

APOLLO

# Outlook for US banks after the Fed pivot

Torsten Slok, Jyoti Agarwal, and Rajvi Shah  
tslok@apollo.com

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## Key themes for banks:

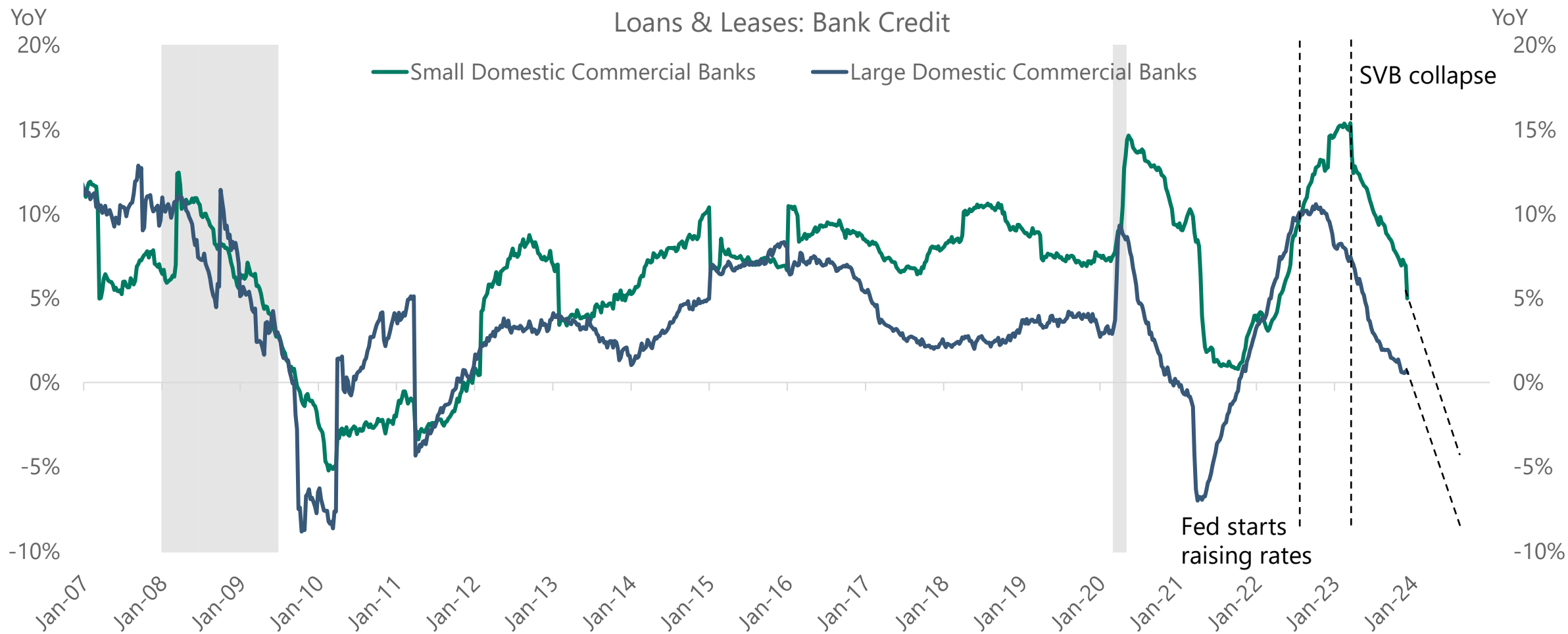
- CRE holdings
- Credit quality deterioration because of Fed hikes
- Held-to-maturity issues because of higher rates
- Duration of deposits
- Funding costs in wholesale markets for regional banks
- Basel 3 endgame
- Fed pivot boosting lending and capital markets activity

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12. Community banks

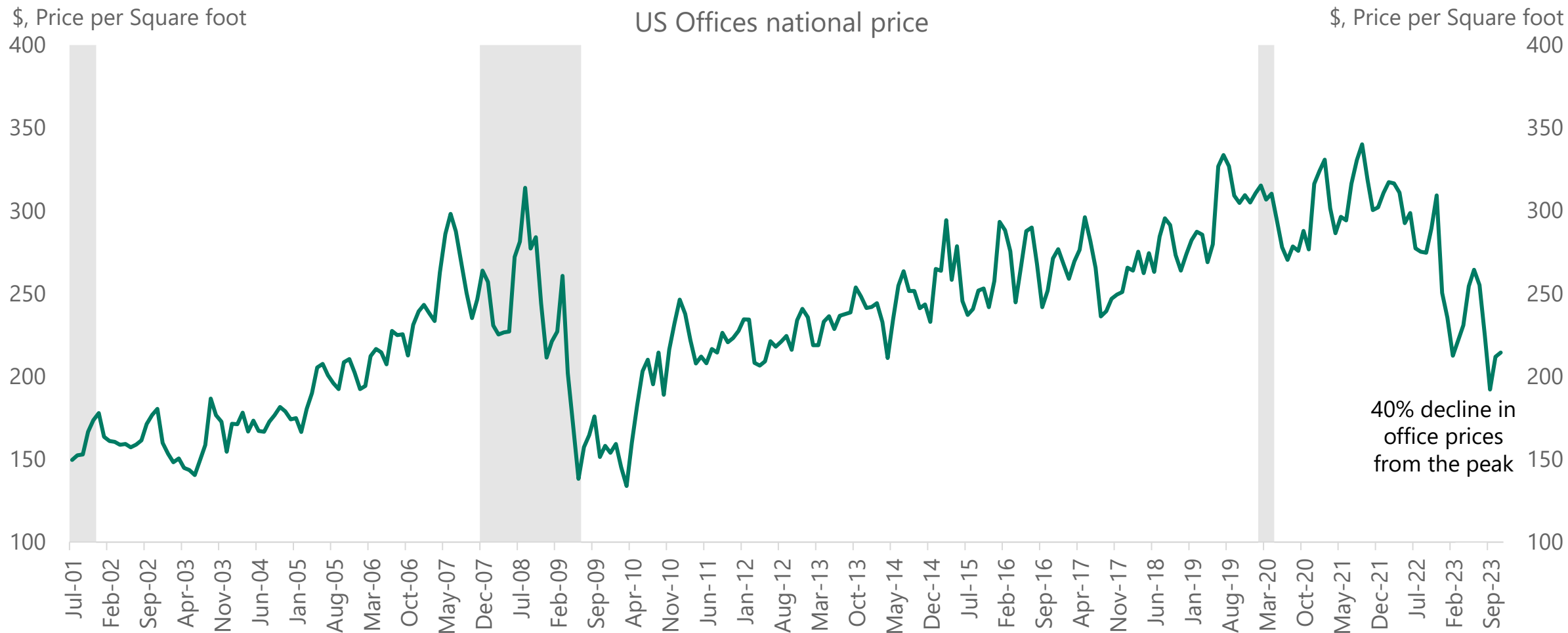
# Overview

# Weekly Fed data shows small and large bank lending growth slowing

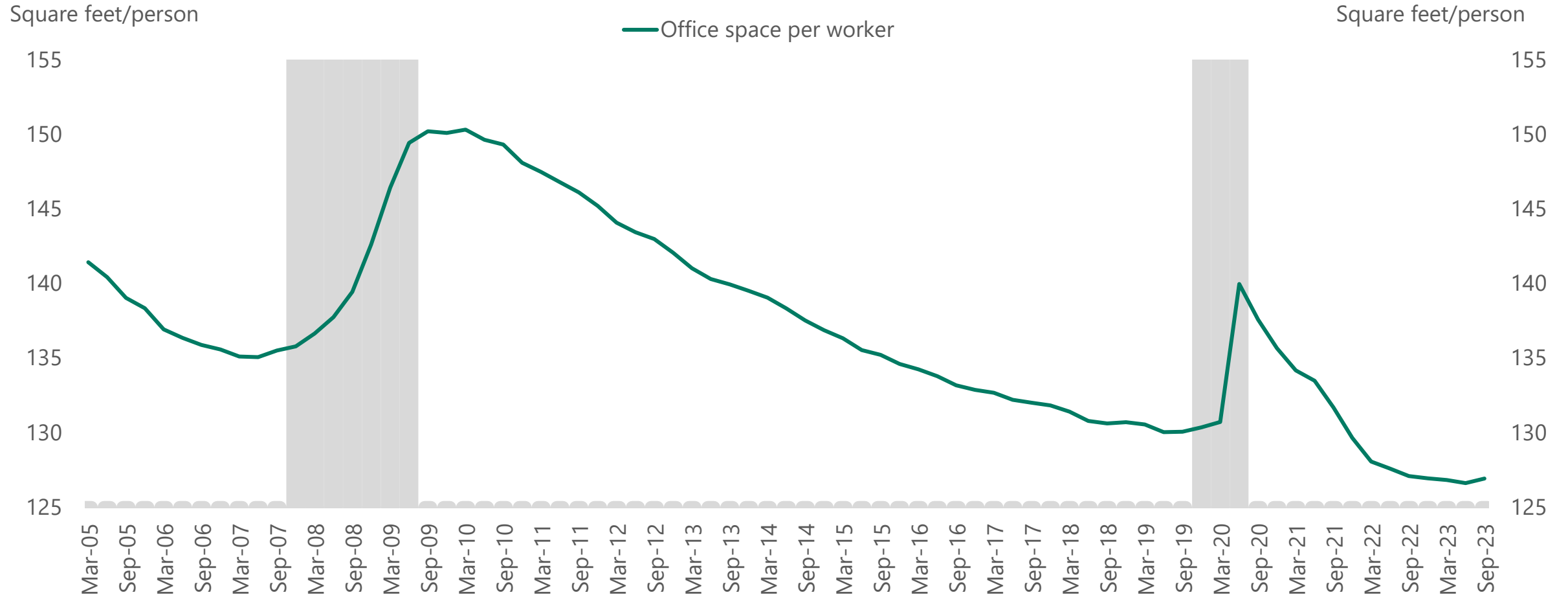


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Price per square foot for US offices is down 40% from peak



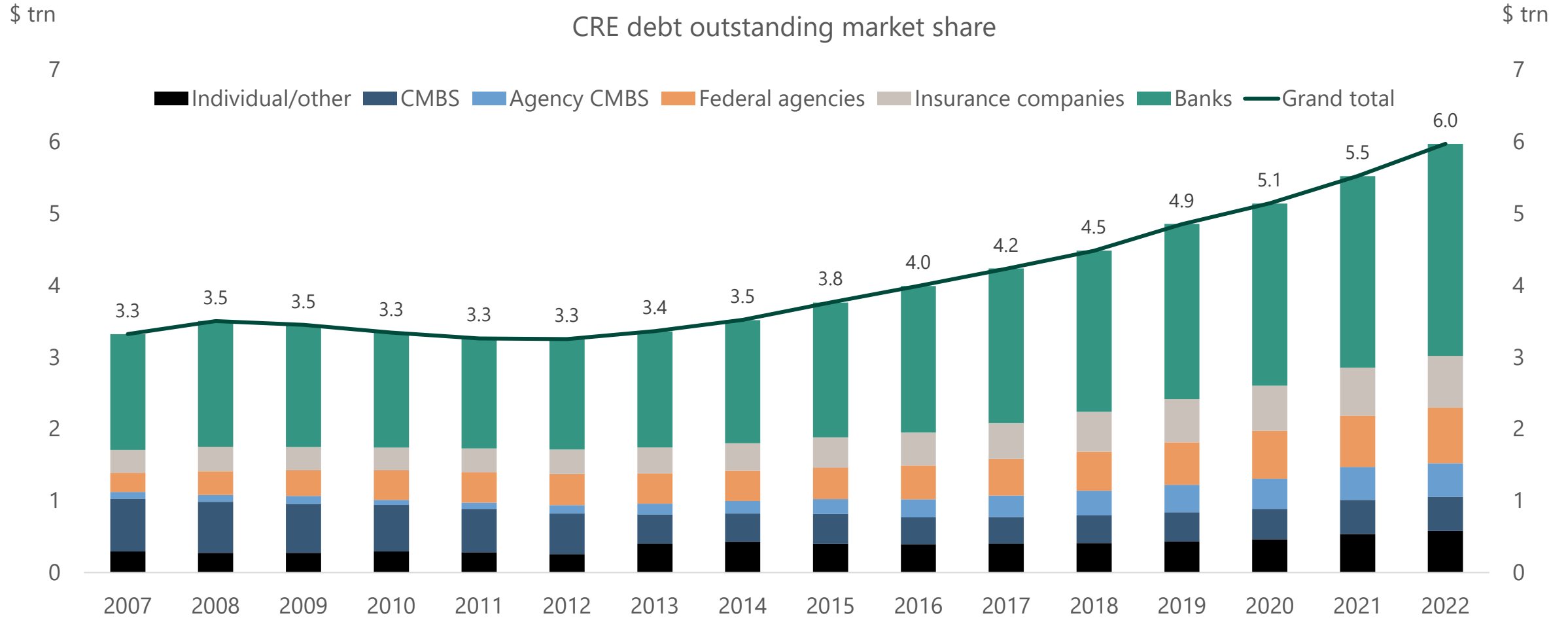
# The amount of office space per worker has been declining



Source: REITS, BLS, Bloomberg, Apollo Chief Economist (Note: Office using employment includes professional and business services, Information and Financial activities)

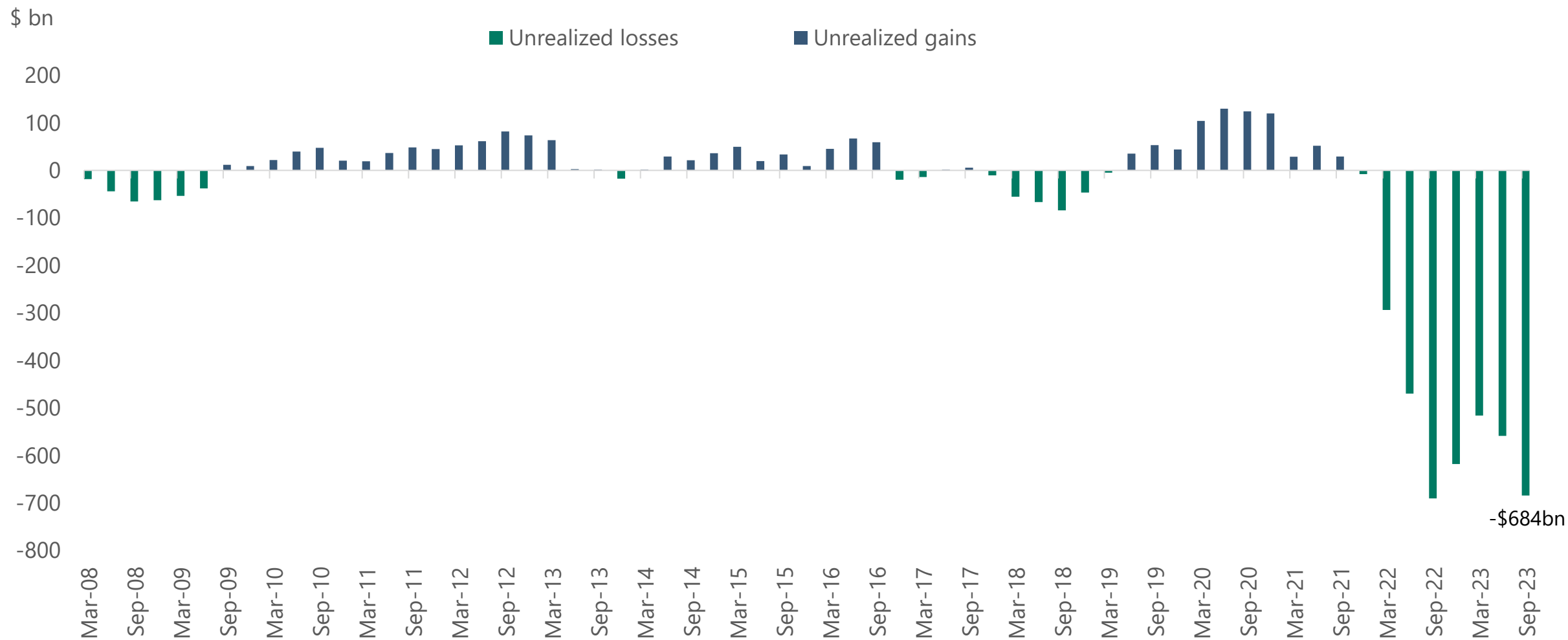


# US banks hold half of CRE debt outstanding



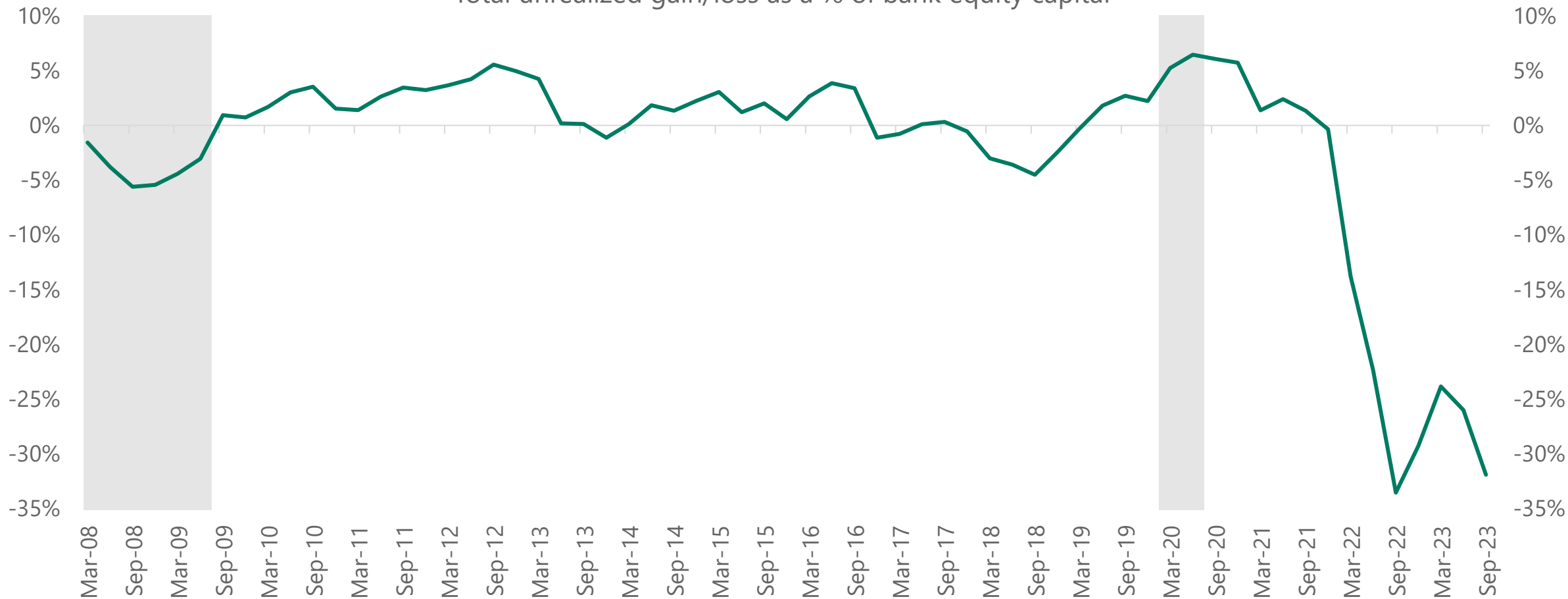
Source: S&P Capital IQ, Apollo Chief Economist

# Unrealized losses on investment securities for banks



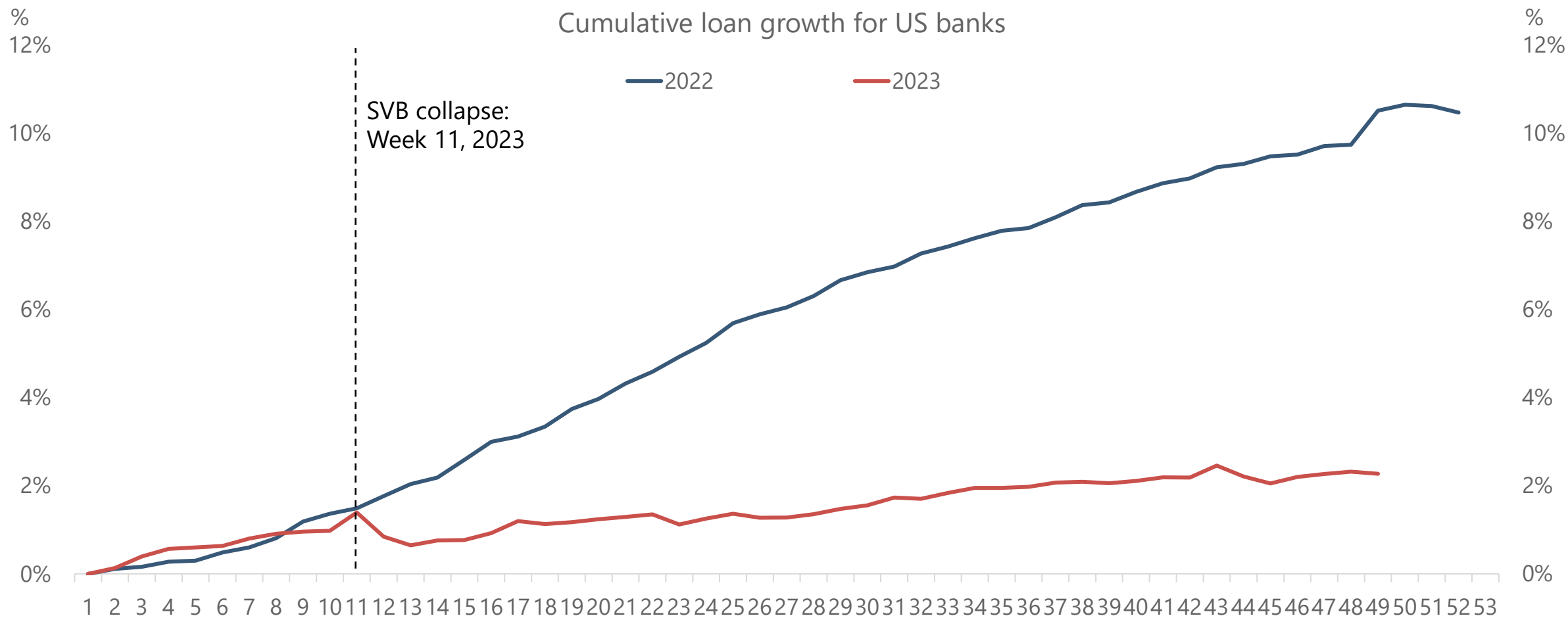
# Unrealized losses making up more than 30% of bank equity capital

Total unrealized gain/loss as a % of bank equity capital

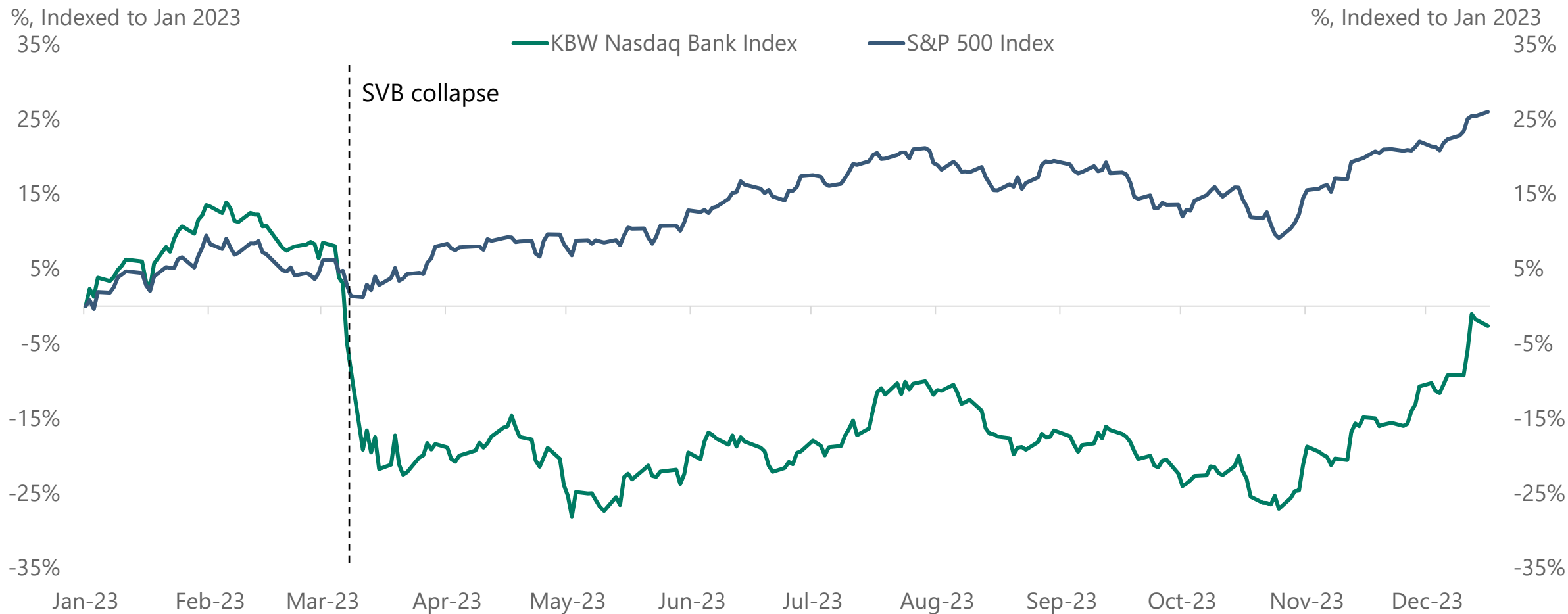


What is the banking sector response to the SVB collapse and associated deposit outflows? Cutting lending and selling mortgages

# SVB having a permanent effect

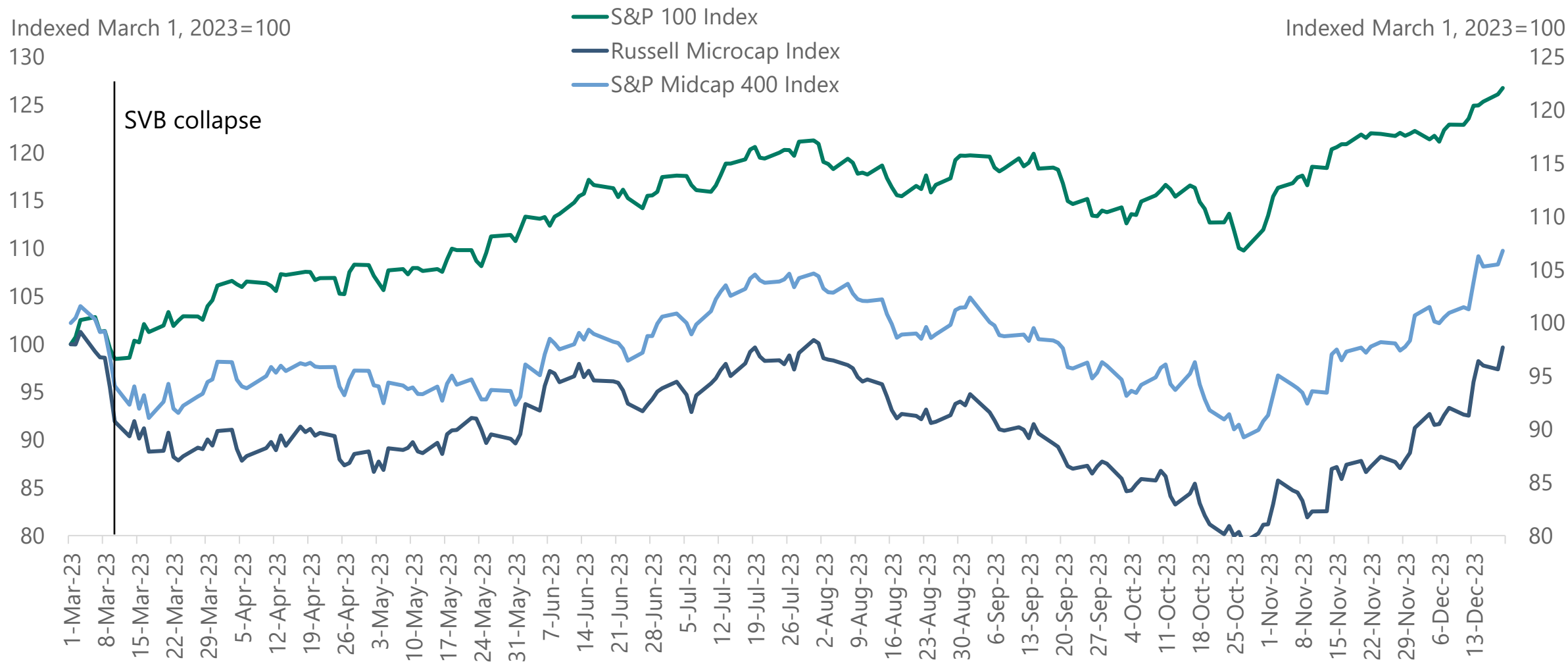


# Bank stocks have underperformed the S&P500 since the SVB collapse

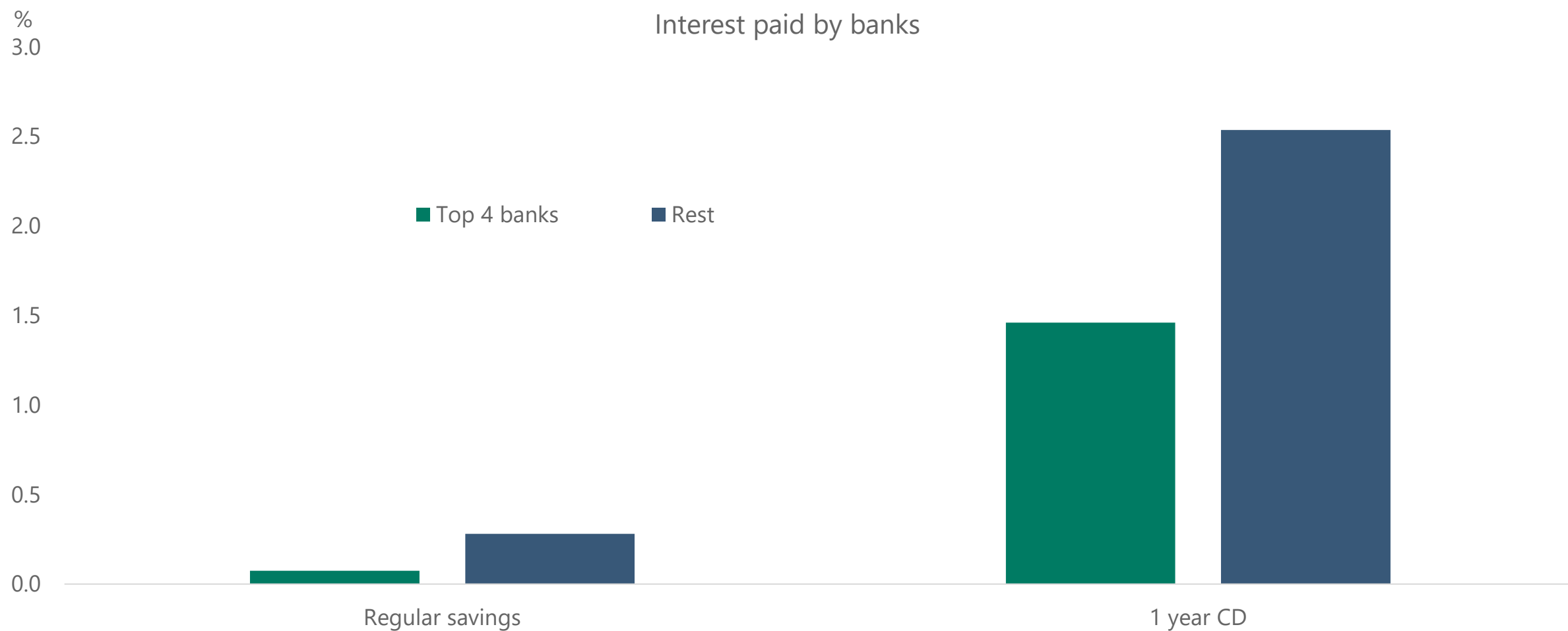


Note: The KBW Bank Index consists of: Bank of NY Mellon, Bank of America, Capital One Financial, Citigroup, Citizens Financial Group, Comerica, Fifth Third Bank, First Horizon, Huntington, JP Morgan Chase, Keycorp, M&T Bank, Northern Trust, PNC, People's United Financial, Regions, State Street, Truist, US Bancorp, Wells Fargo, and Zions. Source: Bloomberg, Apollo Chief Economist

# Banking crisis and Fed hikes having negative impact on small and medium-sized companies

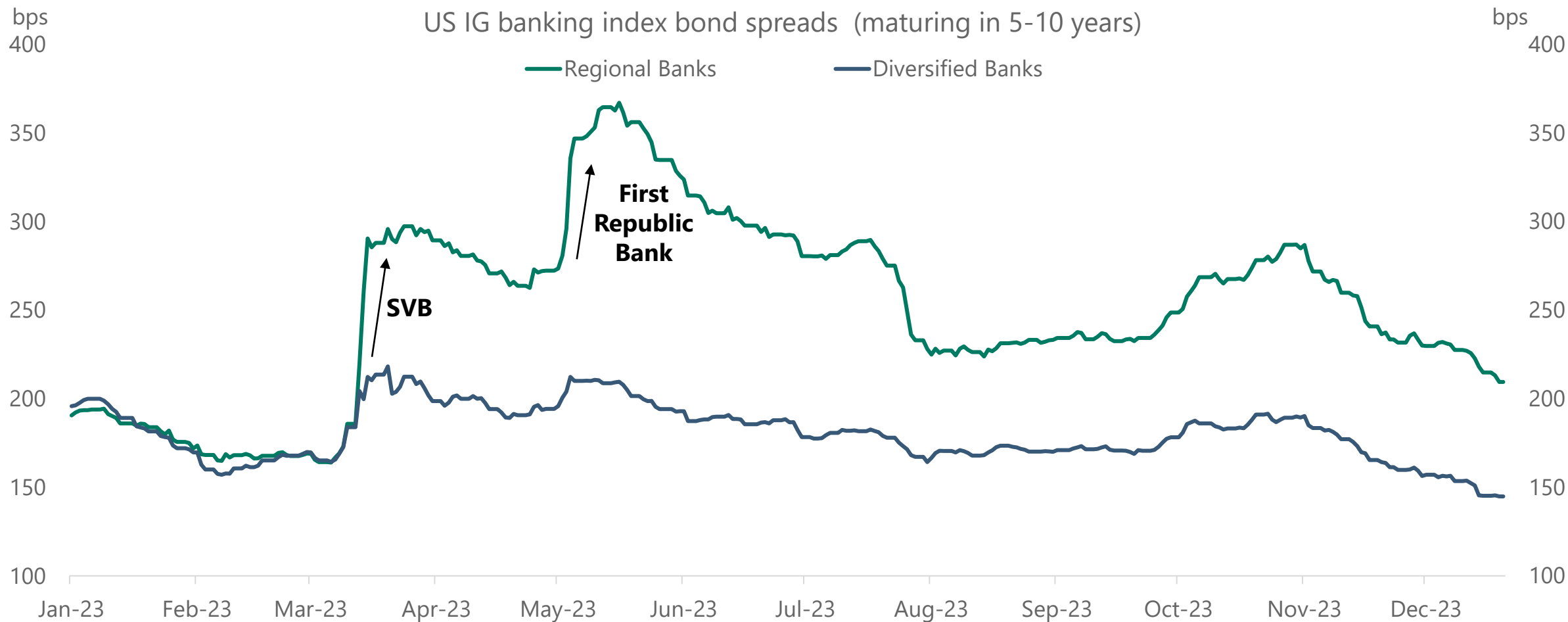


# Top 4 banks pay lower interest rates to consumers



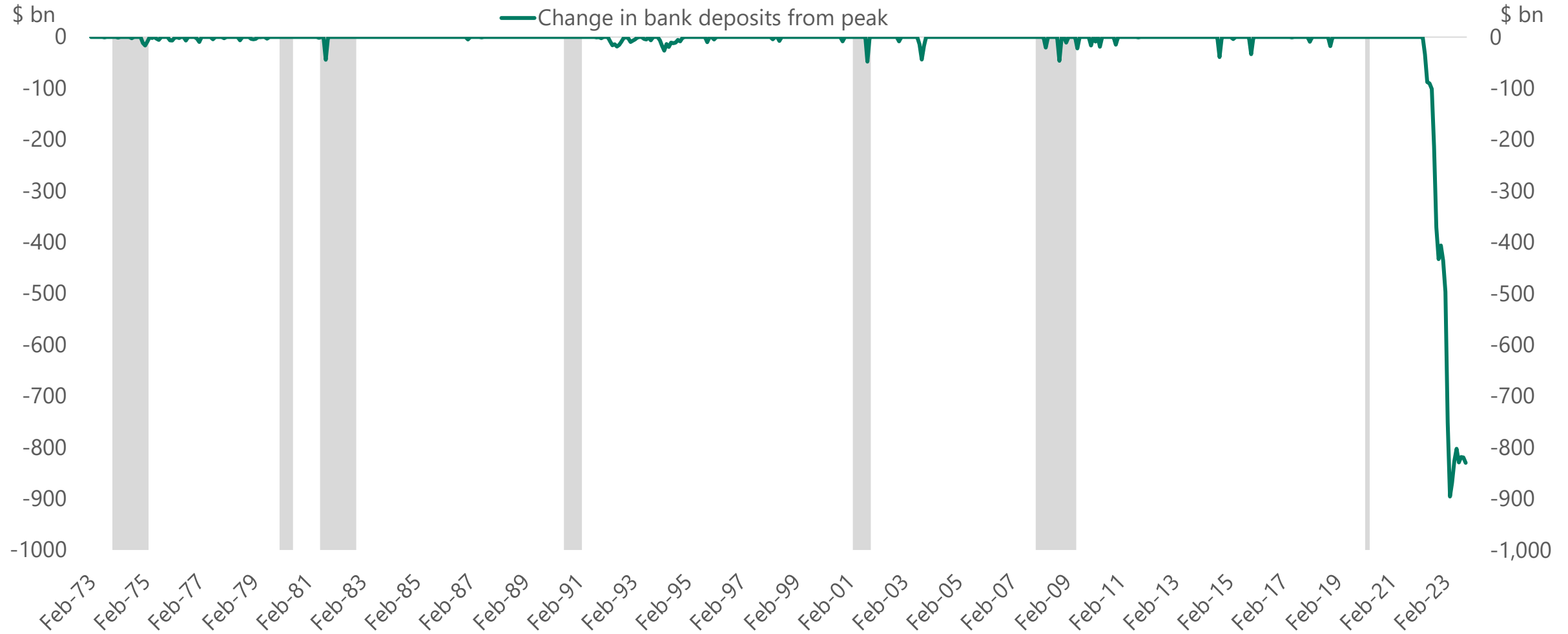


# Funding costs for banks since SVB and FRB



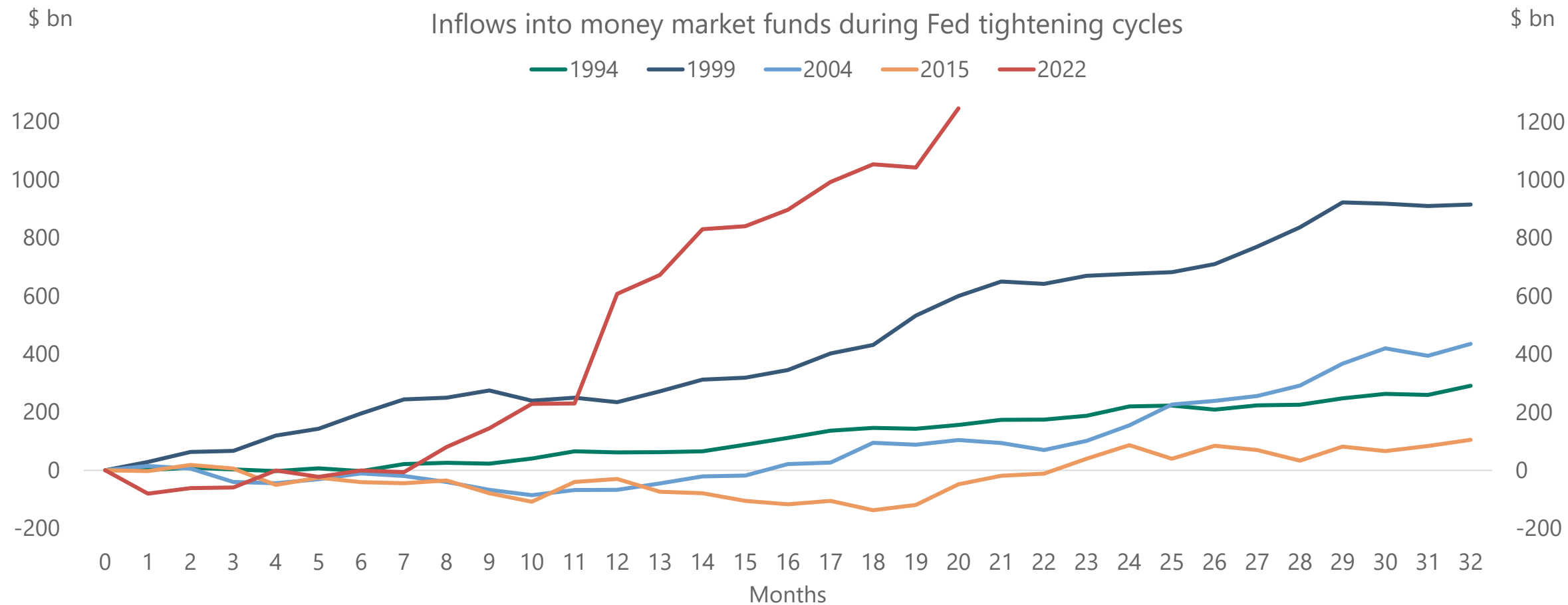
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, C6PX Index for bonds issued before 1st Jan 2023. There are 8 banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited, Citizens Financial, Huntington, and Zions, and Diversified banks includes JP Morgan, Citibank, and Bank of America.

# \$825bn in deposits have left the banks since the Fed began to raise interest rates



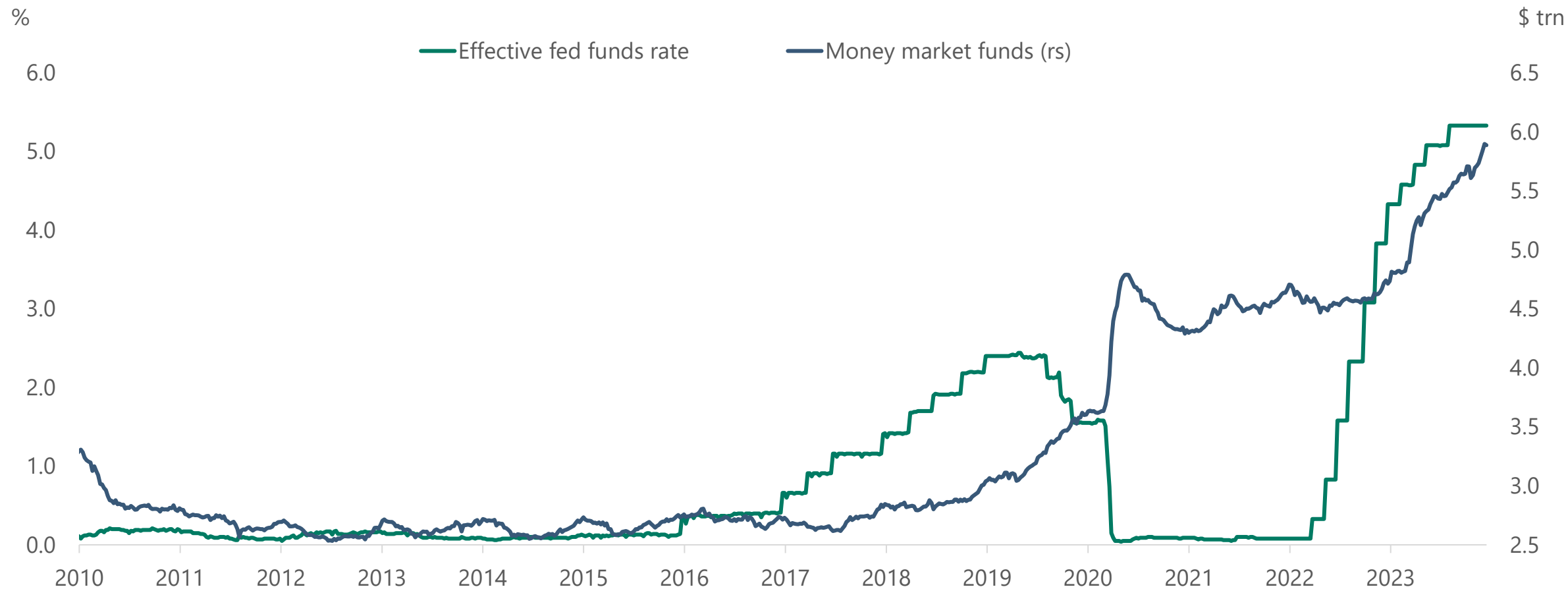
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. Note: Peak is defined as the month before monthly outflows turn negative

# \$1,245bn inflows into money market funds during this Fed hiking cycle

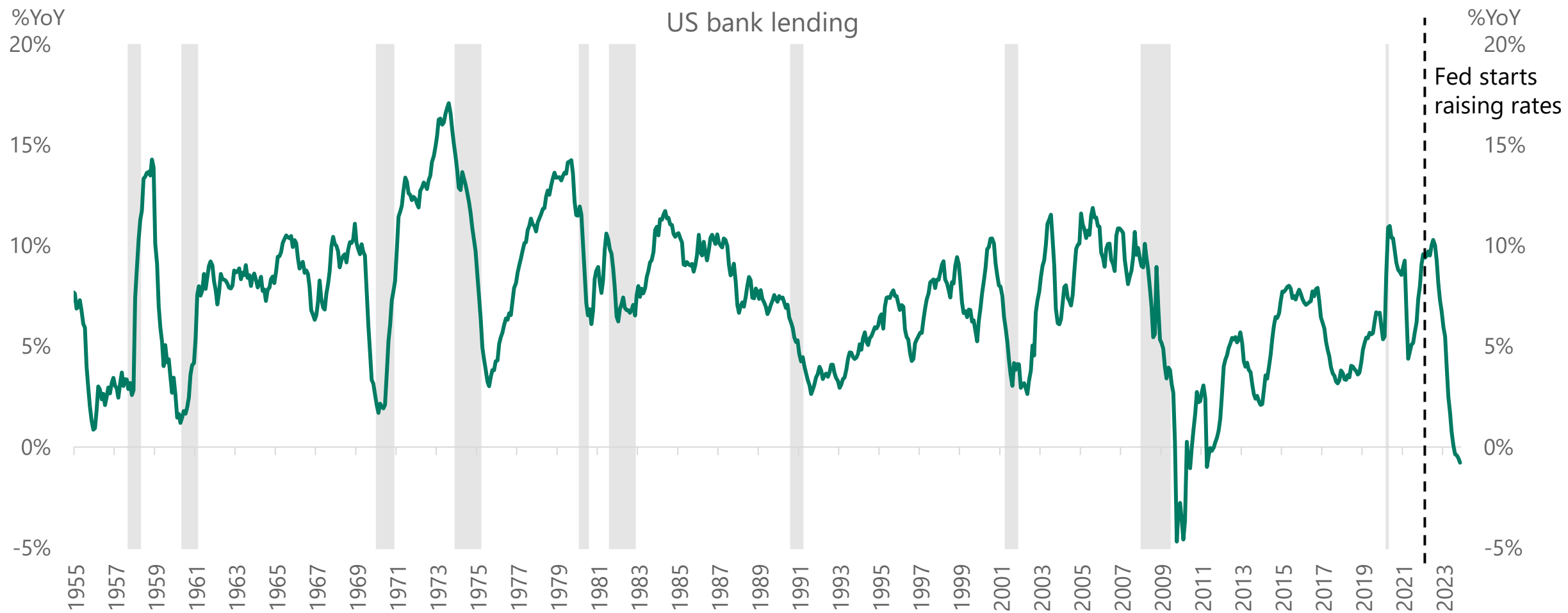


Source: FRB, ICI, Bloomberg, Apollo Chief Economist.

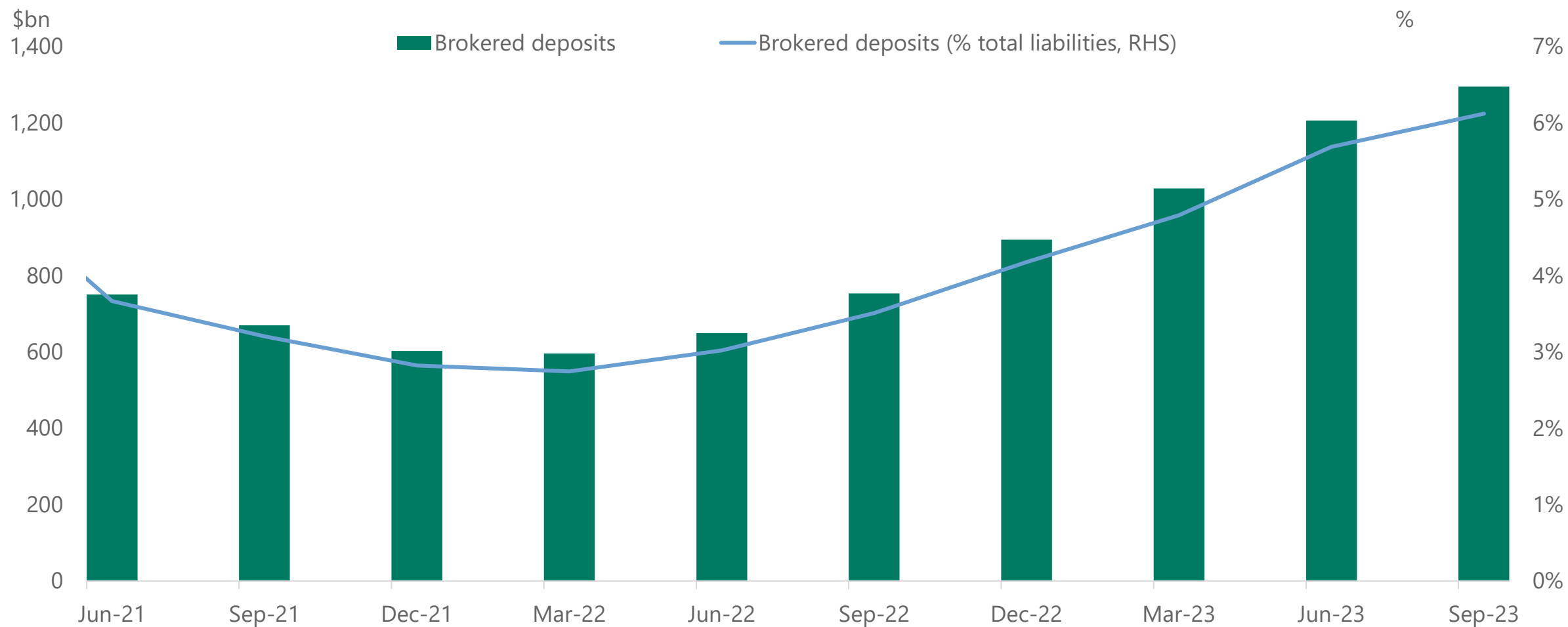
# Money market funds and the Fed funds rate



# Rapid decline in bank lending

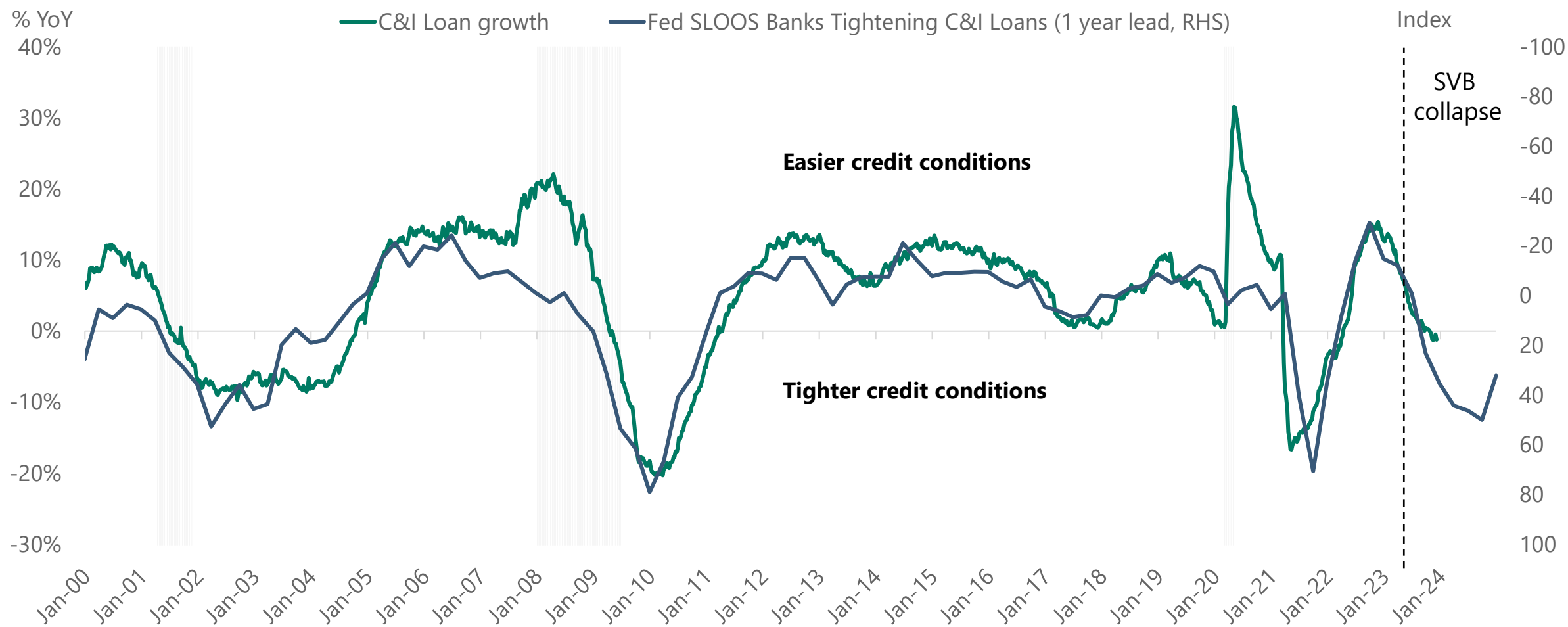


# Brokered deposits rising in US banks

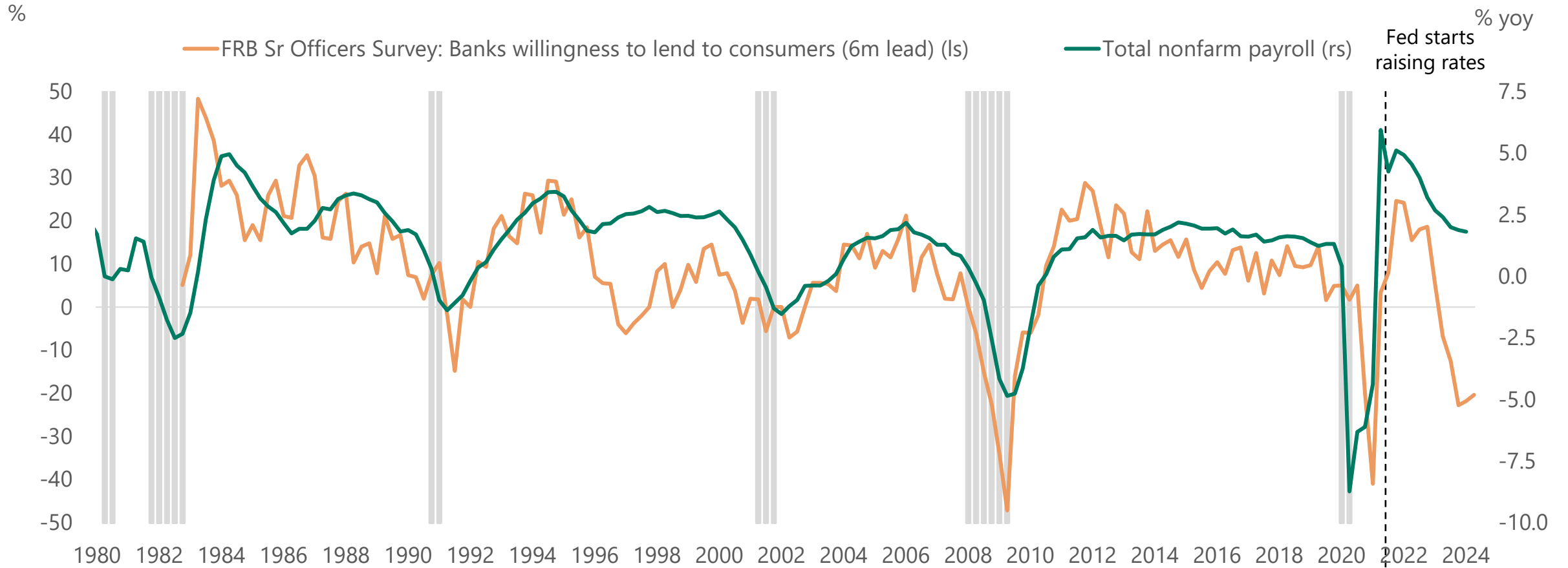


Source: S&P CapitalIQ Pro, Apollo Chief Economist. Note: Brokered deposits represent funds which the reporting bank obtains, directly or indirectly, by or through any deposit broker for deposit into one or more deposit accounts. Thus, brokered deposits include both those in which the entire beneficial interest in a given bank deposit account or instrument is held by a single depositor and those in which the deposit broker sells participations in a given bank deposit account or instrument to one or more investors.

# Bank lending may shrink over the coming quarters

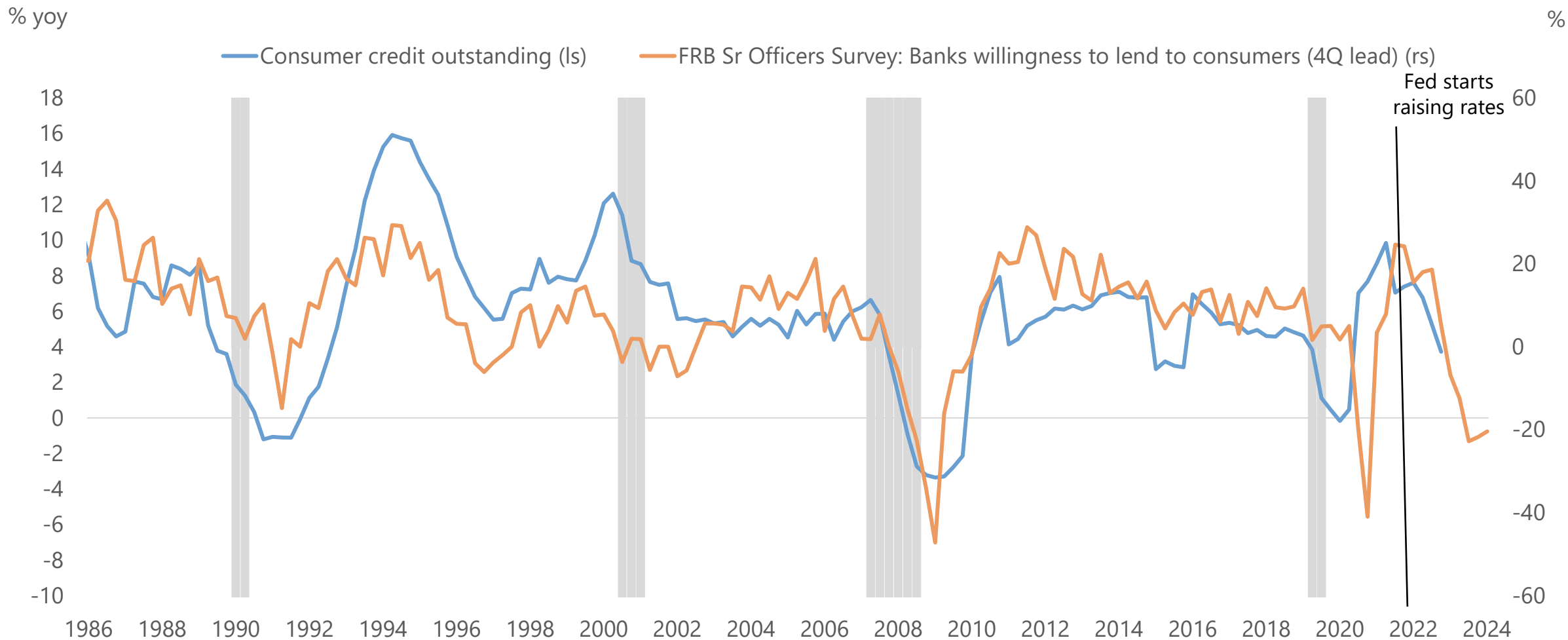


# Downside risks to nonfarm payrolls as a result of tighter credit conditions

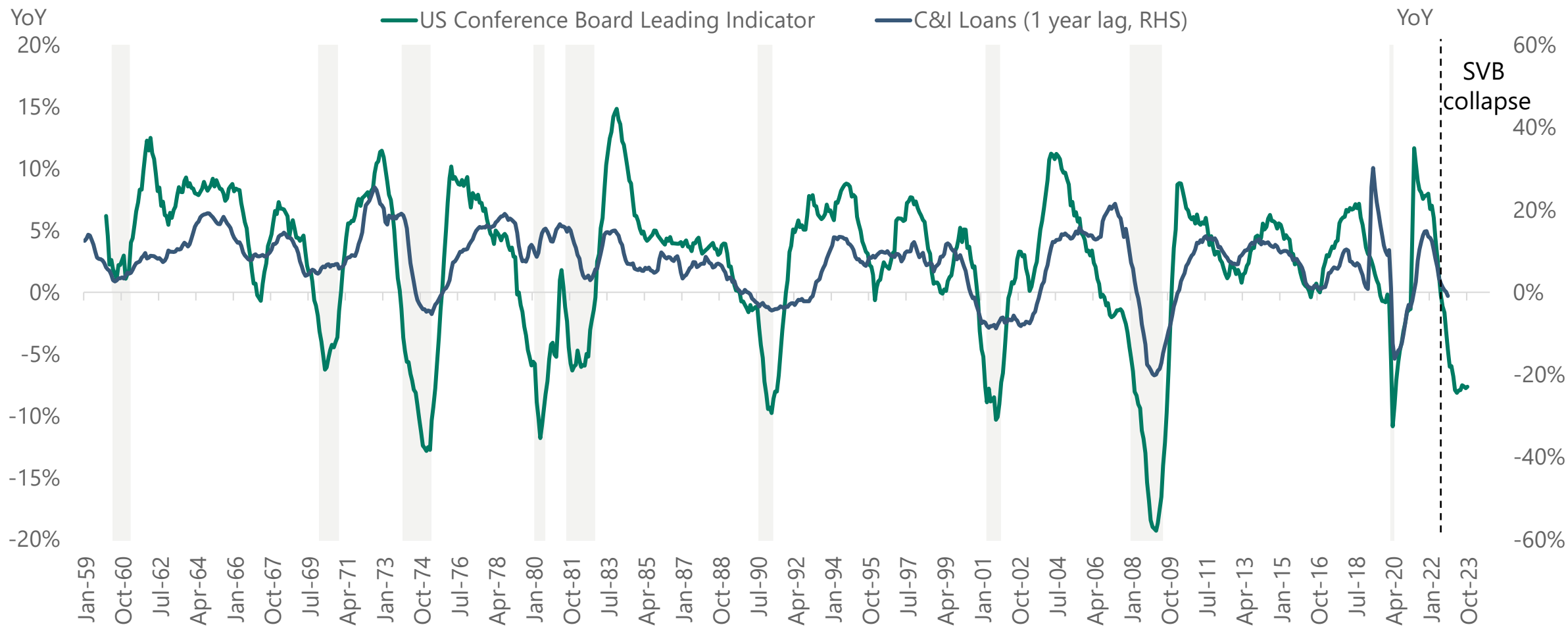




# Credit tightening points to a slowdown in consumer credit

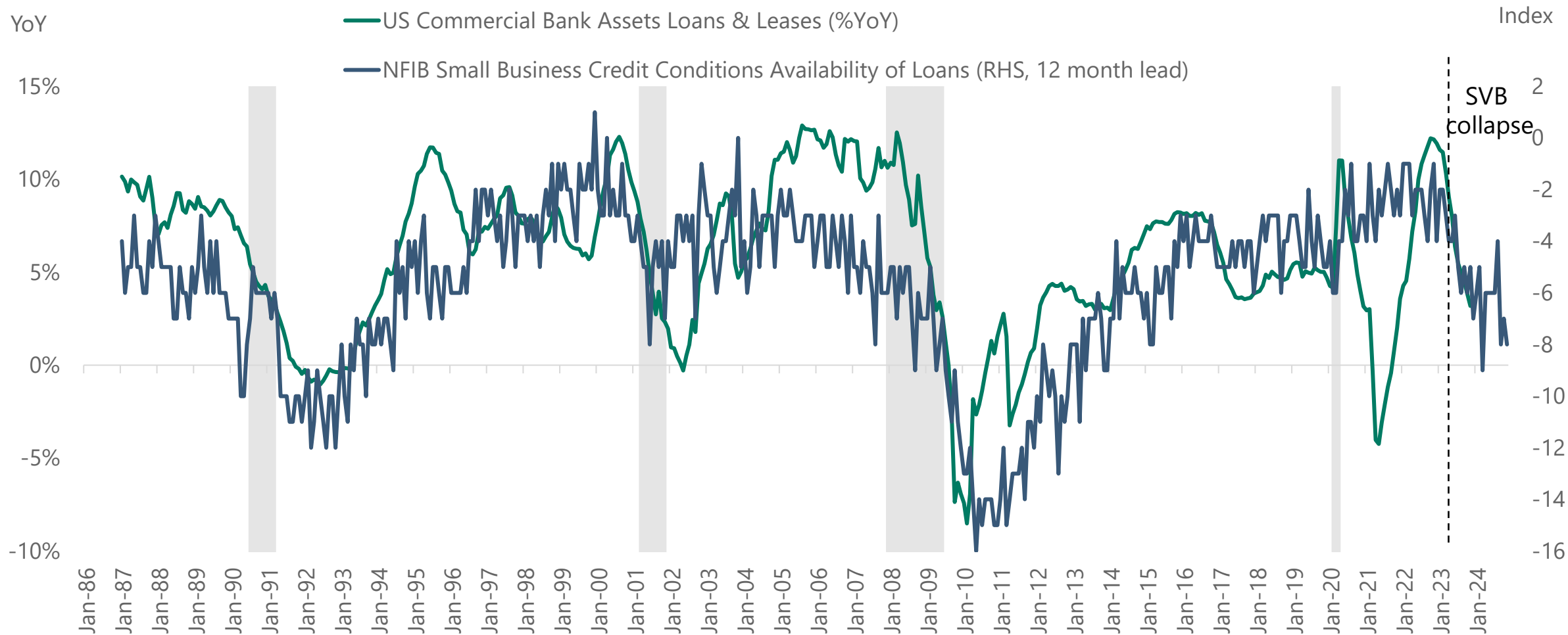


# Tighter credit conditions dragging down the economy

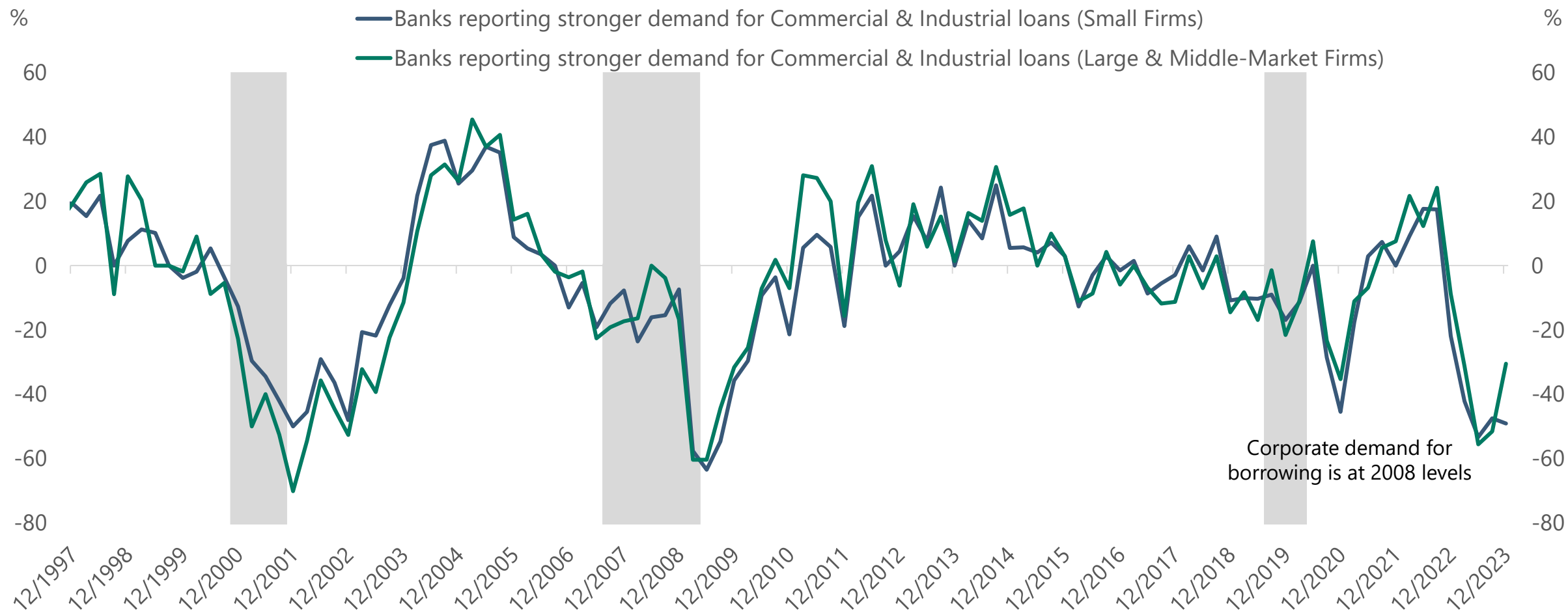


Source: Conference Board, FRB, Haver Analytics, Apollo Chief Economist

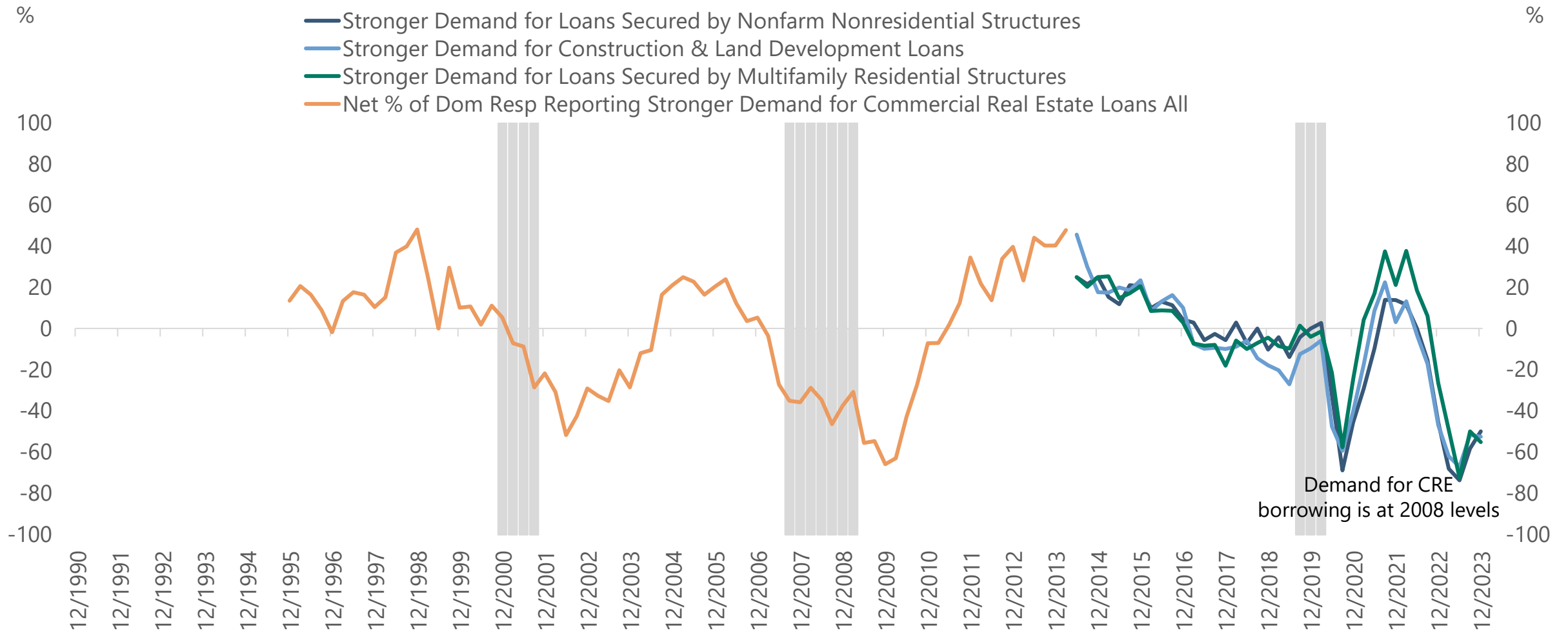
# Tighter credit conditions dragging down the economy



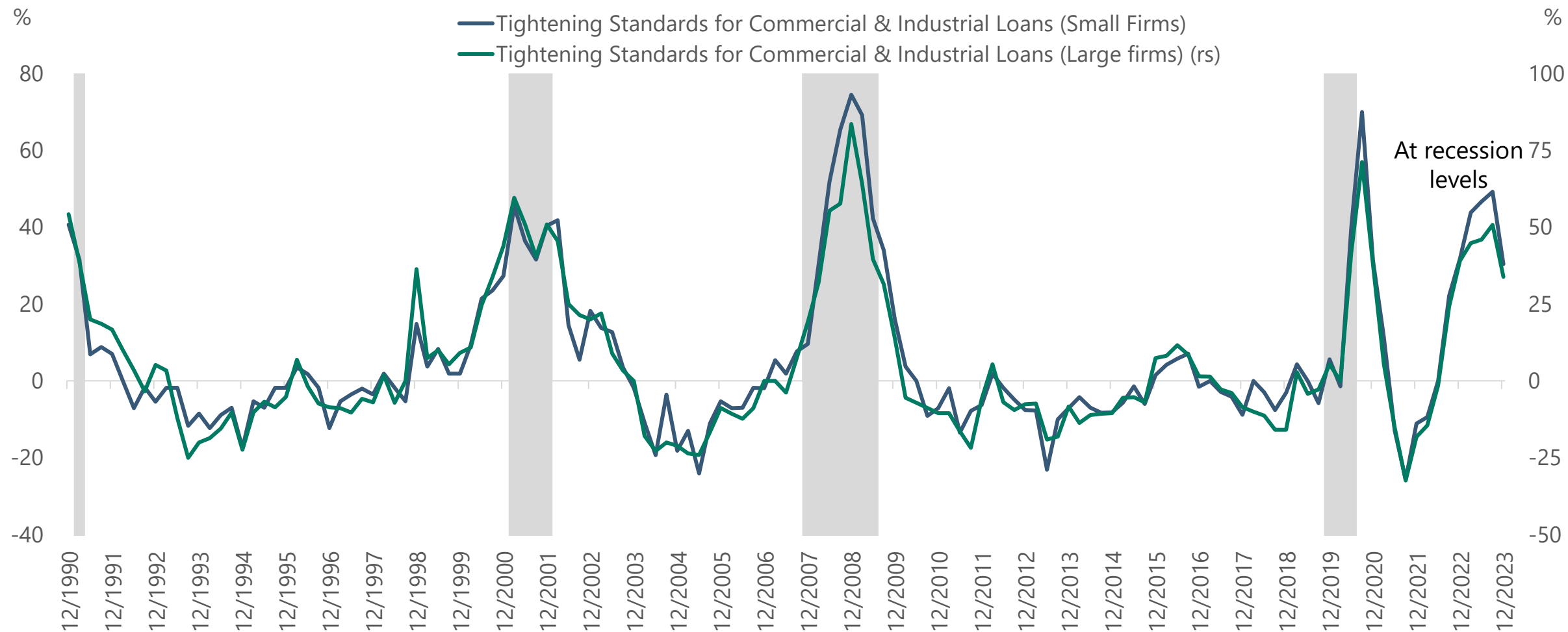
# Demand for corporate loans is at 2008 levels but starting to improve



# Demand for commercial real estate loans is at 2008 levels

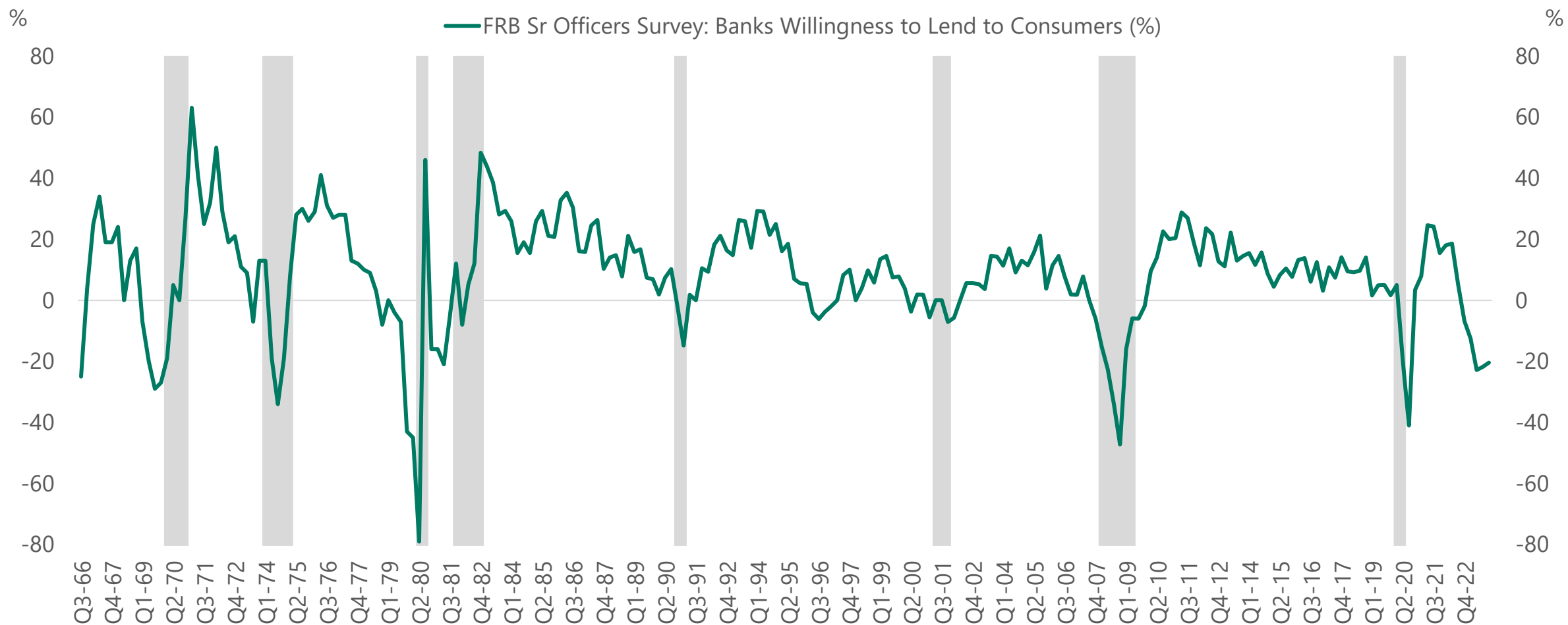


# Banks are tightening lending standards significantly, near 2008 levels



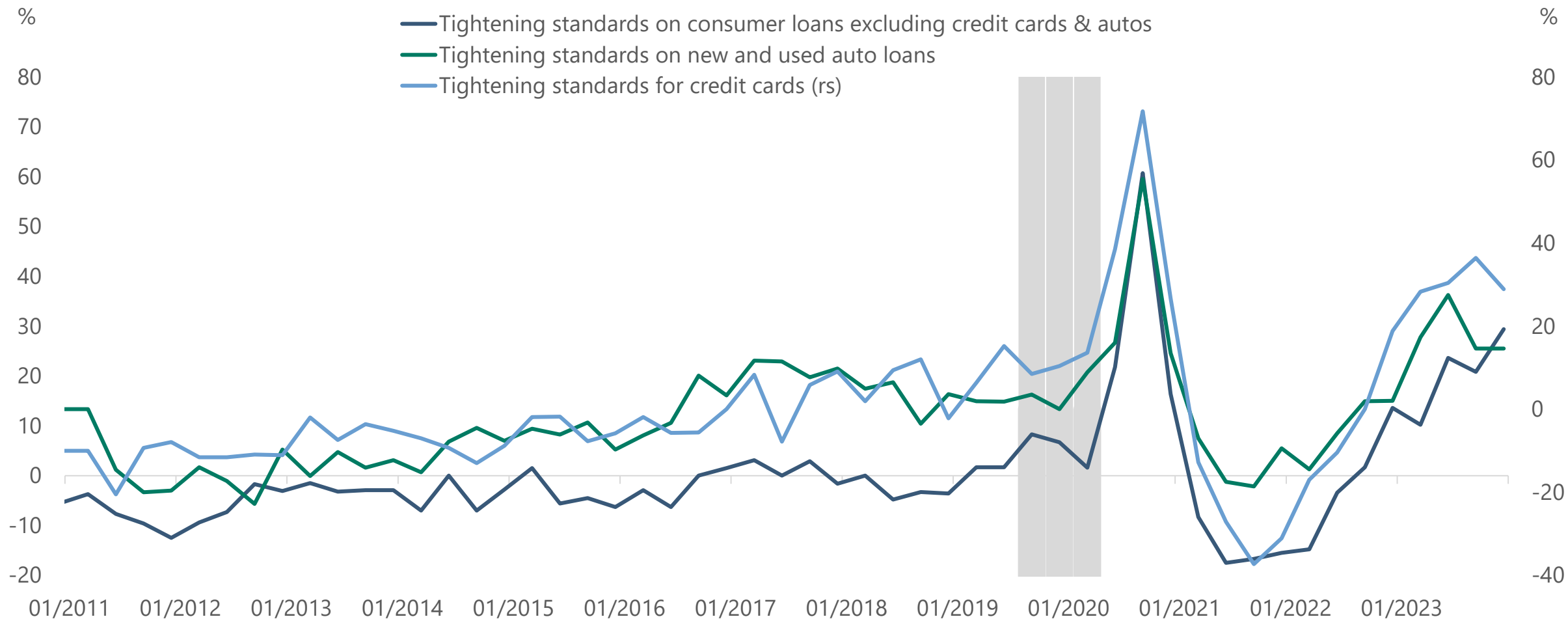
Source: FRB, Bloomberg, Apollo Chief Economist.

# Banks' willingness to lend to consumers approaching 2008 levels



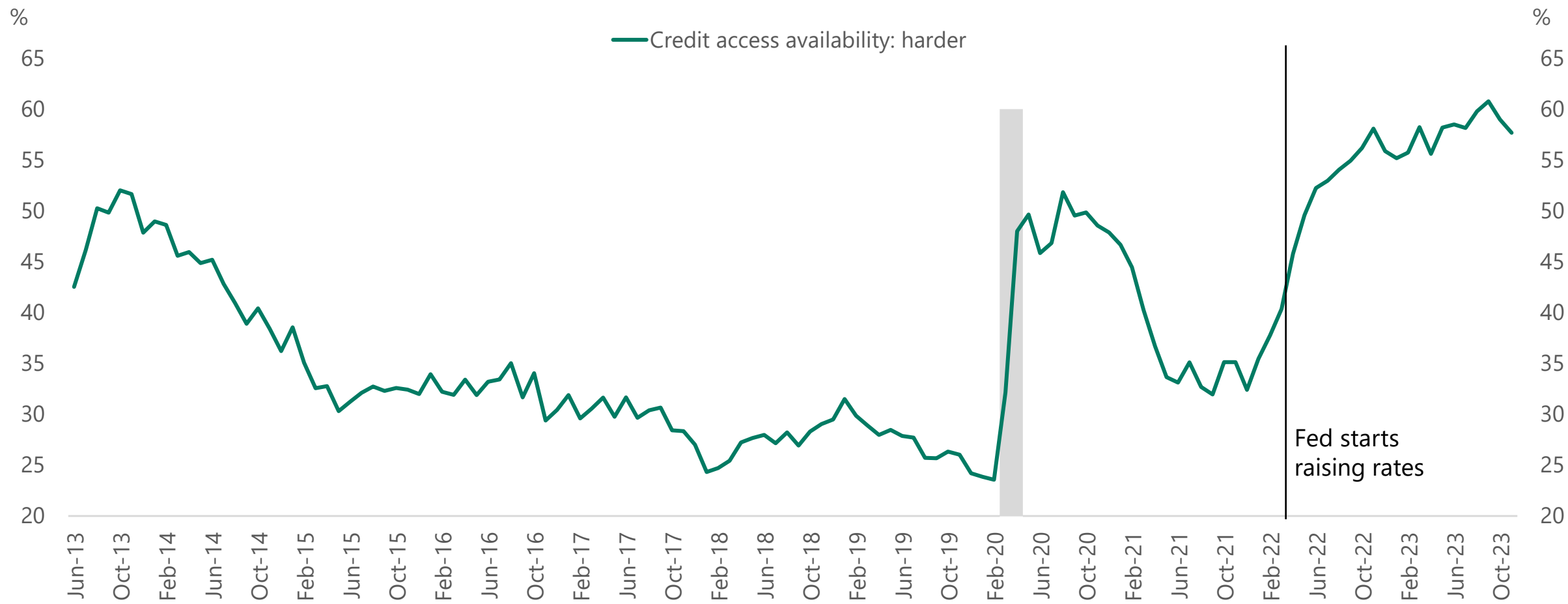
Source: FRB, Bloomberg, Apollo Chief Economist.

# Lending standards are tightening for consumers, approaching 2008 levels



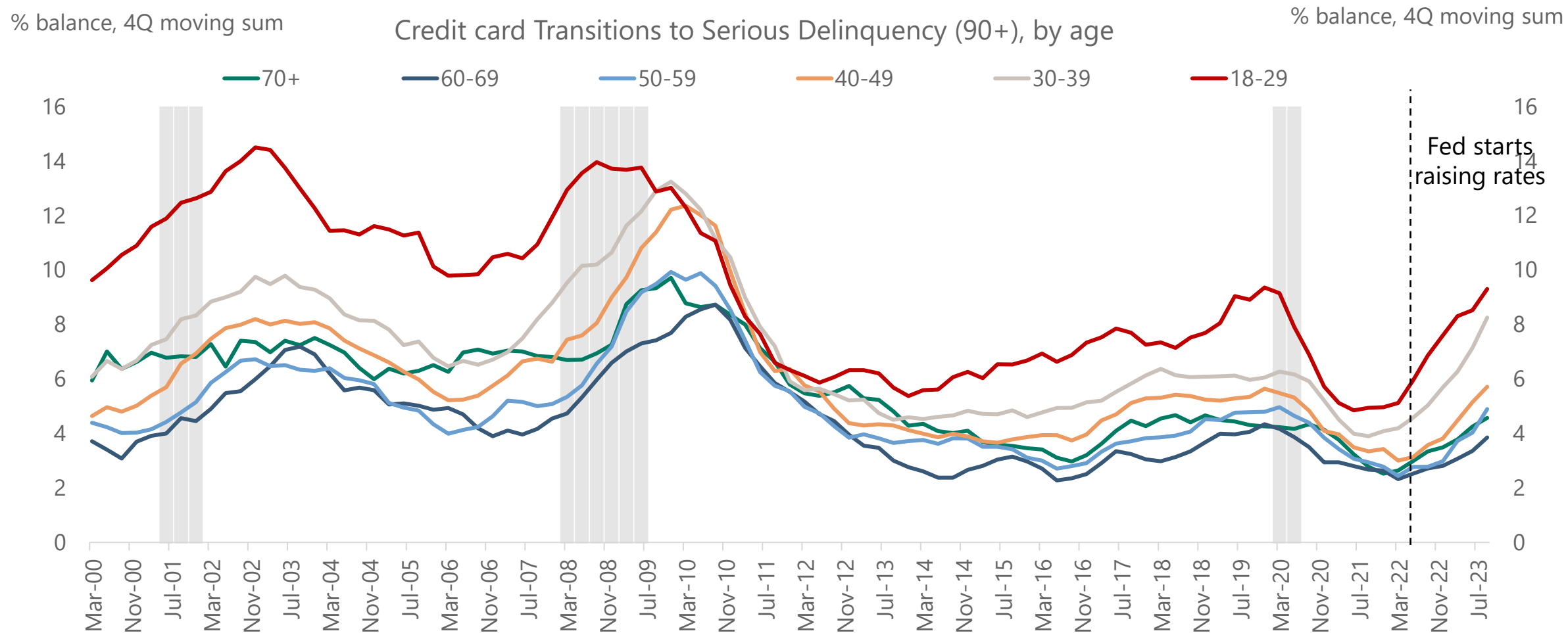


# The share of households reporting it is harder to obtain credit than one year ago



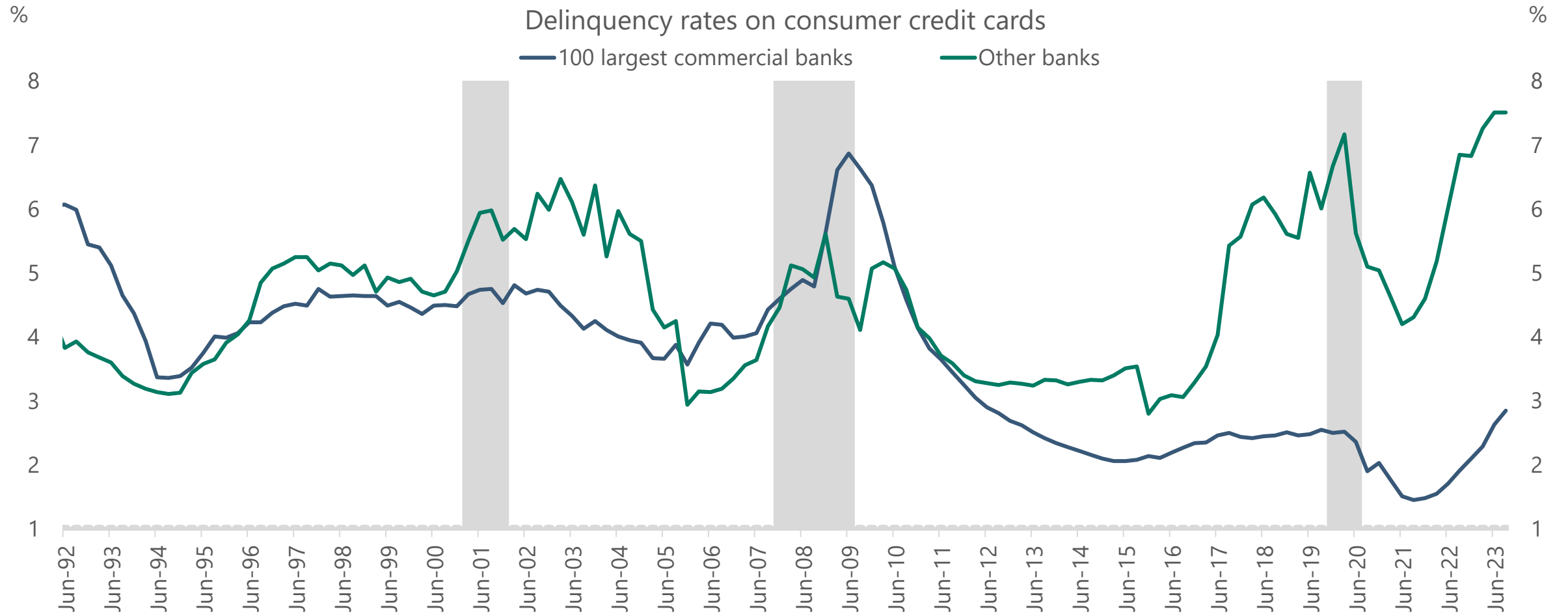
Source: FRBNY, Haver Analytics, Apollo Chief Economist (Harder = much harder + somewhat harder)

# Credit card delinquency rates rising

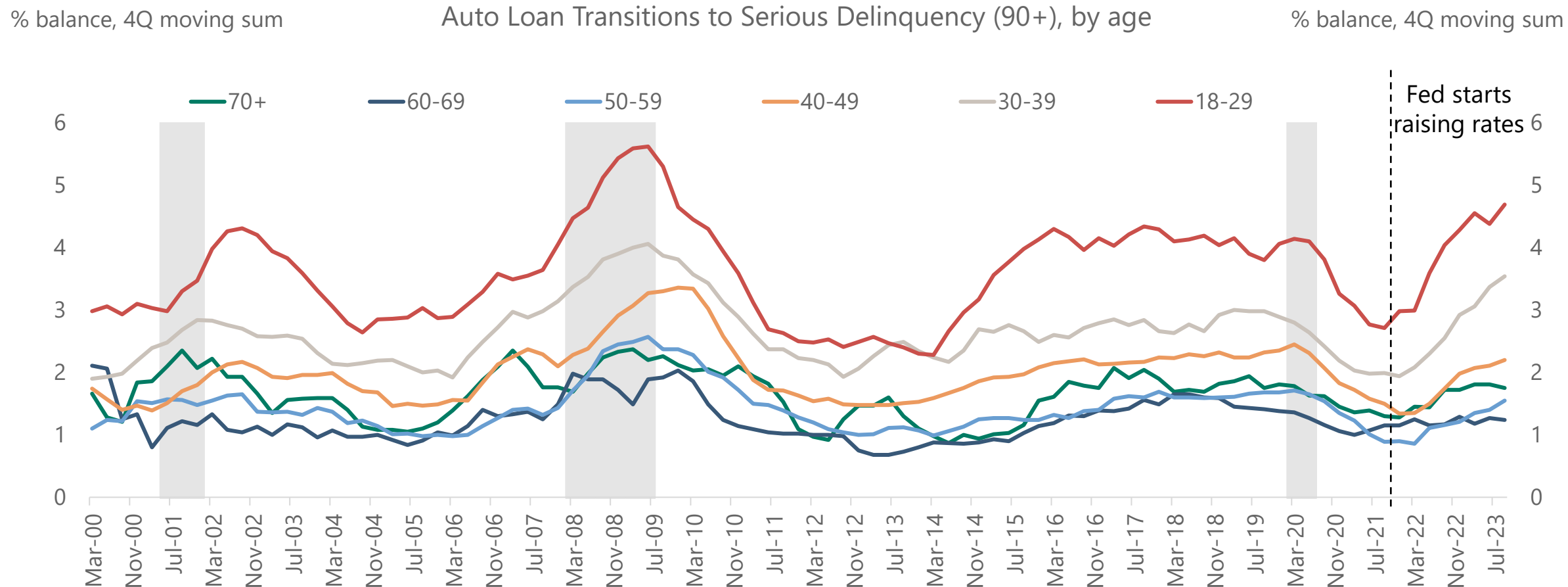


Source: New York Fed Consumer Credit Panel / Equifax, Apollo Chief Economist

# Credit card delinquency rates at small banks are higher than at large banks

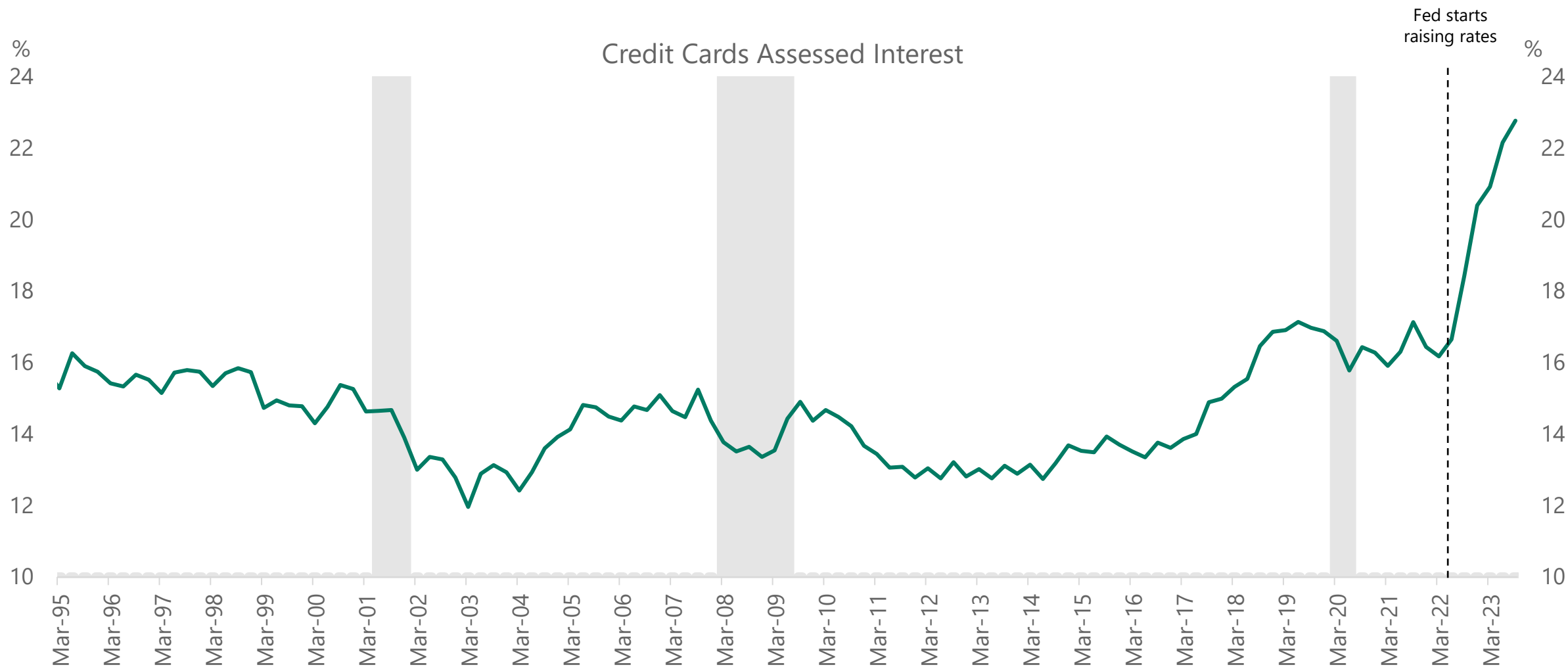


# Auto loan transitions to serious delinquency at 2008 levels

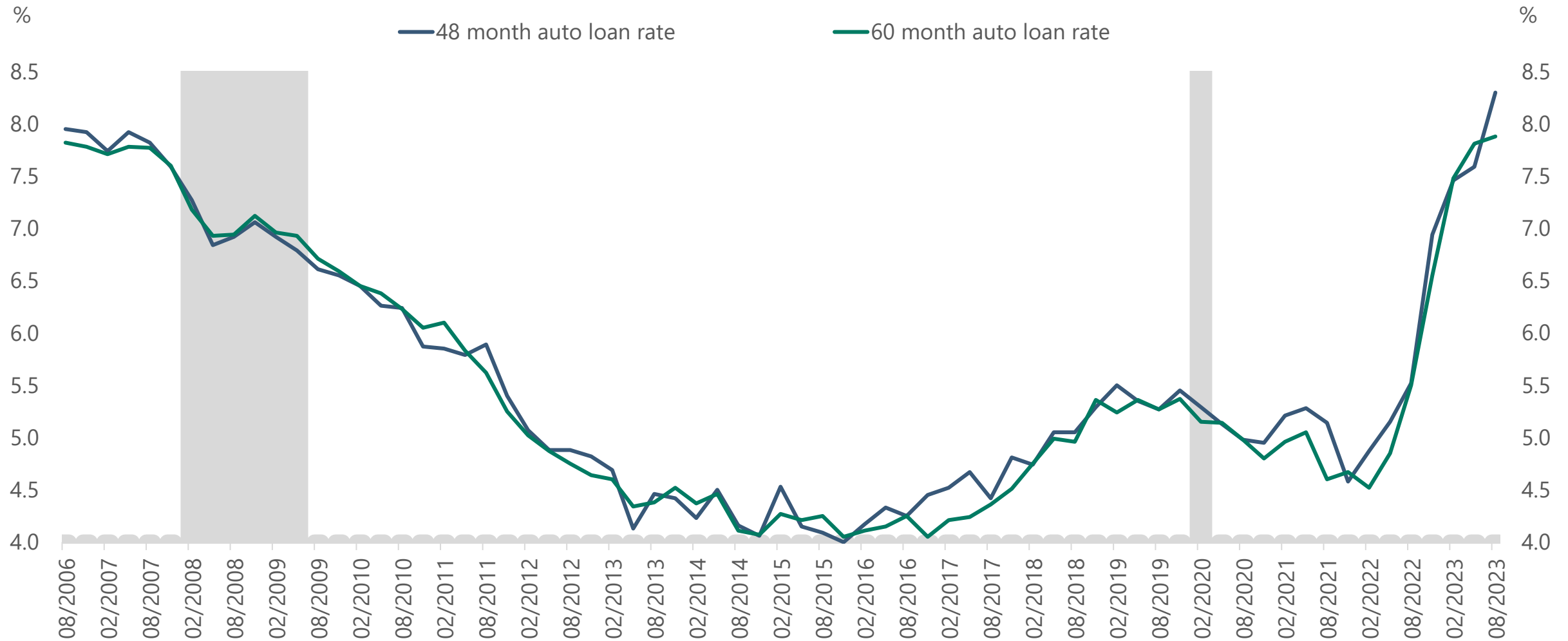


Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist

# Interest rate on credit cards

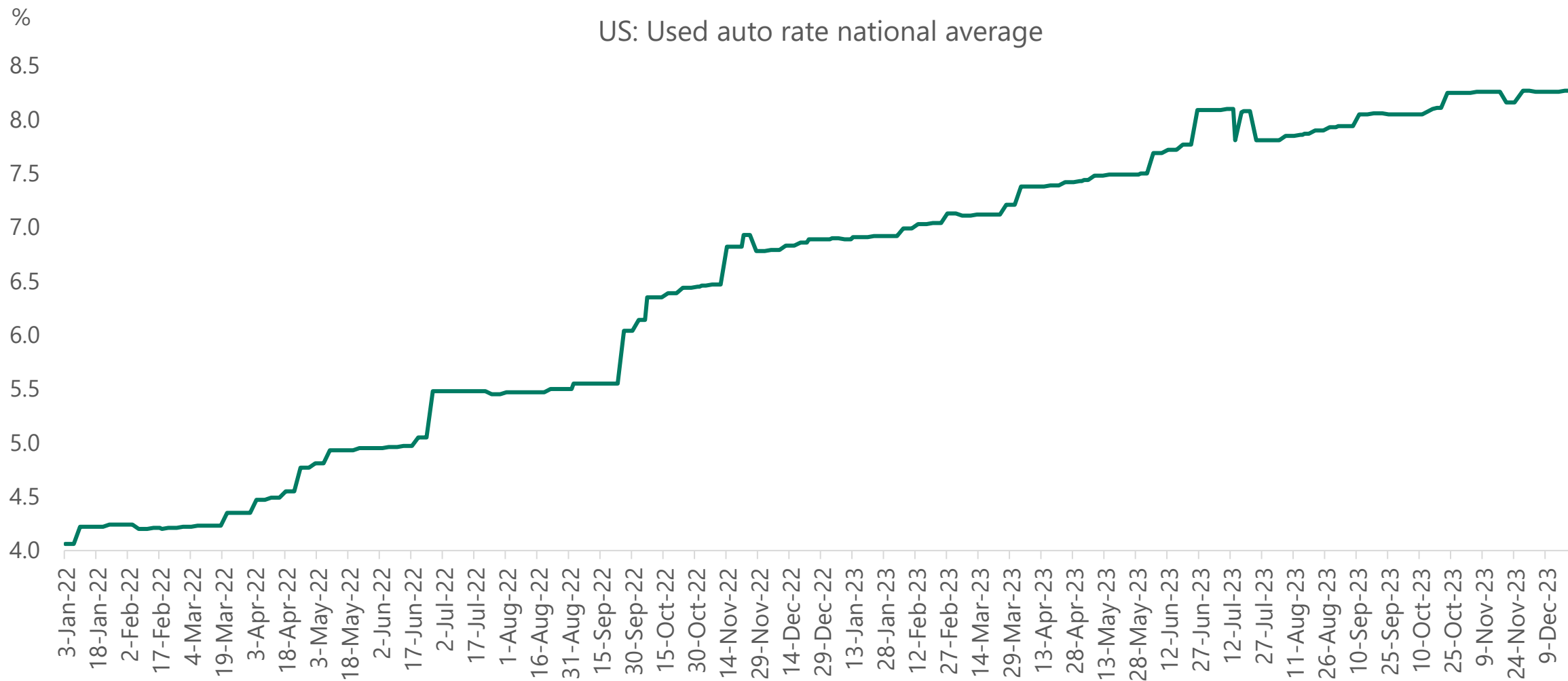


# Commercial bank auto loan rates highest since 2008



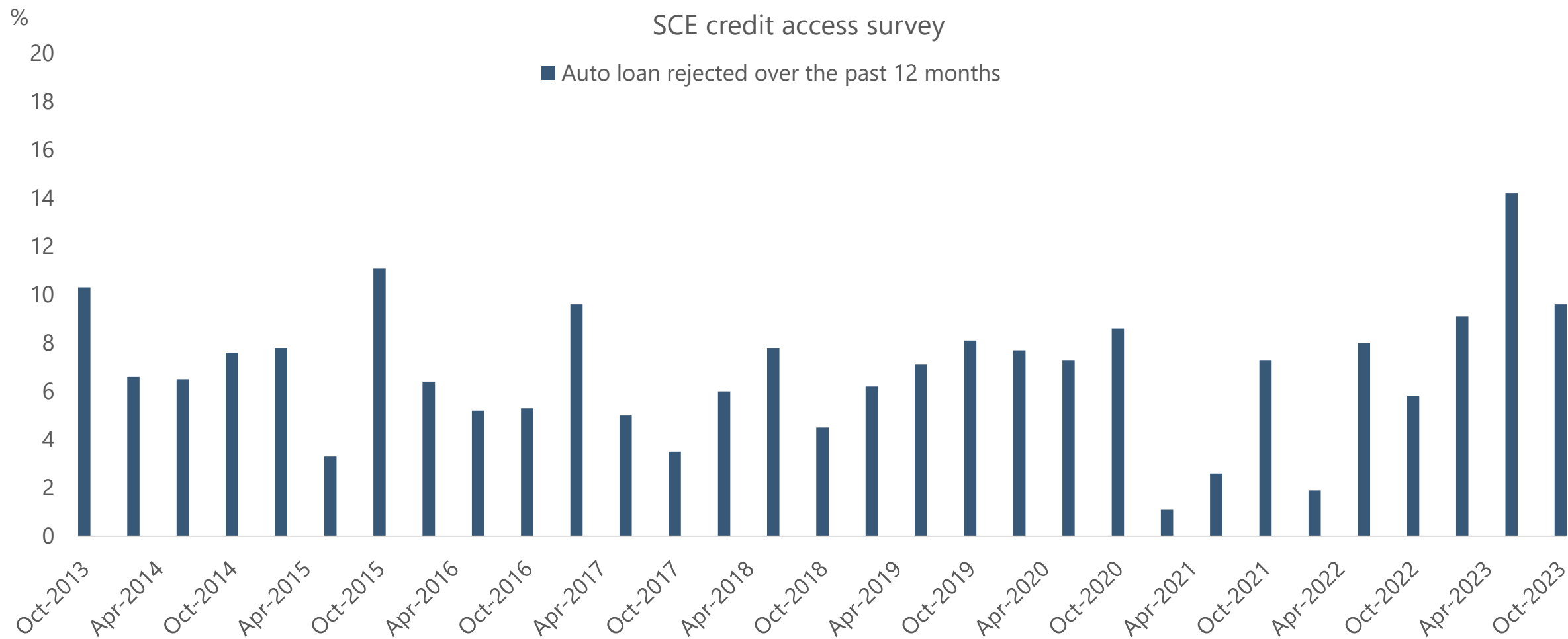
Source: FRB, Bloomberg, Apollo Chief Economist

# Interest rate on auto loans



Source: Bankrate.com, Apollo Chief Economist

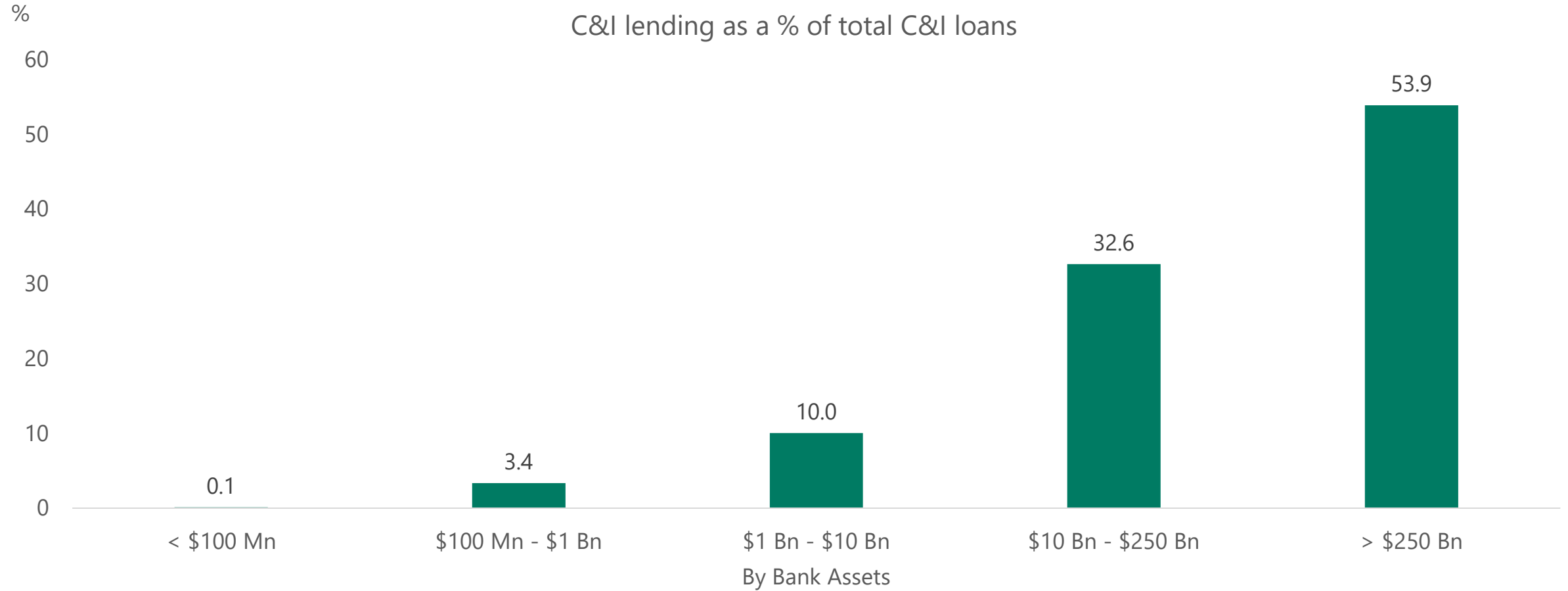
# Auto loan rejection rate over the past 12 months





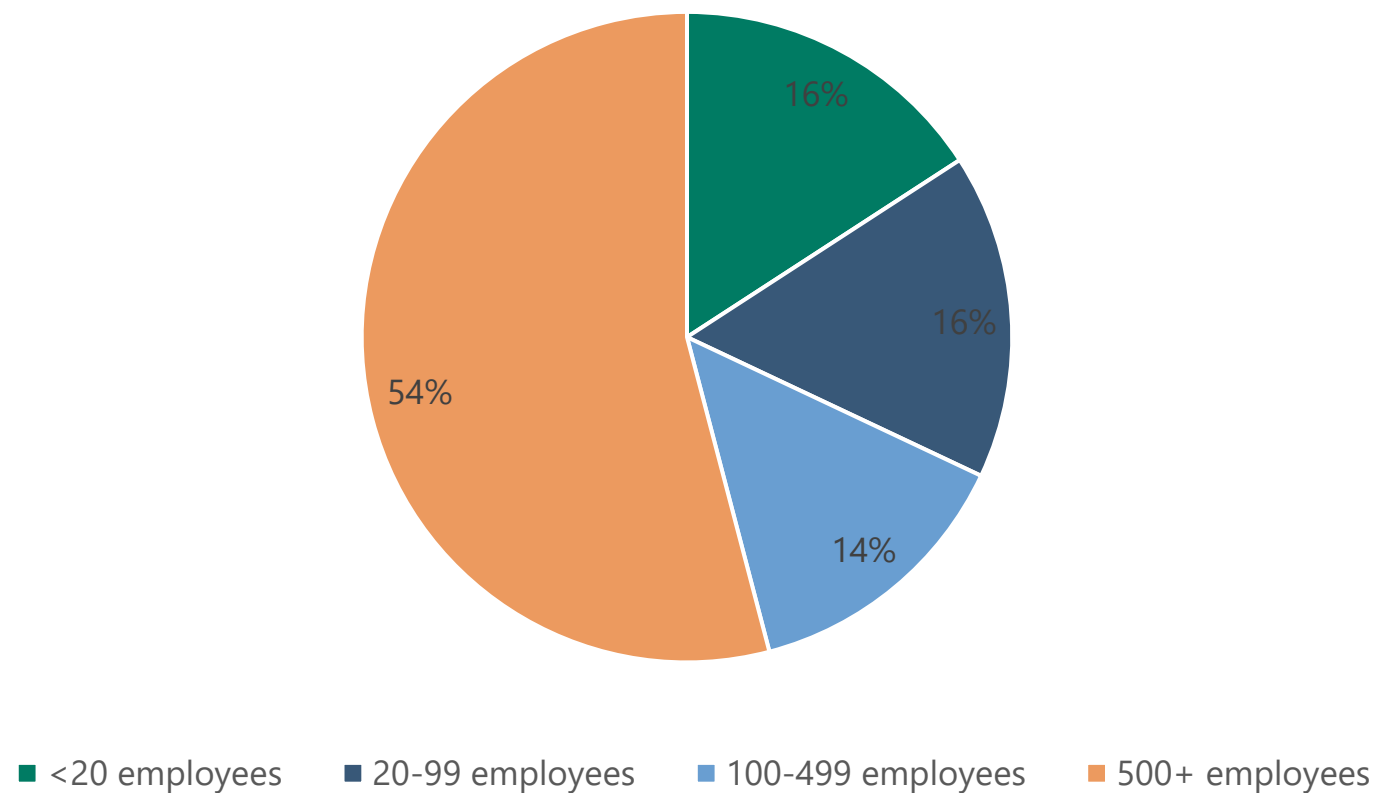
## Small banks lend to small businesses

Banks with less than \$250bn in assets account for 46% of commercial and industrial lending

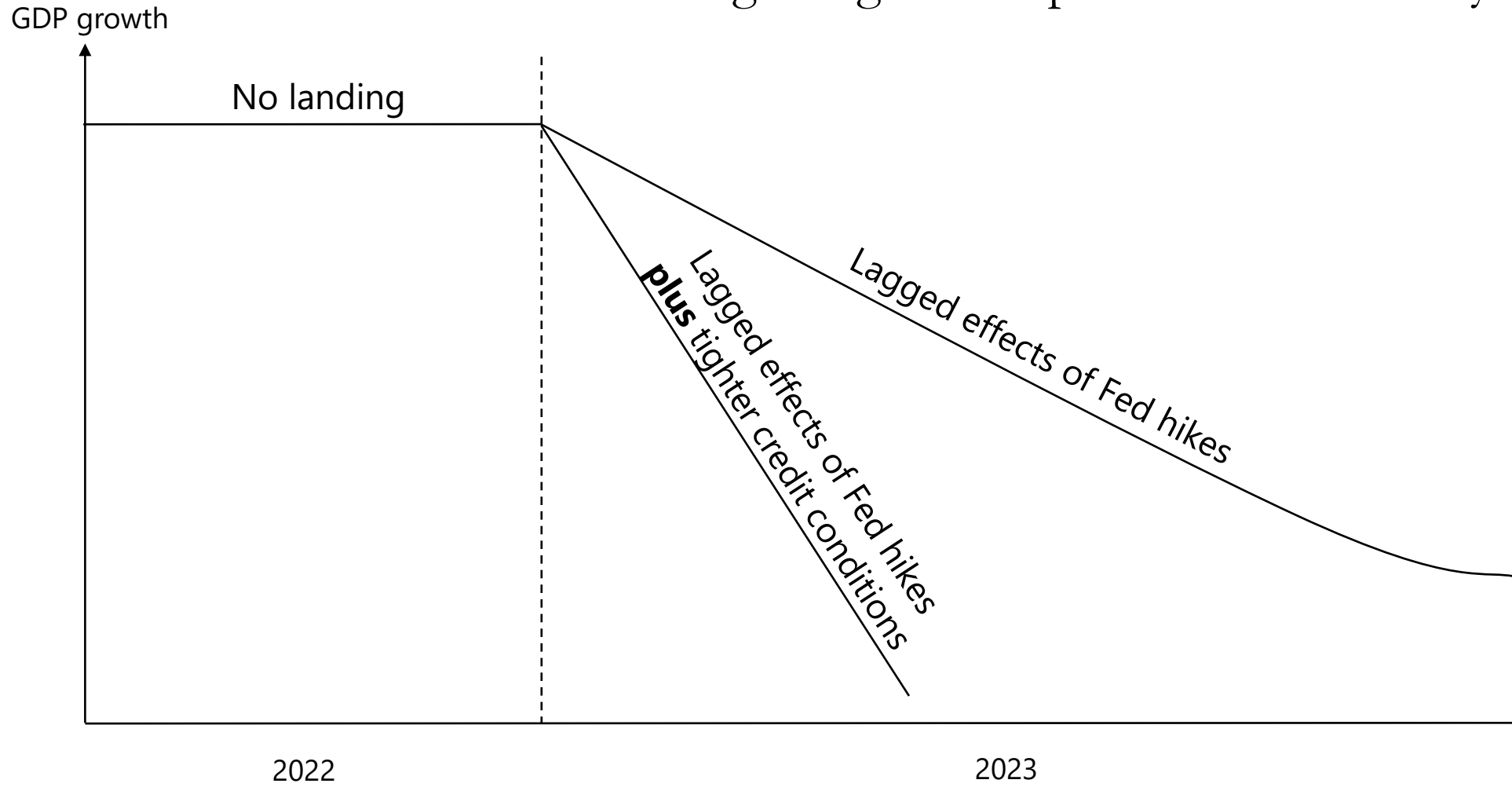


# Half of US employment is in firms with fewer than 500 employees

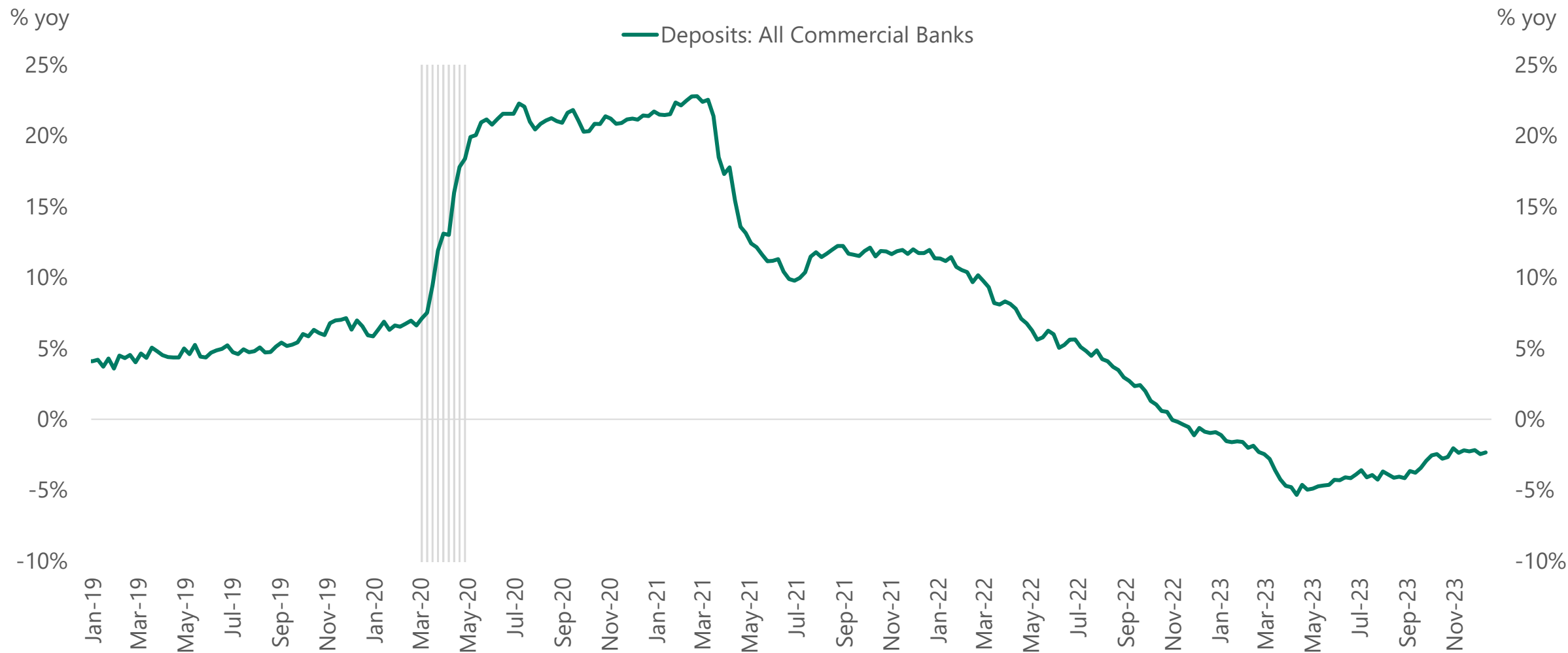
Share of total employment by employment size of the firm, 2020



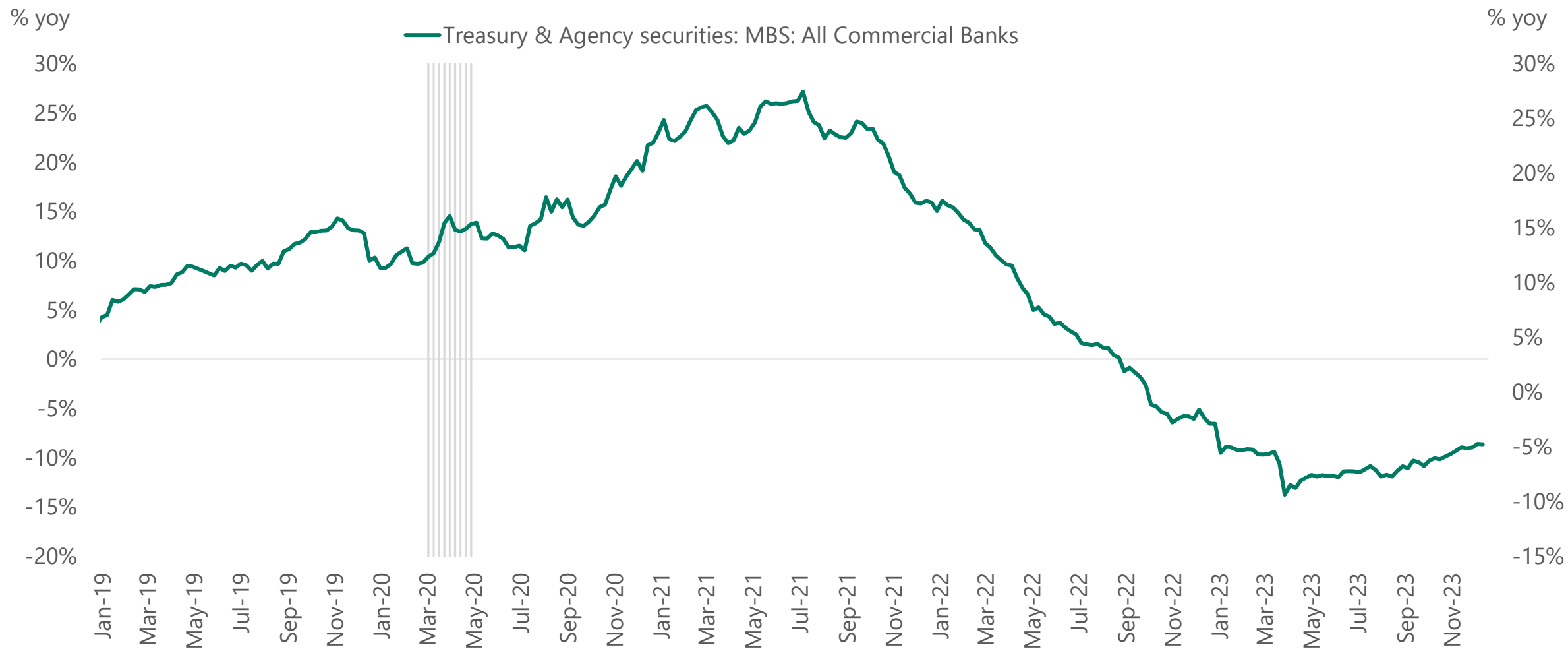
# Lagged effects of Fed hikes combined with tighter credit conditions having a negative impact on the economy



# Negative growth in deposits

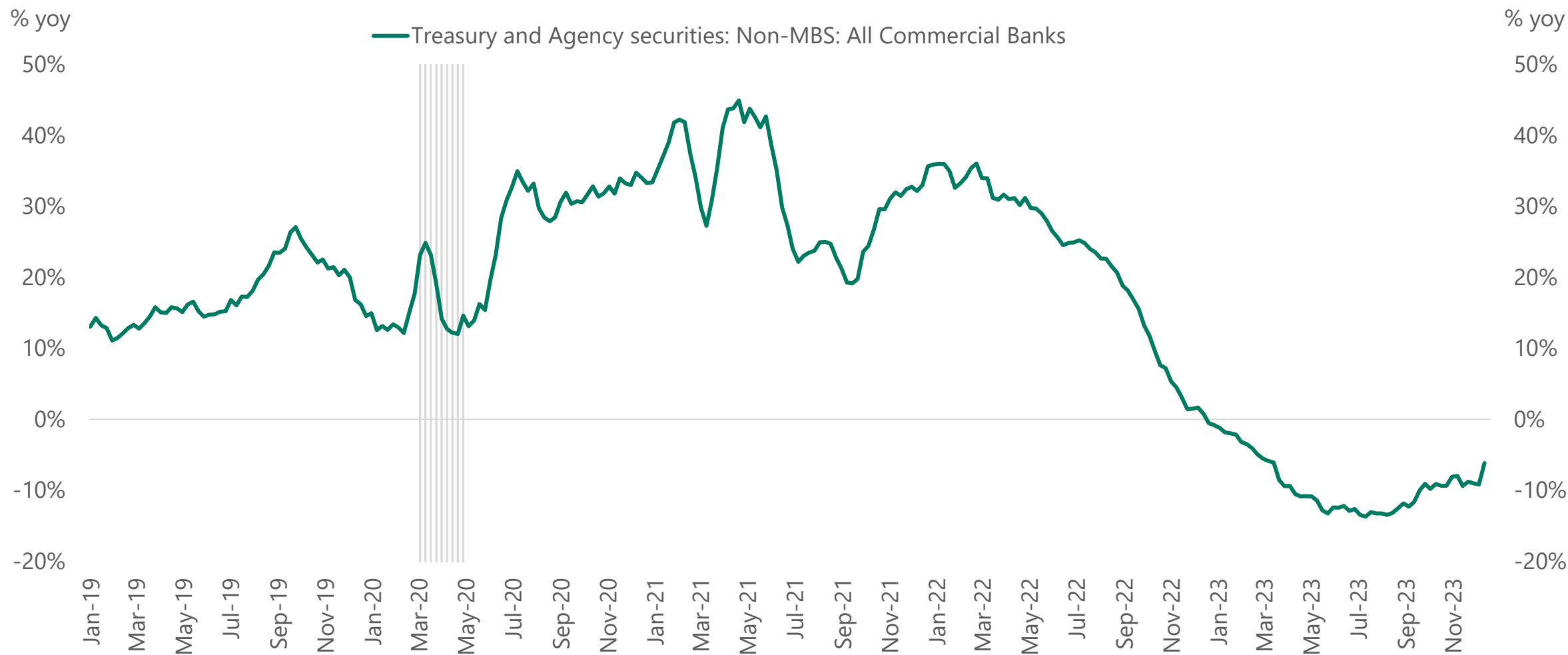


# Negative growth in bank holdings of mortgages



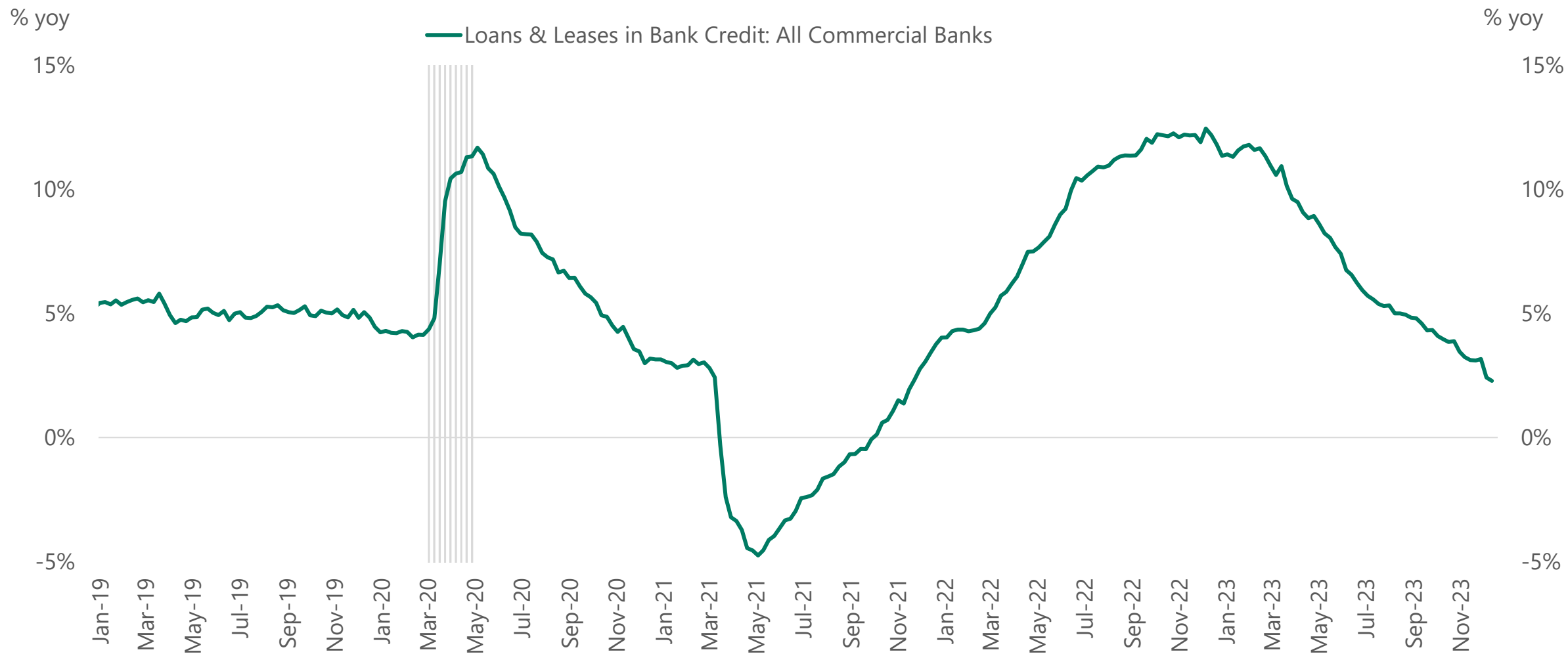
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Growth in bank holdings of Treasuries



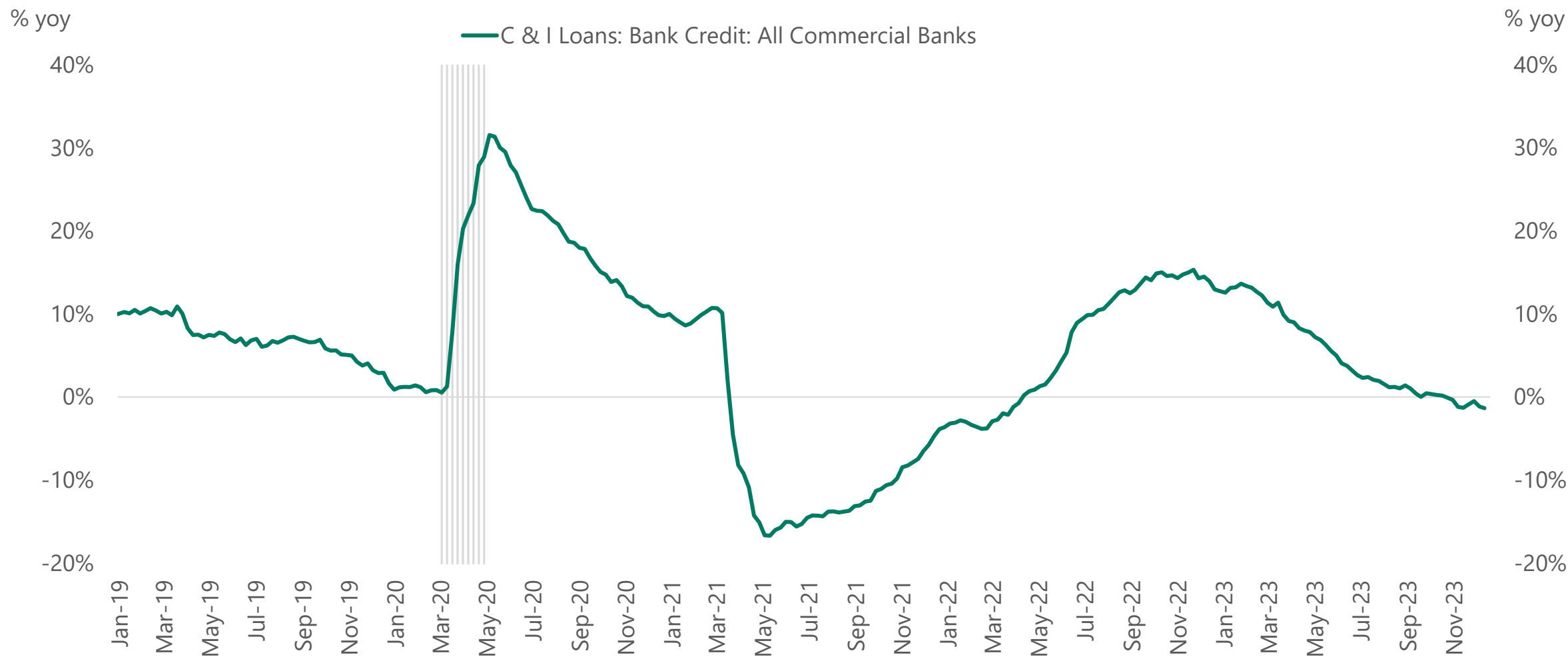
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Bank loan growth declining



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Negative growth in lending to corporates



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

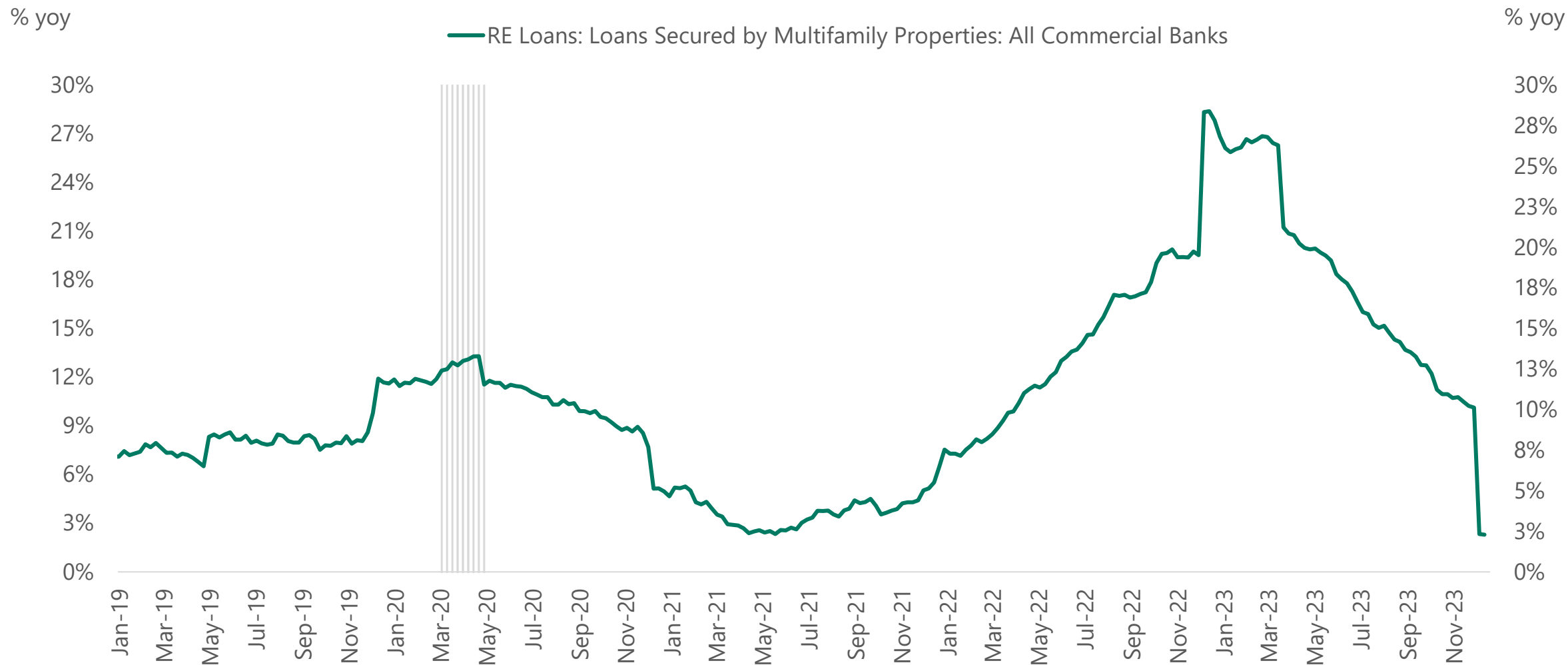


# Decline in growth in real estate lending



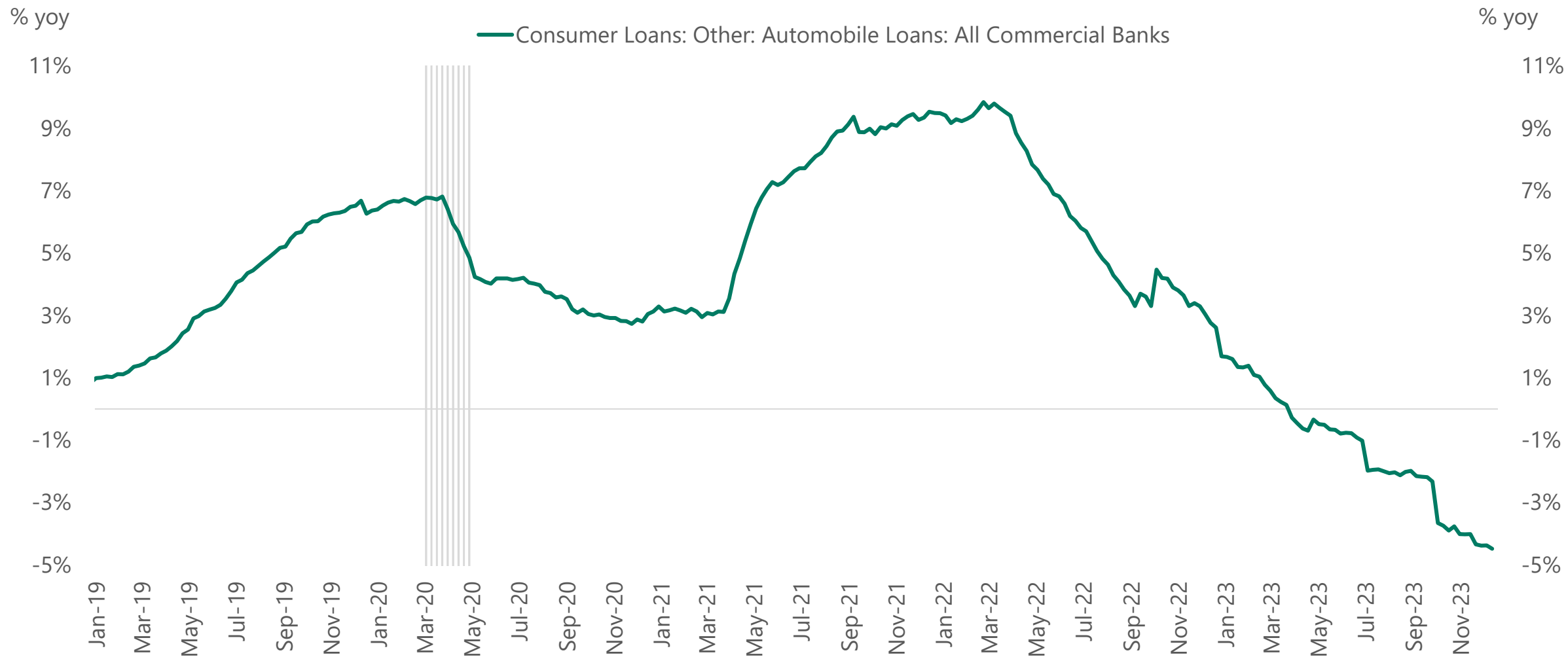
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Decline in growth in lending to multifamily construction



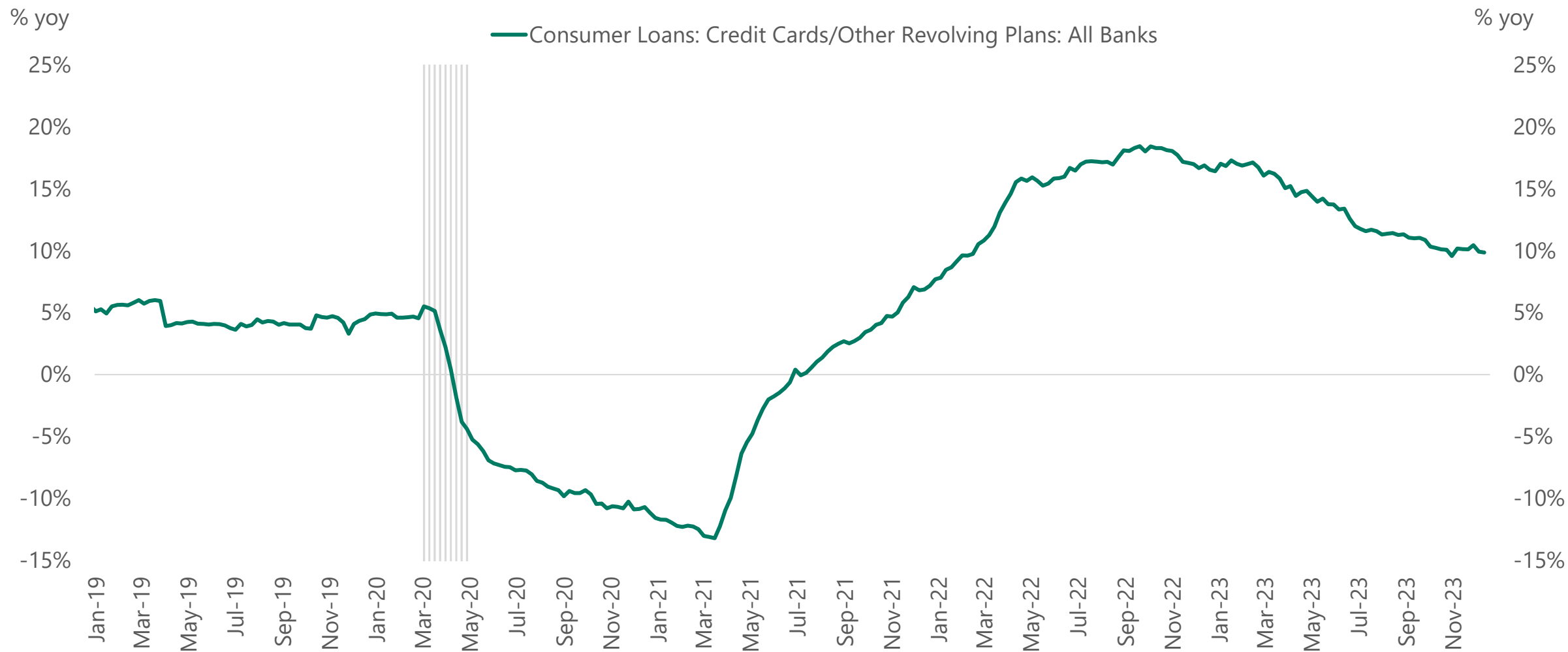
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Negative growth in auto loan lending



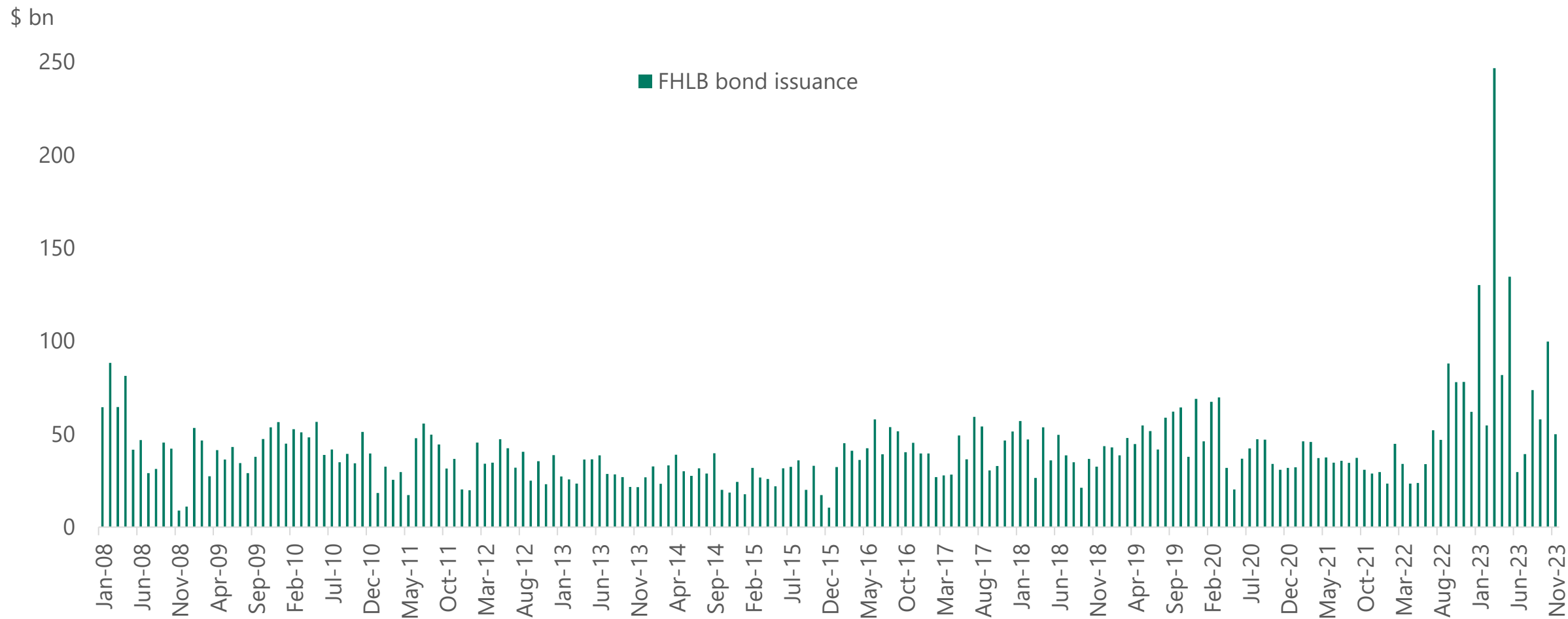
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Decline in growth in banks' credit card lending



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

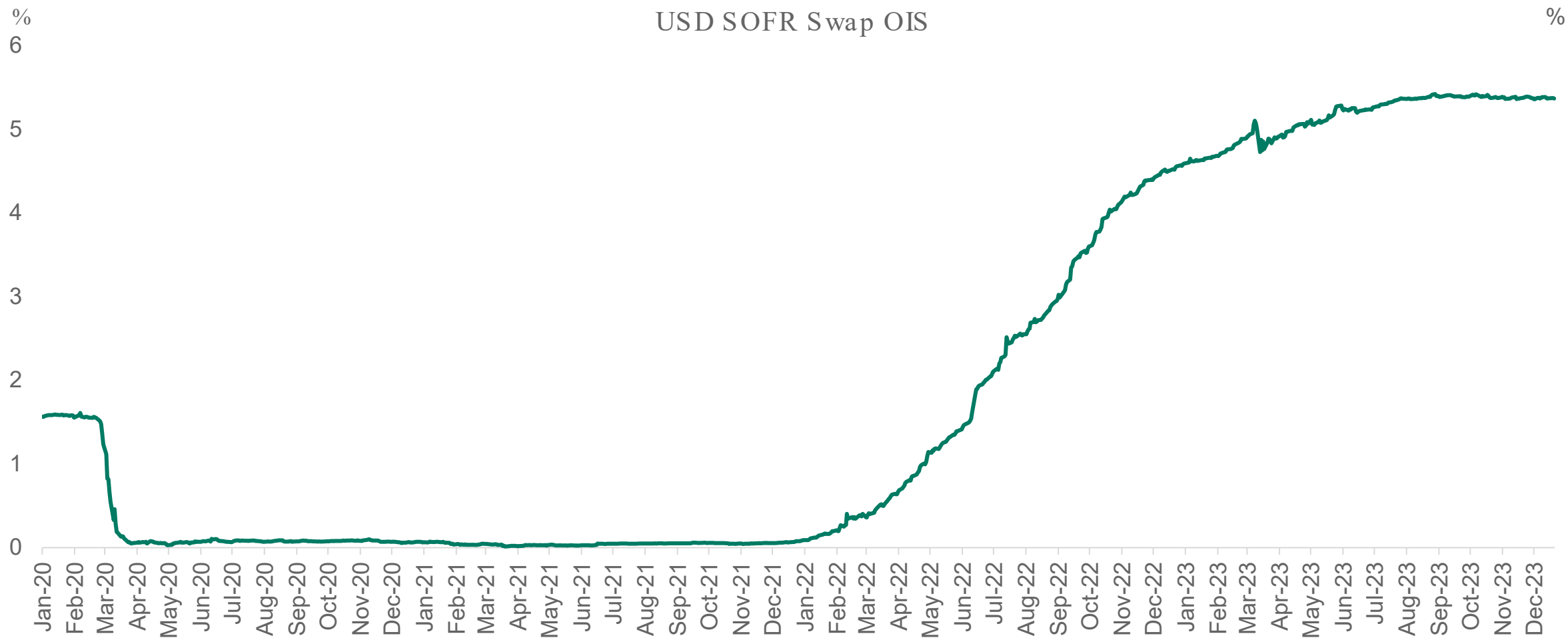
# FHLB bond issuance



Source: FHLB, Haver, Apollo Chief Economist.

Bank funding pressures:  
Deposits and market-based measures

# SOFR OIS Swap



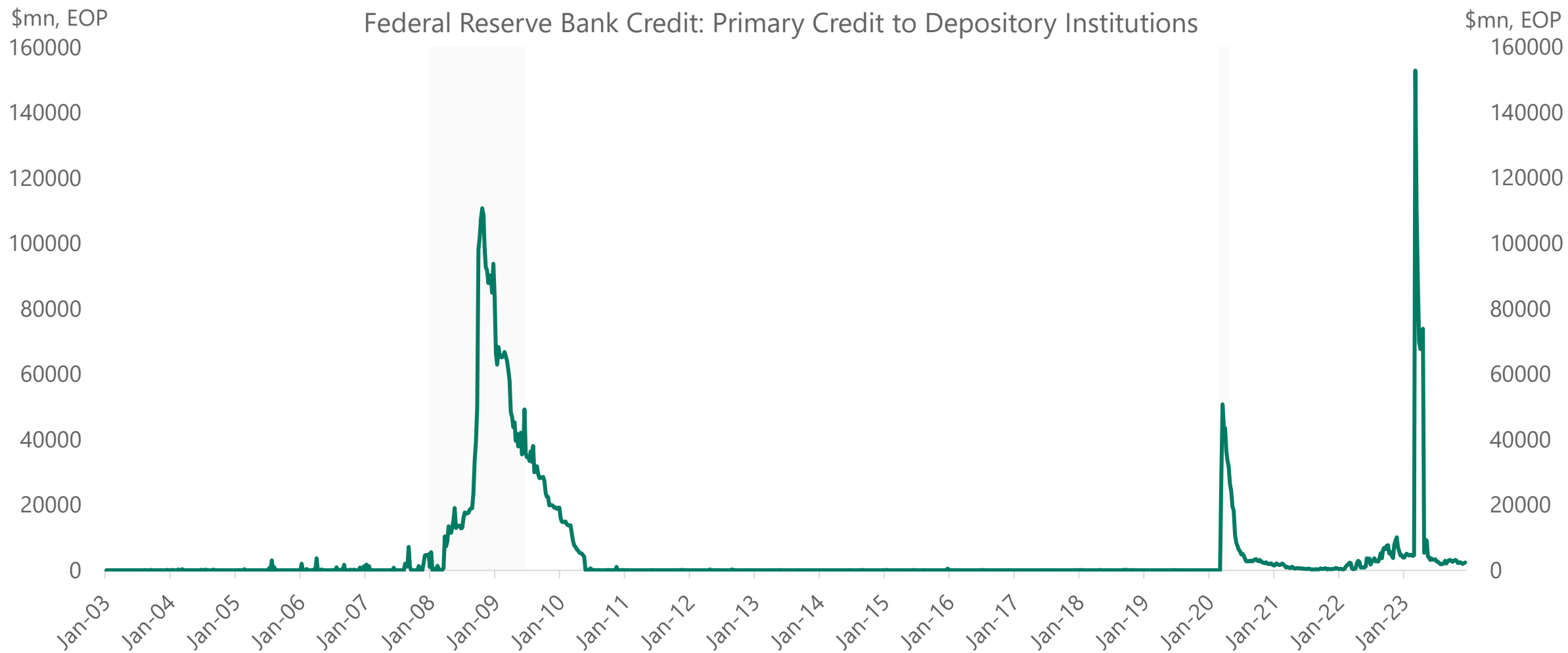
Source: Bloomberg. Note: Ticker used USFOSC1 BGN Currency. As of Nov 28, 2023.

# SOFR spreads currently pricing aggressive Fed cuts in 2024



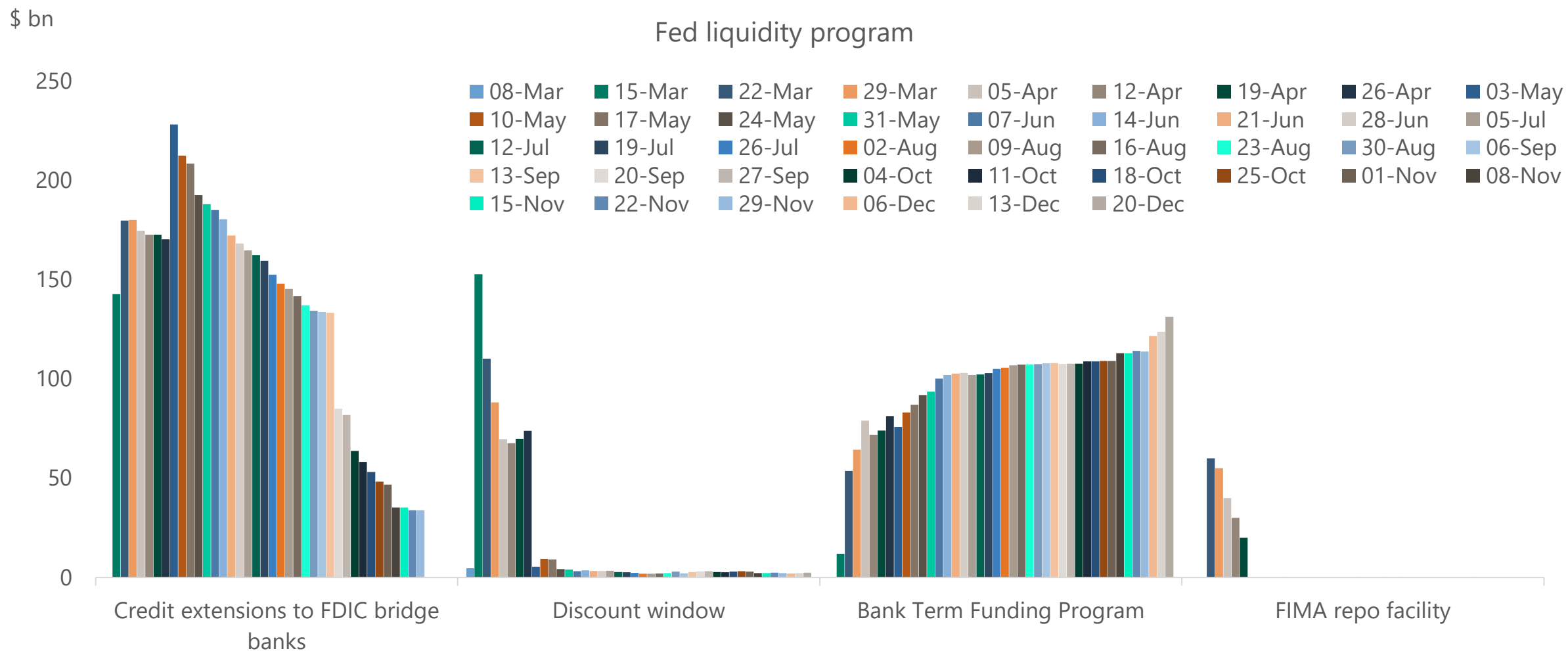


# Fed Discount Window borrowing was higher during regional banking crisis than in 2008



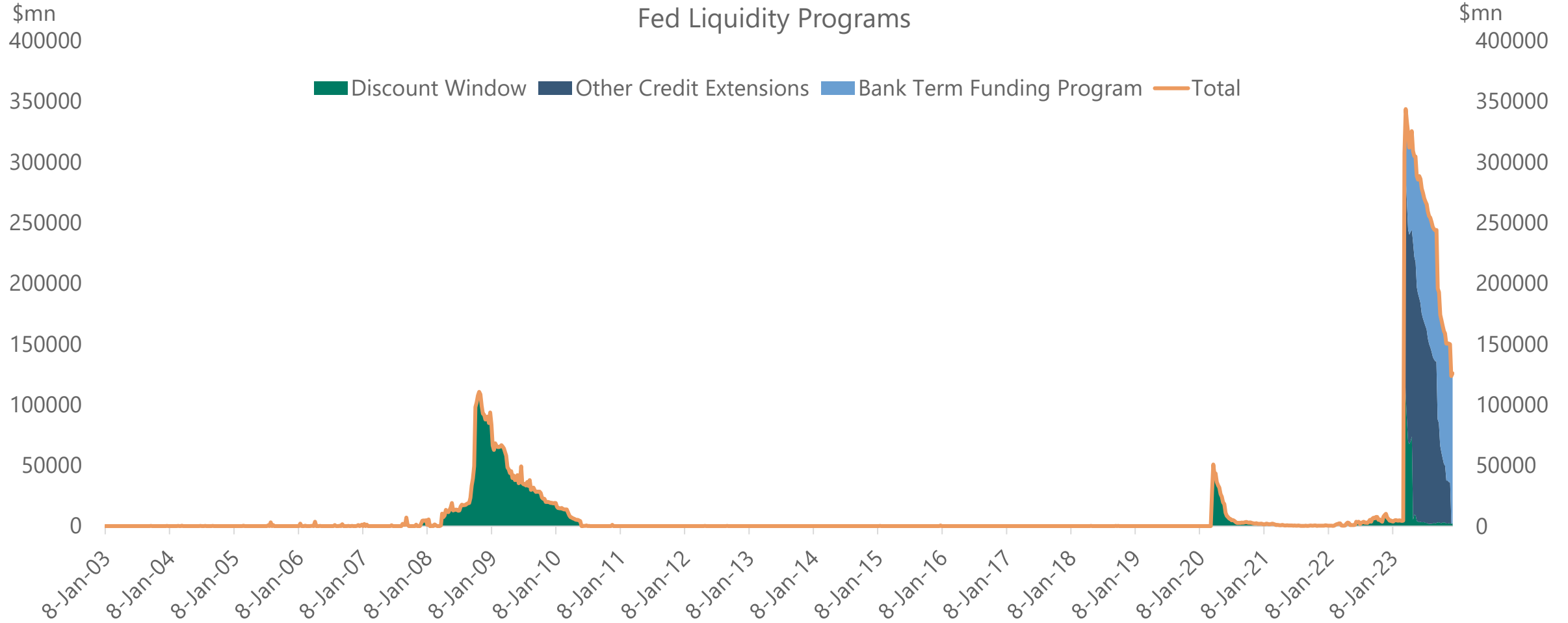
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Fed liquidity programs



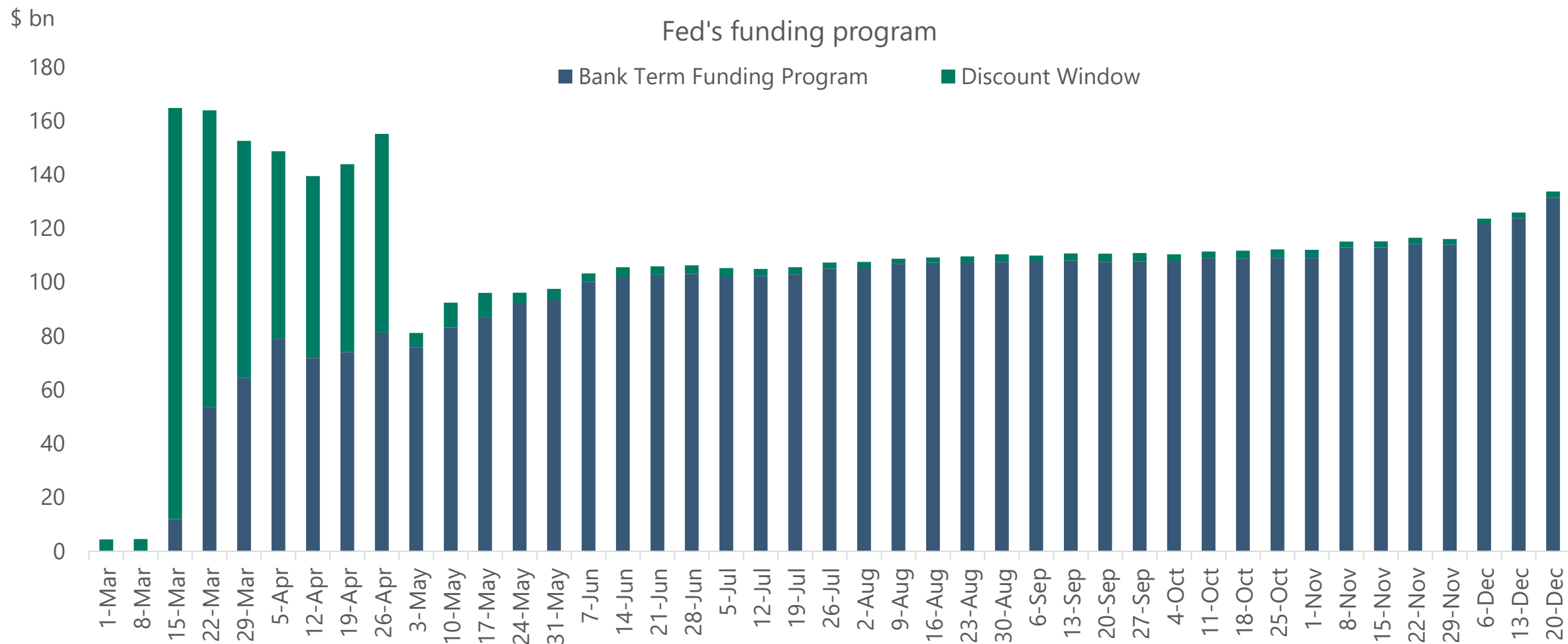
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Fed liquidity borrowing higher during regional banking crisis than in 2008



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

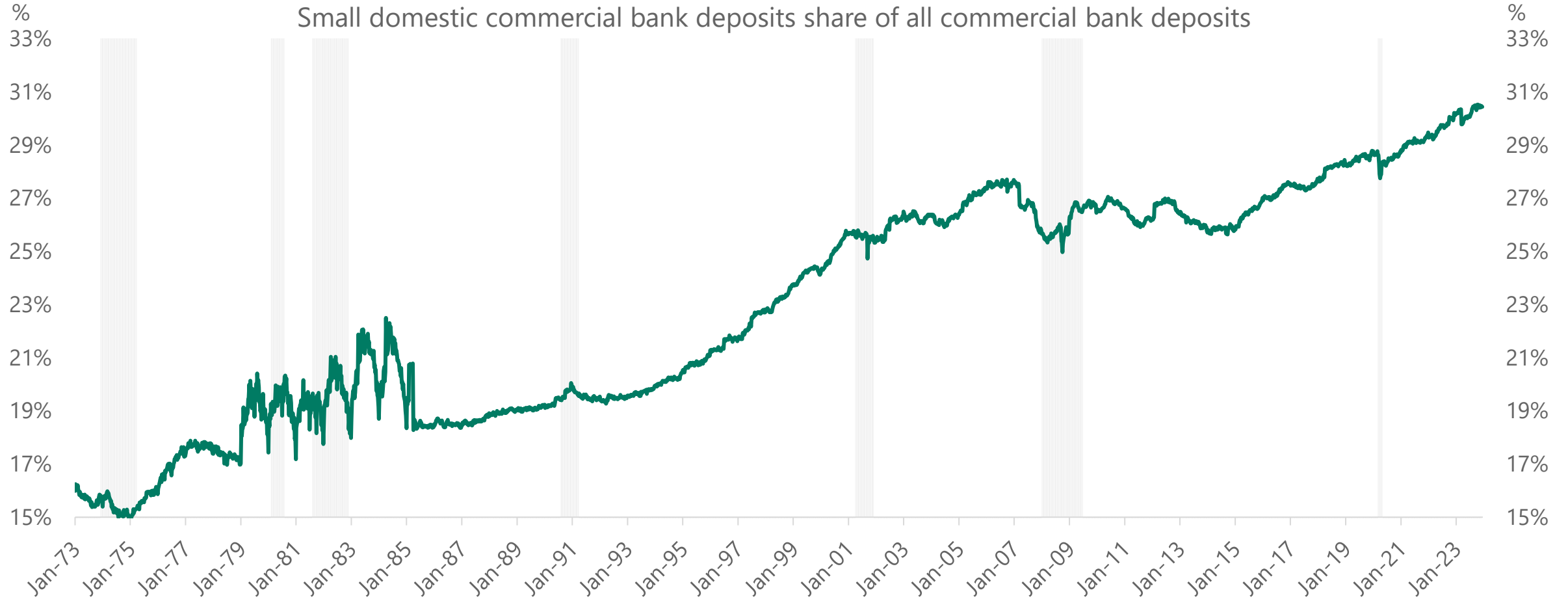
# Borrowing through the Bank Term Funding Program



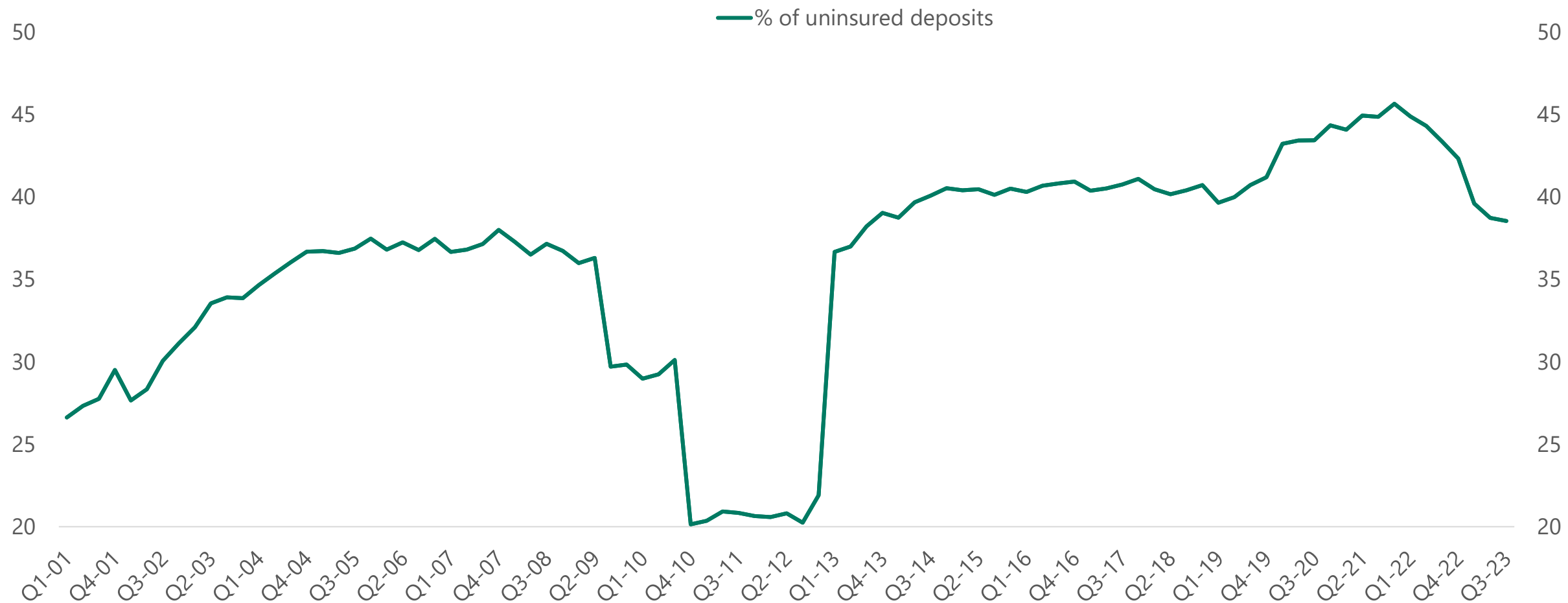
Source: Federal Reserve Board, Bloomberg, Apollo Chief Economist.

What is happening with deposits in regional banks?

Small banks account for about 30% of total deposits in the banking sector, and the share has been rising since the 2008 financial crisis

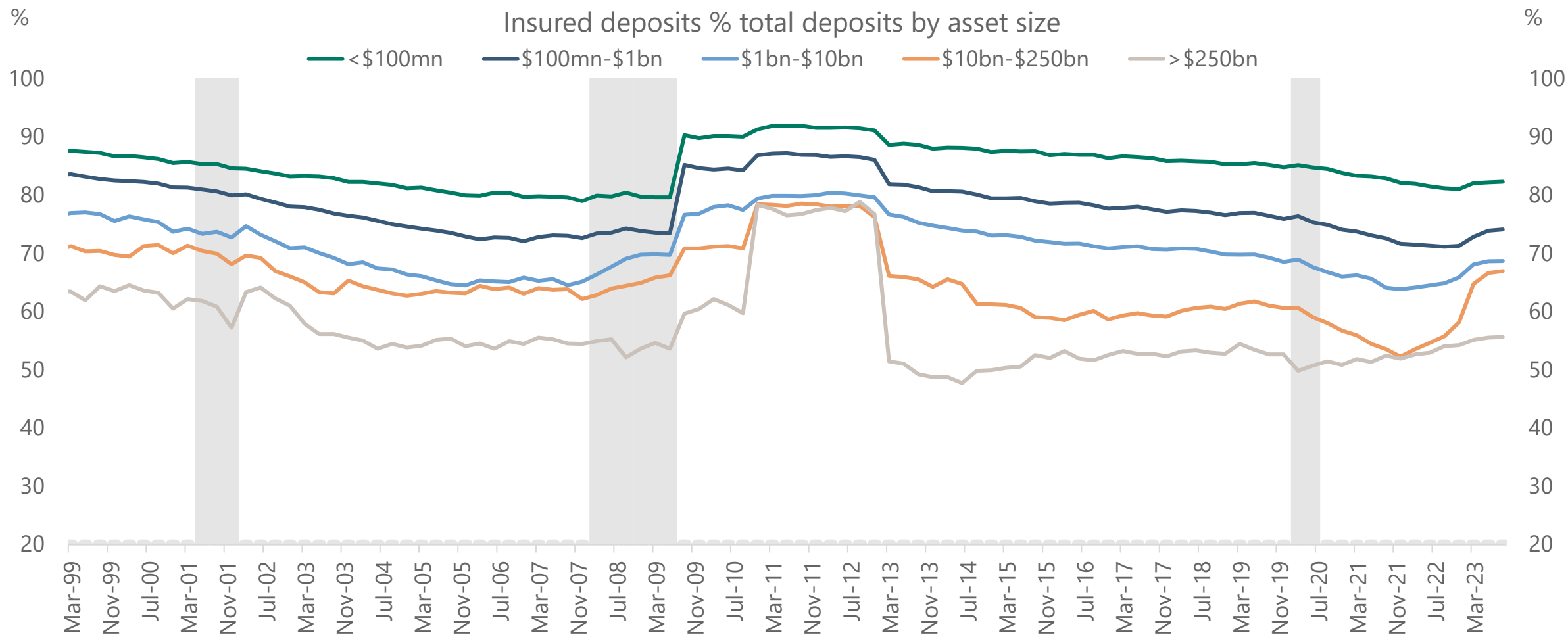


# Share of total bank deposits that are uninsured: 39%



Source: FDIC, Haver Analytics, Apollo Chief Economist.

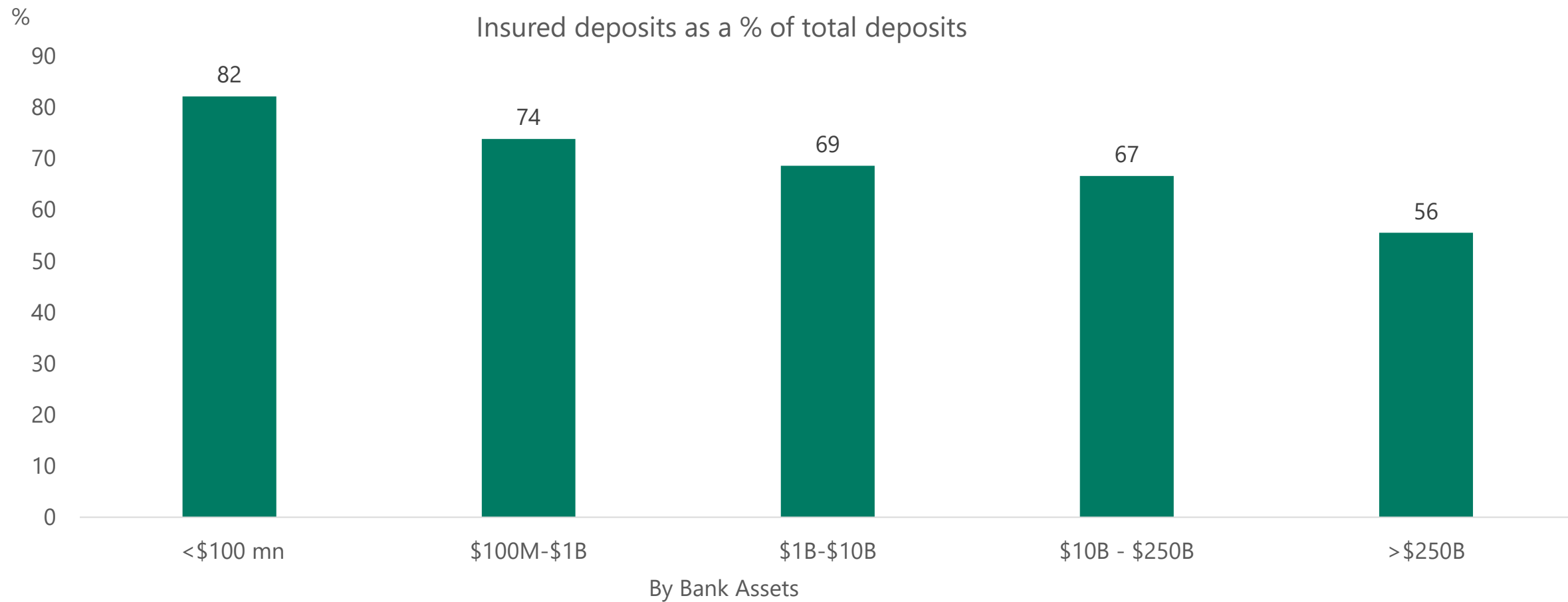
# Share of insured deposits, by bank size



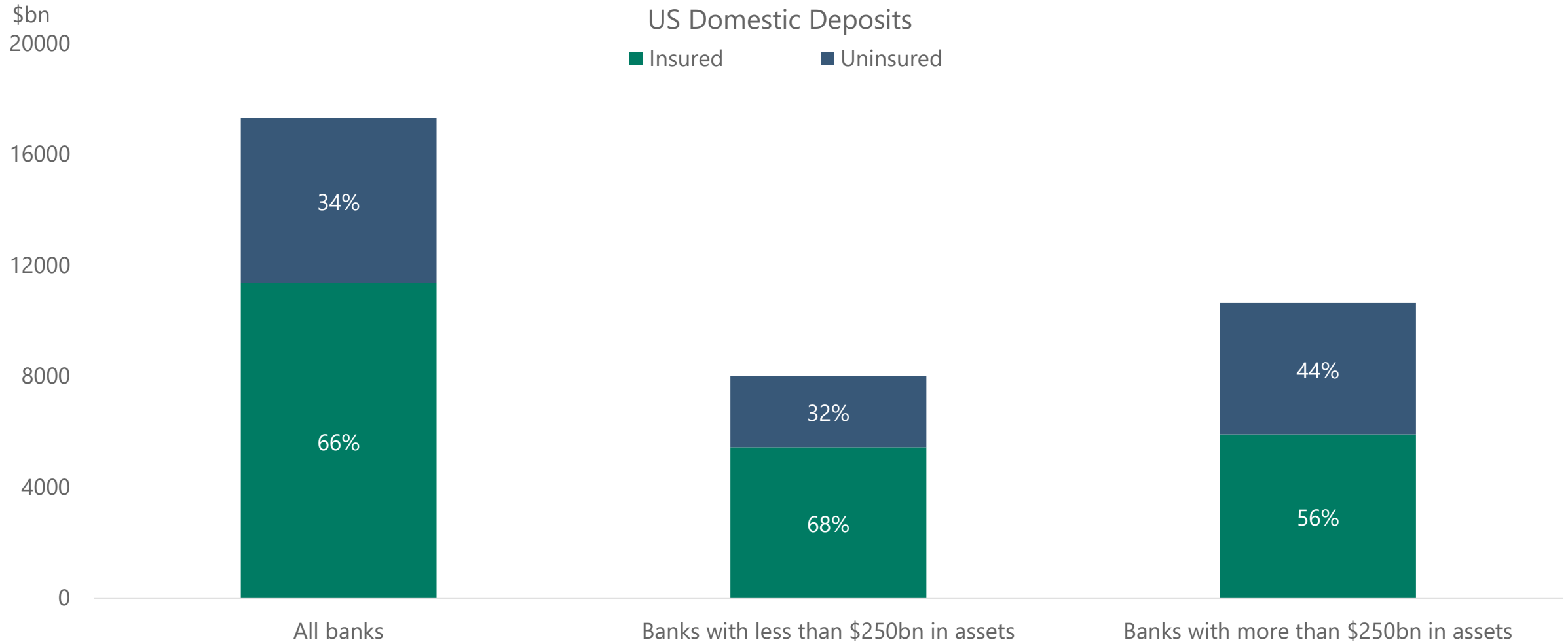
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.



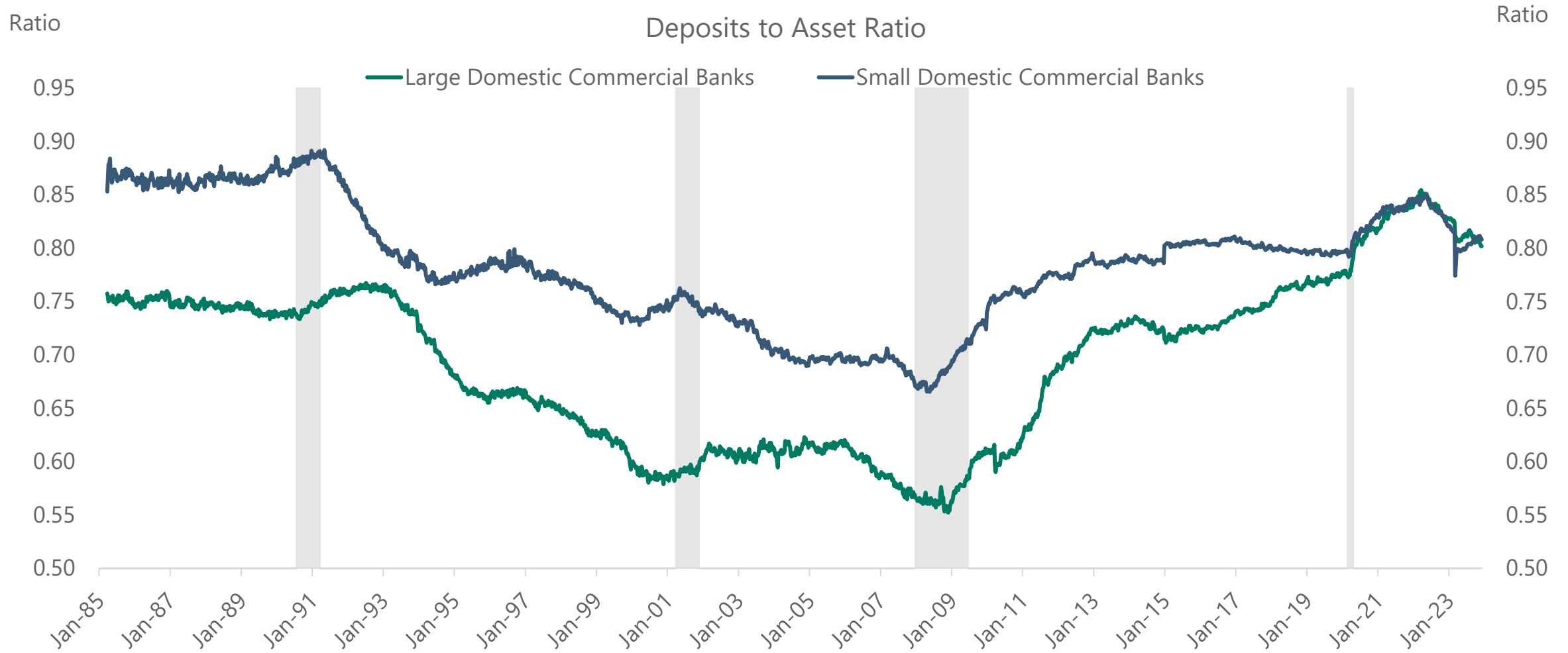
# Share of insured deposits, by bank size



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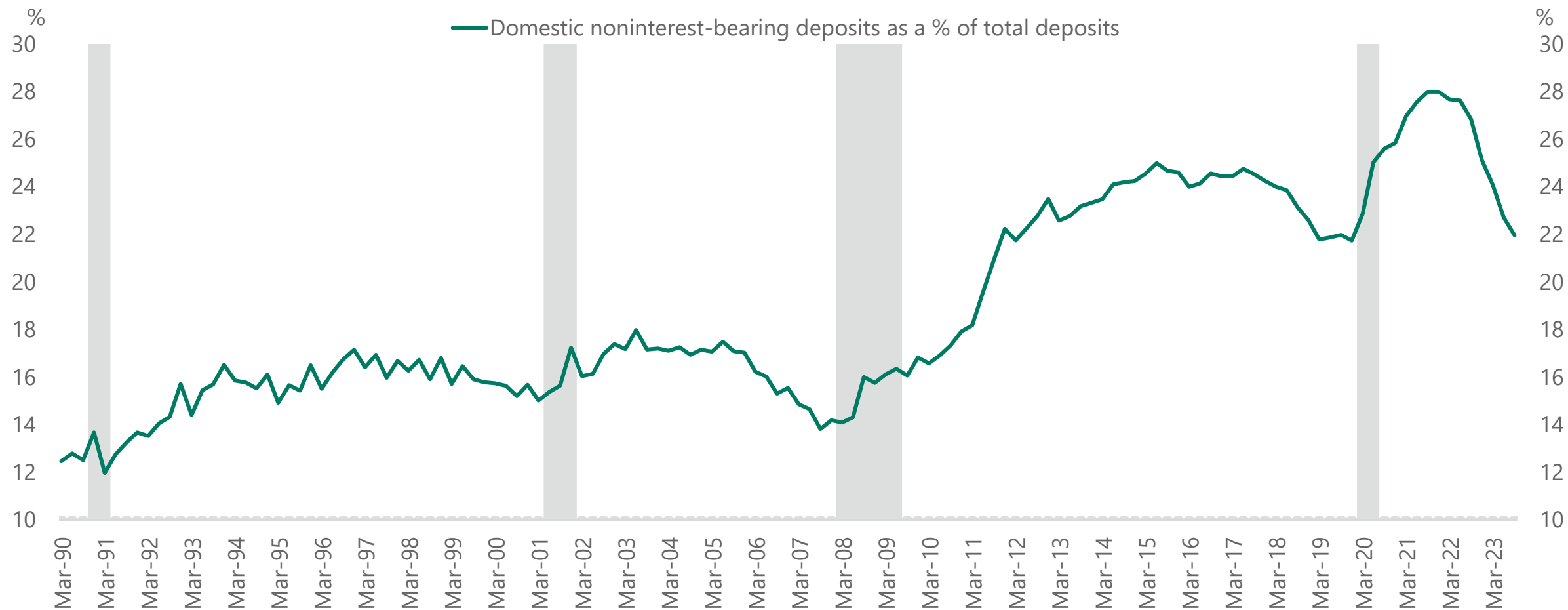


# Deposit to asset ratio for large and small banks



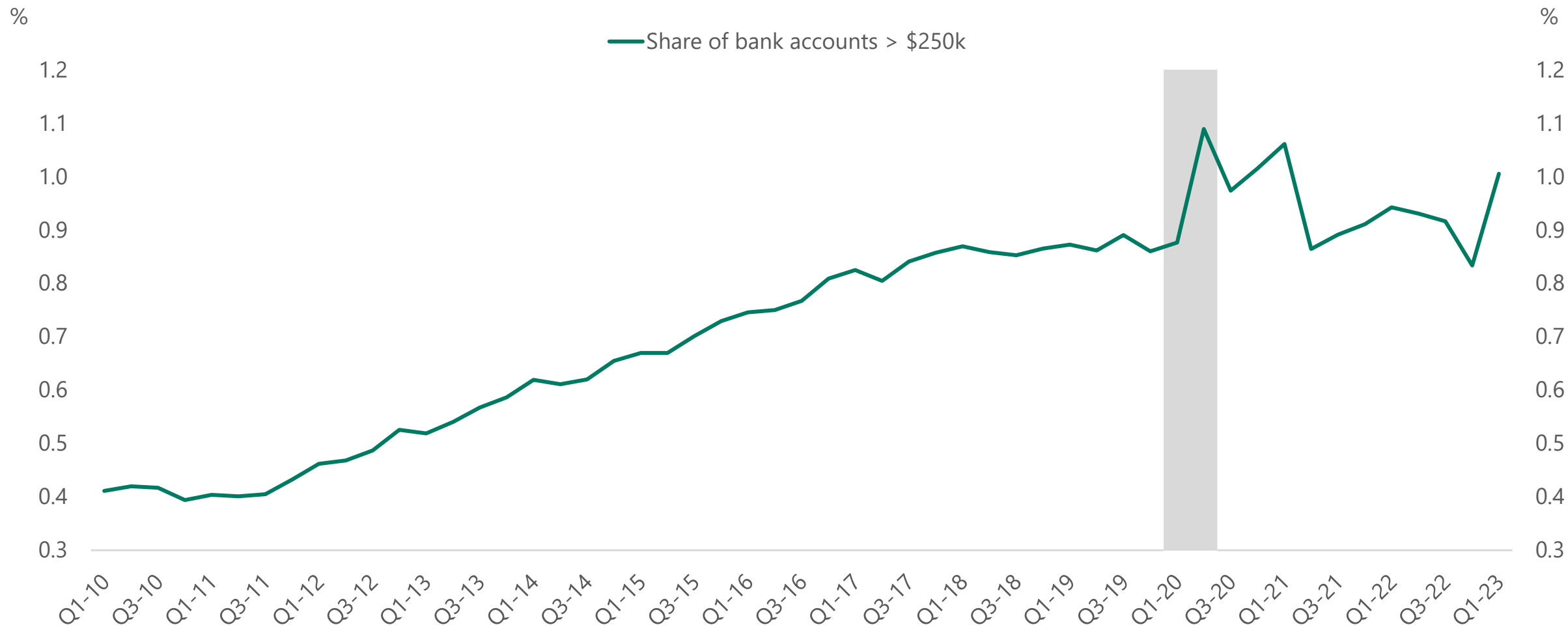
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# 22% of deposits pay no interest



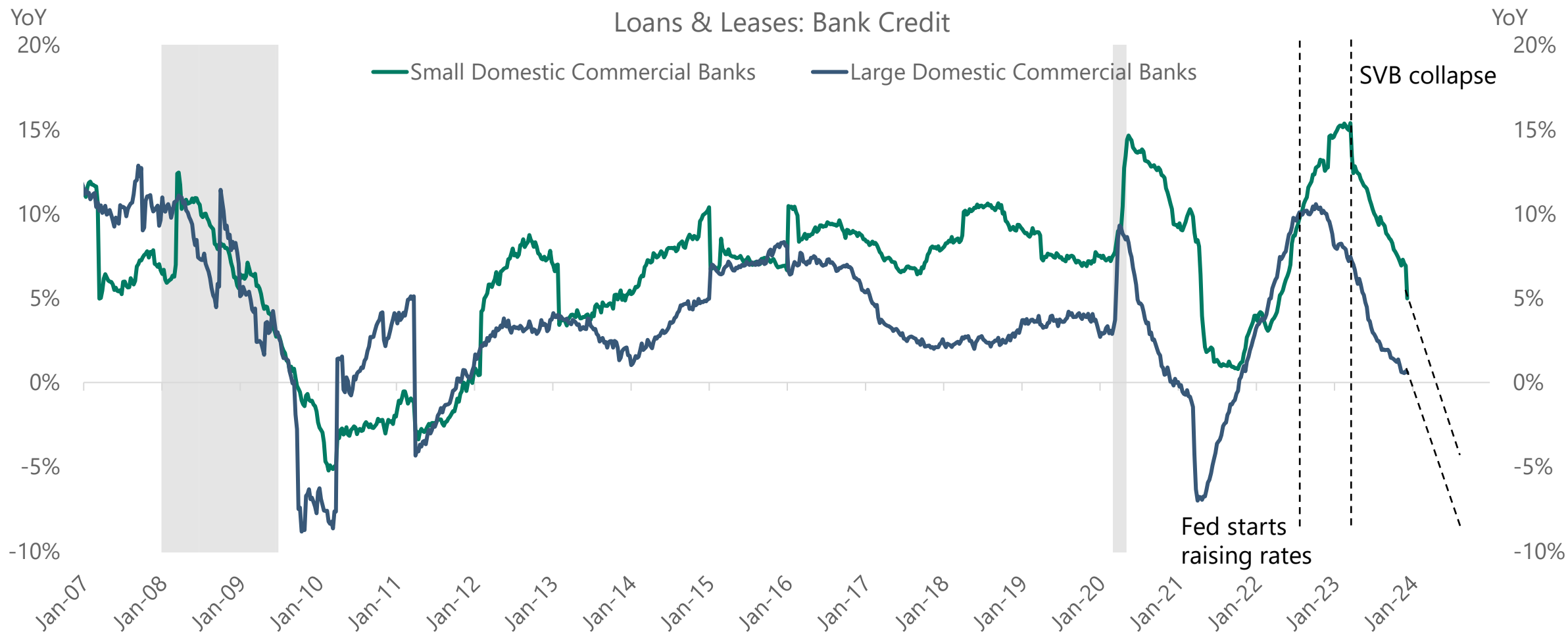
Source: FDIC, Apollo Chief Economist.

# 1% of bank accounts have a balance higher than \$250k



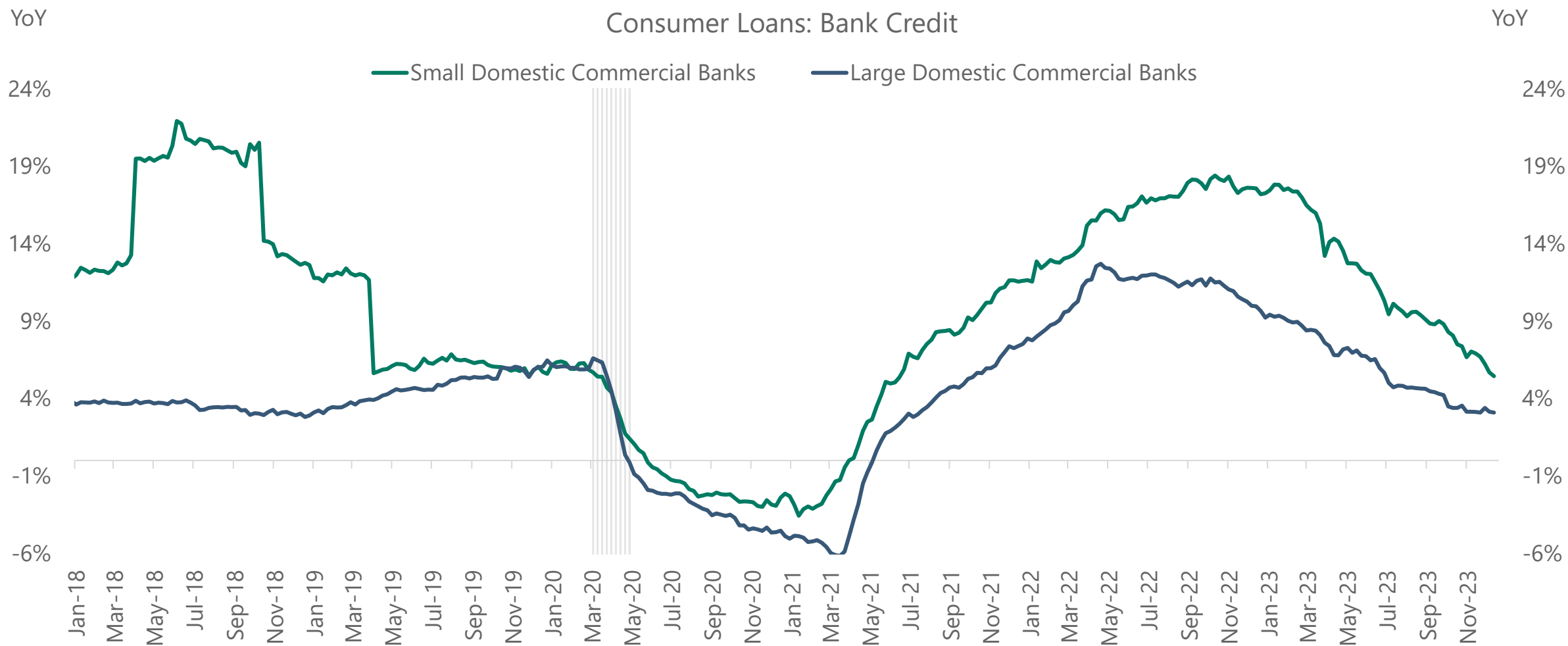
Weekly data for bank lending by small and large banks

# Weekly Fed data shows small and large bank lending growth slowing



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

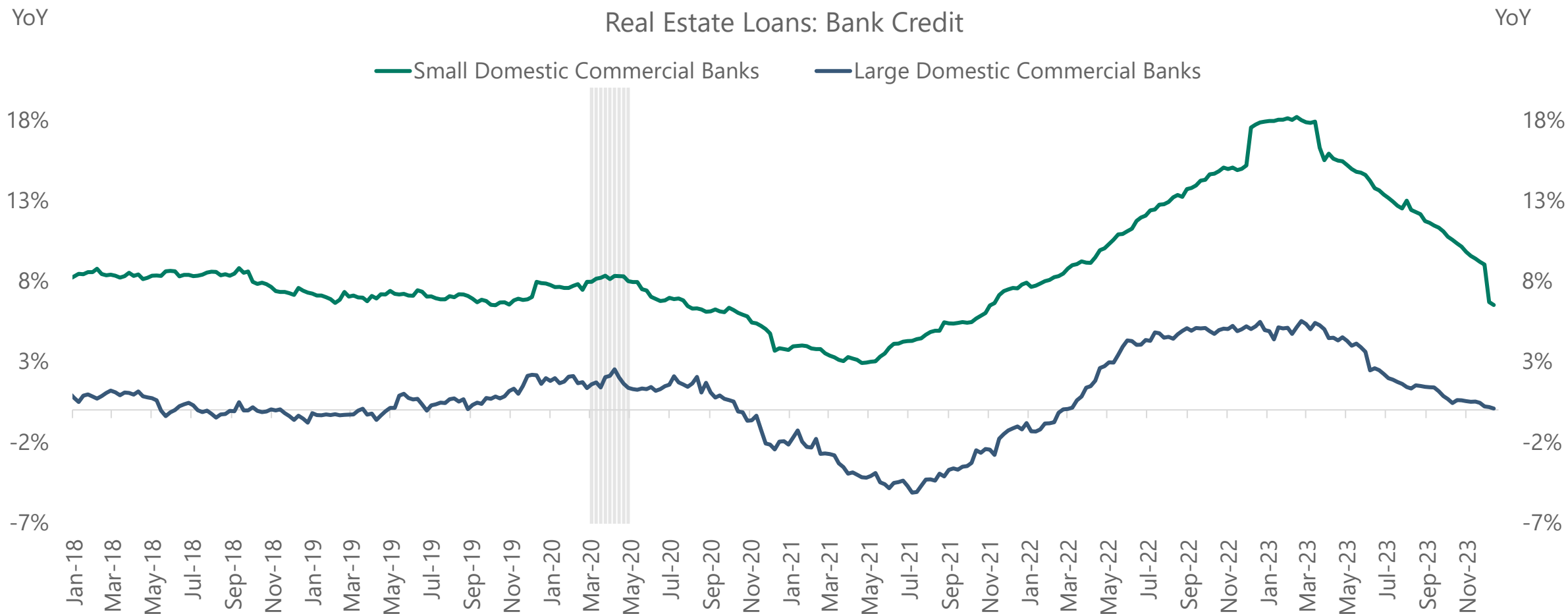
# Lending to consumers is slowing for both small and large banks



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

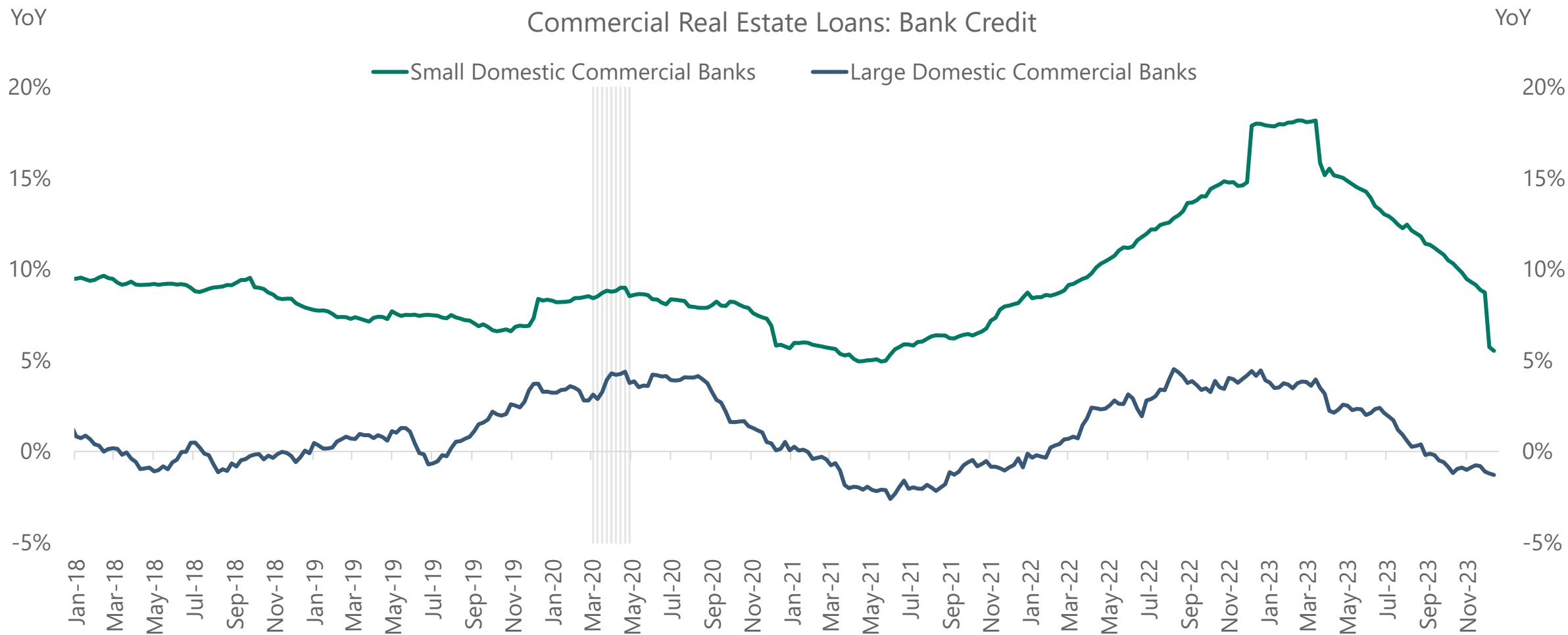


# Real estate lending is slowing for both small and large banks



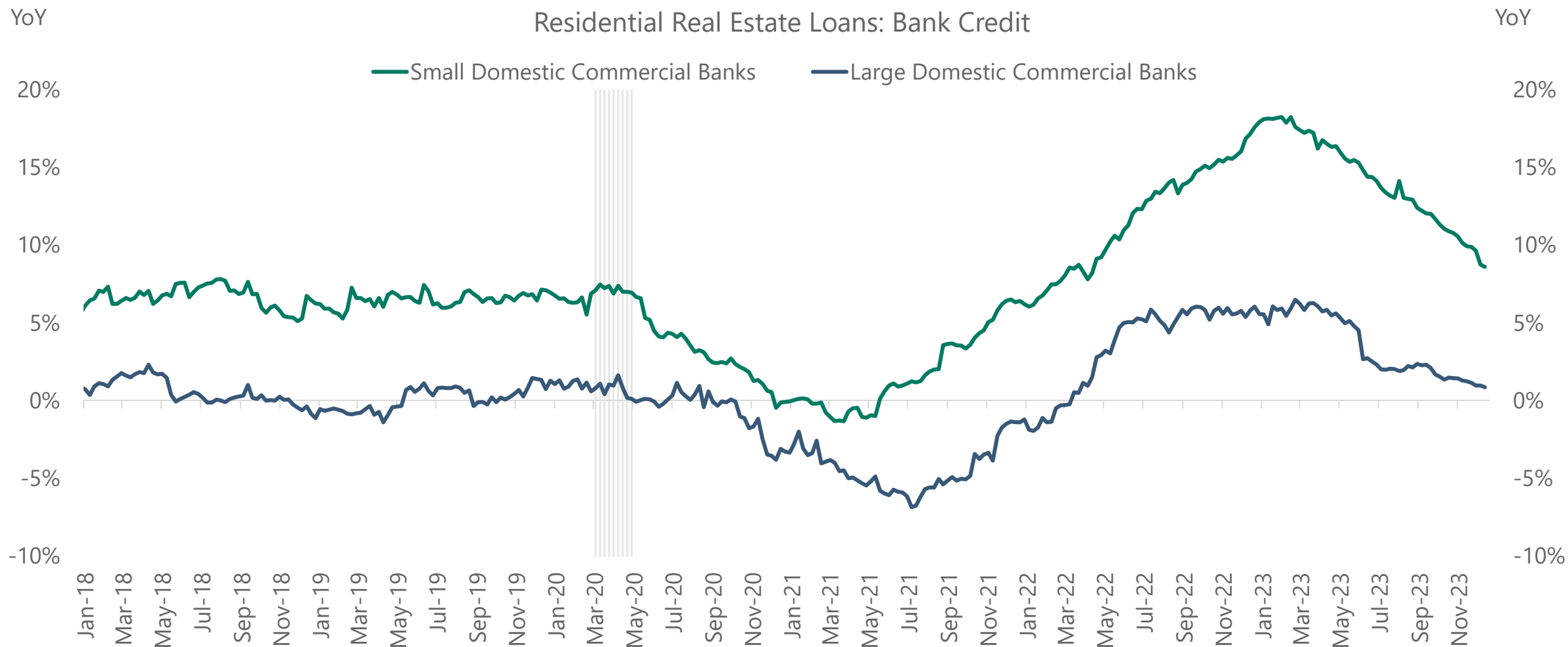
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Commercial real estate lending is slowing for both small and large banks



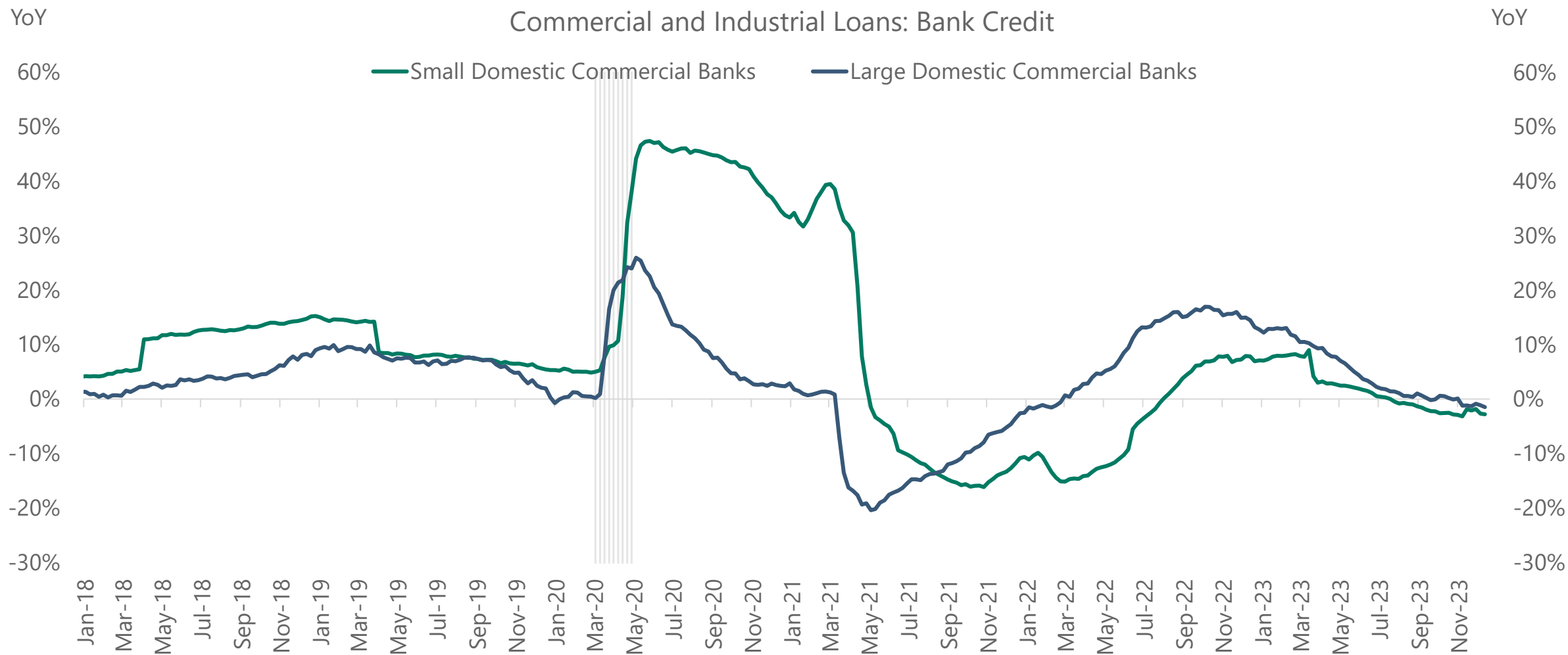
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Residential real estate lending is slowing for both small and large banks



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Lending to corporates is slowing for both small and large banks

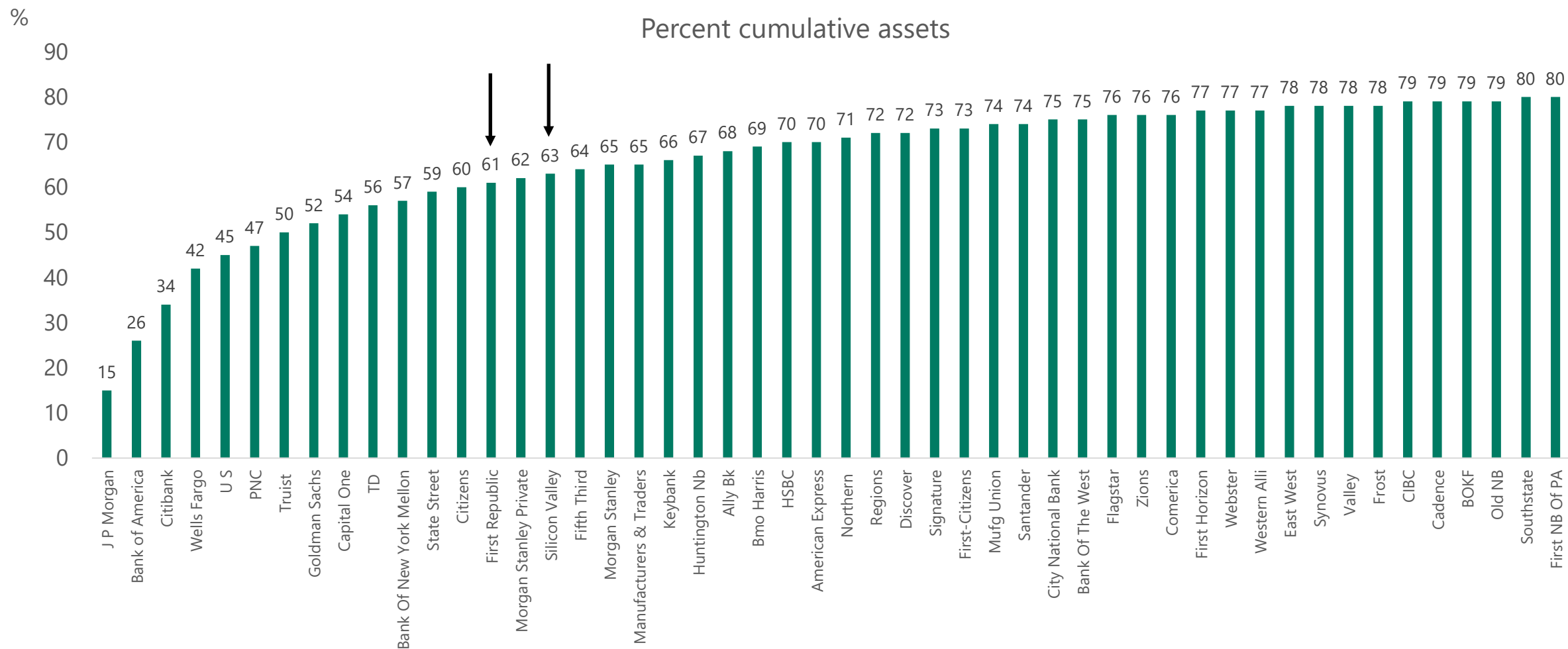


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

US banks by asset size:

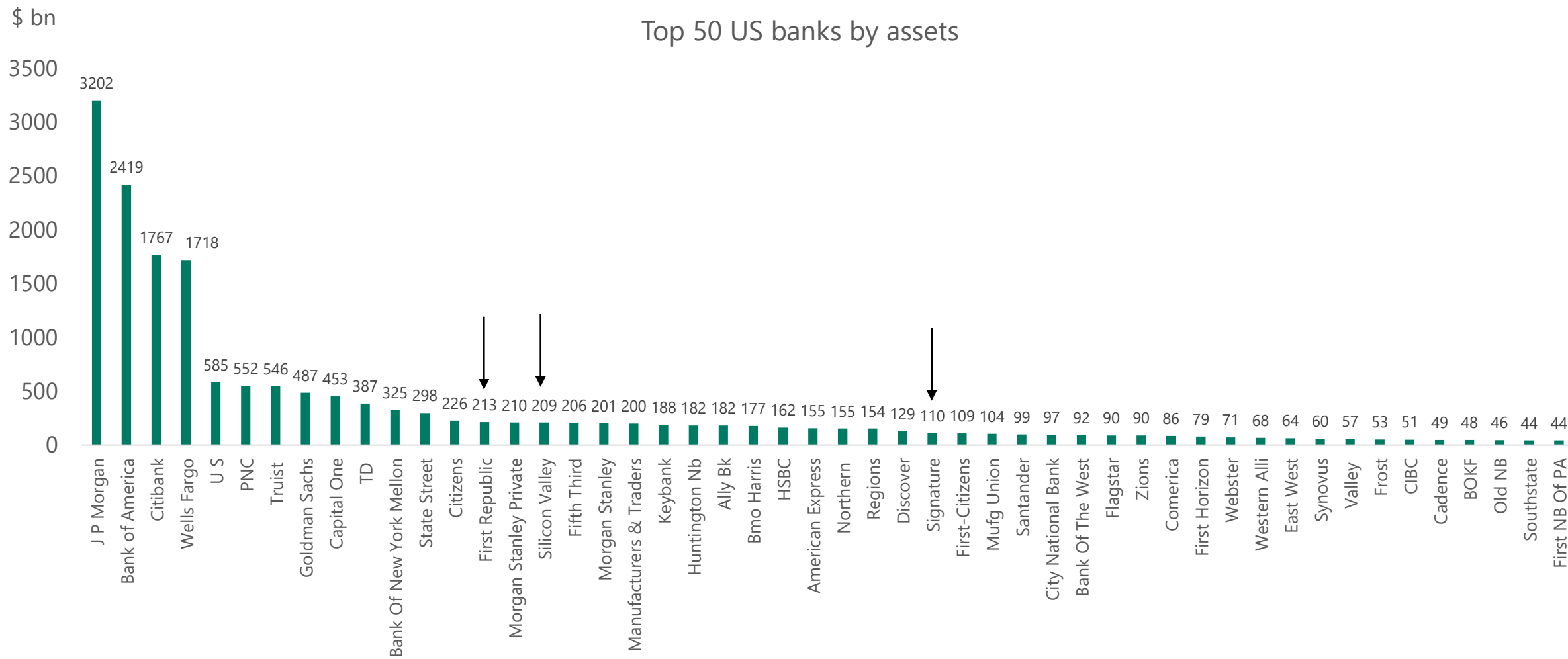
The importance of regional banks for the US economy

# Tighter credit conditions are coming: Banks “to the right” of SVB are likely to start reorganizing their balance sheets



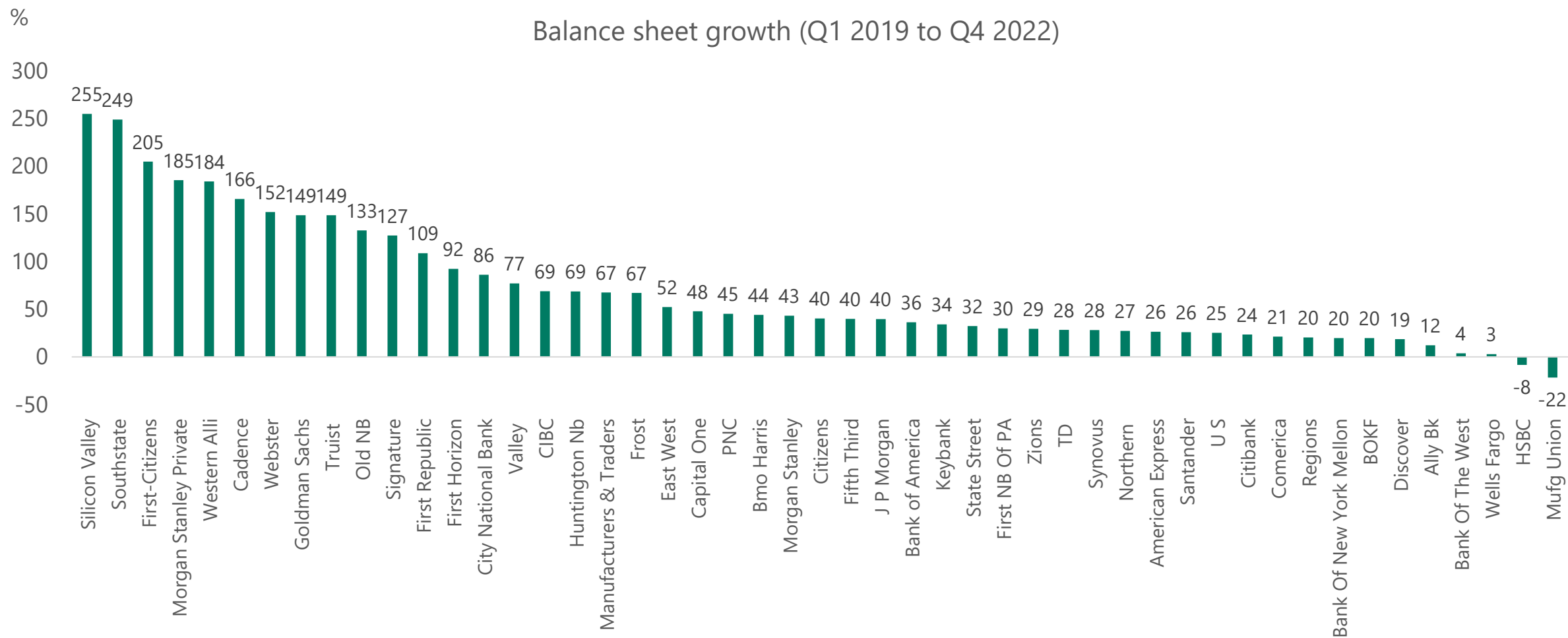
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022. Represents the views and opinions of Apollo's Chief Economist. Subject to change at any time without notice.

# Top 50 US banks by assets



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022.

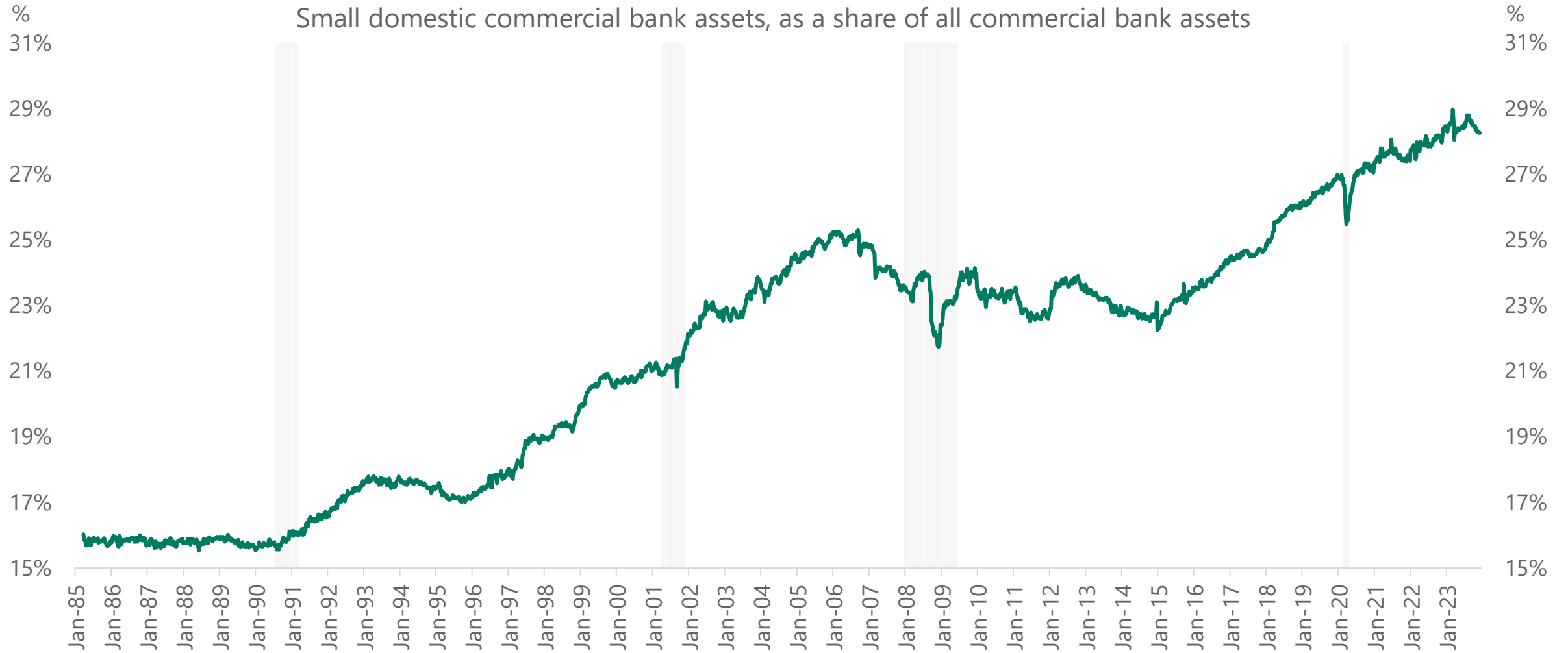
# Balance sheet growth of US banks, ranked by fastest growth in percent



Source: FDIC, Apollo Chief Economist.

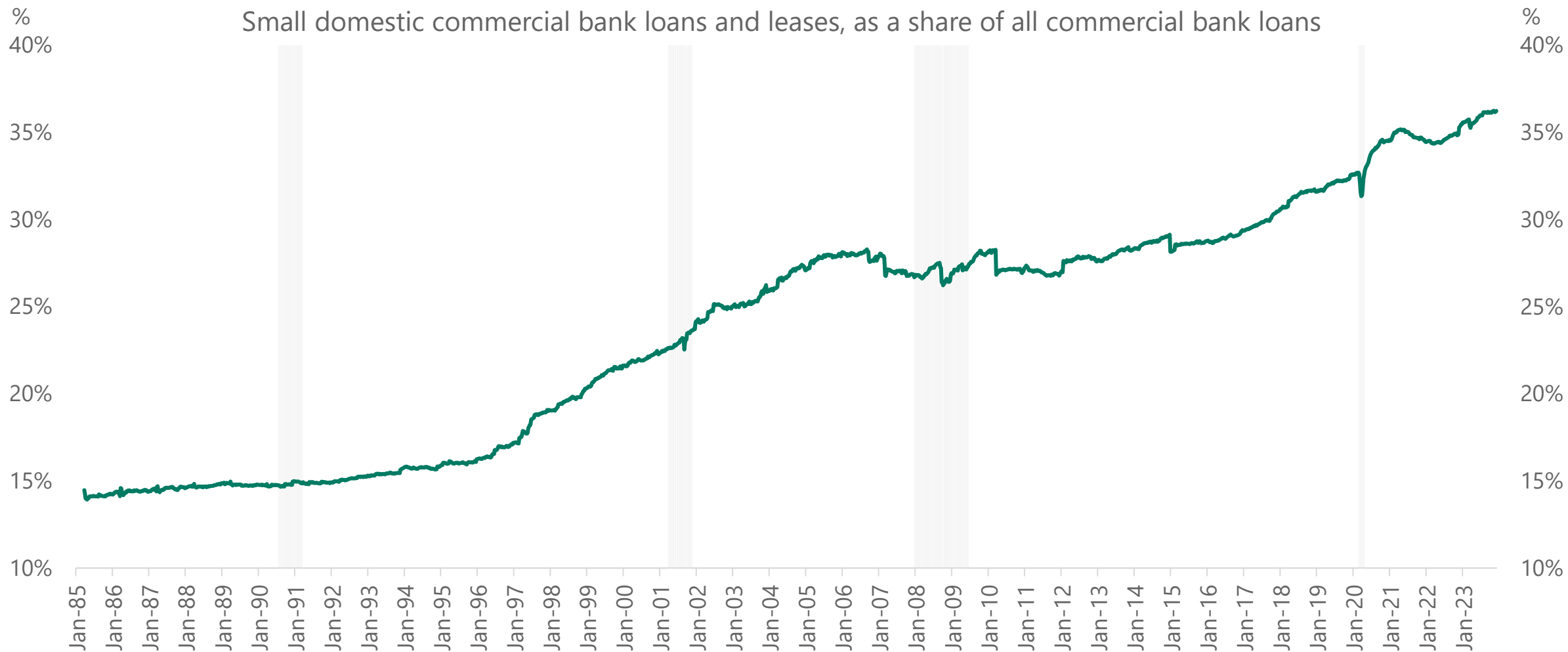


# Small bank assets as a share of total banking sector assets



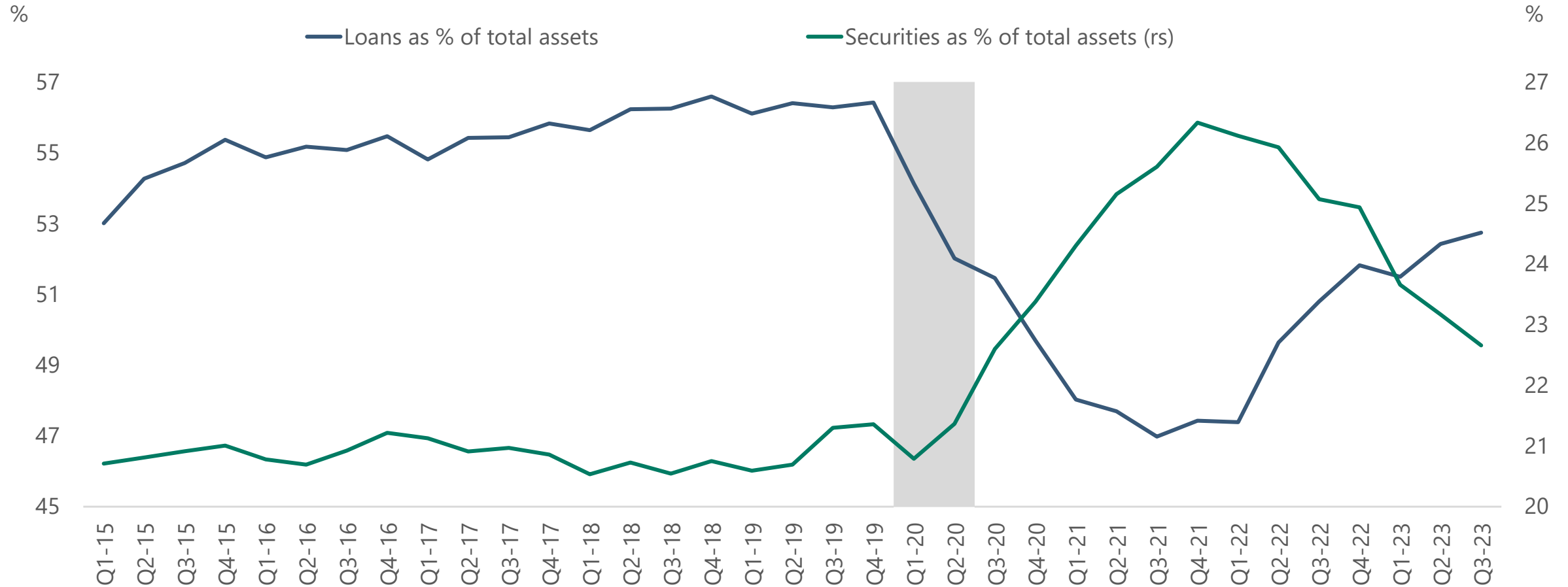
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Share of lending by smaller banks

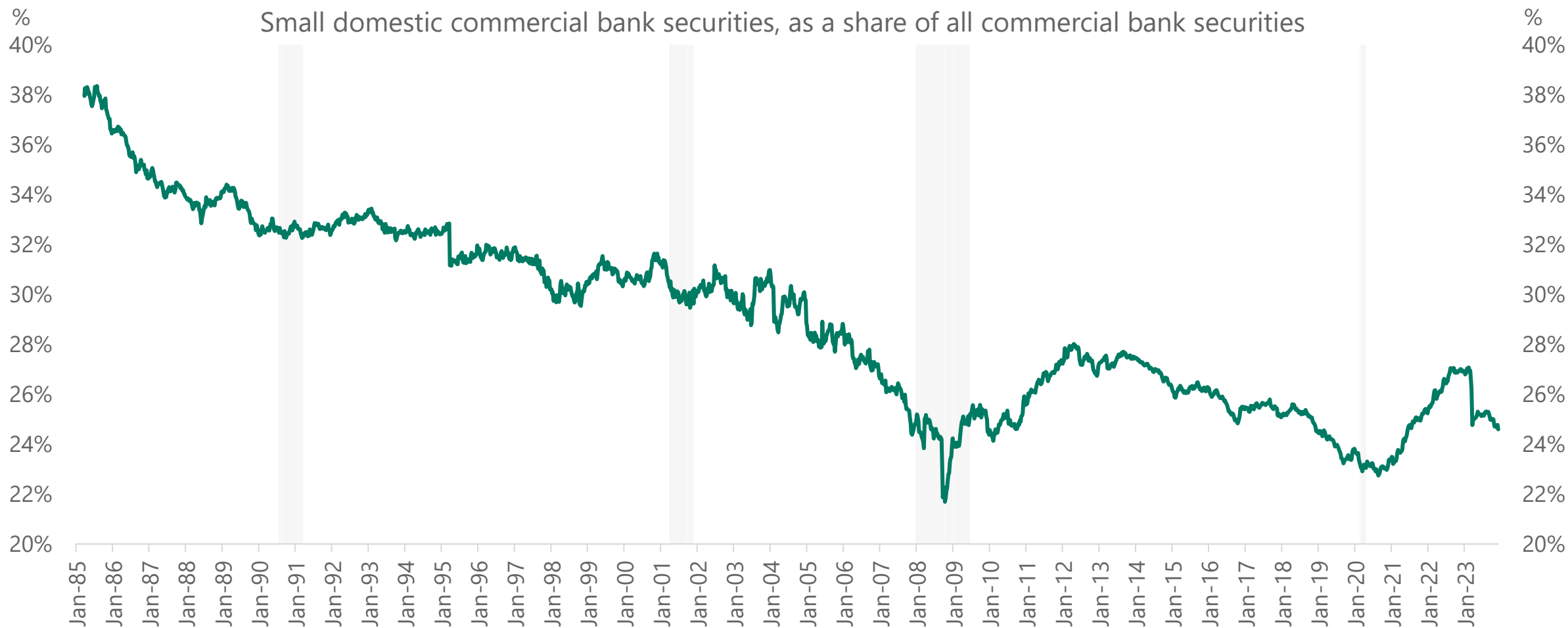


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

During the pandemic, banks shifted from lending to holding securities, which made them more vulnerable to Fed hikes and higher rates

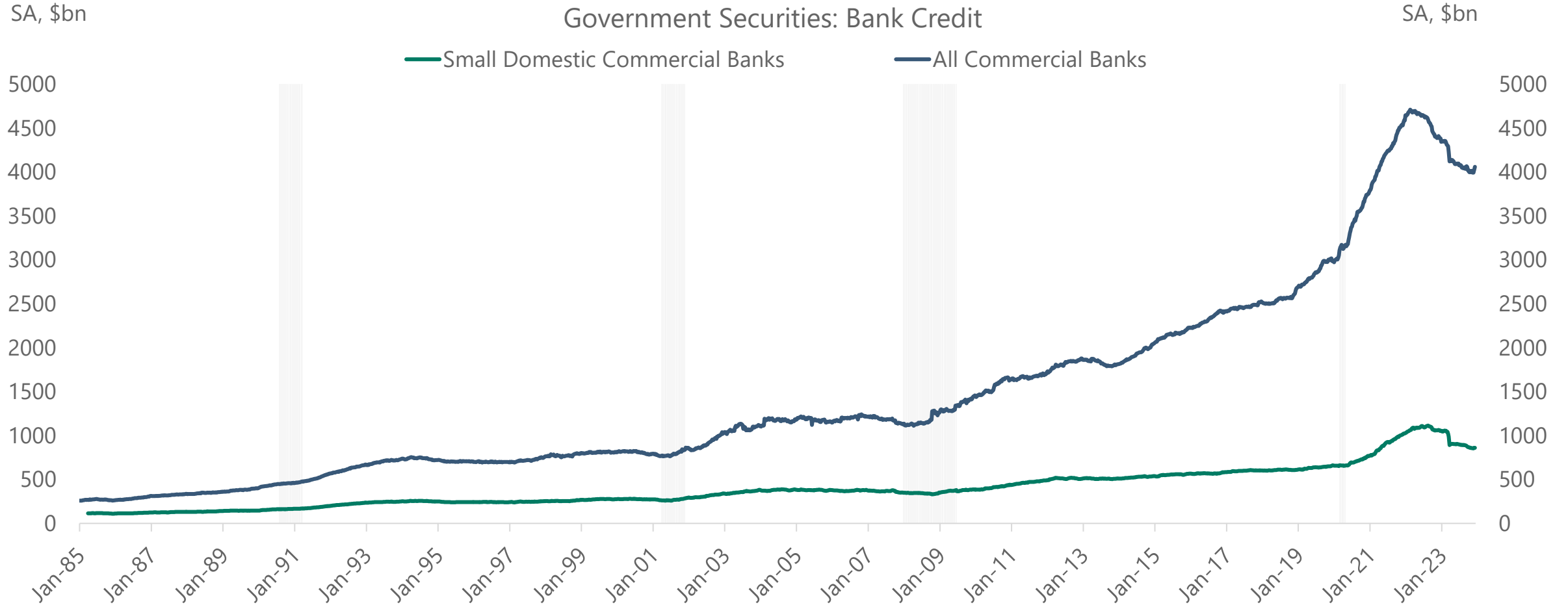


# Share of securities in the banking sector held by small banks



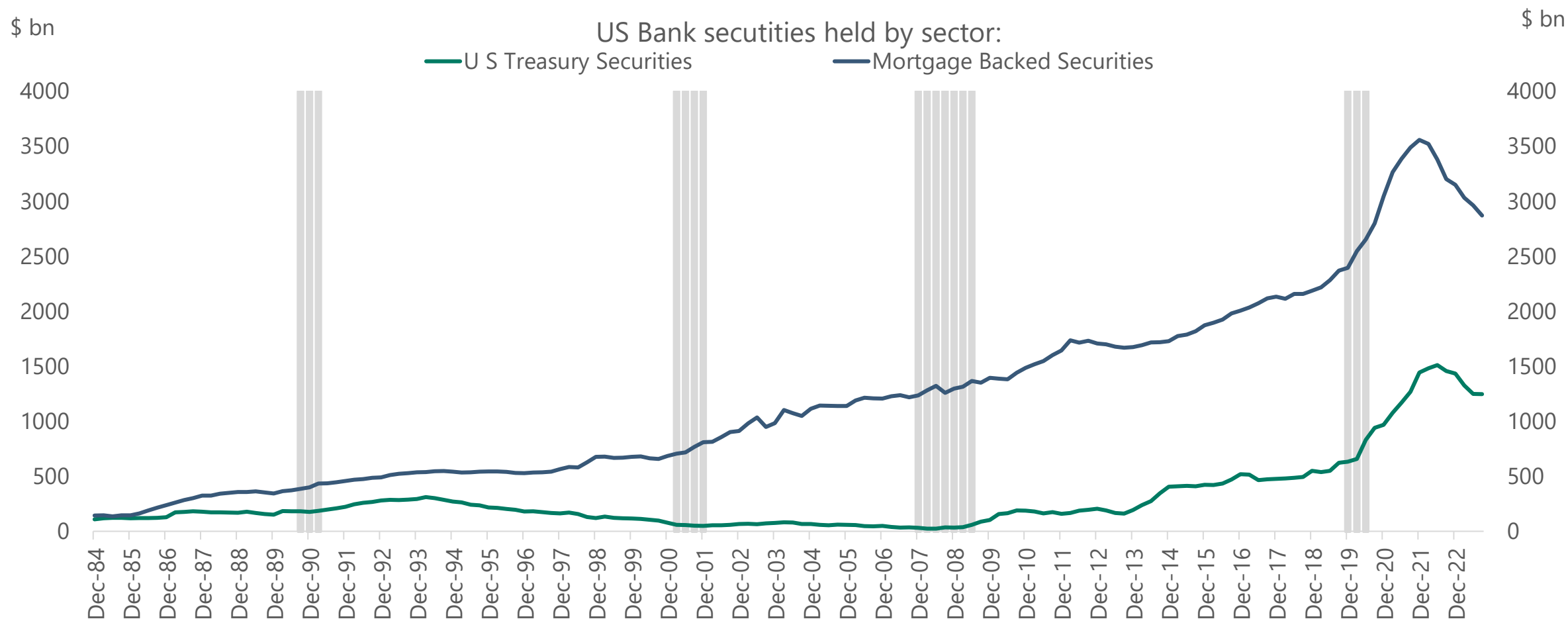
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Small banks hold about \$861bn in Treasuries



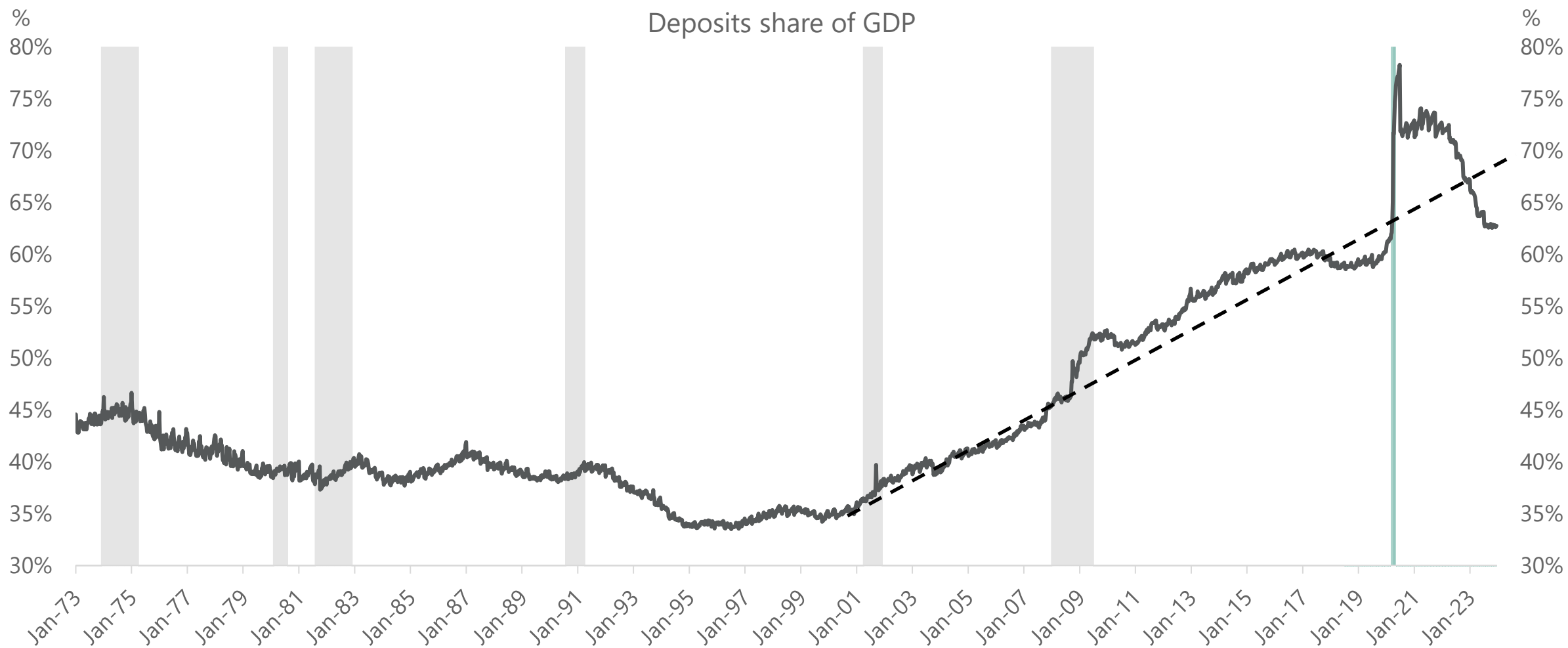
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Securities held by FDIC-insured banks



Source: FDIC, Bloomberg, Apollo Chief Economist.

# Deposits as a share of GDP

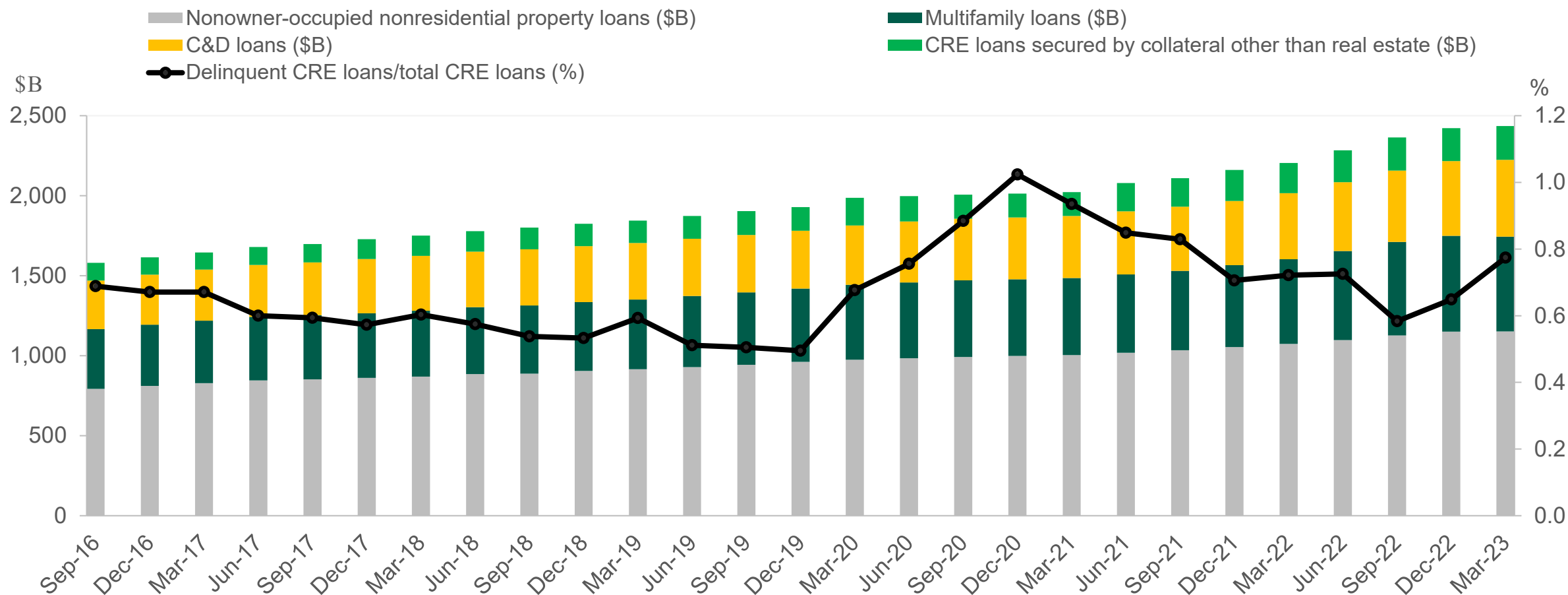


Source: Federal Reserve Board, BEA, Haver Analytics, Apollo Chief Economist

# Regional banks' asset concentration in CRE

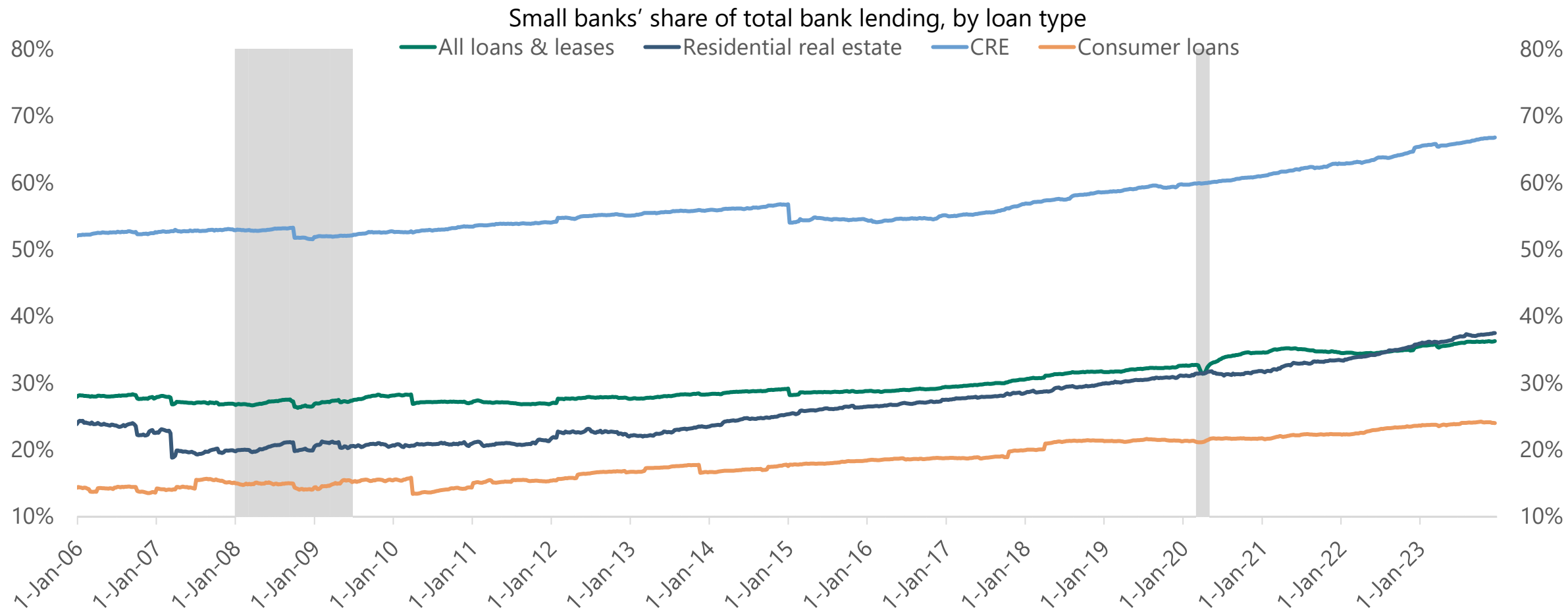


# CRE composition and delinquency at US banks



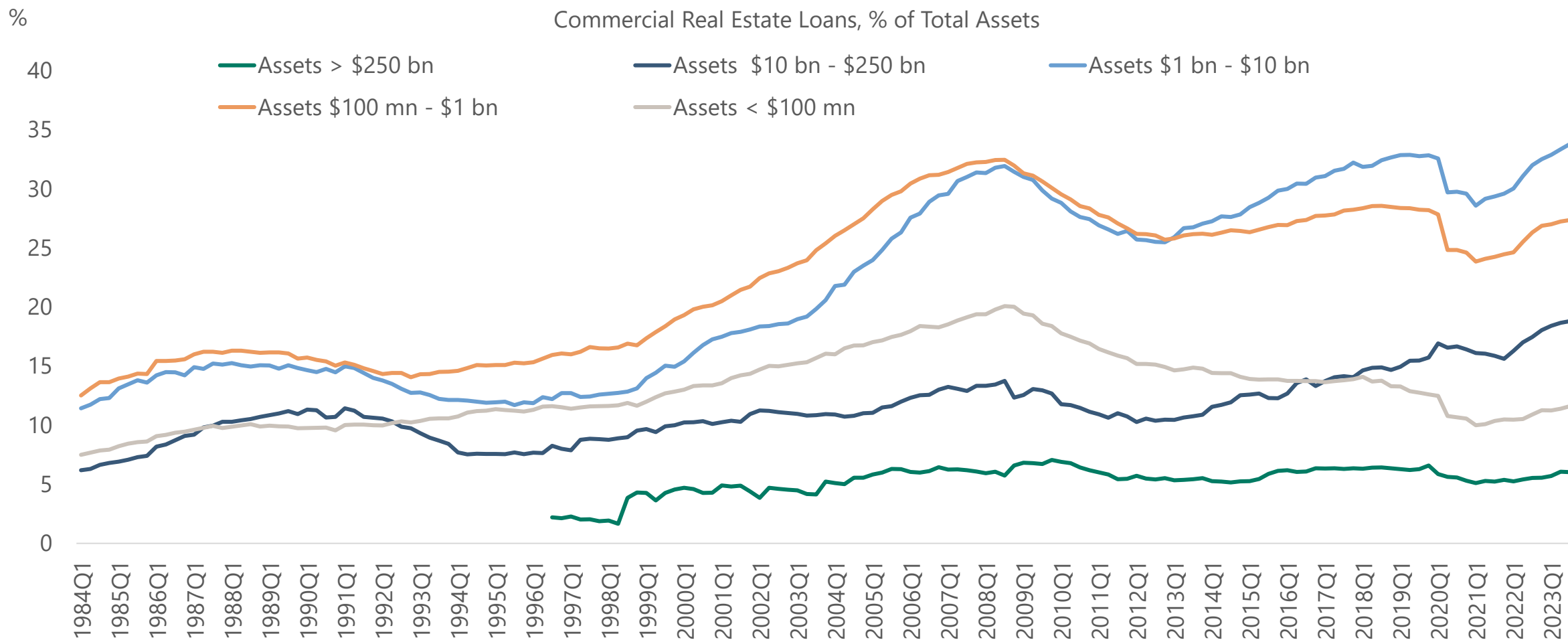
Source: S&P Global Market Intelligence, Apollo Chief Economist

# Small banks account for almost 70% of all commercial real estate loans outstanding



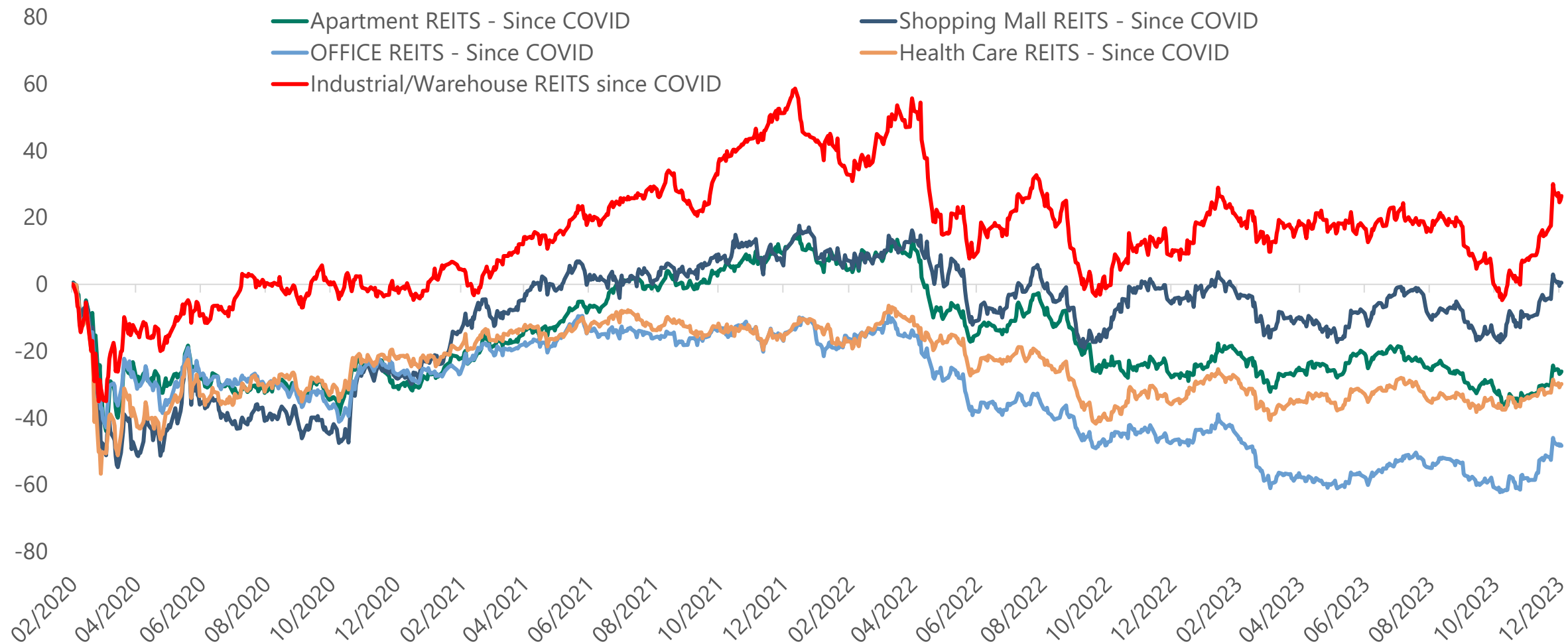
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

# Banks with total assets between \$100mn and \$10bn are more exposed to CRE loans

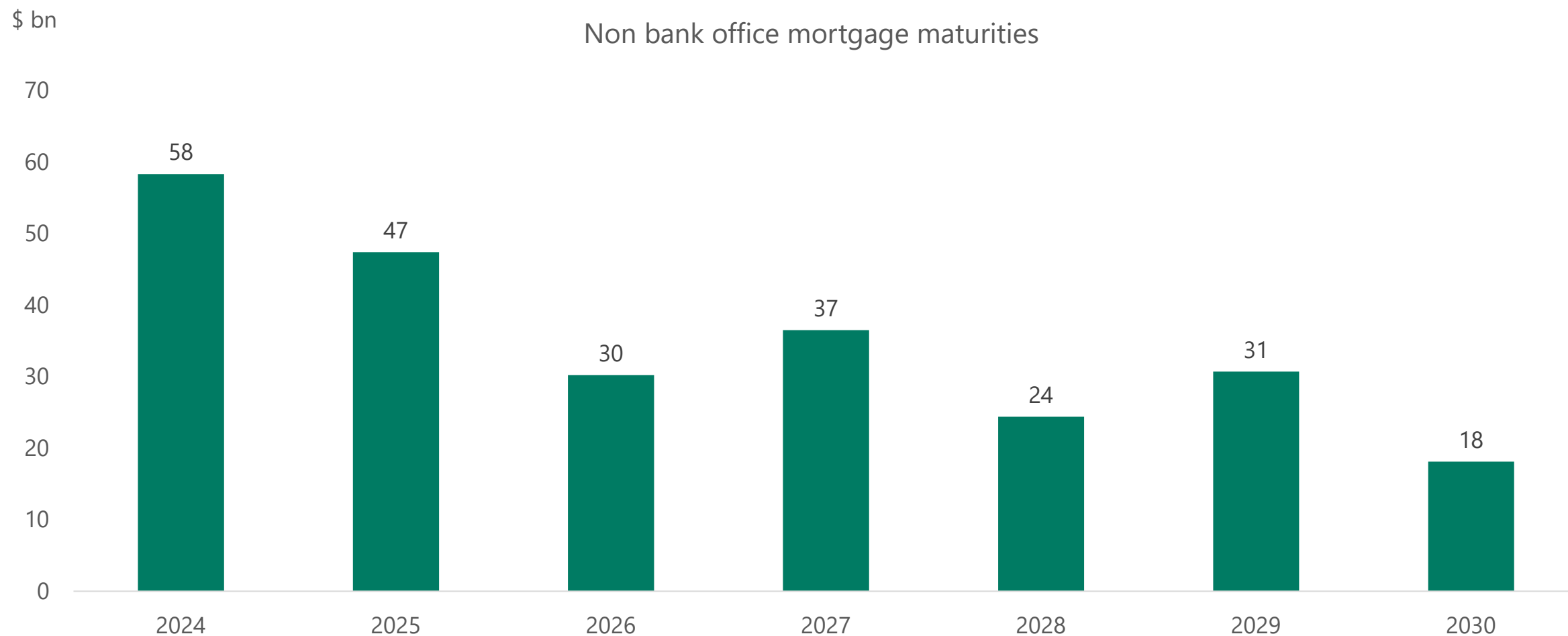


# Where are the problems in CRE?

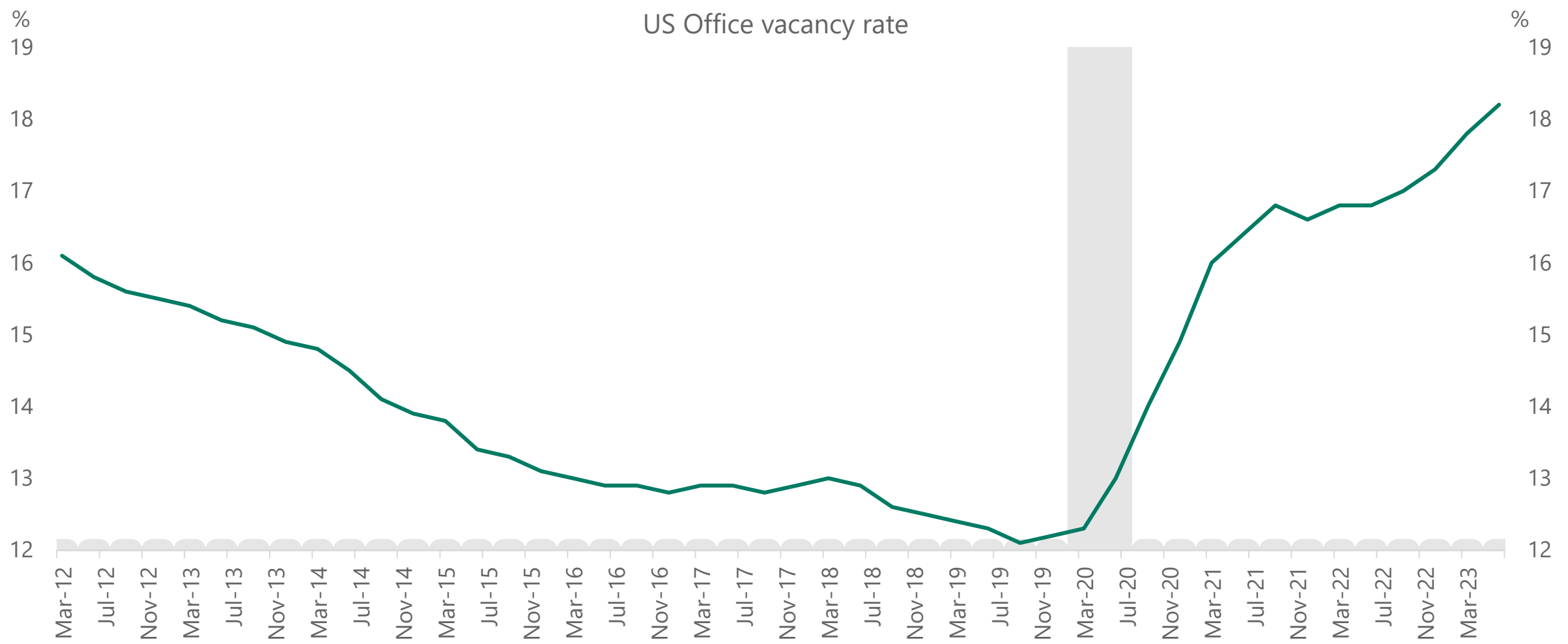
Normalized as of 20 Feb 2020



# Nearly \$58 bn of nonbank office debt is set to mature in 2024

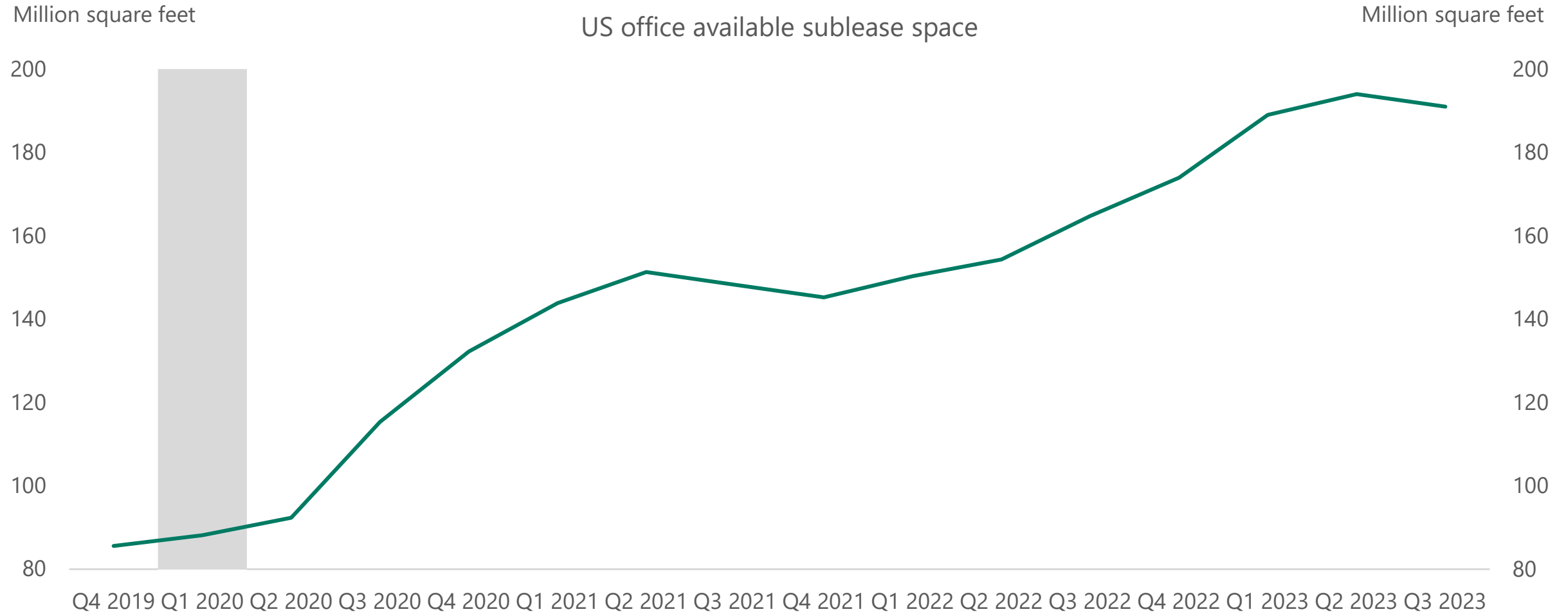


# US Office vacancy rate rising



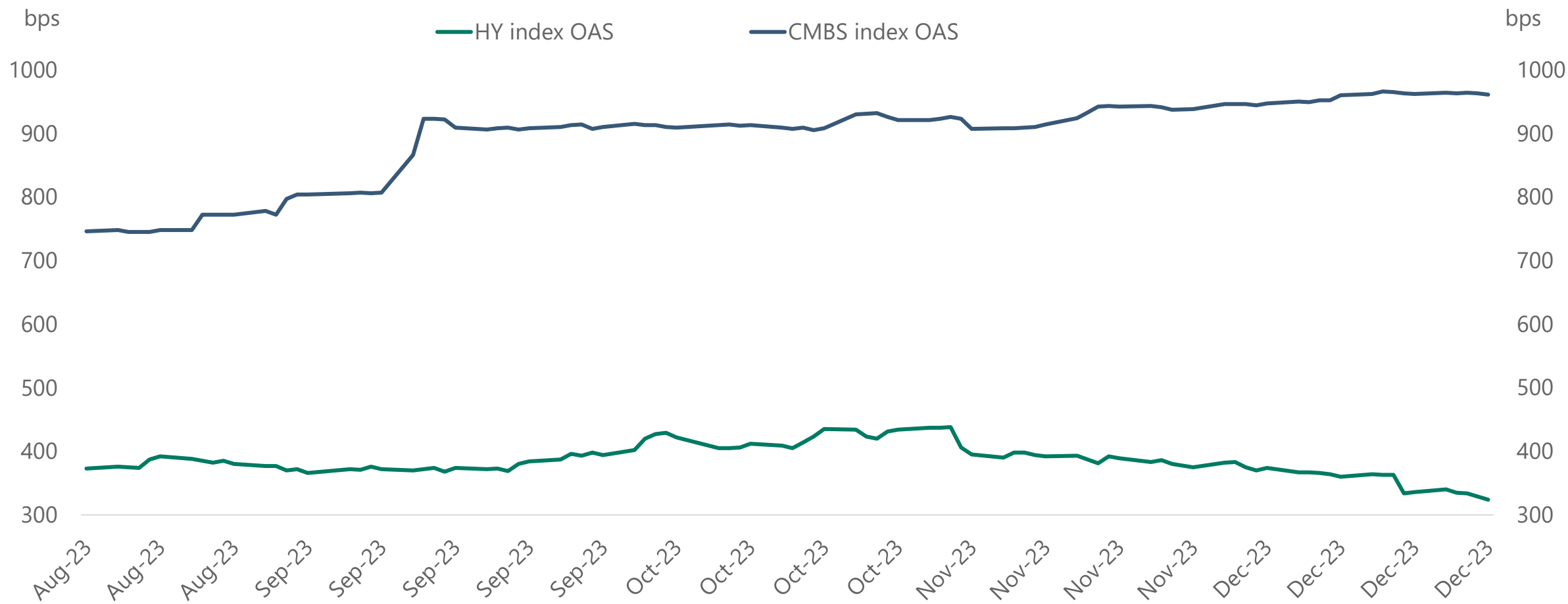
Source: Bloomberg, Apollo Chief Economist

# Available US office space



Source: CBRE, Bloomberg, Apollo Chief Economist.

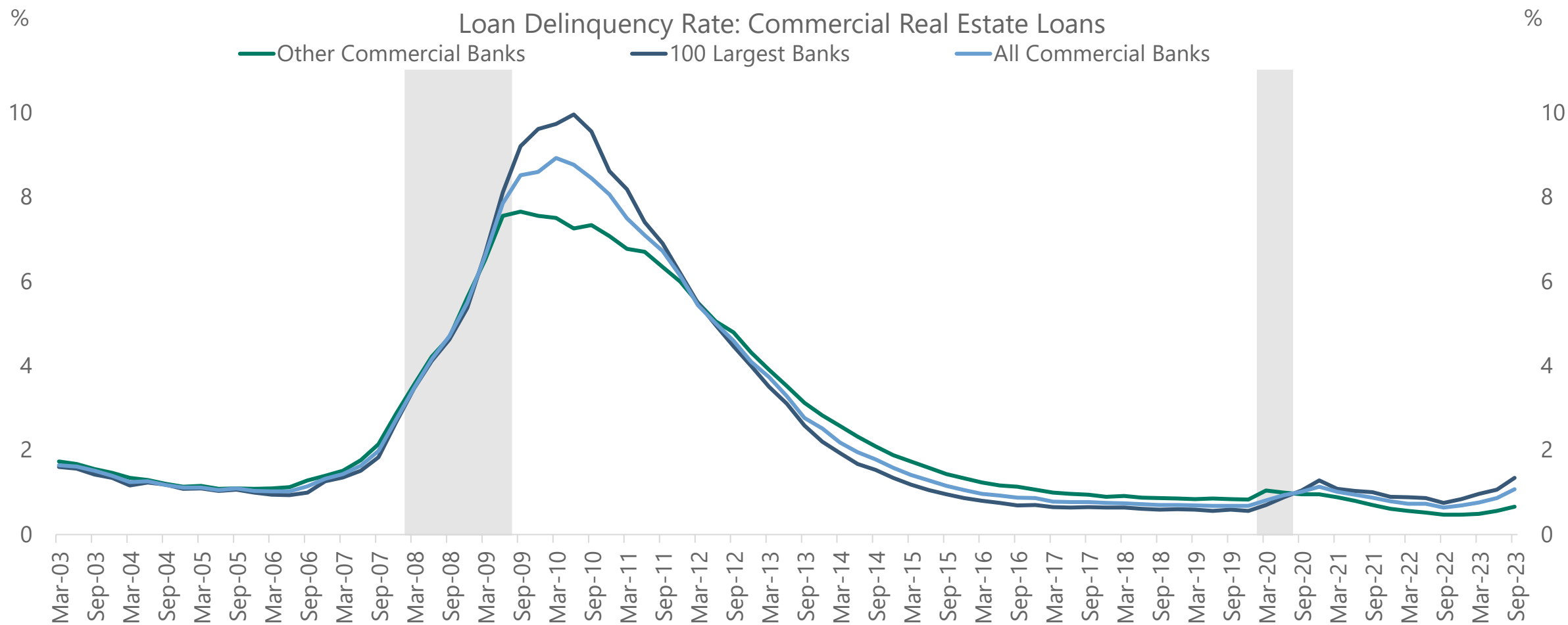
# CMBS spreads compared with HY spreads



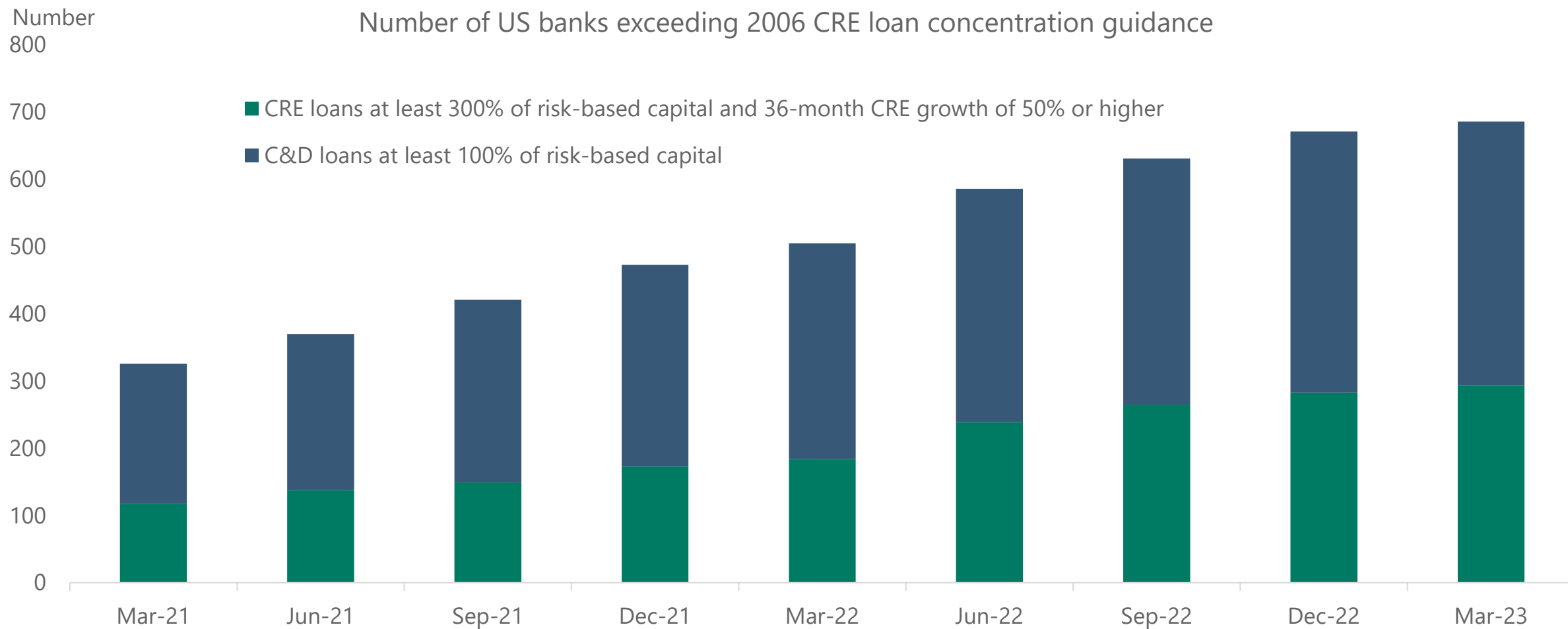
Source: Bloomberg, Apollo Chief Economist. (Note: BBG Ticker: LF98OAS Index, LC31OAS Index)



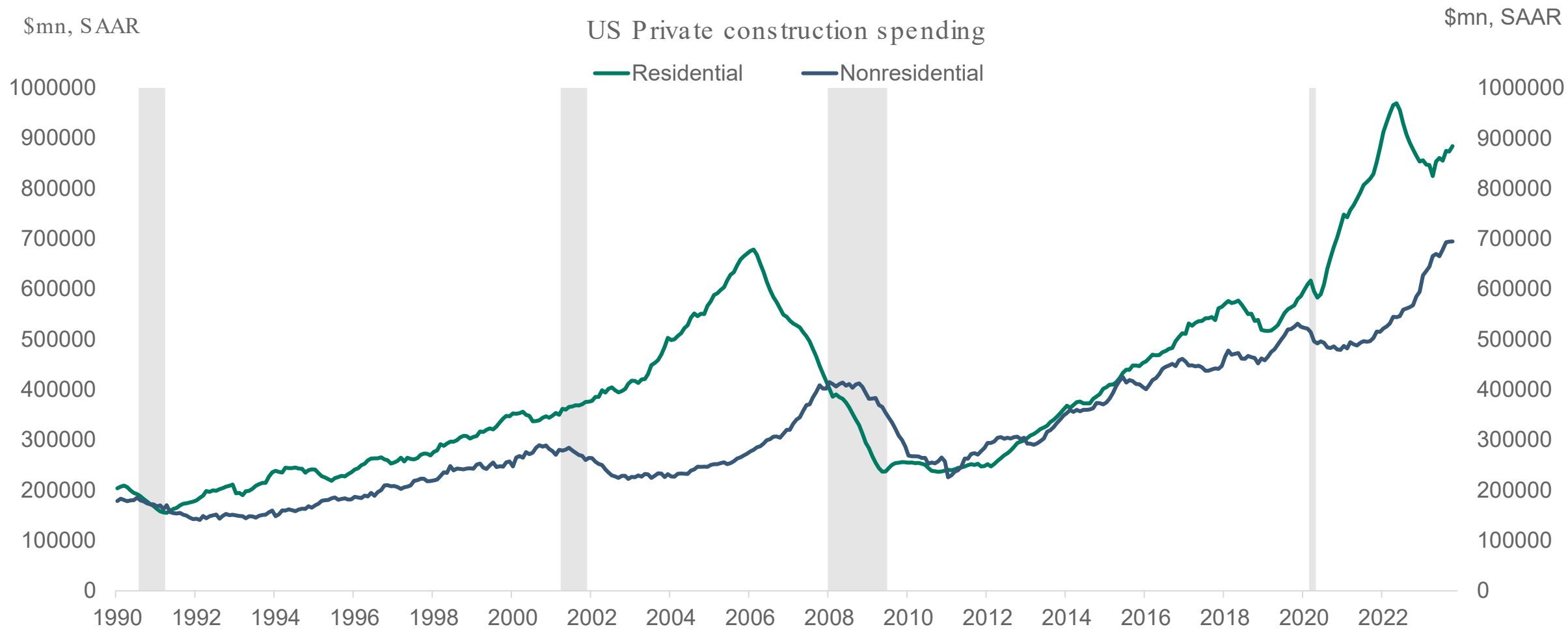
# CRE delinquency rate



# Number of banks with CRE exposure rising

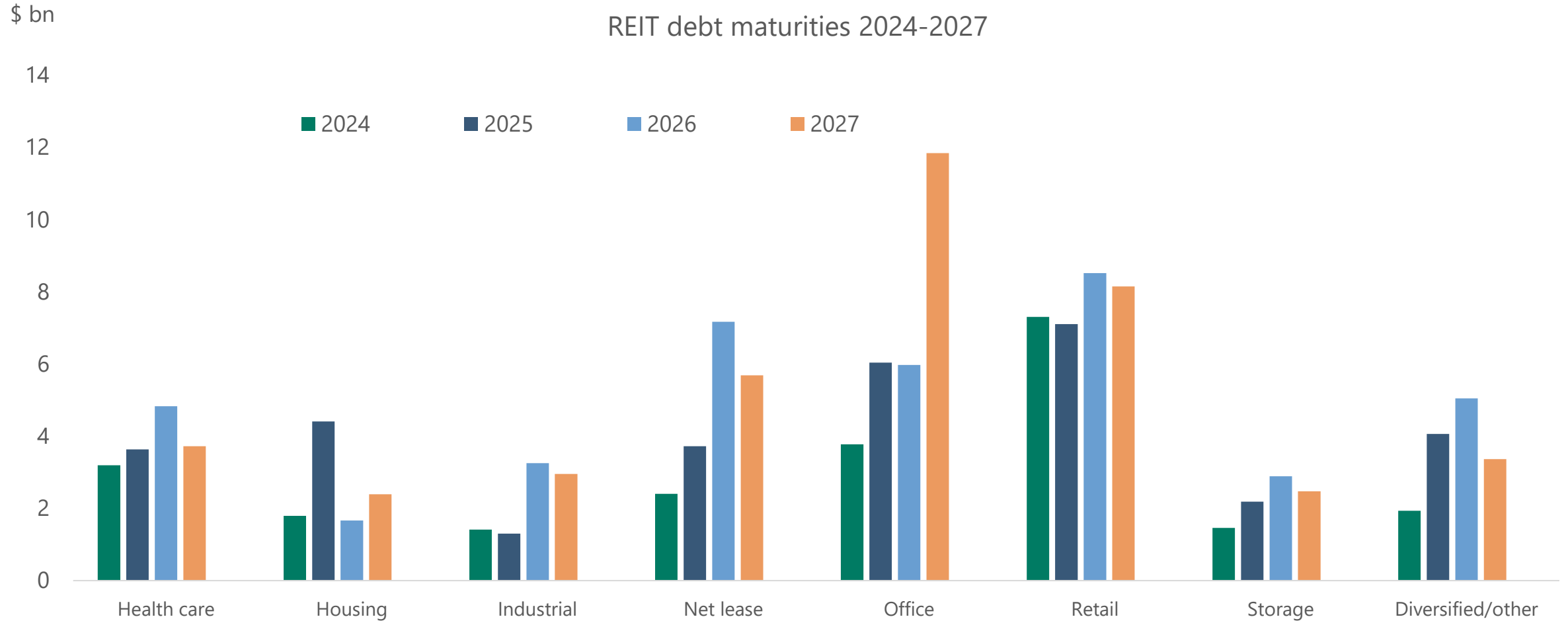


# Residential construction spending elevated



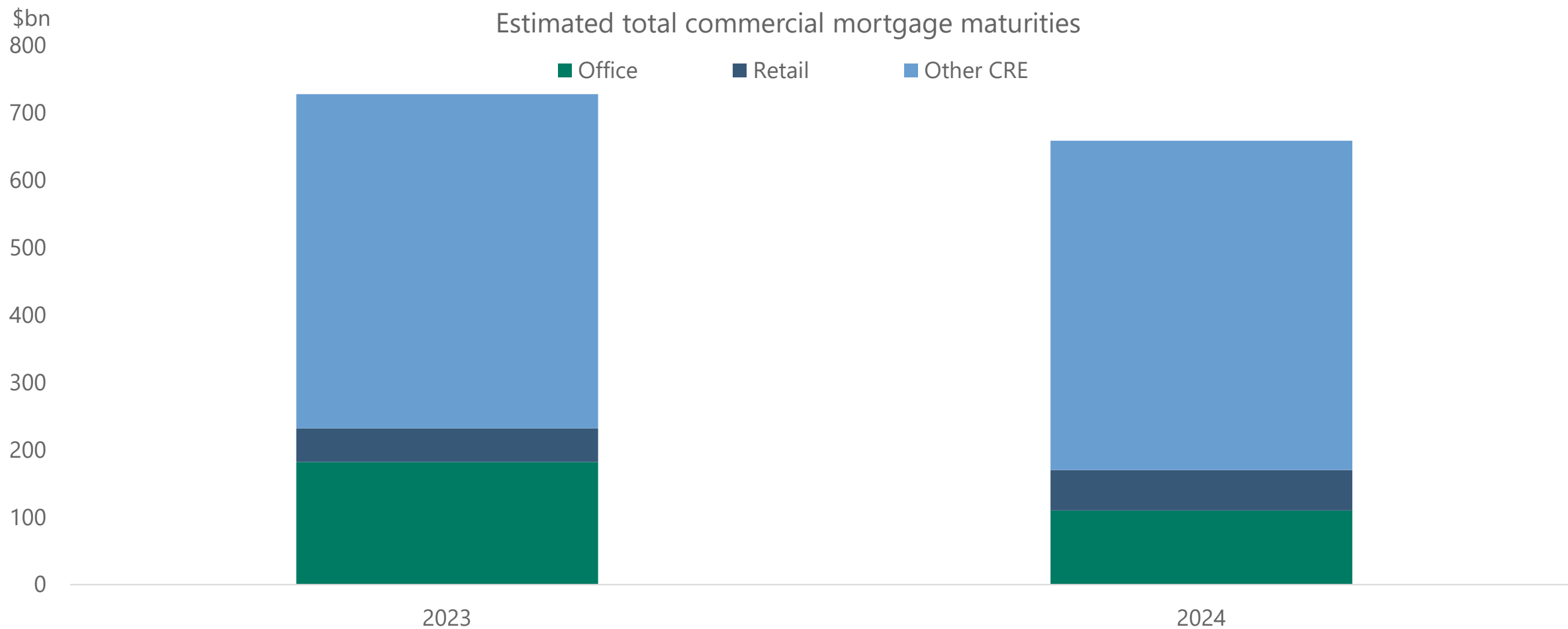
Source: Census Bureau, Haver Analytics, Apollo Chief Economist.

# U.S. REITs hold approximately \$23 billion of debt maturing this year



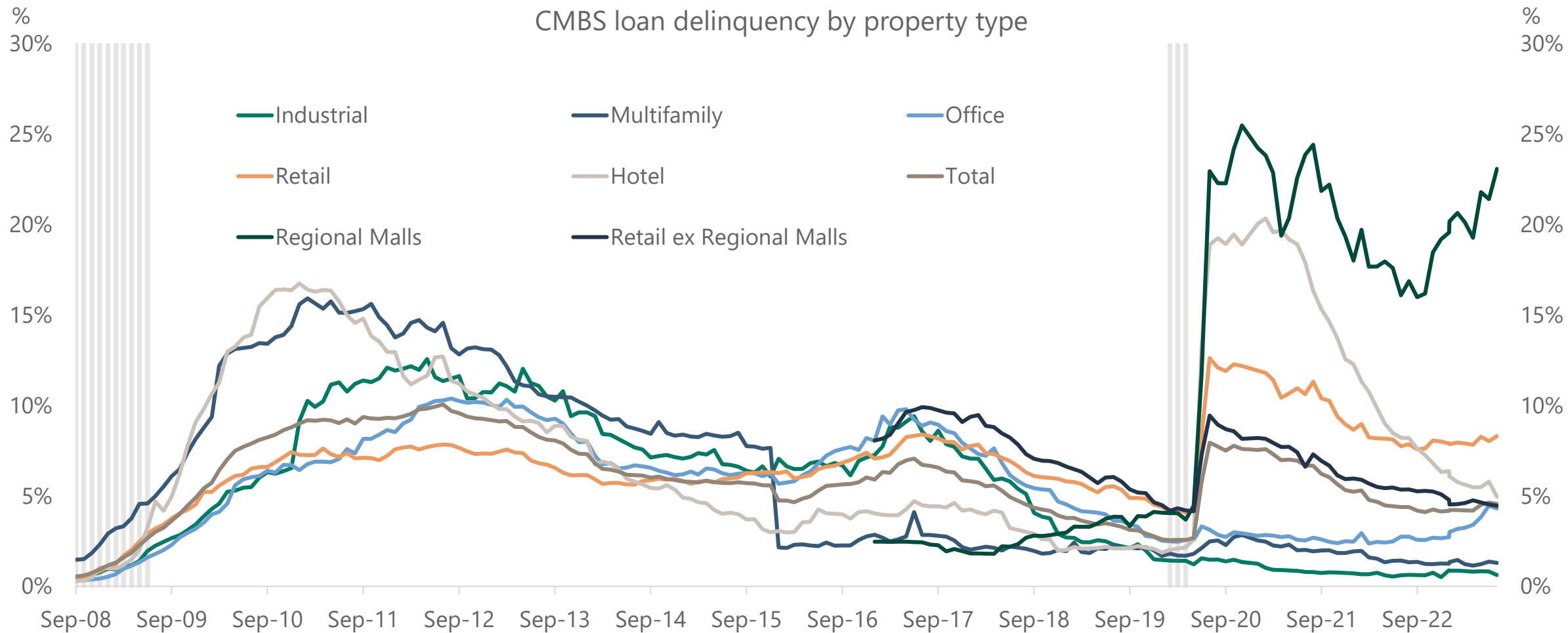
Source: S&P Capital IQ, Apollo Chief Economist

# CRE maturity profile

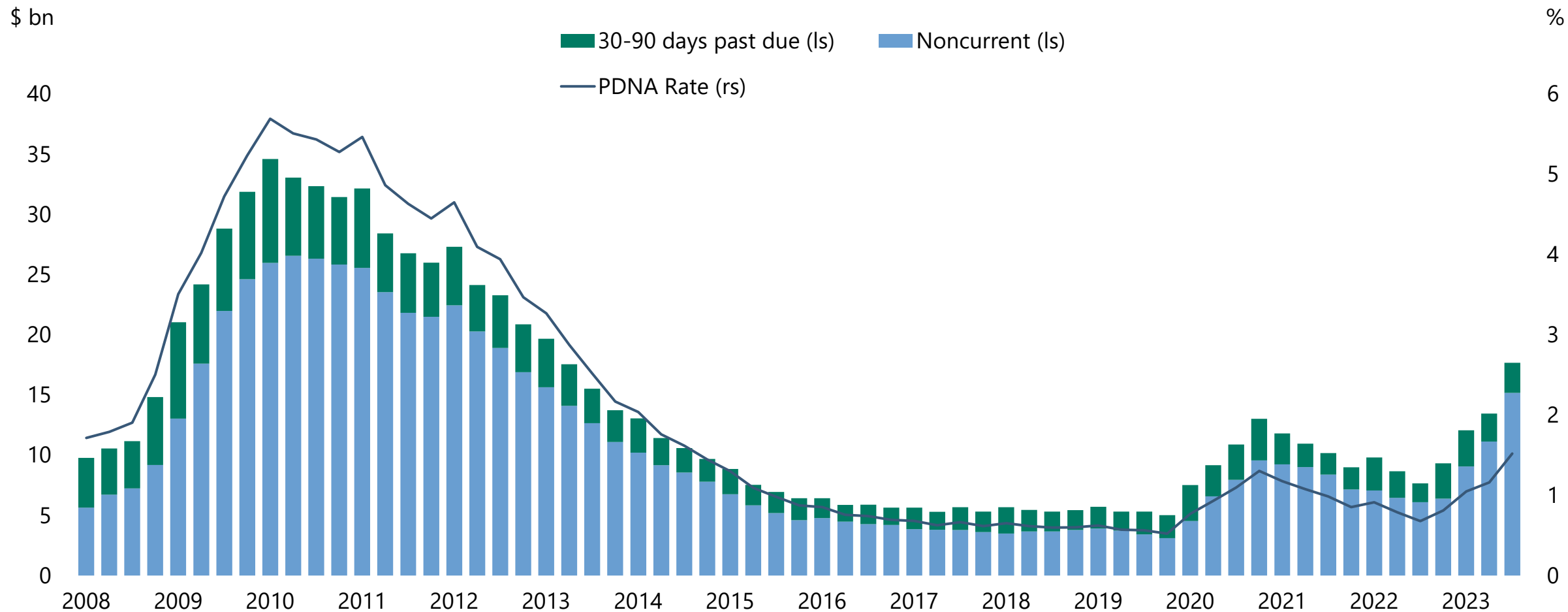


Source: MBA, Apollo Chief Economist. Note: Other CRE includes multifamily, industrial/warehouse, hotel/motel, healthcare and others.

# Delinquency rates rising for multifamily



# Non-owner-occupied CRE past-due and noncurrent loans

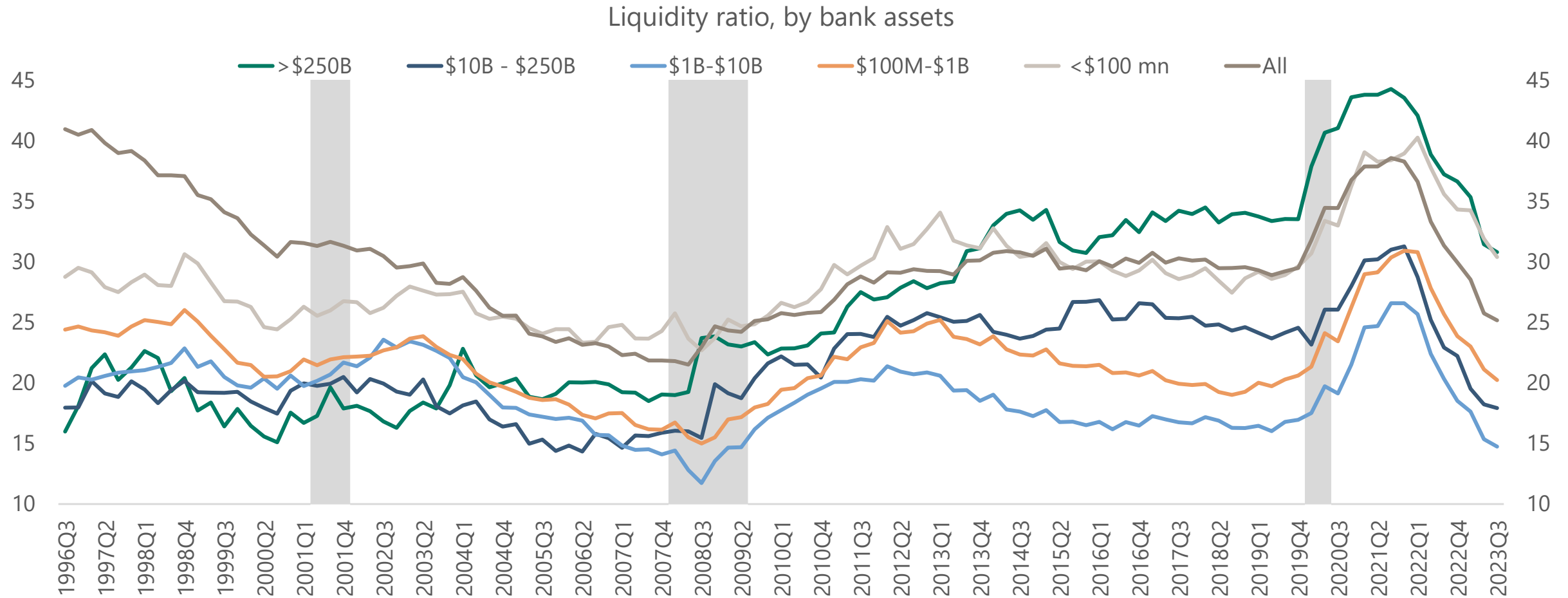


Source: FDIC, Apollo Chief Economist (PDNA stands for Past due and non-accrual rate defined as loans that are past due and are in non-accrual status)

# Measures of banking sector liquidity and capital ratios

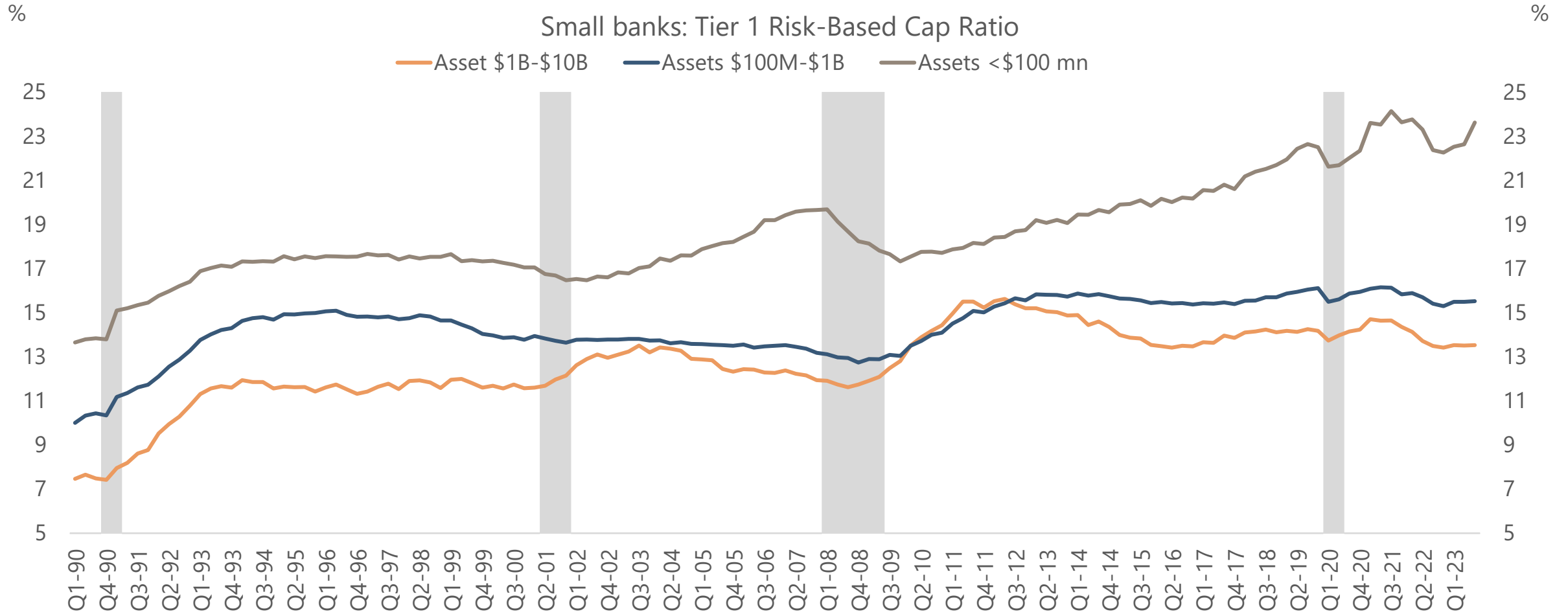


# Liquidity ratio, by bank assets: Banks from \$1bn to \$10bn have lower liquidity ratios



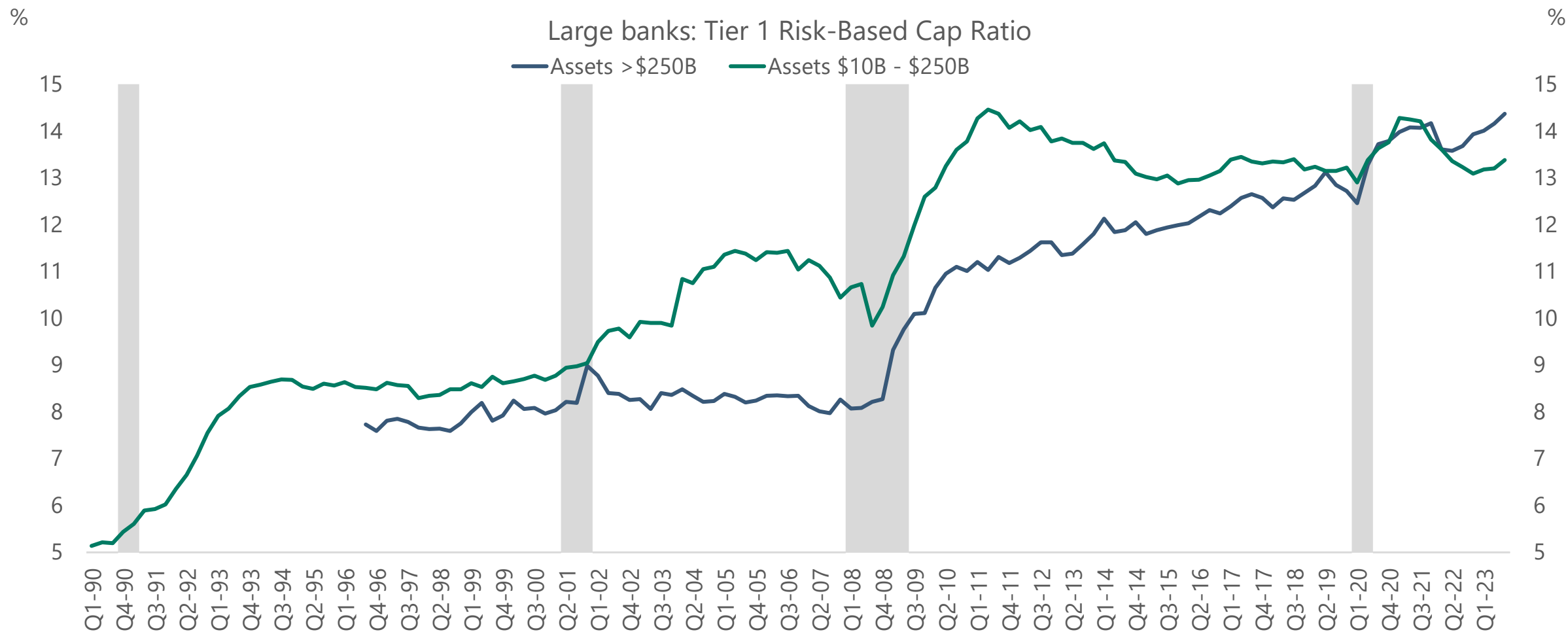
Source: FDIC, Bloomberg, Apollo Chief Economist.

# Tier-1 risk-based capital ratio for banks, by size



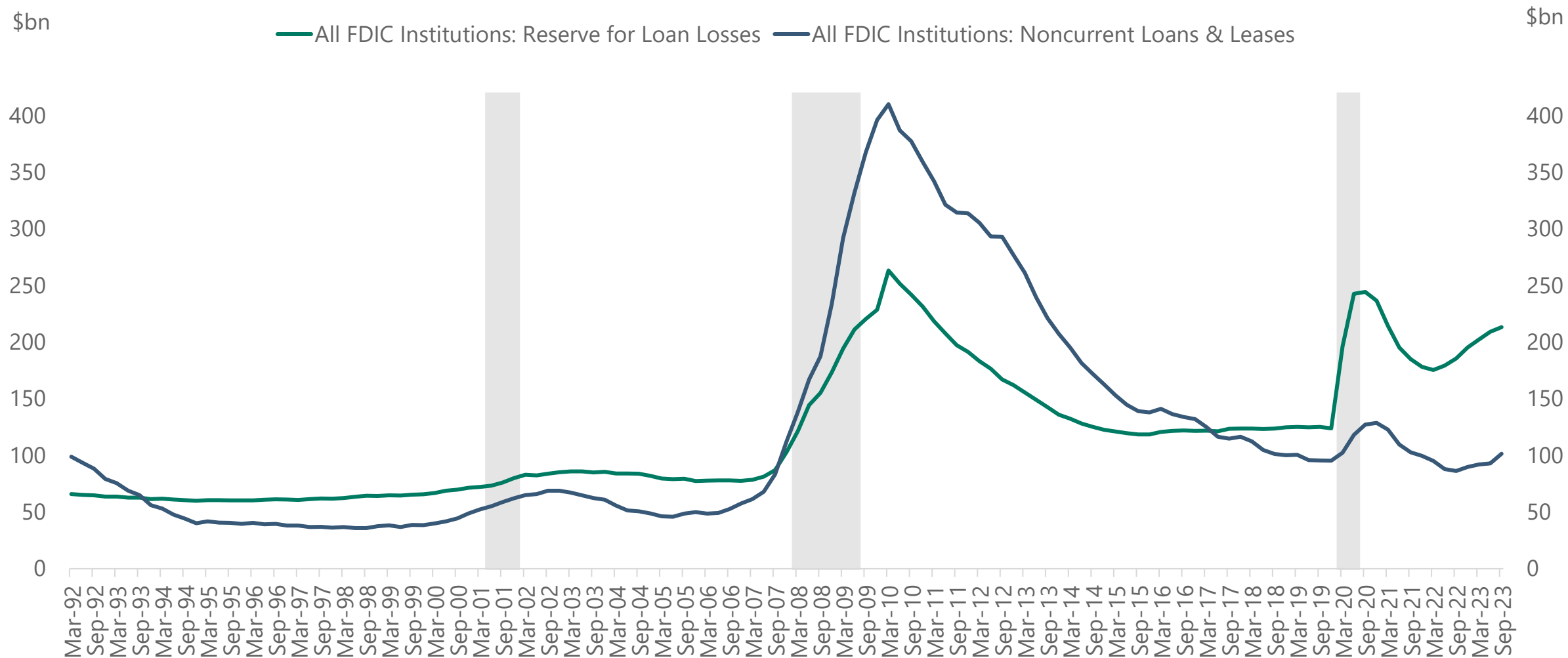
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion.

# Tier 1 risk-based capital ratio for larger banks



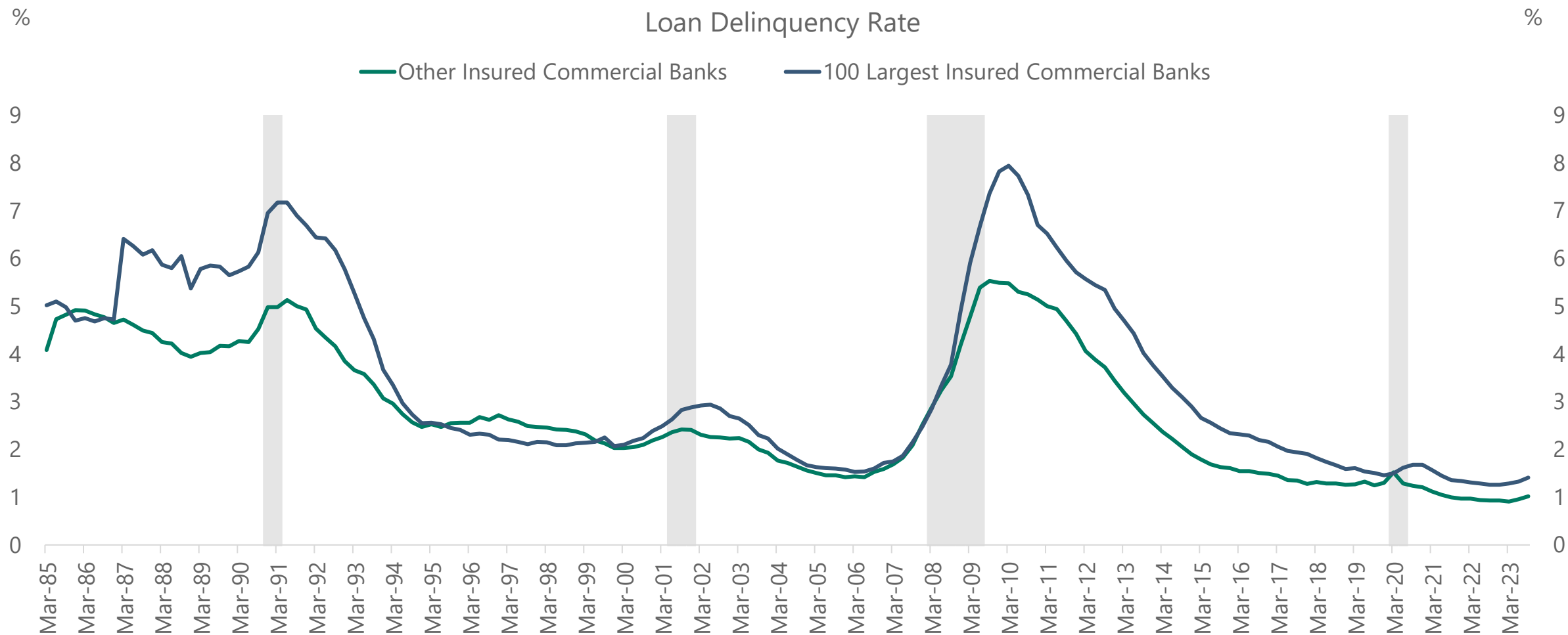
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion..

# Reserves for loan losses



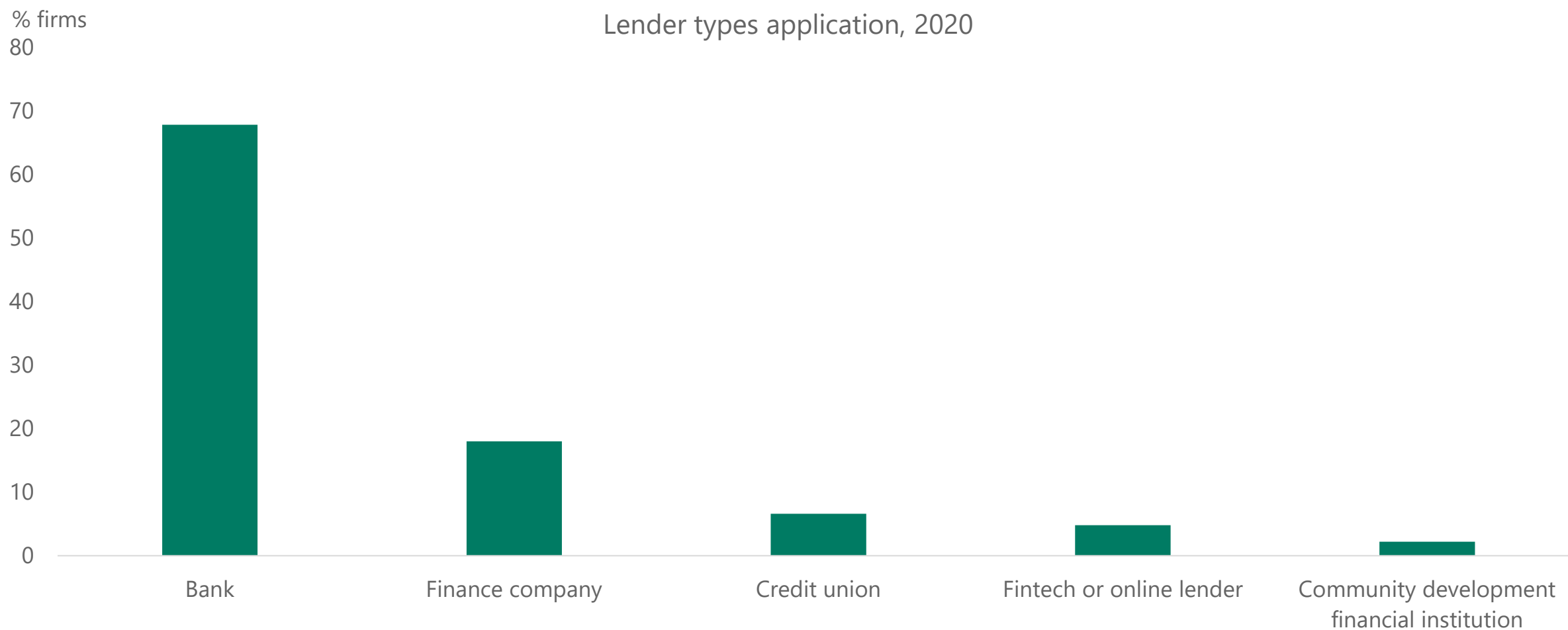
Source: FDIC, Haver Analytics, Apollo Chief Economist.

# Loan delinquency rates for large and small banks

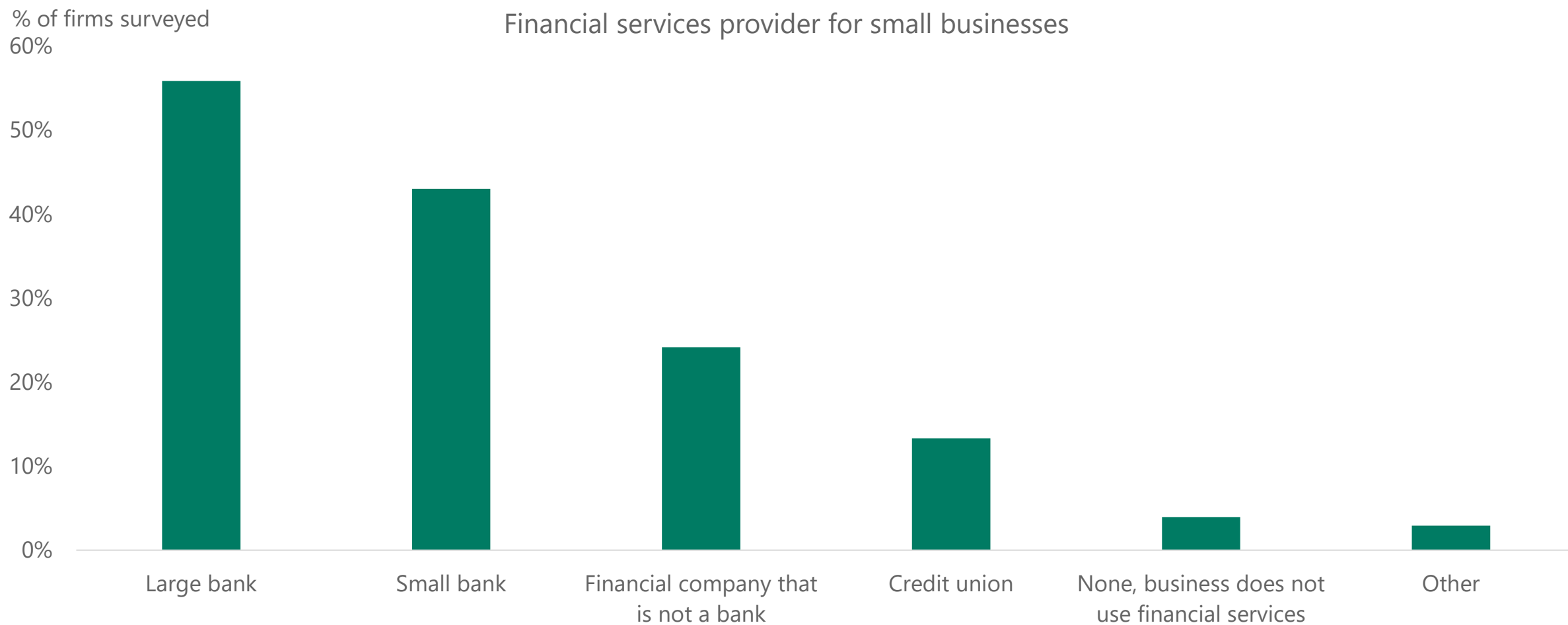


# Sources of financing for small businesses

# Banks are the most important source of financing for small businesses

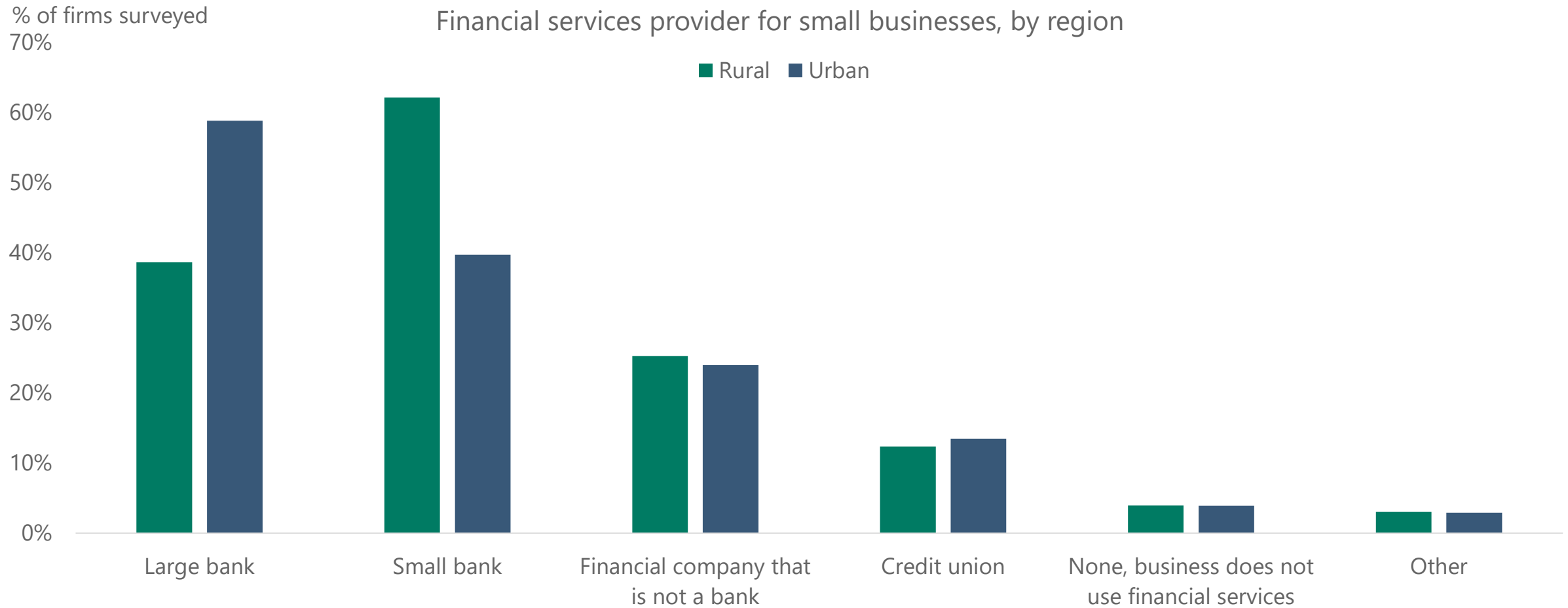


# Sources of financing for small businesses

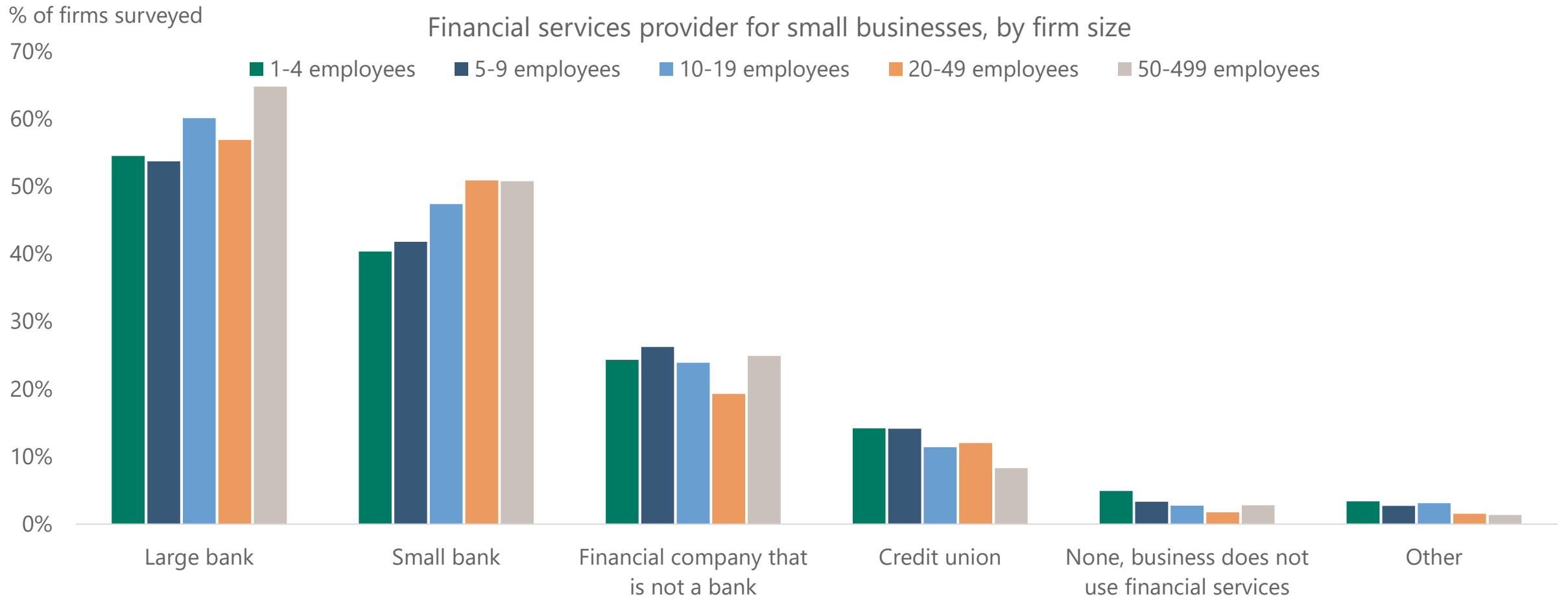




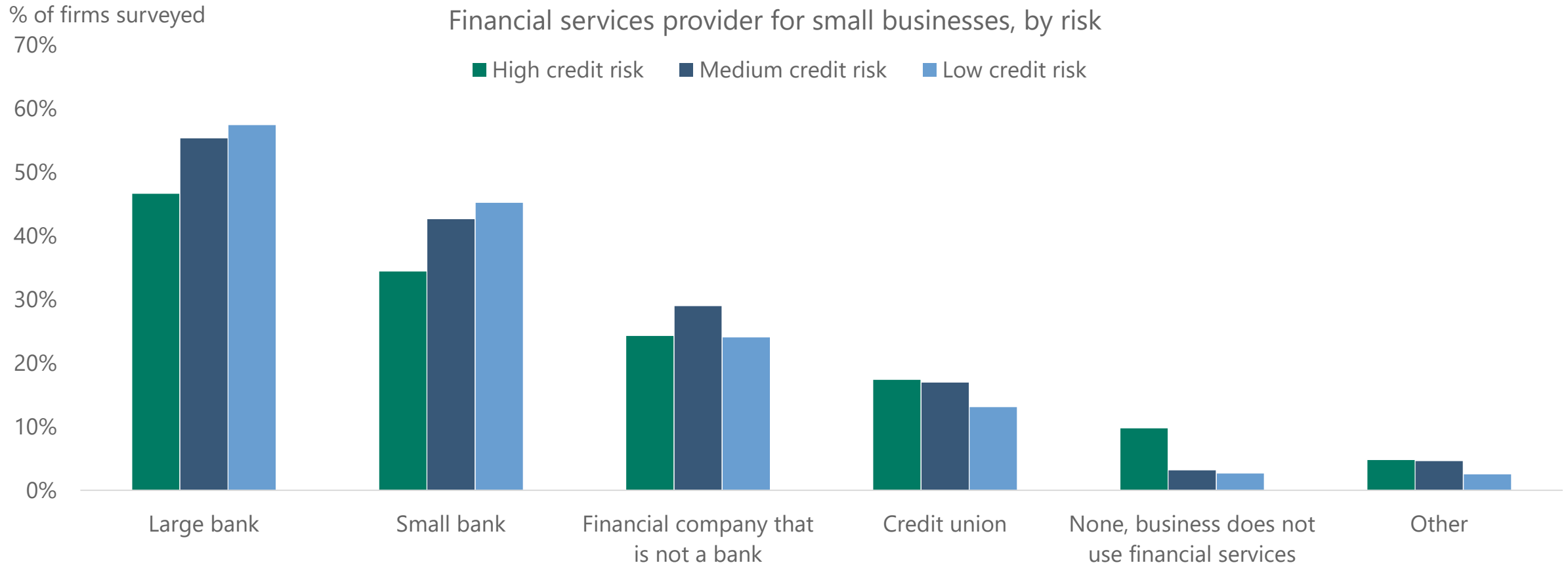
# Small banks provide 60% of lending for small businesses in rural areas and 40% in urban areas



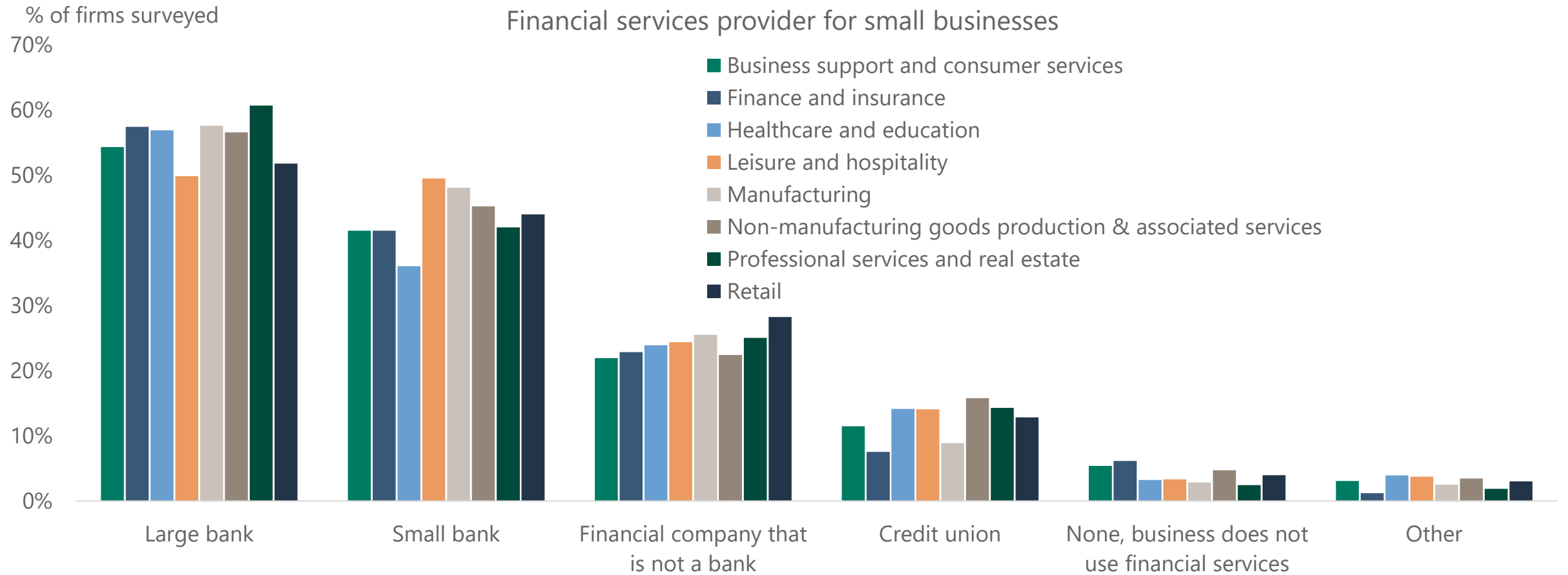
# Sources of financing for small businesses, by firm size



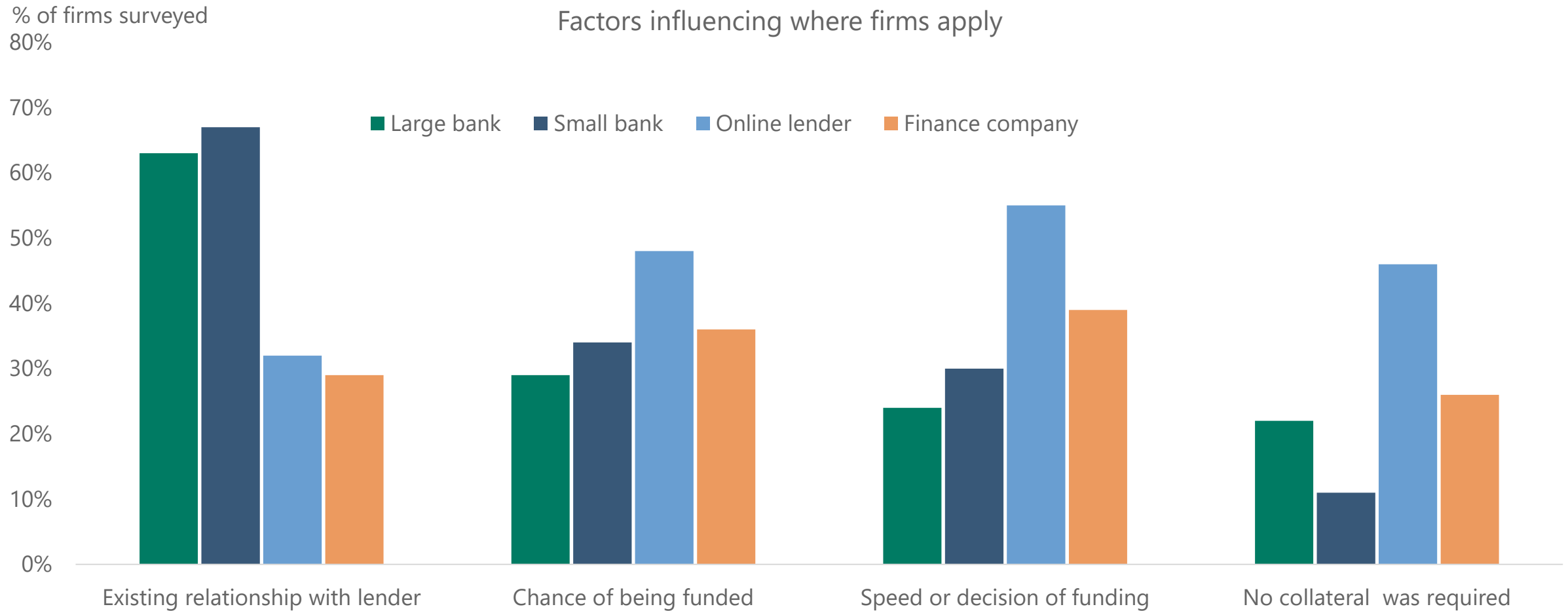
# Sources of financing for small businesses, by risk of the firm



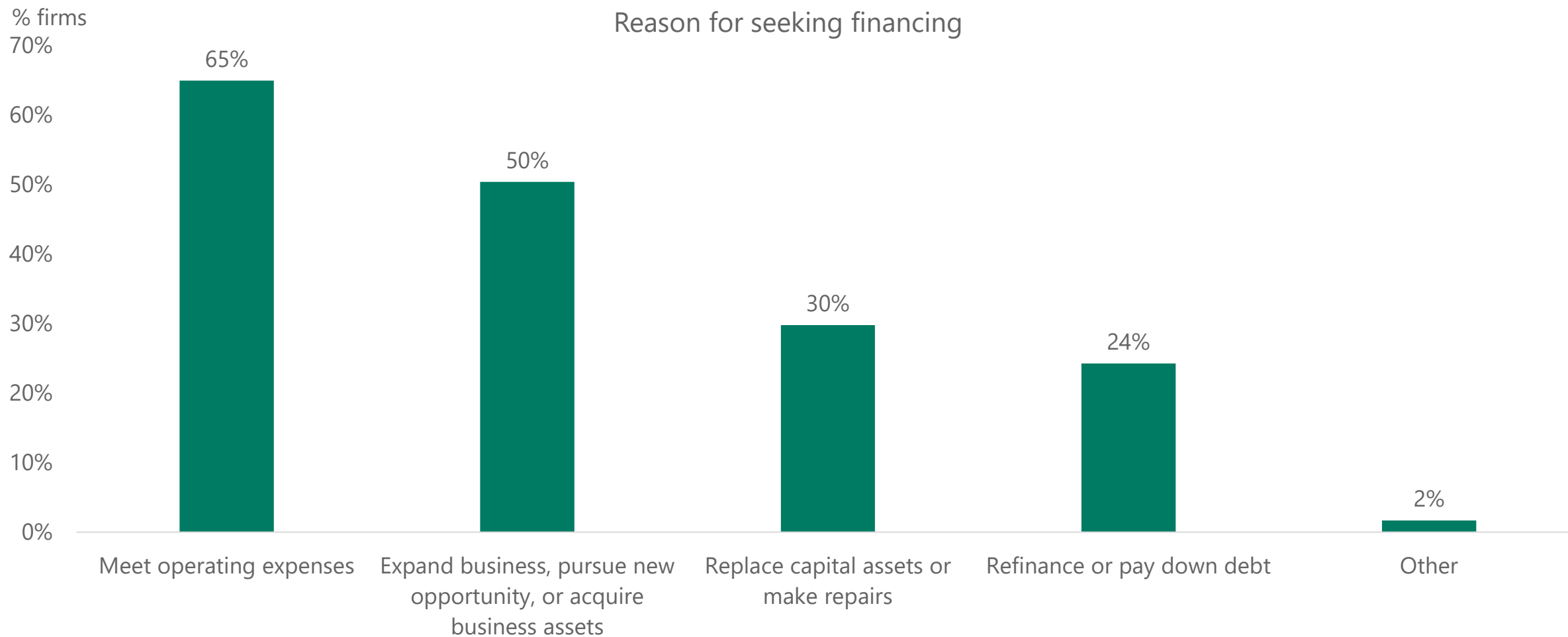
# Sources of financing for small businesses, by firm industry



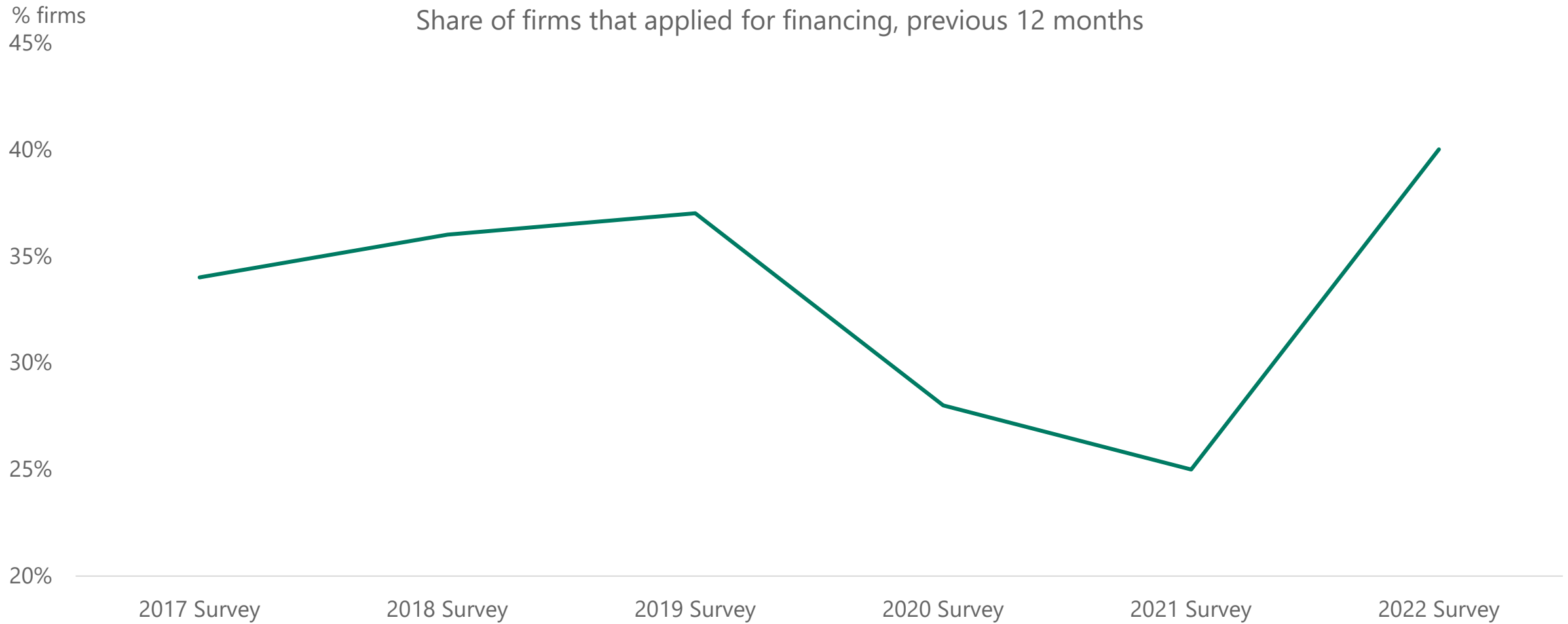
# Factors influencing where small businesses apply for a loan. Relationship is important for small bank lending



# Purpose of seeking financing for small businesses



# Share of small firms applying for financing in the past 12 months

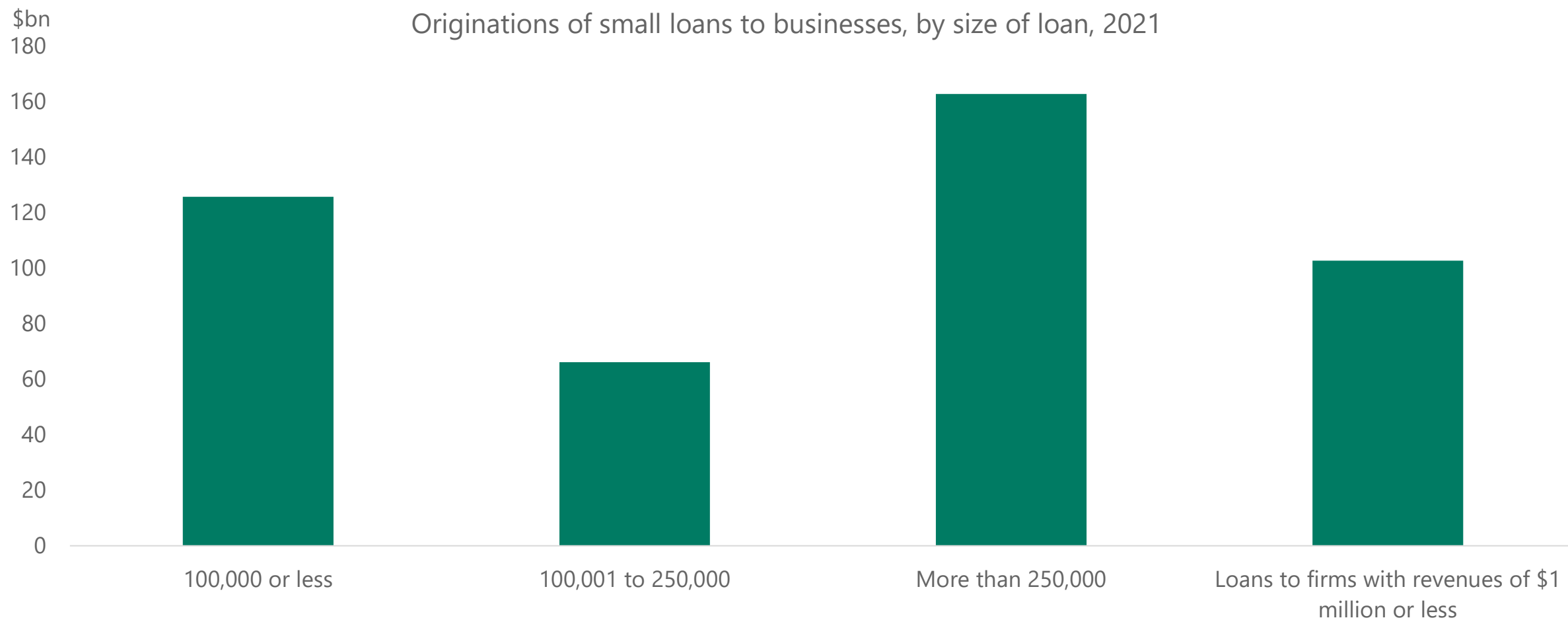


Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist. Note: 2022 survey, prior to 12 months of survey year

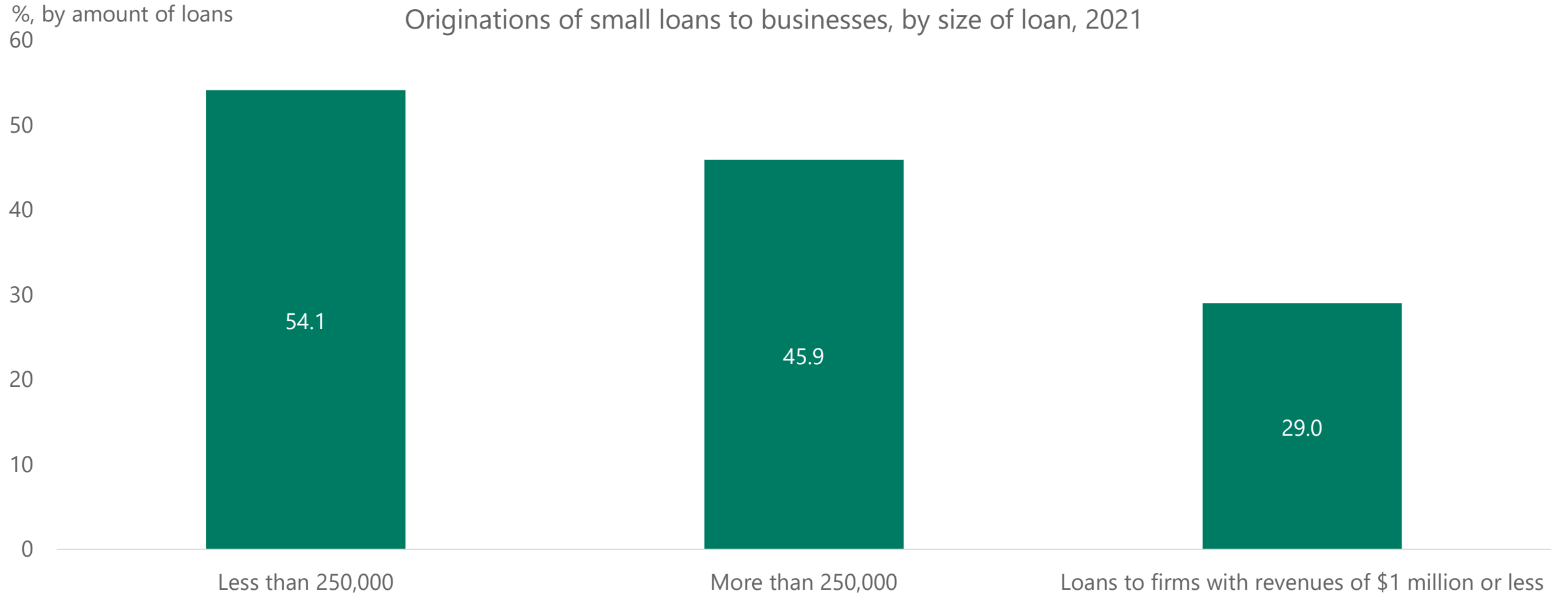
# Small business loans



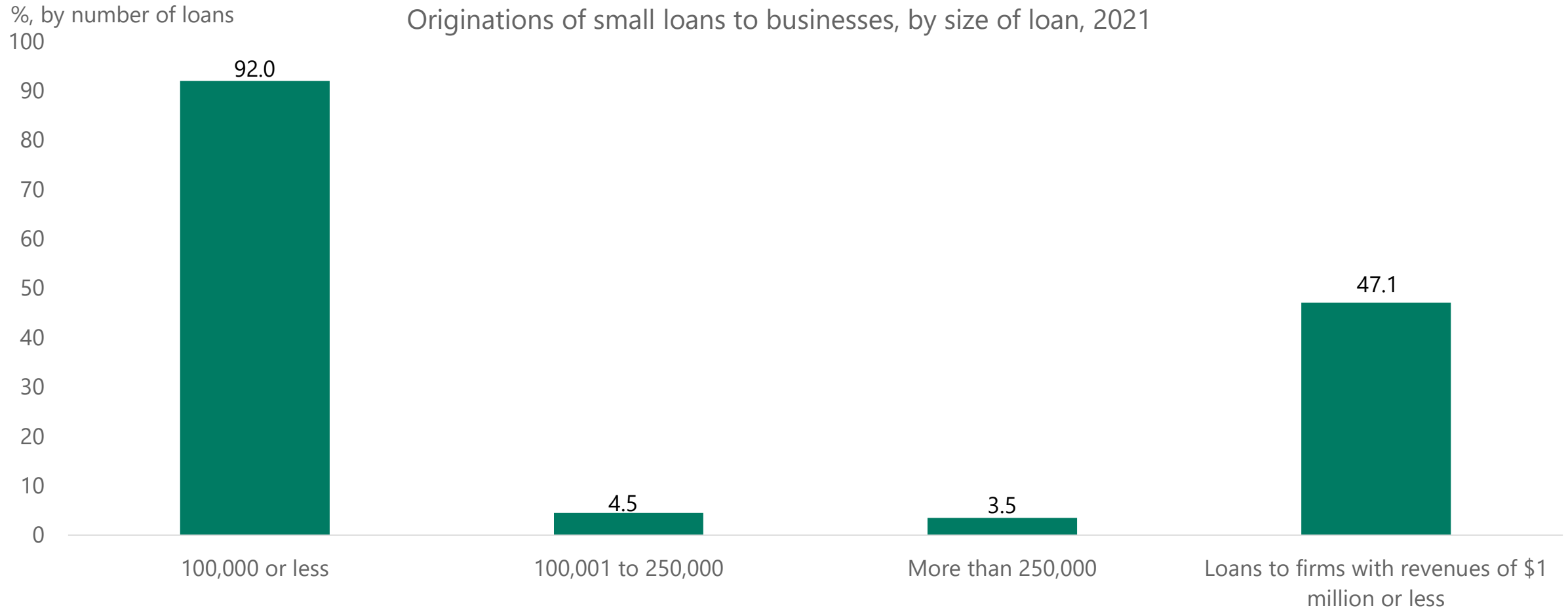
# Size of small loans to businesses



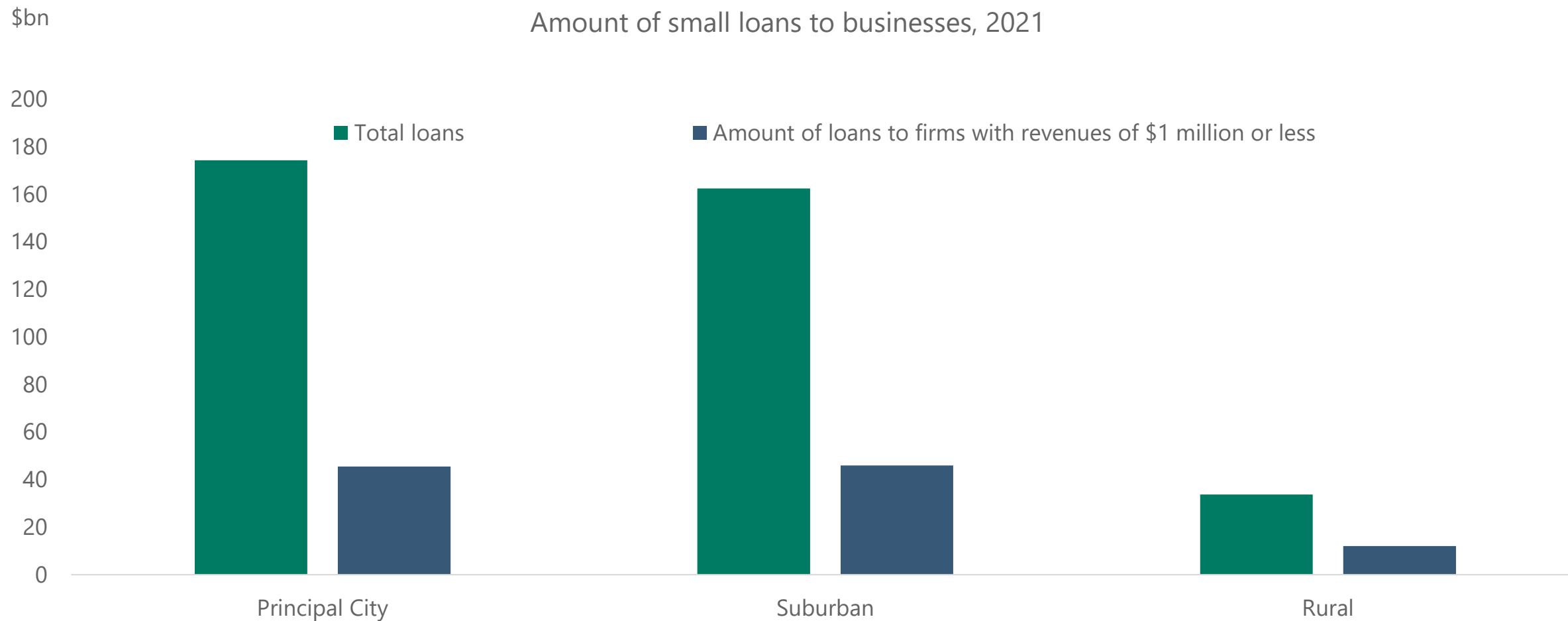
# Share of loans to small businesses, by loan size



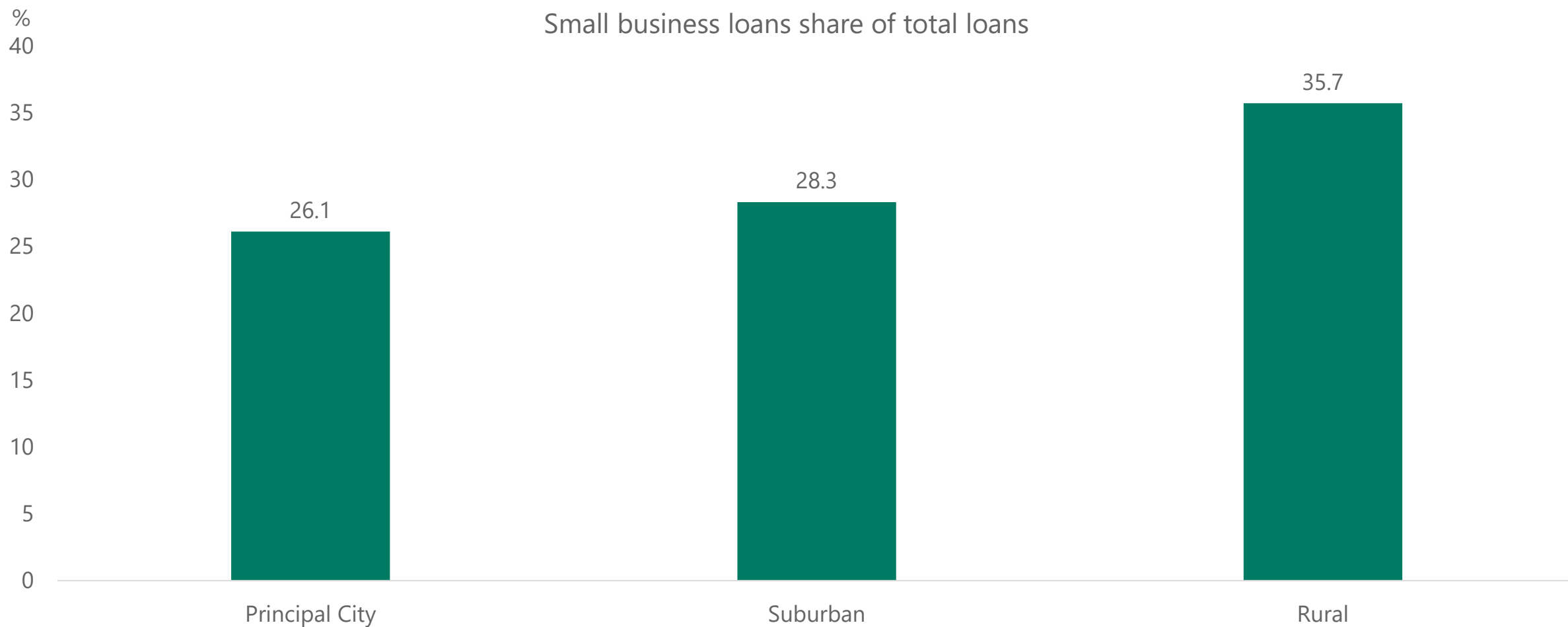
# 92% of all loans to small businesses in the US are less than \$100,000



# Total loans vs loans to small businesses by neighborhood characteristic

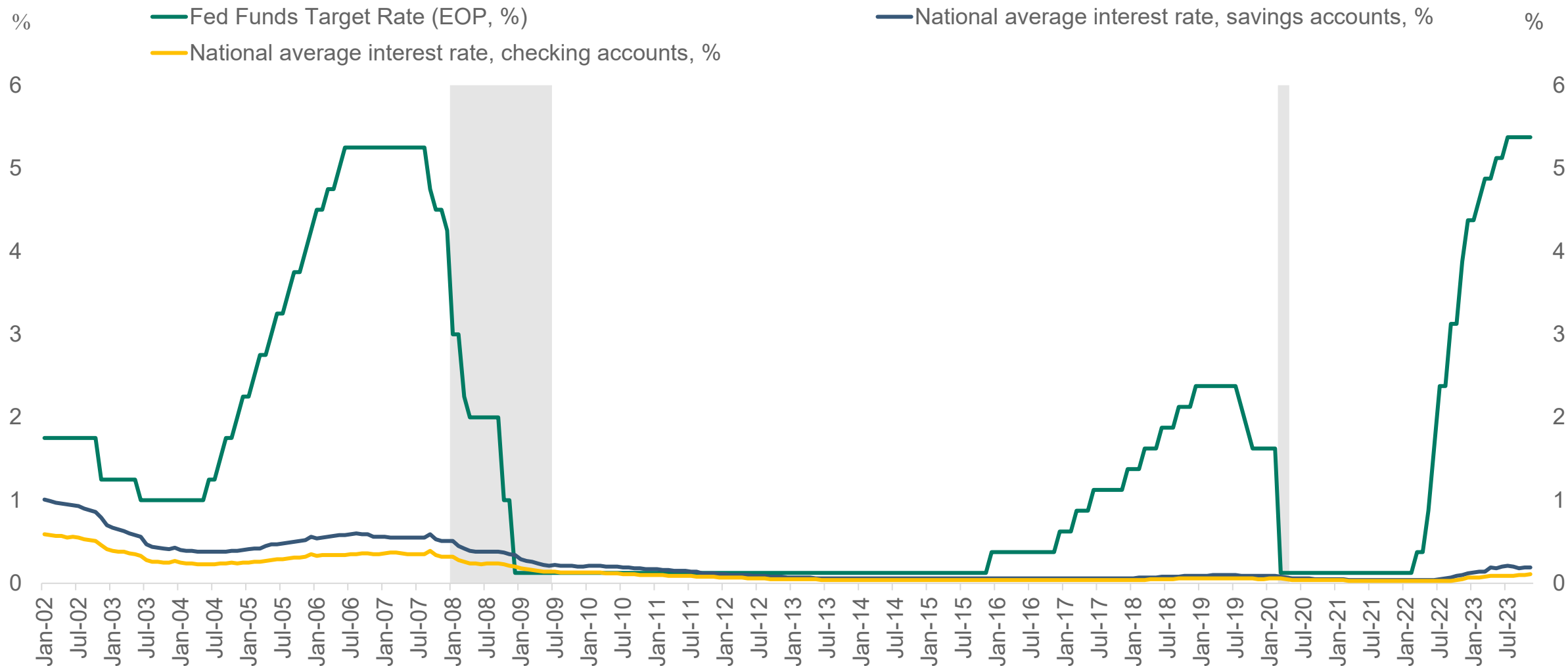


# Share of loans to small businesses by neighborhood characteristic



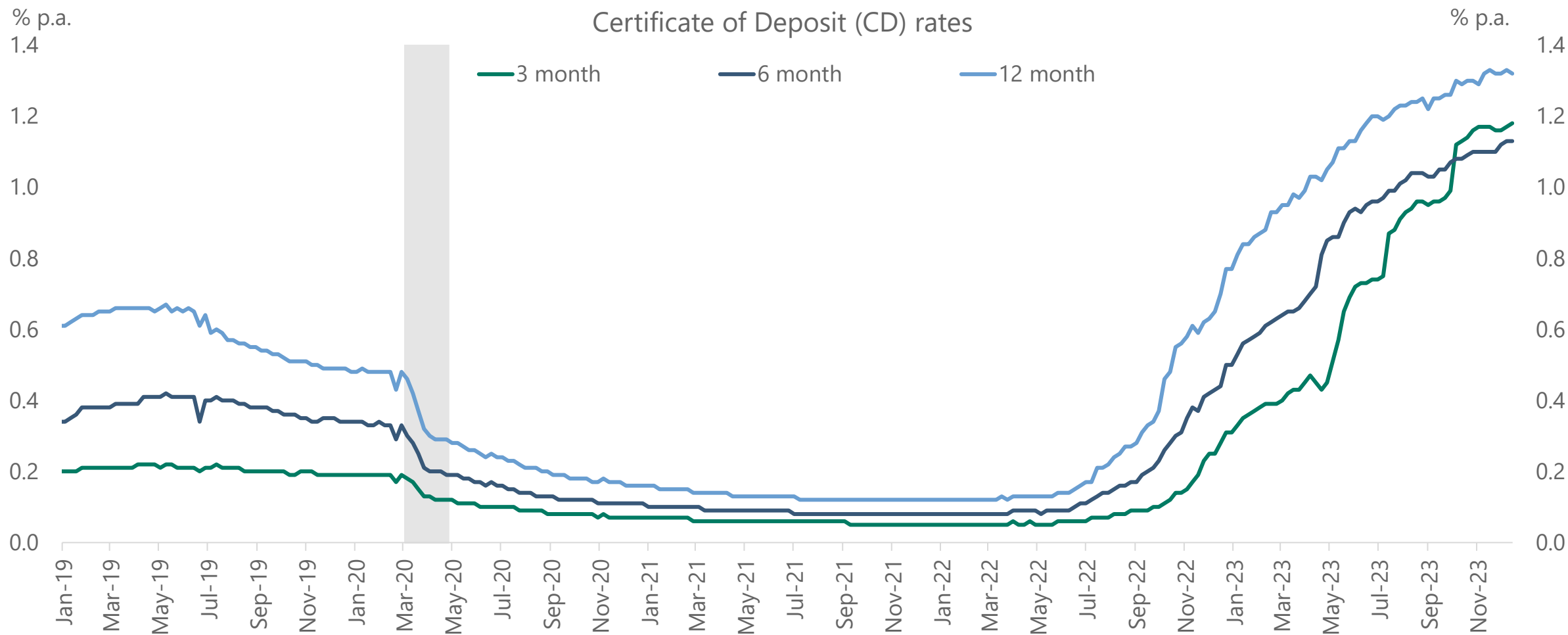
Fed funds rate versus national average  
interest rate on checking accounts and CDs

# Interest rate on checking accounts versus the Fed funds rate



Source: FRB, RateWatch, Haver Analytics, Apollo Chief Economist.

# CD rates have slowly increased as the Fed has raised interest rates

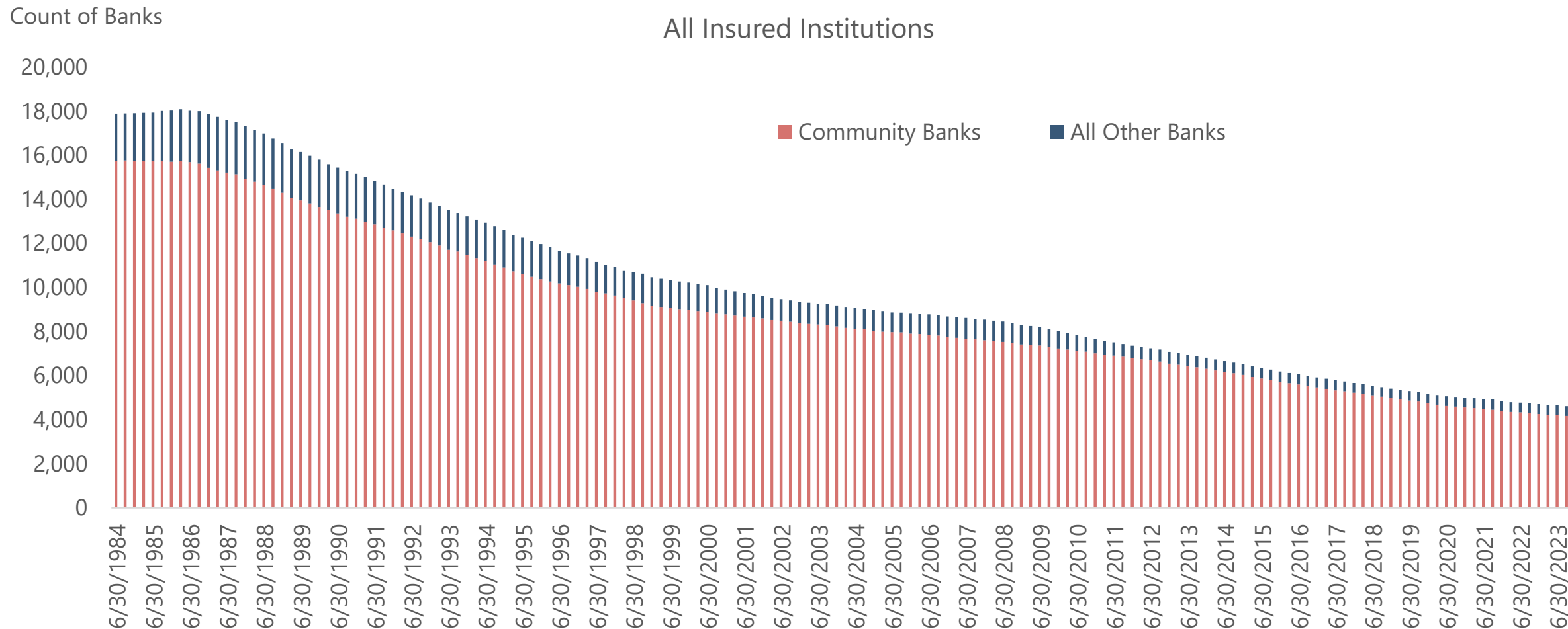


Source: RateWatch, Haver Analytics, Apollo Chief Economist. Note: For \$10,000 Minimum CD



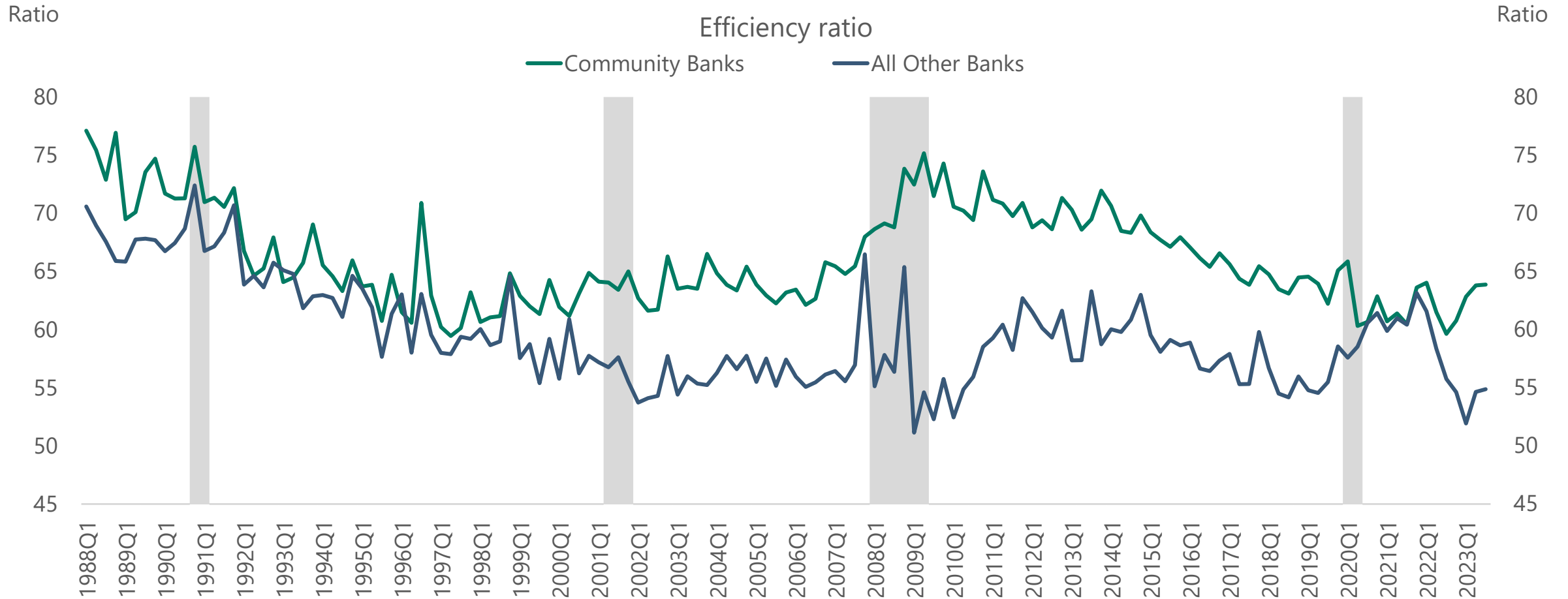
# Community banks

# 90% of all banks in the US are community banks



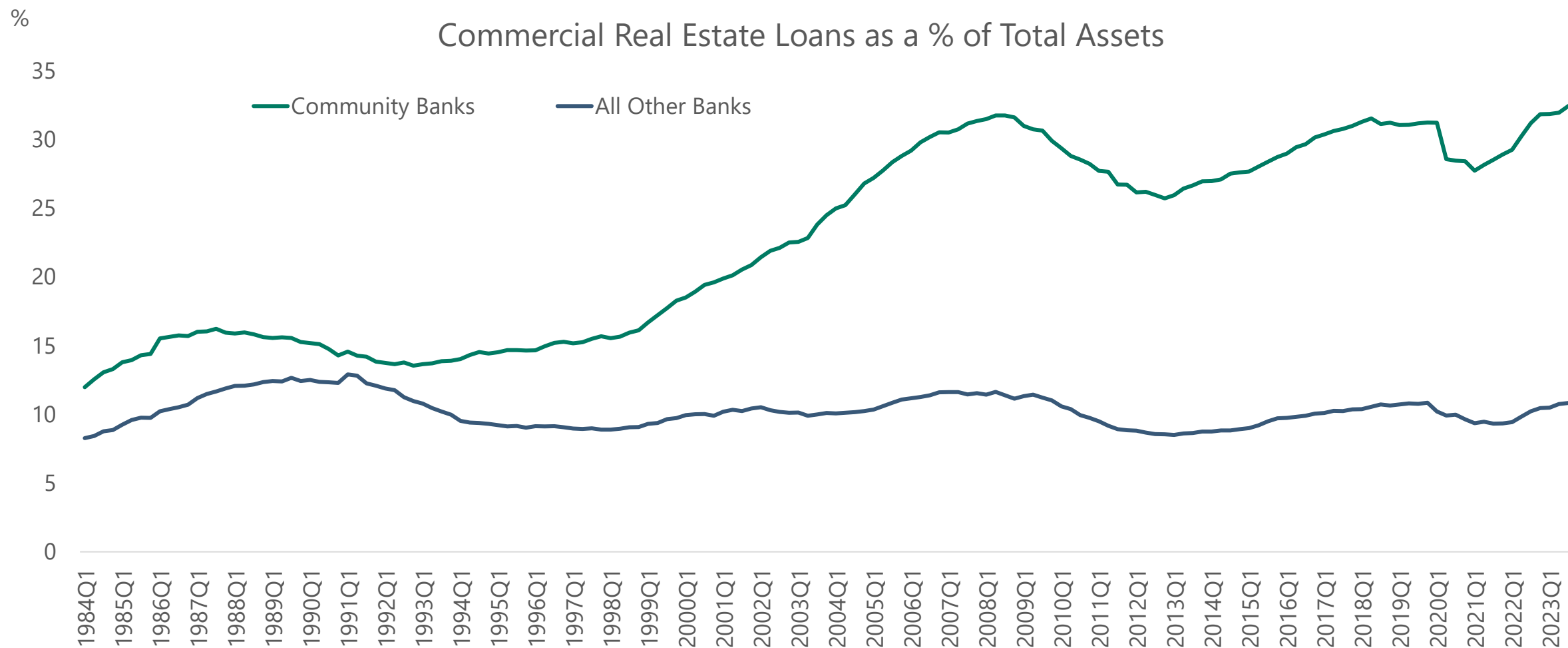
Source: FDIC, Apollo Chief Economist.

The average efficiency ratio for community banks is around 64% compared with 55% for noncommunity banks.



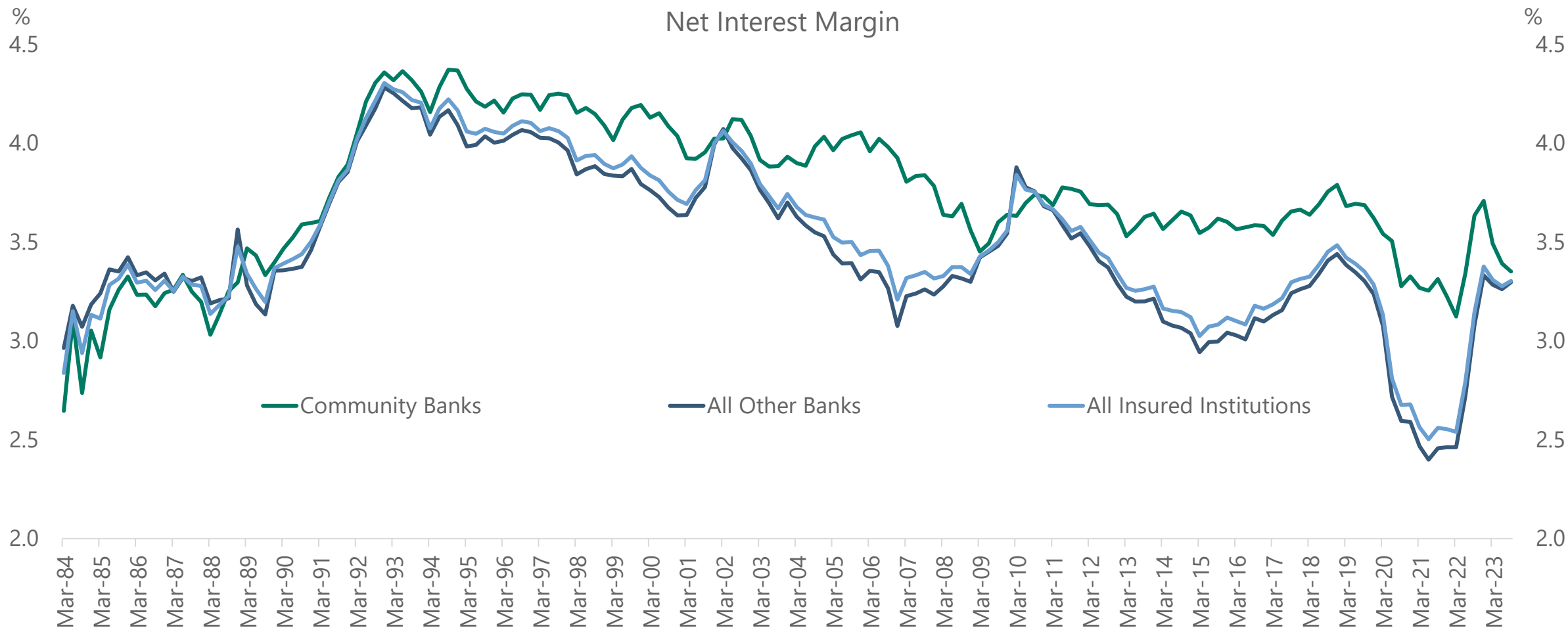
Source: Haver Analytics, Bloomberg, Apollo Chief Economist. A bank's efficiency ratio is defined as the ratio of a bank's non-interest expense to revenues. Higher efficiency ratios indicate less efficient banks.

# CRE loans make up a significant share of community banks' assets



Source: FDIC, Apollo Chief Economist.

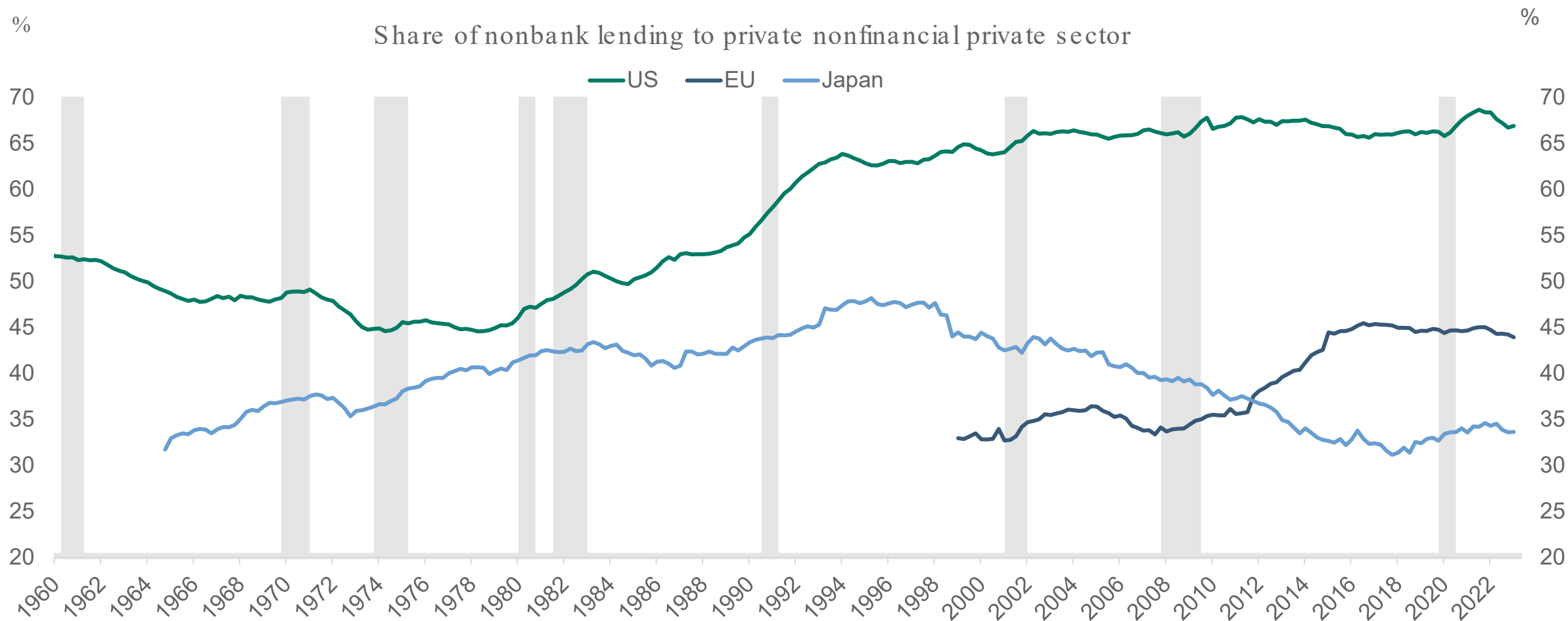
# Net interest margin higher for community banks



Source: FDIC, Apollo Chief Economist.

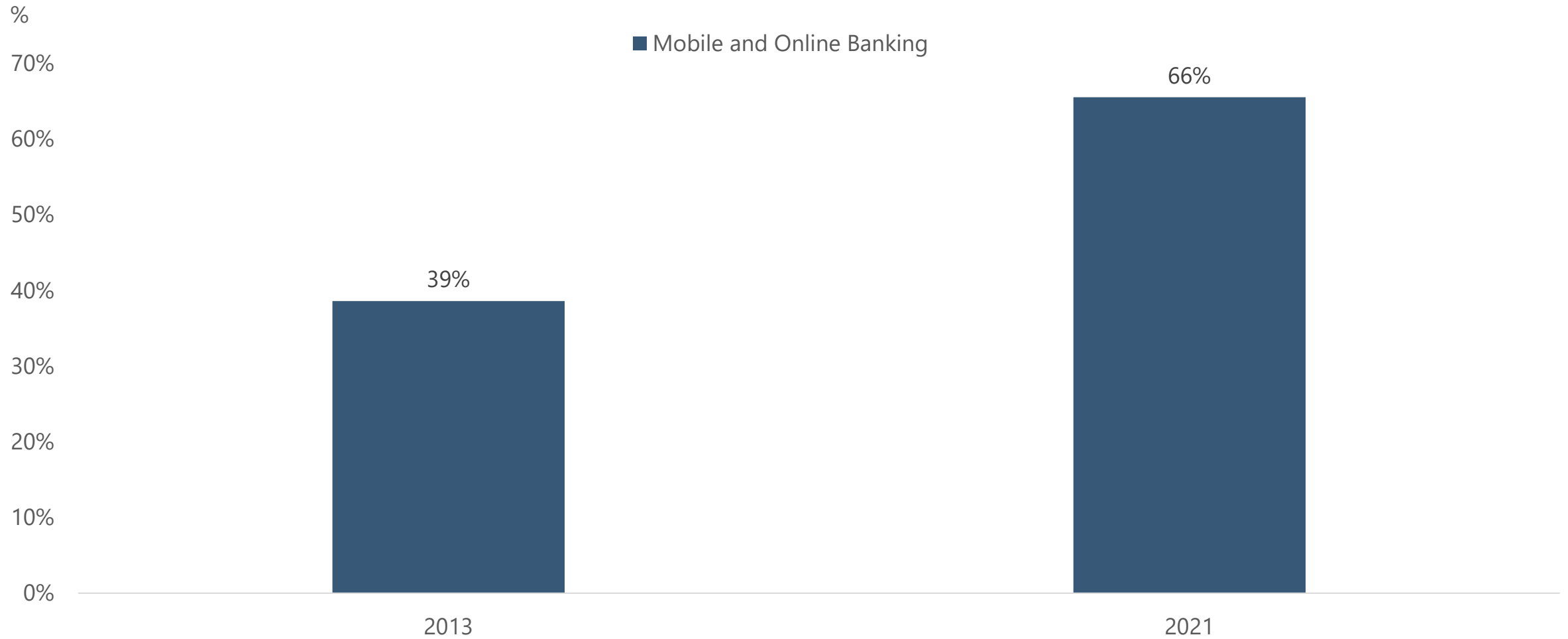
# Other banking sector indicators

The US is a market-based financial system. EU and Japan are bank-based.



Source: BIS, Haver Analytics, Apollo Chief Economist.

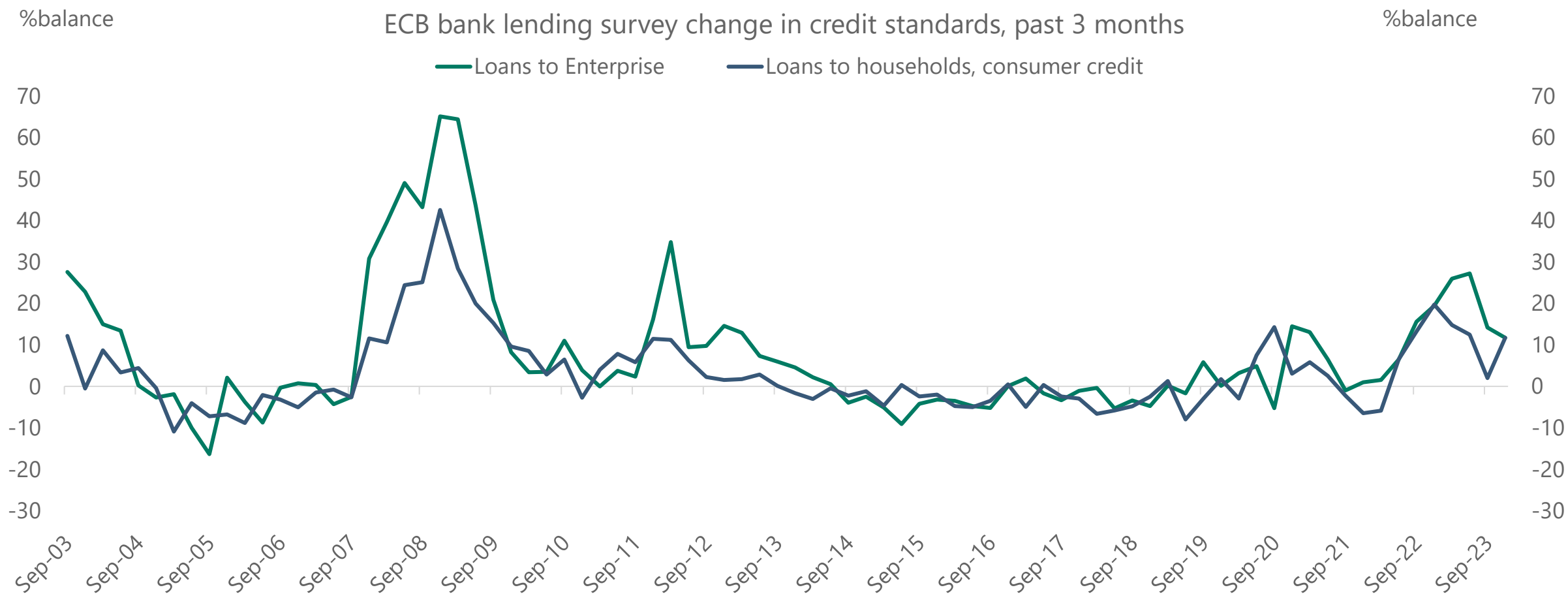
# Primary method of bank account access: More and more households use mobile and online banking



Source: FDIC, Apollo Chief Economist. Note: The data shows the sum of households using mobile and online banking, some respondents may use both.

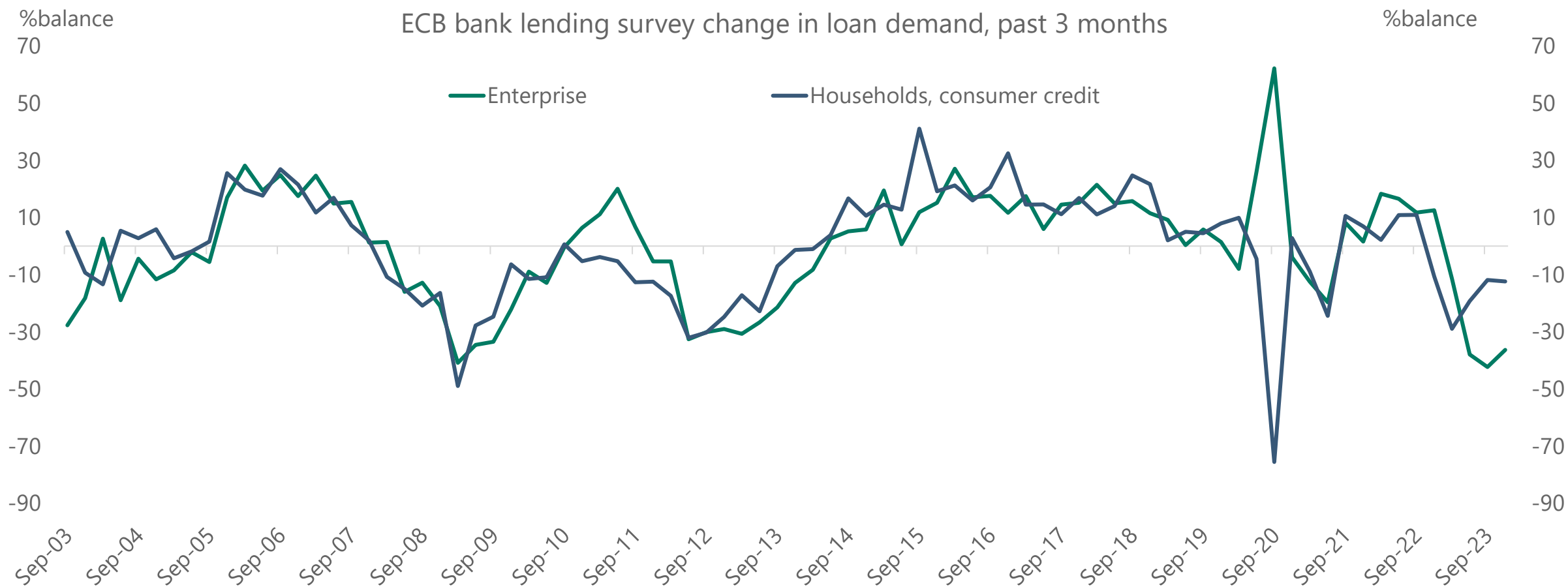


# Euro Area credit conditions



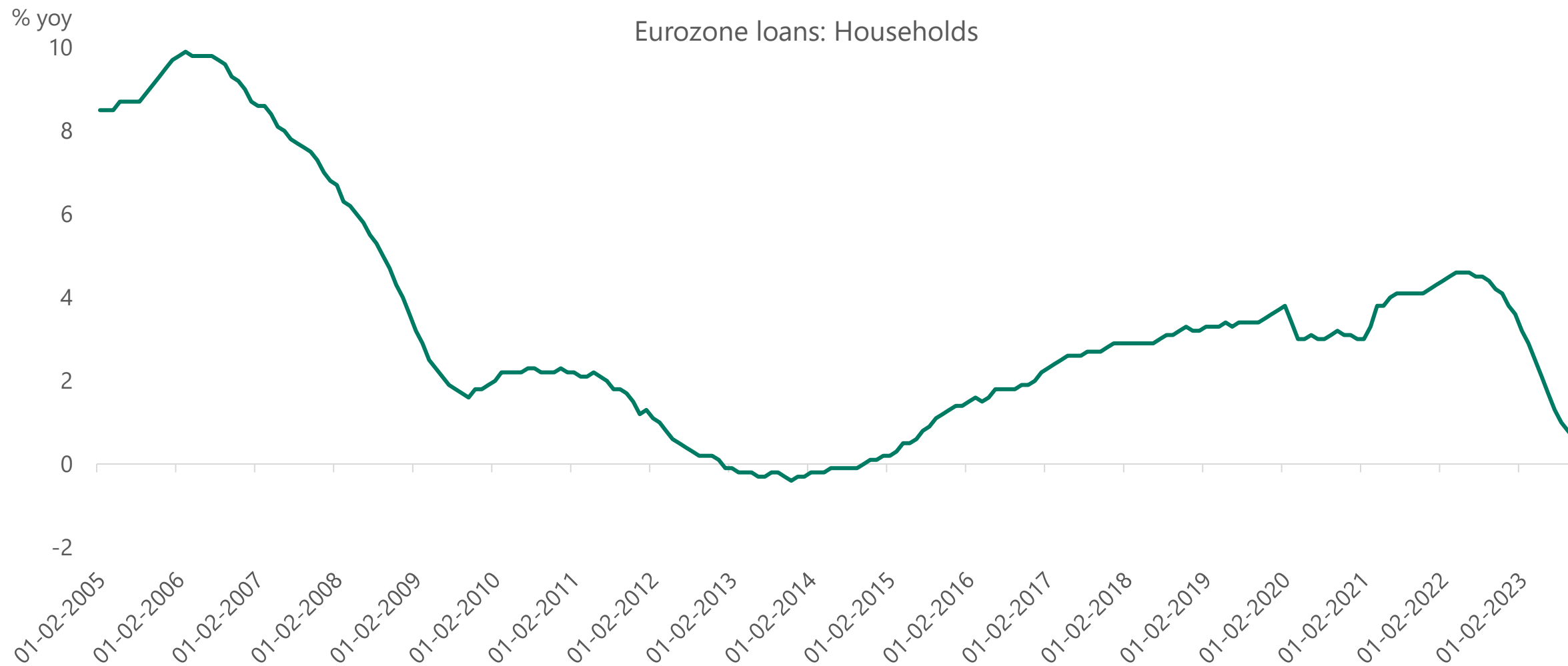
Source: ECB Bank Lending Survey, Bloomberg, Apollo Chief Economist

# Euro Area loan demand falling

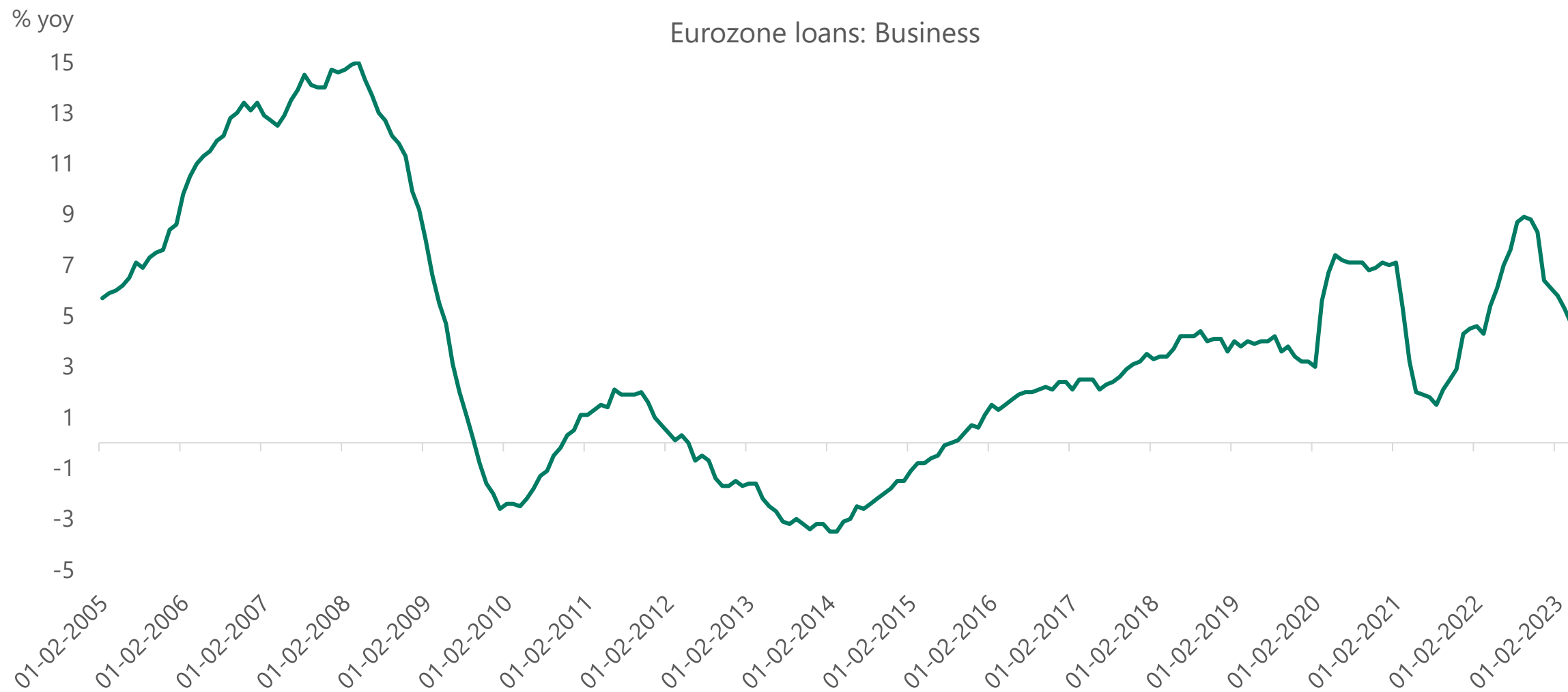


Source: ECB Bank Lending Survey, Bloomberg, Apollo Chief Economist

# Euro Area loan growth to households is slowing



# Euro Area loan growth to businesses is negative





# Torsten Slok, Ph.D.

## Chief Economist

Apollo Global Management

tslok@apollo.com

Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist on the sell-side where his team was top ranked in the annual Institutional Investor survey for a decade. Mr. Slok has also worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and studied at the University of Copenhagen and Princeton University.