

Show Me the Money (\$upply)



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Sage Policy Group, Inc.

On Behalf of

FEMSA / FAMA

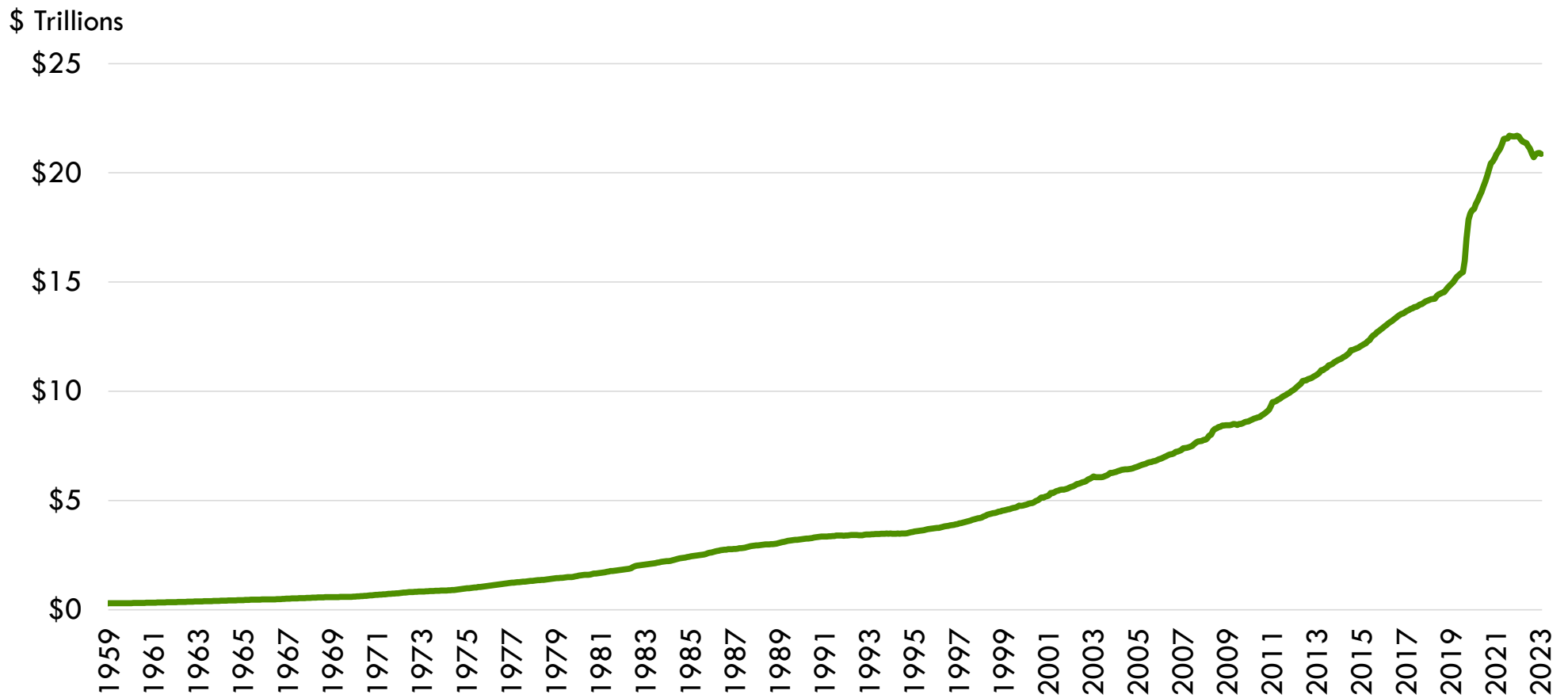
Annual Fall Conference

September 28, 2023



The Color of Money

U.S. Money Supply, 1959 – August 2023



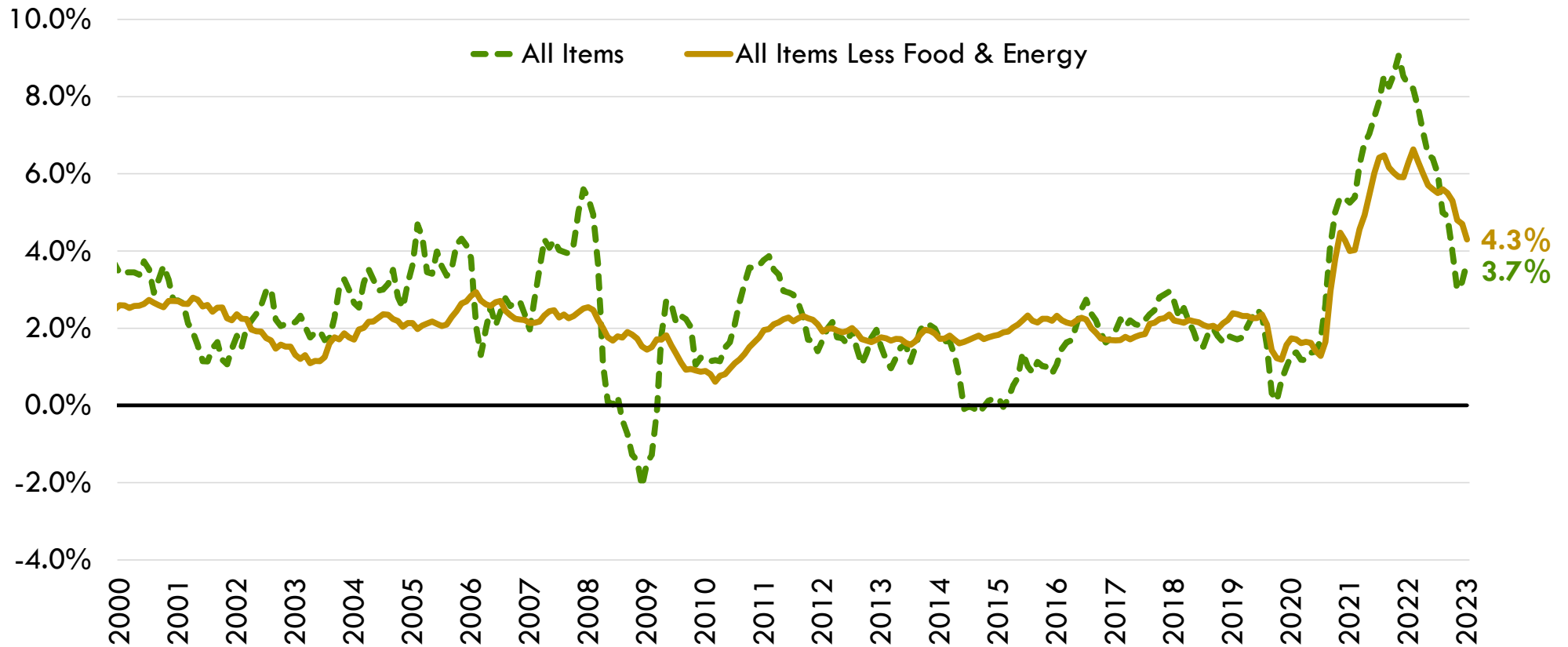
Source: Federal Reserve



Risky Business

(1983)

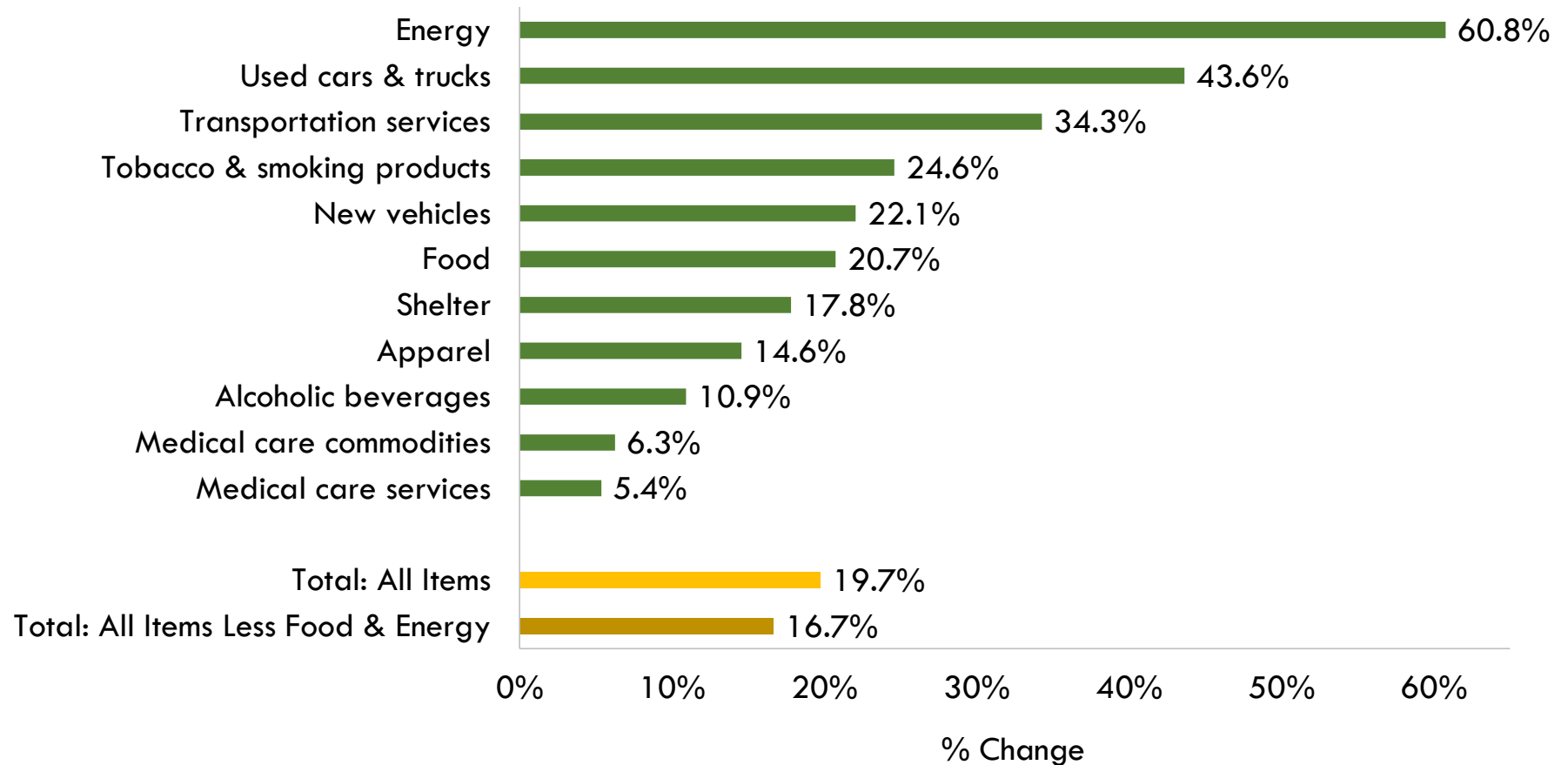
U.S. Consumer Price Index (NSA) 12-Month % Change, 2000 – August 2023



Source: U.S. Bureau of Labor Statistics

U.S. Consumer Price Index, Select Categories (NSA)

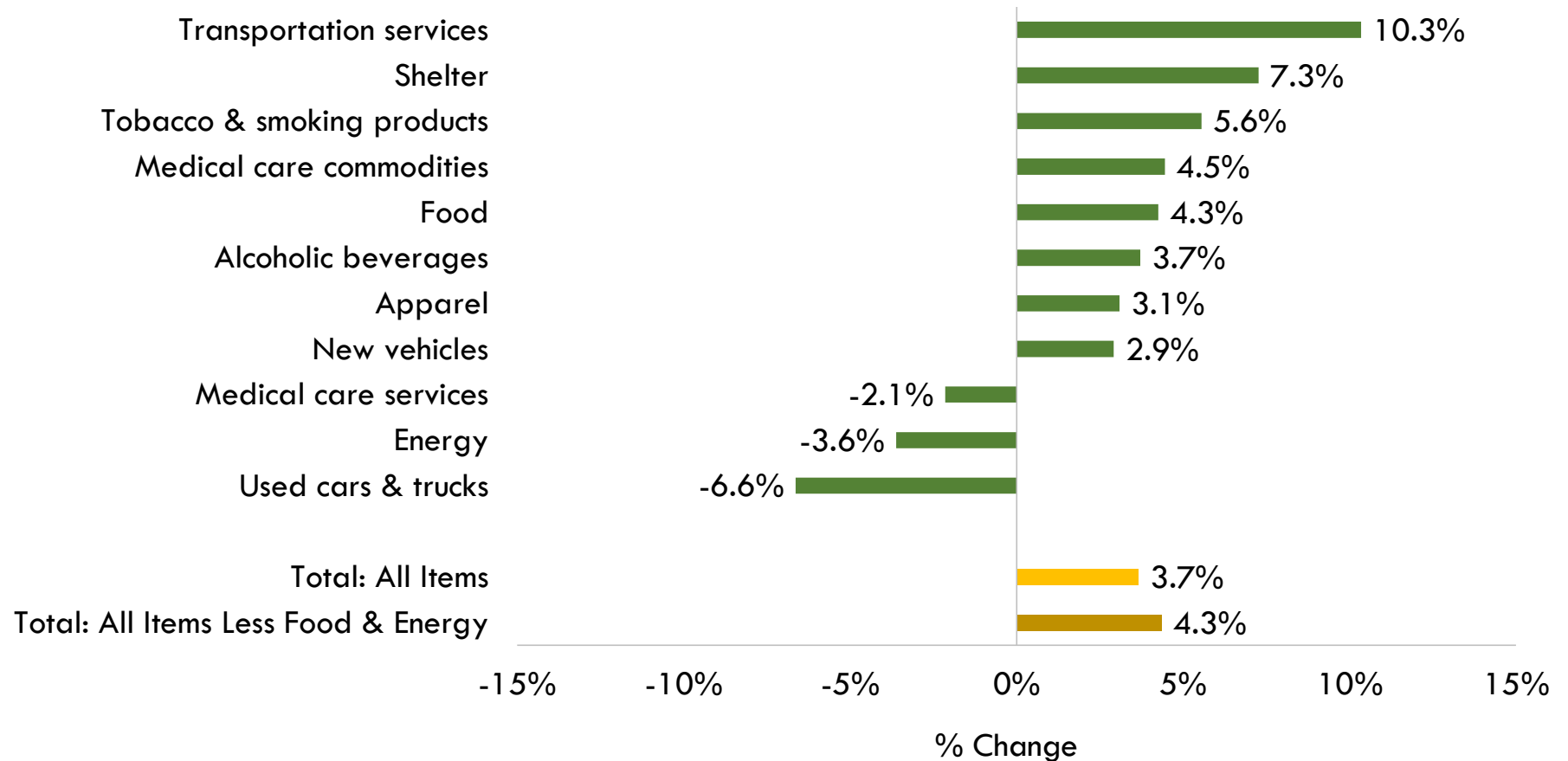
May 2020 v. August 2023 % Change



Source: U.S. Bureau of Labor Statistics

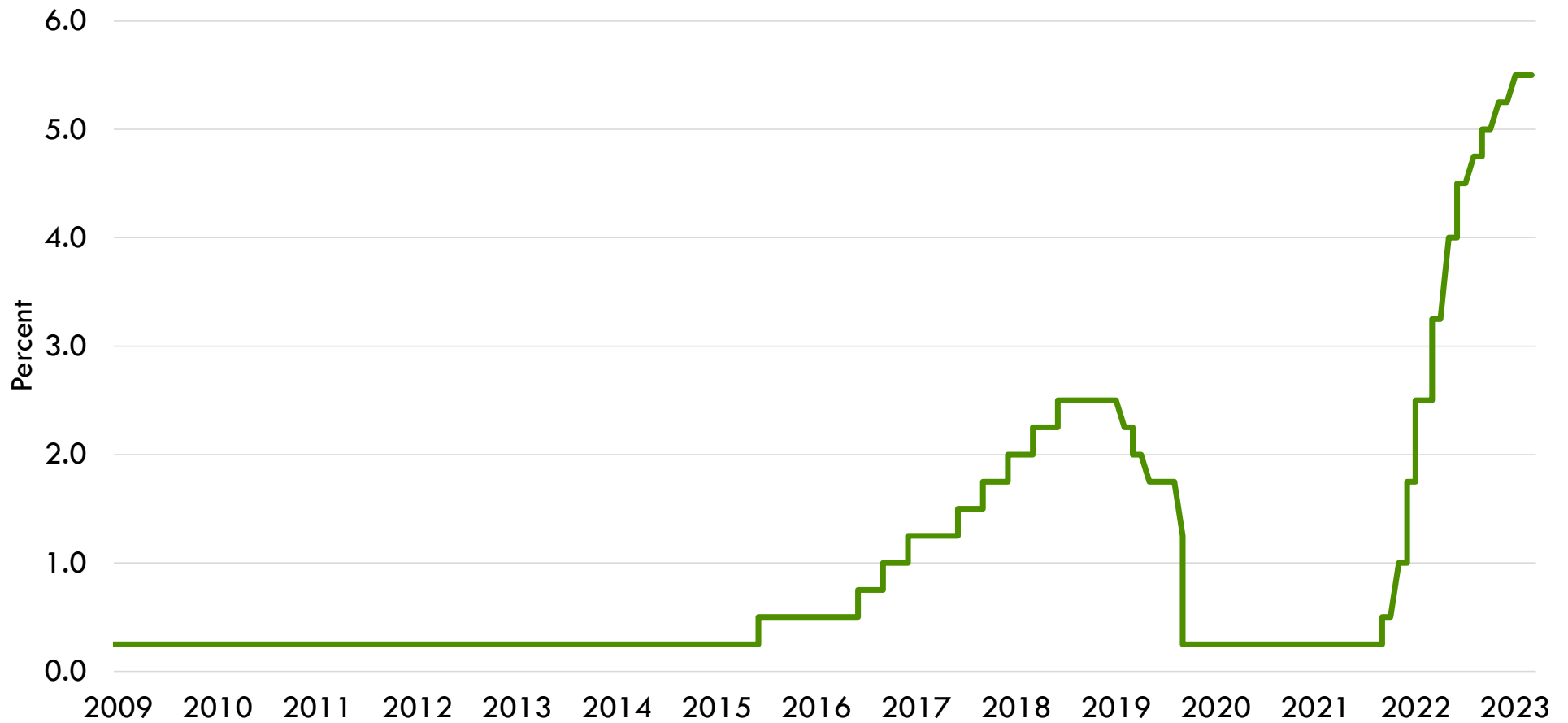
U.S. Consumer Price Index, Select Categories (NSA)

Year-over-year % Change [August 2022 v. August 2023]



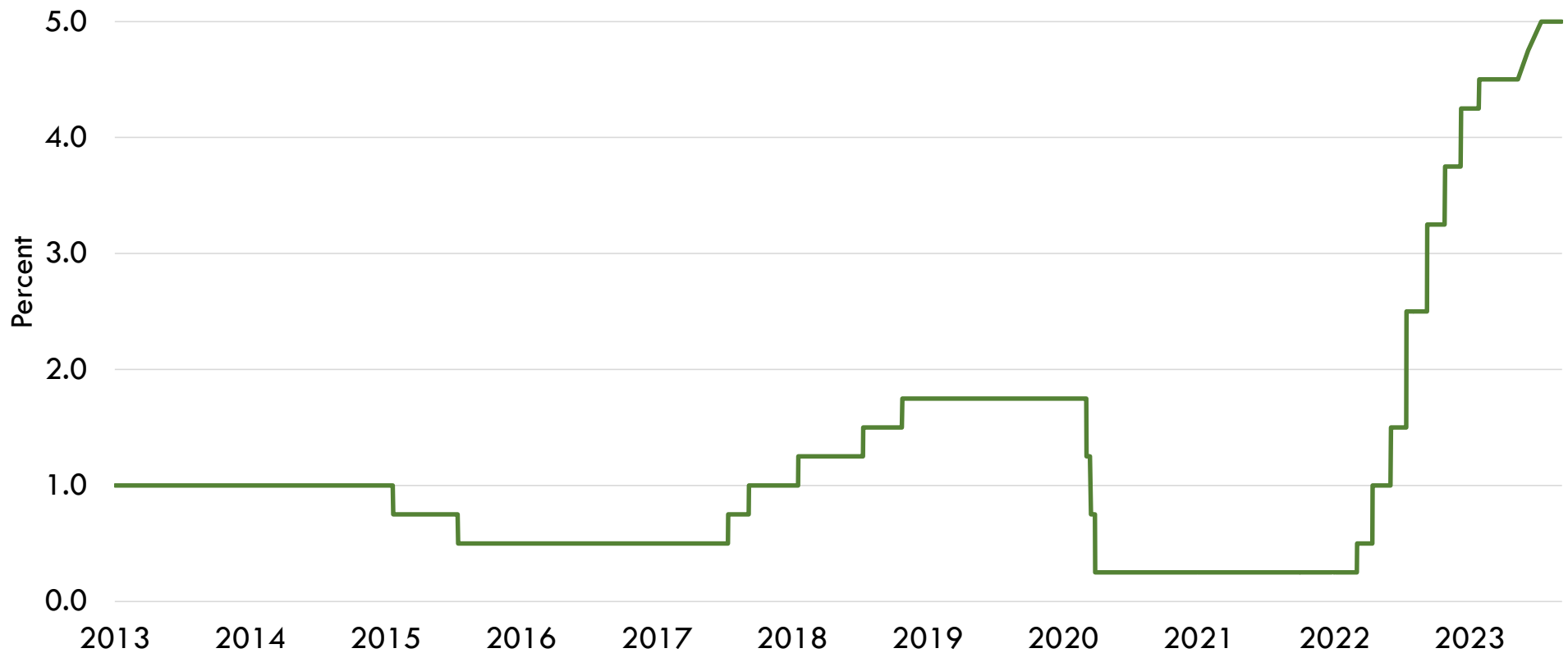
Source: U.S. Bureau of Labor Statistics

Federal Funds Target Range, Upper Limit, 2009 – 2023



Source: Board of Governors of the Federal Reserve System

Bank of Canada Target Overnight Rate, 2013 – 2023



Source: Bank of Canada



Mission Impossible

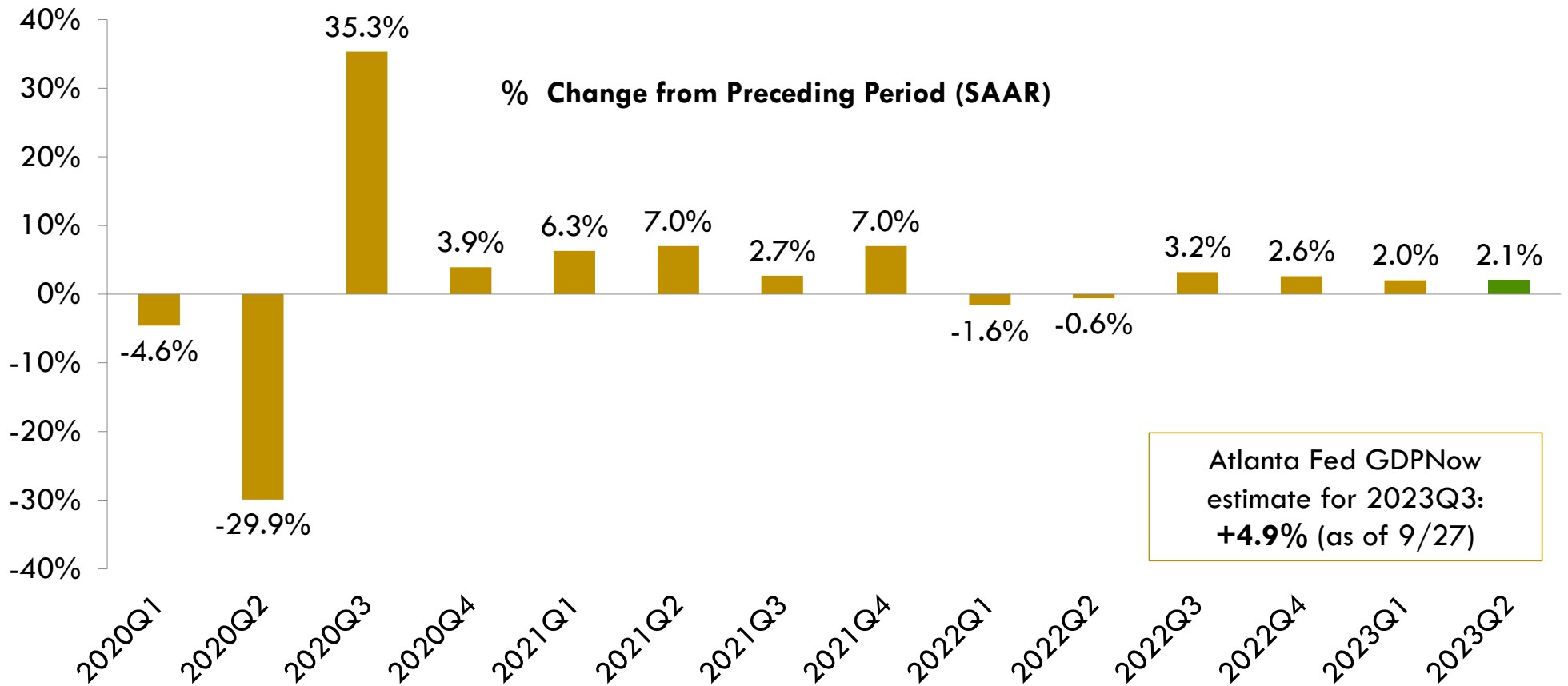
(8 films, 1996-2024)

Monetary Policy Lags

- “A large body of research tells us it can take 18 months to two years or more for tighter monetary policy to materially affect inflation.” - Raphael Bostic, President and Chief Executive Officer, Federal Reserve Bank of Atlanta
- Some reasons for the lag: how fixed people’s expectations are; the gradual response of investment (both business investment and consumer investment in durables/dwellings); long-term contracts (rent); gradual transmission from sectors of the economy immediately affected (ex. lending) to other sectors.
- In the meantime, higher rates reduce investment, slow hiring and wage growth, and eventually increase unemployment.

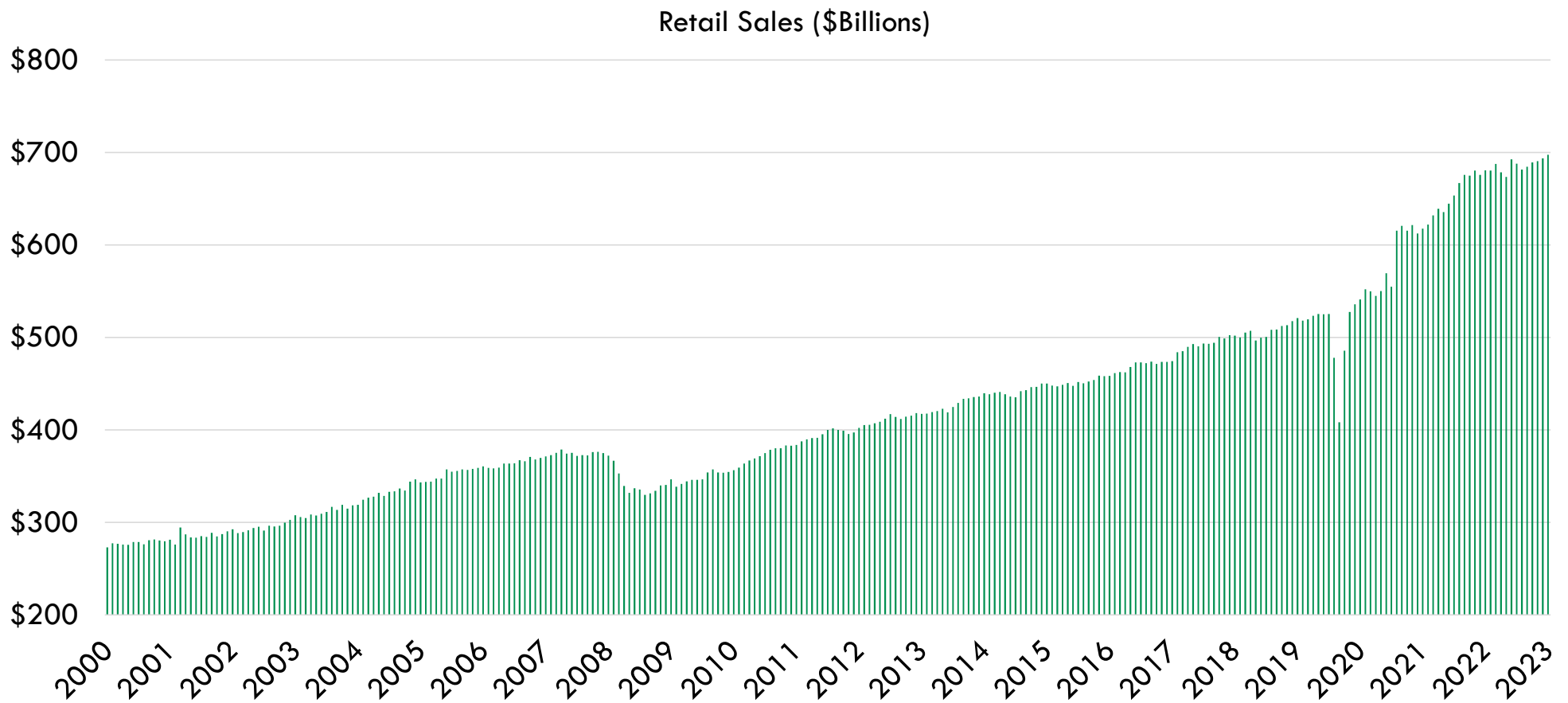
Born on the 4th of July

U.S. Gross Domestic Product Growth, 2020 – 2023Q2



Source: U.S. Bureau of Economic Analysis *2023Q2: 2nd estimate

U.S. Retail Sales, 2000 – August 2023

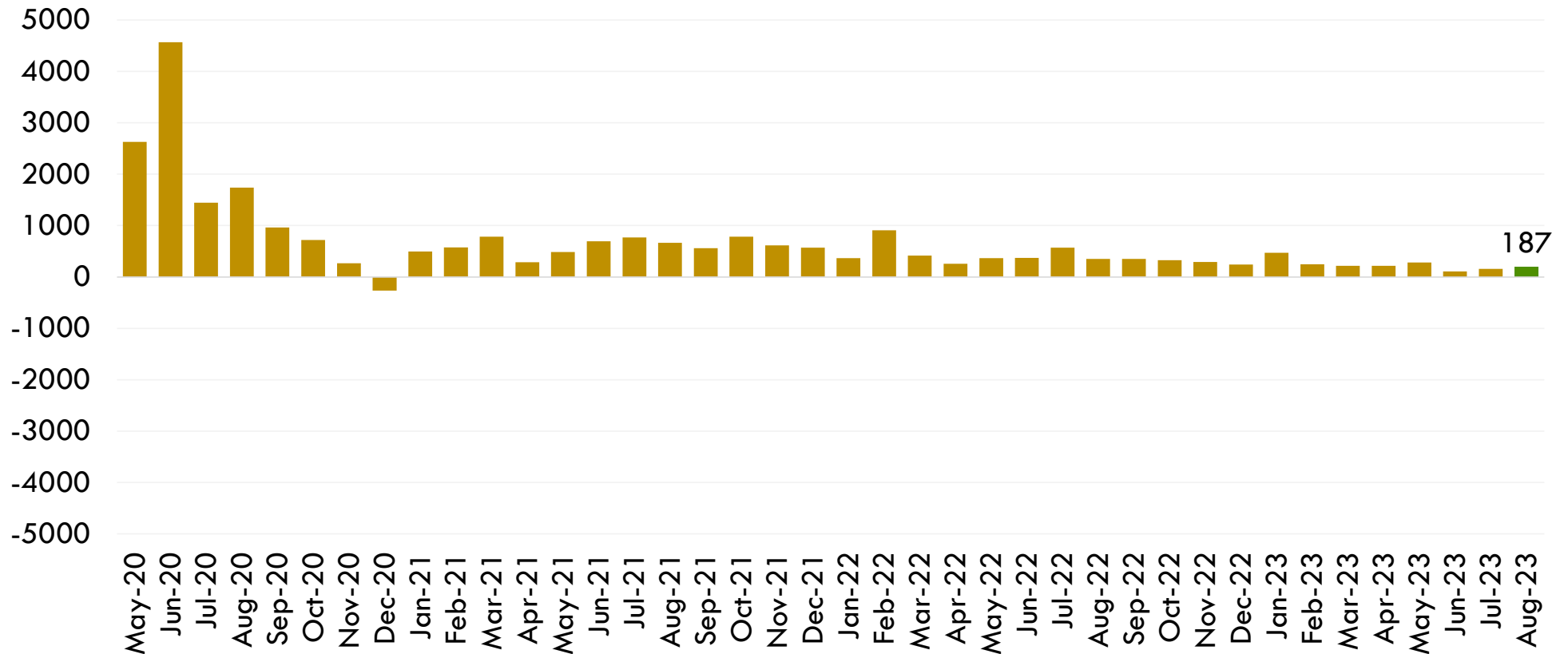


Source: U.S. Census Bureau

Top Gun: Net Change in U.S. Jobs

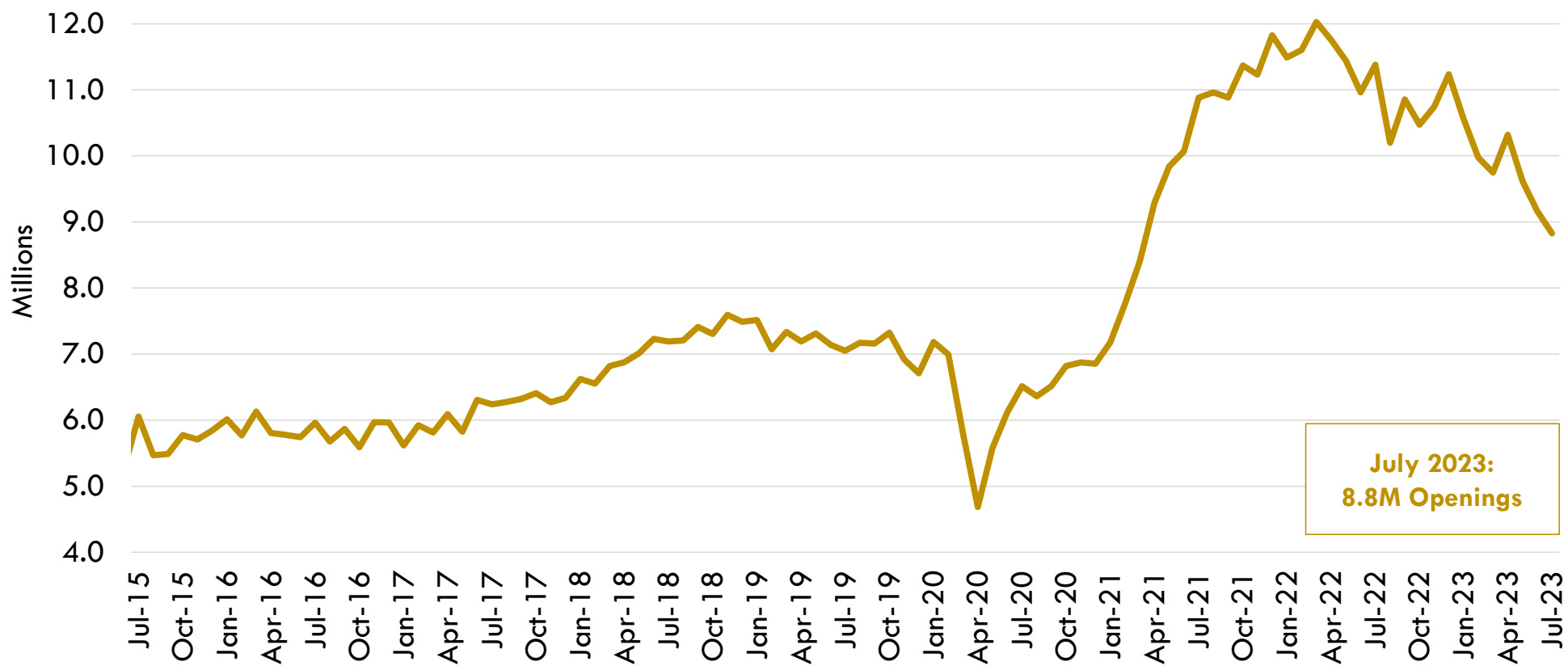
May 2020 – August 2023

Monthly Job Growth (000's)



Source: U.S. Bureau of Labor Statistics

U.S. Job Openings, 2015 – July 2023



**July 2023:
8.8M Openings**

Change in LF Participation Rate by Age, Gender 1980 v. 2023



Change in LF Participation Rate, 1980 v. 2023 (percentage points)			
Age Group	Total	Men	Women
16+ years	-1.2	-9.4	+5.8
16-19 years	-19.8	-24.2	-15.5
20-24 years	-5.9	-13.2	+0.9
25-34 years	+3.7	-5.9	+12.6
35-44 years	+3.8	-5.3	+11.9
45-54 years	+7.1	-3.7	+16.8
55-64 years	+9.9	-0.7	+18.6

If the labor force participation rate were what it was in 1980, there would be 12.2 million more men and 7.9 million fewer women in the labor force (ages 16+).

Source: Bureau of Labor Statistics

Employment Growth, 25 Largest Metros

February 2020 v. August 2023 Percent Change

Rank	MSA	%	Rank	MSA	%
1	Dallas-Fort Worth-Arlington, TX	11.6%	14	San Diego-Carlsbad, CA	3.5%
2	Tampa-St. Petersburg-Clearwater, FL	8.6%	15	Portland-Vancouver-Hillsboro, OR-WA	2.8%
3	Charlotte-Concord-Gastonia, NC-SC	8.5%	16	Chicago-Naperville-Elgin, IL-IN-WI	2.3%
4	Orlando-Kissimmee-Sanford, FL	7.2%	17	Boston-Cambridge-Nashua, MA-NH	2.1%
5	San Antonio-New Braunfels, TX	6.7%	17	St. Louis, MO-IL	2.1%
6	Atlanta-Sandy Springs-Roswell, GA	6.2%	19	New York-Newark-Jersey City, NY-NJ-PA	1.2%
7	Phoenix-Mesa-Scottsdale, AZ	5.5%	20	Minneapolis-St. Paul-Bloomington, MN-WI	1.1%
8	Riverside-San Bernardino-Ontario, CA	5.1%	21	San Francisco-Oakland-Hayward, CA	1.0%
9	Houston-The Woodlands-Sugar Land, TX	4.9%	22	Baltimore-Columbia-Towson, MD	0.9%
10	Denver-Aurora-Lakewood, CO	4.2%	23	Los Angeles-Long Beach-Anaheim, CA	0.5%
11	Miami-Fort Lauderdale-West Palm Beach, FL	4.1%	23	Washington-Arlington-Alexandria, DC-VA-MD-WV	0.5%
11	Philadelphia-Camden-Wilm., PA-NJ-DE-MD	4.1%			
13	Seattle-Tacoma-Bellevue, WA	3.8%	25	Detroit-Warren-Dearborn, MI	0.0%

Source: Bureau of Labor Statistics

Current Employment Statistics (CES) Survey. Note: data are not seasonally adjusted.

U.S. % Change 2/2020 v. 8/2023: +2.7%

Unemployment Rates, 25 Largest Metros

August 2023

Rank	MSA	%	Rank	MSA	%
1	Baltimore-Columbia-Towson, MD	1.8	12	Seattle-Tacoma-Bellevue, WA	3.8
2	Miami-Fort Lauderdale-West Palm Beach, FL	2.6	13	Phoenix-Mesa-Scottsdale, AZ	4.0
2	Washington-Arlington-Alexandria, DC-VA-MD-WV	2.6	13	San Francisco-Oakland-Hayward, CA	4.0
4	Boston-Cambridge-Nashua, MA-NH	2.7	15	Detroit-Warren-Dearborn, MI	4.1
5	Orlando-Kissimmee-Sanford, FL	3.1	16	Dallas-Fort Worth-Arlington, TX	4.2
6	Minneapolis-St. Paul-Bloomington, MN-WI	3.2	17	San Antonio-New Braunfels, TX	4.3
6	Tampa-St. Petersburg-Clearwater, FL	3.2	17	San Diego-Carlsbad, CA	4.3
8	Charlotte-Concord-Gastonia, NC-SC	3.3	19	Philadelphia-Camden-Wilm., PA-NJ-DE-MD	4.5
9	Denver-Aurora-Lakewood, CO	3.6	20	Houston-The Woodlands-Sugar Land, TX	4.9
10	Atlanta-Sandy Springs-Roswell, GA	3.7	20	New York-Newark-Jersey City, NY-NJ-PA	4.9
10	Portland-Vancouver-Hillsboro, OR-WA	3.7	22	Chicago-Naperville-Elgin, IL-IN-WI	5.1
10	St. Louis, MO-IL	3.7	23	Riverside-San Bernardino-Ontario, CA	5.3
			24	Los Angeles-Long Beach-Anaheim, CA	5.4

Source: Bureau of Labor Statistics
Local Area Unemployment Statistics (LAUS) program. Note:
data are not seasonally adjusted



U.S. Unemployment Rate: 3.8%

Unemployment Rate by Canadian Province/Territory

August 2023

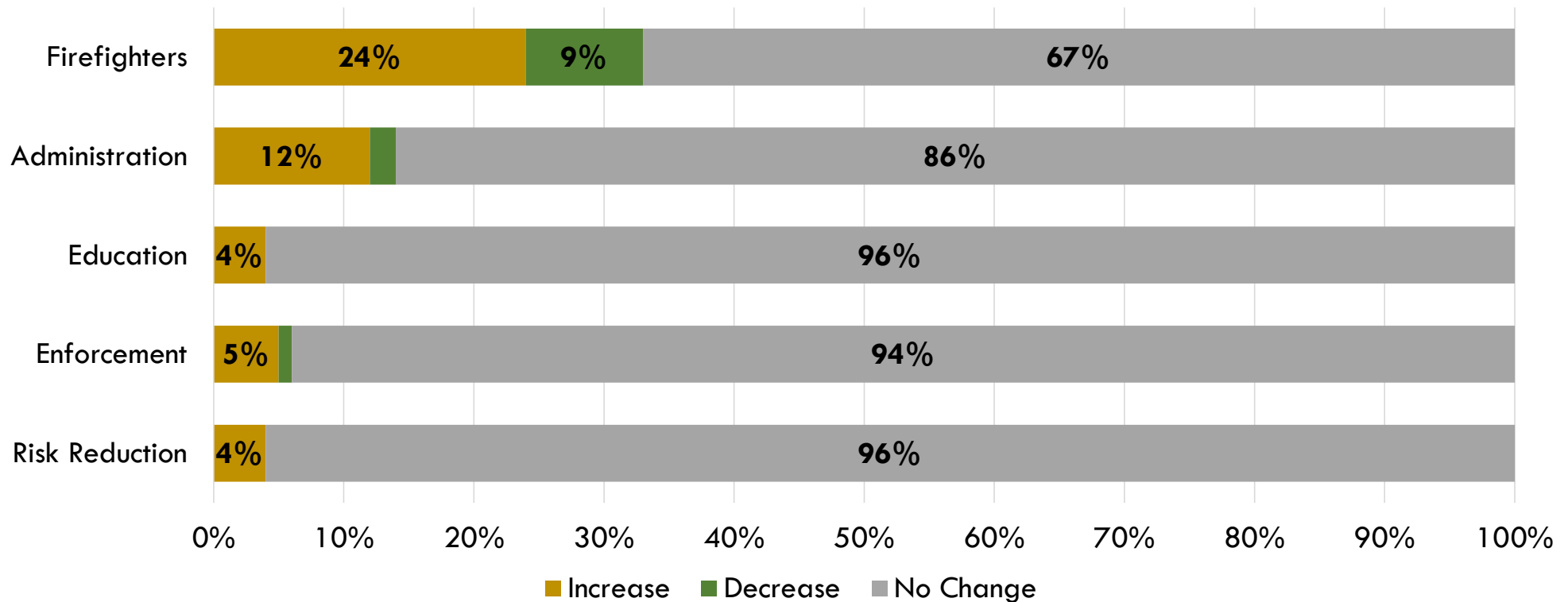
Province/Territory	Unemployment Rate
Quebec	4.3%
British Columbia	5.2%
Saskatchewan	5.4%
Manitoba	5.7%
Alberta	5.7%
Ontario	5.9%
Nova Scotia	7.0%
Prince Edward Island	7.6%
New Brunswick	7.7%
Newfoundland and Labrador	8.9%
Canada	5.5%

NFPA's 2021 Fire Service Needs Assessment Shows Ongoing Need for Staff & Training

- The expansion of fire department roles and responsibilities shows no sign of stopping.
- Across all response types, from structural firefighting to active shooter situations, there are fire department personnel responsible for responding to incidents for which they have not been formally trained or certified.
- Most fire departments (87%) are responsible for wildland and wildland-urban interface (WUI) firefighting.
 - 78% of the departments that perform wildland and WUI firefighting operations have unmet training needs
- Staffing levels across job roles and functions have remained flat since 2015 and weekday staffing among volunteer fire departments remains a challenge.

Most Departments Saw No Change in Staff from 2016 to 2020

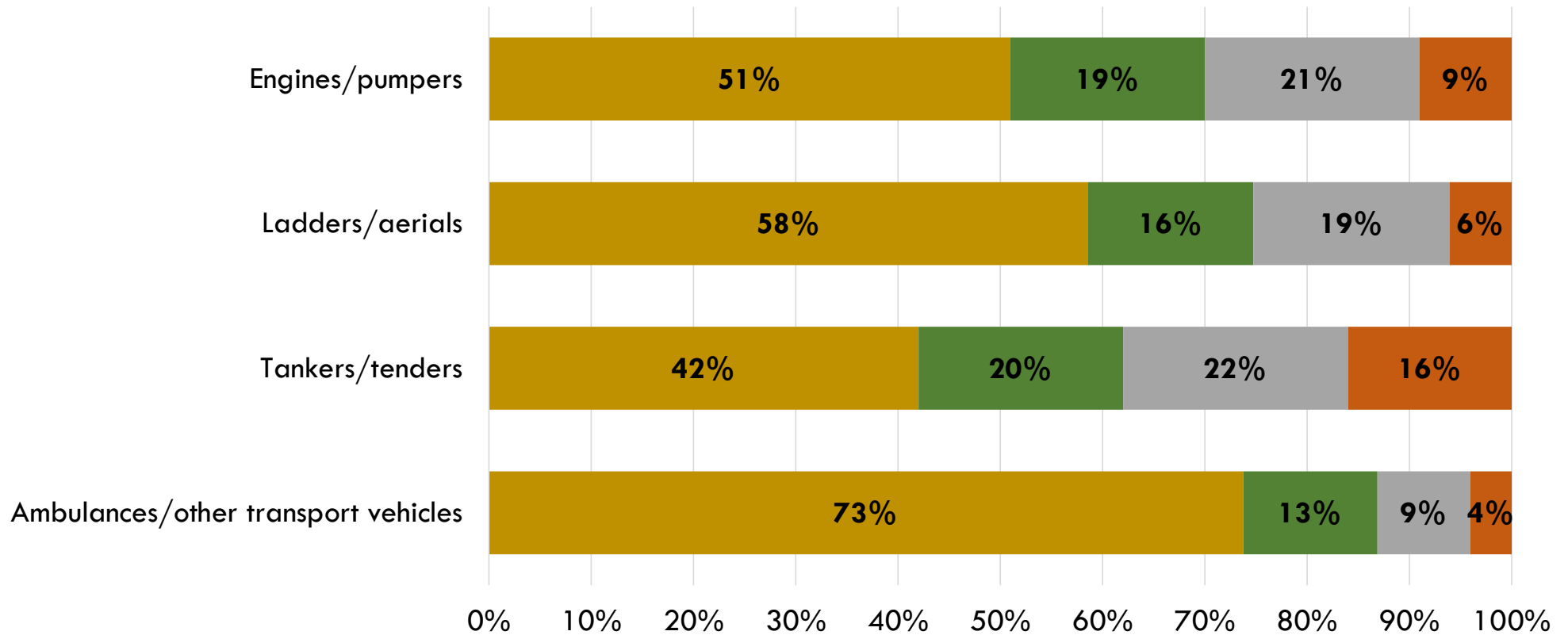
What change have you seen in the total number of full-time positions or fulltime equivalents (FTE) in each of the following categories in your department since 2016?



Source: NFPA, Fifth Needs Assessment of the U.S. Fire Service

Fire Apparatus by Age, 2021

■ 0-14 Yrs Old ■ 15-19 Yrs Old ■ 20-29 Yrs Old ■ 30+Yrs Old



Source: National Fire Protection Association (NFPA), "Needs Assessment of the U.S. Fire Service", December 2021

Fire Apparatus Continues to Age

- As of 2021, almost 50% of engines/pumpers in service are 15 or more years old (up from 43% in 2015);
- Only 38% of fire departments plan and budget for apparatus replacement on a regular schedule;
- 31% of departments plan for replacement, but have no budget;
- 31% have no plan or budget;
- Larger departments are much more likely to have a plan and a budget, while 45% of the smallest departments have no plan or budget.



You Had Me at Recession

(Jerry Maguire, 1996)

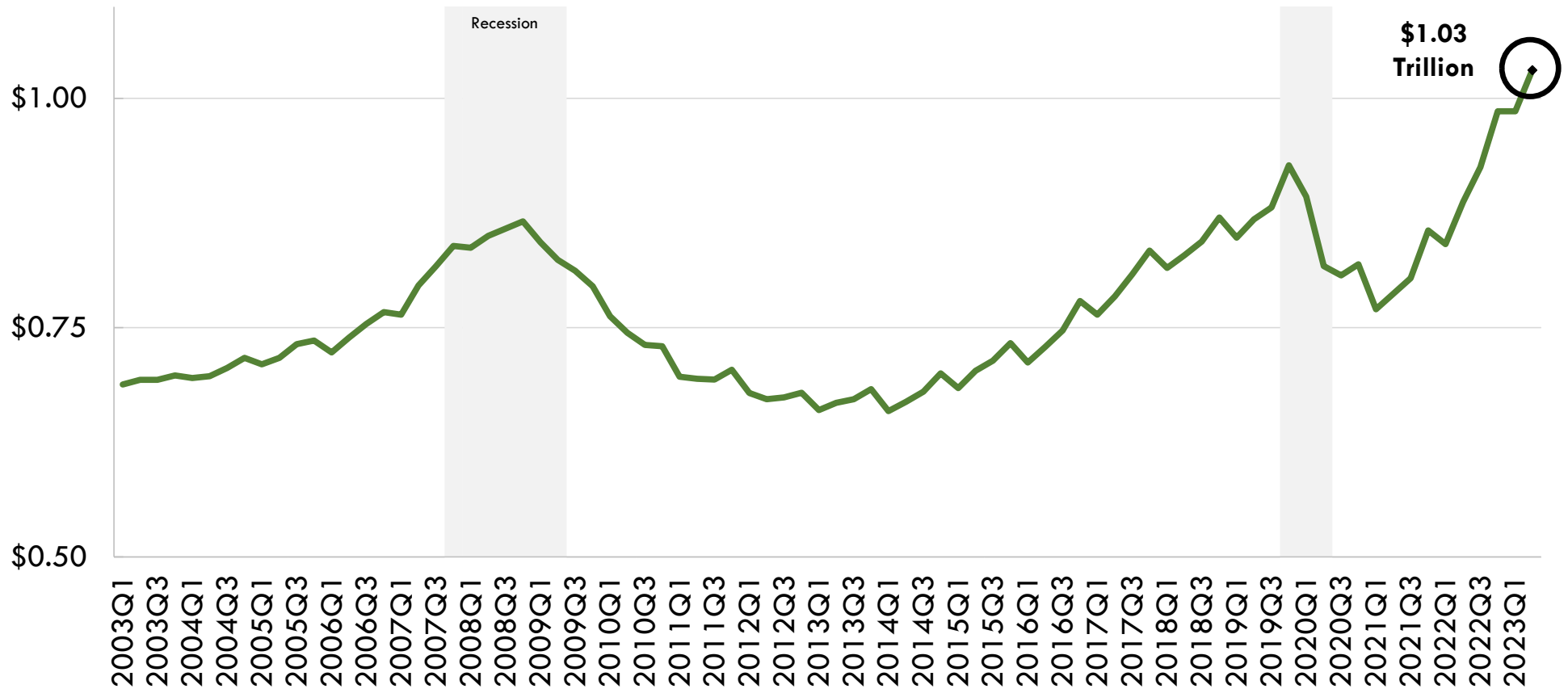


Defining Recession: Eyes Wide Shut

- The National Bureau of Economic Research (NBER)'s Business Cycle Dating Committee is the official recession scorekeeper – it maintains a chronology of U.S. business cycles.
- NBER's traditional definition of recession is “a significant decline in economic activity that is spread across the economy and that lasts more than a few months.”
- There is no fixed rule about which indicators contribute information to NBER's process or how they are weighted in the determination of recession.
- Because the government statistics NBER relies on are published at various lags, the NBER Committee cannot officially designate a recession until after it starts (and often not until it's over).

U.S. Credit Card Debt, 2003 – 2023

\$ Trillions

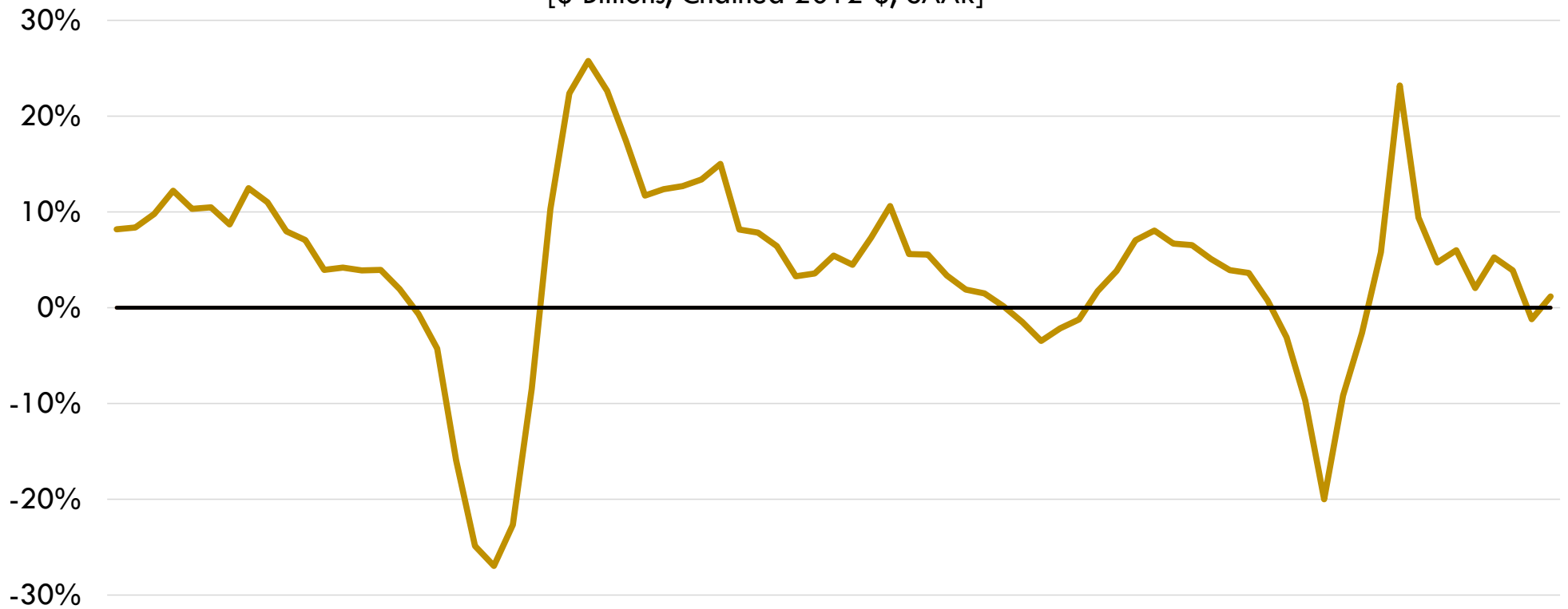


Source: FRED; New York Fed Consumer Credit Panel/Equifax

U.S. GDP: Nonresidential Fixed Investment in Equipment

2004 – 2023Q2

YOY % Change
[\$ Billions, Chained 2012 \$, SAAR]



Source: U.S. Bureau of Economic Analysis *2023Q2: 2nd estimate

The Firm

- According to a November 2022 PwC survey of U.S. executives, 26% of firms are planning to reduce the number of full-time employees over the next 12-18 months.
 - In August 2022, 50% of firms said they already had, or had a plan in place to, reduce overall headcount.
- Four out of five executives surveyed by PwC in November 2022 said a recession is coming within the next six months.

Noteworthy Layoffs in 2022-2023

Ranked by Number Laid Off

Company	Estimated Layoffs	Workforce Before Layoffs	Percent Laid Off
Amazon	27,000	1,544,000	1.7%
Meta	21,000	87,314	24.1%
Accenture	19,000	760,000	2.5%
Alphabet	12,000	187,000	6.4%
Microsoft	10,000	221,000	4.5%
3M	8,500	90,000	9.4%
Salesforce	8,000	79,000	10.1%
Disney	7,000	222,000	3.2%
Dell	6,650	133,000	5.0%
Twitter	3,700	7,500	49.3%
Goldman Sachs	3,200	49,000	6.5%
Indeed	2,200	14,600	15.1%
PayPal	2,000	29,000	6.9%
Dow	2,000	38,000	5.3%
Boeing	2,000	156,000	1.3%

Source: Company announcements & government filings; news reports

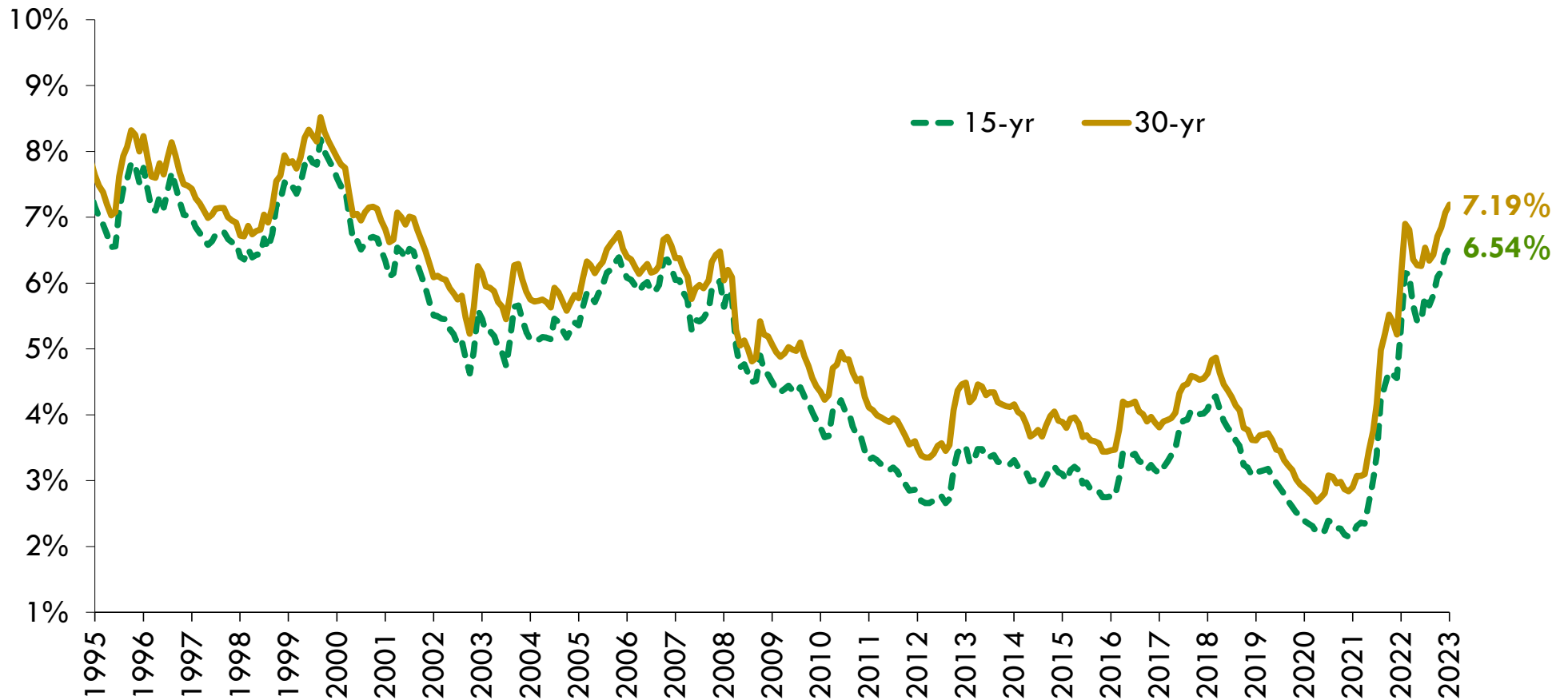


A Few Good Properties

(A Few Good Men, 1992)



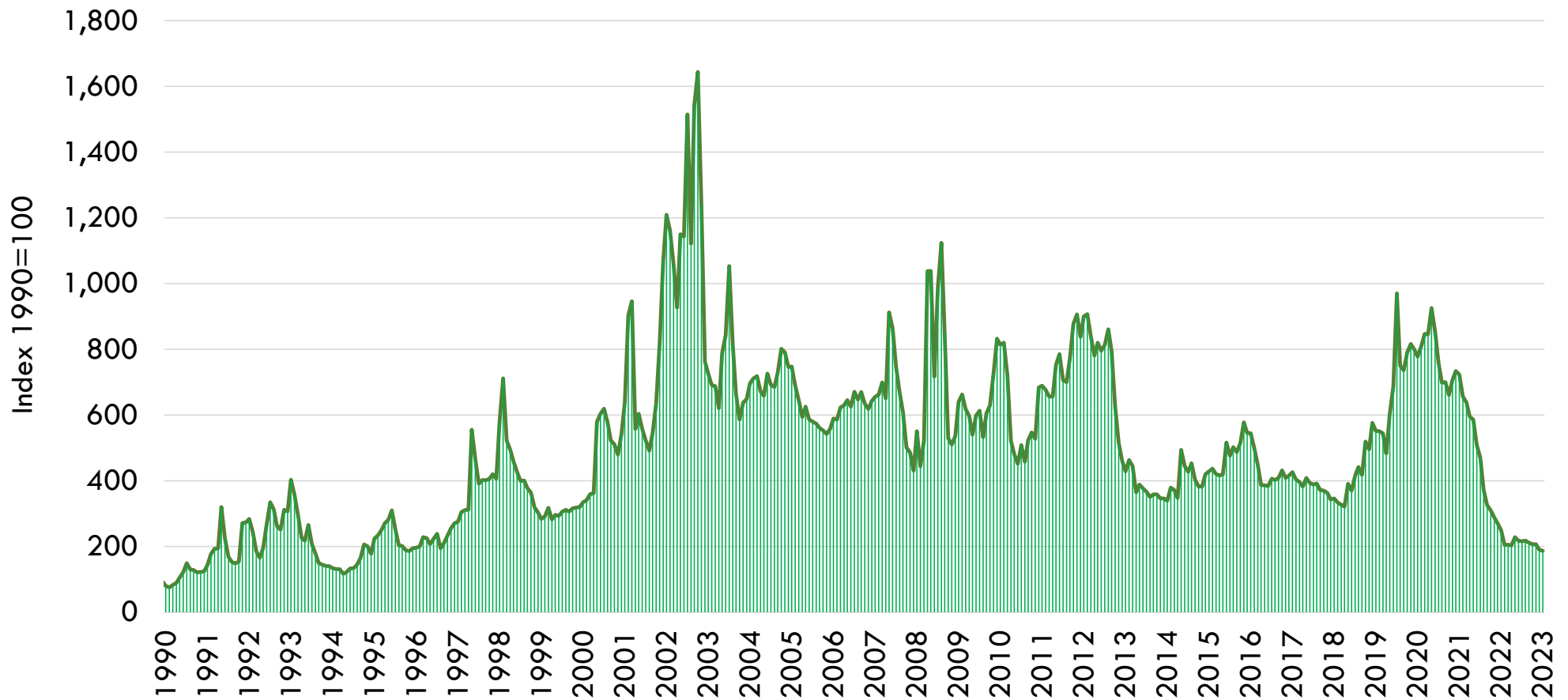
U.S. 15-Year & 30-Year Fixed Mortgage Rates 1995 – September 2023*



Source: Freddie Mac *Week ending 9/21/2023

U.S. Mortgage Loan Applications Composite Index

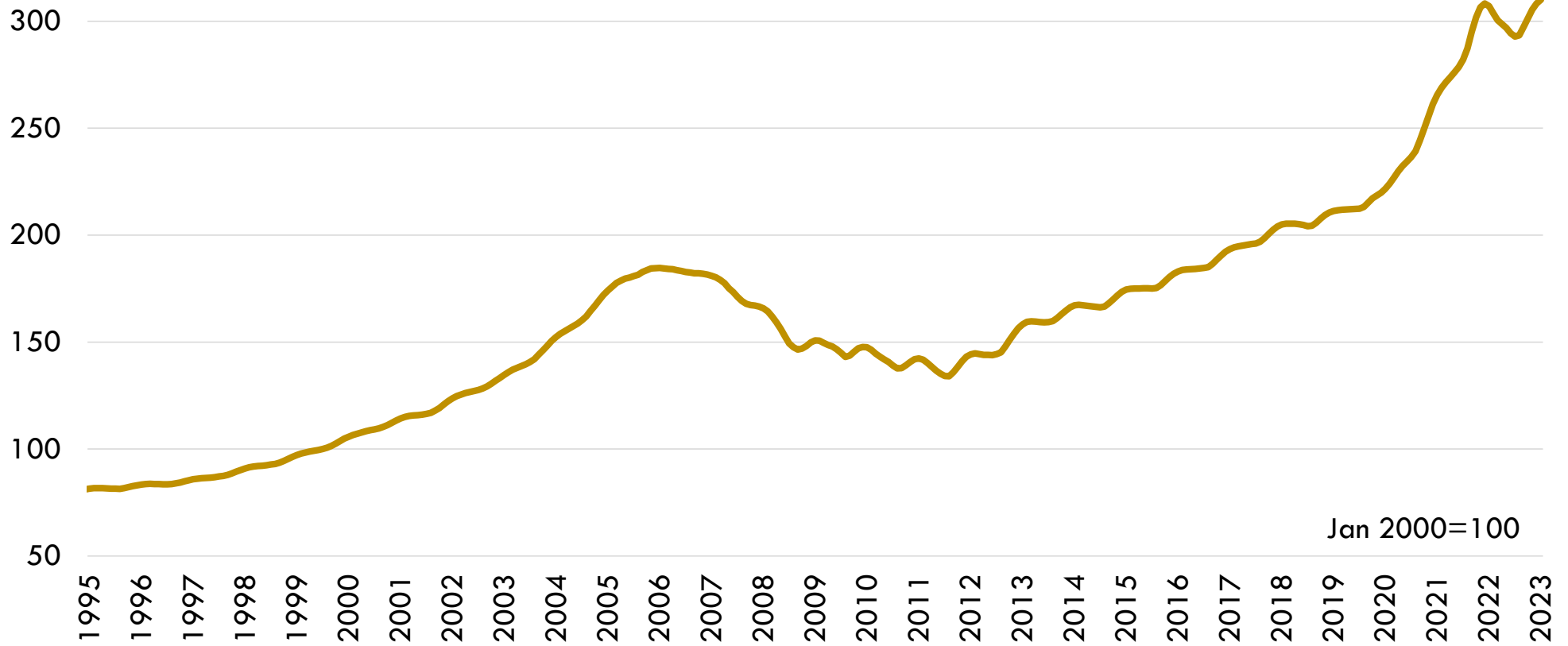
1990 – September 2023



Source: Mortgage Bankers Association (MBA)

S&P Case-Shiller U.S. National Home Price Index

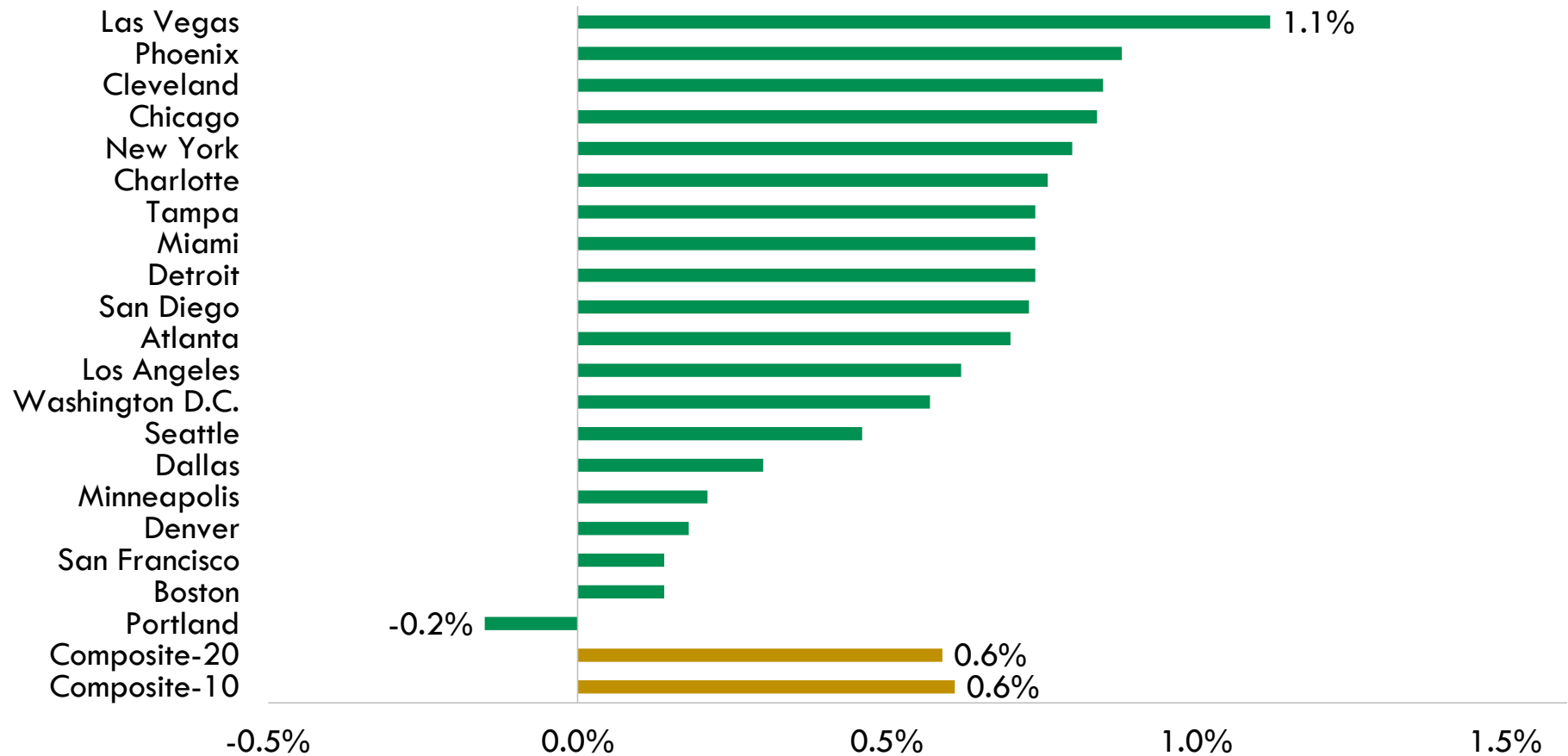
1995 – July 2023



Source: Standard & Poor's

S&P Case-Shiller Home Price Index by Metro Area

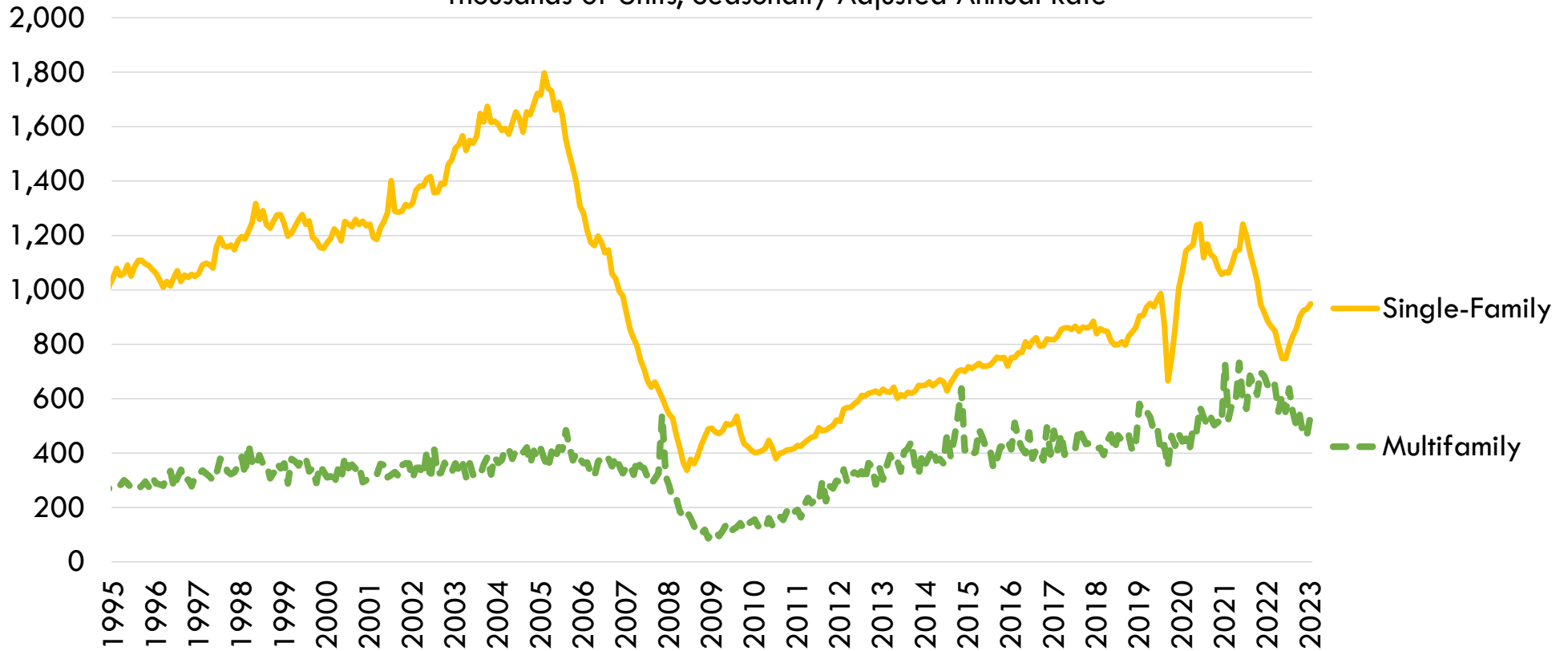
1-Month % Change, July 2023



Source: Standard & Poor's

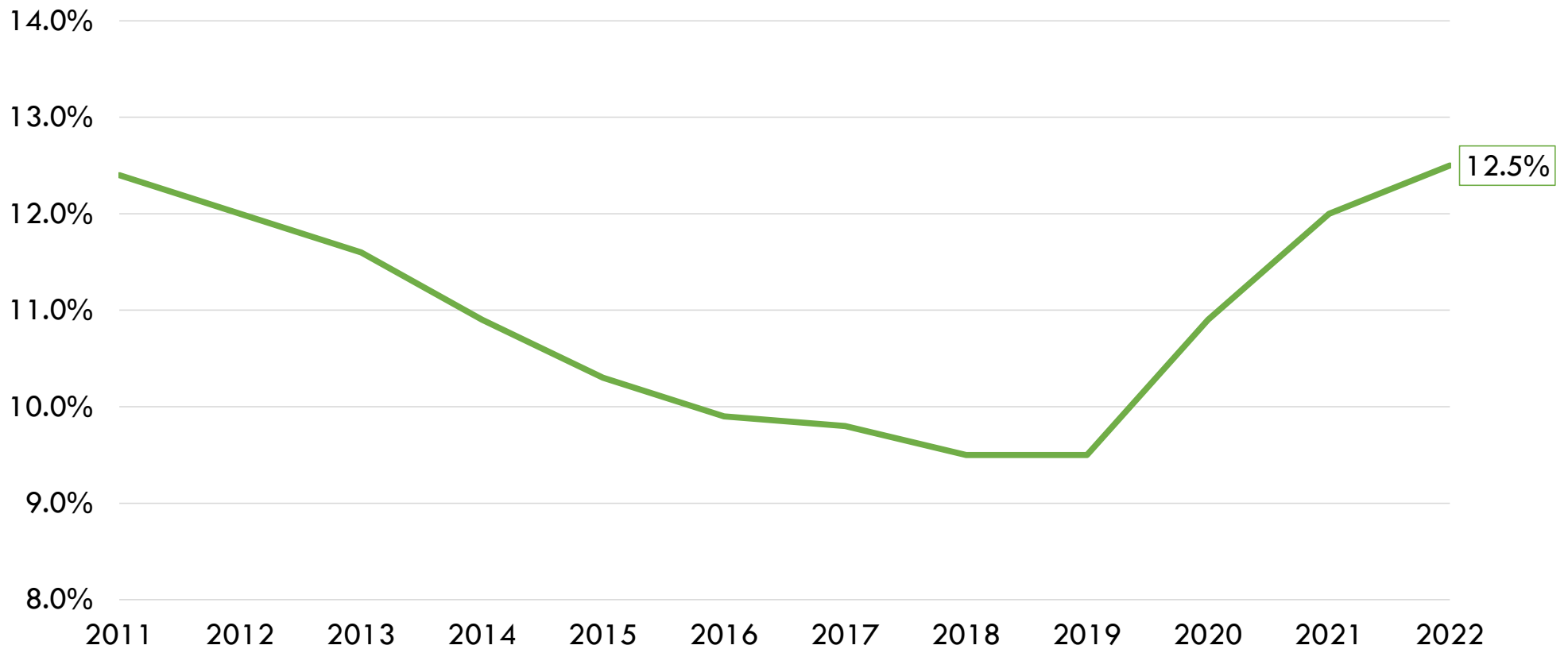
U.S. Residential Building Permits 1995 – August 2023

Thousands of Units, Seasonally Adjusted Annual Rate



Source: U.S. Census Bureau

U.S. Office Vacancy, 2011 – 2022

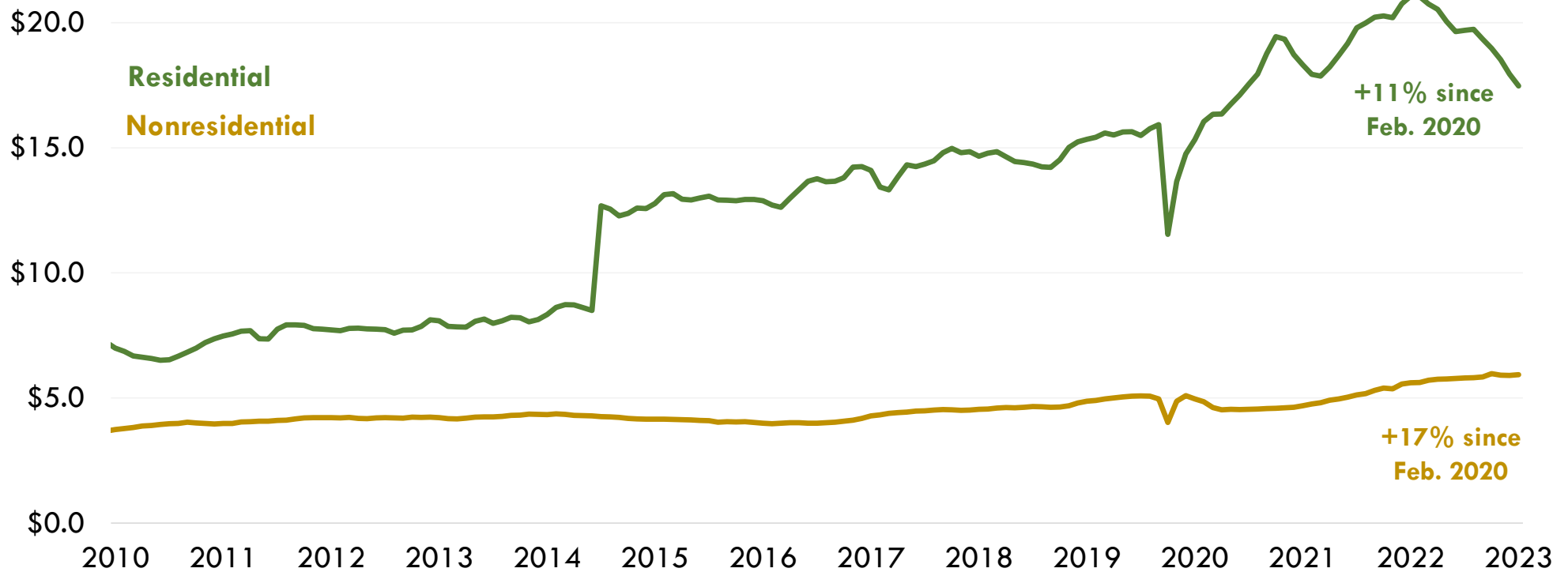


Source: Costar

Canada Building Construction Investment

2010 – July 2023

Investment in Building Construction, Seasonally Adjusted Current Dollars (\$Billions)

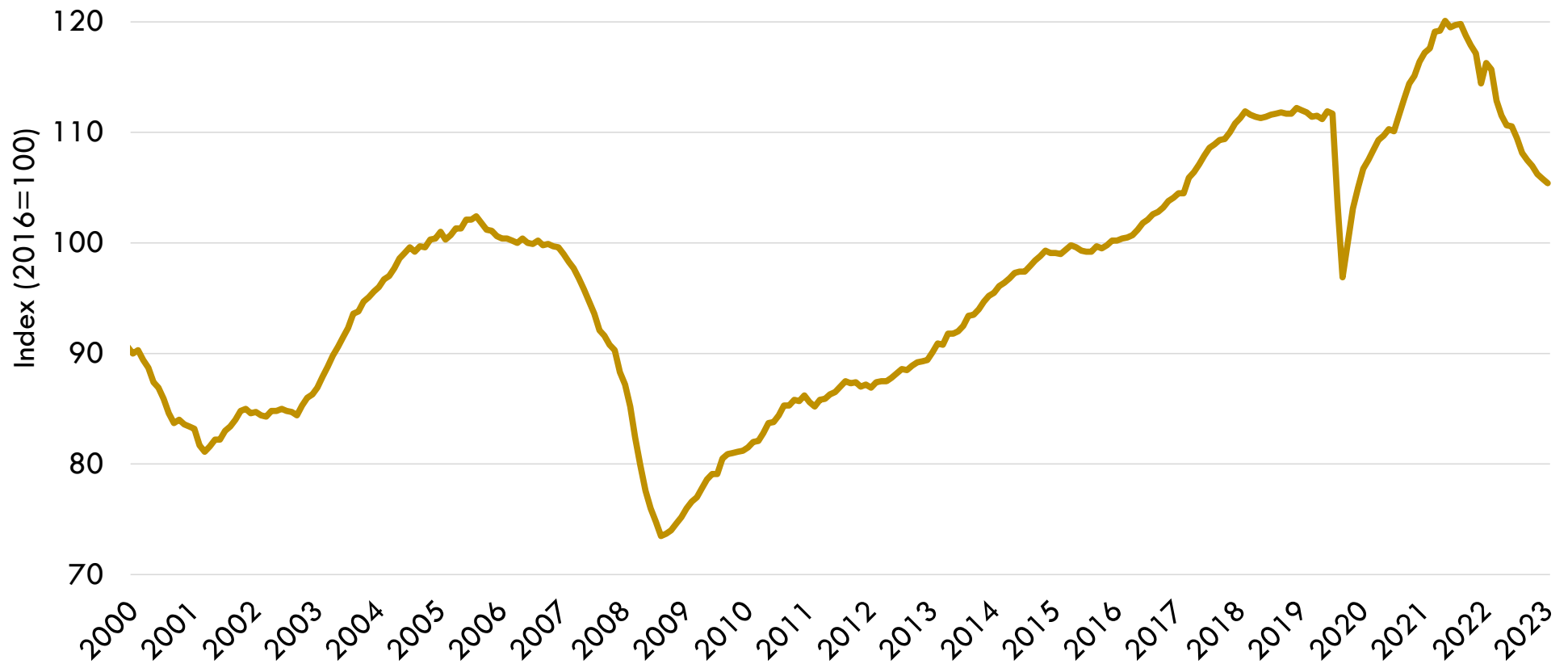


Source: Statistics Canada, Table 34-10-0175-01 Investment in Building Construction

Edge of Tomorrow

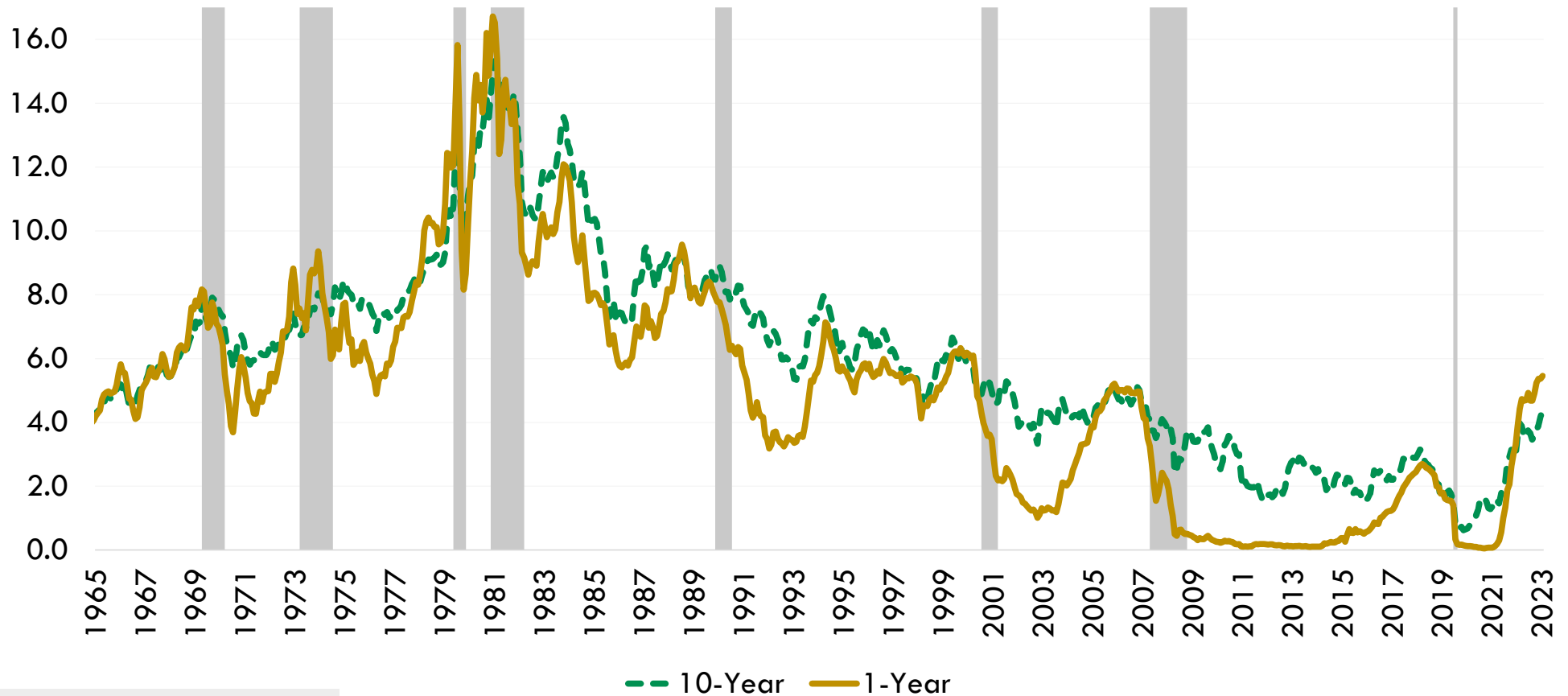


Conference Board: U.S. Leading Economic Index 2000 – August 2023



Source: The Conference Board

U.S. Treasury Yields : 10-Year v. 1-Year 1965 – September 2023



Shaded areas indicate U.S. recessions

Source: Federal Reserve Bank of St. Louis

You Can't Handle the Truth!

- It's going to get worse before it gets better.
- The global economy is weakening, the national economy is weakening, borrowing costs are higher, and excess inflation persists.
- Some segments stand to hold up better than others, including public construction, grocery stores, and multifamily housing.
- At some point, the Federal Reserve will stop raising rates – that will represent a key inflection point for the economy.
- Recessionary conditions will prevail at some point over the next 12 months.

Thank You

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Q&A

