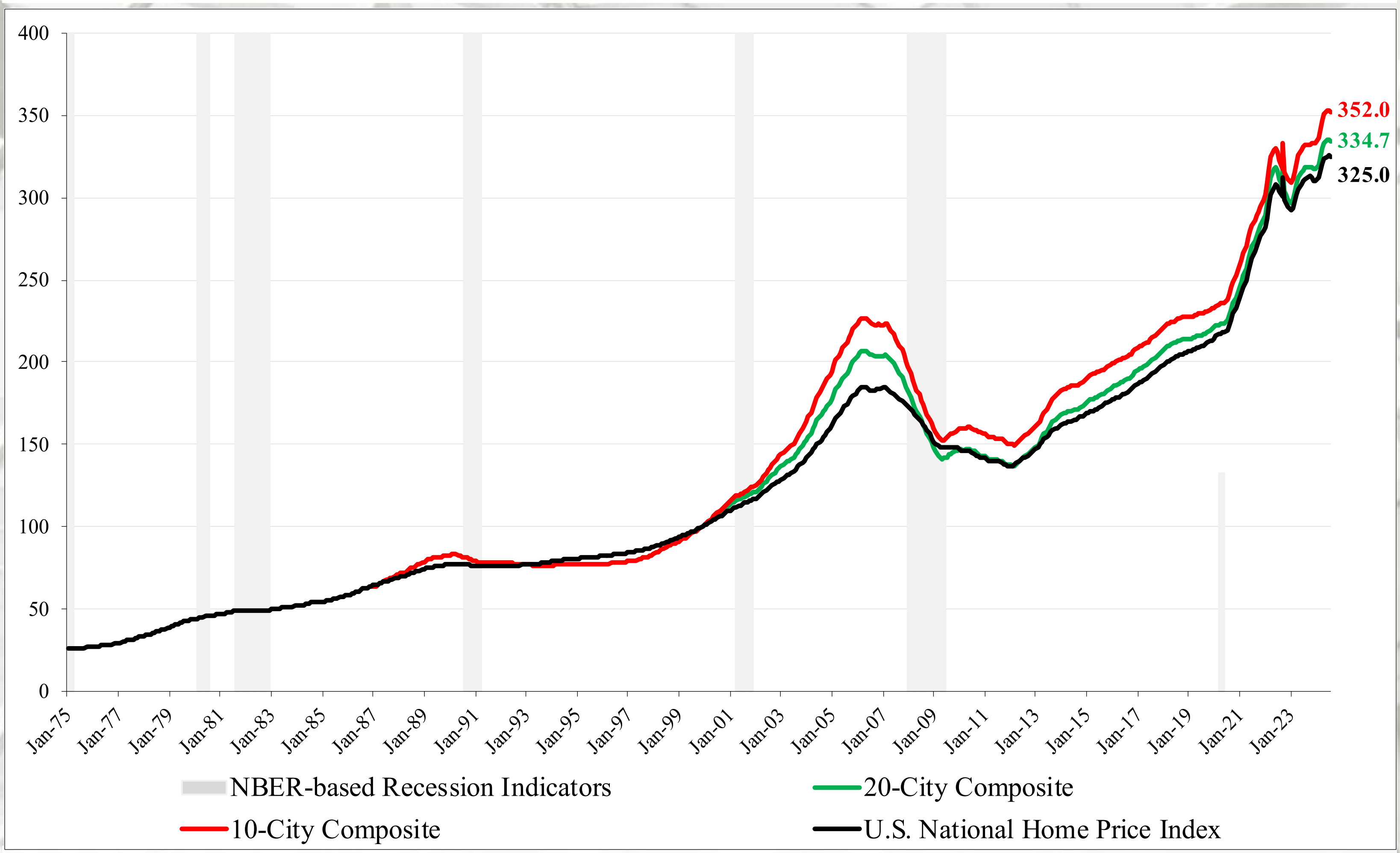
S&P/Case-Shiller Home Price Indices



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

Source: https://www.spglobal.com/spdji/en/index-announcements/article/sp-corelogic-case-shiller-index-records-42-annual-gain-in-august-2024; 10/29/24

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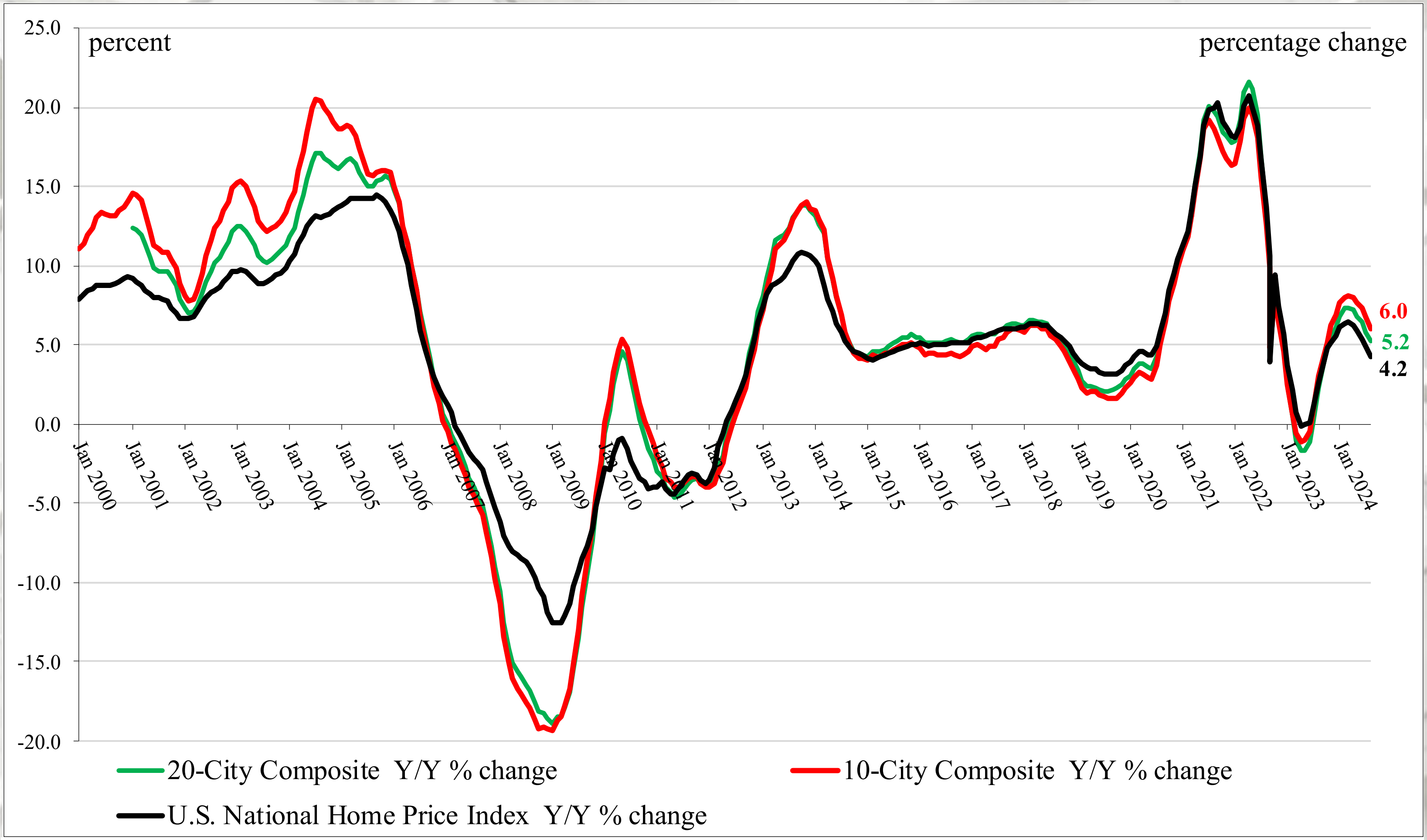
S&P/Case-Shiller Home Price Indices



Y/Y Price Change

From August 2023 to August 2024, the National Index indicated a 4.2% increase; the Ten-City increased by 6.0%, and the Twenty-City escalated by 5.2%.

Source: https://www.spglobal.com/spdji/en/index-announcements/article/sp-corelogic-case-shiller-index-records-42-annual-gain-in-august-2024; 10/29/24

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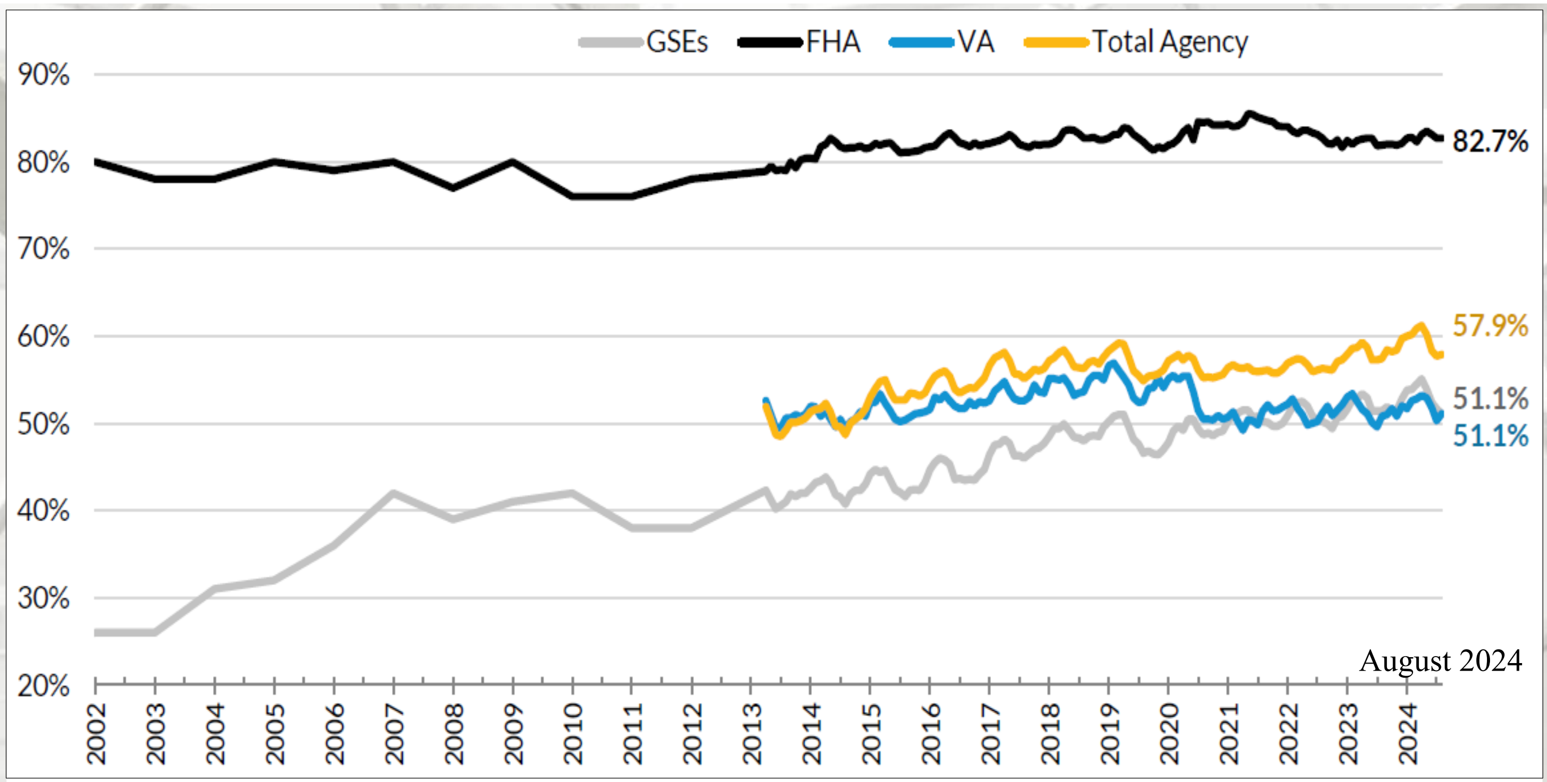
U.S. First-Time House Buyers



Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute.
Note: All series measure the first-time home buyer share of purchase loans for principal residences.

Urban Institute

First-time House Buyer Share

"In August 2024, the first-time home buyer (FTHB) share for FHA, which has always been more focused on first time home buyers, was 82.7 percent. The FTHB share of GSE lending in August was 51.1 percent, equal to the VA share. …" – Laurie Goodman *et. al*, Vice President, Urban Institute

Source: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-october-2024/; 10/30/24

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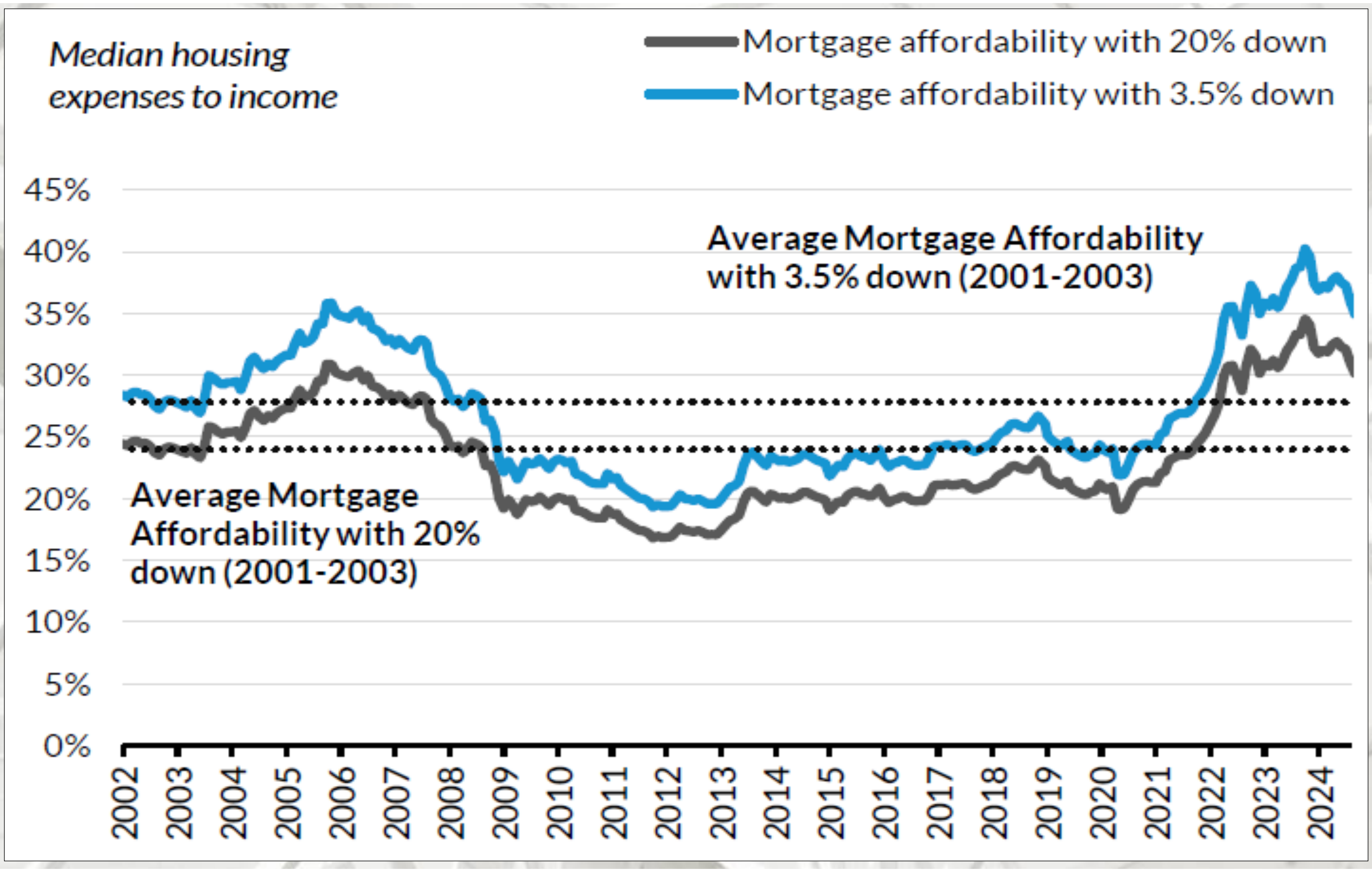
U.S. Housing Affordability



Urban Institute

National Mortgage Affordability Over Time

"Mortgage affordability has improved as rates moderated but remains close to the worst level since the inception of this series in 2002. As of September 2024, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 30.1 percent, just under the 30.9 percent at the peak of the housing bubble in November 2005; and with 3.5 percent down the housing cost burden is 35.0 percent, also below the 35.8 percent prior peak in November 2005. …" – Laurie Goodman *et. al*, Vice President, Urban Institute

Source: https://www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-october-2024/; 10/30/24

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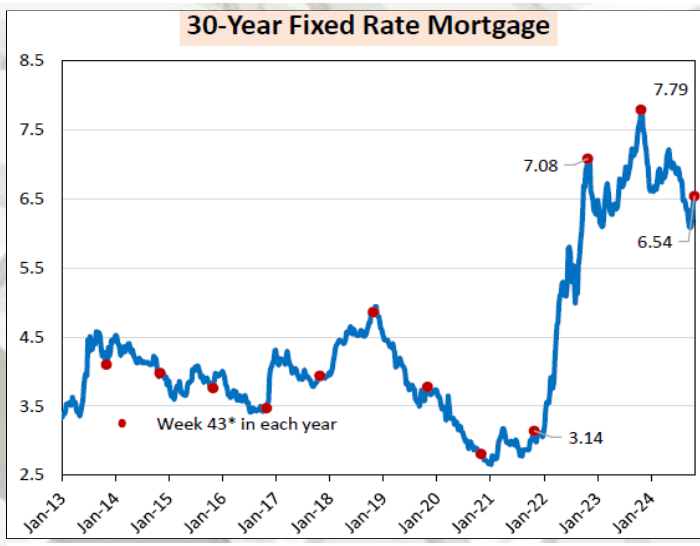
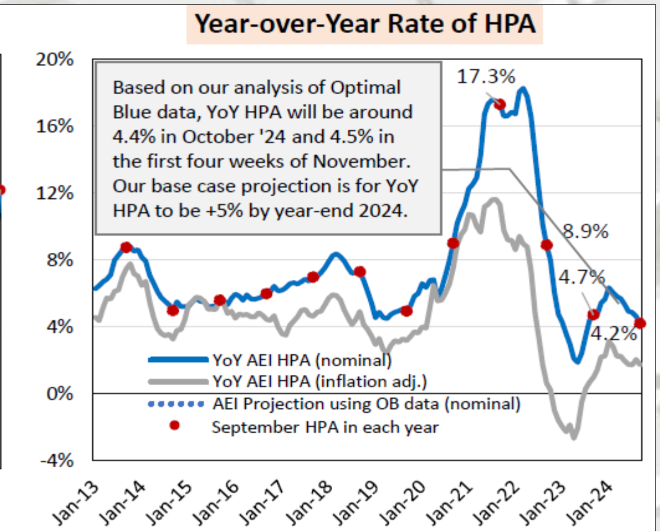
U.S. Housing Affordability





Note: Data are for 30-year fixed rate prime conventional conforming. 2024 data are preliminary.
Home purchase mortgages with a loan to value of 80 percent.
* Week 43 2024 refers to the week ending October 24th.
Source: Freddie Mac.

Note: Data are for the entire country; September

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

AEI Housing Center

Year over Year (YoY) HPA in September 2024 Remains Robust at 4.2%

"September 2024's preliminary YoY HPA was 4.2%, down from 4.6% a month ago and 4.7% a year ago.

- September 2024's MoM HPA was -0.4%. As our projection on the following slide indicates, YoY HPA is expected to be around 5% by Dec. 2024.
- YoY HPA has remained robust, especially for low-price tier homes, but has tapered down slightly due to relatively high rates.
- A strong sellers' market continues, with well-qualified buyers competing for a limited supply of homes.
- YoY HPA is projected to increase slightly to around 4.5% in October and the first four weeks of November.
- Constant-quality HPA controls for mix shifts in home quality, which otherwise may skew MoM or YoY changes." – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

Source: https://www.aei.org/research-products/report/aei-housing-market-indicators-october-2024/; 10/29/24

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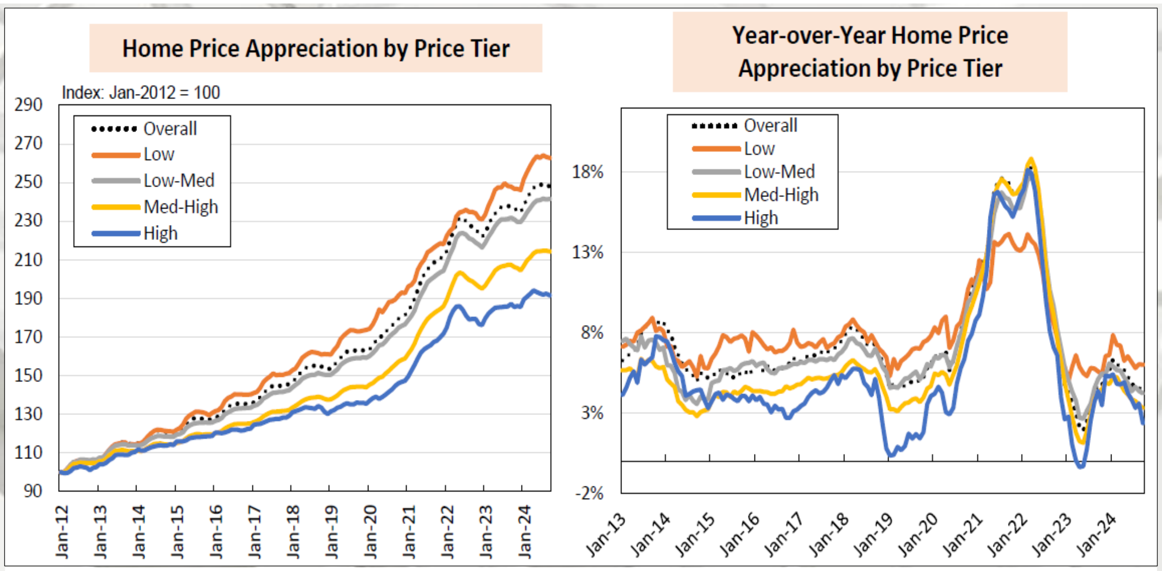
Home Price Appreciation by Price Tier



Note: Data are for the entire country. Data for September 2024 are preliminary .
Source: AEI Housing Center, www.AEI.org/housing

AEI Housing Center

"Since 2012, a large and widening gap in HPA has developed between the lower and upper end of the market (left panel).

- Preliminary numbers for September 2024 indicate that the low price tier leads the YoY change in tier home prices at 6.0% due to low months' supply (2.6 months), low unemployment, and increasing demand promoted by agency credit easing (right panel).
- The med high and high price tiers are generally not eligible for federal first time buyer assistance, leaving them more dependent on the Fed's monetary punchbowl. As a result, they had the largest slowdowns in YoY HPA since March 2022.
- As of September 2024 , all price tiers have shown relatively robust YoY HPA from the slowest at 2.4% and 3.3% high and med high, respectively) to the highest of 6.0% (low)." – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing Center

Source: https://www.aei.org/research-products/report/aei-housing-market-indicators-october-2024/; 10/29/24

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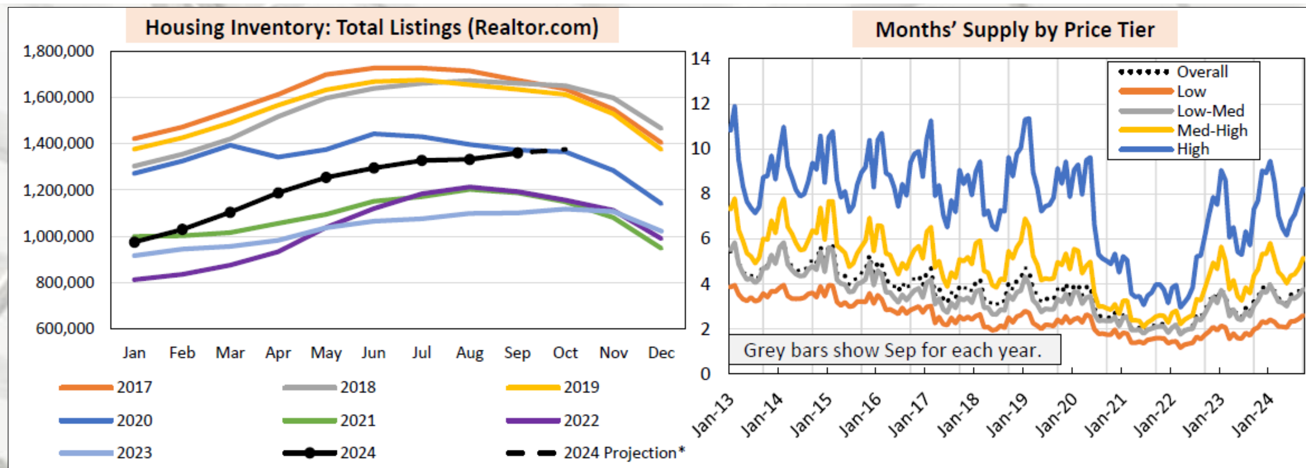
Housing Inventory and Months' Supply



* Projected total listings are based on average Altos weekly listings through the week ending October 25, 2024.
Source: Realtor.com, Zillow, and AEI Housing Center, www.AEI.org/housing

AEI Housing Center

"Months' remaining supply was 3.7 months (not seasonally-adjusted) in September 2024. Housing was at pre-pandemic levels (the average for September 2017, 2018, and 2019 was 3.3).

- The strong seller's market continued, as months' remaining supply was 4.0 months (not seasonally adjusted) in September 2024. Housing inventory remains at near pre pandemic levels (the average for September 2017, 2018, and 2019 was 3.9).
- In a break from the typical downward seasonal trend, September's 2024 housing inventory was up 2.1% from August 2024. Although inventory was up 24 % from September 2023, it is still 17% below September 2019 , the "last normal" pre pandemic September reading (left panel).
- The projection for October suggests that inventory is expected to increase by 1.4% over the prior month, continuing the recent break with the traditional seasonal trend.*
- Months' supply stood at 4.0 months in September 2024 , up from 3.7 months in August 2024 , and up from 3.2 months a year ago (right panel). YoY HPA was 4.2% in September 2024 compared to 5.0% in September 2019, indicative of a continuing strong seller's market. Relatively tight inventory helps explain the robust YoY HPA.
- Based on an analysis of historical data, a 6 8 months' supply represents a national market that is at a nominal price equilibrium or neutral point and would need to increase to 8 9 months to trigger a national YoY decline in home price appreciation." – Edward Pinto, Senior Fellow and Director and Tobias Peter, Research Fellow and Assistant Director, AEI Housing

Source: https://www.aei.org/research-products/report/aei-housing-market-indicators-october-2024/; 10/29/24

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U.S. Housing Finance

Mortgage Bankers Association

Mortgage Application Payments Decreased 0.8 Percent to $2,041 in September

"Home buyer affordability improved in September, with the national median payment applied for by purchase applicants decreasing to $2,041 from $2,057 in August. This is according to the Mortgage Bankers Association's (MBA) Purchase Applications Payment Index (PAPI), which measures how new monthly mortgage payments vary across time – relative to income – using data from MBA's Weekly Applications Survey (WAS).

Home buyer affordability conditions improved for the fifth consecutive month, as mortgage rates near the low 6 percent range improved purchasing power for prospective buyers. Overall affordability is now at its highest level since August 2022, but the recent jump in rates will likely cause conditions to plateau. MBA is forecasting for rates to be around 6.3 by the end of the year.

The national PAPI index indicates that new home affordability improved in September. Interest rates decreased by 31 bps from August. This is the fifth consecutive decline in rates, down 100 bps from April. The median purchase application amount increased from $320,100 to $328,000. Taken together, we had a decrease in PAPI. It is at the lowest level since August 2022. The decrease in PAPI was felt in all but ten states.

An increase in MBA's PAPI – indicative of declining borrower affordability conditions – means that the mortgage payment to income ratio (PIR) is higher due to increasing application loan amounts, rising mortgage rates, or a decrease in earnings. A decrease in the PAPI – indicative of improving borrower affordability conditions – occurs when loan application amounts decrease, mortgage rates decrease, or earnings increase." – Edward Seiler, Ph.D, Associate Vice President of Economics; MBA and Executive Director, Research Institute for Housing America

Source: https://www.mba.org/news-and-research/newsroom/news/2024/10/31/mortgage-application-payments-decreased-3.9-percent-to-2-057-in-august; 10/31/24

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U.S. Housing Finance

Mortgage Bankers Association

Mortgage Application Payments Decreased 0.8 Percent to $2,041 in September

“The national PAPI (Figure 1) decreased 0.8 percent to 157.9 in September from 159.2 in August. Median earnings were up 4.2 percent compared to one year ago, and while payments decreased 5.3 percent, the moderate earnings growth means that the PAPI is down 9.1 percent on an annual basis. For borrowers applying for lower-payment mortgages (the 25th percentile), the national mortgage payment decreased to $1,369 in September from $1,388 in August.

The Builders’ Purchase Application Payment Index (BPAPI) showed that the median mortgage payment for purchase mortgages from MBA’s Builder Application Survey decreased to $2,333 in September from $2,362 in August.

Additional Key Findings of MBA's Purchase Applications Payment Index (PAPI) – September 2024

- The national median mortgage payment was $2,041 in September – down $16 from August. It is down by $114 from one year ago, equal to a 5.3% decrease.
- The national median mortgage payment for FHA loan applicants was $1,753 in September, down from $1,817 in August and down from $1,920 in September 2023.
- The national median mortgage payment for conventional loan applicants was $2,053, down from $2,056 in August and down from $2,180 in September 2023.
- The top five states with the highest PAPI were: Idaho (238.4), Nevada (236.7), Arizona (210.3), Florida (202.5), and Rhode Island (197.5).” – Edward Seiler, Ph.D, Associate Vice President of Economics; MBA and Executive Director, Research Institute for Housing America

Source: https://www.mba.org/news-and-research/newsroom/news/2024/10/31/mortgage-application-payments-decreased-3.9-percent-to-2-057-in-august; 10/31/24

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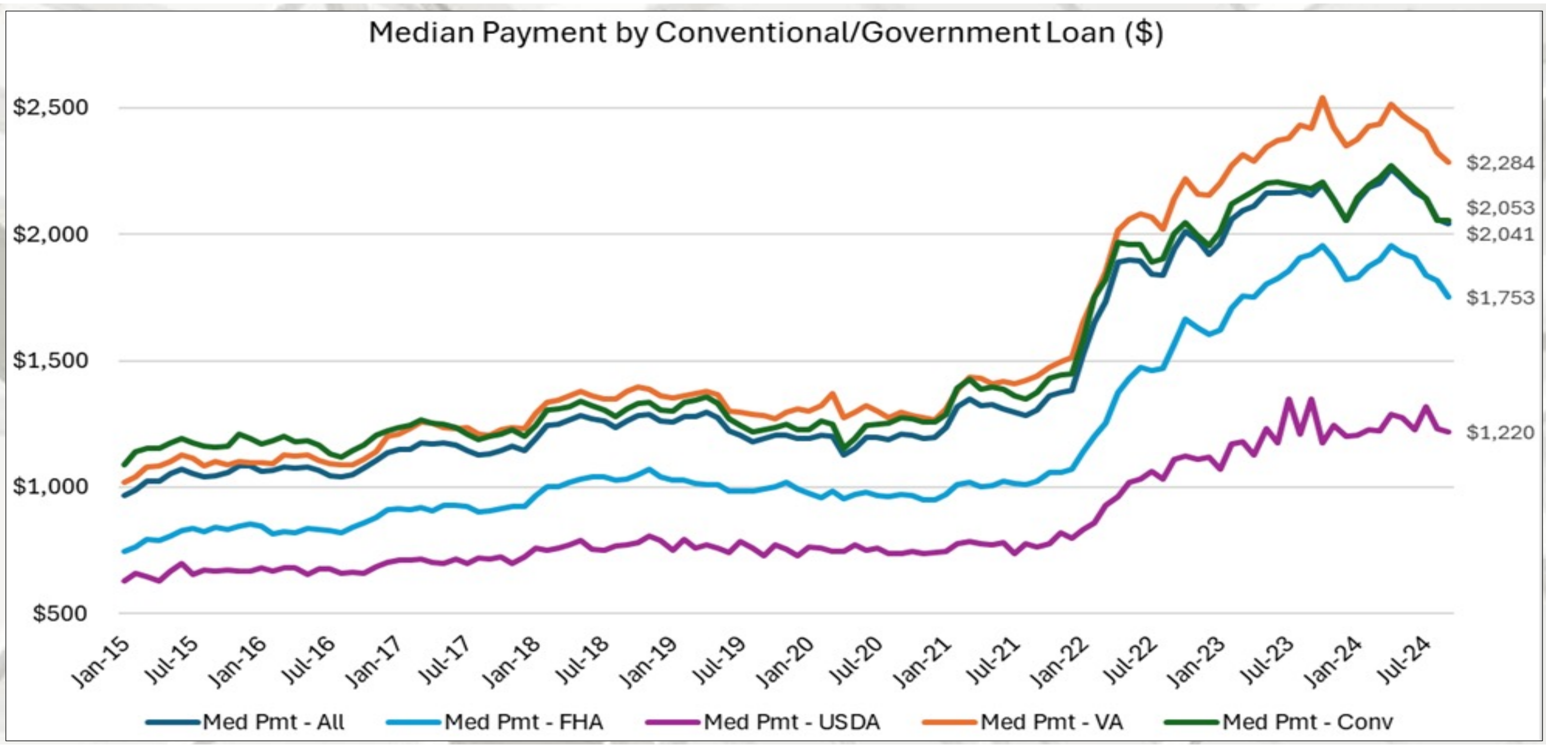
U.S. Housing Finance



Mortgage Bankers Association

"**Additional Key Findings of MBA's PAPI – September 2024**

- The top five states with the lowest PAPI were: Louisiana (109.6), Connecticut (115.7), New York (119.0), West Virginia (121.0), and Alaska (124.8).
- Home buyer affordability increased for Black households, with the national PAPI decreasing from 159.2 in August to 157.9 in September.
- Home buyer affordability increased for Hispanic households, with the national PAPI decreasing from 151.2 in August to 150.1 in September.
- Home buyer affordability increased for White households, with the national PAPI decreasing from 161.5 in August to 160.2 in September." – Edward Seiler, Ph.D, Associate Vice President of Economics; MBA and Executive Director, Research Institute for Housing America

Source: https://www.mba.org/news-and-research/newsroom/news/2024/10/31/mortgage-application-payments-decreased-3.9-percent-to-2-057-in-august; 10/31/24

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U.S. Housing Finance

Mortgage Bankers Association

Mortgage Credit Availability Increased in October

"Mortgage credit availability increased in October according to the Mortgage Credit Availability Index (MCAI), a report from the Mortgage Bankers Association (MBA) that analyzes data from ICE Mortgage Technology.

The MCAI rose by 0.7 percent to 99.2 in October. 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 1.0 percent, while the Government MCAI increased by 0.4 percent. Of the component indices of the Conventional MCAI, the Jumbo MCAI increased by 1.2 percent, and the Conforming MCAI rose by 0.9 percent.

Mortgage credit availability increased to its highest level since April 2023, driven by gains across all loan categories. However, despite the across-the-board increases, overall credit supply remains tight, with the index still near the very low levels of 2011-2013. Notably, while credit availability was higher over the month, it was for a specific segment of borrowers. Credit supply improved in loan programs for cash-out refinances and those that require lower-LTV and higher credit scores. Additionally, there was greater availability of jumbo loan programs, which pushed the jumbo index up over the month." " – Joel Kan, Associate Vice President of Economic and Industry Forecasting; MBA

Source: https://www.mba.org/news-and-research/newsroom/news/2024/11/15/mortgage-credit-availability-increased-in-october; 11/15/24

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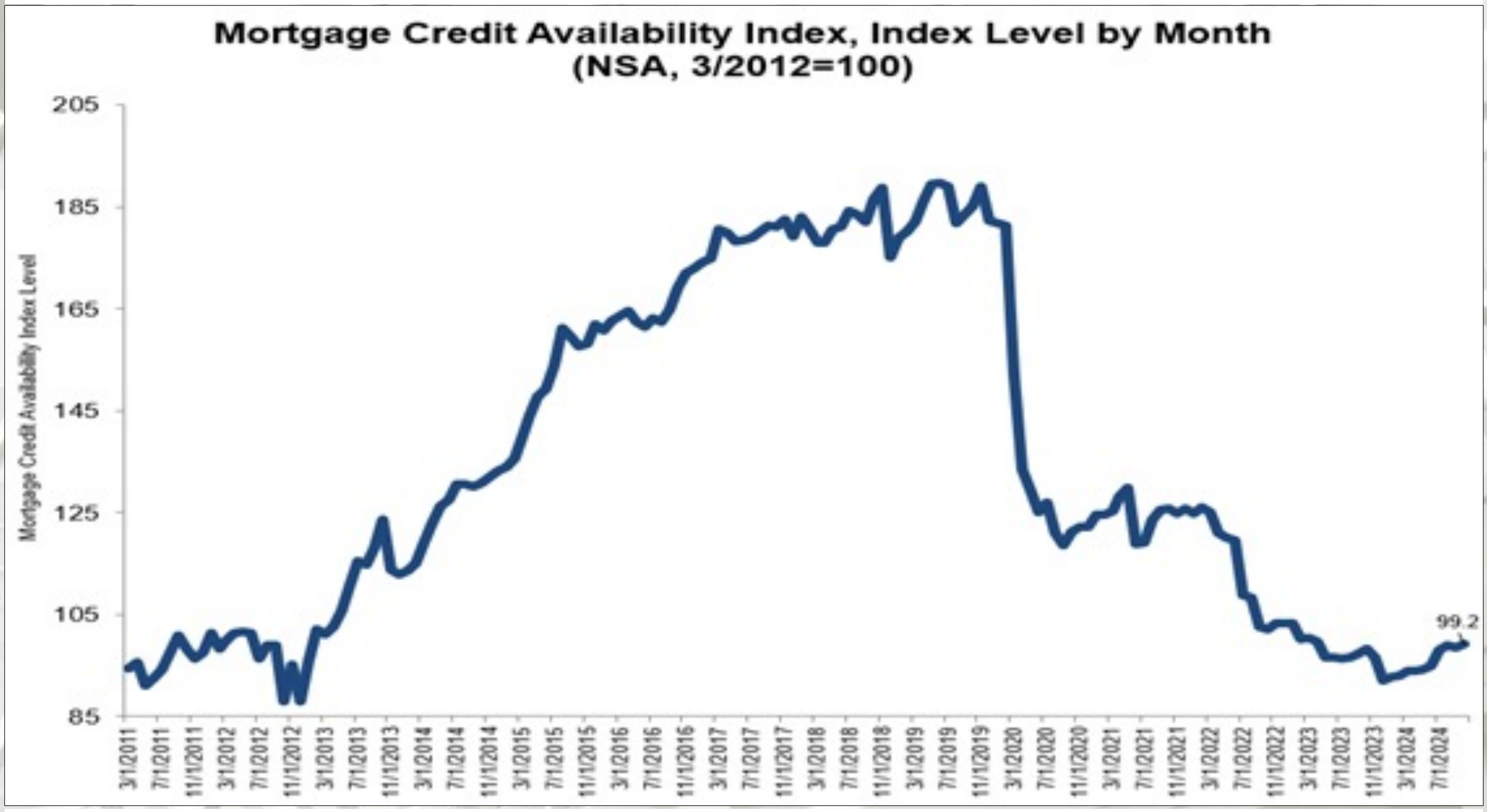
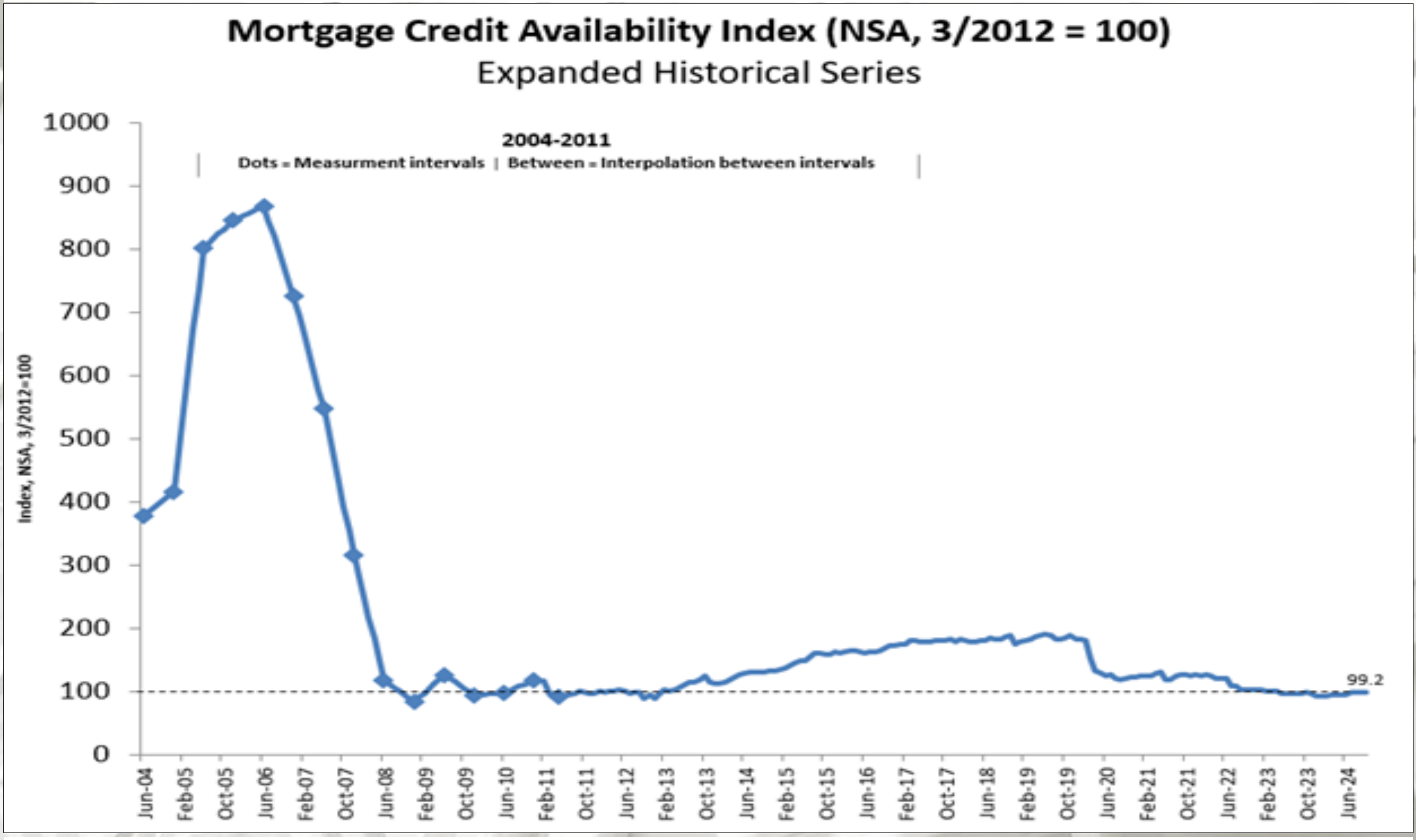
U.S. Housing Finance
Mortgage Credit Availability (MBA)



Source: *Mortgage Bankers Association; Powered by ICE Mortgage Technology*

Source: https://www.mba.org/news-and-research/newsroom/news/2024/11/15/mortgage-credit-availability-increased-in-october; 11/15/24

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



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

Source: https://www.mba.org/news-and-research/newsroom/news/2024/11/15/mortgage-credit-availability-increased-in-october; 11/15/24

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MBA Mortgage Finance Forecast

MBA Mortgage Finance Forecast

October 27, 2024

	2024				2025				2026								
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025	2026	2027
Housing Measures																	
Housing Starts (SAAR, Thous)	1,407	1,340	1,326	1,351	1,367	1,398	1,413	1,432	1,441	1,442	1,436	1,417	1,421	1,356	1,402	1,434	1,452
Single-Family	1,062	1,004	963	1,008	1,024	1,061	1,094	1,124	1,136	1,142	1,126	1,112	949	1,009	1,076	1,129	1,142
Two or More	345	336	363	343	343	337	319	308	305	300	310	305	473	347	327	305	310
Home Sales (SAAR, Thous)																	
Total Existing Homes	4,200	4,047	3,893	4,049	4,140	4,214	4,378	4,520	4,547	4,585	4,593	4,606	4,119	4,047	4,313	4,583	4,729
New Homes	663	656	724	758	770	778	785	790	797	810	810	813	666	700	781	807	849
FHFA US House Price Index (YOY % Change)	6.6	6.0	4.8	3.8	2.9	2.2	1.8	1.6	1.5	1.5	1.6	1.7	6.4	3.8	1.6	1.7	2.4
Median Price of Total Existing Homes (Thous $)	385.3	416.9	413.4	404.0	409.4	415.1	413.1	407.0	412.5	417.4	416.7	412.9	388.1	404.9	411.1	414.9	415.8
Median Price of New Homes (Thous $)	429.2	414.4	421.5	420.0	425.8	431.8	427.7	418.8	426.2	432.3	427.0	428.9	427.4	421.3	426.0	428.6	432.4
Interest Rates																	
30-Year Fixed Rate Mortgage (%)	6.7	7.0	6.5	6.3	6.2	6.0	5.9	5.9	5.9	5.9	5.9	5.9	7.3	6.3	5.9	5.9	6.0
10-Year Treasury Yield (%)	4.2	4.4	3.9	4.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.4	4.0	3.9	3.9	4.0
Mortgage Originations																	
Total 1- to 4-Family (Bil $)	377	429	479	506	513	581	611	596	580	654	626	578	1,458	1,791	2,301	2,438	2,496
Purchase	291	336	357	304	308	379	393	376	364	442	432	394	1,239	1,288	1,456	1,632	1,698
Refinance	86	93	122	202	205	202	218	220	216	212	194	184	219	503	845	806	798
Refinance Share (%)	23	22	25	40	40	35	36	37	37	32	31	32	15	28	37	33	32
FHA Originations (Bil $)													178	206	223	236	223
Total 1- to 4-Family (000s loans)	1,076	1,203	1,343	1,467	1,477	1,639	1,720	1,679	1,629	1,804	1,712	1,578	4,213	5,090	6,516	6,723	6,733
Purchase	773	880	924	779	784	960	990	945	911	1,102	1,073	974	3,412	3,356	3,679	4,059	4,145
Refinance	303	323	419	688	693	679	730	734	718	702	640	604	800	1,734	2,836	2,664	2,587
Refinance Share (%)	28	27	31	47	47	41	42	44	44	39	37	38	19	34	44	40	38
Mortgage Debt Outstanding																	
1- to 4-Family (Bil $)	13,990	14,094	14,178	14,268	14,363	14,468	14,571	14,665	14,753	14,853	14,949	15,035	13,952	14,268	14,665	15,035	15,418

Notes:

As of the August 2024 forecast, 2023 origination volume was revised based on the 2023 Home Mortgage Disclosure Act data.

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

Mortgage rate forecast is based on Freddie Mac's 30-Yr fixed rate which is based on predominantly home purchase transactions.

The 10-Year Treasury Yield and 30-Yr mortgage rate are the average for the quarter, but annual columns show Q4 values.

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

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Source: https://www.mba.org/news-and-research/forecasts-and-commentary/; 10/27/24

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MBA Economic Forecast

MBA Economic Forecast

October 27, 2024

	2024				2025				2026								
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2023	2024	2025	2026	2027
Percent Change, SAAR																	
Real Gross Domestic Product	1.6	3.0	2.8	1.8	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.5	3.2	2.3	1.2	1.4	2.0
Personal Consumption Expenditures	1.9	2.8	3.2	2.4	1.4	1.5	1.1	1.2	1.2	1.4	1.5	1.6	3.0	2.6	1.3	1.4	2.1
Business Fixed Investment	4.5	3.9	5.5	2.5	1.9	1.2	0.7	0.3	0.8	0.5	0.8	0.7	5.0	4.1	1.0	0.7	1.4
Residential Investment	13.7	-2.8	-5.3	-4.1	-1.1	2.3	5.9	6.3	2.6	1.3	0.5	-0.2	2.5	0.1	3.3	1.1	2.2
Govt. Consumption & Investment	1.8	3.1	1.3	1.2	0.4	0.3	0.2	0.2	0.1	0.1	0.0	0.0	4.3	1.8	0.3	0.1	-0.1
Net Exports (Bil. Chain 2012$)	-1092.5	-1150.6	-1156.7	-1170.1	-1186.2	-1199.6	-1207.2	-1205.3	-1182.3	-1164.7	-1148.4	-1129.2	-1046.5	-1142.5	-1199.6	-1156.1	-1092.3
Inventory Investment (Bil. Chain 2012$)	15.7	63.5	57.4	57.4	67.8	68.3	73.6	76.9	76.3	76.5	75.5	74.1	29.3	48.5	71.7	75.6	75.1
Consumer Prices (YOY)	3.2	3.2	2.6	2.3	2.2	2.2	2.2	2.0	2.0	2.1	2.1	1.9	3.2	2.3	2.0	1.9	2.3
Percent																	
Unemployment Rate	3.8	4.0	4.2	4.2	4.3	4.4	4.6	4.7	4.7	4.7	4.6	4.6	3.6	4.0	4.5	4.7	4.4
Federal Funds Rate	5.375	5.375	4.875	4.375	4.125	3.875	3.625	3.375	3.375	3.375	3.375	3.375	5.375	4.375	3.375	3.375	3.875
10-Year Treasury Yield	4.2	4.4	3.9	4.0	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.4	4.0	3.9	3.9	3.9

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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Source: https://www.mba.org/news-and-research/forecasts-and-commentary/; 10/27/24

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Summary

In conclusion:

Housing data, in aggregate, month-over-month were negative and year-over-year, were slightly positive. On a month-over-month basis single-family starts; new house sales; and total and single-family spending were positive. Year-over-year, single-family starts; housing completions; construction spending, and new house sales were positive. Existing house sales continued their decline (at a more sluggish rate than after the Great Recession). The influence of mortgage rates is evident, as aggregate costs have decreased affordability, and the "lock-in" effect have obfuscated sales.

Pros:

1) The desire to own a house remains positive.

Cons:

1) Mortgage interest rates and affordability;
2) Inflation;
3) The war in Ukraine and the Israel-Palestinian conflict, and other international concerns;
4) Lot availability and building regulations (according to several sources);
5) Labor shortages in many sectors;
6) Household formations still lag historical averages;
7) Job creation is improving and consistent, but some economists question the quantity and types of jobs being created;
8) Increasing debt: Corporate, personal, government – United States and globally;
9) Other global uncertainties.

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