



Welcome



HFA Happenings



HFA Happenings

Cris White

*Executive Director
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Development Authority*

Washington Update

Stockton Williams
Executive Director,
NCSHA



Economist Update

Elliot Eisenberg Ph.D.,
Chief Economist,
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THE US ECONOMY: REMARKABLY RESILIENT, SO FAR

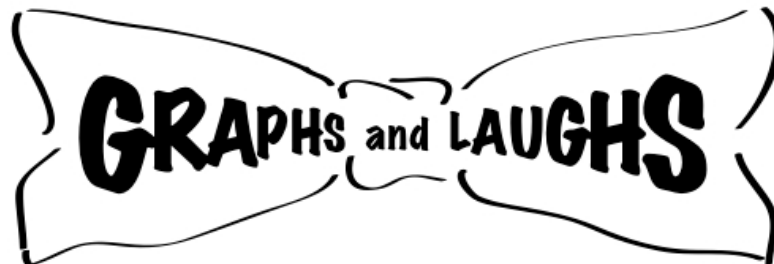
Presented by:

Elliot F. Eisenberg, Ph.D.

President: GraphsandLaughs, LLC

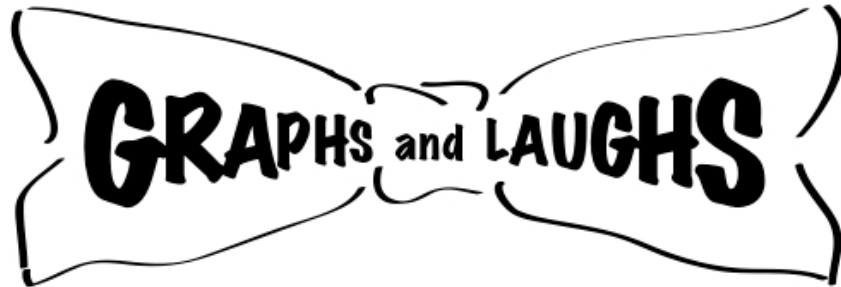
Colorado Springs, CO

May 7, 2024



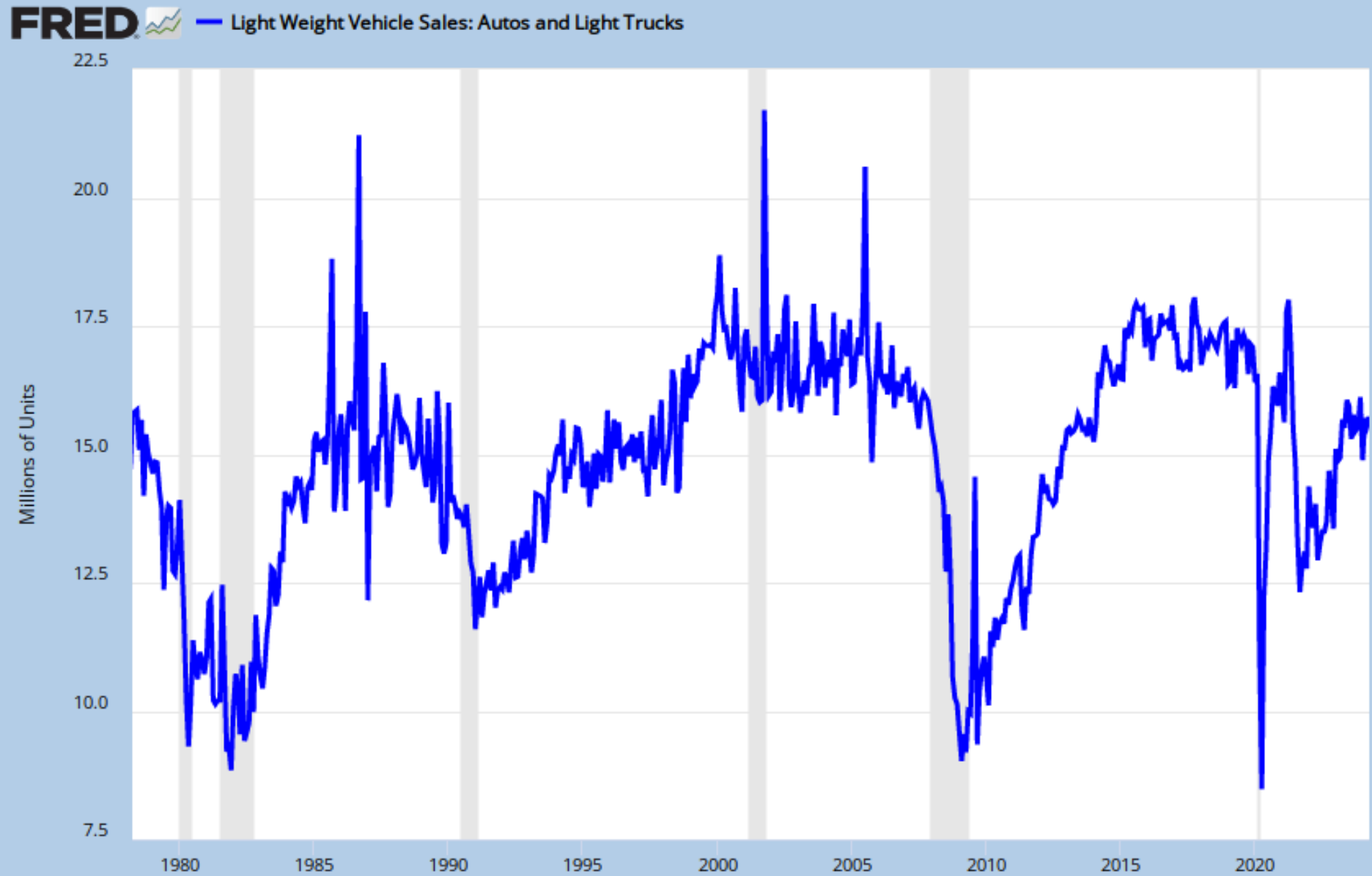
The Economy Surprises

$$\text{GDP} = C + I + G + (X - M)$$



US Light Vehicle Sales

Chip shortages are not a problem. But rates...

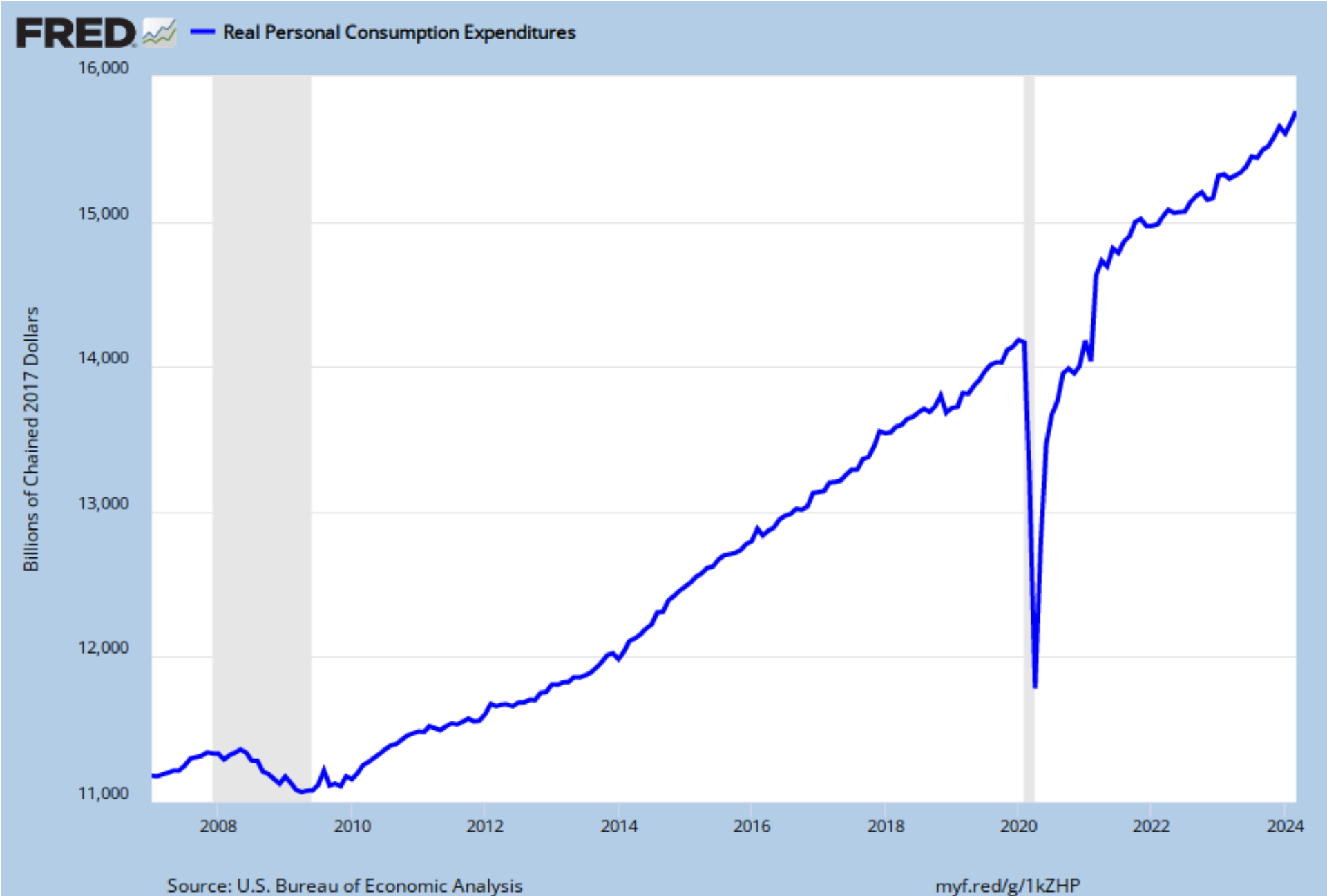


Source: U.S. Bureau of Economic Analysis

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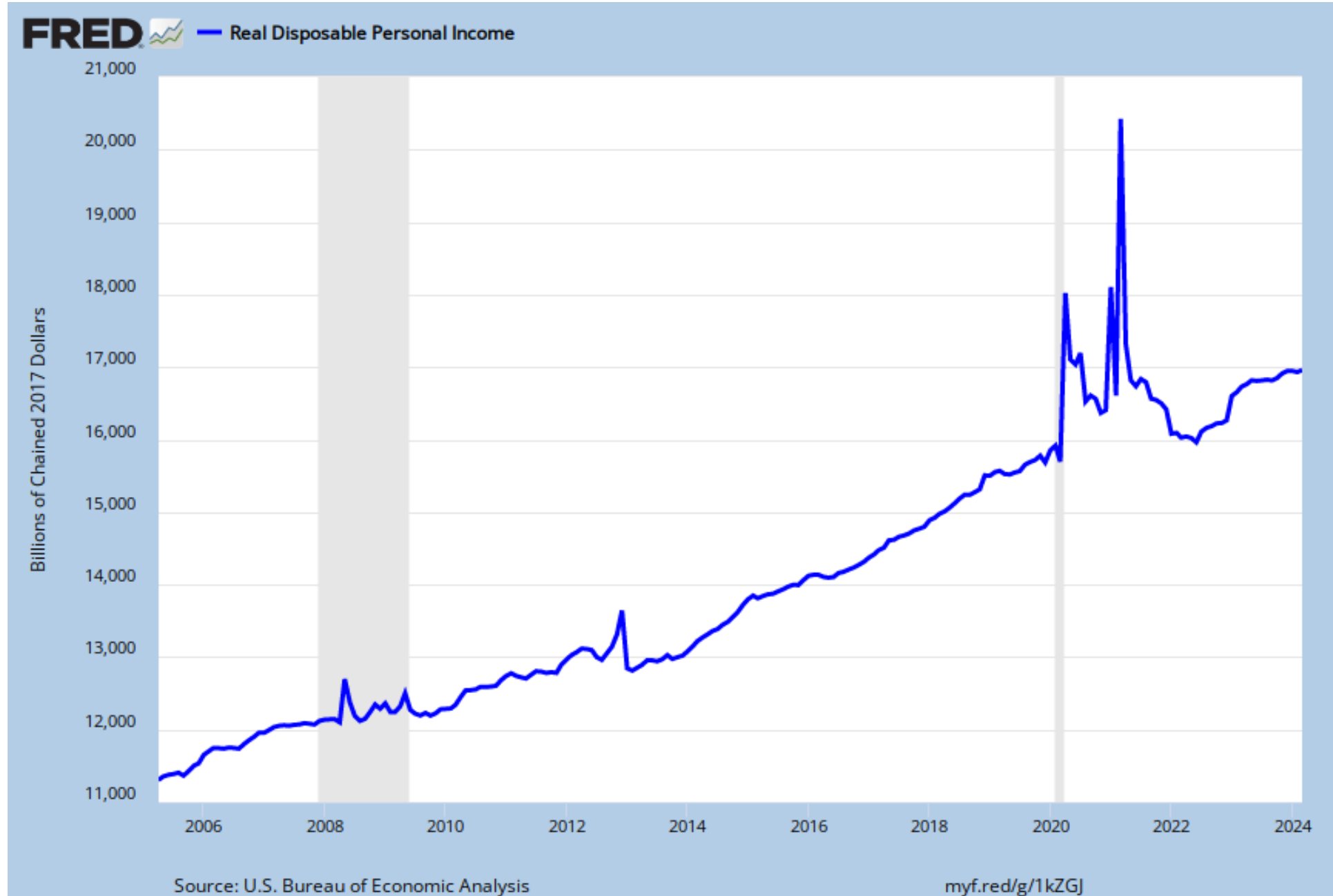
Real Personal Consumption Expenditures

It remains on trend, keeping the economy growing, and frustrating the Fed



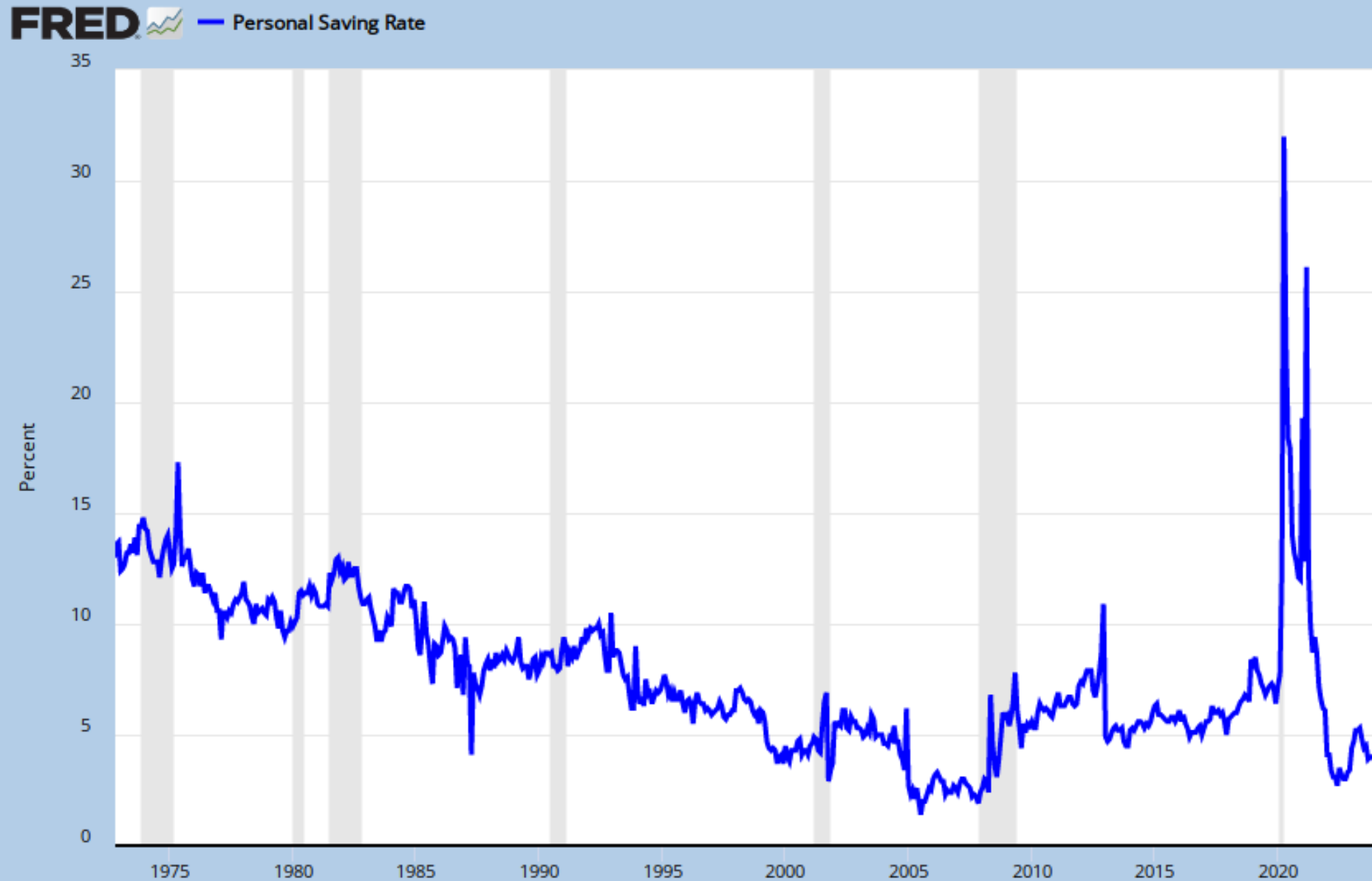
Real Disposable Personal Income

It is above pre-Covid, but well below trend and growing slowly



Household Savings Rate

It is profoundly low, at 3.2% and falling

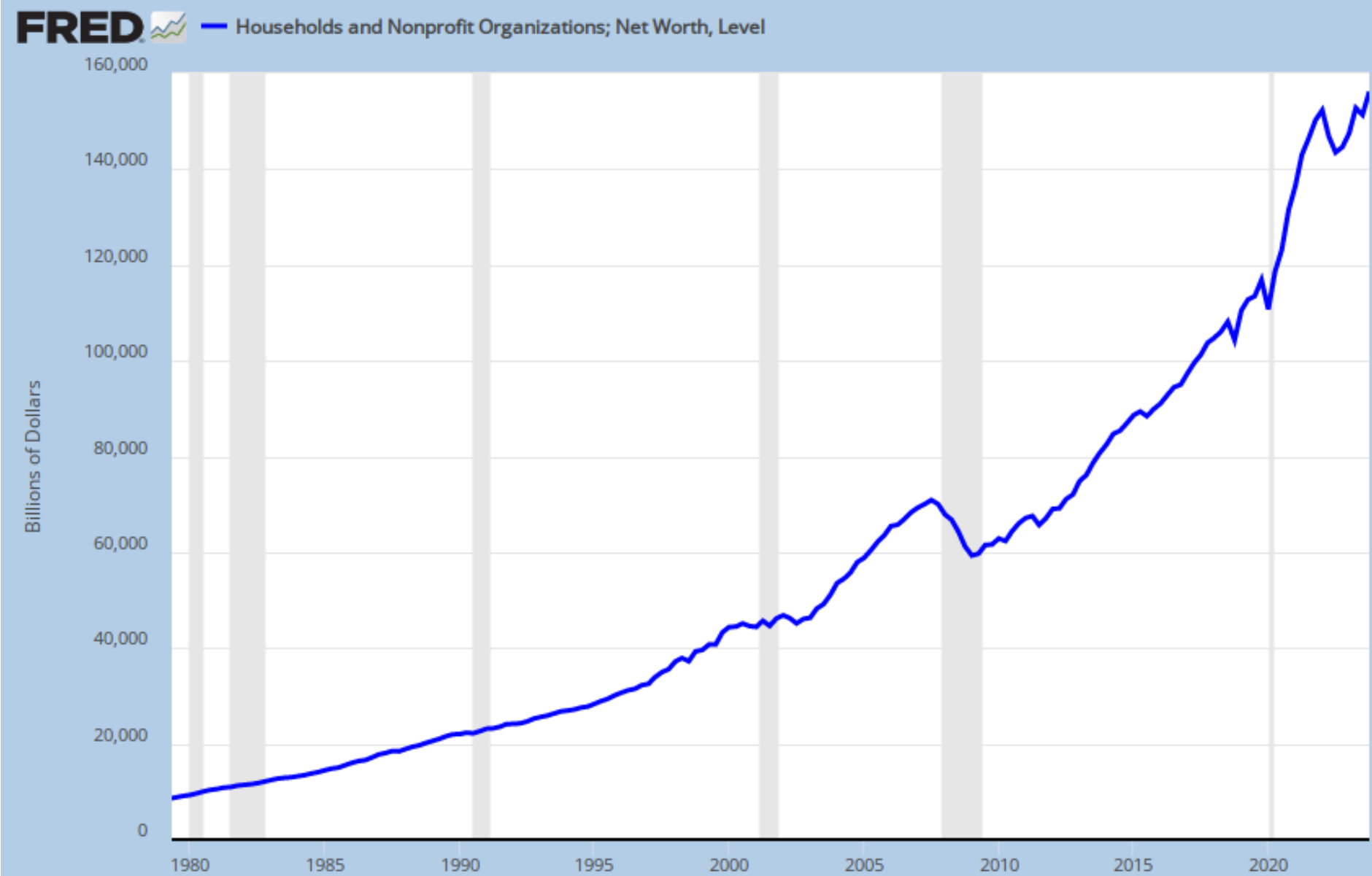


Source: U.S. Bureau of Economic Analysis

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Household Balance Sheets

Are high but flat

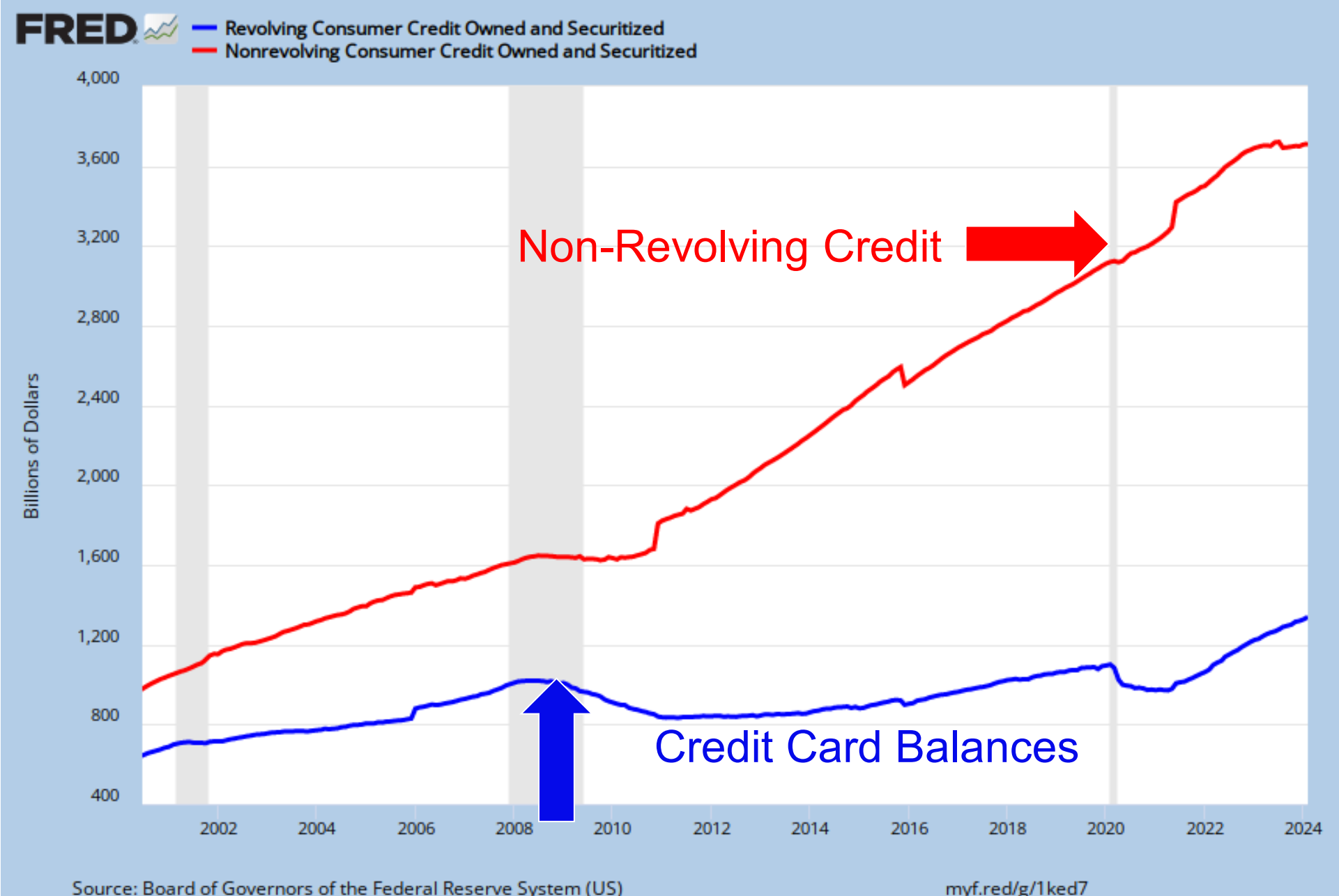


Source: Board of Governors of the Federal Reserve System (US)

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Non-Revolving Credit Growth Slows

Revolving credit is well above its pre-Covid trend



Household Covid Savings

It is being dissipated

Cumulative excess savings held by U.S. households

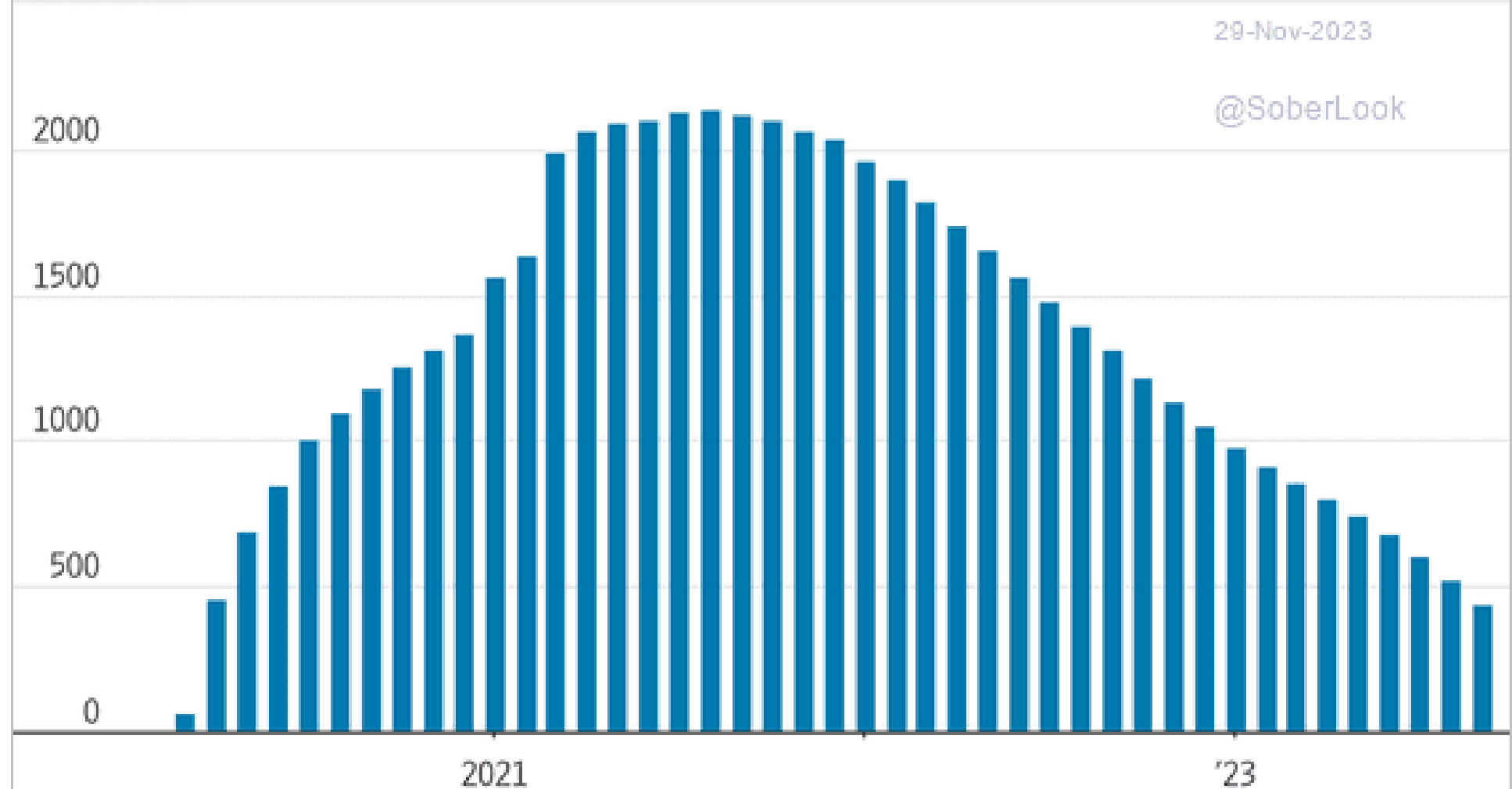
Posted on

The Daily Shot

29-Nov-2023

@SoberLook

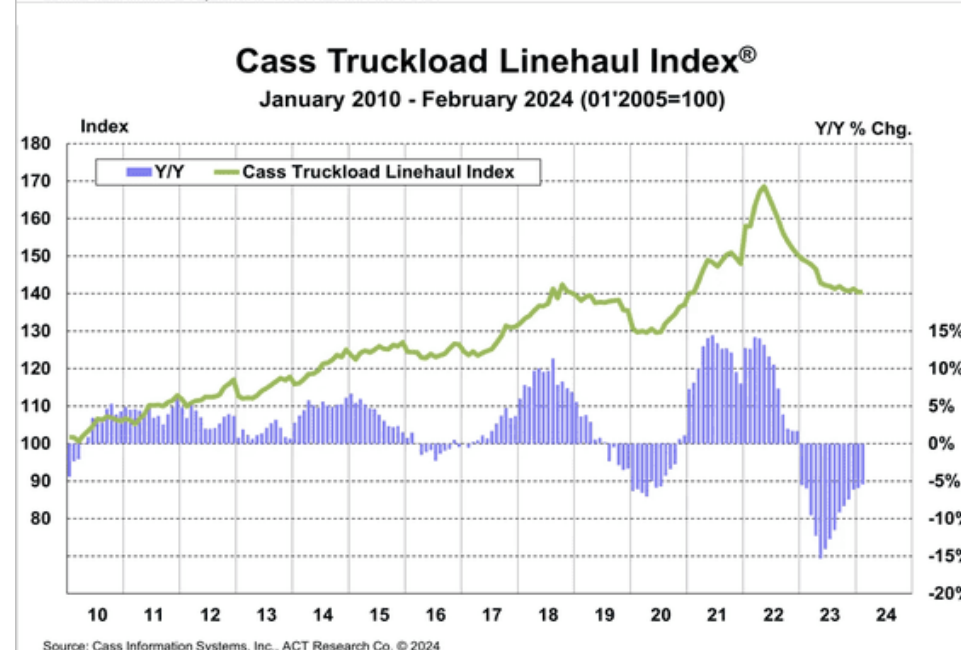
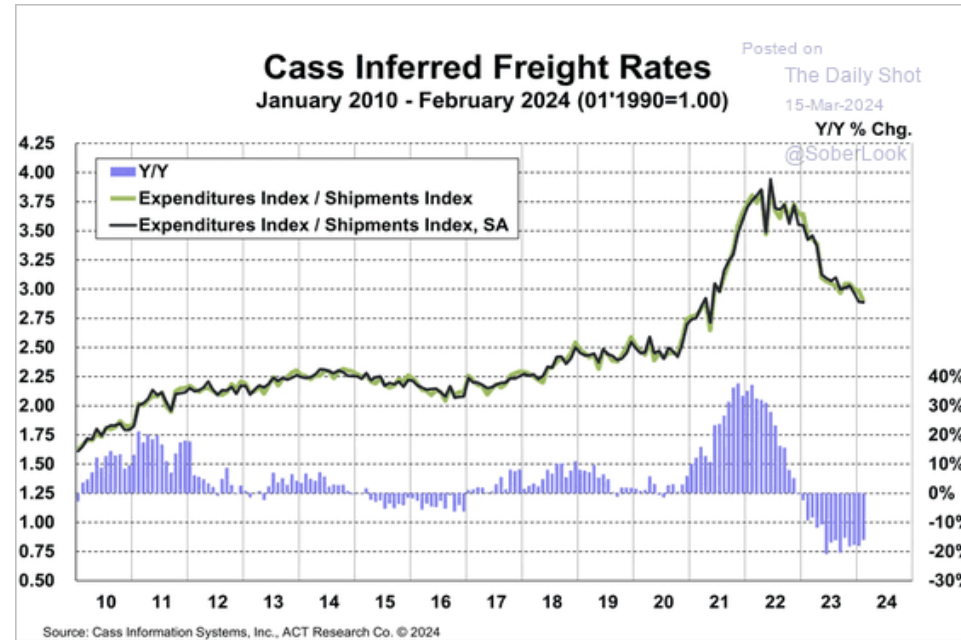
\$2500 billion



Source: Federal Reserve Bank of San Francisco

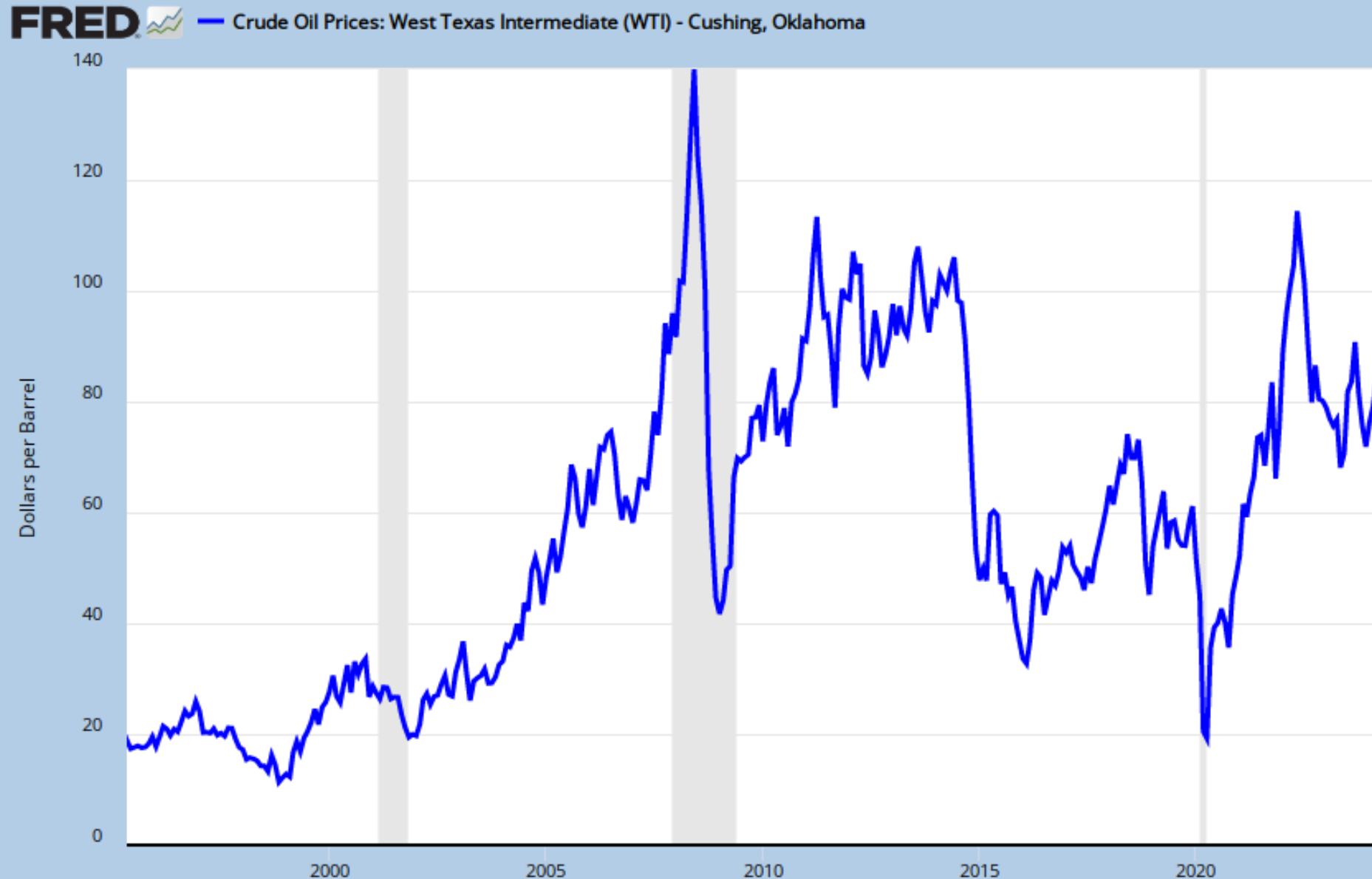
Freight Costs are Falling

Costs peaked in mid-2022



Oil Prices Stabilize

Production cuts from OPEC+ but production increases elsewhere

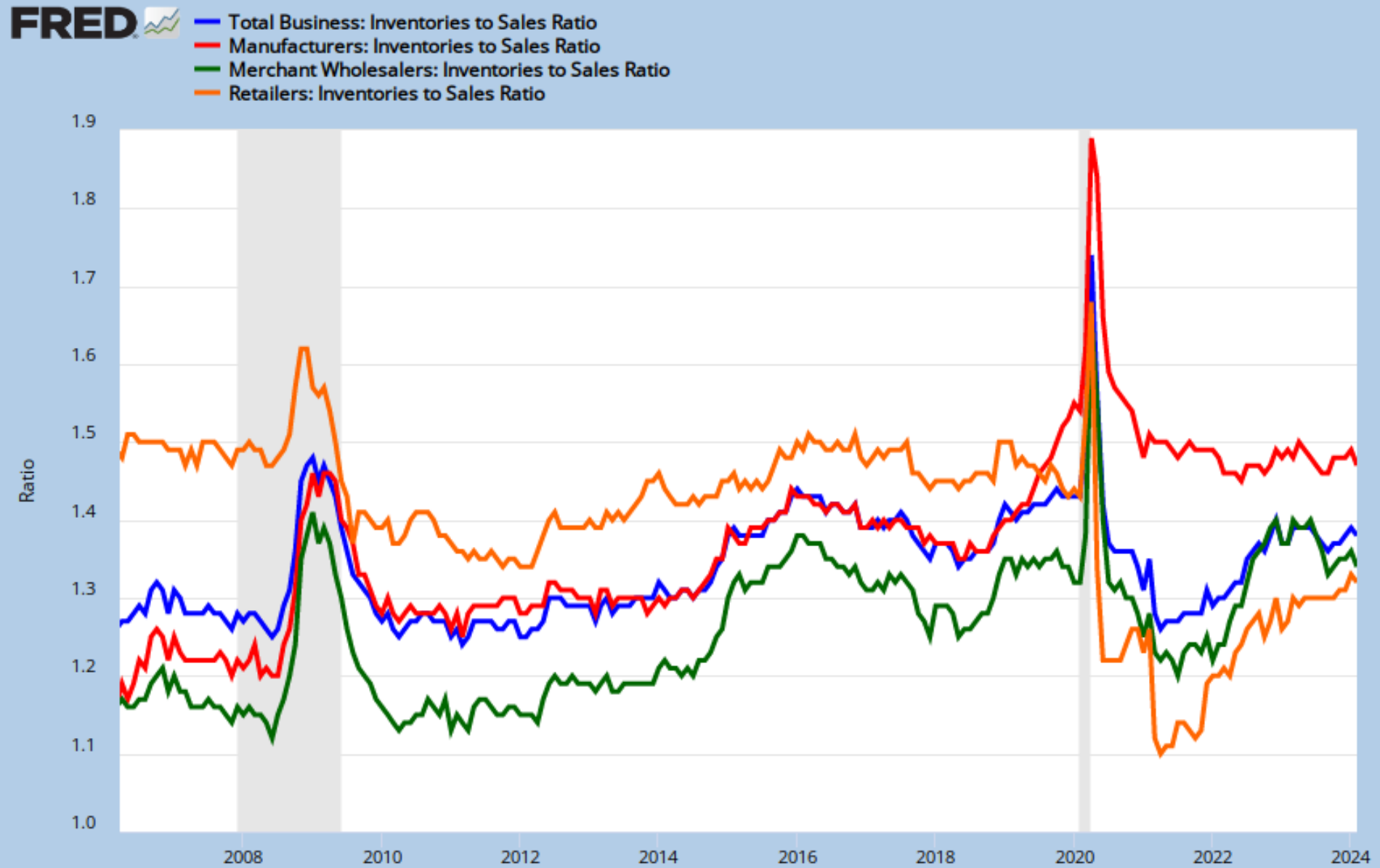


Source: U.S. Energy Information Administration

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Inventory to Sales Ratios

Inventory ratios are rising

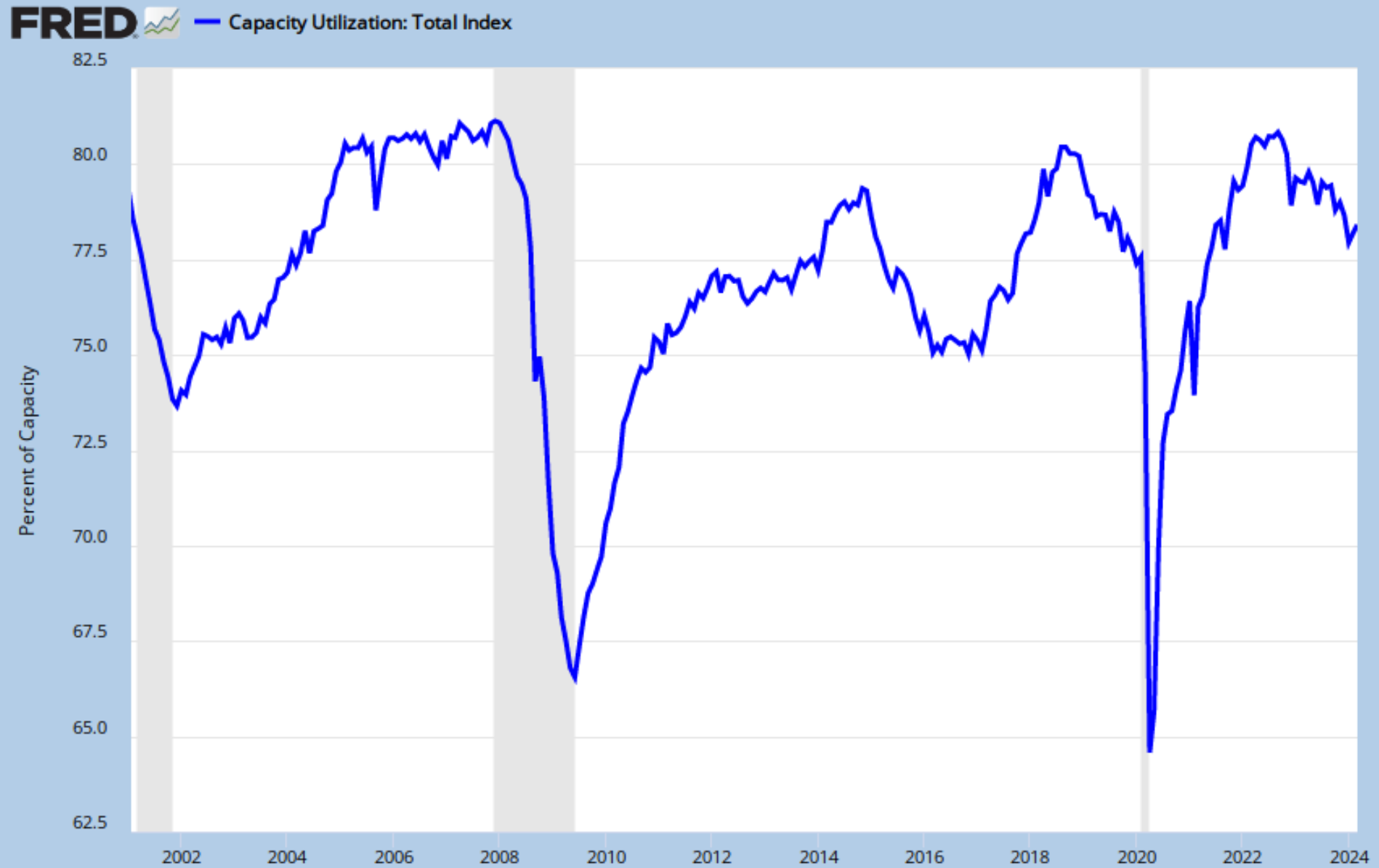


Source: U.S. Census Bureau

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Capacity Utilization Rates Soften

Above pre-Covid levels, but now steadily weakening

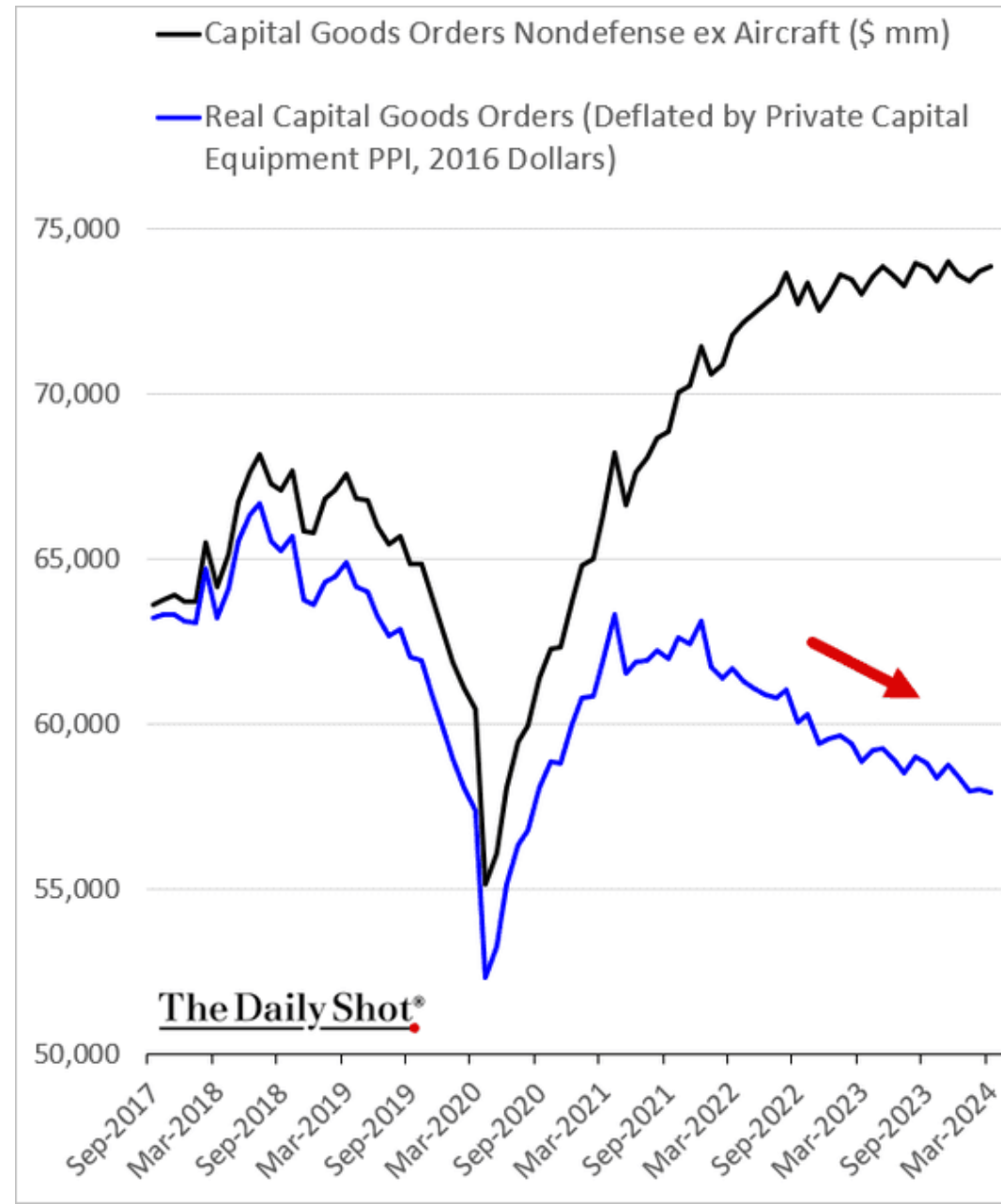


Source: Board of Governors of the Federal Reserve System (US)

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Real Capital Goods Orders

Firms are investing in IP. Think software and AI



Fiscal Policy Is Contractionary

But look at monetary policy

Posted on

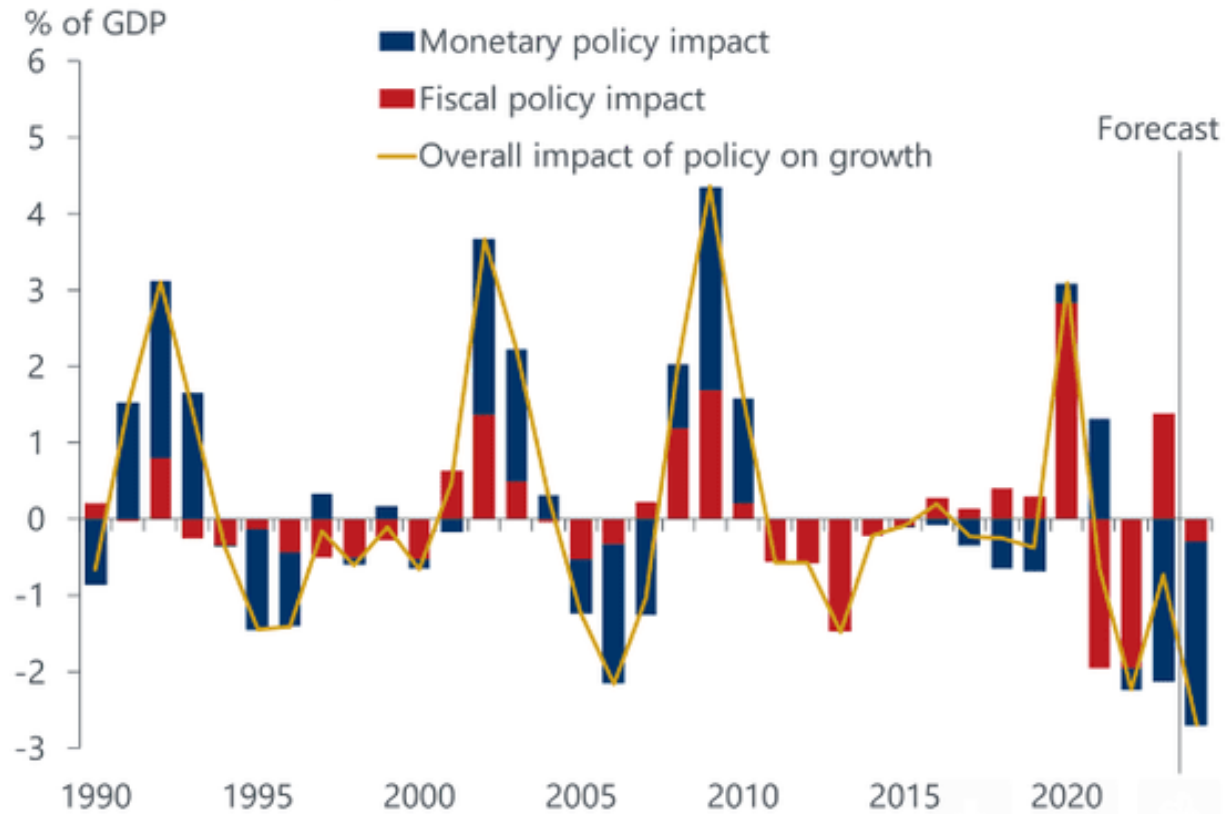
The Daily Shot

21-Nov-2023

@SoberLook

Chart 1: Overall macroeconomic policy stance is set to tighten in 2024

US: Macro policy is set to be more restrictive in 2024



Source: Oxford Economics/Haver Analytics

Student Loans Repayments Restart

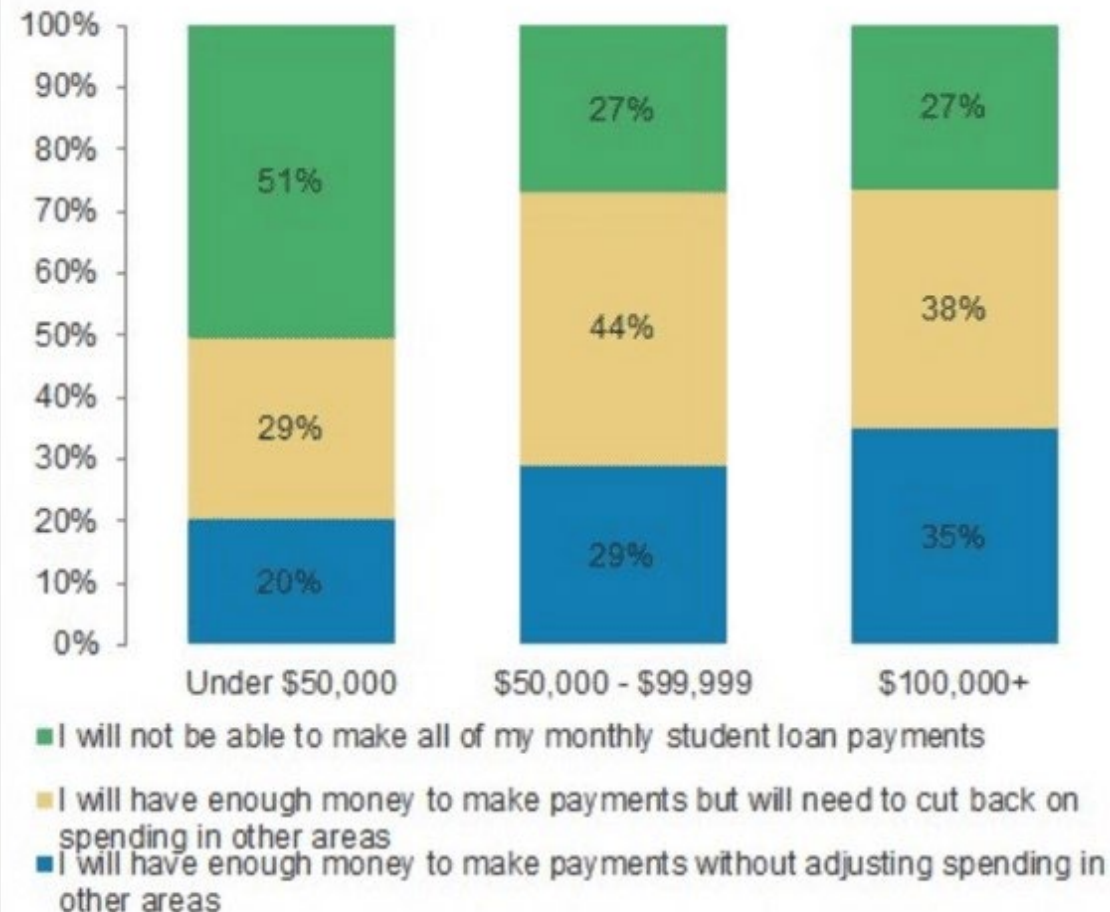
No one is excited about it

Exhibit 2: Lower income borrowers less likely to be able to make payments

Posted on
The Daily Shot
01-Sep-2023

Impact of Federal Student Loan Payment Freeze Ending, by HH Income (Among Federal Student Loan Holders)

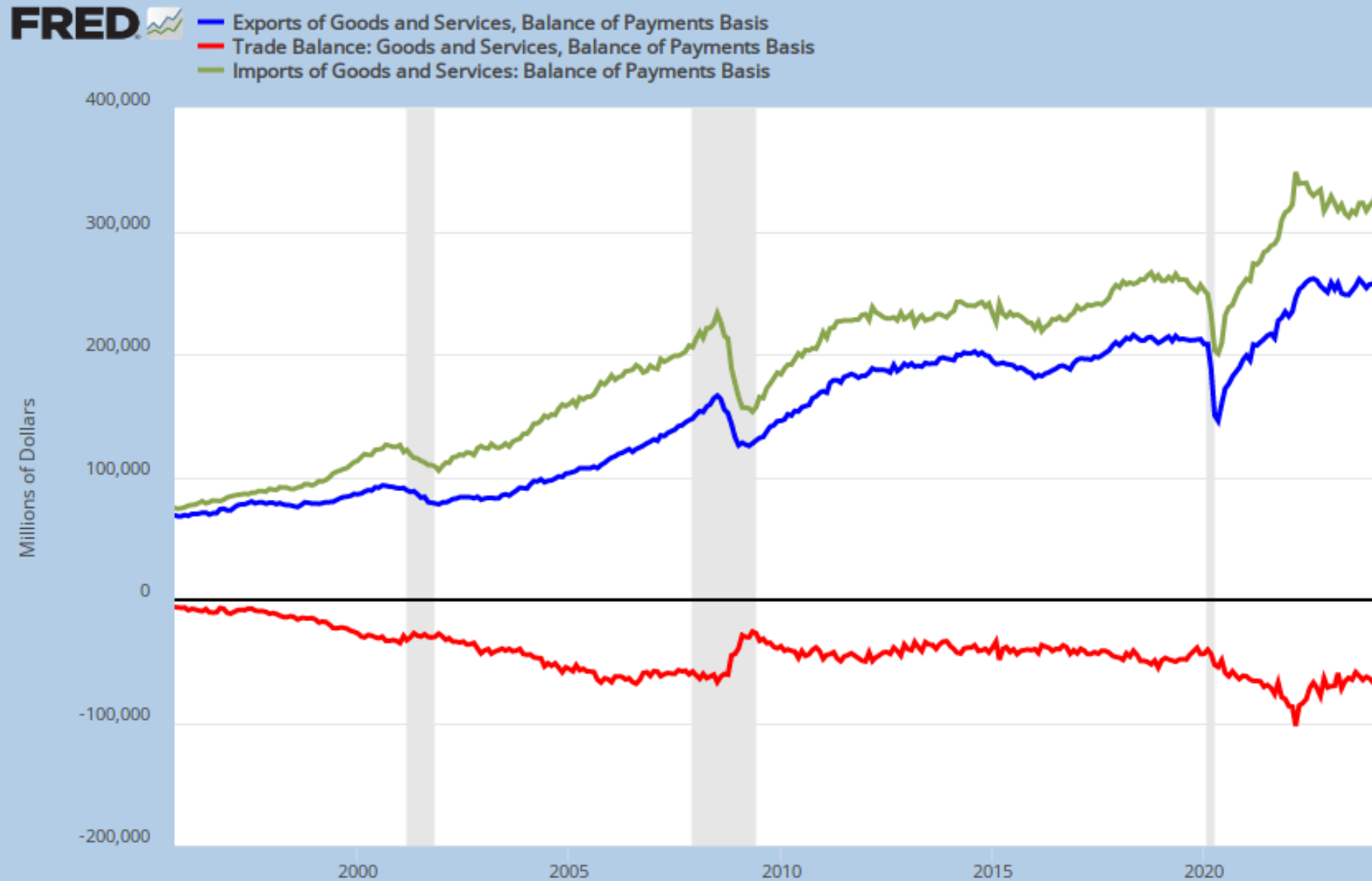
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Source: AlphaWise Consumer Pulse Survey, Morgan Stanley Research. Morgan Stanley's AlphaWise provides proprietary evidence-based investment research.

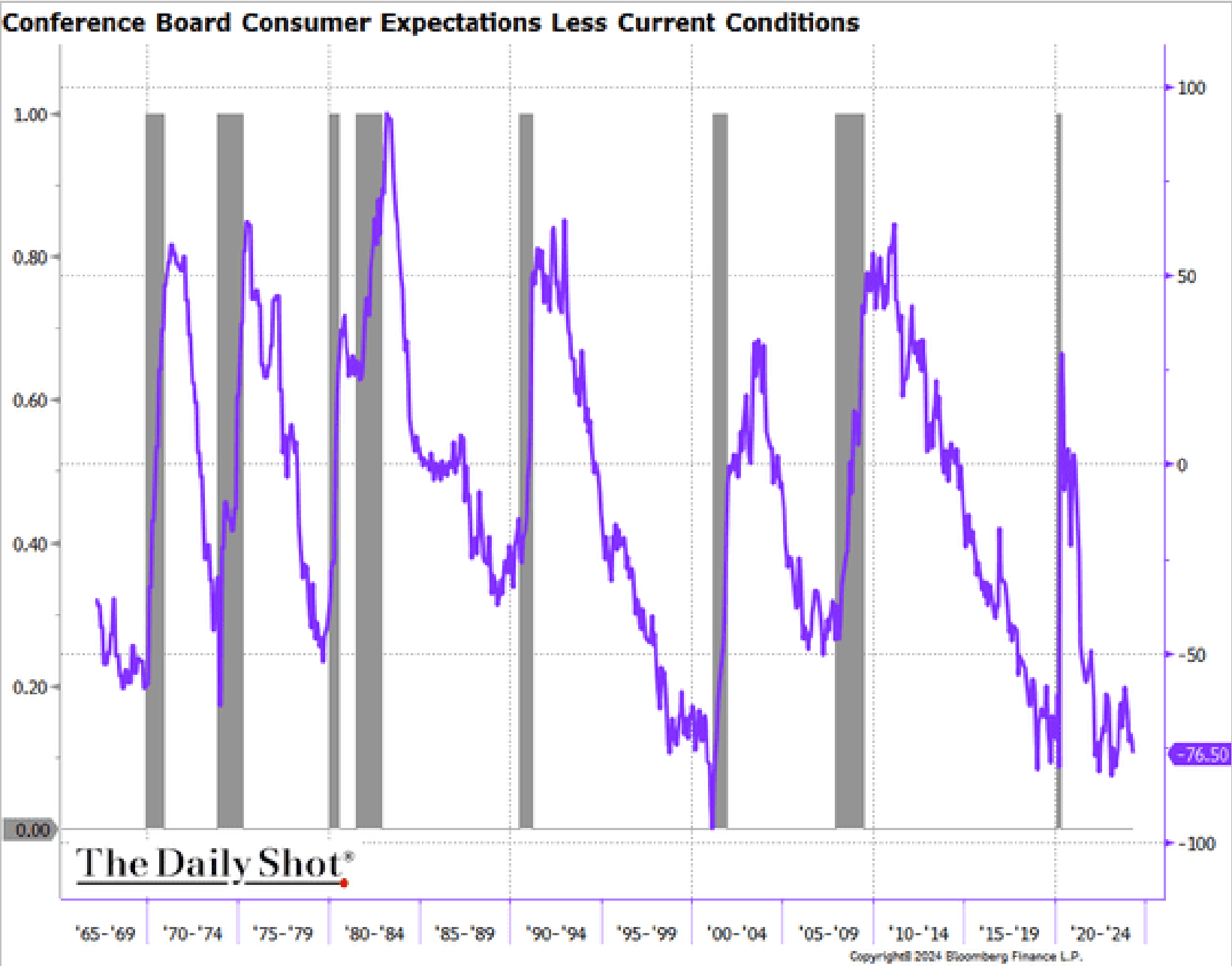
The Trade Deficit Worsens

Imports are up and exports are flat



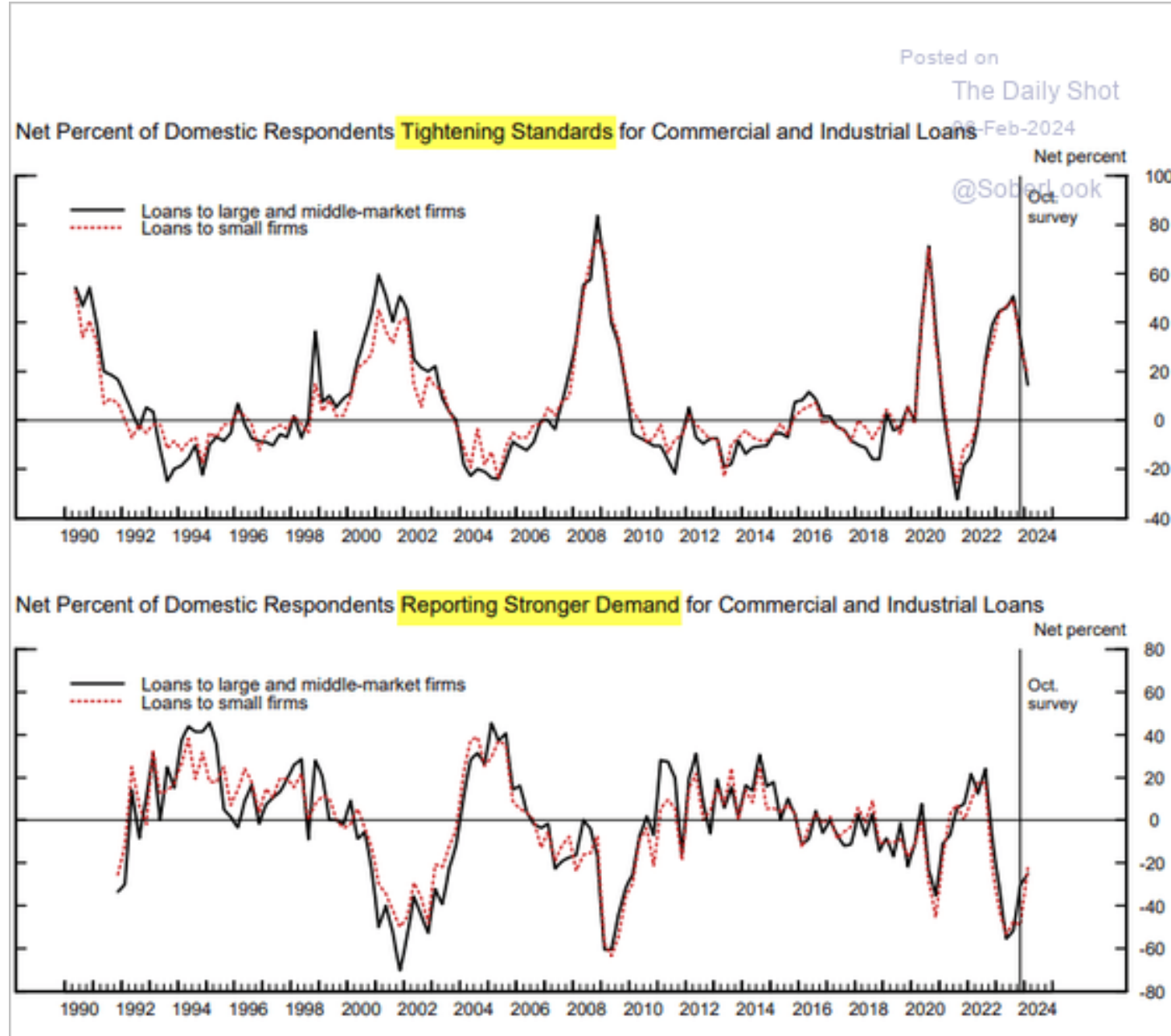
Conference Board Economic Indicators

It has at least stopped sinking



Loan Officers are Tightening Up

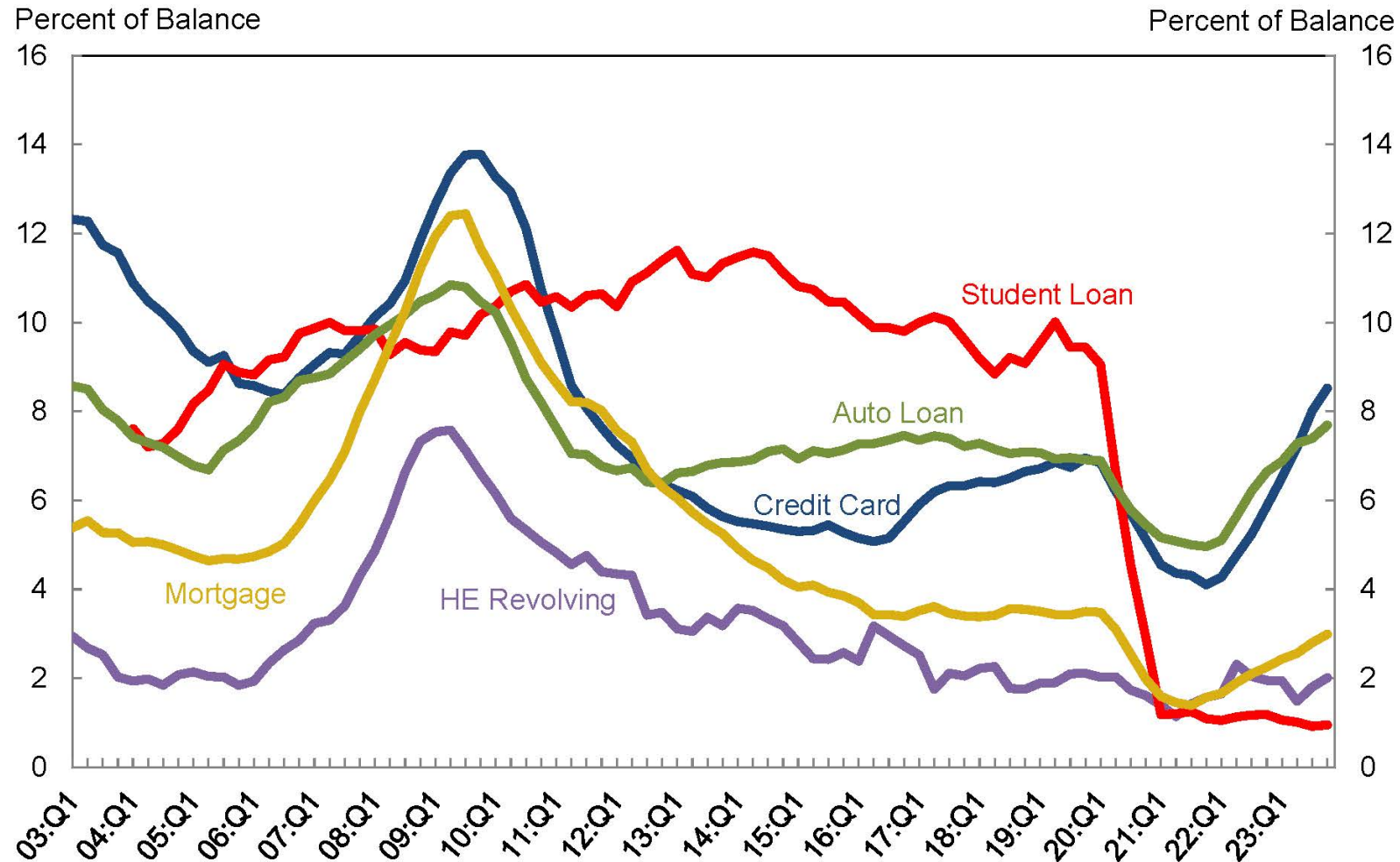
This is for C&I loans



Percent of Balance 30+ Days Delinquent

Most loan types now show deterioration

Transition into Delinquency (30+) by Loan Type



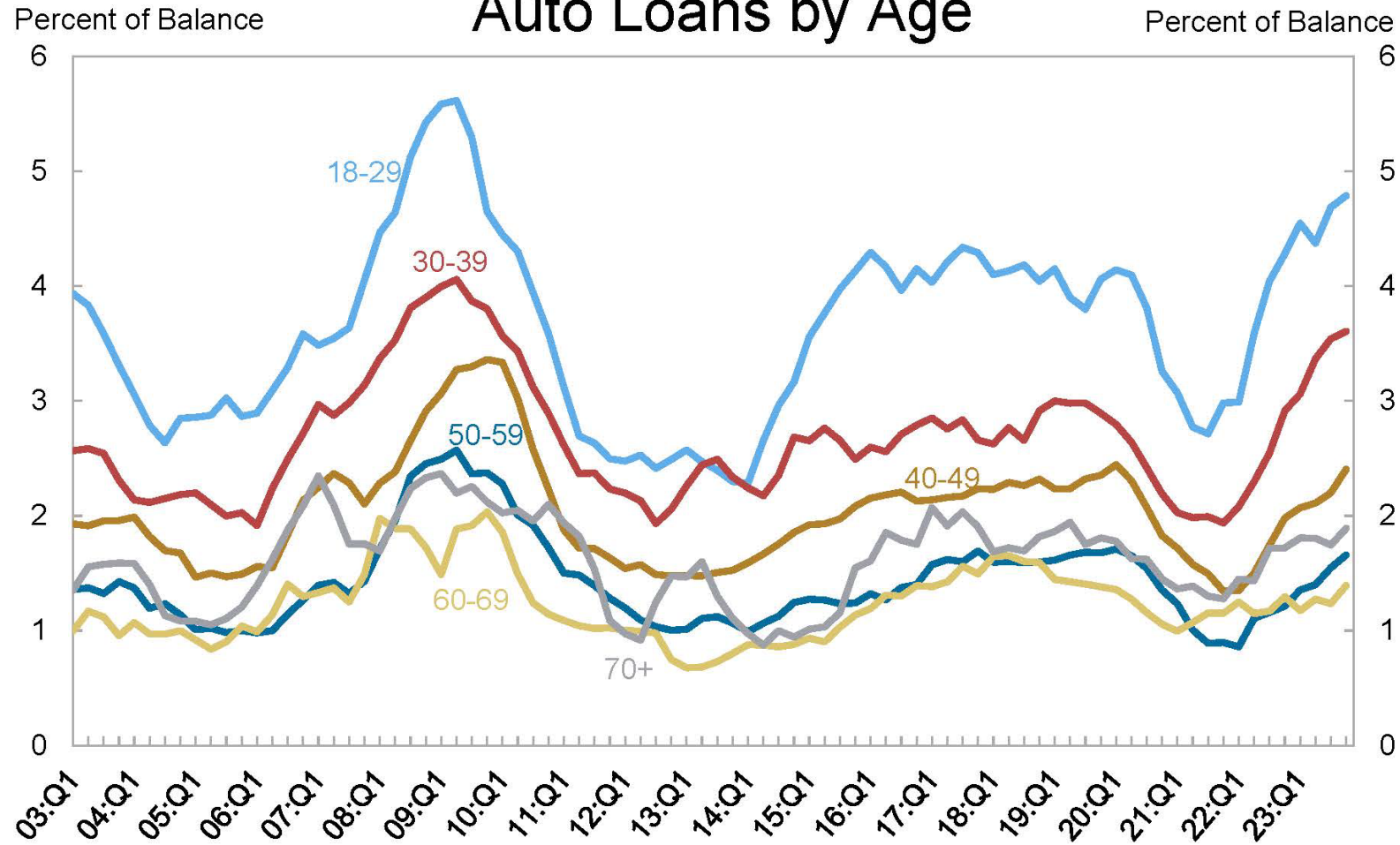
Source: New York Fed Consumer Credit Panel/Equifax

Note: 4 Quarter Moving Sum
Student loan data are not reported prior to 2004 due to uneven reporting

Percent of Auto Loans 90+ Days Delinquent

Most trouble loans are for those under 40

Transition into Serious Delinquency (90+) for Auto Loans by Age



Note: 4 Quarter Moving Sum.

Age is defined as the current year minus the birthyear of the borrower.

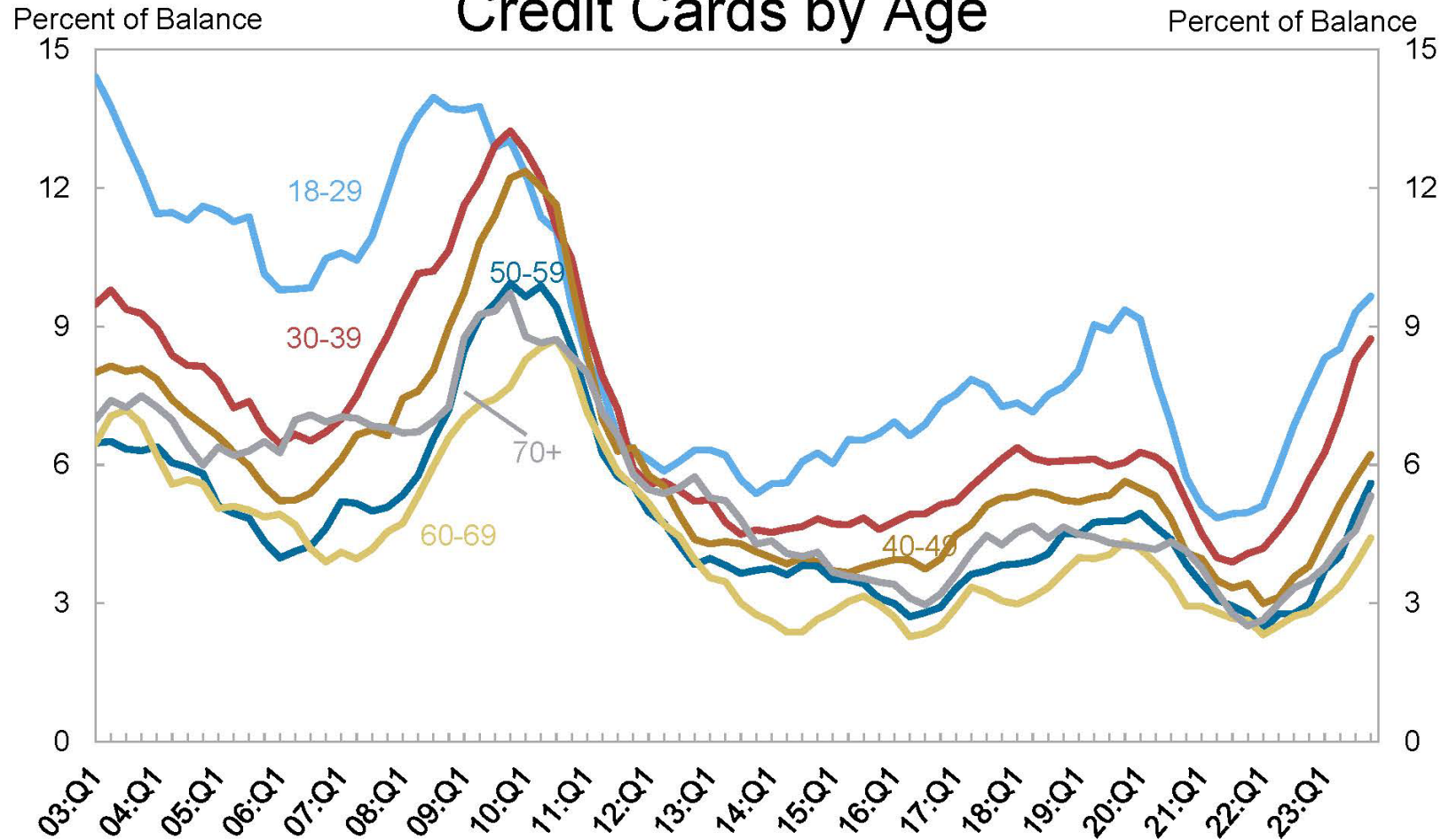
Age groups are re-defined each year.

Source: New York Fed Consumer Credit Panel/Equifax

Percent of Credit Cards 90+ Days Delinquent

Most trouble loans are for those under 40

Transition into Serious Delinquency (90+) for Credit Cards by Age



Note: 4 Quarter Moving Sum.

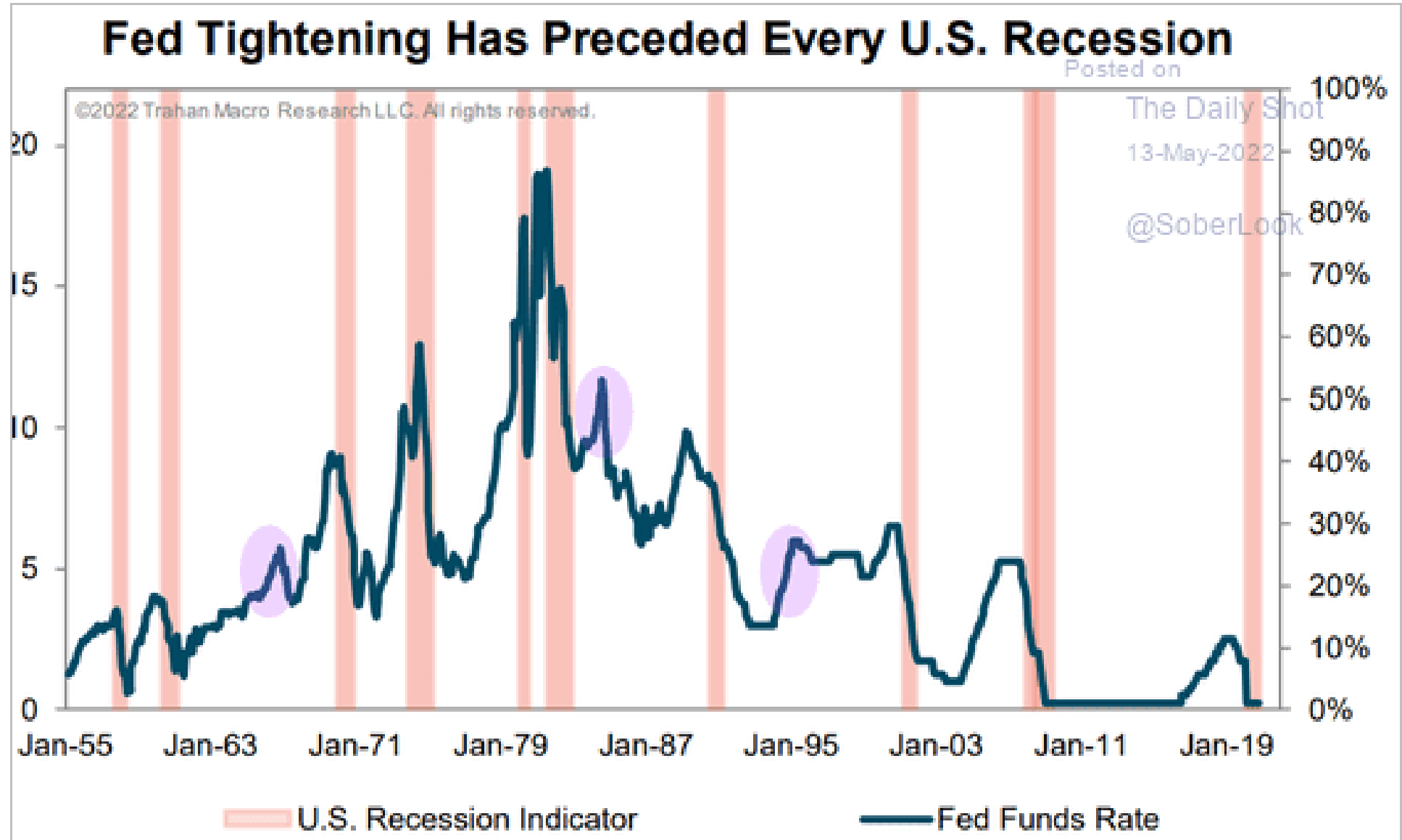
Age is defined as the current year minus the birthyear of the borrower.

Age groups are re-defined each year.

Source: New York Fed Consumer Credit Panel/Equifax


Fed Rate Hikes and Recessions

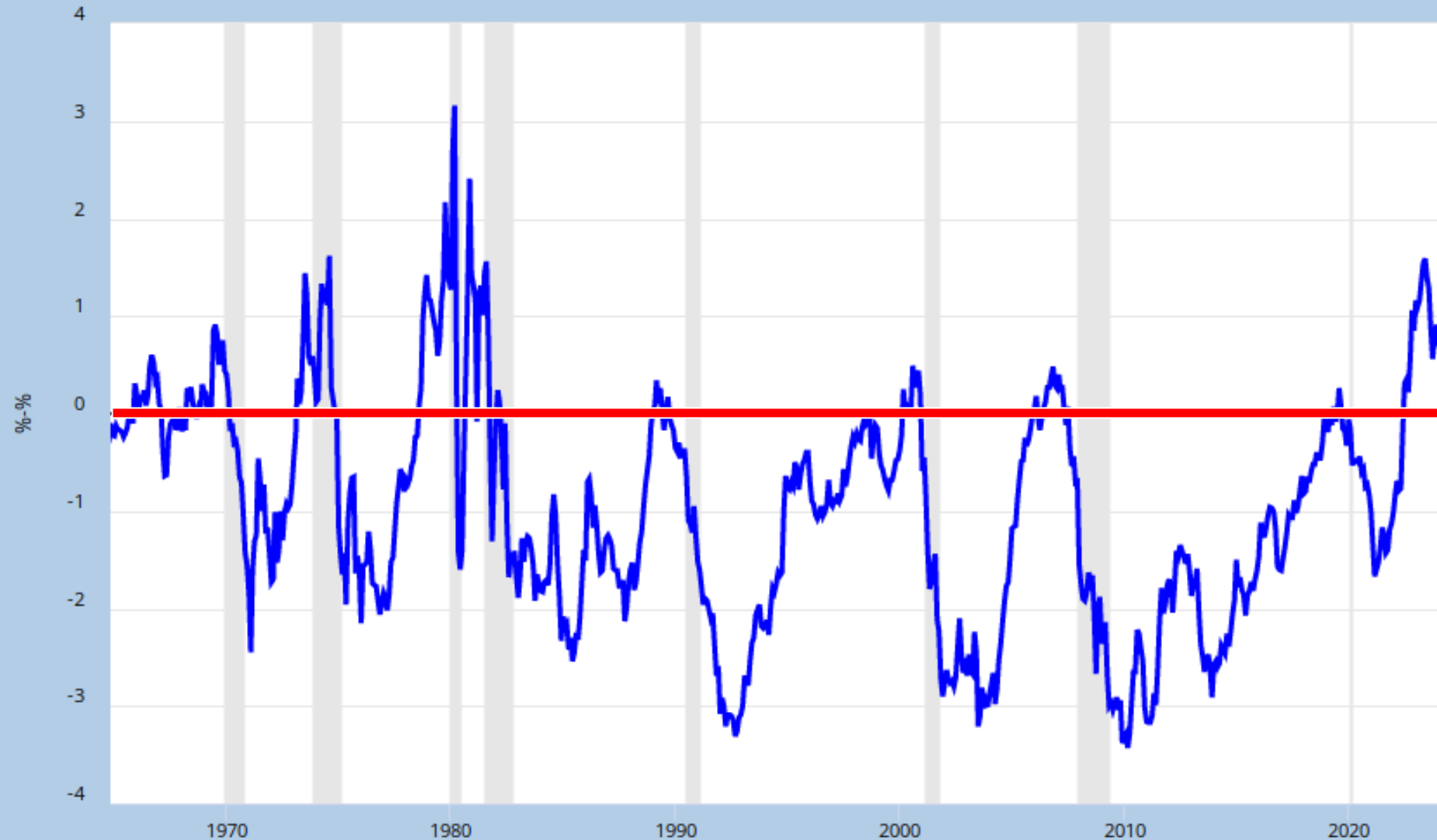
They generally travel together



The Yield Curve is Inverted

Yield Curve Inversion Test: 1-Year Treasury Yield – 10-Year Treasury Yield

FRED  — Market Yield on U.S. Treasury Securities at 1-Year Constant Maturity, Quoted on an Investment Basis—Market Yield on U.S. Treasury Securities at 10-Year Constant Maturity, Quoted on an Investment Basis



Fed Rate Hikes and Recessions

They generally travel together

Fed hiking cycles and recessions

Start of hiking cycle	Start of recession	Gap from start of hiking (# months)
Aug-58	Apr-60	20
Nov-67	Dec-69	25
Mar-72	Nov-73	20
Dec-76	Jan-80	37
Aug-80	Jul-81	11
Mar-83	Jul-90	87
Jan-87	Jul-90	42
Feb-94	Mar-01	85
Jun-99	Mar-01	20
Jun-04	Dec-07	41
Dec-16	Feb-20	38
Average in hard landings		27
Median in hard landings		23

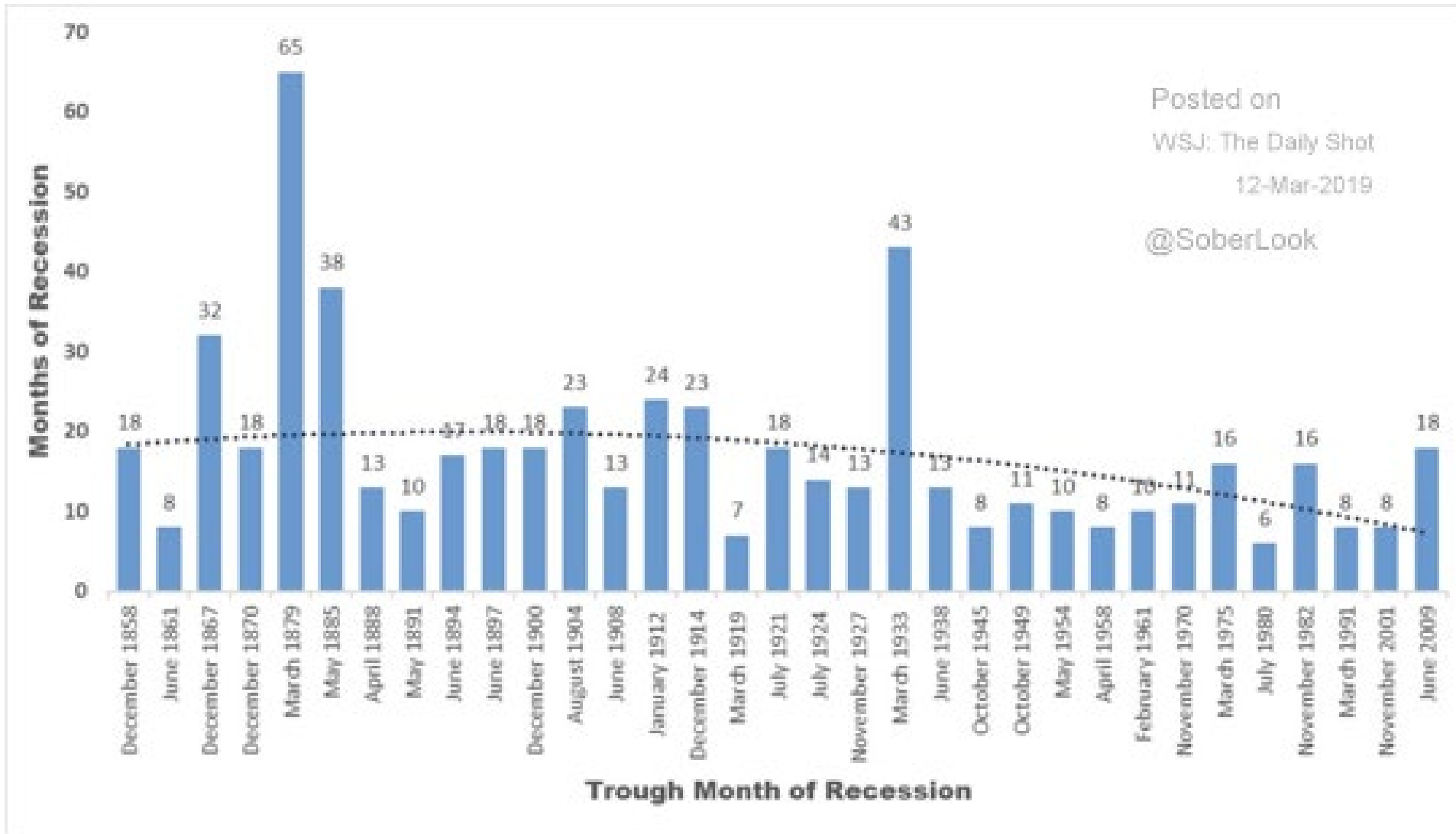
Shortest gap was 11 months

Typical gap was 2 years

* Shaded episodes are soft landing cycles that avoided a recession

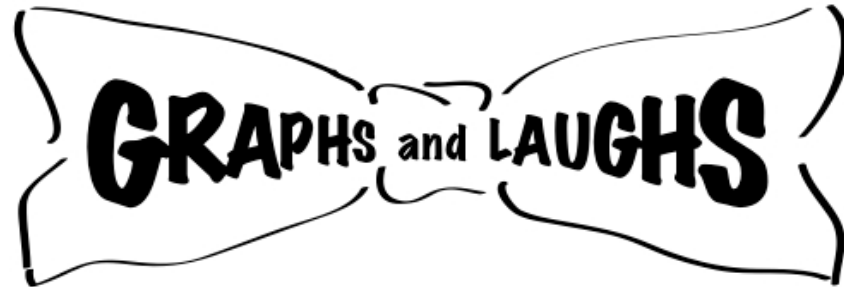
Duration of All Recorded US Recessions

Since the Depression they tend to be shorter



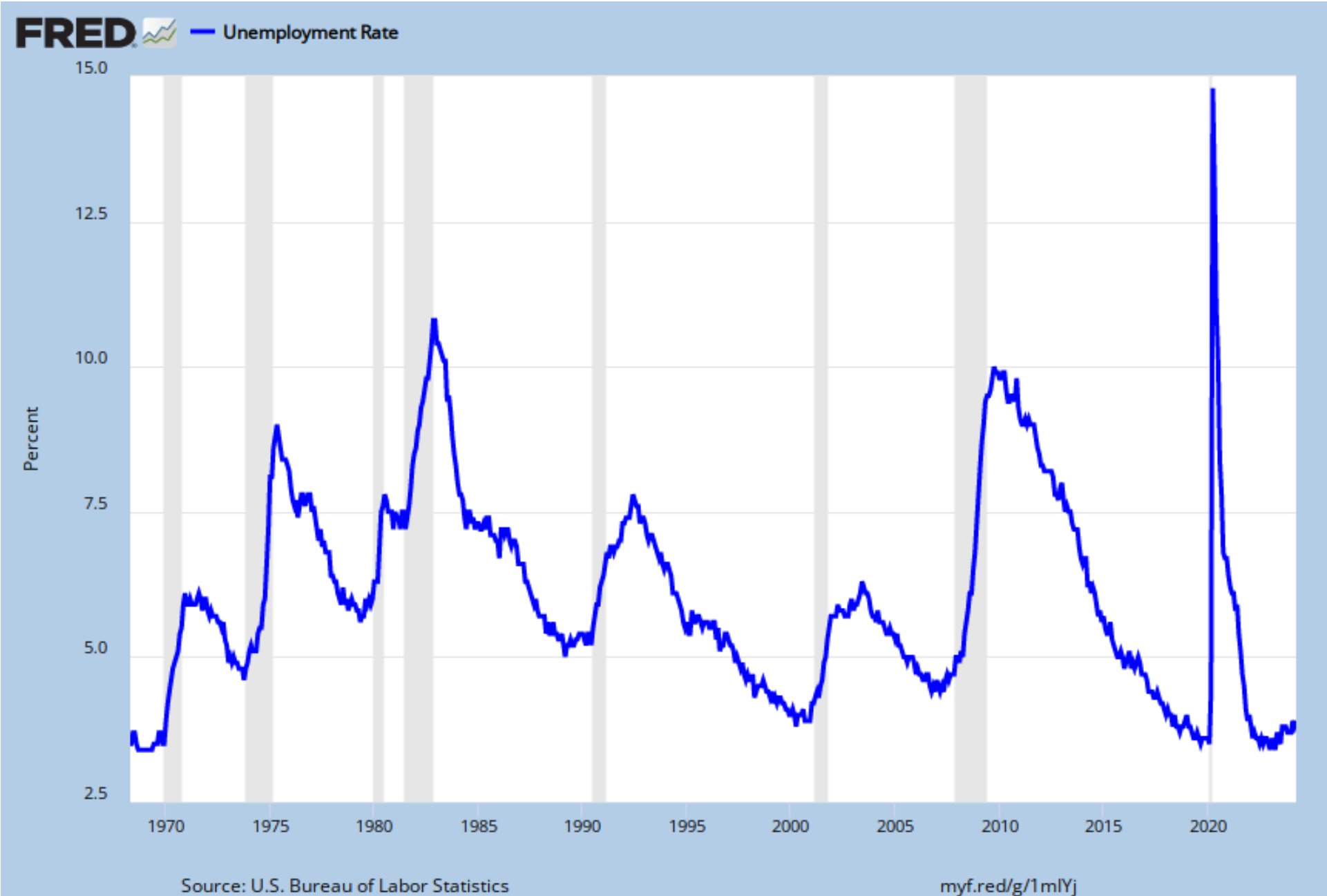
Labor Markets:

They are Softening



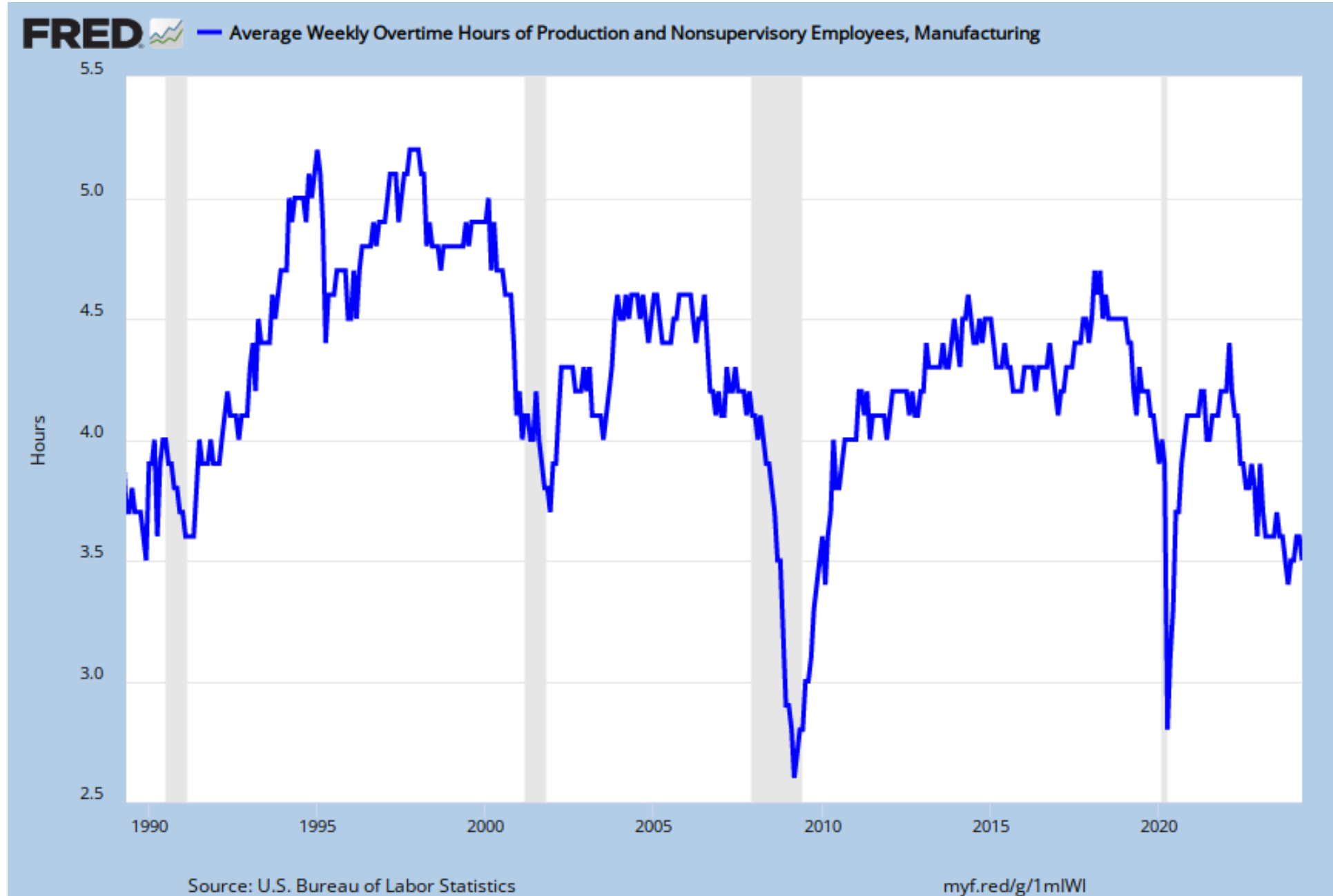
The Unemployment Rate

The rate is low at 3.9% but is clearly rising



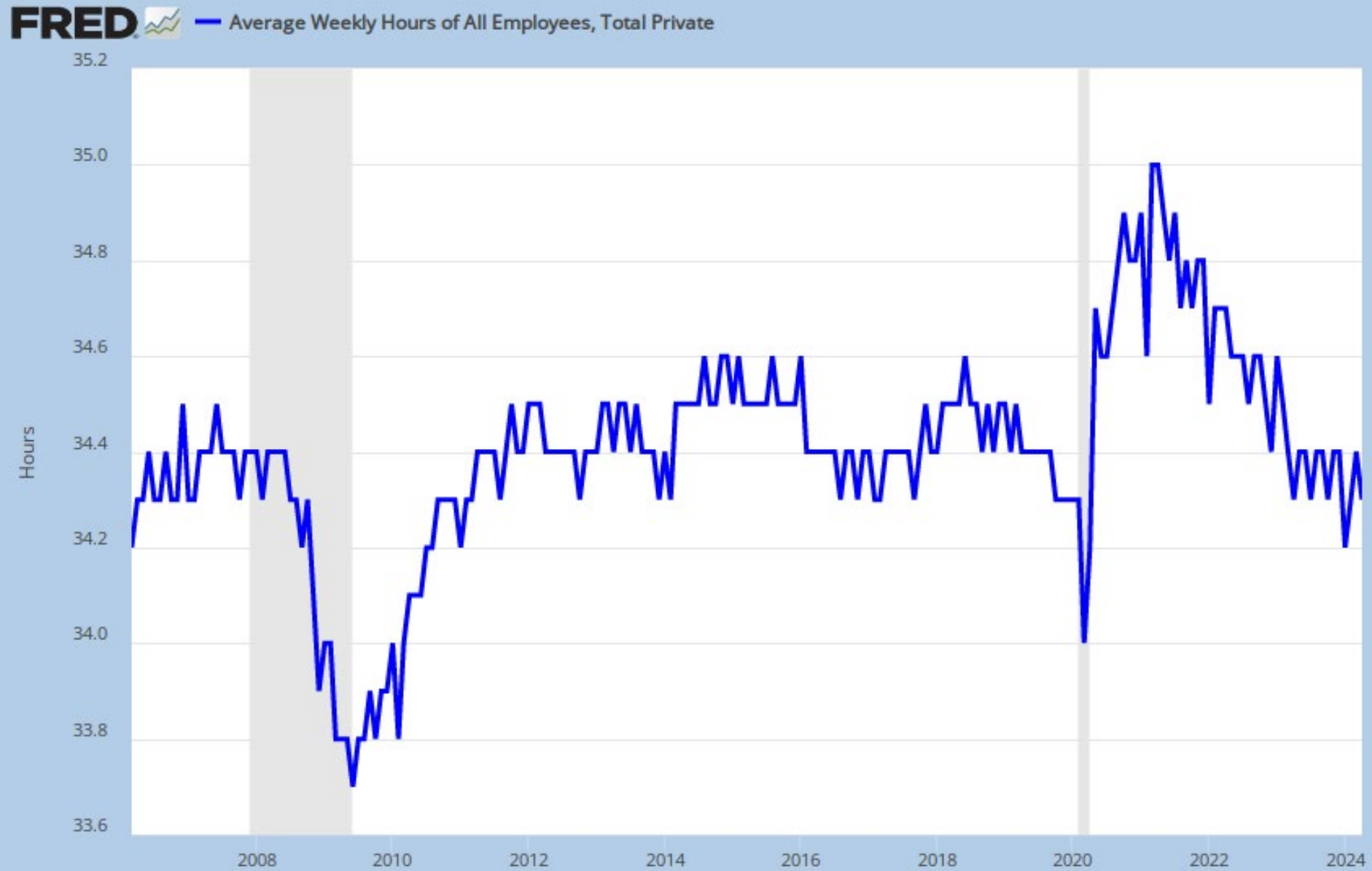
Overtime Hours

They are historically low



Weekly Hours Worked

Hours worked are low but stable

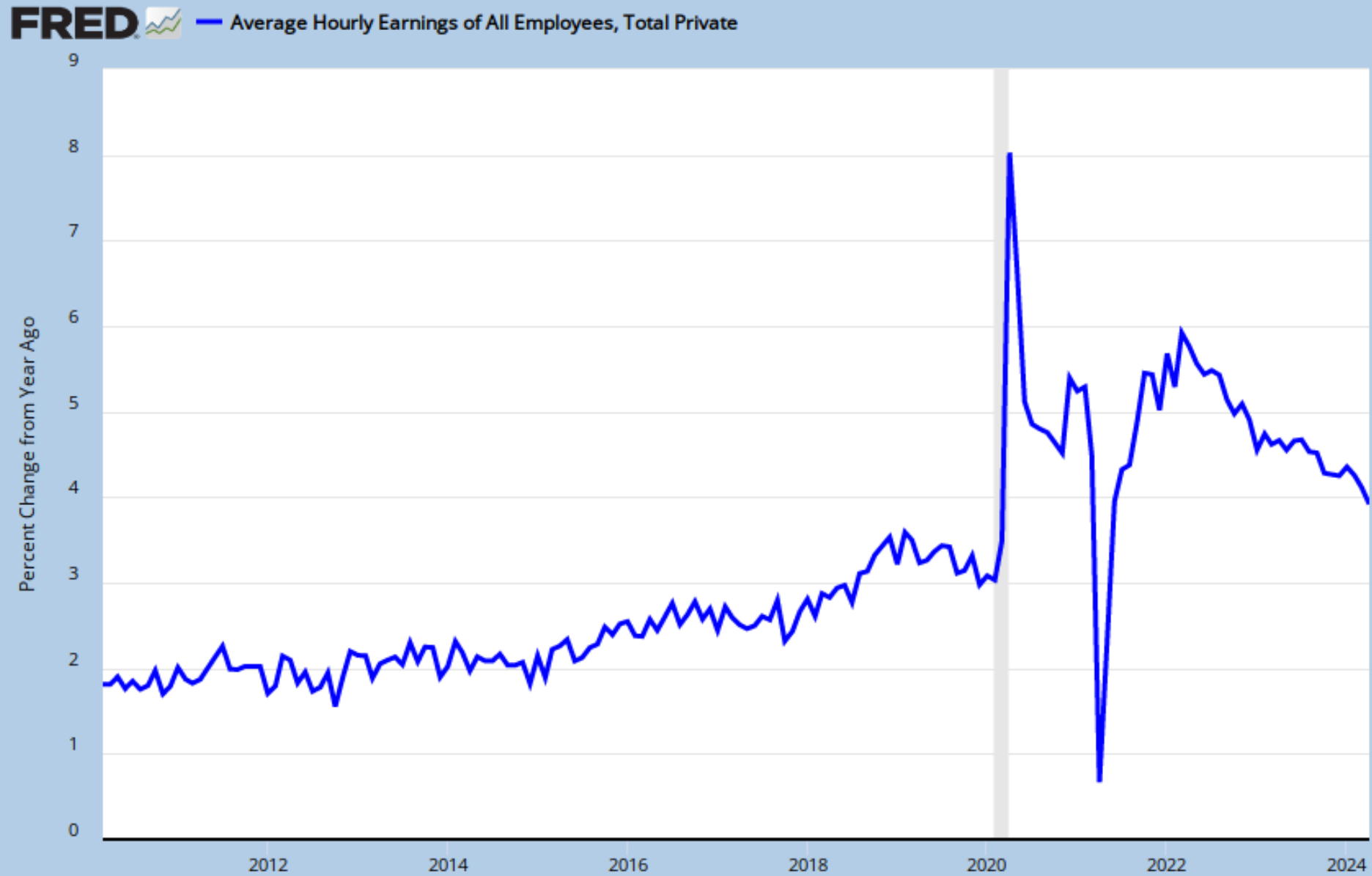


Source: U.S. Bureau of Labor Statistics

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Y-o-Y Percent Change in Hourly Earnings

Wage growth is falling nicely but at 3.9% is too high

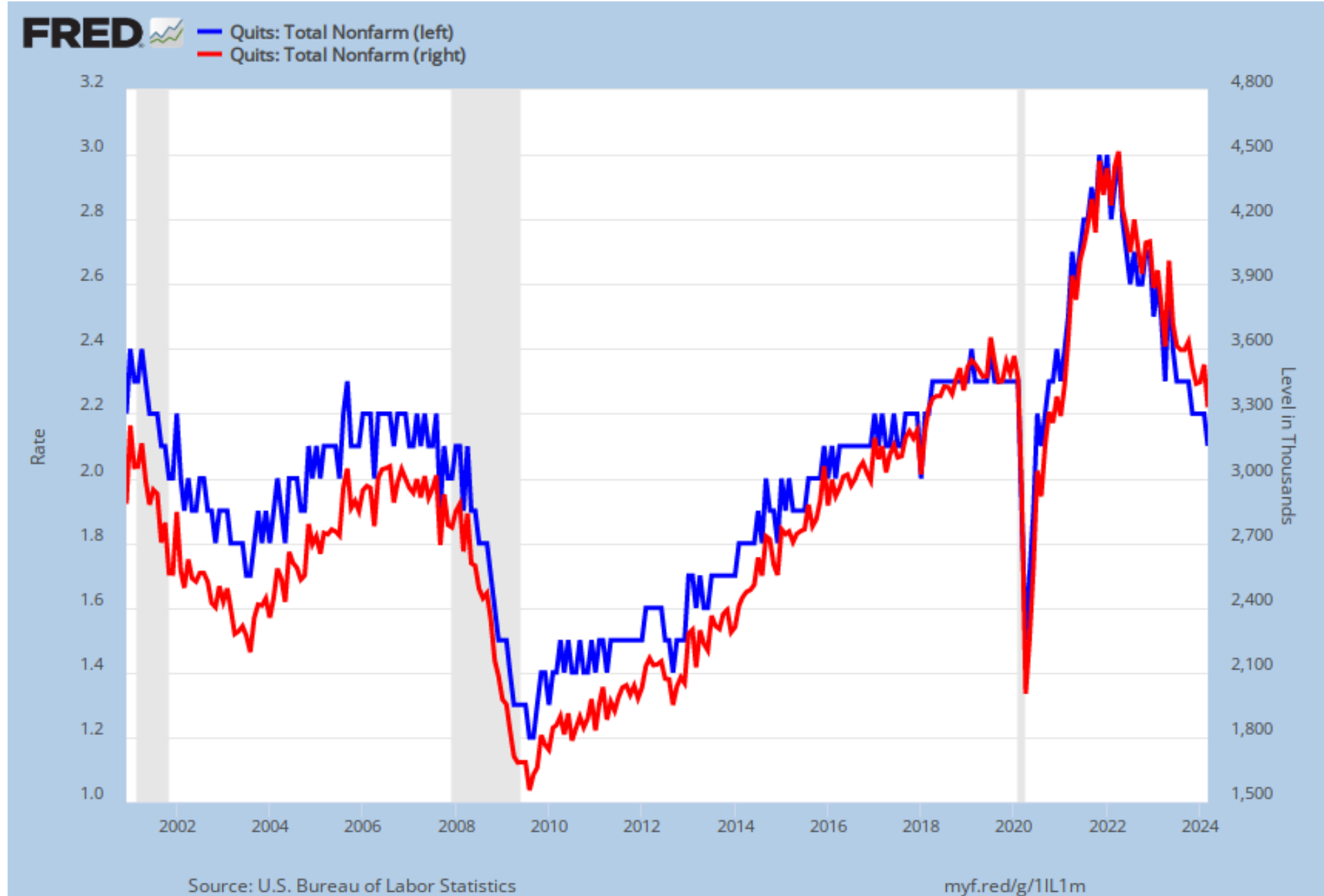


Source: U.S. Bureau of Labor Statistics

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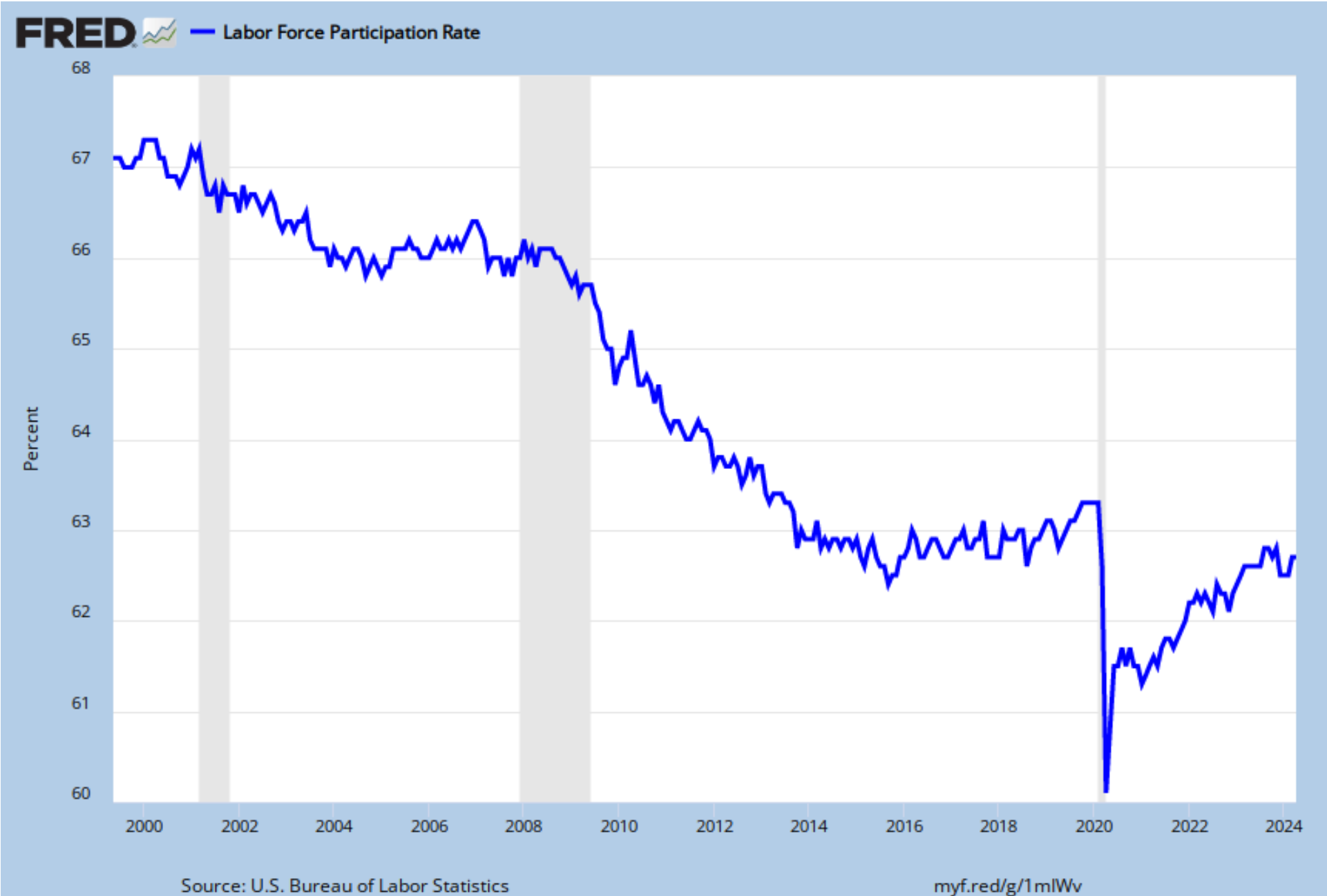
Quit Rates Are Rapidly Reversing

Workers were quitting in droves, but not now



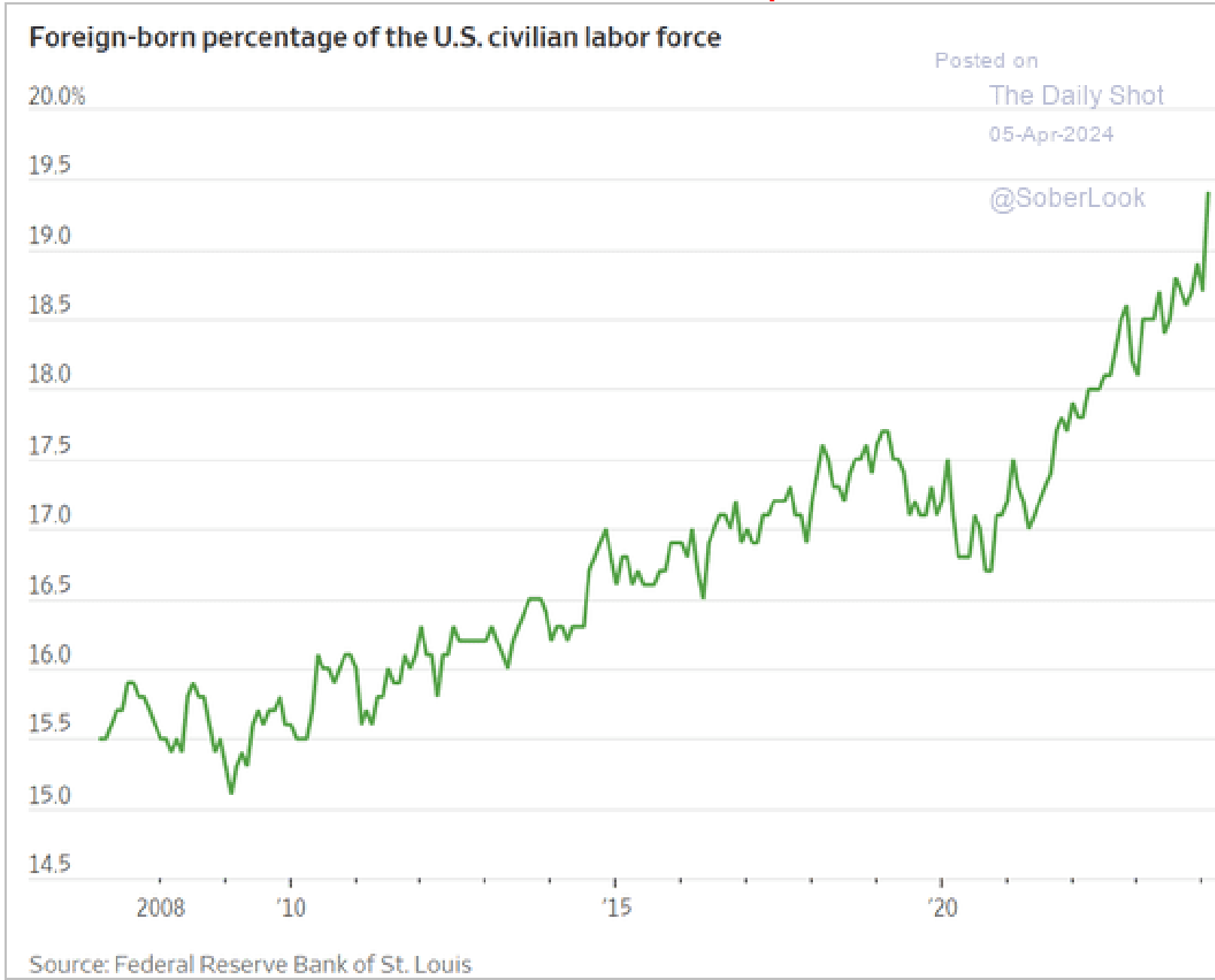
The Labor Force Participation Rate

Is it improving?



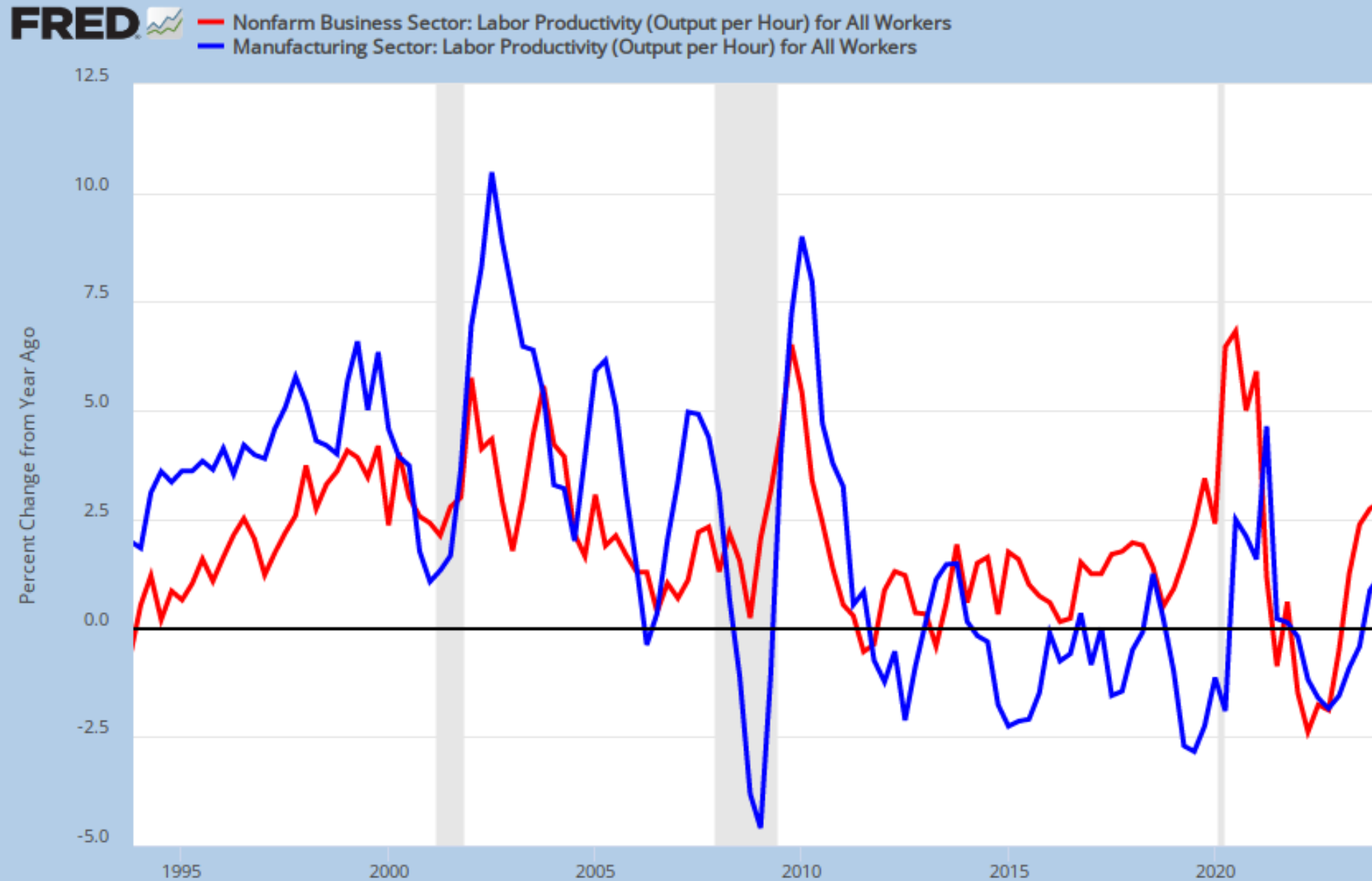
This Recent Rise is Substantial

It is close to 2 million persons



Labor Productivity Growth

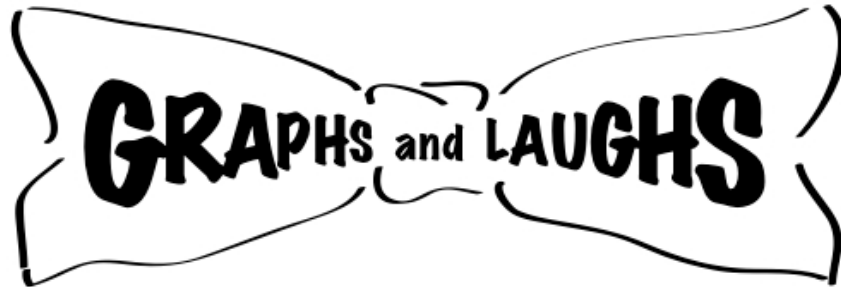
It is now suddenly much better



Source: U.S. Bureau of Labor Statistics

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Inflation & The Fed



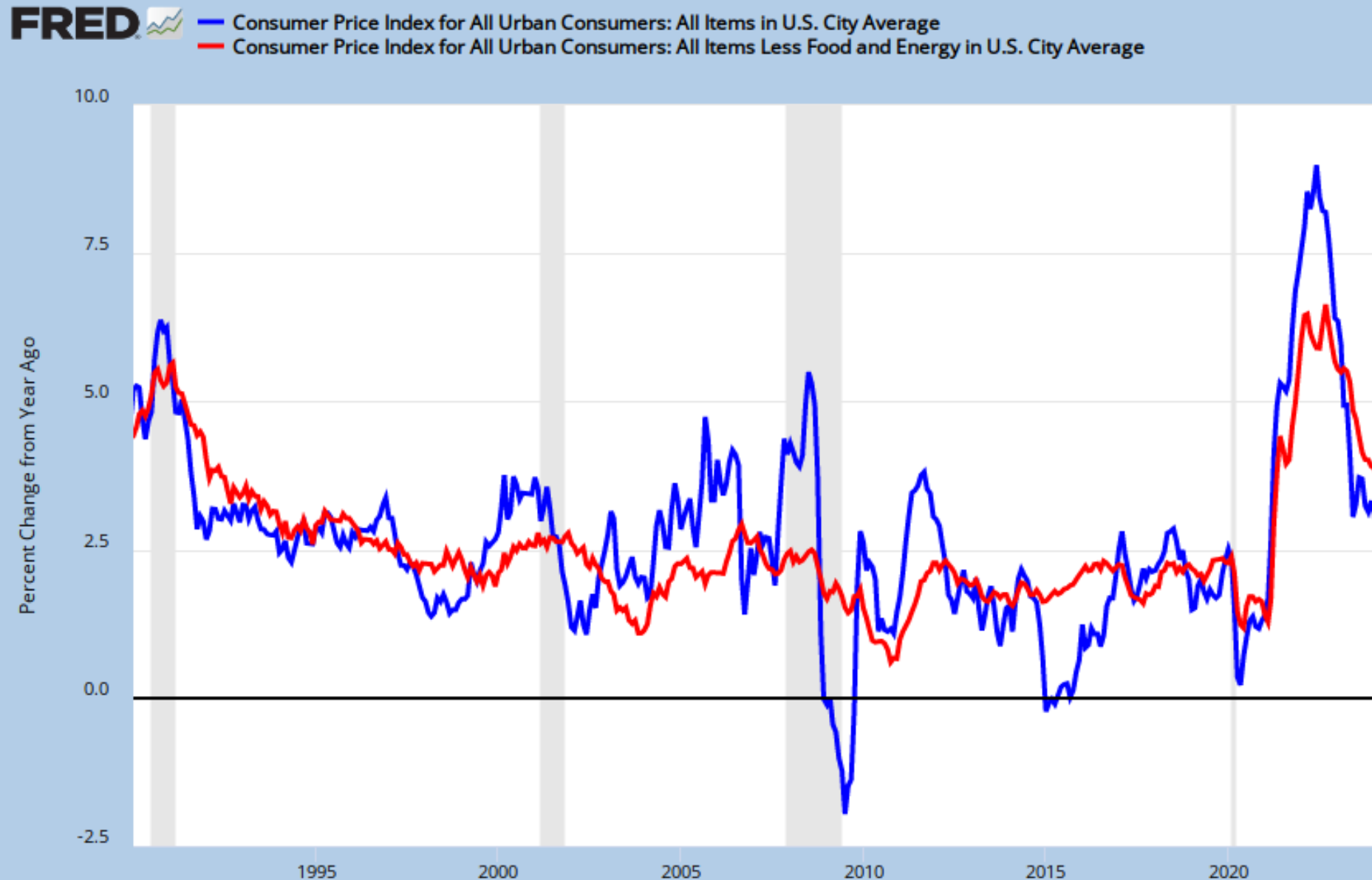
INFLATION? WHAT INFLATION?

THE ATLAS SOCIETY

**A PACK OF GROUND BEEF IS THE
SAME PRICE AS LAST MONTH**

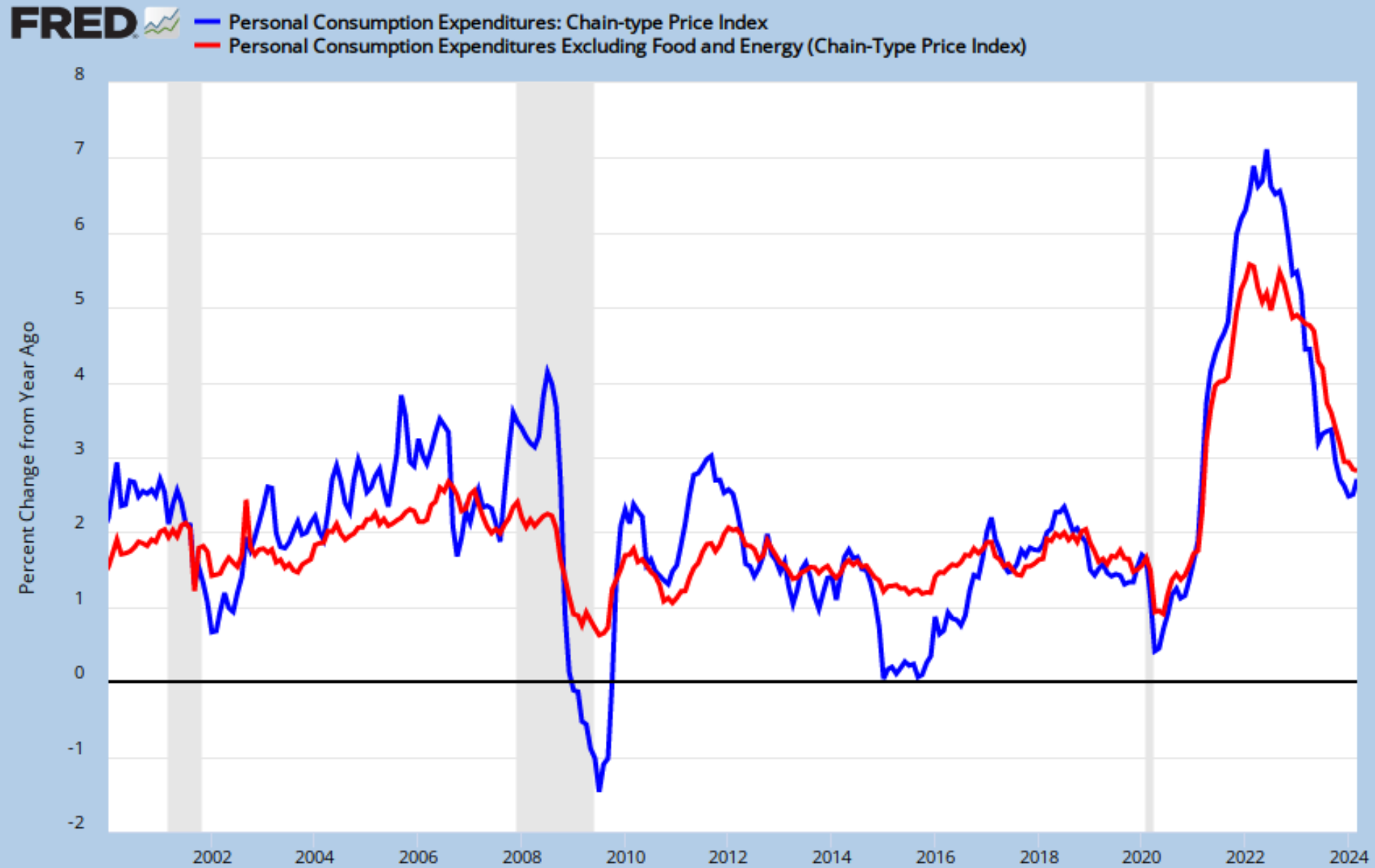
CPI: Inflationary Pressures Weaken

Watch the core numbers closely



Core PCE Price Index

Focus on core (red) inflation



Source: U.S. Bureau of Economic Analysis

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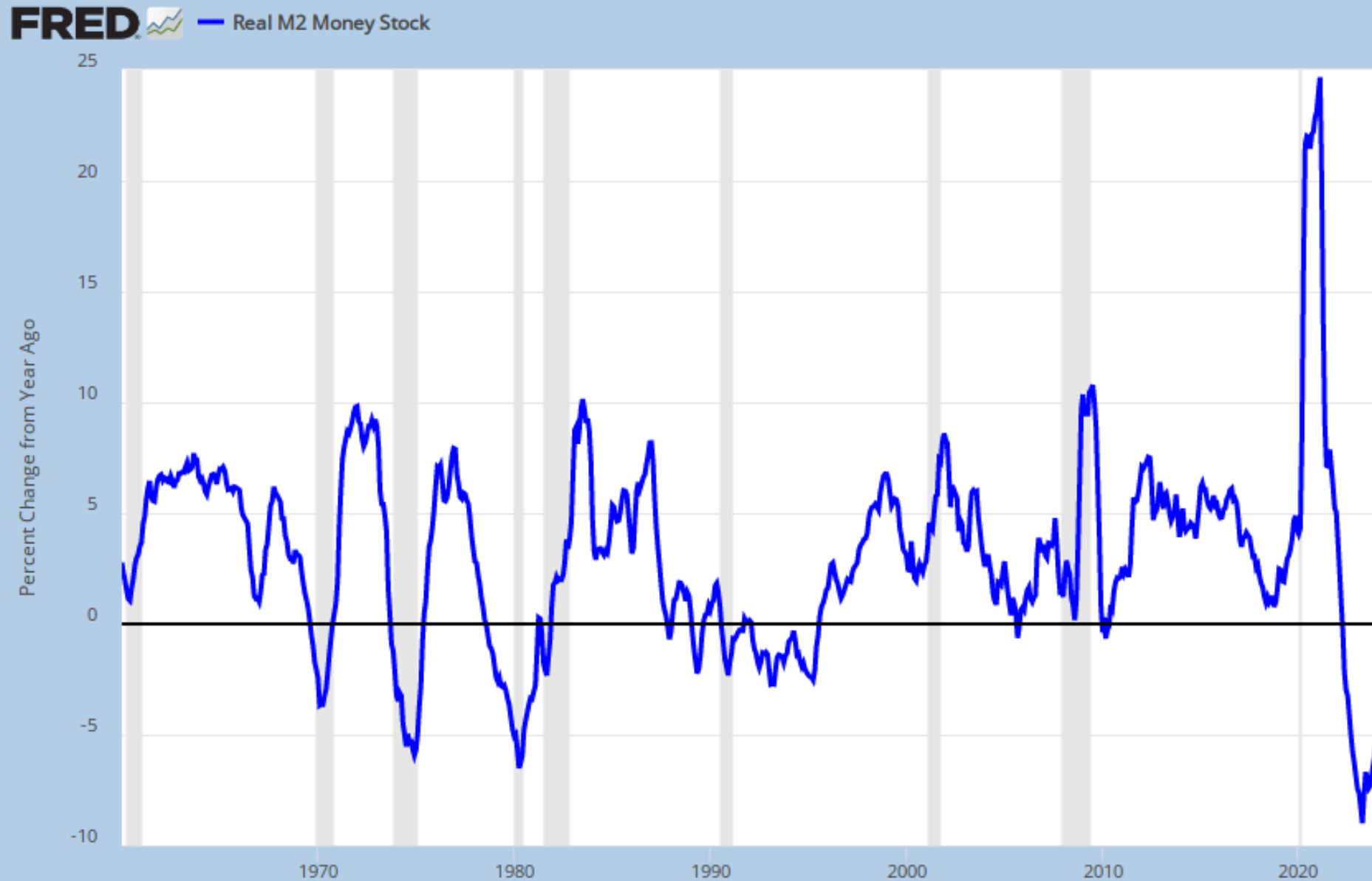
Federal Reserve Behavior

Most likely scenario

- Fed funds is currently 5.375%
- On 5/1/24 it stayed at 5.375%
- On 6/12/24 it will stay at 5.375%
- On 7/31/24 it will again stay at 5.375%

Monetary Stock Shrinks

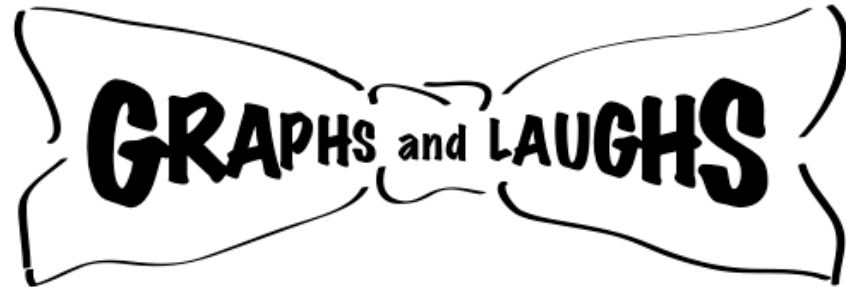
The shrinkage is fortunately shrinking



Source: Federal Reserve Bank of St. Louis

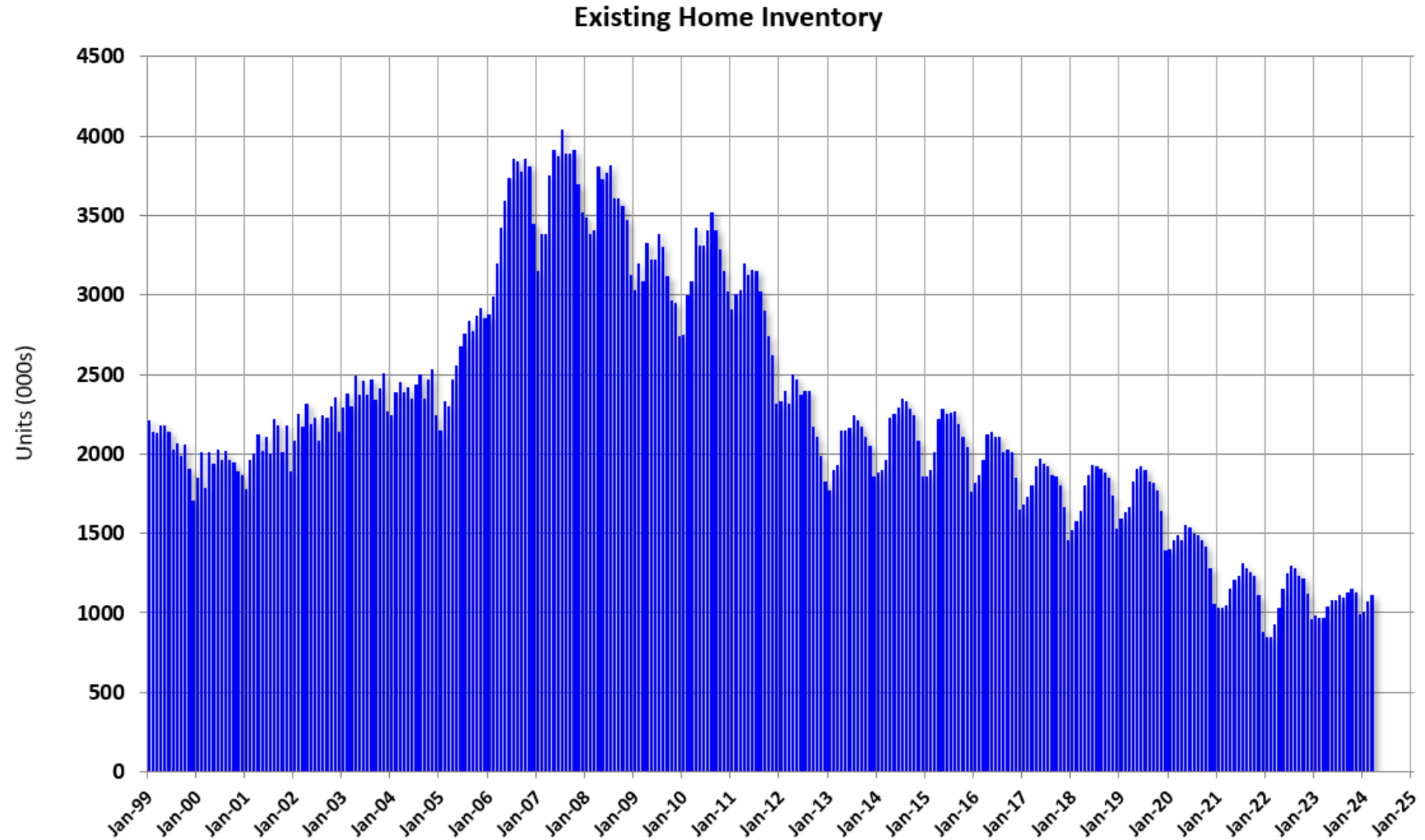
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How About Housing?



Inventory is Rising Slightly

But remains painfully low



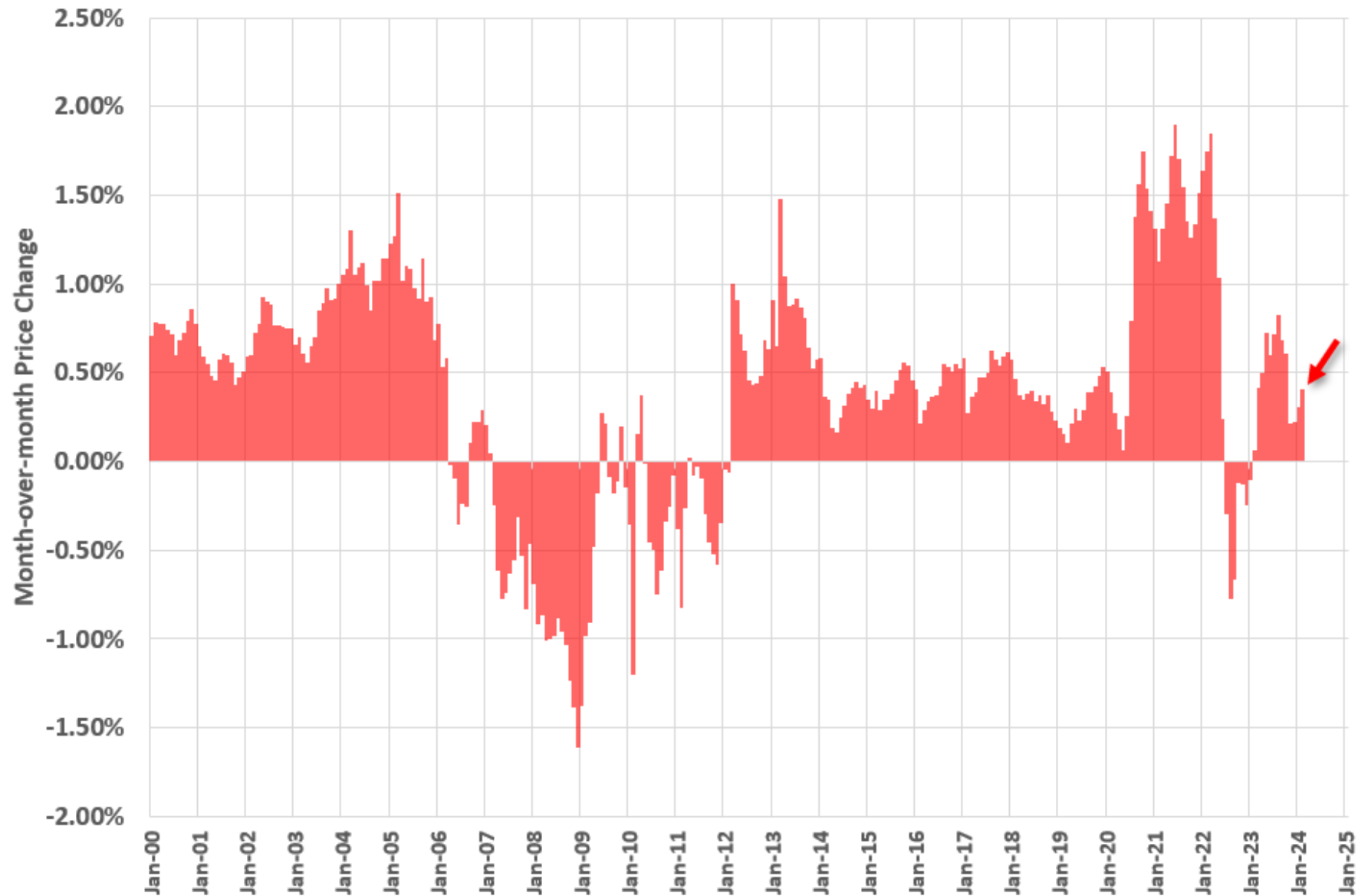
<http://www.calculatedriskblog.com/>

Source: NAR

Case-Shiller M-o-M Price Changes

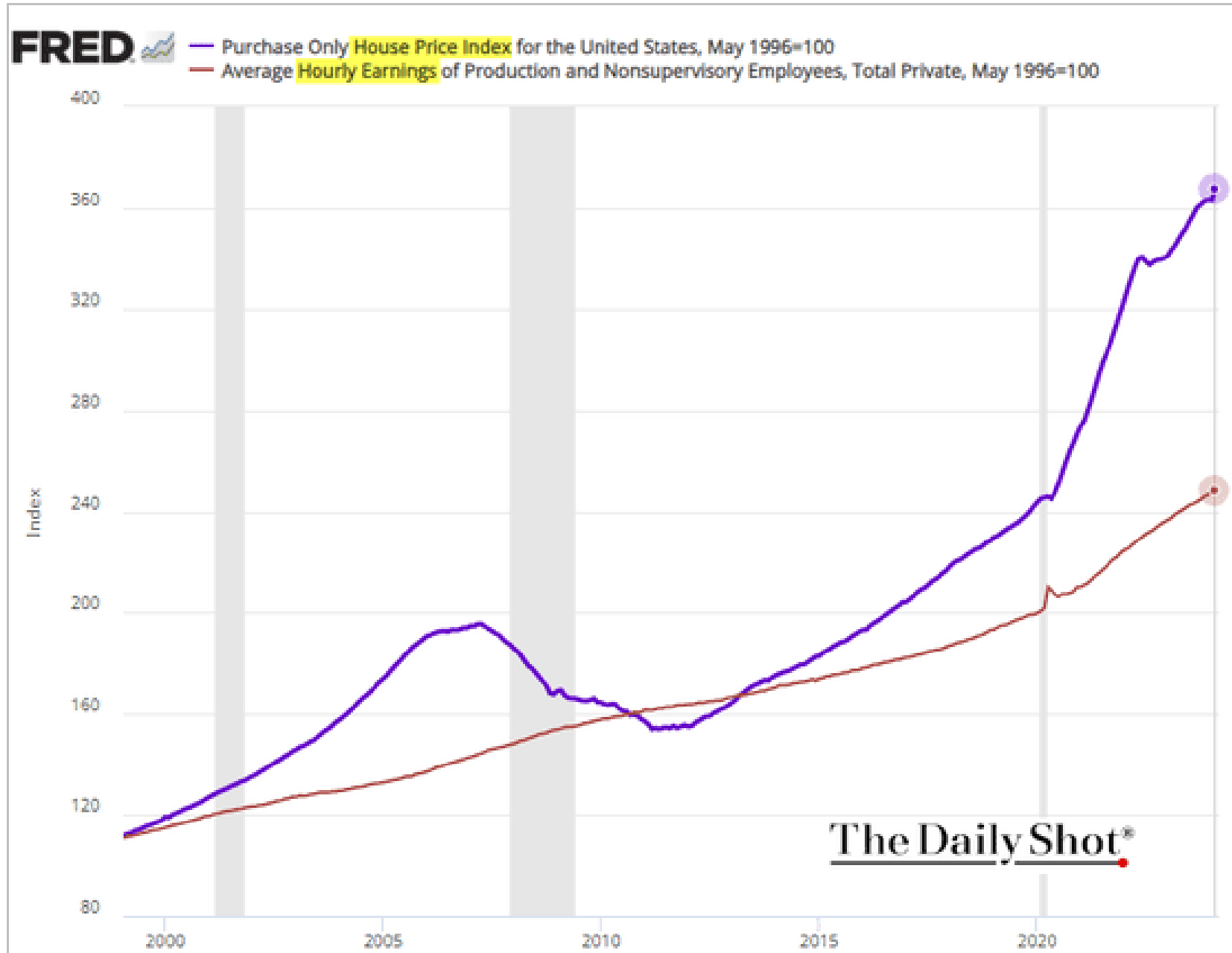
House prices fell for 7 months but have been rising steadily since

Case-Shiller National Index, Month-over-month, Seasonally Adjusted



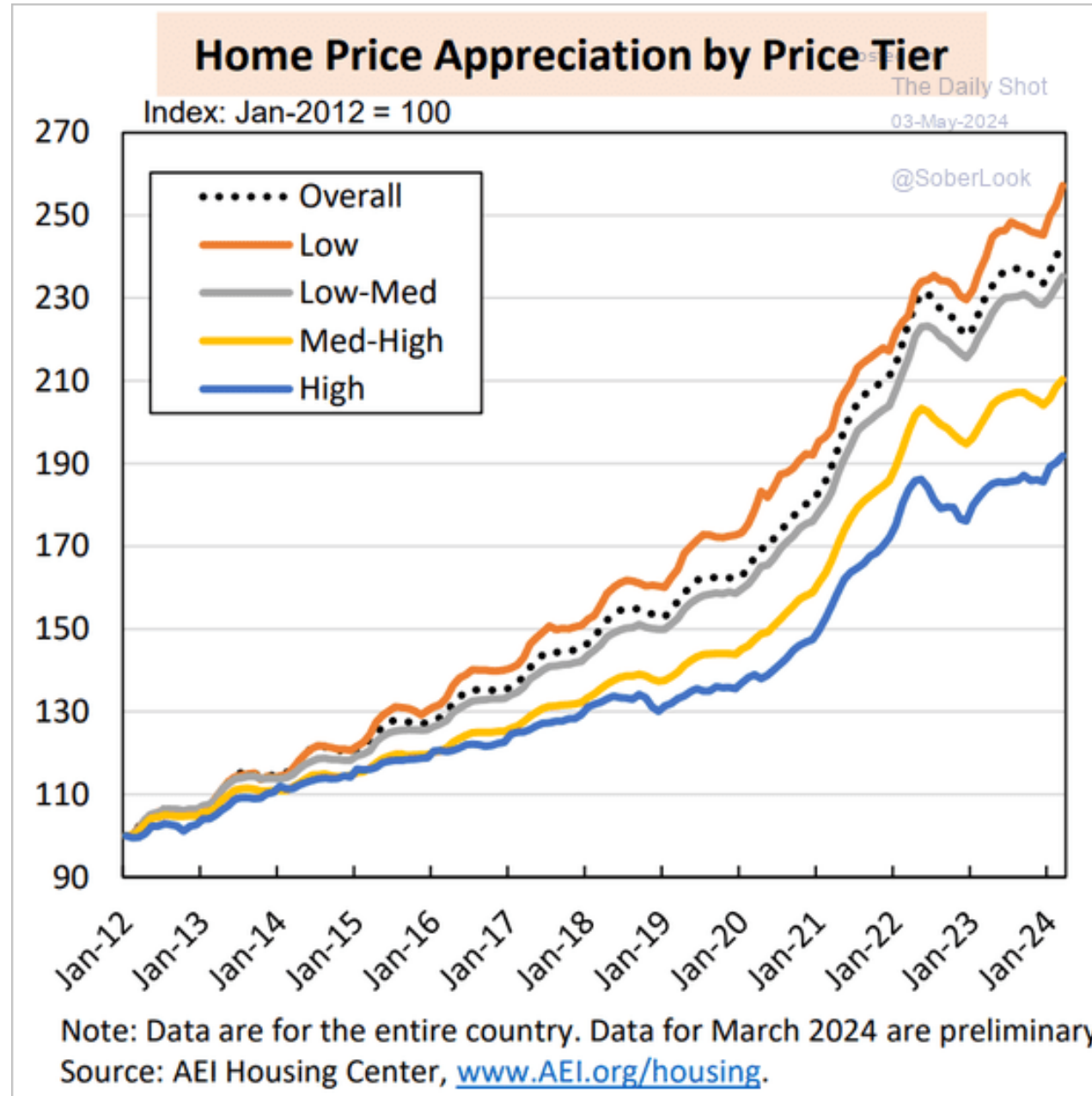
House Prices Are Way Up

Inventory is why



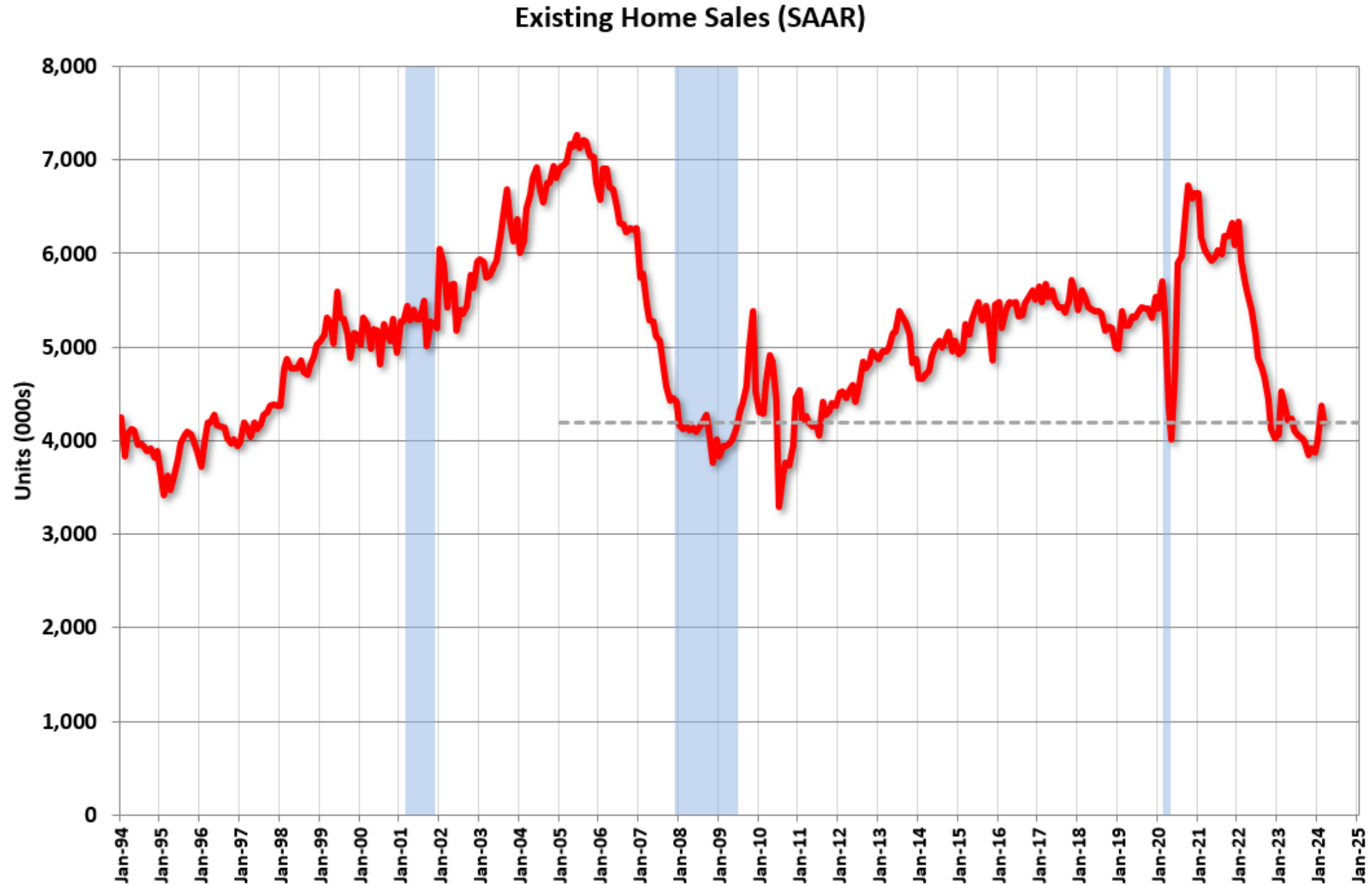
Prices of Lower Priced Homes Rise Most Quickly

A lack of low-priced inventory is key



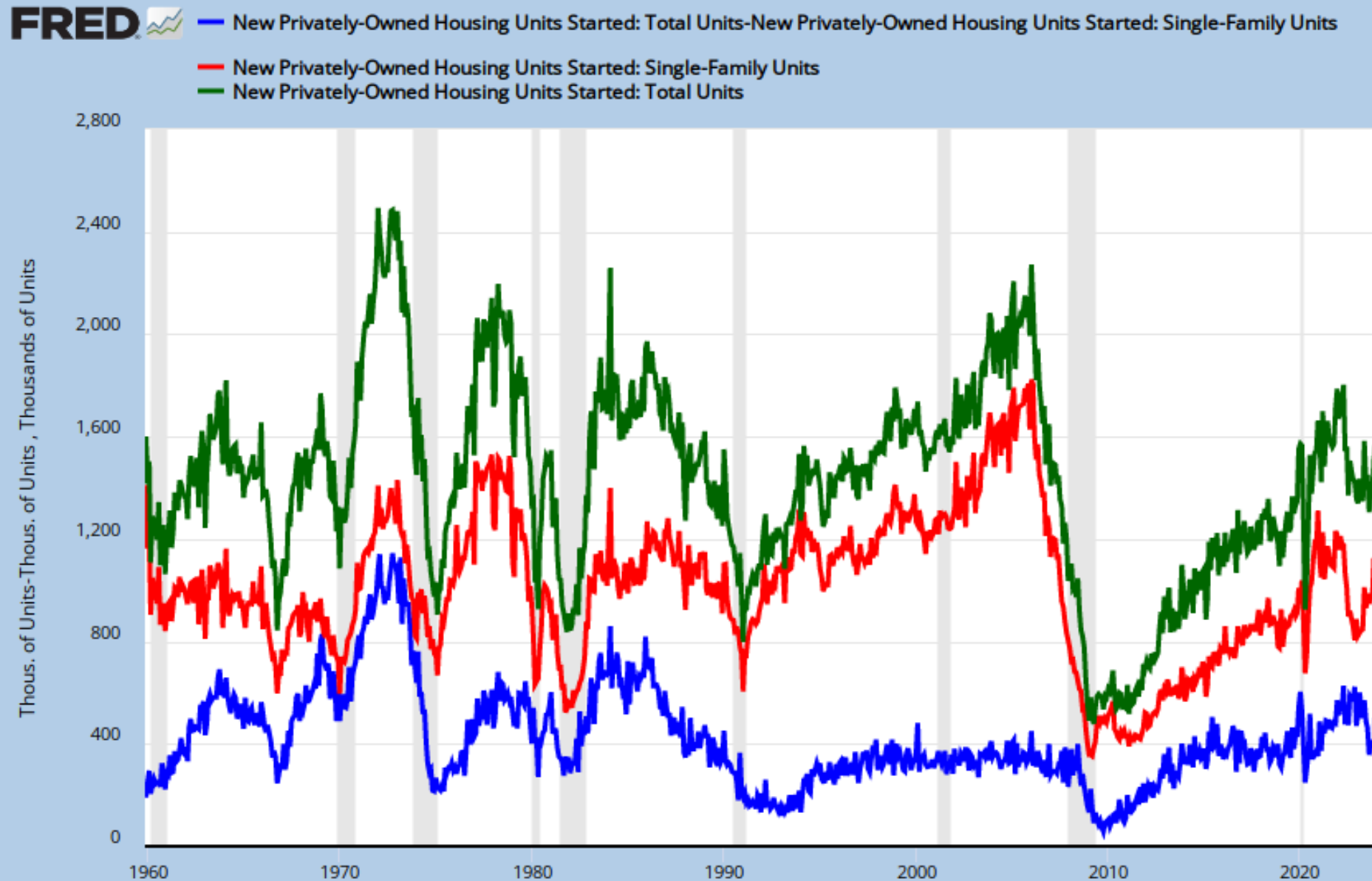
Existing Home Sales Are Soft

They should rise in 2024 as rates decline



Single-Family and Multifamily Starts

SF starts are very strong, MF starts struggle

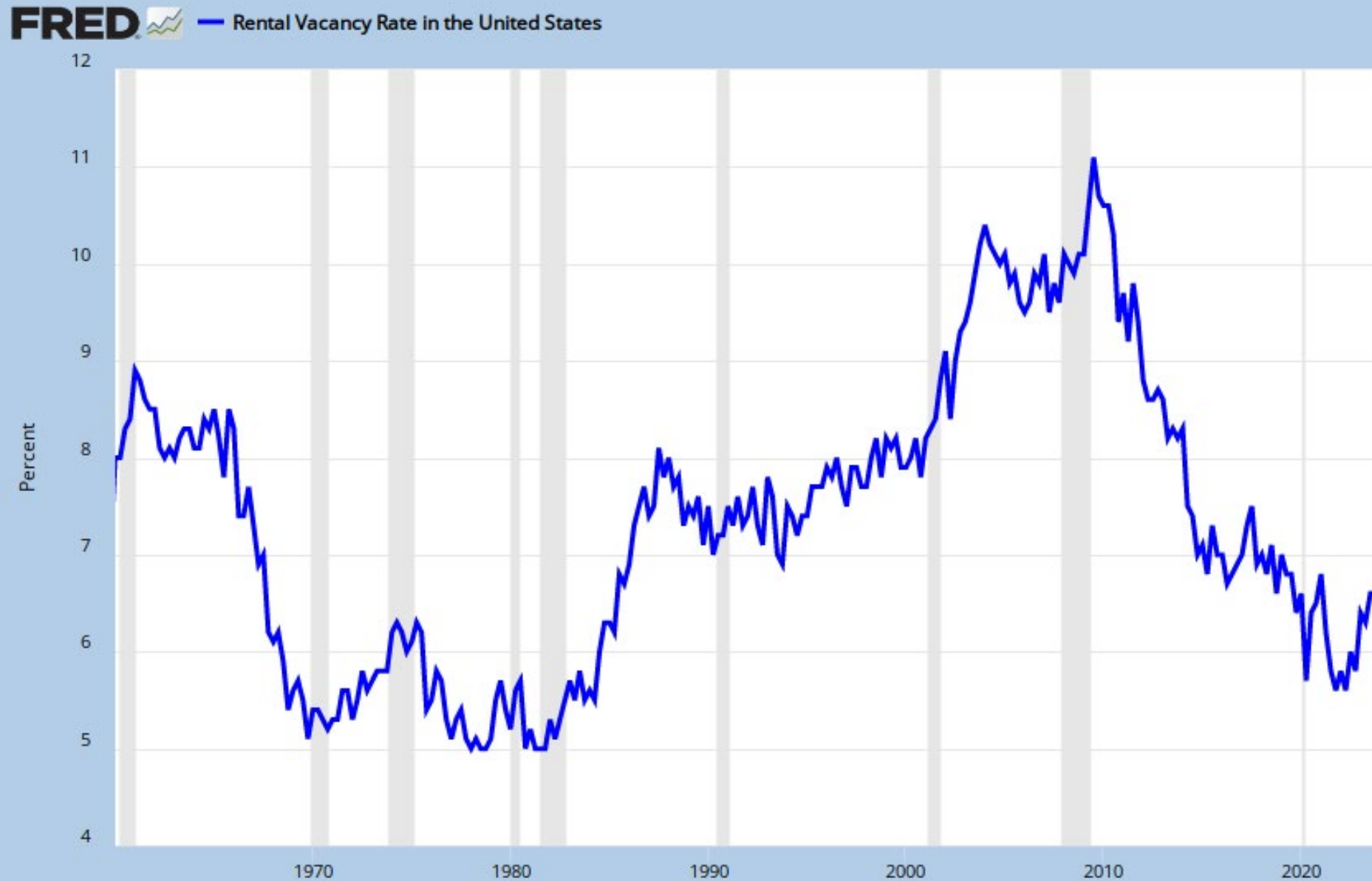


Sources: Census; HUD

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Apartment Vacancy Rates

Rental vacancy rate is well up from near 40-year lows

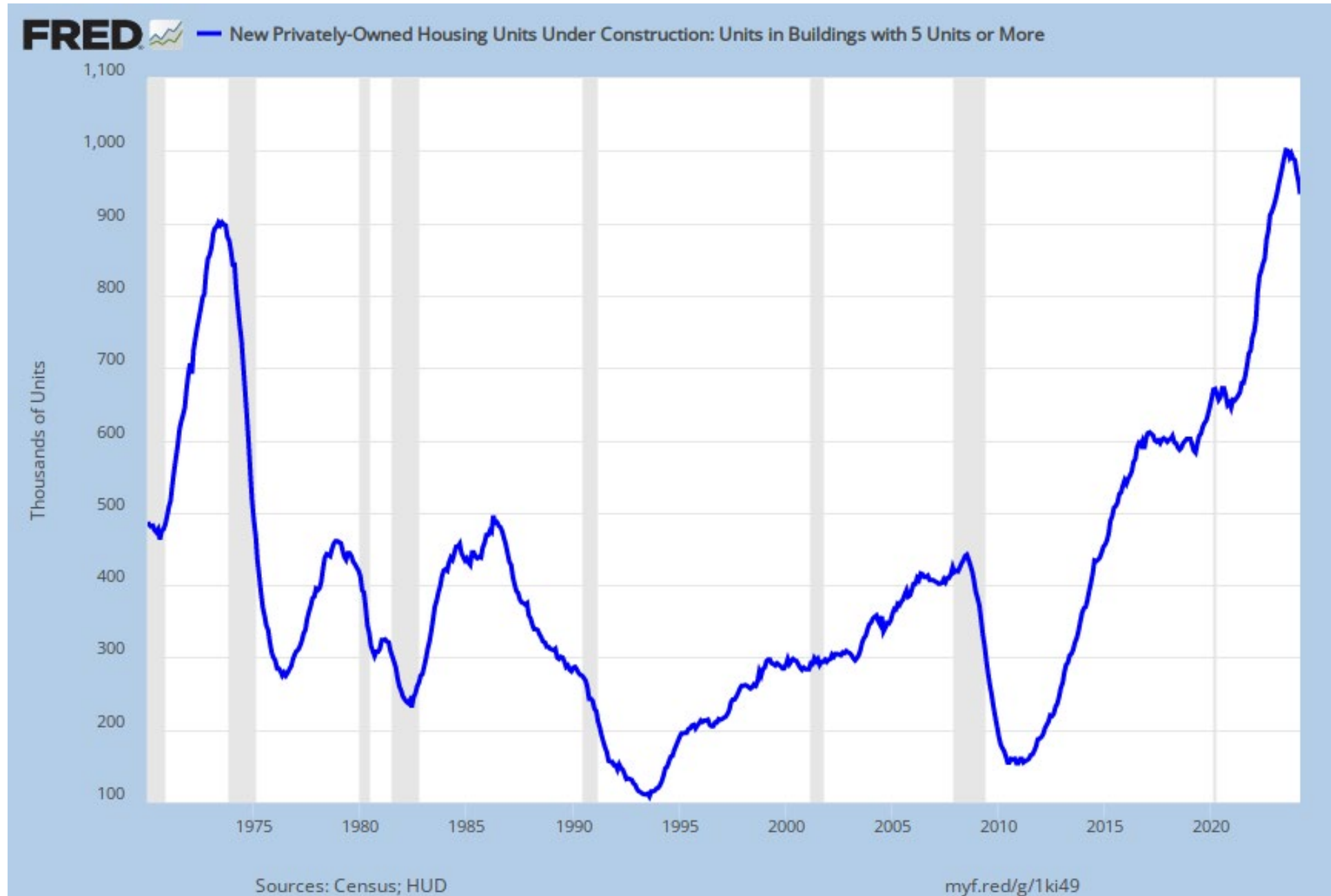


Source: U.S. Census Bureau

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Number of Multifamily Units Under Construction

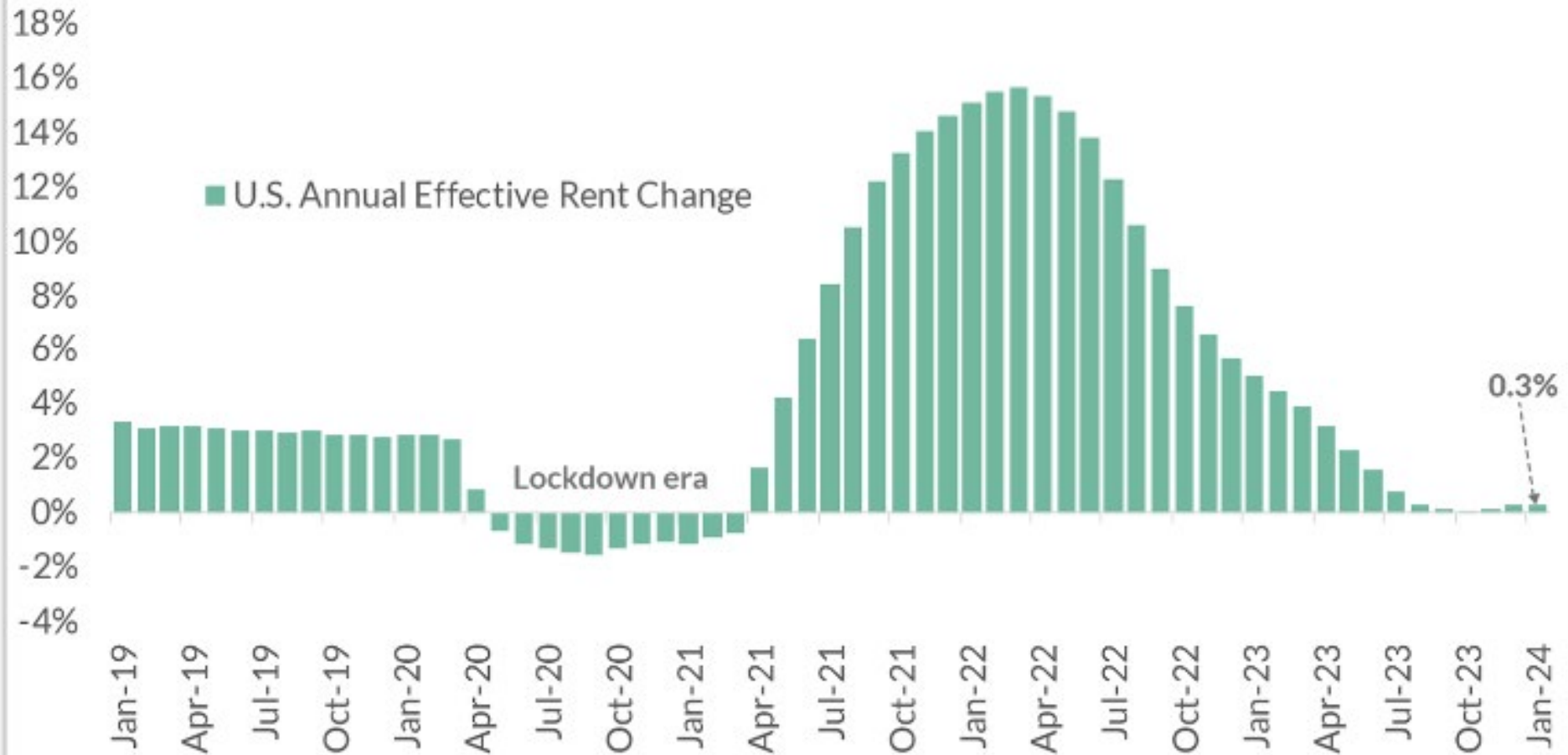
The number of units being built is very high due to supply-chain problems and so on



National Apartments Rents

They have been flat for several years

Apartment Rent Change Hovers Near Zero Since August 2023



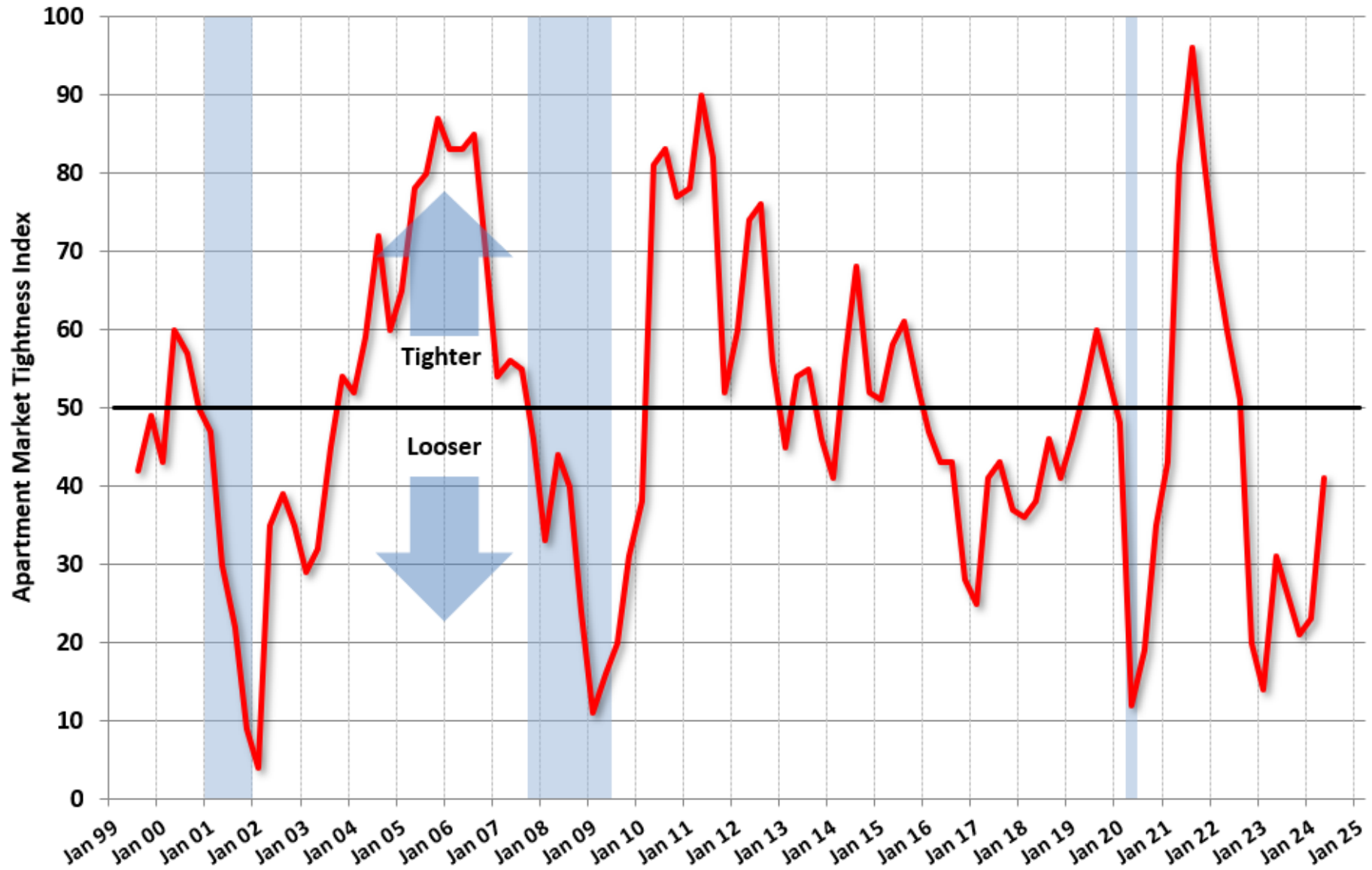
Source: RealPage Market Analytics

REALPAGE

Apartment Rental Situation

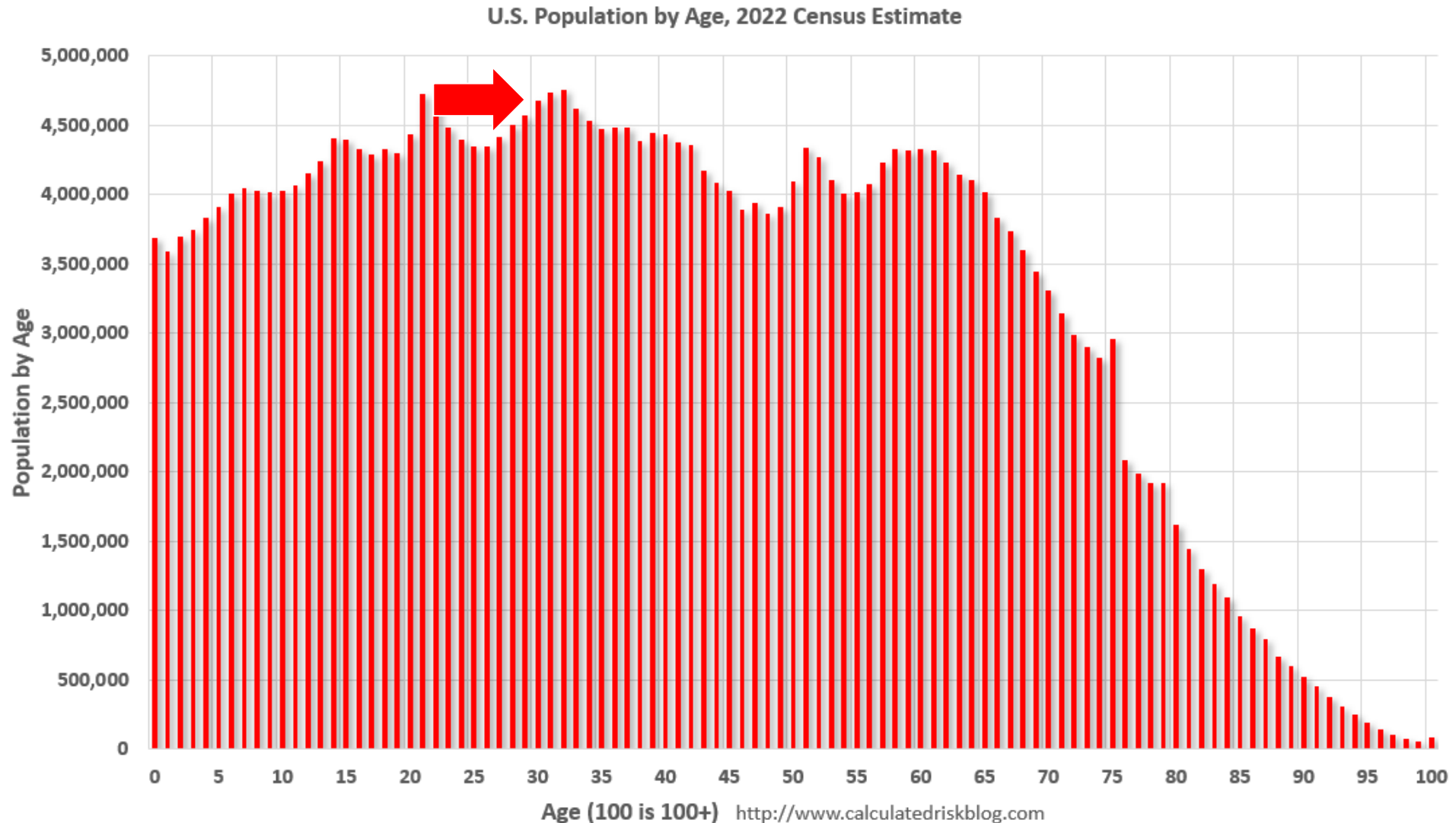
The multifamily situation is weak. Higher rates, lower rents, recession fears

NMHC Quarterly Survey of Apartment Market Tightness



Millennials Will Keep This Issue Front and Center

Beginning to approach Peak Millennial. Chase them, move-up buyers and Boomers



Construction Costs are Way Up

The increases since Covid-19 are astounding

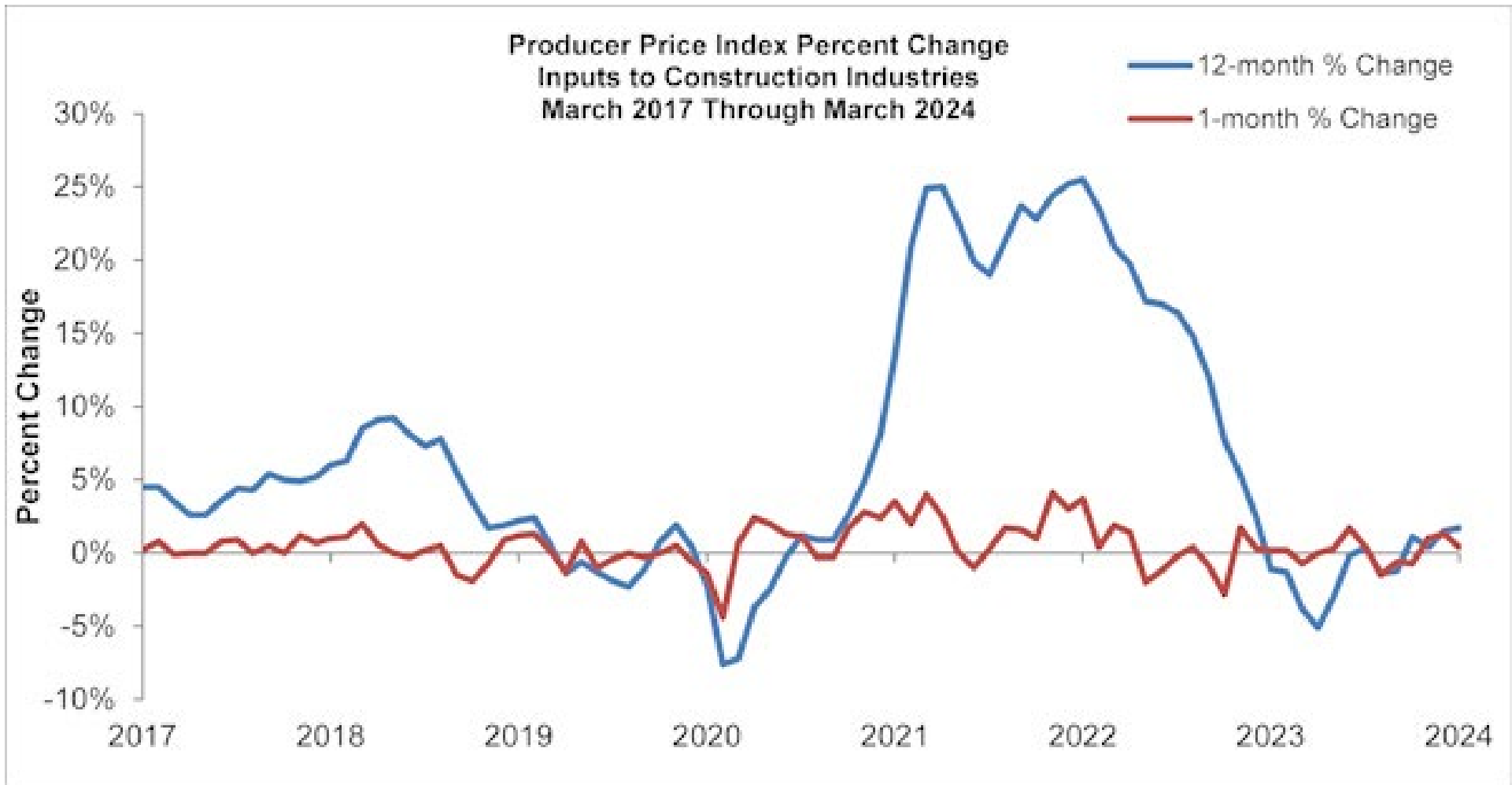
Producer Price Index, March 2024

	1-Month % Change	12-Month % Change	Change Since Feb 2020
Inputs To Industries			
Inputs to construction	0.4%	1.7%	41.1%
Inputs to multifamily construction	0.2%	2.6%	40.1%
Inputs to nonresidential construction	0.4%	1.7%	41.6%
Inputs to commercial construction	0.3%	1.3%	41.3%
Inputs to healthcare construction	0.3%	1.5%	41.1%
Inputs to industrial construction	0.5%	2.4%	37.5%
Inputs to other nonresidential construction	0.4%	1.7%	41.7%
Inputs to maintenance and repair construction	0.5%	1.4%	39.5%
Commodities			
Adhesives and sealants	0.6%	0.4%	33.9%
Brick and structural clay tile	0.3%	4.0%	29.8%
Concrete products	0.0%	6.2%	37.4%
Construction machinery and equipment	0.0%	3.9%	29.5%
Construction sand, gravel, and crushed stone	0.4%	8.3%	36.1%
Copper wire and cable	1.6%	-3.0%	33.3%
Crude petroleum	-0.8%	6.1%	55.2%
Fabricated structural metal products	-0.8%	1.2%	54.3%
Gypsum products	1.5%	1.1%	47.0%
Hot rolled steel bars, plates, and structural shapes	0.3%	-0.9%	54.4%
Insulation materials	-0.1%	3.9%	42.6%
Iron and steel	-6.9%	-5.9%	53.4%
Lumber and wood products	0.4%	-2.0%	25.5%
Natural gas	-37.0%	-43.8%	-17.1%
Plumbing fixtures and fittings	0.0%	1.1%	18.0%
Prepared asphalt, tar roofing and siding products	0.1%	7.0%	42.5%
Softwood lumber	3.2%	-6.8%	11.3%
Steel mill products	-7.8%	-3.6%	63.7%
Switchgear, switchboard, industrial controls equipment	0.8%	7.2%	43.7%
Unprocessed energy materials	-6.9%	-4.1%	54.2%

Source: U.S. Bureau of Labor Statistics

Construction Cost Inflation

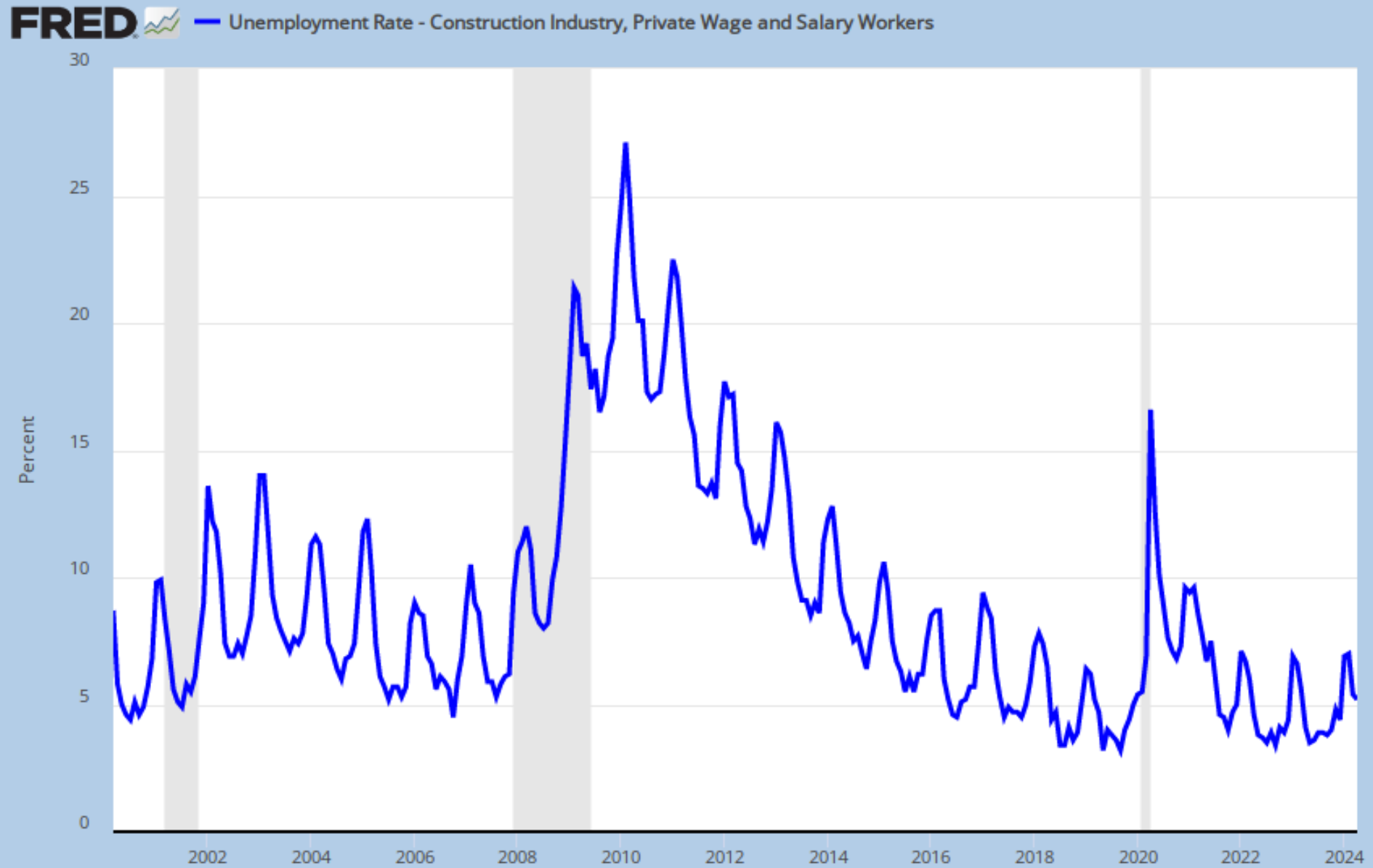
The increases have totally stopped



Source: U.S. Bureau of Labor Statistics

Construction Unemployment

Is near its best level in at least 20 years

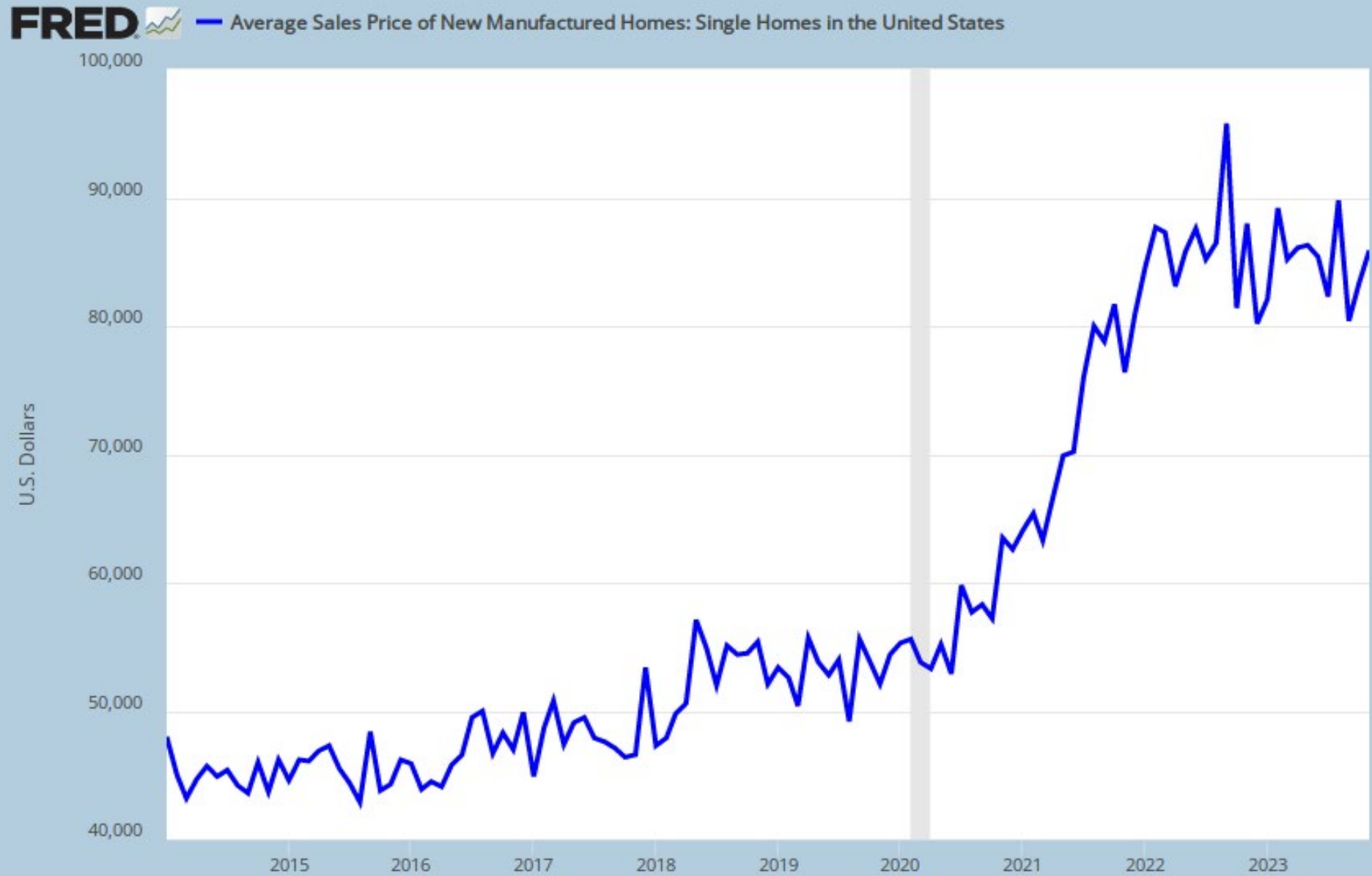


Source: U.S. Bureau of Labor Statistics

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Mobile Home Prices are High

Is this because SF/Condo prices are out of reach? Supply-chain issues are better

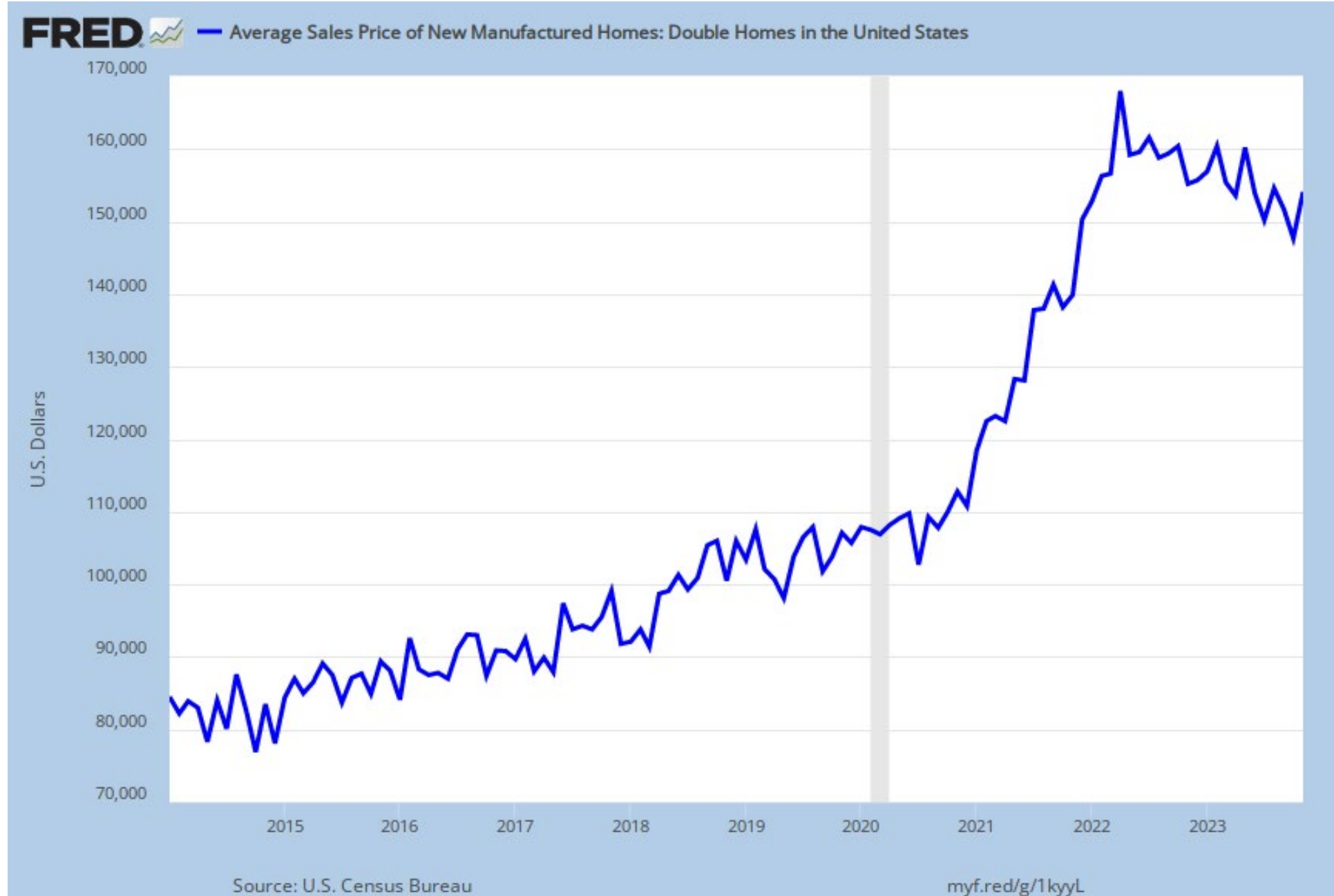


Source: U.S. Census Bureau

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Double-Wide Mobile Home Prices are High

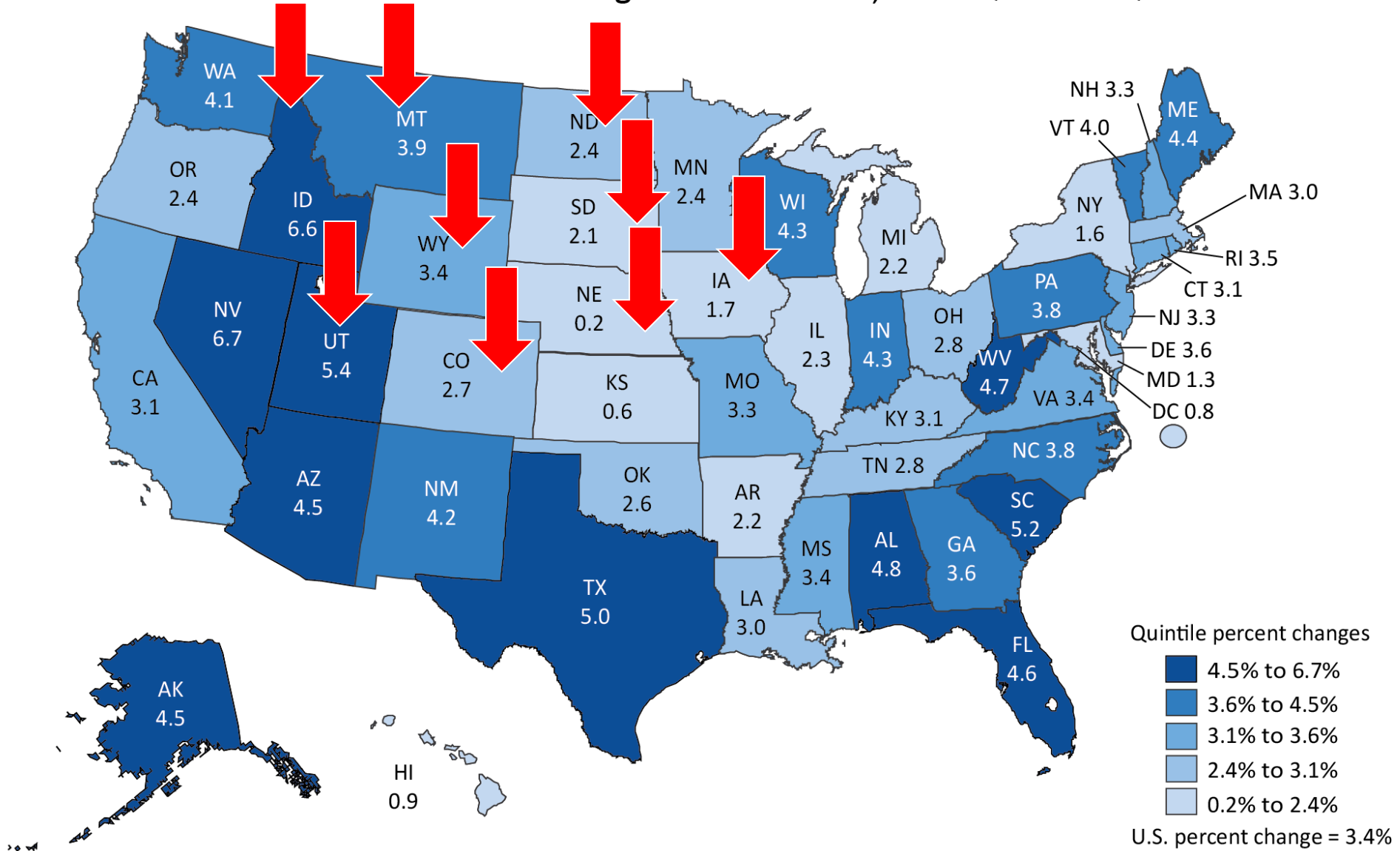
Supply-chain issues are abating



**What About
Things Here?**

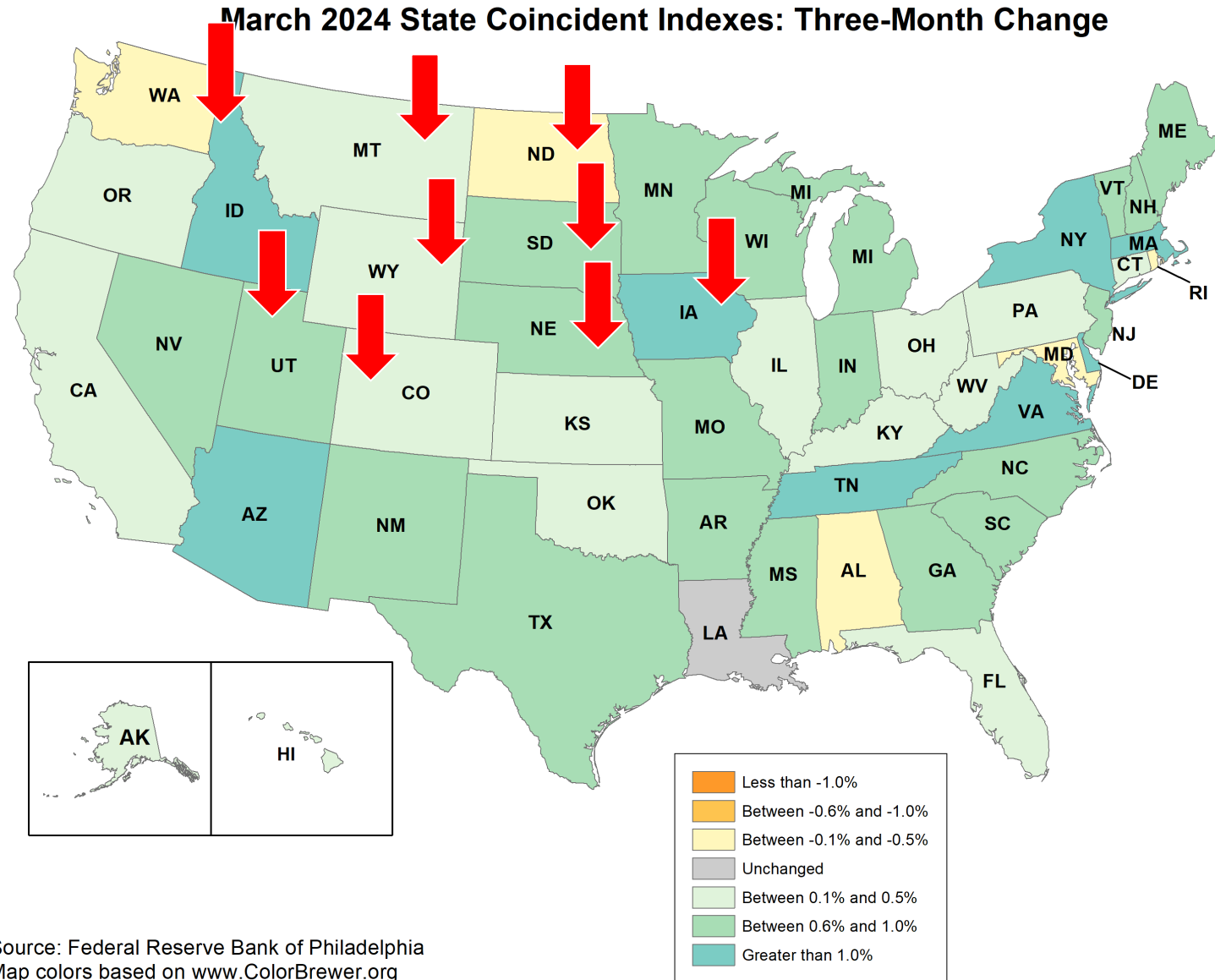
Things Are Generally Best Further West

Real GDP: Percent Change at Annual Rate, 2023:Q3–2023:Q4












Things Vary

States starting with an I are growing best



Home Prices Decline

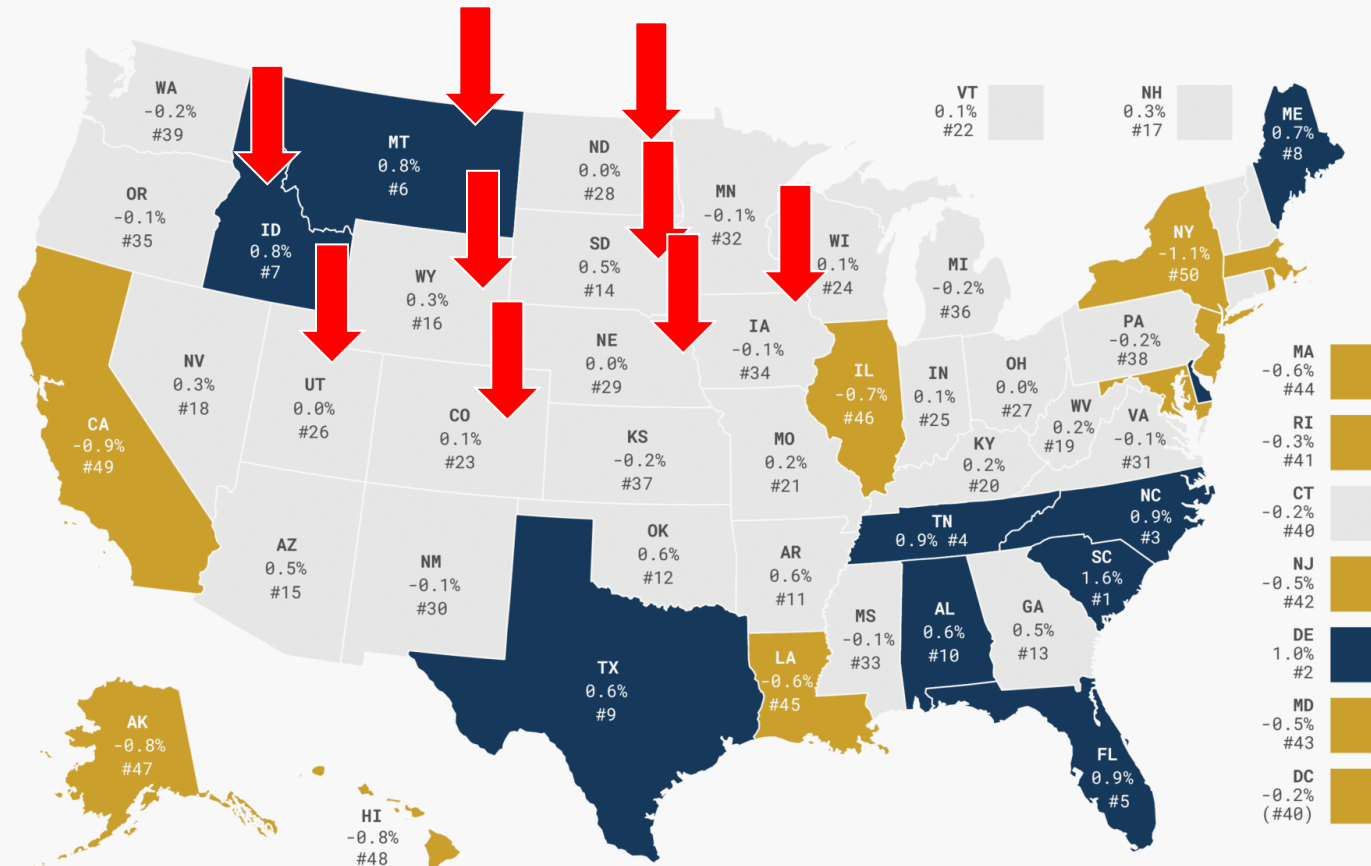
Largely west of the Mississippi River

	Core-Based Statistical Area (CBSA)	Change from Peak (SA)
	1 Austin-Round Rock-Georgetown TX	-12.3%
	2 Pueblo CO	-6.2%
	3 Coeur d'Alene ID	-5.4%
	4 Lake Charles LA	-5.2%
	5 Idaho Falls ID	-4.8%
	6 Boise City ID	-4.7%
	7 Logan UT-ID	-4.6%
	8 Colorado Springs CO	-4.2%
	9 Punta Gorda FL	-3.9%
	10 Morgantown WV	-3.7%
	11 Charleston WV	-3.7%
	12 Parkersburg-Vienna WV	-3.7%
	13 Santa Cruz-Watsonville CA	-3.5%
	14 New Orleans-Metairie LA	-3.5%
	15 Lake Havasu City-Kingman AZ	-3.2%
	16 Hammond LA	-3.1%
	17 San Francisco-Oakland-Berkeley CA	-2.9%
	18 Beckley WV	-2.9%
	19 Sacramento-Roseville-Folsom CA	-2.5%
	20 Portland-Vancouver-Hillsboro OR-WA	-2.5%
	21 Cape Coral-Fort Myers FL	-2.2%
	22 Boulder CO	-2.2%
	23 Stockton CA	-2.0%
	24 Redding CA	-1.9%
	25 Bend OR	-1.8%
	26 Vallejo CA	-1.8%
	27 Fargo ND-MN	-1.7%
	28 Waco TX	-1.6%
	29 Bismarck ND	-1.6%
	30 Medford OR	-1.6%

State Migratory Population Changes 2023

State Population Changes in 2023

State Net Population Changes from Interstate Migration, from Most Inbound to Most Outbound, FY 2023



Note: On this map, population changes are rounded to the tenths place, but ranks are based on unrounded Census figures. D.C.'s rank does not affect states' ranks, but the figure in parentheses indicates where it would have ranked if included.
Source: U.S. Census Bureau.

State Population Changes 2023

It's all about the South, Texas and the Intermountain West

The U.S. States Losing & Gaining Population

Posted on

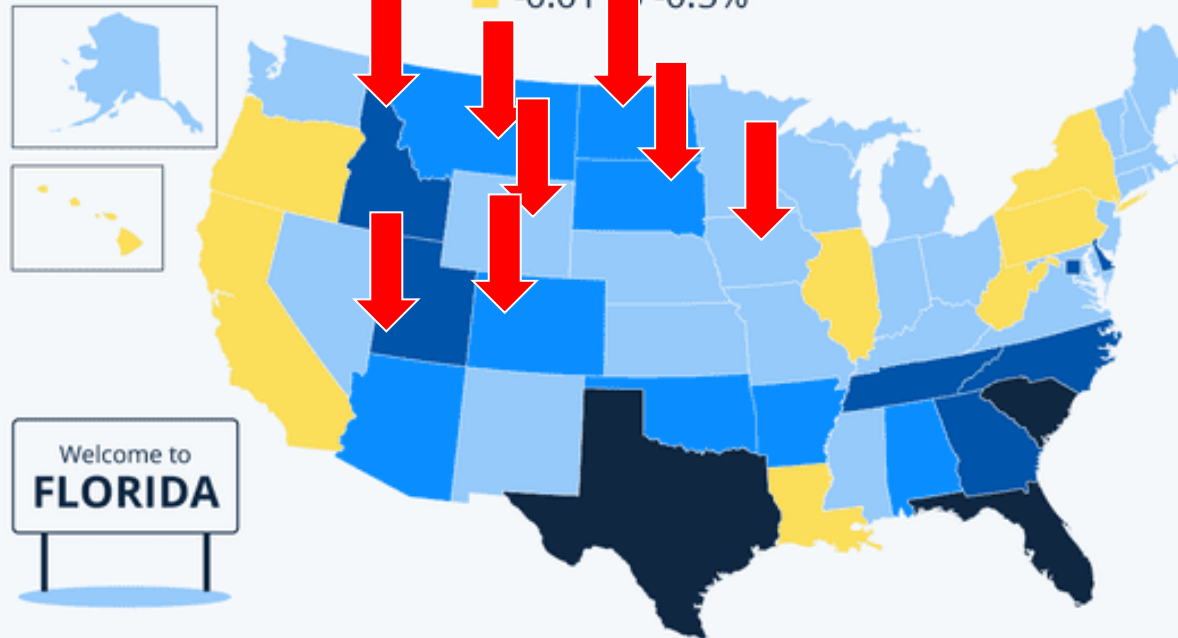
The Daily Shot

01-May-2024

@SoberLook

Population growth by U.S. state from 2022 to 2023*

■ 1.6 to 1.7% ■ 1.1 to 1.5% ■ 0.6 to 1.0% ■ 0.0 to 0.5%
■ -0.01 to -0.5%





* As of mid-year

Source: U.S. Census Bureau





statista

The Most Numeric Growth 7/1/22-6/30/23

Top 10 States by Numeric Growth: 2022 to 2023					
Rank	Geographic Area	April 1, 2020 (Estimates Base)	July 1, 2022	July 1, 2023	Numeric Growth
1	Texas	29,145,459	30,029,848	30,503,301	473,453
2	Florida	21,538,216	22,245,521	22,610,726	365,205
3	North Carolina	10,439,459	10,695,965	10,835,491	139,526
4	Georgia	10,713,771	10,913,150	11,029,227	116,077
5	South Carolina	5,118,422	5,282,955	5,373,555	90,600
6	Tennessee	6,910,786	7,048,976	7,126,489	77,513
7	Arizona	7,157,902	7,365,684	7,431,344	65,660
8	Virginia	8,631,373	8,679,099	8,715,698	36,599
 9	Colorado	5,773,707	5,841,039	5,877,610	36,571
 10	Utah	3,271,614	3,381,236	3,417,734	36,498

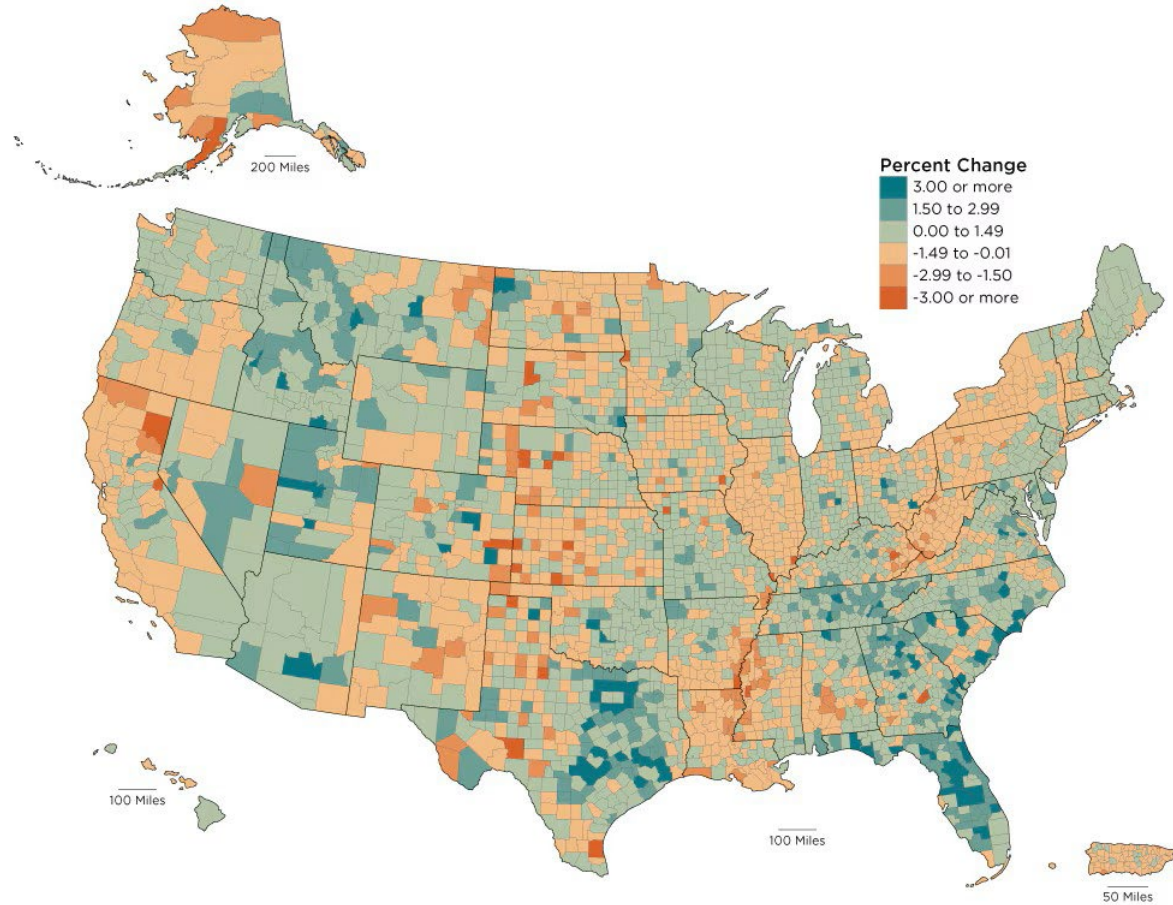
The Fastest Percentage Growth 7/1/22-6/30/23

Top 10 States or State Equivalent by Percent Growth: 2022 to 2023					
Rank	Geographic Area	April 1, 2020 (Estimates Base)	July 1, 2022	July 1, 2023	Percent Growth
1	South Carolina	5,118,422	5,282,955	5,373,555	1.7
2	Florida	21,538,216	22,245,521	22,610,726	1.6
3	Texas	29,145,459	30,029,848	30,503,301	1.6
 4	Idaho	1,839,117	1,938,996	1,964,726	1.3
5	North Carolina	10,439,459	10,695,965	10,835,491	1.3
6	Delaware	989,946	1,019,459	1,031,890	1.2
7	District of Columbia	689,548	670,949	678,972	1.2
8	Tennessee	6,910,786	7,048,976	7,126,489	1.1
 9	Utah	3,271,614	3,381,236	3,417,734	1.1
10	Georgia	10,713,771	10,913,150	11,029,227	1.1

Population Growth by State: 2022-2023

Best all over the place. Pandemic related. Will it persist?

Percent Change in County Population: July 1, 2022, to July 1, 2023



KEY TAKEAWAYS

- 1) 2024 will be a decent year
- 2) The Fed has stopped raising rates
- 3) Job growth will most likely slow
- 4) Inflation should keep decelerating
- 5) Watch inflation and unemployment

ANY QUESTIONS?

Elliot F. Eisenberg, Ph.D.

Cell: 202.306.2731

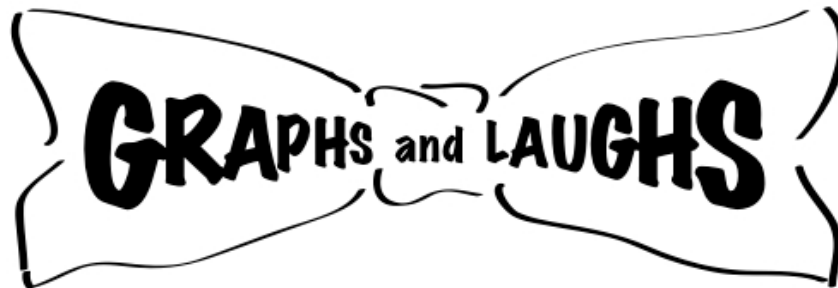
elliott@graphsandlaughs.net

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Do you want to get my daily 70-word economics email?
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Thank YOU all very very much!

@ECON70



Innovative Housing Solutions



Innovative Housing Solutions

Nate Peterson

*Owner and Founder,
Rocky Mountain Home Builders*

Michael Fraley

*Chief Growth Officer,
Oakwood Homes*

Ross Cohen

*President,
Huron Components*

Moderator: Steve Boice

*Manager, Business Finance,
CHFA*

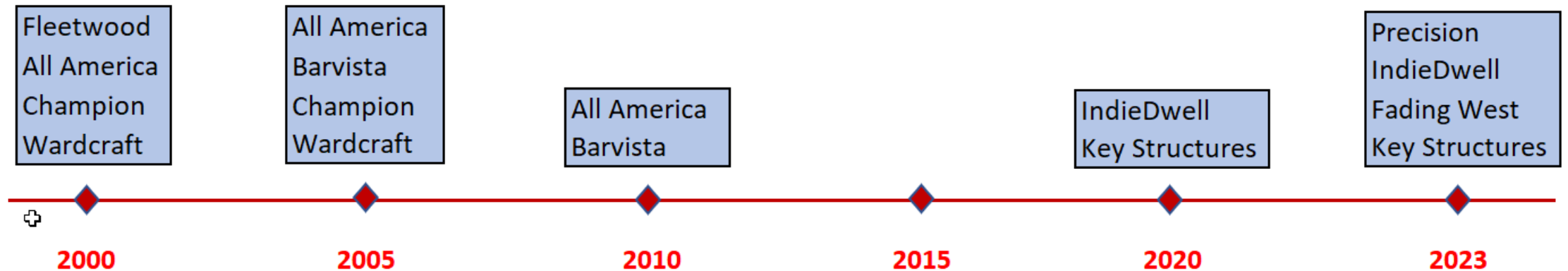


**NATE
PETERSON**

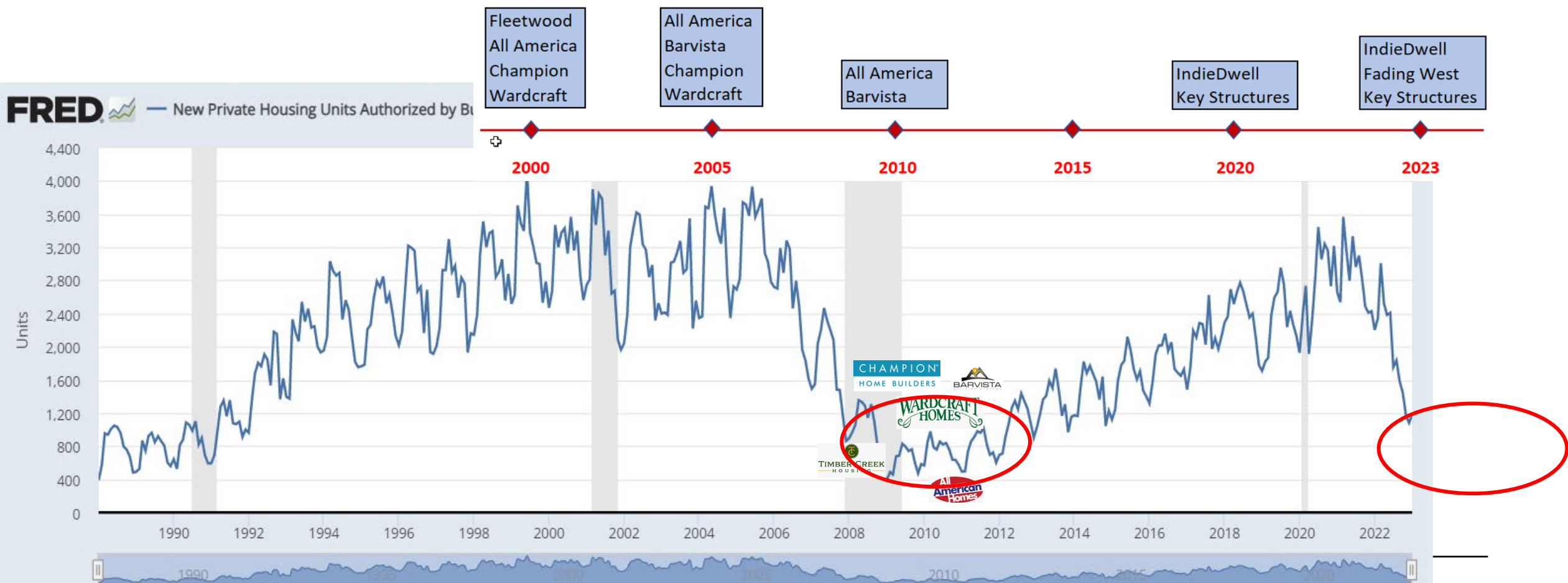


COLORADO'S MODULAR HOUSING HISTORY

**Fun Fact – Colorado's first Modular Home Factory
was in 1940 in Littleton**



COLORADO'S MODULAR HOUSING HISTORY



COLORADO'S DEMAND AND PRODUCTION

2021

COLORADO CONSUMED
1516
MODULAR COMPONENTS

COLORADO FACTORIES – 119

OUT OF STATE FACTORIES – 1,429

92%

Out of State

2022

COLORADO CONSUMED
1548
MODULAR COMPONENTS

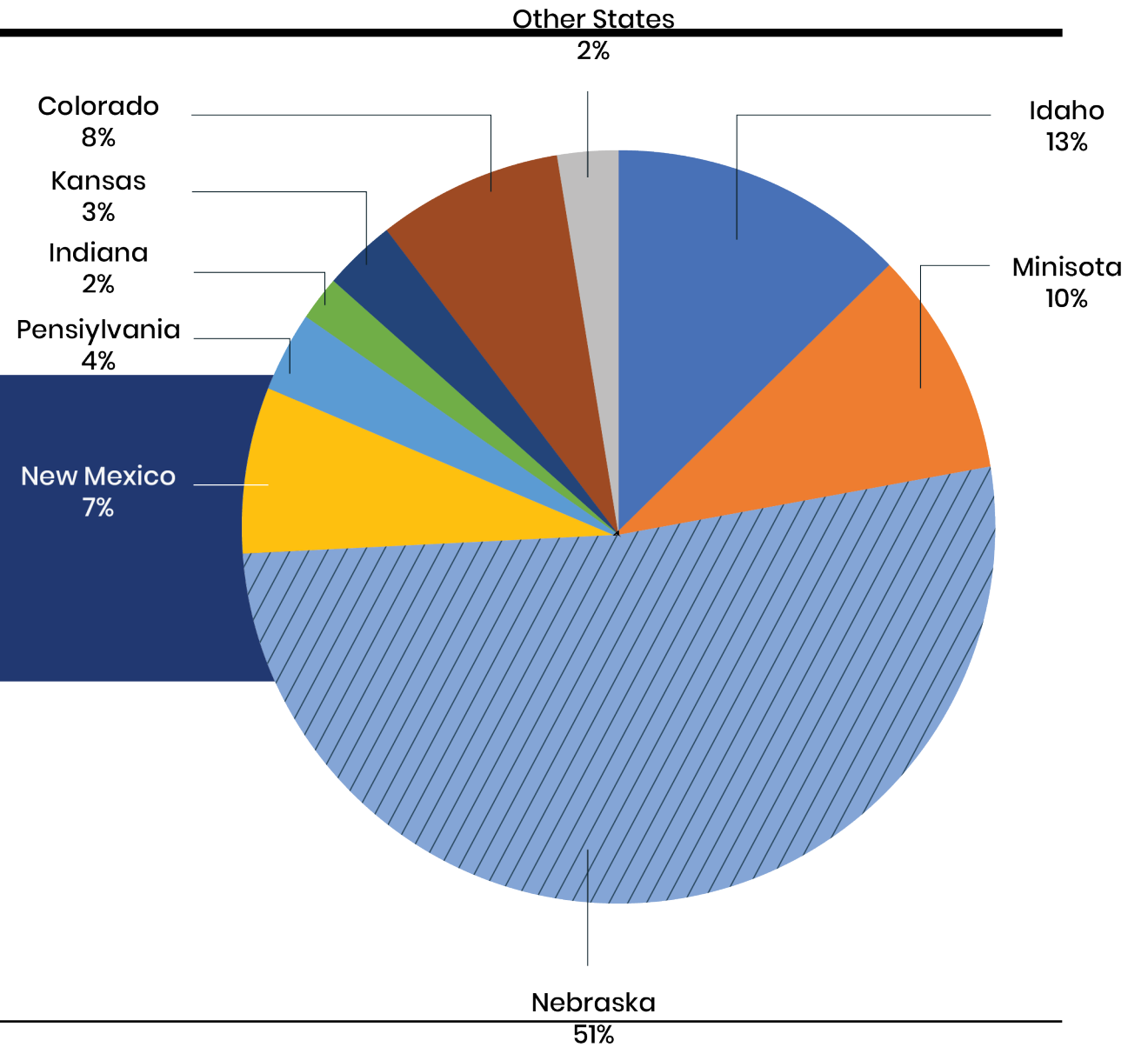
COLORADO FACTORIES – 180

OUT OF STATE FACTORIES – 1,368

88%

Out of State

What states supply Colorado



THE PRICE WE PAY

Cost of out of state purchases

State Shipping into Colorado - Modular	Unit	Square Feet	Purchase Price
Idaho	192	148,800	24,552,000
Minnesota	150	116,250	19,181,250
Nebraska	781	605,275	99,870,375
New Mexico	106	82,150	13,554,750
Pennsylvania	54	41,850	6,905,250
Indiana	28	21,700	3,580,500
Kansas	48	37,200	6,138,000
Colorado	119	92,225	
Other States	38	29,450	4,859,250
			\$178,641,375

THE COST OF SHIPPING

Cost to ship to Colorado

State Shipping into Colorado - Modular	Components	Market	Distance Traveled	Total miles to State Line
Idaho	192	13%	600	115,200
Minnesota	150	10%	710	106,500
Nebraska	781	52%	300	234,300
New Mexico	106	7%	243	25,758
Pennsylvania	54	4%	1413	76,302
Indiana	28	2%	869	24,332
Kansas	48	3%	300	14,400
Colorado	119	8%		
Other States	28	3%	500	19,000
	1516			615,792

- 615,792 Miles to State Line @ \$22.00 per mile = \$13,547,424
- This cost adds 8% to the cost of our modular housing

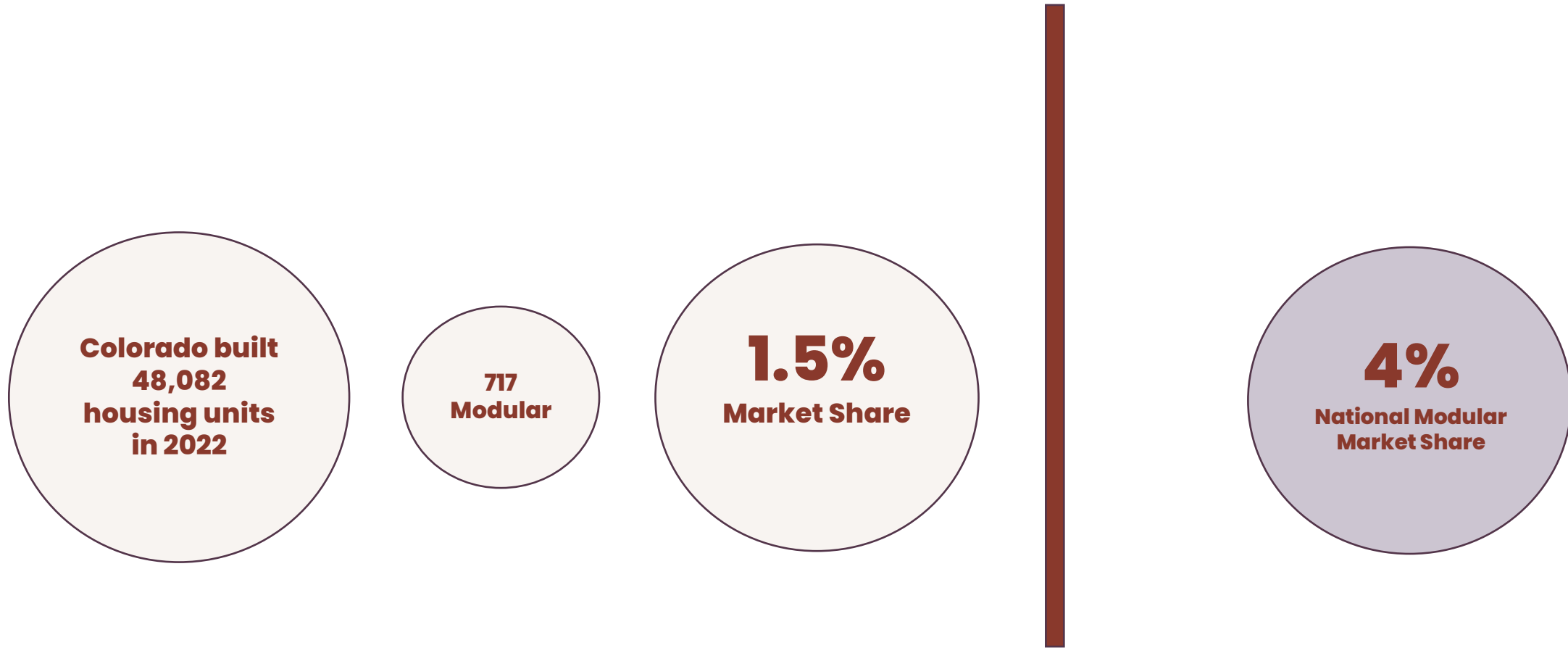
WAGES SENT OUT OF STATE

Lost Wages

State Shipping into Colorado - Modular	Components
Idaho	192
Minnesota	150
Nebraska	781
New Mexico	106
Pennsylvania	54
Indiana	28
Kansas	48
Colorado	
Other States	38
Total	1,397

- Average modular component takes 750 labor hours to manufacturer
- $1,397 \times 750 = 1,047,750$ hours → **\$31,432,500** lost wages to other states

Colorado – Overall Modular Market Share



Colorado – Modular Multifamily / Apartment Market share



**Colorado
issued 23,580
multifamily
housing
permits in 2022**

**32
Modular**

**0.13%
Market Share**

**6.0%
National Modular
Market Share**



State Agencies – Modular Market Share



COLORADO
Department of Local Affairs



**2022
DOLA/CHFA
Financed
4,466
Affordable
Housing Units**

**30
Modular**

**0.6%
Market Share**



Year	Modular
1992	40
2001	22
2005	17
2008	16
2021	16
Total	111



Year	Modular
2016	16
2021	28
2022	30
2023	14
Future	197
Total	285



innovative housing and modular manufacturer financing

Huron Components - panelized homes

Guerdon - Modular Housing

VillaLife - Modular Housing

Adoba - RV / Park Models

Azure Printed Homes - 3D Printed Homes

Vederra- Modular Homes

____Timber Age - Modular Homes_____



COLORADO'S LEADER in Modular Building Technology



Vederra Building Systems is setting a new standard in Colorado for factory-built energy efficient construction with positive social impact. Vederra is 100% committed to supporting affordable housing organizations and developers across Colorado.



Colorado Experience - Vederra's top leadership has over 30 years of experience designing, permitting, and building modular projects all across Colorado. This institutional knowledge of the design process, components, engineering, and contractor relationships is critical to a successful modular project.

Installation Expertise - Vederra's team has installed hundreds of modular home components in the state of Colorado over the past 3 decades. Vederra provides our own installation crews to set our modular components at your site, providing critical on-site expertise during the most important step of modular construction.

Product Mix - Vederra specializes in large multifamily and multi-unit projects under the IRC, IBC, and IECC codes. To maintain needed factory efficiency, minimum order size is 20 units.



303.283.0123 | www.Vederra.com

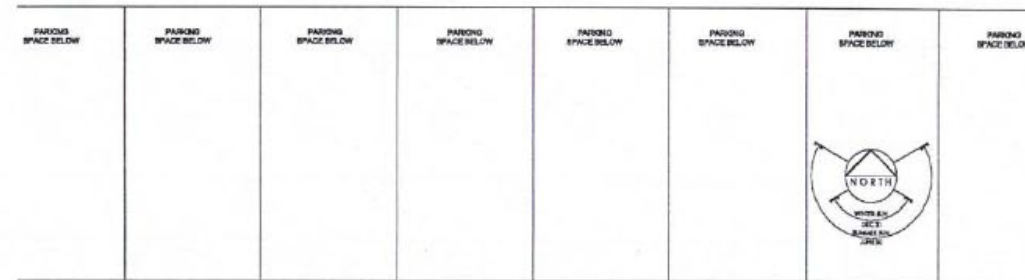
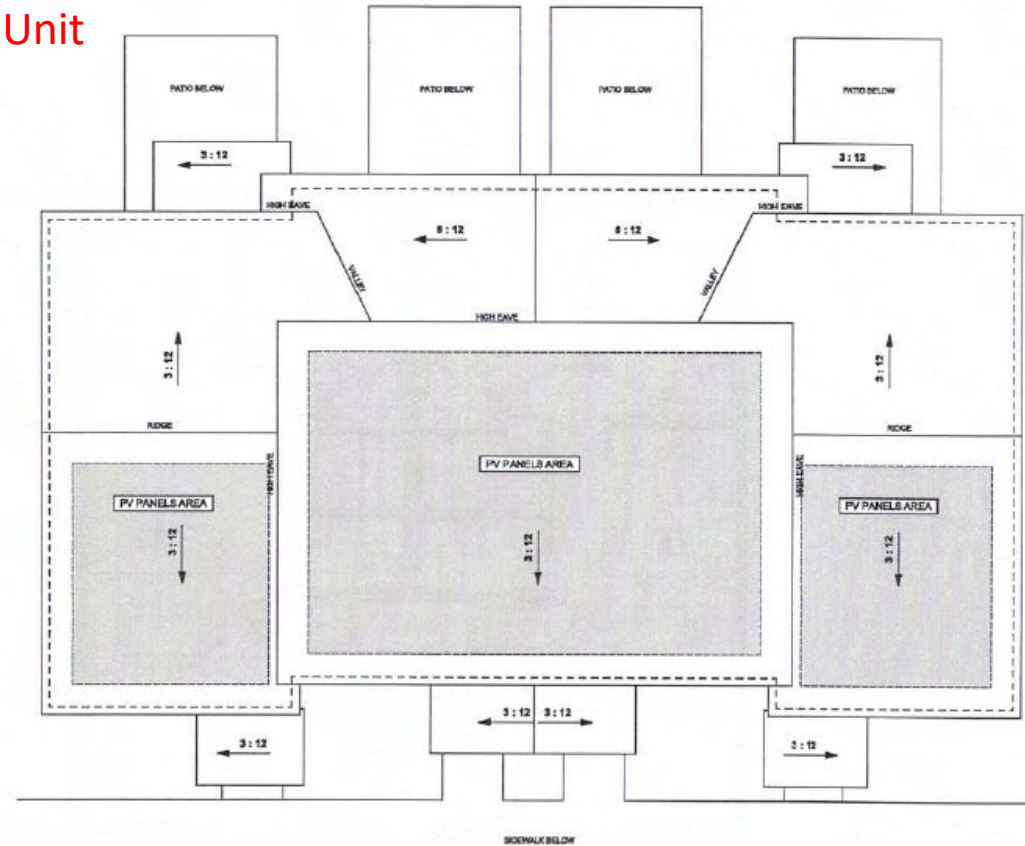
4 -Plex
 \$287,000 / Unit
 \$292 / PSF



2 3D NORTHWEST
 A-5 NOT TO SCALE



3 3D SOUTH EAST
 A-5 NOT TO SCALE



1 ROOF PLAN
 A-5 NOT TO SCALE

**GRANBY COMMUNITY HOUSING
 TOWNHOMES - FOUR-PLEX**

US HIGHWAY 40
 GRANBY, CO

ROOF PLAN &
 3D VIEWS
 FRONT FACING
 SOUTH

JOB 2317
 DRAWN BY GP
 SCALE 1/8"=1'-0"

8-1827

I

14 Unit Apartment
\$230,000 / Unit
\$287 / PSF



REVISIONS	REVISIONS PER EMAIL: 04-25-2024

CONTRACTOR / BUILDER:
VEDERRA
264 Snowy Ridge Rd.
Evergreen, CO 80439
CONTACT:
303-285-0123

PROJECT NAME		
3 STORY WALKUP BUILDING		

SCALE	DATE	DRAWN BY
AS NOTED	04-21-2024	KM

DRAWING TITLE:
ELEVATIONS
A5
SHEET

A perspective line drawing of a two-story house. The house has a gabled roof with a small dormer on the left side. The exterior walls are covered in horizontal siding. There are several windows: a large double window on the second floor of the left wing, a smaller window below it, and a window on the first floor. The right wing has a similar window arrangement. A small porch with a gabled roof is located on the right side of the house, accessible by a few steps. The house is set on a flat surface with a simple horizon line in the background.

[illegible]

ARAPAHOE
ARCHITECTS

**F.O. BOX 4780
DENVER, CO 80202
875 452 8478**

**■ COMMENT
BEFORE OR IMMEDIATELY
UPON THE OCCURRENCE OF
ANY VIOLATION OF
THE PROVISIONS OF
AMFAR AND ACTS, E.C.**

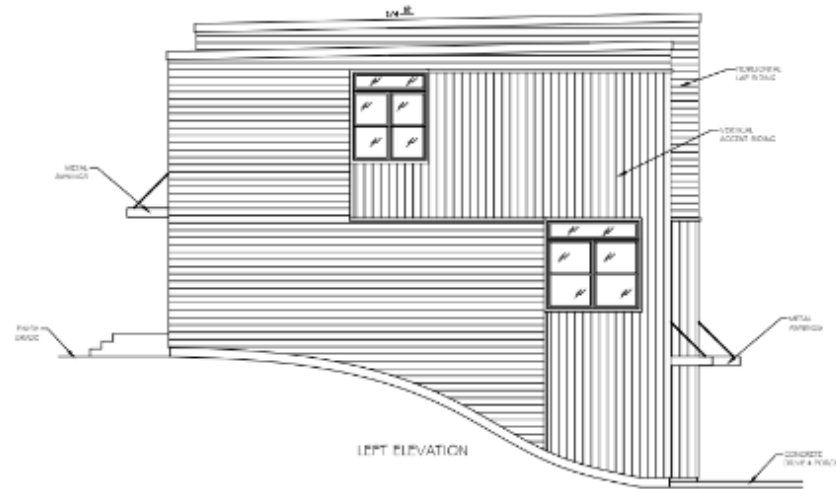
**GRANBY COMMUNITY HOUSING
NARROW SINGLE FAMILY**

ROOF PLAN &
3D VIEWS

AIR 2017
 DAILY GP
 BSA
 12-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043

A-3

Townhomes– 3BR
 \$390,000 / Unit
 \$310 / PSF



Vederra Modular
 303-285-0123
 info@vederra.com

REVISIONS

EMAIL REVISIONS: 03-05-2024
 EMAIL REVISIONS: 04-21-2024
 EMAIL REVISIONS: 04-25-2024

CONTRACTOR / BUILDER:

CONTACT:

PROJECT NAME

2-BOX ROW HOME

SCALE: 3/16" = 1'-0"

DATE: 02-27-2024

DRAWN BY: KM

DRAWING TITLE:

ELEVATIONS

A4

SHEET

Innovative Housing Solutions

Nate Peterson

*Owner and Founder,
Rocky Mountain Home Builders*

Michael Fraley

*Chief Growth Officer,
Oakwood Homes*

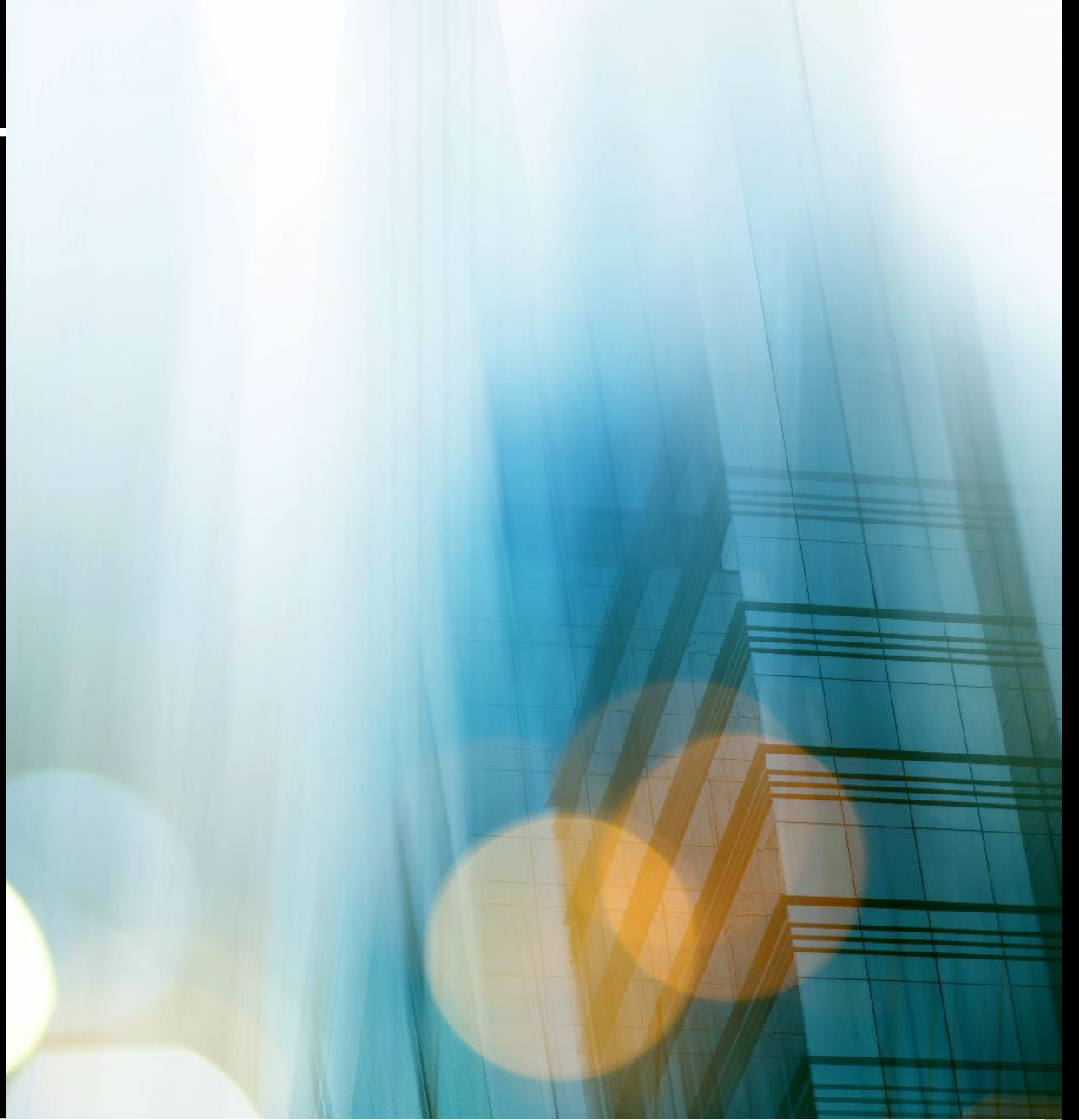
Ross Cohen

*President,
Huron Components*

Moderator: Steve Boice

*Manager, Business Finance,
CHFA*

Creative Financing in Shifting Markets



Creative Financing in Shifting Markets

Frances Lee

*Relationship Manager,
Fannie Mae*

Mitch Gallo

*Director,
RBC*

David Jones

*CFO,
CSG Advisors*

Moderator: Denver Maw

*Director, Finance,
CHFA*

Mountain Plains Housing Summit

Innovative Housing Solutions

May 7, 2024



Capital
Markets



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Economic Snapshot

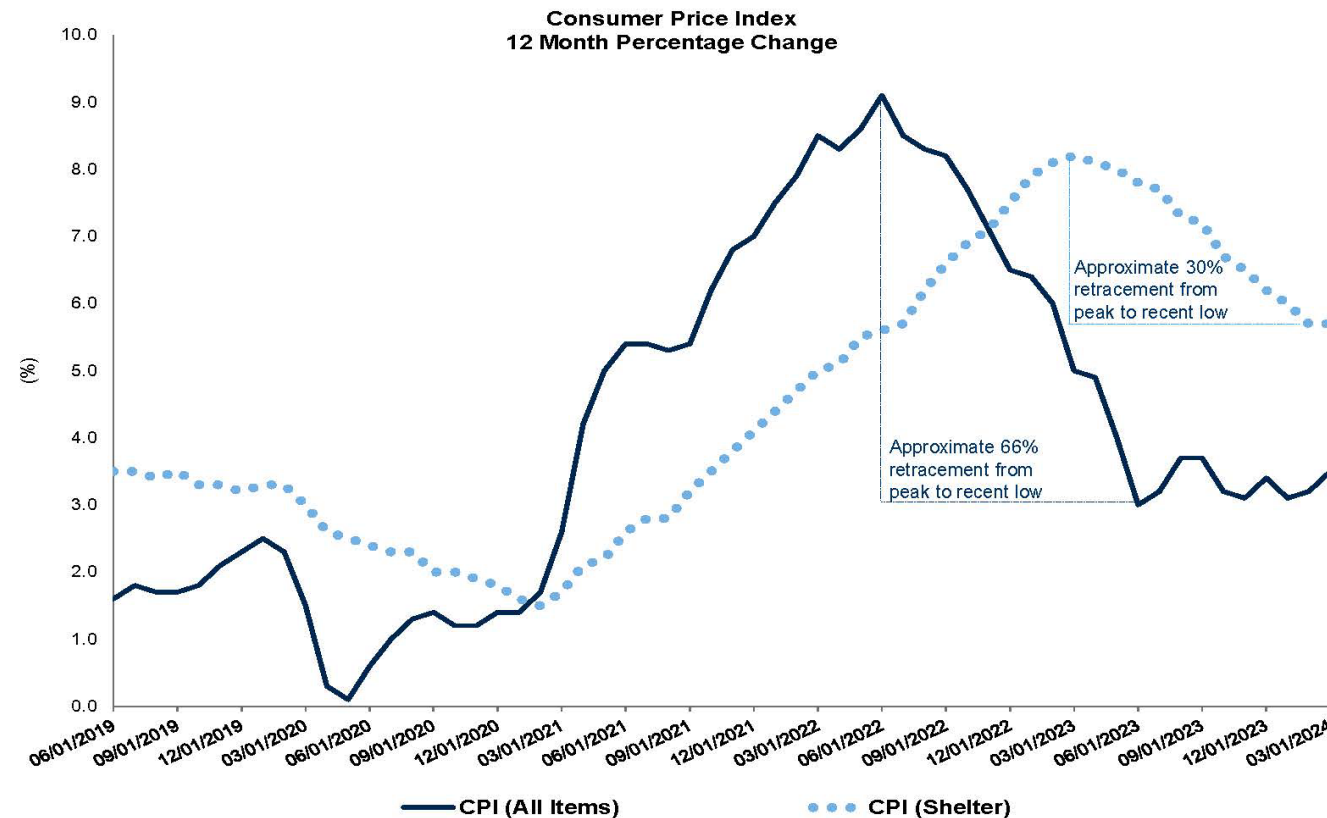
The Federal Reserve remains data dependent

Inflation

- CPI rose 0.4% in March 2024, putting the 12 month inflation rate at 3.5%
- This followed a 0.4% increase in February 2024, putting the then-annualized increase at 3.2%
- CPI is down from recent annualized 9.1% peak for 12 month period ending June 2022

Labor Market

- Job growth in the U.S. slowed in April
- Payroll employment growth slowed at the start of Q2, to 175k in April from an average pace of 270k in the first quarter; below consensus forecast of 245k
- Unemployment rate ticked back up to 3.9% in April from 3.8% in March – that is still historically low but is up half a percent from a year ago

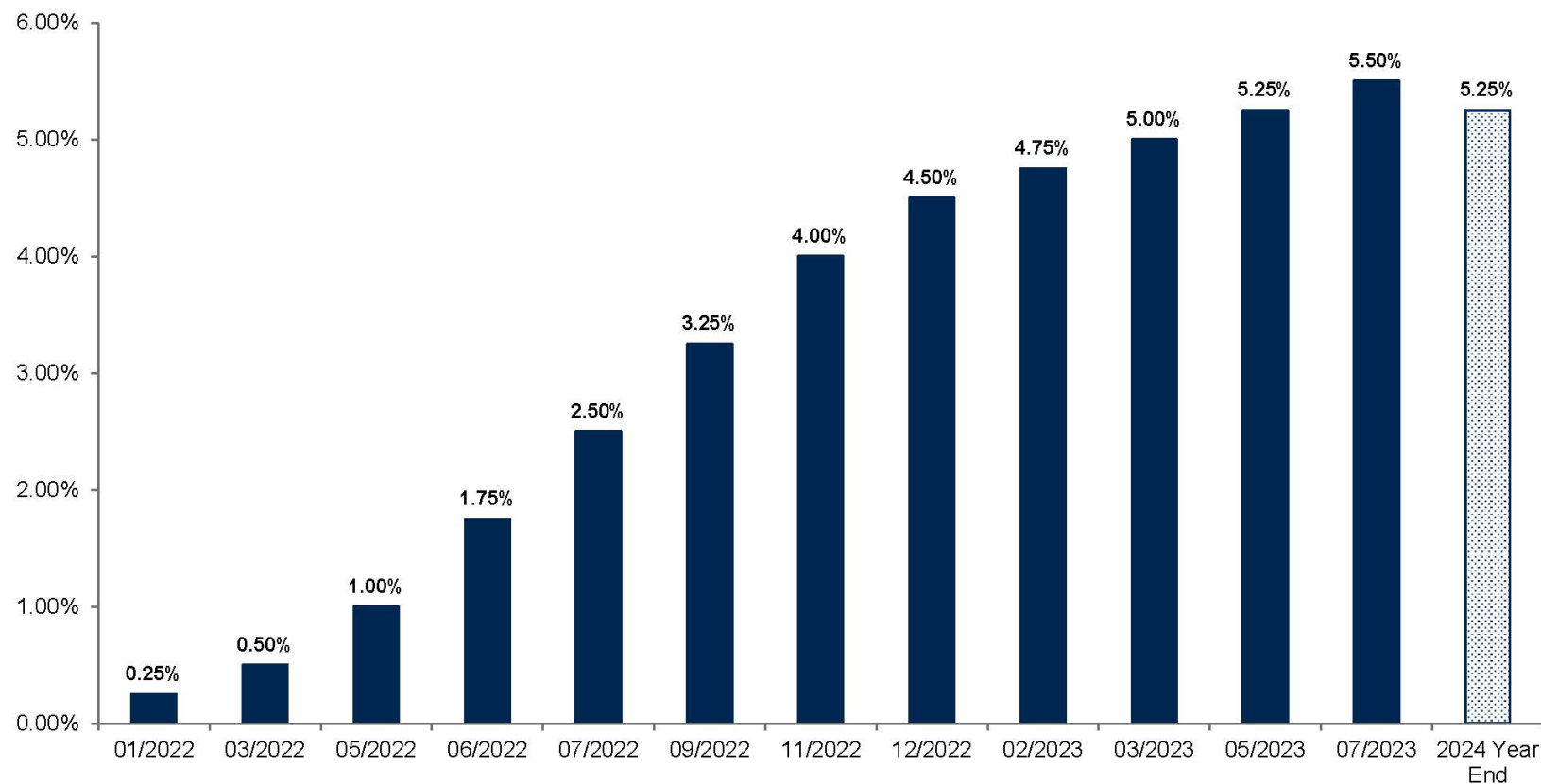




Fed Funds Target Rate (Upper Bound) Projections

Upper bound Fed Funds rate remains at 5.50%

- Fed policymakers signaled their next moves will be data driven
- Fed funds futures are pricing in one 25bps cut in 2024 (46% probability in December)
- RBC Capital Markets projects one 25bps rate cut in December 2024



Source: Bloomberg, RBCCM report, "Revised Fed Call: No cuts till Christmas (04/10/2024); <https://www.rbcinsightresearch.com/ui/init.html?tv=20240228161604&prp=/main/report/TVU3MDkxTVVB&>



Interest Rate Forecasts – RBC Economics and Bloomberg Consensus

Forecast market conditions through 2025 have changes considerably in recent months

RBC Economics U.S. Interest Rate Forecast - April 2024

	Actual					Forecast						
End of Quarter	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4
Fed funds	4.88	5.13	5.38	5.38	5.38	5.38	5.38	5.13	4.88	4.63	4.63	4.63
Three-month	4.85	5.43	5.55	5.40	5.45	5.21	5.23	4.98	4.78	4.53	4.53	4.53
Two-year	4.06	4.87	5.03	4.23	4.66	5.05	5.05	4.90	4.80	4.70	4.70	4.75
Five-year	3.6	4.13	4.60	3.84	4.28	4.60	4.60	4.45	4.35	4.35	4.40	4.50
10-year	3.48	3.81	4.59	3.88	4.27	4.45	4.40	4.30	4.25	4.30	4.40	4.50
30-year	3.67	3.85	4.73	4.03	4.41	4.5	4.45	4.50	4.55	4.60	4.70	4.80
Yield curve (10s-2s)	-58	-106	-44	-35	-39	-60	-65	-60	-55	-40	-30	-25

Sources: RBC Capital Markets as of April 26, 2024, <http://www.rbc.com/economics/>; Bloomberg as of April 26, 2024

RBC Economics U.S. Interest Rate Forecast - February 2024

End of Quarter	23Q1	23Q2	23Q3	23Q4	24Q1	24Q2	24Q3	24Q4	25Q1	25Q2	25Q3	25Q4
Fed funds	4.88	5.13	5.38	5.38	5.38	5.38	5.13	4.63	4.13	3.88	3.63	3.38

Sources: Bloomberg and RBC Capital Markets as of February 15, 2024, <http://www.rbc.com/economics/>

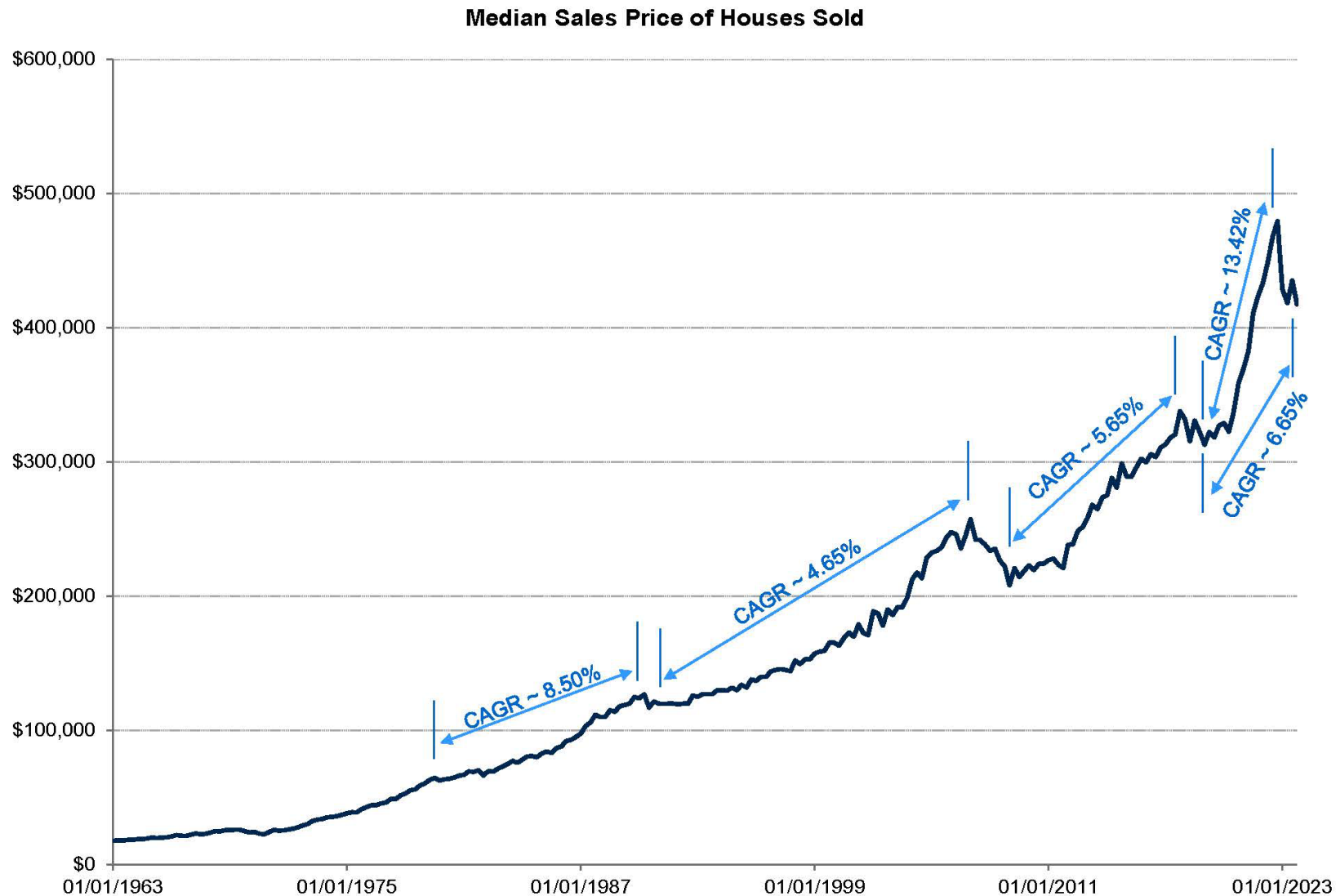
Change in Forecast

24Q3	24Q4	25Q1	25Q2	25Q3	25Q4
+25 bps	+50 bps	+75 bps	+ 75 bps	+100 bps	+125 bps



Home Prices Have Increased Significantly

Median home sales increased at a compounded annual growth rate exceeding 13% from recent trough to peak

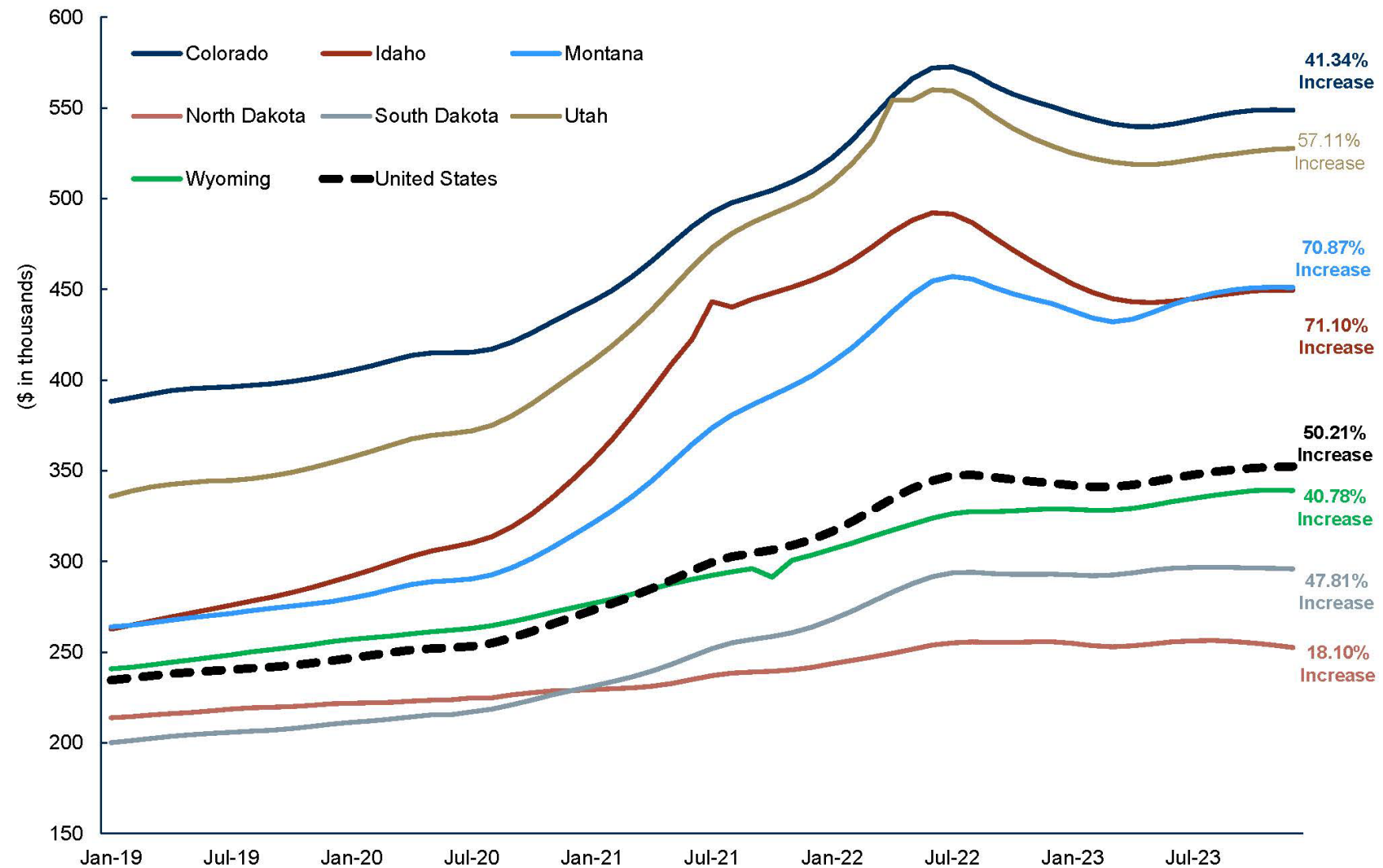


Source: <https://fred.stlouisfed.org/series/MSPUS>



Zillow Home Value Index by State

Mountain Plains states have followed the national trend

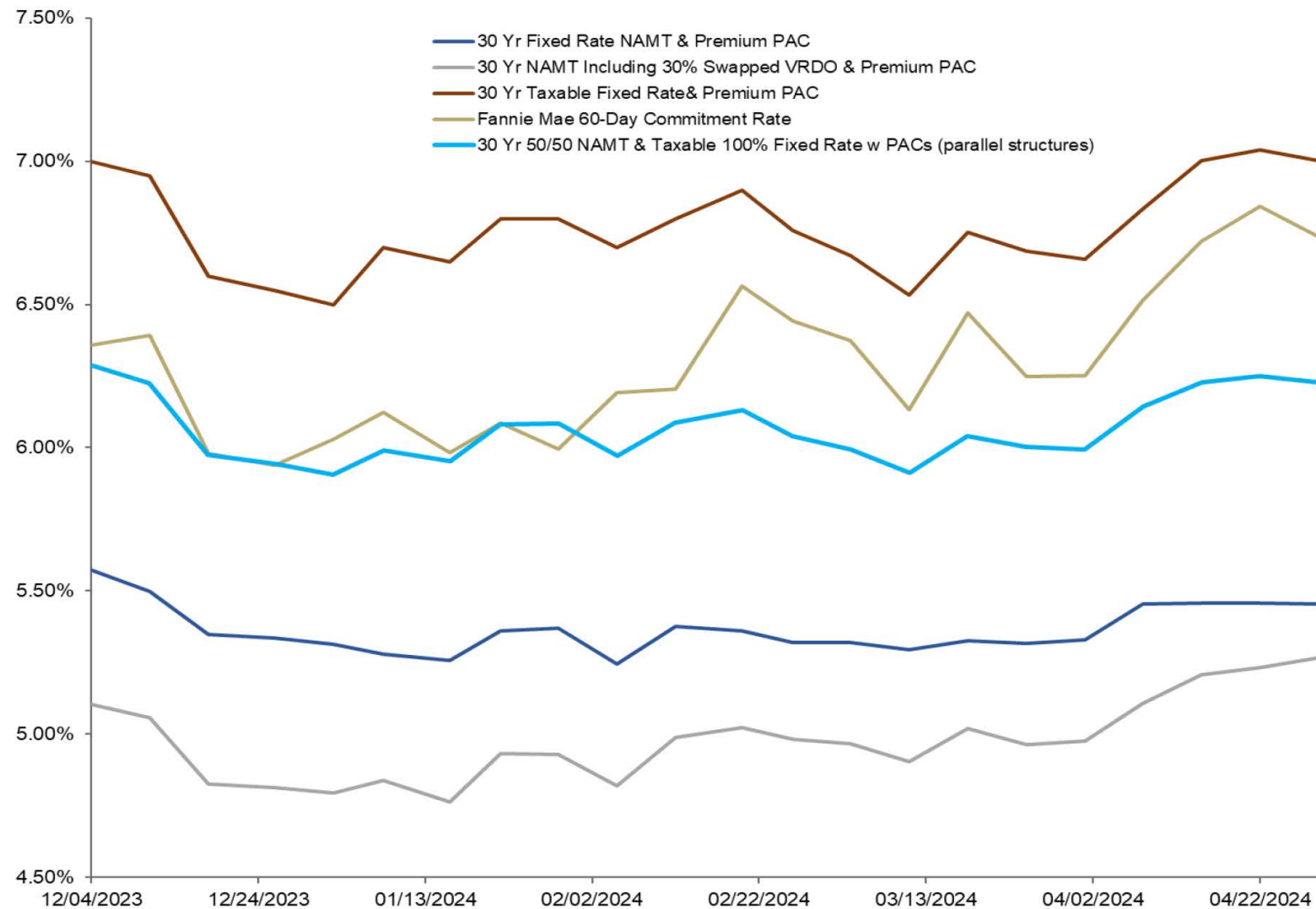


Source: <https://www.zillow.com/home-values/102001/united-states/>



Estimated Full Spread HFA Lending Rates Remain Highly Competitive

Even with complementing taxable issuance HFA lending rates should meet market demand

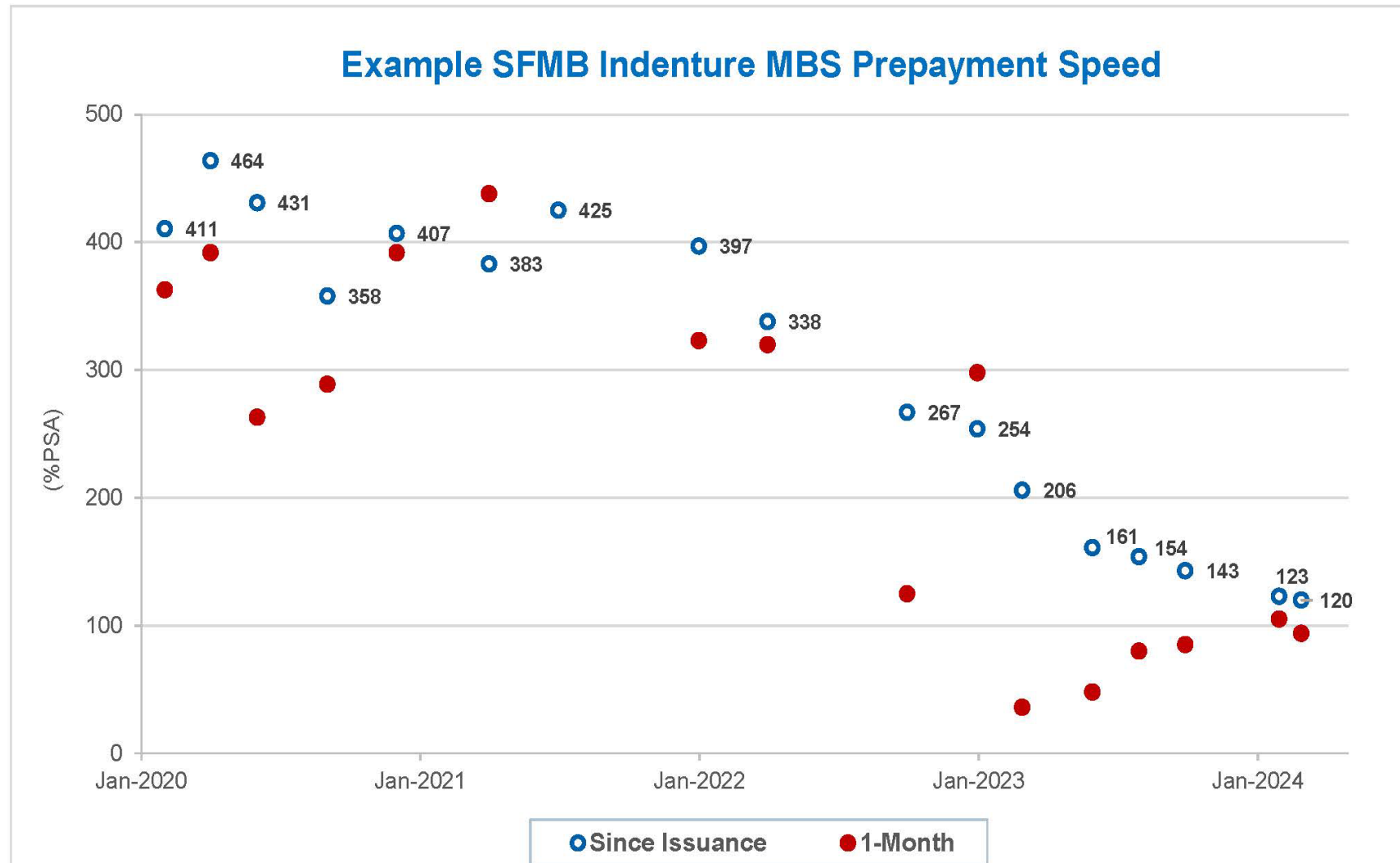


Source: Bloomberg, RBCCM internal tracking



Prepayment Speeds have Decreased

Inability to refinance or move up have slowed prepayments

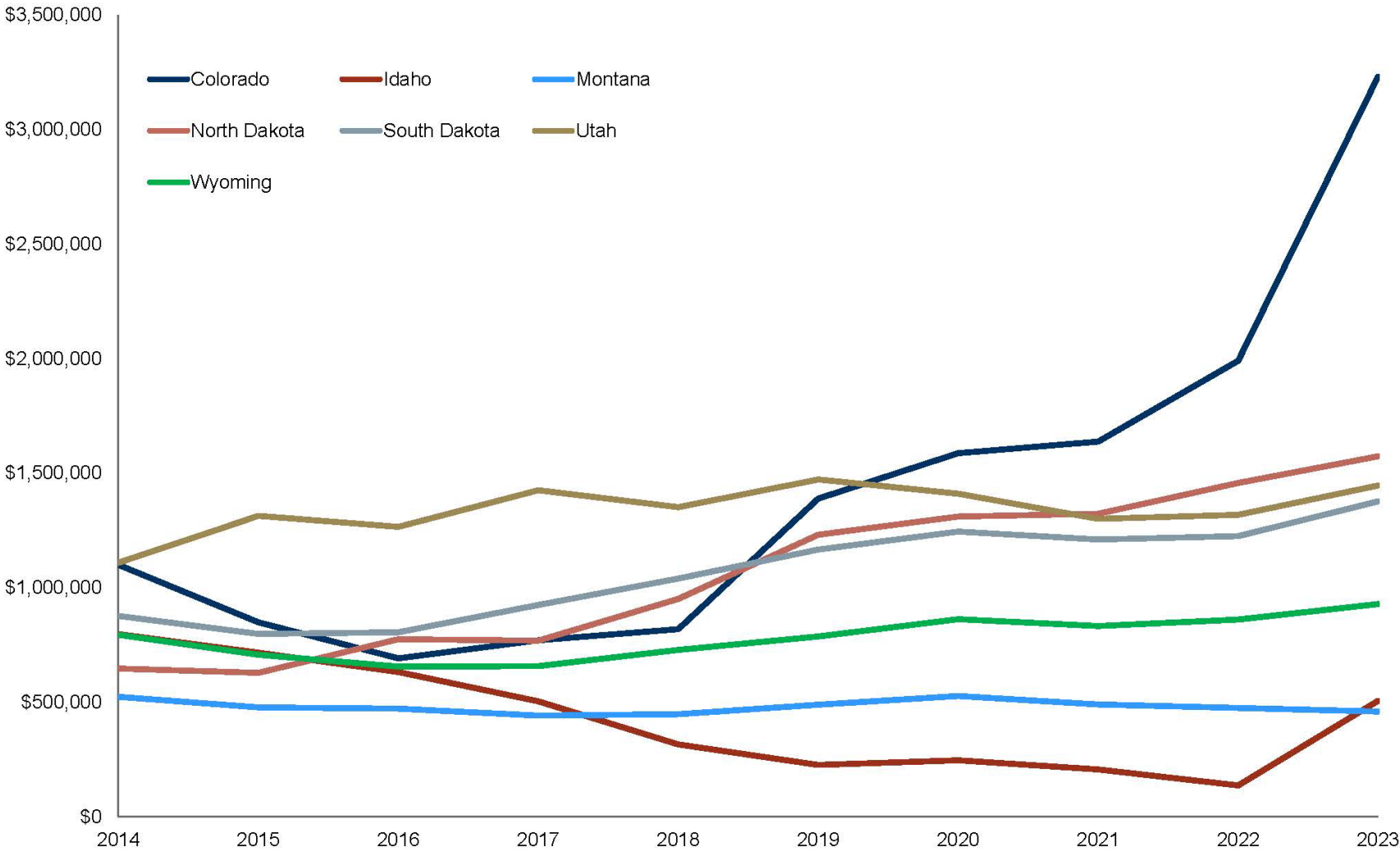


Sources: RBC Internal Tracking / Bloomberg



Historical Outstanding Single-Family Bond Balances by State

Asset growth both a function of increased production and decreased run-off via prepayments

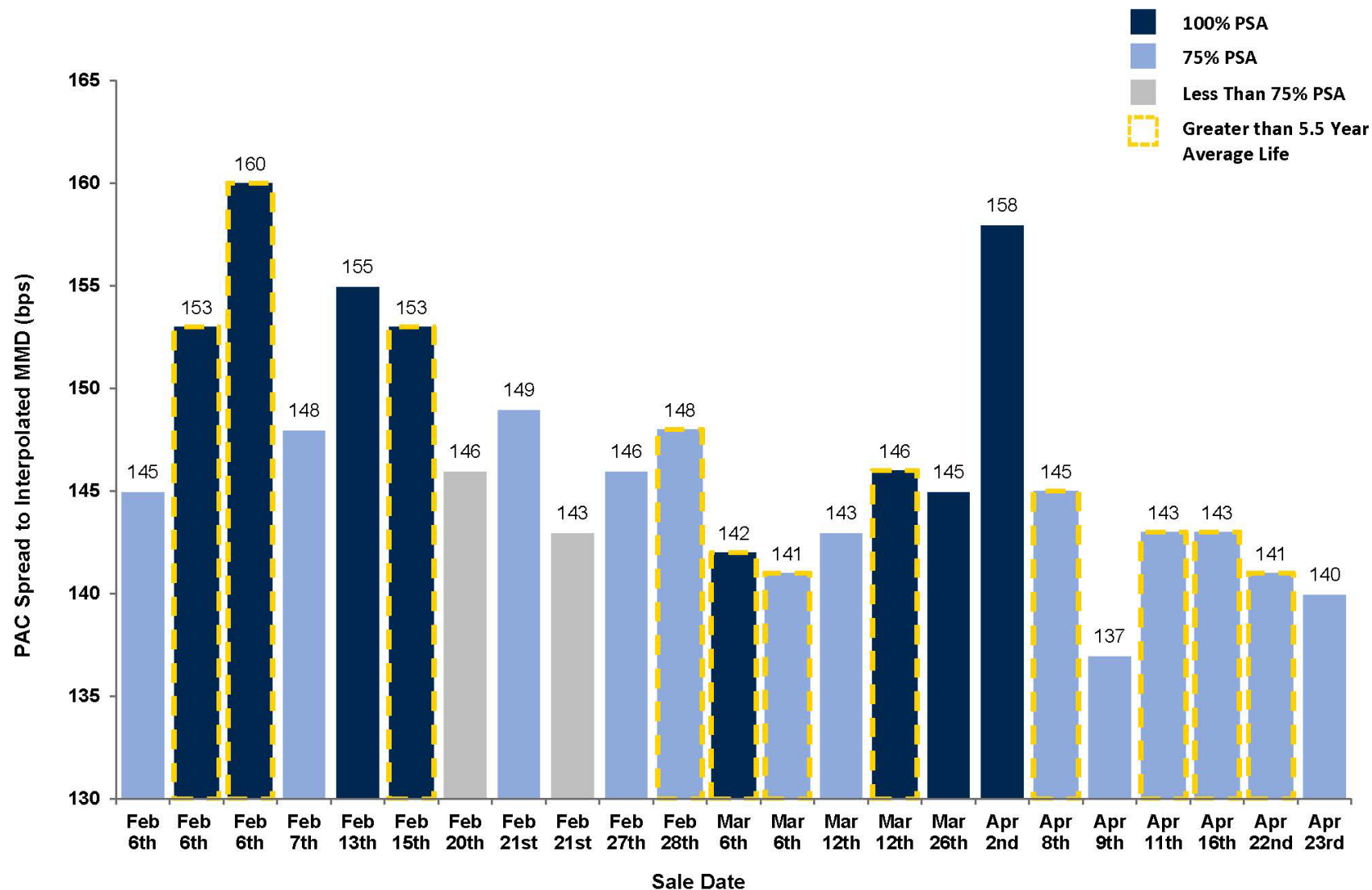


Source: Respective Issuer Audited Financial Statements



Is 100% PSA the Most Efficient Lower Band?

Slowing prepayment speeds have many investors focused on PAC bands



Source: RBC Internal Tracking; ipreo; munidss.com

Including a PAC can Help Execution at Pricing

A largely known investor pool for PACs can partially de-risk an offering

Two Non-AMT Aa1/AA+ Single Family Issued Priced on the Same Day

All Bond Pricing at Par Unless Otherwise Noted

<u>Maturity</u>	<u>Start</u>	<u>Finish</u>	<u>Start</u>	<u>Finish</u>
2034	3.75% / 3.75%	3.75% / 3.75%	3.75% / 3.75%	3.75% / 3.75%
2035	3.80% / 3.85%	3.80% / 3.85%	3.80% / 3.85%	3.80% / 3.85%
2036	3.90% / 3.90%	3.90% / 3.90%	3.90% / 3.90%	3.90% / 3.90%
2039	4.05%	4.05%	4.05%	4.05%
2041	4.25%	4.30%	4.25%	5.00% to Yield 4.00% \$107, locked out until call date ~4.38% YTM
2044	4.45%	4.45%	4.45%	4.45% Priced at \$99.25 ~ 4.51% YTM
2049	4.60%	4.60%	4.60%	4.60% Priced at \$99.00 ~4.667% YTM
2051	4.65%	4.65%	-	-
2054 PAC	3.92%	3.90%	-	-
2054 Term	-	-	4.70%	4.75%

\$265 million NAMT Offering;
Approximately \$13 million of unsold balances

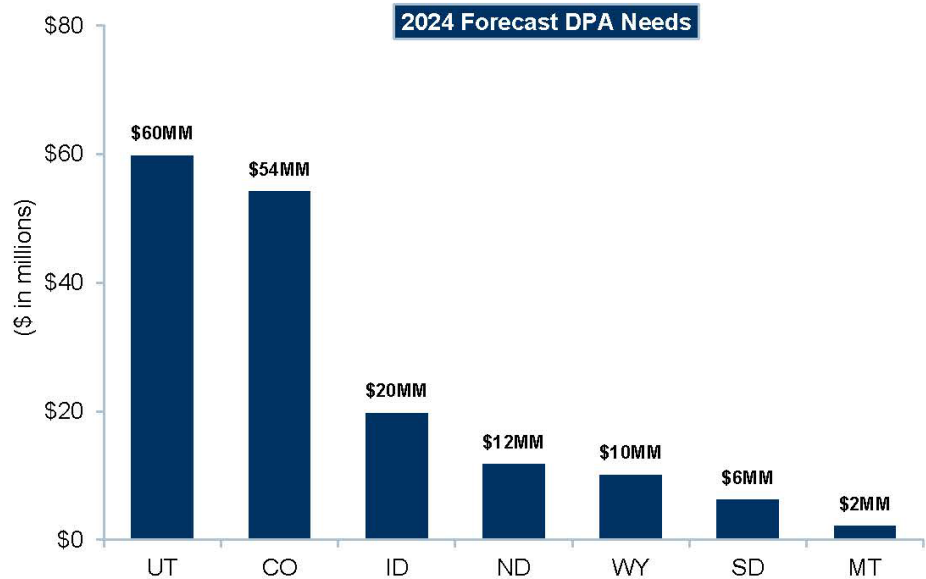
\$159 million NAMT Offerings
Approximately \$60 million of unsold balances

Source: RBCCM Internal Tracking; ipreo, unsold balances are as of order period expiration



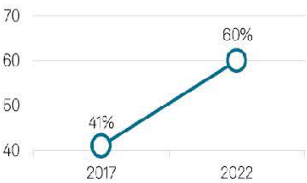
State HFA DPA Summary

Downpayment assistance is a key driver of production



HFA's increasing use of DPA products is unlikely to abate

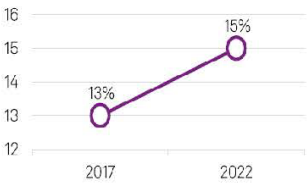
Percentage of agencies offering some form of DPA to more than 90% of homebuyers



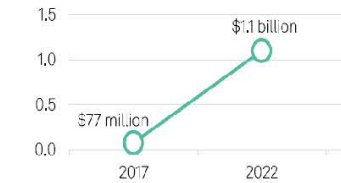
The average DPA provided per borrower



Average DPA provided over borrower income of an HFA borrower's income



Total amount of DPA provided by HFAs



DPA--Down payment assistance, HFA--Housing finance agency, Source: S&P Global Ratings. Copyright © 2024 by Standard & Poor's Financial Services LLC. All rights reserved.

	Colorado	Idaho	South Dakota	Montana	North Dakota	Utah	Wyoming
2023 SF Issuance	\$1,433,000,000	\$600,150,000	\$577,000,000	\$127,000,000	\$440,000,000	\$347,615,000	\$233,505,000
Aggregate DPA Portfolio	\$399,000,000	\$80,000,000	\$42,267,504	\$8,223,425	\$23,000,000	\$192,637,223	\$30,839,758
DPA Needed 2024	\$54,432,000	\$20,000,000	\$6,414,282	\$2,400,000	\$12,000,000	\$60,000,000	\$10,370,000
Avg DPA Per Loan	\$14,536		\$6,453	\$10,560	\$6,945	\$19,581	\$11,400
Avg Loan Size	\$363,394	\$330,000	\$219,666	\$264,830	\$198,726	\$374,405	\$231,000
DPA Percentage	4.0%	0.0%	2.9%	4.0%	3.5%	5.2%	4.9%
DPA Source	<ul style="list-style-type: none">• Bonds• TBA• Reserves	<ul style="list-style-type: none">• State• Bonds• Reserves	<ul style="list-style-type: none">• Reserves	<ul style="list-style-type: none">• Bonds• Reserves	<ul style="list-style-type: none">• Bonds	<ul style="list-style-type: none">• State• Bonds• Reserves	<ul style="list-style-type: none">• Bonds

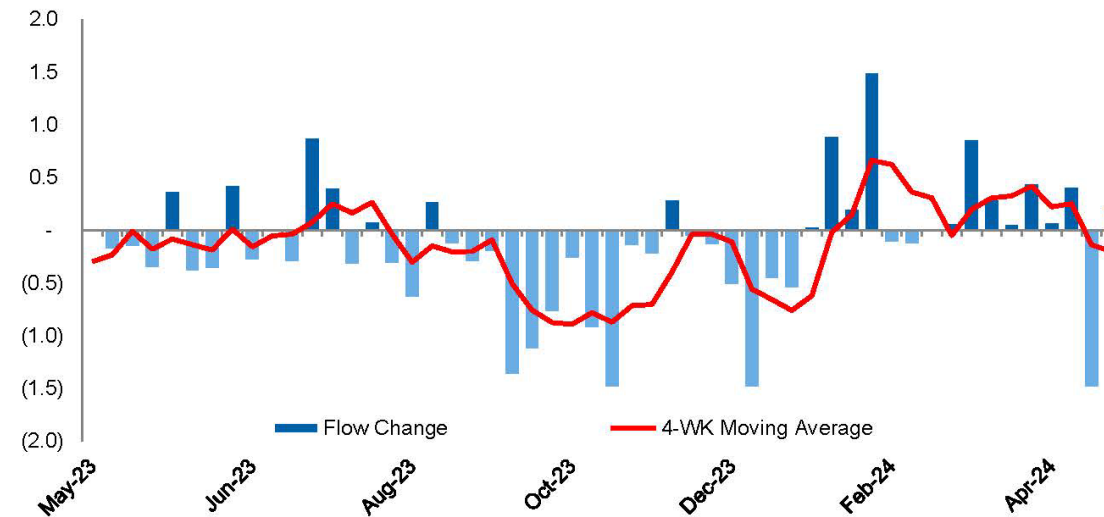
Source: RBCCM Internal Tracking and HFA client survey



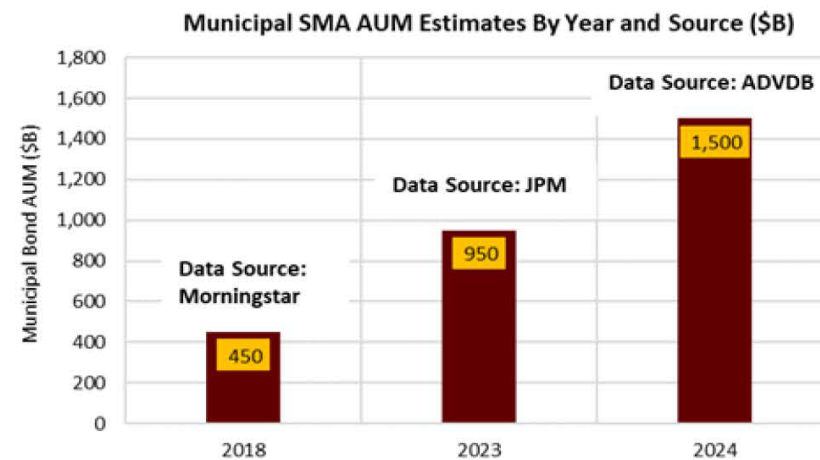
An Evolving Investor Base

We have seen increased retail participation, particularly among professional retail accounts

Weekly Municipal Bond Fund Flows (\$ billions)



SMA and Professional Retail are Active Buyers in the Current Market





Challenges and Opportunities for HFAs

Challenges

- Macroeconomic conditions
- Market volatility; 2024 election uncertainty
- Housing affordability (prices, supply, and mortgage rates)
- Private Activity Bond Volume Cap availability
- TBA pricing likely to remain challenging
- Evolving investor base

Opportunities

- Countercyclical nature of HFA lending
- Slowing prepayments
- Growing balance sheets; reaching new borrowers
- First-Time homebuyers 32% of market in 2023*
- DPA likely to remain a critical component of HFA homeownership programs
- Evolving investor base

* Source: <https://www.nar.realtor/newsroom/nar-finds-typical-home-buyers-annual-household-income-climbed-to-record-high-of-107000>

2024 Mountain Plains Housing Summit



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- CSG provides a wide range of financial advisory, program design, and real estate services to state and local public agencies, including public housing authorities, throughout the U.S.
- Over the past 22 years, CSG has advised on more long-term housing issues and a higher volume of issues than any other financial advisory firm
- 100% employee owned; 53% women owned.

*Source: Thomson Reuters rankings of financial advisors in tax-exempt long-term housing new issues, 2000-2023.

30+
State &
Local
Housing
Agencies

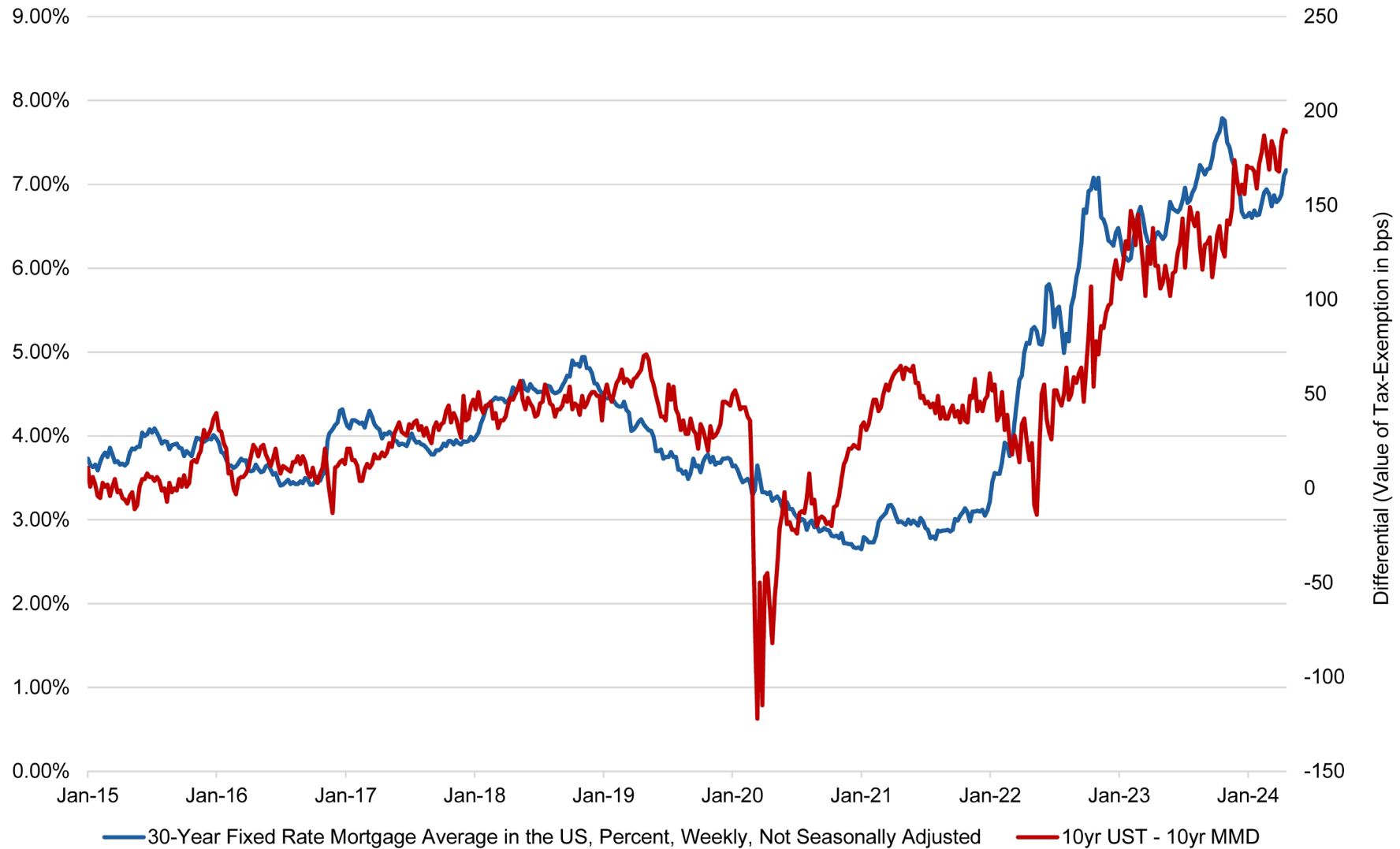
33+
Public Housing
Authority
Clients

600+
Homeowners
served

1,800+
Multifamily
& 501c3
bond issues

1,000,000
homes financed
since 1978

Value of Tax-Exemption



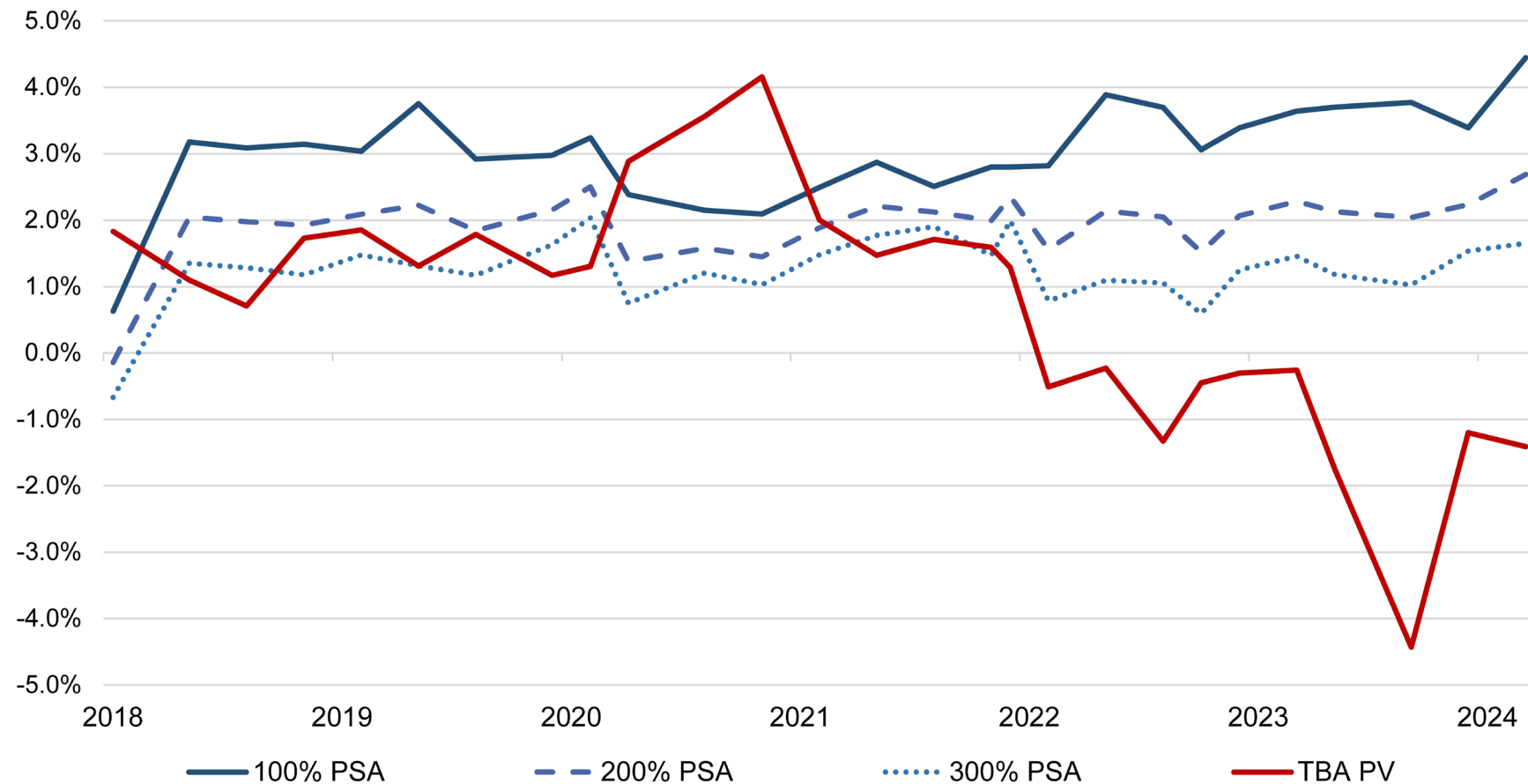
Housing Bond Volume



Source: Bloomberg, as of April 26, 2024; \$ in billions

Relative Profitability of Bonds vs. TBA

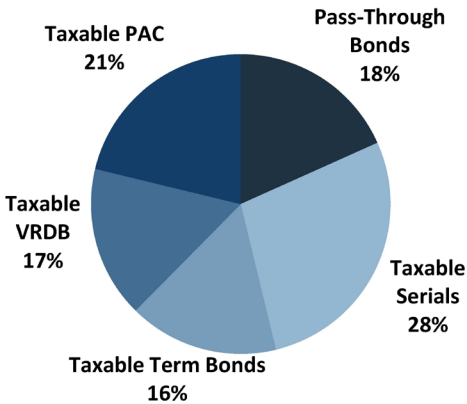
Historical Net Present Value of Bonds and TBA



All-Taxable Issue & Monthly Pass-Through: Colorado HFA 2023 Series AB

No Use of Volume Cap via 100% Taxable Bonds

- The 2023 Series AB Bonds were structured as 100% taxable to preserve volume cap, with a \$21 million taxable fully-swapped adjustable-rate term bond (16% of total par)
- With this structure CHFA achieved over full spread on the aggregate issuance, even while MBS spreads were increasing
- Issuing premium pass-through bonds allowed CHFA to lower its contribution
- Proceeds of the bonds will be used to finance:
 - \$123.55 million of the Authority’s Smart Step program mortgages at 6.500%
 - \$5.0 million of non-amortizing 0% 2nd mortgages



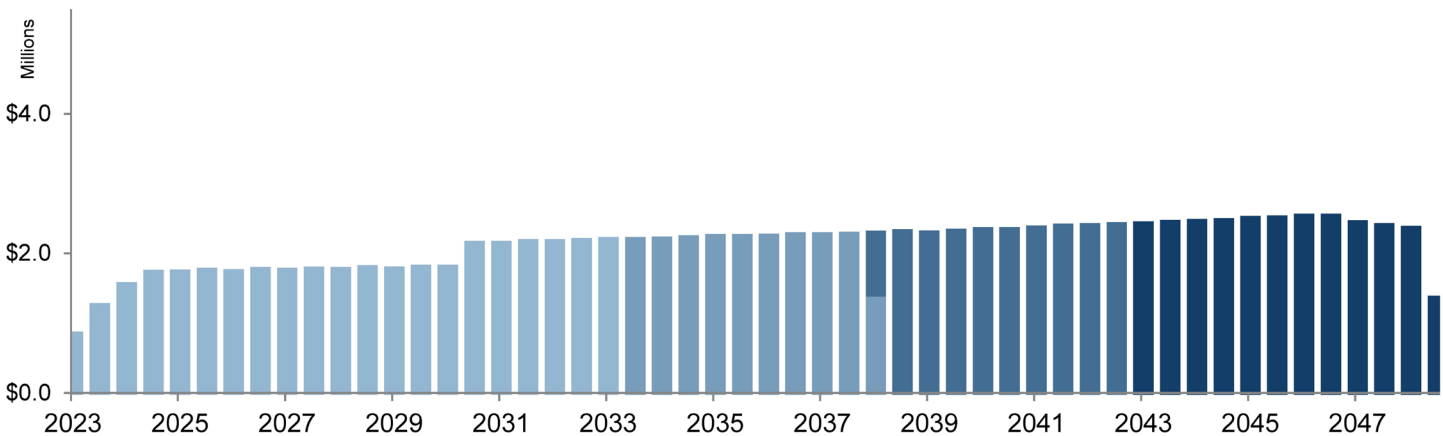
Bond Type	Serials	2038 Term	VRDB	PAC	Pass-Thru
Tax Status	Taxable				
Yield	4.195% - 5.083%	5.103%	-	6.00% (\$104.945)	5.125% - 5.375%
Par (\$000s)	\$35,895	\$20,810	\$21,000	\$27,295	\$23,525

Mortgage Yield 6.54%

Bond Yield 5.00%

Spread 1.54%

Amortization Profile



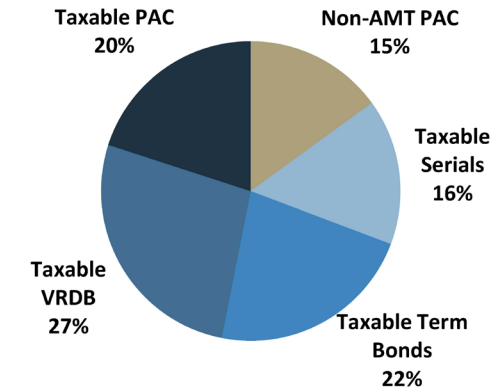
*Discount rate of 4%, net of 1.5% SRP, 12% loss assumed on 2nds.

	NPV * (\$)	as a %
50%	\$5.6	4.4%
100%	5.8	4.5%
200%	3.3	2.5%
300%	1.7	1.3%

Blending Taxable with Tax-exempt Bonds: Colorado HFA 2023 Series OP

Minimizing Use of Volume Cap and Achieving Full Spread

- The 2023 Series OP Bonds were structured as 15% tax-exempt and 85% taxable to minimize use of volume cap, with \$40.3 million taxable variable rate debt (27% of total par) hedged with swap (full optionality in 7 years)
- With this structure CHFA achieved over full spread on the aggregate issuance, even while taxable borrowing costs spiked in the beginning of October
- Using synthetic fixed debt allowed the Authority to lower funding costs by 65 bps
- Proceeds of the bonds will be used to finance:
 - \$144.3 million of the Authority's First Step program mortgages at 7.265%
 - \$5.8 million of non-amortizing 0% 2nd mortgages



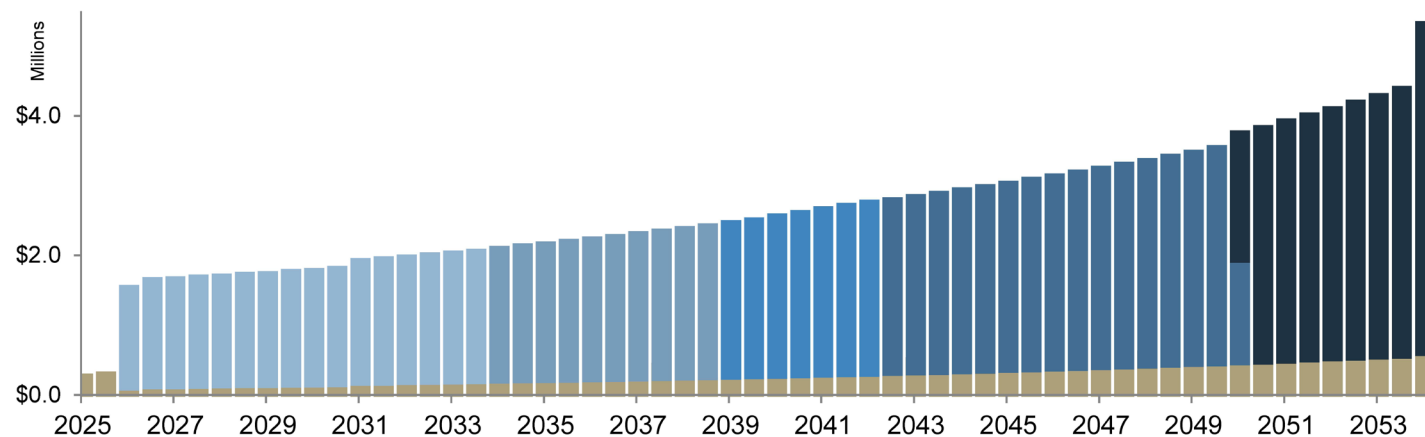
Bond Type	Serials	2038 Term	2042 Term	VRDB	PAC	PAC
Tax Status	Taxable					Non-AMT
Yield	5.521% - 6.271%	6.311%	6.458%	5.454%	6.137% (\$101.6)	5.110% (\$106.3)
Par (\$000s)	\$23,650	\$18,475	\$15,055	\$40,320	\$30,000	\$22,500

Mortgage Yield 6.93%

Bond Yield 5.63%

Spread 1.30%

Amortization Profile



*Discount rate of 4%, net of 1.5% SRP, 12% loss assumed on 2nds.

	NPV * (\$)	as a %
50%	\$11.2	7.5%
100%	8.8	5.8%
200%	4.6	3.1%
300%	2.0	1.4%

Volume Cap Management

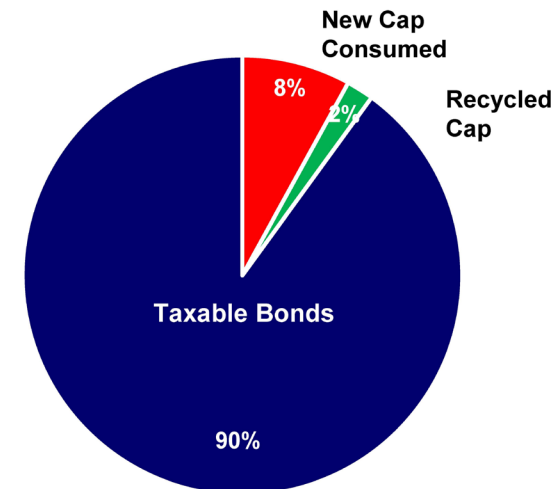
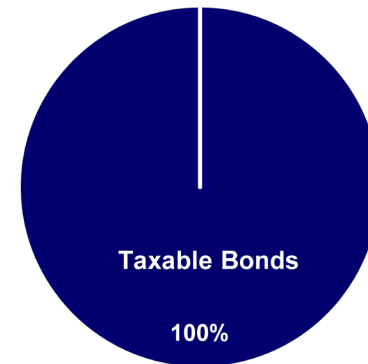
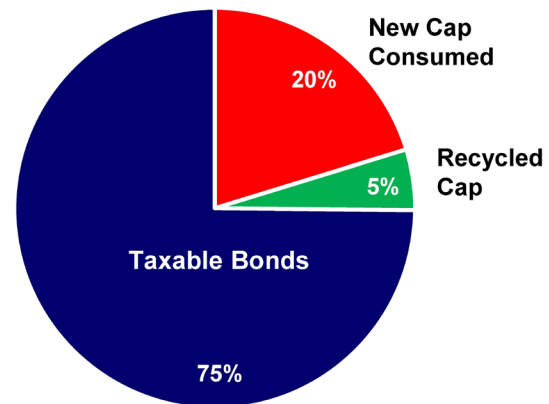
- **CHFA has limited its use of volume cap through substantial taxable issuance**
 - \$1.6 billion out of \$1.8 billion issued over last 18 months

CHFA Issuance (November 2022 – March 2024)

Qualified Loans: \$732MM

Non-Qualified Loans: \$1.1BN

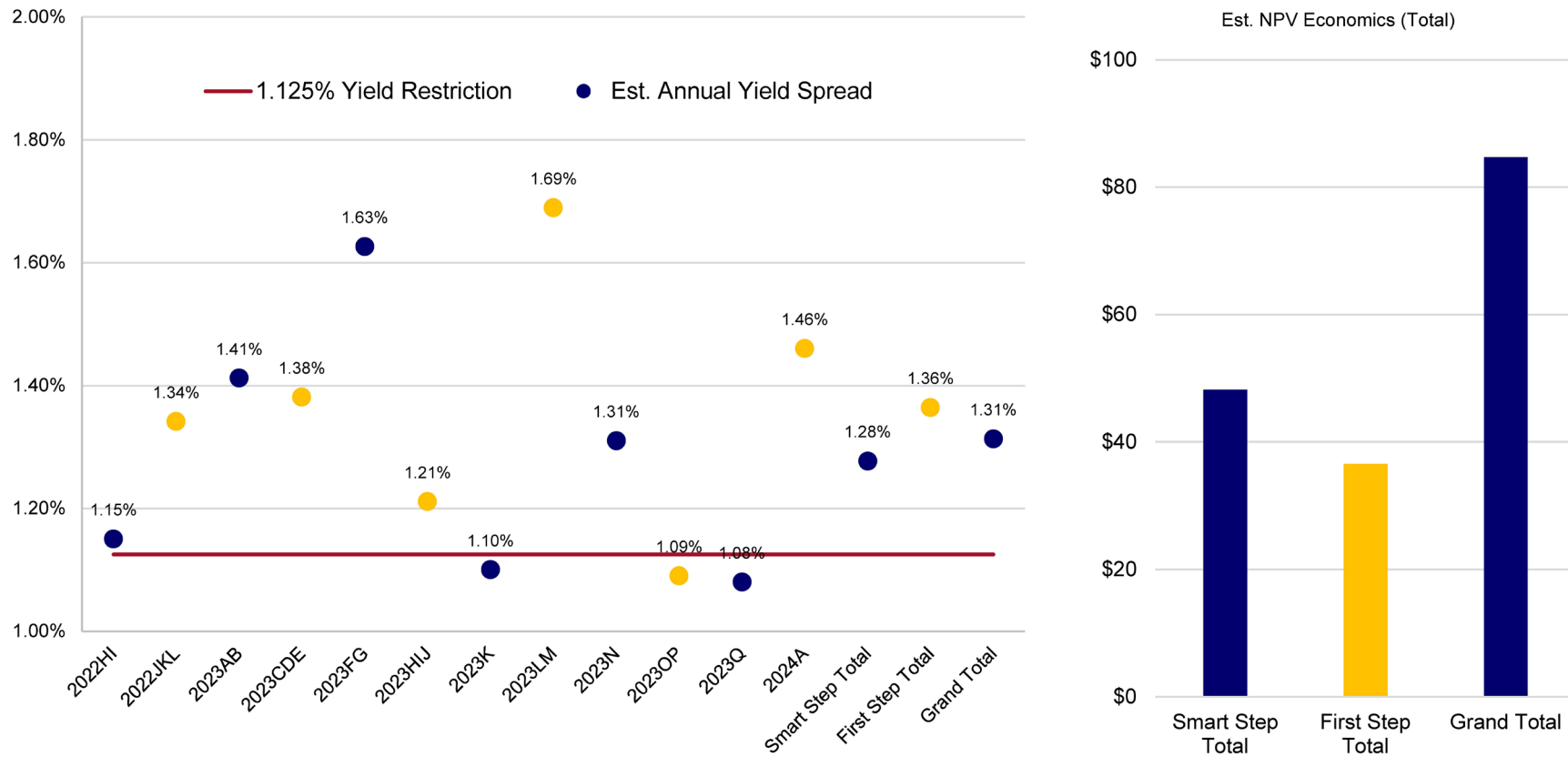
Total: \$1.8BN



■ New Cap Consumed ■ Recycled Cap Used
■ Taxable Bonds Issued

Yield and NPV Economics

- Over the last year and a half, CHFA has issued ~\$1.8BN in total financing, at a weighted average total spread of 1.31%
 - ~\$1.1BN Smart Step (non-qualified loans) financed at a yield of 1.28%
 - ~\$750MM First Step (qualified loans) financing at a yield of 1.36%

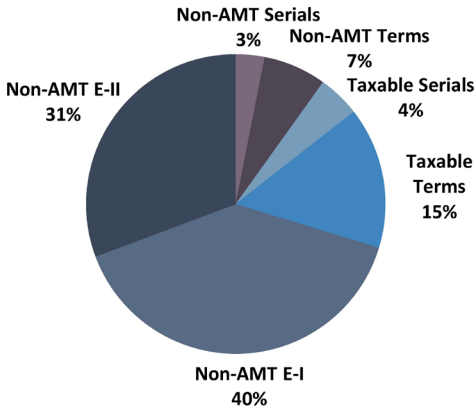


*Estimated NPV economics assume 12% losses on 2nd mortgage loans over their life, exclude servicing revenue, and are net of 1.5% SRP paid to lenders;
\$ in millions

Volume Cap Recycling through Issuance: Virginia HDA 2023 Series CDE

Taxable, Tax-Exempt and COBs

- The 2023 Series CDE Bonds were structured including:
 - \$355MM of Convertible Bonds; used to issue volume cap that would have otherwise expired at the end of 2023 (2020 Carryforward cap).
 - \$50MM of tax-exempt long-term bonds
 - \$150MM of taxable long-term bonds
- VHDA achieved over full spread on the aggregate issuance
- Proceeds of the bonds will be used to finance approximately:
 - \$105.8 million of FHA mortgages at 6.51%
 - \$44.2 million of conventional mortgages at 6.46%



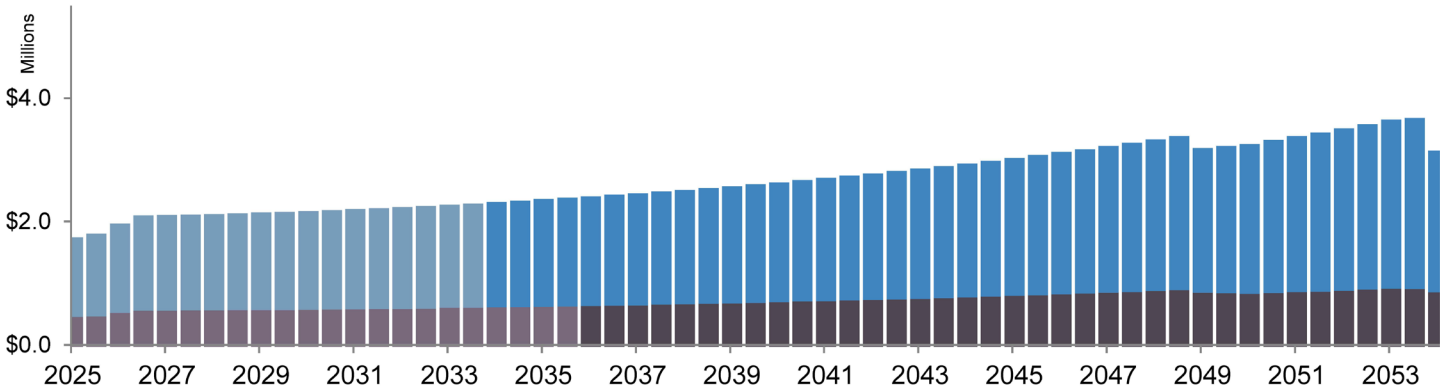
Bond Type	Serials		Terms 38, 43, 48, 54		ST COB E-I	ST COB E-II
Tax Status	Non-AMT		Taxable		Non-AMT	
Yield	3.500% - 4.150%	4.375% - 4.950%	5.138% - 5.750%	5.830% - 6.175%	3.850%	3.900%
Par (\$000s)	\$15,710	\$34,290	\$22,930	\$77,070	\$200,000	\$155,000

Mortgage Yield 6.67%

Bond Yield 5.23%

Spread 1.44%

Amortization Profile (not including COBs)



	NPV * (\$)	as a %
50%	\$13.9	9.3%
100%	\$11.2	7.5%
200%	9.2	6.1%
300%	7.2	4.8%

*Discount rate of 4%, net of 1.5% SRP, 12% loss assumed on 2nds. NPV % as a % of long-term bonds only.

Questions?



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Creative Financing in Shifting Markets

Frances Lee

*Relationship Manager,
Fannie Mae*

Mitch Gallo

*Director,
RBC*

David Jones

*CFO,
CSG Advisors*

Moderator: Denver Maw

*Director, Finance,
CHFA*

Roundtables

1. Single Family
2. Multifamily
3. Asset Management





Thank you!