



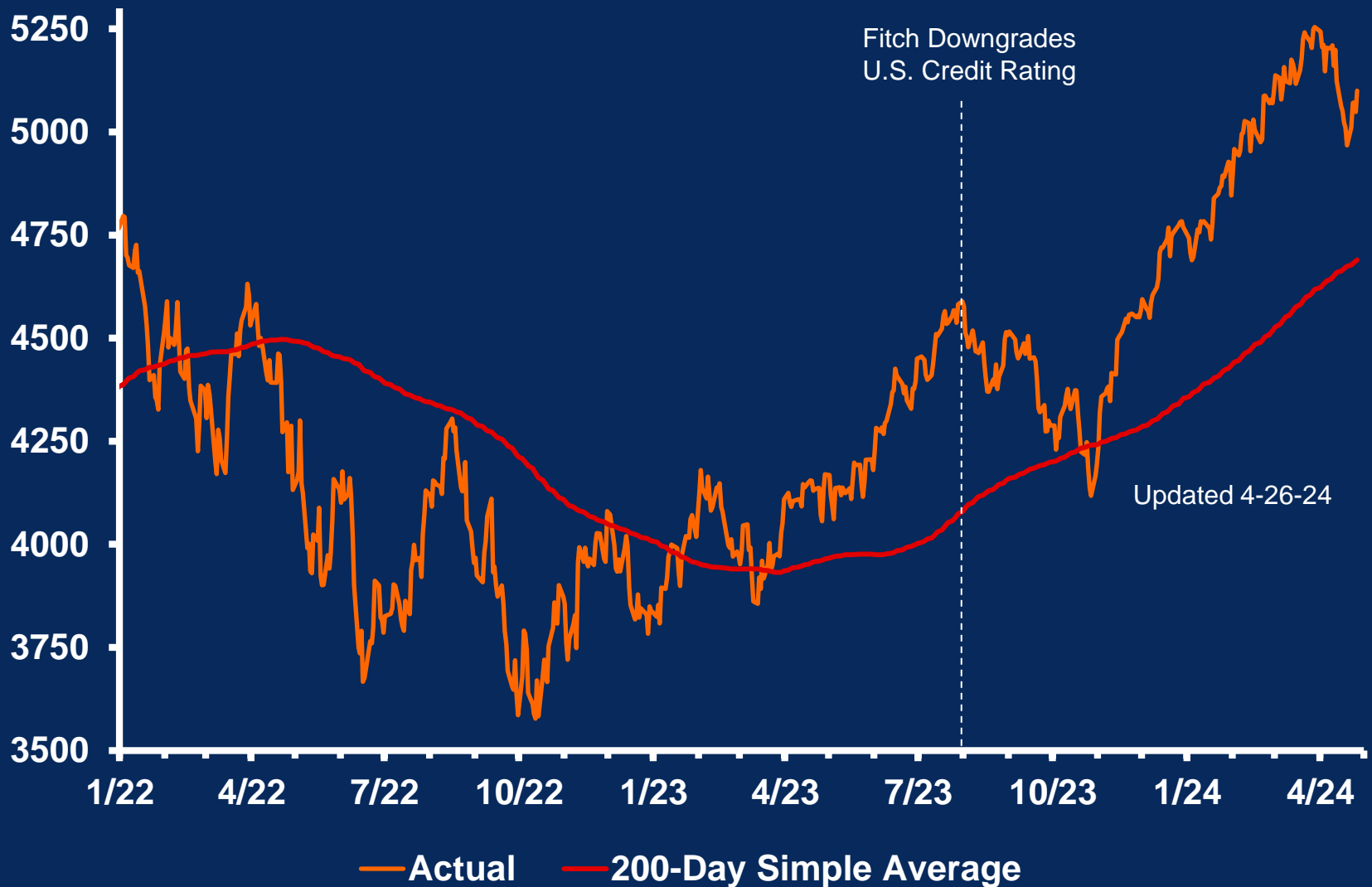
# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

Clare Zempel, CFA, CBE  
Economist and Investment Strategist

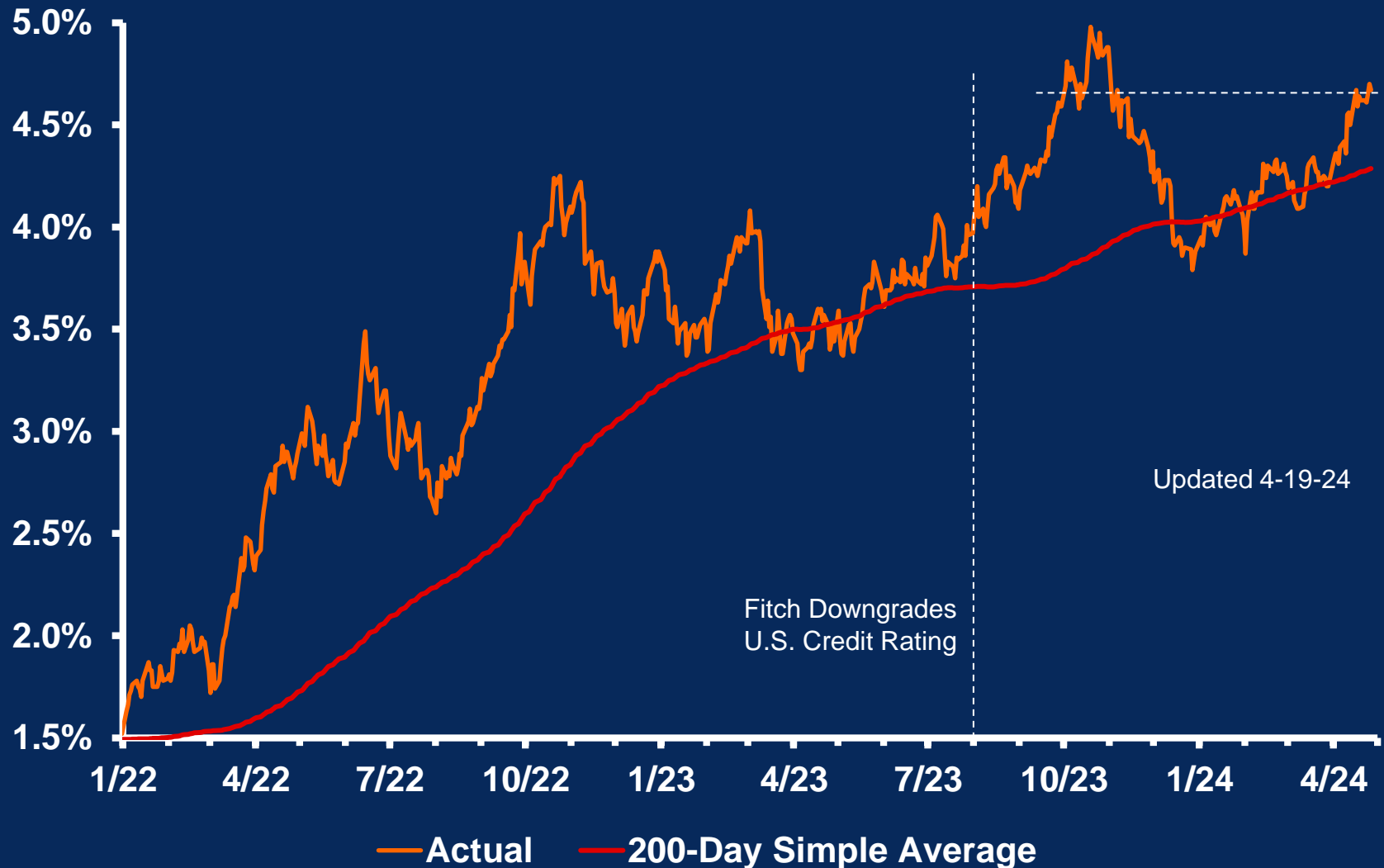
Austin, Texas  
May 1, 2024

# S&P 500 Common Stock Index (Days)



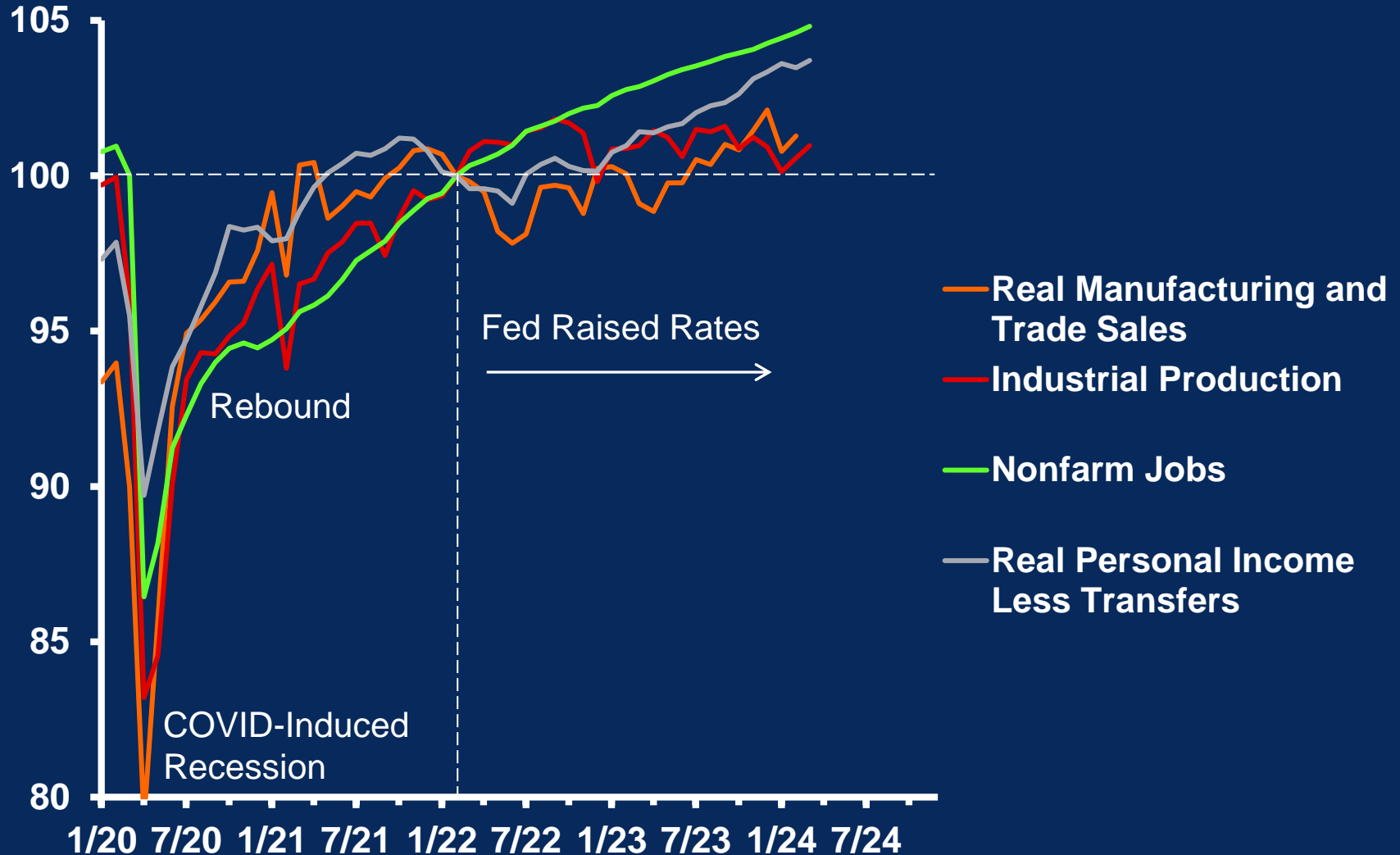
# 10-Year T-Note Yield

(Days) (Constant Maturity)



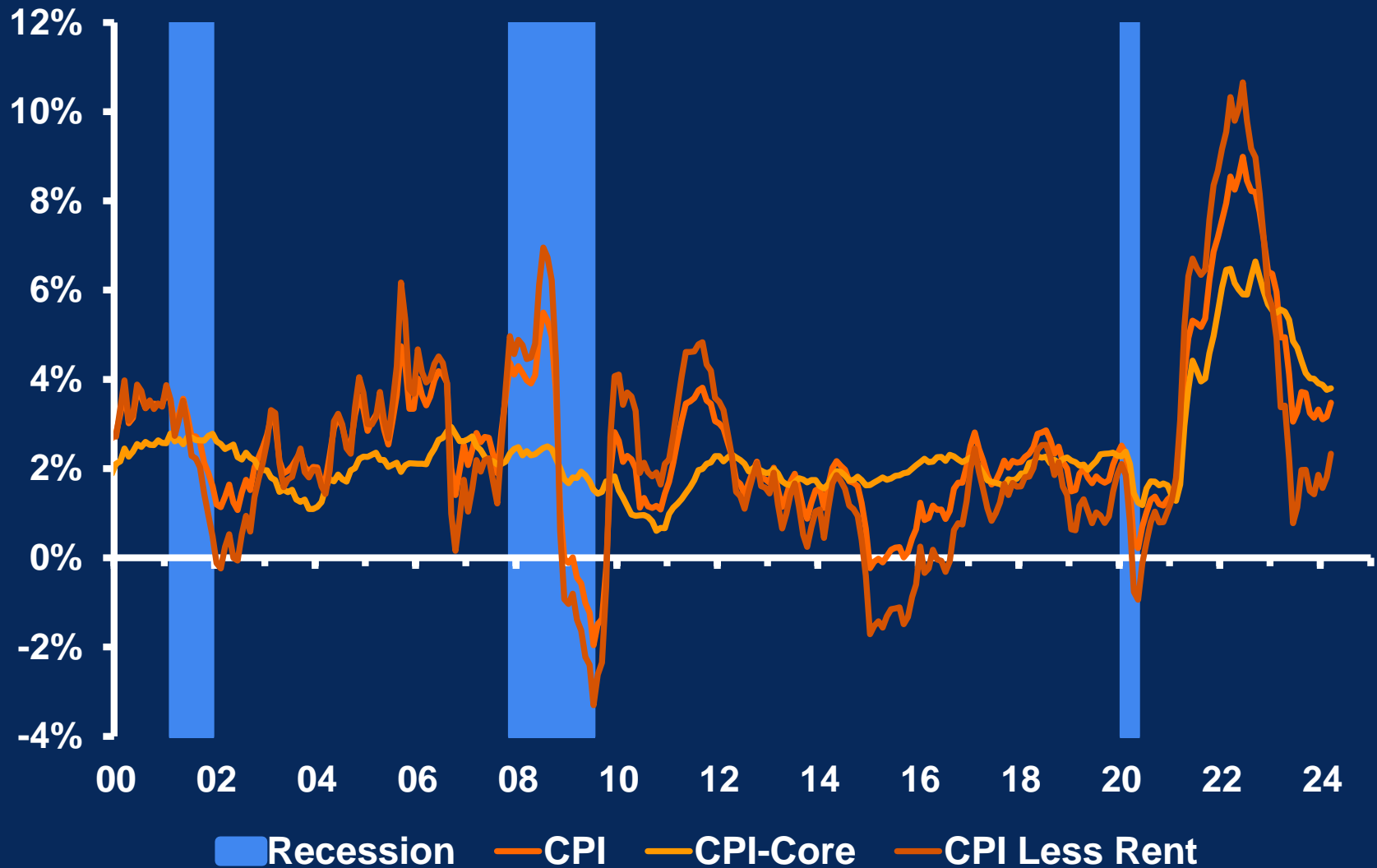
# NBER Recession Watch – Four Key Numbers

(NBER = National Bureau of Economic Research) (February 2022 = 100)



# CPI Inflation

(CPI = Consumer Price Index) (12-Month Changes)





# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

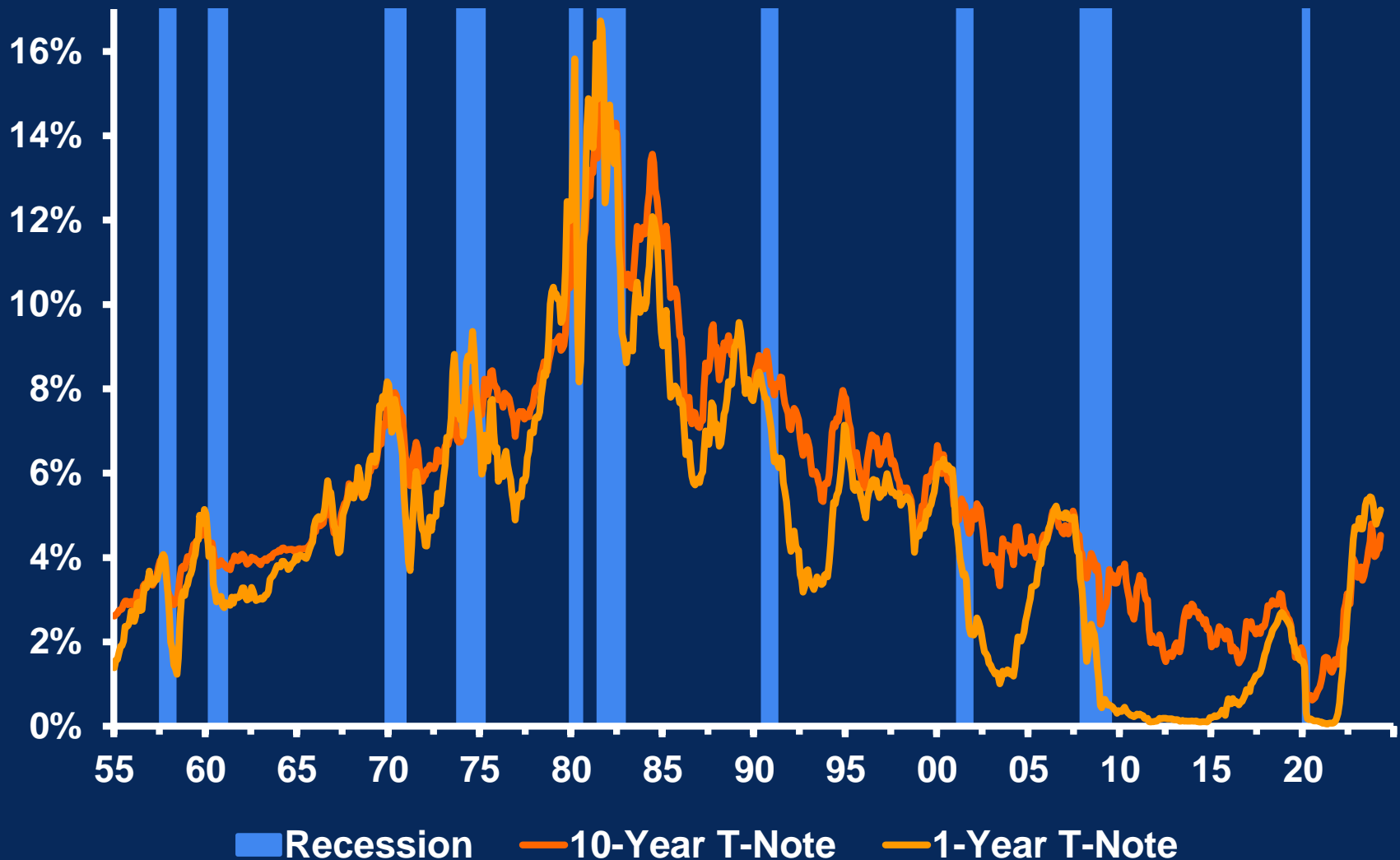
Best Downside Economic Risk Indicators

Yield-Spread  
Interest-Rate Changes

# Interest Rates and Recessions

(Inversion = 1-Year > 10-Year)

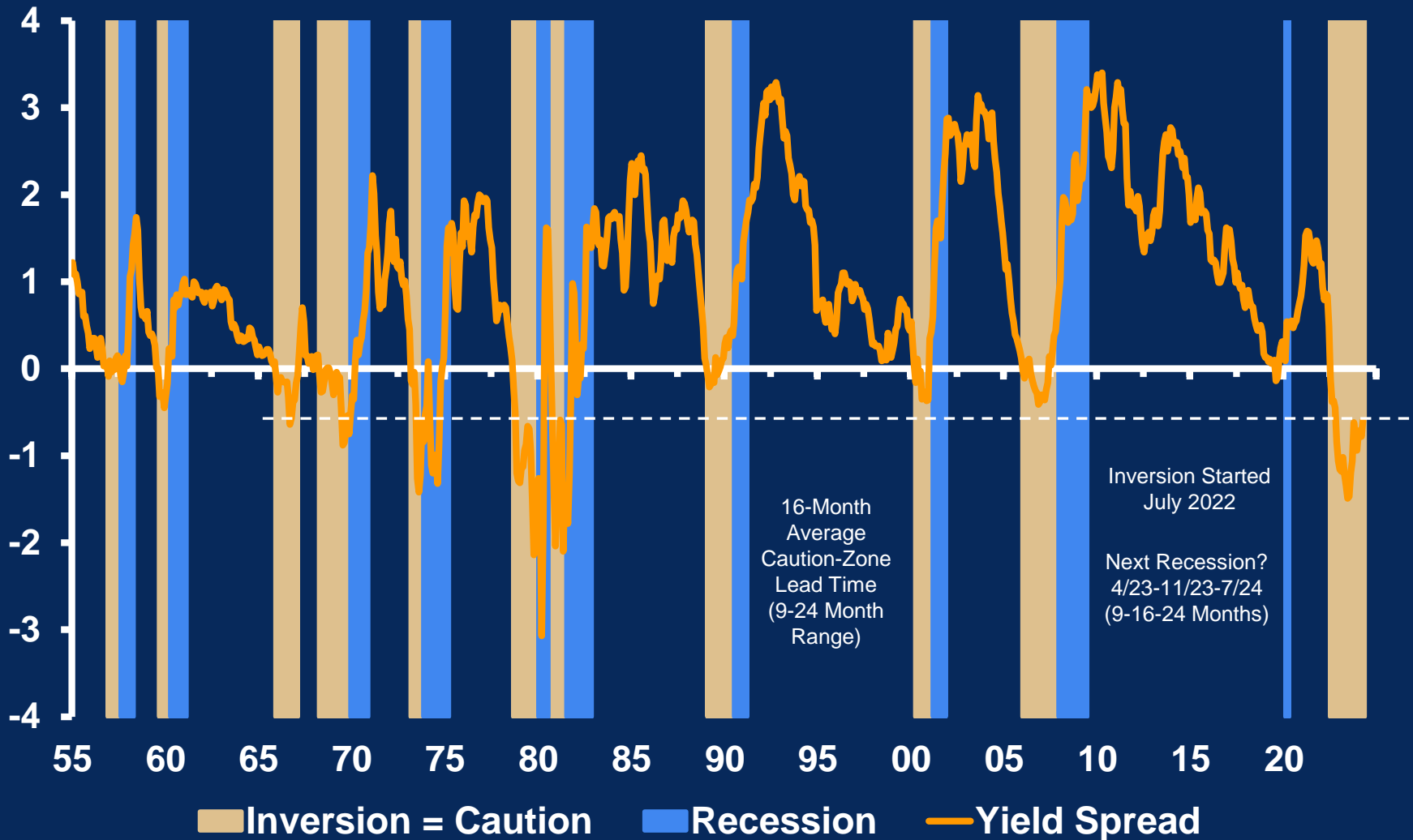
10 Recessions  
Since 1955



# Yield Spread and Caution Zones ©

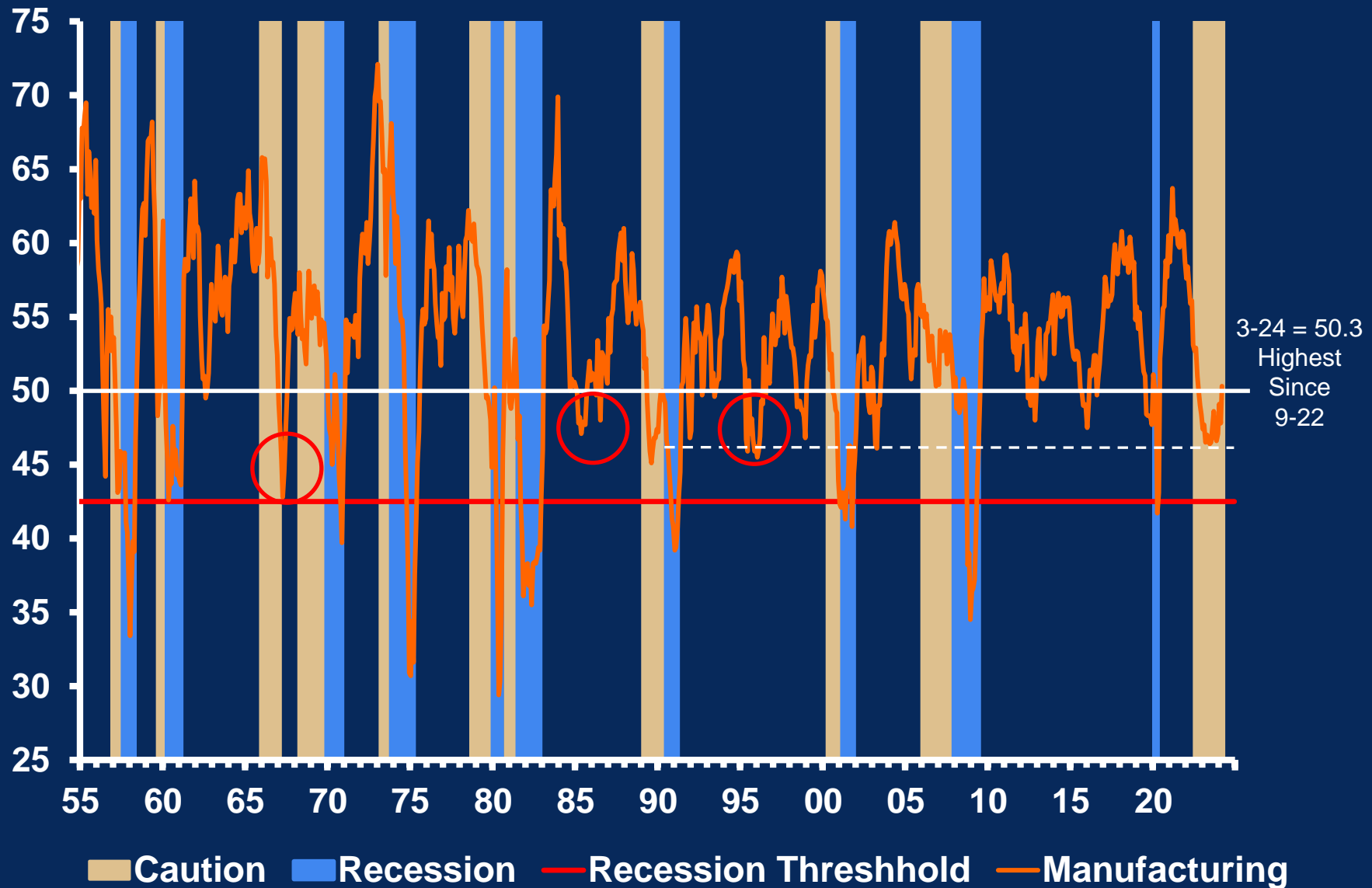
(10-Year T-Note Yield Minus 1-Year T-Note Yield) (Percentage Points)

(Inversion = Caution Zone When Fed Funds Rate Is Rising)

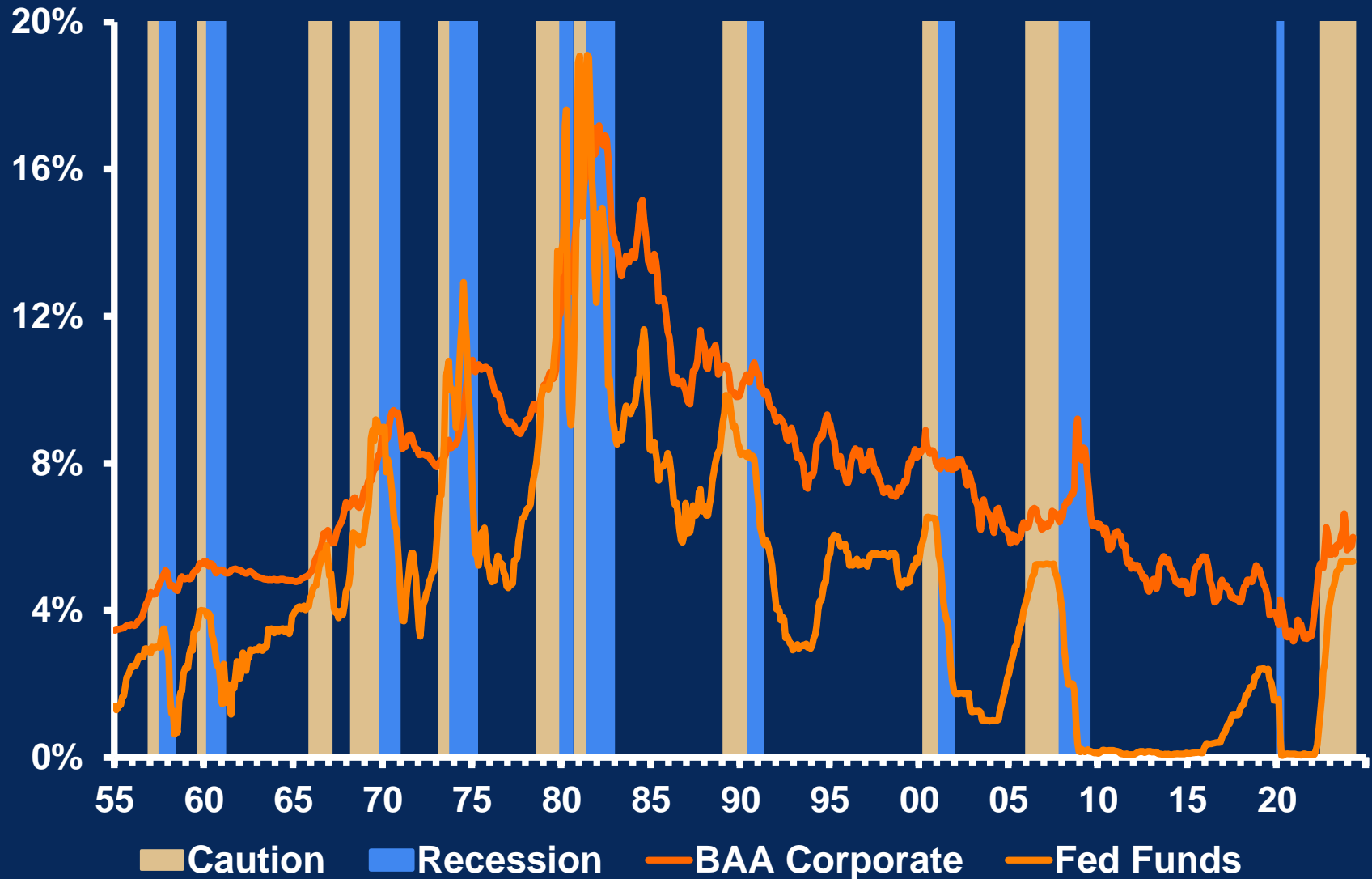




# ISM (PMI) Indexes (PMI = Purchasing Managers Indexes)



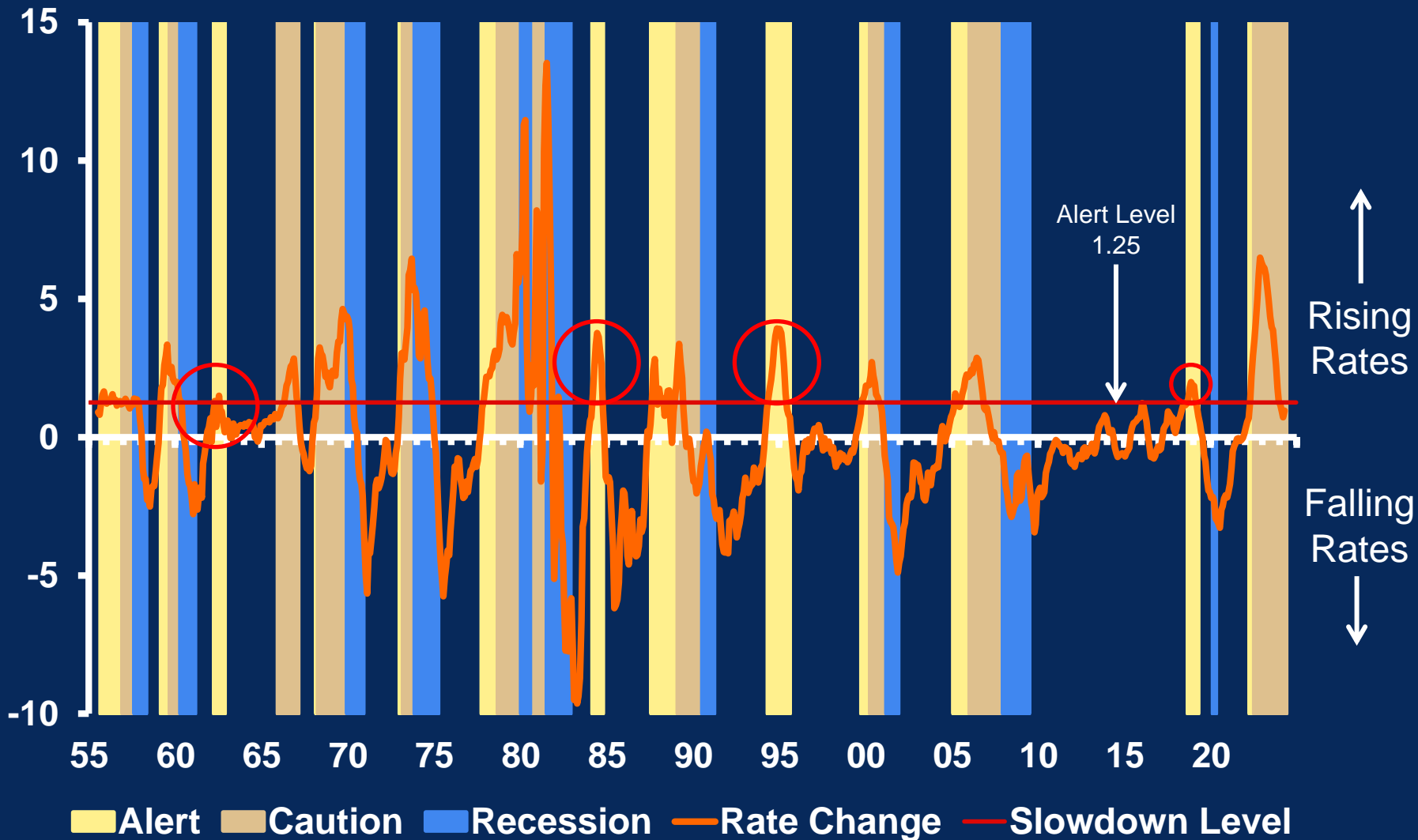
# Interest Rates and Recessions



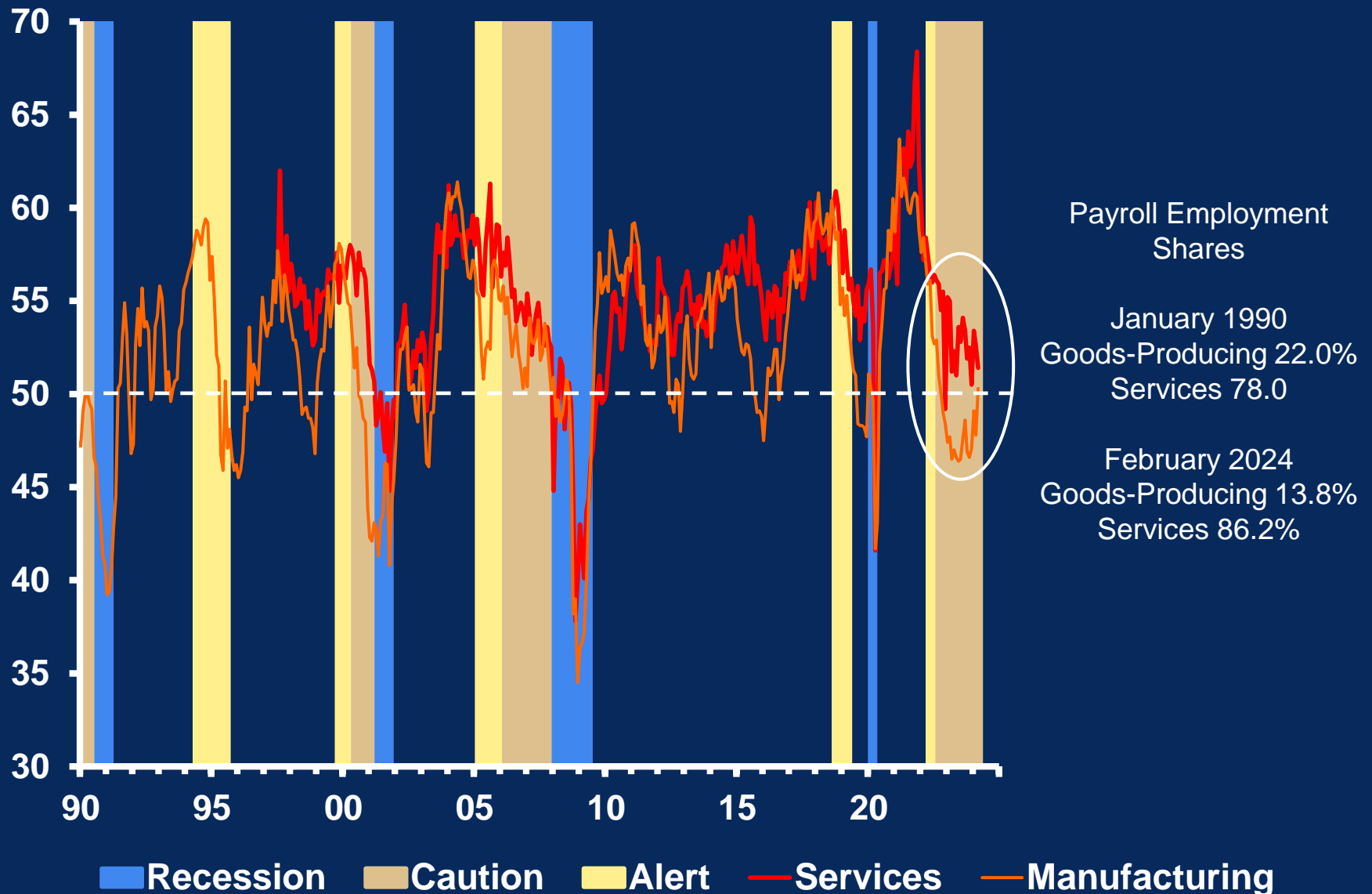
# Rate Changes and Zempel Zones ©

(BAA and Fed Funds) (Total 12-Month Change in Percentage Points)

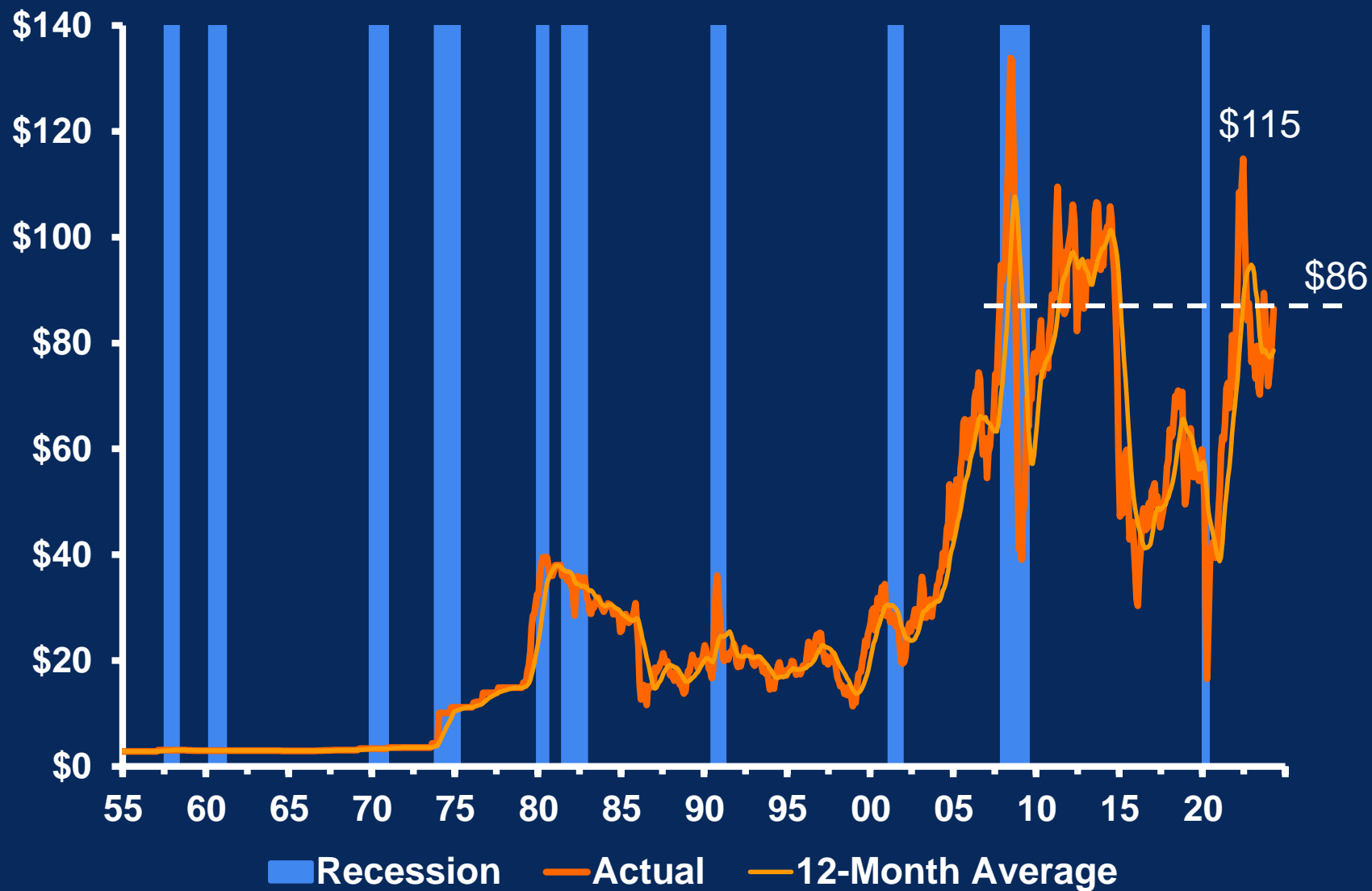
(Alert Zone = When Rates Rise 1.25 Percentage Points)



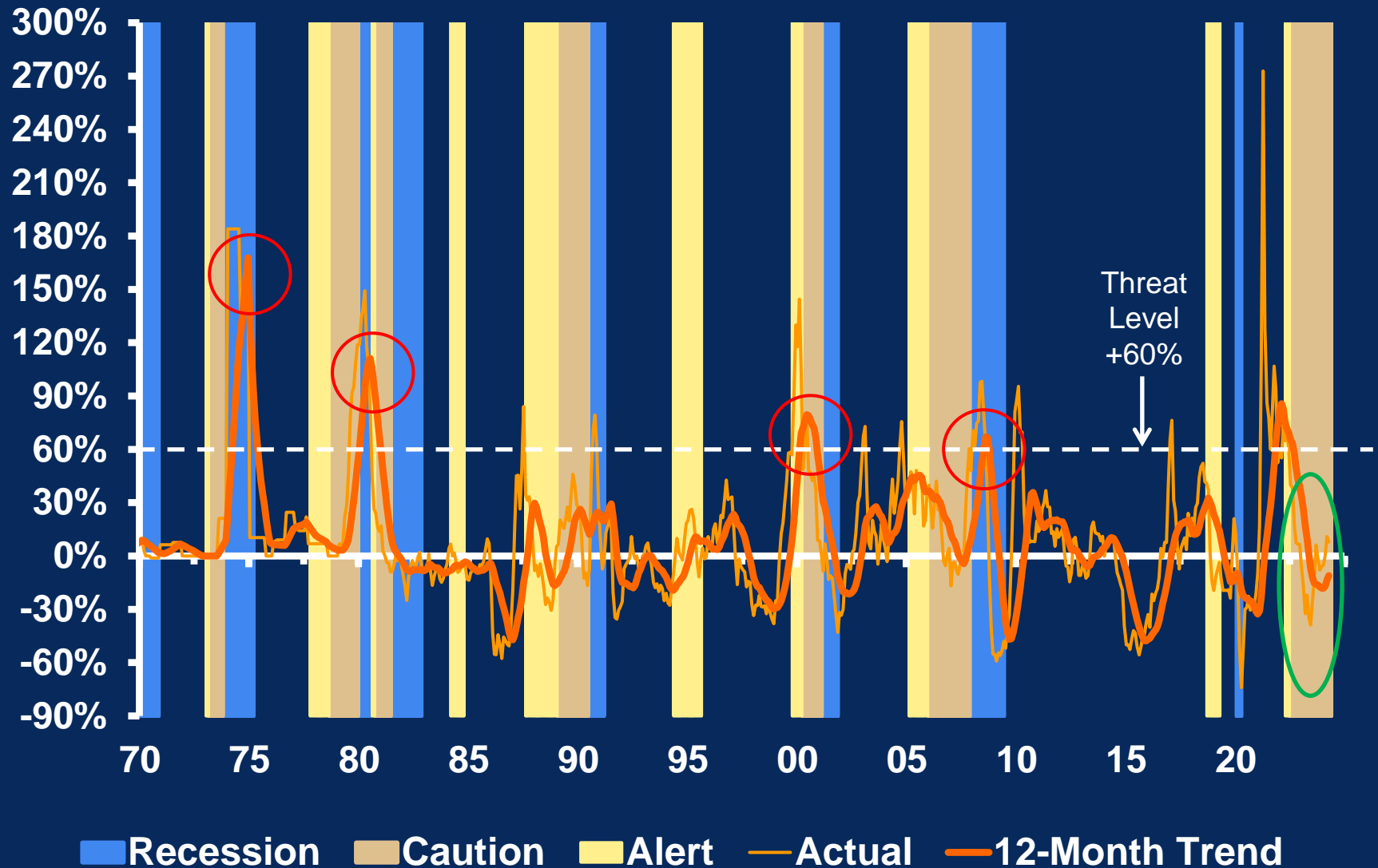
# ISM (PMI) Indexes (PMI = Purchasing Managers Indexes)



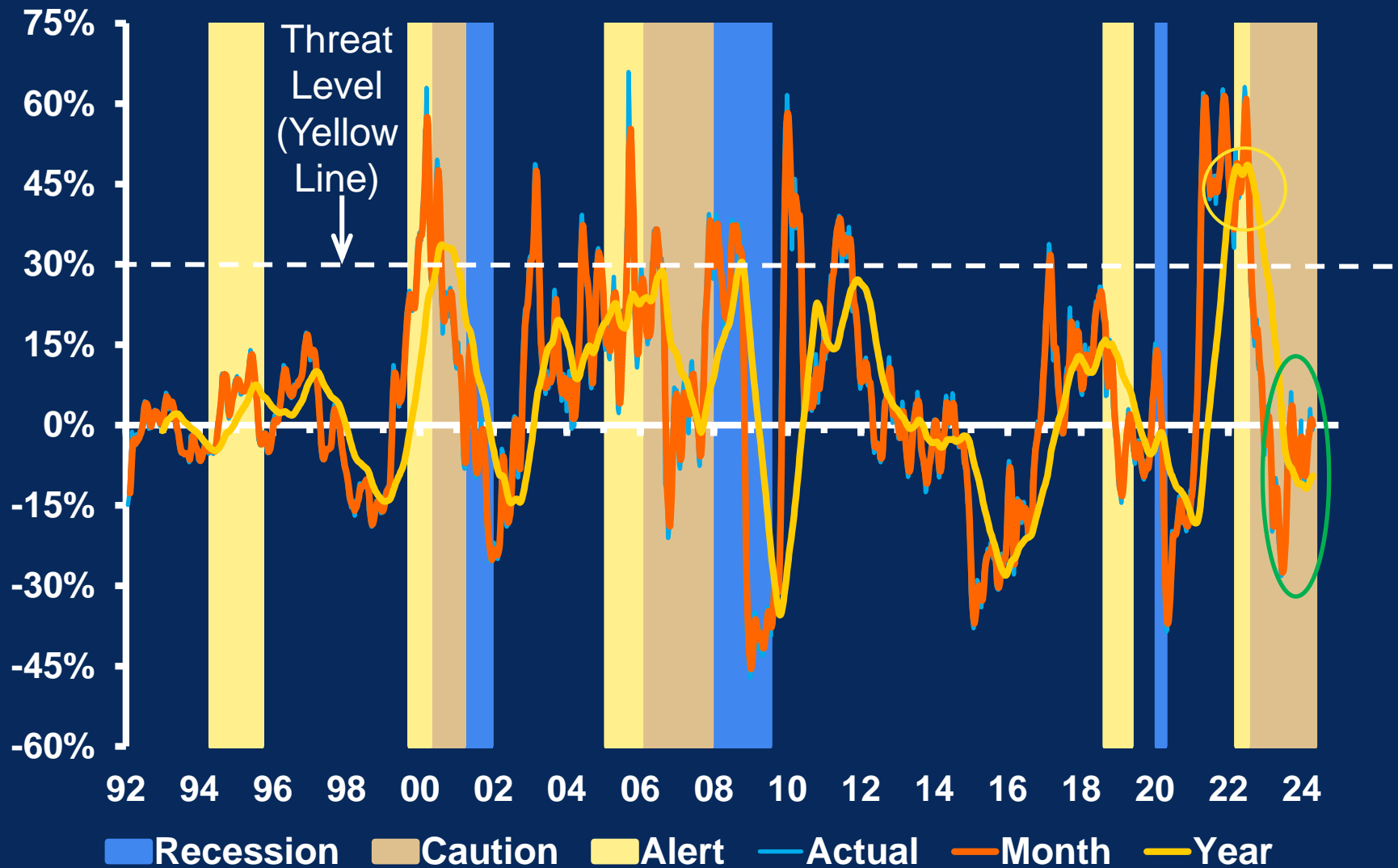
# Oil Prices (WTI Spot)



# Oil Prices (WTI Spot) (12-Month Changes)



# Regular Gasoline Prices (U.S. 52-Week Changes)





# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

### Best Downside Risk Indicator Implications

Yield Spread Inverted – Recession Risk Not Zero  
Rate-Changes Still “High” – Slowdown Not Over

Energy Prices Not Threatening





# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

Has Recession Started? No

Why Not? Inflation Fell Sharply Much Sooner Than Usual

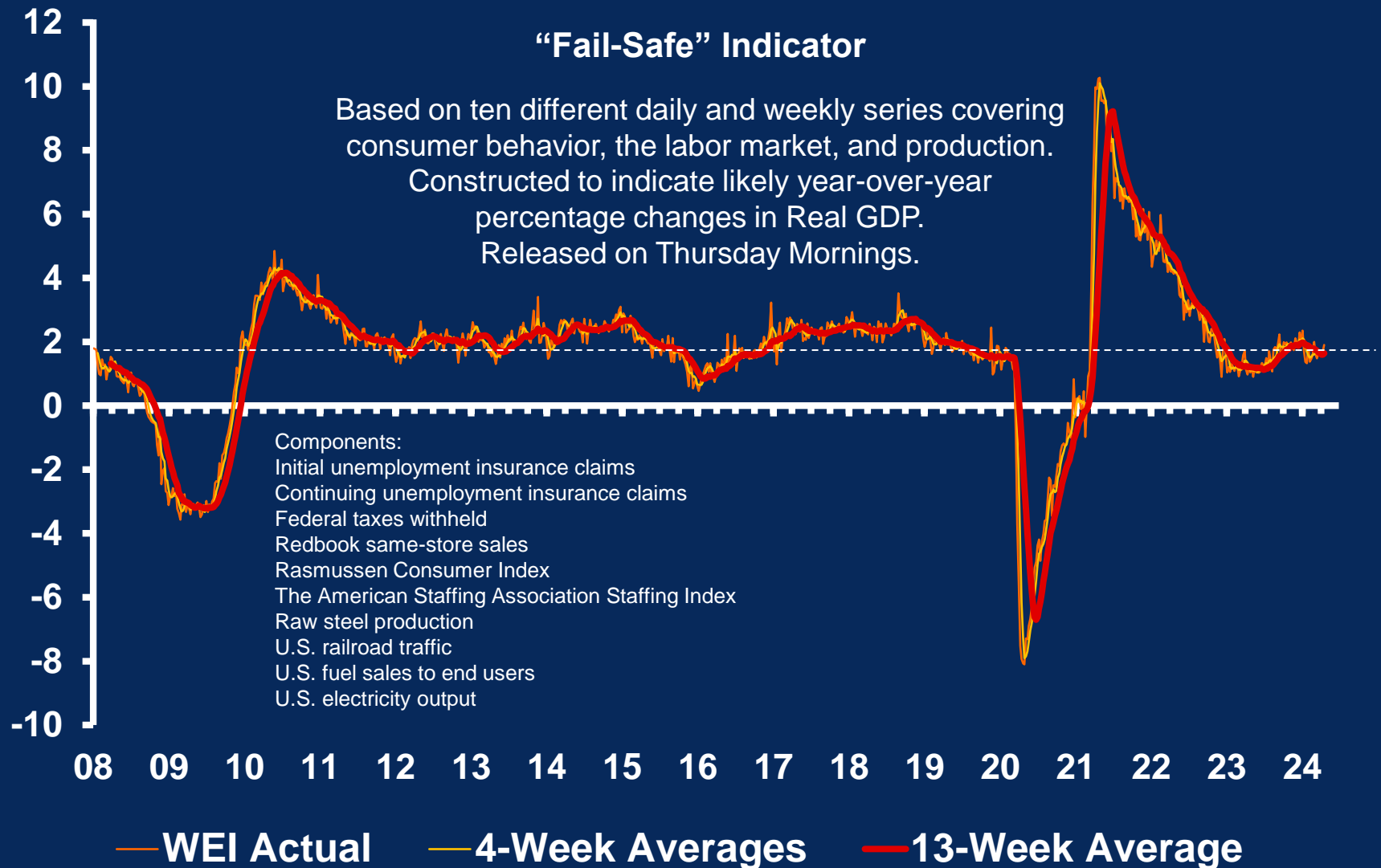
Why Did Inflation Fall So Soon?

Supply Pressures Collapsed Since 2021

Fiscal-Monetary Policies Turned Restrictive

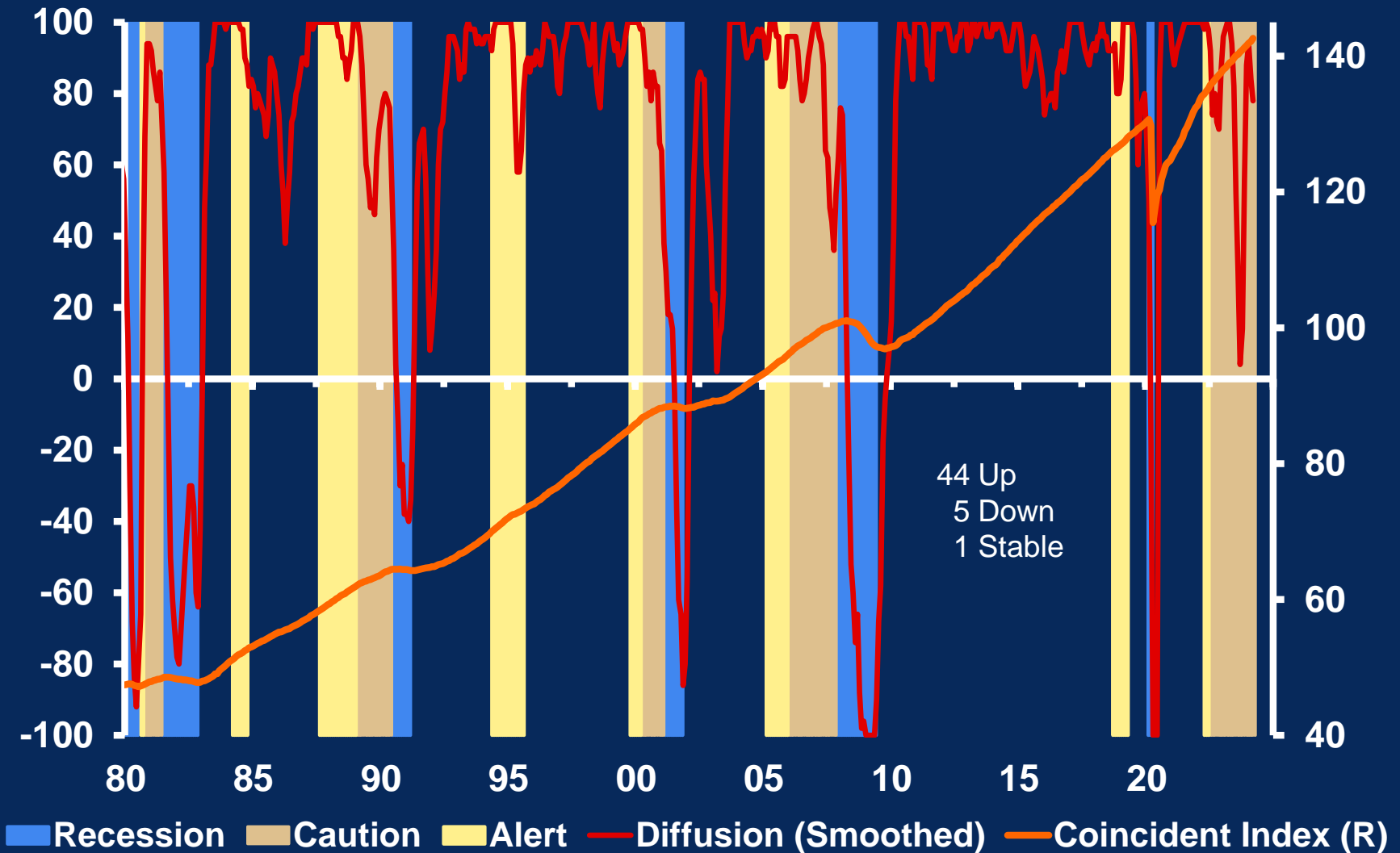
# Dallas Fed's Weekly Economic Index

<https://www.dallasfed.org/research/wei>



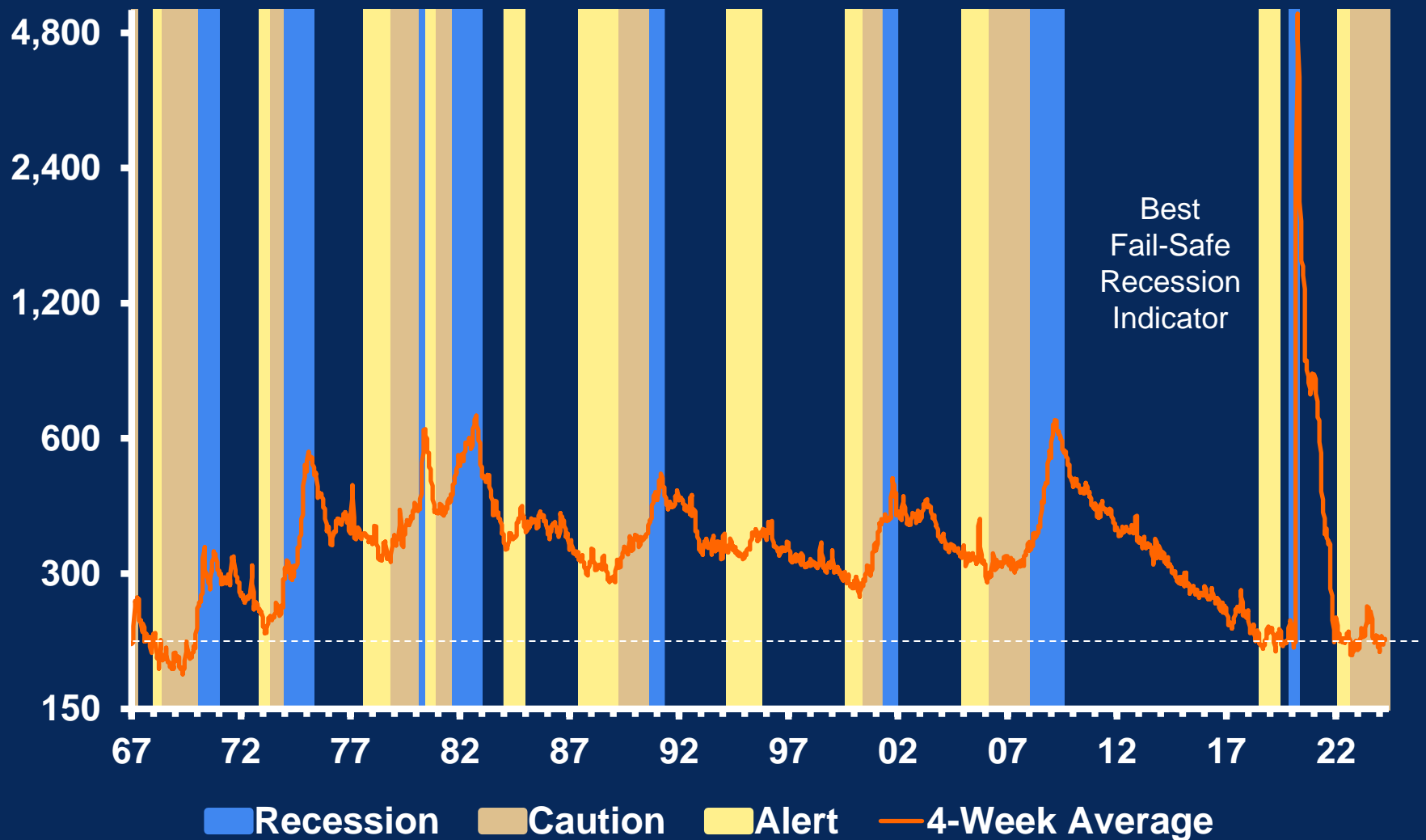
# U.S. Coincident and Diffusion Indexes

(Coincident Economic Activity Index) (Diffusion = States Improving Percentage)



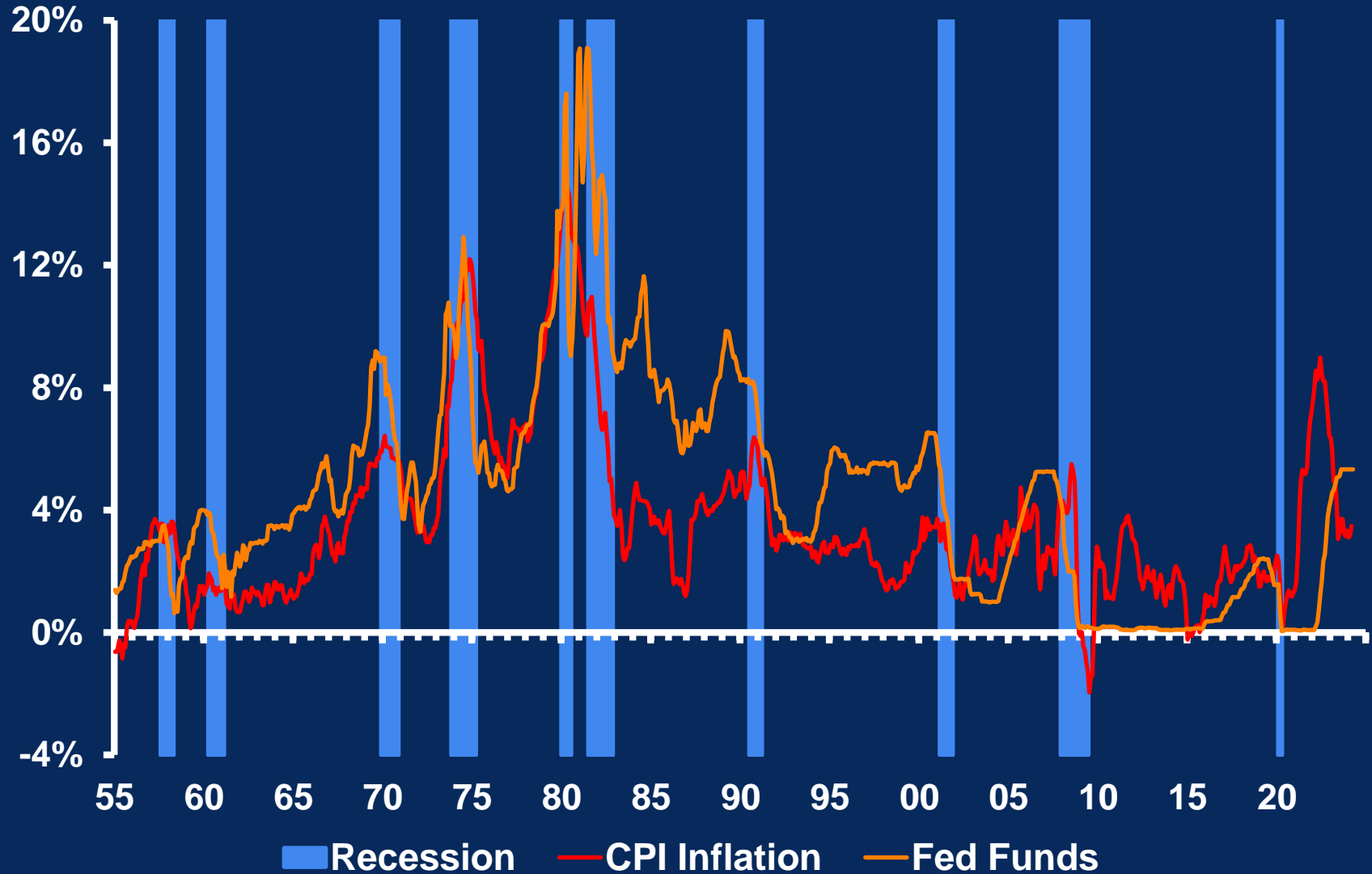
# Jobless Claims and Zempel Zones ©

(Initial Unemployment Insurance Claims) (Log Scale) (Weekly) (Thousands)



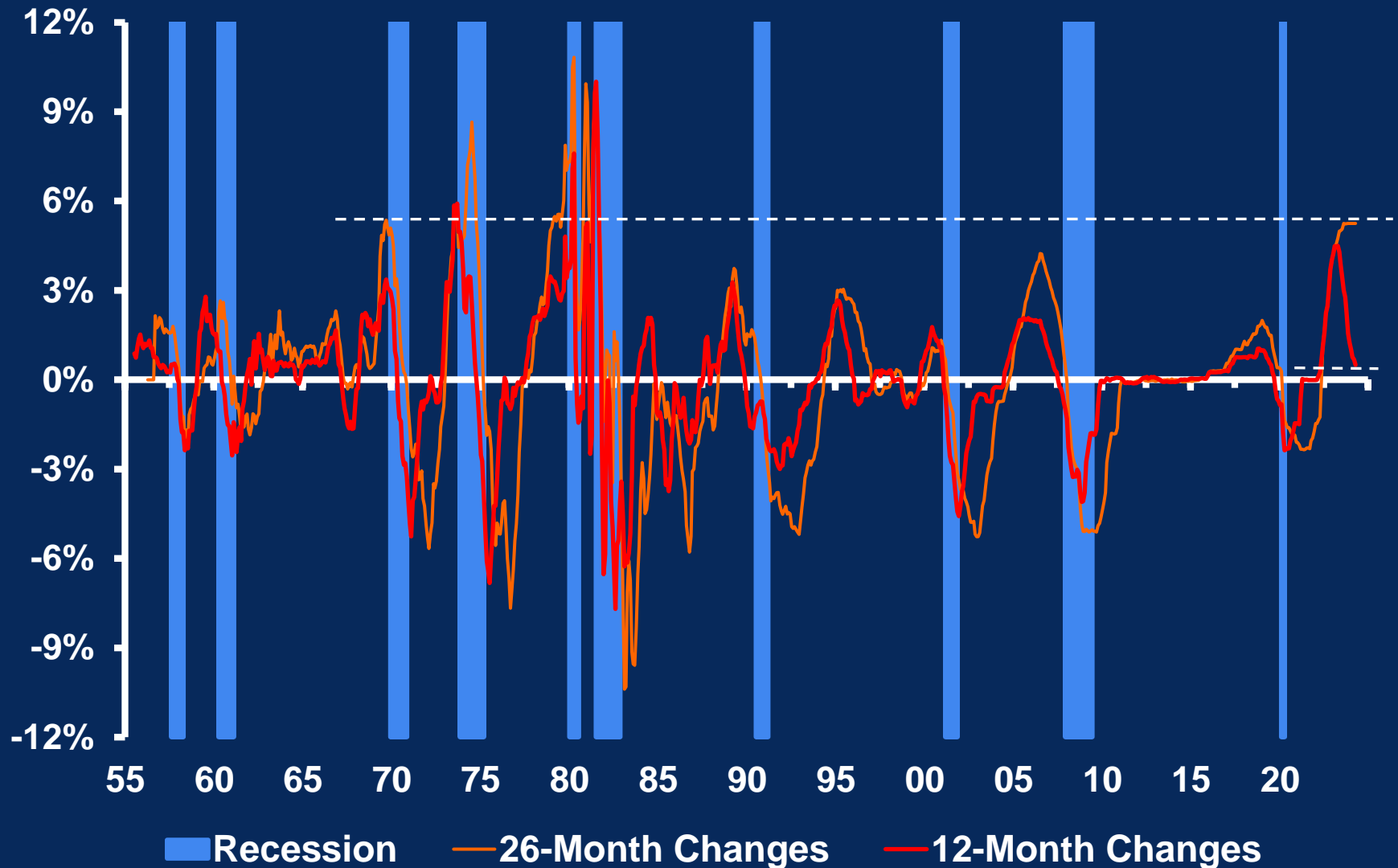
# Interest Rates and Inflation

(CPI Inflation = 12-Month Change)



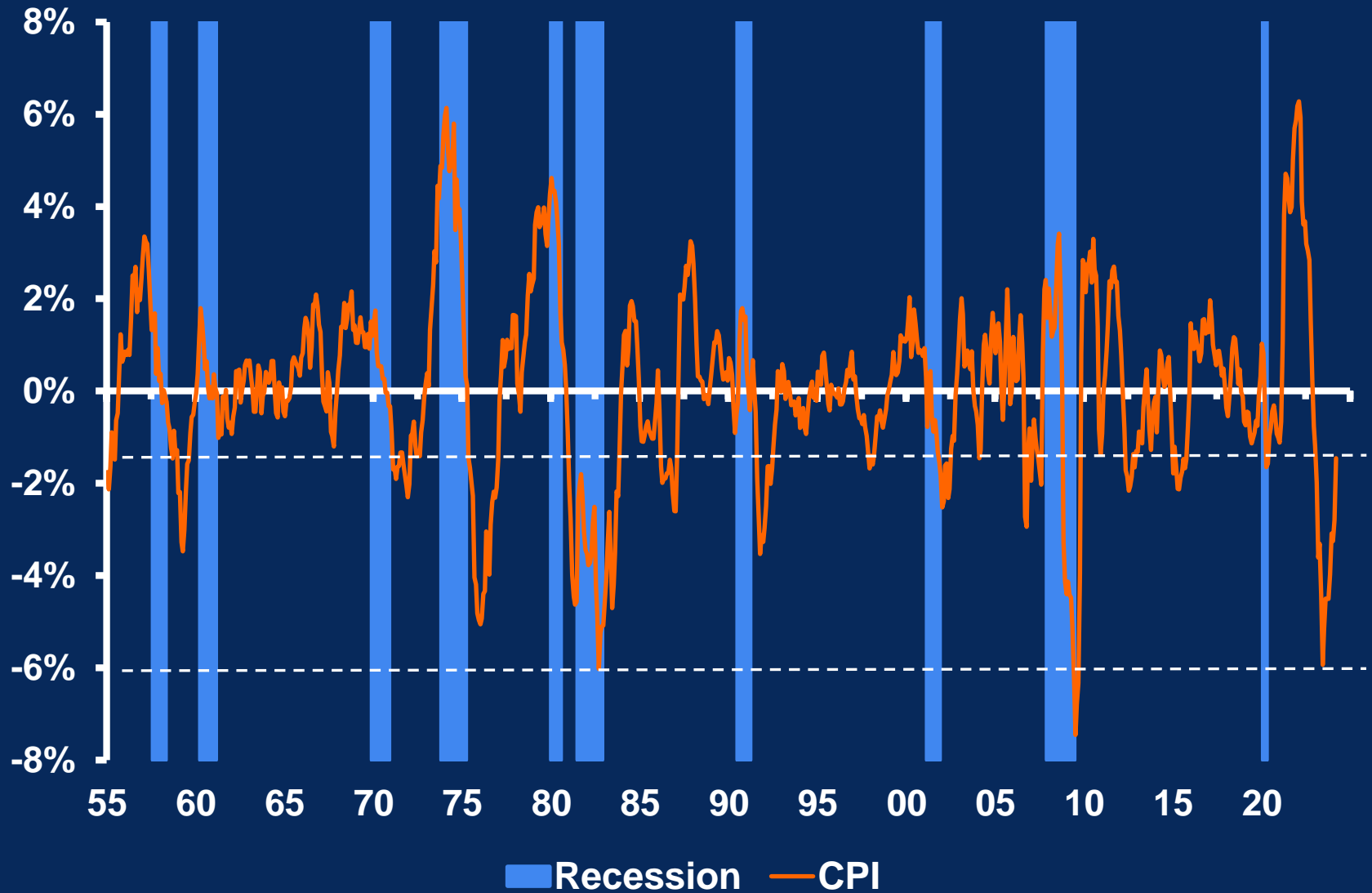
# Fed Funds Changes

(Percentage Points)



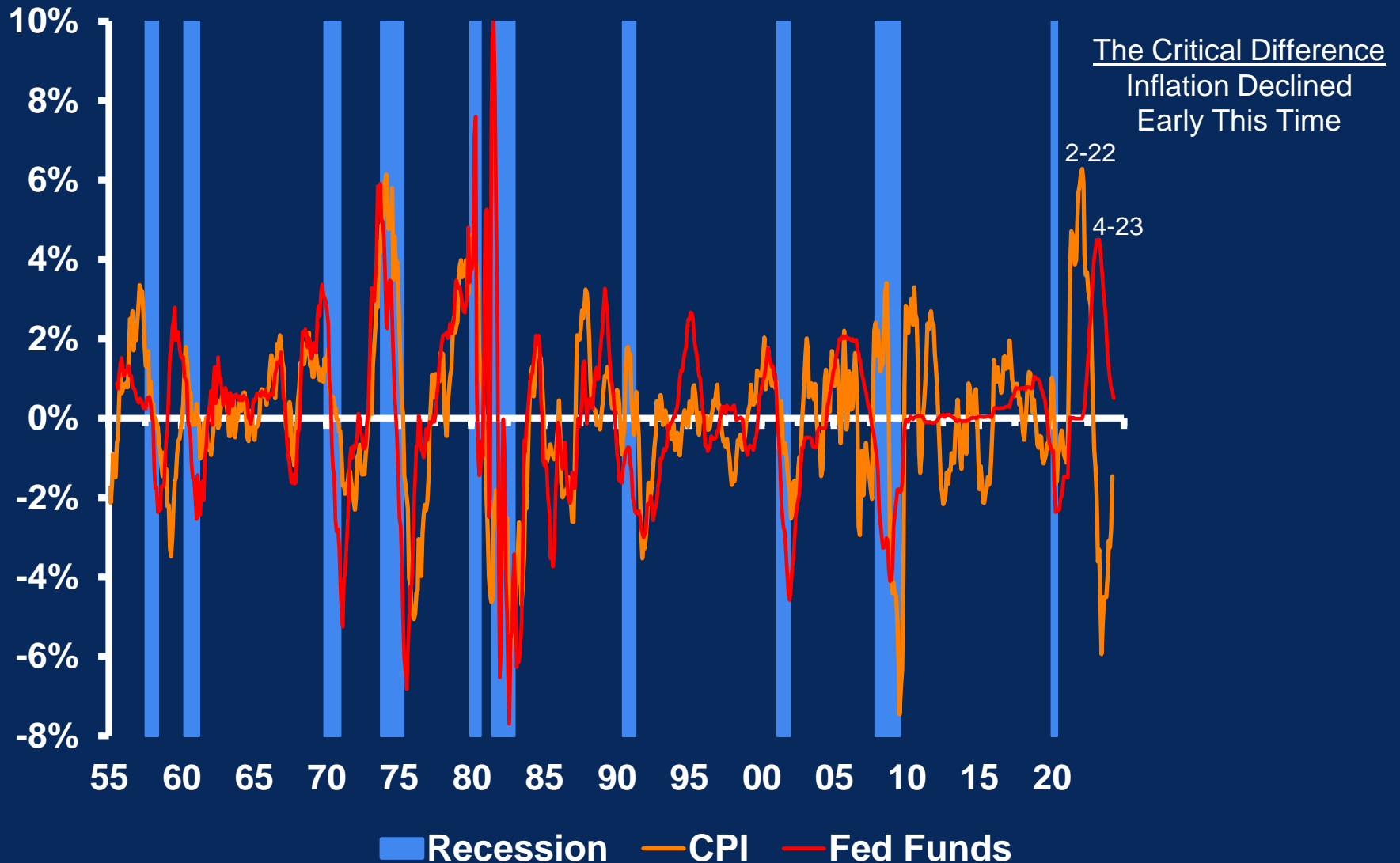
# CPI Inflation Rate Changes

(12-Month Changes) (Percentage Points)



# Fed Funds and CPI Changes

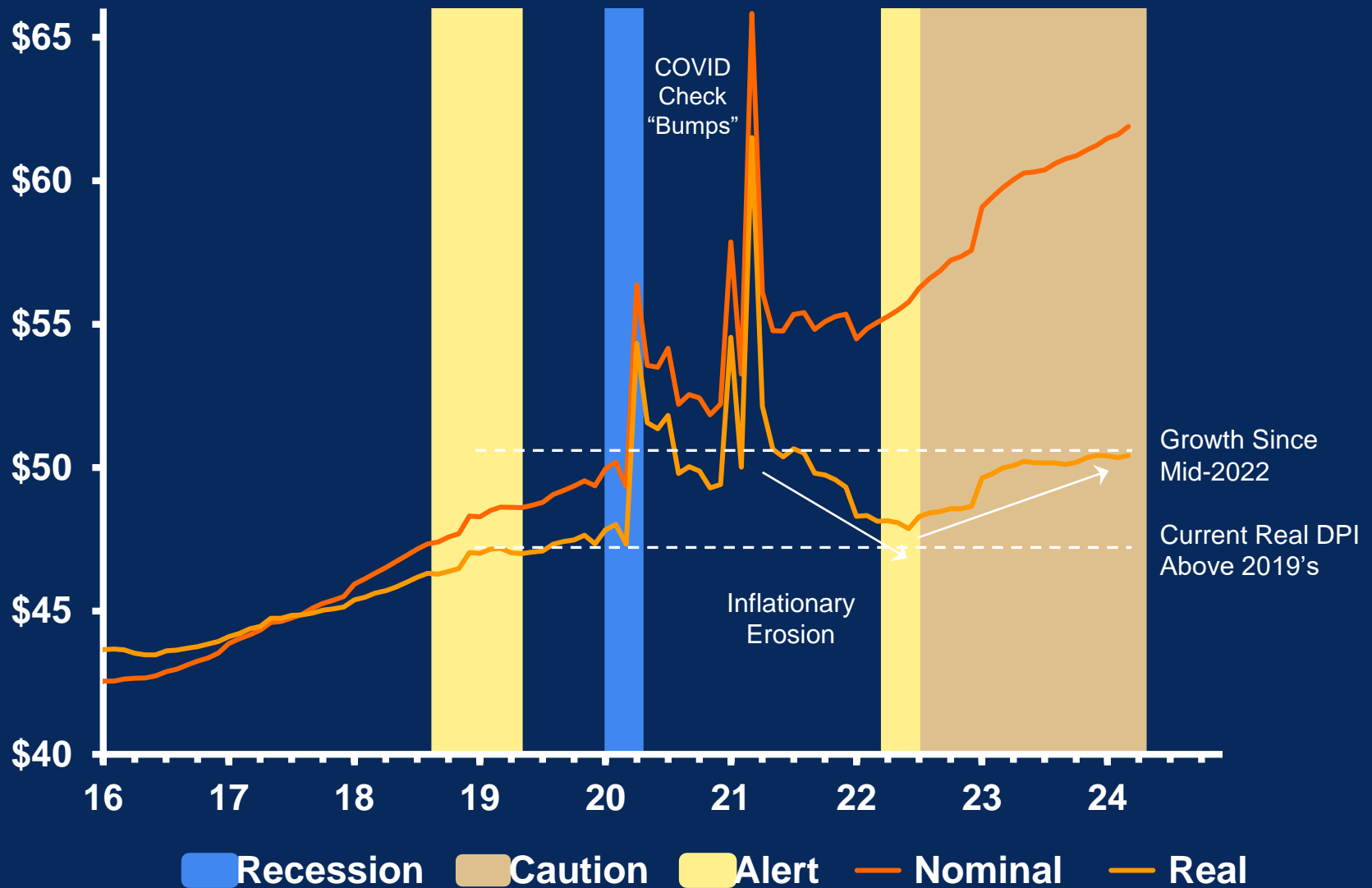
(12-Month Changes) (Percentage Points)





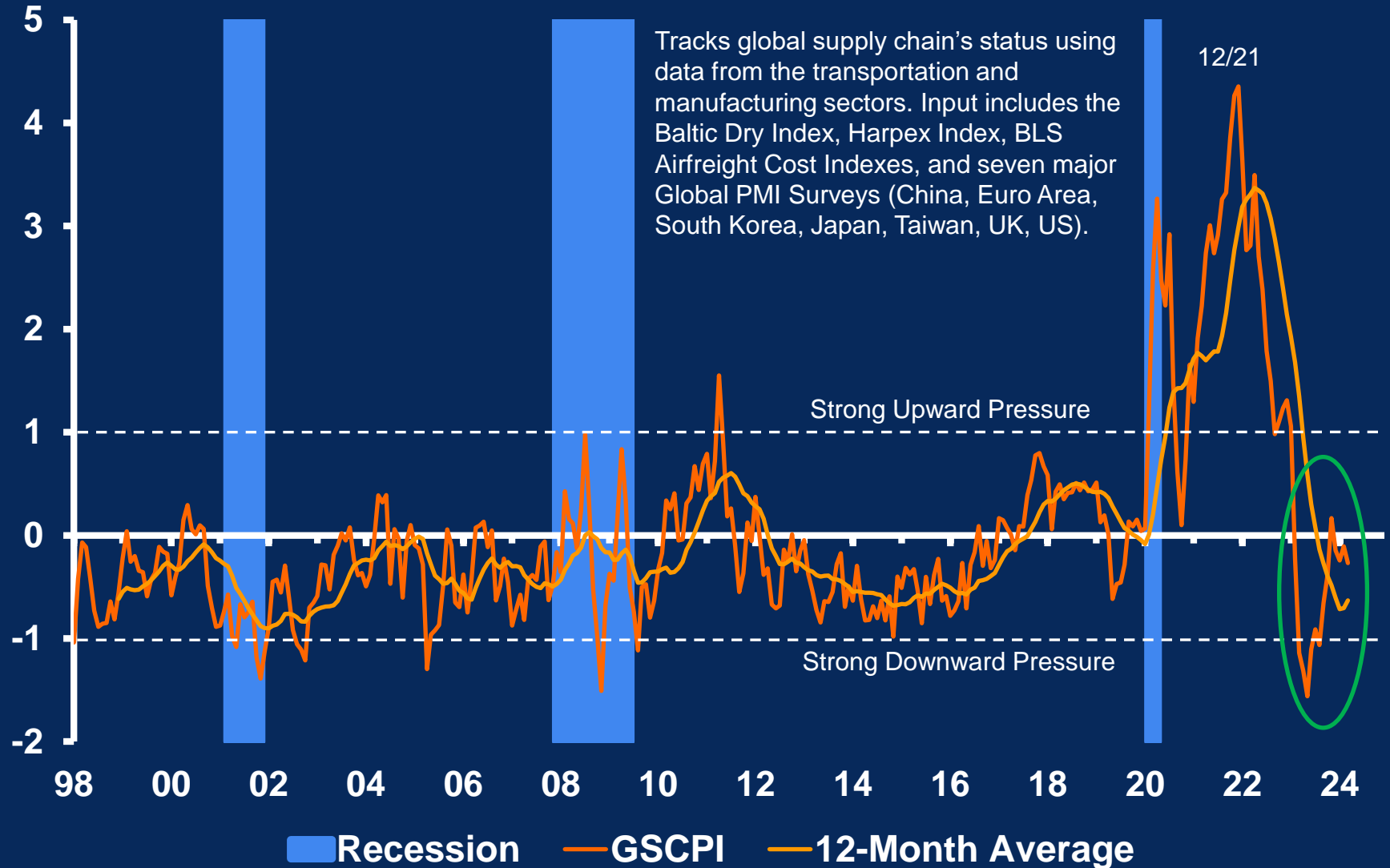
# Disposable Personal Income and Zempel Zones ©

(Per Capita) (Thousand Dollars)



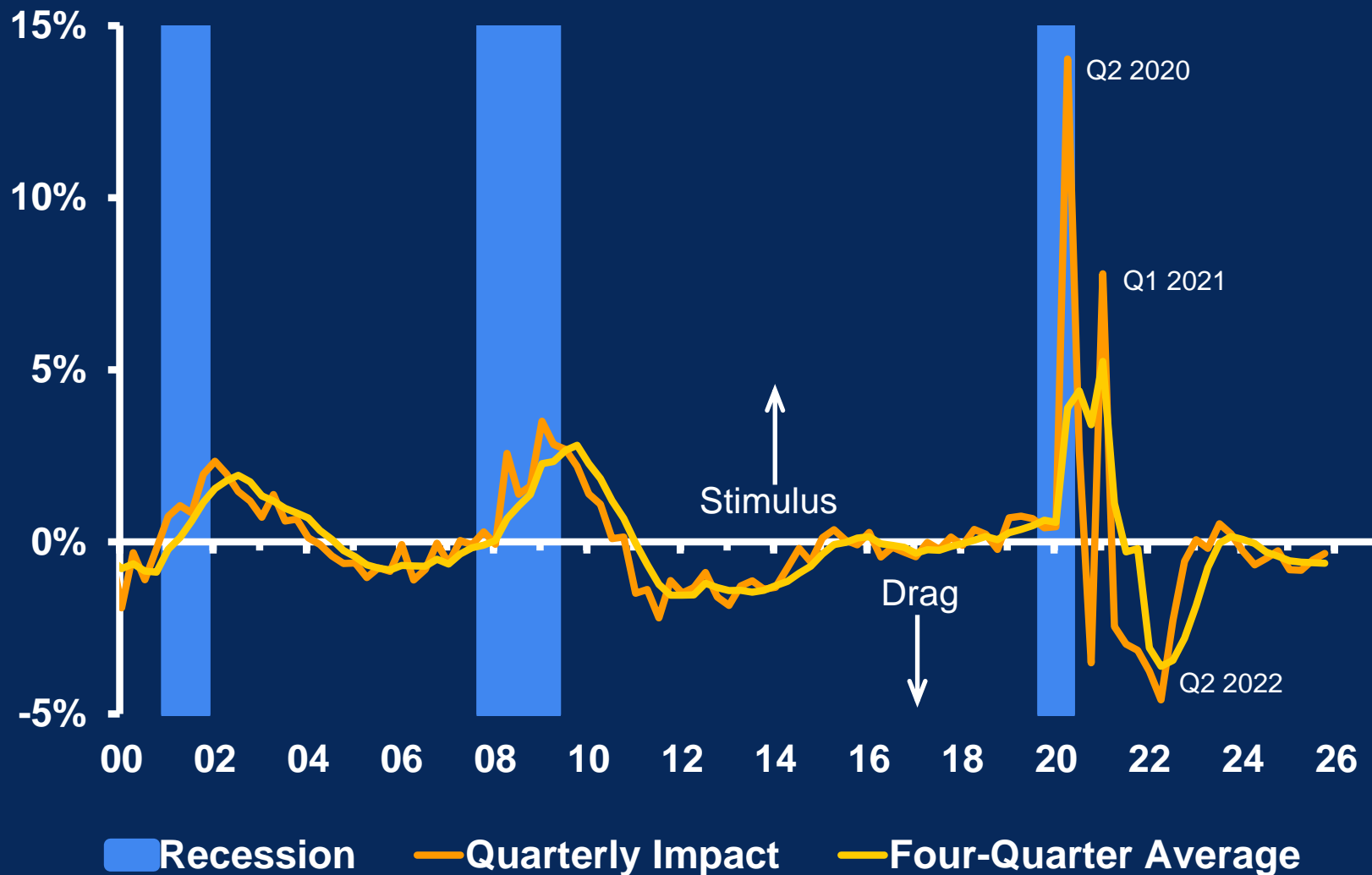
# Global Supply Chain Pressure Index

(GSCPI) (Monthly) (New York Fed)



# Hutchins Center Fiscal Impact Measure

(GDP Growth Contributions)



Odds update every minute | Last updated: 9:25AM EDT on Apr 29, 2024

# Election Betting Odds

By [Maxim Lott](#) and [John Stossel](#)

[Why This Beats Polls](#) | Odds from [Betfair](#), [Smarkets](#), [PredictIt](#), [Polymarket](#) | [How People Bet](#)

[Home](#) | [Charts](#) | [Track Record](#)  
Primaries: [Democrats](#) | [Republicans](#)  
Final winner: [By Party](#) | [By Candidate](#) | [Biden Out?](#)  
[GOP VP Nominee](#)

Hover over candidate pics to see market breakdown. Hover over underlined titles for amount bet.

## Chance of winning...

**Presidency 2024 (by party)**

Last Day

Last Week

Last Month

Maximum

Go to another chart

About



DEM

50.7%

▼ -0.3% in last day



REP

47.4%

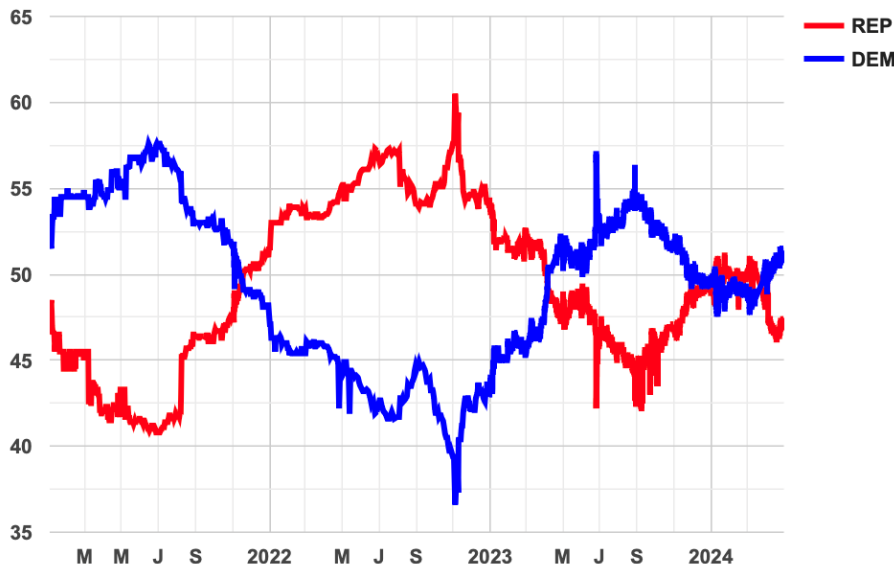
▲ 0.5%



Other

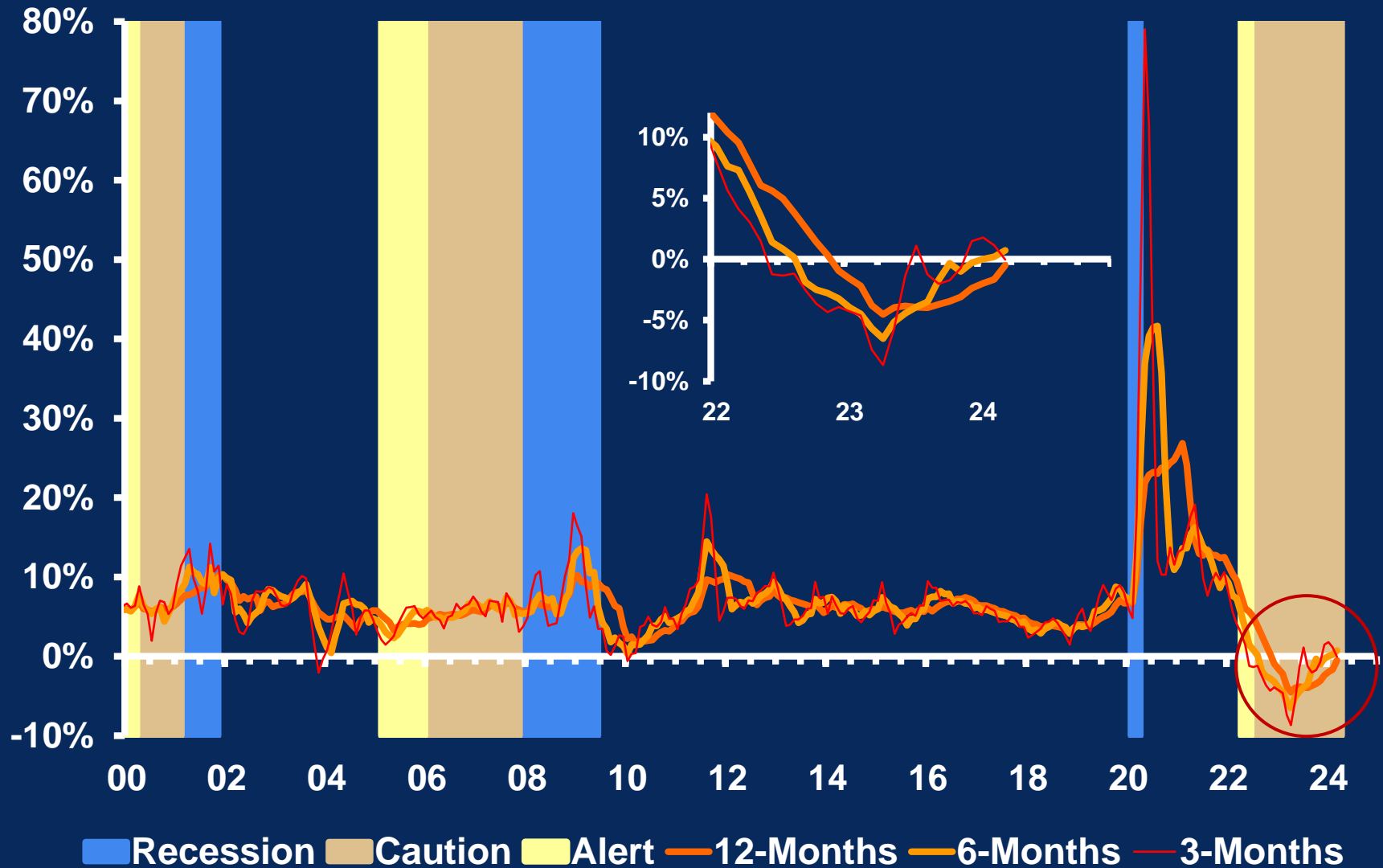
1.9%

Presidency 2024 (by party) (% chance)



# M2 Growth and Zempel Zones ©

(M2 Money Stock) (Monthly)





# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

Will Inflation Keep Declining? Yes

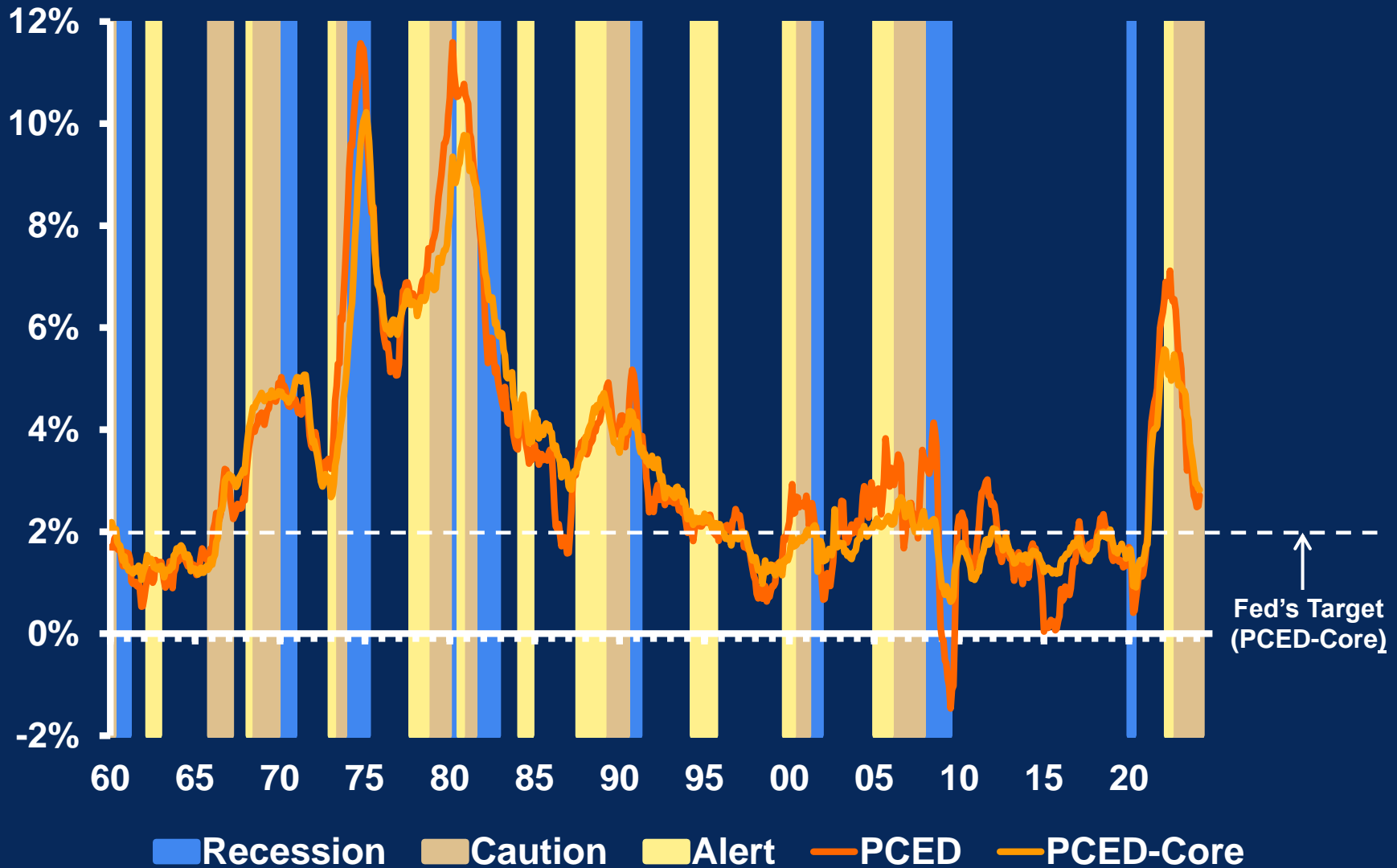
What Drives Inflation? Spending

What Drives Spending? Macro Policies

Where Are Interest Rates Headed? Lower

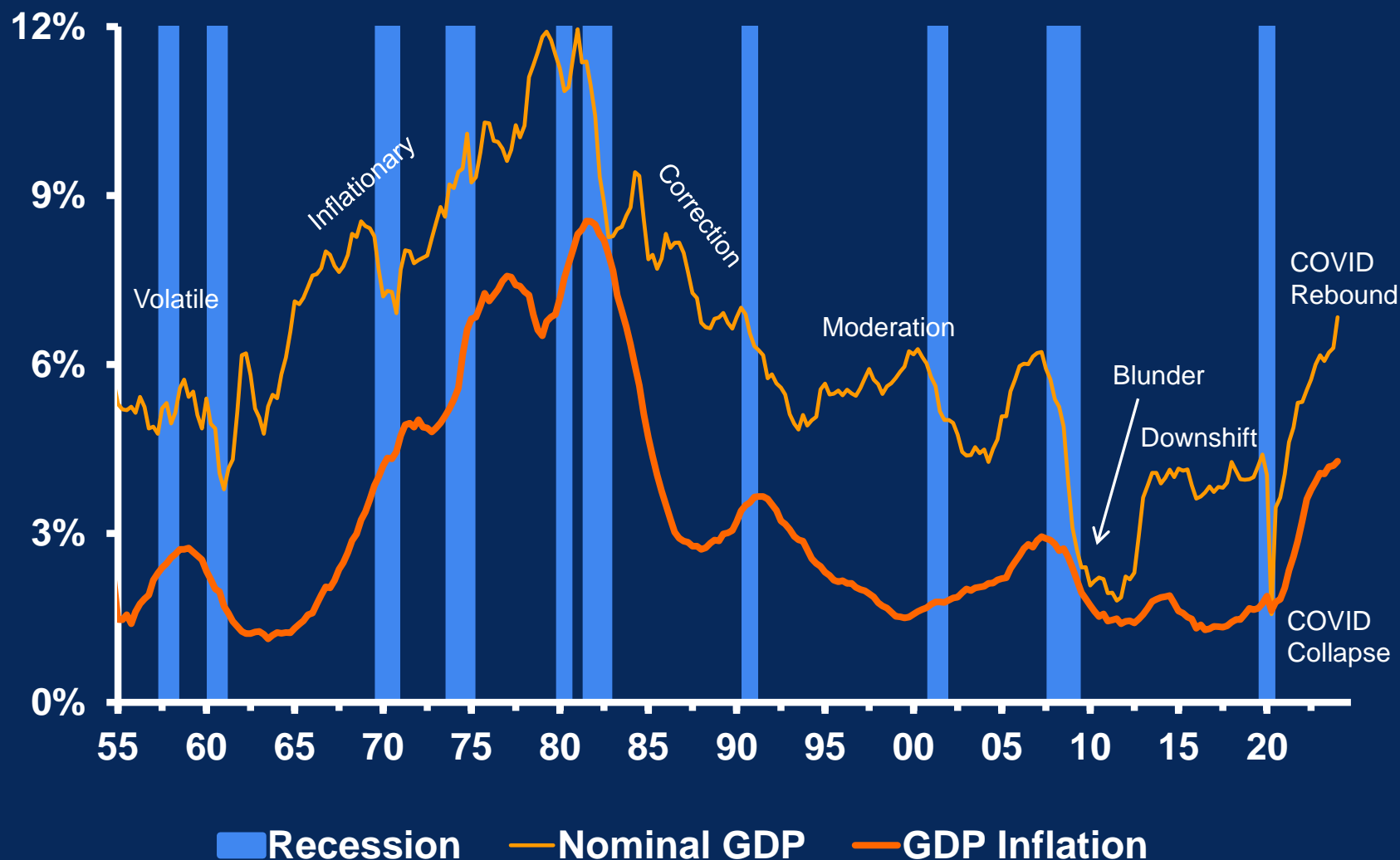
# PCED Inflation and Zempel Zones ©

(PCED = Personal Consumption Expenditure Deflator) (12-Month Changes)



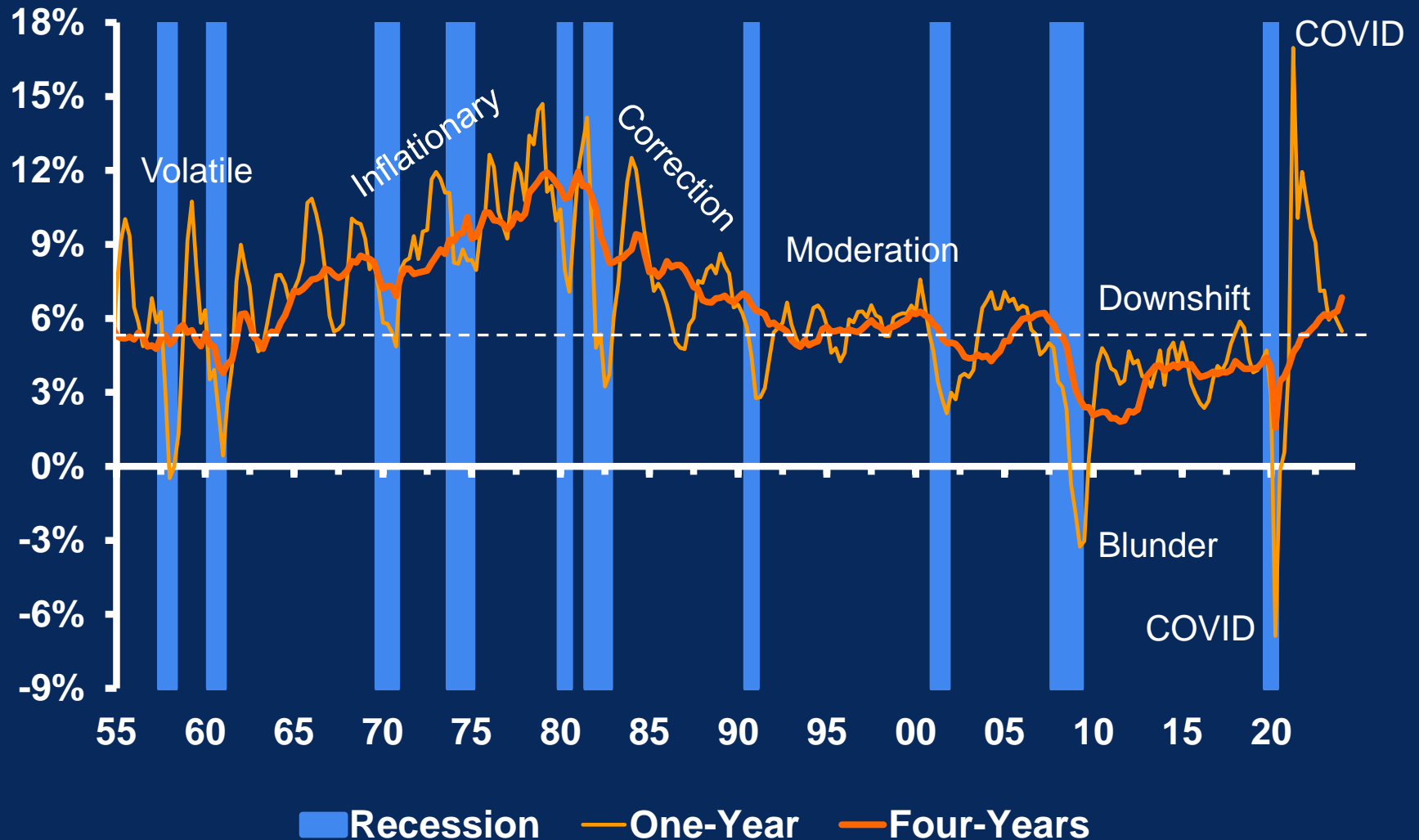
# Nominal GDP Growth and Inflation

(Four-Year Growth Rates)





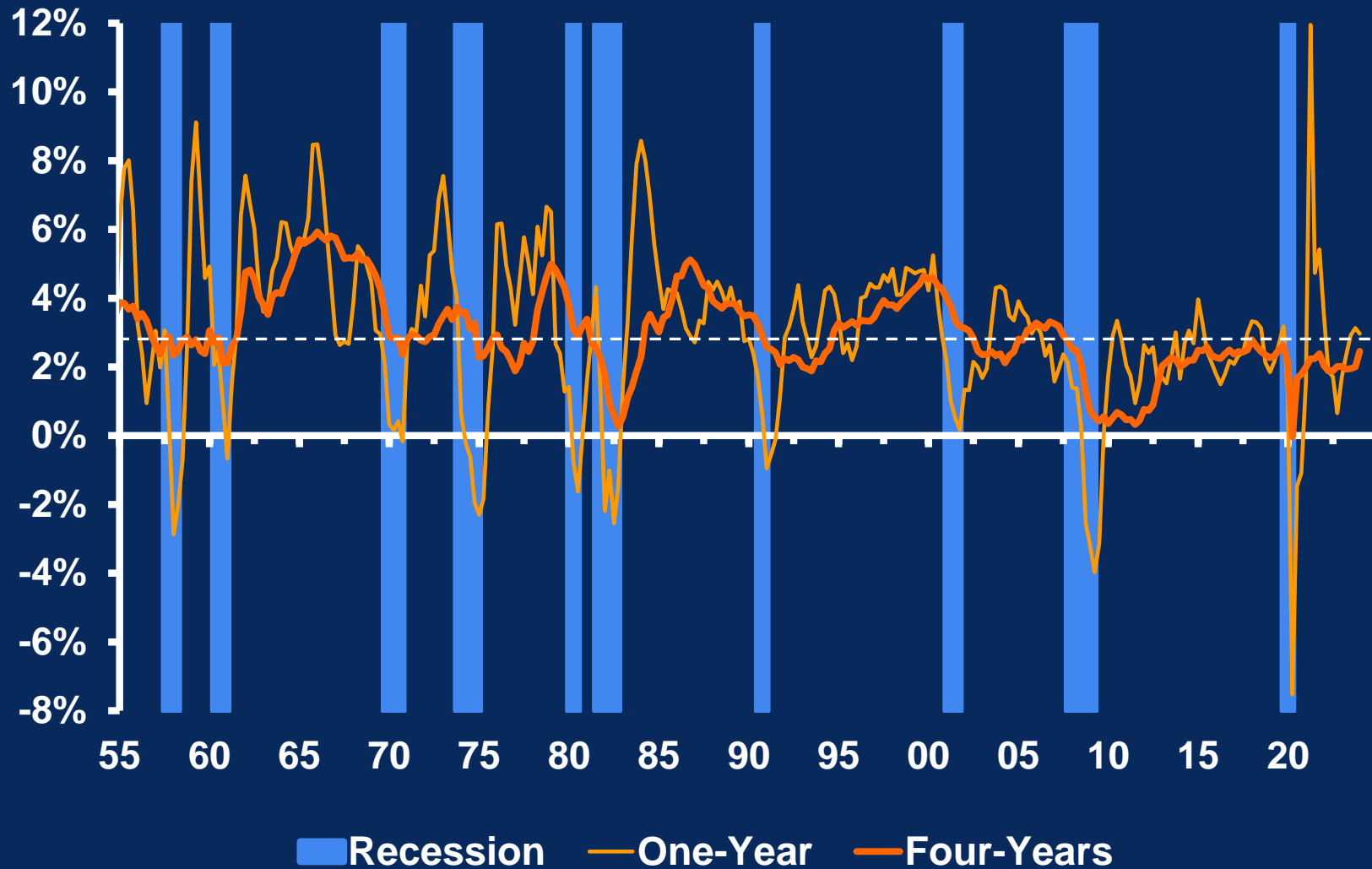
# Nominal GDP Growth Rates



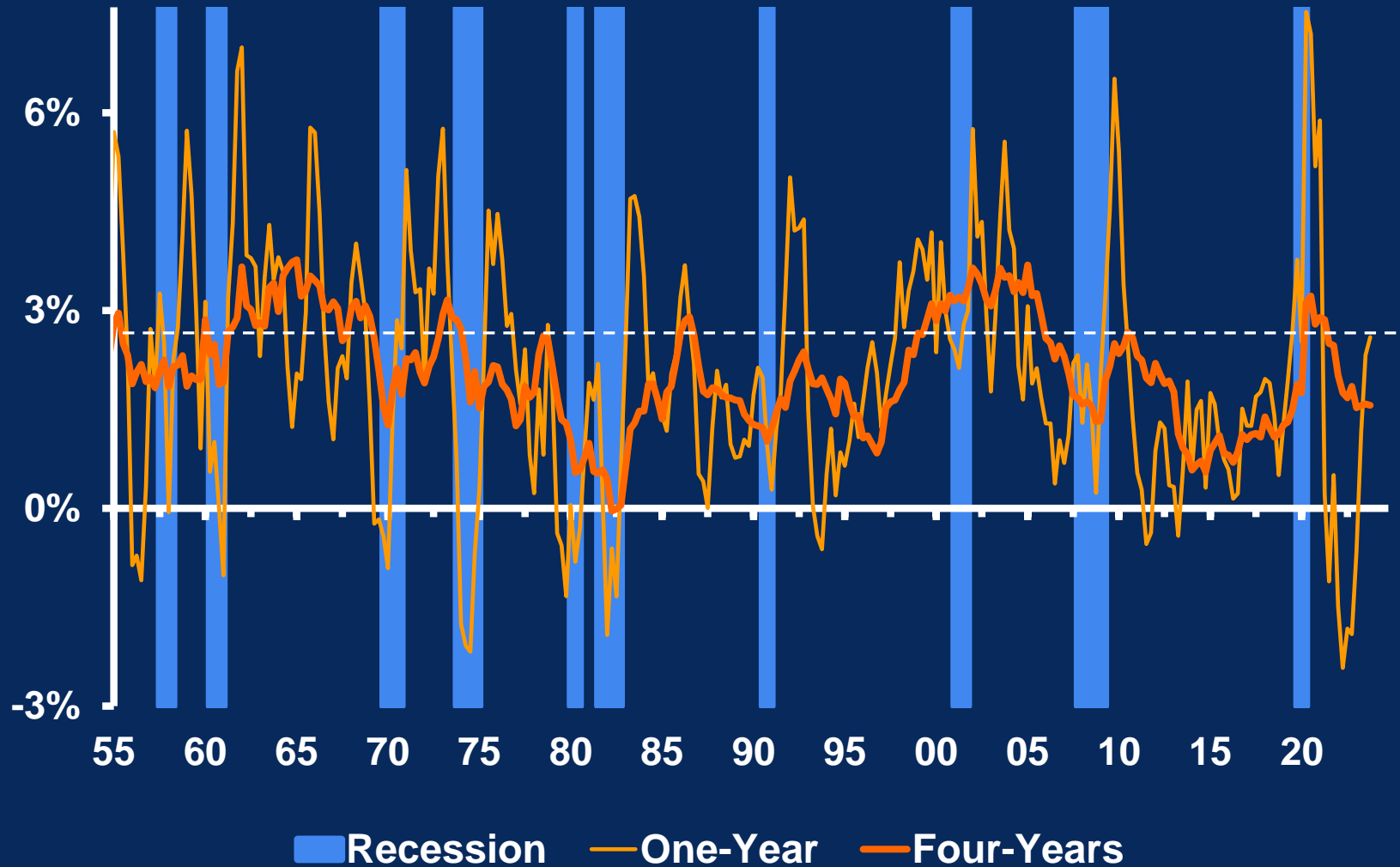
# GDP Inflation Rates



# Real GDP Growth Rates



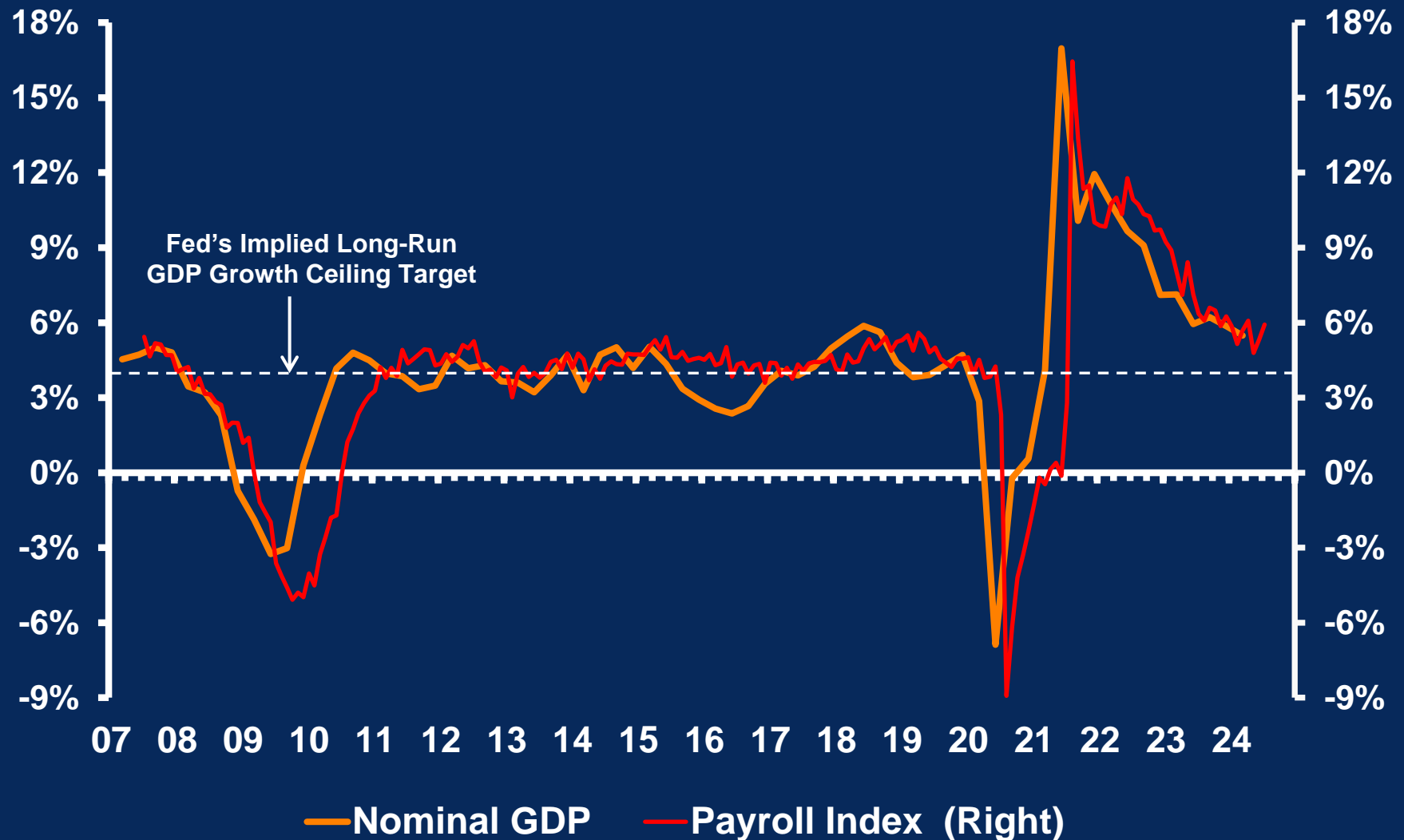
# Non-Farm Productivity Growth



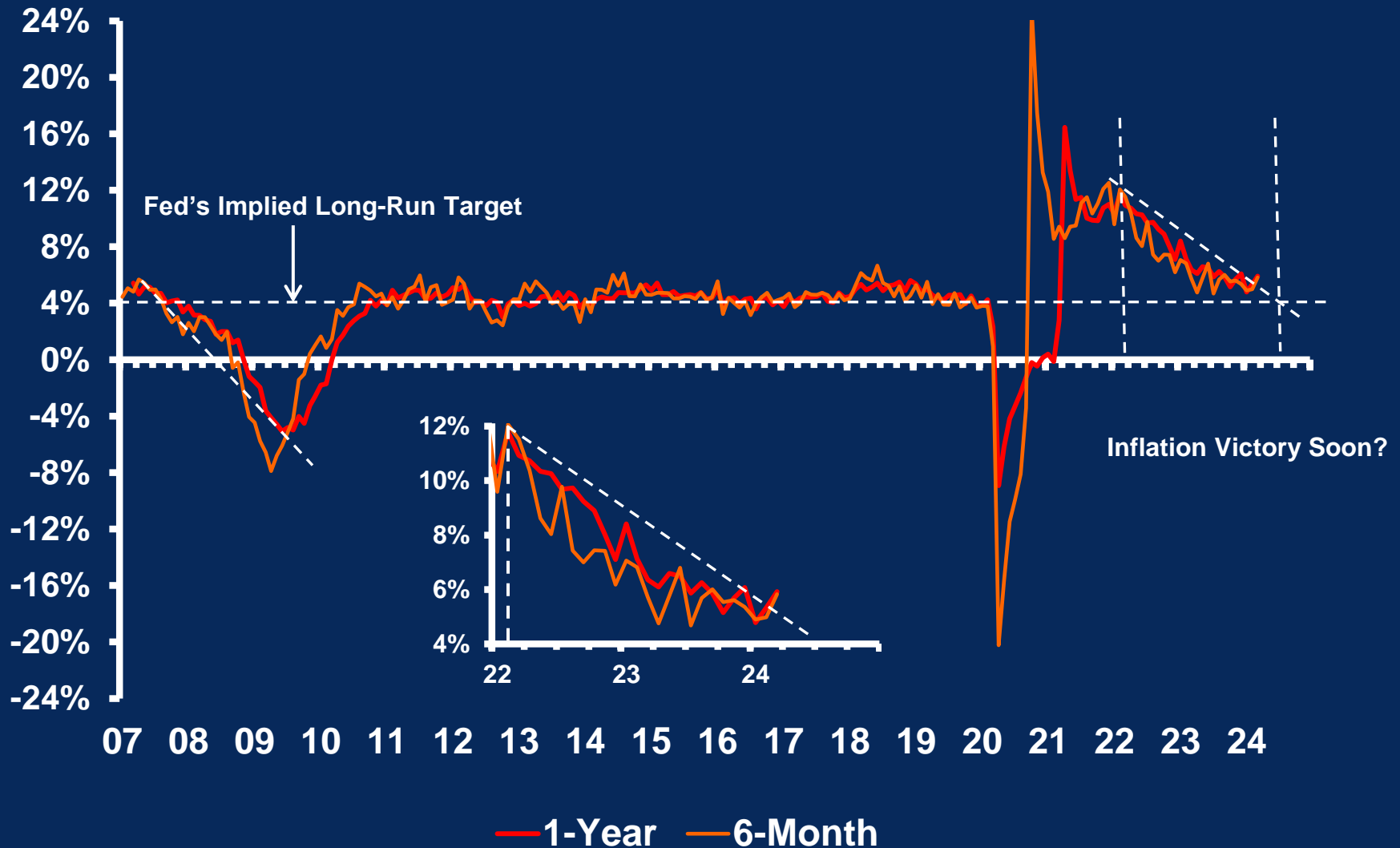
# Nominal GDP and Payroll Index Growth

(Nominal GDP Growth = 4-Quarter Change)

(Payroll Index = Hours x Wages) (Payroll Index Growth = 12-Month Change)



# Payroll Index Growth (Payroll Index = Hours x Wages)



# Selected Interest Rates (Daily)



# Breakeven CPI Inflation Rate

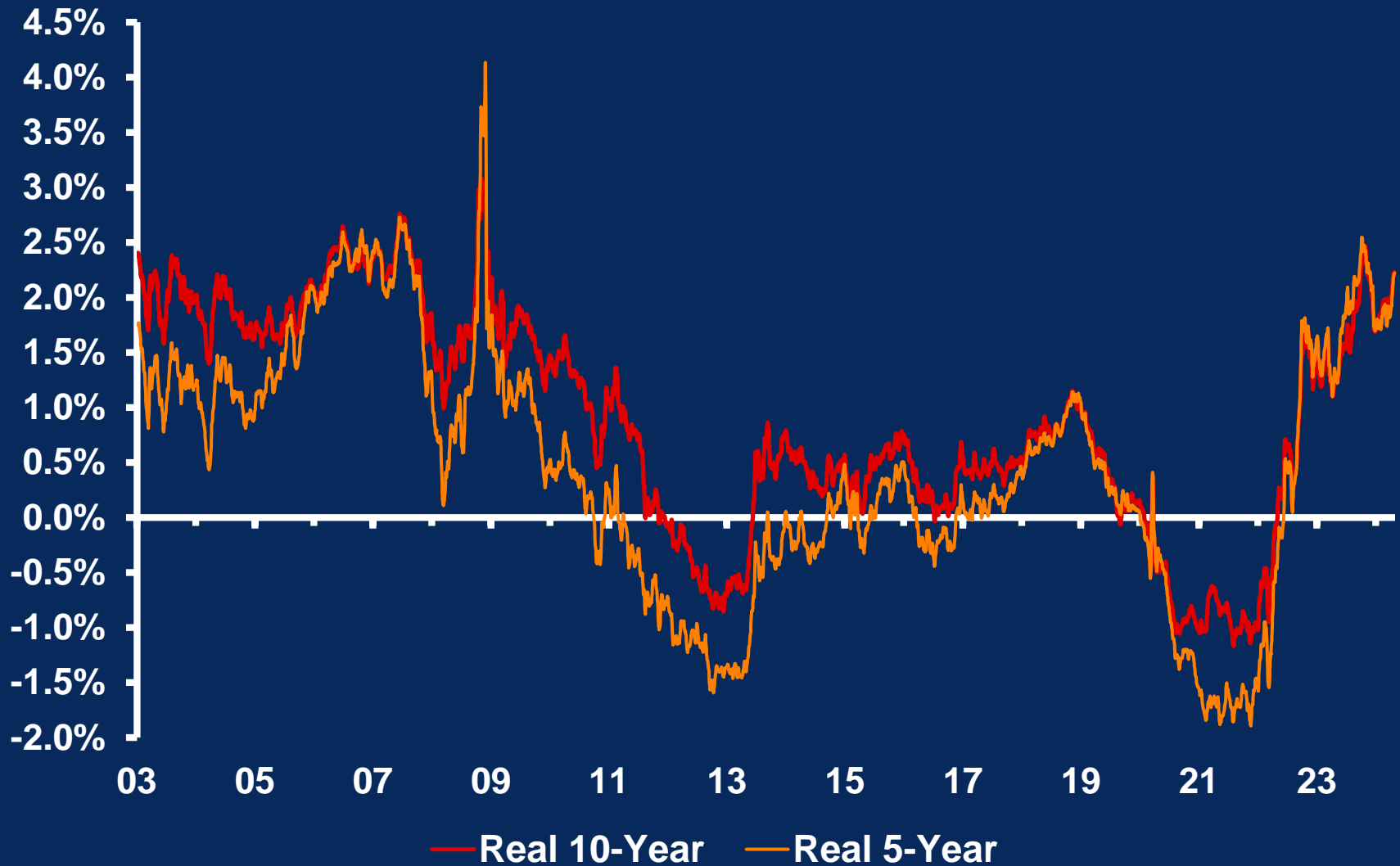
(T-Note-TIPS Spreads) (5-Day Averages) (PCE Runs 0.45% Lower Than CPI)



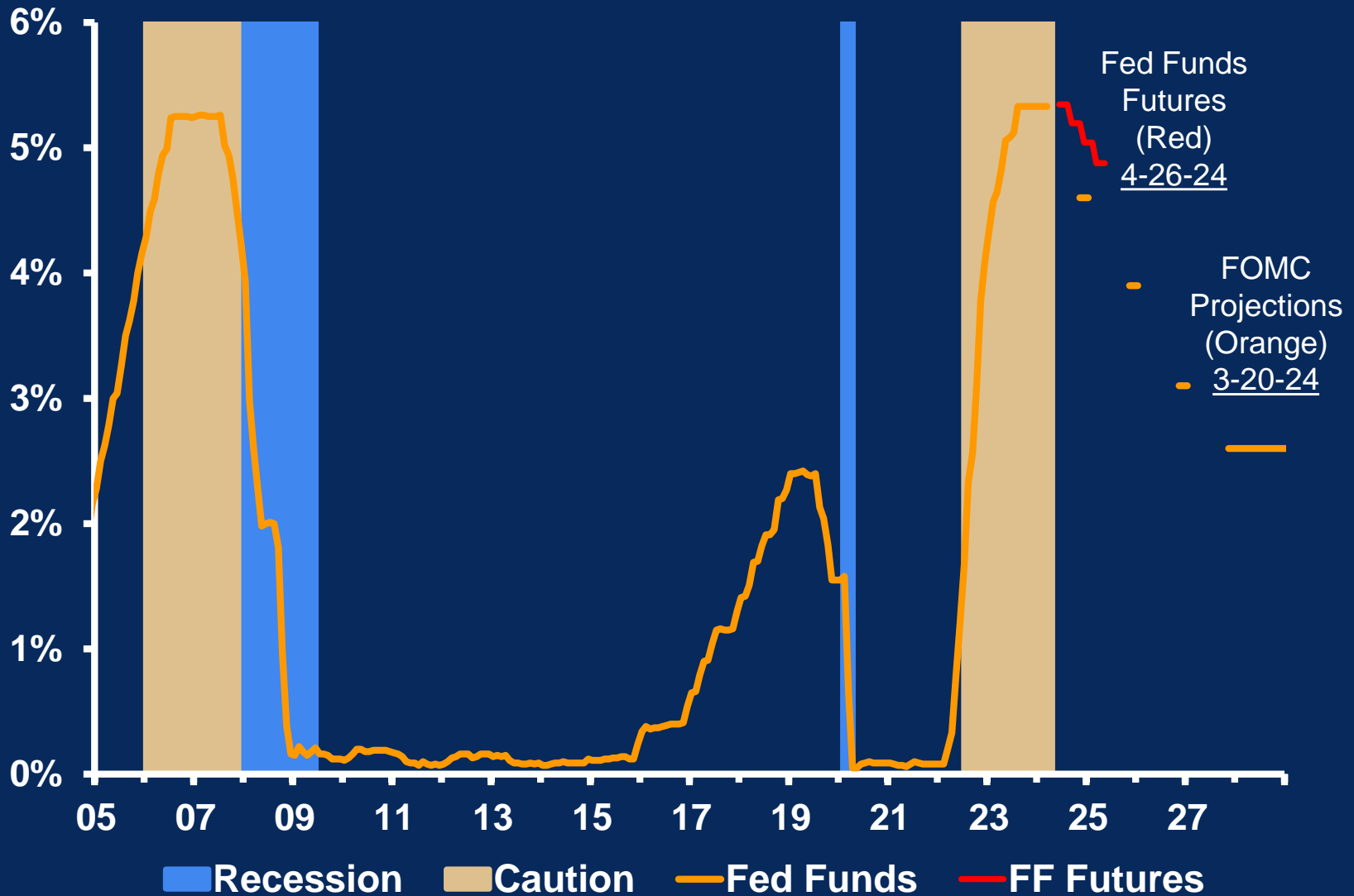


# Real Interest Rates (Nominal Yields Minus TIPS Yields)

(5-Day Averages)



# Interest Rate Prospects





# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

Inflation Has Peaked – Fed's Target Achievable "Soon"  
Monetary-Fiscal Policies Remain Restrictive  
Political Prospects Uncertain  
Slowdown Will Persist – Inflation Decline Will Resume  
Lower Inflation Makes Recession Improbable  
Interest Rates Will Decline Later This Year



# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

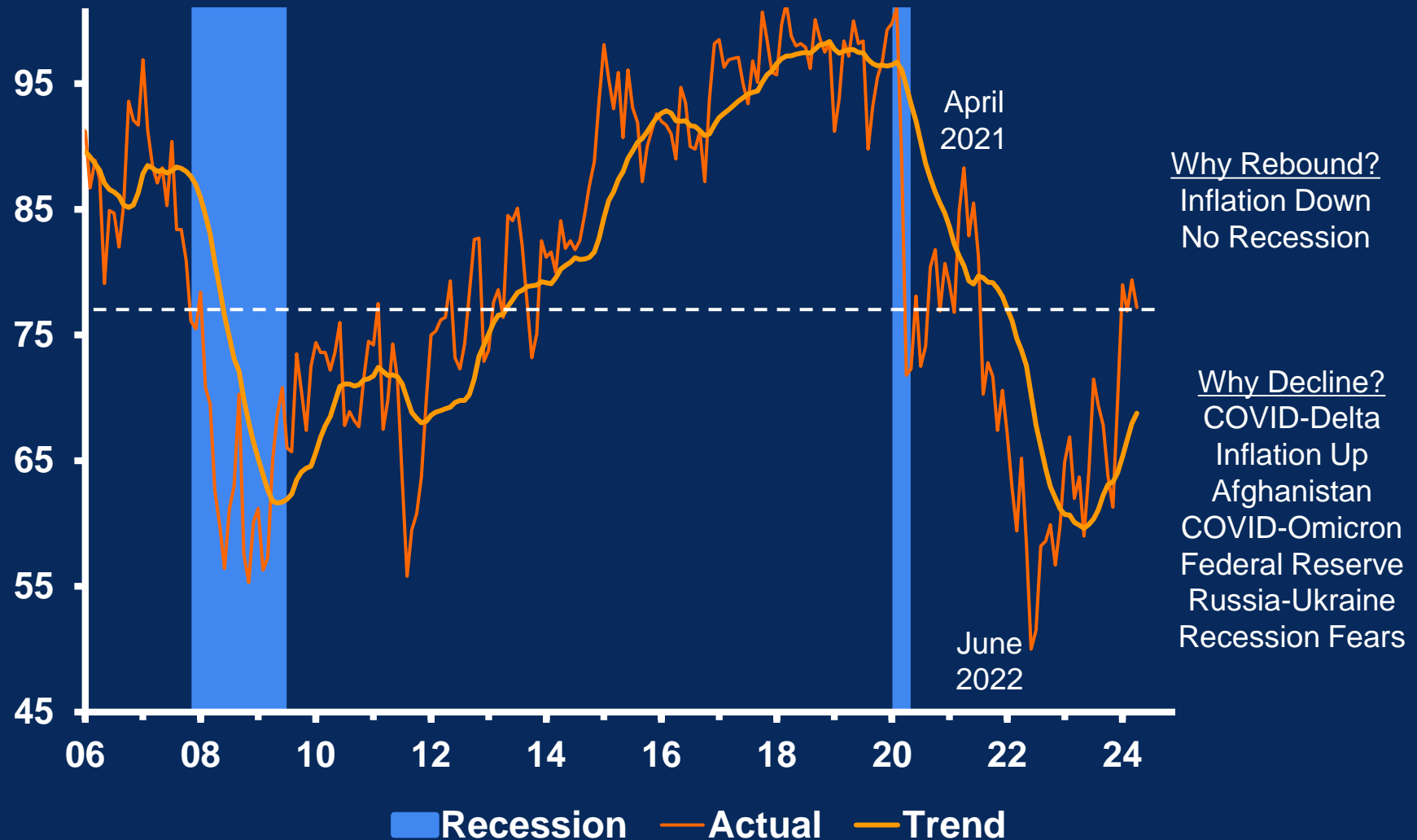
### Economic Sector Performances

2024 Prospects Positive But Not Robust

Productivity Upturn Implies Post-2024 “Boomlet”

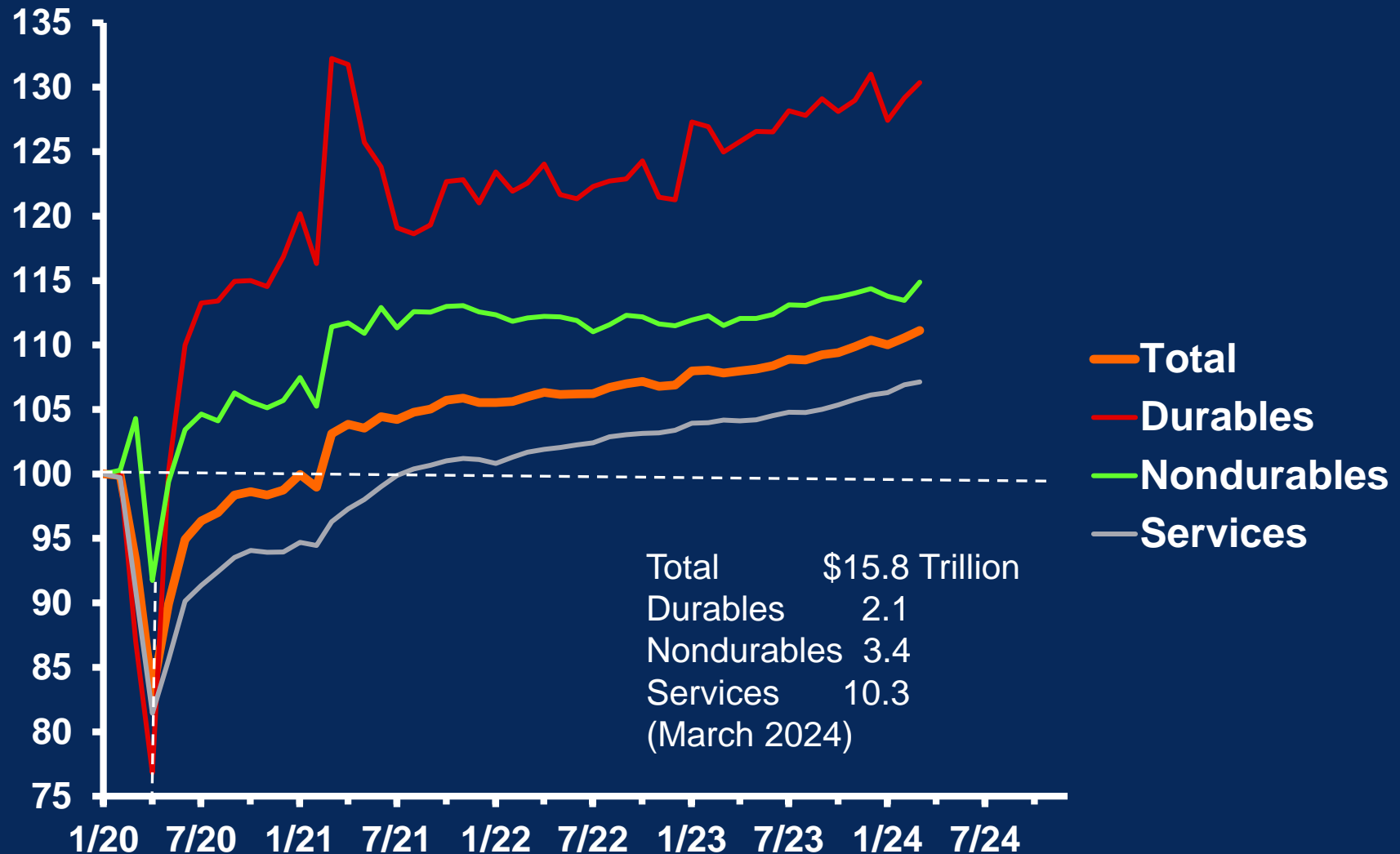
# Consumer Sentiment and Zempel Zones ©

(Consumer Sentiment Index) (University of Michigan) (Monthly)



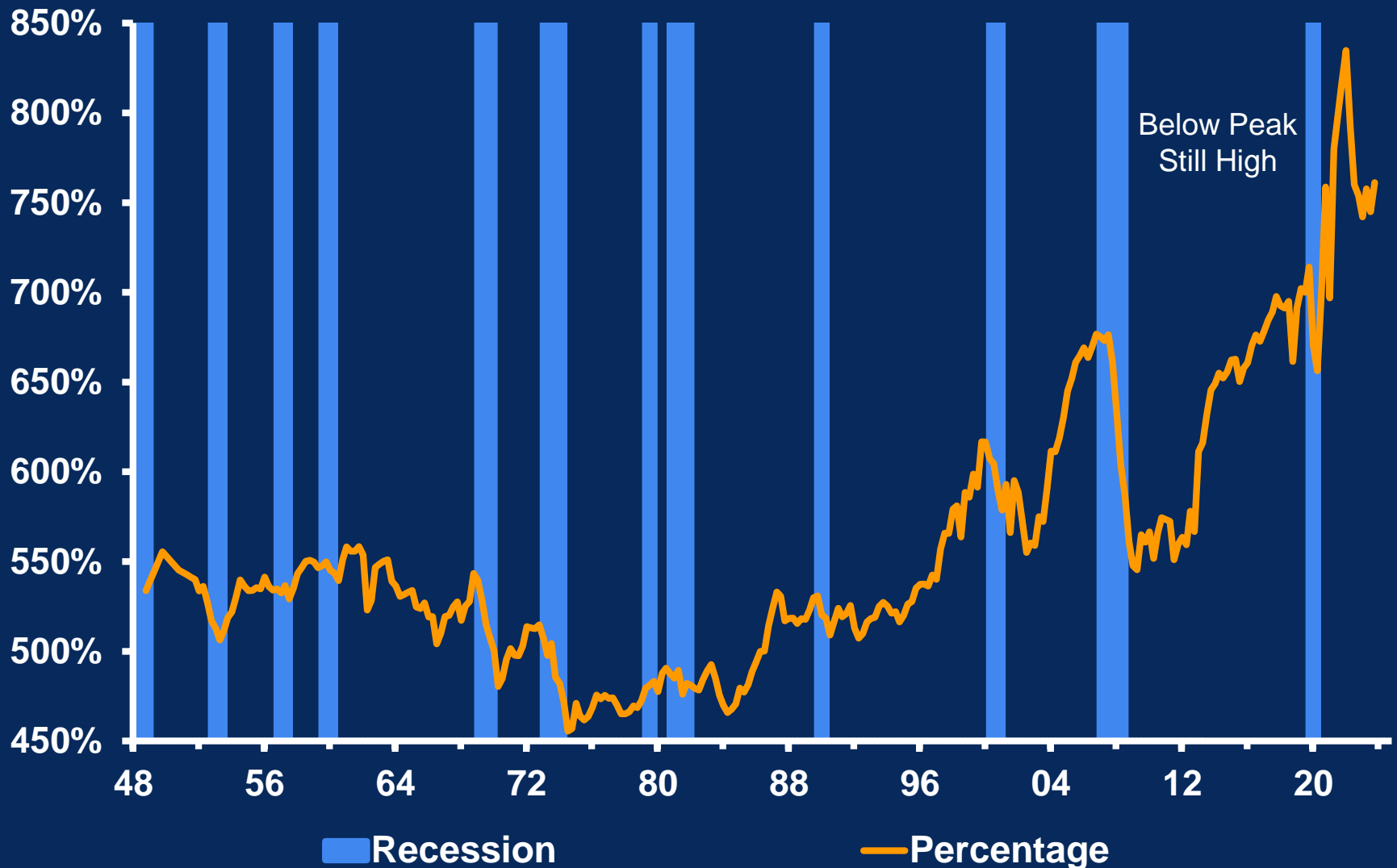
# Real Personal Consumption Indexes

(January 2020 = 100)



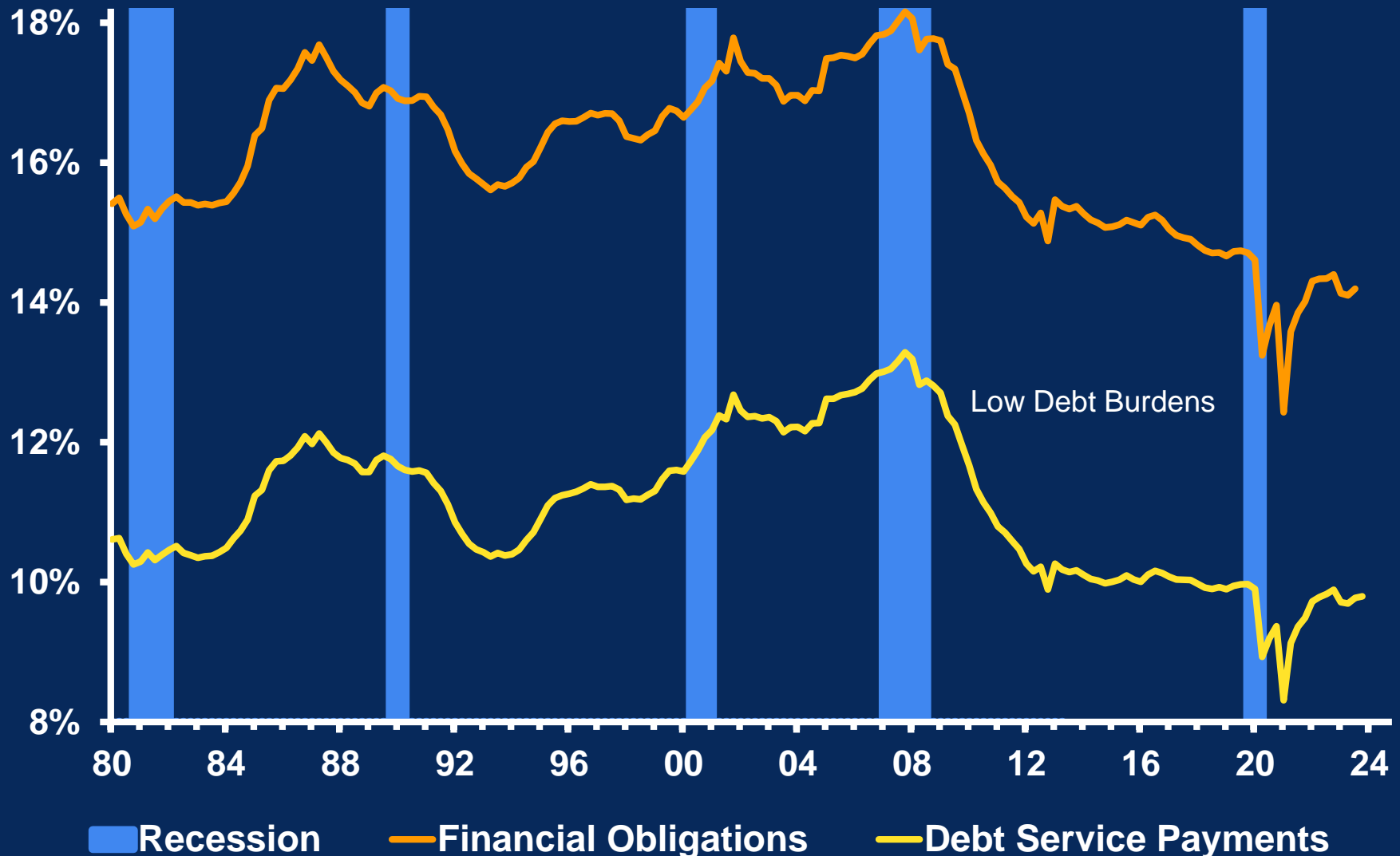
# Net Worth (Percentage of DPI)

(Households and Nonprofit Organizations)



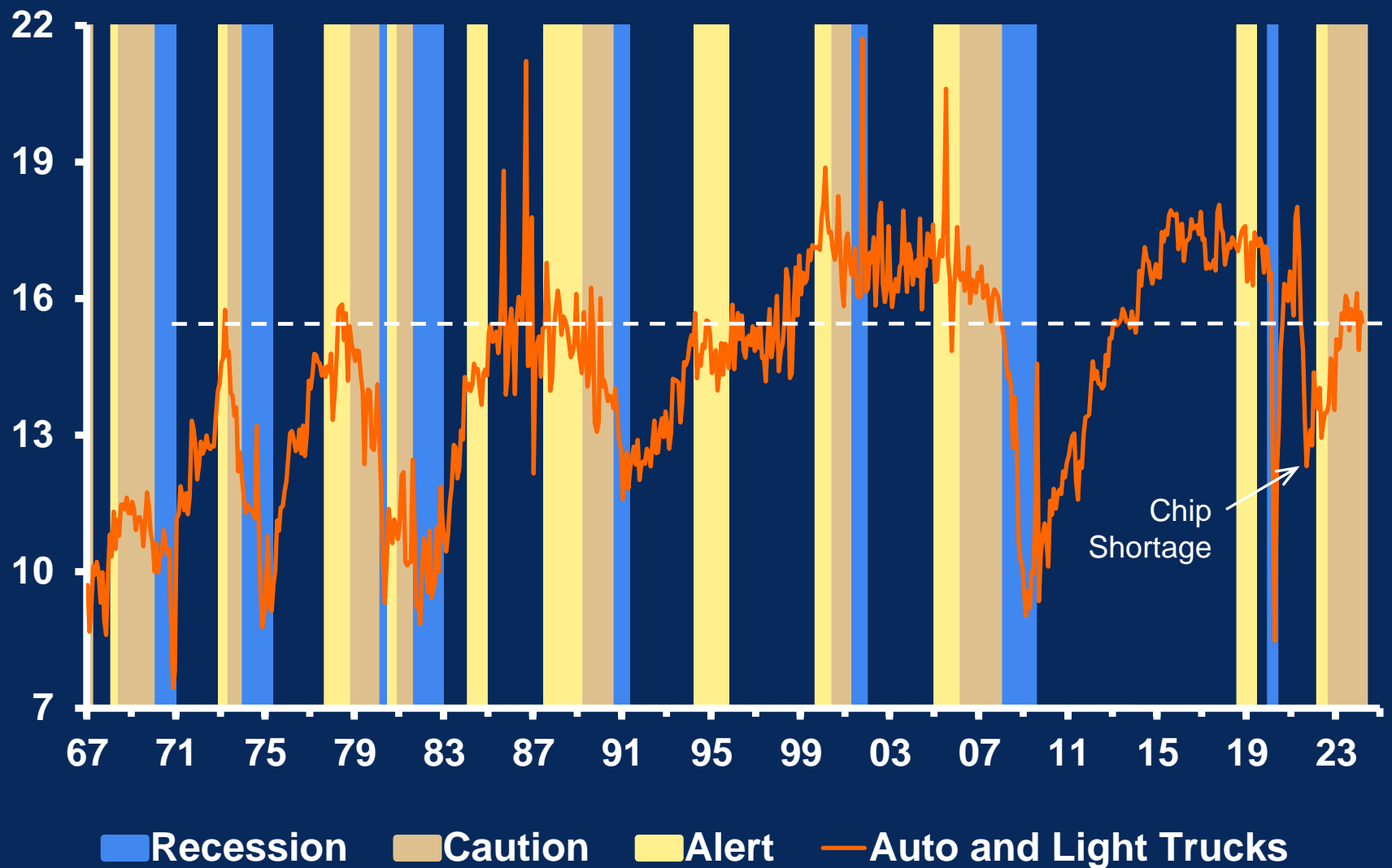
# Household Debt Burdens

(Percent of Disposable Personal Income)

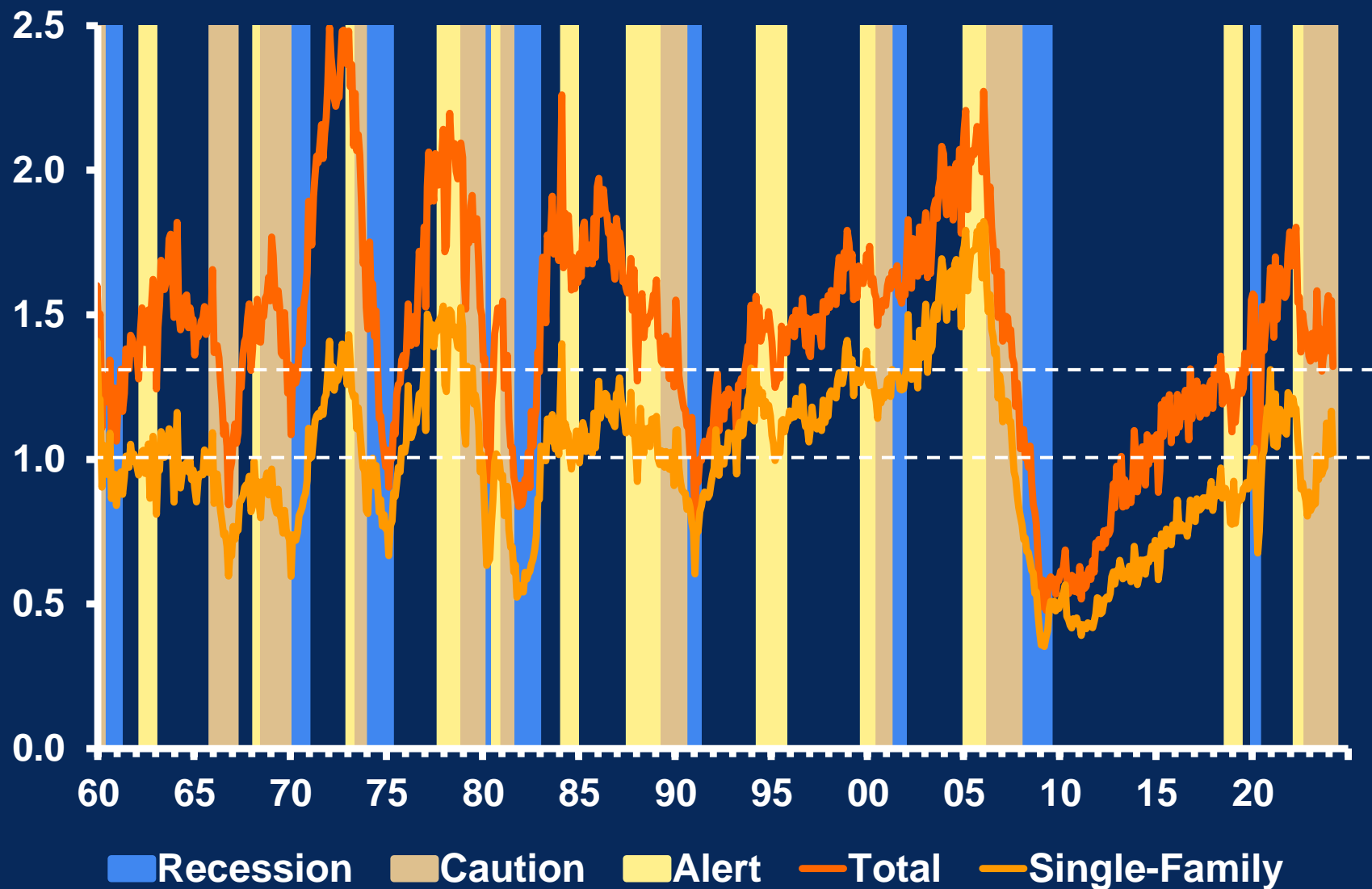




# Auto and Light Truck Sales (Million Units)

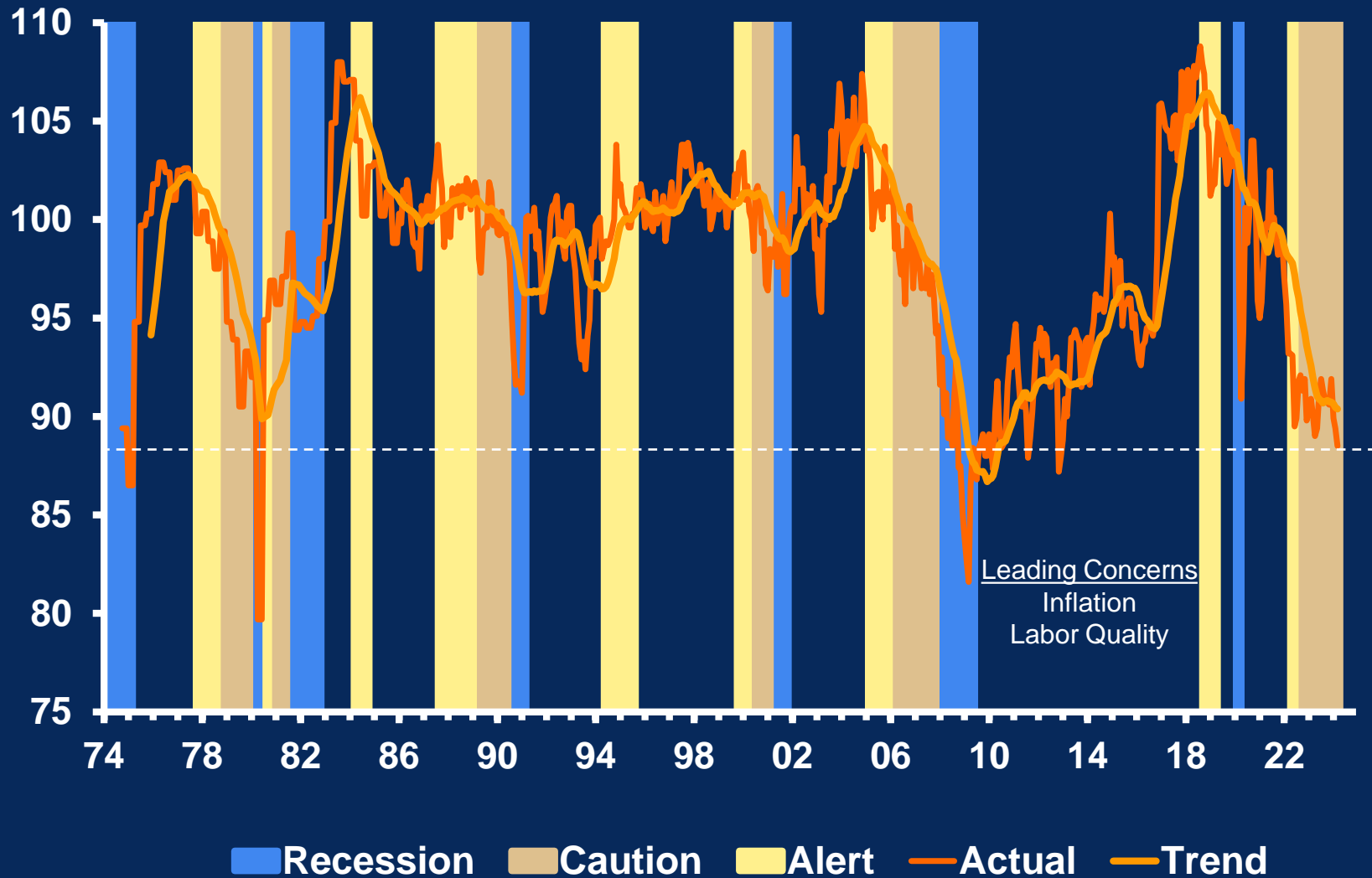


# Housing Starts (Million Units)



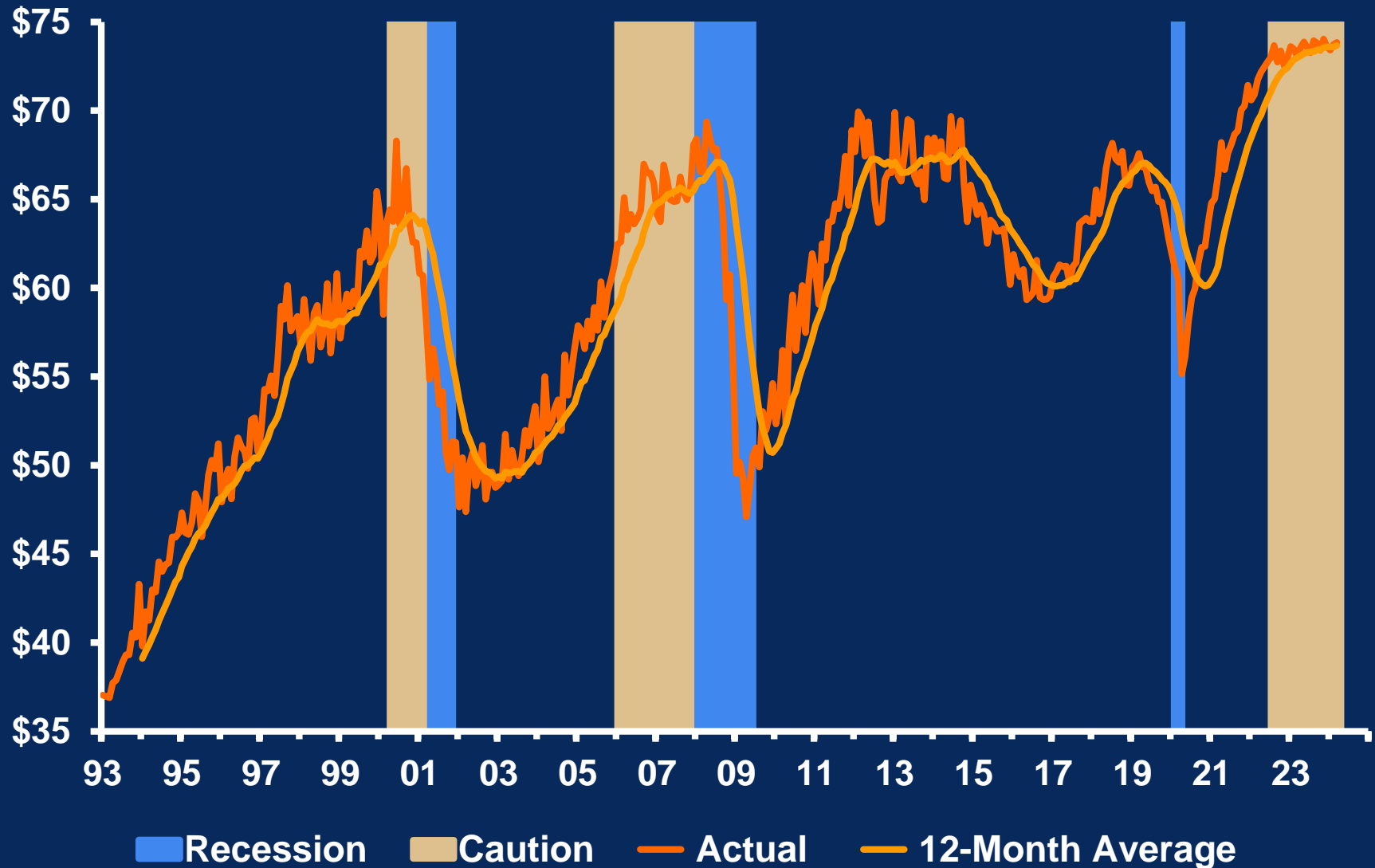
# NFIB Optimism and Zempel Zones ©

(Small Business Optimism Index) (Monthly Since 1986)



# New Non-Defense Capital Goods Orders

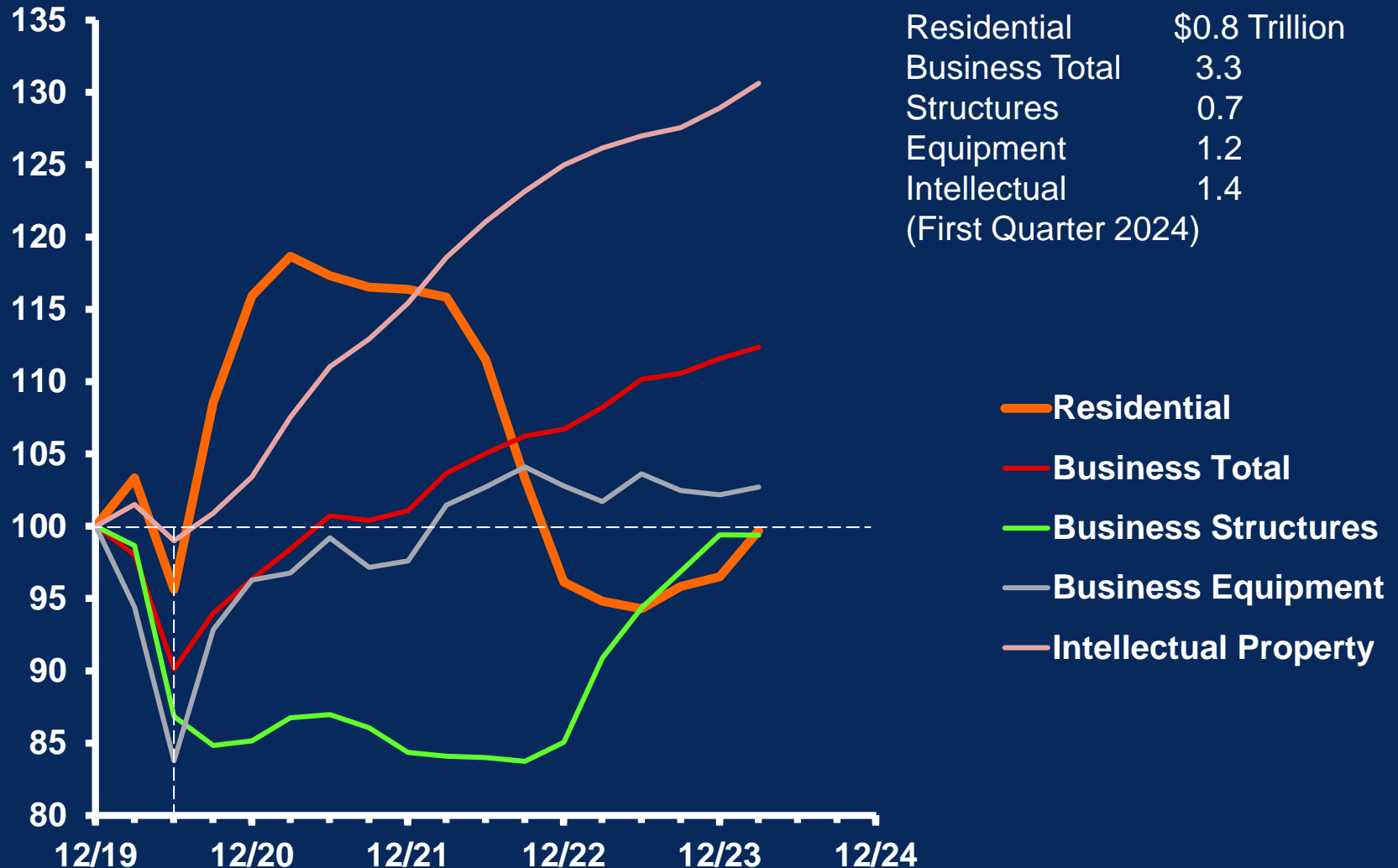
Excluding Aircraft (Monthly) (Current Dollars) (Billions)



# Real Investment Indexes

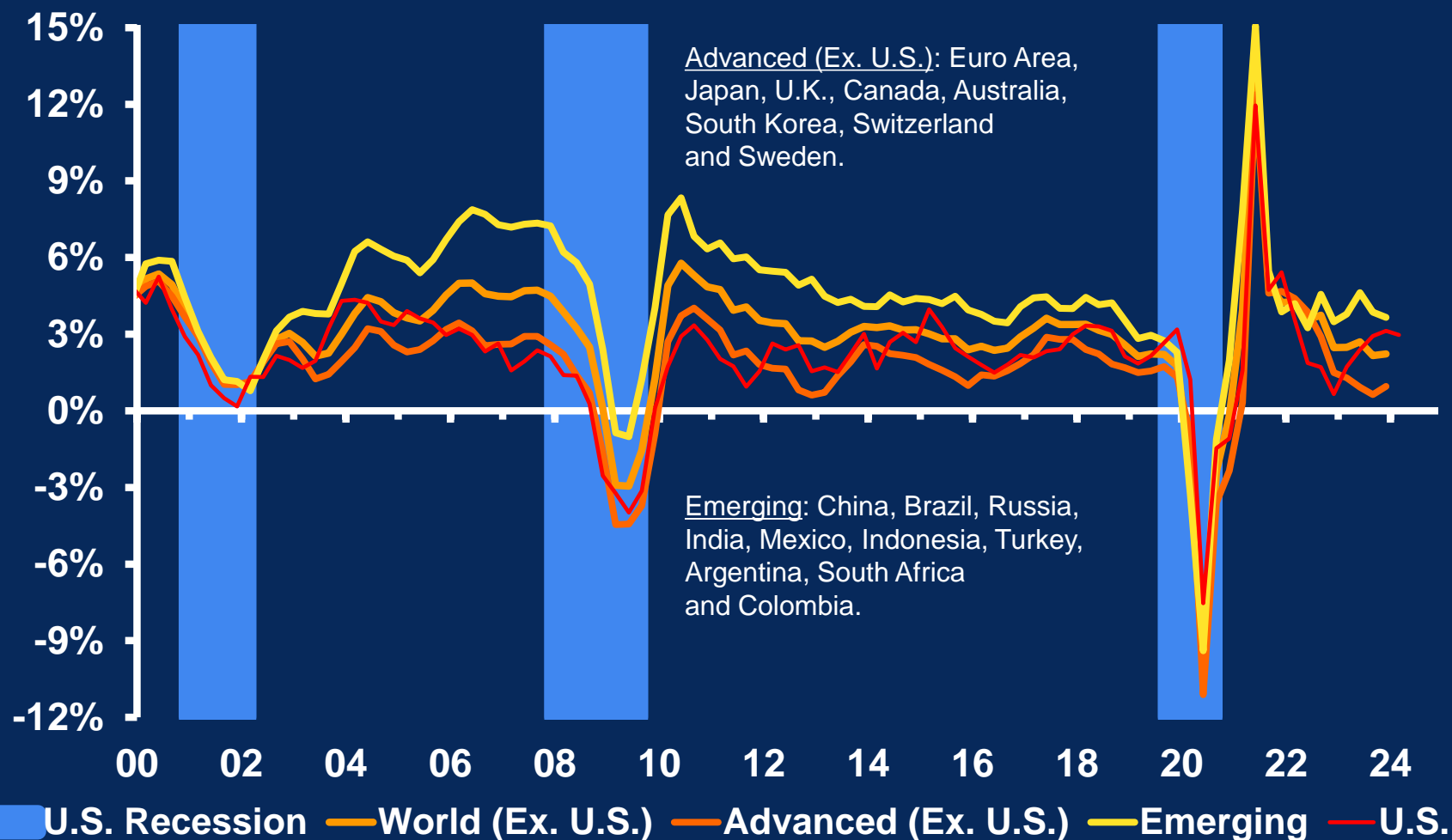
(Quarterly) (December 2019 = 100)

Residential      \$0.8 Trillion  
Business Total      3.3  
Structures      0.7  
Equipment      1.2  
Intellectual      1.4  
(First Quarter 2024)



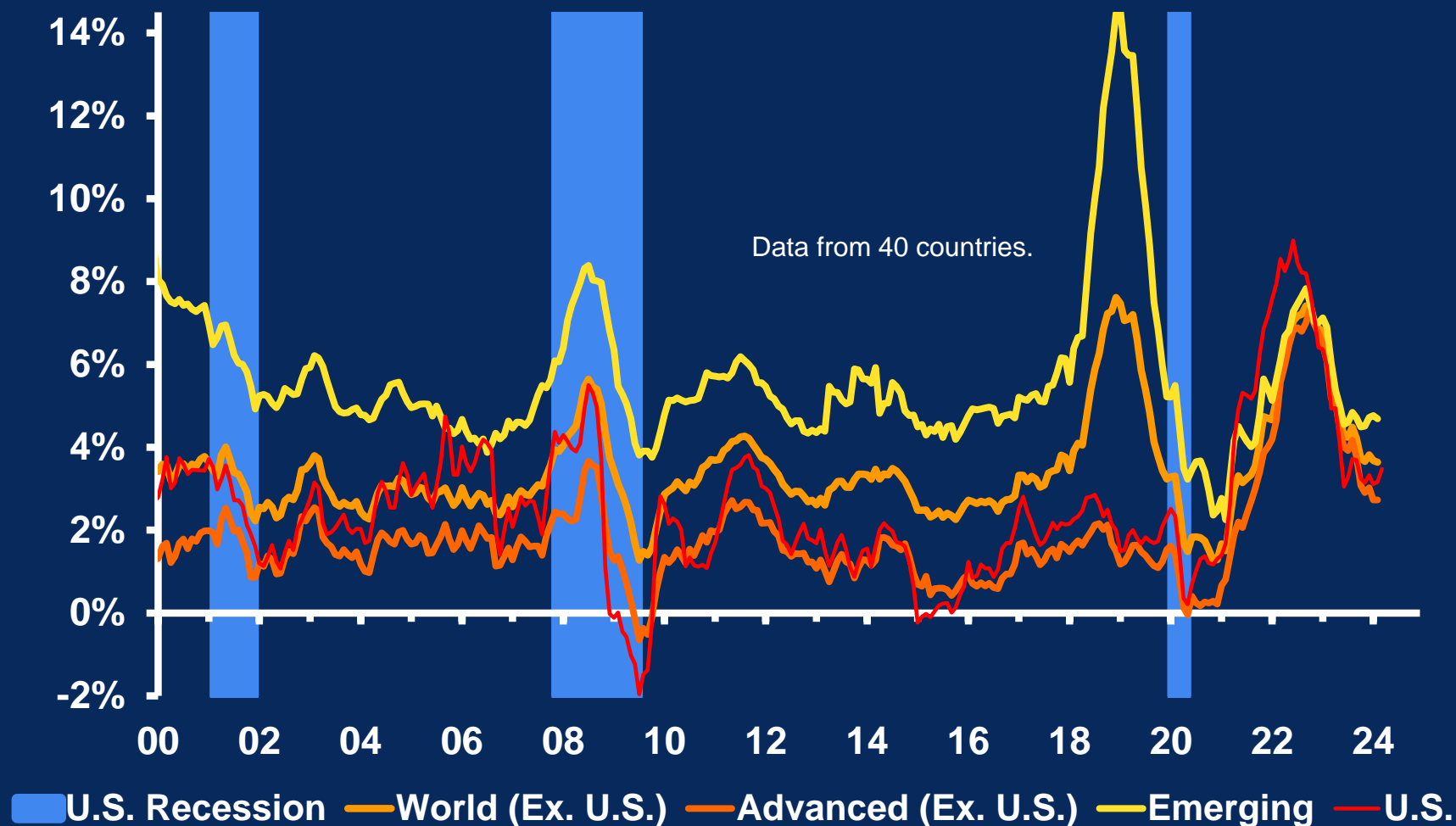
# World Real GDP

Dallas Fed's Globalization & Monetary Policy Institute



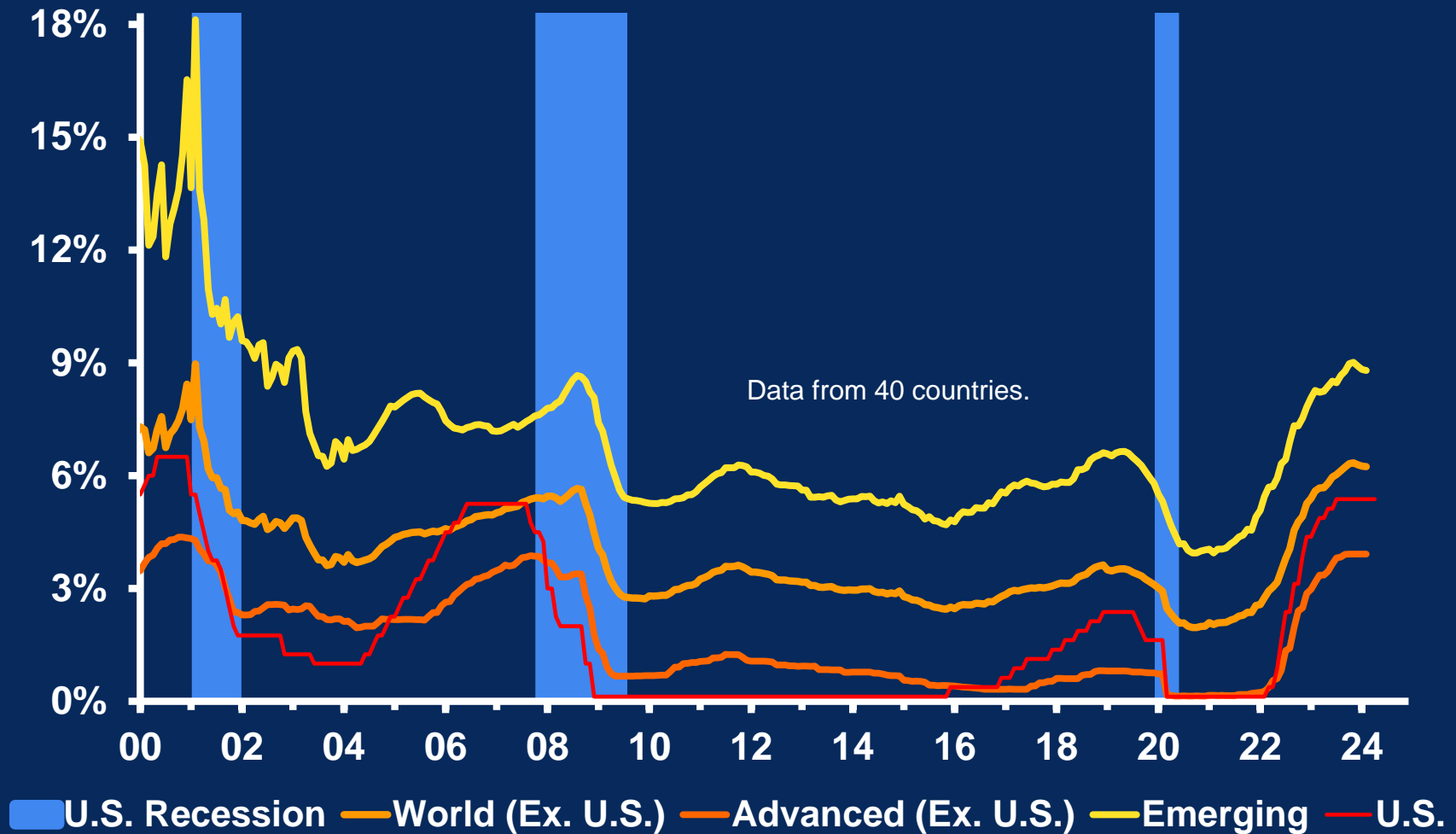
# World Headline CPI Inflation Rates

Dallas Fed's Globalization & Monetary Policy Institute



# World Policy Short-Term Interest Rates

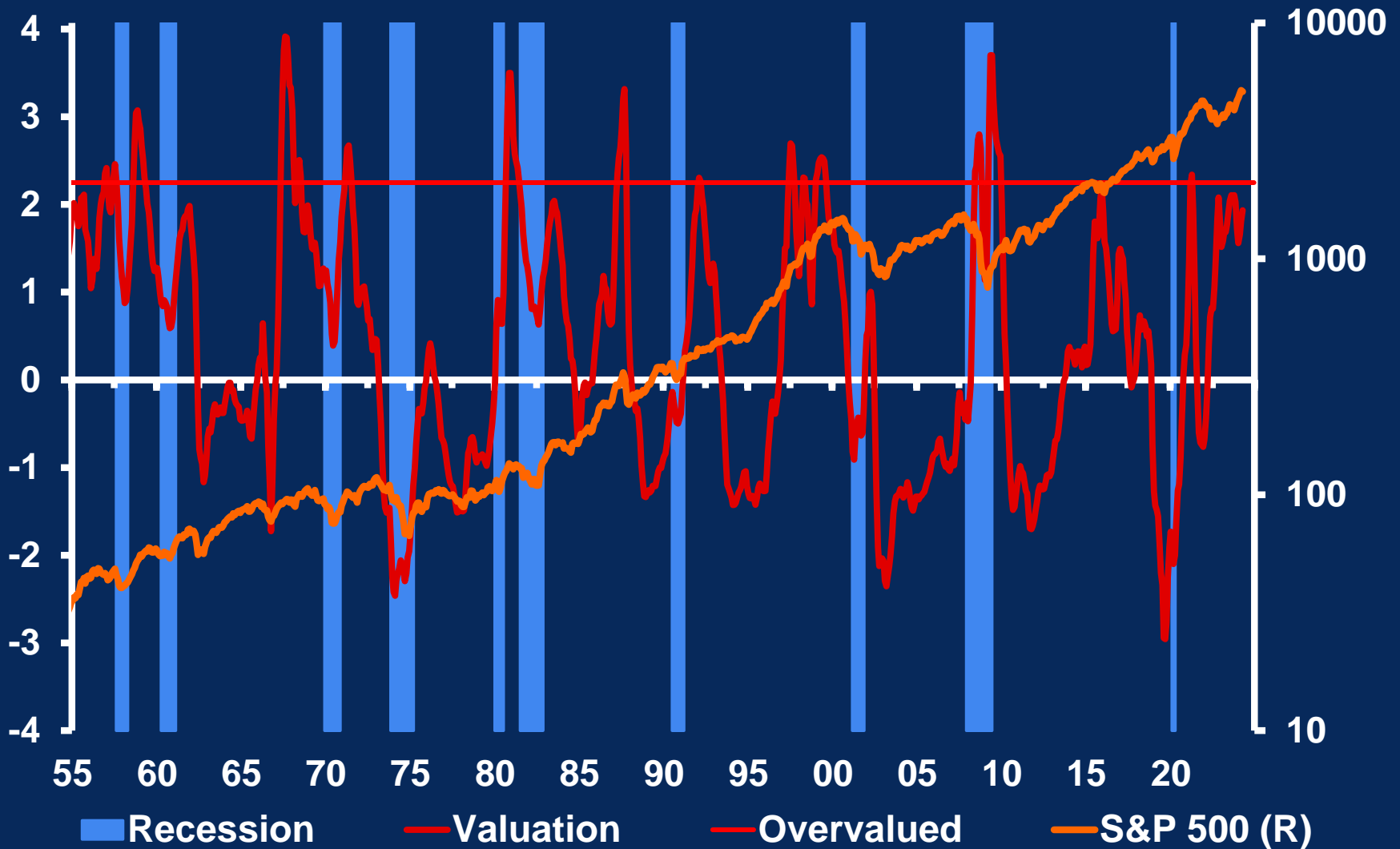
Dallas Fed's Globalization & Monetary Policy Institute





# S&P 500 Valuation Index

(Operating Earnings) (Smoothed Valuation Index)





## Association for Governmental Leasing & Finance

### Stock Market Model Components

Momentum

Interest-Rate Changes

Valuation

### Stock Market Valuation Index Concepts

Ratio = Bond Yield / Earnings Yield

Earnings Yield =  $E/P$

Valuation Index = Normalized Ratio

Bond Yield = Moody's BAA Corporate Bond Yield

E = Trailing Year Operating Earnings

P = S&P 500 Index

Normalization =  $(\text{Actual} - \text{Mean}) / \text{Standard Deviation}$



# Association for Governmental Leasing & Finance

## The Economic and Market Outlook 2024 – 2028

Has Recession Started? No

Will Inflation Decline Further? Yes

Will Interest Rates Decline? Yes

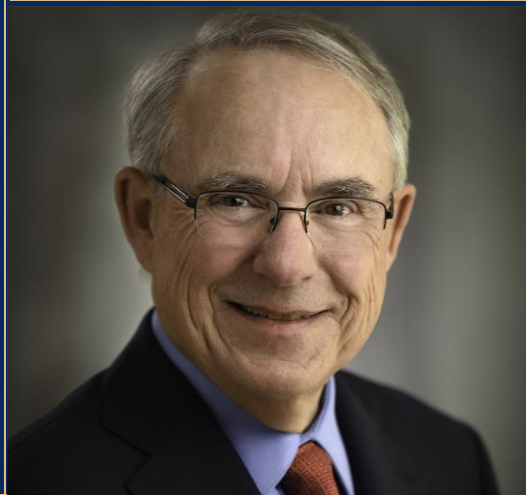
2024 Economic Prospects Positive But Not Robust ( $2 + 2 = 4$ )

Best Indicators Predict Sustained Slowdown

But No Recession If Inflation Slows Further + Fed Eases

Worst Case? Misplaced Hawkishness Triggers Recession

Post-2024? Productivity Upturn Promises “Boomlet”



# Questions...

Clare W. Zempel, CFA, CBE

Zempel Strategic

Applied Economics and Financial Market Analysis

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(414) 351-1250

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