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First In Forecasts Worldwide



***♪ Thank your
lucky stars
you're in Texas! ♪***

Presented by ITR Economics
President
Alan Beaulieu, PhD

2021 Forecast Results

Despite everything that happened...



	Duration	Accuracy
US GDP	15	98.6%
US Ind. Production	19	98.3%
Europe Ind. Production	11	97.3%
Canada Ind. Production	12	99.5%
China Ind. Production	14	97.7%
Retail Sales	11	90.6%
Housing - Single Family	12	93.1%
Employment-Private Sector	18	99.2%

ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.

A decorative graphic on the left side of the slide. It features a close-up of the American flag's stars and stripes, partially obscured by a series of overlapping, semi-transparent geometric shapes in shades of green and blue. A thin white line with two small white circles at its ends runs diagonally across the graphic.

The US Economy

- “George Soros says US banks ‘basically insolvent’,” Reuters, 4/6/2009
- The financial sector ETF (XLF) established a low in February 2009)

Economy is Already Collapsing, Majority of Americans Believe
Newsweek June 17, 2022

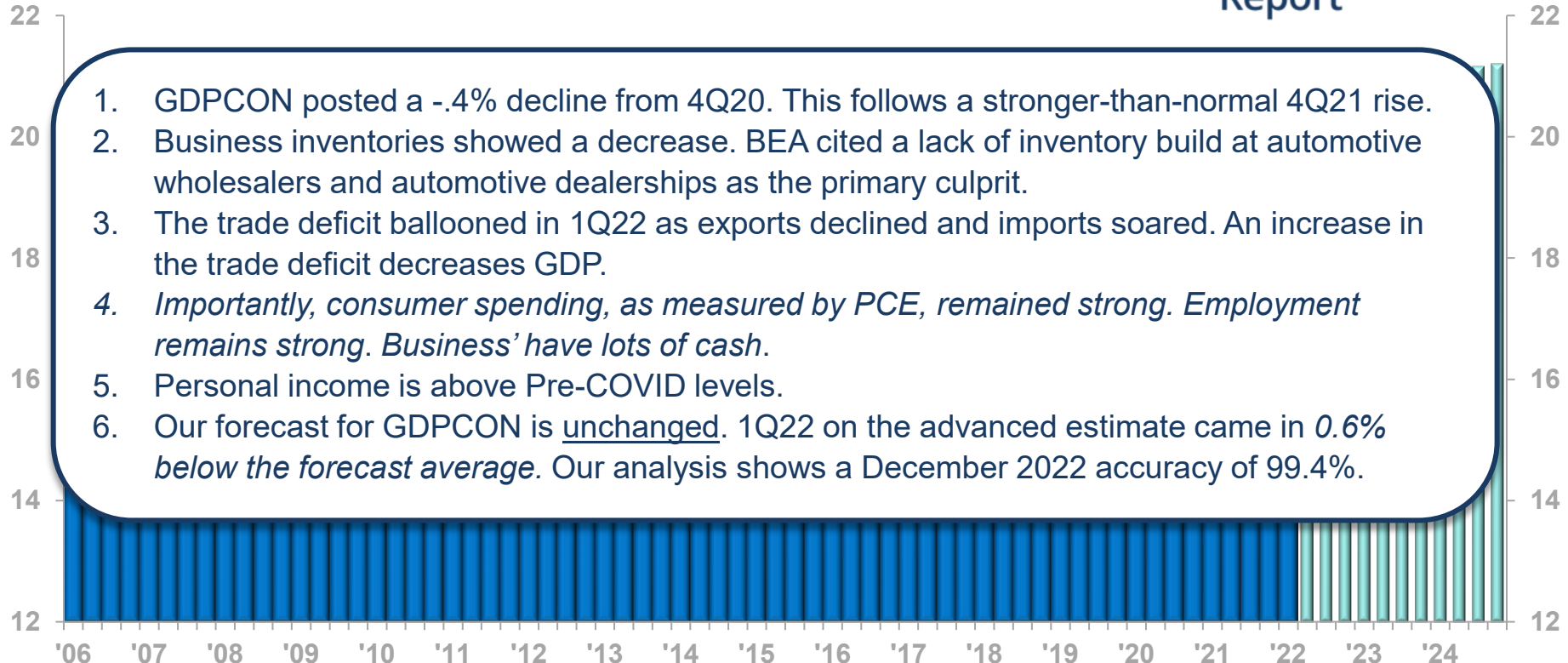
- “Debt Crisis unsettles European economy,” – The Washington Post, 2/9/2010
 - EU GDP declined for one quarter (1Q10) before resuming its ascent
-
- ❖ “Dow’s Brief Falls of 1000 Points Sets off Anxiety,” The New York Times, 5/6/2010
 - ❖ S&P 500 declined further, hitting a low in June, closing up 28.1% one year later

US Gross Domestic Product, SAAR, Chained 2012 \$

3-Month Moving Average, Trillions of Dollars

as seen in
ITR Economics'
**Trends
Report**

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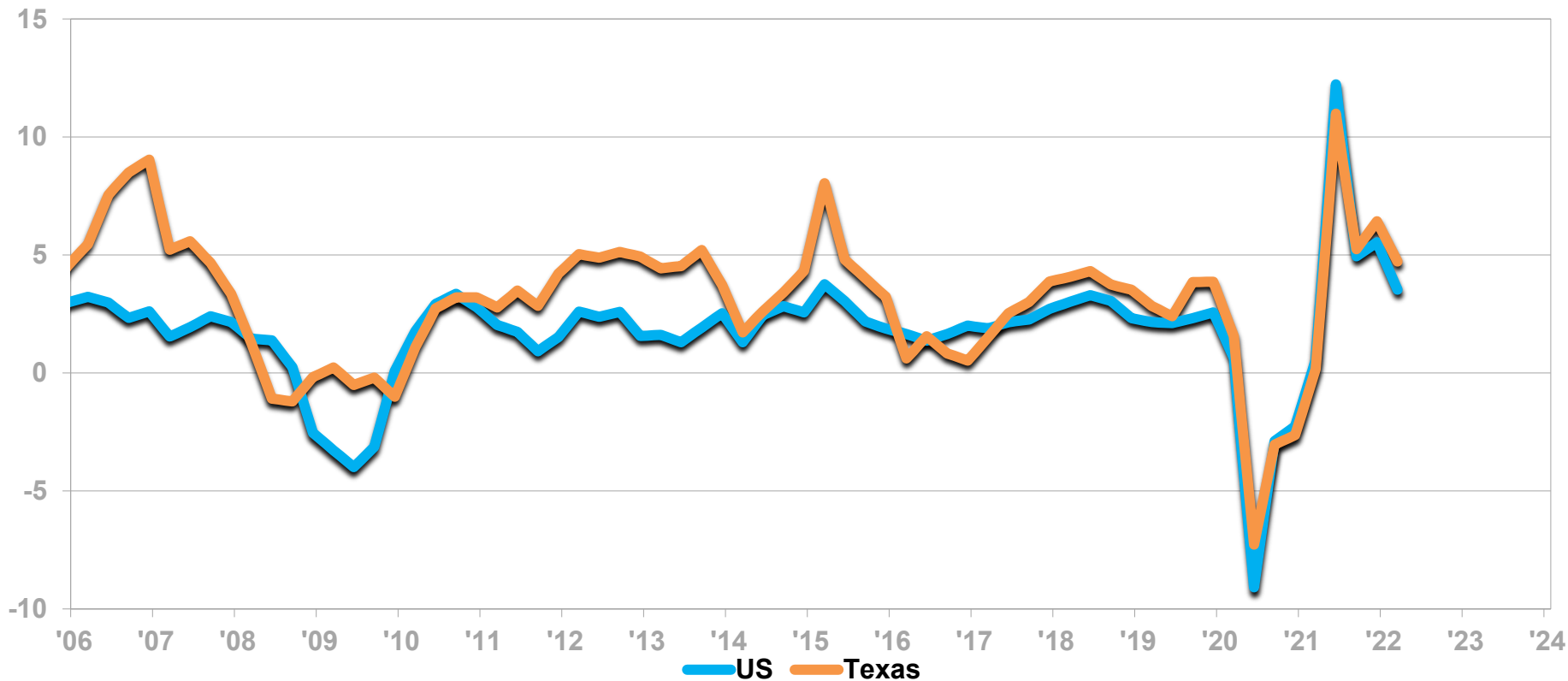


Close Cyclical Relationship

Source: BEA

US and Texas GDP Growth Rate

3/12 Rates-of-Change

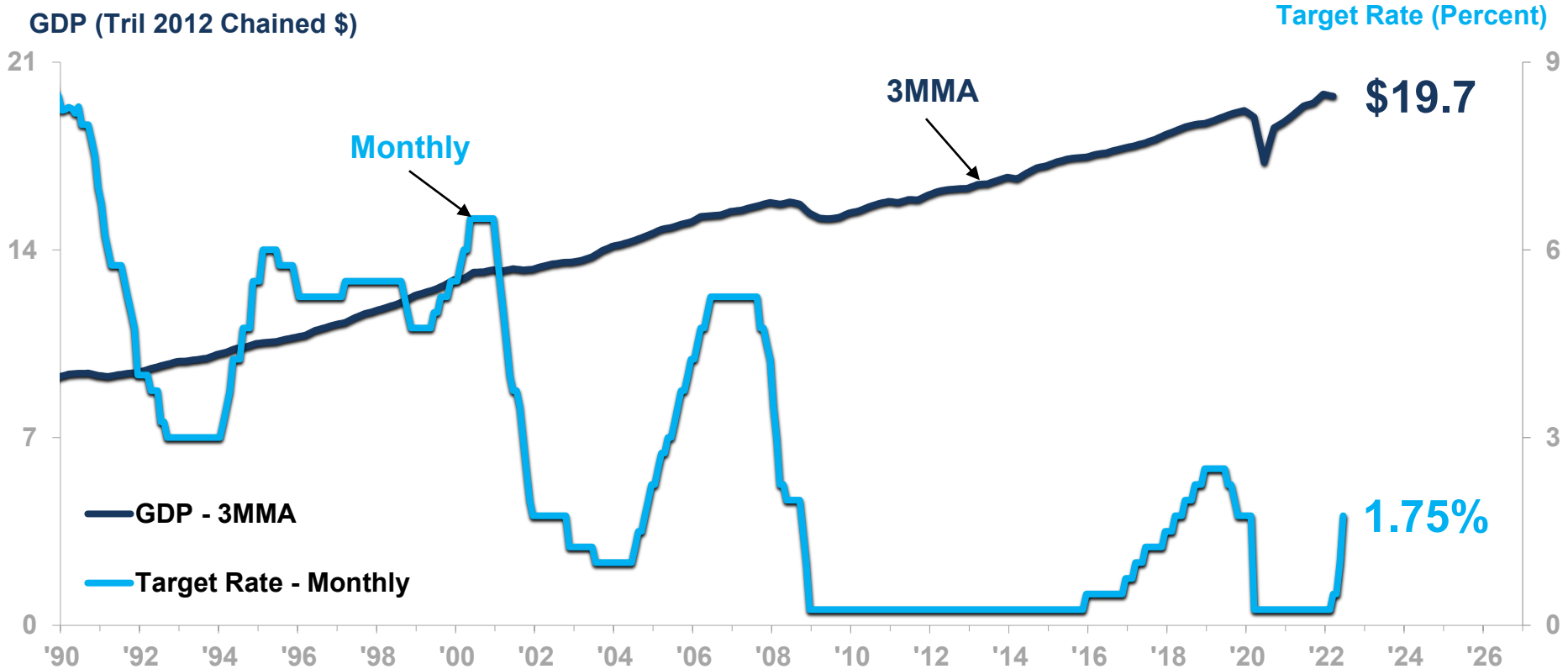


No Immediate Adversity Beyond the Emotional

Sources: WSJ, BEA

US Federal Funds Target Rate to US Real Gross Domestic Product

Target Rate: Percent, GDP: Trillions of Dollars



Slowing Macro Growth Tends to Tame Inflation

Sources: BLS, BEA

US Consumer Price Index to US Real Gross Domestic Product

3/12 Rates-of-Change



A Powerful Management Tool • Rates-of-Change

	Raw	3MMT	3/12	12MMT	12/12
Jun-20	4.864				
Jul-20	4.912				
Aug-20	4.866	14.6			
Sep-20	5.064	14.8			
Oct-20	5.293	15.2			
Nov-20	4.983	15.3			
Dec-20	5.399	15.7			
Jan-21	4.942	15.3			
Feb-21	4.803	15.1			
Mar-21	6.035	15.8			
Apr-21	5.850	16.7			
May-21	5.756	17.6		62.8	
Jun-21	6.216	17.8		64.1	
Jul-21	5.982	18.0		65.2	
Aug-21	6.075	18.3	24.8%	66.4	
Sep-21	6.208	18.3	23.1%	67.5	
Oct-21	6.279	18.6	21.9%	68.5	
Nov-21	6.366	18.9	22.9%	69.9	21.3%
Dec-21	6.524	19.2	22.3%	71.0	22.6%
Jan-22	6.063	19.0	23.7%	72.2	24.3%
Feb-22	6.001	18.6	22.7%	73.4	25.8%
Mar-22	7.406	19.5	23.4%	74.7	25.8%
Apr-22	6.904	20.3	21.7%	75.8	23.8%
May-22	7.183	21.5	21.8%	77.2	23.0%

3/12

Based on data from a consecutive 3-month period compared to one year earlier.

Anticipates shifts in business cycle trends.

12/12

Based on data from a consecutive 12-month period compared to one year earlier.

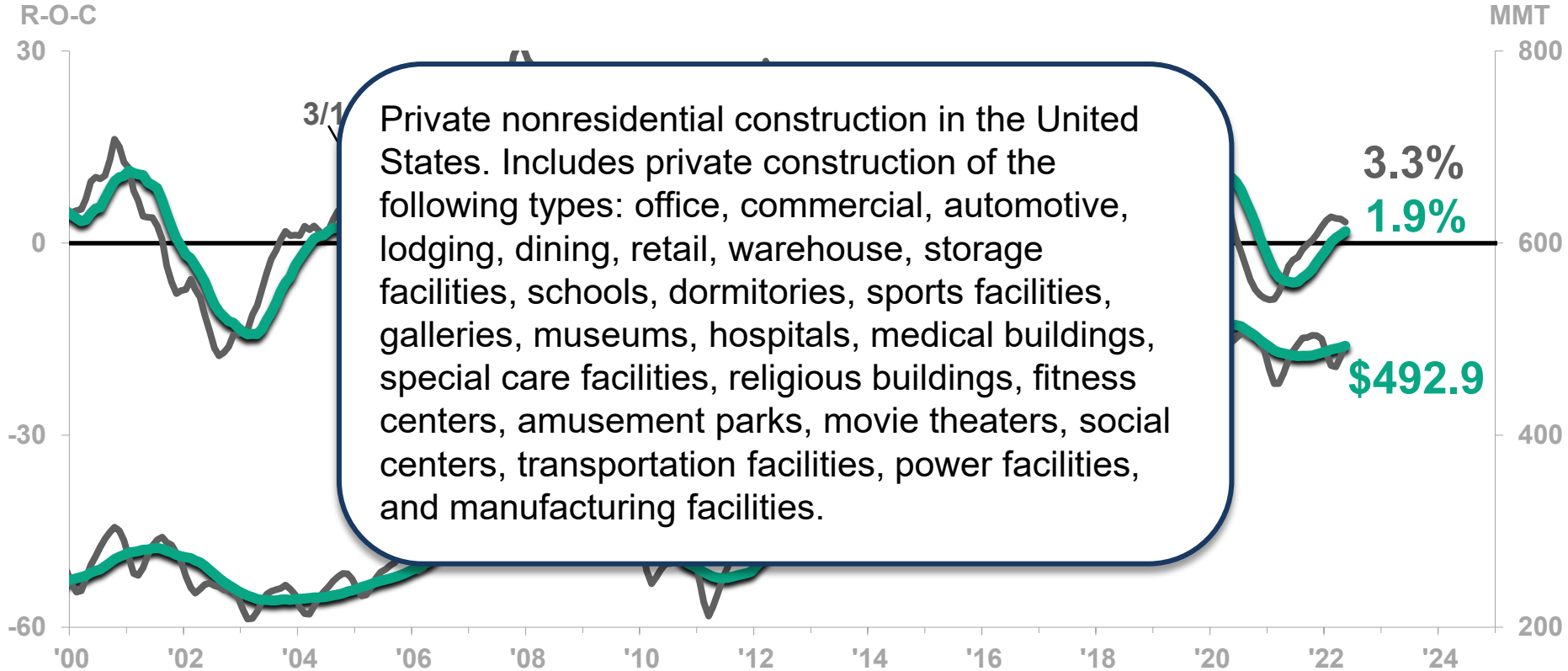
Defines the business cycle.

Indicating Cyclical Rise Ahead

Source: US Census Bureau


US Private Nonresidential Construction

Billions of Dollars



US Economic Leading Indicators: Deceleration in 2022 & 2023

Sources: ITR Economics, Institute for Supply Management, OECD, Yahoo Finance, US Census Bureau, FRB

Indicator	Trend	Macro Indication	 ITR ECONOMICS
ITR Retail Sales Leading Indicator	Decline	Deceleration probable for 2022...	
ITR Financial Leading Indicator	Decline	Deceleration probable for 2022...	
JPMorgan Global PMI	Decline	Deceleration probable for 2022...	
OECD Leading Indicator	Decline	Deceleration probable for 2022...	
G7 Leading Indicator	Decline	Deceleration probable for 2022...	
Purchasing Managers Index (PMI)	Decline	Deceleration probable for 2022...	
ITR Leading Indicator	Decline	Deceleration probable for 2022...	
Wilshire Total Market Cap	Decline	Deceleration probable for 2022...	
US Business Confidence Index	Decline	Deceleration probable for 2022...	
Single-Family Housing Starts	Decline	Deceleration probable for 2022...	
Total Industry Capacity Utilization	Decline	Deceleration probable for 2022...	
US Exports, Goods – World	Decline	Deceleration probable for 2022...	

Plan on Growth Through 2023

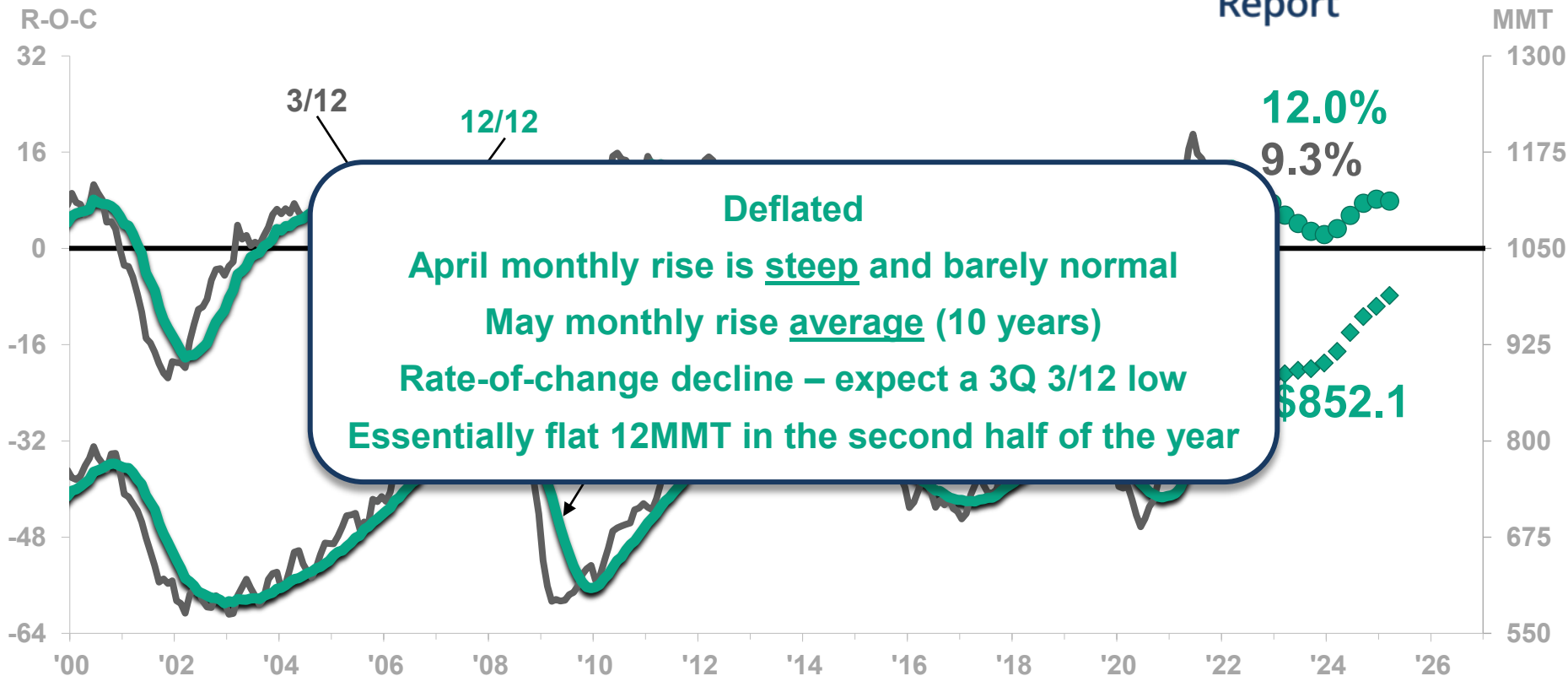
Source: US Census Bureau

US Nondefense Capital Goods New Orders (excluding aircraft)

Billions of Dollars

as seen in
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Rise Through 2023

Source: FRB

US Industrial Production Index

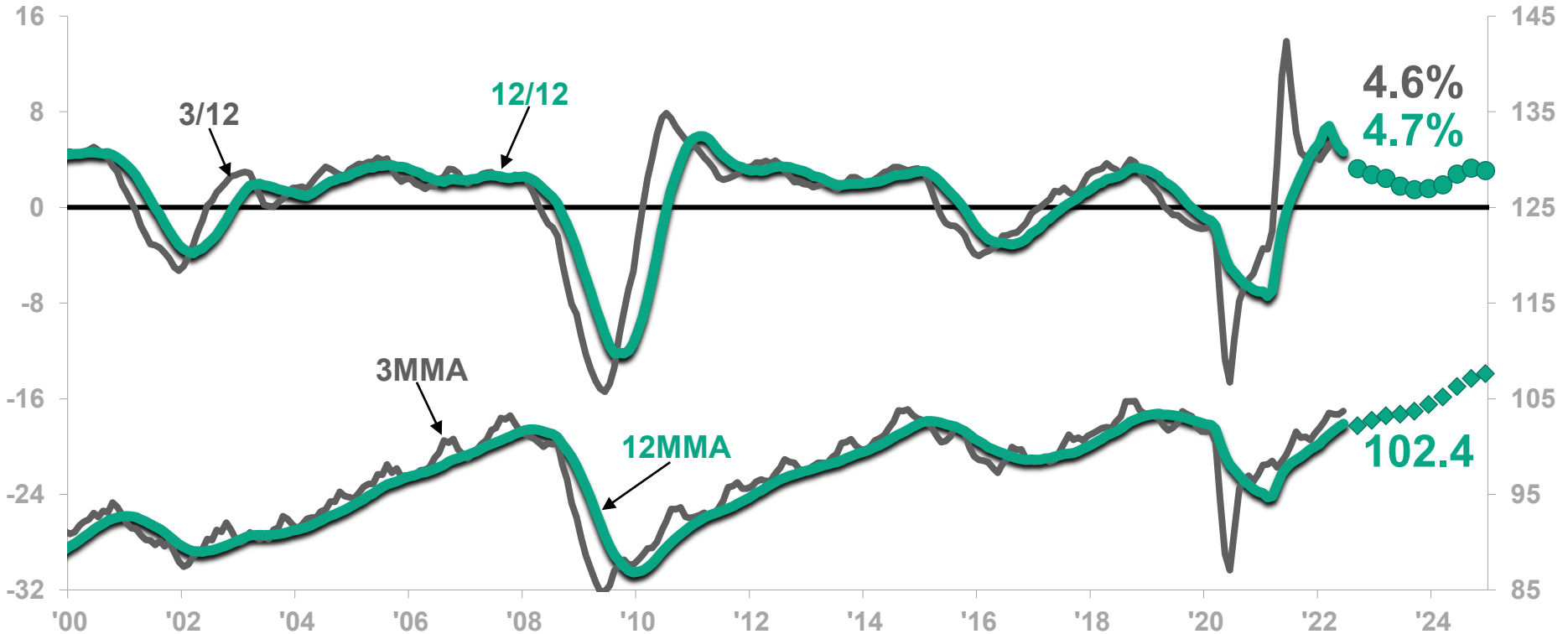
2017 = 100

R-O-C

as seen in
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MMA

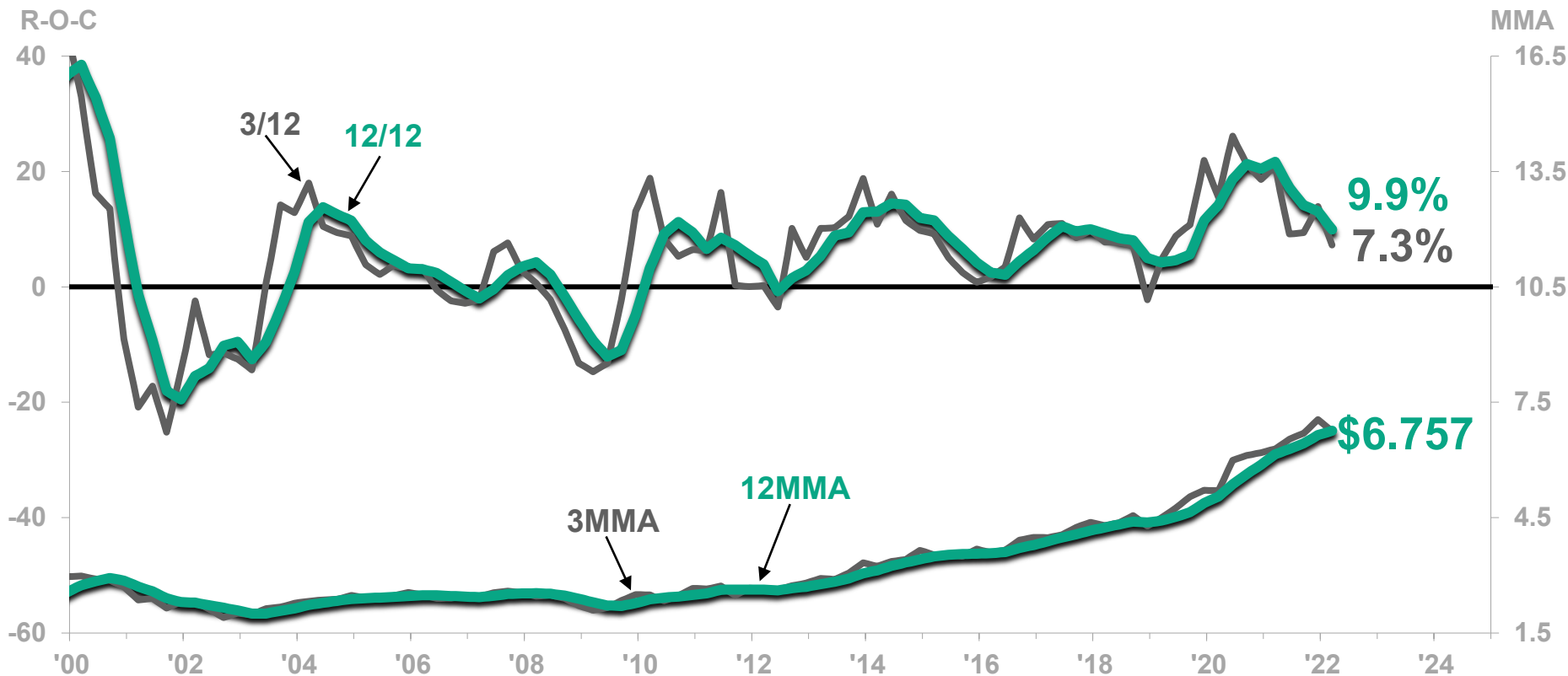





Strong Liquidity Positions

Source: FRB

US Nonfinancial Corporate Business Liquid Assets

Trillions of Dollars



-  **Consumer financial health is good with incomes rising**
-  **Businesses are profitable and liquidity is high**
-  **Situation looks stable**

Next Steps

- **Listen to your numbers and relevant leading indicators.**

Financial Markets

US Stock Prices Index to US Domestic Corporate Profits with Capital Consumption Adjustments

Data Trends



SP5

10000

Profits

10000

ITR's Senior Economist Eric Post:

- The Optimizer leading indicator itself has formed a tentative low and is rising slightly. The rise is not sharp enough or sustained enough to warrant going to cyclical, per our algorithm, but it is nonetheless an encouraging green shoot.

1000

1000

— S&P 500 - Raw

— Domestic Profits - 3MMA

100

100

'92 '94 '96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20 '22 '24

alan@itreconomics.com

For information on the ITR
investment process



People



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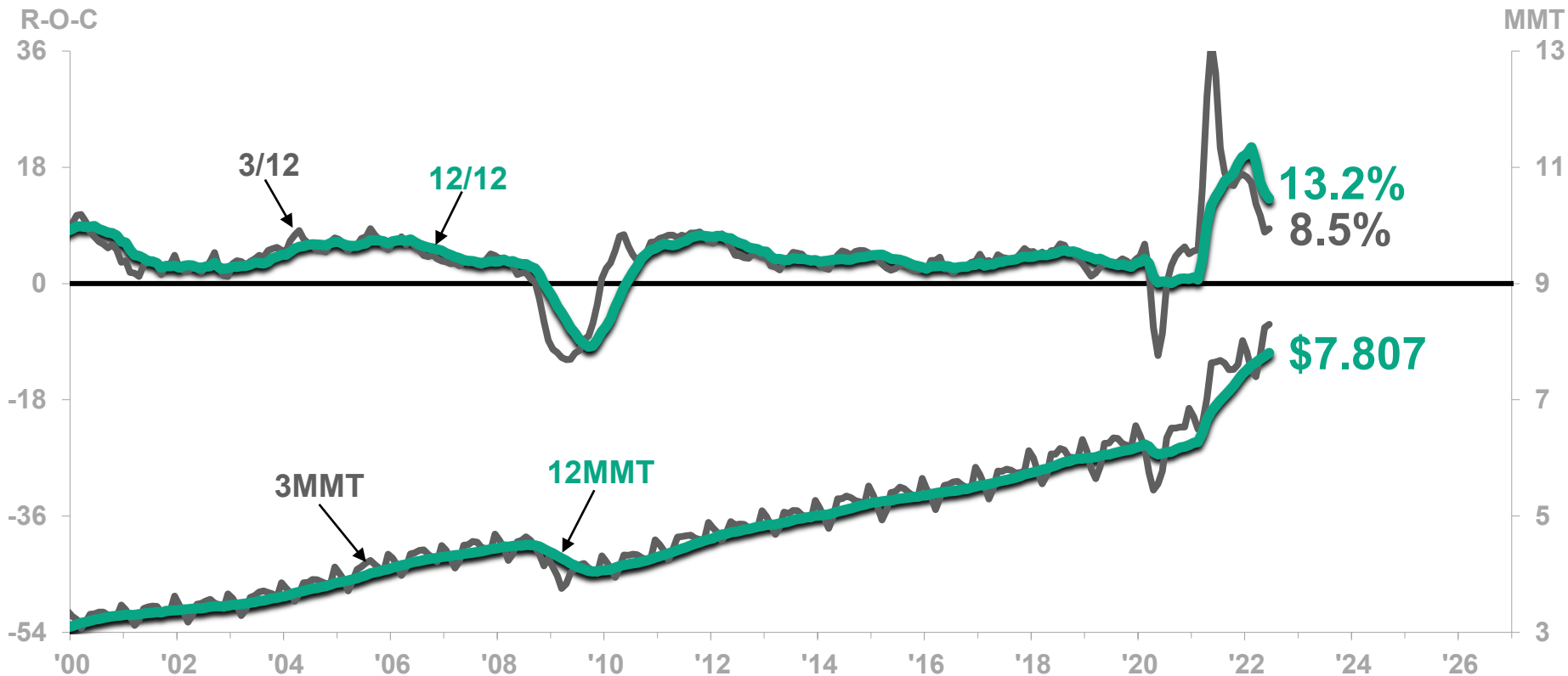
Stimulus-Driven Ascent Is Dissipating

Source: US Census Bureau

US Total Retail Sales

Trillions of Dollars

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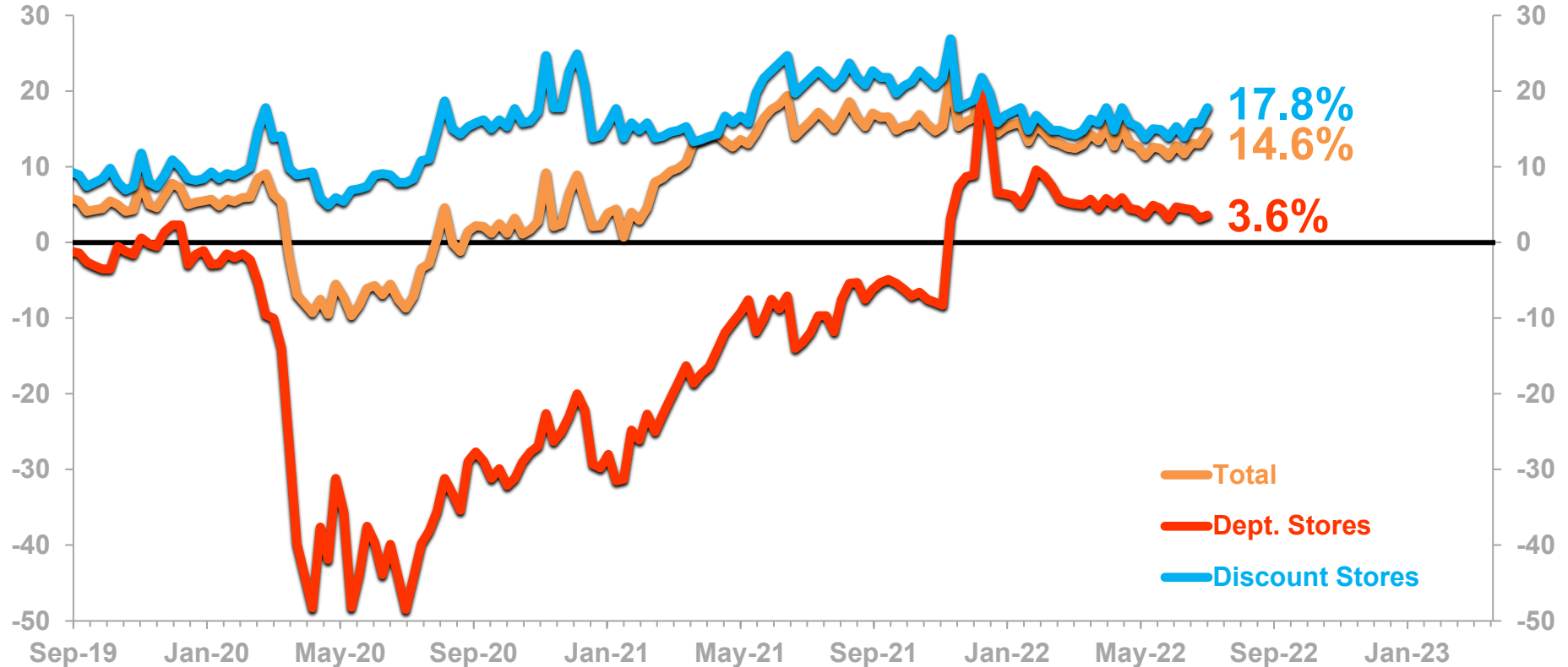


Retail Sales Are Holding Up

Source: Johnson Redbook

Johnson Redbook Indexes for the US

Percent, Raw Data



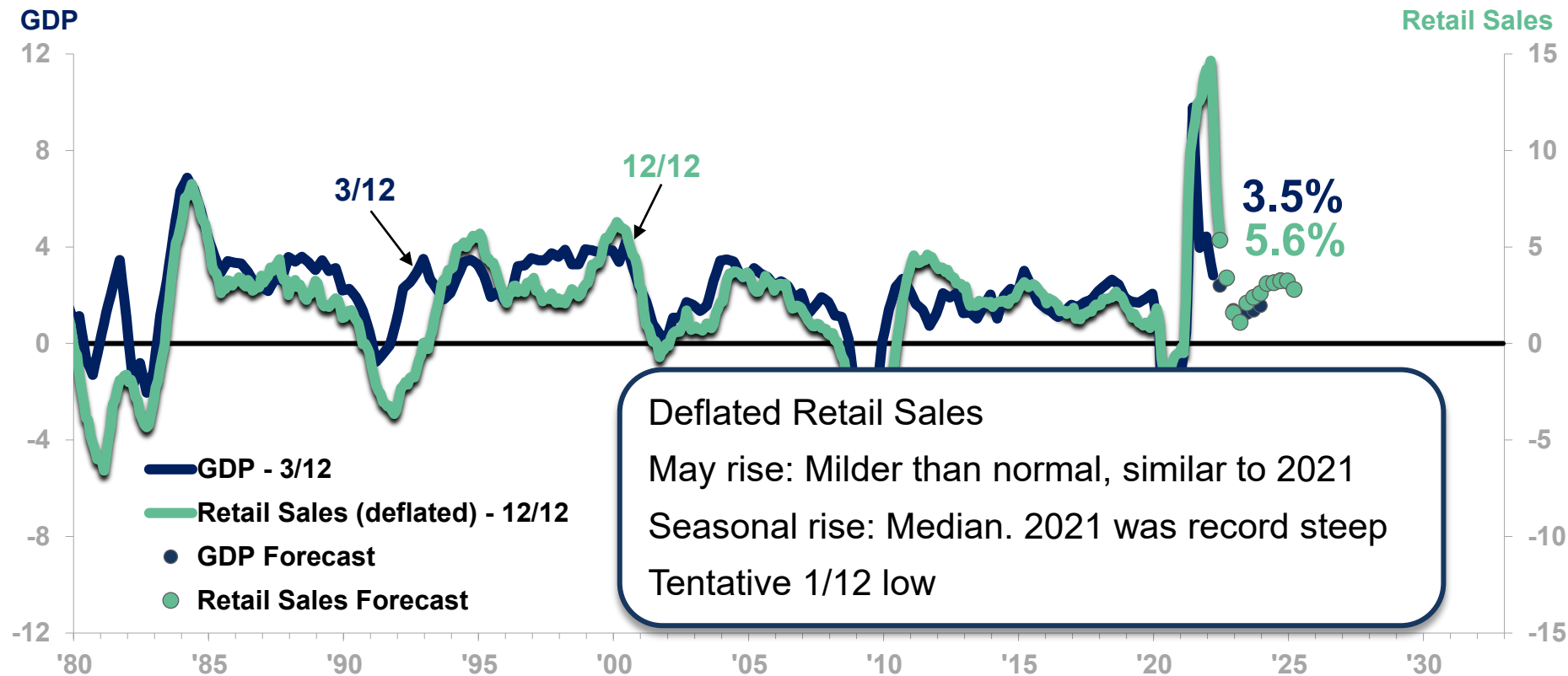
Retail Sales Deflated and GDP Heading to Soft Landing

Source: US Census Bureau, BEA



US Total Retail Sales (deflated) to US Real Gross Domestic Product

Rates-of-Change



Rising Inflation Adjusted Wages

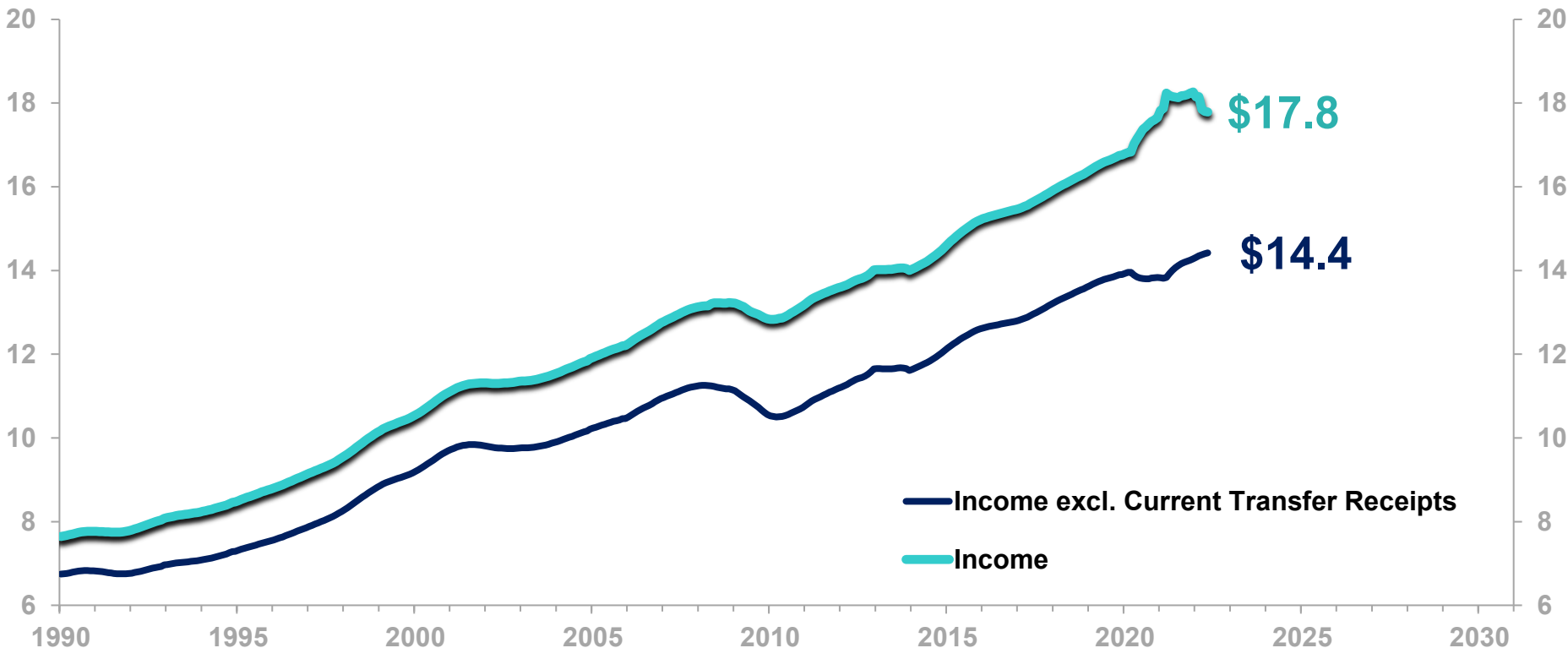
Source: BEA

US Real Personal Income (excluding current transfer receipts) to US Real Personal Income

Annual Data Trends in Trillions of Chained 2012 Dollars



Income excl. Transfers



Retail Sales Can Rise With High Gas Prices

Source: EIA, US Census Bureau

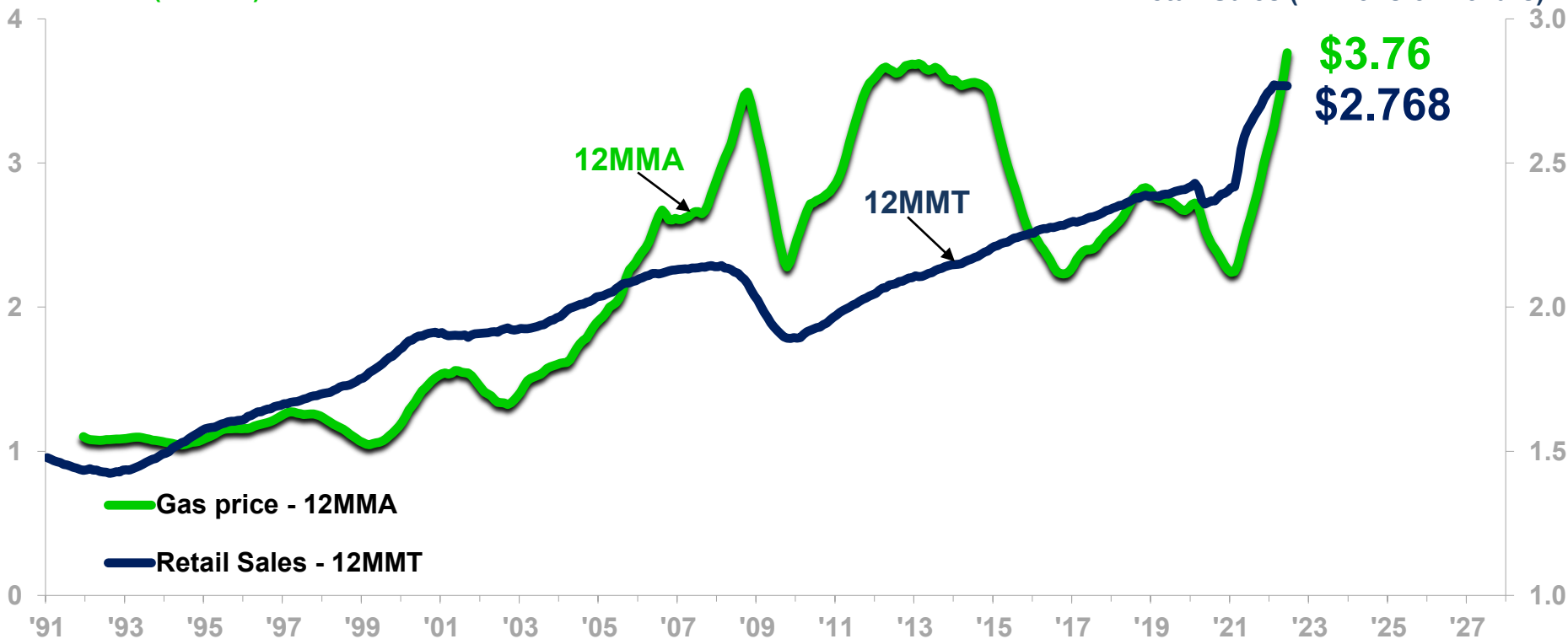


US Retail On-Highway Gas Price to US Total Retail Sales (deflated)

Annual Data Trends

Gas Price (Dollars)

Retail Sales (Trillions of Dollars)



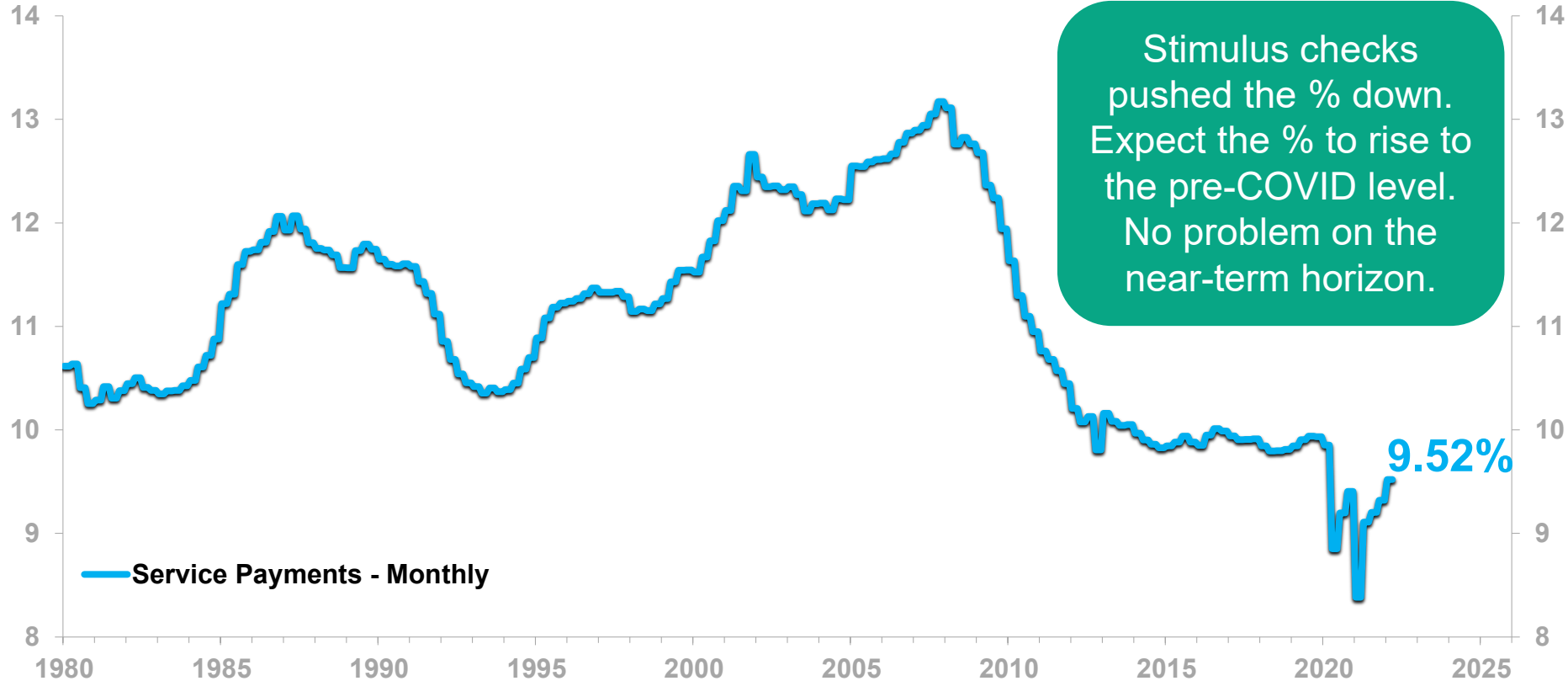
The Consumer Is In A Sound Financial Position

Source: FRB

US Household Debt Service Payments as a Percent of Disposable Personal Income

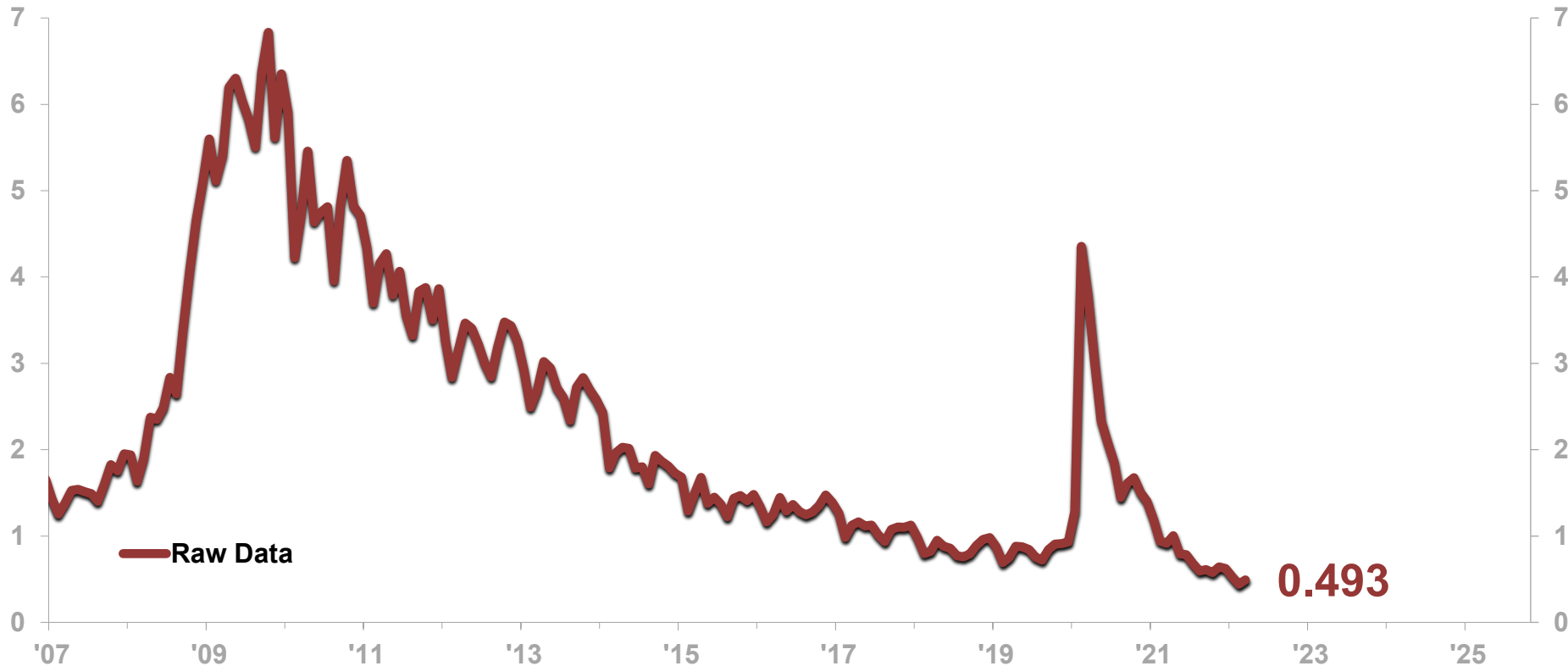


Raw Data: Percent



US Number of Unemployed Persons per Job Opening

Raw Data, Number of Persons



Inflation and Interest Rates

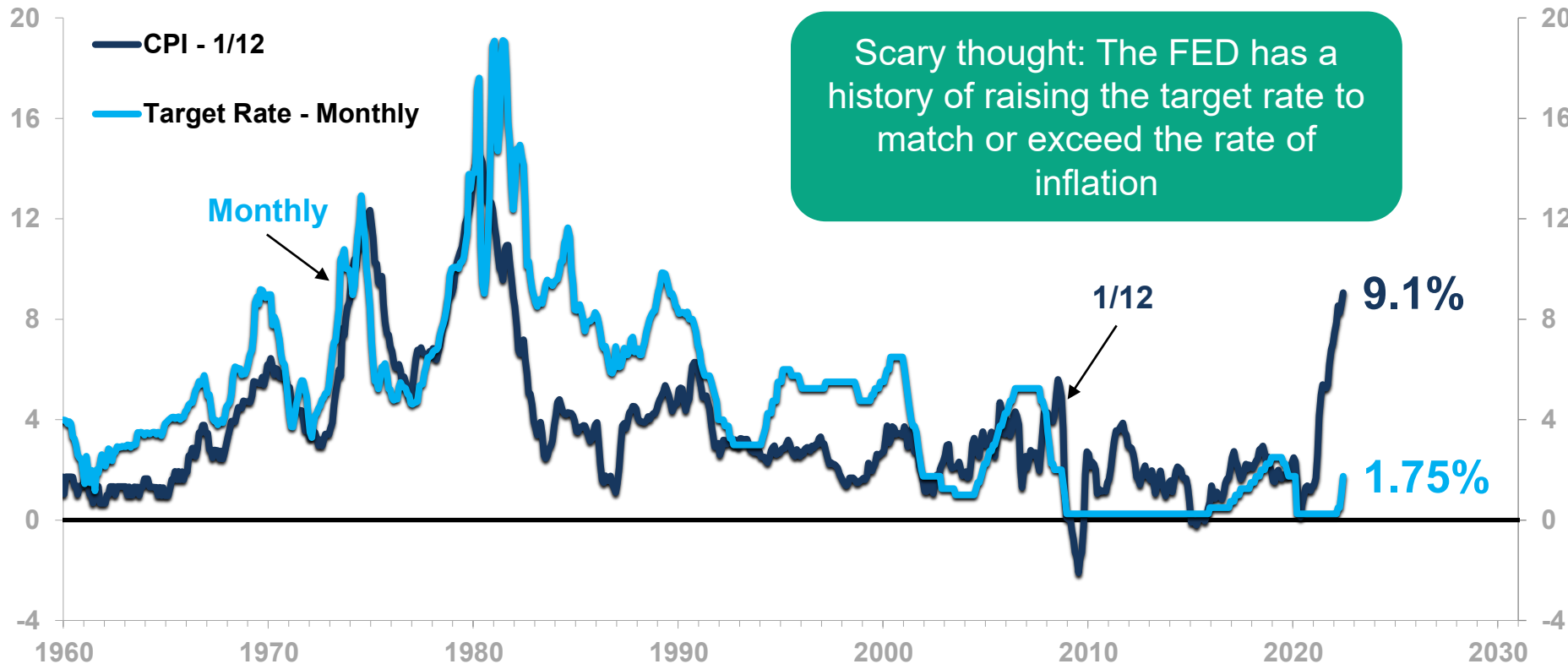


Potential to Do Some Real Damage

Sources: WSJ, BLS

US Federal Funds Target Rate to US Consumer Price Index

Target Rate: Percent, CPI: 1/12 Rate-of-Change

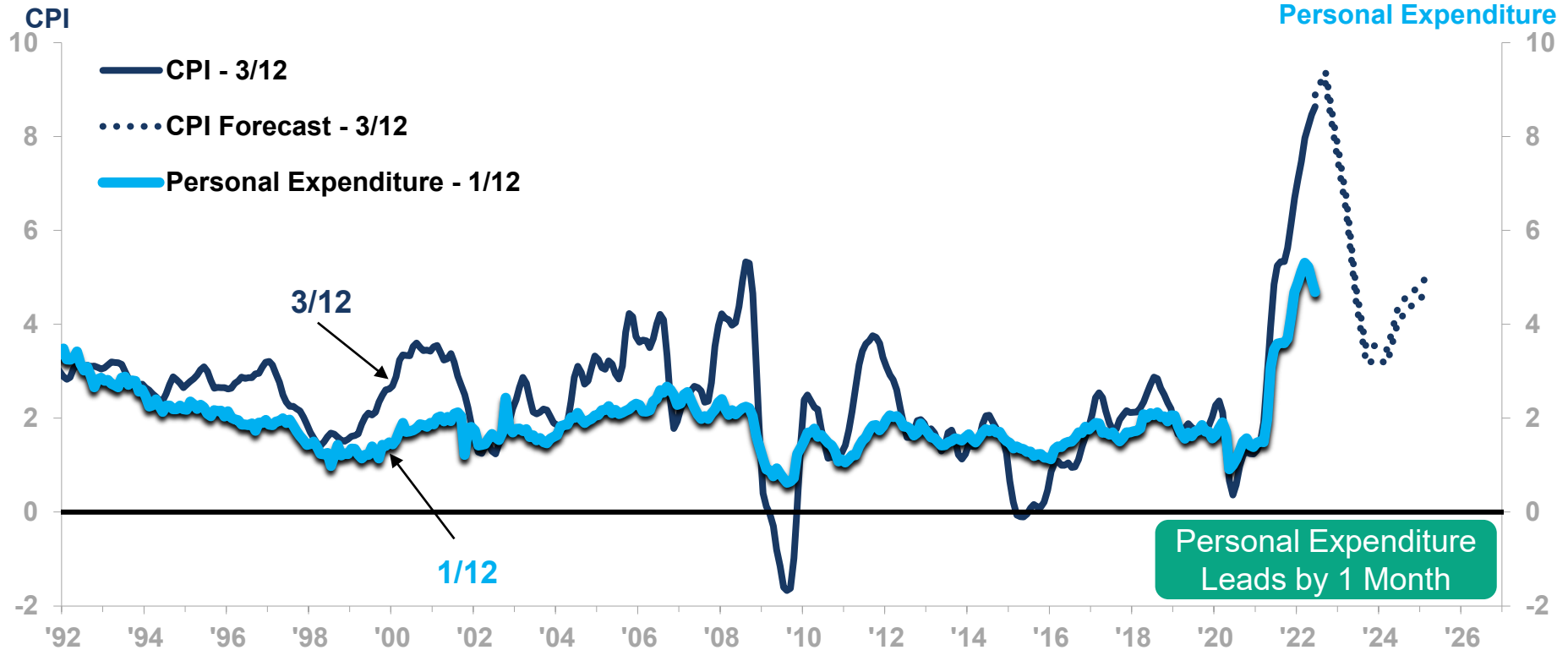


Disinflation has begun

Sources: BLS, BEA



US Consumer Price Index to US Personal Consumption Expenditures Price Index (excluding food and energy) Rates-of-Change



High Energy Prices But the Rate of Inflation is Declining

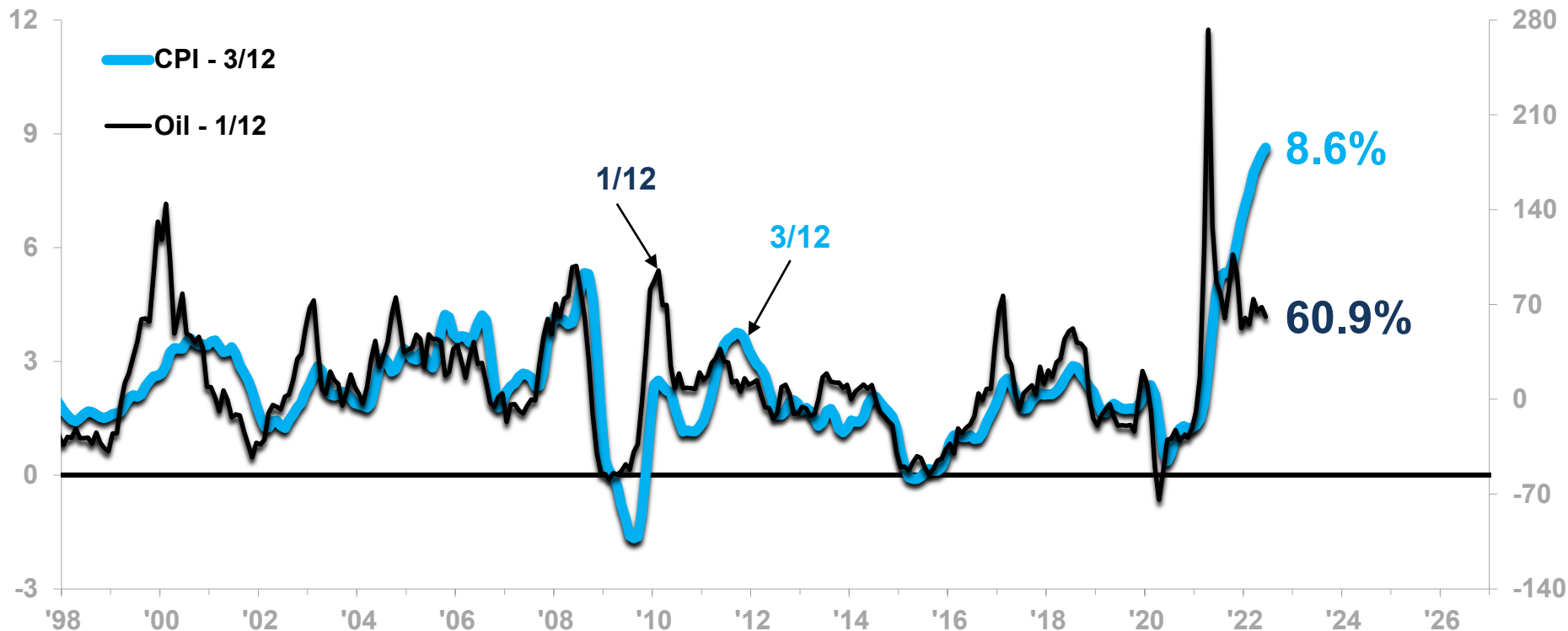
Source: BLS, EIA

US Consumer Price Index to US Crude Oil Spot Prices

Rates-of-Change



Total CPI



A Monetary Signal Pointing to Less Inflation

Sources: BLS, FRB

US Consumer Price Index to US M2 Money Supply (deflated)

Rates-of-Change



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Dr. Copper Says Inflation Moderation Ahead

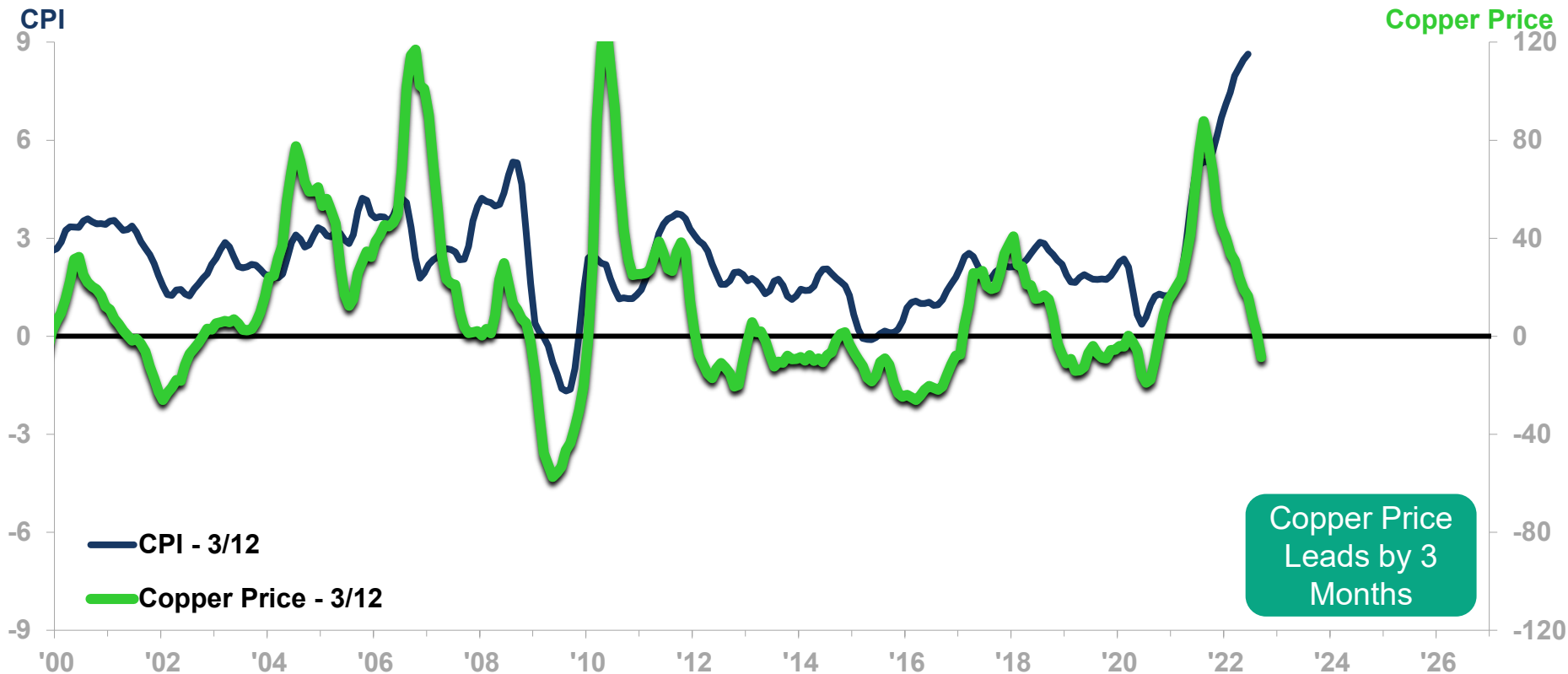
Sources: BLS, WSJ

US Consumer Price Index to Copper Futures Prices

3/12 Rates-of-Change



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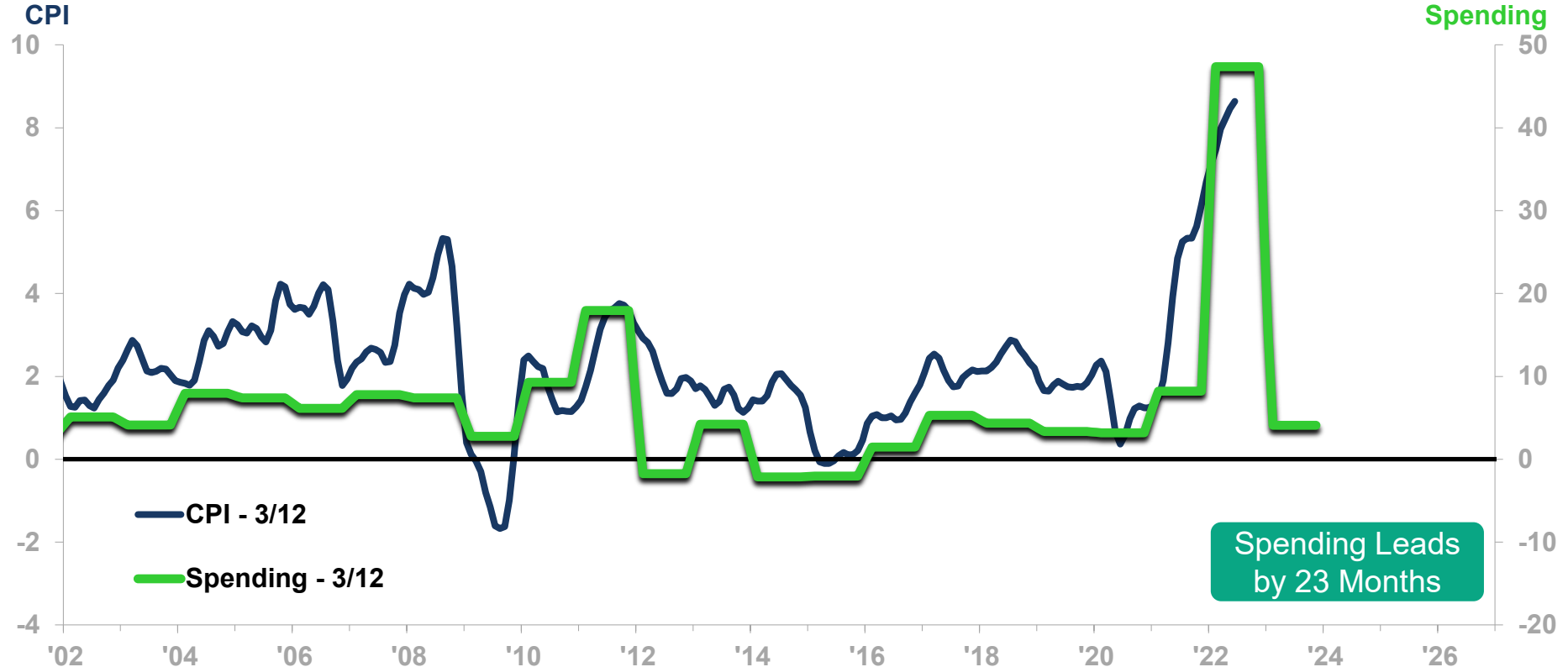


A Clear Indication of Near-Term Disinflation

Sources: BLS, White House Office
of Management and Budget

US Consumer Price Index to US Total Government Spending

3/12 Rates-of-Change

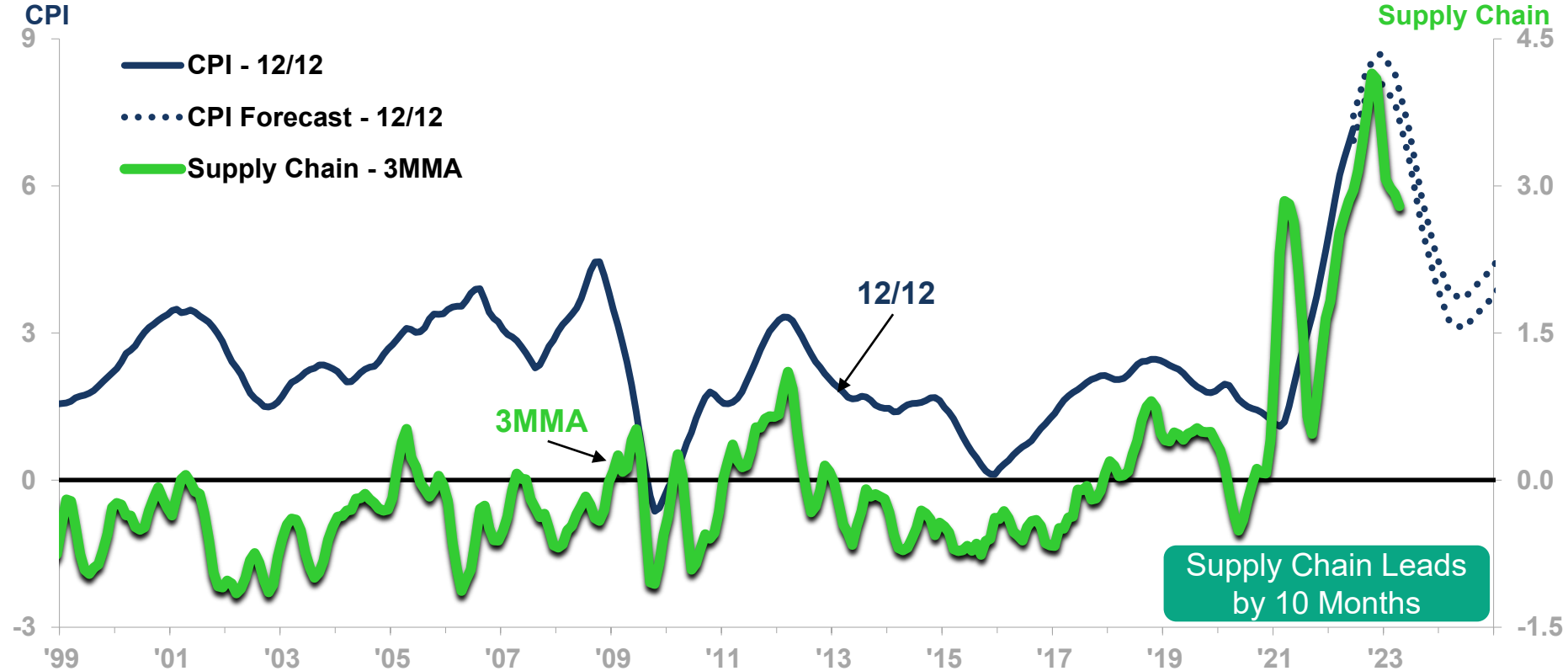


Easing Supply Chain Pressures Foreshadow Easing Inflation

Sources: BLS, FRBNY

US Consumer Price Index to Global Supply Chain Pressure Index

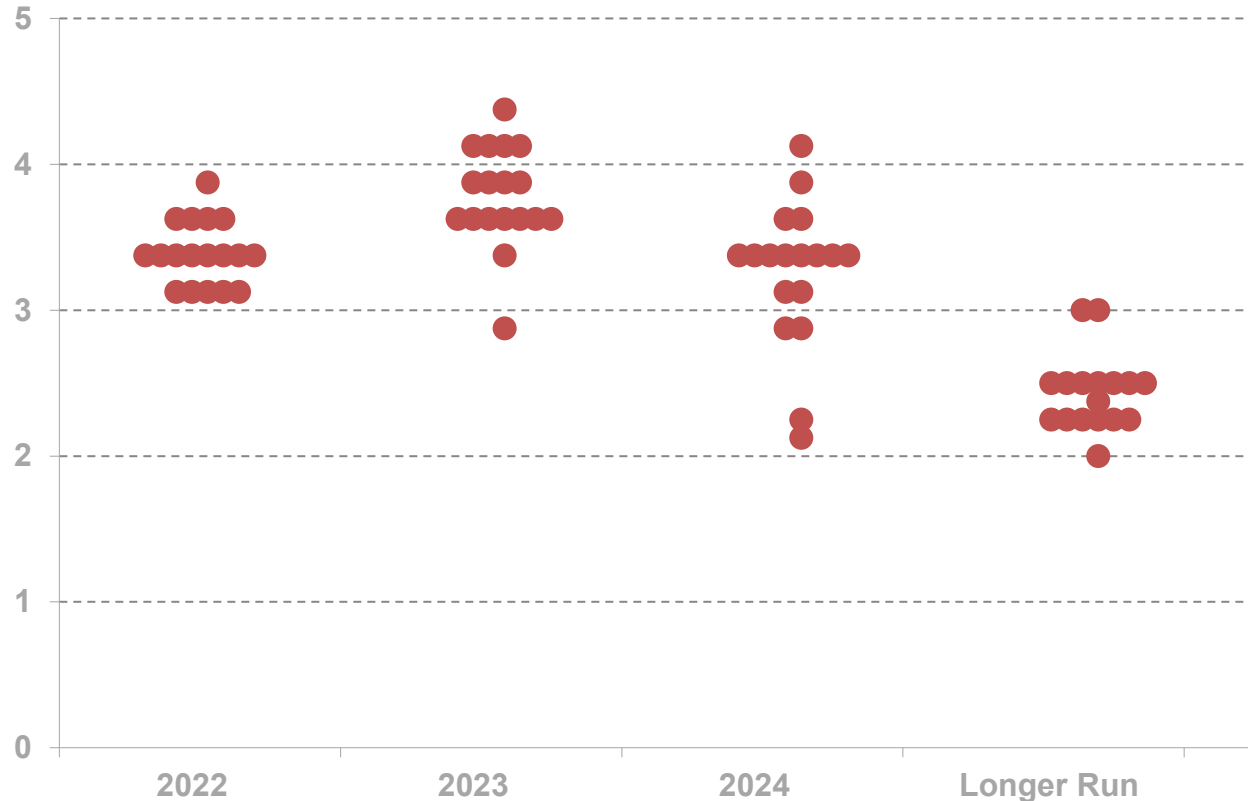
12/12 R-O-C to Quarterly Data Trend



FOMC Member Interest Rate Projections

Source: FRB

Fed Open Market Committee | June 2022






Make acquisitions

**Invest in your
products – innovate**

**Invest in your
processes – efficiency
gains, supply chain**

**Invest in sales and
marketing**

-  Disinflation probable late this year and in 2023
-  Disinflation will give the Fed latitude to be non-aggressive with interest rates
-  Use the time to strategize on a program for dealing with relentless inflation later this decade

Next Steps

Use the abeyance in pressure to formulate a long-term strategic plan re: price increase

Know and expound upon your competitive advantages



Texas



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Texas Population Growth Rate

Source: US Census Bureau

Percent Change from Population Estimates 2016 to 2020



<u>City</u>	<u>Growth Rate</u>
Houston	0.4%
San Antonio	5.3%
Dallas	1.5%
Austin	5.9%
Fort Worth	8.4%
El Paso	0.4%
United States Total	2.0%

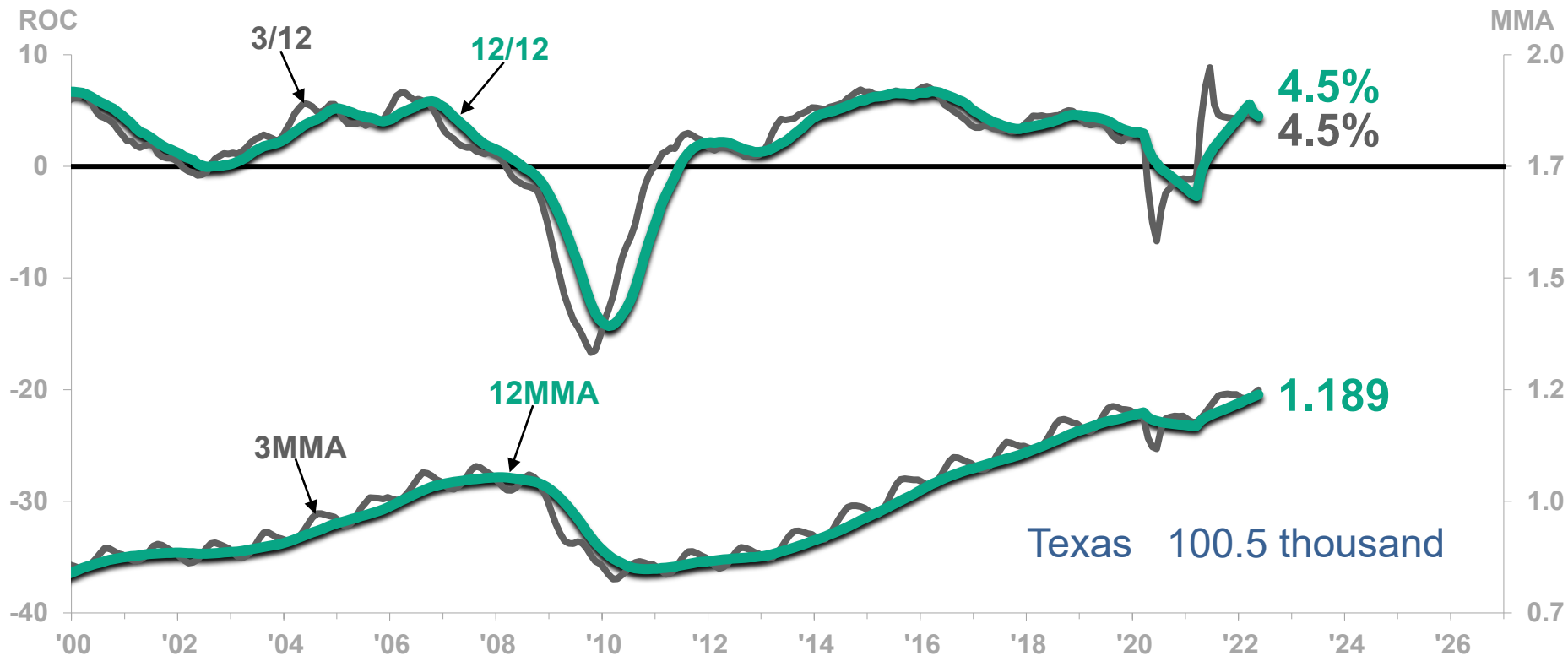


Ongoing Demand for People

Source: BLS

US Plumbing and HVAC Contractors Employment

Millions of People

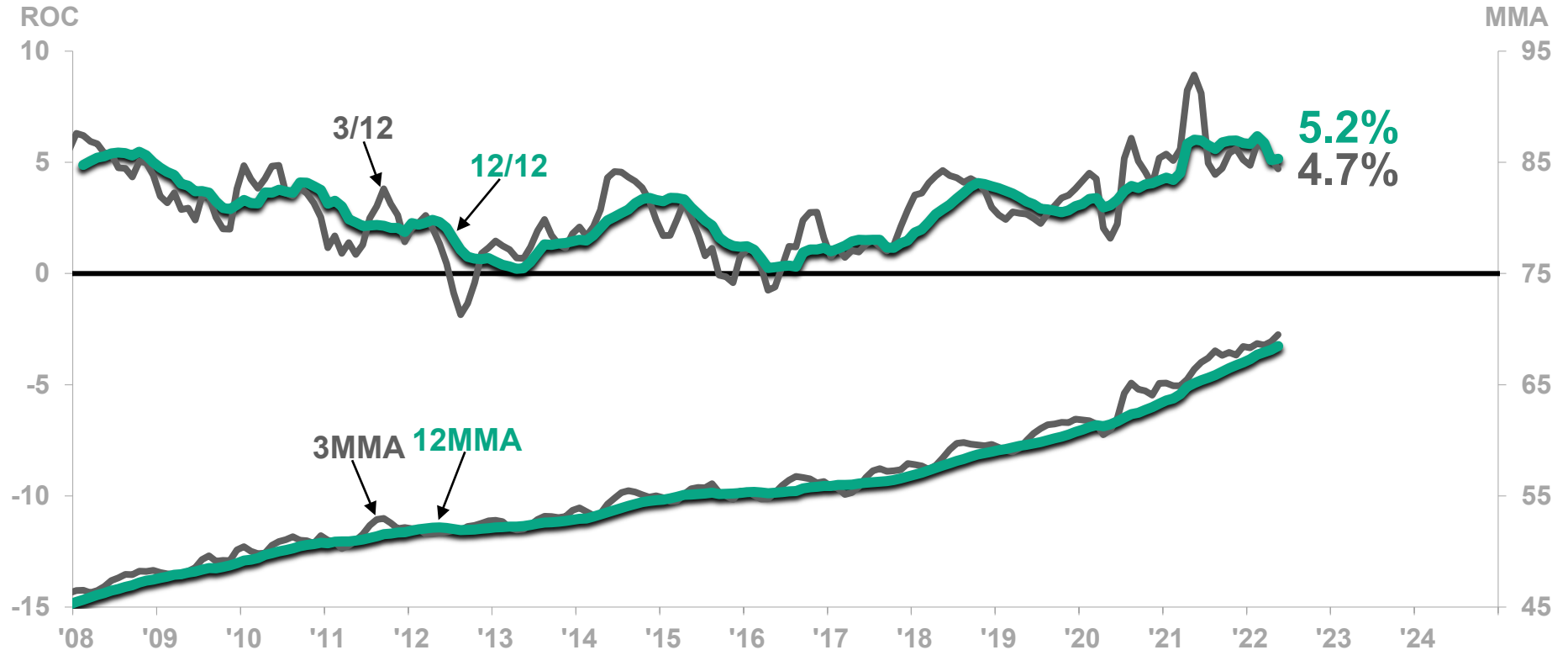


Strong Rate of Rise – Some Easing as Inflation Eases

Source: BLS

US Plumbing and HVAC Contractors Average Annual Earnings

Thousands of Dollars

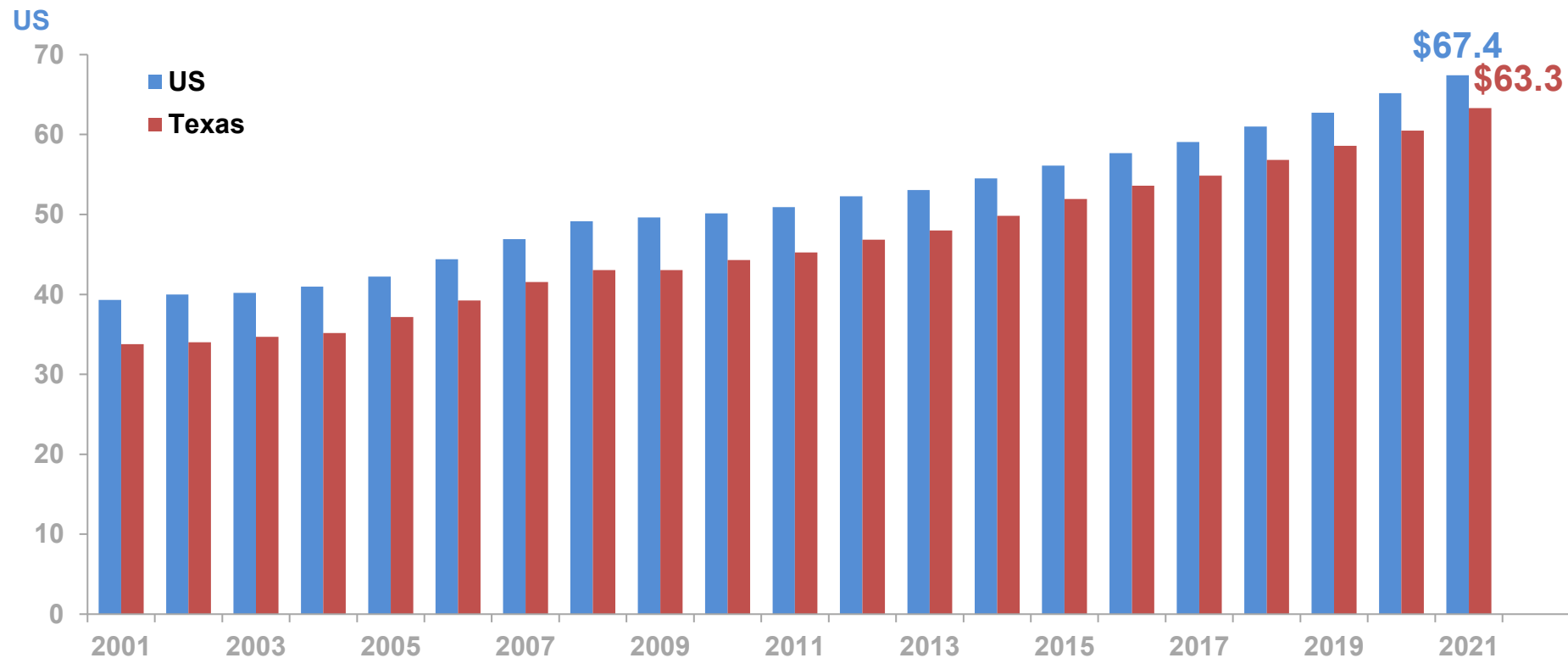


Higher and Higher

Source: BLS

Plumbing and HVAC Average Annual Wages, US vs. Texas

Thousands of Dollars



Positive News for the Texas Economy

Source: US Census Bureau

Texas Housing Permits

Thousands of Permits



Location	12/12	Phase	Annual Trend	Direction
Texas Total	6.5%	C	261.4	↑
Texas Single-Family	-0.4%	D	174.5	↓
Texas Multi-Family	23.5%	B	87.0	↑
*San Antonio Single-Family	10.1%	C	13.6	↑
*Houston Single-Family	3.0%	C	54.1	↓
*Dallas Single-Family	1.8%	C	49.7	↑
*Austin Single-Family	1.0%	C	24.2	↓

*Metropolitan Statistical Areas





Construction Markets



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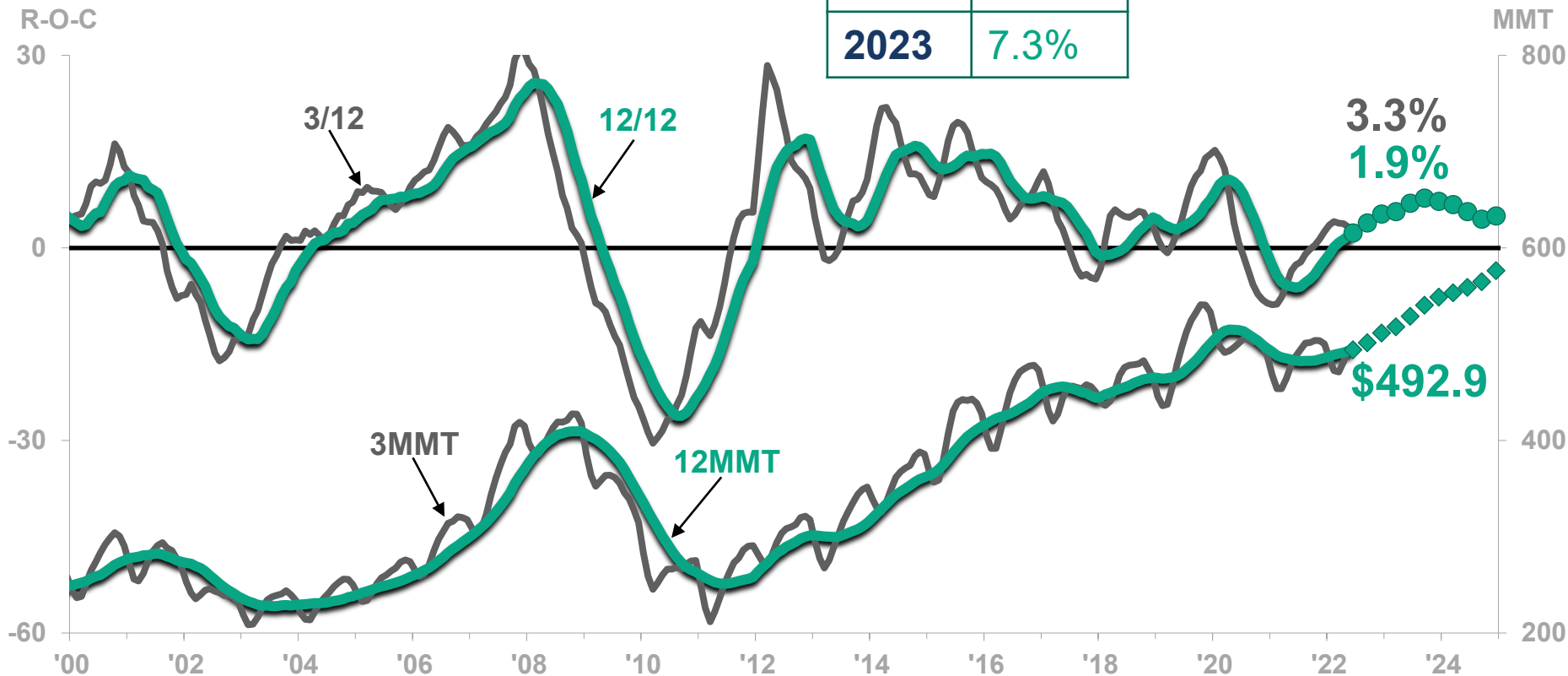
Strong Indication Of Cyclical Rise Ahead

Source: US Census Bureau

US Private Nonresidential Construction

Billions of Dollars

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Housing Leads – Nonresidential Lags

Source: US Census Bureau

US Private Nonresidential Construction to US Single-Unit Housing Starts

12/12 Rates-of-Change

as seen in
ITR Economics'

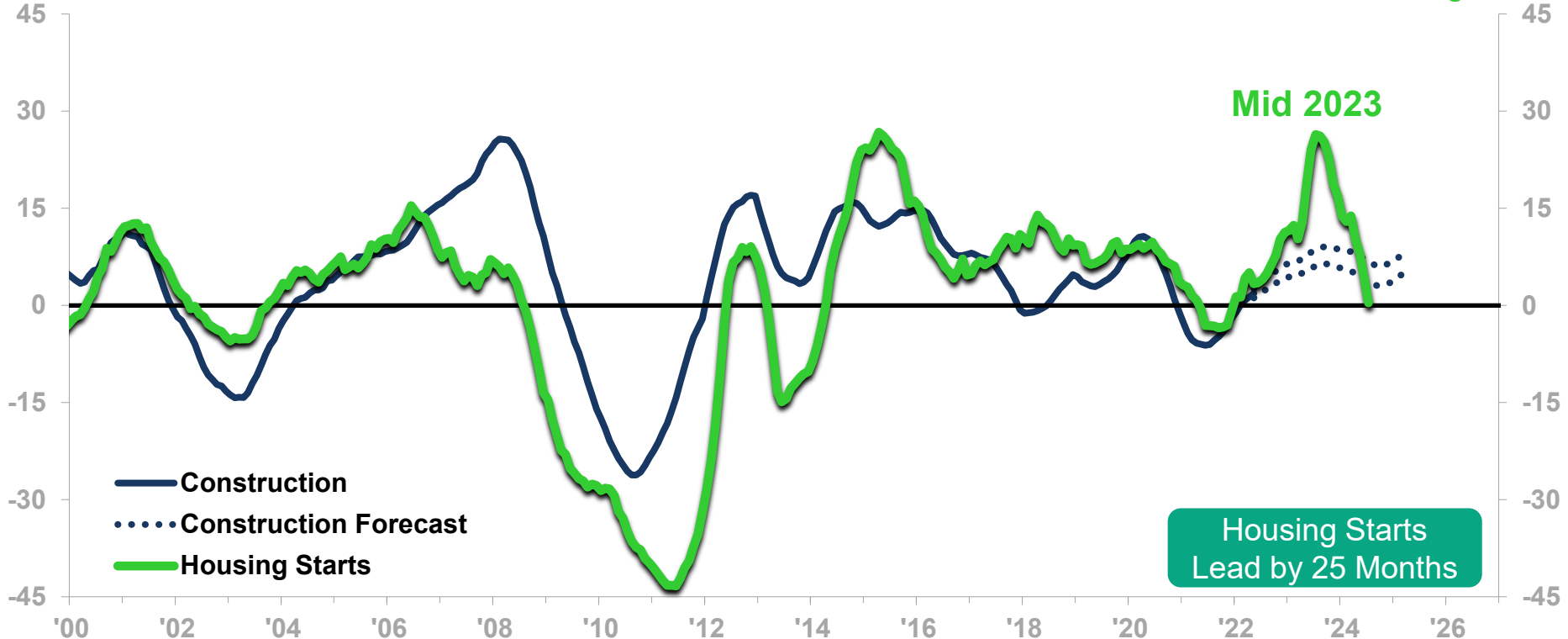
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Housing Starts

Construction

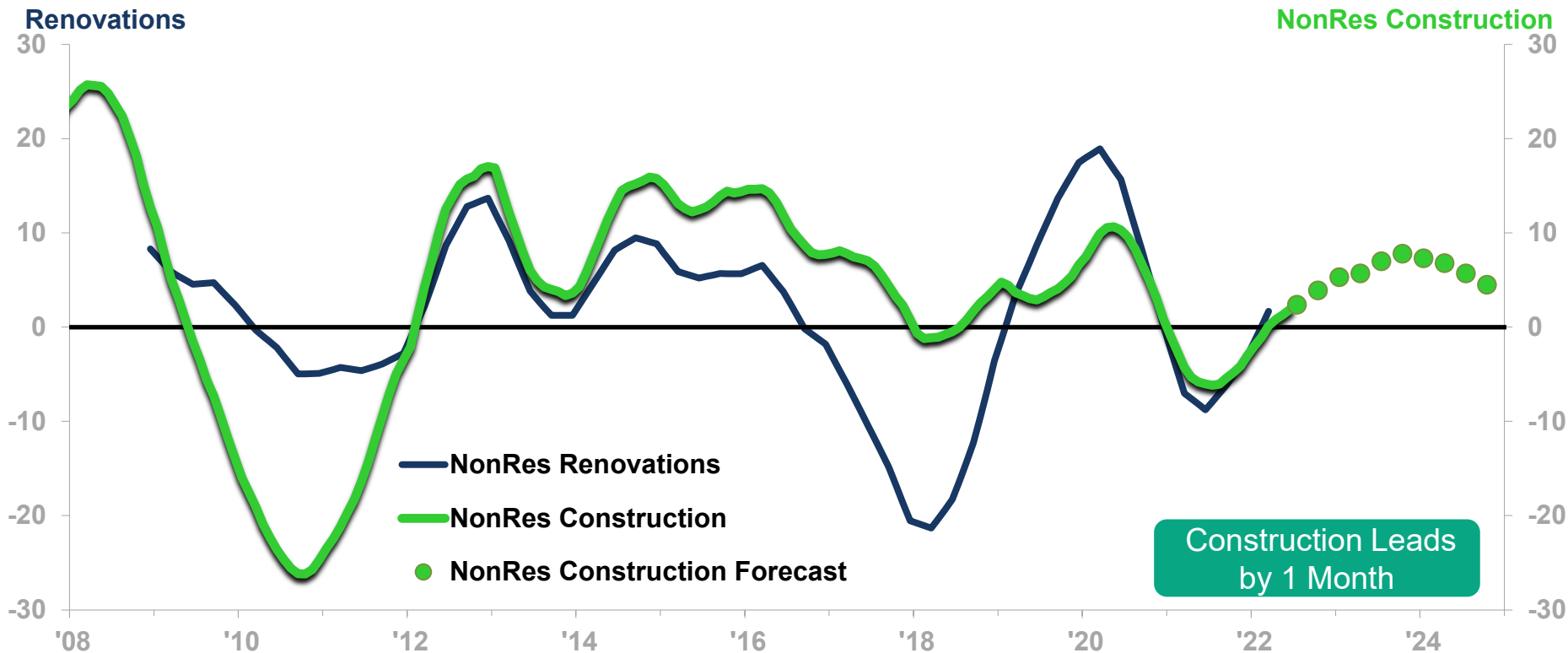


Tight Correlation Between Renovation and New Construction

Sources: ConstructConnect,
US Census Bureau

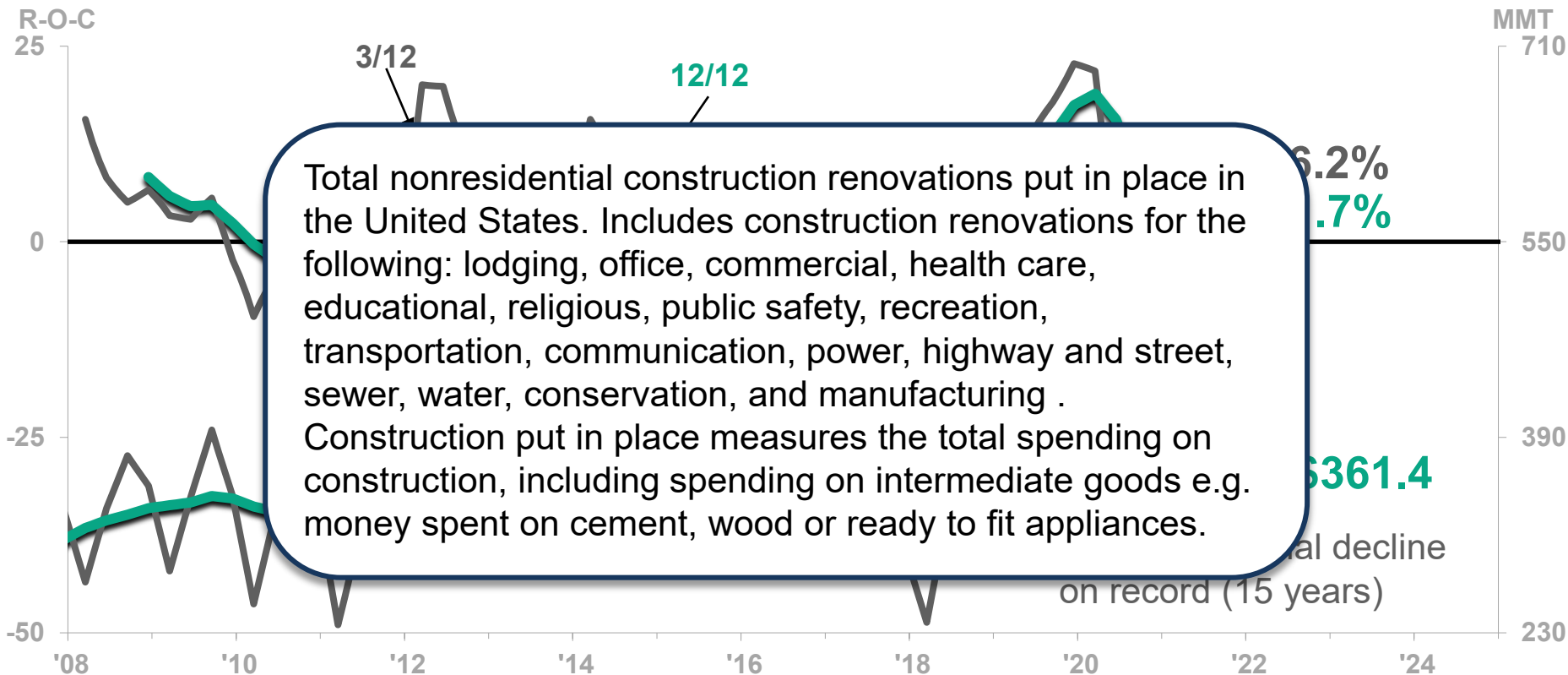


**US Total Nonresidential Construction Renovations to
US Private Nonresidential Construction**
12/12 Rates-of-Change



US Total Nonresidential Construction Renovations

Billions of Dollars

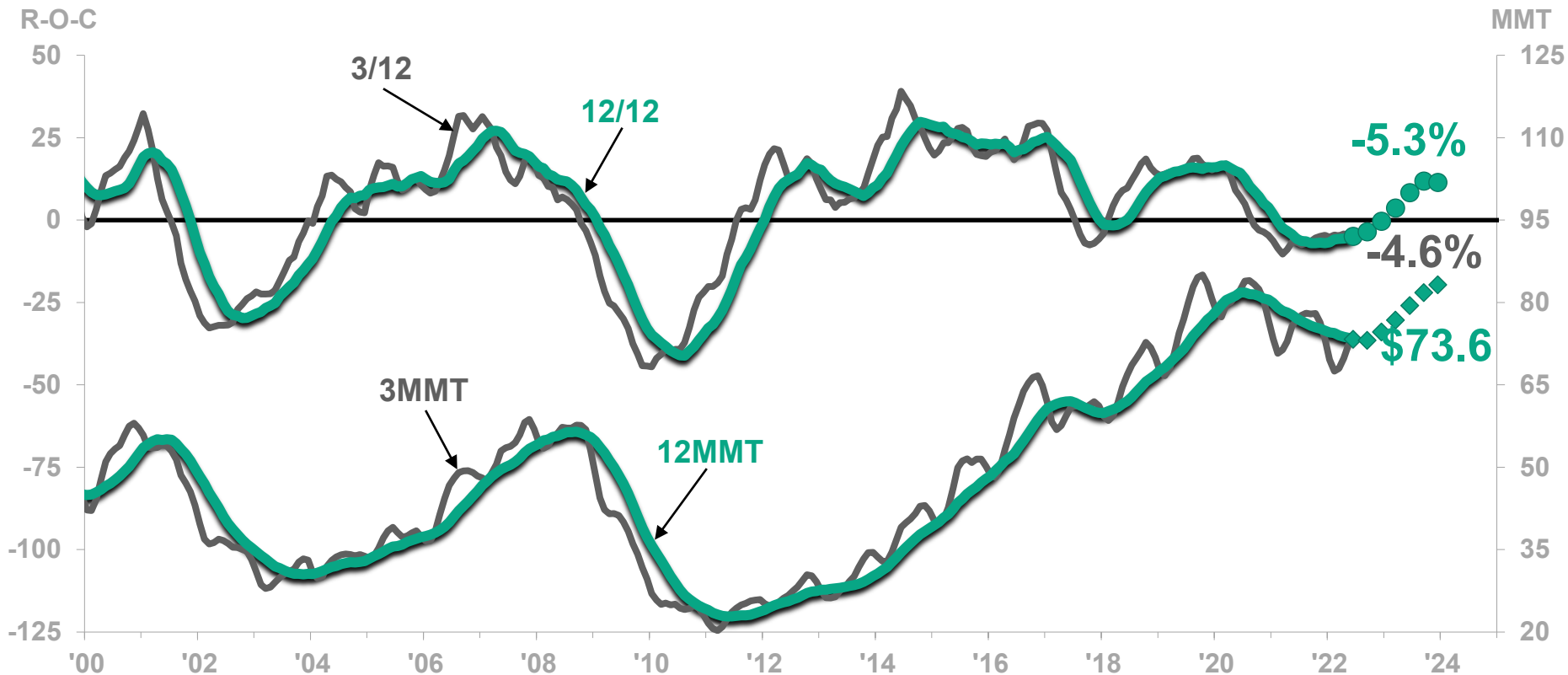


Expect Construction To Rise Through Mid 2023

Source: US Census Bureau

US Private Office Construction

Billions of Dollars



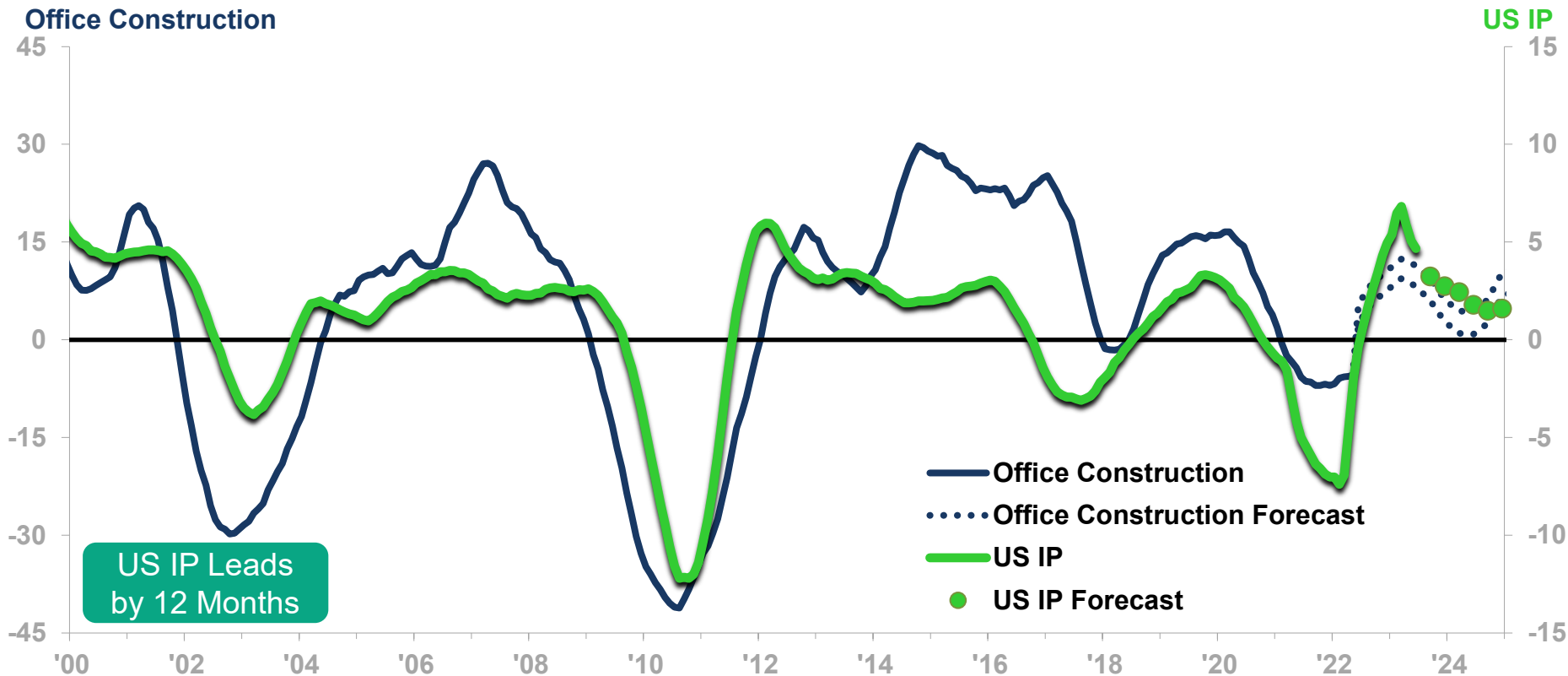
The Macro Outlook Says Office Construction Slows 2H23

Sources: US Census Bureau,
FRB

US Private Office Construction to US Industrial Production Index

12/12 Rates-of-Change

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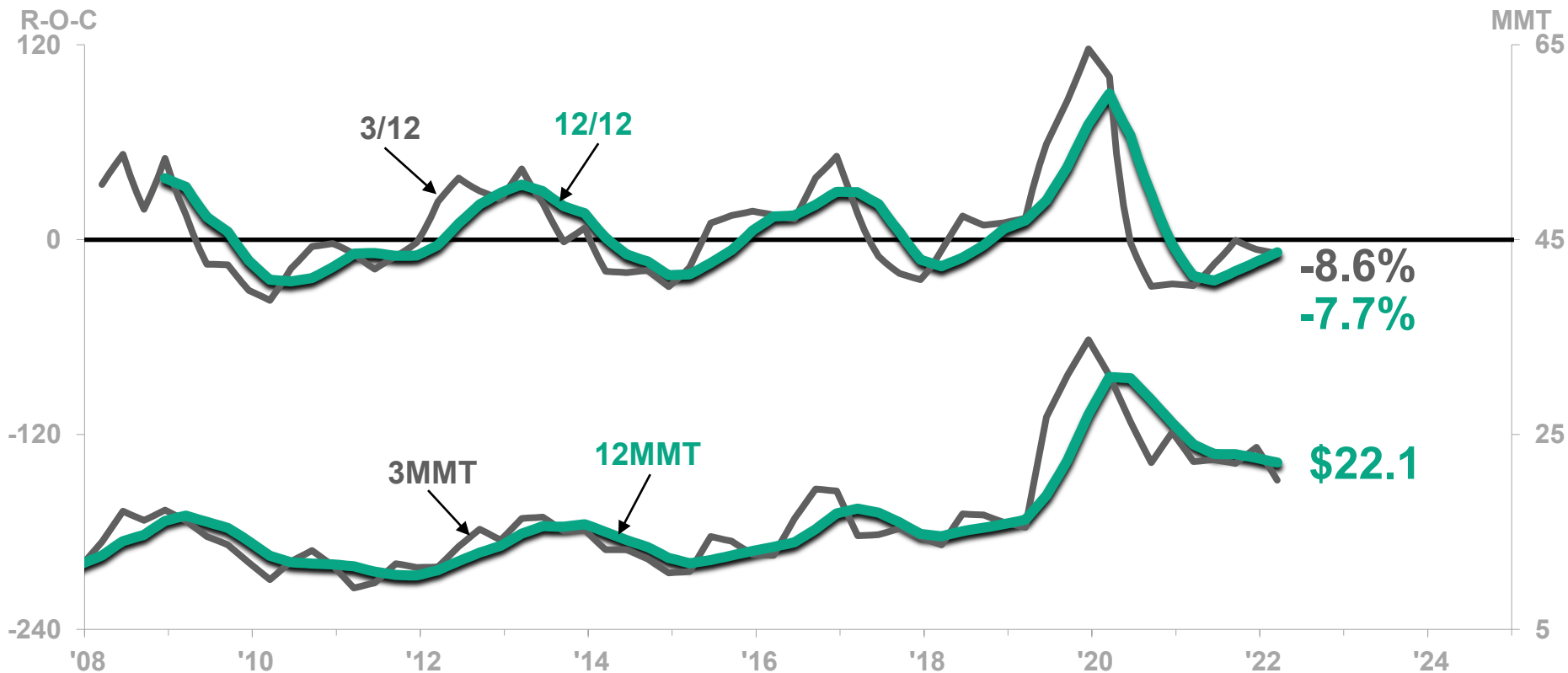


Struggling to Find a Cyclical Low...

Source: ConstructConnect

US Total Value of Office Construction Renovations

Billions USD



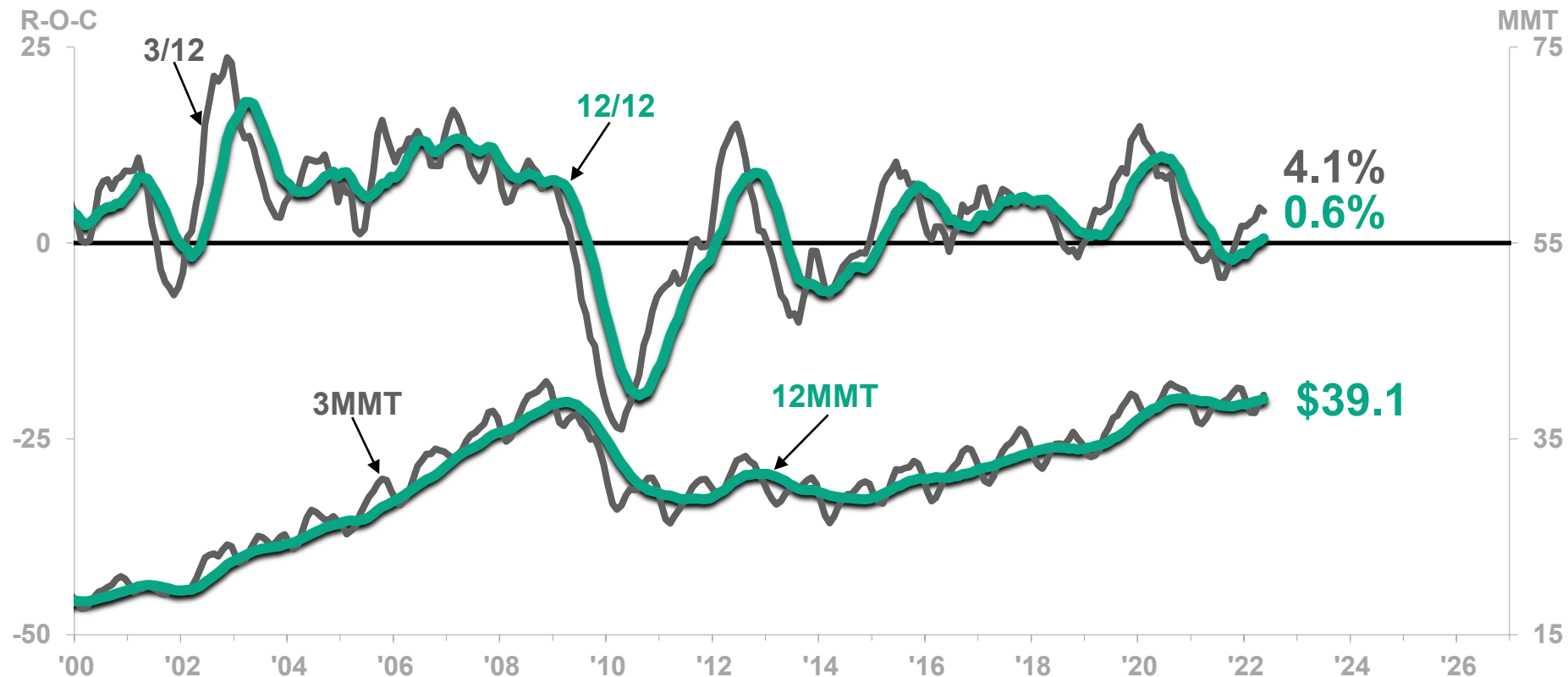
Near-Term Cyclical Rise

Source: US Census Bureau

US Private Health Care Buildings Construction

Billions of Dollars

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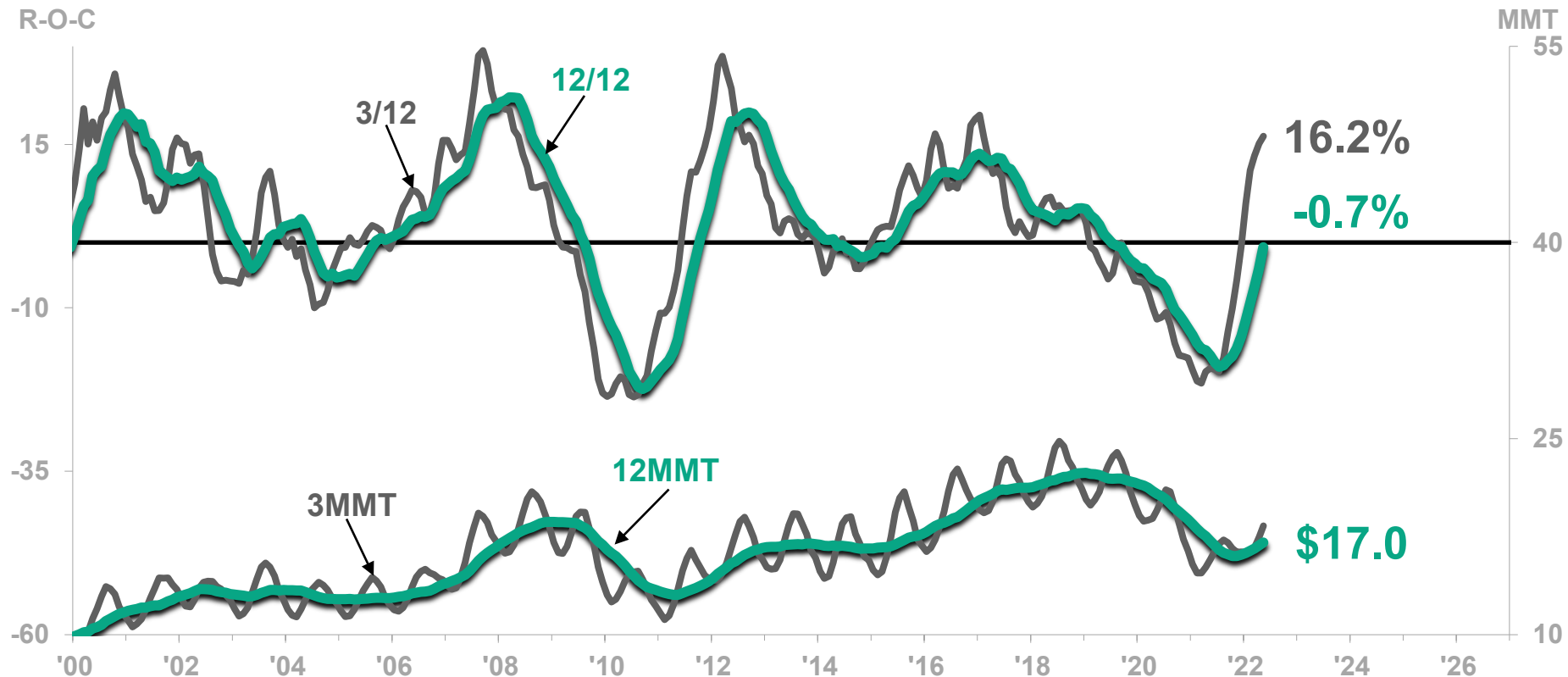


Clear Indication Of More Rise Ahead

Source: US Census Bureau

US Private Education Construction

Billions of Dollars



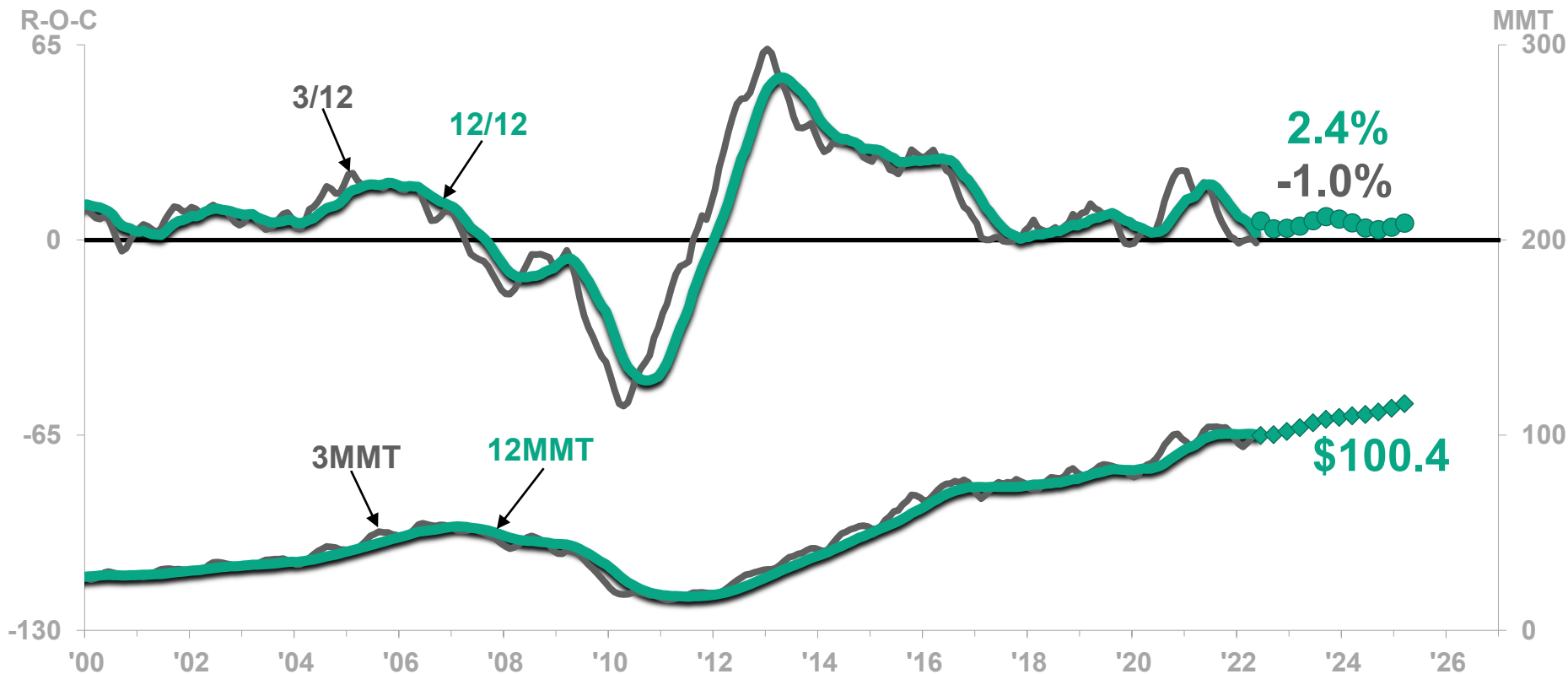
Decelerating Rise Ahead

Source: US Census Bureau

US Private Multi-Family Residential Construction

Billions of Dollars

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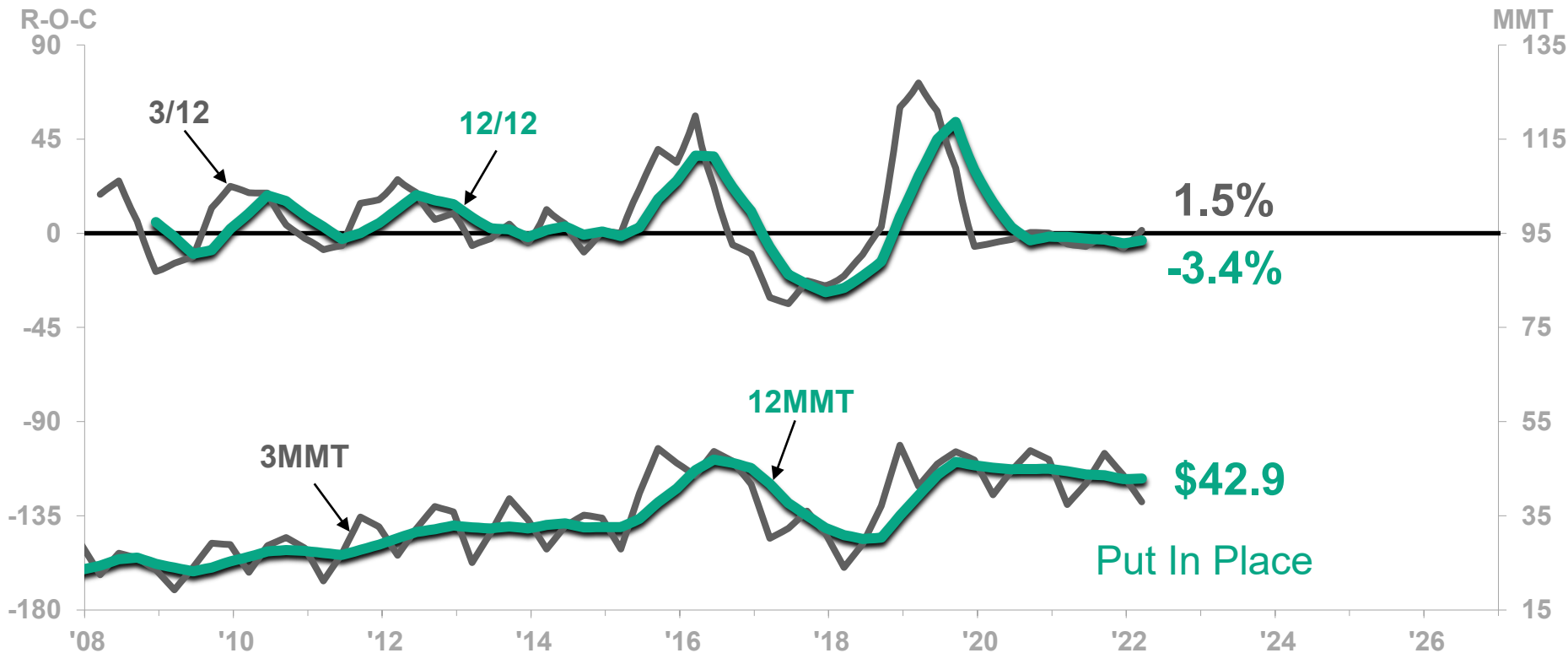


Not Moving With the National Trend

Source: ConstructConnect

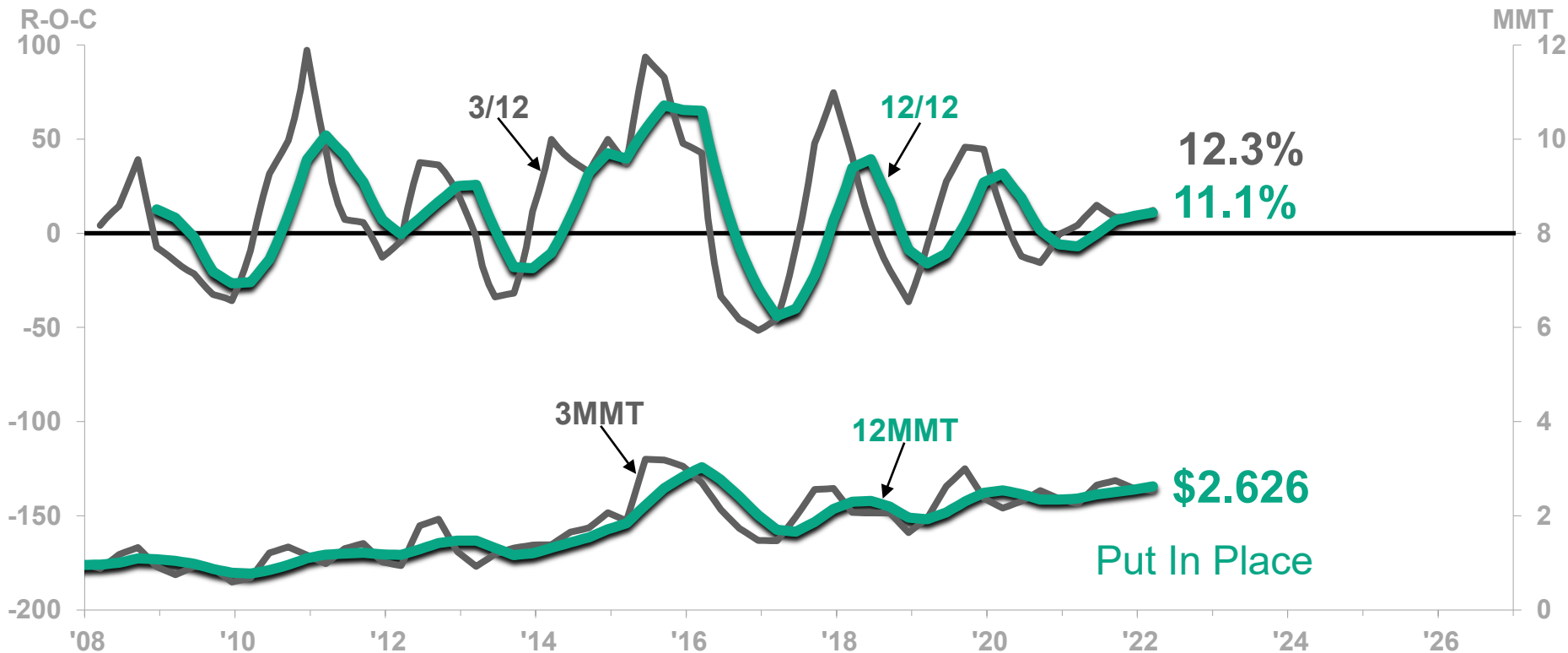
US Texas Total Value of Nonresidential Construction Renovations

Billions of Dollars



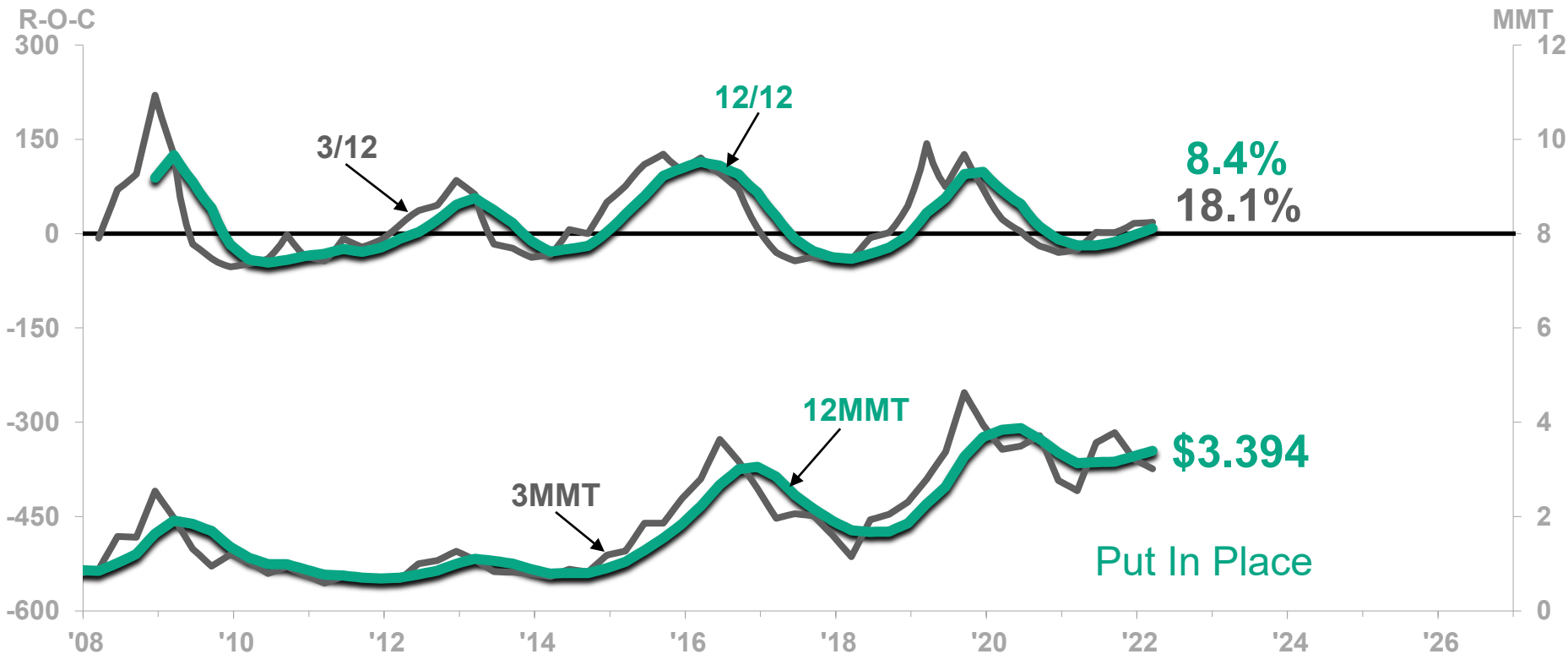
US Texas Total Value of Commercial Construction Renovations

Billions of Dollars



US Texas Total Value of Office Construction Renovations

Billions of Dollars



Value of New Construction



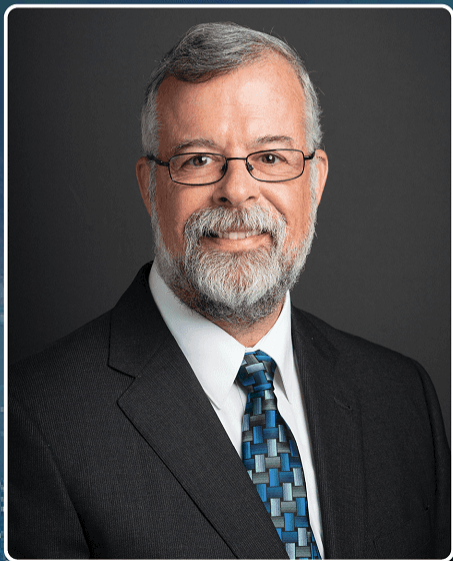
	12/12	Phase	3/12	Phase	12MMT	12MMT Notes
Austin Commercial	7.1%	C	5.4%	C	\$ 1.5 bn	Decelerating rise
Dallas Commercial	11.1%	B	28.7%	B	\$ 3.4 bn	Rising
Houston Commercial	-4.3%	A	-6.6%	D	\$ 3.1 bn	Declining
San Antonio Commercial	12.9%	B	17.8%	B	\$ 1.3 bn	Rising
Austin Office	-30.3%	A	-0.4%	A	\$ 3.0 bn	Declining – 12/12 A
Dallas Office	-11.9%	A	1.5%	B	\$ 3.8 bn	Rising
Houston Office	7.8%	B	9.7%	C	\$ 2.2 bn	Decelerating rise
San Antonio Office	13.2%	B	10.1%	C	\$ 0.7 bn	Decelerating rise





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