

September 2023

2024 US Inflation and Interest Rate Outlook

Fed to Pause as Recession Threats Grow. What Comes Next?

Dimitri Delis, Ph.D.

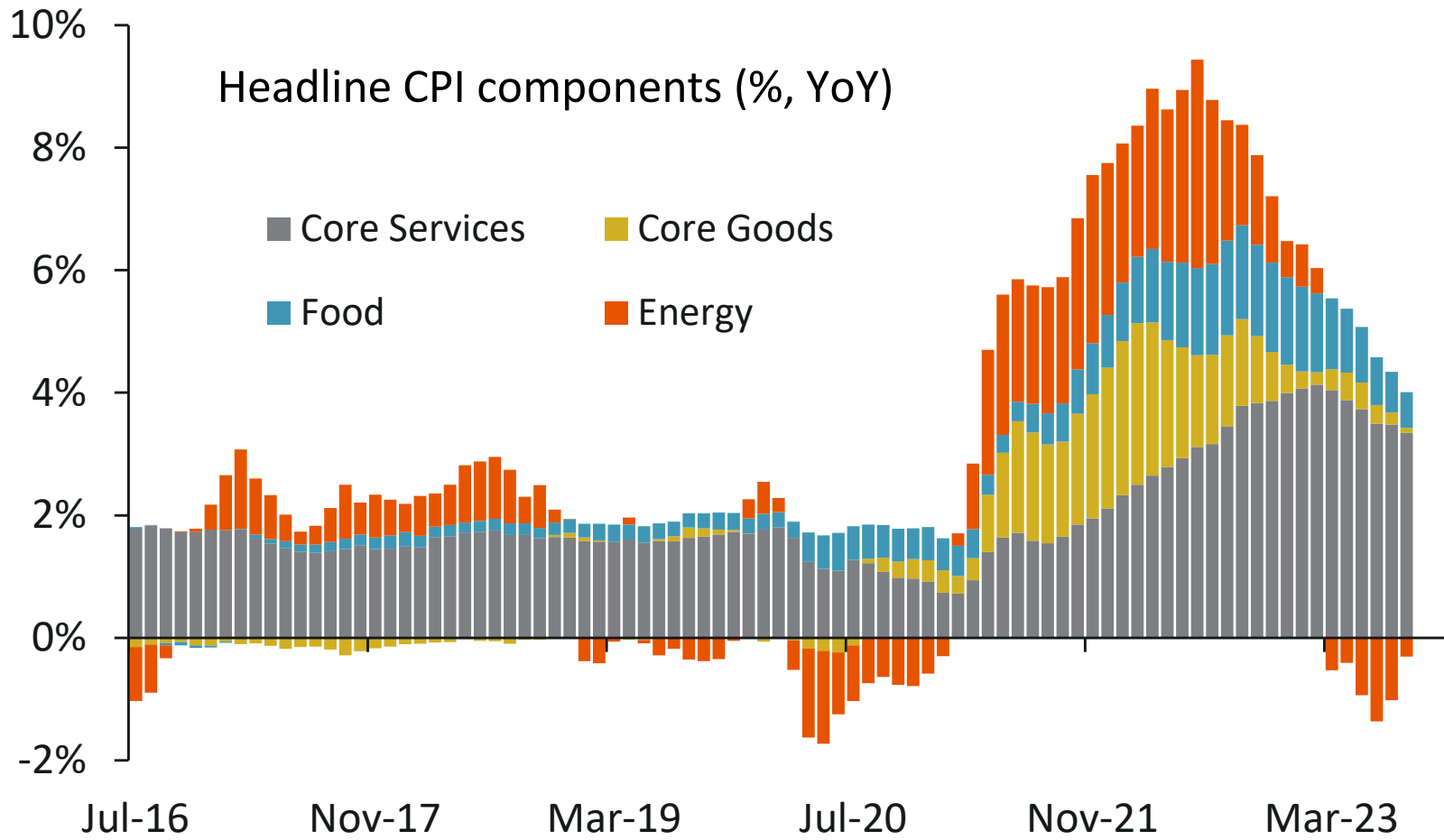
MANAGING DIRECTOR, PIPER SANDLER FINANCIAL STRATEGIES

Tel: +1 312 267-5158

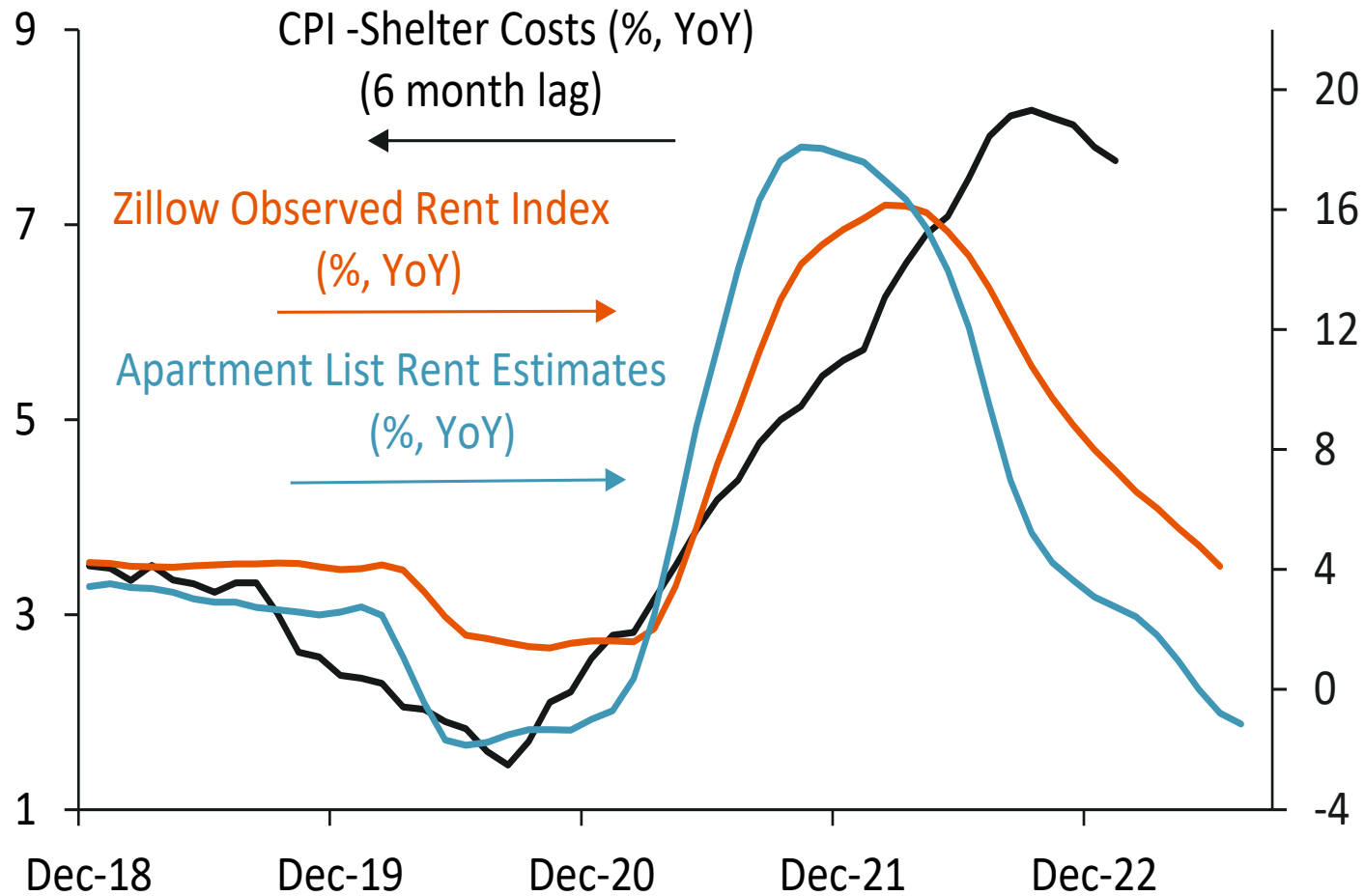
Email: Dimitri.Delis@psc.com

-
- **Inflation on a downward trend**
 - Fed tightening near the end
 - What happens after a Fed pause
 - Gauging the next recession
 - Regional housing bubbles
 - Liquidity in the banking system

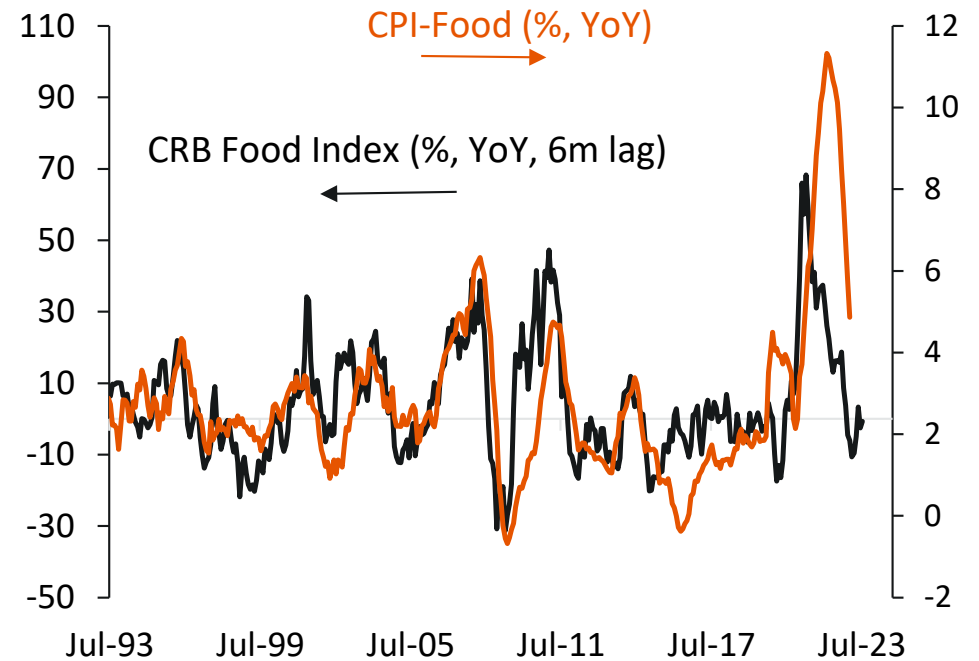
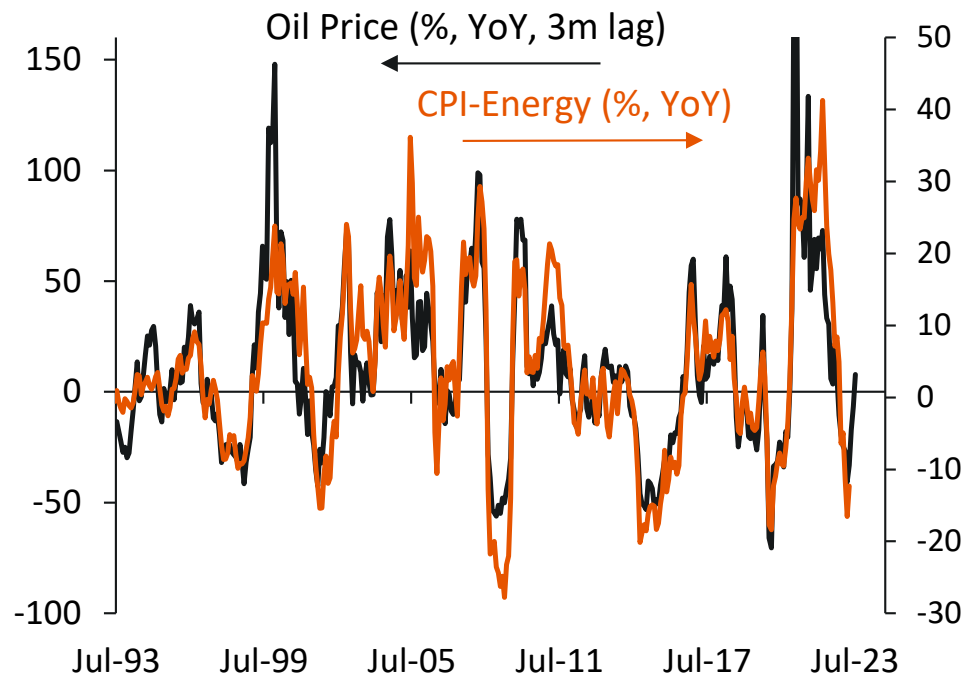
Inflation is headed lower



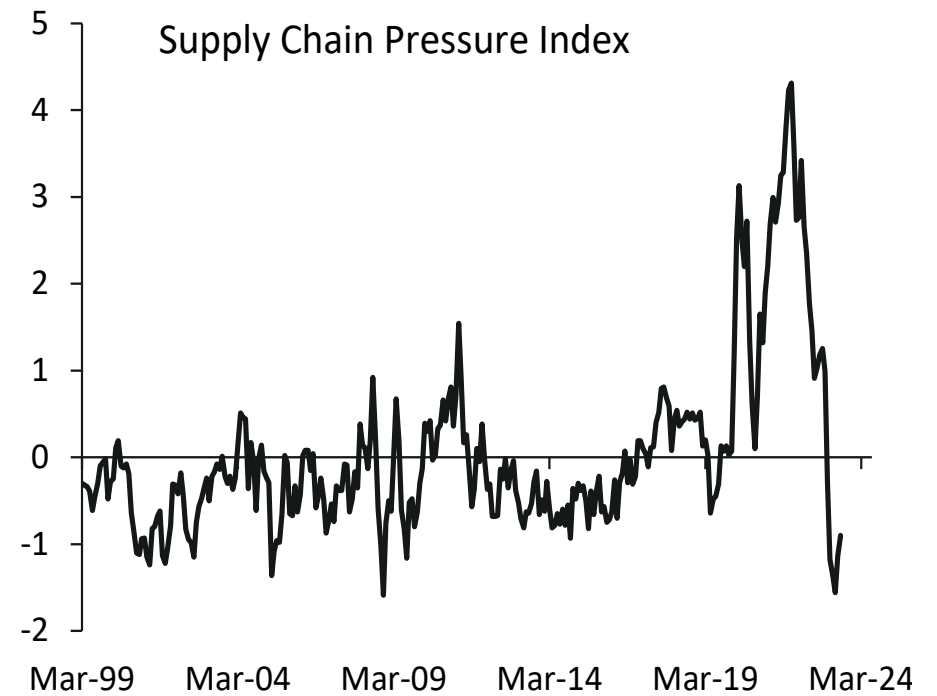
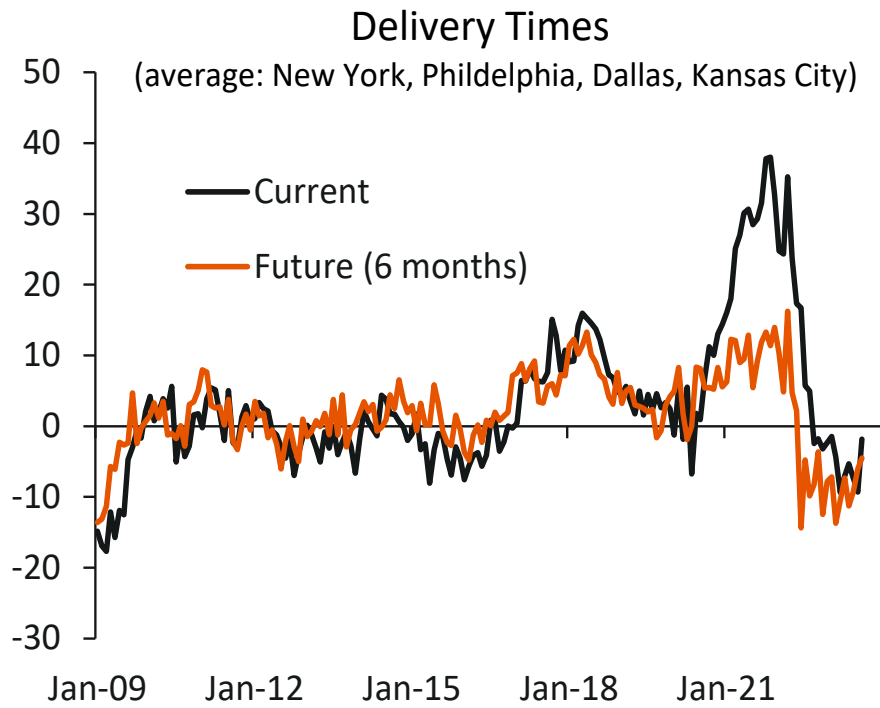
Growth for shelter related costs has peaked and should be moving lower



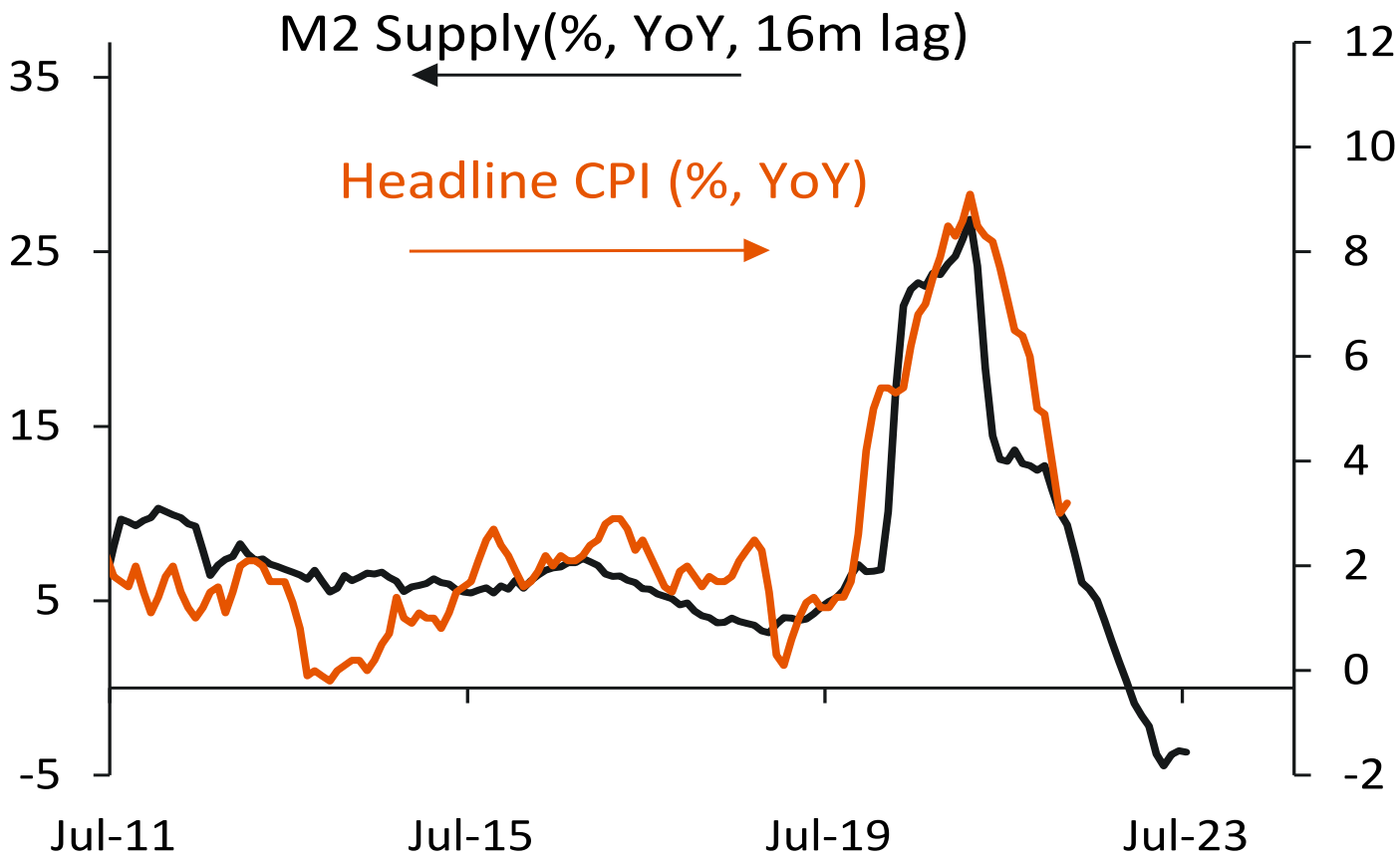
Food and energy are volatile



Supply chains are back to normal

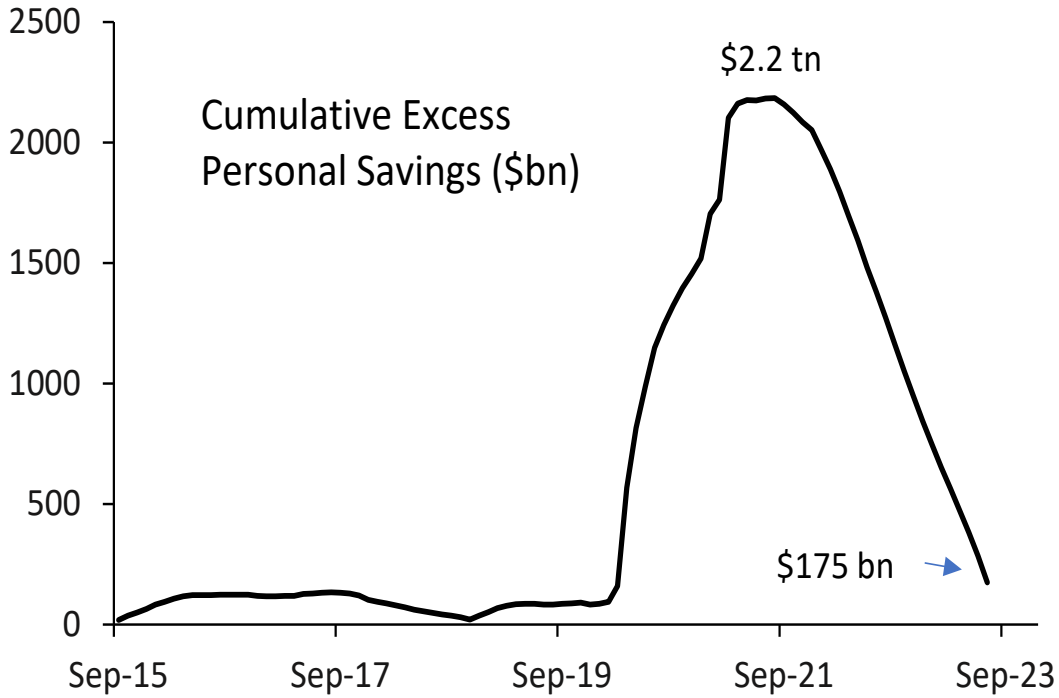
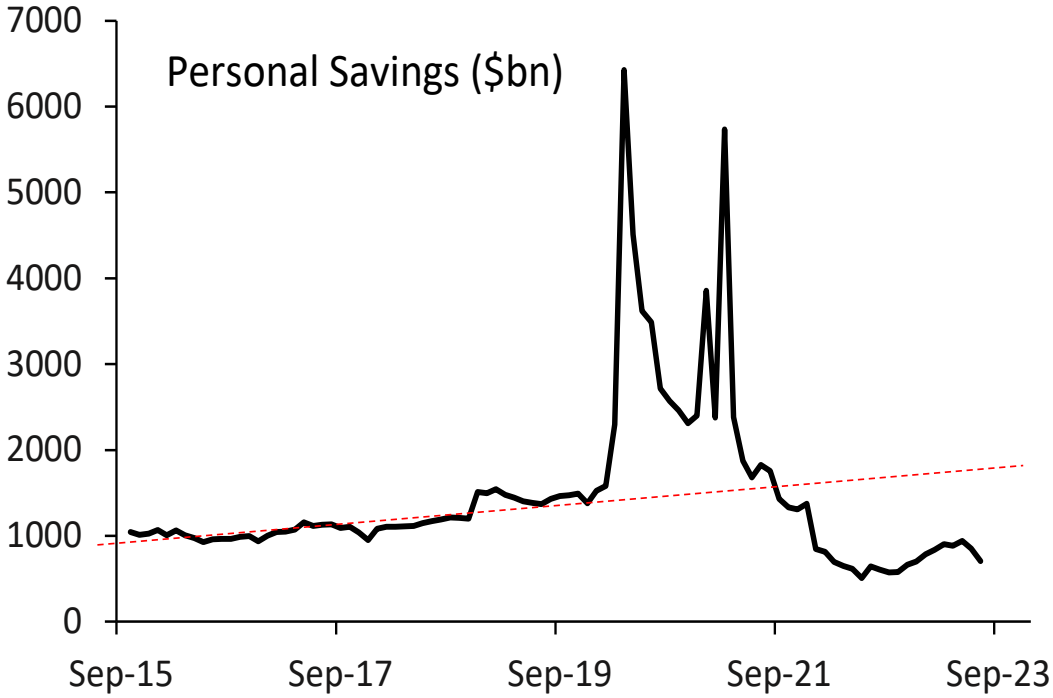


Declining M2 money supply to stifle inflation



Source: BLS, Federal Reserve, Piper Sandler

The excess personal savings related to the COVID stimulus is gone

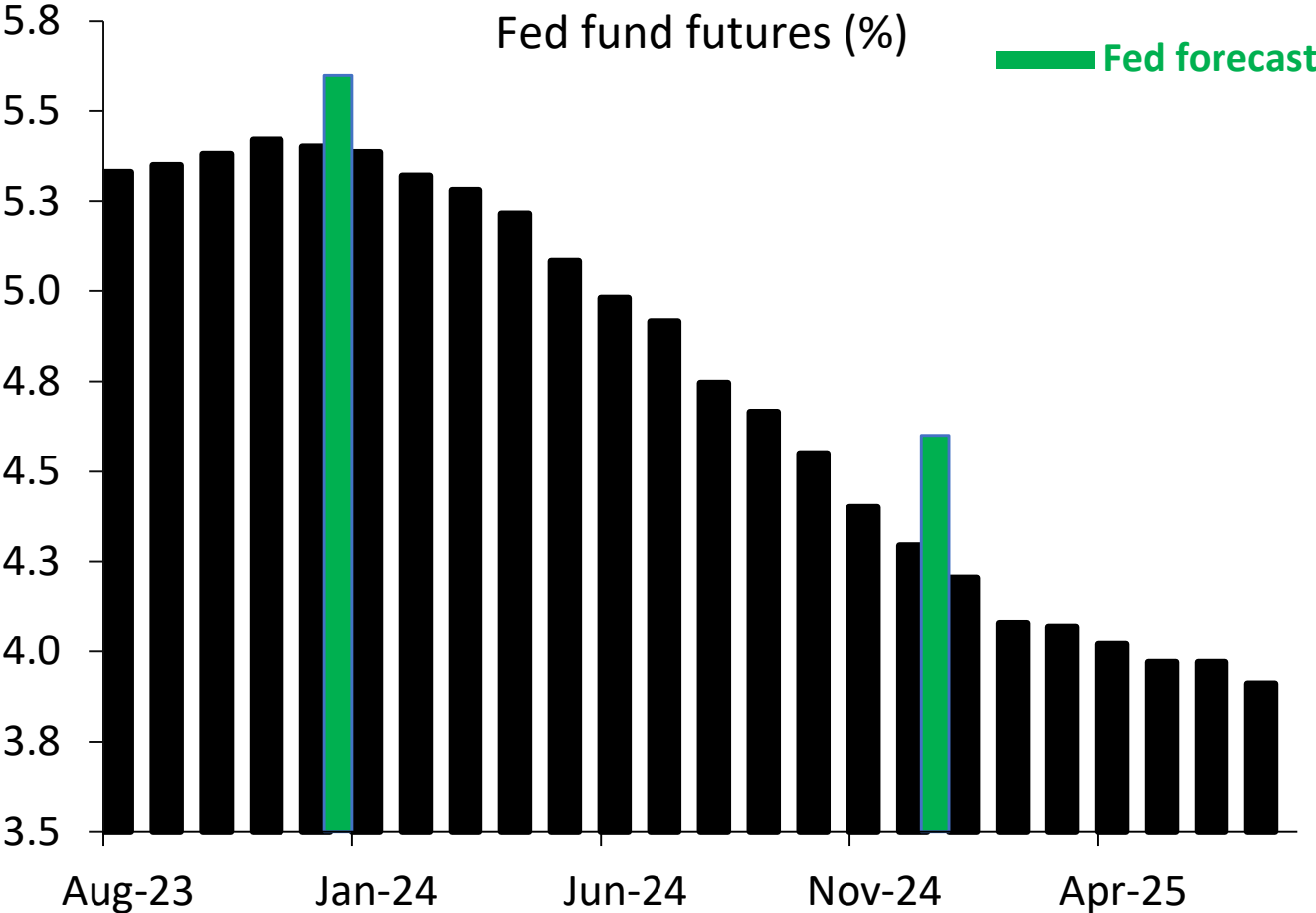


Inflation is turning benign across a broad range of metrics

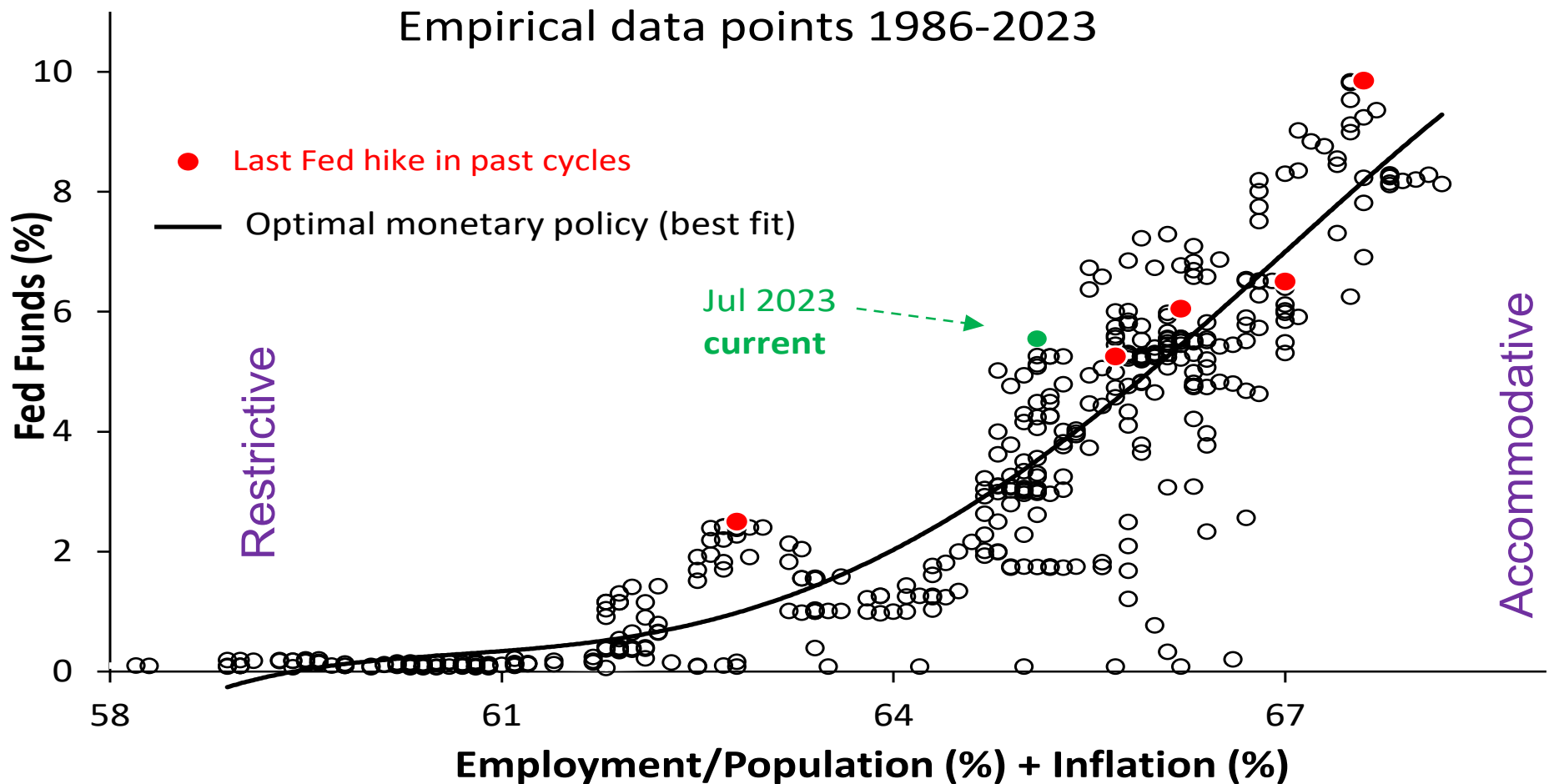
Inflation Indicators (%)	Jul/Aug 2022	Jul/Aug 2023	Change	
PCE Price Index (yoy, sa)	6.40	3.30	-3.10	US government (BLS, BEA)
Core PCE Index (yoy, sa)	4.70	4.24	-0.47	
Consumer Price Index (yoy)	8.30	3.70	-4.60	
CPI ex-Food & Energy (yoy)	6.30	4.30	-2.00	
5yr x 5yr Forward TIIPS Breakeven Inflation	2.33	2.28	-0.04	Market
10yr TIIPS Breakeven Inflation	2.48	2.24	-0.24	
U. of Michigan 1yr Expect.	4.70	3.10	-1.60	Survey
U. of Michigan 5-10yr Expect.	2.70	2.70	0.00	

-
- Inflation on a downward trend
 - **Fed tightening near the end**
 - What happens after a Fed pause
 - Gauging the next recession
 - Regional housing bubbles
 - Liquidity in the banking system

Will the Fed hike rates again?

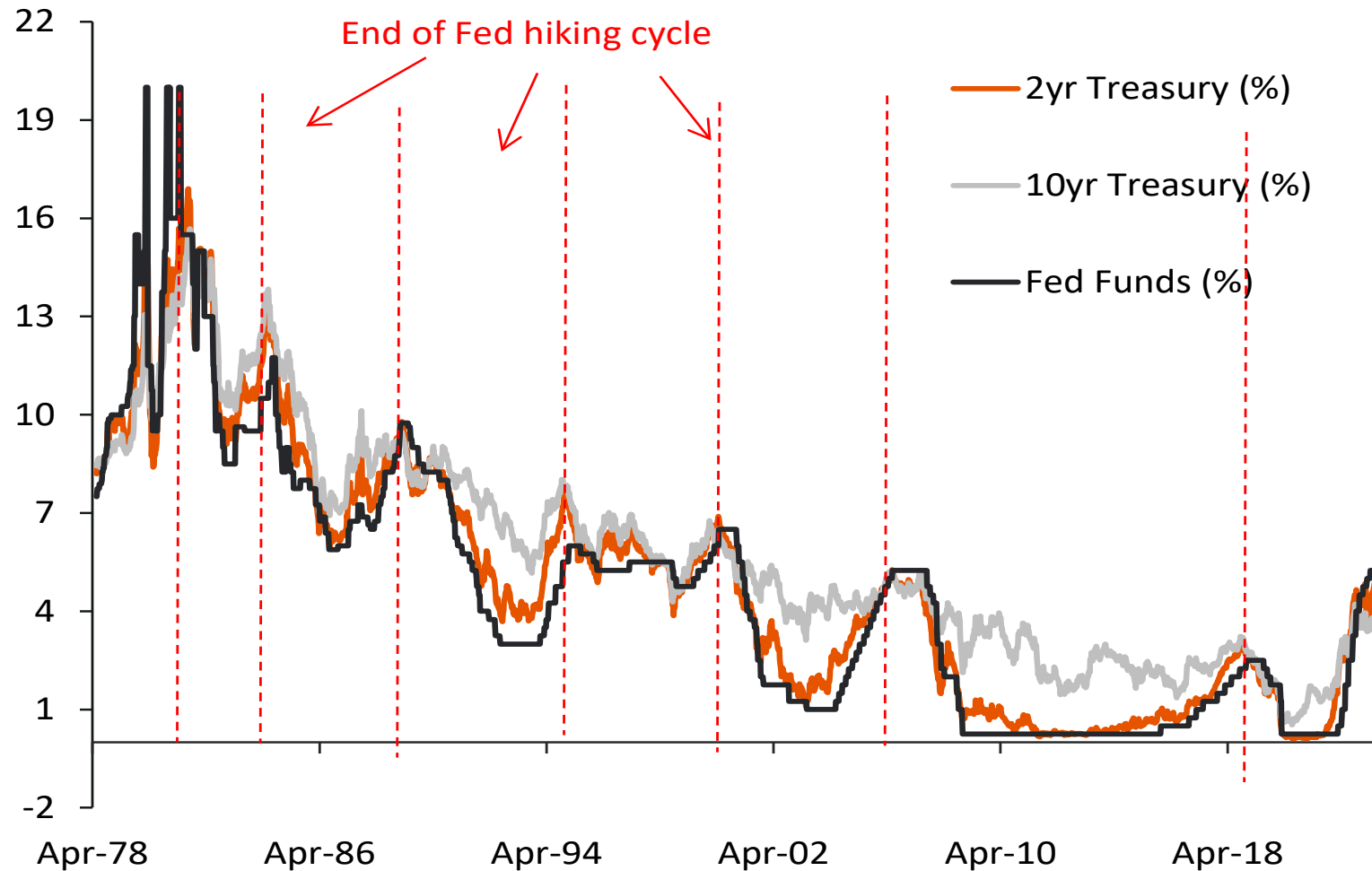


Monetary policy is turning restrictive

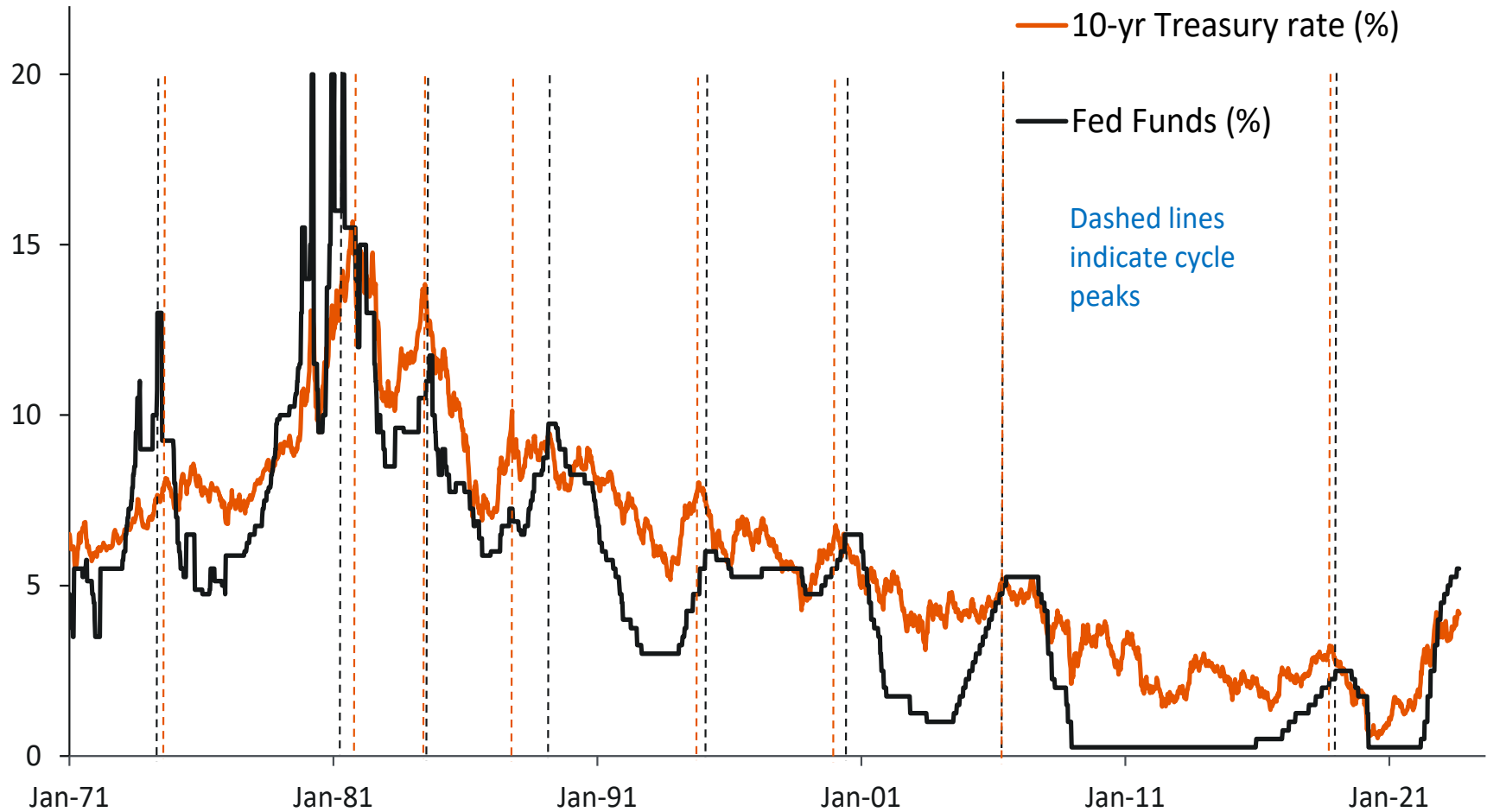


-
- Inflation on a downward trend
 - Fed tightening near the end
 - **What happens after a Fed pause**
 - Gauging the next recession
 - Regional housing bubbles
 - Liquidity in the banking system

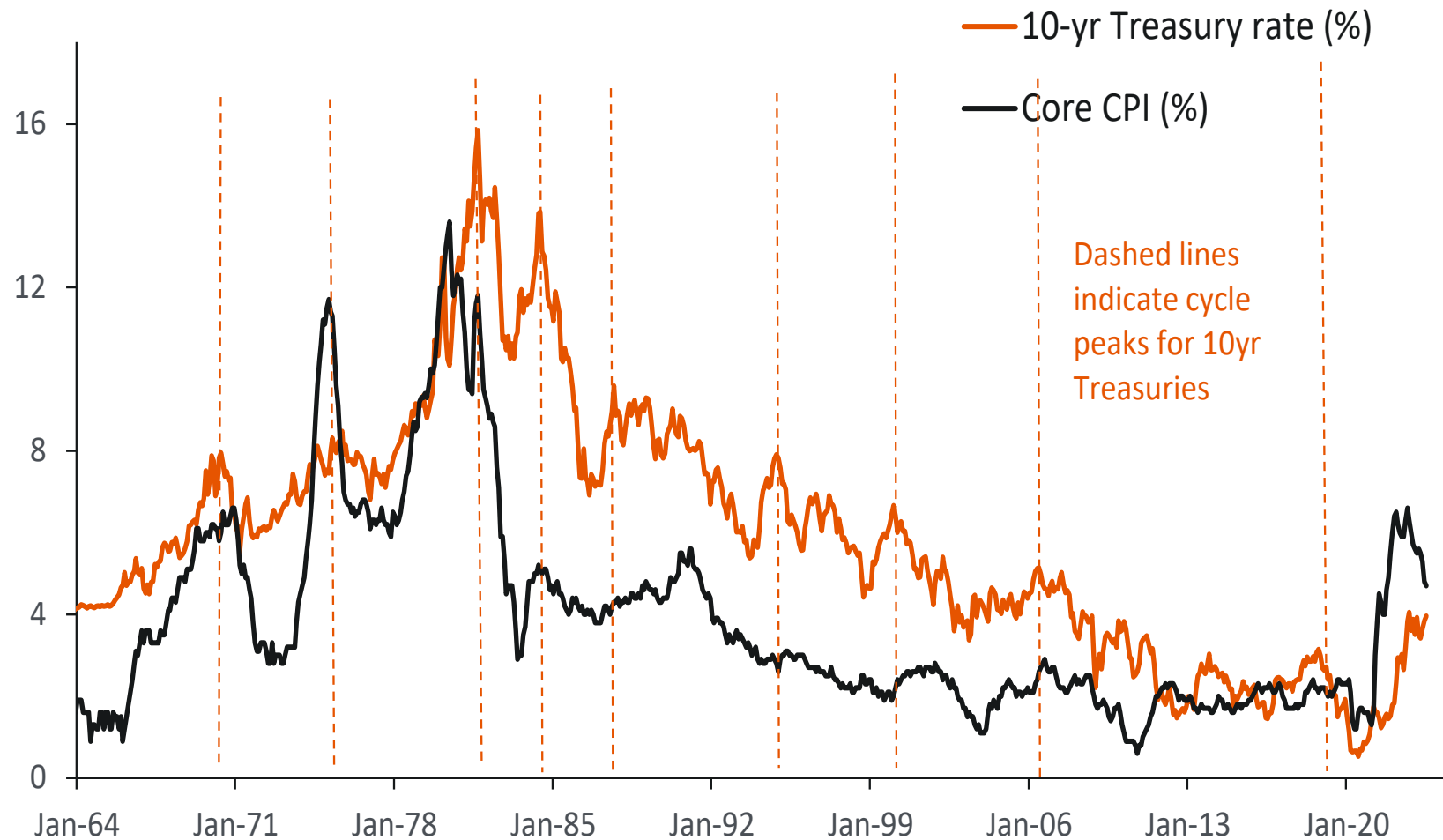
Since the mid-1980s yields have always peaked shortly before or when the Fed raises rates for the last time



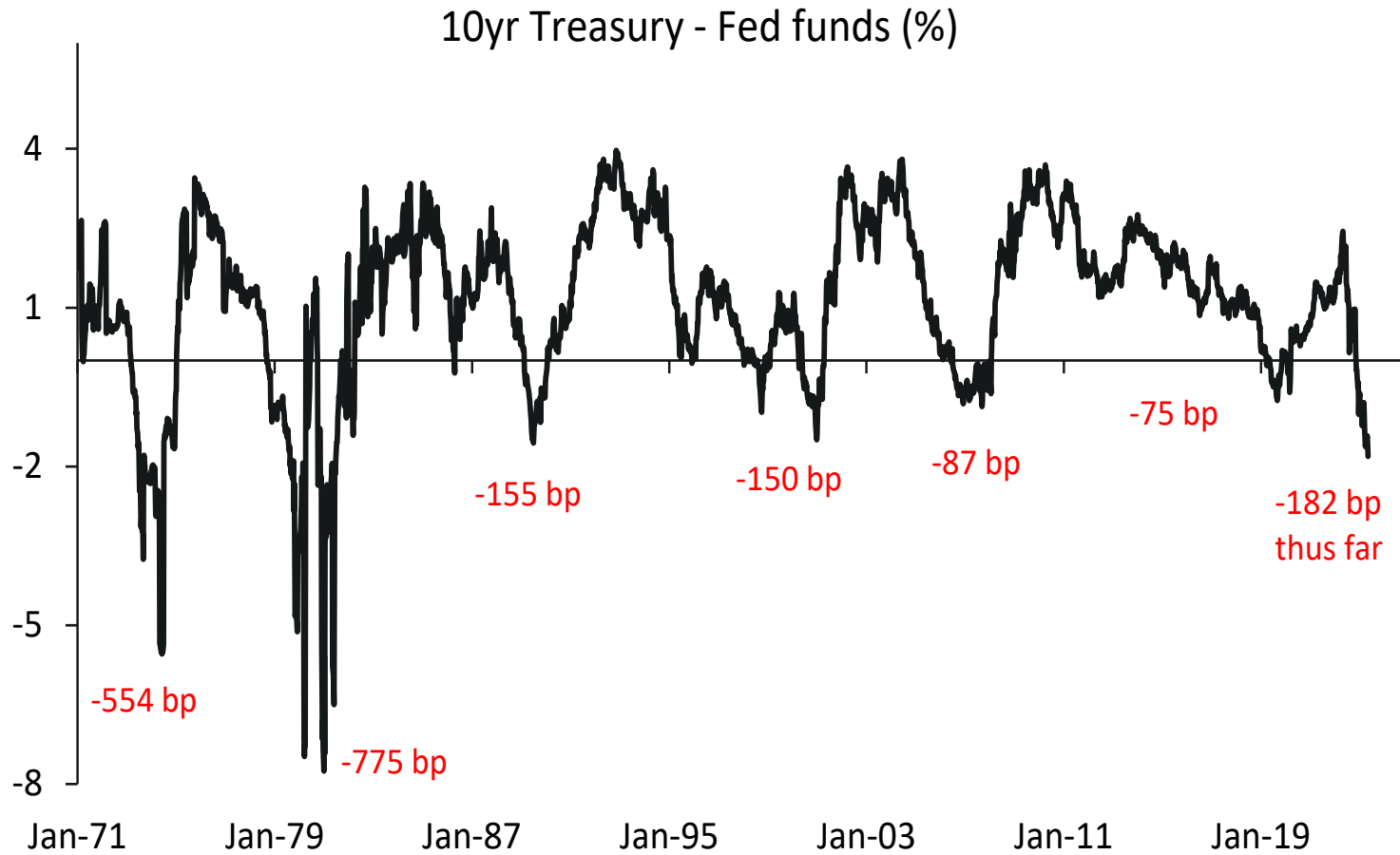
Prior to the mid-1980s yields peaked after the last Fed hike



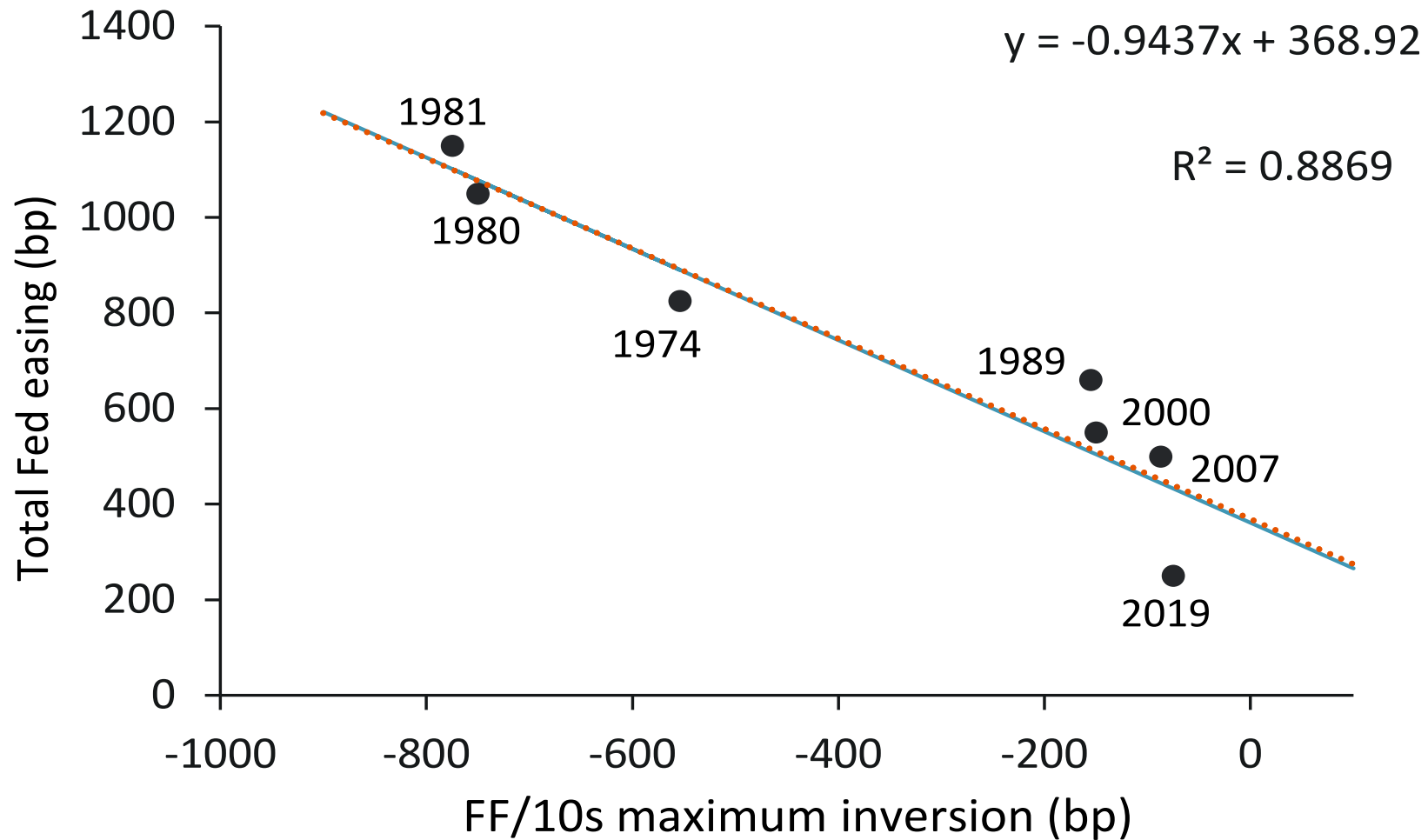
Prior to the mid-1980s core inflation was moving higher



Curve inversion may keep longer term rates low

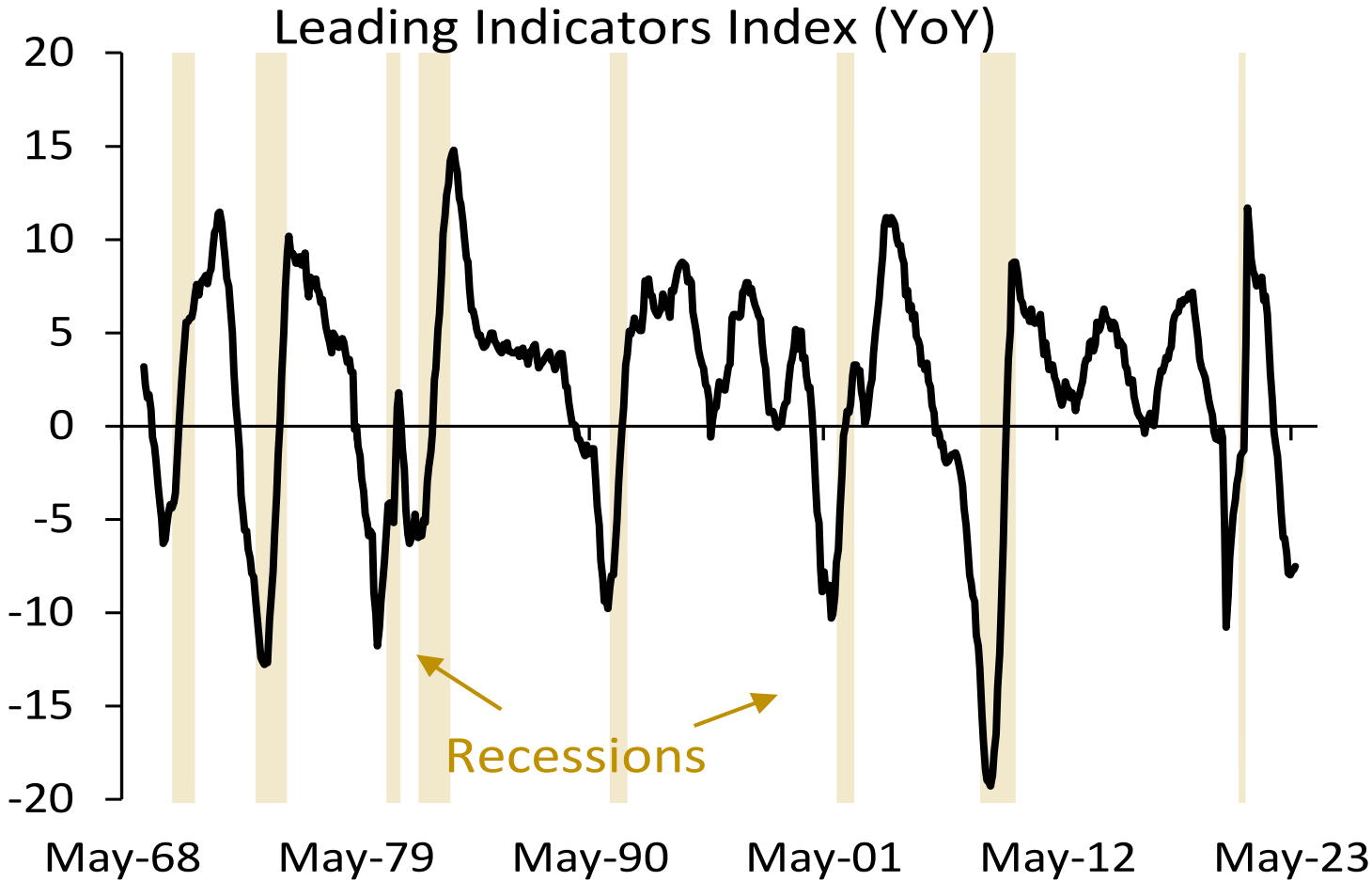


Deeper curve inversions lead to deeper rate cuts

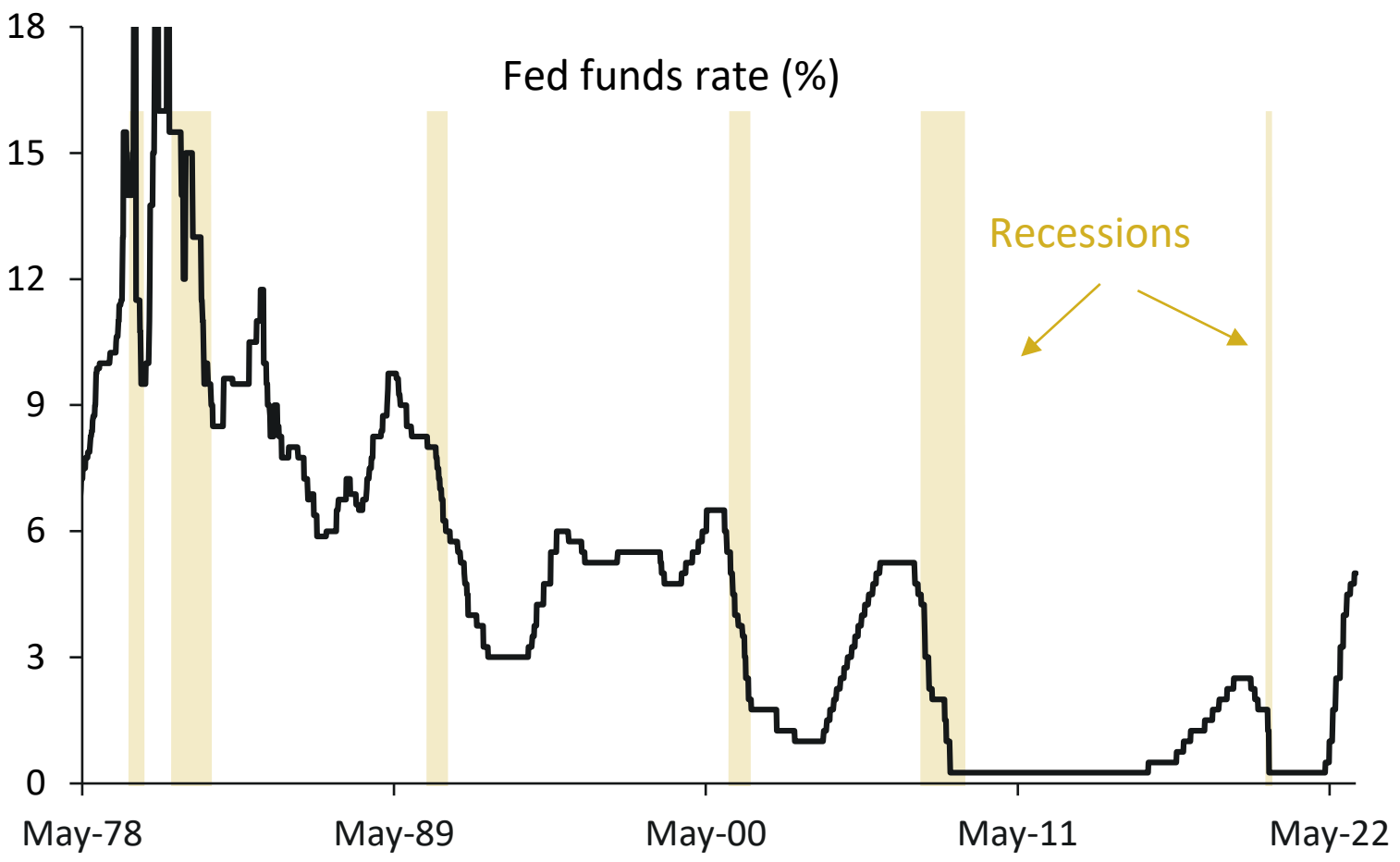


-
- Inflation on a downward trend
 - Fed tightening near the end
 - What happens after a Fed pause
 - **Gauging the next recession**
 - Regional housing bubbles
 - Liquidity in the banking system

The leading index decline has never been this large without a recession

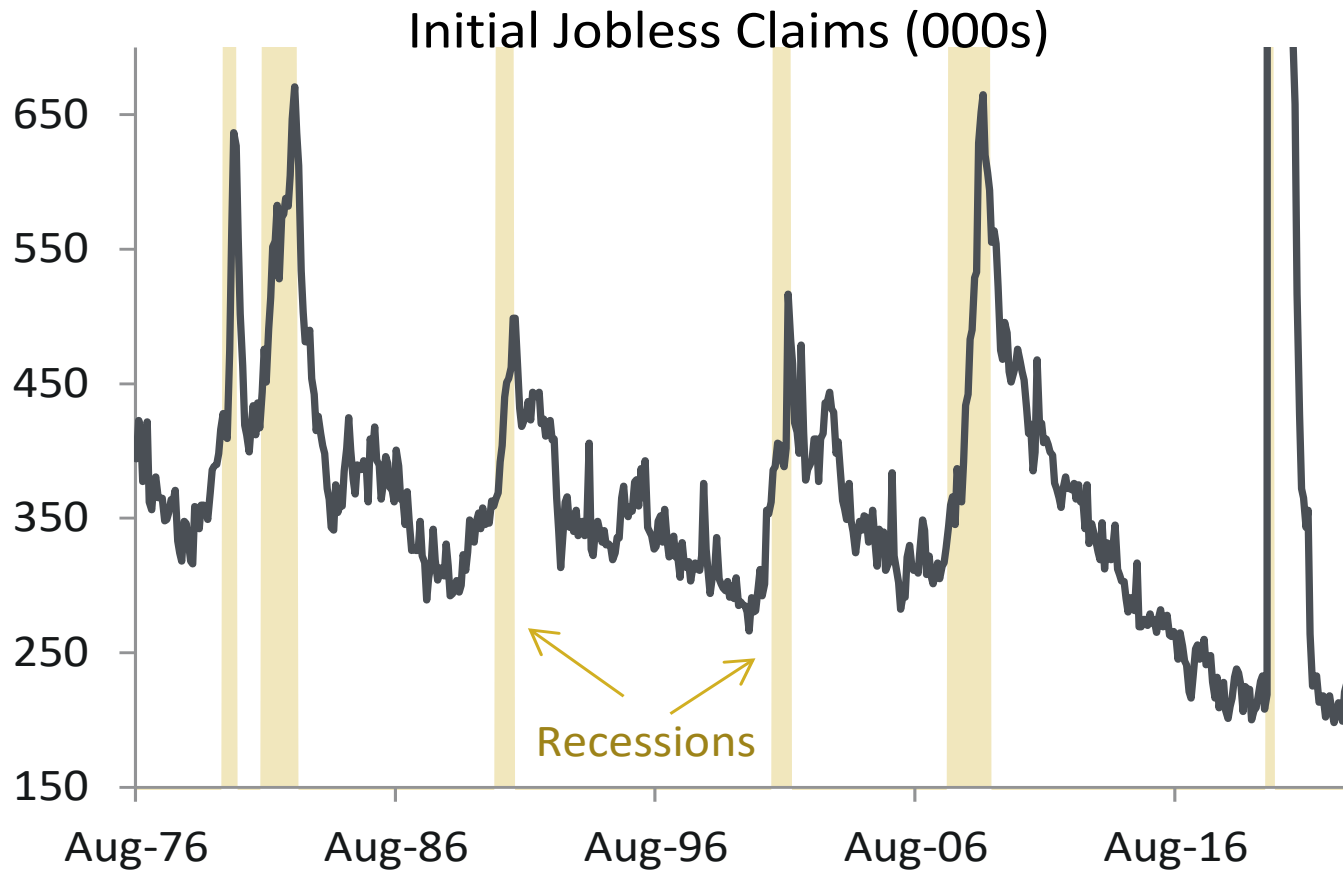


Recessions start after the Fed starts cutting rates

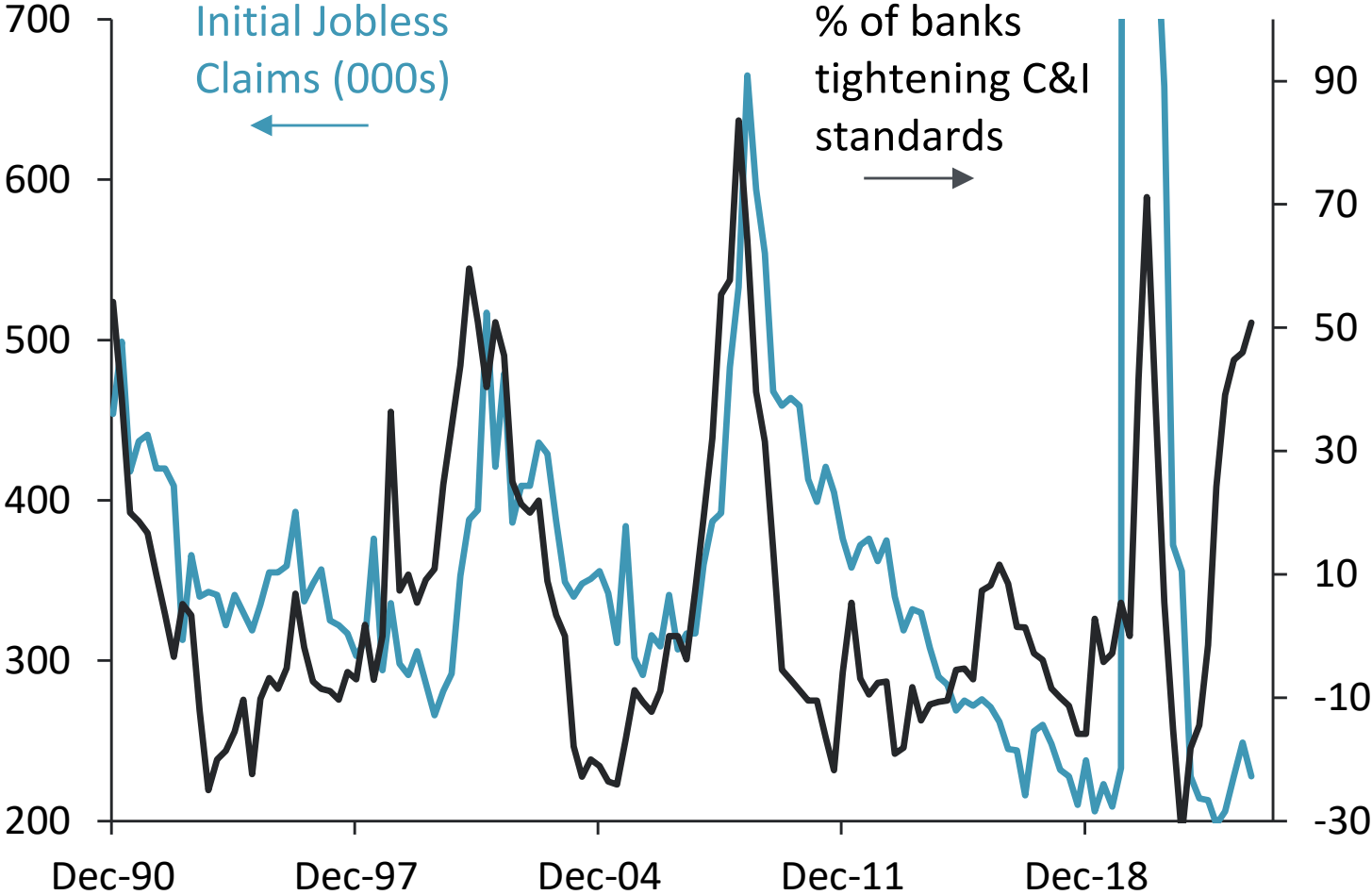


Source: Federal Reserve, Piper Sandler

Unemployment hits cyclical lows just prior to the onset of the next recession

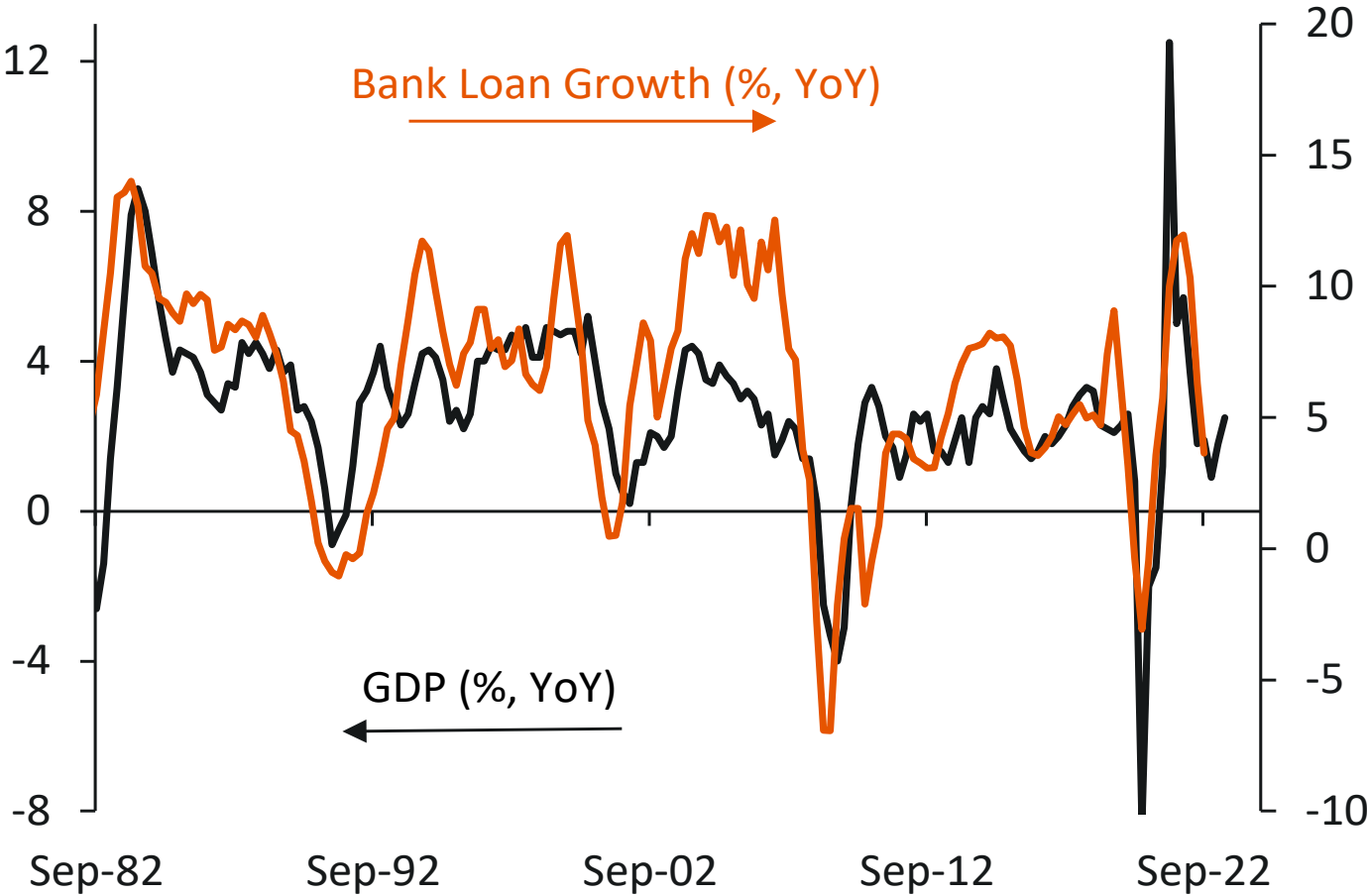


Jobless claims may be surging soon



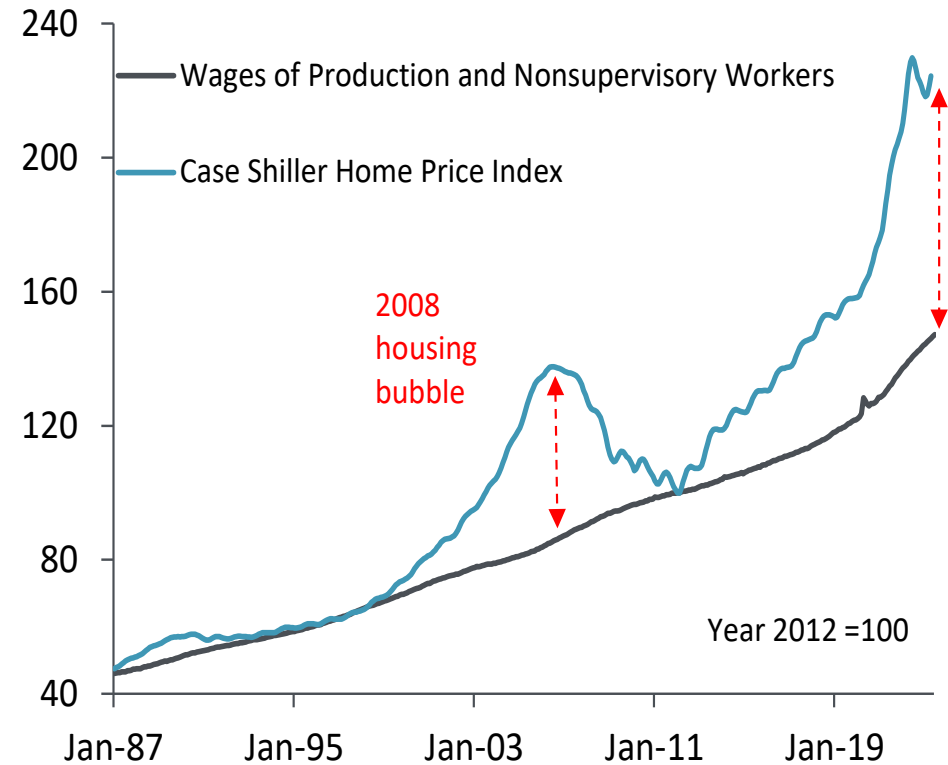
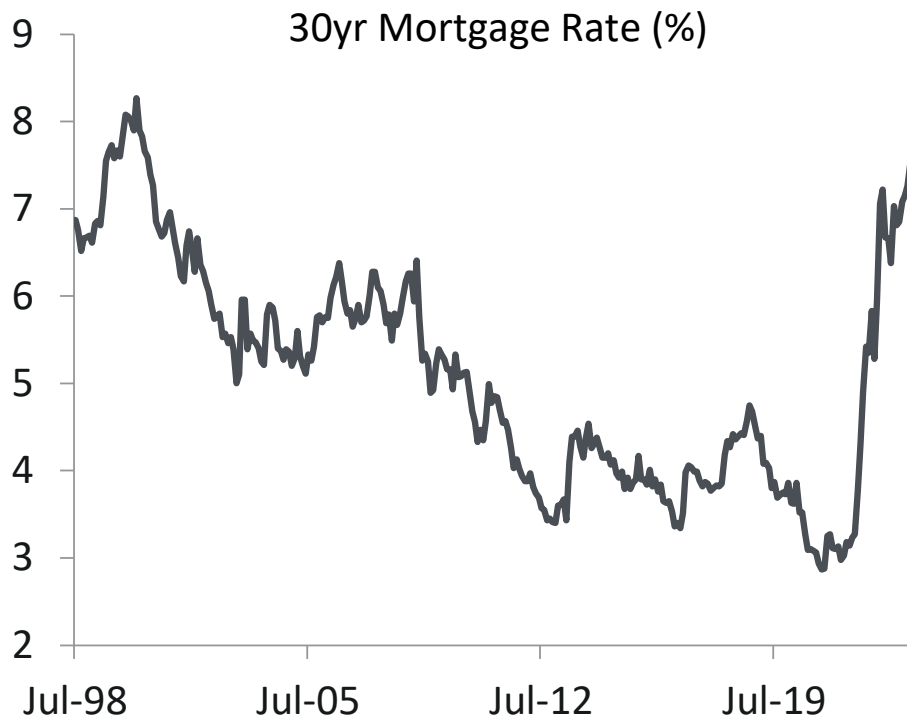
Source: Federal Reserve, Department of Labor, Piper Sandler

Slower loan growth leads to slower economic growth

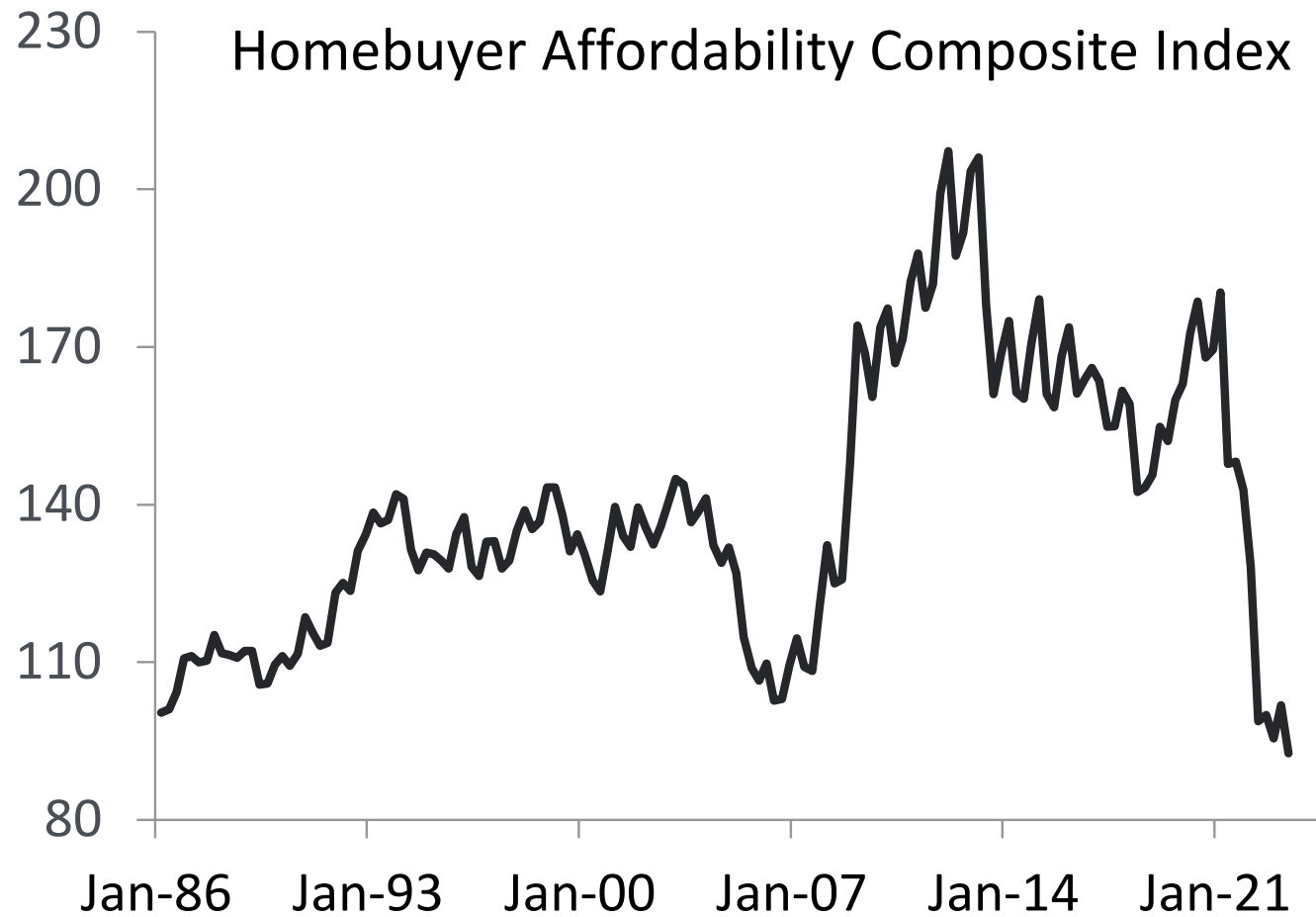


-
- Inflation on a downward trend
 - Fed tightening near the end
 - What happens after a Fed pause
 - Gauging the next recession
 - **Regional housing bubbles**
 - Liquidity in the banking system

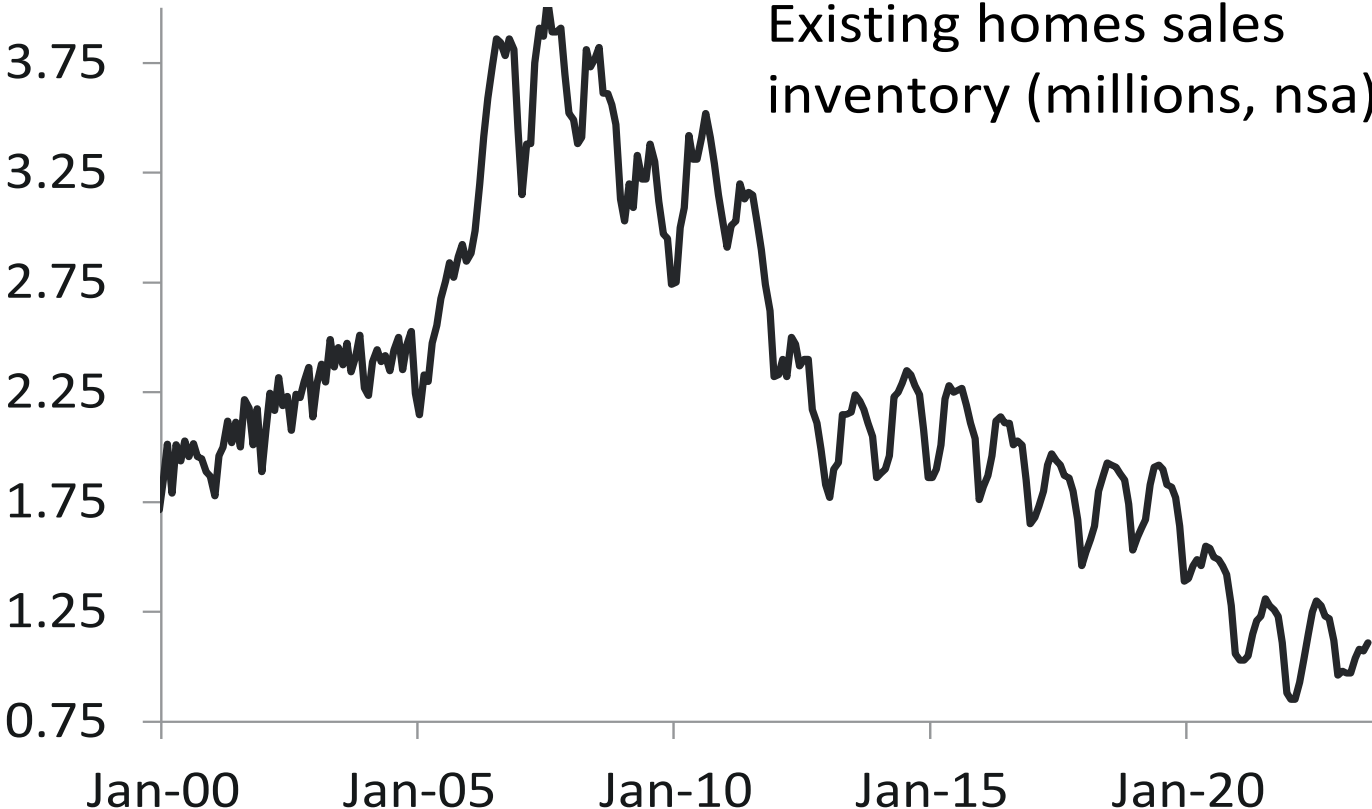
Rising rates and rising home prices lead to...



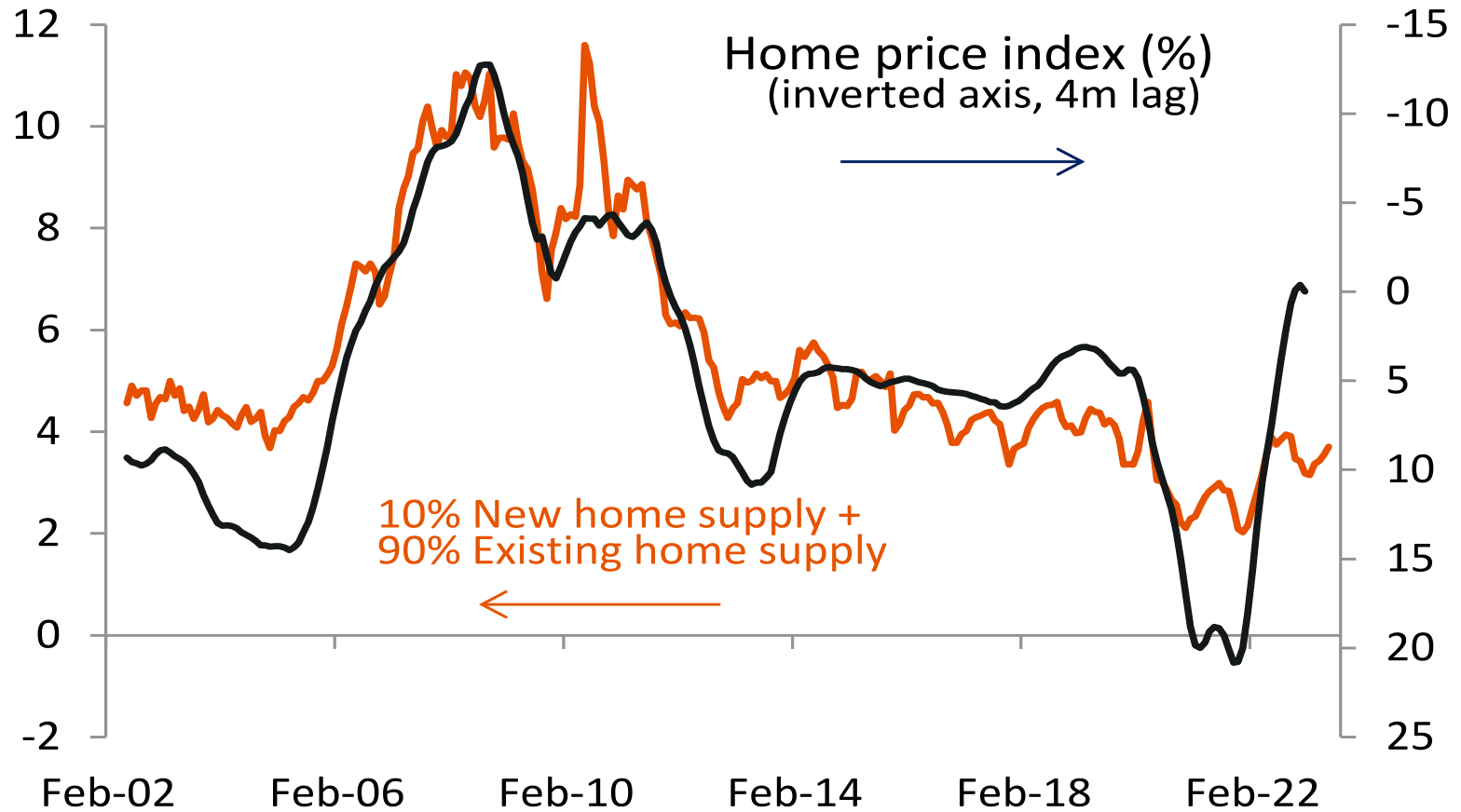
...the worst affordability ever



Existing home inventory has fallen near record lows



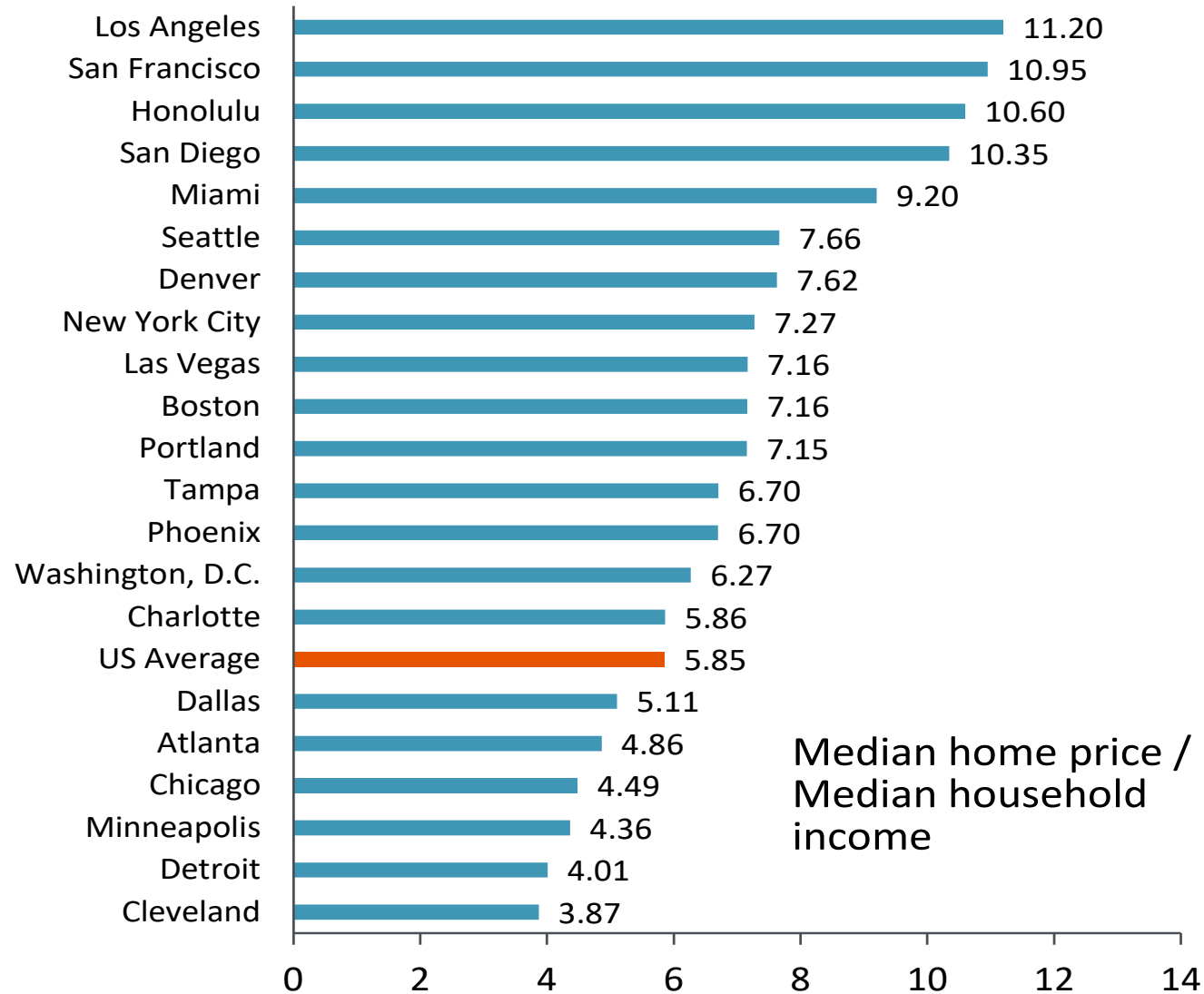
Low inventory may put a floor under home price declines



Residential construction, home sales and home sales usually decline during recessions

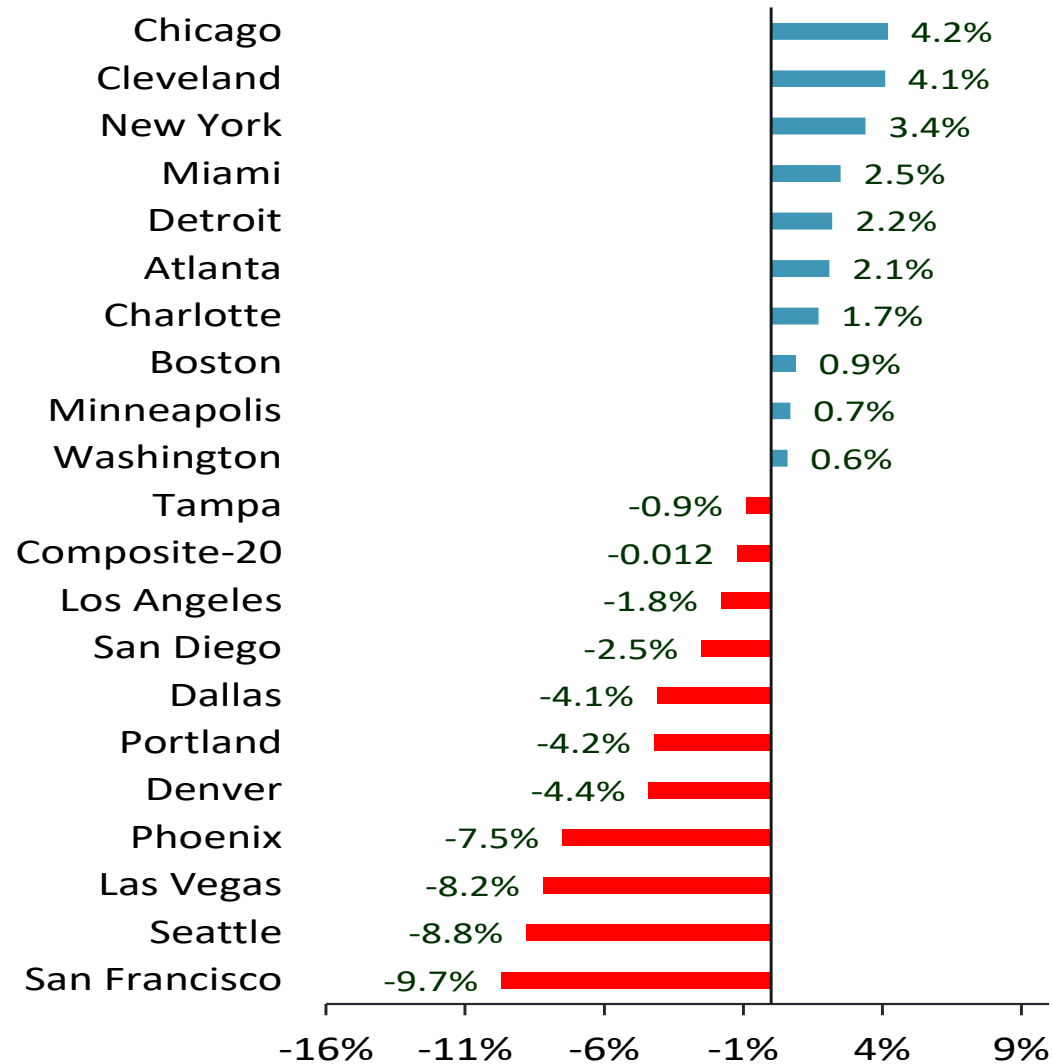
	Recessions						
	1980	1981	1990	2001	2007	2020	Average
Recession Length (months)	6.0	16.0	8.0	8.0	18.0	2.0	9.7
New Home Starts	-15%	31%	-22%	-1%	-51%	-41%	-17%
<i>Single Family Starts</i>	-16%	24%	-15%	-3%	-42%	-30%	-14%
<i>Multifamily Starts</i>	-15%	45%	-41%	4%	-72%	-59%	-23%
New Home Sales	14%	33%	-6.8%	-4.0%	-39%	-17%	-3.2%
Existing Home Sales	-	-	-	0.2%	-8%	-17%	-8.2%
House Prices	4.1%	6.8%	-2.0%	-0.6%	-13.8%	-5.7%	-1.9%

Cities with high price to income ratios are at larger risk of outright declines



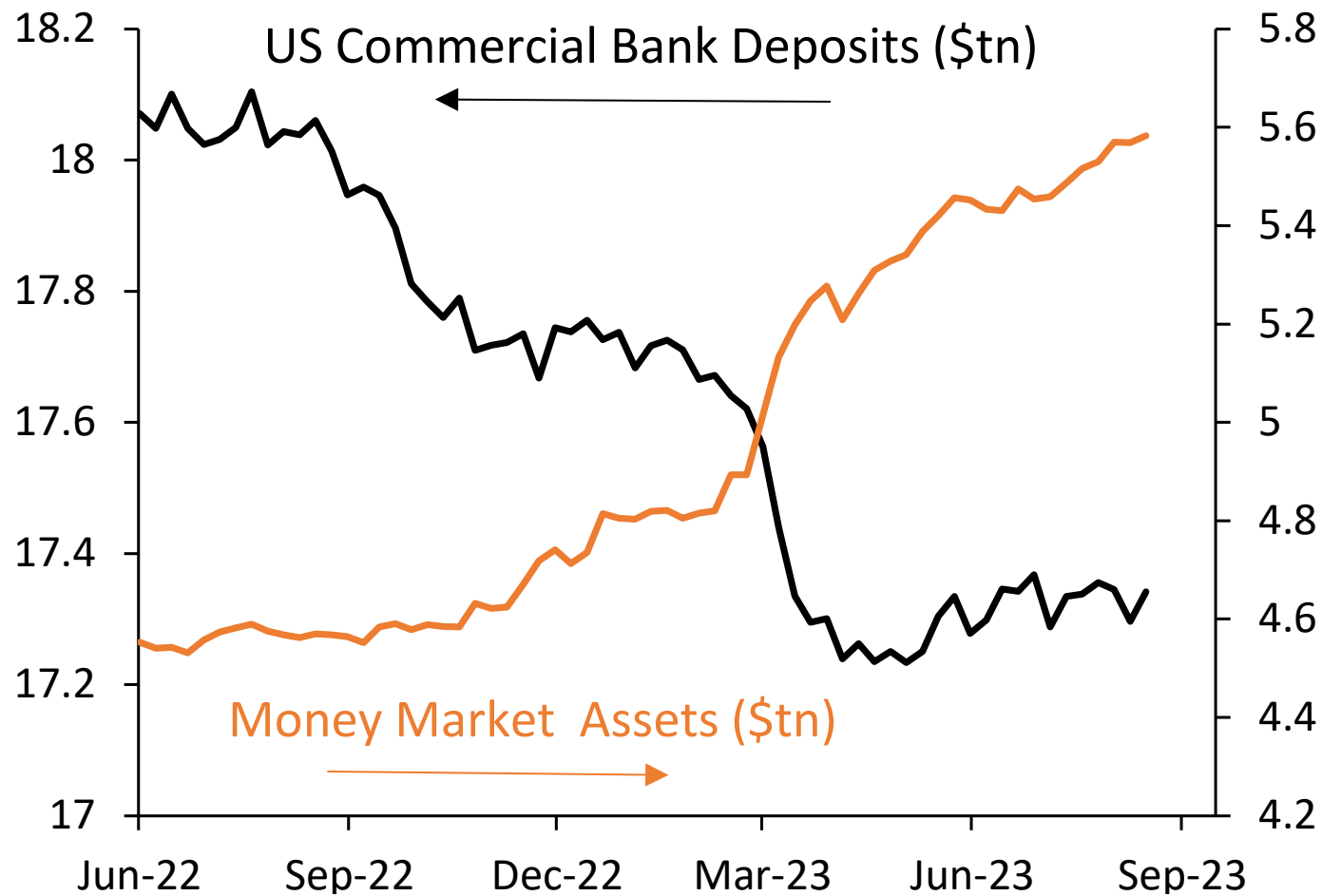
Prices are dropping outright

Home price change (YoY,%)
June 2022 - June 2023

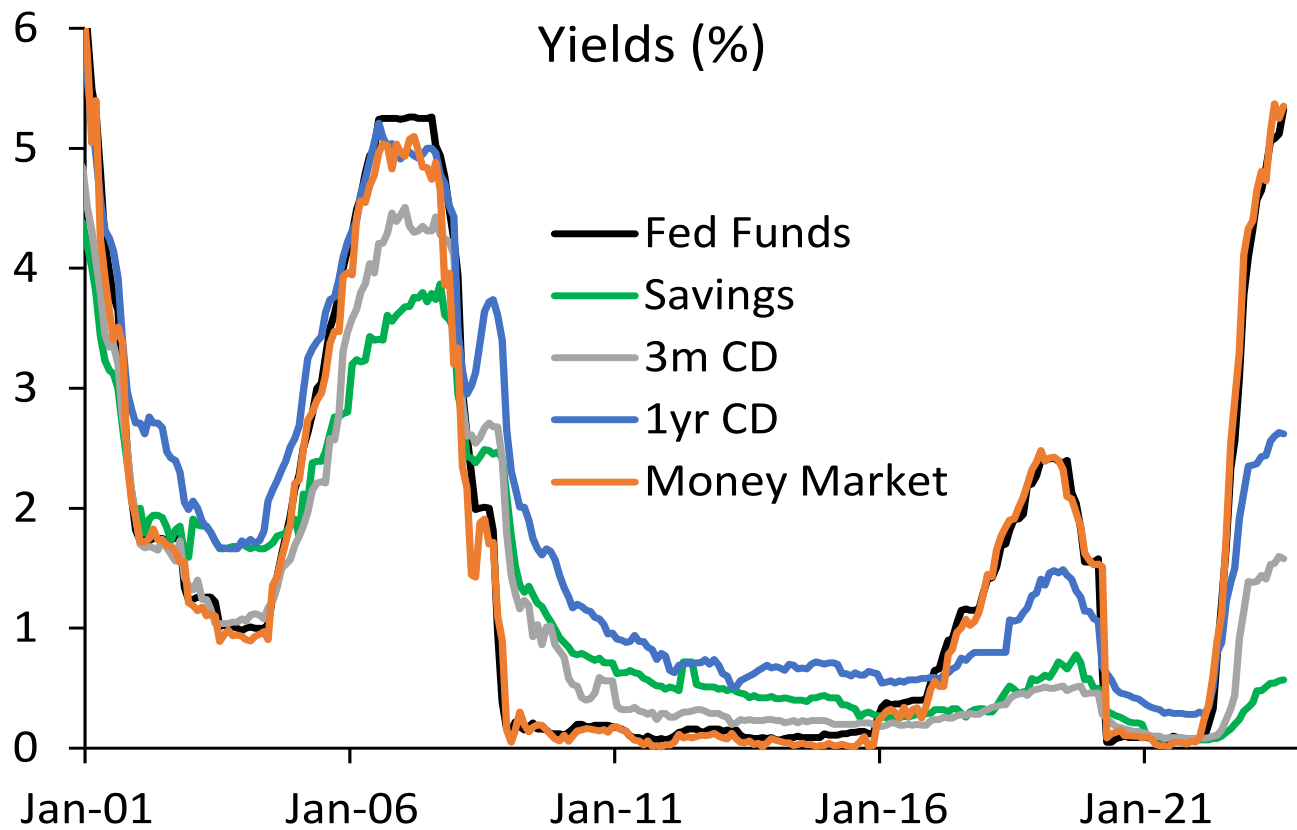


-
- Inflation on a downward trend
 - Fed tightening near the end
 - What happens after a Fed pause
 - Gauging the next recession
 - Regional housing bubbles
 - **Liquidity in the banking system**

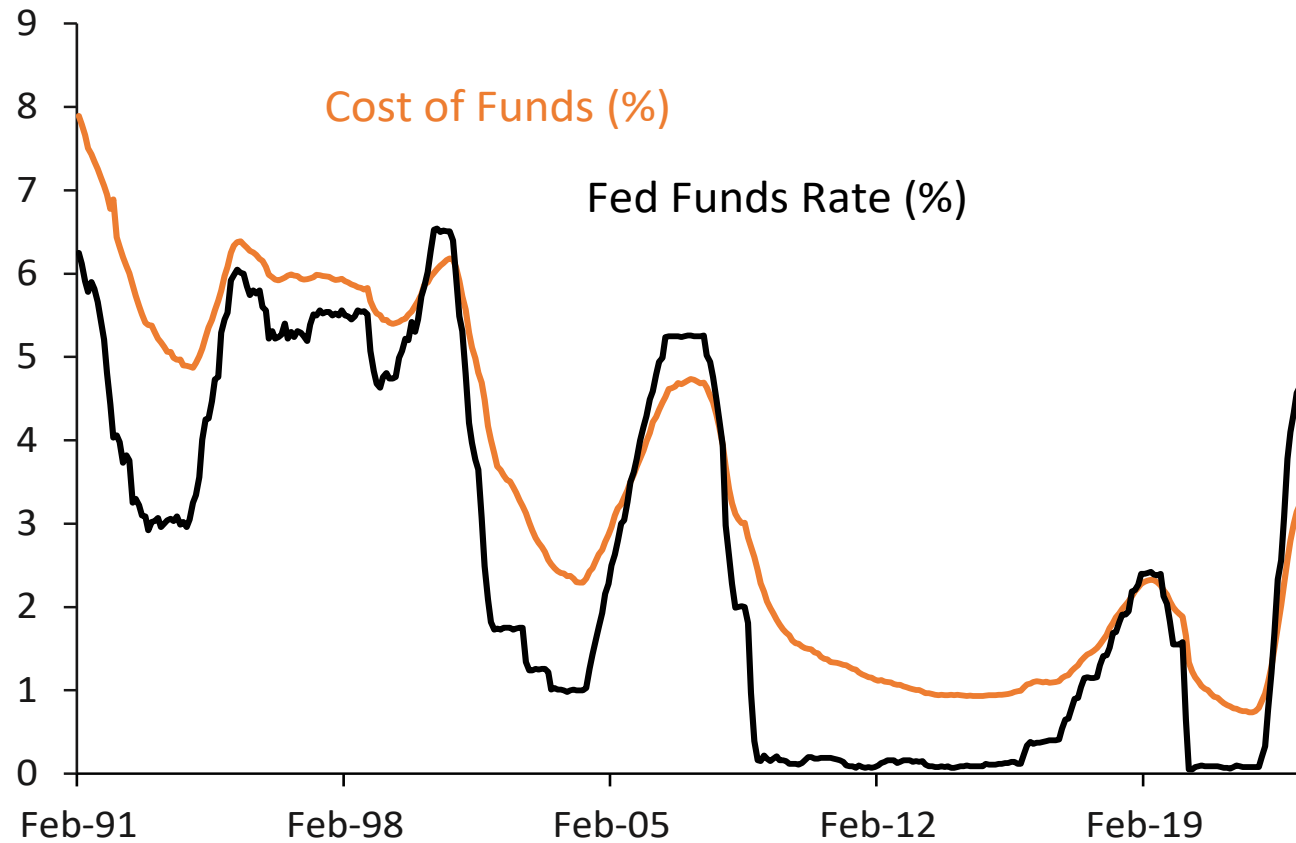
Bank deposit levels have stabilized, but...



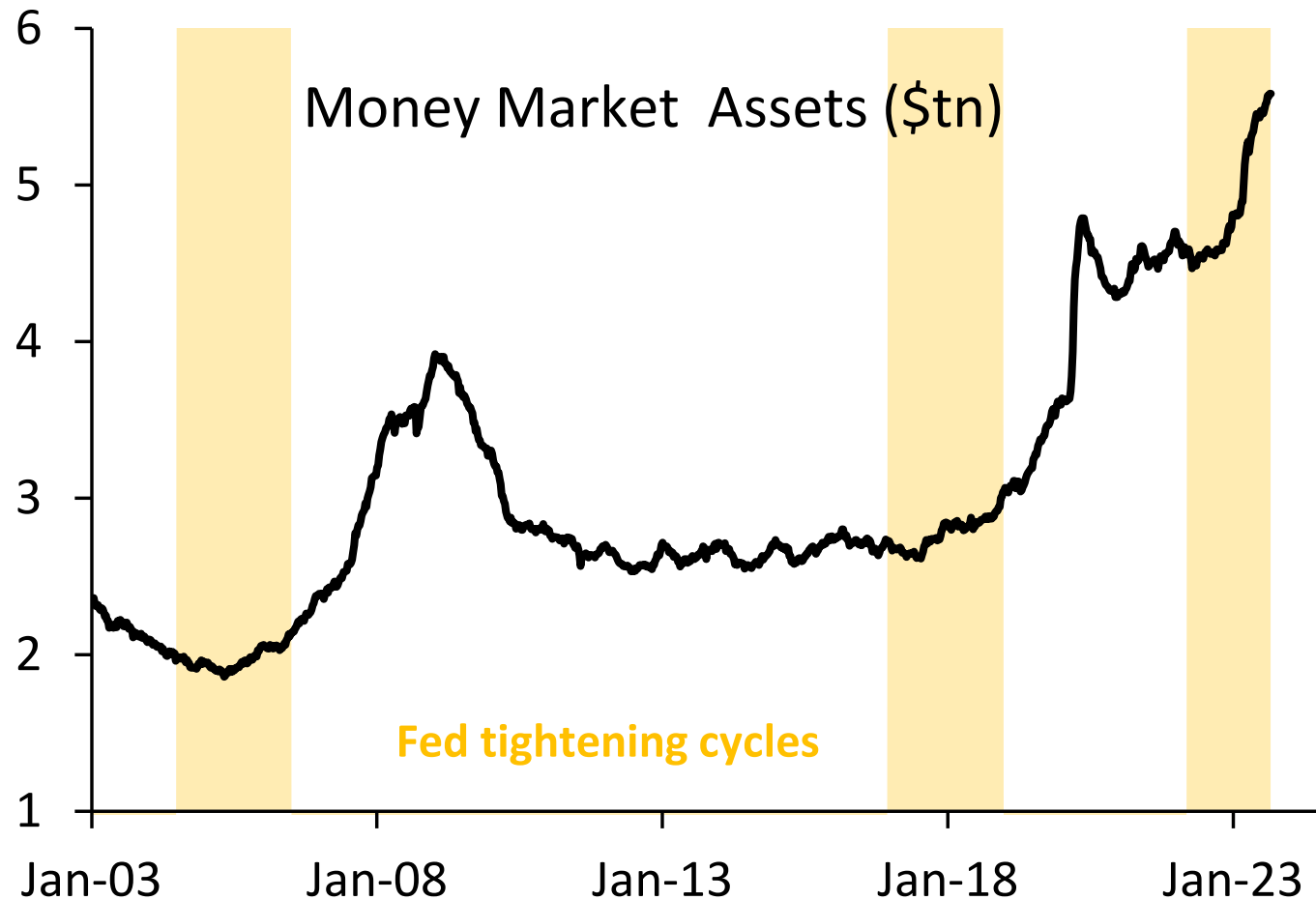
...deposit rates still remain uncompetitive



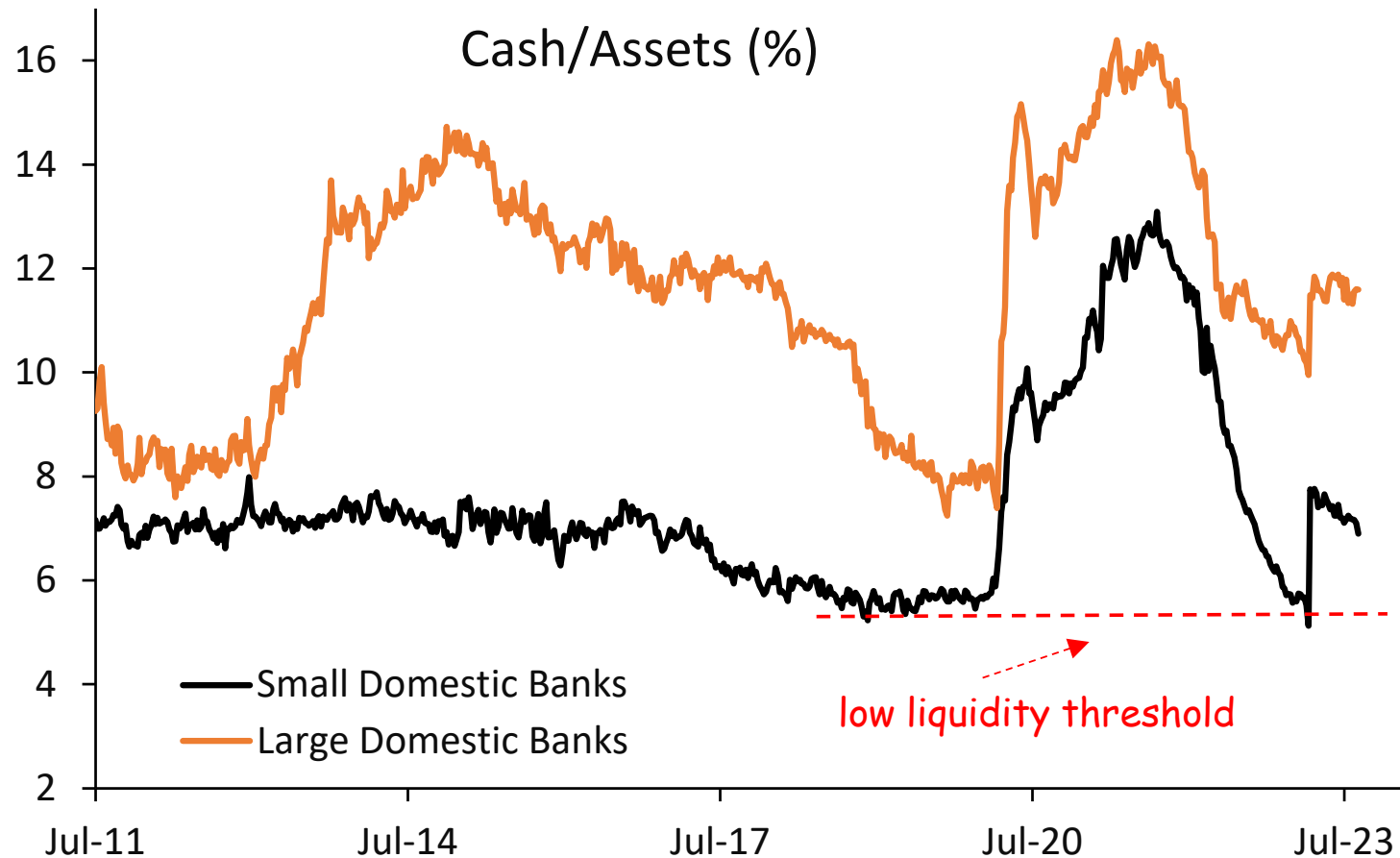
Cost of funds may still move higher



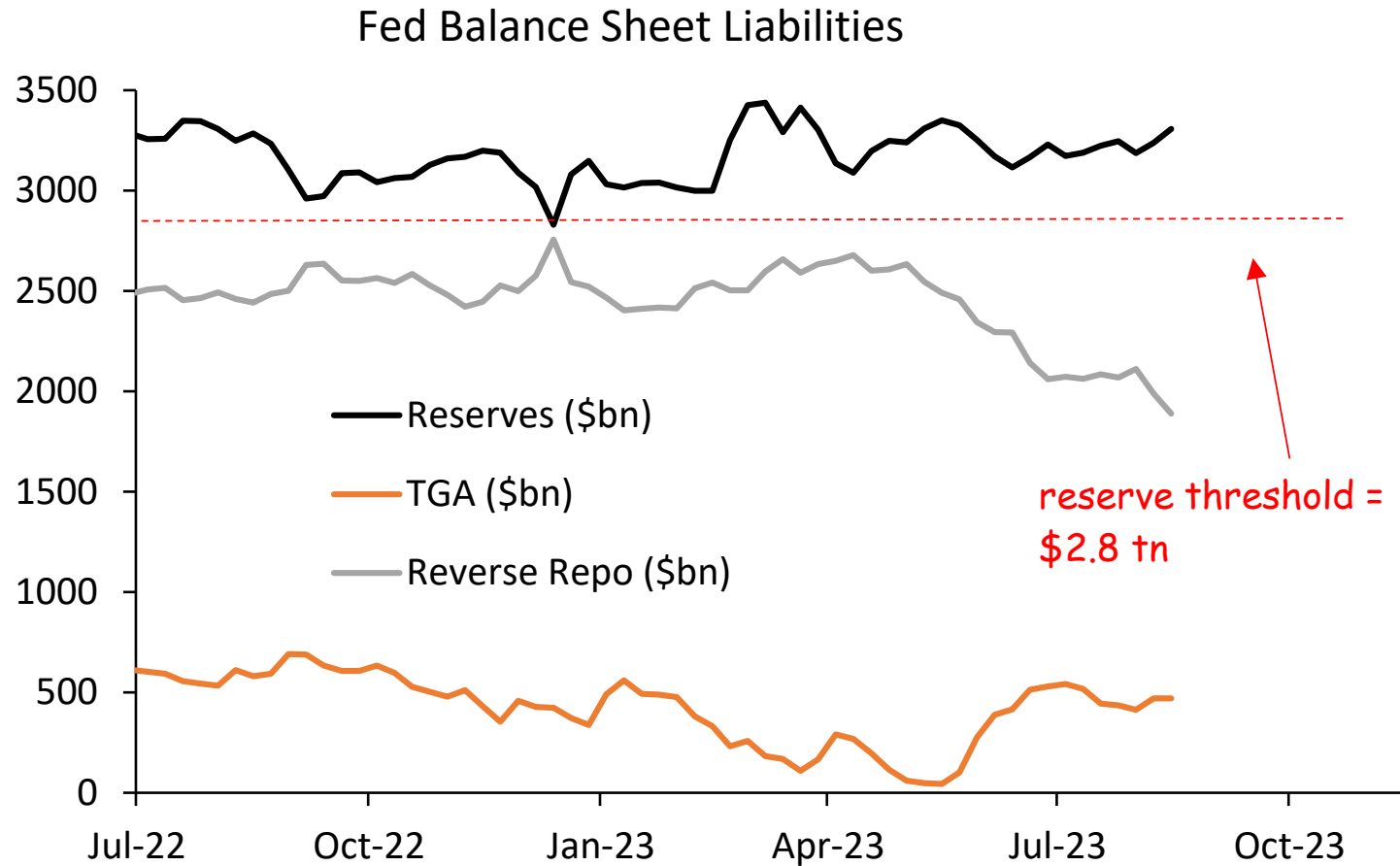
Pressure on bank deposits may continue even after the Fed stops hiking rates



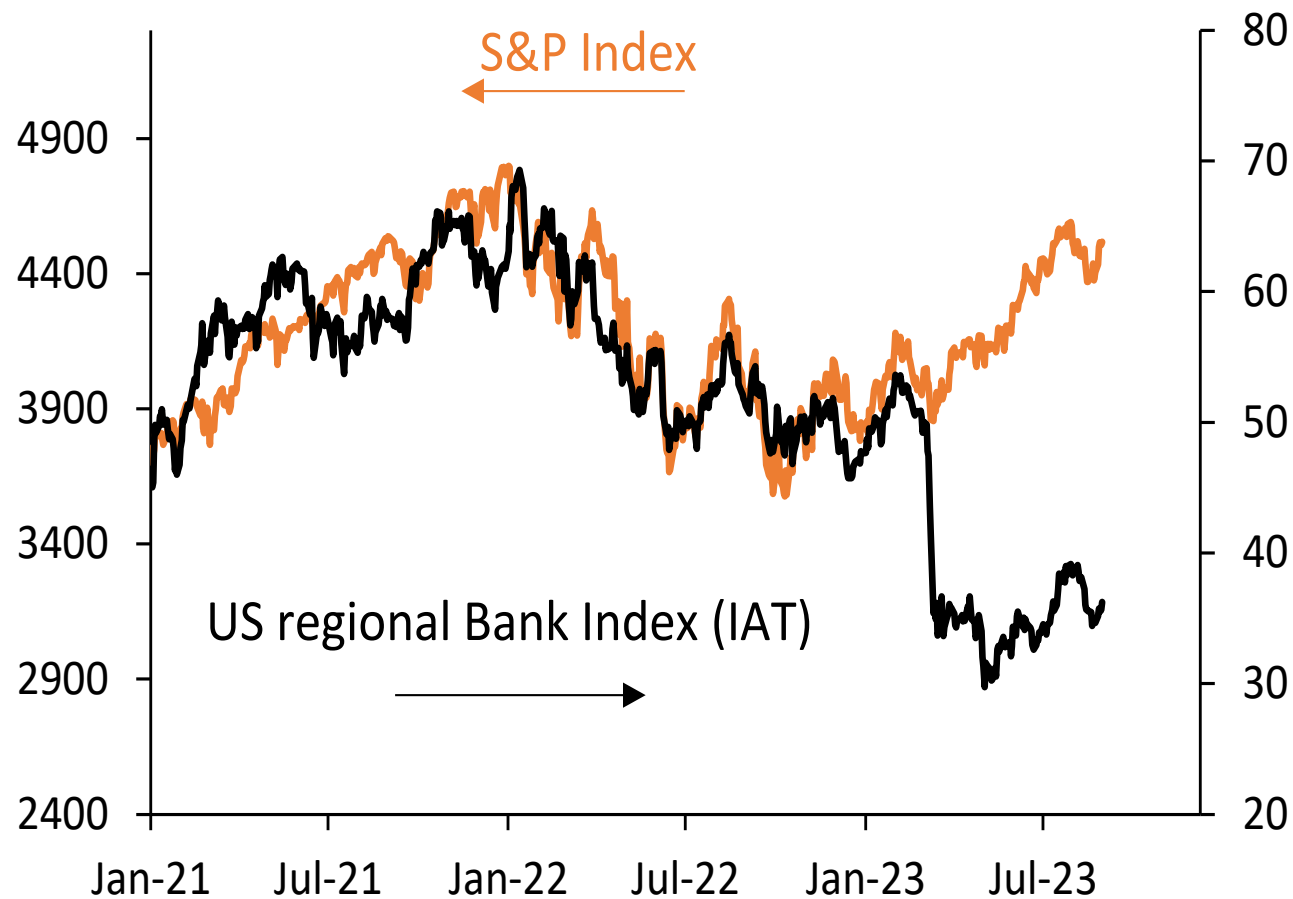
Reserves for small banks are elevated but are slowly drifting in the wrong direction



The reverse repo facility has been absorbing the QT impact



The divergence between the S&P and regional bank index suggest the crisis may not be over



Q & A

Disclosures

The material contained herein is not a product of any research department of Piper Sandler & Co. or any of its affiliates. Nothing herein constitutes a recommendation of any security or regarding any issuer; nor is it intended to provide information sufficient to make an investment decision. The information provided is herein not intended to be and should not be construed as a recommendation or "advice" within the meaning of Section 15B of the Securities Exchange Act of 1934.

The information contained in this communication has been compiled by Piper Sandler & Co. from sources believed to be reliable, but no representation or warranty, express or implied, is made by Piper Sandler & Co., its affiliates or any other person as to its accuracy, completeness or correctness. All opinions and estimates contained in this communication constitute Piper Sandler & Co.'s judgment as of the date of this communication, are subject to change without notice and are provided in good faith but without legal responsibility. Past performance is not a guide to future performance, future returns are not guaranteed, and a loss of original capital may occur.

Nothing in this communication constitutes legal, accounting or tax advice or individually tailored investment advice. This material is prepared for general circulation to clients and may have been prepared without regard to the individual financial circumstances and objectives of persons who receive it. The investments or services contained in this communication may not be suitable for you and it is recommended that you consult an independent investment advisor if you are in doubt about the suitability of such investments or services.

Every state in the U.S., and most countries throughout the world have their own laws regulating the types of securities and other investment products which may be offered to their residents, as well as the process for doing so. As a result, any specific securities discussed in this communication may not be eligible for sale in some jurisdictions. This communication is not, and under no circumstances should be construed as, a solicitation to act as securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction.

In providing information contained herein to a municipal entity or obligated person, Piper Sandler (i) is not providing discretionary investment advice to any municipal entity or obligated person recipient (ii) is not acting as an advisor to any municipal entity or obligated person and (iii) does not owe a fiduciary duty pursuant to Section 15B of the Exchange Act to any municipal entity or obligated person with respect to the information and material contained in this communication. Piper Sandler is acting for its own interests, and any municipal entity or obligated person recipient of this information should discuss any information and material contained in this communication with any and all internal or external advisors and experts that the municipal entity or obligated person deems appropriate before acting on this information or material.

To the fullest extent permitted by law neither Piper Sandler & Co., nor any of its affiliates, nor any other person, accepts any liability whatsoever for any direct or consequential loss arising from any use of this communication or the information contained herein. No matter contained in this document may be reproduced or copied by any means without the prior consent of Piper Sandler & Co. Piper Sandler & Co. may buy from or sell to customers on a principal basis for its own account or as an agent for another person in the securities or related derivatives that are the subject of this communication in reliance on Rule 206(3)-1, we will not obtain client consent for each principal trade.

Piper Sandler & Co. has or may have proprietary positions in the securities or in related derivatives that are the subject of this communication. Piper Sandler & Co. may have been manager or co-manager of a public offering of securities of the issuer within the past twelve months. Additional information is available upon request.

Piper Sandler outgoing and incoming e-mail is electronically archived and recorded and is subject to review, monitoring and/or disclosure to someone other than the recipient. This e-mail may be considered an advertisement or solicitation for purposes of regulation of commercial electronic mail messages. If you do not wish to receive commercial e-mail communications from Piper Sandler, visit: www.piperSandler.com/do_not_email to review the details and submit your request to be added to the Piper Sandler "Do Not E-mail" directory. For additional disclosure information, see www.piperSandler.com/disclosures.

Piper Sandler Companies (NYSE: PIPR) is a leading investment bank and institutional securities firm driven to help clients Realize the Power of Partnership®. Securities brokerage and investment banking services are offered in the U.S. through Piper Sandler & Co., member SIPC and FINRA; in Europe through Piper Sandler Ltd., authorized and regulated by the U.K. Financial Conduct Authority; and in Hong Kong through Piper Sandler Hong Kong Ltd., authorized and regulated by the Securities and Futures Commission. Asset management products and services are offered through separate investment advisory affiliates.

© 2023 Piper Sandler & Co., 800 Nicollet Mall, Suite 900, Minneapolis, MN 55402-7036