

APOLLO

Outlook for US regional banks:
Credit growth slowing and credit conditions tightening

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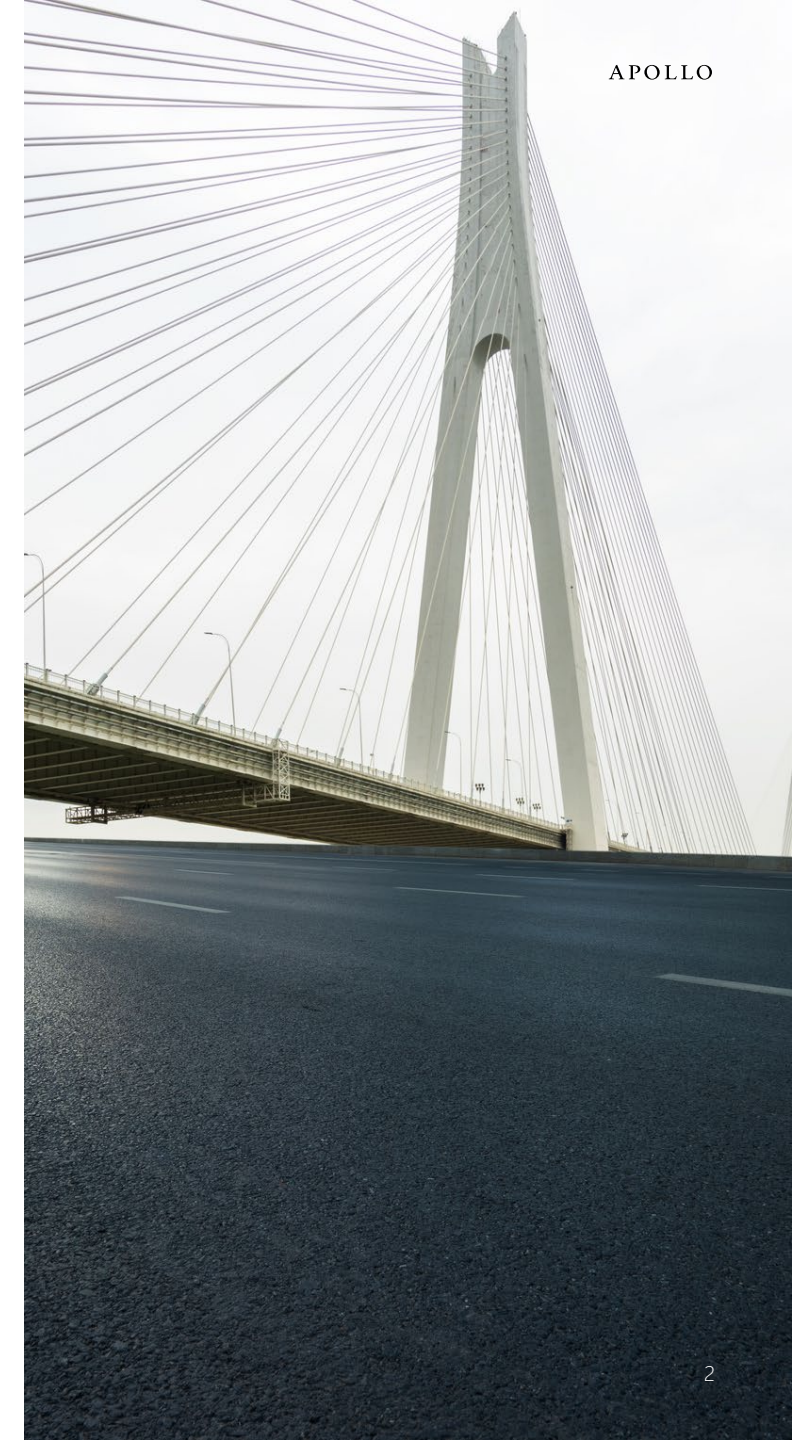
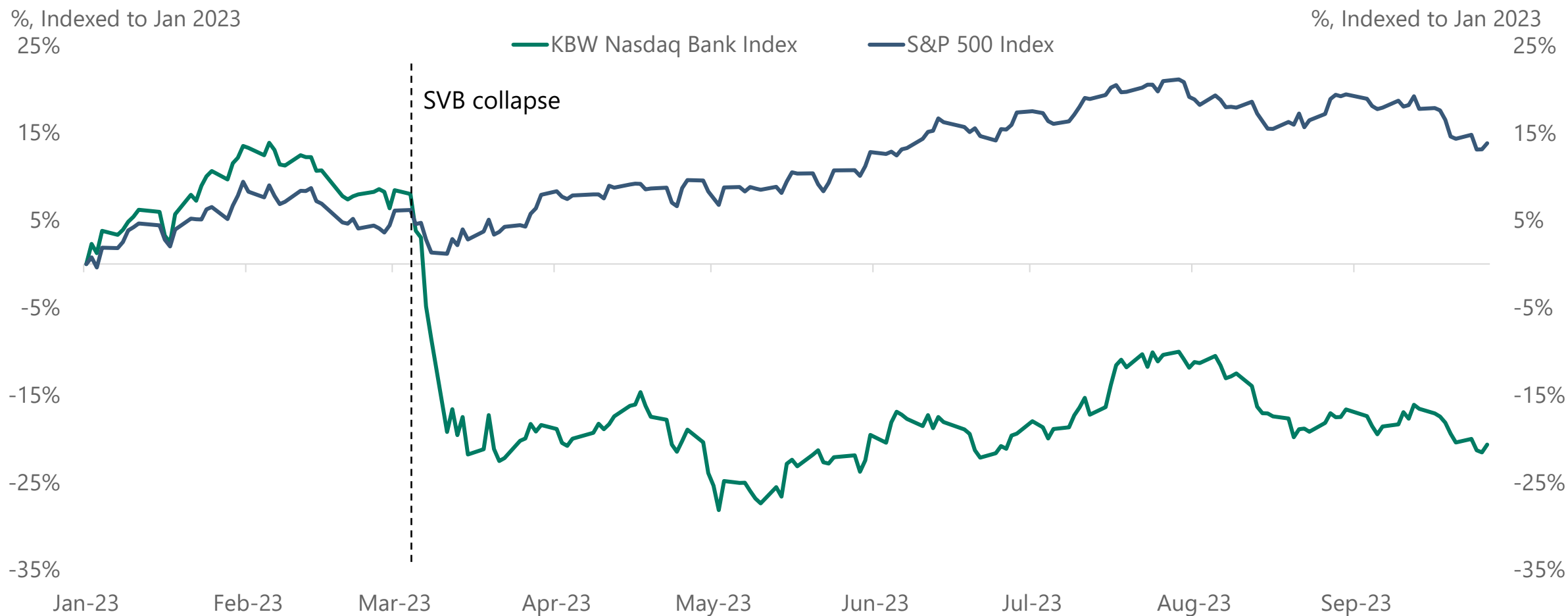


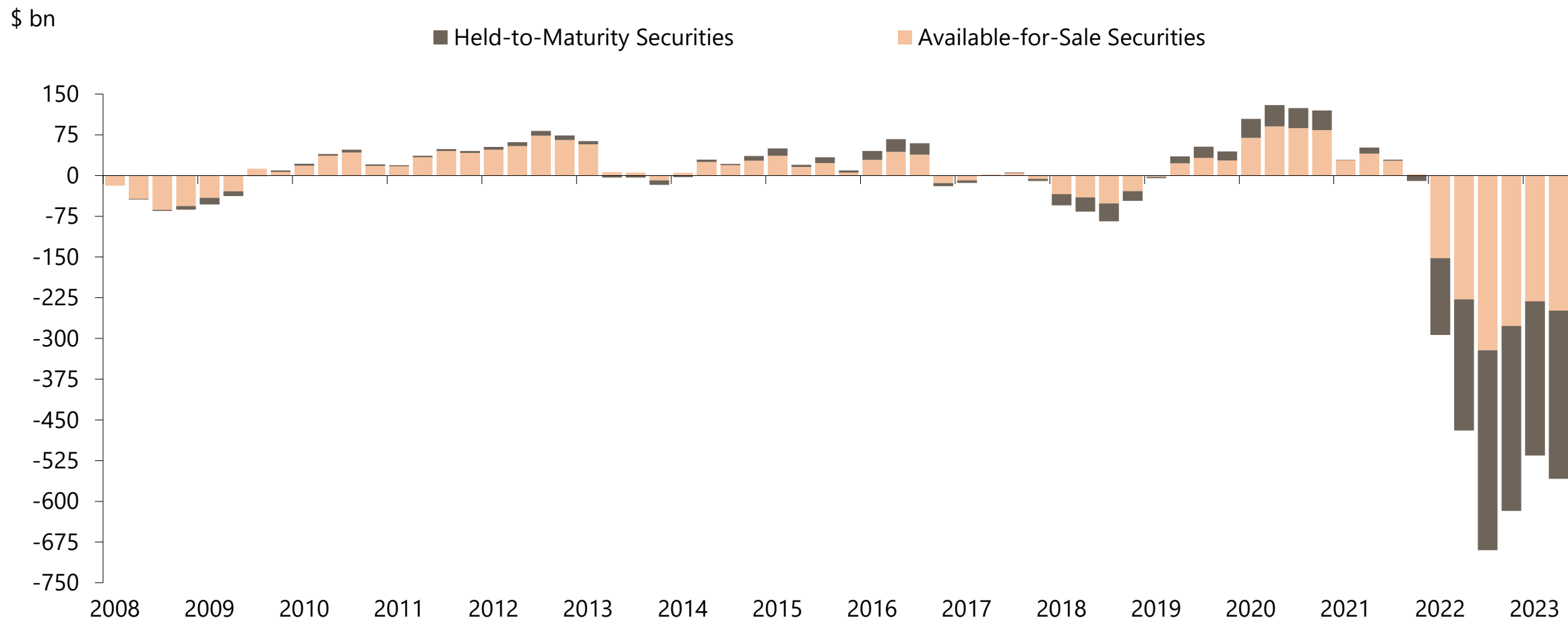
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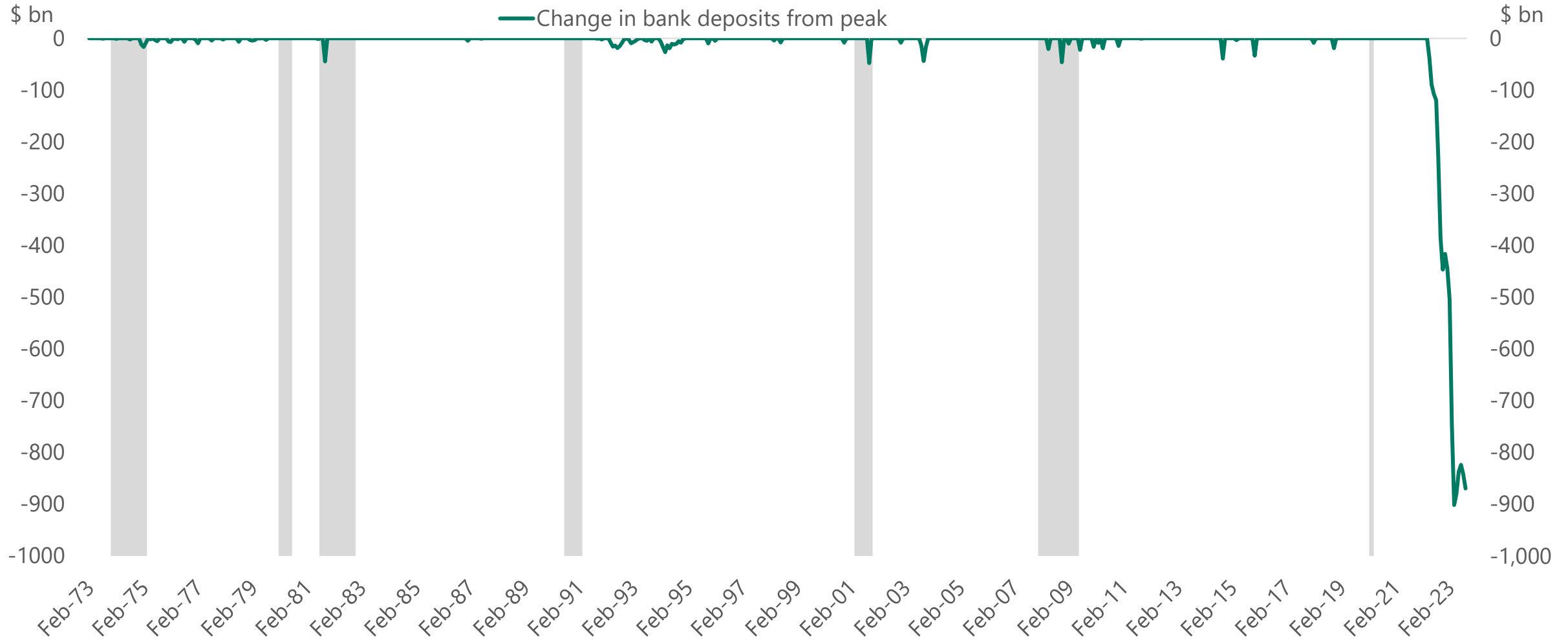
Bank stocks since the SVB collapse



Unrealized Gains (Losses) on investment securities for banks, as of 2023Q2

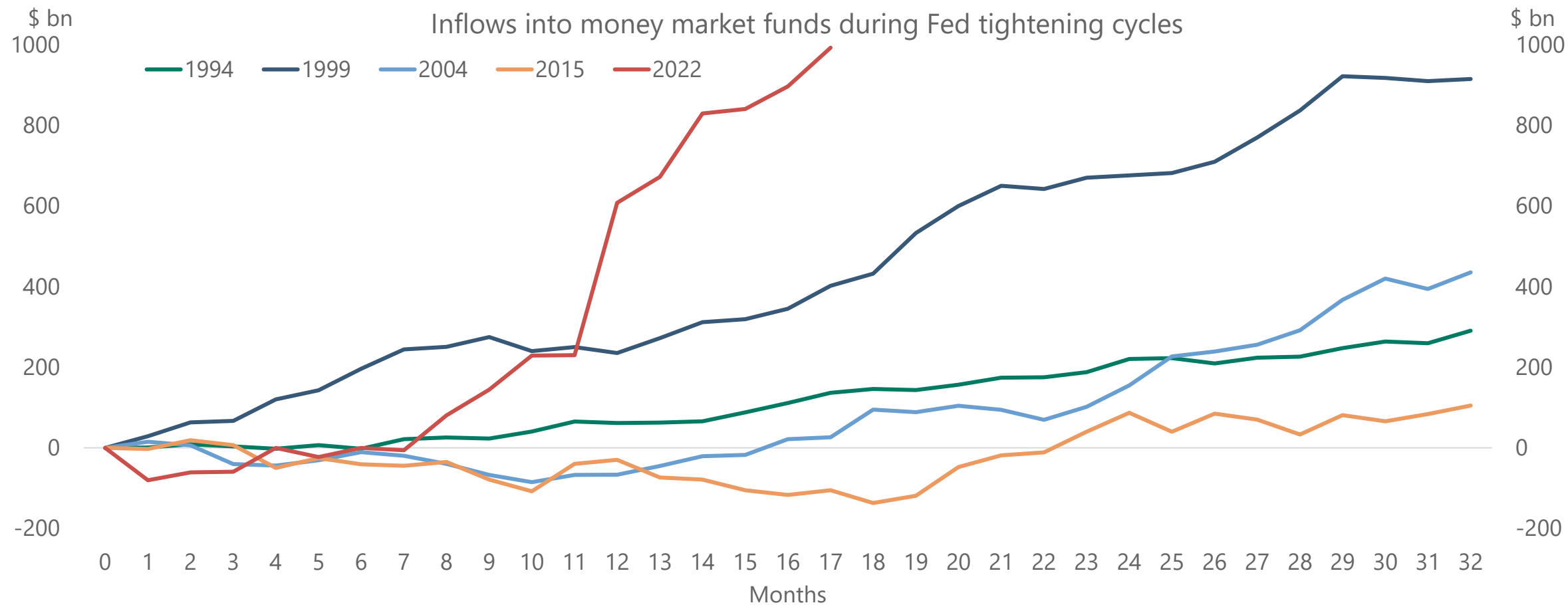


\$870bn in deposits have left the banks since the Fed began to raise interest rates



Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. Note: March data as of 10th May 2023. Peak is defined as the month before monthly outflows turn negative

\$993bn inflows into money market funds during this Fed hiking cycle

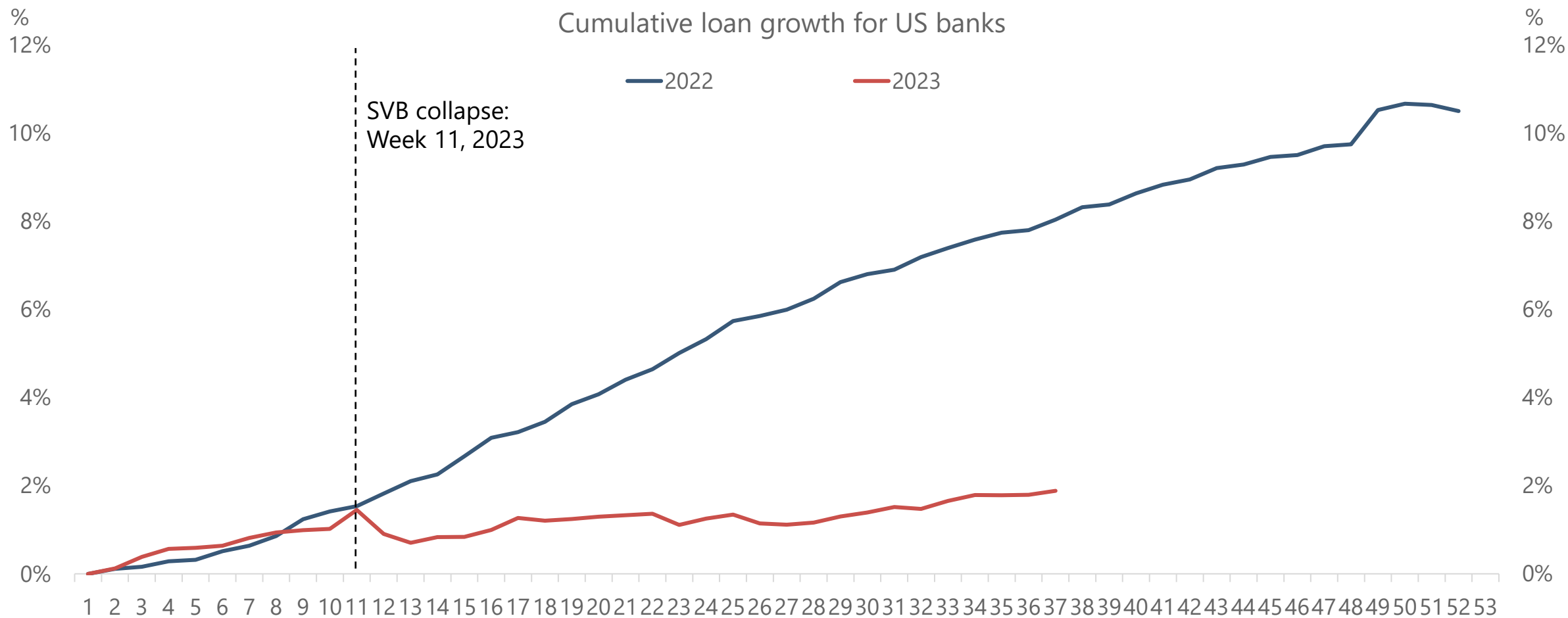


Source: FRB, ICI, Bloomberg, Apollo Chief Economist.

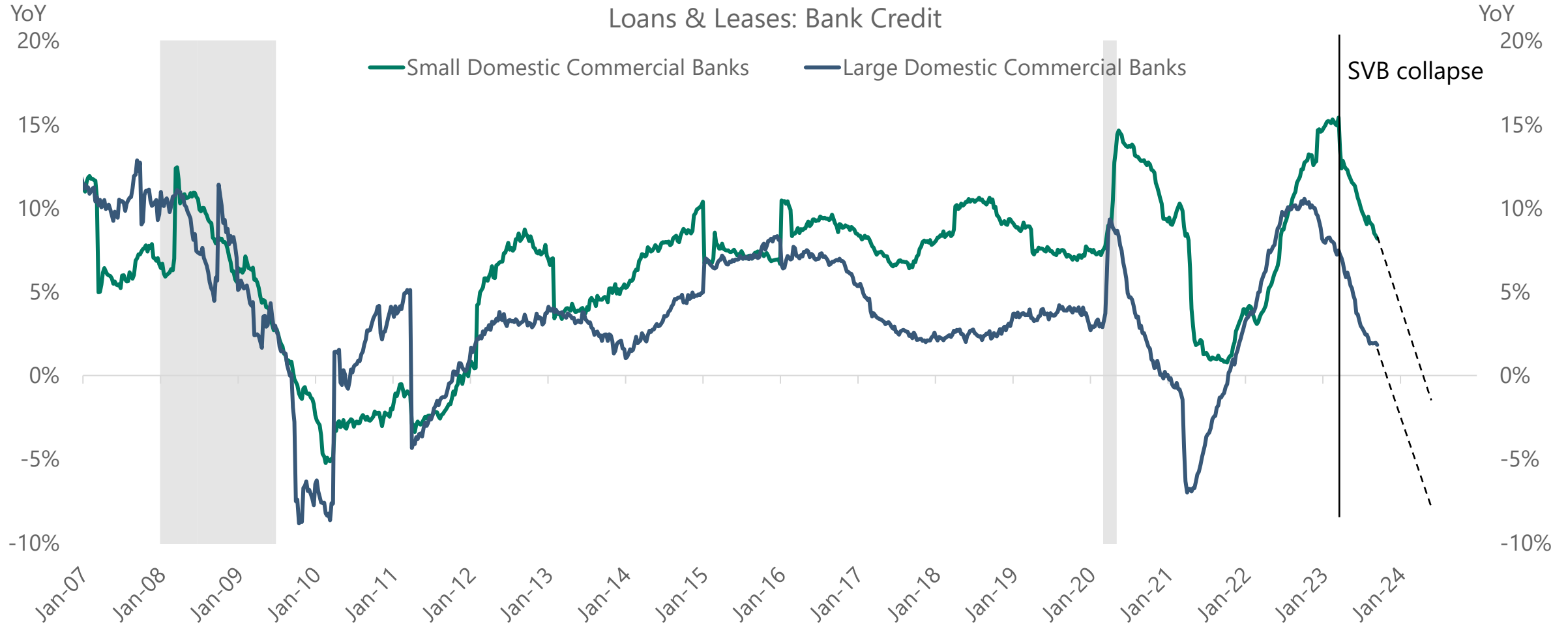
Overview:

Credit growth slowing and credit conditions deteriorating

SVB having a permanent effect

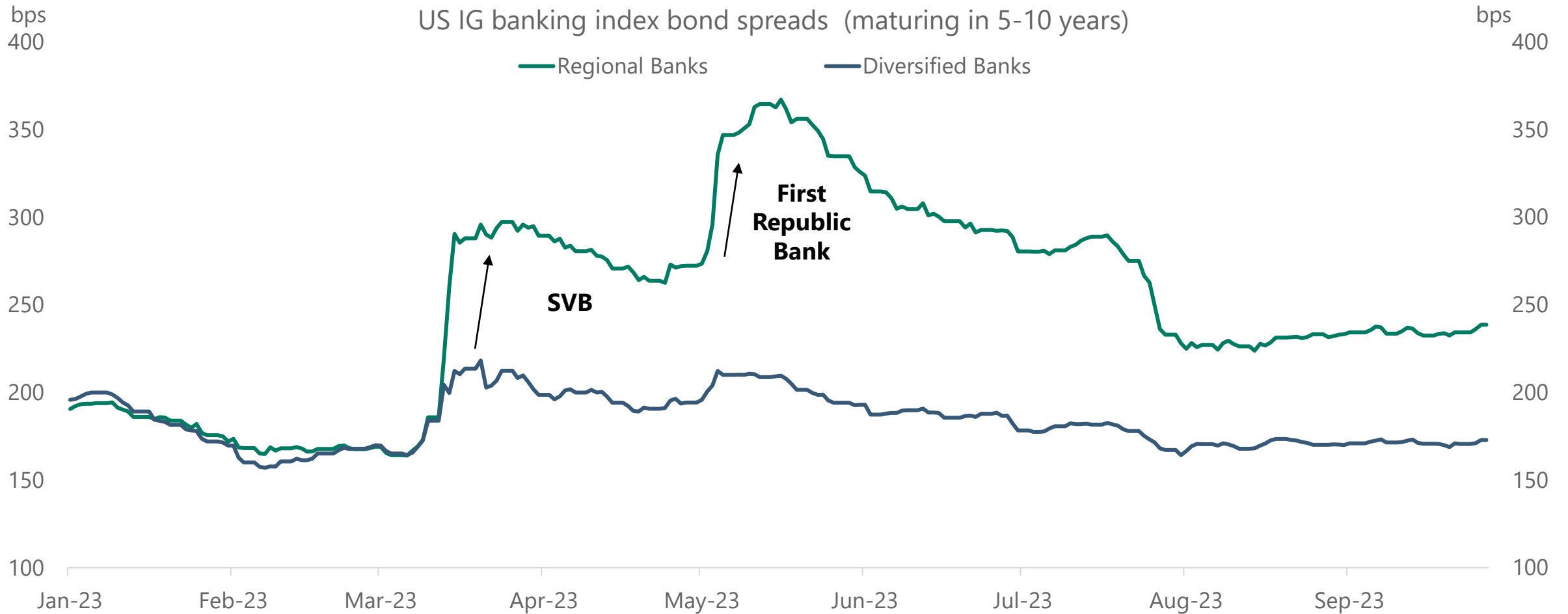


Weekly Fed data shows small and large bank lending growth slowing rapidly after SVB



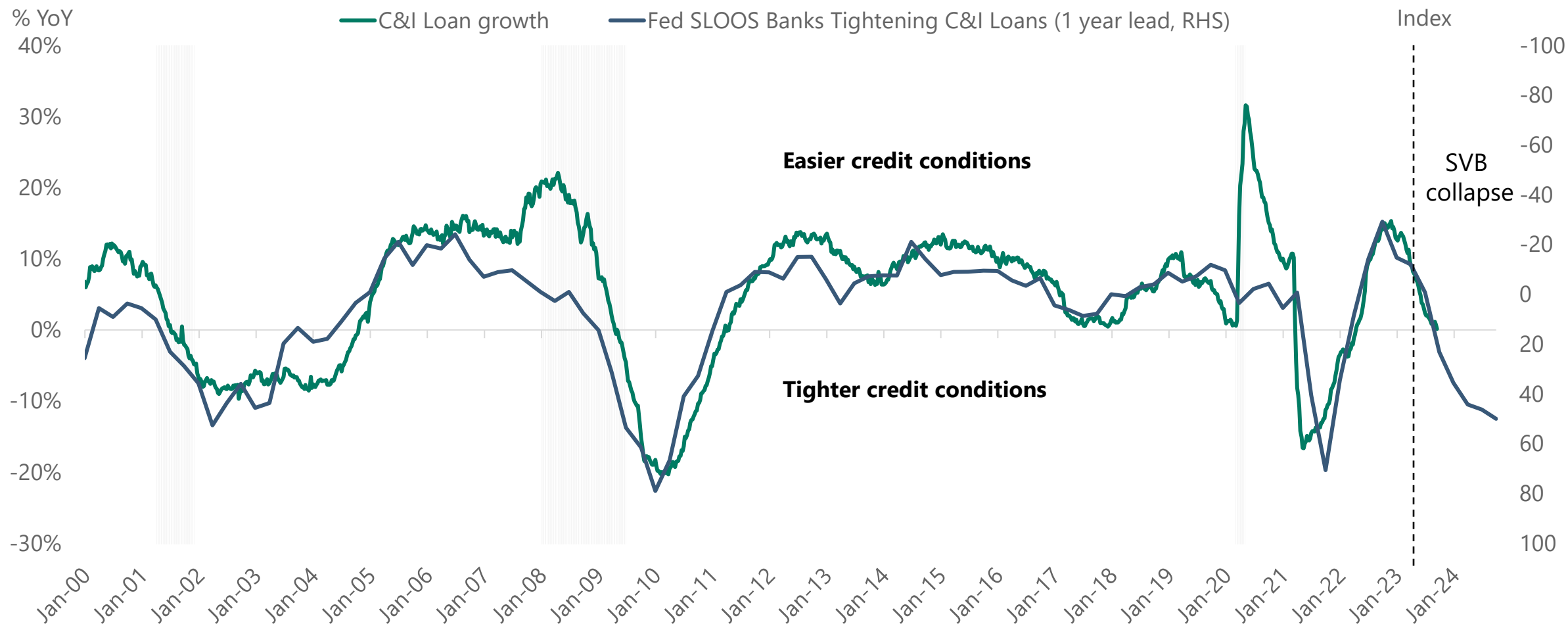
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

SVB and FRC lifted funding costs for banks permanently

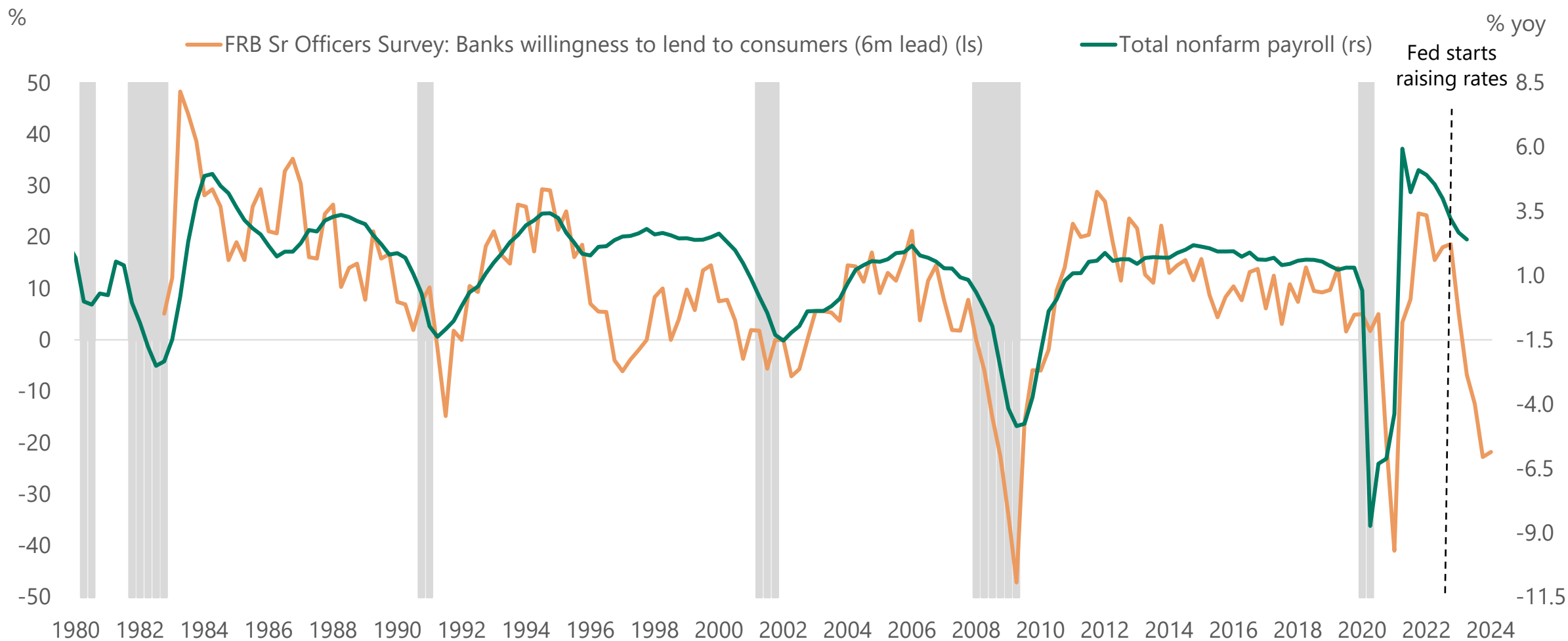


Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, C6PX Index for bonds issued before 1st Jan 2023. There are 8 banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited, Citizens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

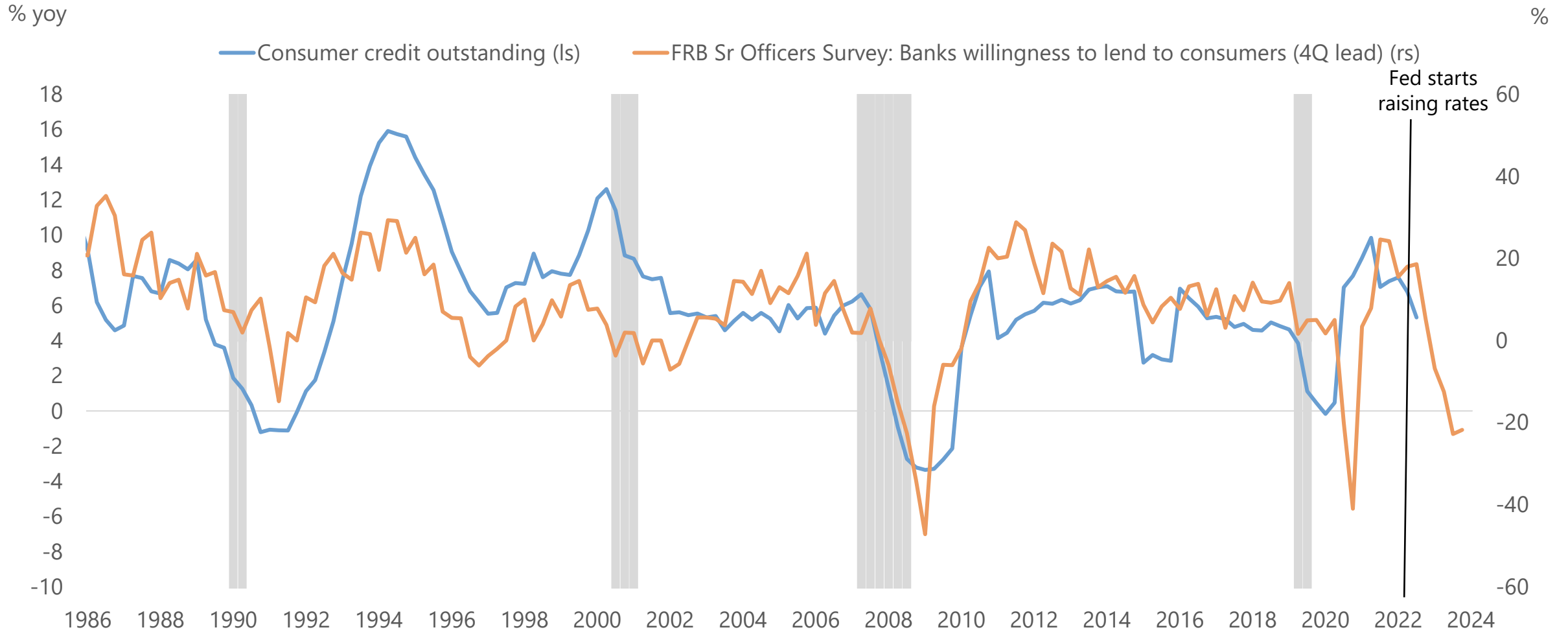
Bank lending will shrink significantly over the coming quarters



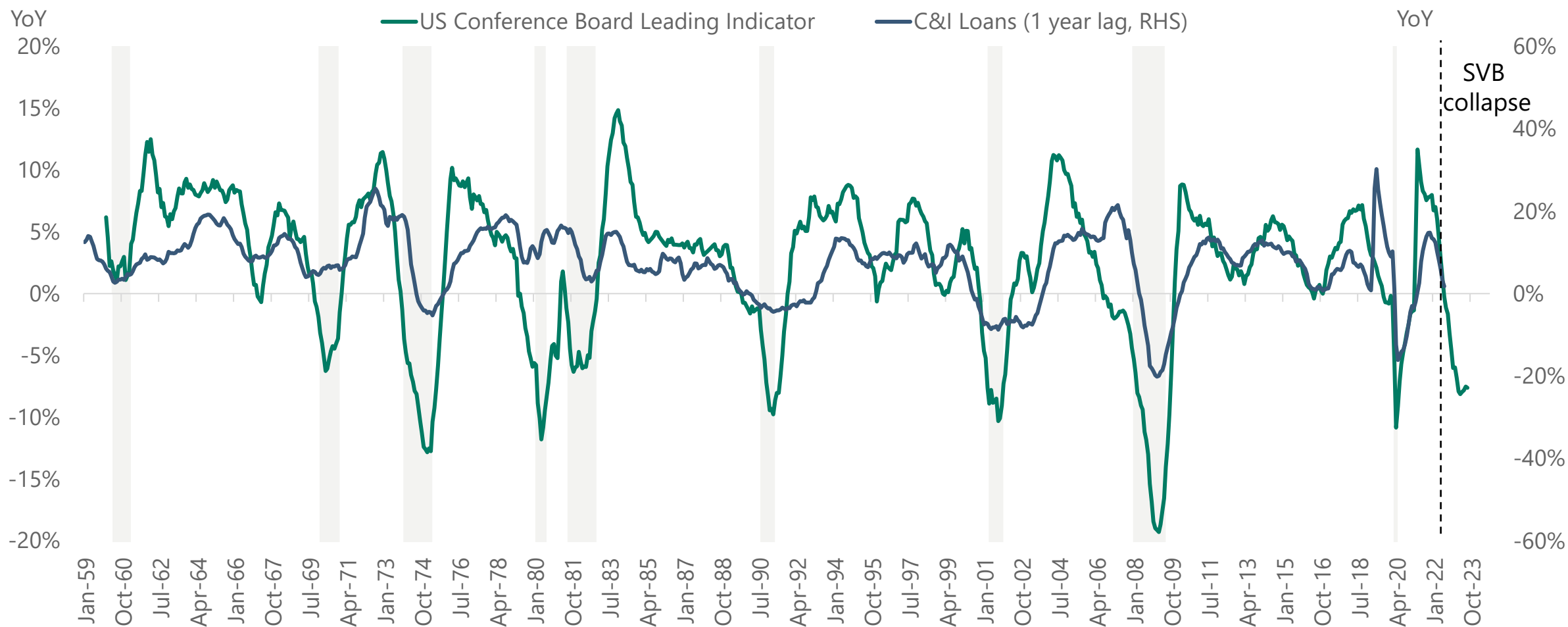
Significant downside risks to nonfarm payrolls as a result of tighter credit conditions



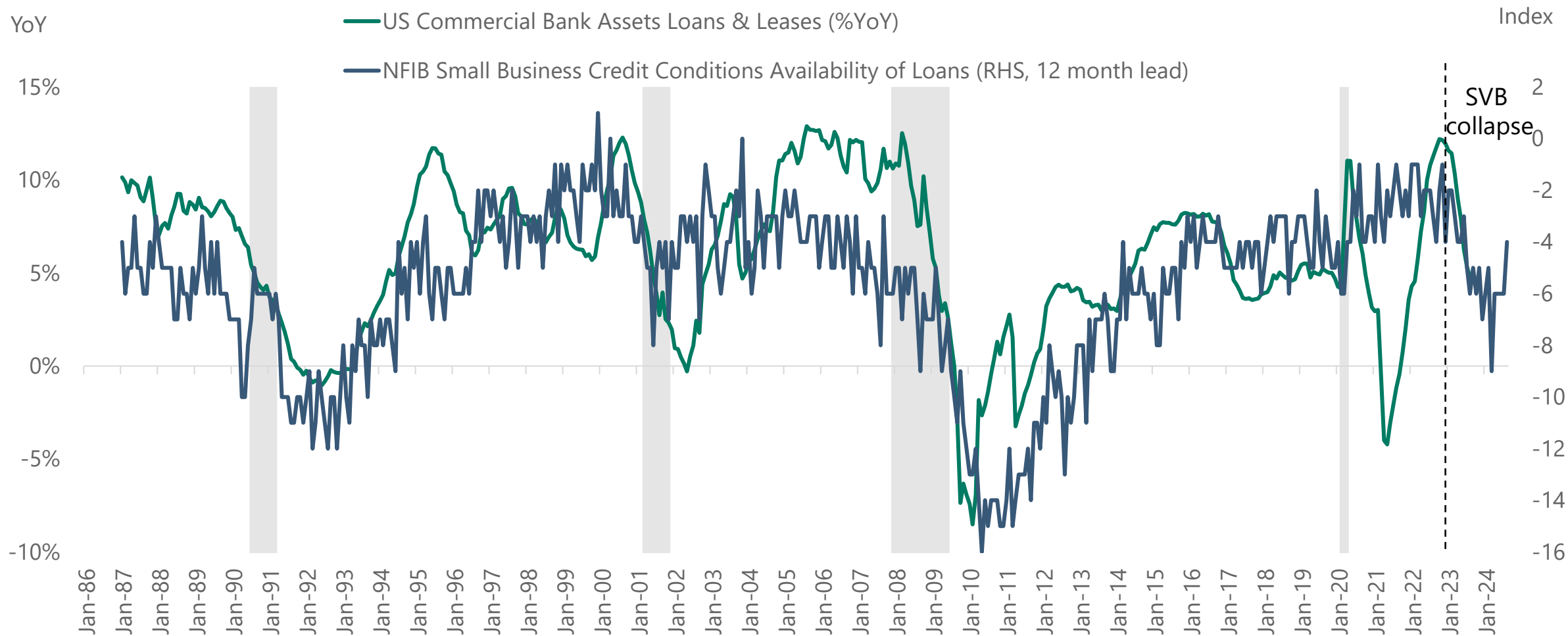
Credit tightening points to sharp slowdown in consumer credit



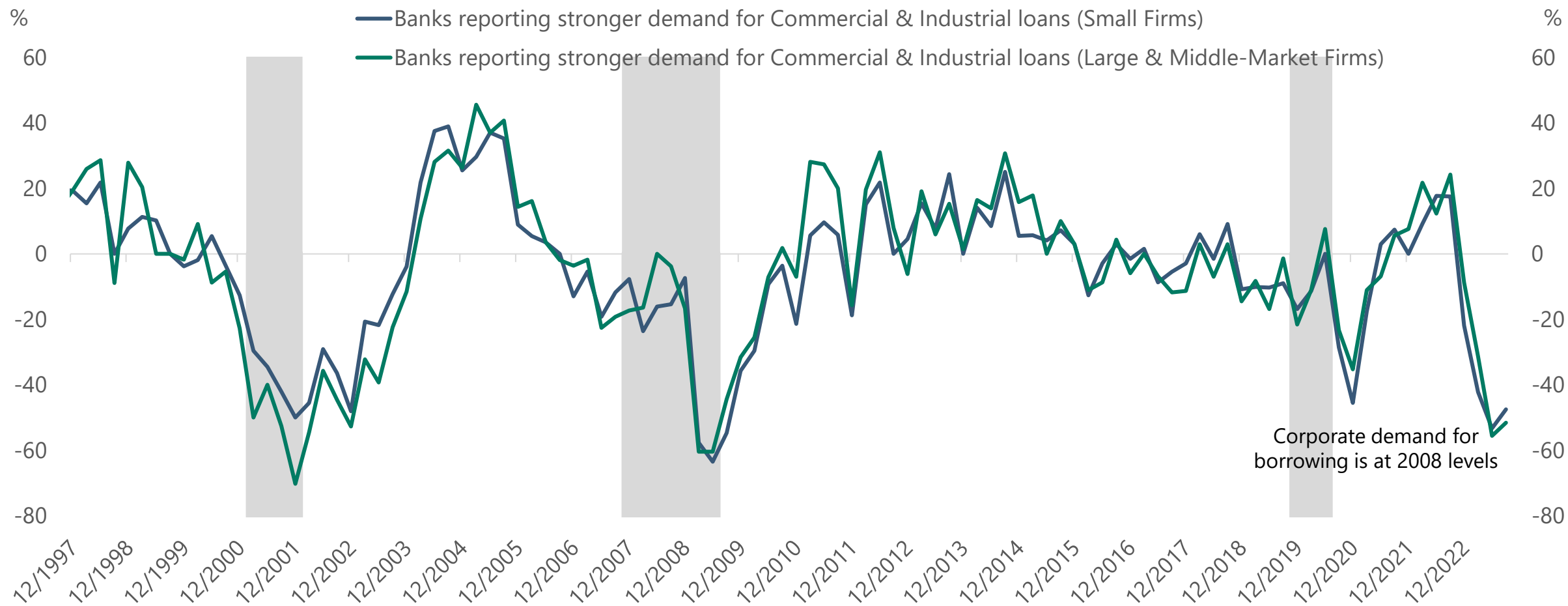
Tighter credit conditions dragging down the economy



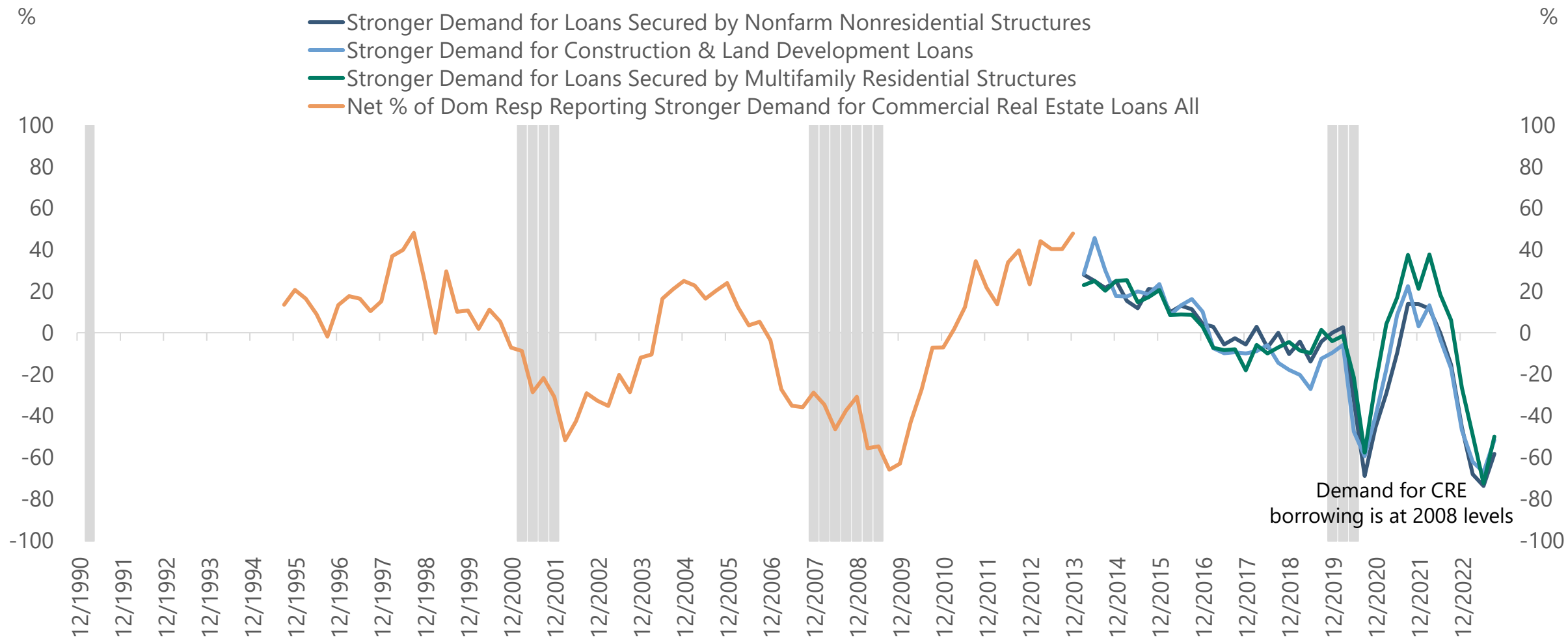
Tighter credit conditions dragging down the economy



Demand for corporate loans is at 2008 levels

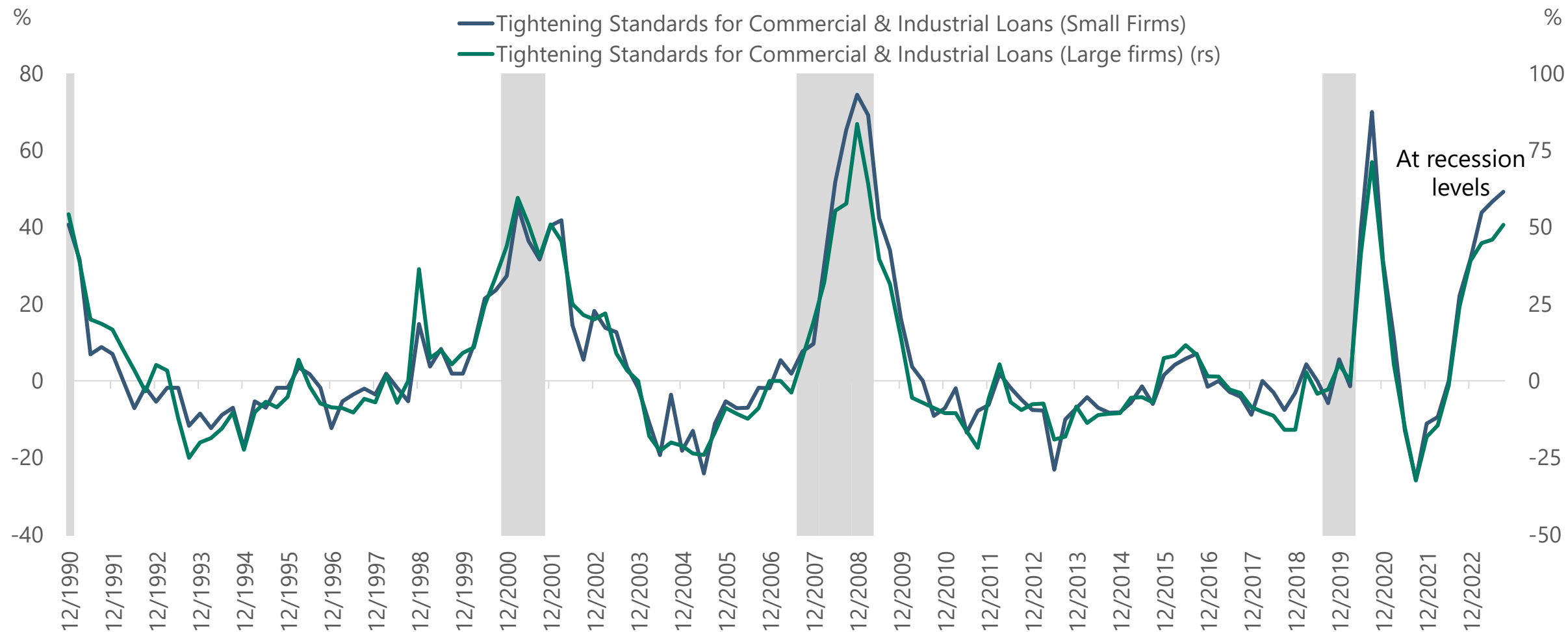


Demand for commercial real estate loans is at 2008 levels

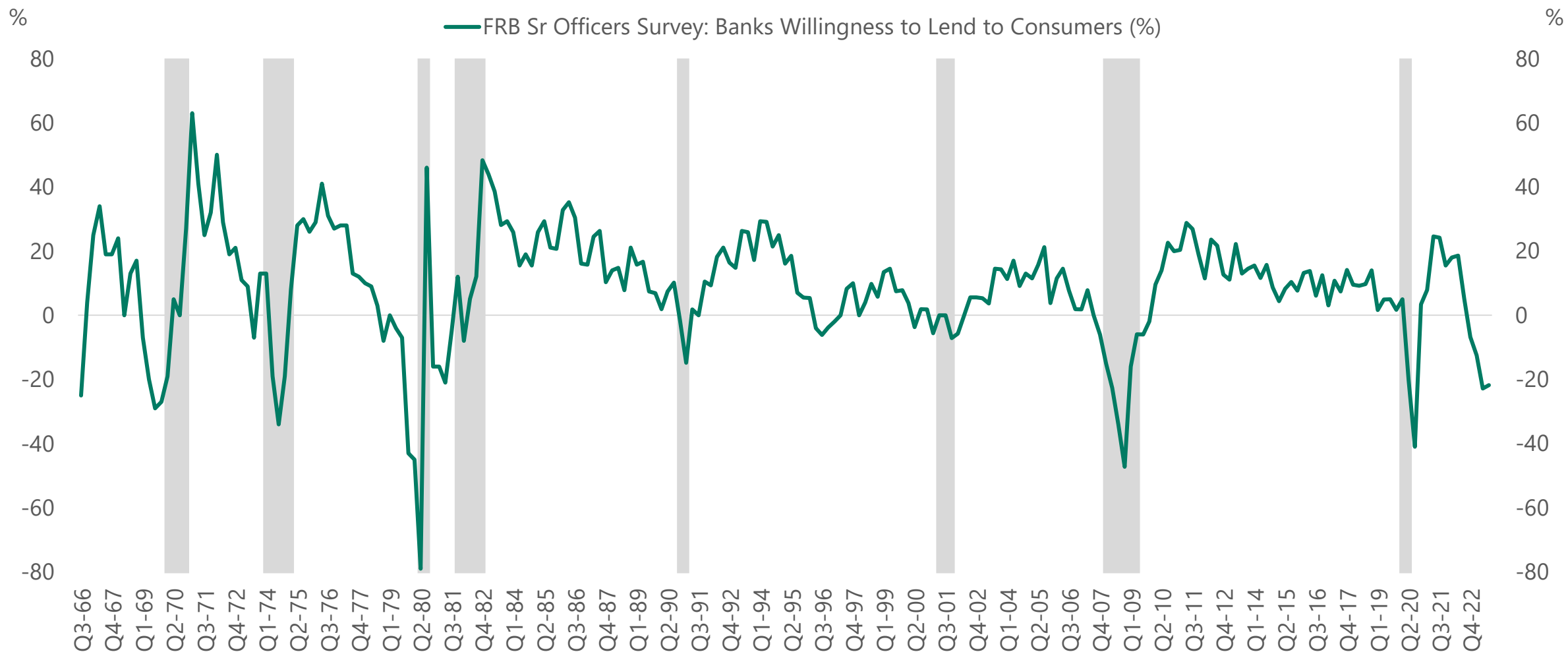


Source: FRB, Bloomberg, Apollo Chief Economist.

Banks are tightening lending standards significantly, near 2008 levels

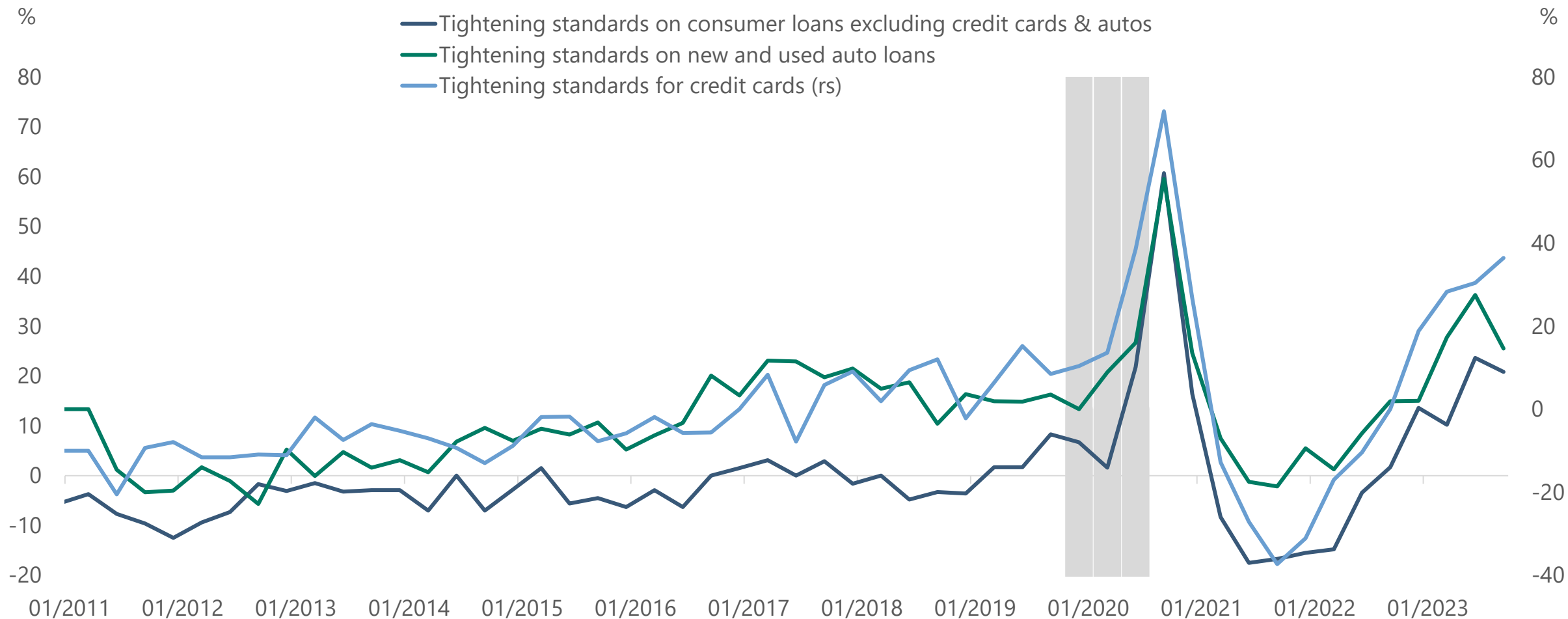


Banks' willingness to lend to consumers approaching 2008 levels

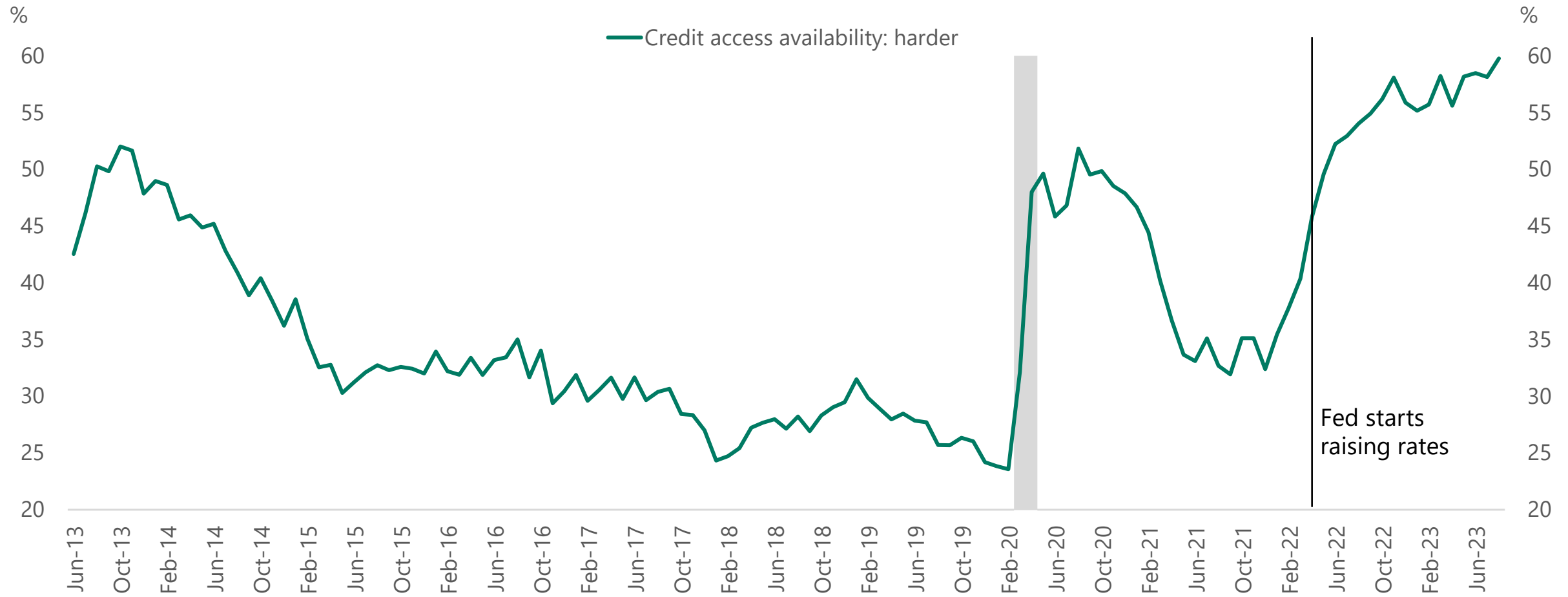


Source: FRB, Bloomberg, Apollo Chief Economist.

Lending standards are tightening for consumers, approaching 2008 levels

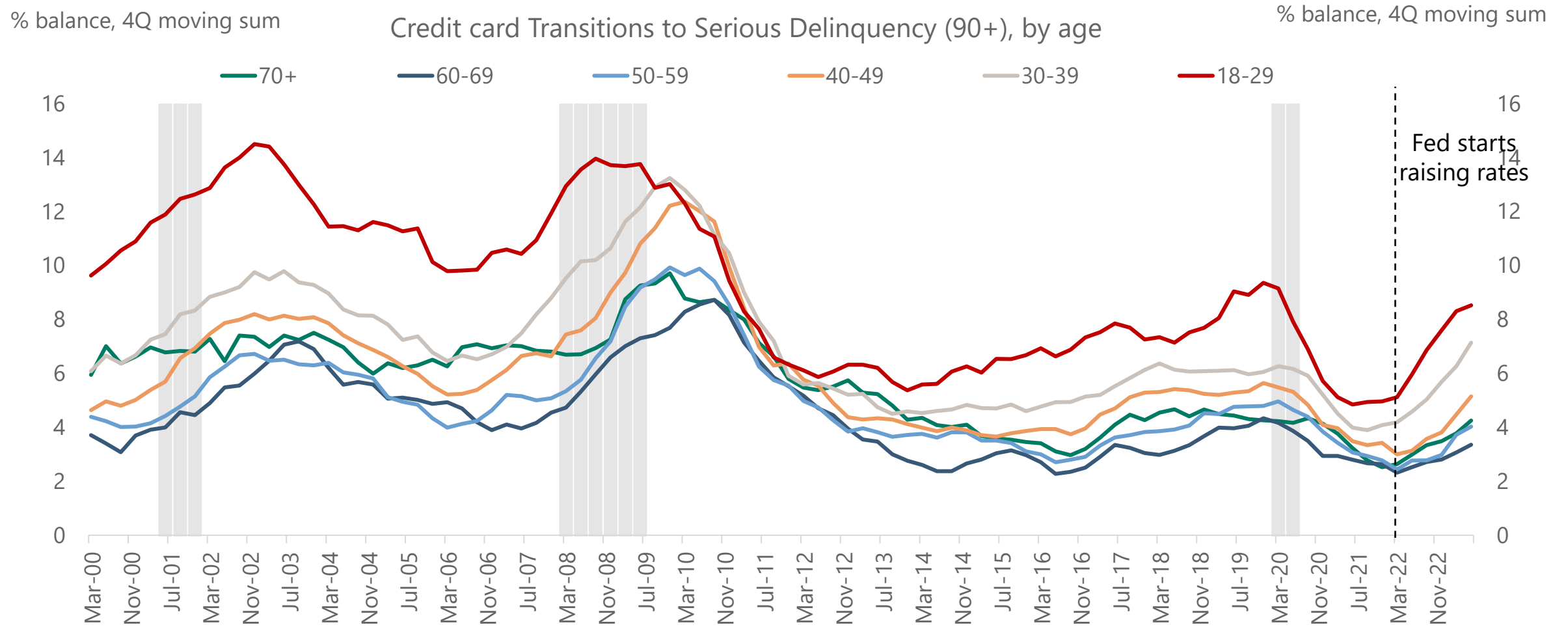


The share of households reporting it is harder to obtain credit than one year ago



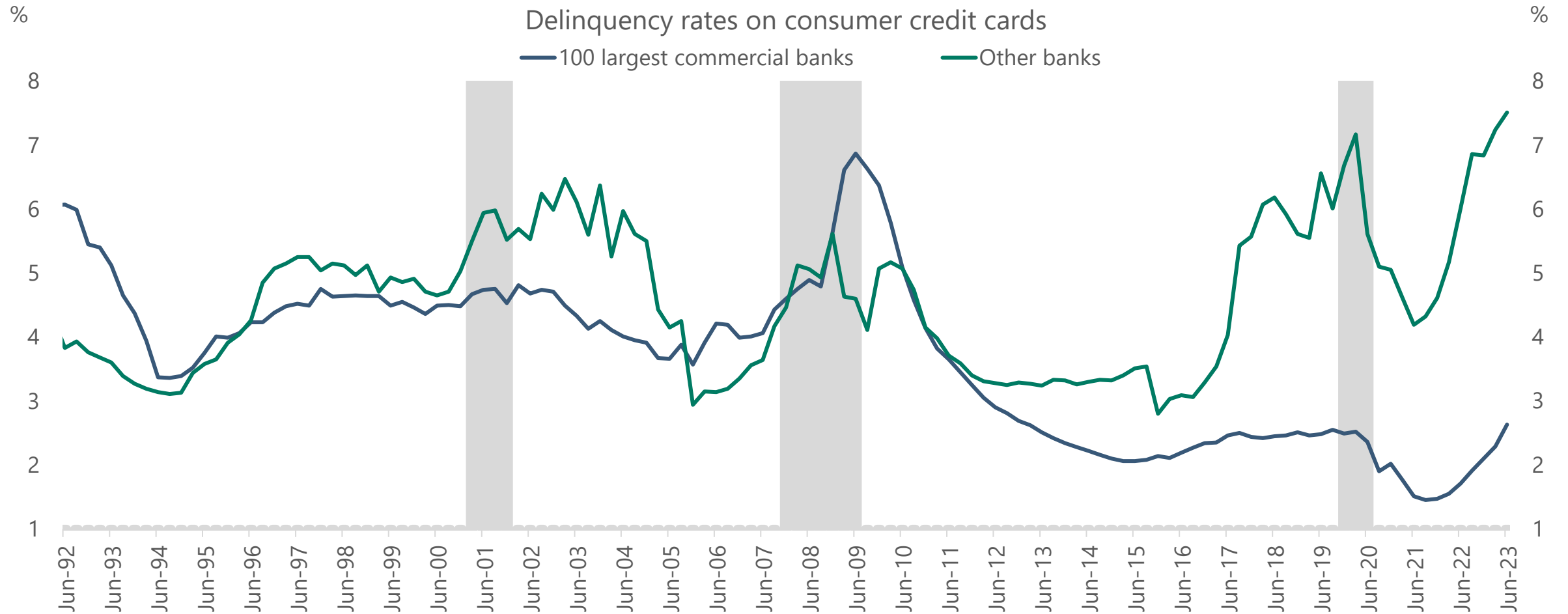
Source: FRBNY, Haver Analytics, Apollo Chief Economist (Harder = much harder + somewhat harder)

Credit card delinquency rates rising

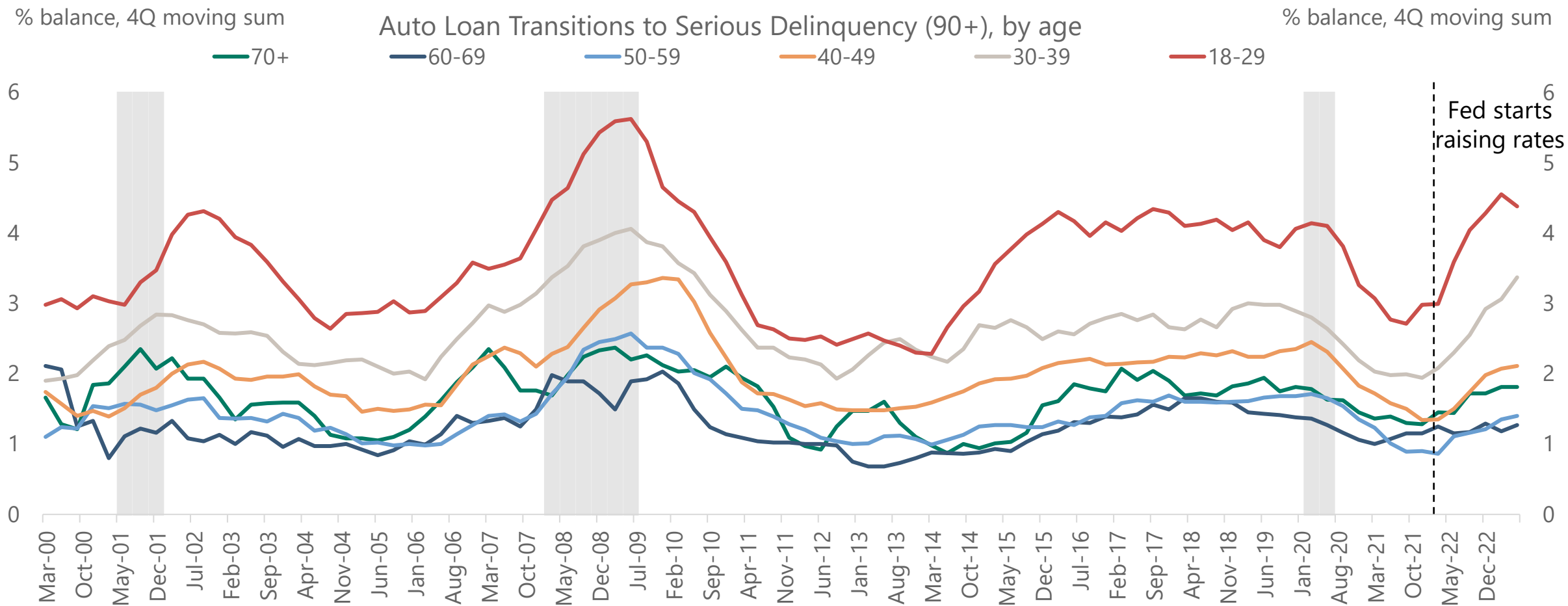


Source: New York Fed Consumer Credit Panel / Equifax, Apollo Chief Economist

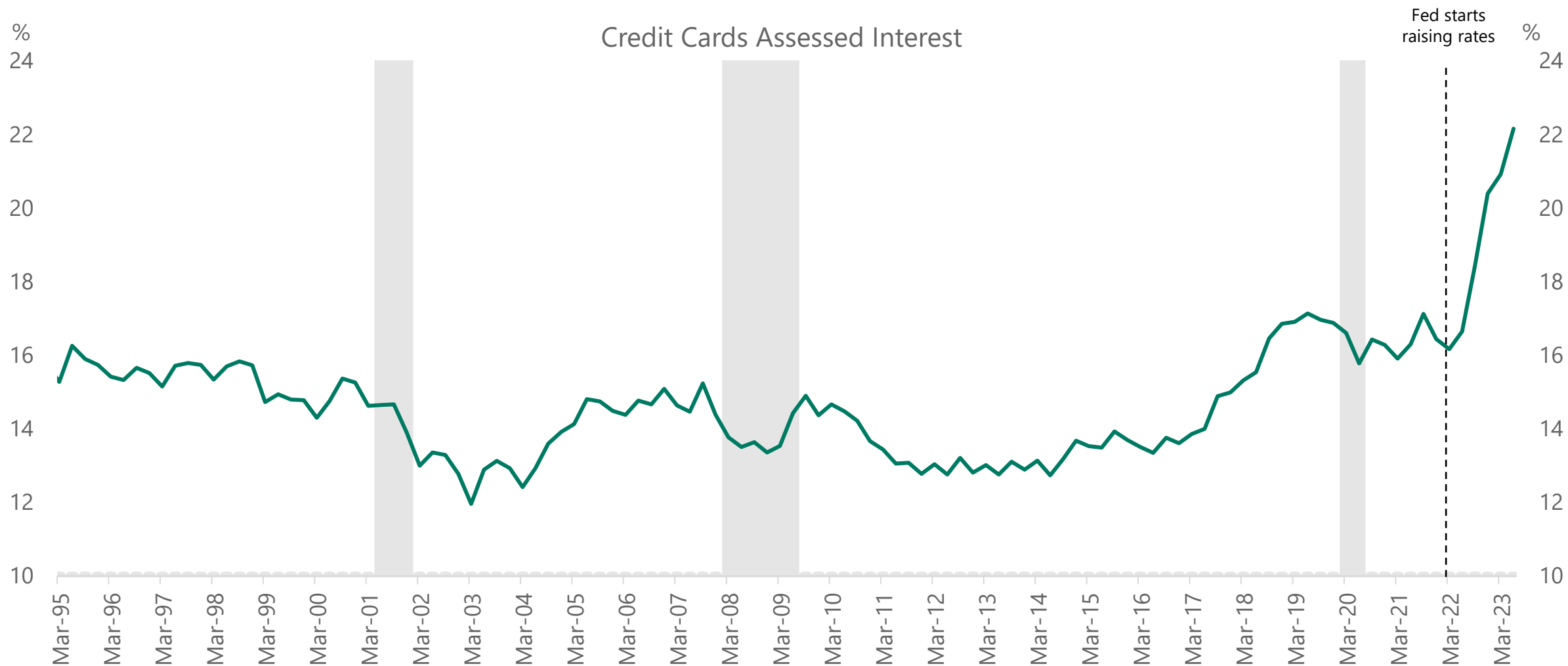
Credit card delinquency rates at small banks are higher than at large banks



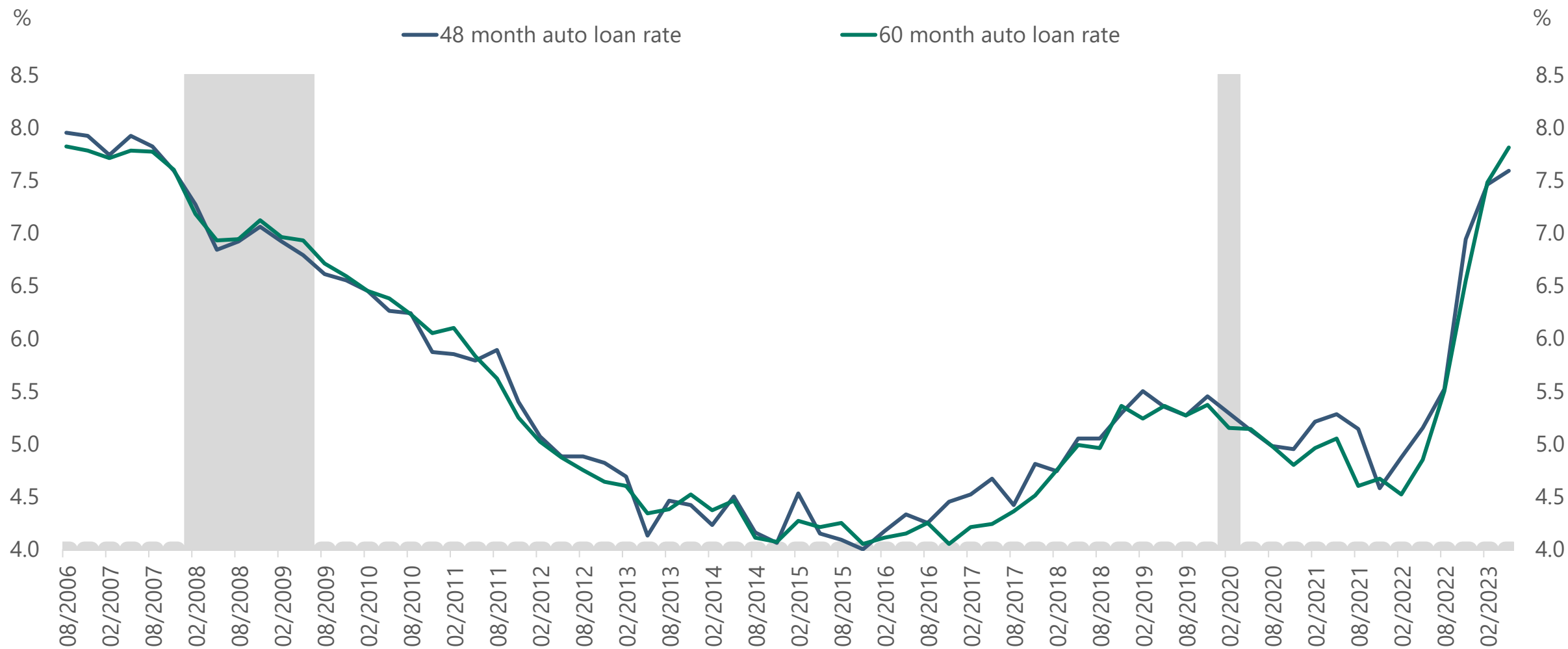
Auto loan transitions to serious delinquency at 2008 levels



Interest rate on credit cards

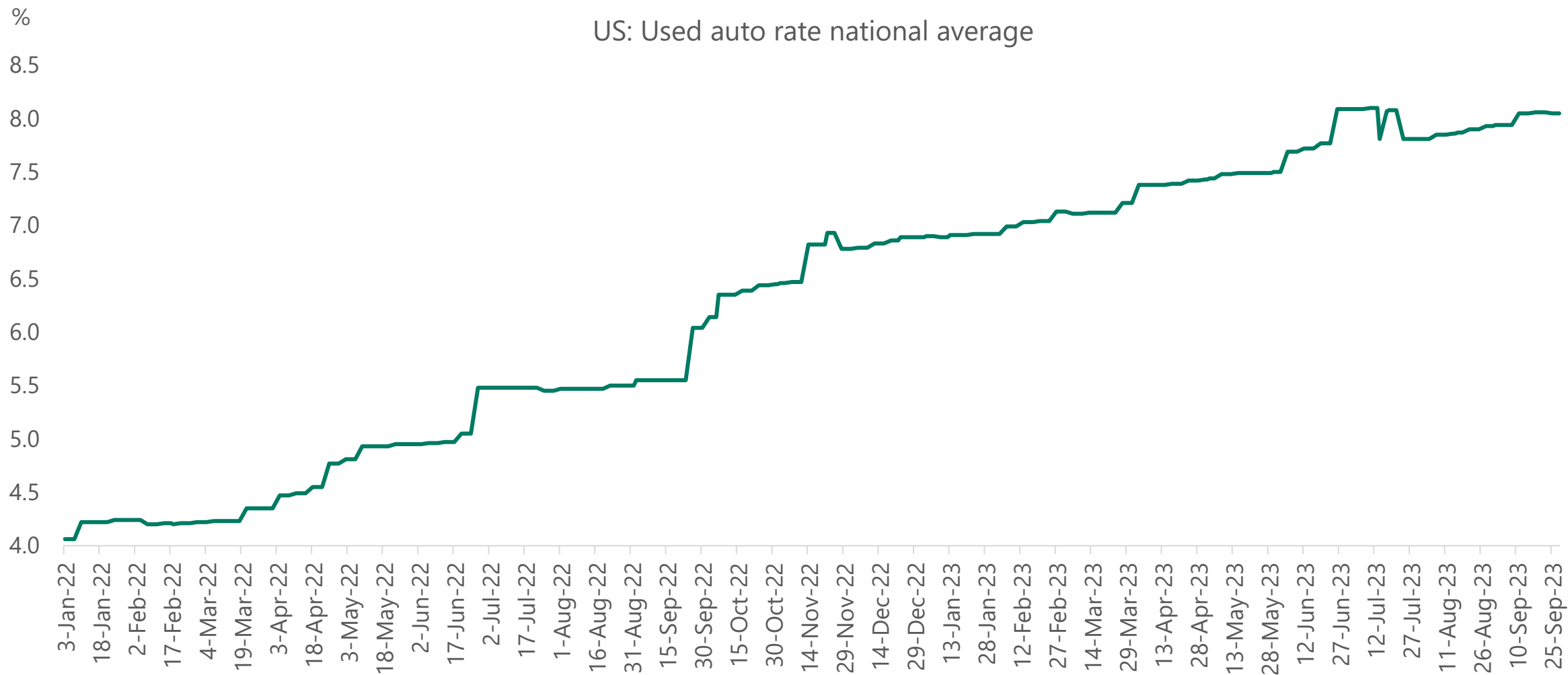


Commercial Bank auto loan rates highest since 2008



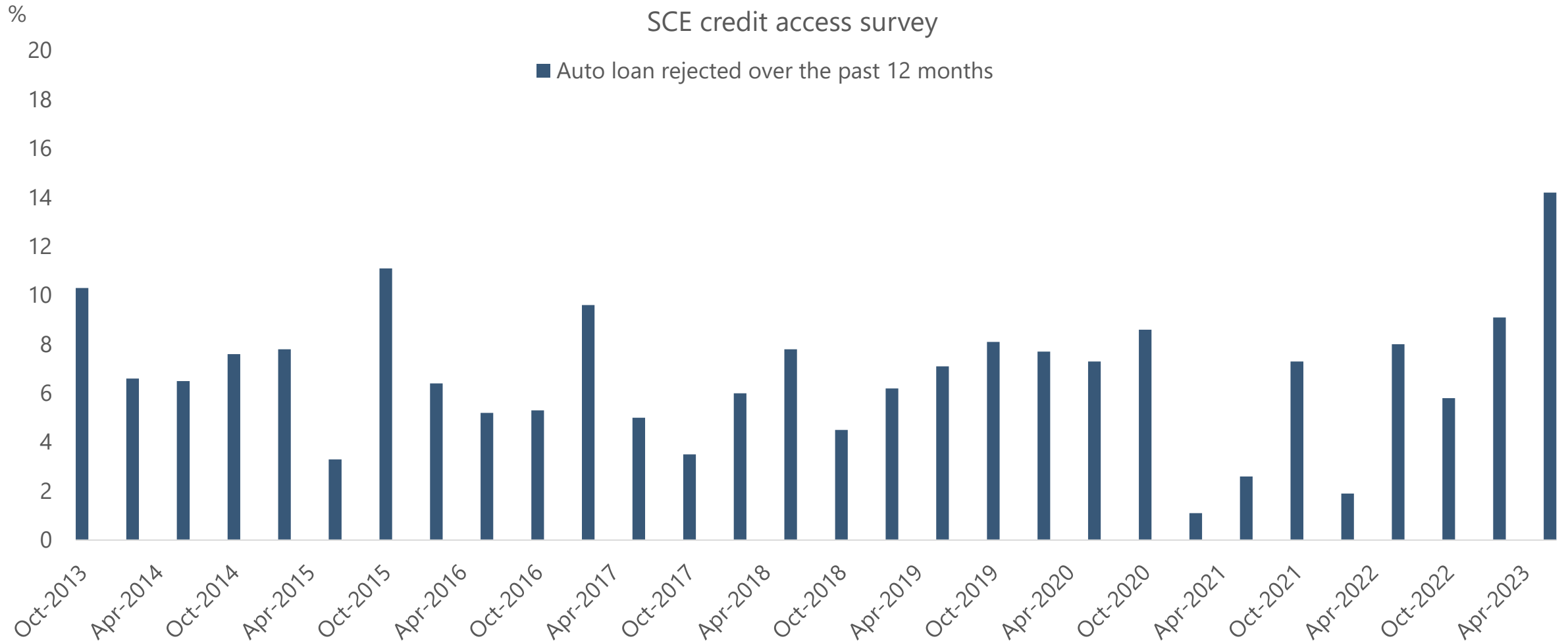
Source: FRB, Bloomberg, Apollo Chief Economist

Interest rate on auto loans

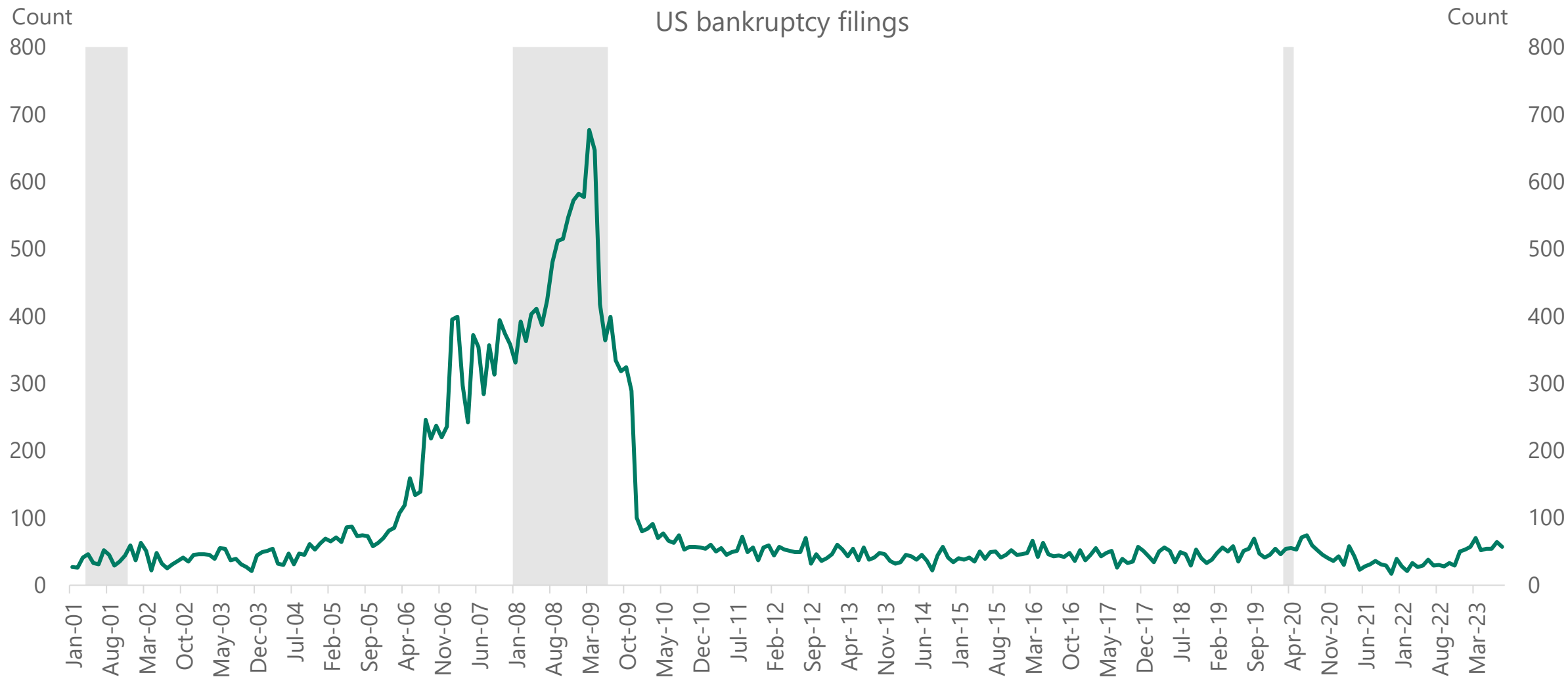


Source: Bankrate.com, Apollo Chief Economist

Auto loan rejection rate over the past 12 months

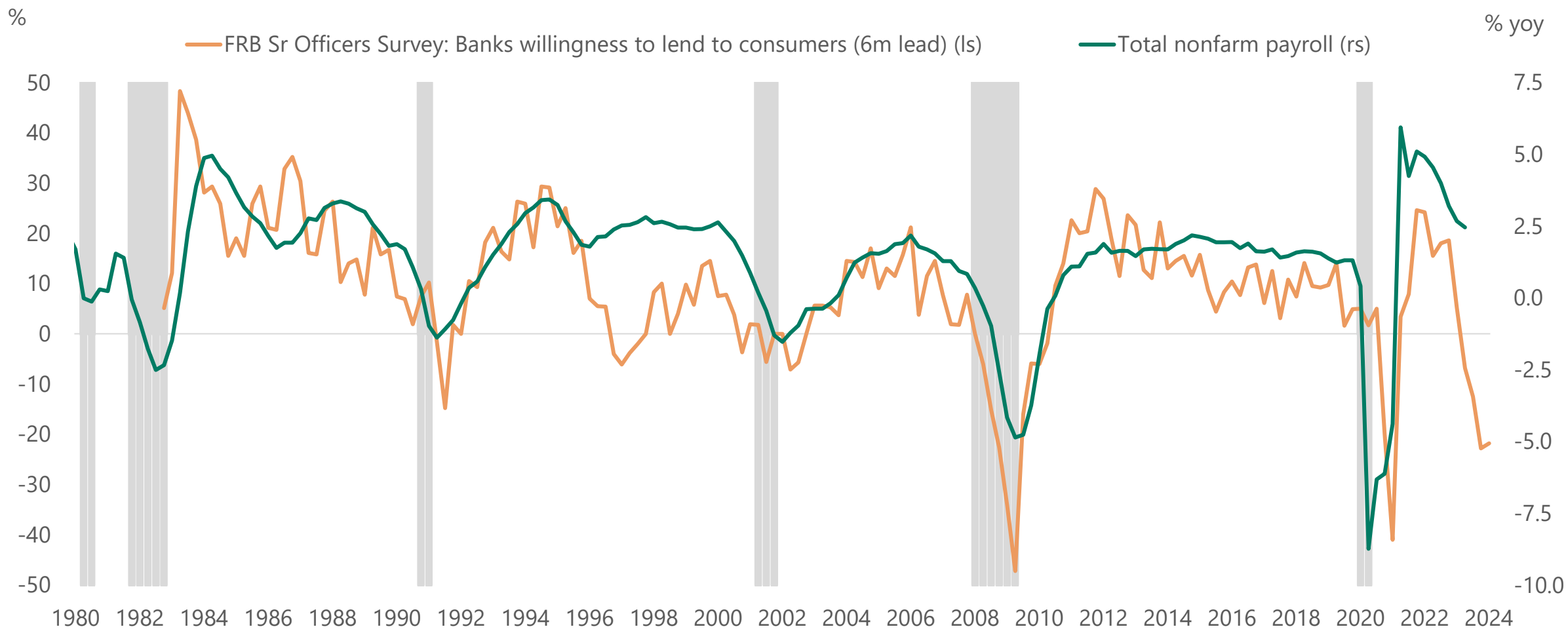


Bankruptcy filings



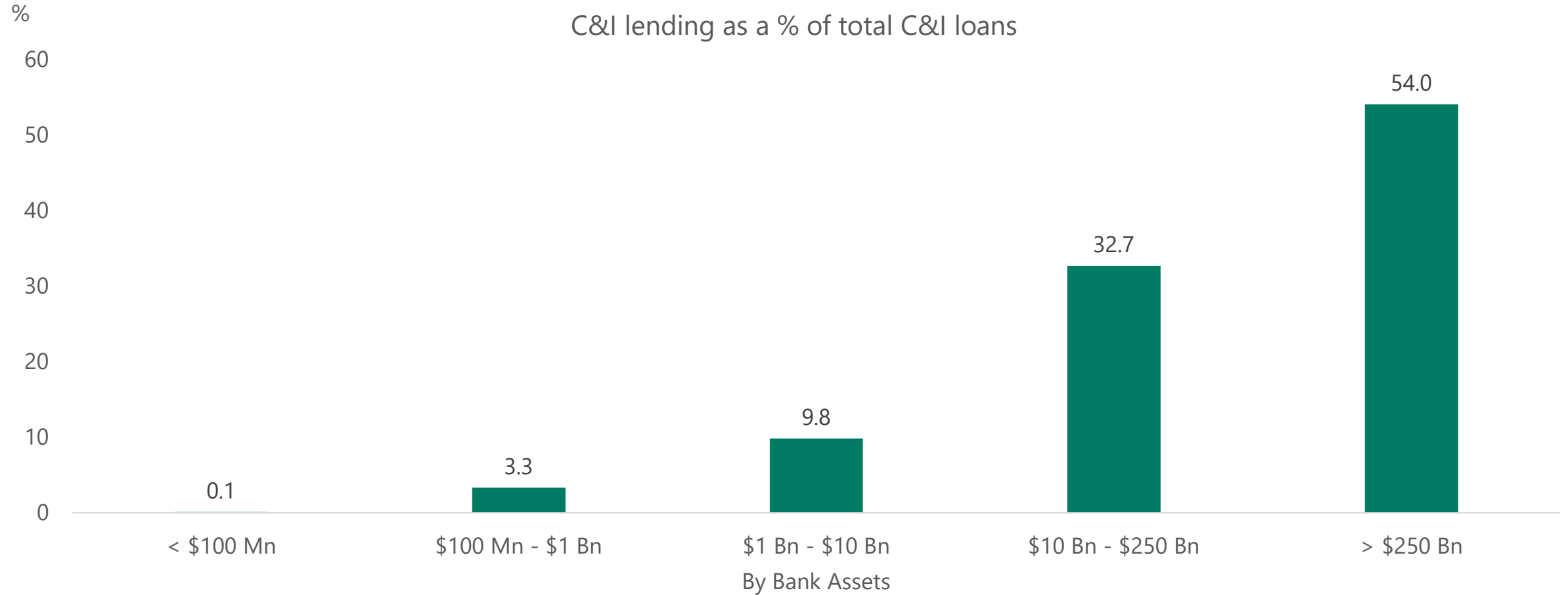
Source: S&P Capital IQ, Bloomberg, Apollo Chief Economist. Note: Bankruptcy figures include public companies or private companies with public debt with a minimum of \$2 million in assets or liabilities at the time of filing, in addition to private companies with at least \$10 million in assets or liabilities.

Credit tightening suggests weaker payrolls



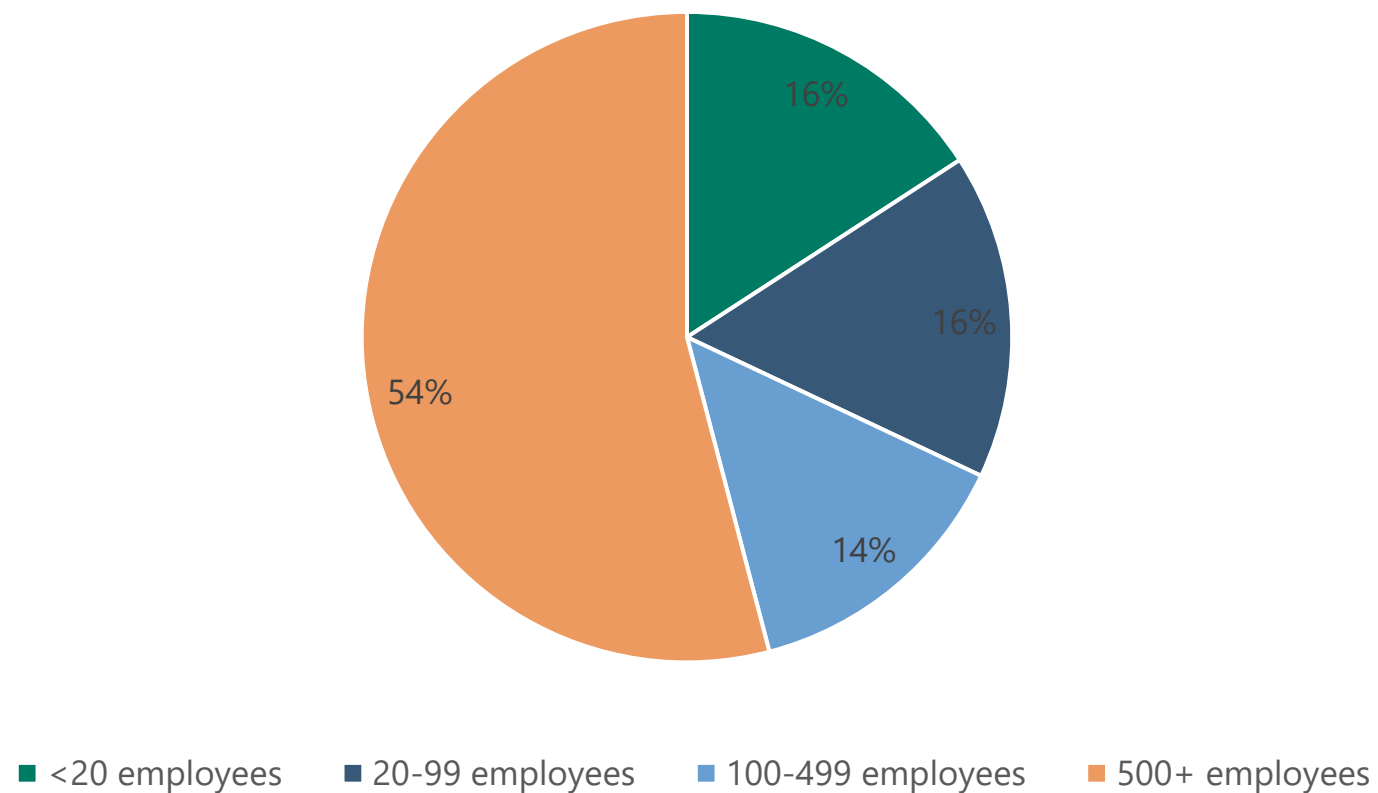
Small banks lend to small businesses

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

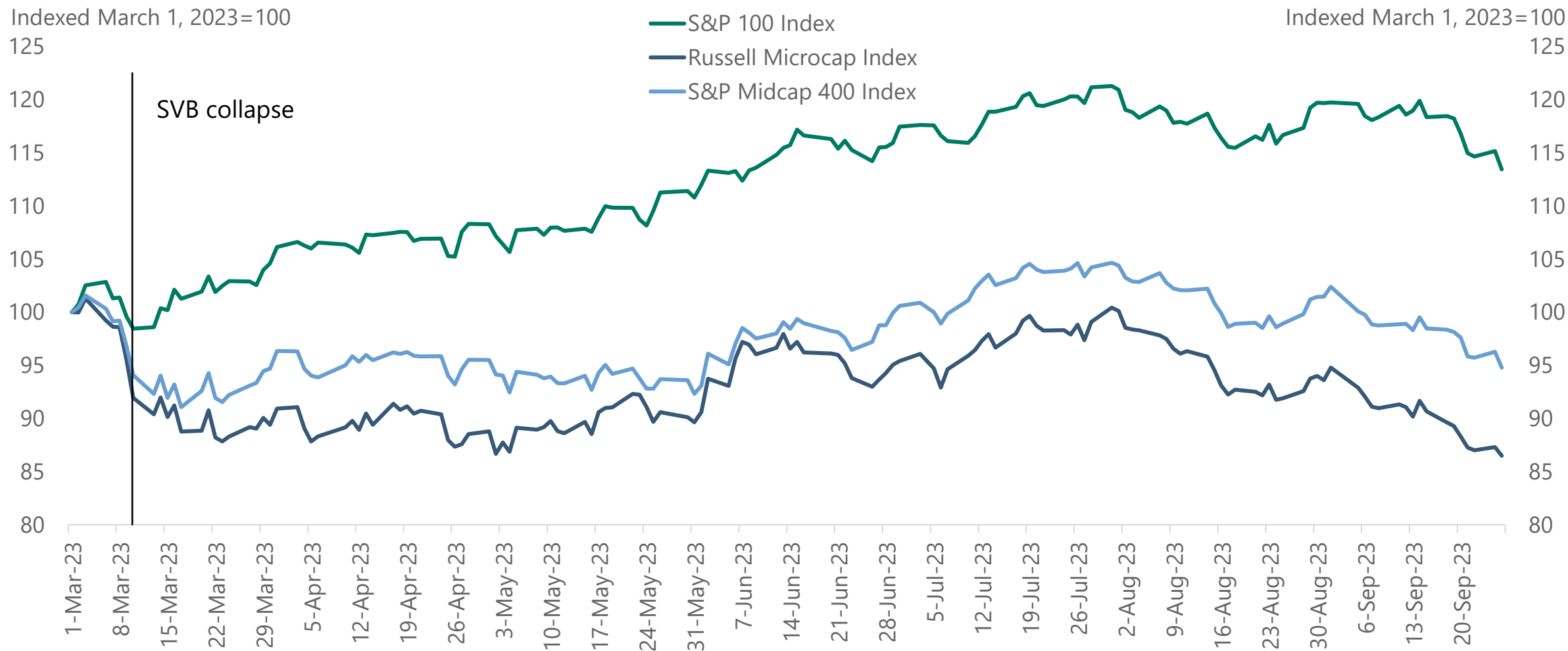


Half of US employment is in firms with fewer than 500 employees

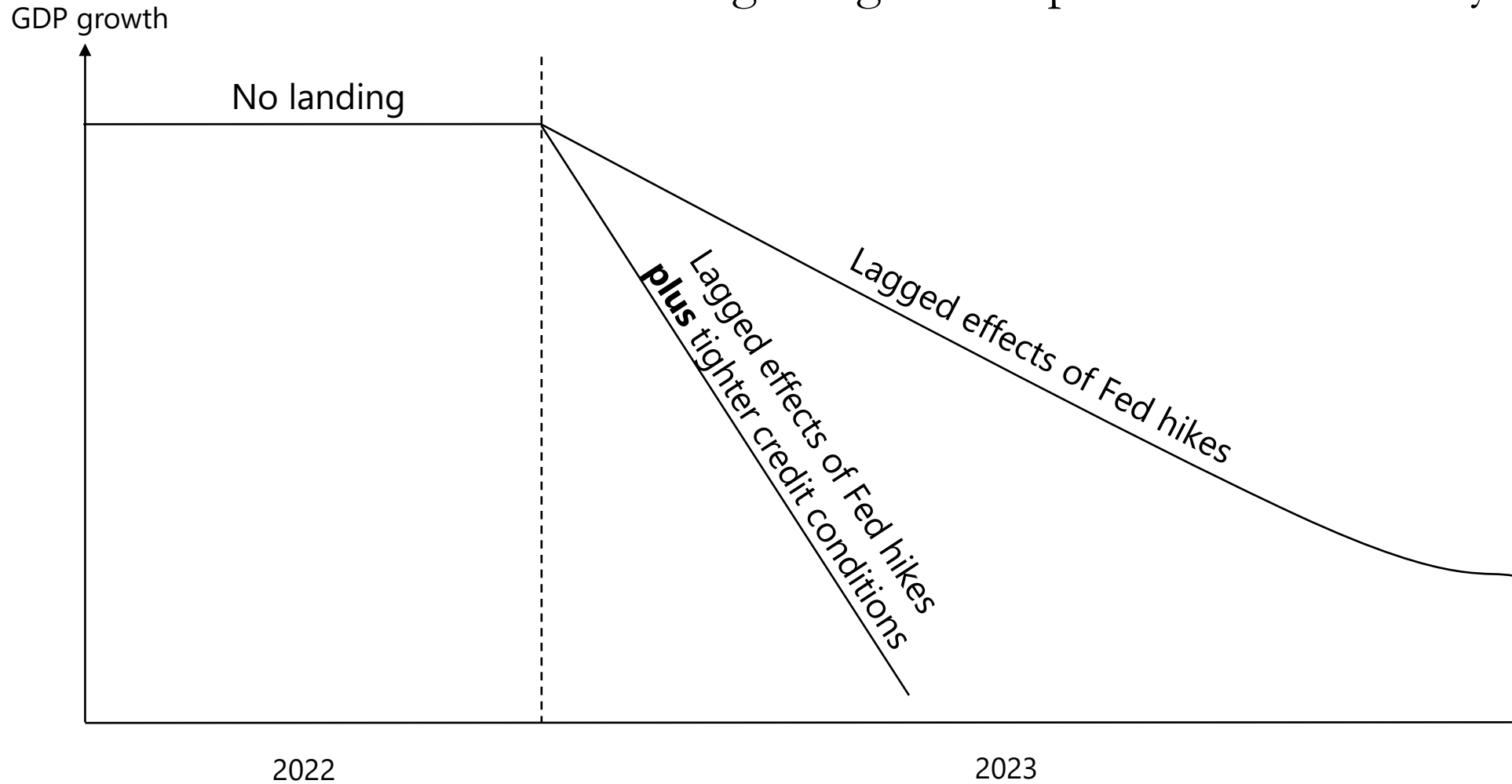
Share of total employment by employment size of the firm, 2020



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

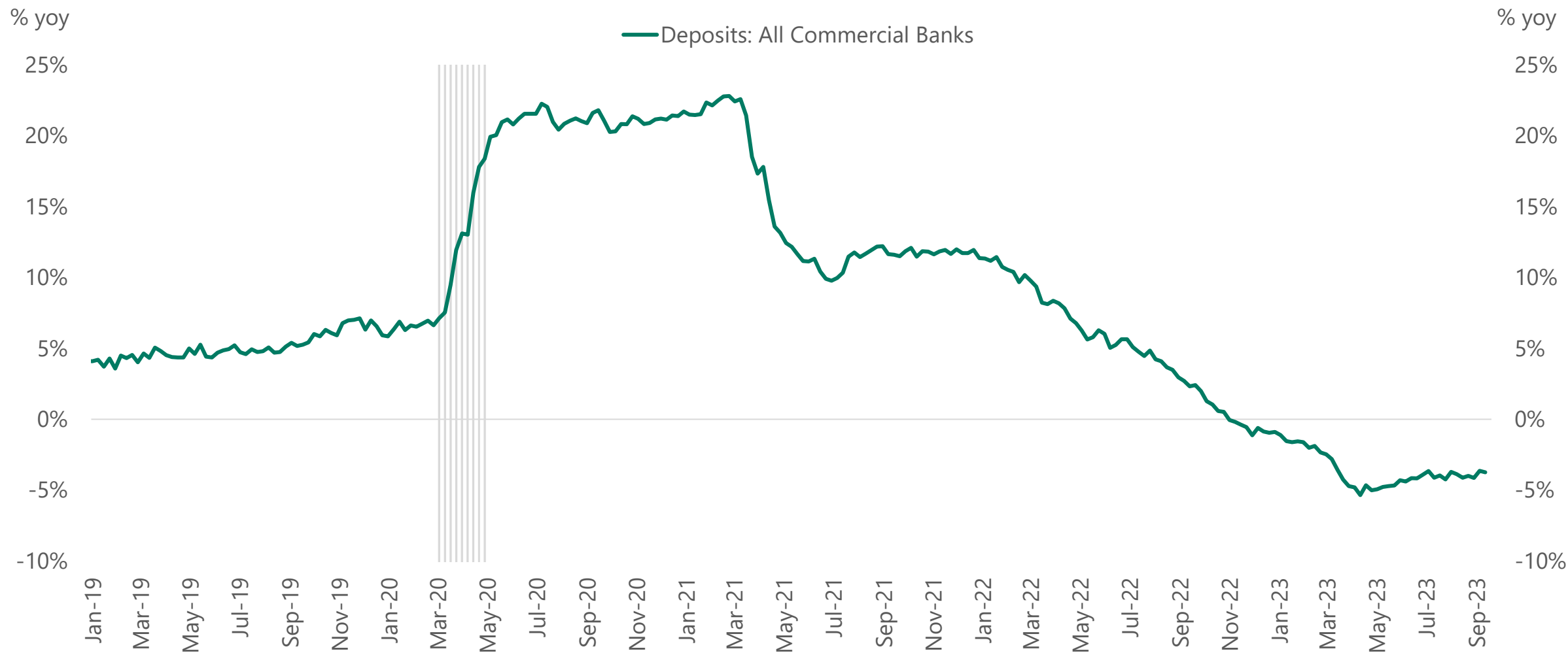


Lagged effects of Fed hikes combined with tighter credit conditions having a negative impact on the economy

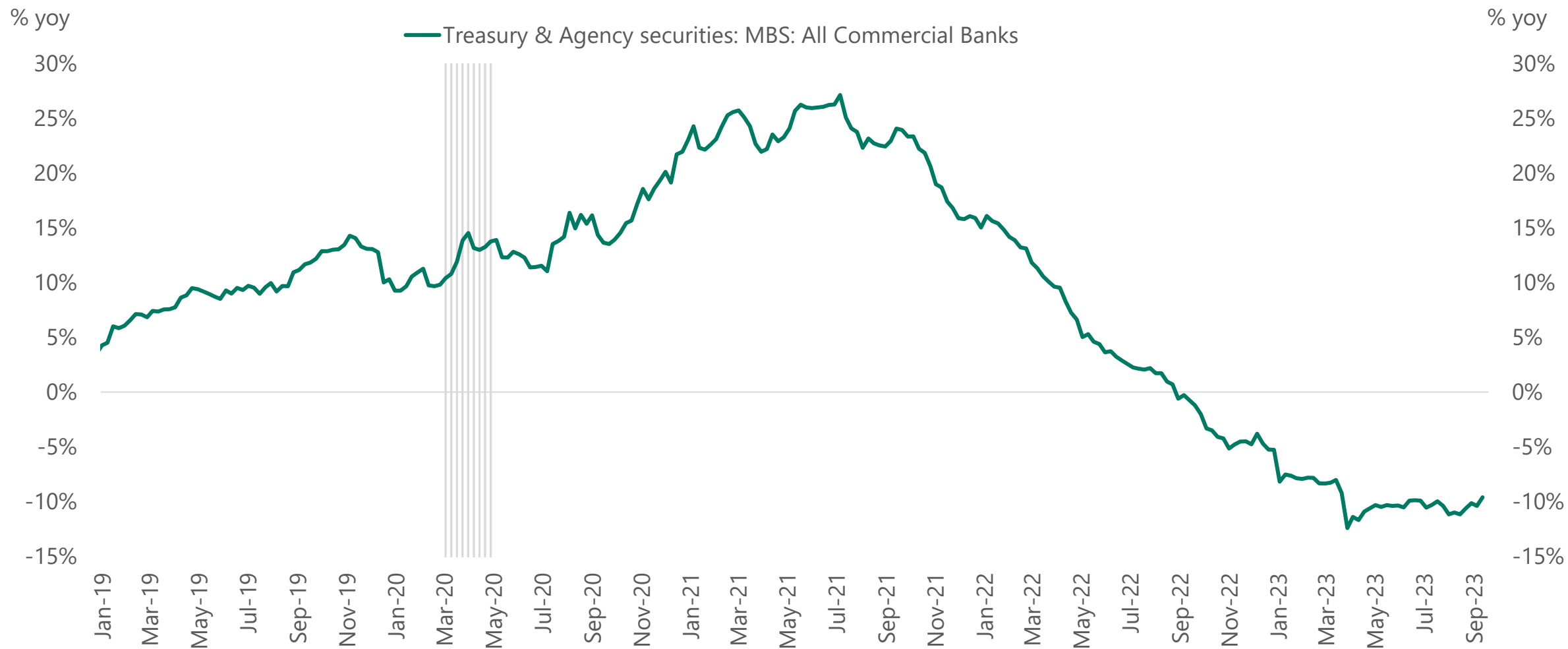


What is the banking sector response to the SVB collapse and associated deposit outflows? Cutting lending and selling mortgages

Negative growth in deposits

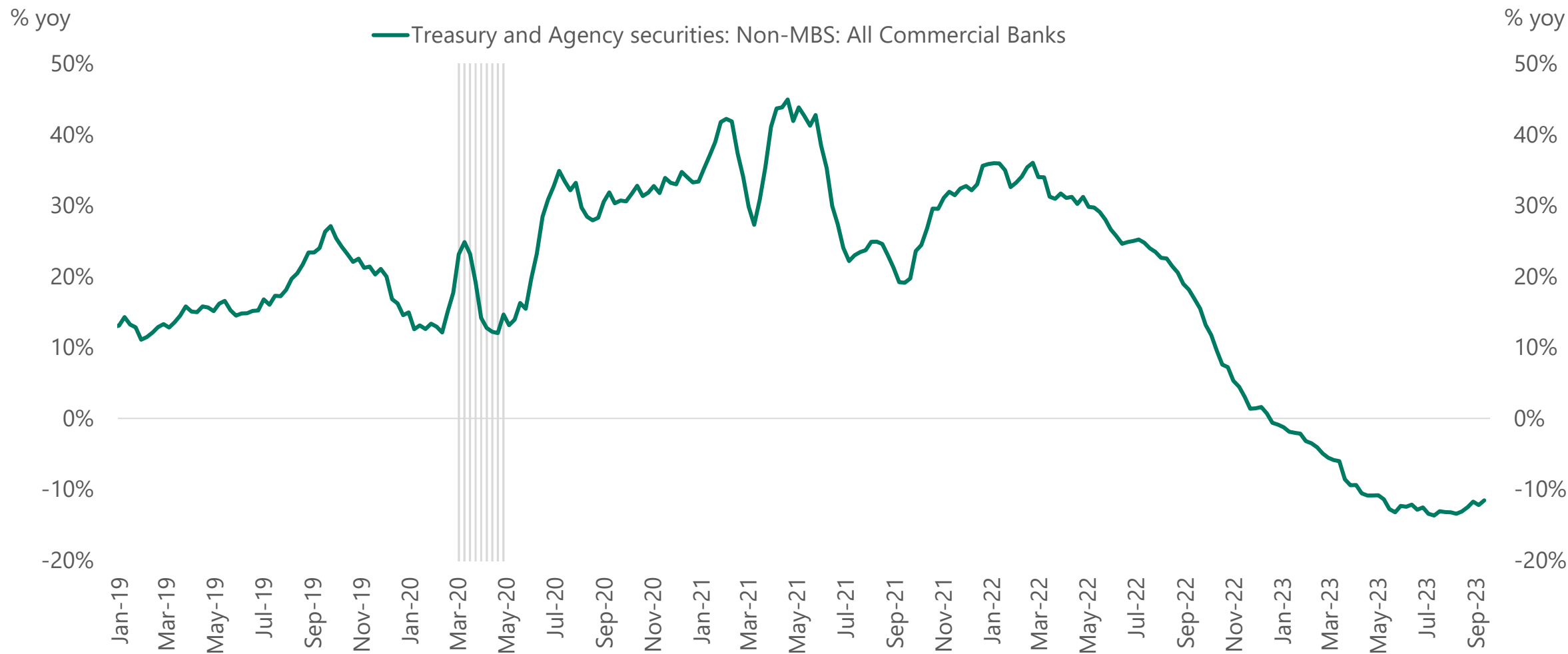


Negative growth in bank holdings of mortgages



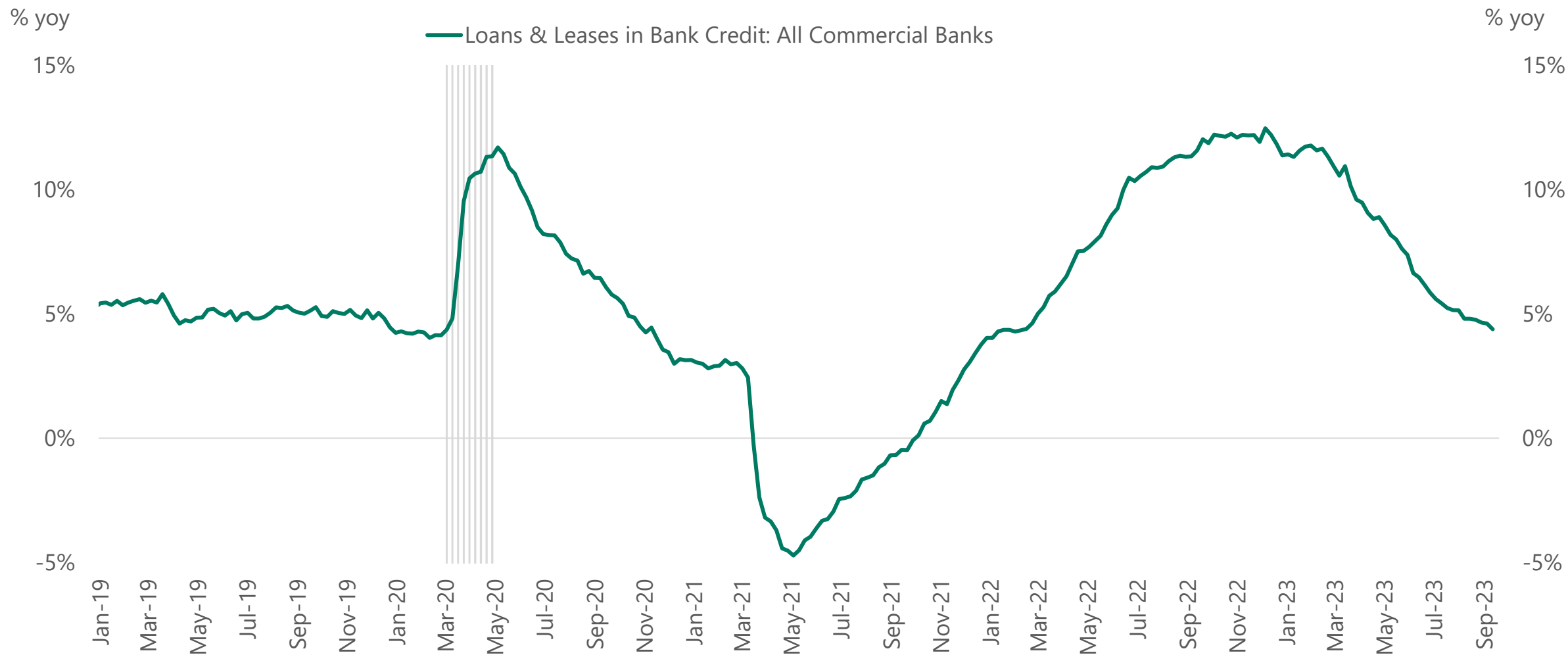
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Growth in bank holdings of Treasuries



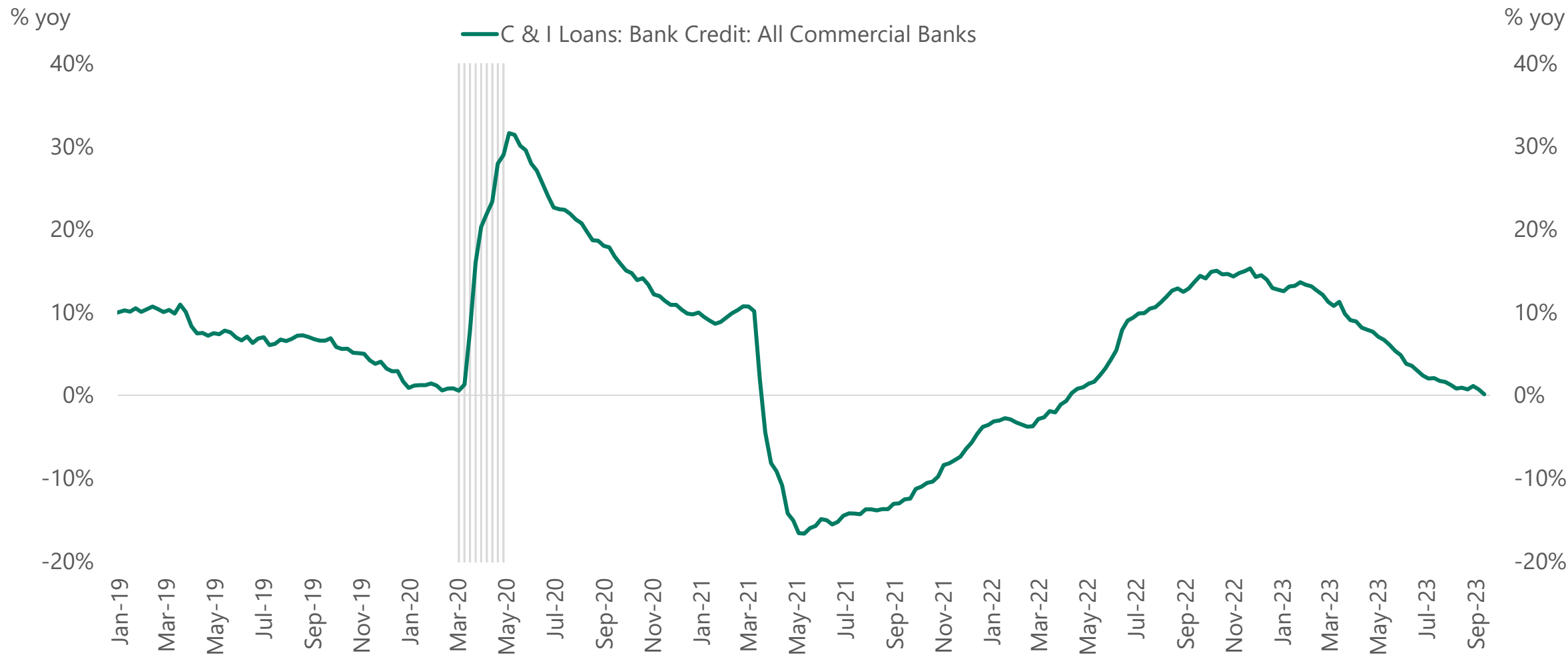
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Bank loan growth declining



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

Decline in growth in lending to corporates



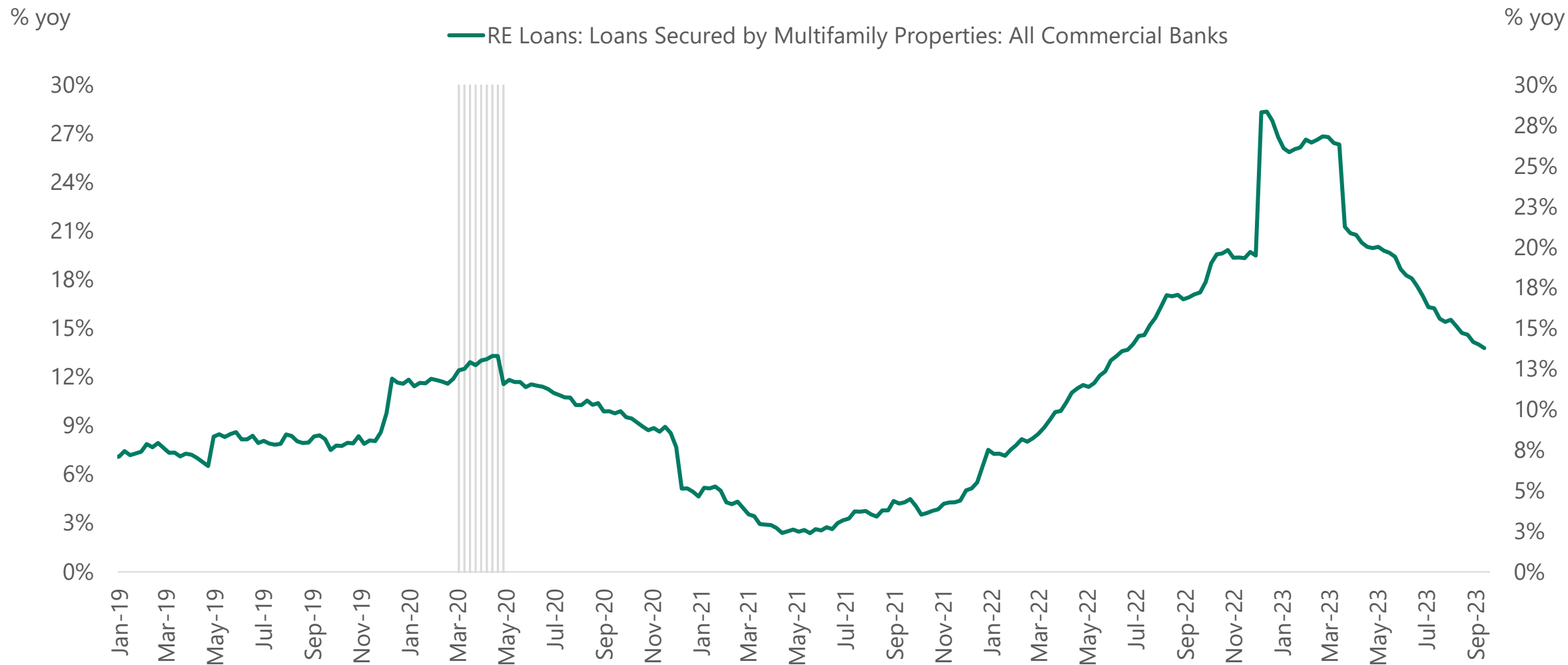
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Decline in growth in real estate lending



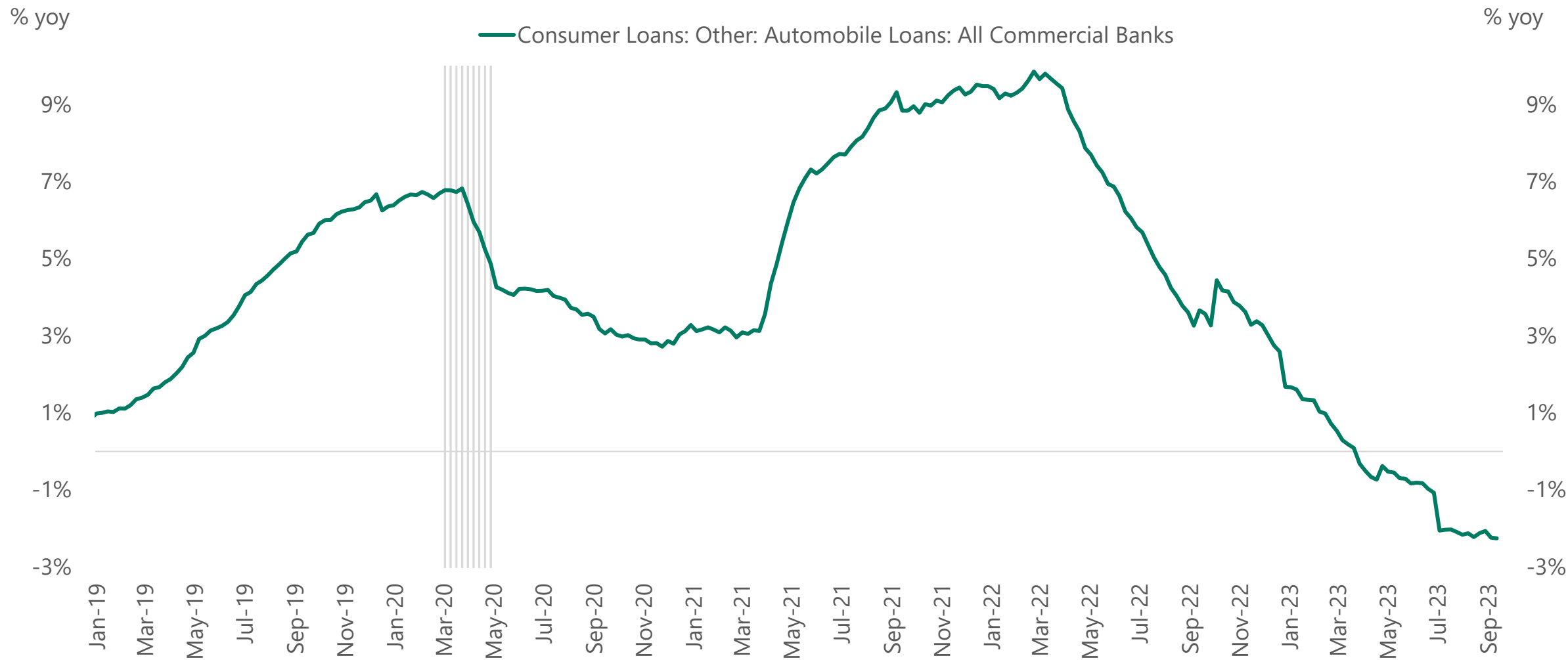
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Decline in growth in lending to multifamily construction



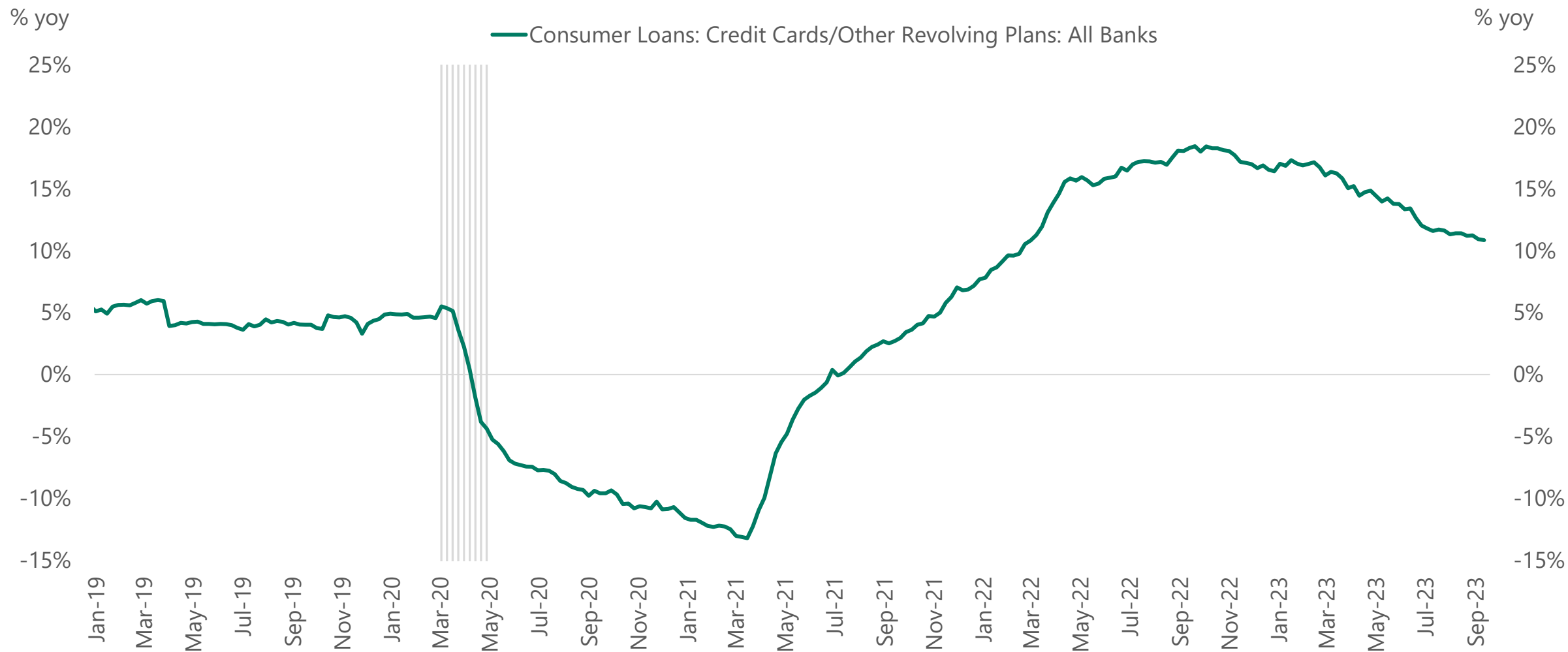
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Negative growth in auto loan lending



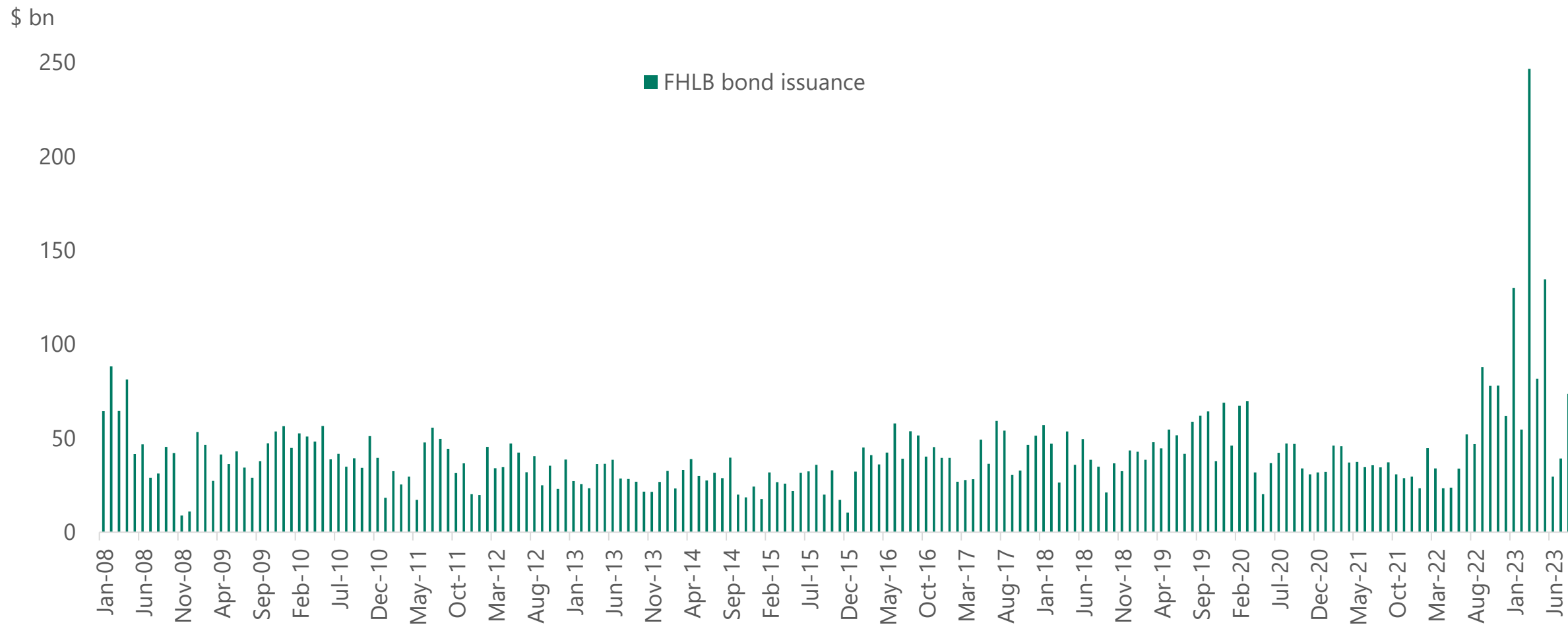
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Decline in growth in credit card lending



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

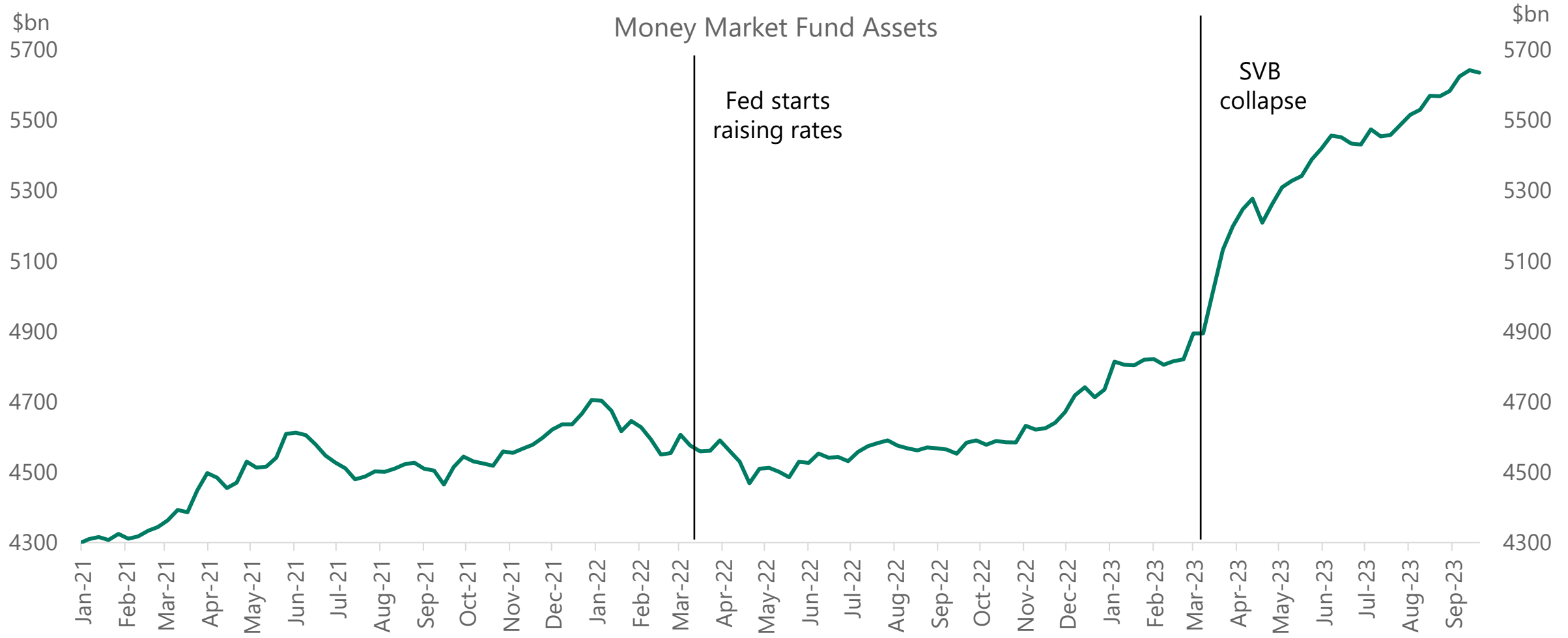
FHLB bond issuance



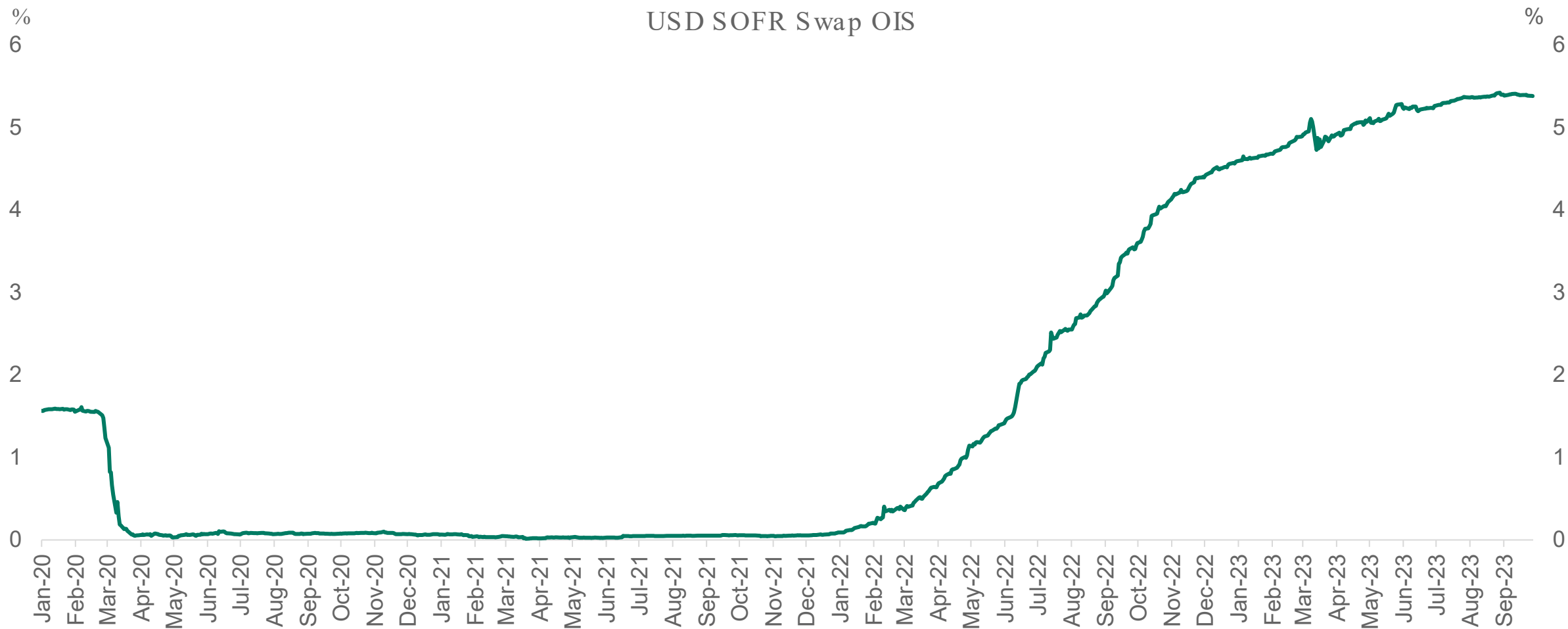
Source: FHLB, Haver, Apollo Chief Economist.

Bank funding pressures:
Deposits and market-based measures

\$675bn has been moved into money market funds since SVB went under

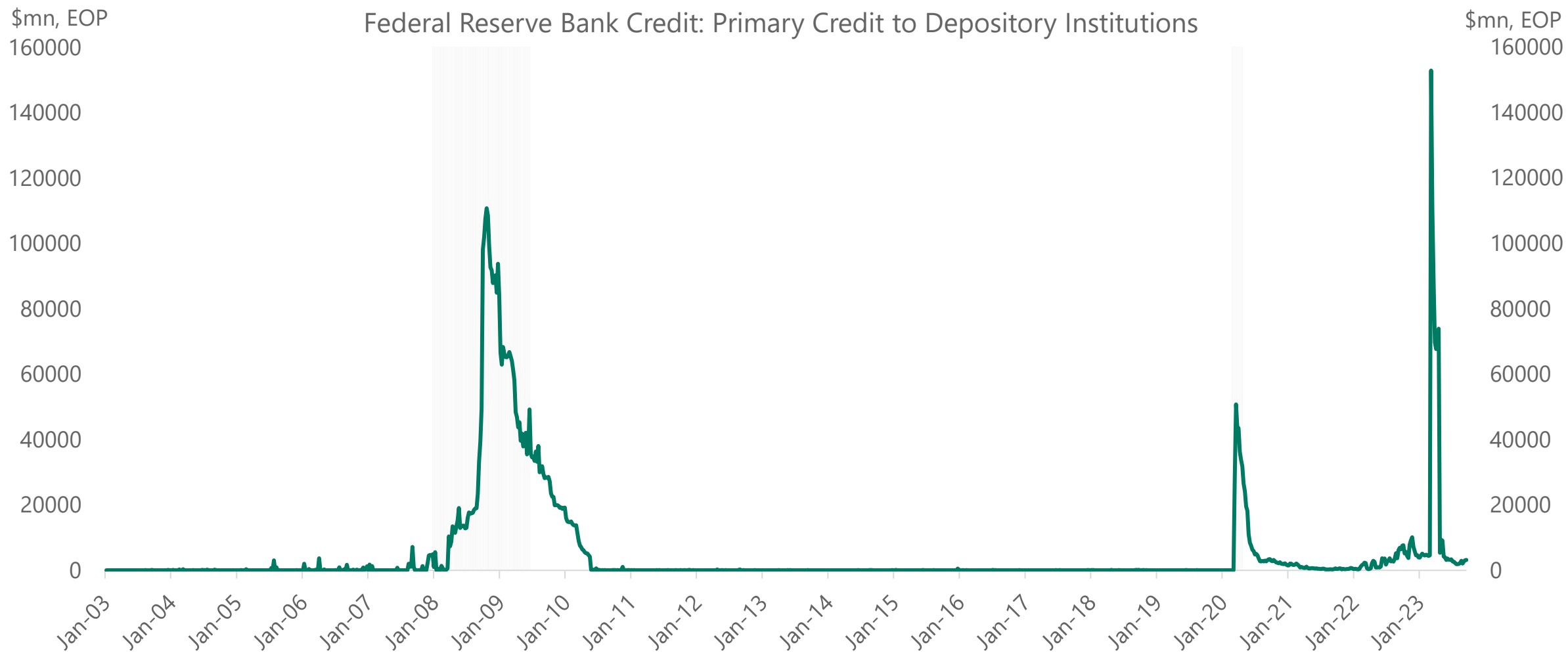


SOFR OIS Swap



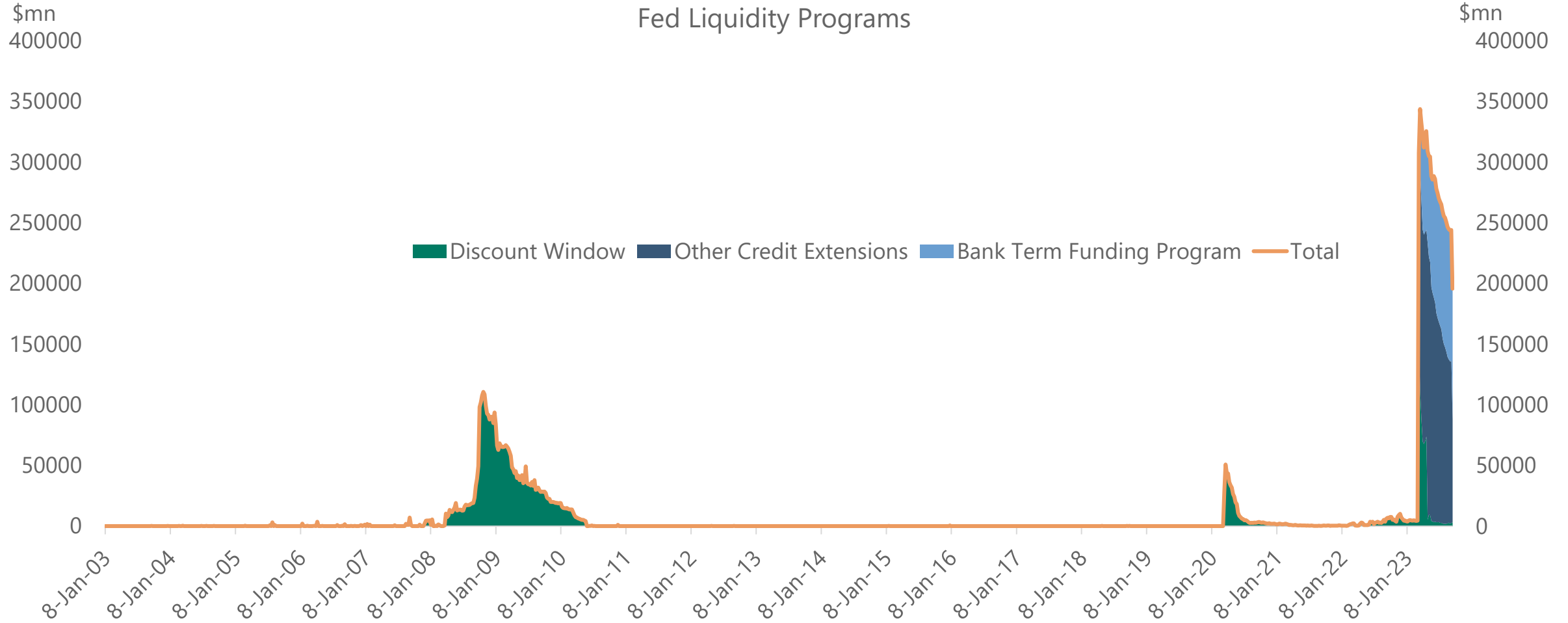
Source: Bloomberg. Note: Ticker used USFOSC1 BGN Currency. As of Aug 28, 2023.

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



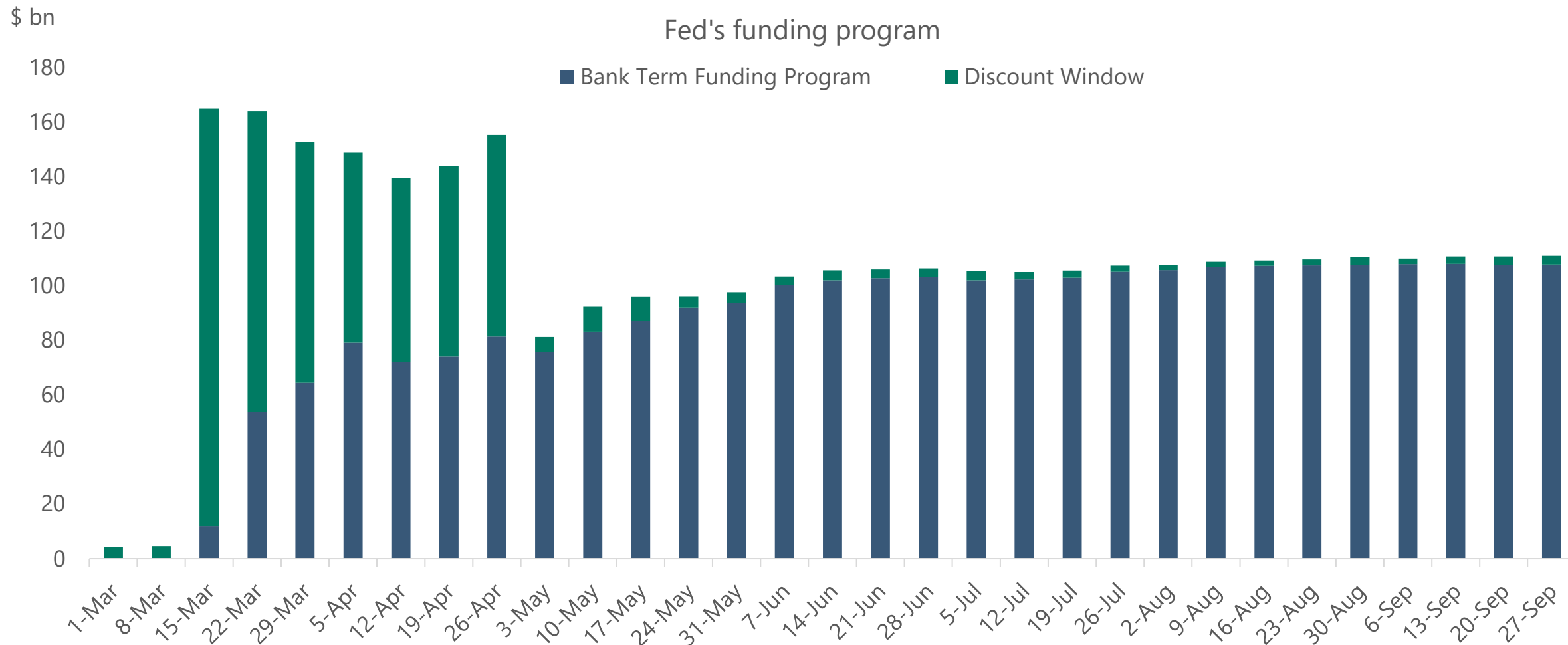
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Fed liquidity borrowing higher during regional banking crisis than in 2008



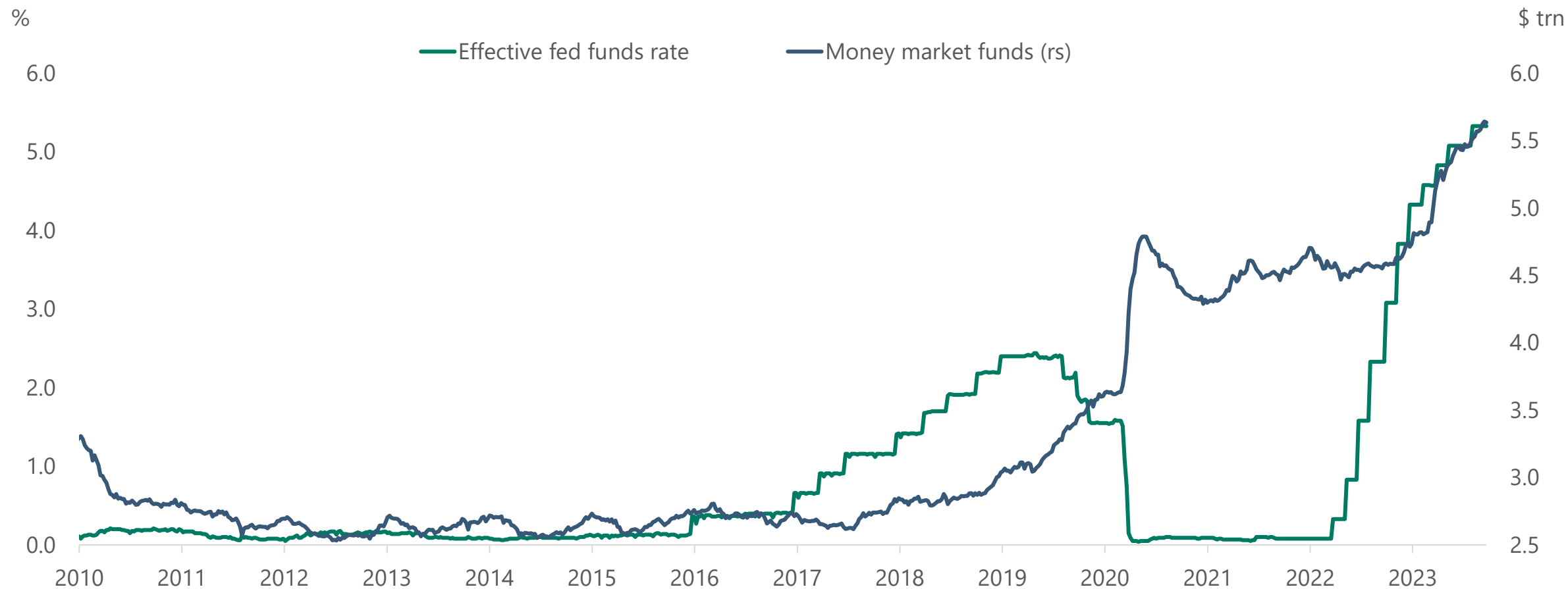
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Increased borrowing through the Bank Term Funding Program

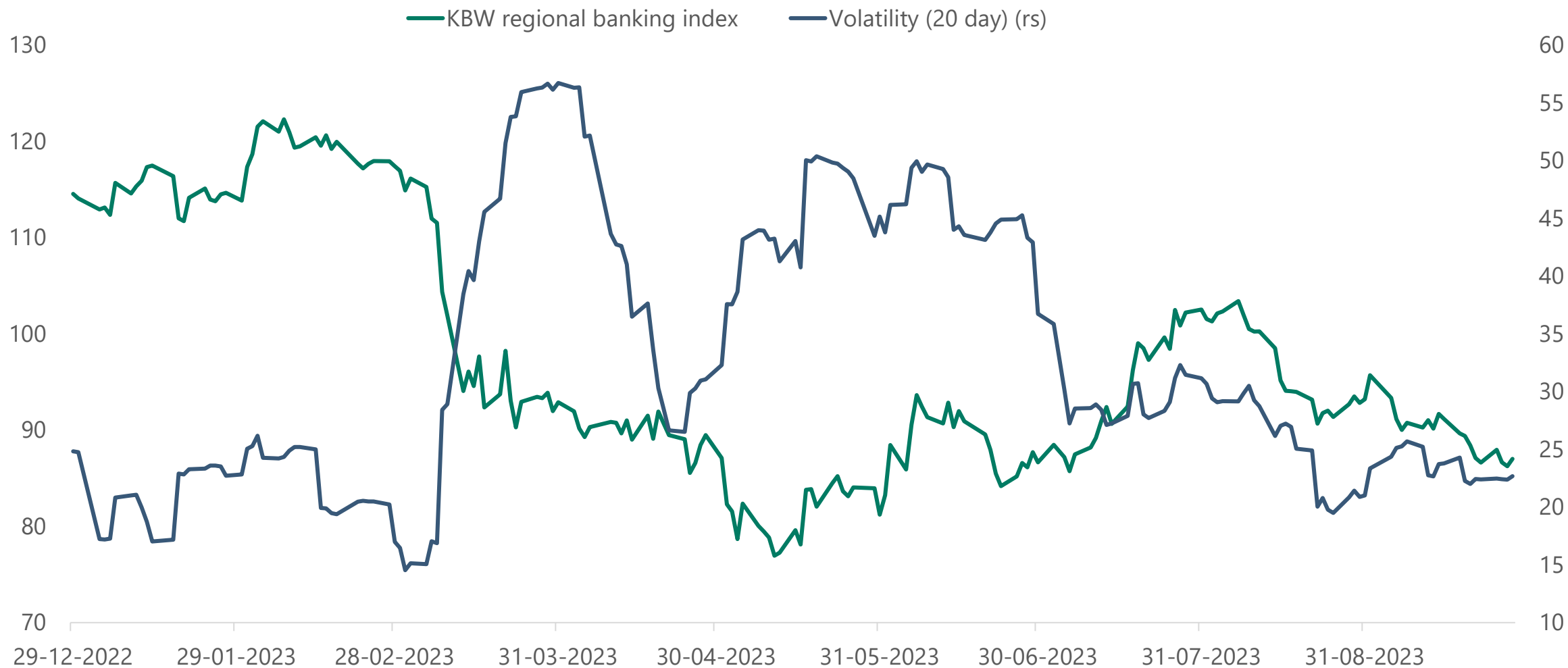


Source: Federal Reserve Board, Bloomberg, Apollo Chief Economist.

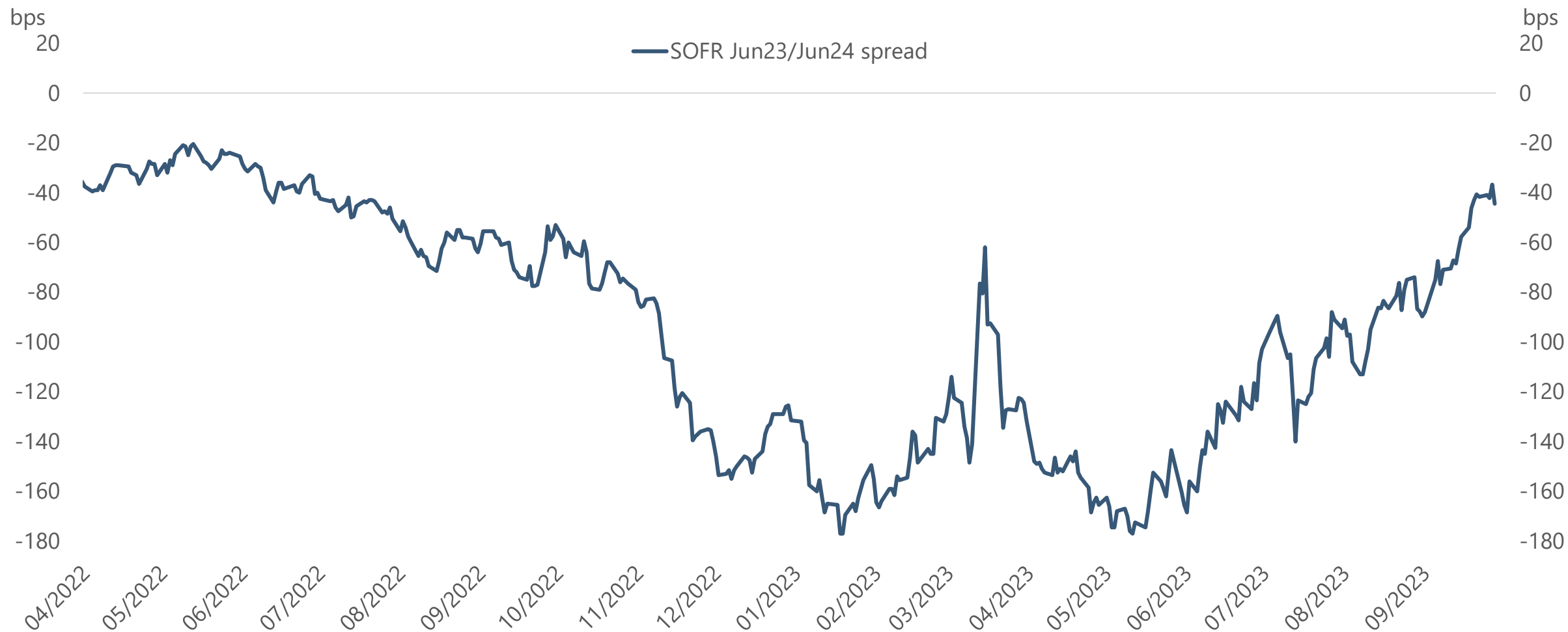
Money market funds during the current tightening cycle



Regional Bank volatility has declined

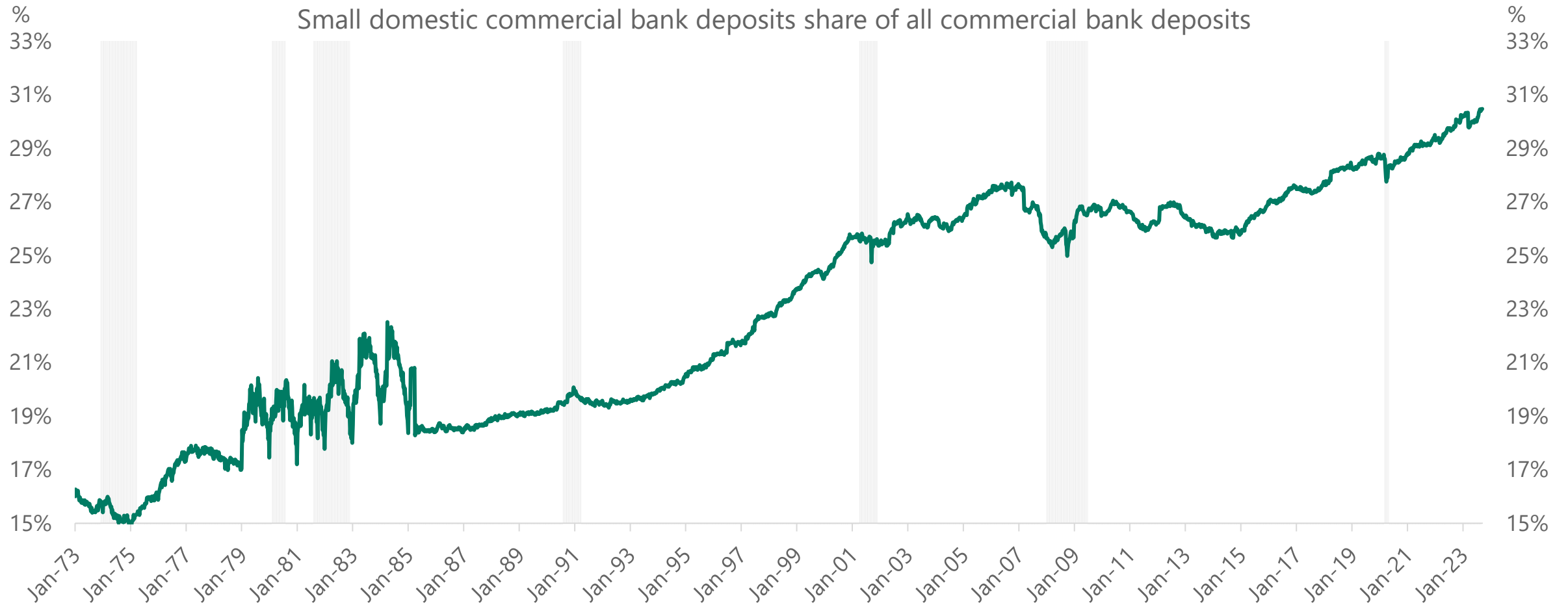


SOFR spreads currently pricing aggressive Fed cuts in 2024



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

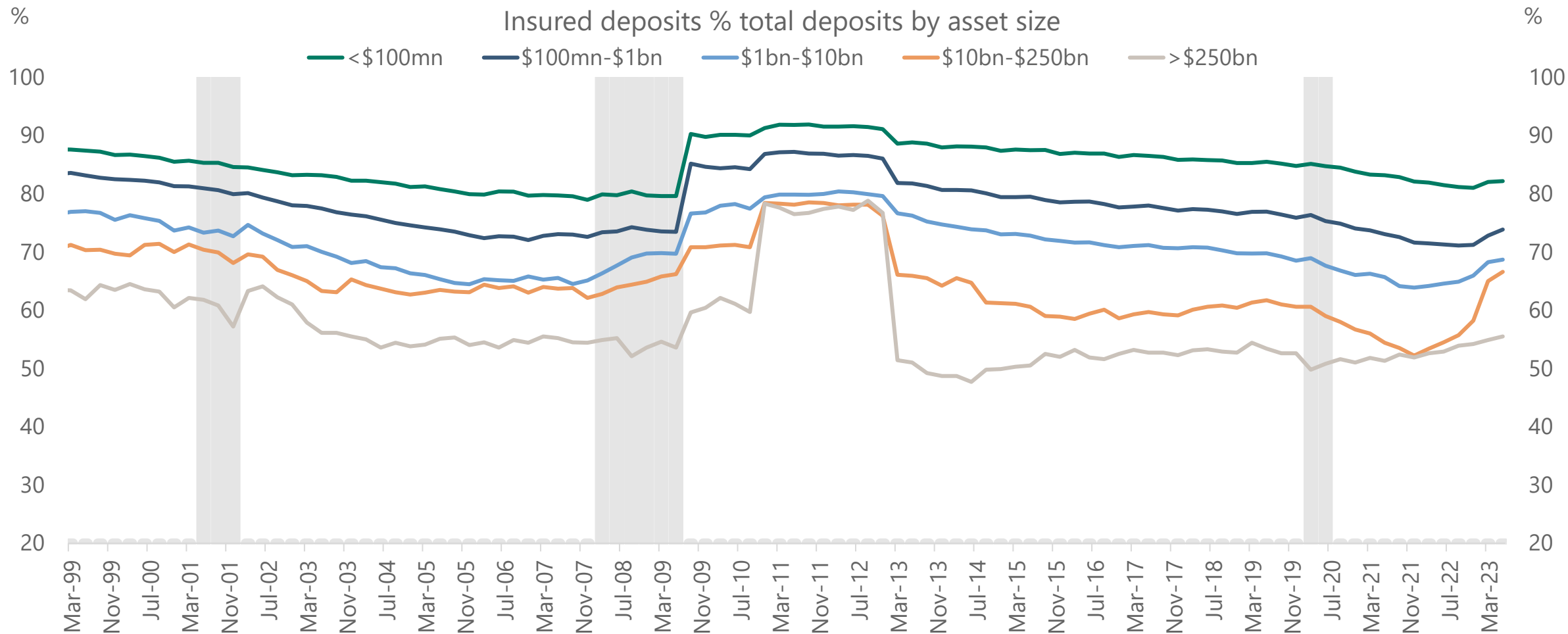


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Share of total bank deposits that are uninsured: 39%

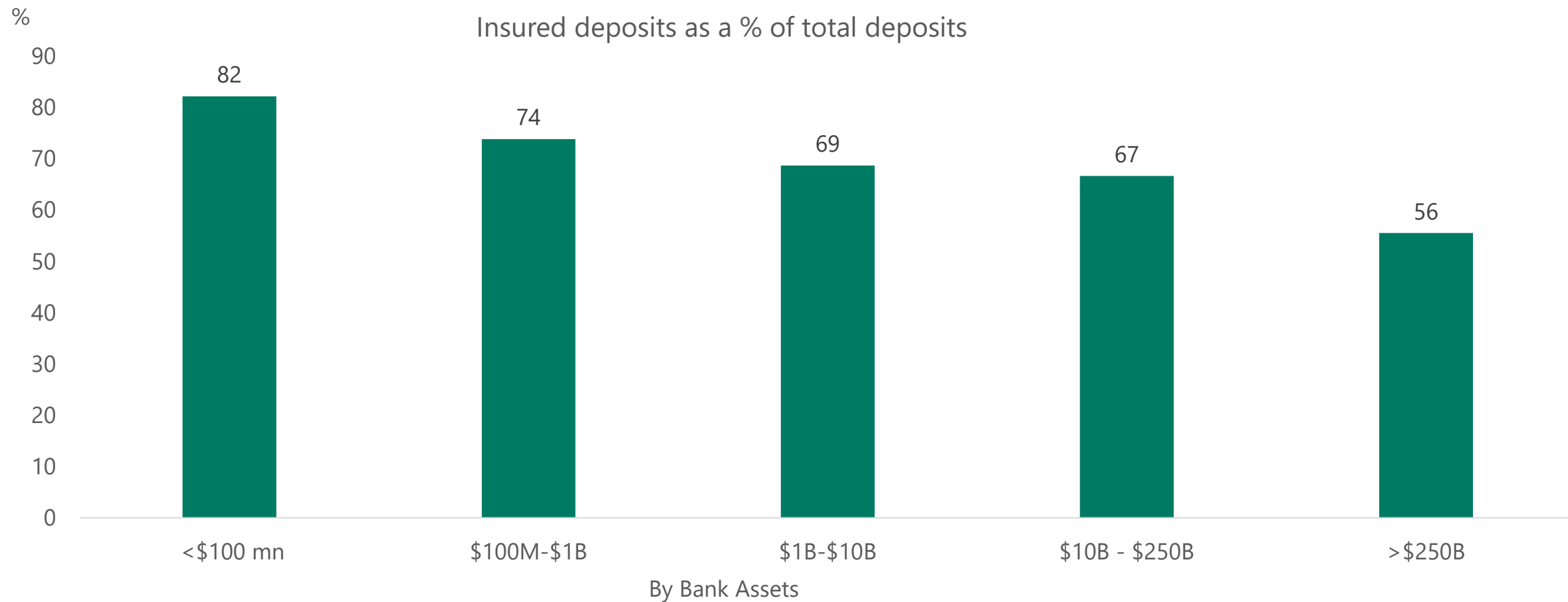


Share of insured deposits, by bank size

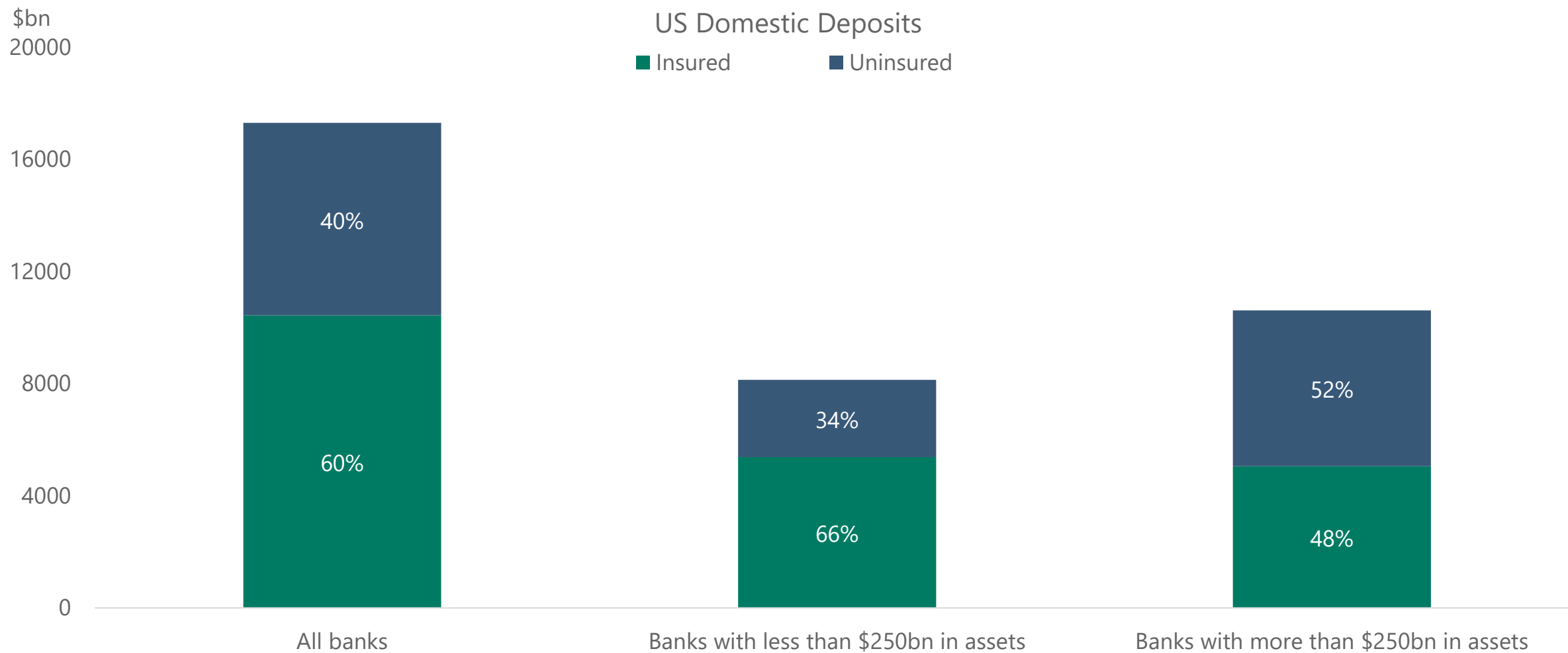


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

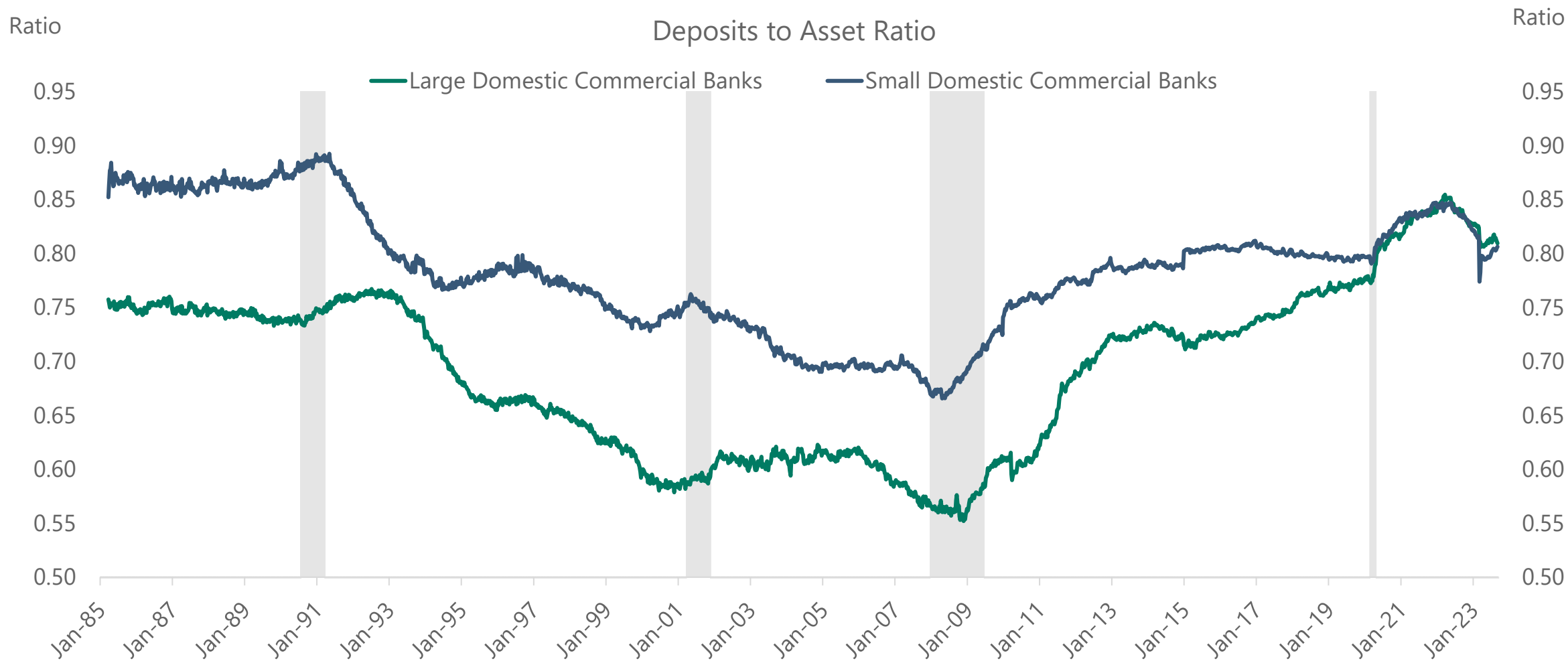
Share of insured deposits, by bank size



Share of insured deposits, by bank size

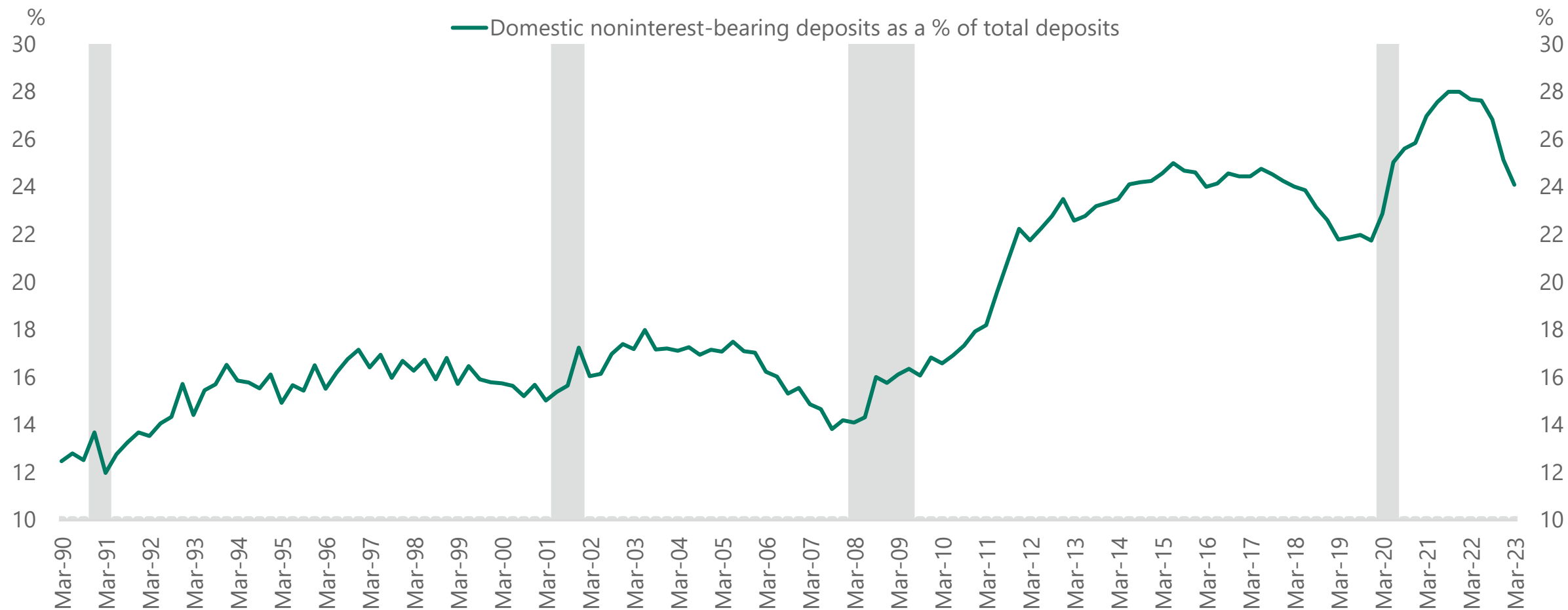


Deposit to asset ratio for large and small banks



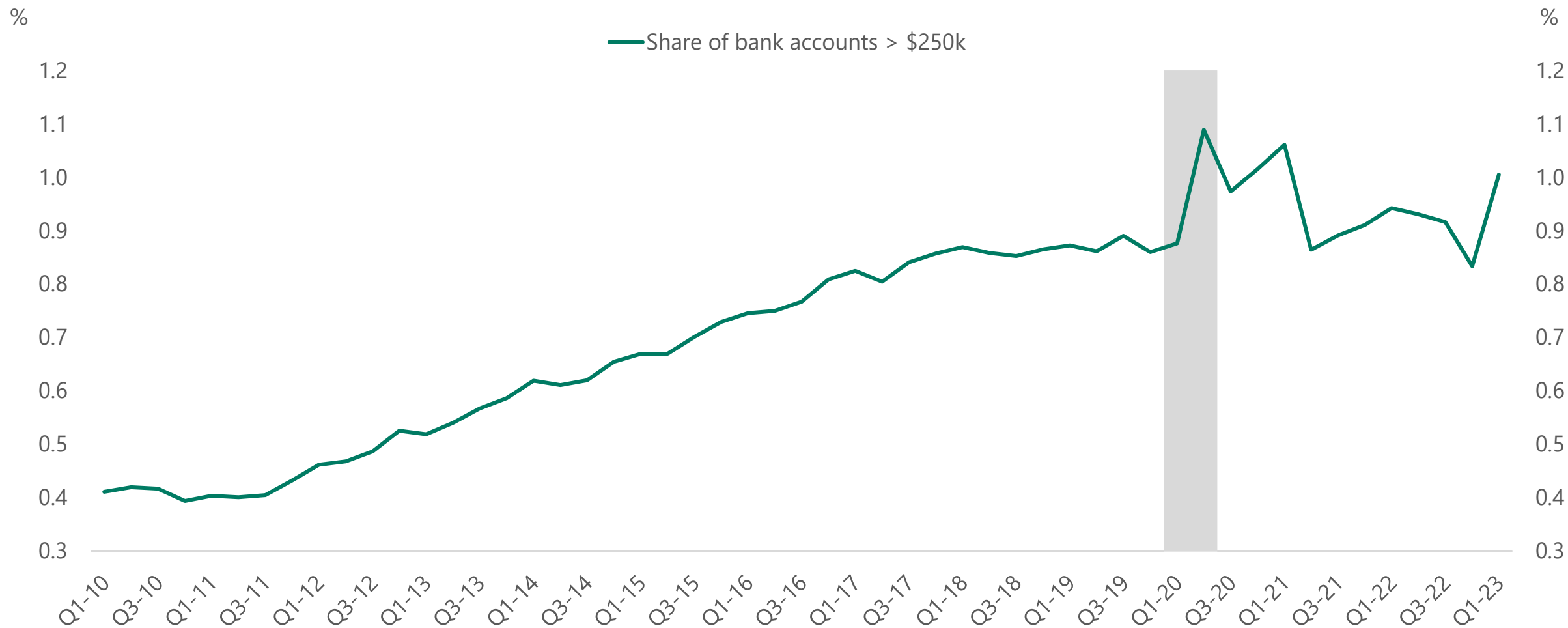
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

The share of bank deposits paying zero interest rate is declining



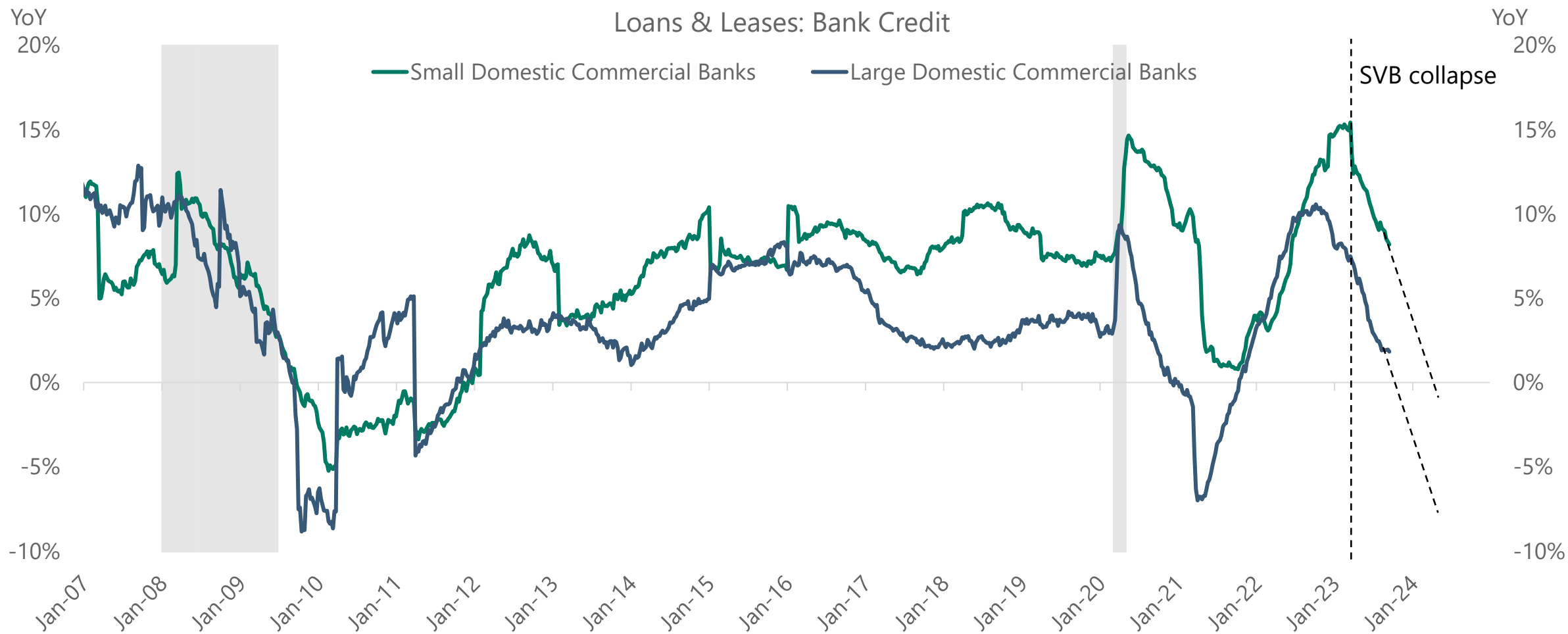
Source: FDIC, Apollo Chief Economist.

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



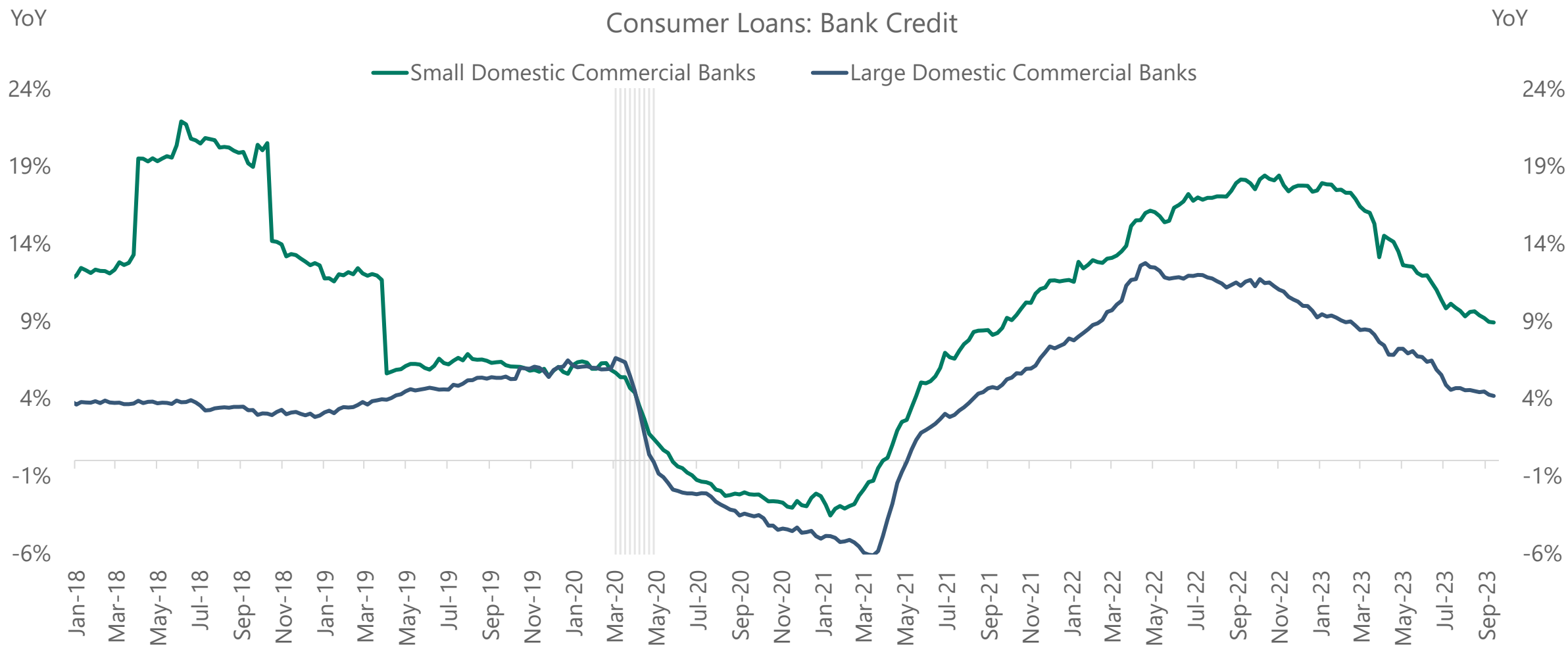
Weekly data for bank lending by small and large banks

Weekly data shows small and large bank lending growth slowing rapidly after SVB



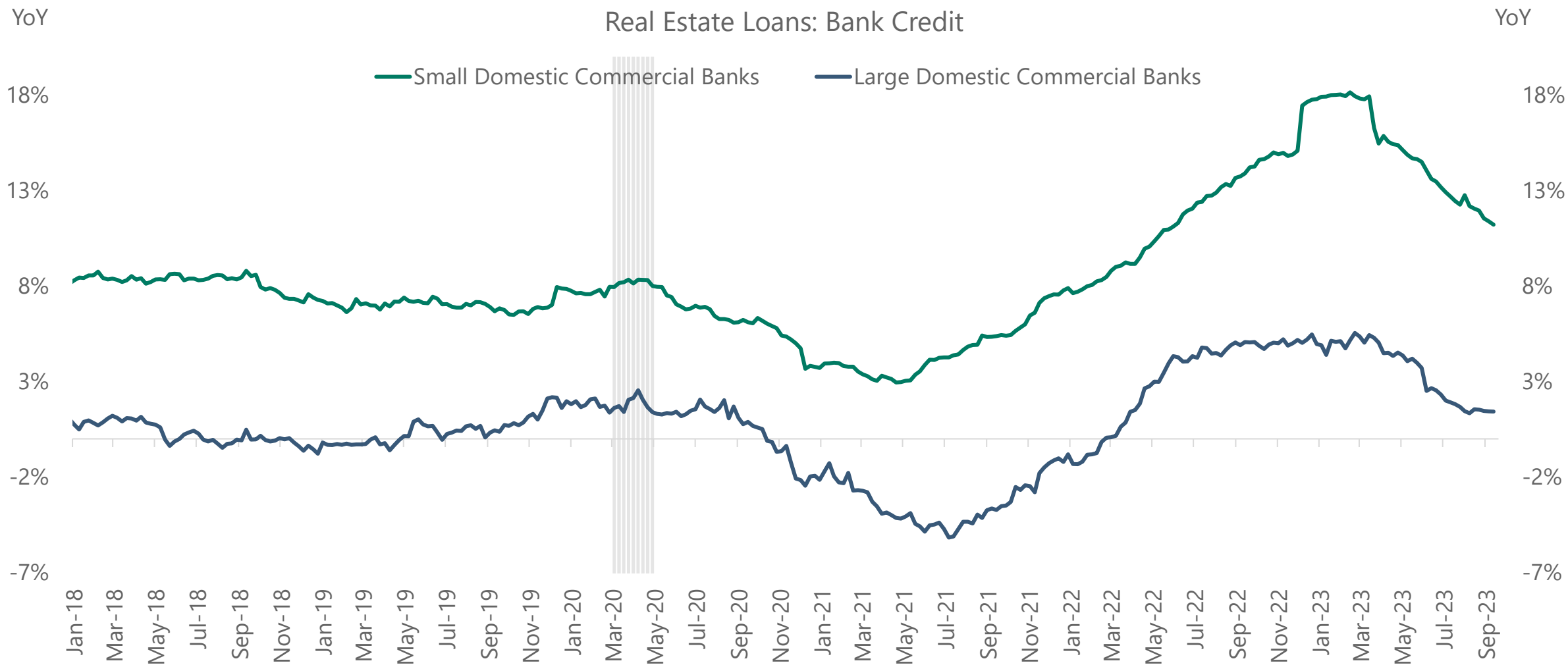
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Lending to consumers is slowing for both small and large banks



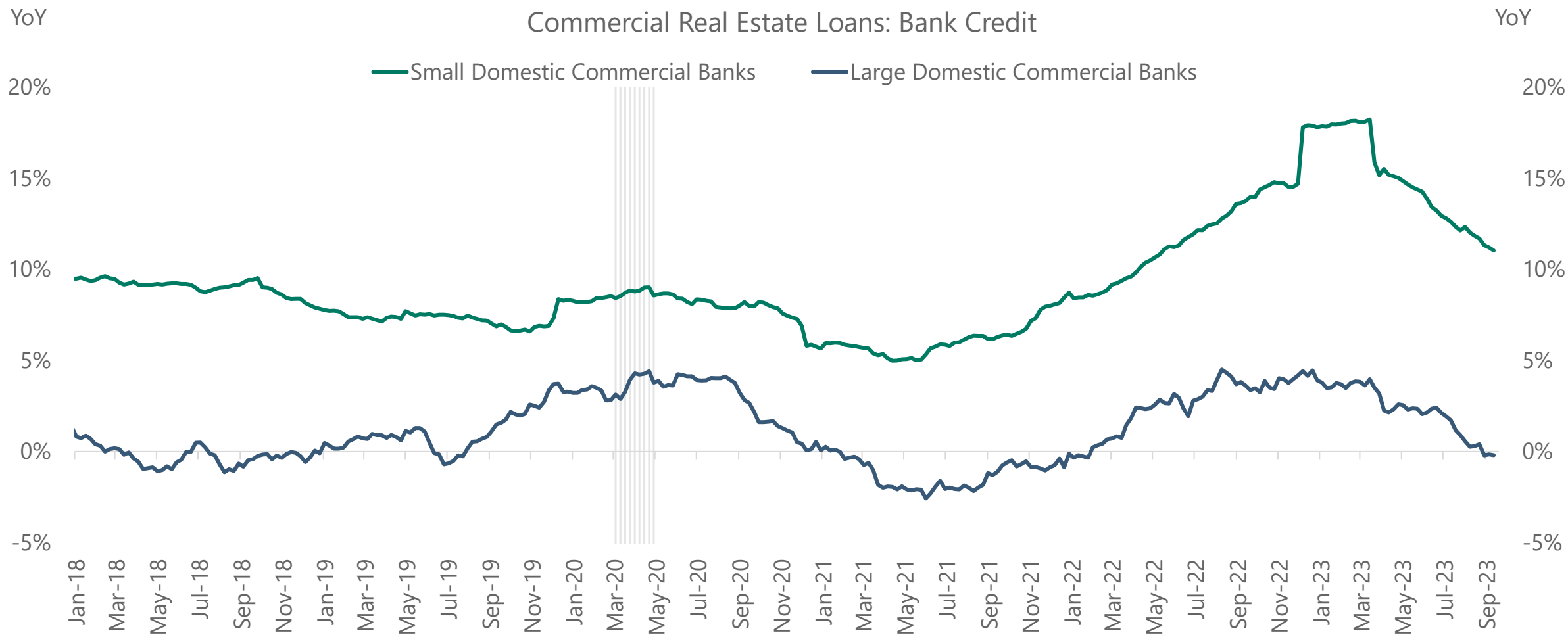
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Real estate lending is slowing for both small and large banks



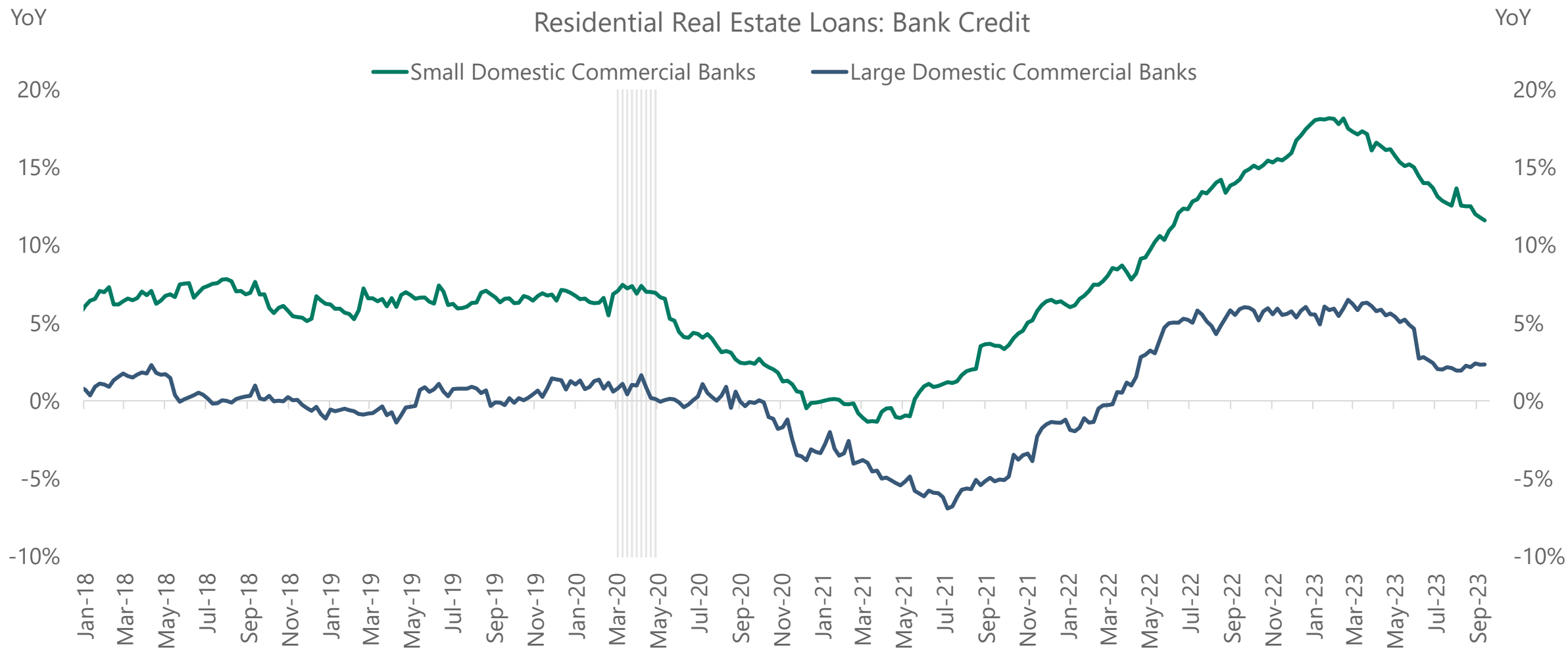
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

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



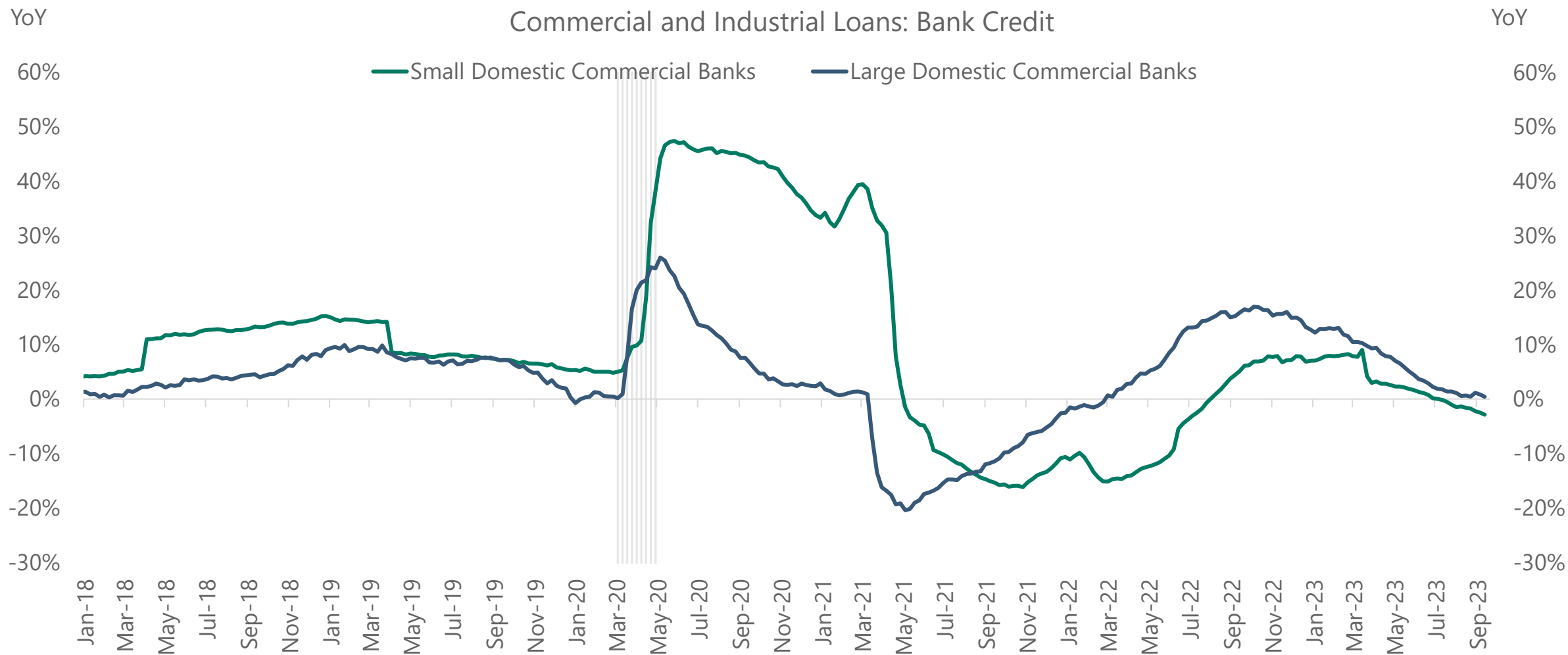
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

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

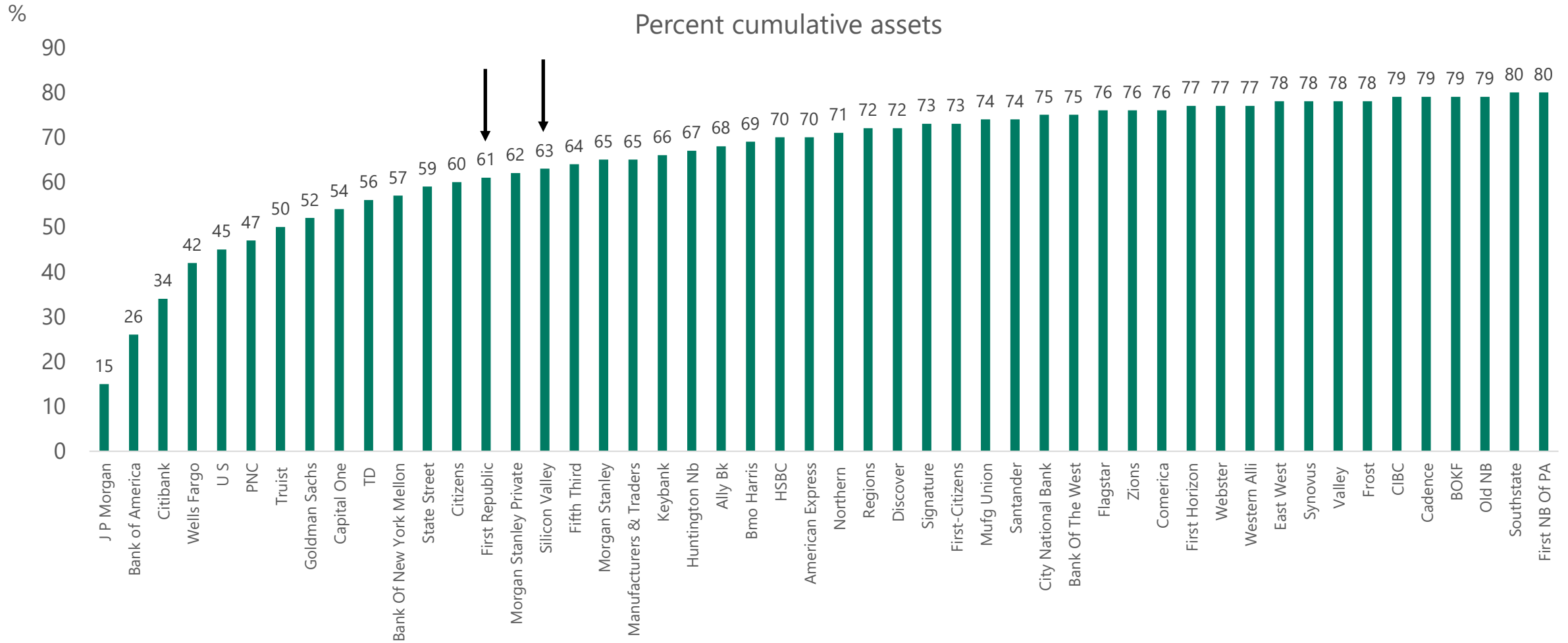


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

US banks by asset size:

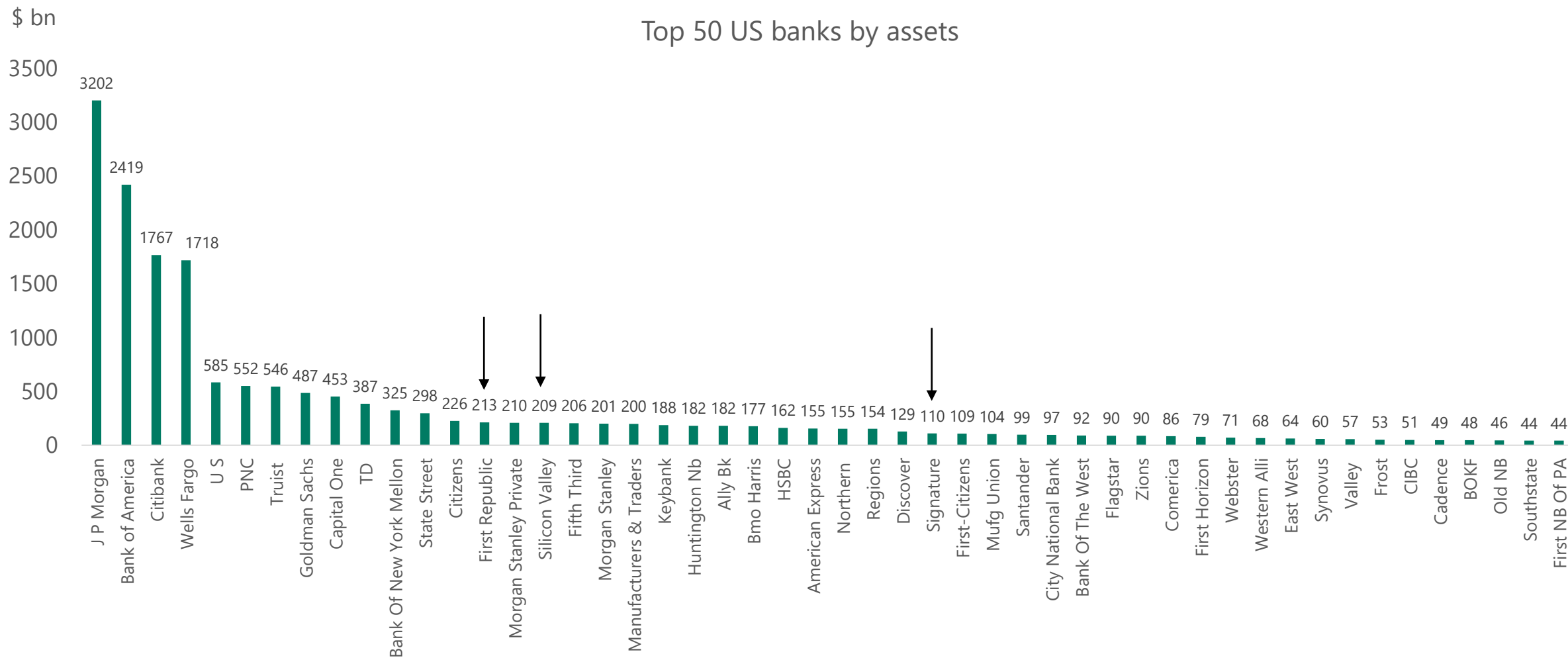
The importance of regional banks for the US economy

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



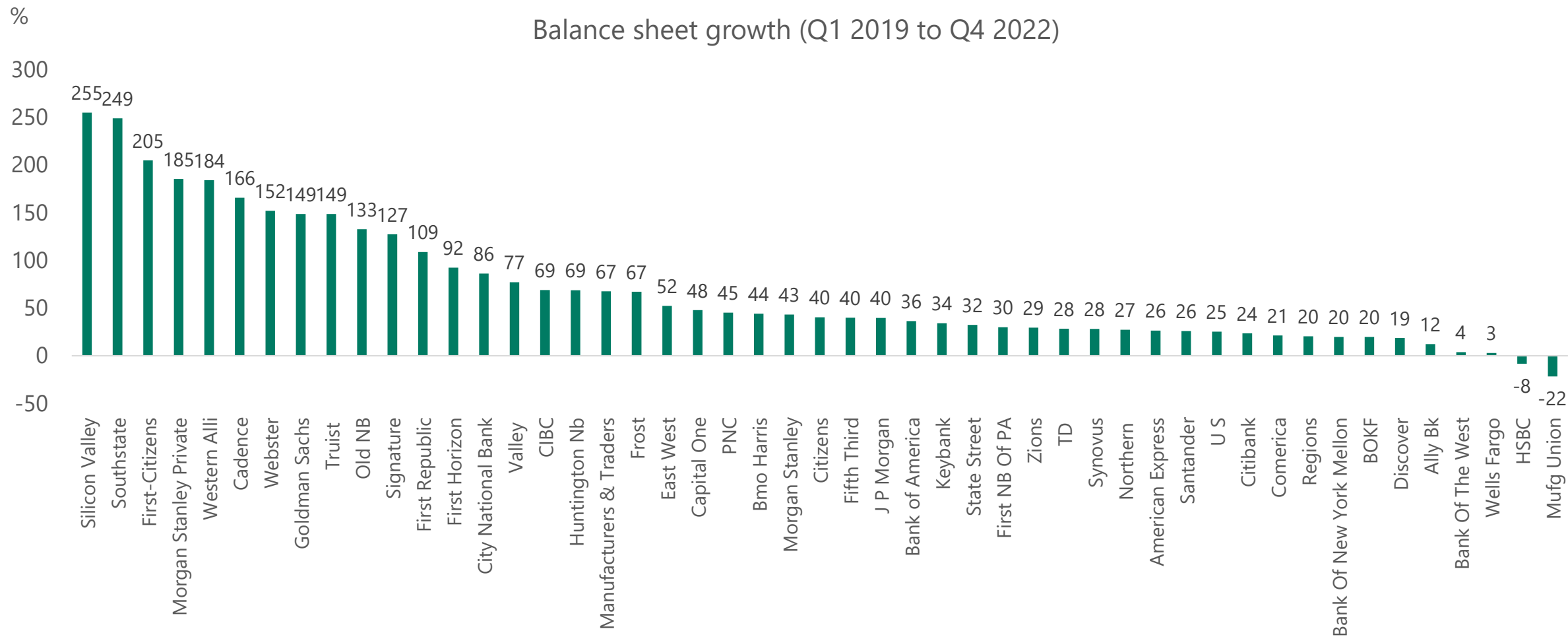
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022. Represents the views and opinions of Apollo's Chief Economist. Subject to change at any time without notice.

Top 50 US banks by assets



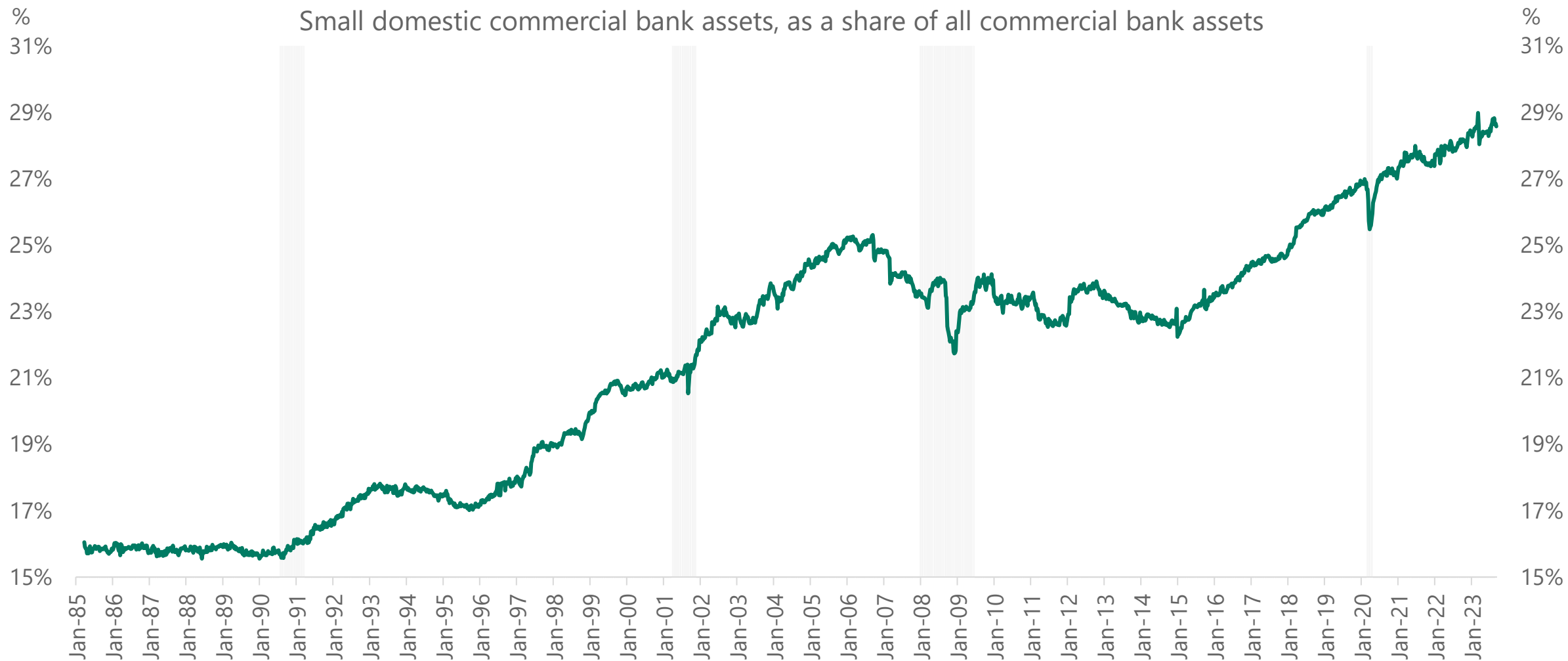
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022.

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



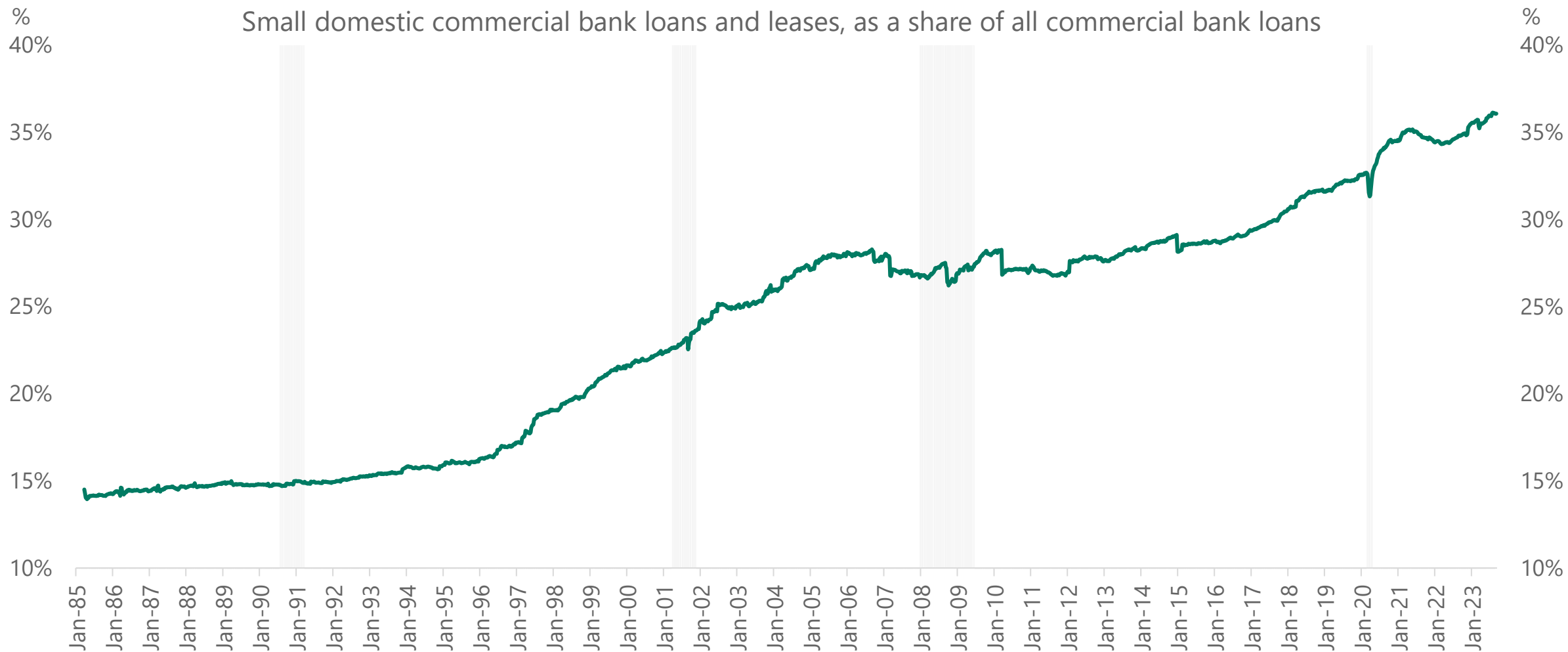
Source: FDIC, Apollo Chief Economist.

Small bank assets as a share of total banking sector assets



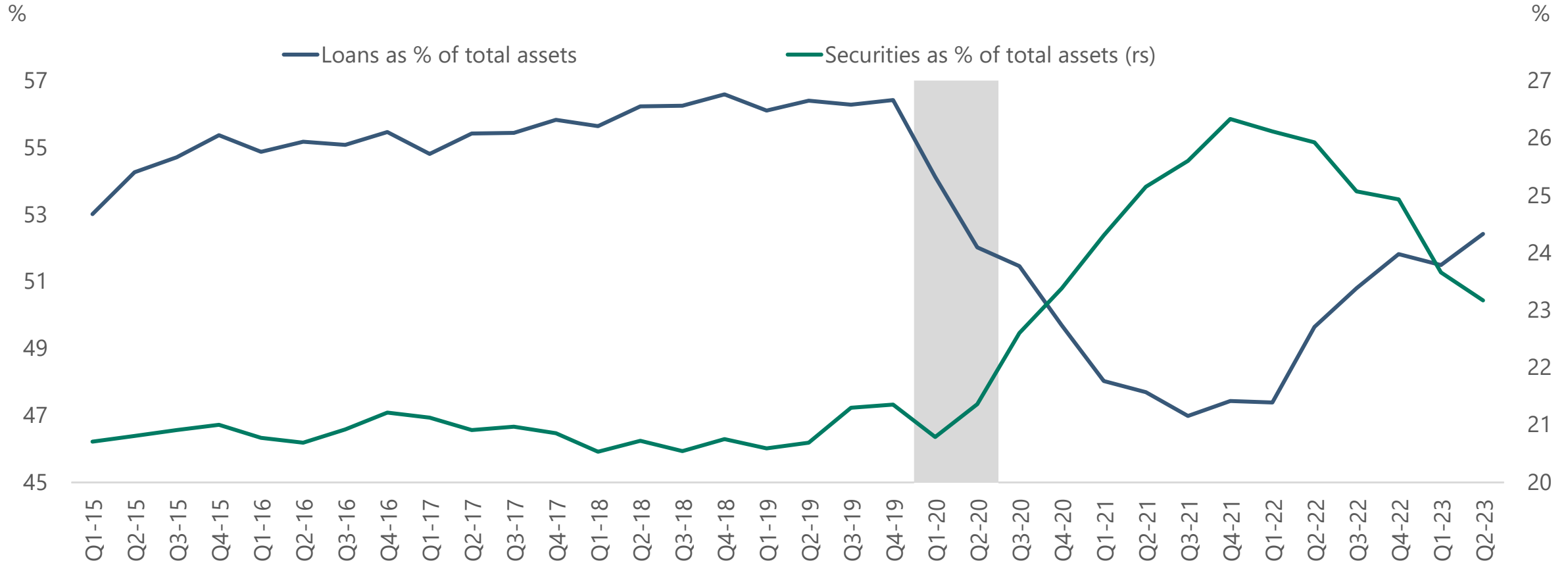
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Share of lending by smaller banks

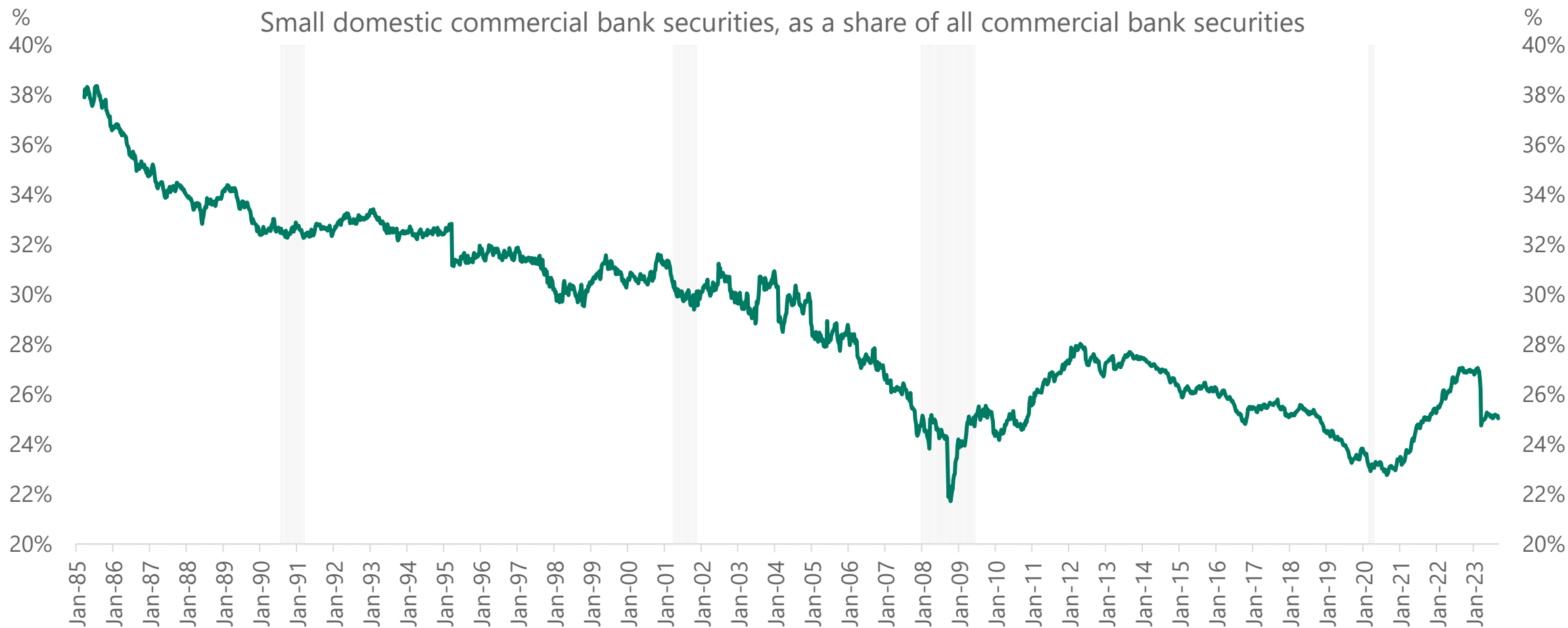


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

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

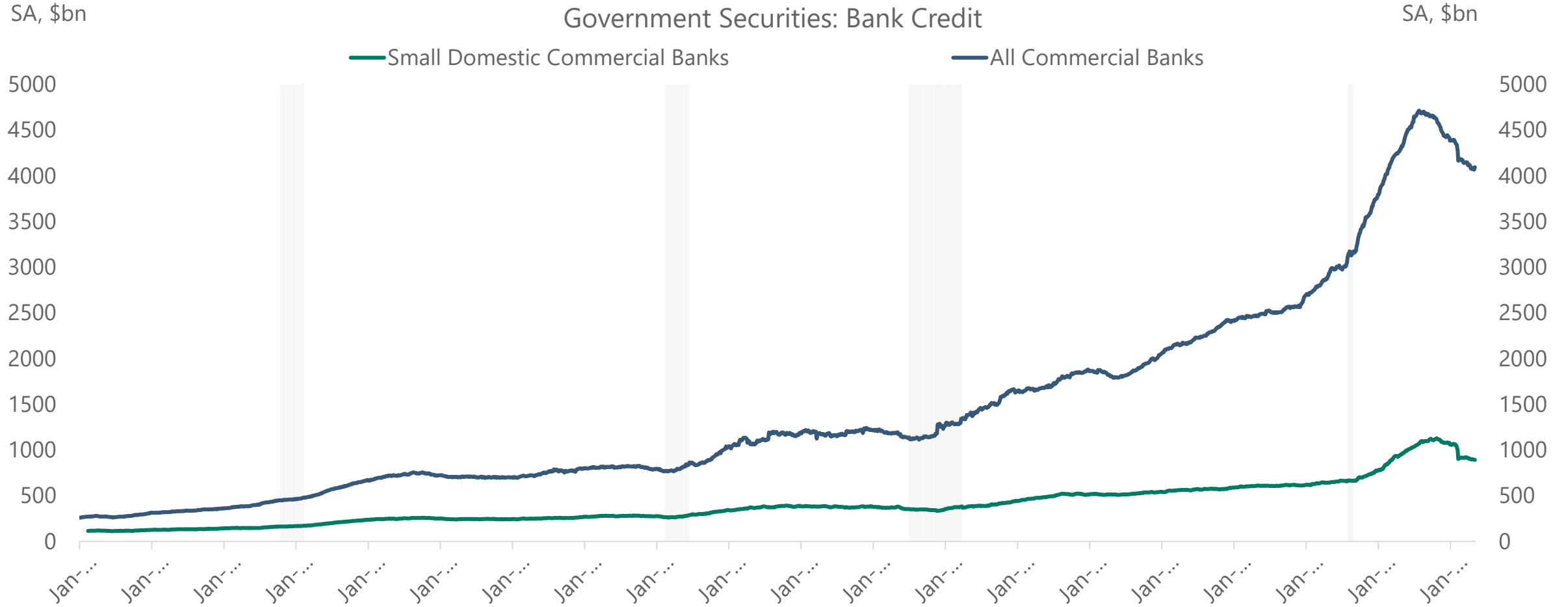


Share of securities in the banking sector held by small banks



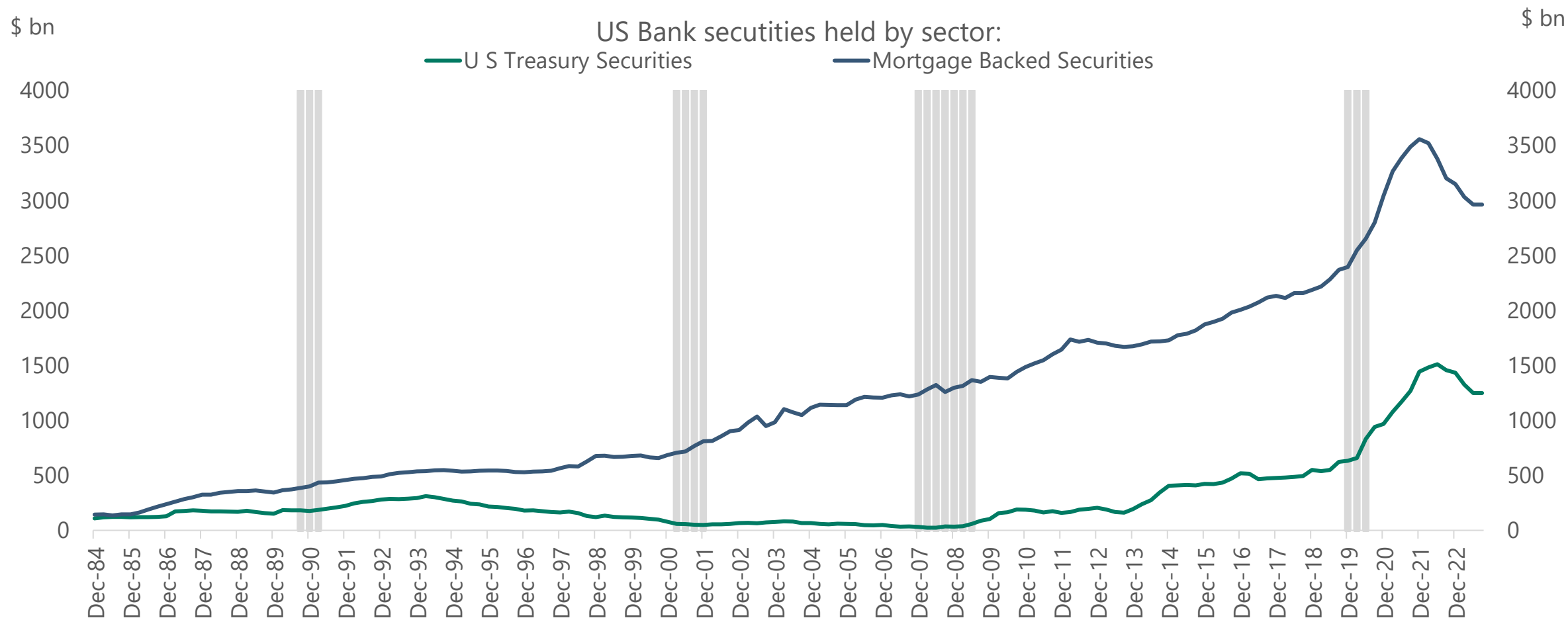
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Small banks hold about \$900bn in Treasuries



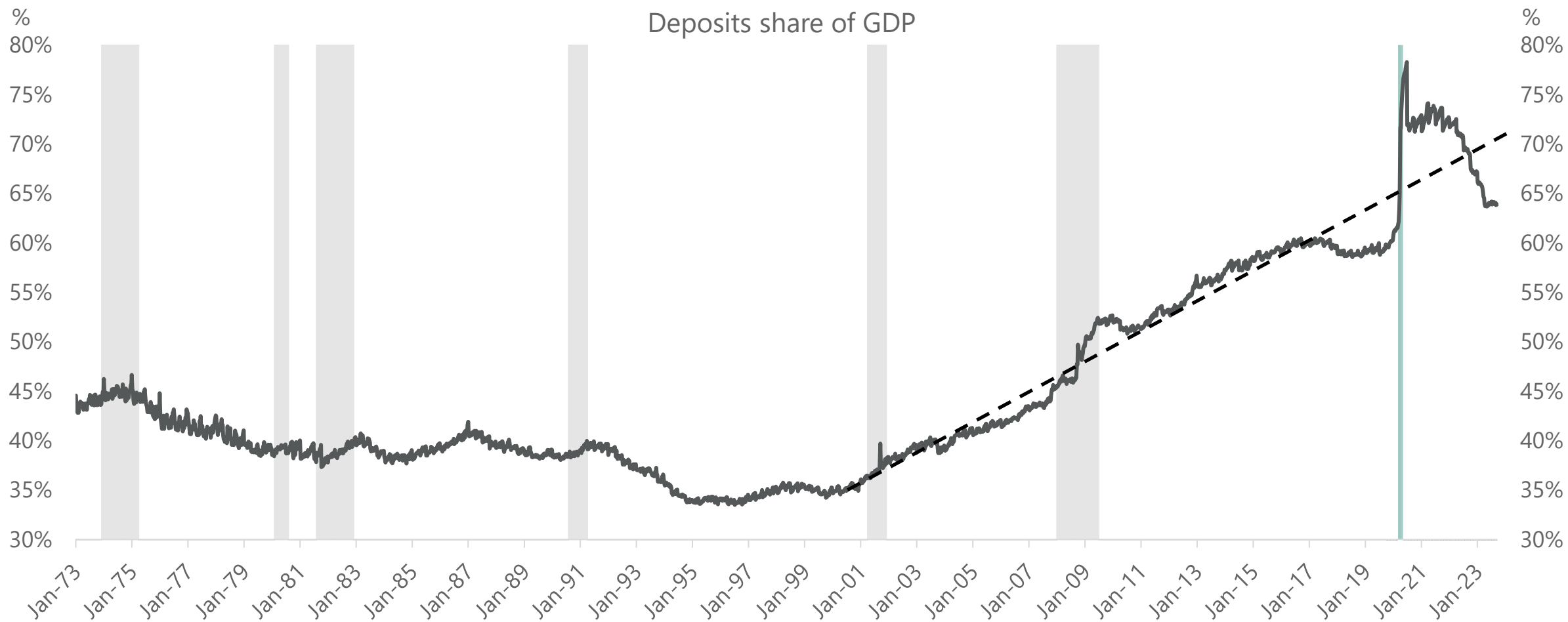
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Securities held by FDIC-insured banks



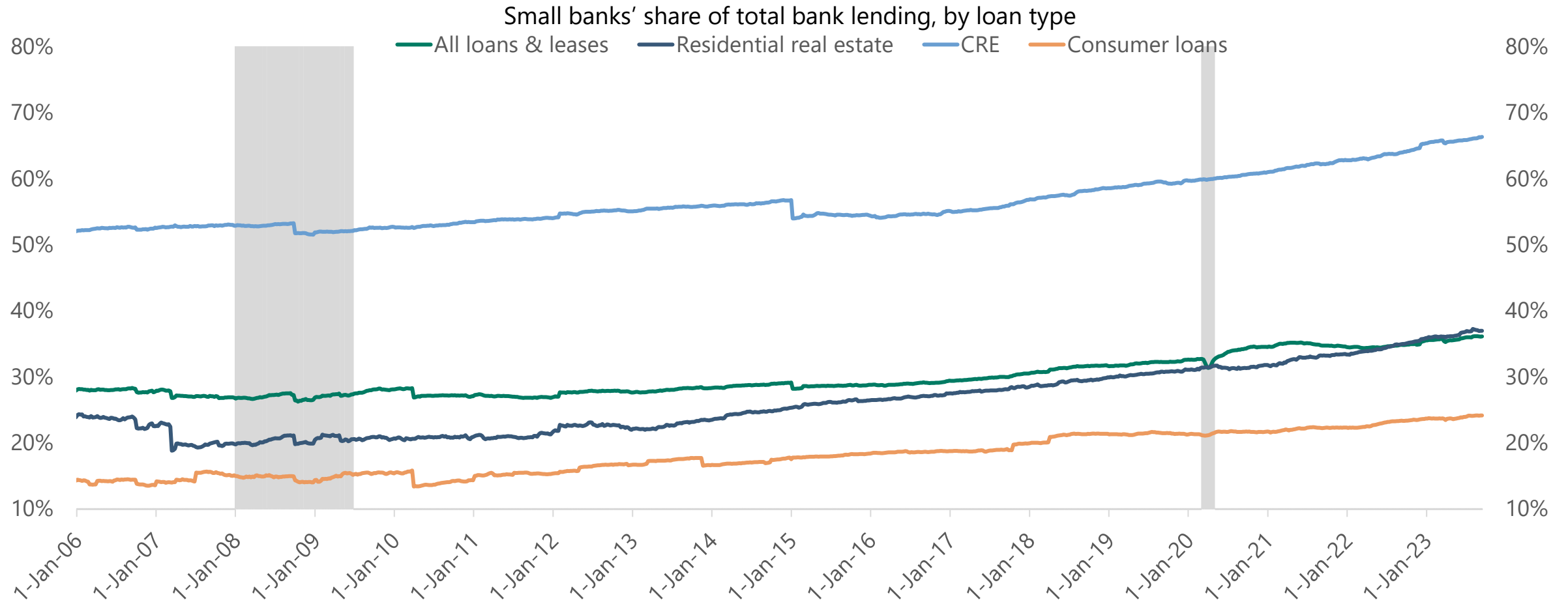
Source: FDIC, Bloomberg, Apollo Chief Economist.

Deposits as a share of GDP



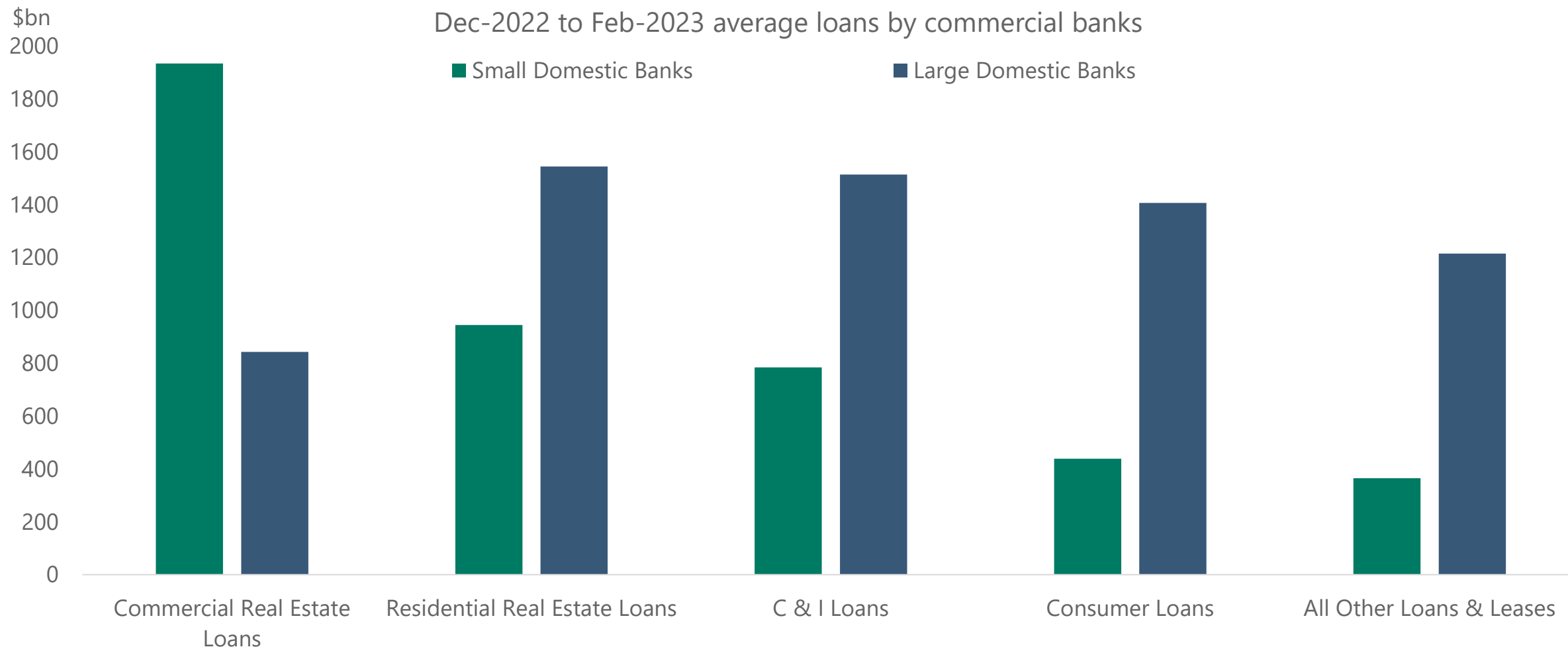
Regional banks' asset concentration in CRE

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

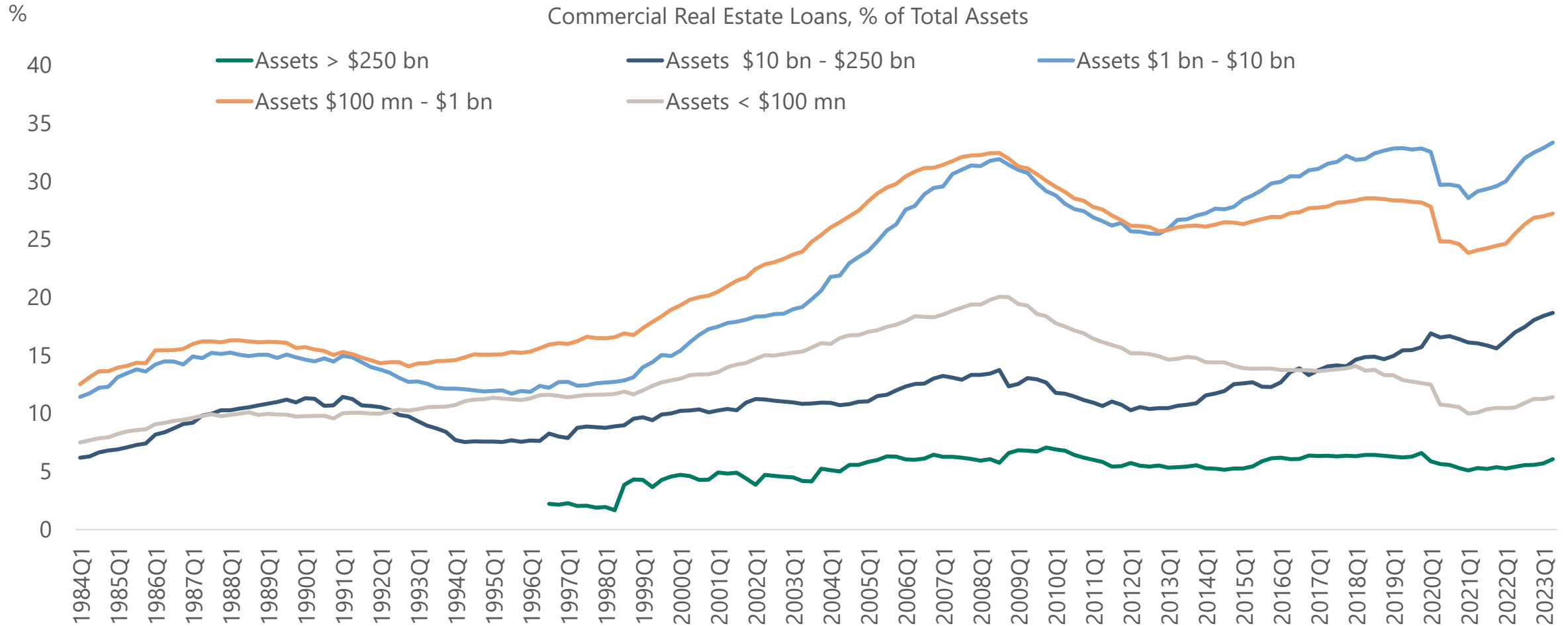


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

High concentration of commercial real estate in small banks

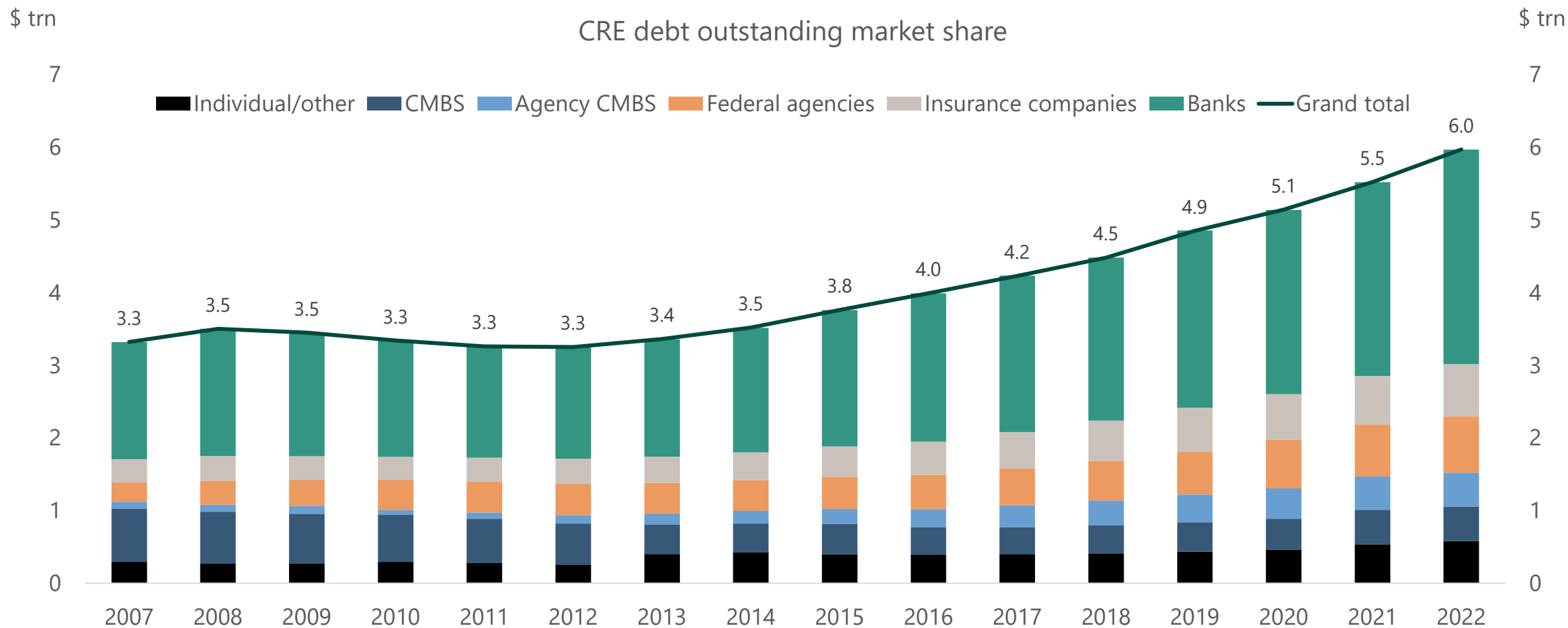


Banks with total assets between \$100mn and \$10bn are more exposed to CRE loans



Source: FDIC, Apollo Chief Economist.

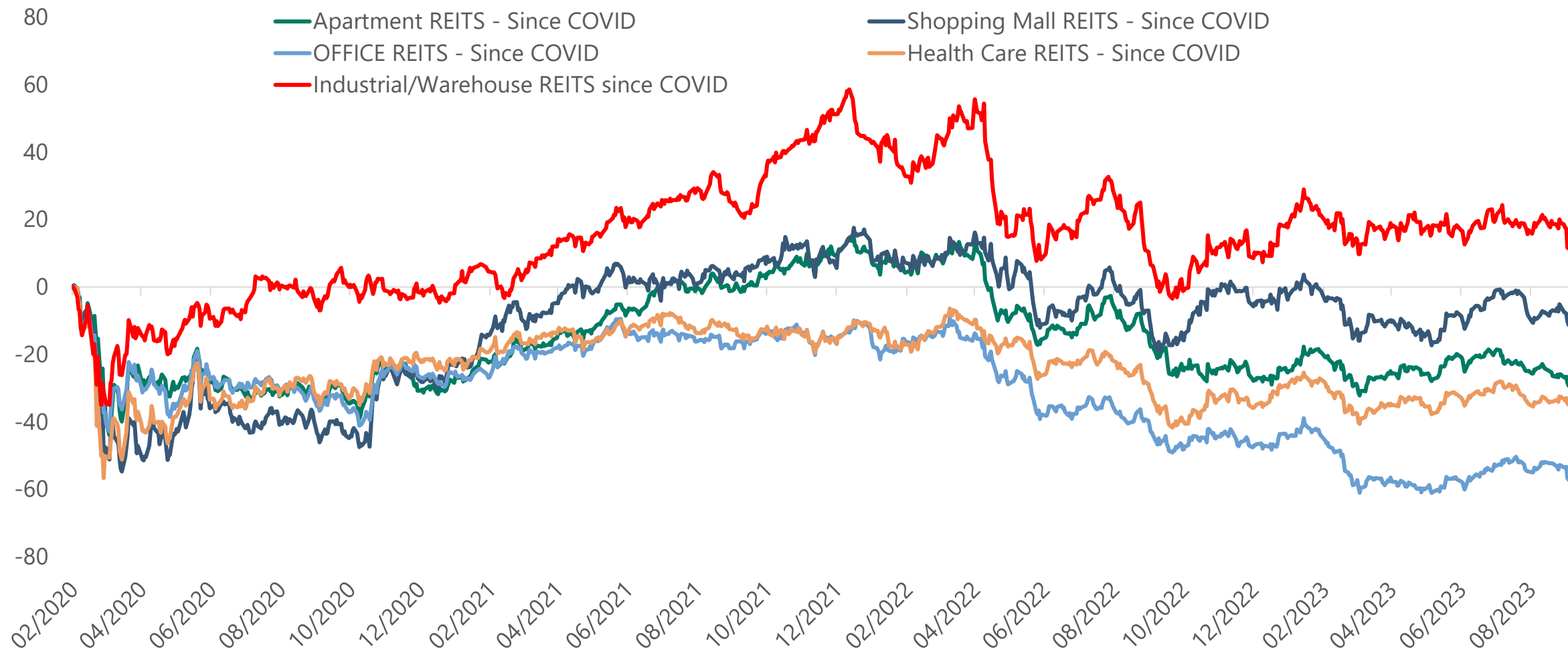
US banks account for the bulk of CRE lending



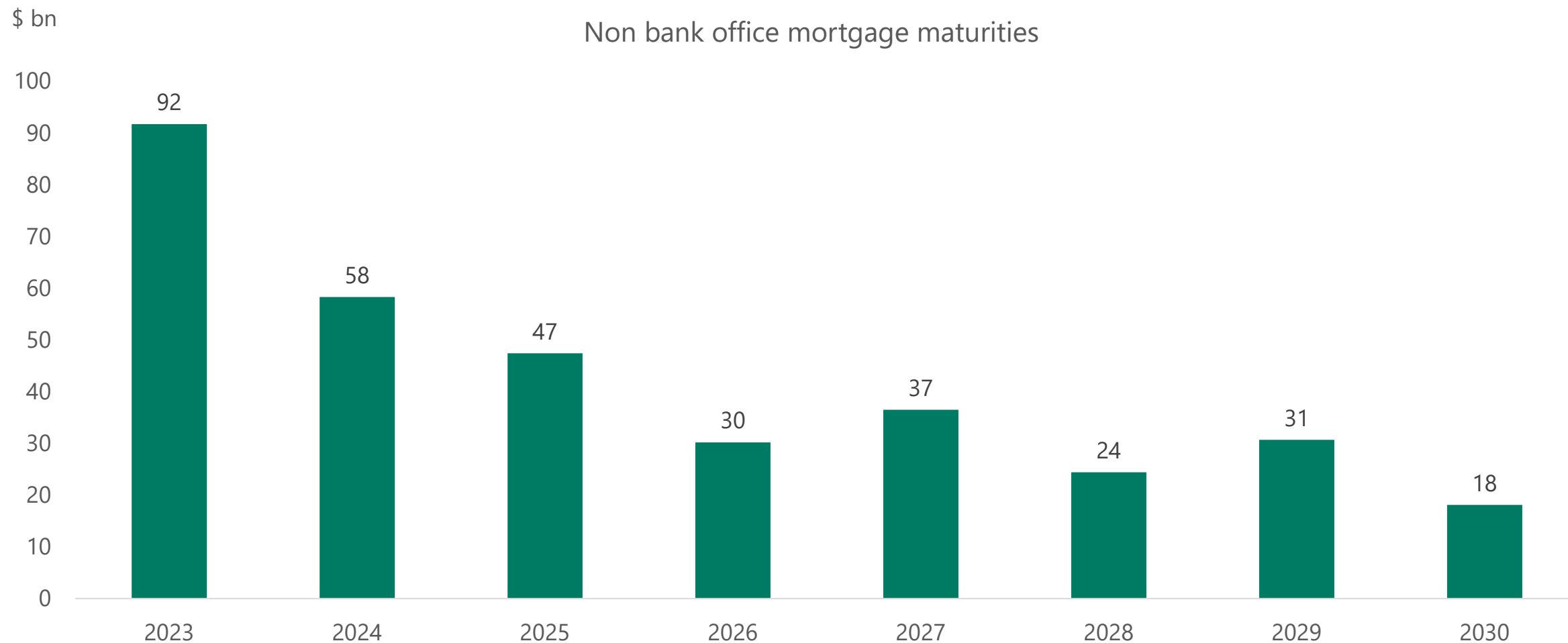
Source: S&P Capital IQ, Apollo Chief Economist

Where are the problems in CRE?

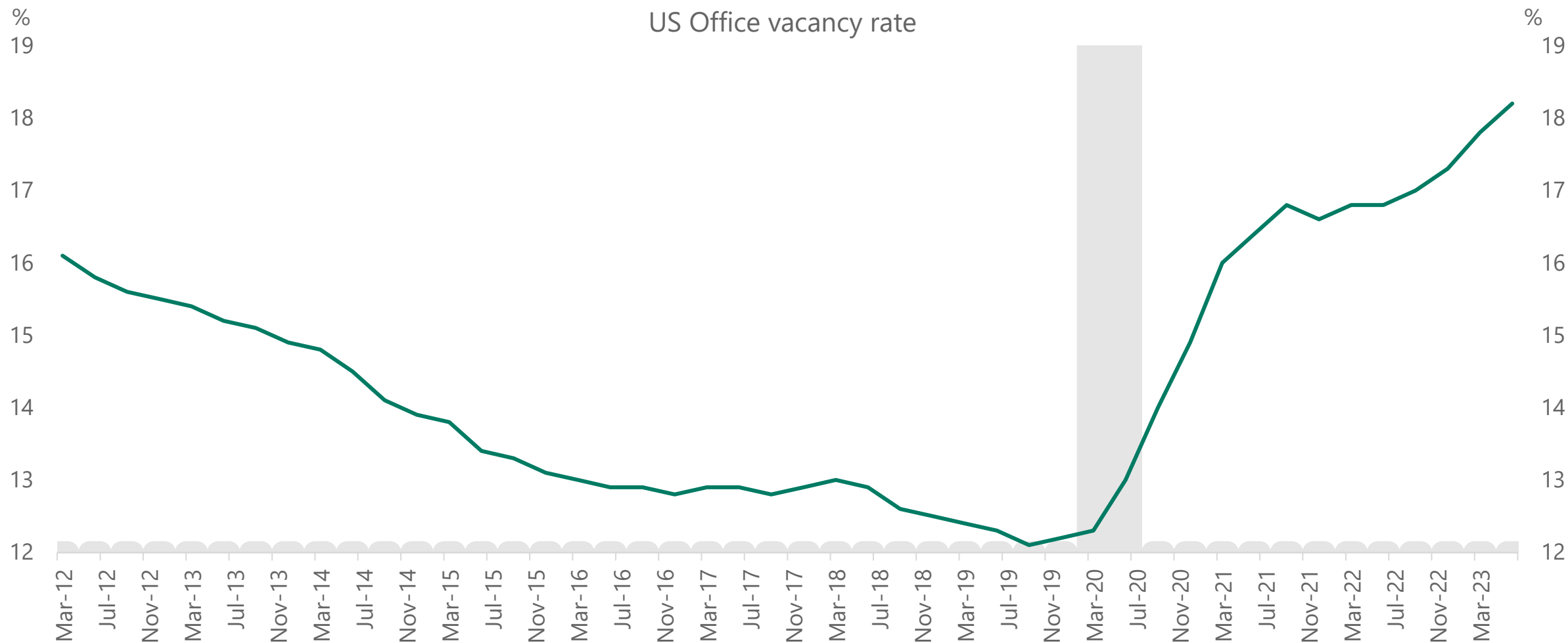
Normalized as of 20 Feb 2020



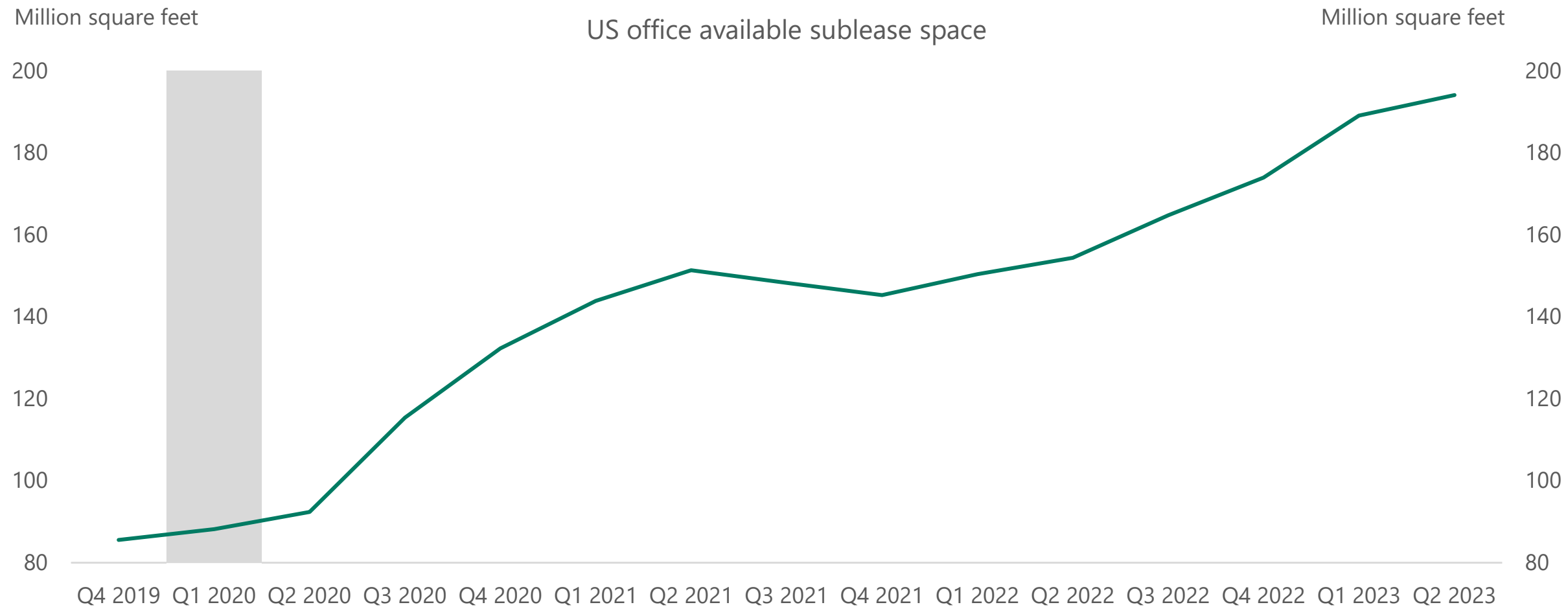
Nearly \$92 bn of nonbank office debt is set to mature this year



US Office vacancy rate rising

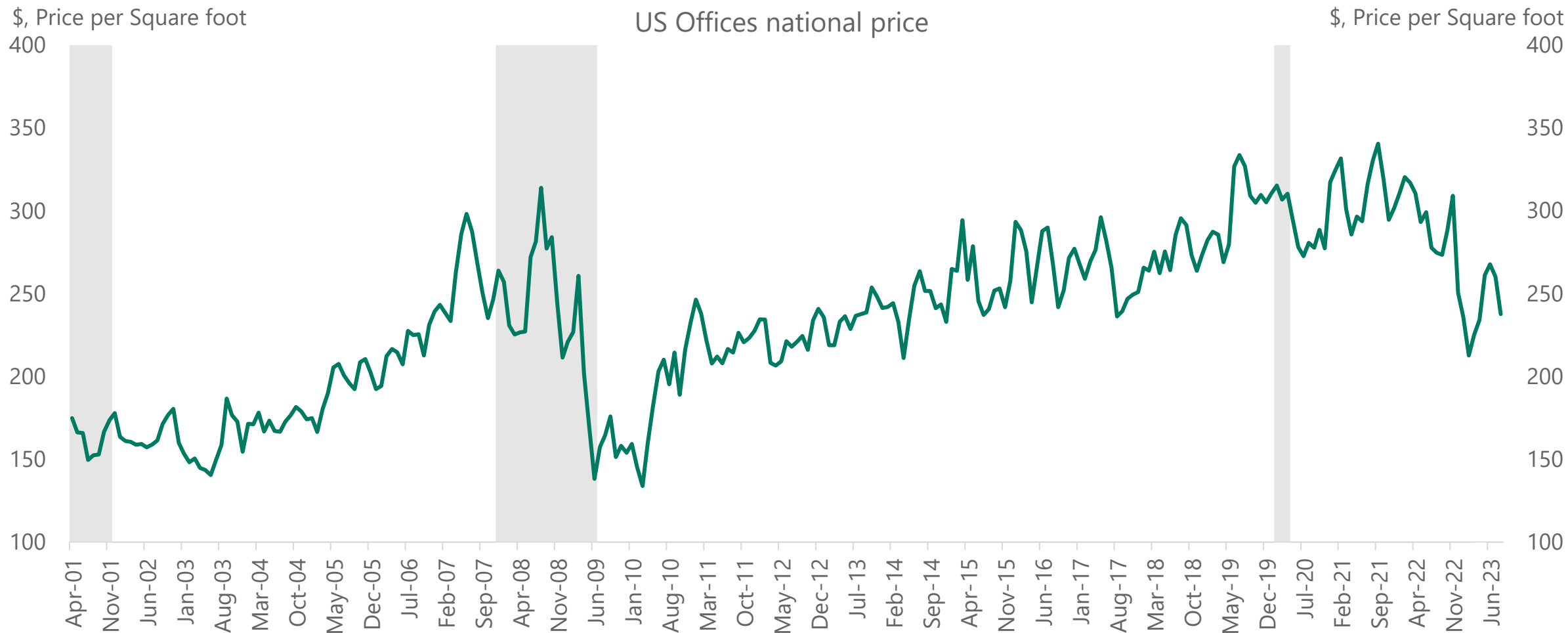


Available US office space rising

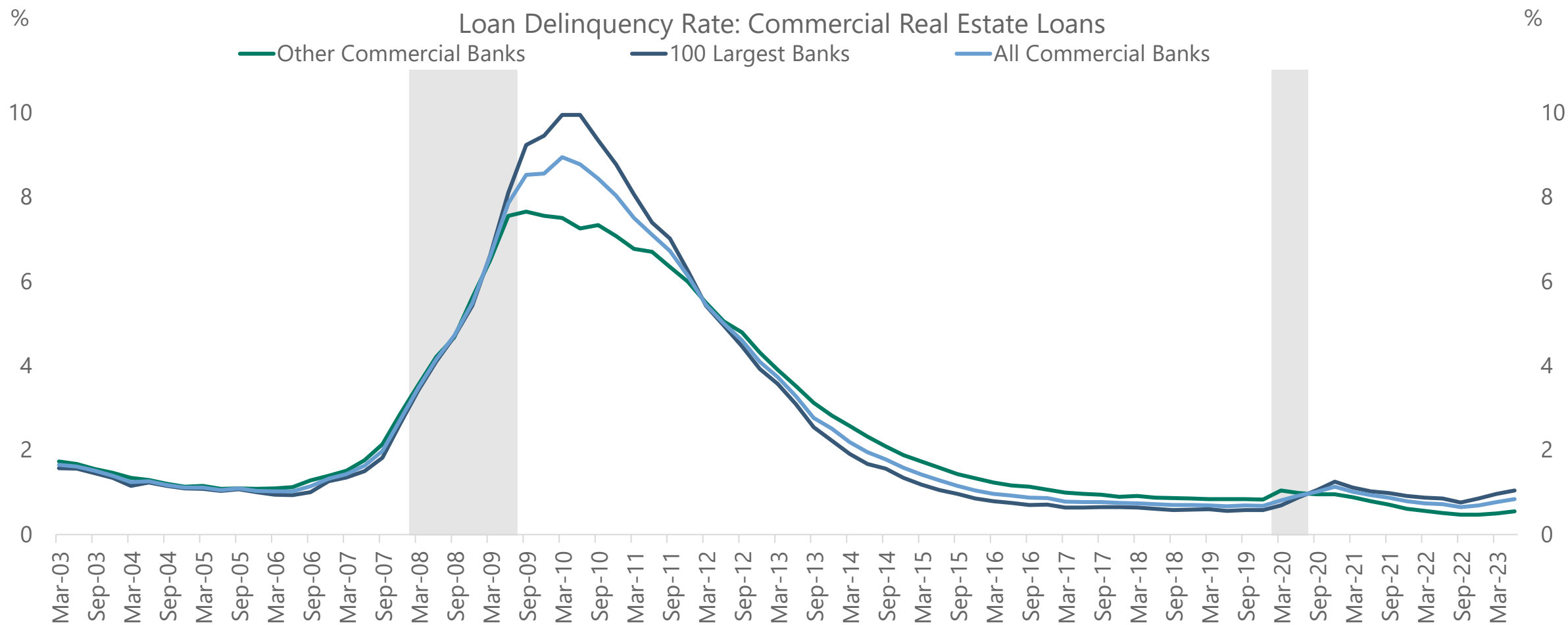


Source: Savills US Markets, Bloomberg, Apollo Chief Economist.

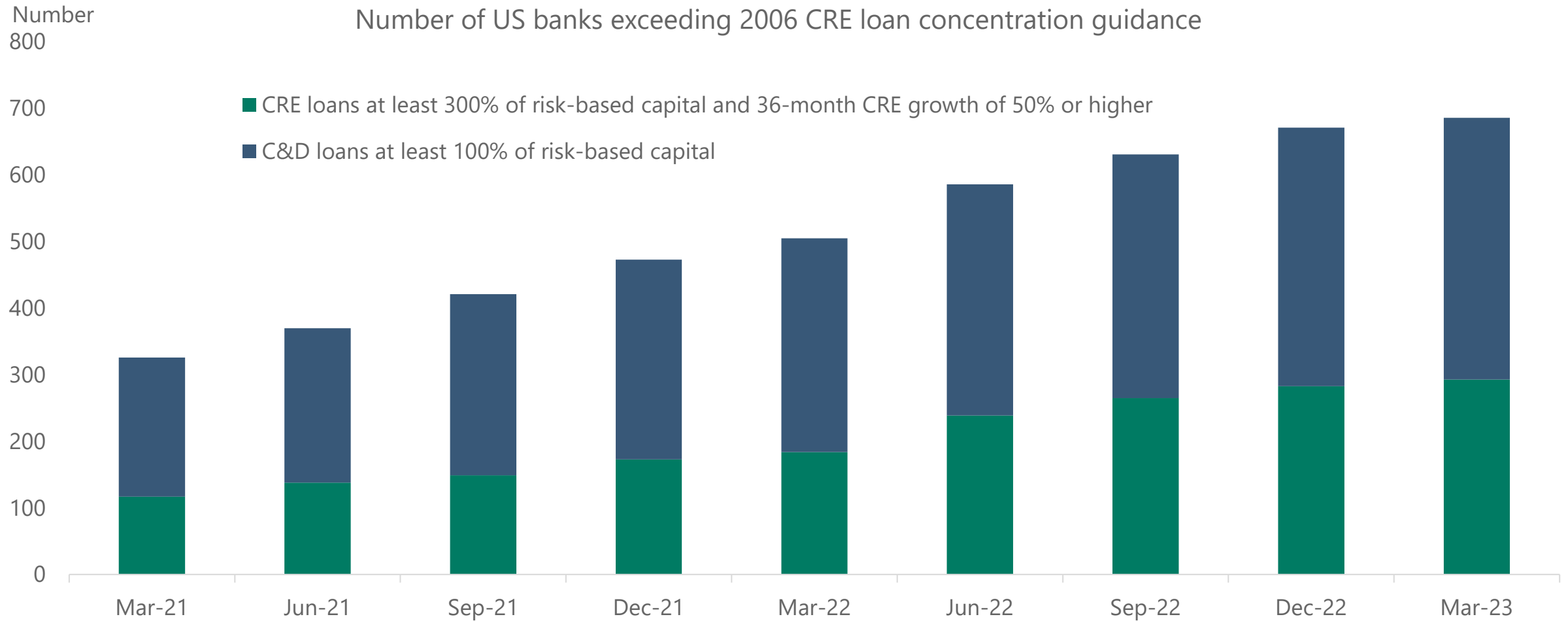
Price per square foot for US offices falling



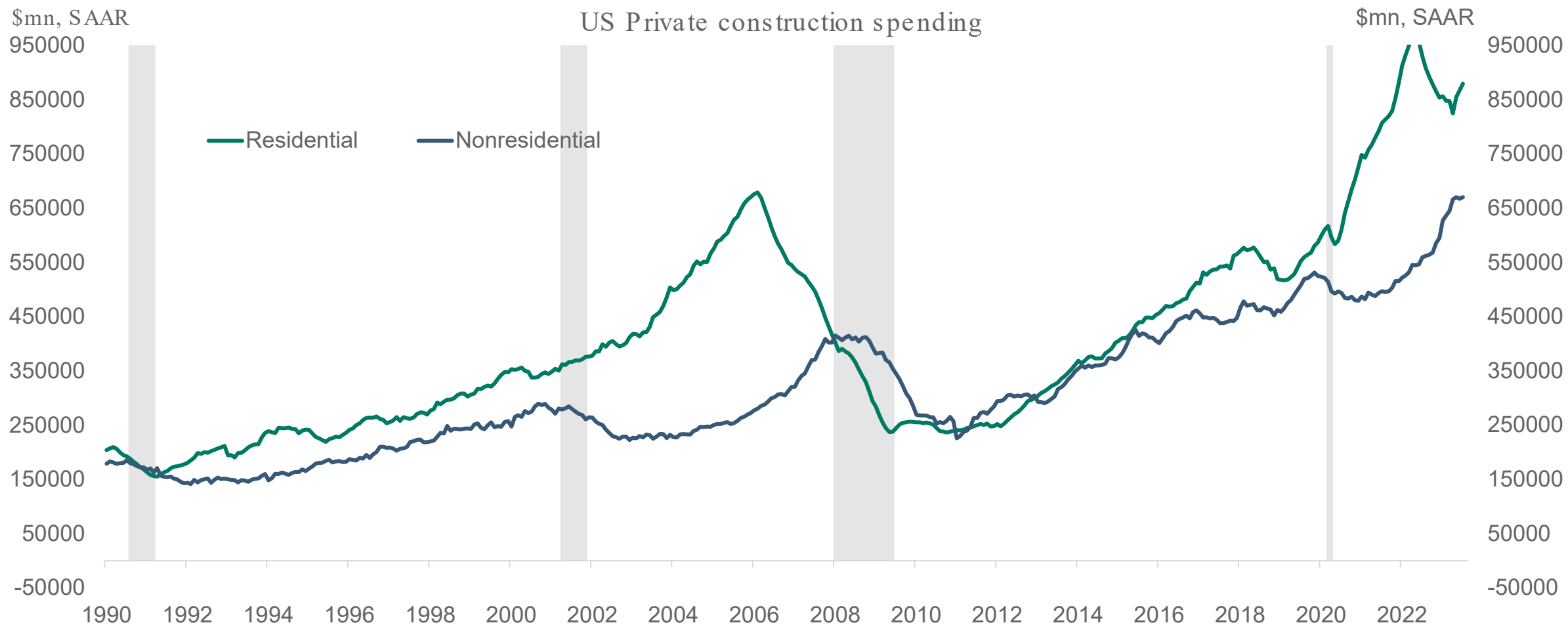
CRE delinquency rate



Number of banks with CRE exposure rising

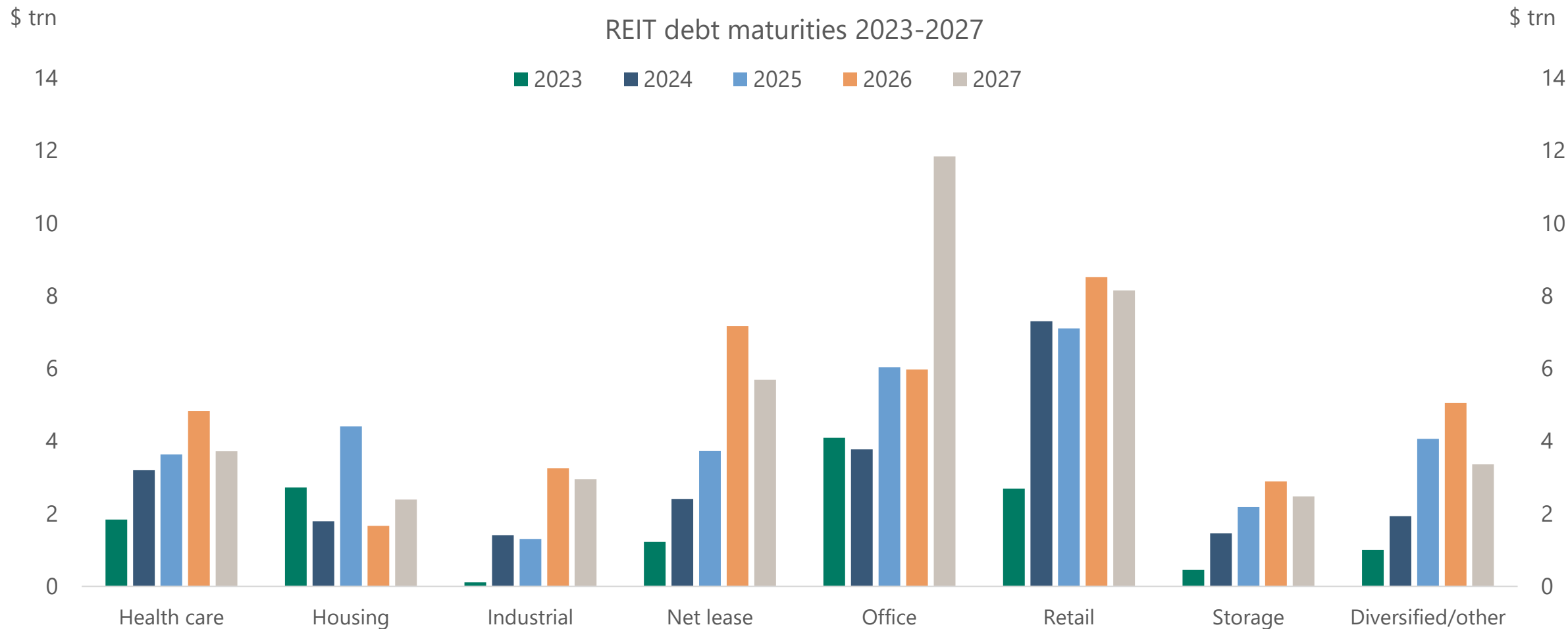


Residential construction spending elevated

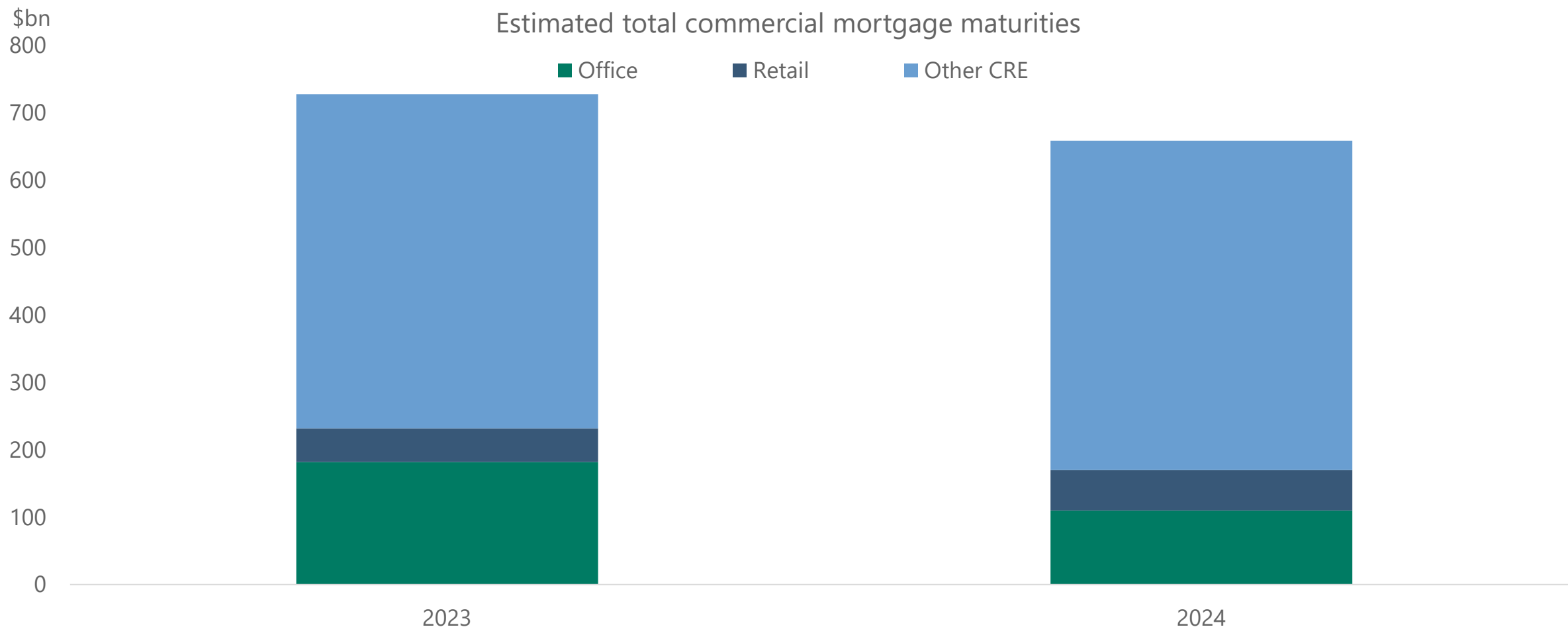


Source: Census Bureau, Haver Analytics, Apollo Chief Economist.

U.S. REITs hold approximately \$14 billion of debt maturing this year

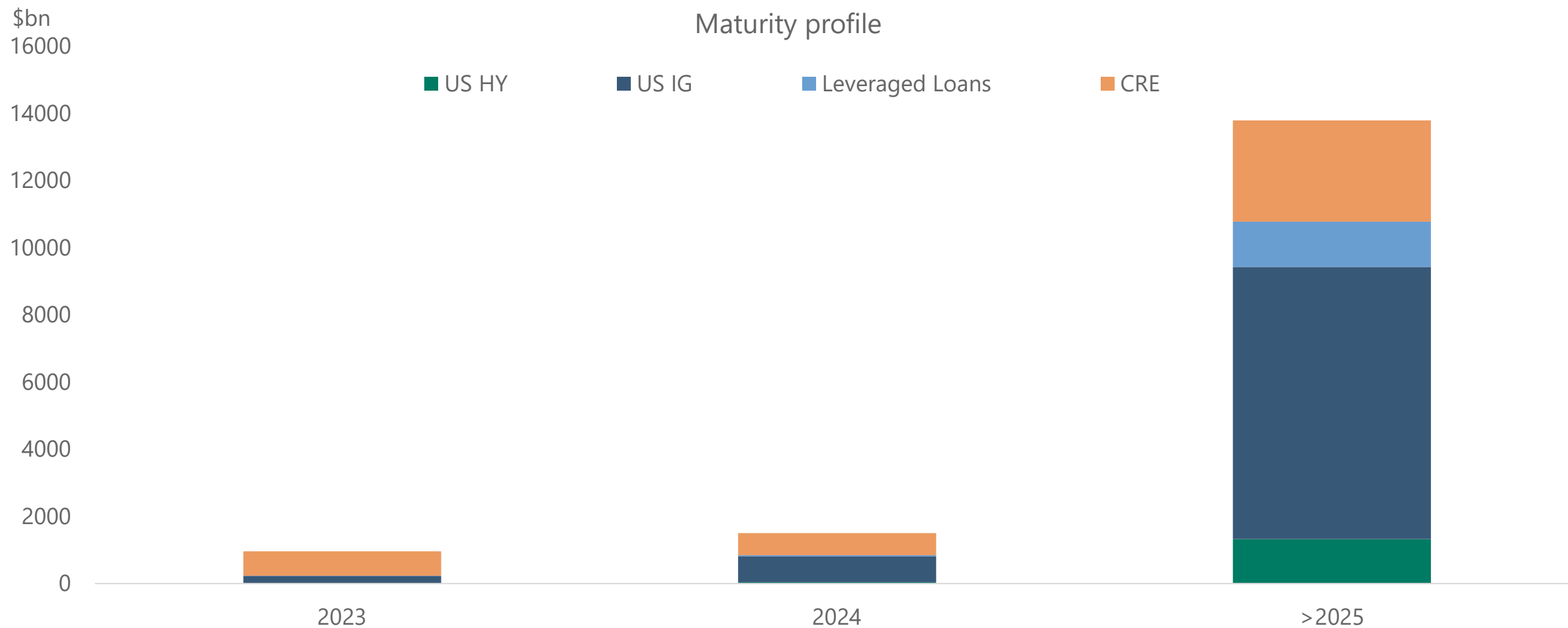


CRE maturity profile

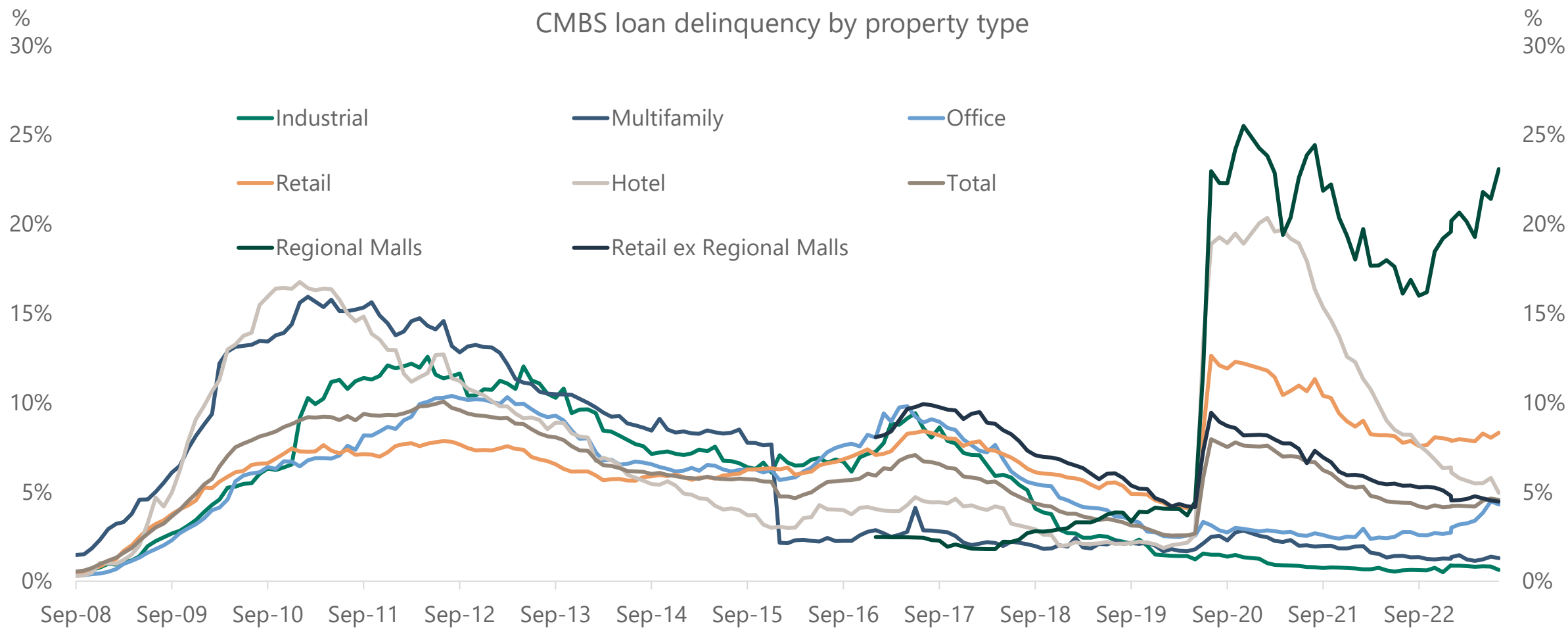


Source: MBA, Apollo Chief Economist. Note: Other CRE includes multifamily, industrial/warehouse, hotel/motel, healthcare and others.

Maturity profile for US fixed income

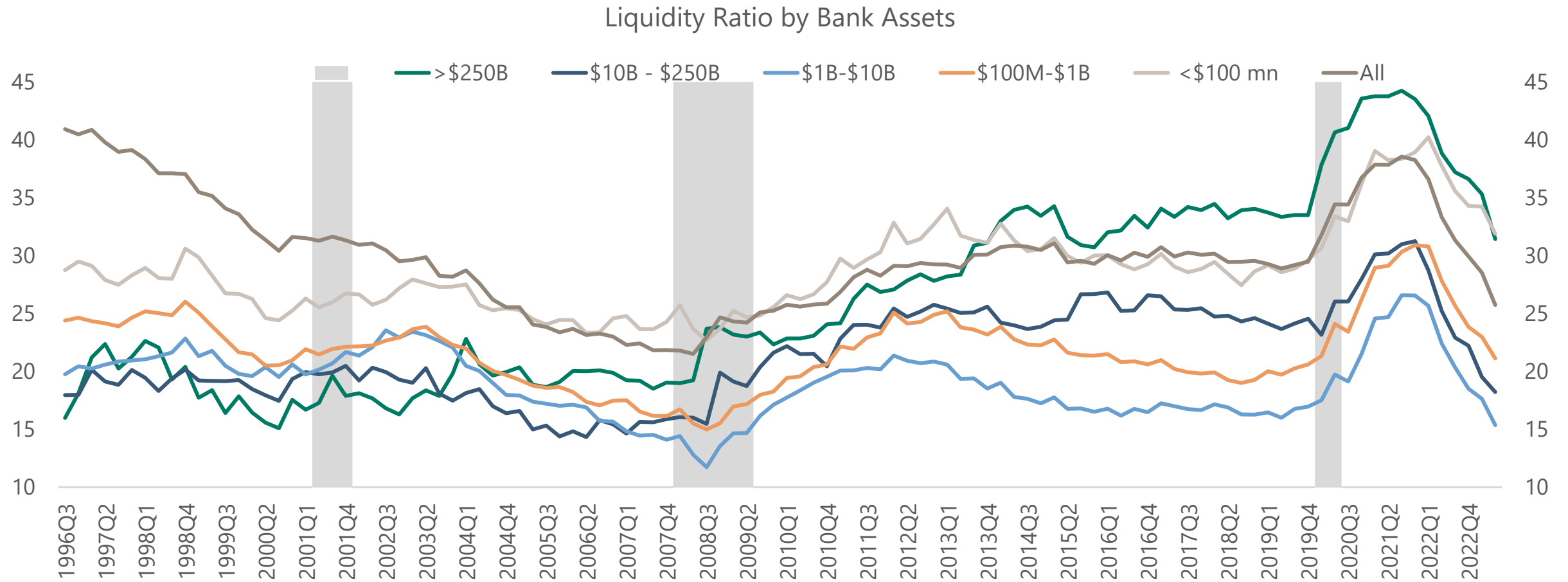


CMBS loan delinquency rates



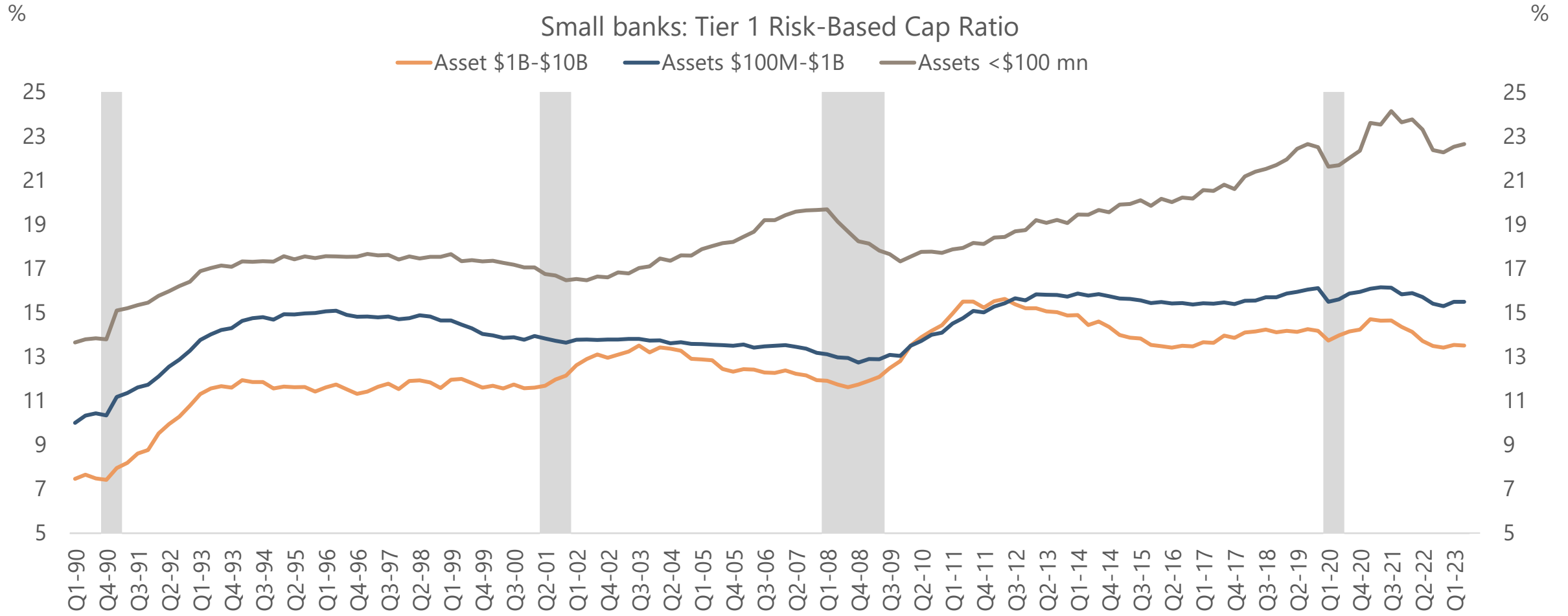
Measures of banking sector liquidity and capital ratios

Liquidity ratio, by bank assets: Banks from \$1bn to \$10bn have the least liquidity



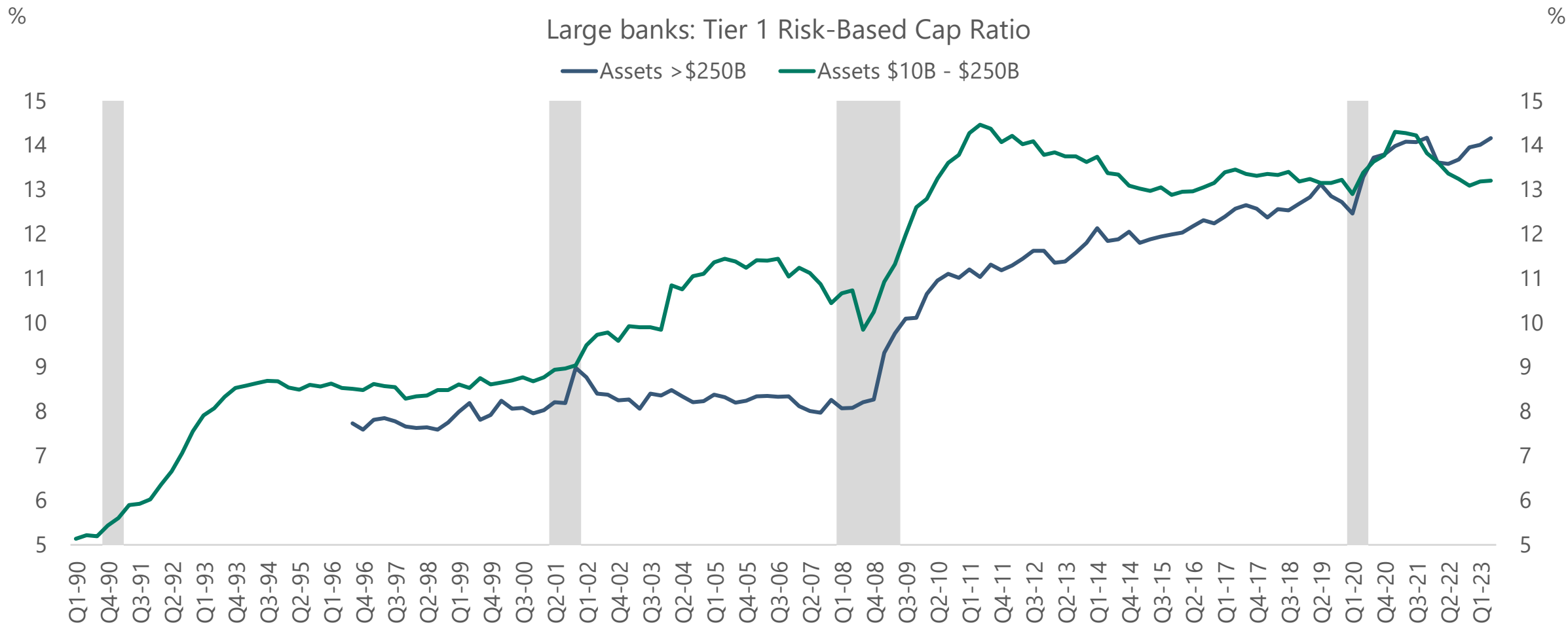
Source: FDIC, Bloomberg, Apollo Chief Economist.

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



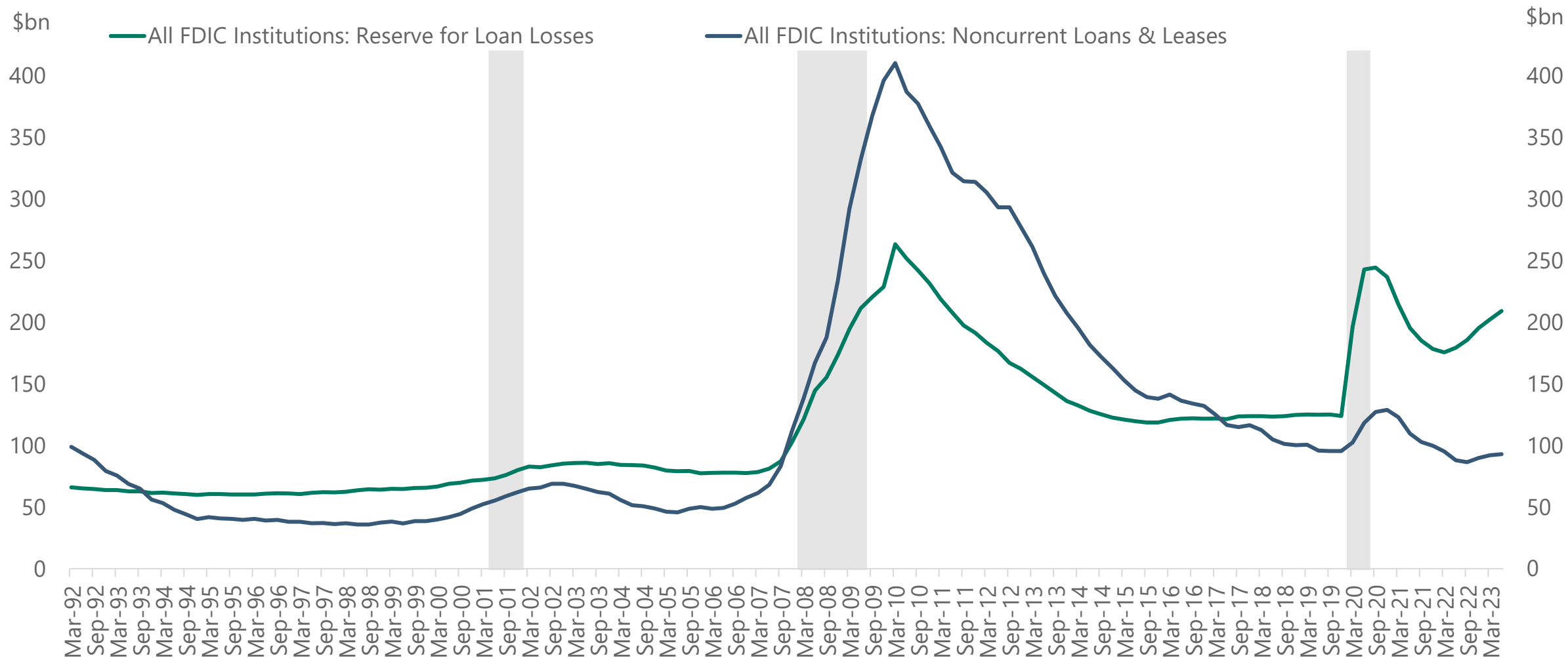
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion.

Tier 1 risk-based capital ratio for larger banks



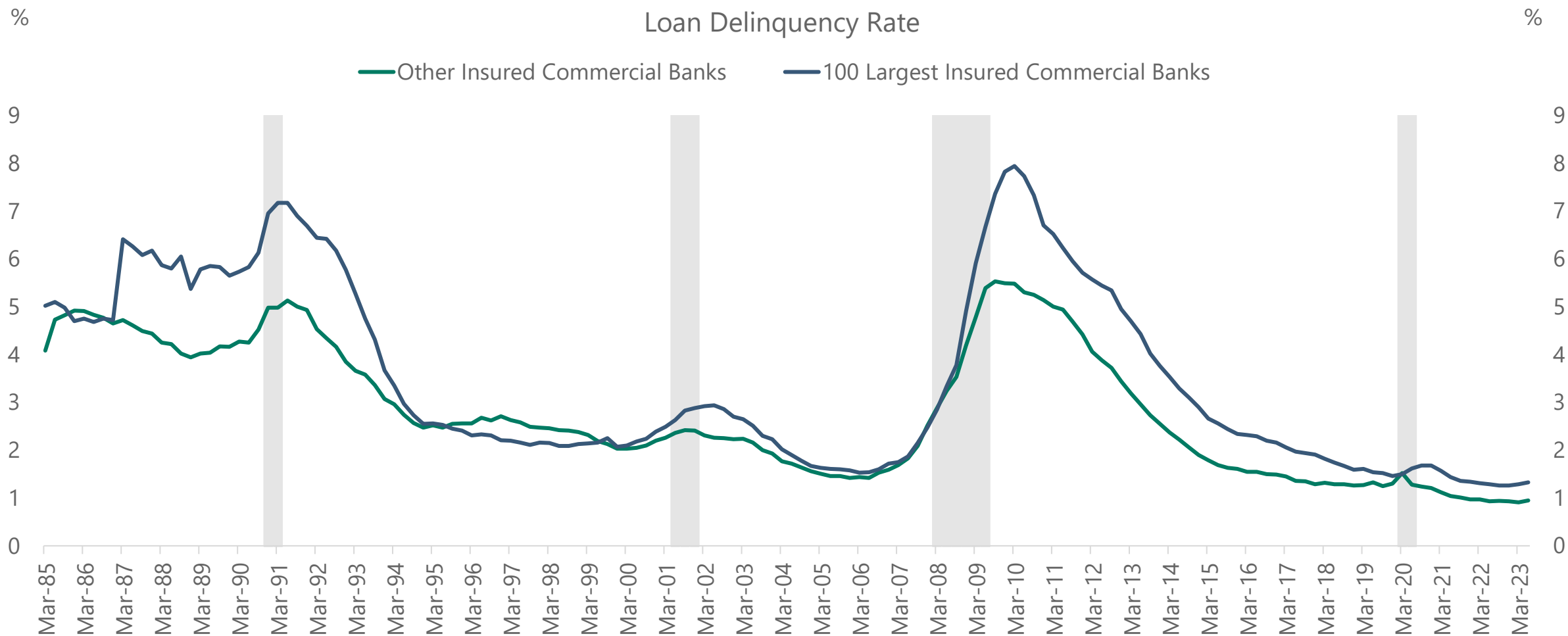
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion..

Reserves for loan losses



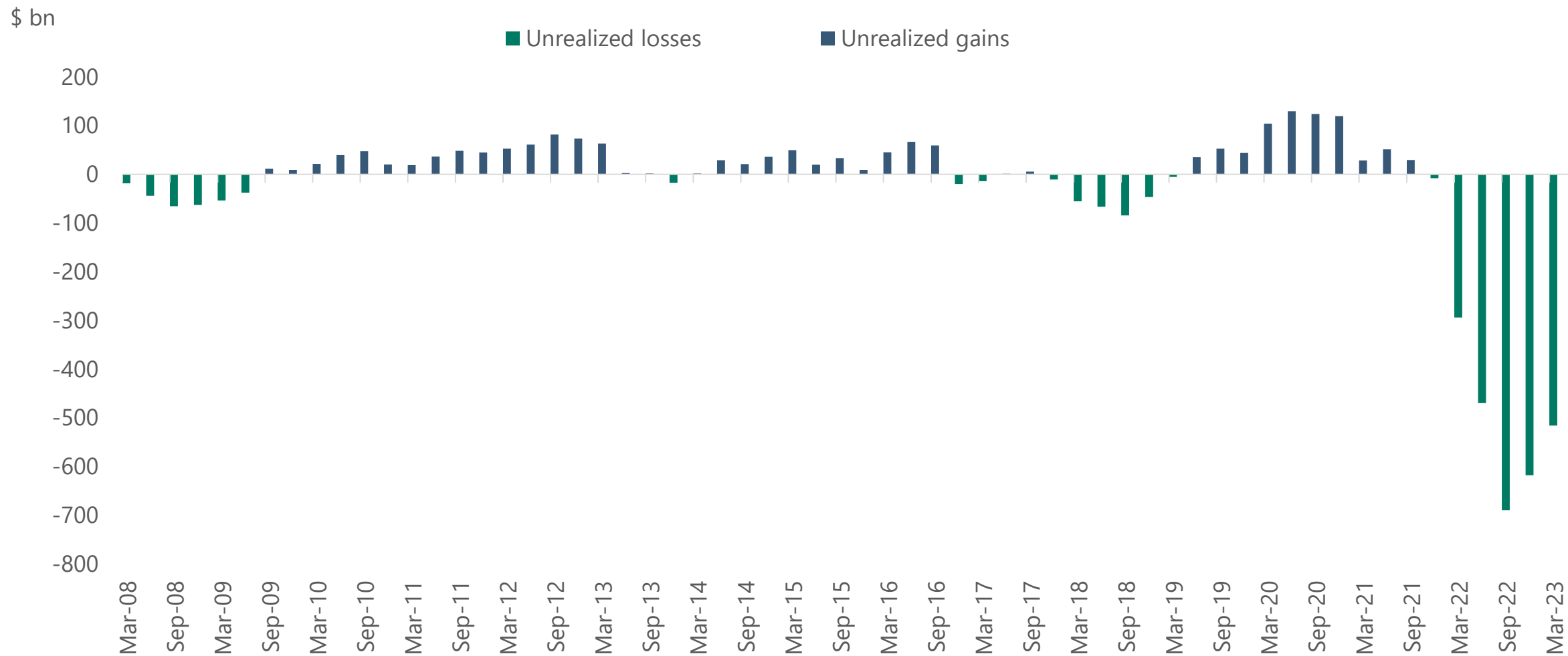
Source: FDIC, Haver Analytics, Apollo Chief Economist.

Loan delinquency rates for large and small banks



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

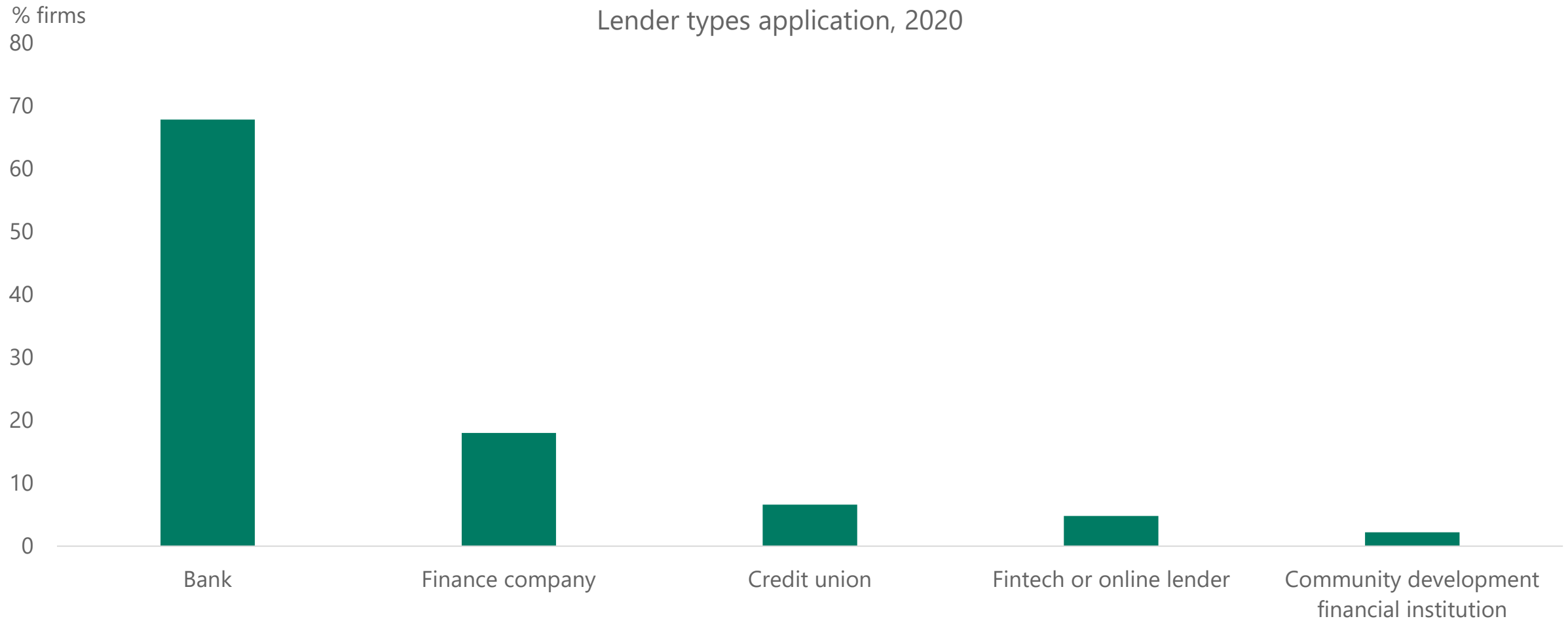
Unrealized losses on investment securities for banks increased



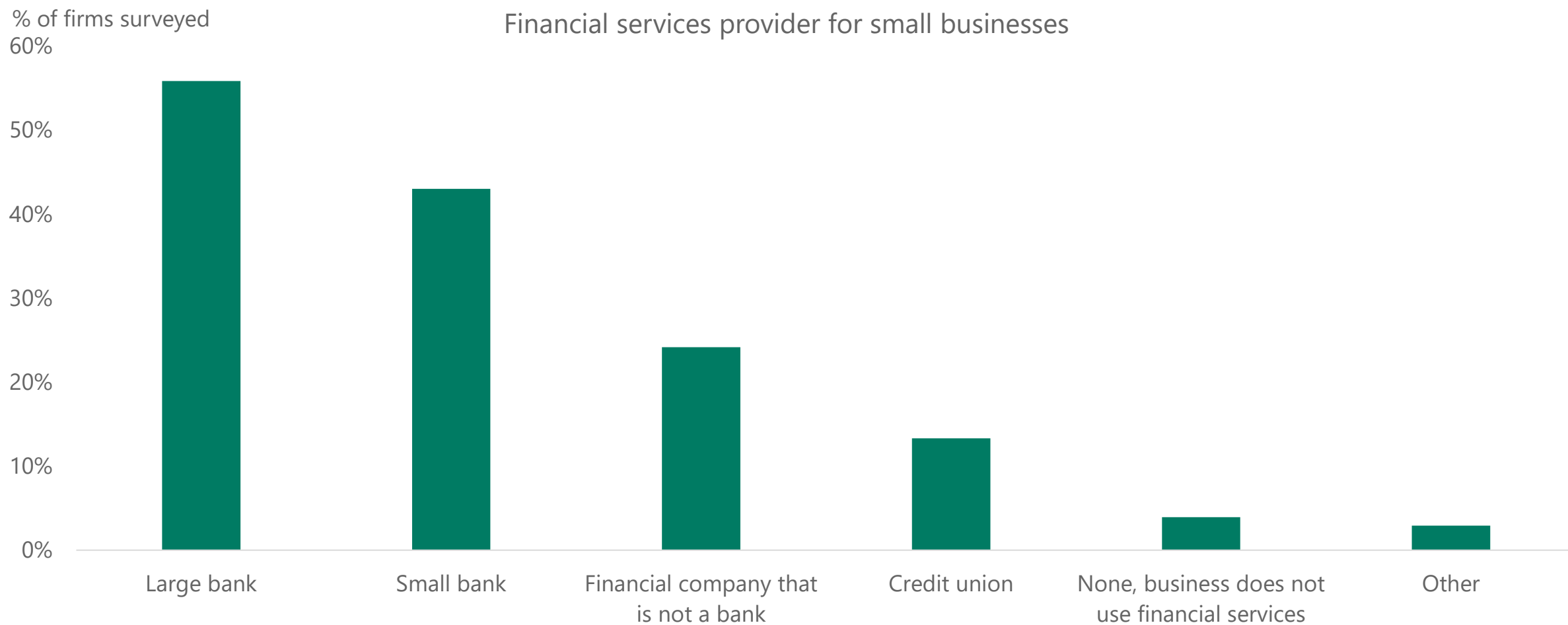
Source: FDIC, Apollo Chief Economist.

Sources of financing for small businesses

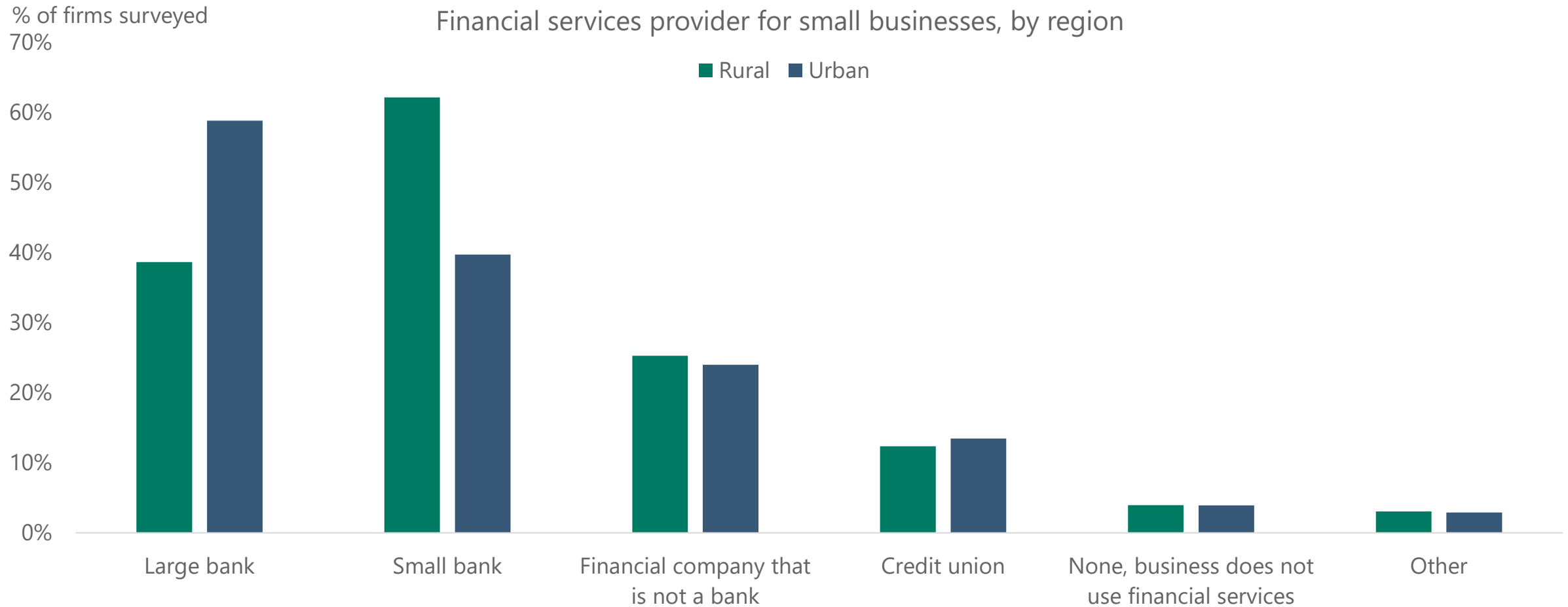
Banks are the most important source of financing for small businesses



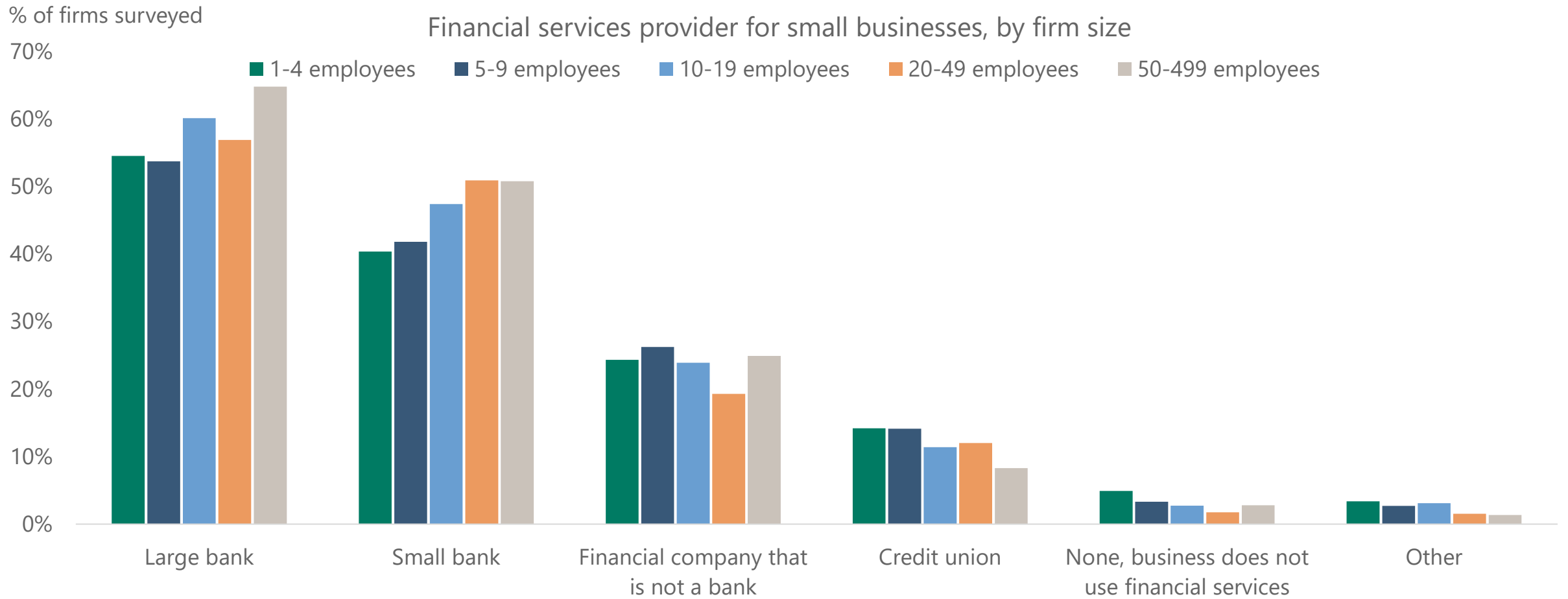
Sources of financing for small businesses



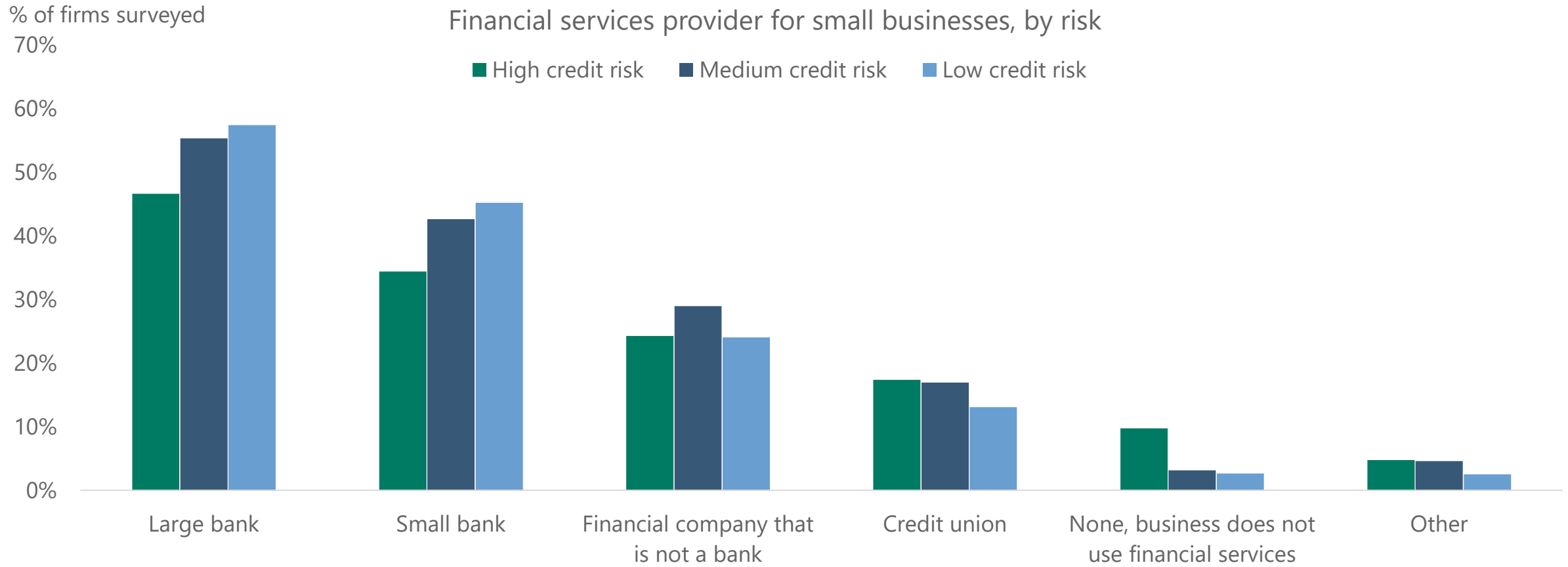
Small banks provide 60% of lending for small businesses in rural areas and 40% in urban areas



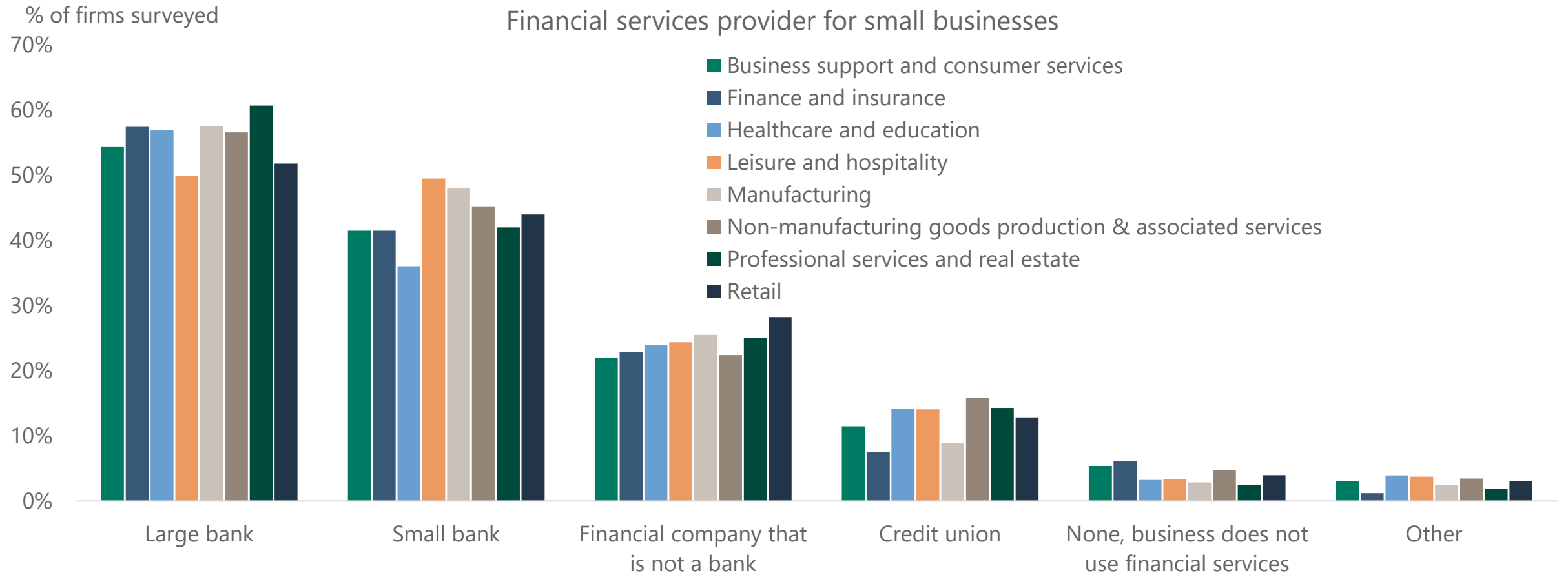
Sources of financing for small businesses, by firm size



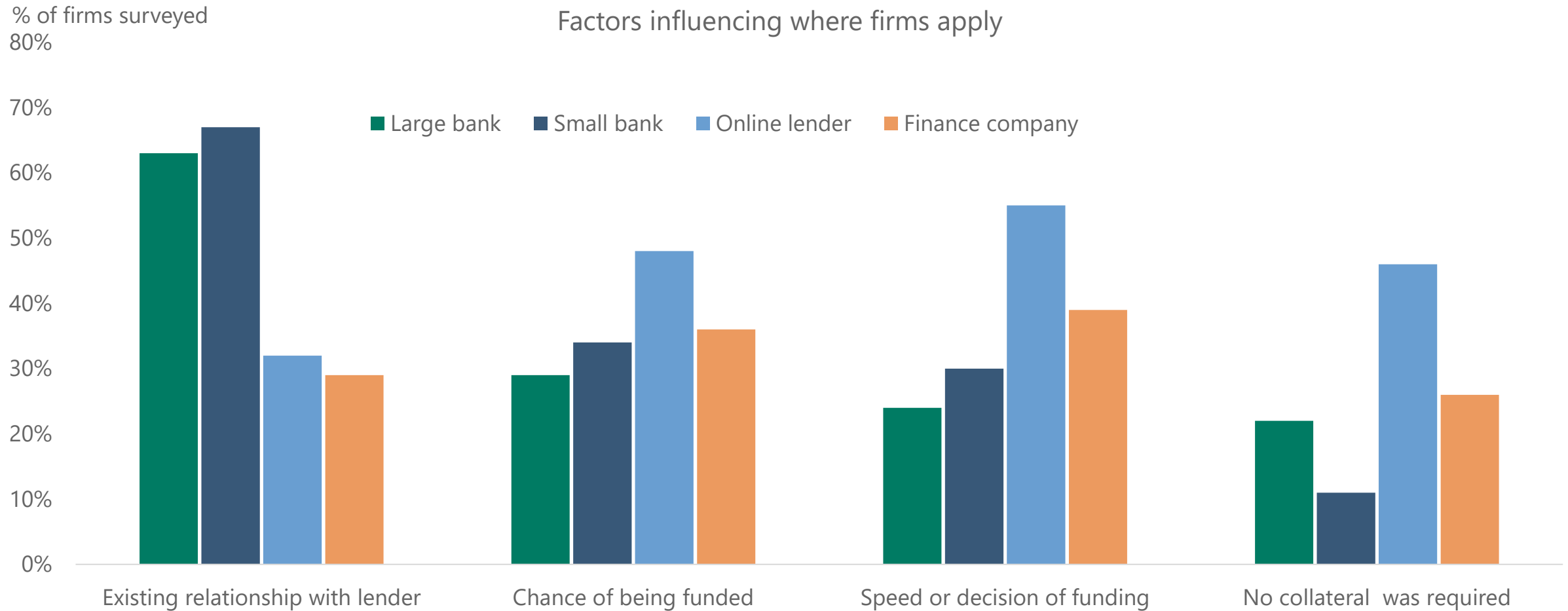
Sources of financing for small businesses, by risk of the firm



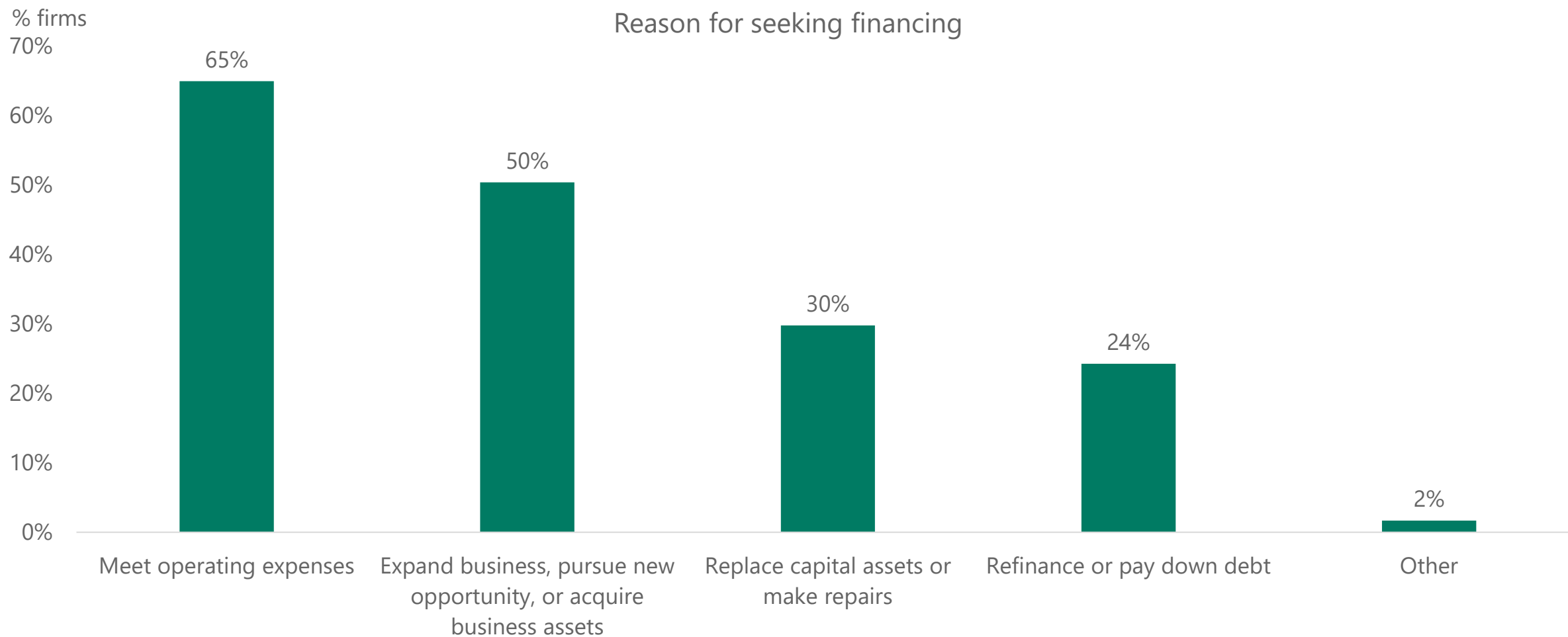
Sources of financing for small businesses, by firm industry



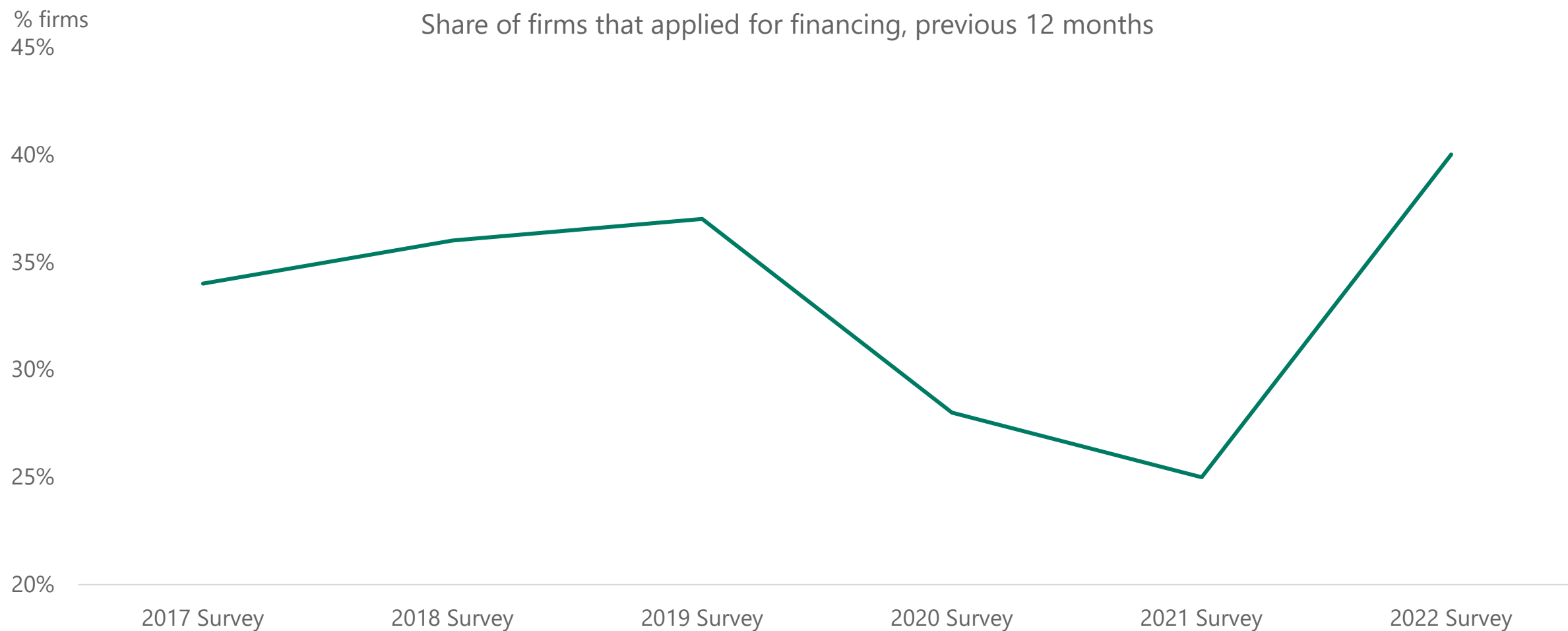
Factors influencing where small businesses apply for a loan. Relationship is important for small bank lending



Purpose of seeking financing for small businesses

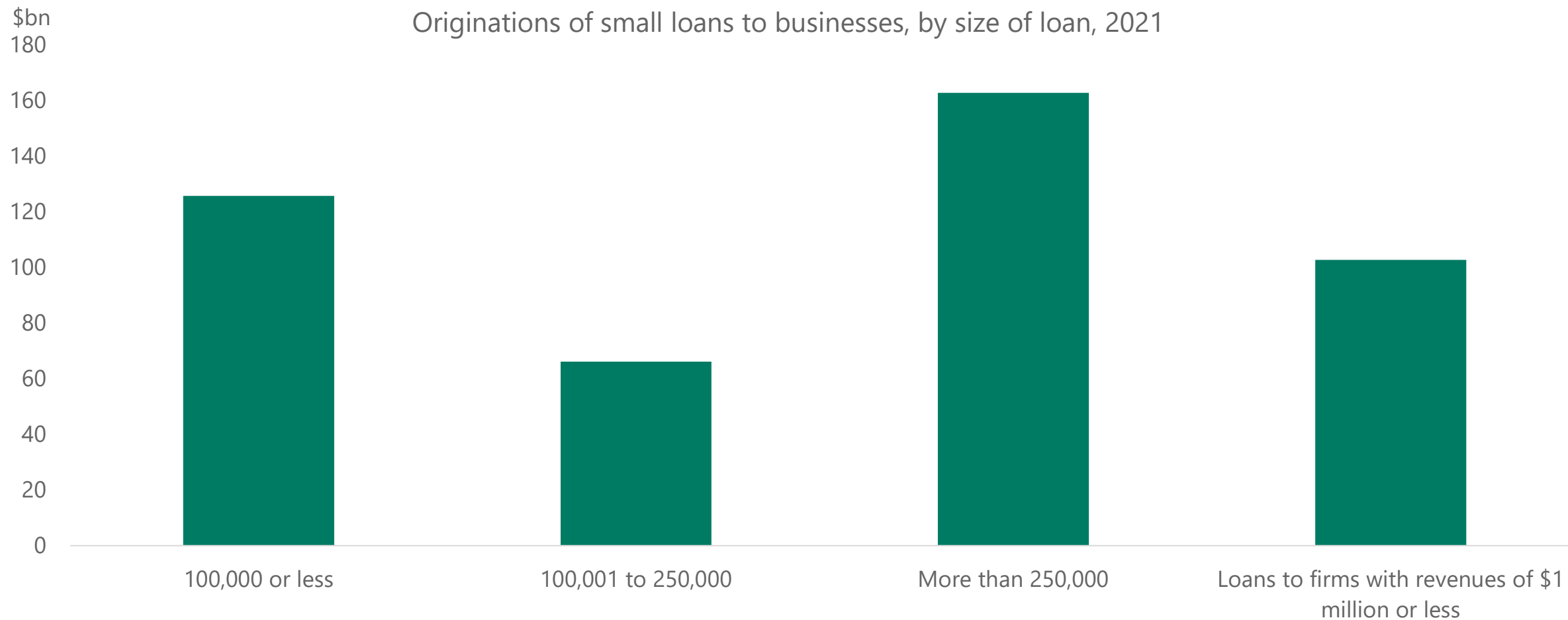


40% of small firms have applied for financing in the past 12 months



Small business loans

Size of small loans to businesses

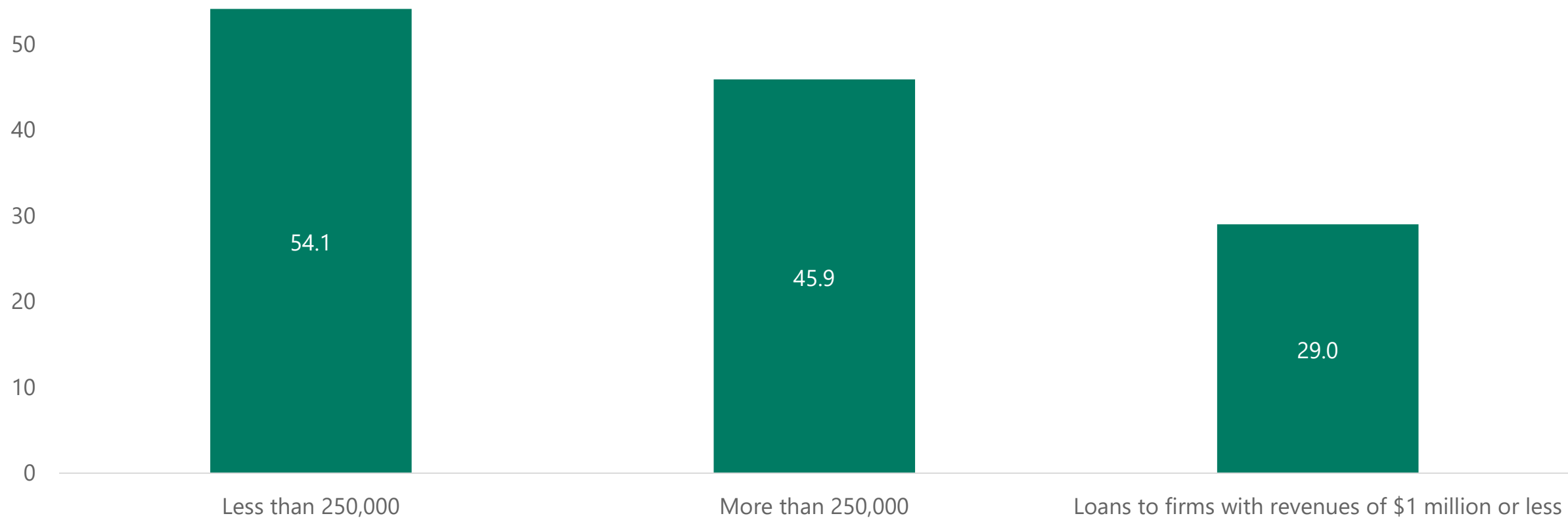


Source: Community Reinvestment Act, Apollo Chief Economist. <https://www.ffiec.gov/craadweb/naaghelp.htm>

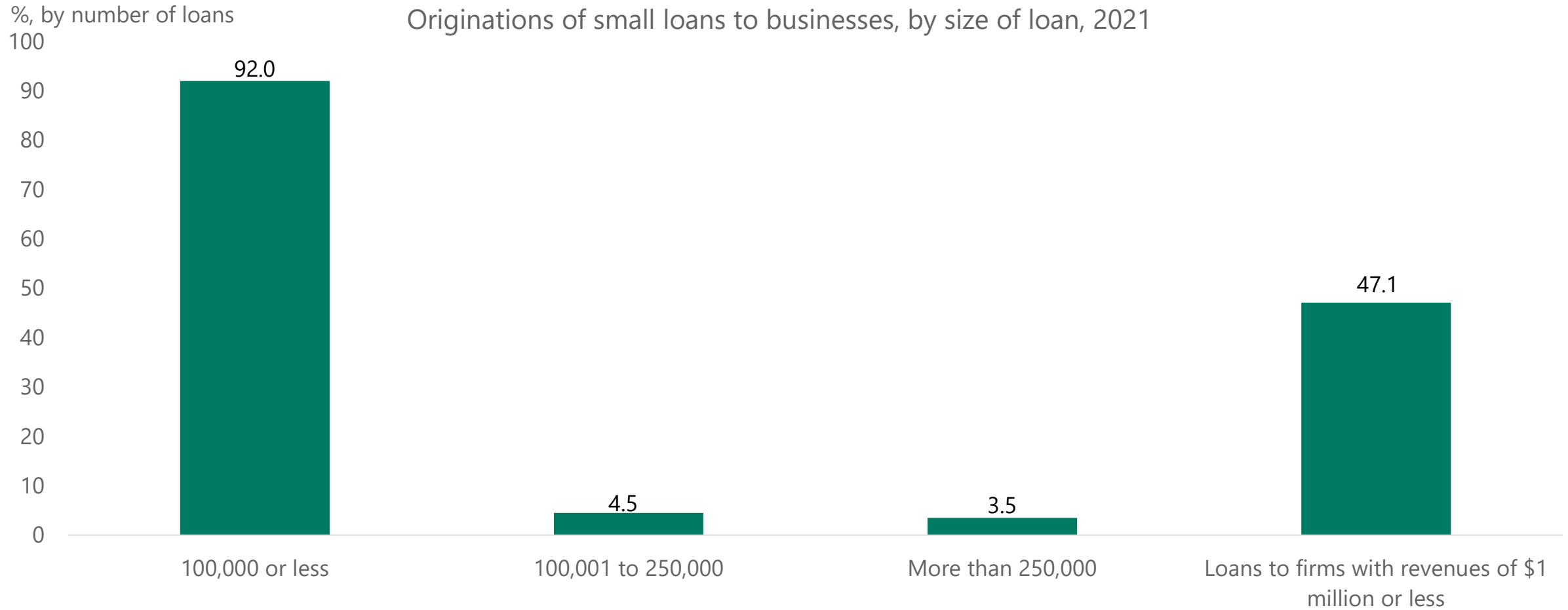
Share of loans to small businesses, by loan size

%, by amount of loans
60

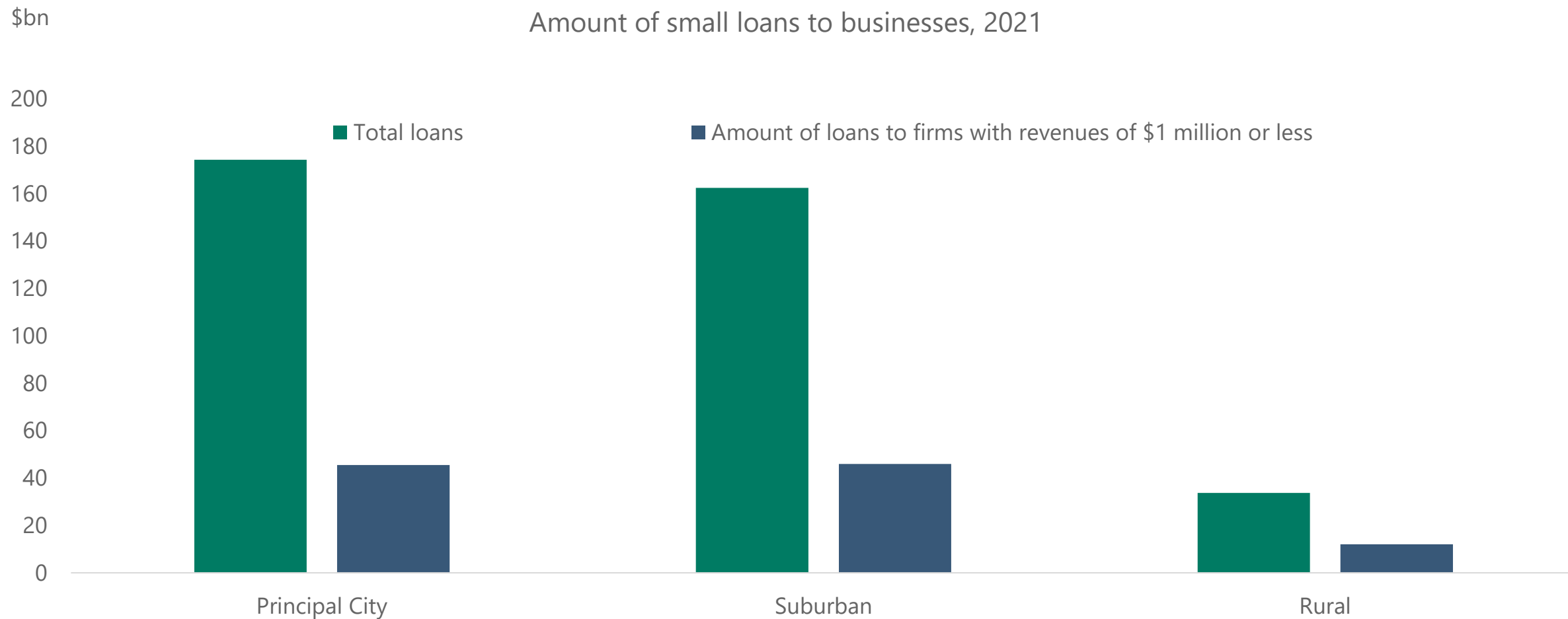
Originations of small loans to businesses, by size of loan, 2021



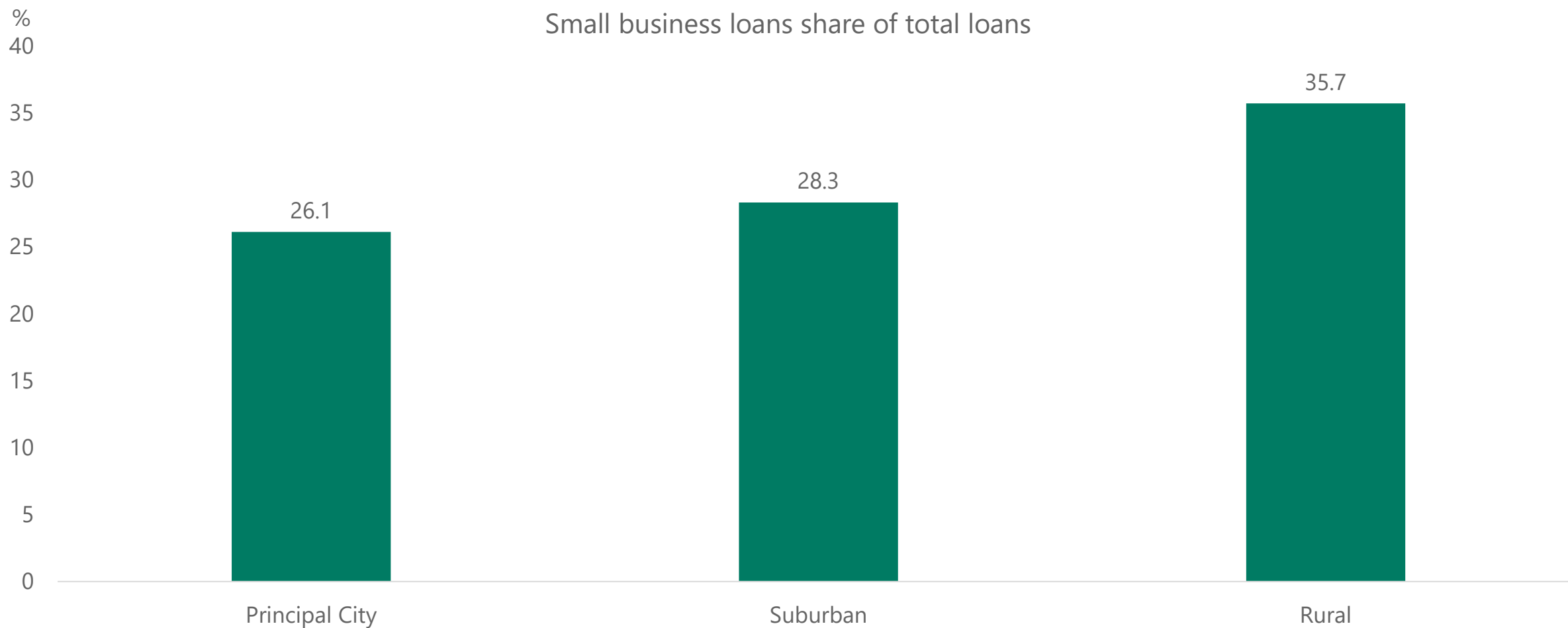
92% of all loans to small businesses in the US are less than \$100,000



Total loans vs loans to small businesses by neighborhood characteristic

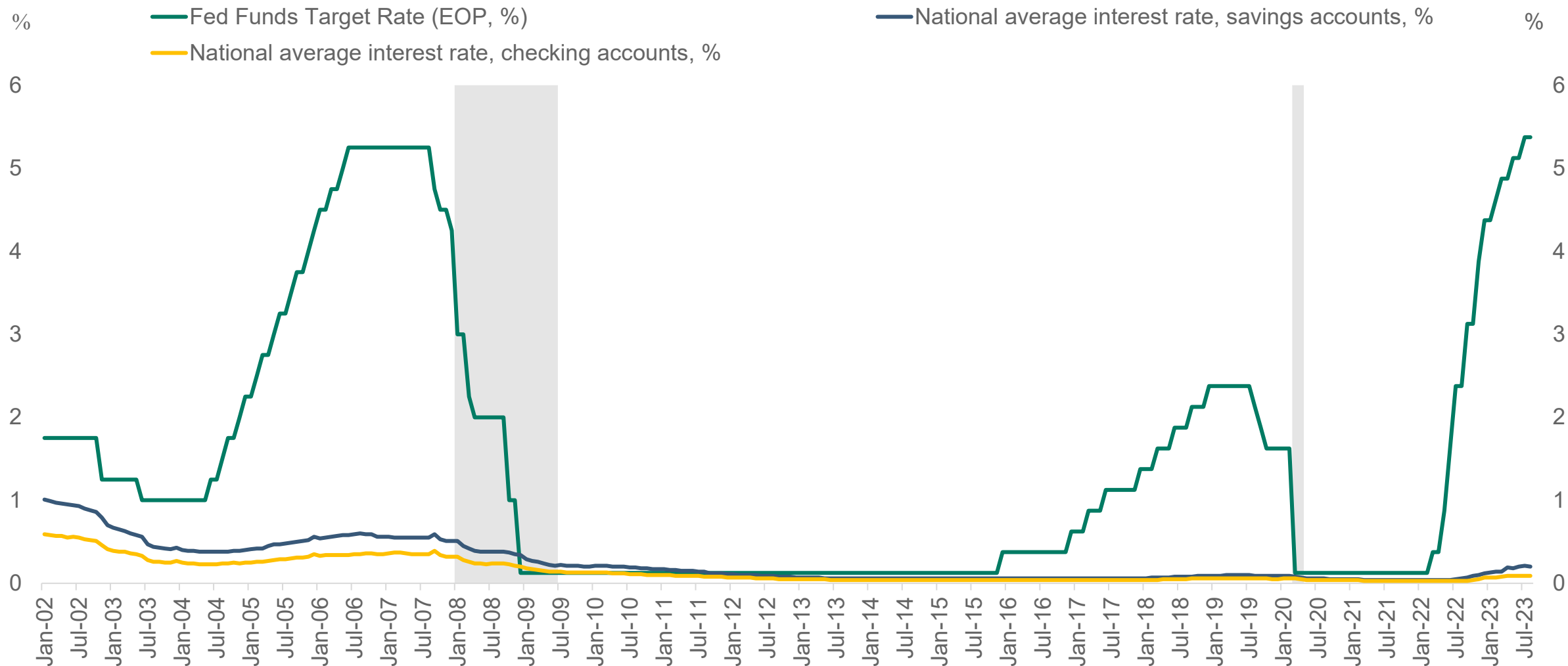


Share of loans to small businesses by neighborhood characteristic



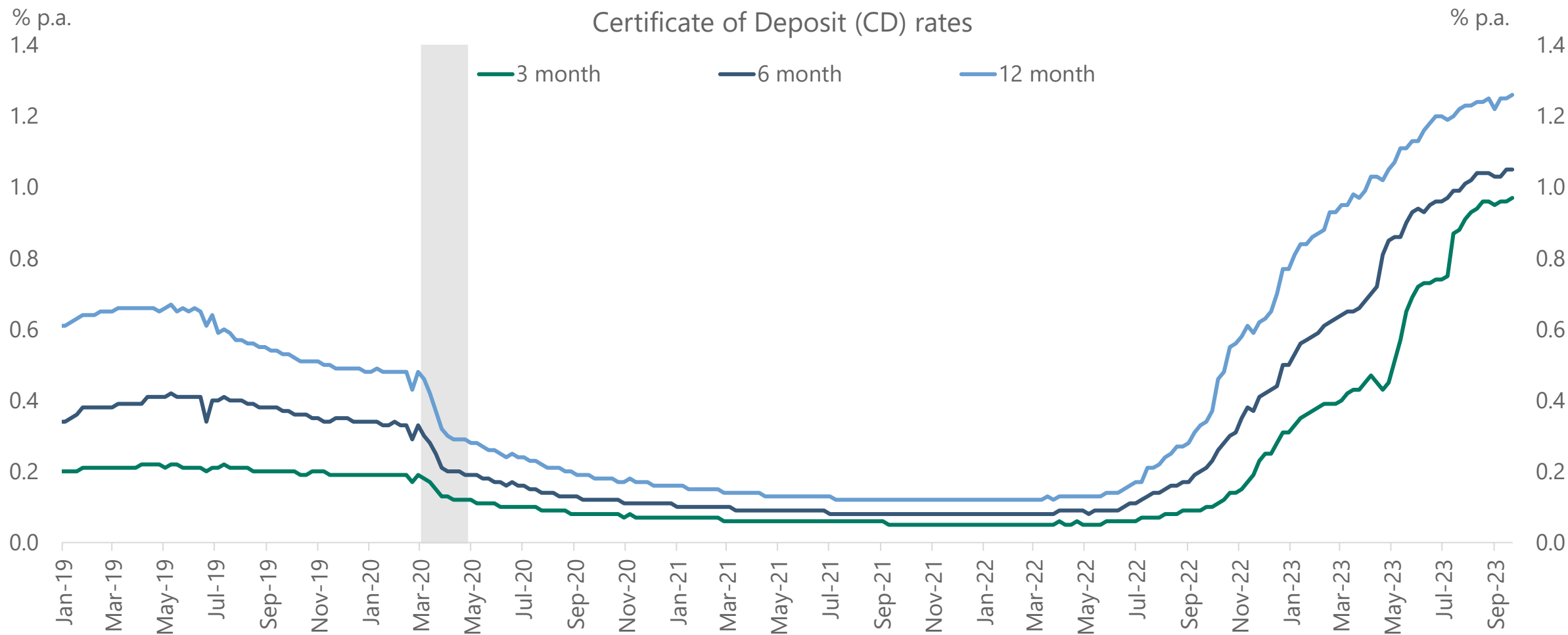
Fed funds rate versus national average
interest rate on checking accounts and CDs

Interest rate on checking accounts versus the Fed funds rate



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

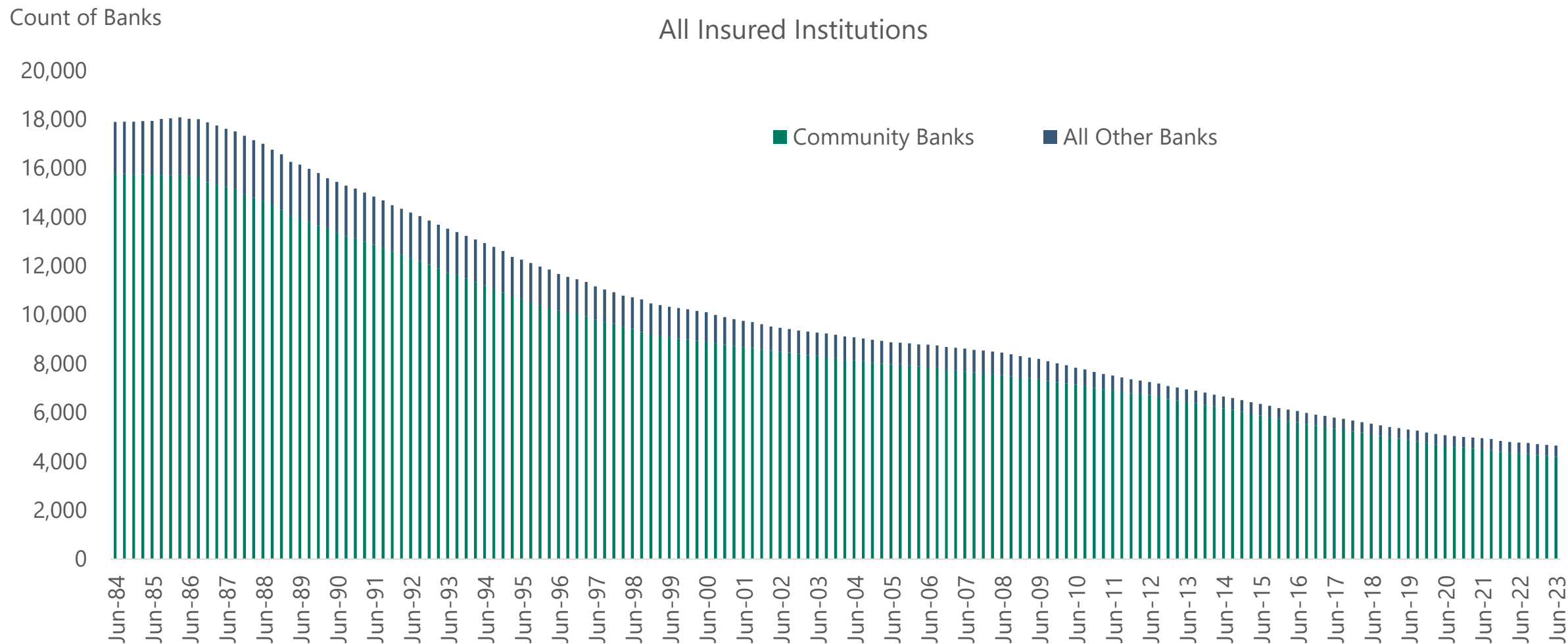
CD rates have slowly increased as the Fed has raised interest rates



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

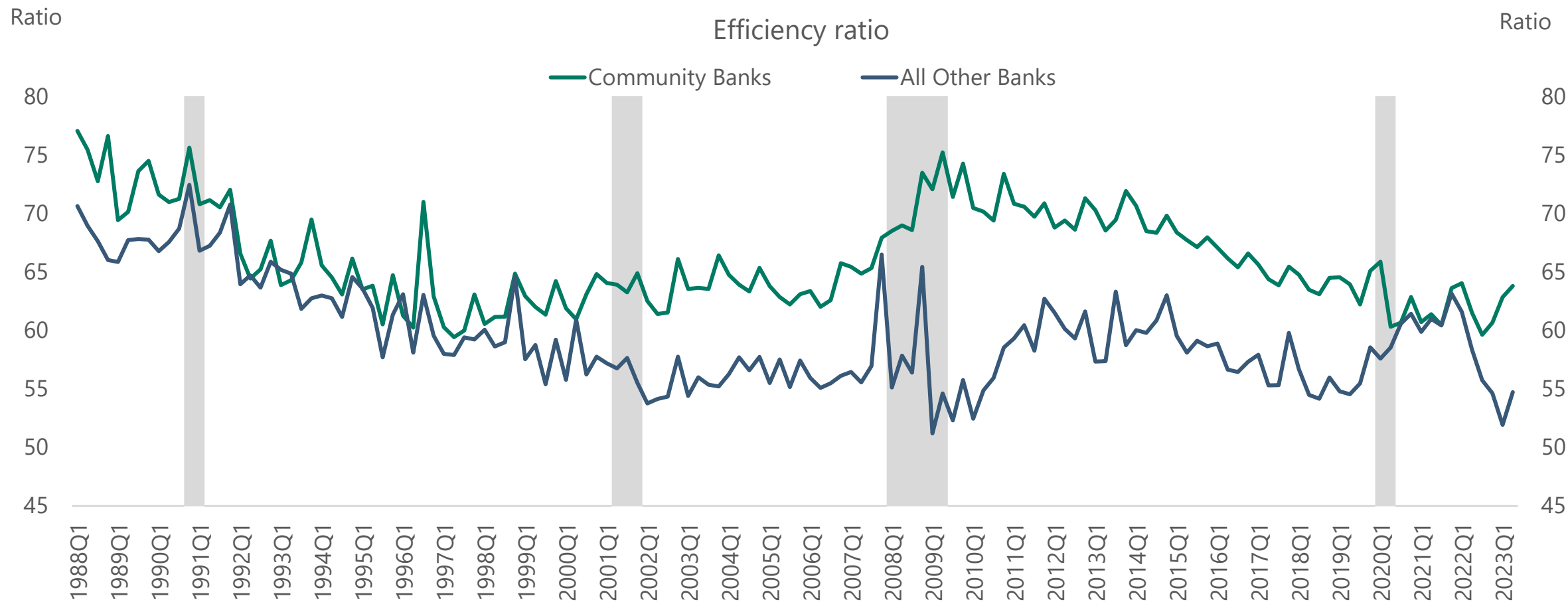
Community banks

90% of all banks in the US are community banks



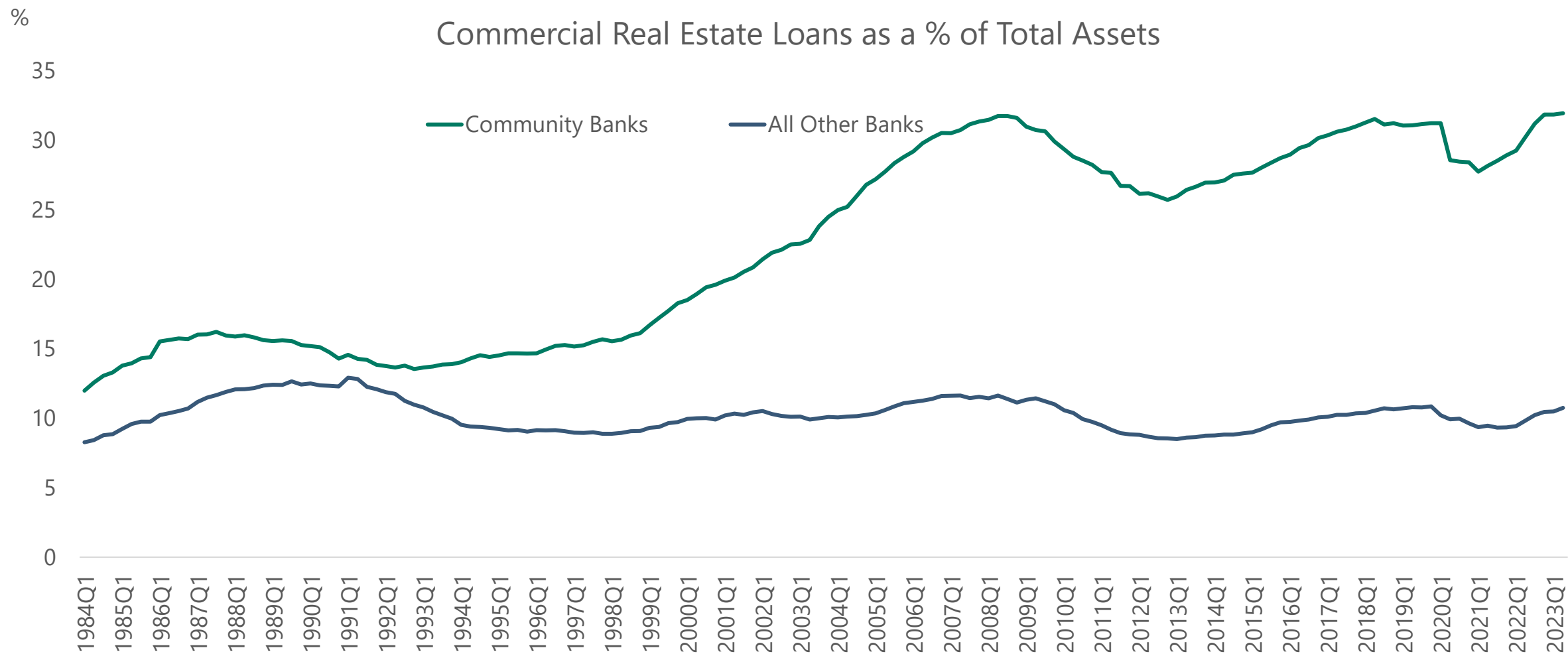
Source: FDIC, Apollo Chief Economist.

The average efficiency ratio for community banks is around 63% compared with 52% for noncommunity banks.



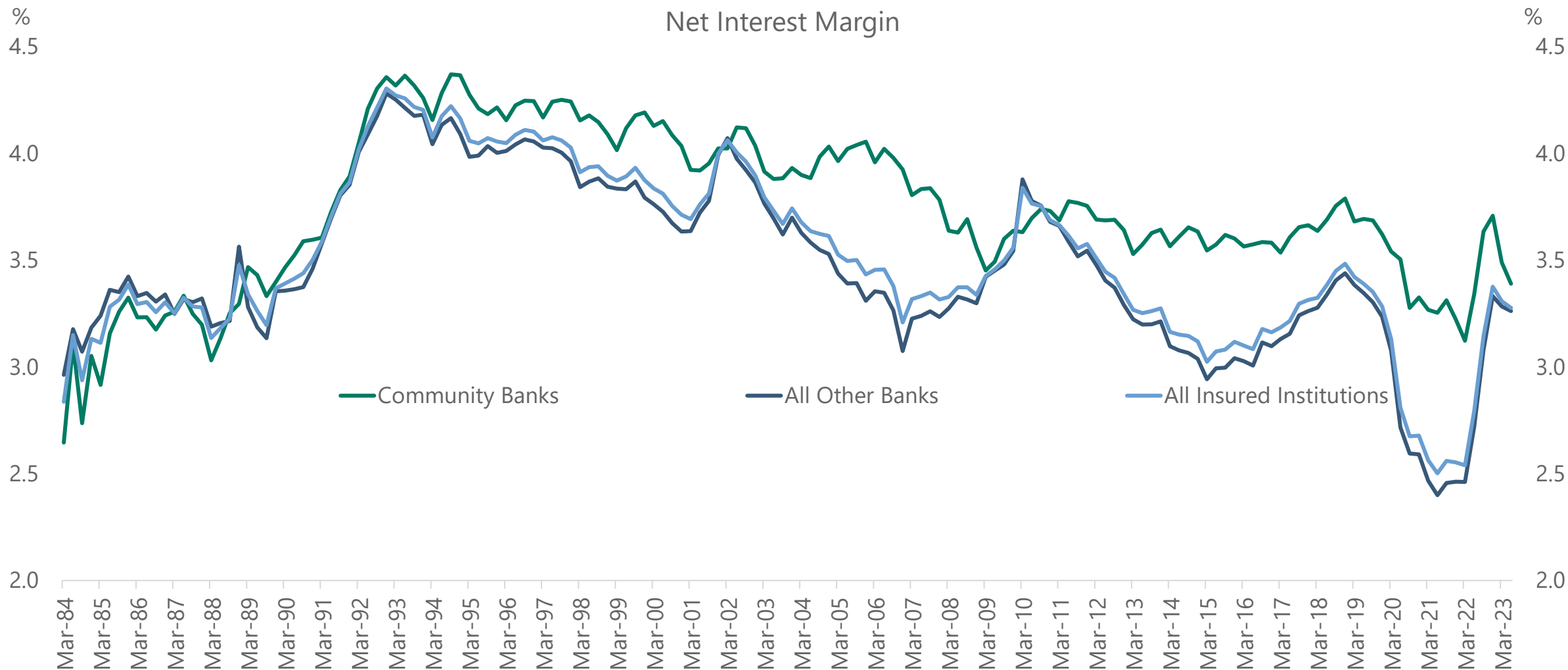
Source: Haver Analytics, Bloomberg, Apollo Chief Economist. A bank's efficiency ratio is defined as the ratio of a bank's non-interest expense to revenues. Higher efficiency ratios indicate less efficient banks.

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



Source: FDIC, Apollo Chief Economist.

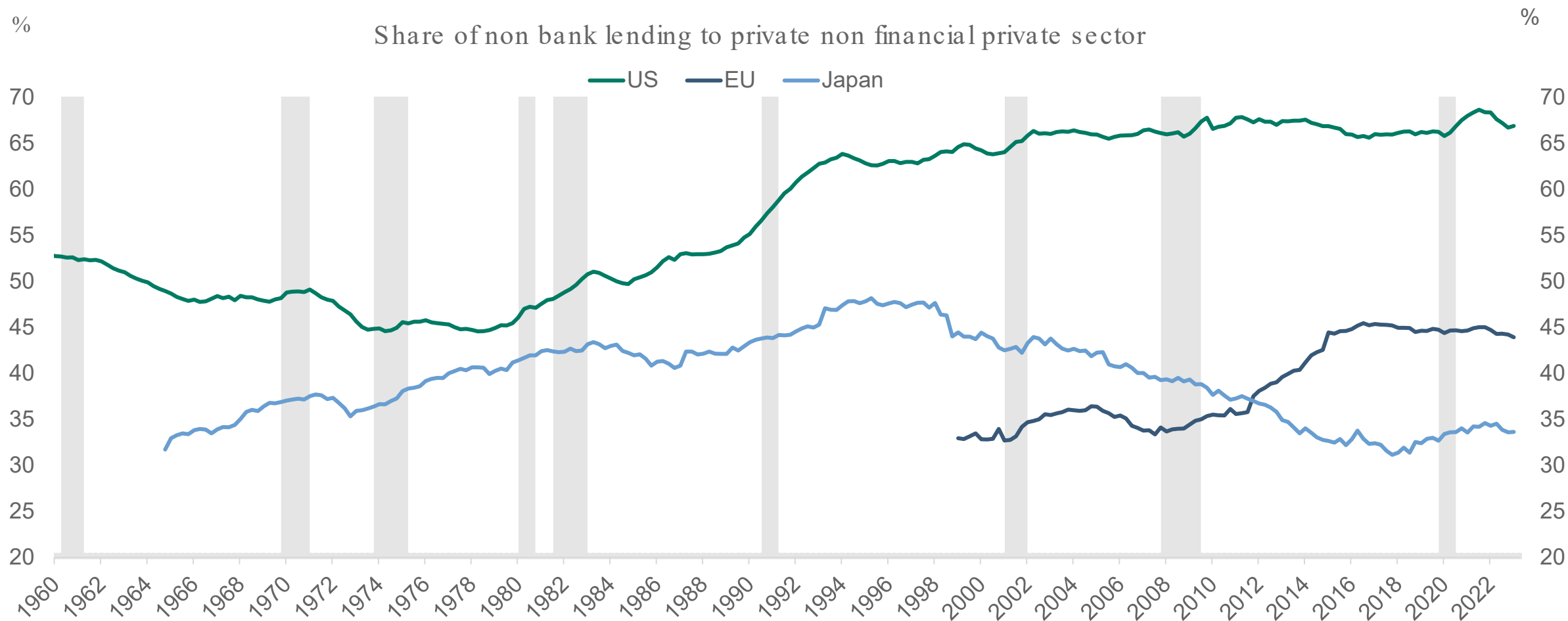
Net interest margin higher for community banks



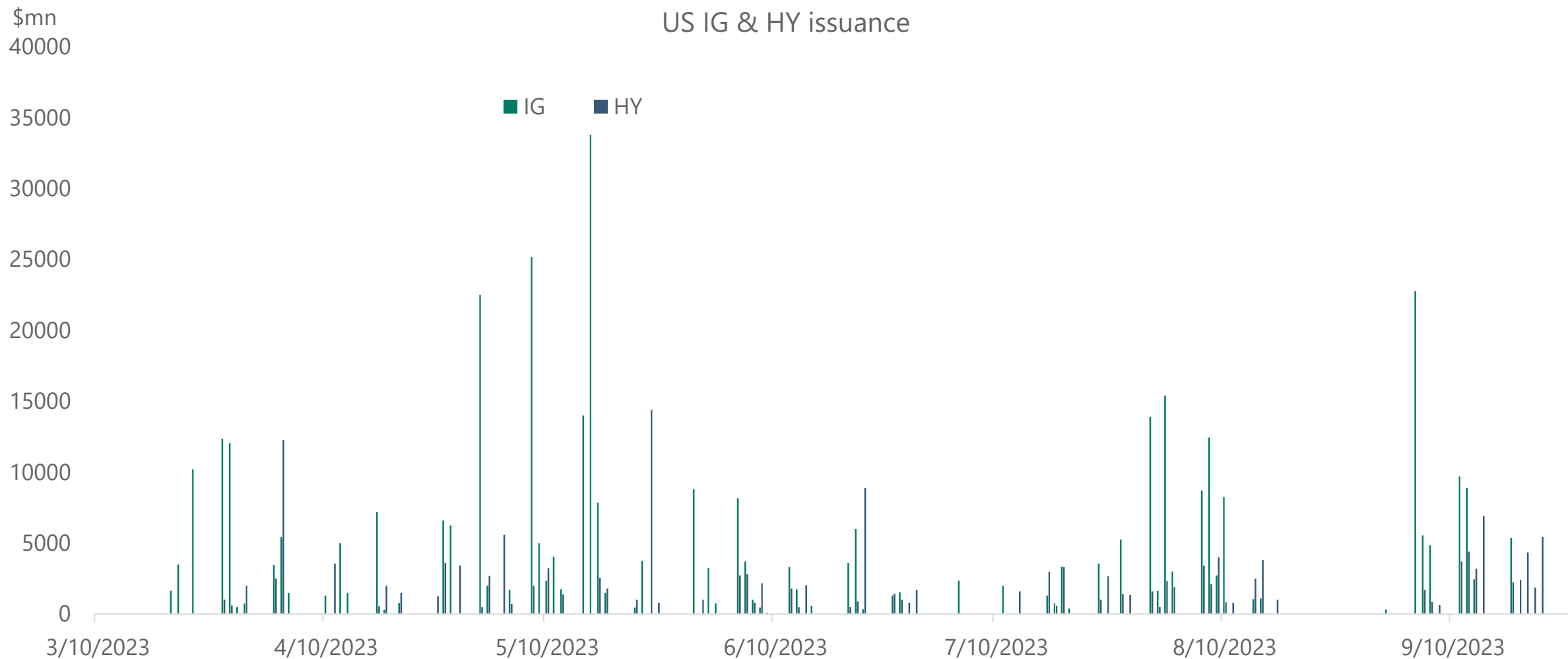
Source: FDIC, Apollo Chief Economist.

Other banking sector indicators

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

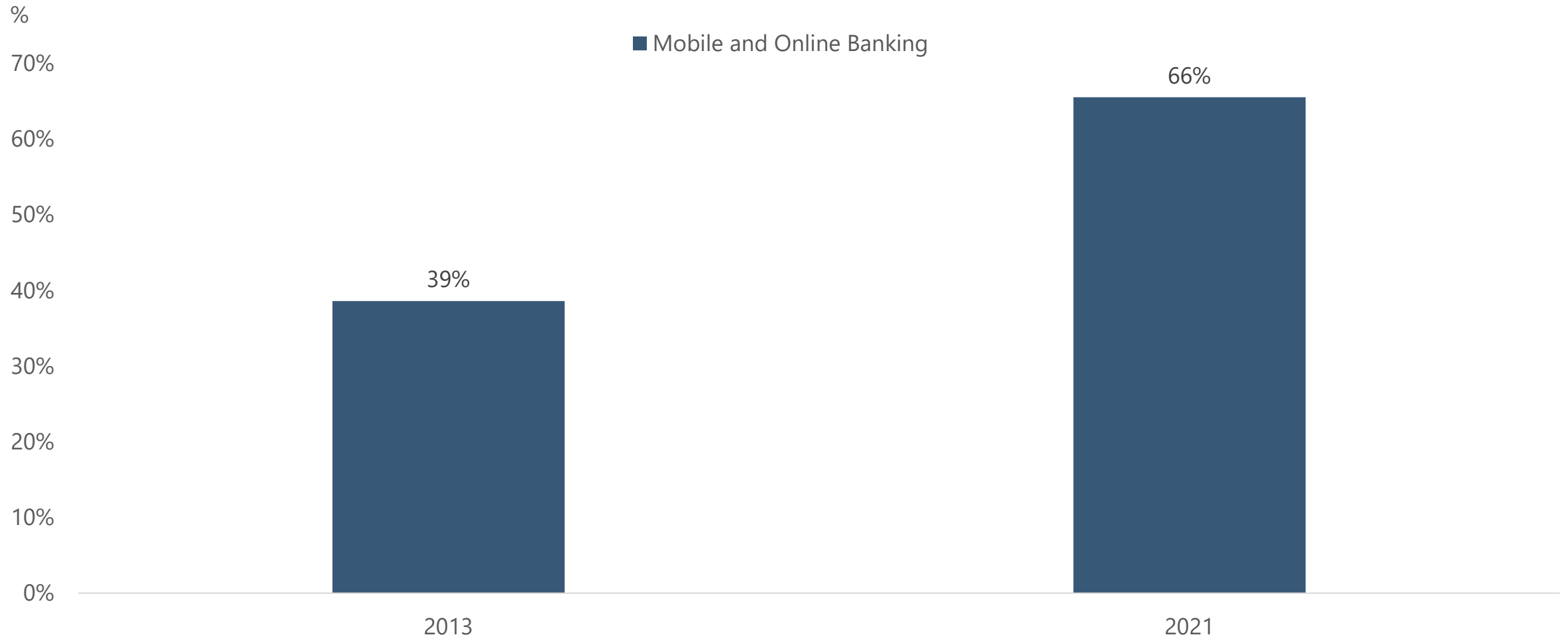


IG and HY primary issuance

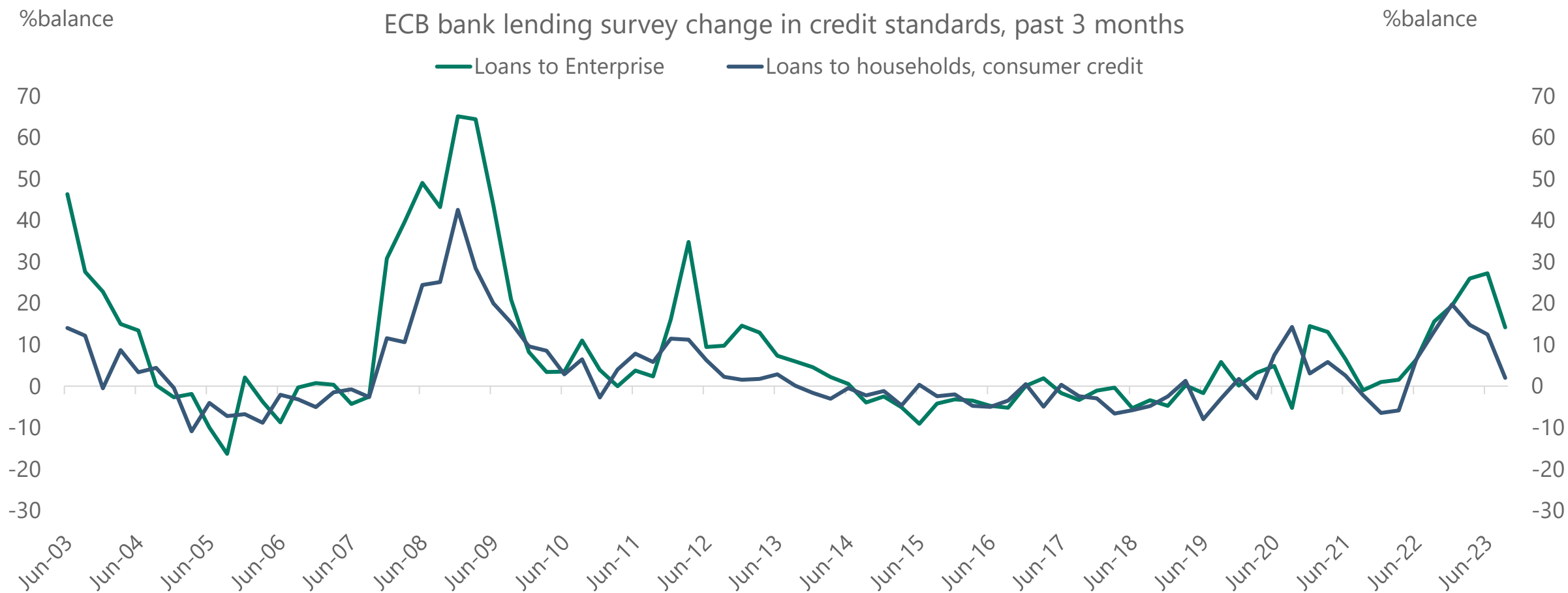


Source: Bloomberg, Apollo Chief Economist. Note: Data from NIM <GO>, IG excludes government and financials issuance.

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

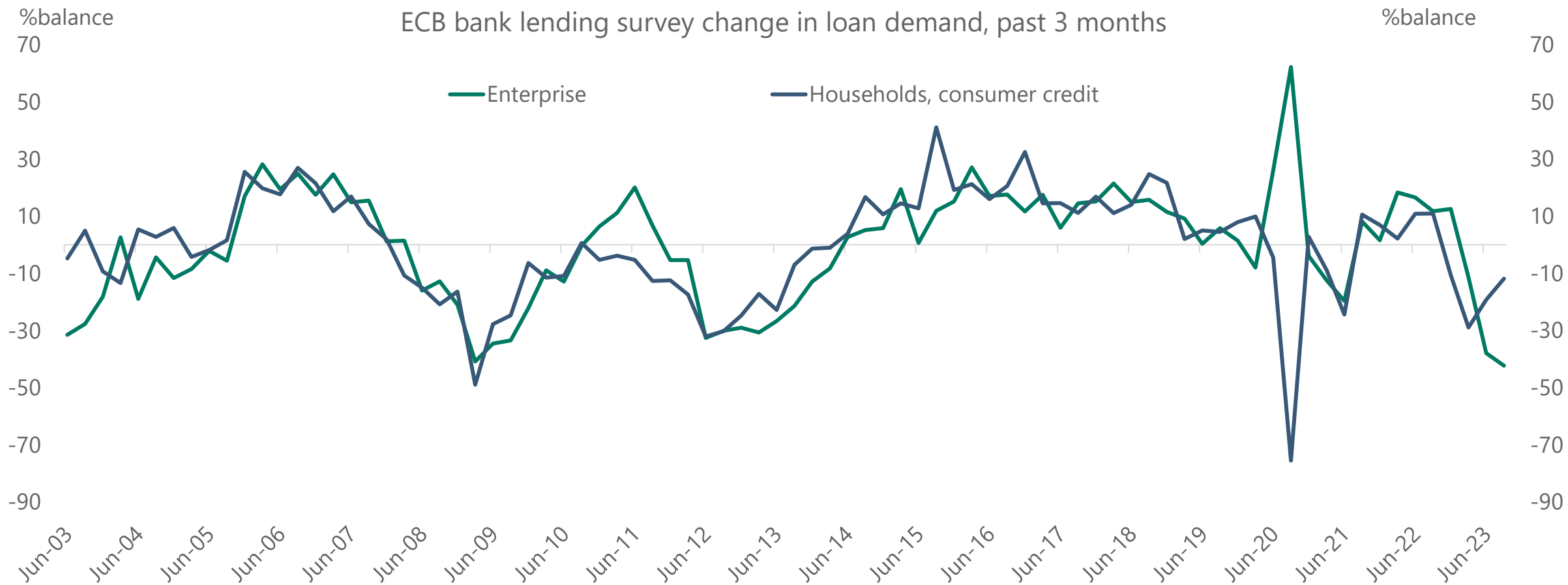


Euro Area credit conditions



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

Euro Area loan demand falling





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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.