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Outlook for US regional banks

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Apollo Global Management

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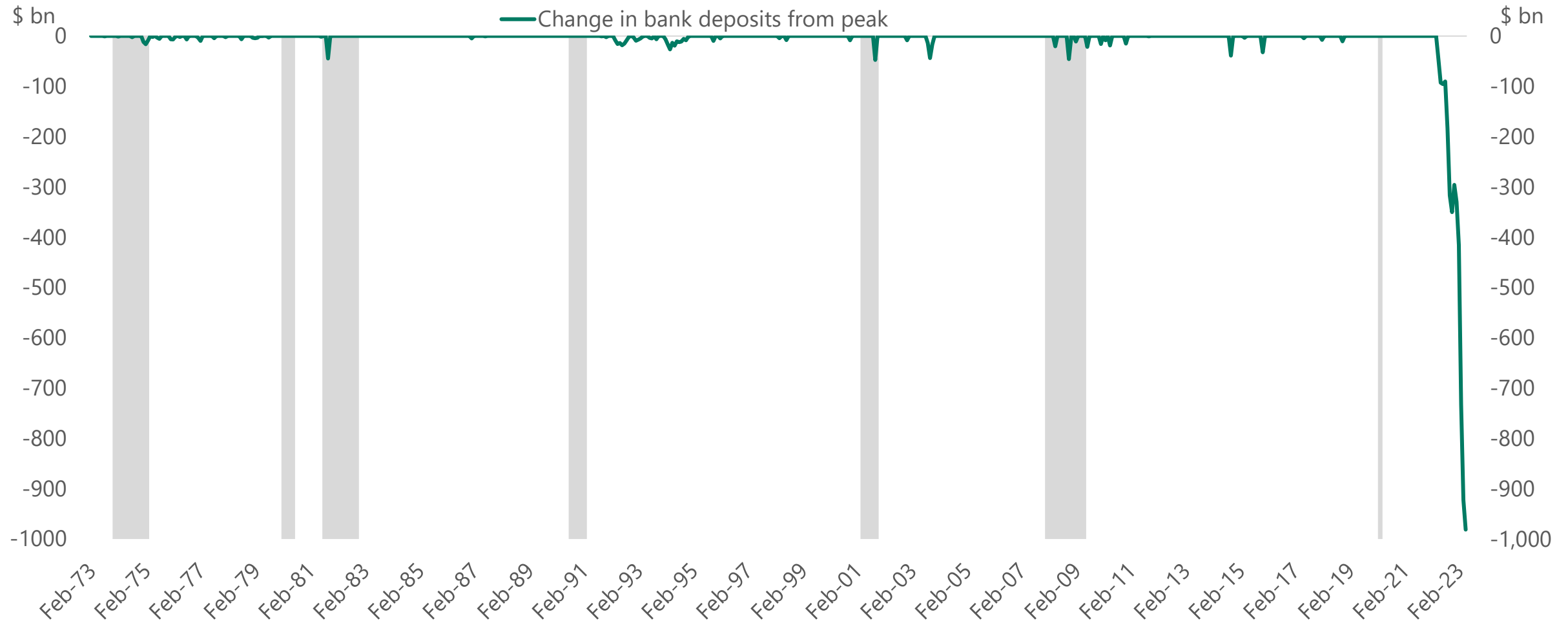
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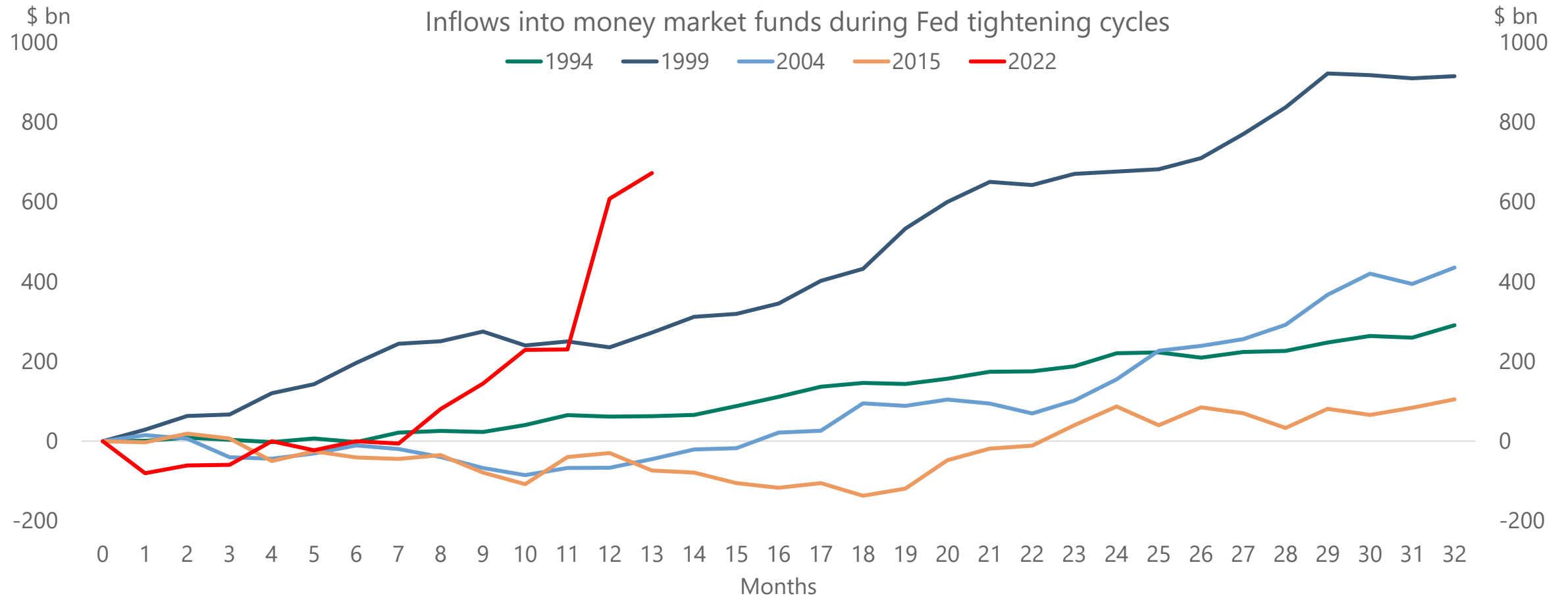


Overview

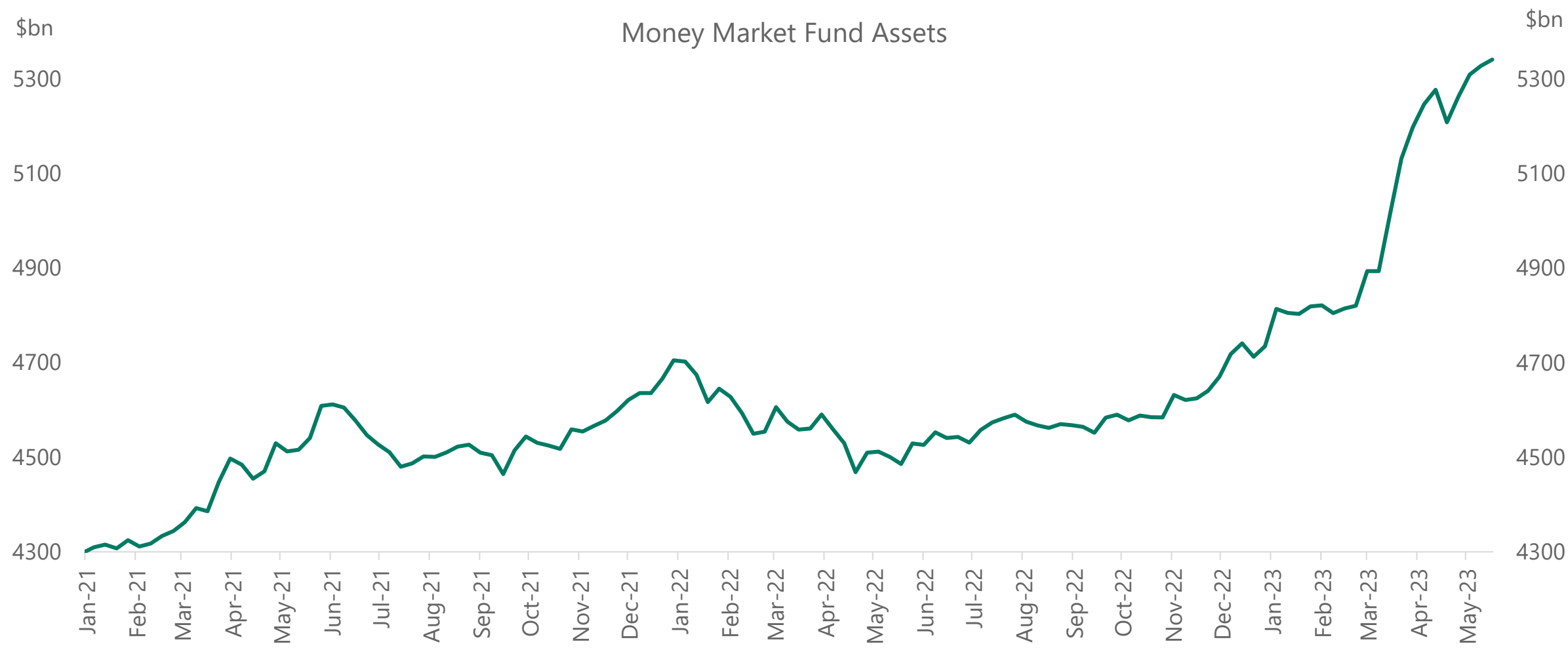
\$981bn in deposits have left the banks since the Fed began to raise interest rates, the biggest outflow on record



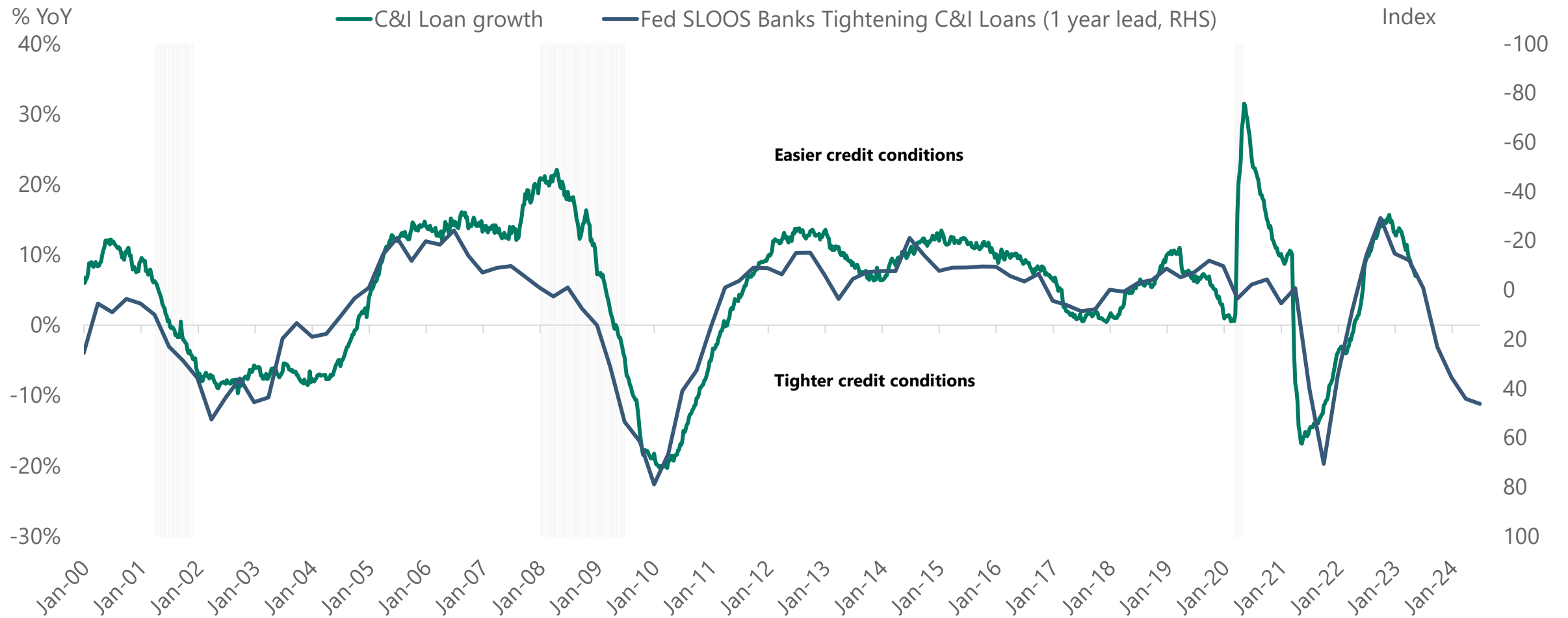
\$672bn inflows into money market funds during this Fed hiking cycle



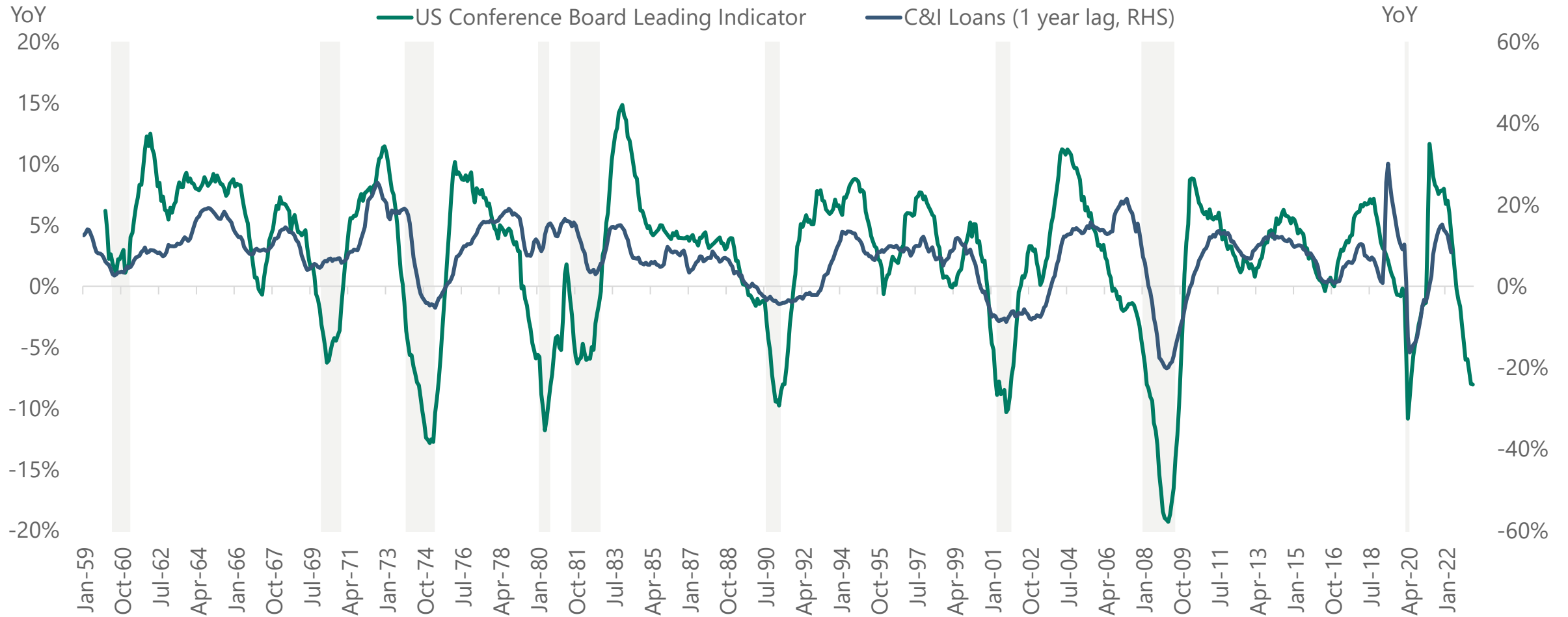
\$350bn has been moved into money market funds since SVB went under



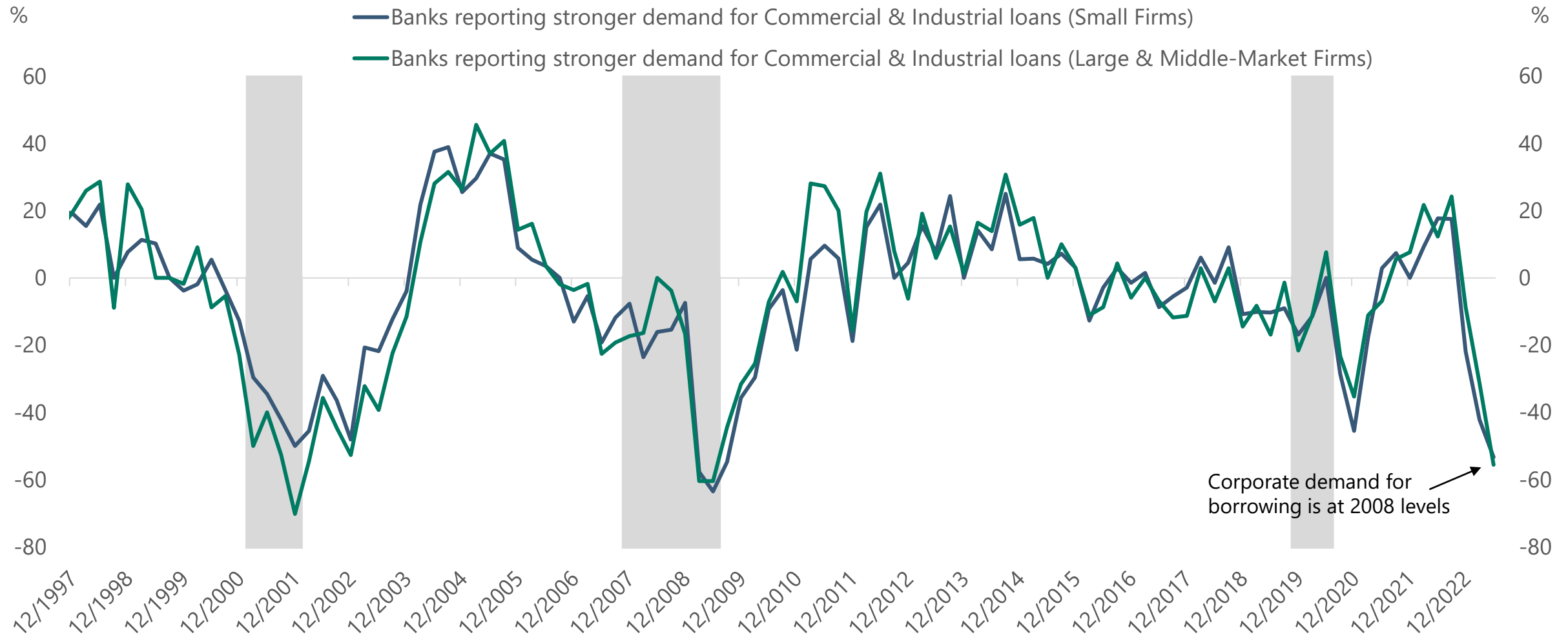
Bank lending will shrink significantly over the coming quarters



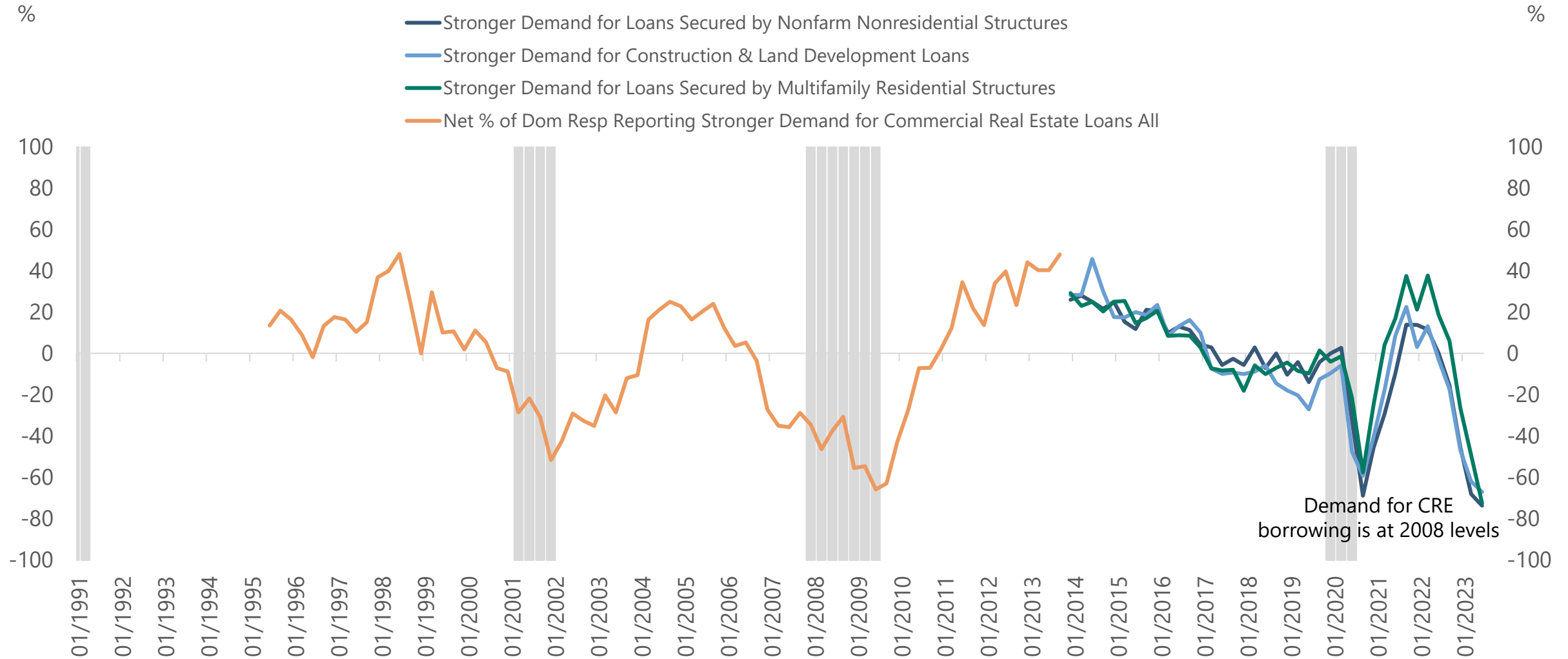
Tighter credit conditions dragging down the economy



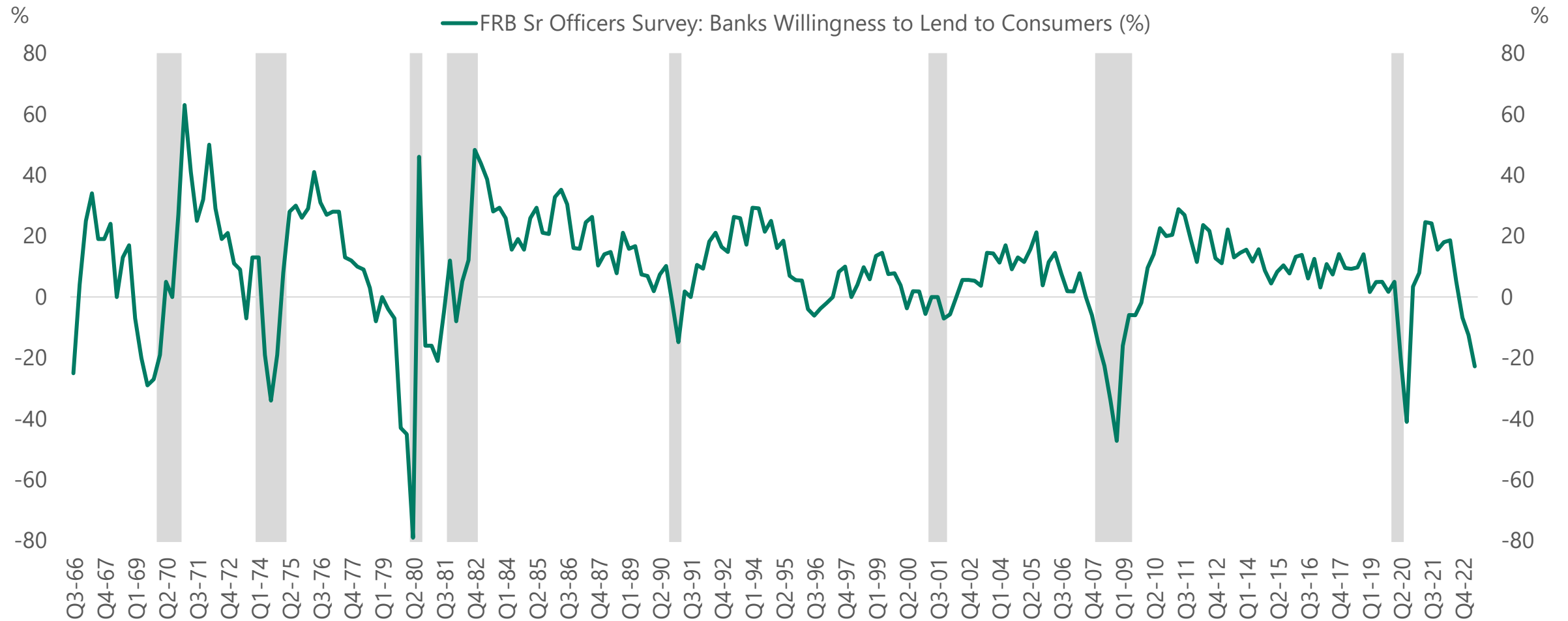
Demand for corporate loans is at 2008 levels



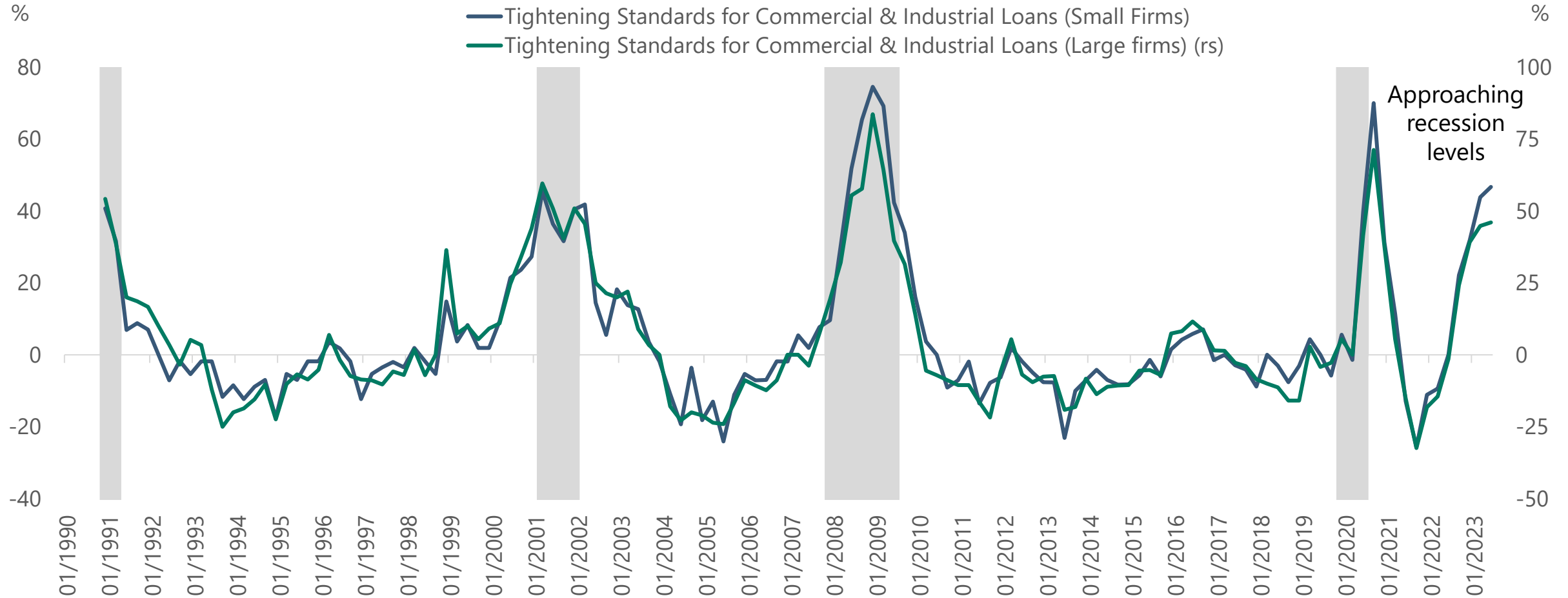
Demand for commercial real estate loans is at 2008 levels



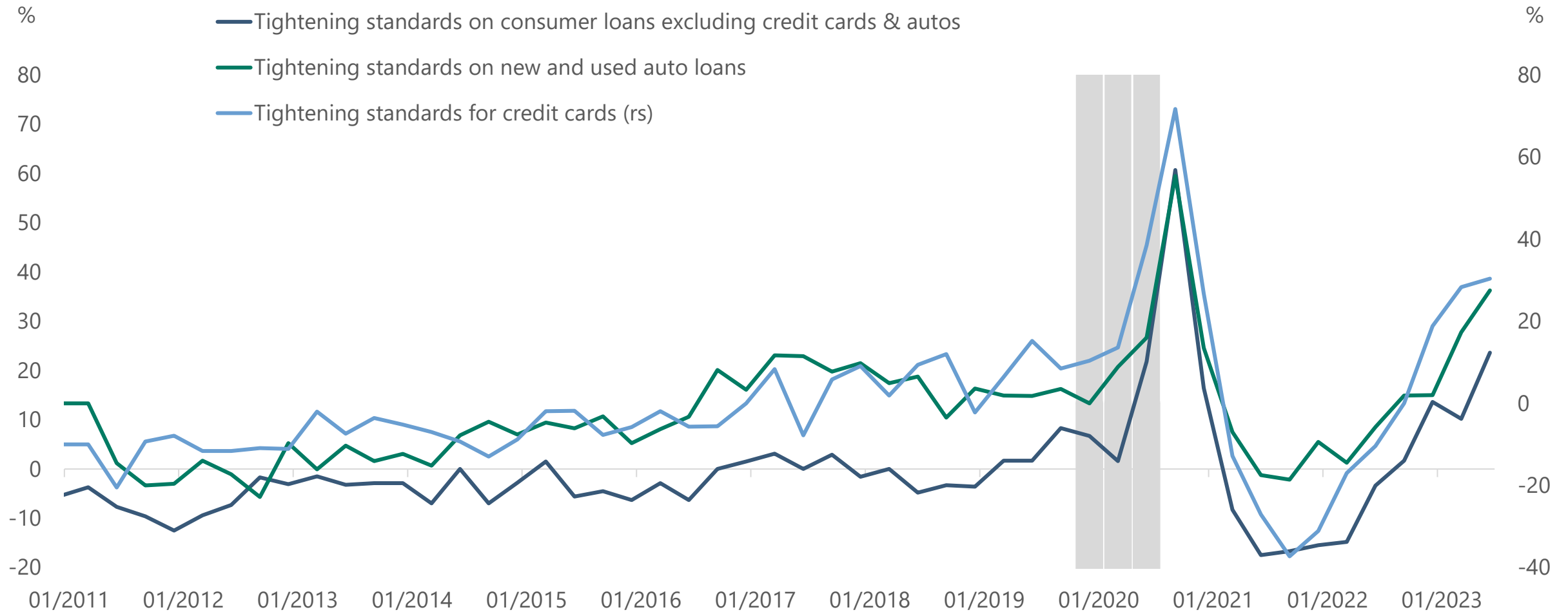
Banks' willingness to lend to customers approaching 2008 levels



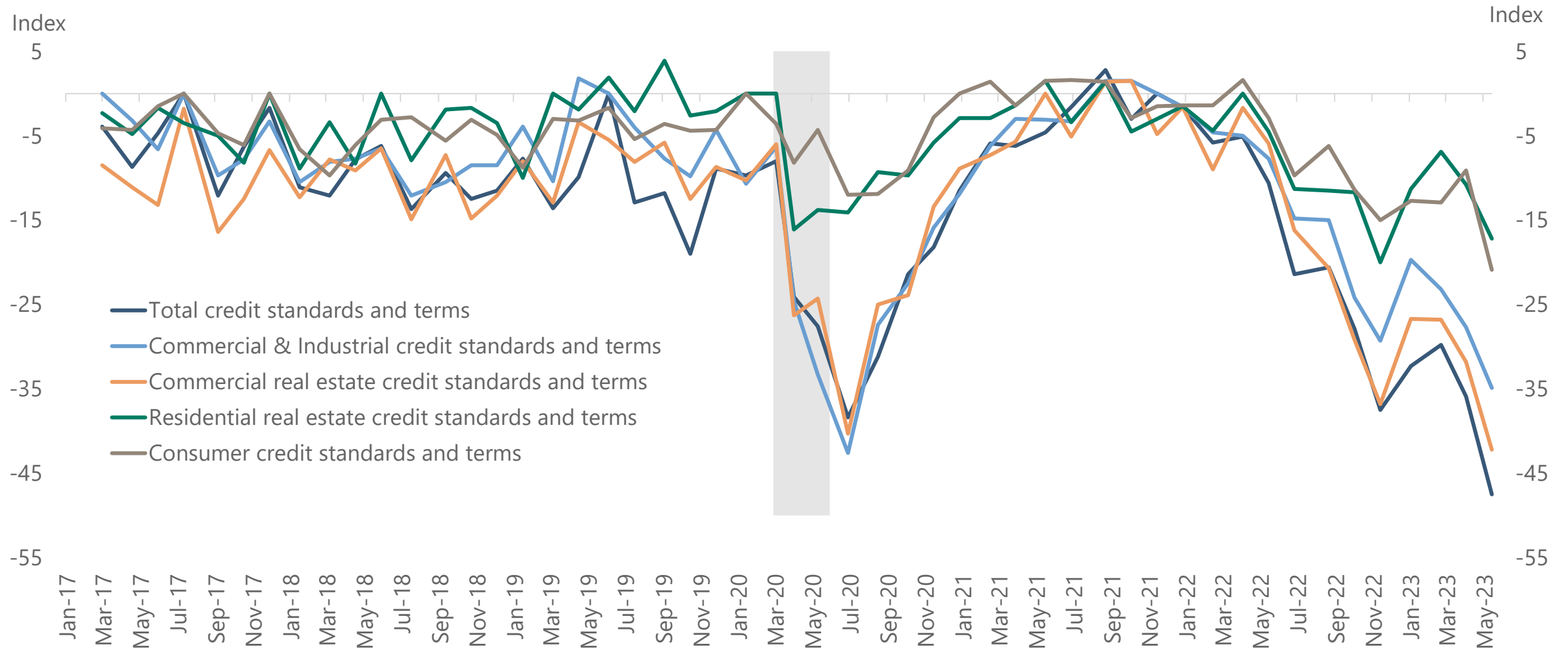
Banks are tightening lending standards significantly, near 2008 levels



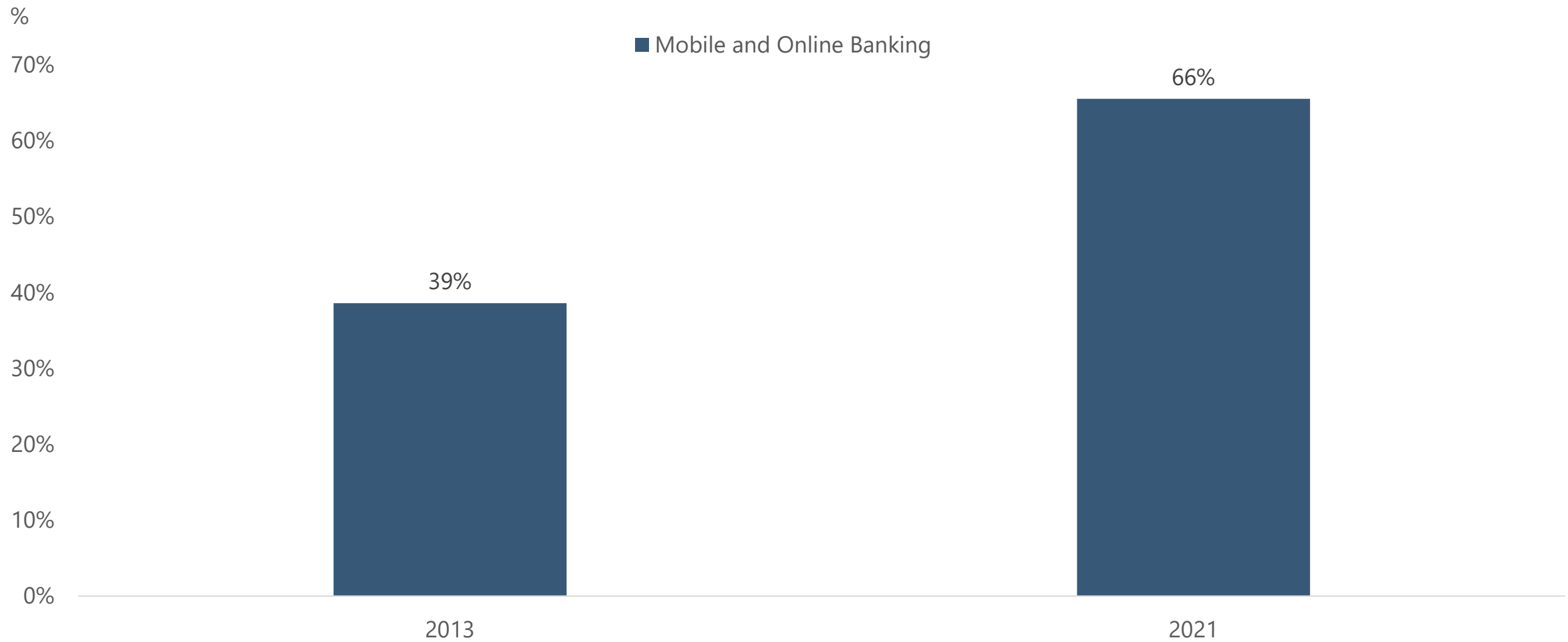
Lending standards are tightening for consumers, approaching 2008 levels



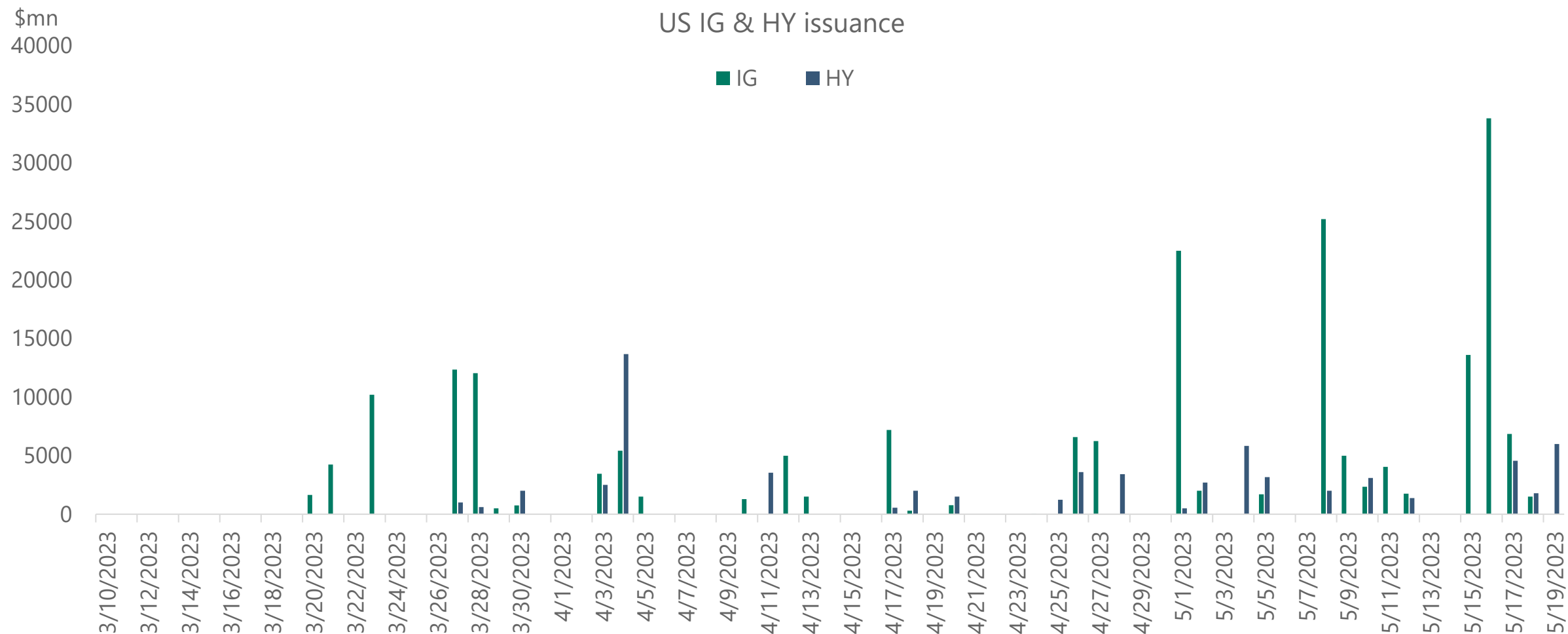
Credit standards at 2020 levels and deterioration continues



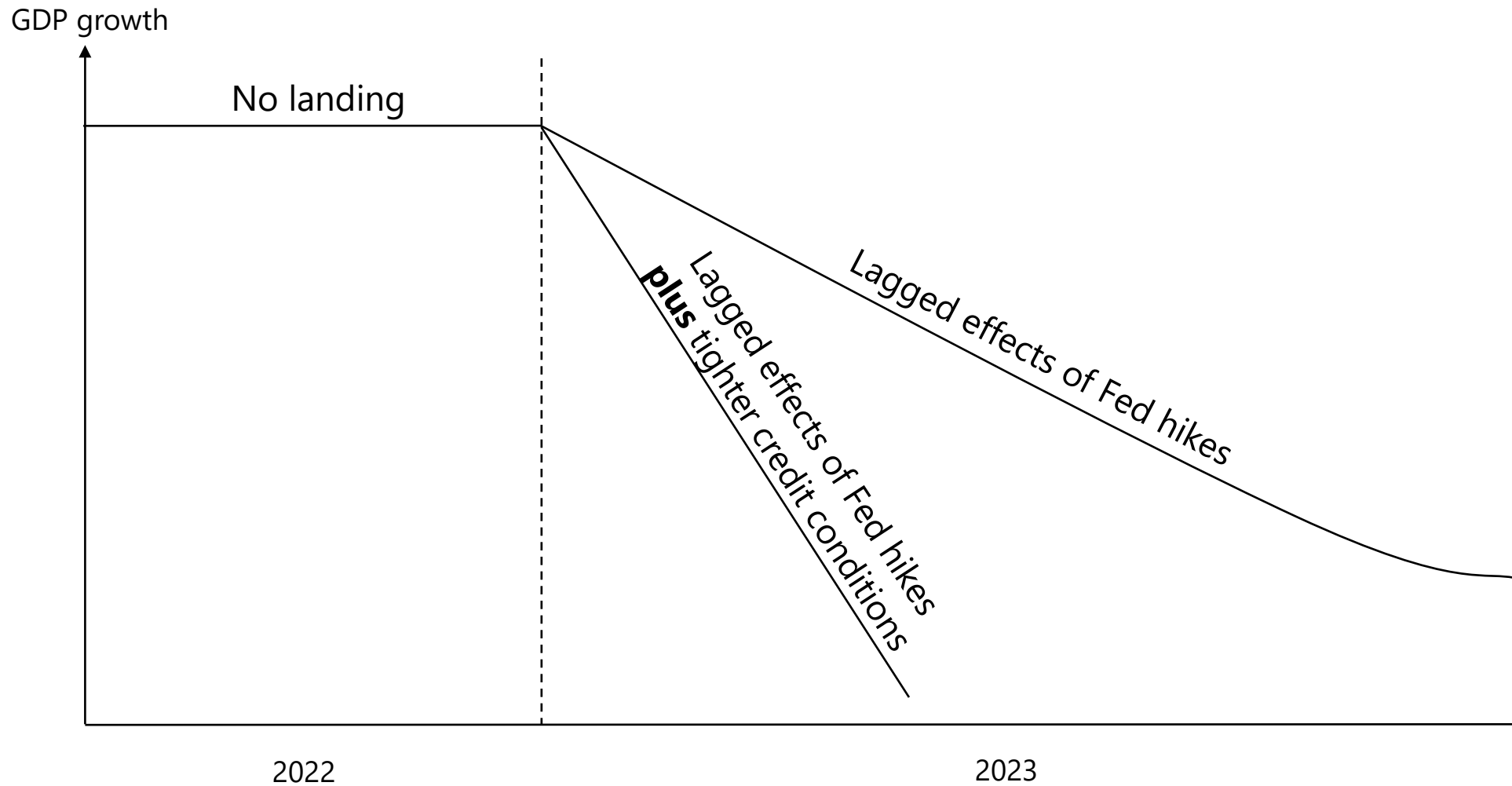
Primary method of bank account access: More and more households use mobile and online banking



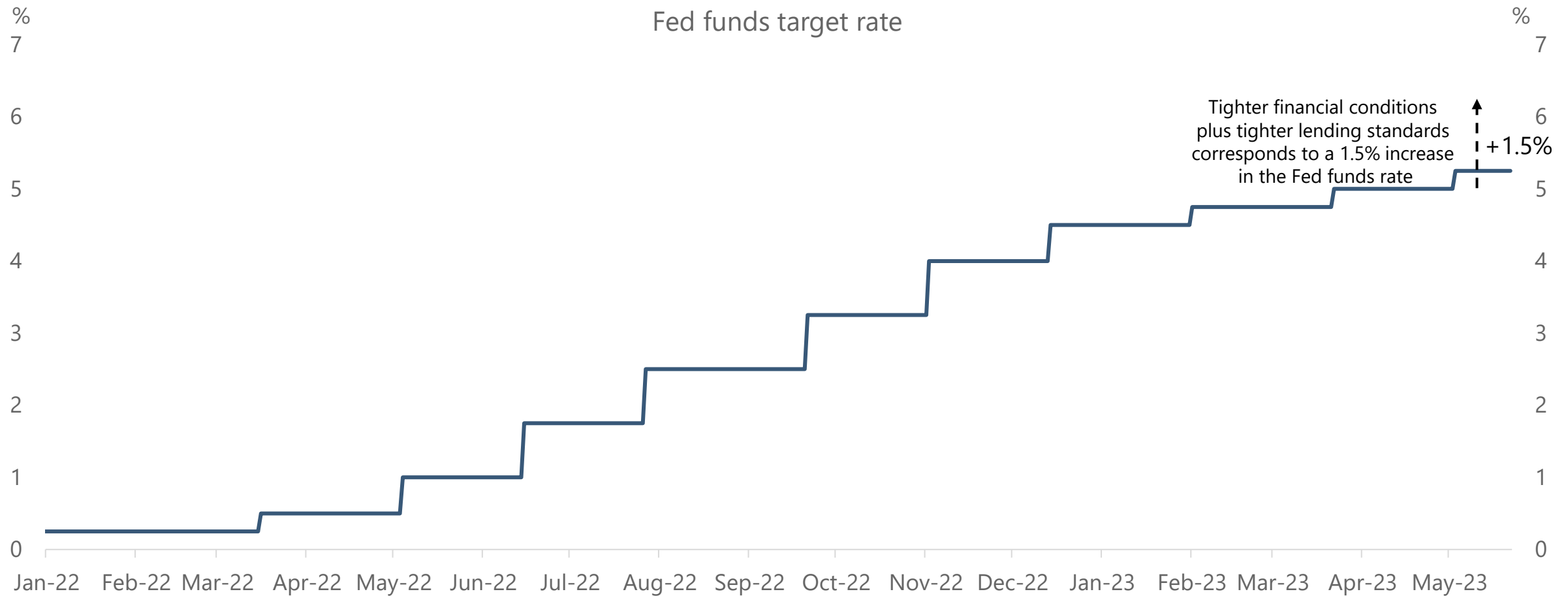
IG and HY primary issuance coming back



Lagged effects of Fed hikes combined with tighter credit conditions will create a sharper slowdown in the economy

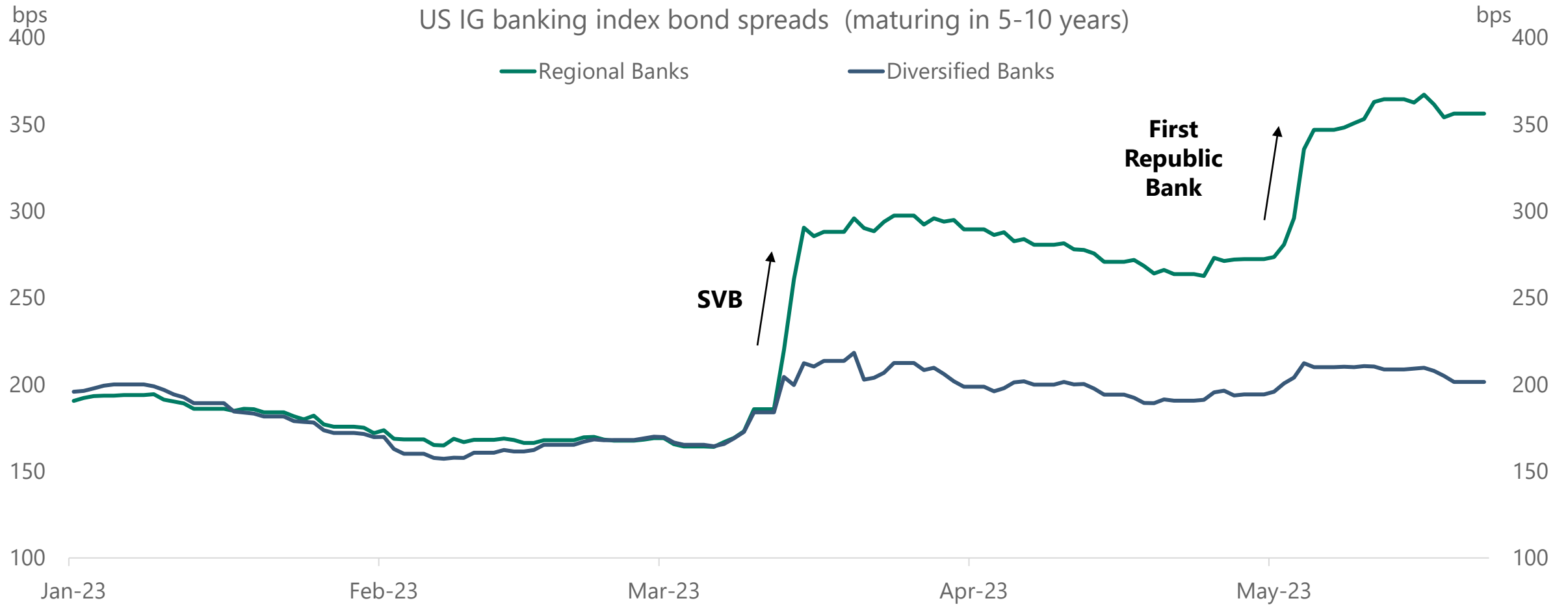


The Fed funds rate effectively pushed 1.5%-points higher after SVB because of tighter financial conditions combined with tighter lending standards



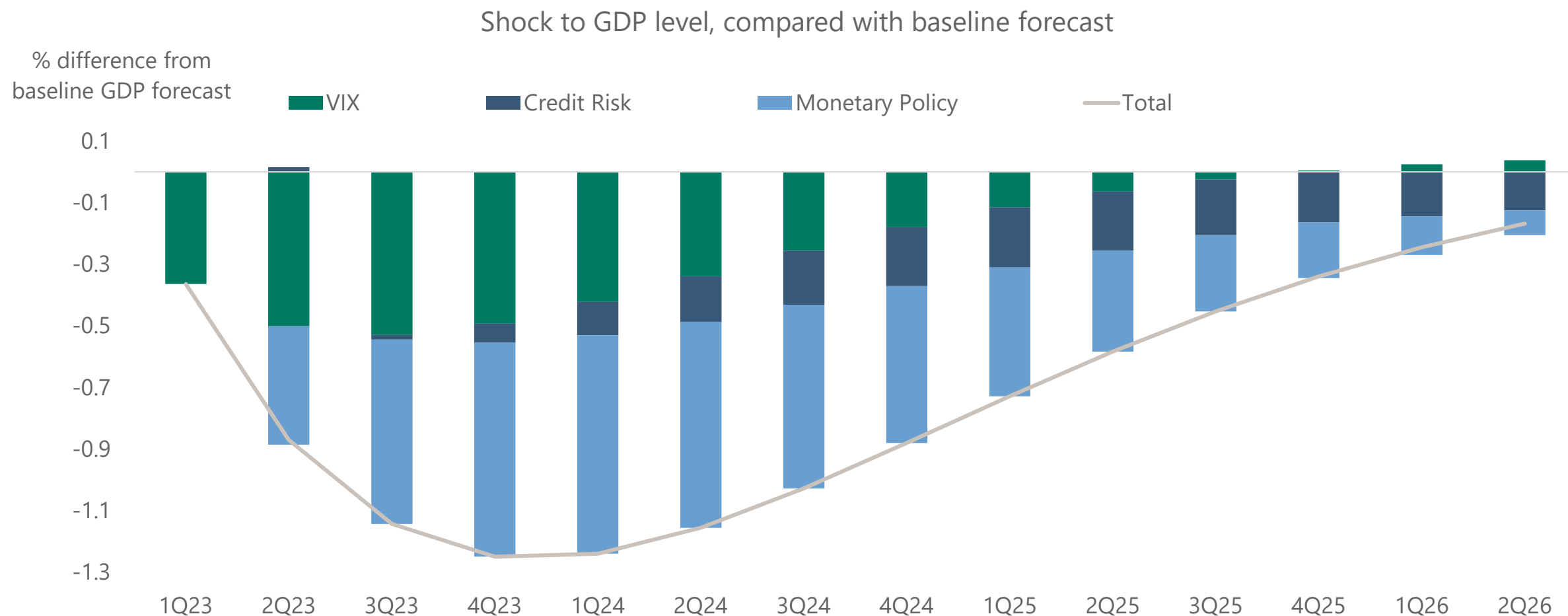
Source: Bloomberg, Apollo Chief Economist. Note: Two regression models with the Fed funds rate on the left-hand side were run to quantify the effect from tighter financial conditions and tighter lending standards, and the estimated coefficients show 0.5% higher Fed funds rate from tighter financial conditions and 1% higher Fed funds rate from tighter lending standards.

SVB and FRC lifted funding costs for banks permanently



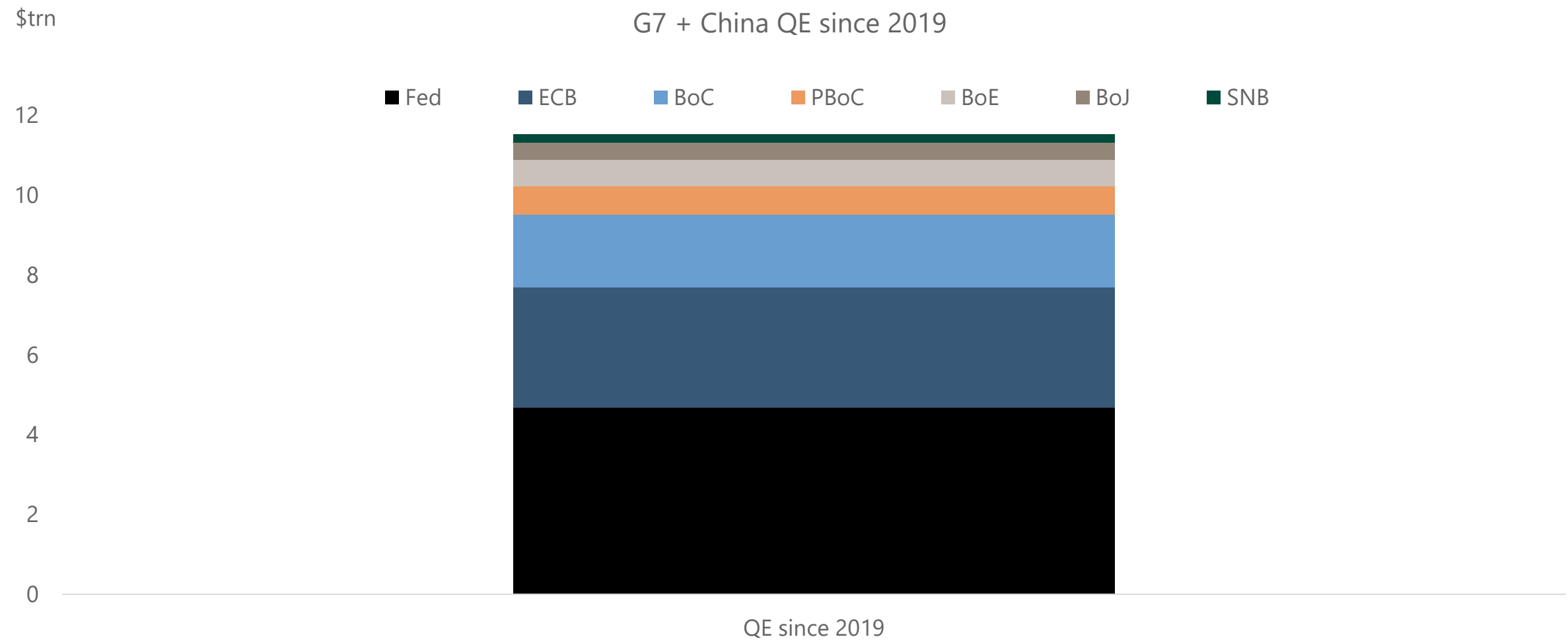
Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, C6PX Index for bonds issued before 1st Jan 2023. There are 8 banks in the Regional index and 41 banks in the Diversified index, and Regional banks include BankUnited, Citizens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

Impact on GDP if the ongoing banking crisis continues



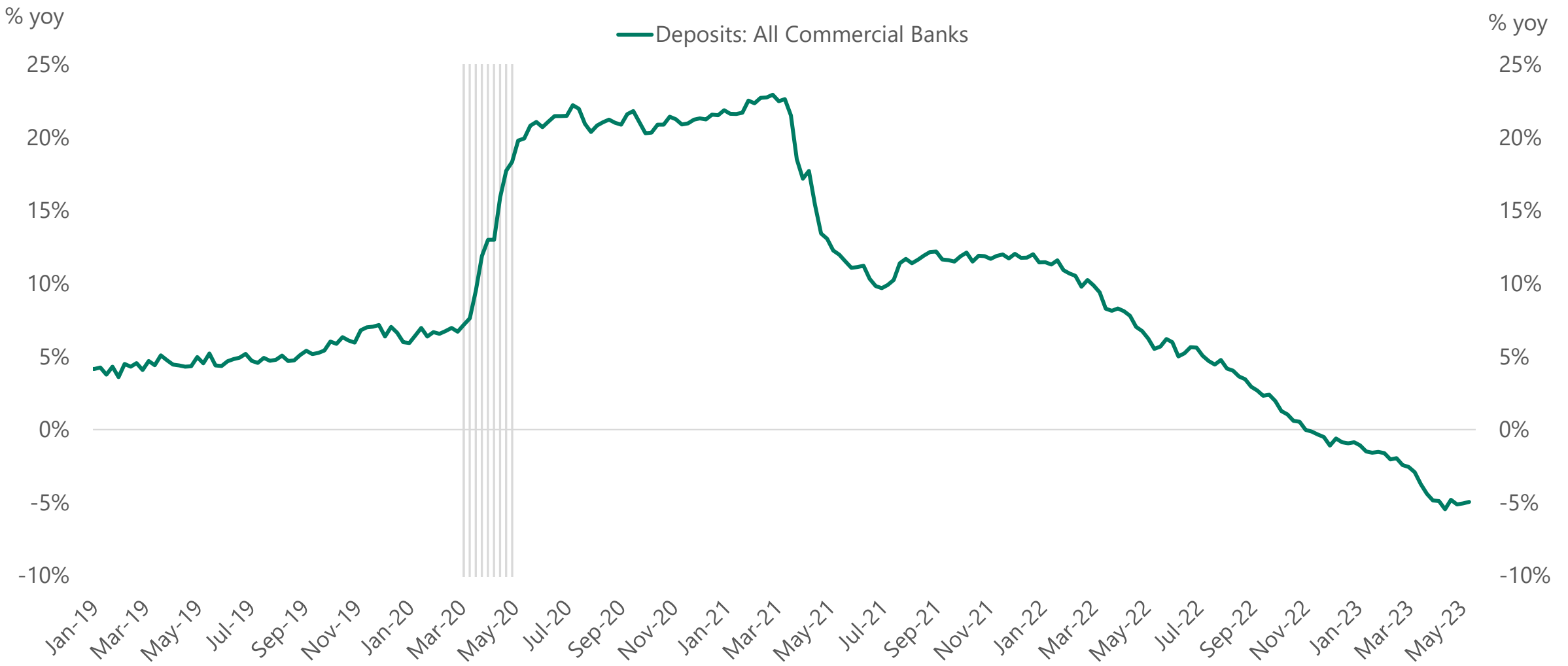
Source: Bloomberg, Apollo Chief Economist. Note: The chart shows difference in baseline forecast adding a 150bps shock to Fed funds rate and 30 bps to credit risk and a two standard deviation shock to VIX, all starting in 1Q23. VIX is currently two standard deviations from its mean since 2010.

QE added \$12trn to global liquidity since 2019



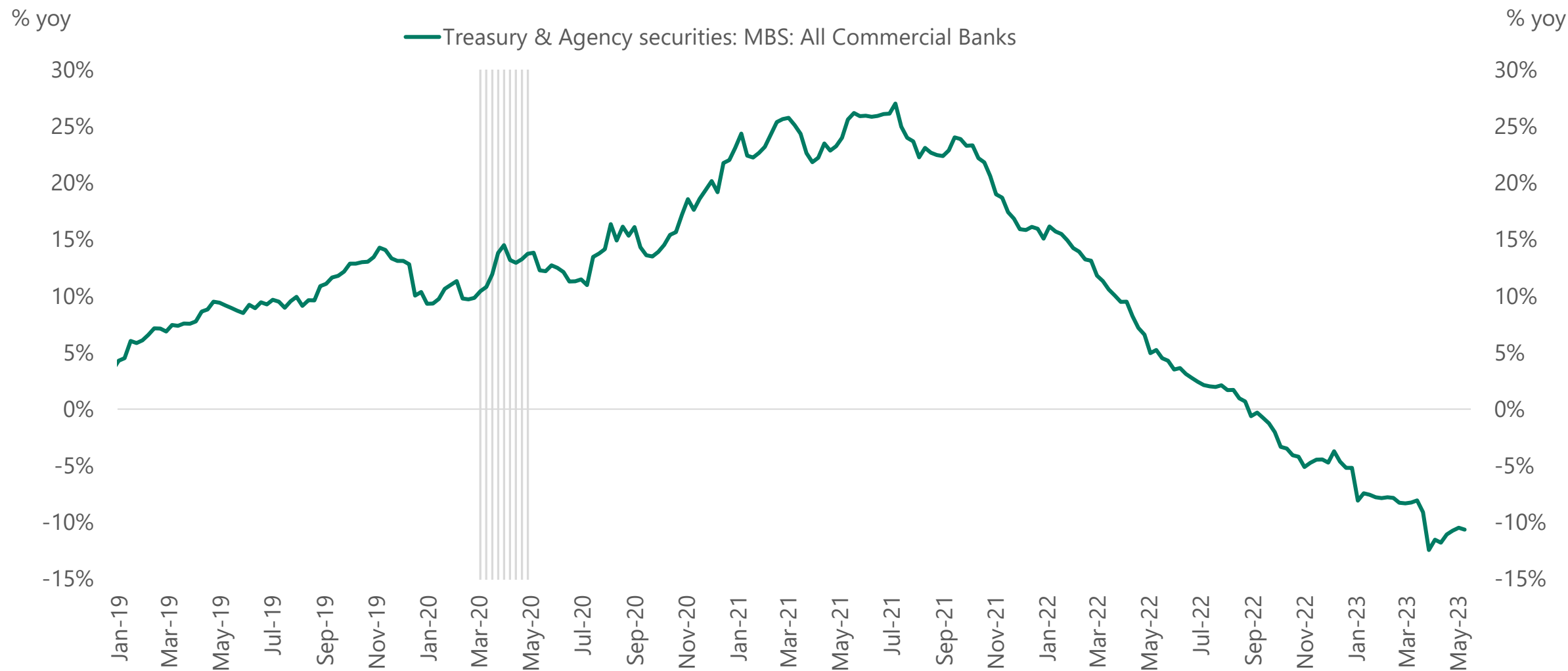
What is the banking sector response to the SVB collapse and associated deposit outflows? Cutting lending and selling mortgages

Negative growth in deposits

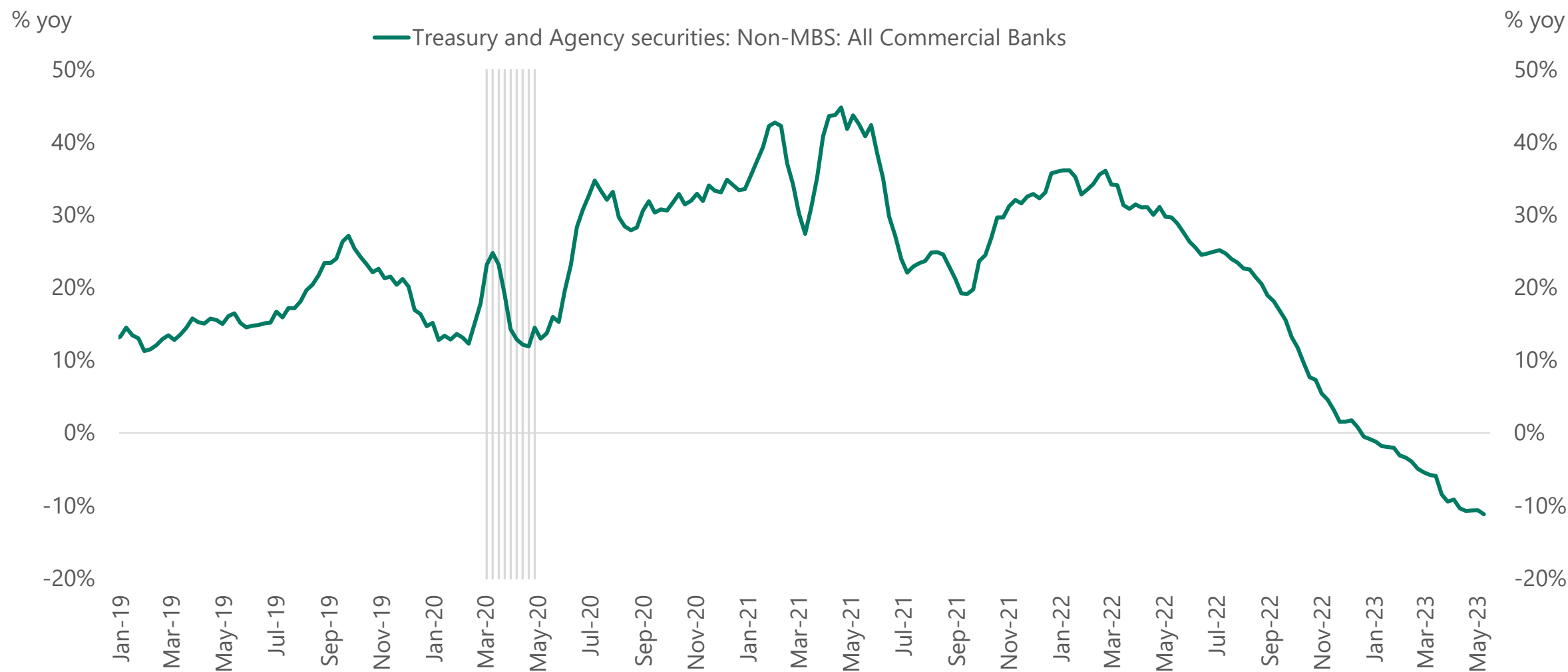


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

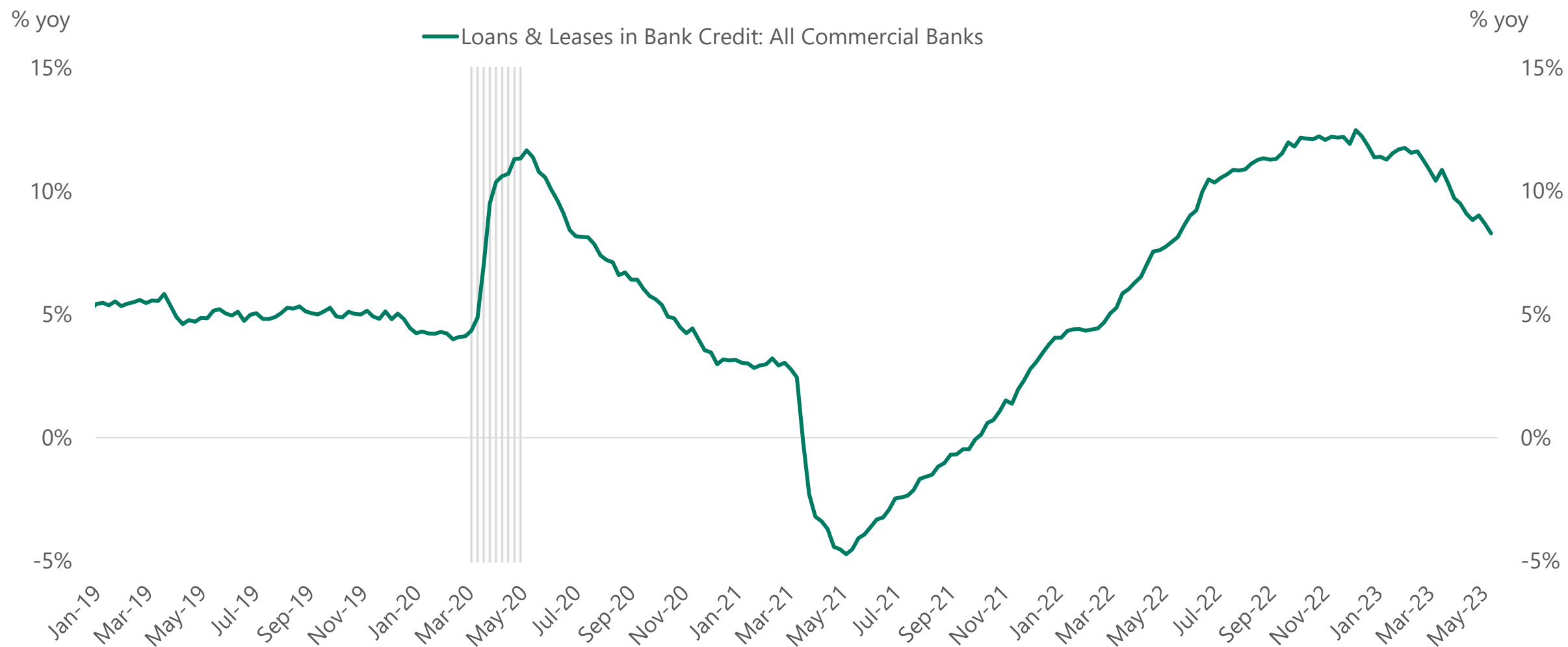
Negative growth in bank holdings of mortgages



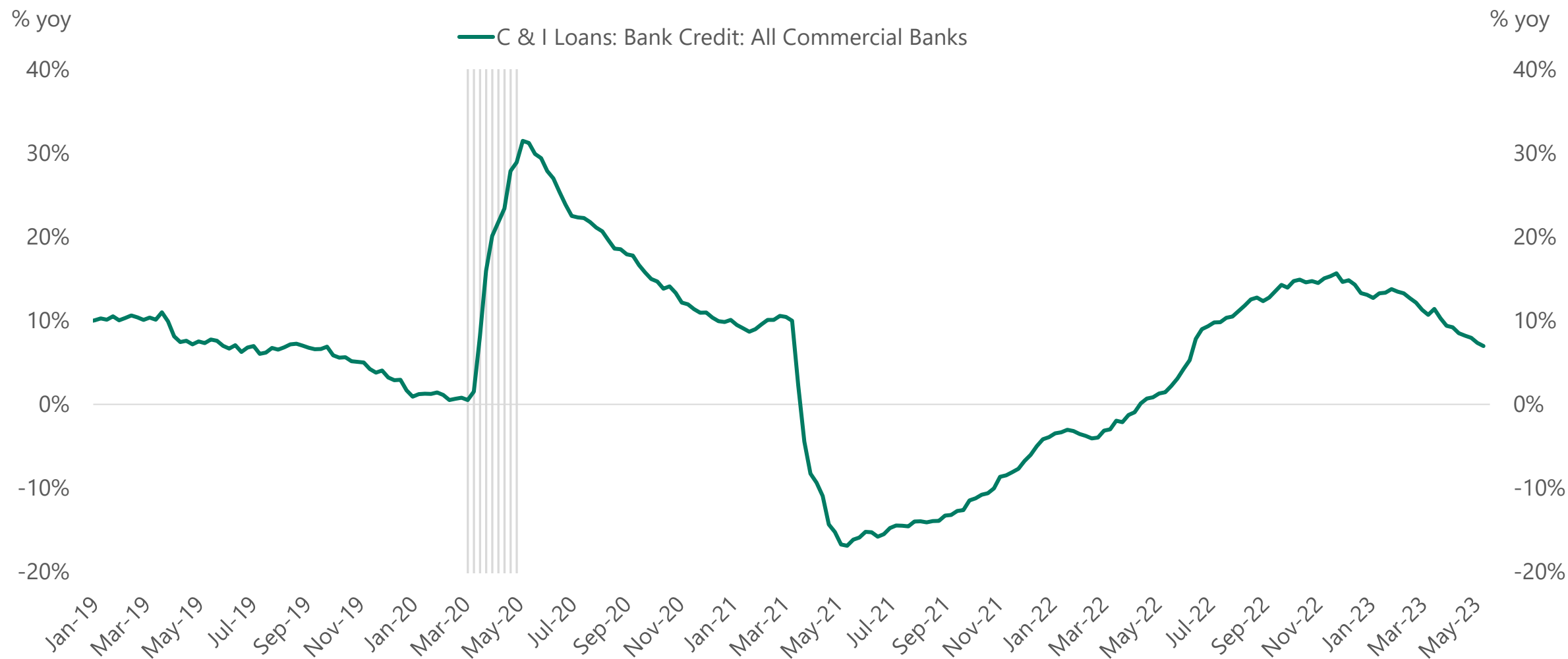
Growth in bank holdings of Treasuries



Some decline in bank lending growth



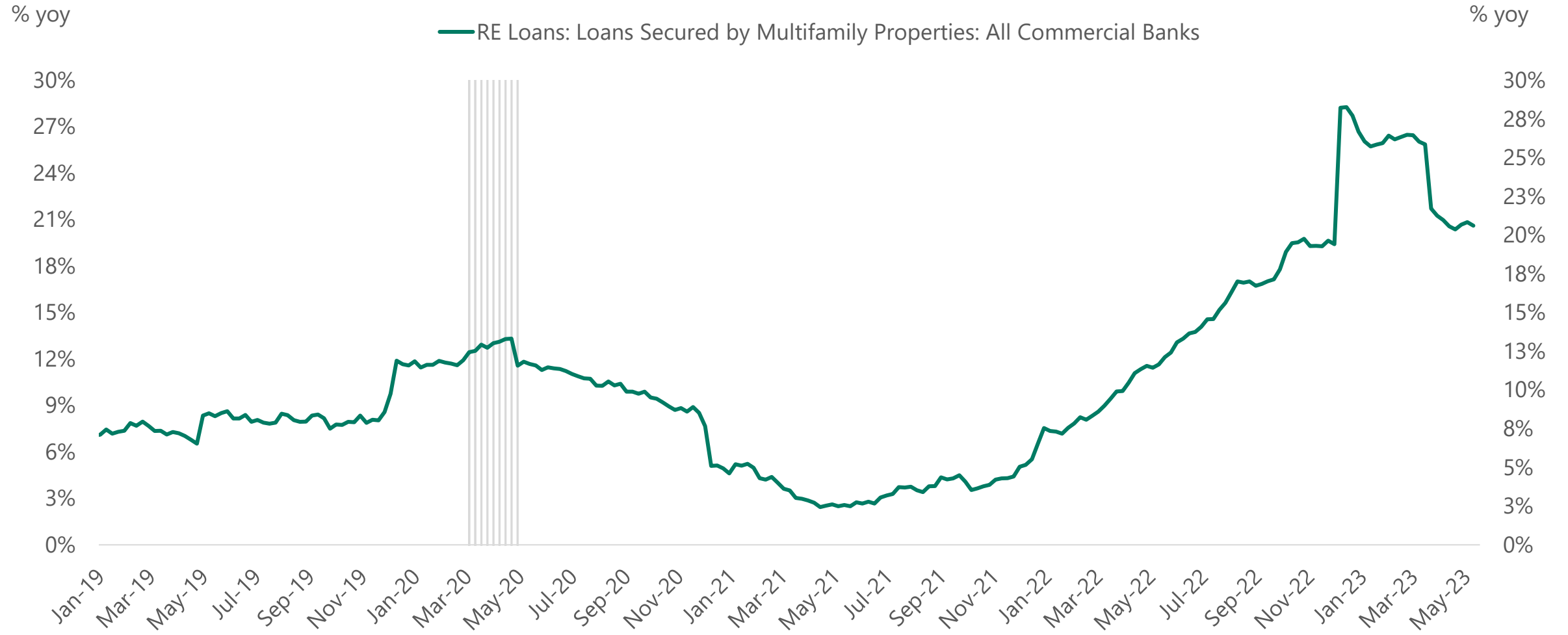
Decline in growth in lending to corporates



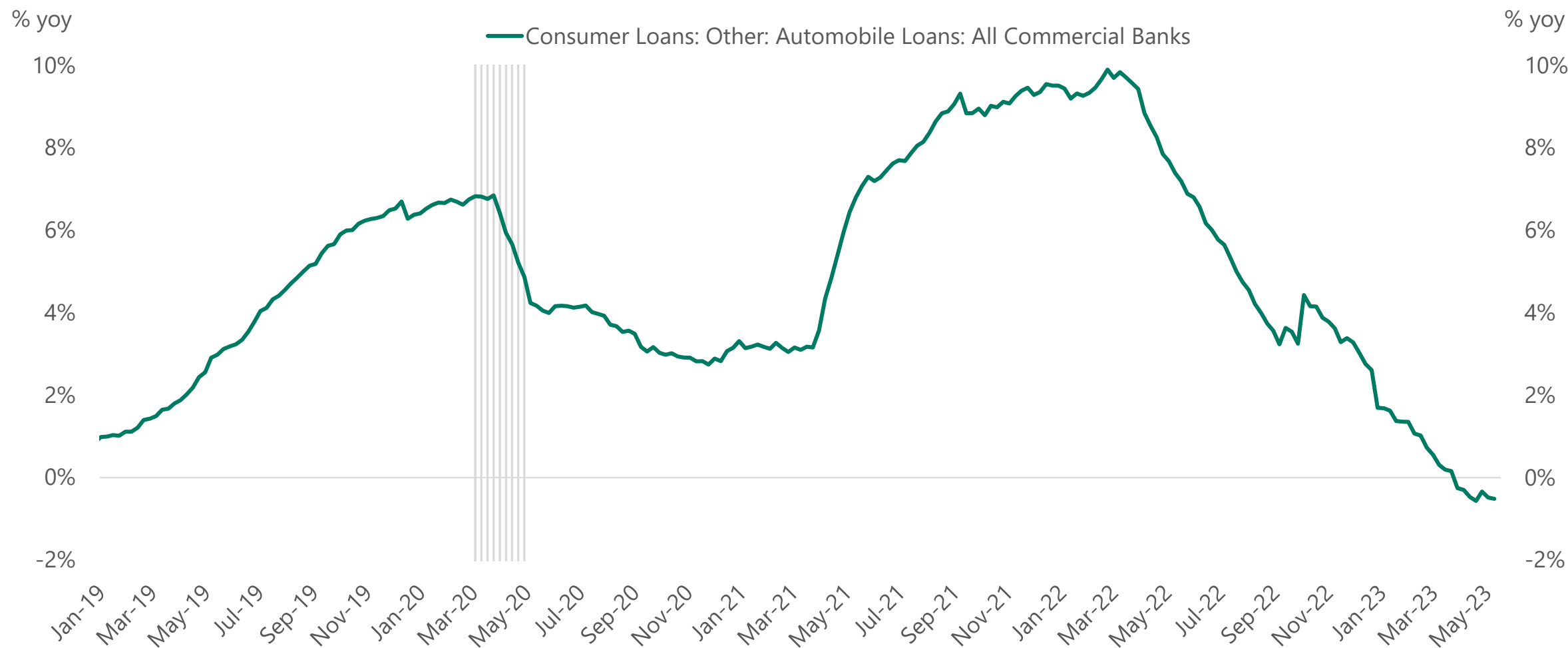
Decline in growth in real estate lending



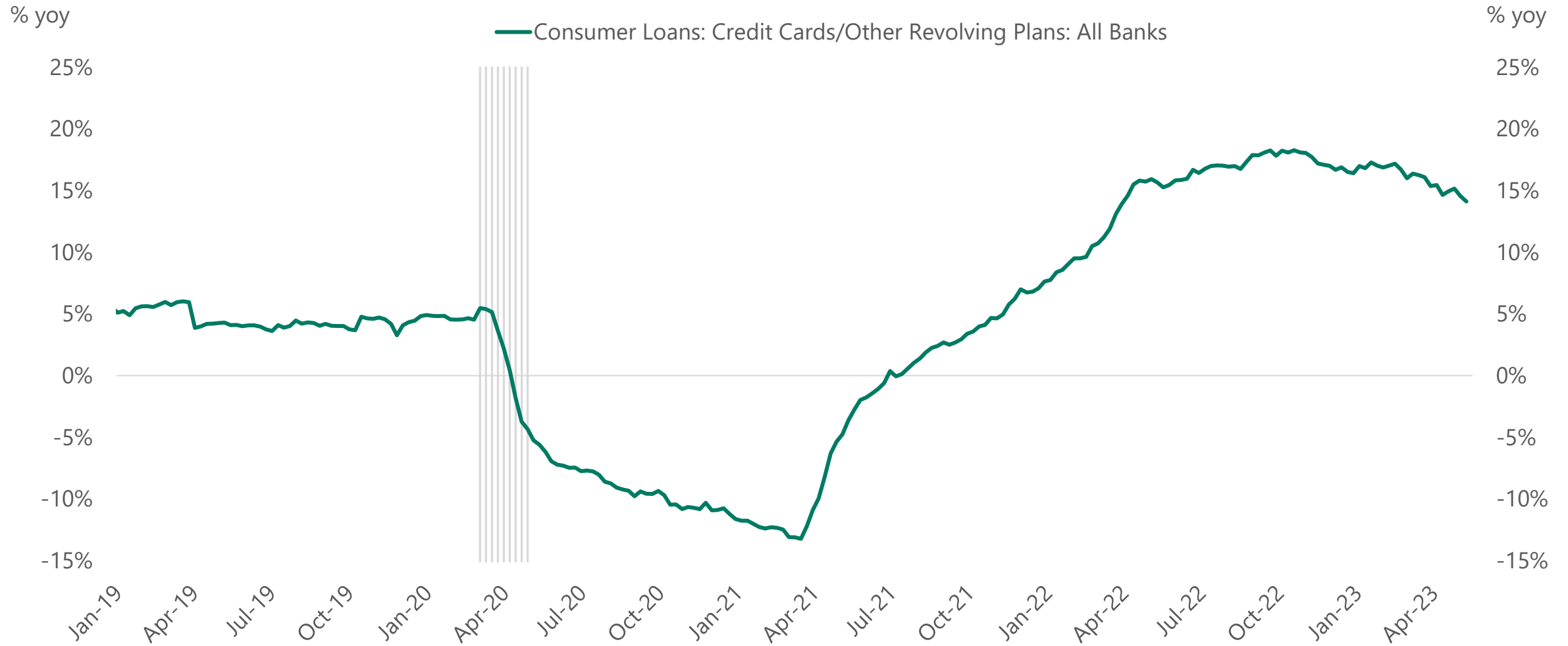
Decline in growth in lending to multifamily construction



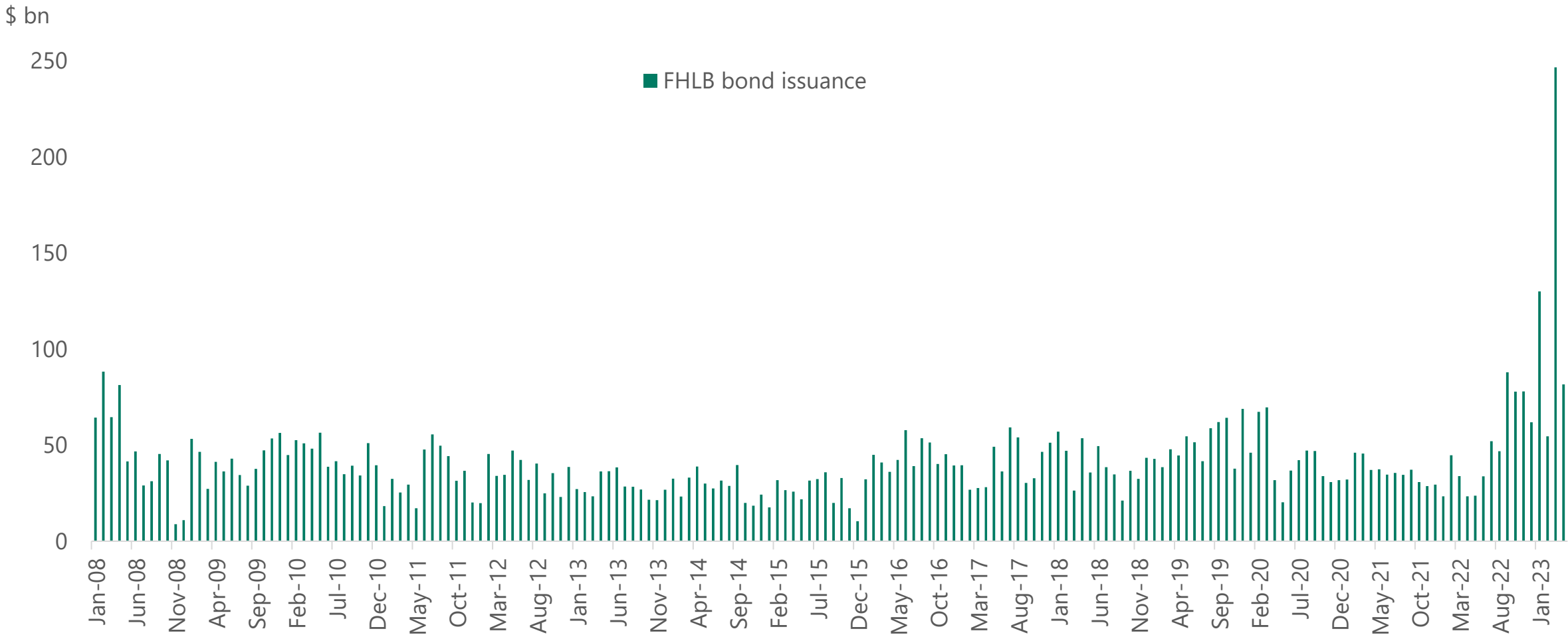
Negative growth in auto loan lending



Some decline in growth in credit card lending



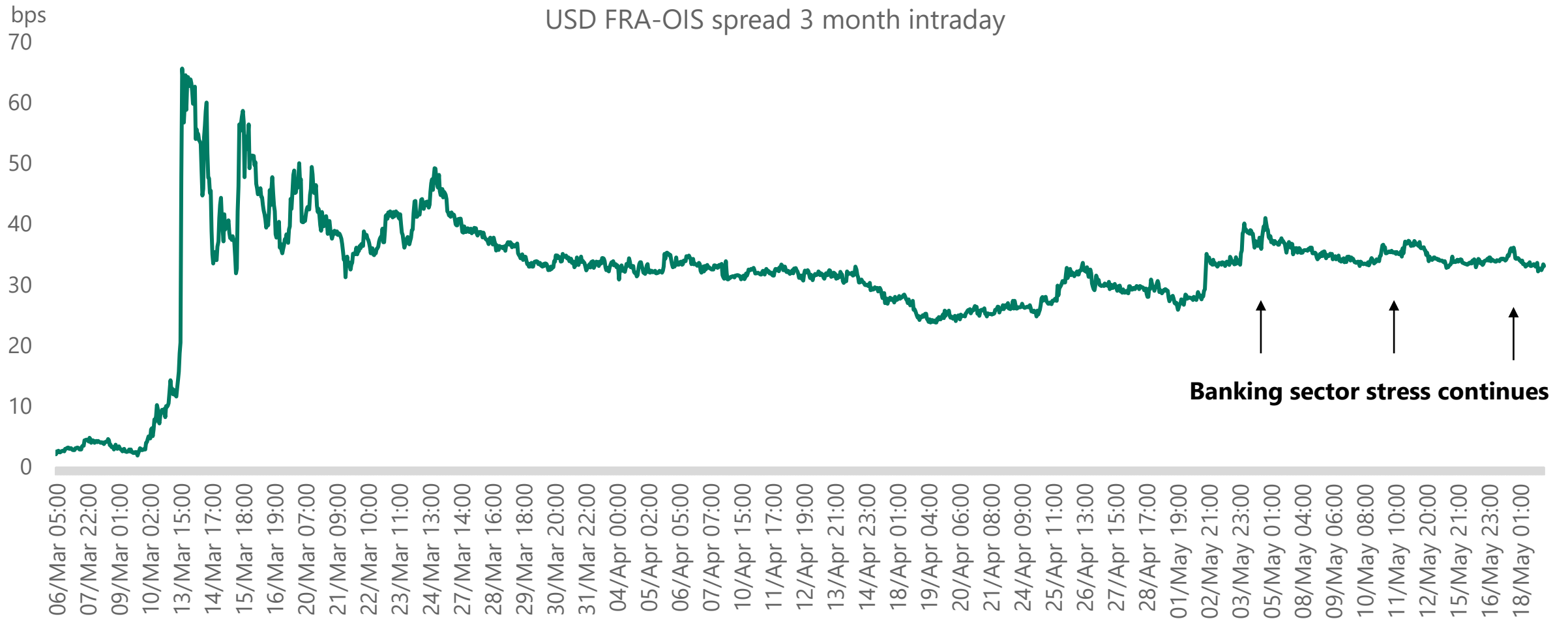
The FHLB system remains elevated



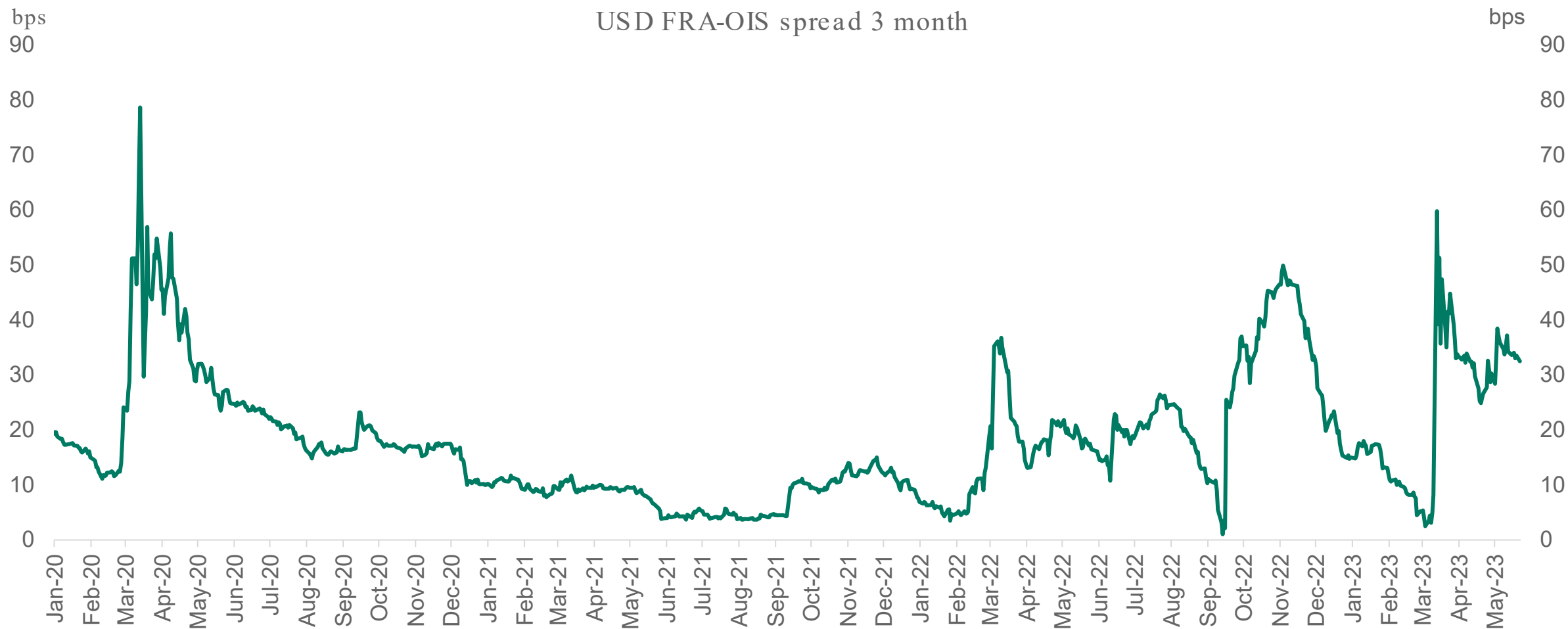
Source: FHLB, Haver, Apollo Chief Economist.

Bank funding pressures:
Deposits and market-based measures

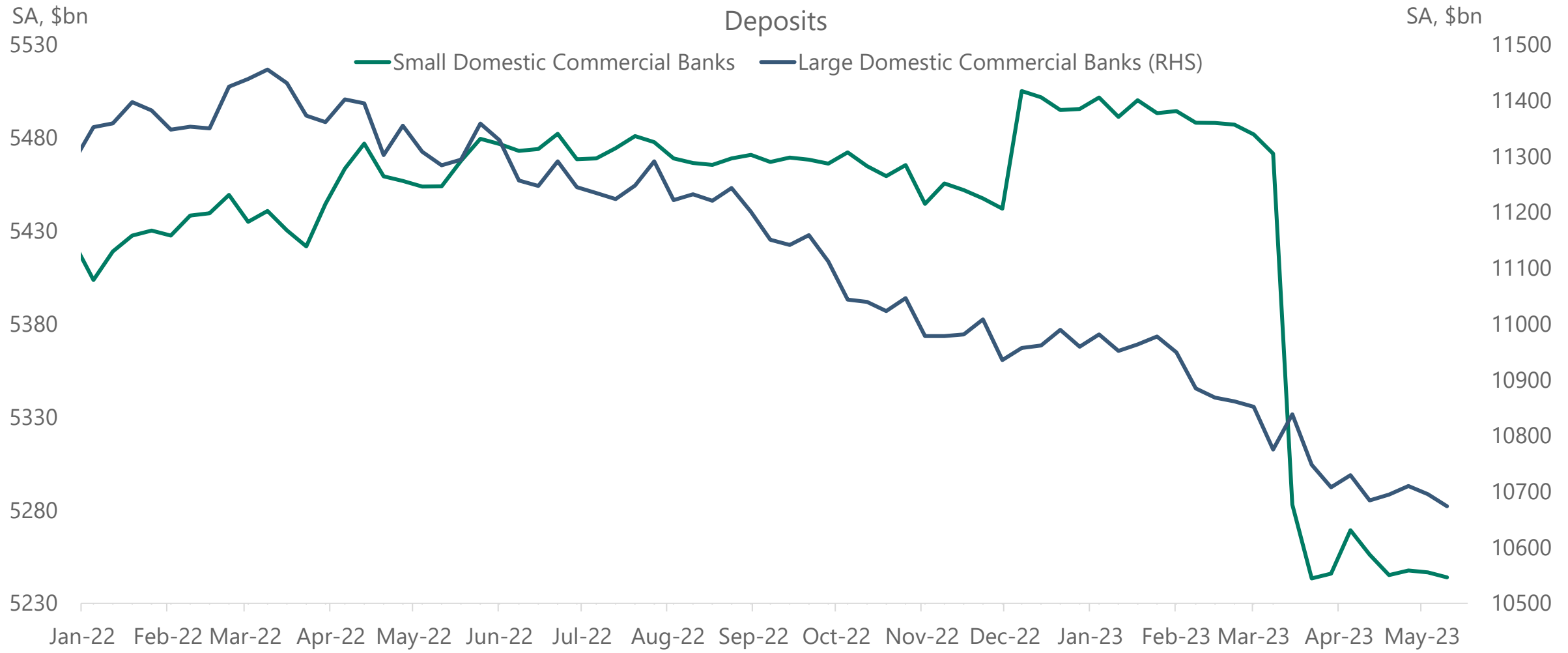
Bank funding costs widening out: FRA-OIS spread remains elevated



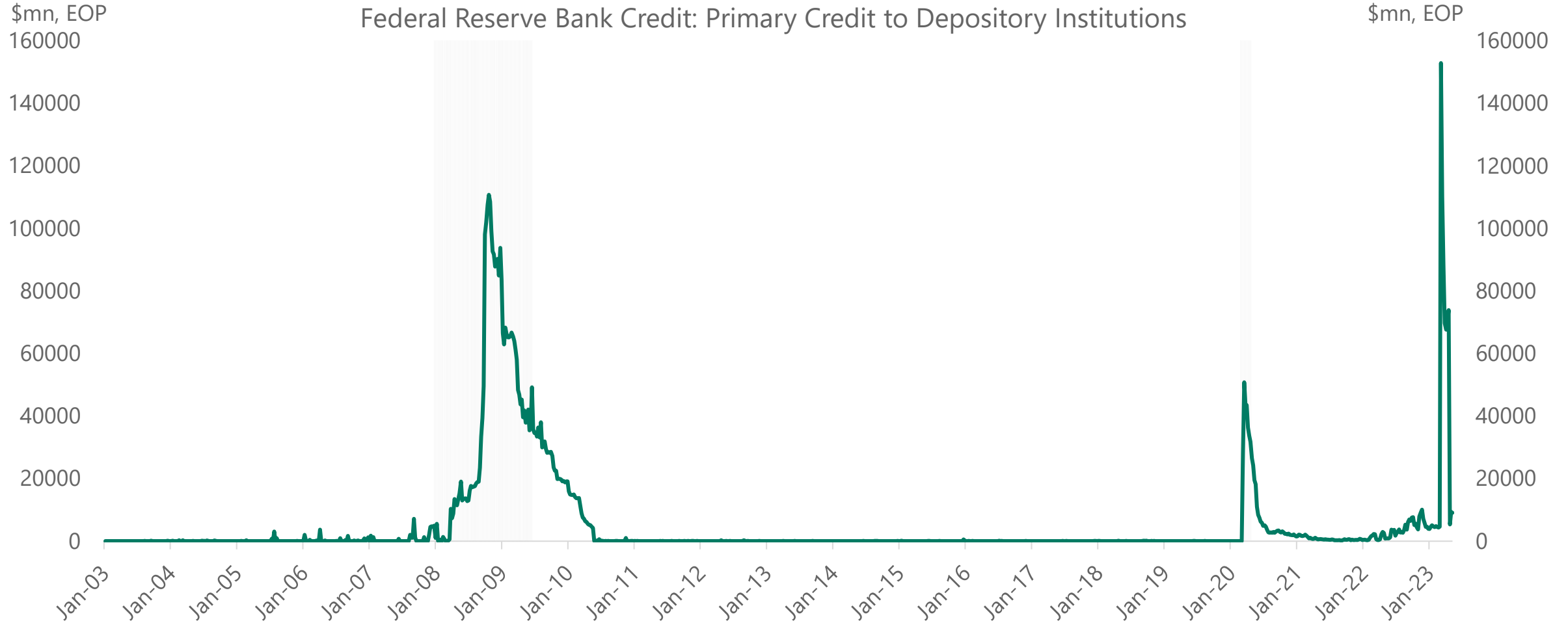
FRA-OIS spread at levels seen in March 2020



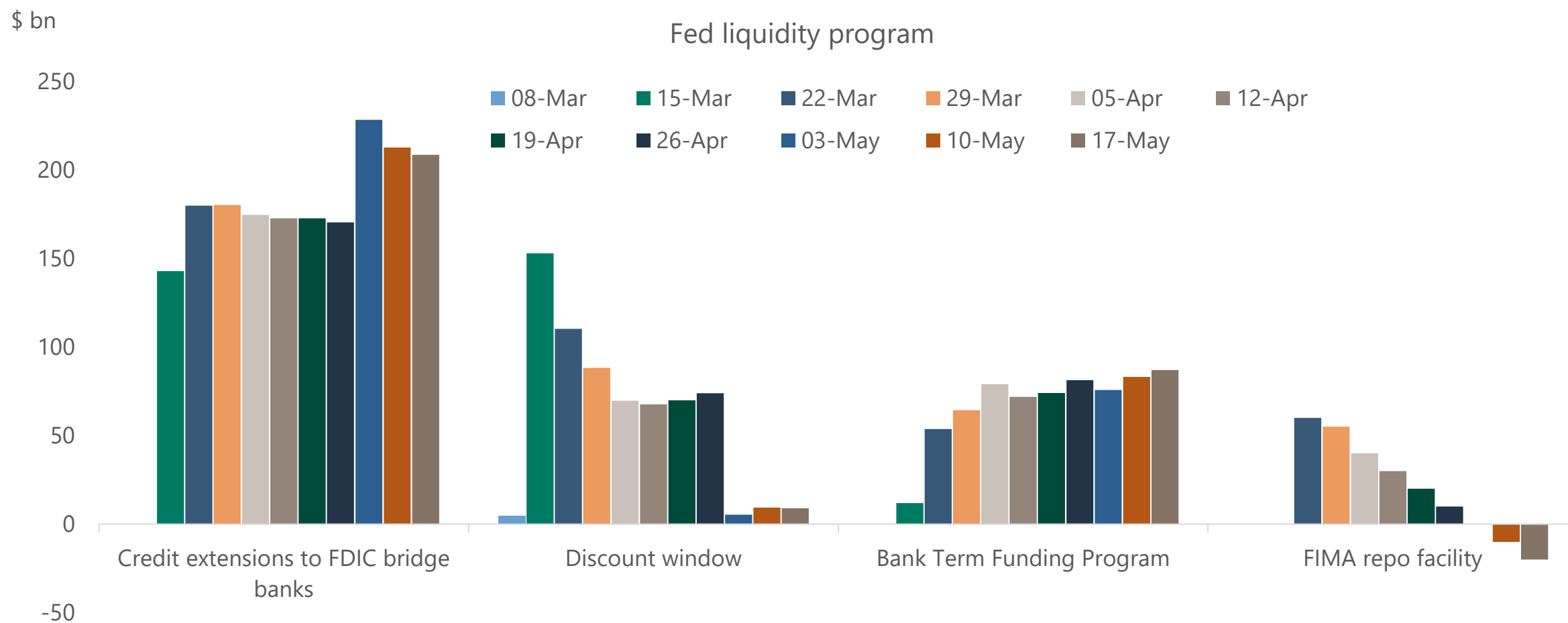
Deposits declining in small and large banks



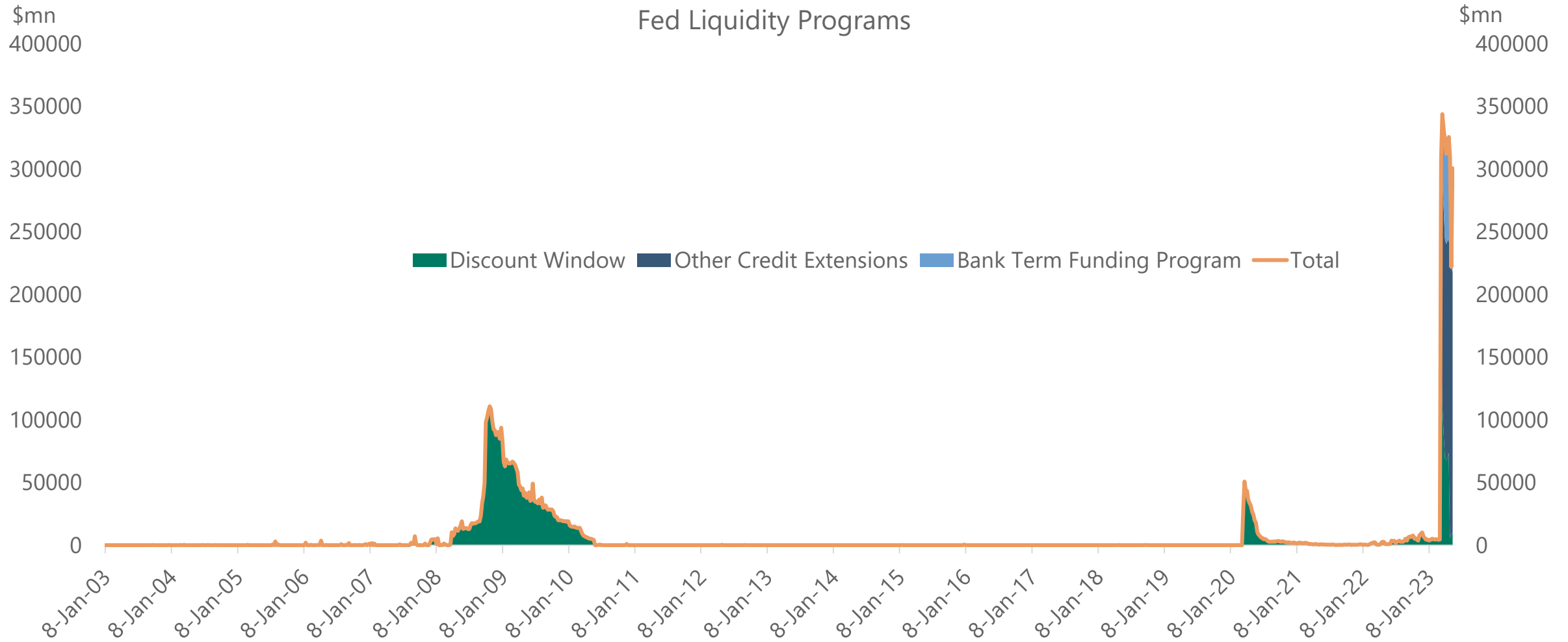
Fed Discount Window borrowing higher than in 2008



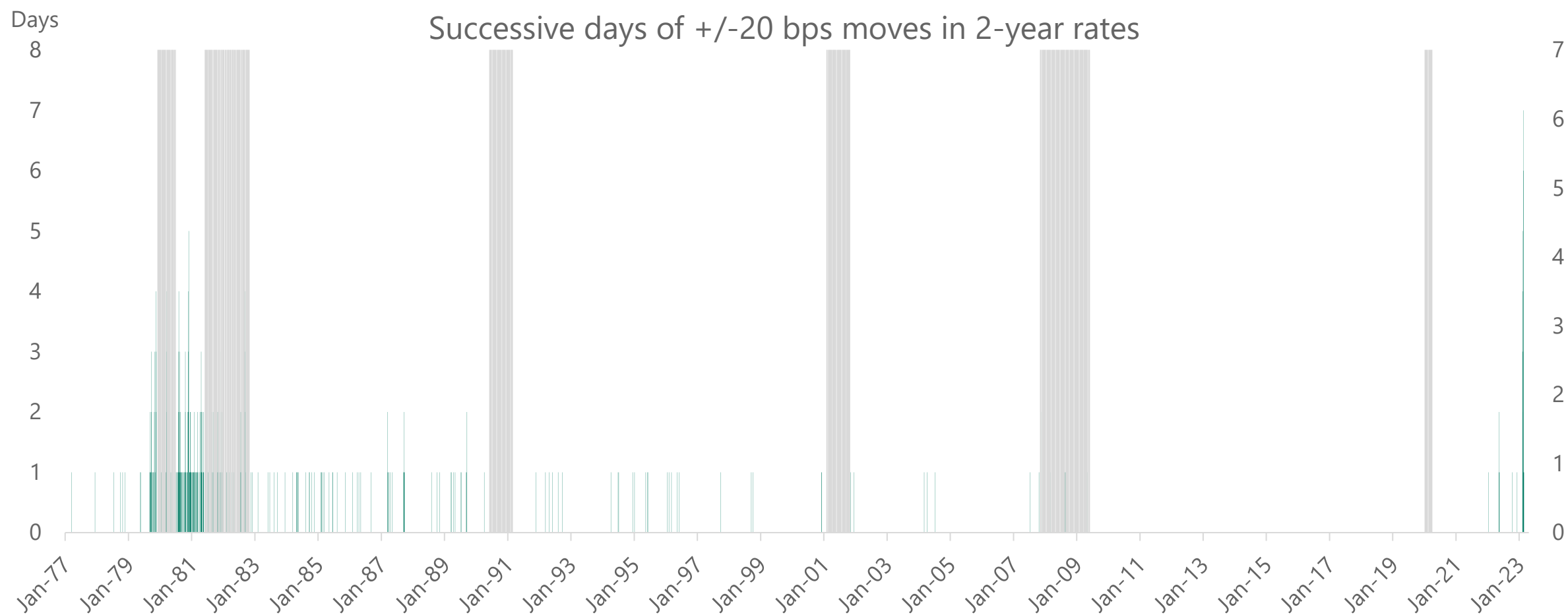
Fed liquidity programs



Fed liquidity borrowing higher than in 2008



Record-high volatility in fixed income markets

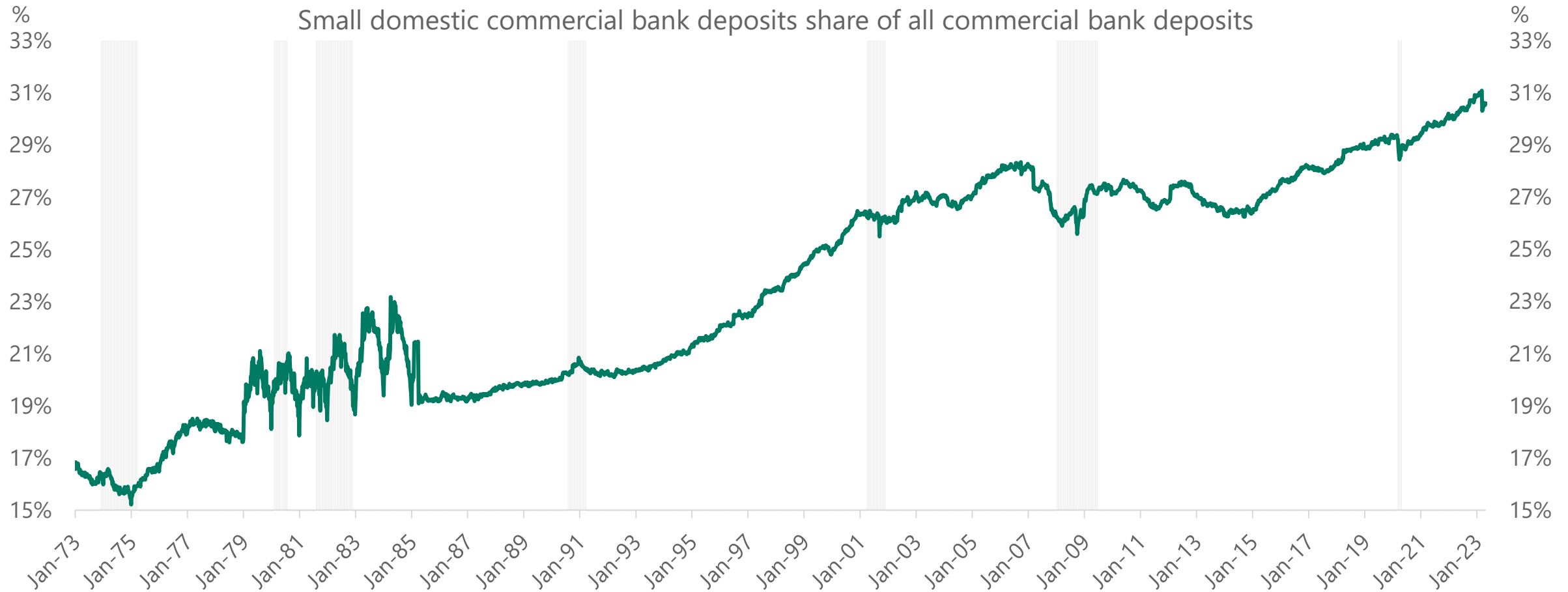


SOFR spreads currently pricing aggressive rate cuts

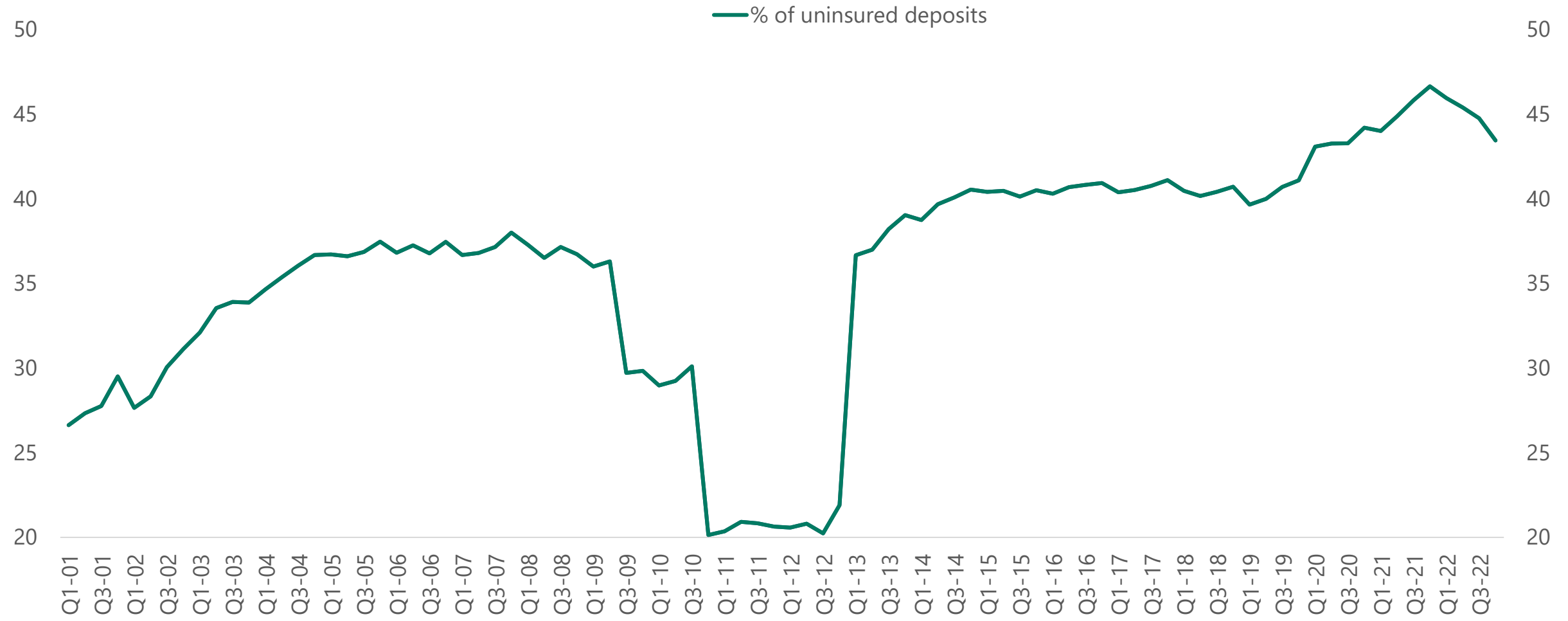


What is happening with deposits in regional banks?

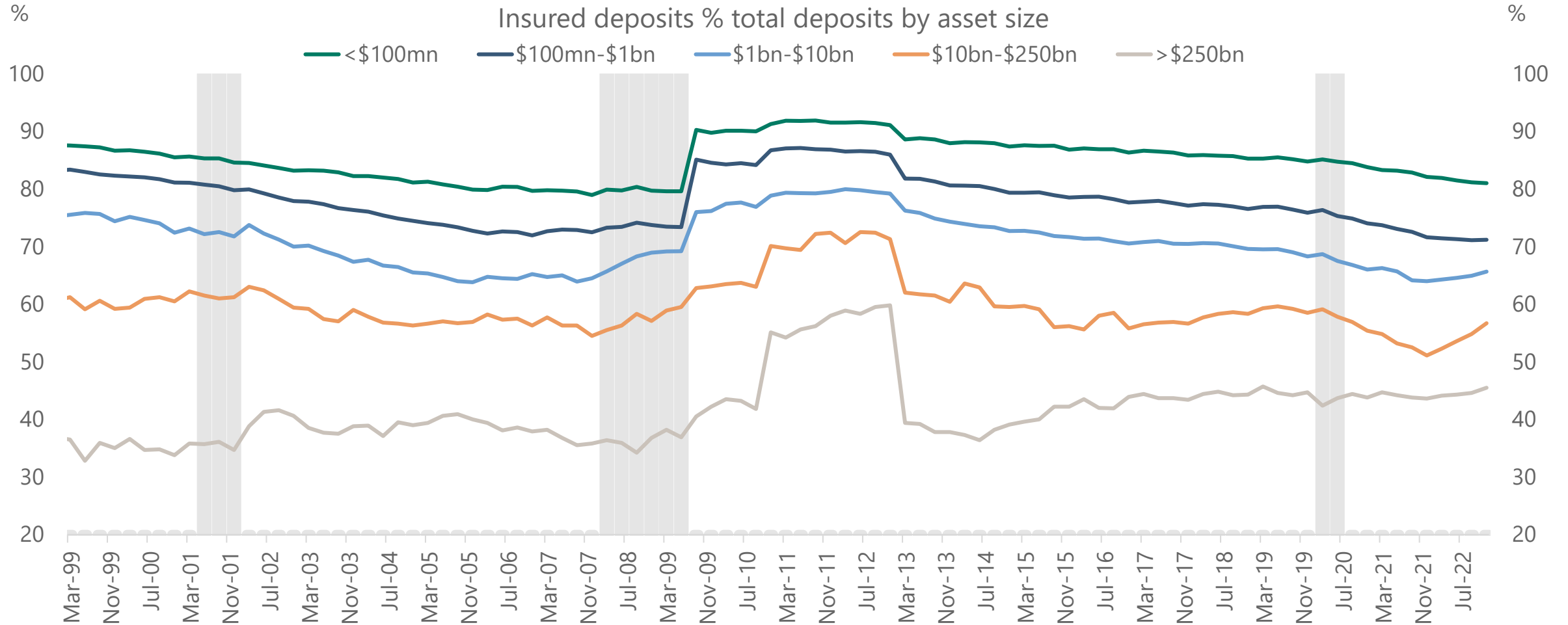
Small banks account for about 1/3 of total deposits in the banking sector and the share has been rising since the 2008 financial crisis



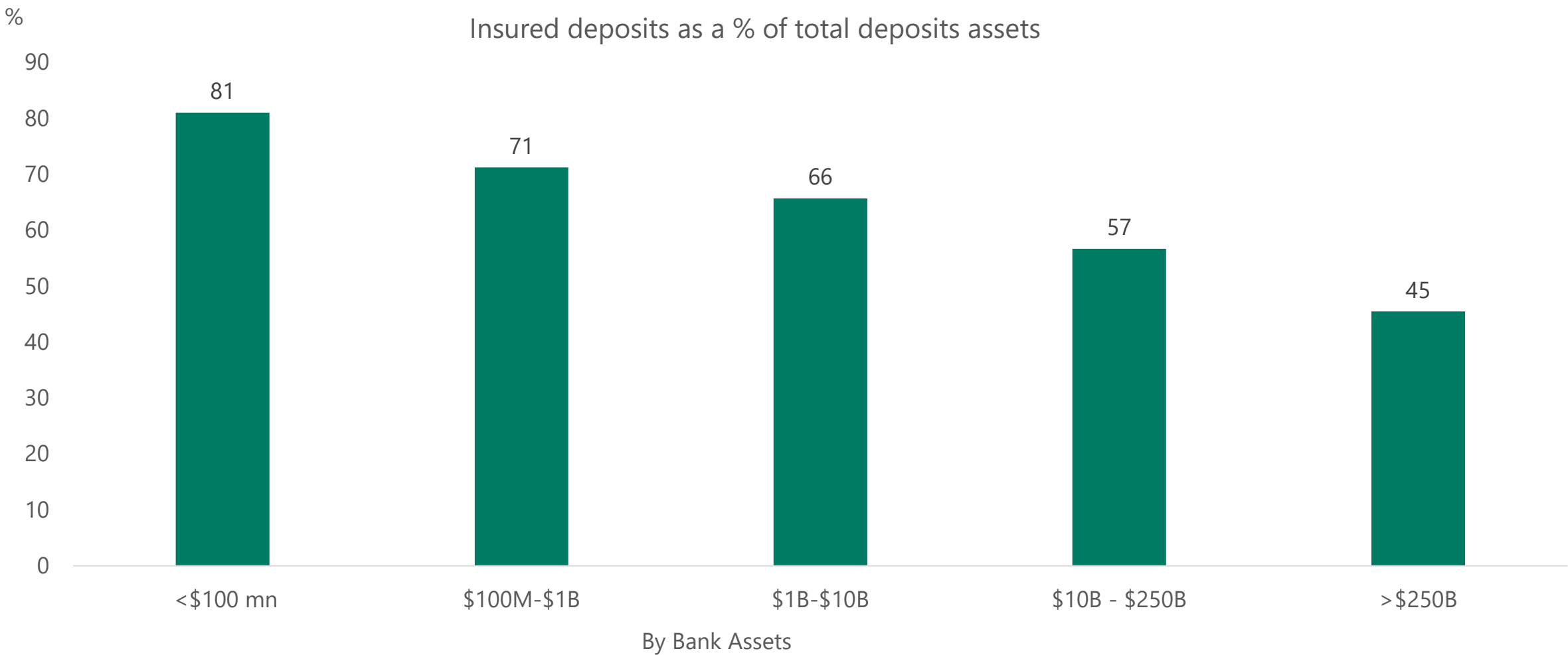
Share of total bank deposits that are uninsured: 43%



Share of insured deposits, by bank size

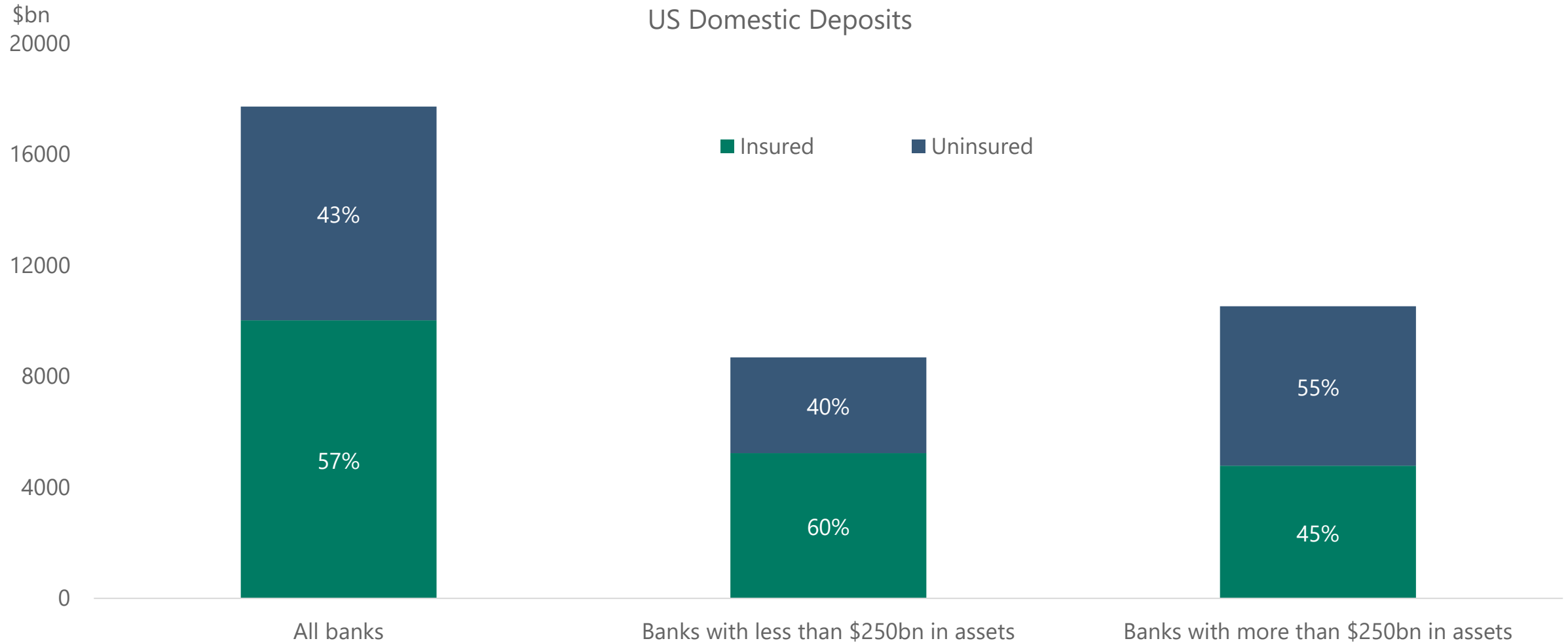


Share of insured deposits, by bank size

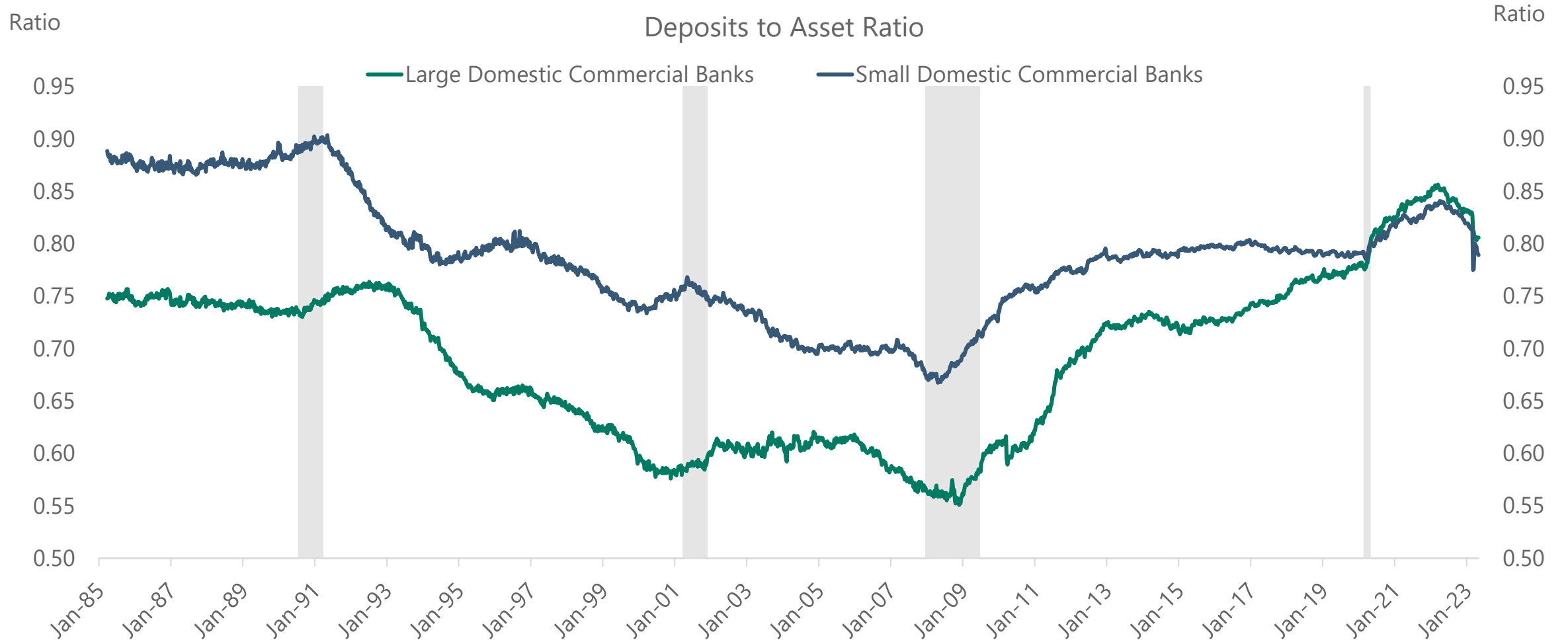


Source: FDIC, Haver Analytics, Apollo Chief Economist. As of Q4 2022

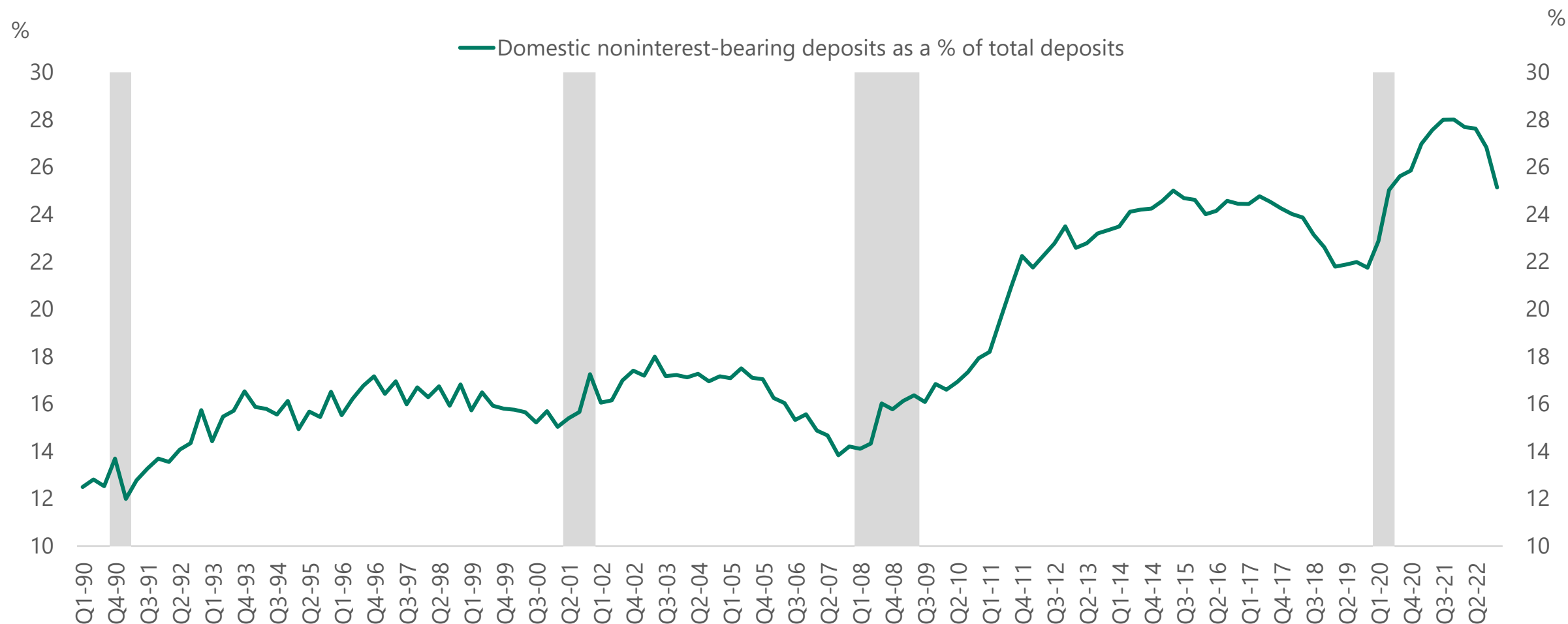
Share of insured deposits, by bank size



Deposit to asset ratio for large and small banks

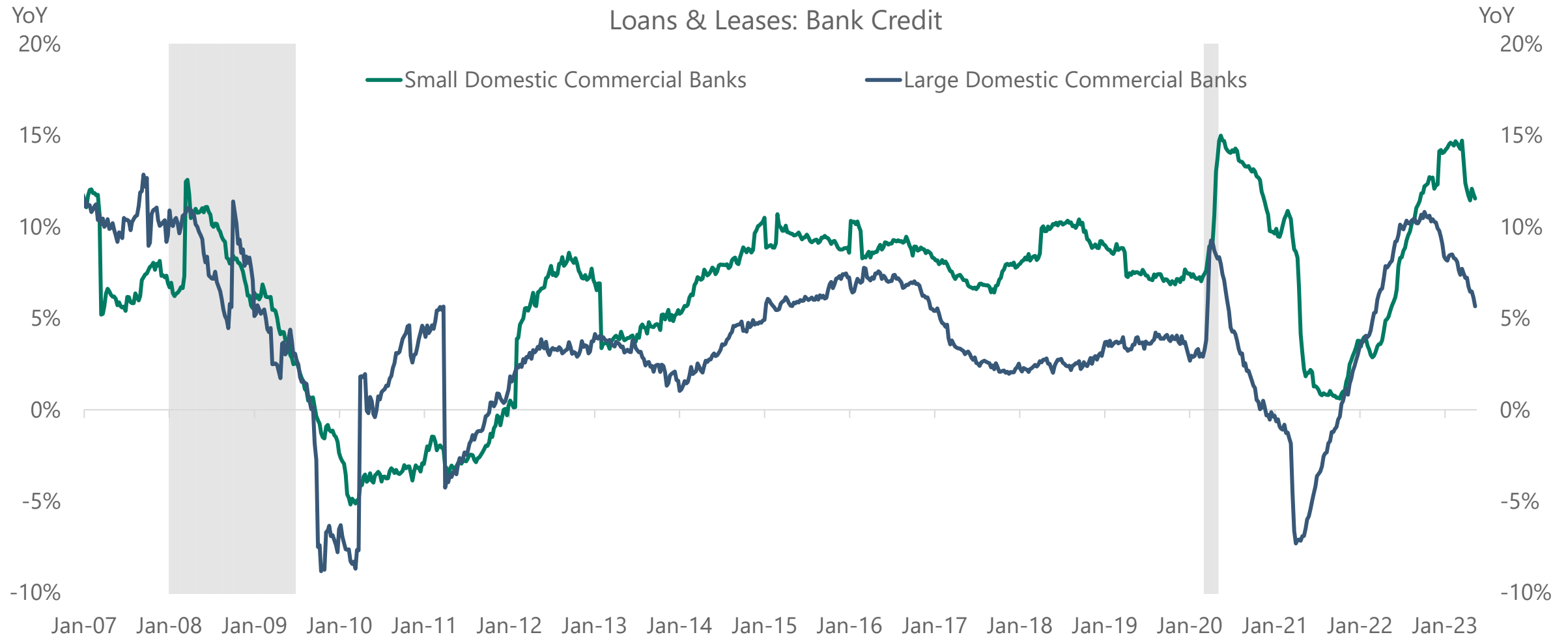


The share of bank deposits paying zero interest rate is declining

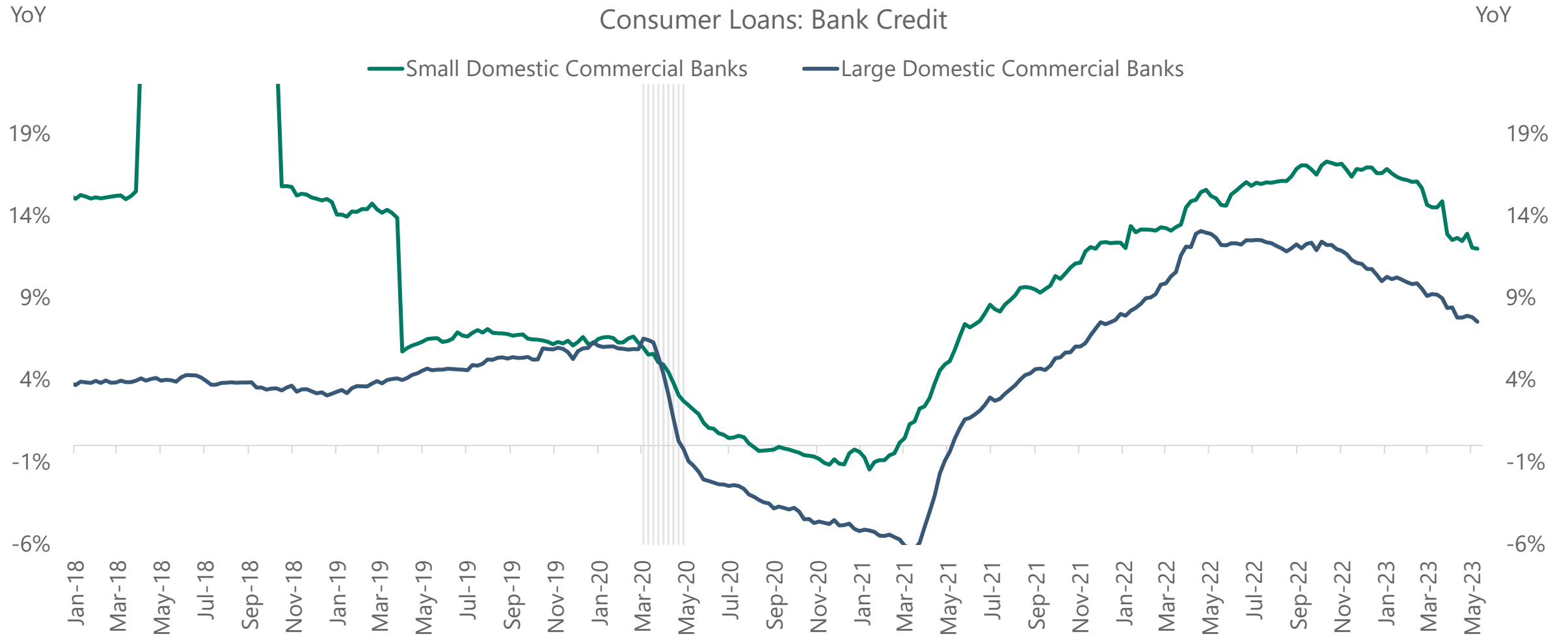


Weekly data for bank lending by small and large banks

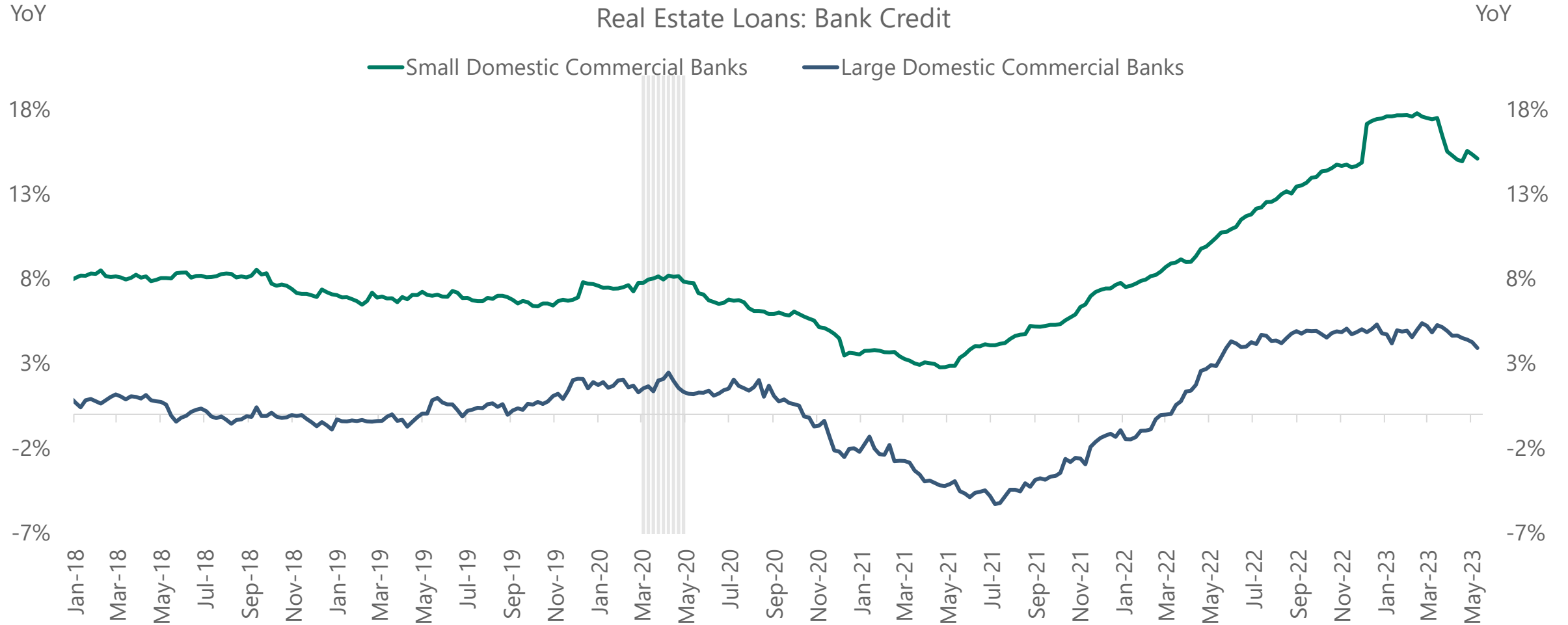
Divergence between small bank and large bank lending growth over the past year



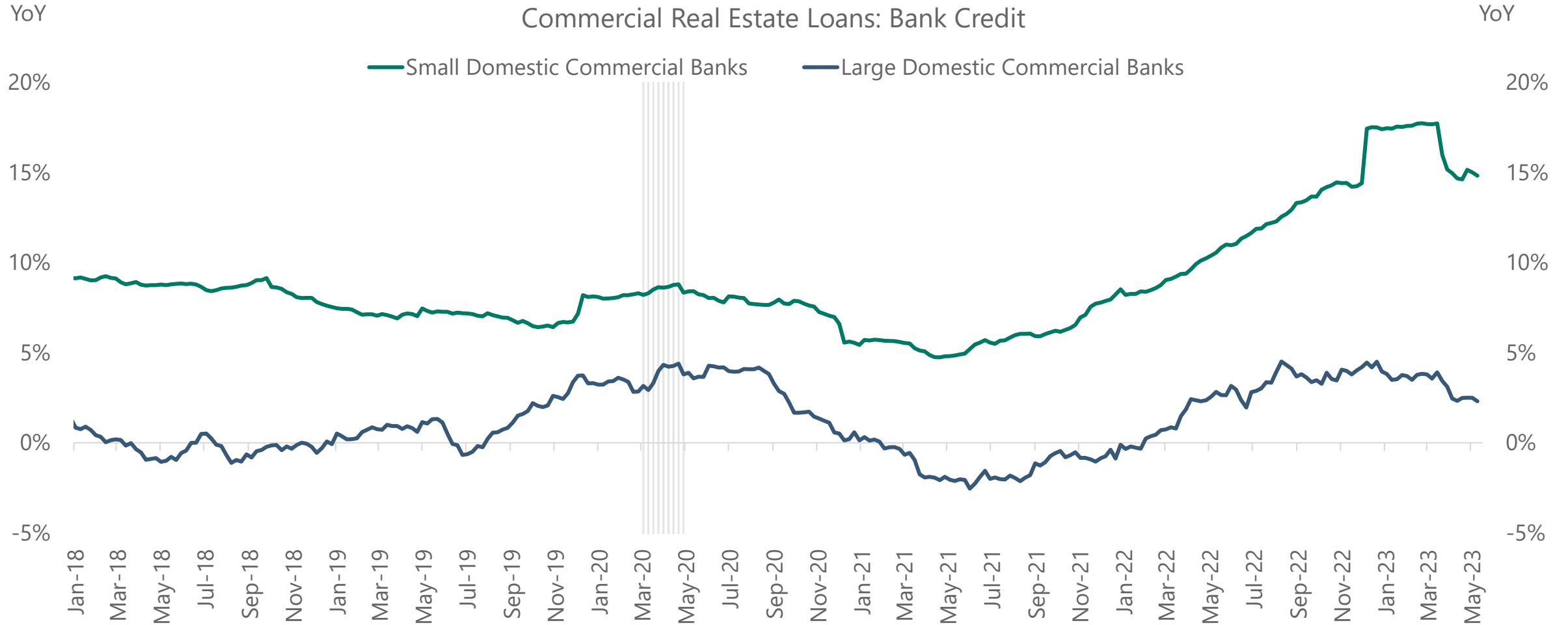
Lending to consumers has been growing faster for smaller banks



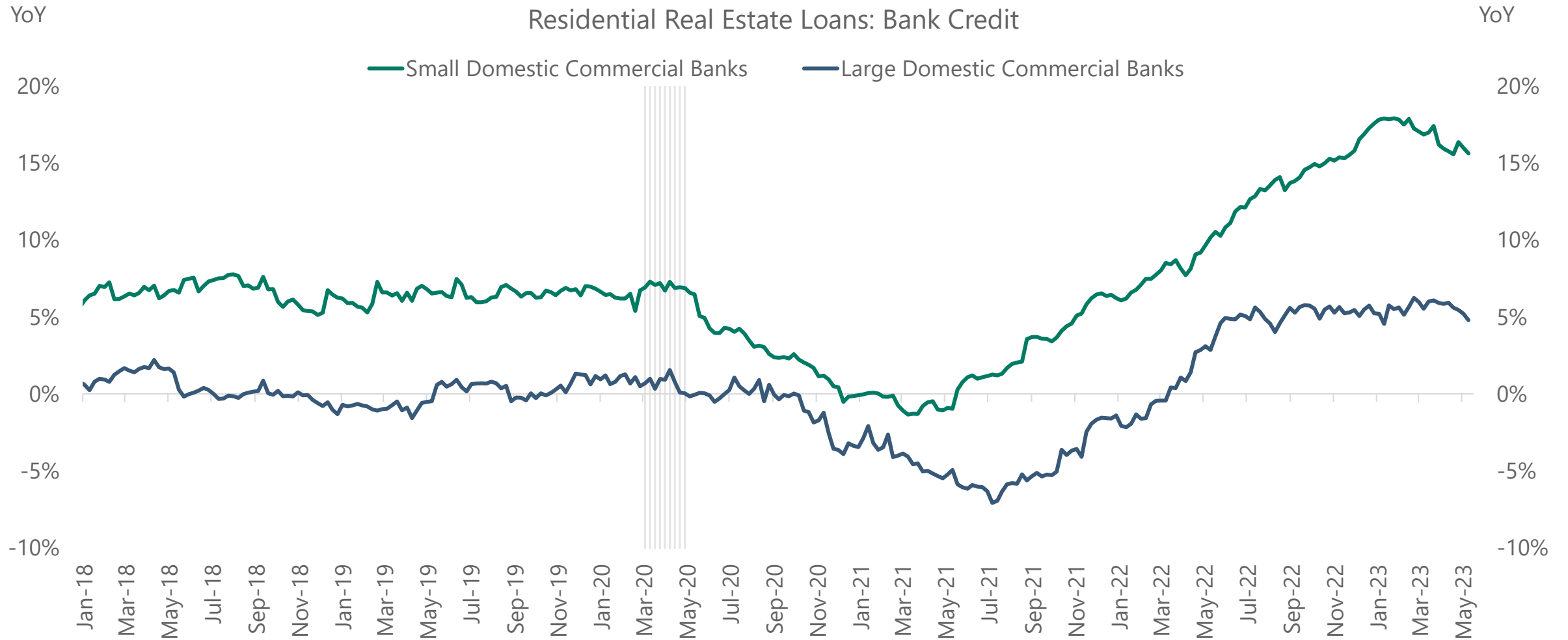
Real estate lending has been growing faster for smaller banks



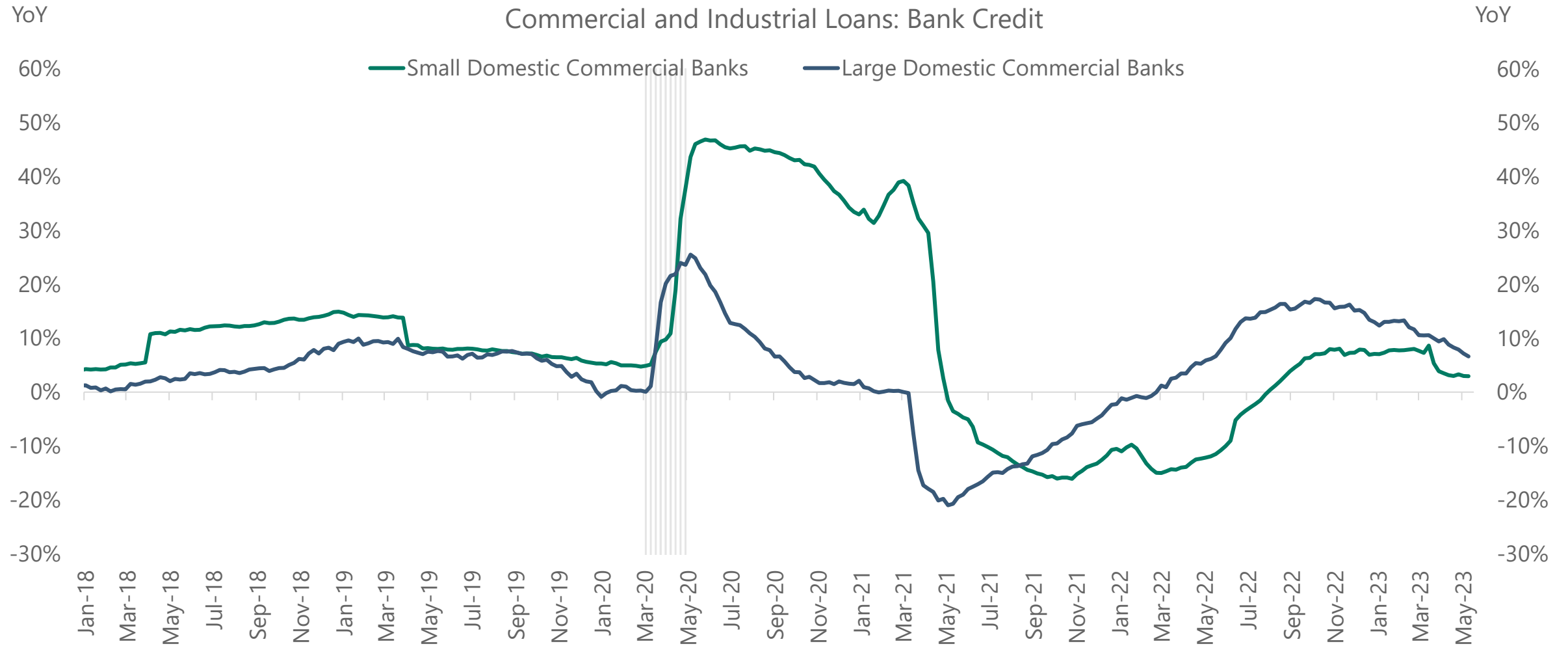
Commercial real estate lending has been growing faster for smaller banks



Residential real estate lending has been growing faster for smaller banks

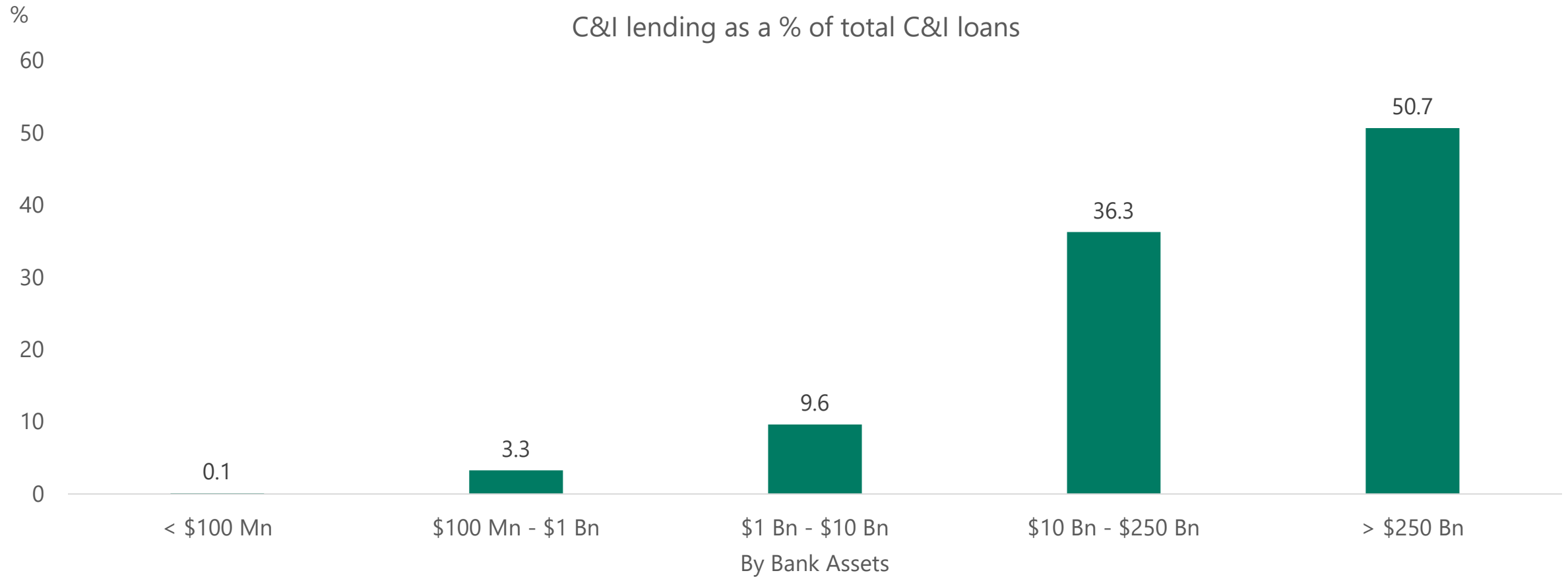


Lending to corporates among small and large banks



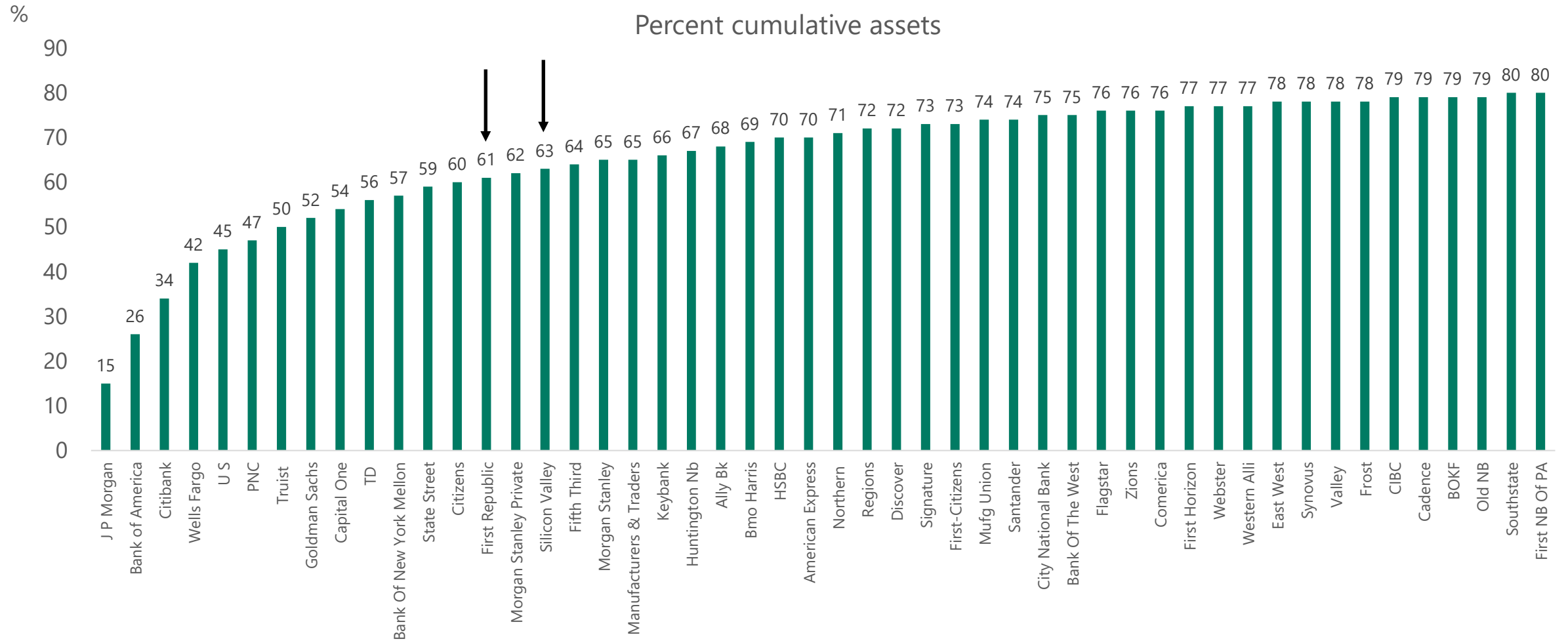
Small banks lend to small businesses

Banks with less than \$250bn in assets account for 50% of commercial and industrial lending

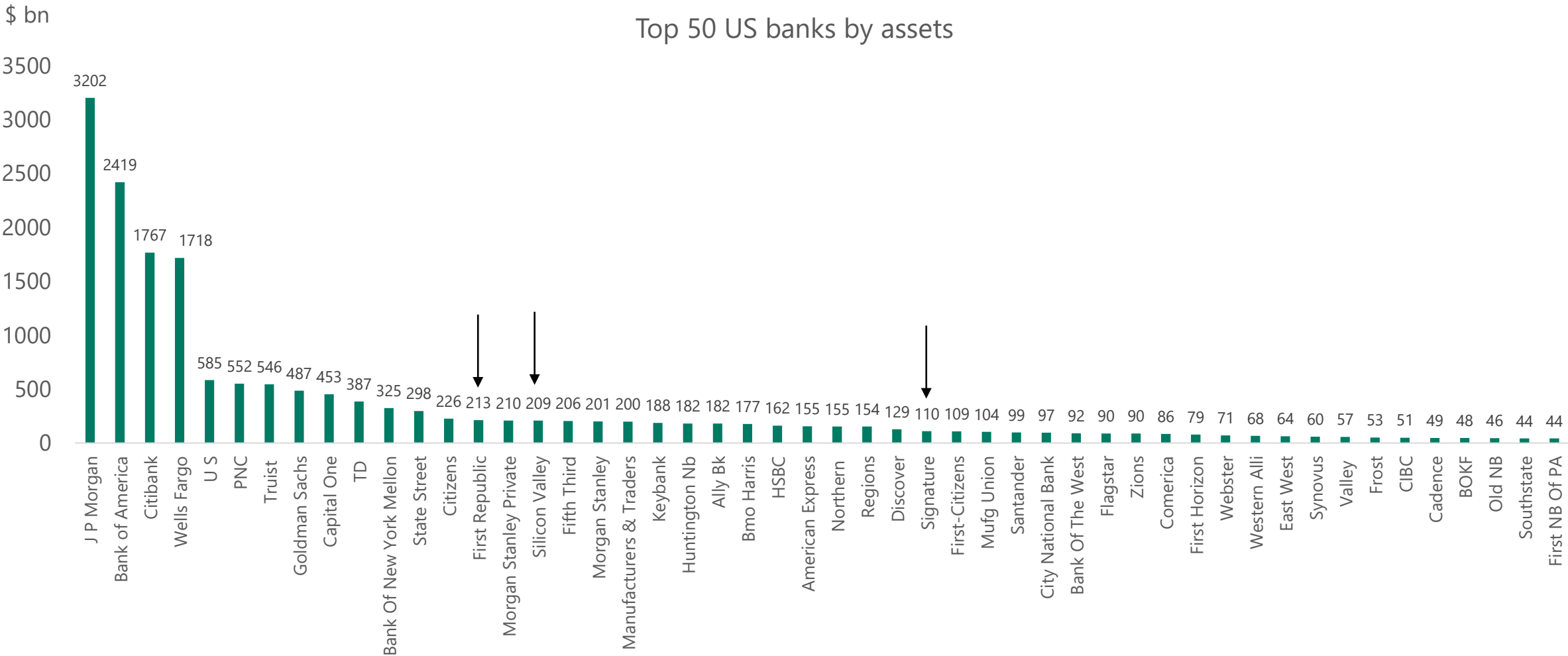


US banks by asset size:
The importance of regional banks for the US economy

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

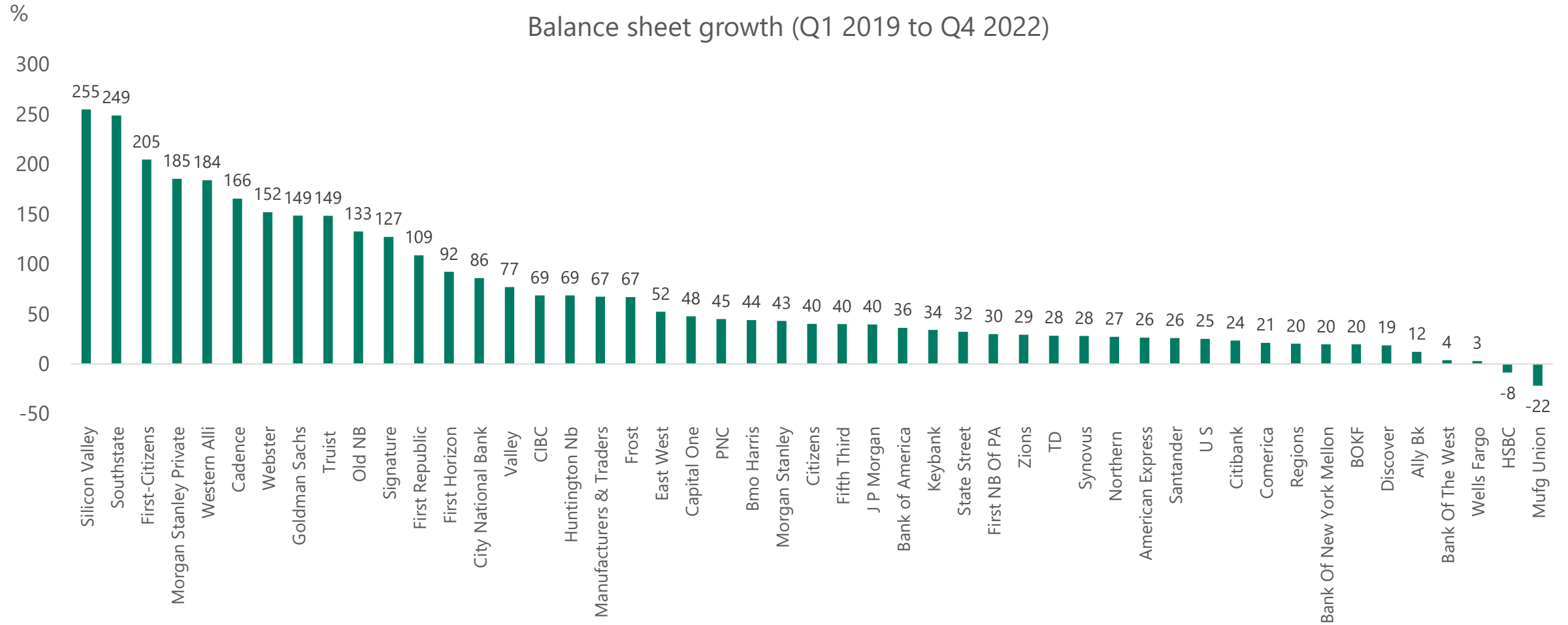


Top 50 US banks by assets

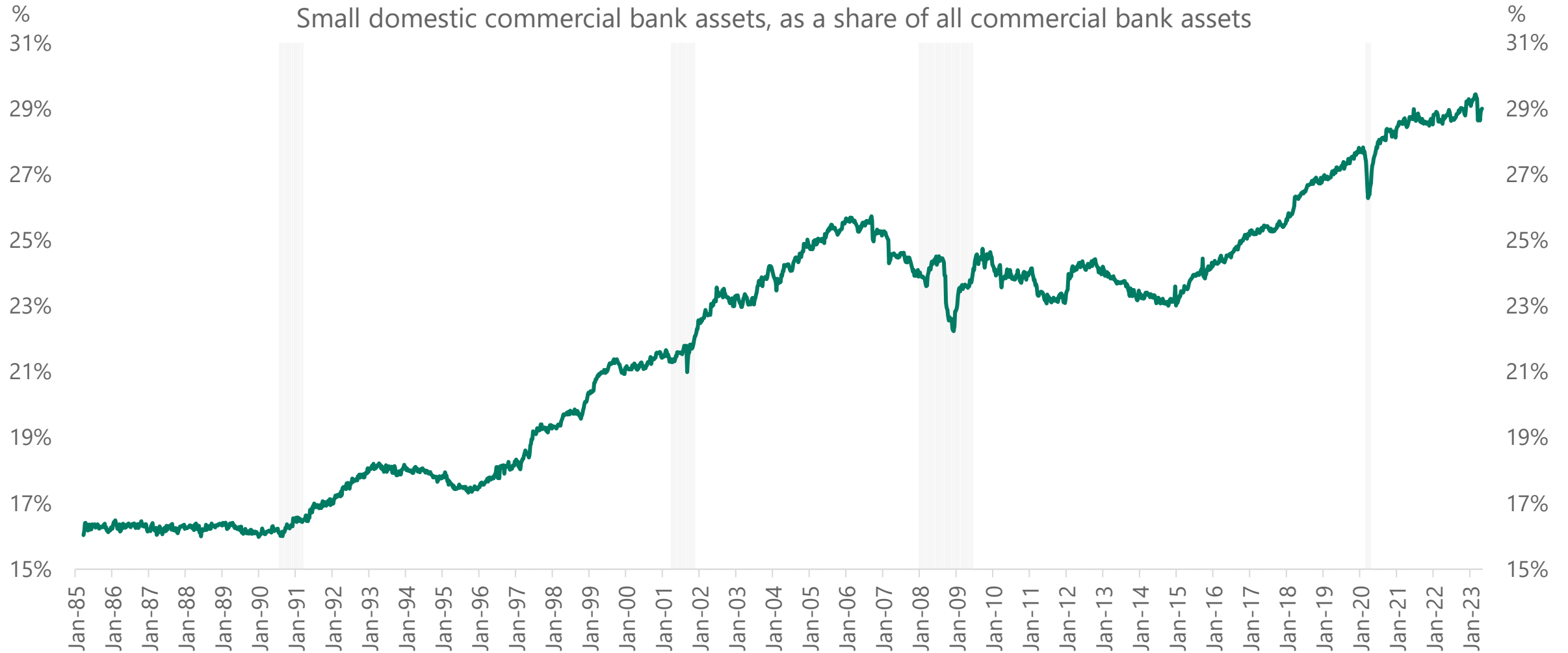


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022.

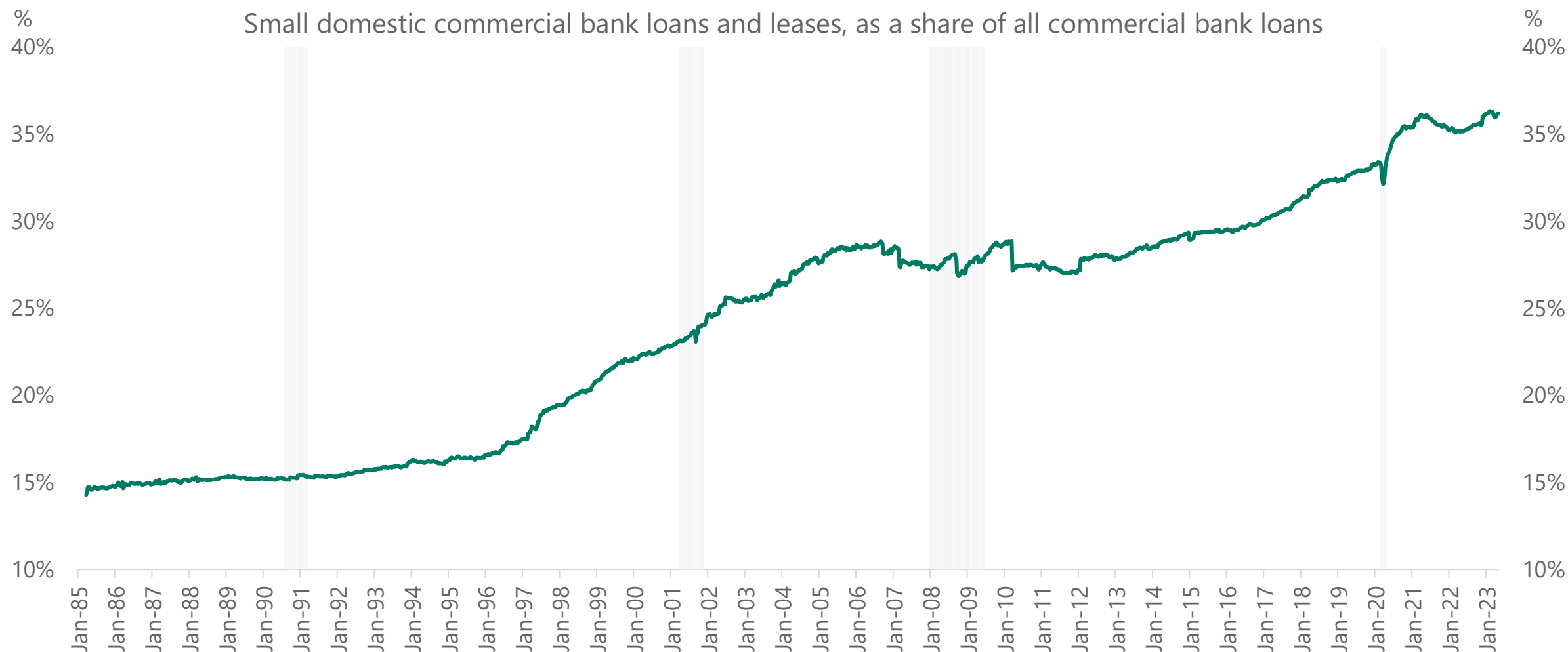
Balance sheet growth of US banks, ranked by fastest growth in percent



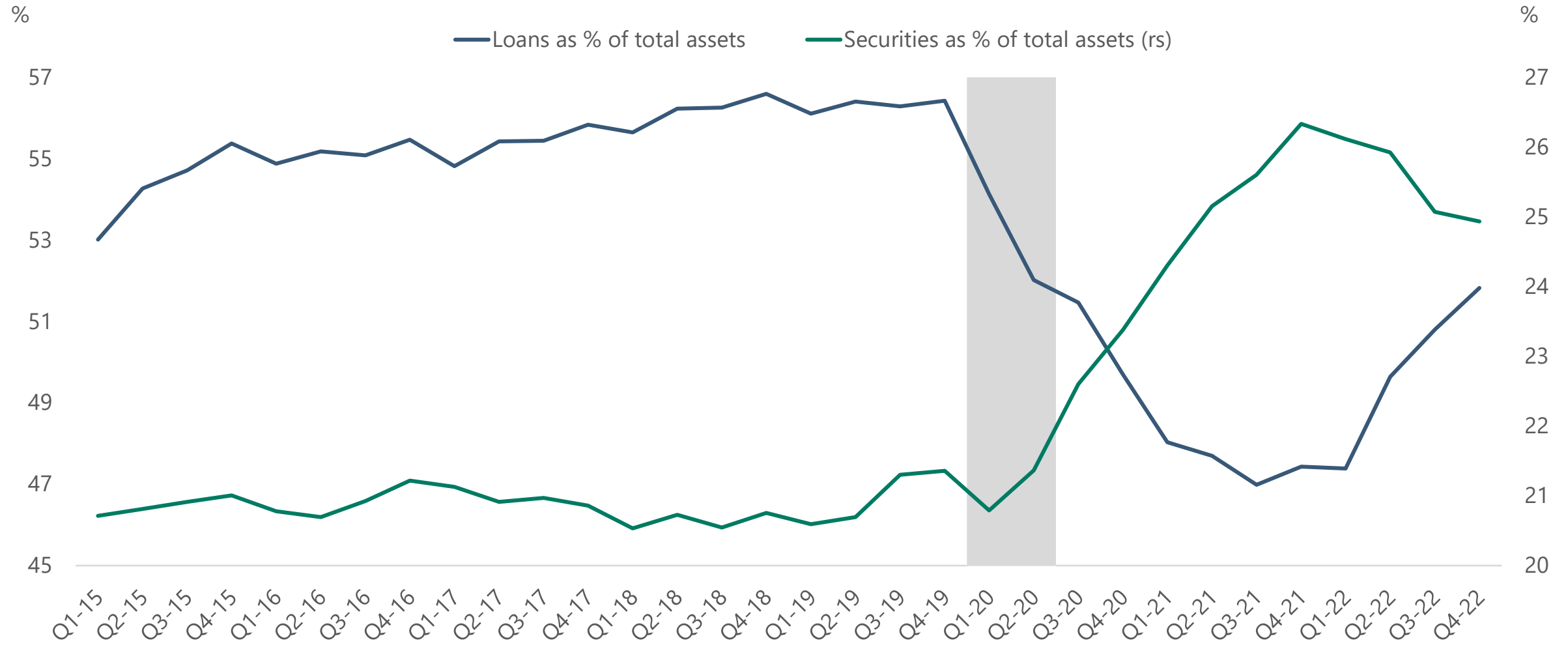
Small bank assets as a share of total banking sector assets



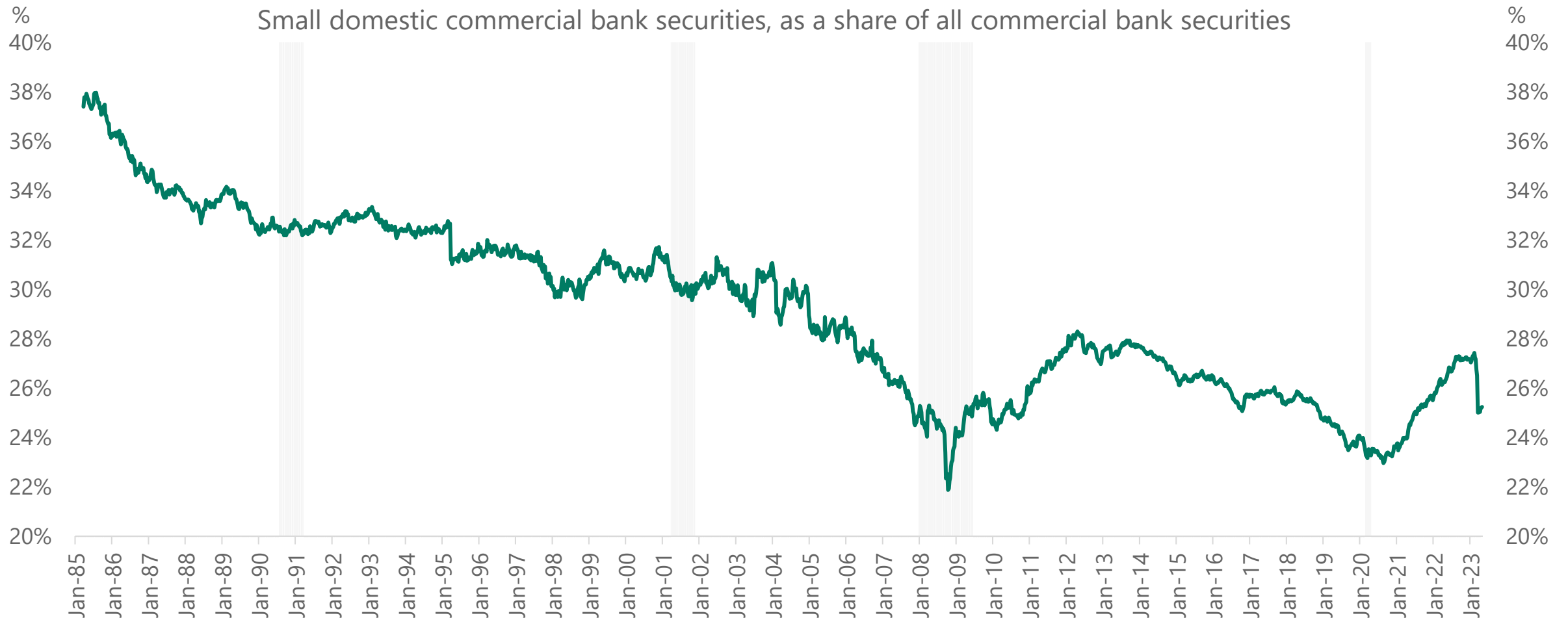
Share of lending by smaller banks



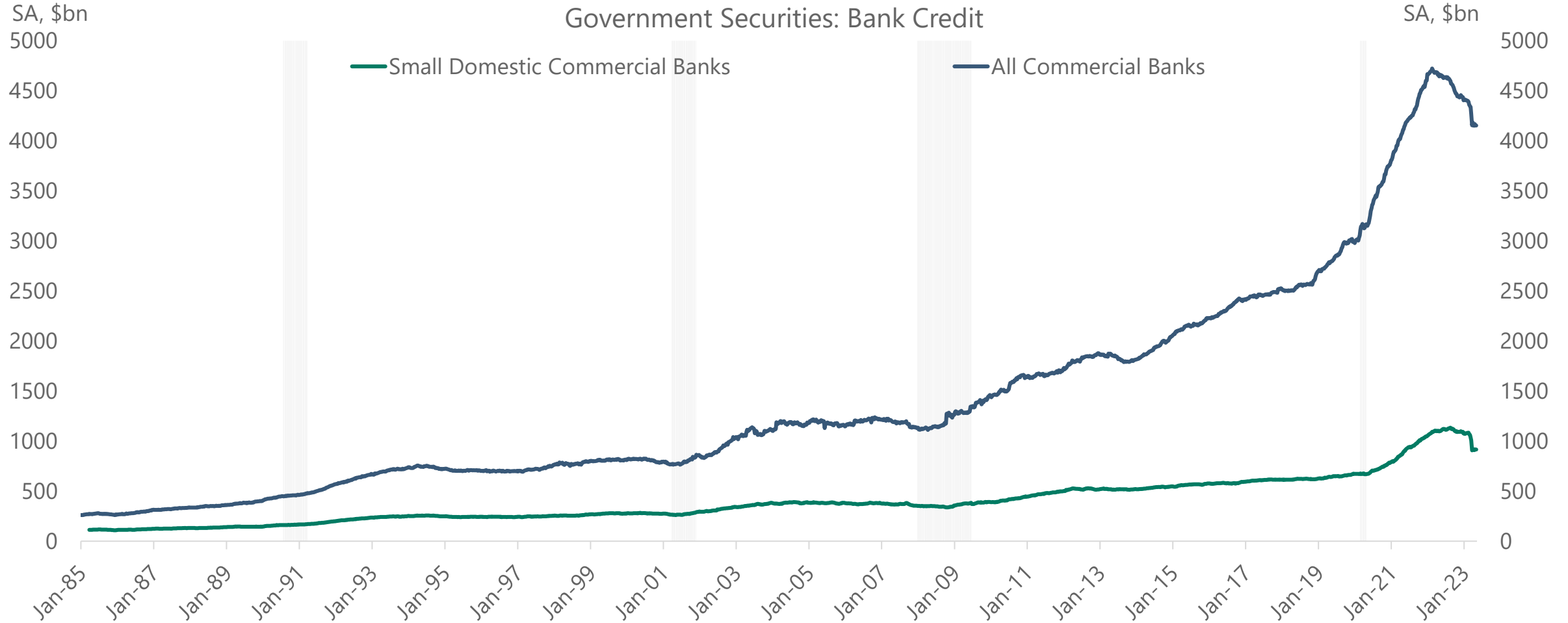
During the pandemic, banks shifted from lending to holding securities



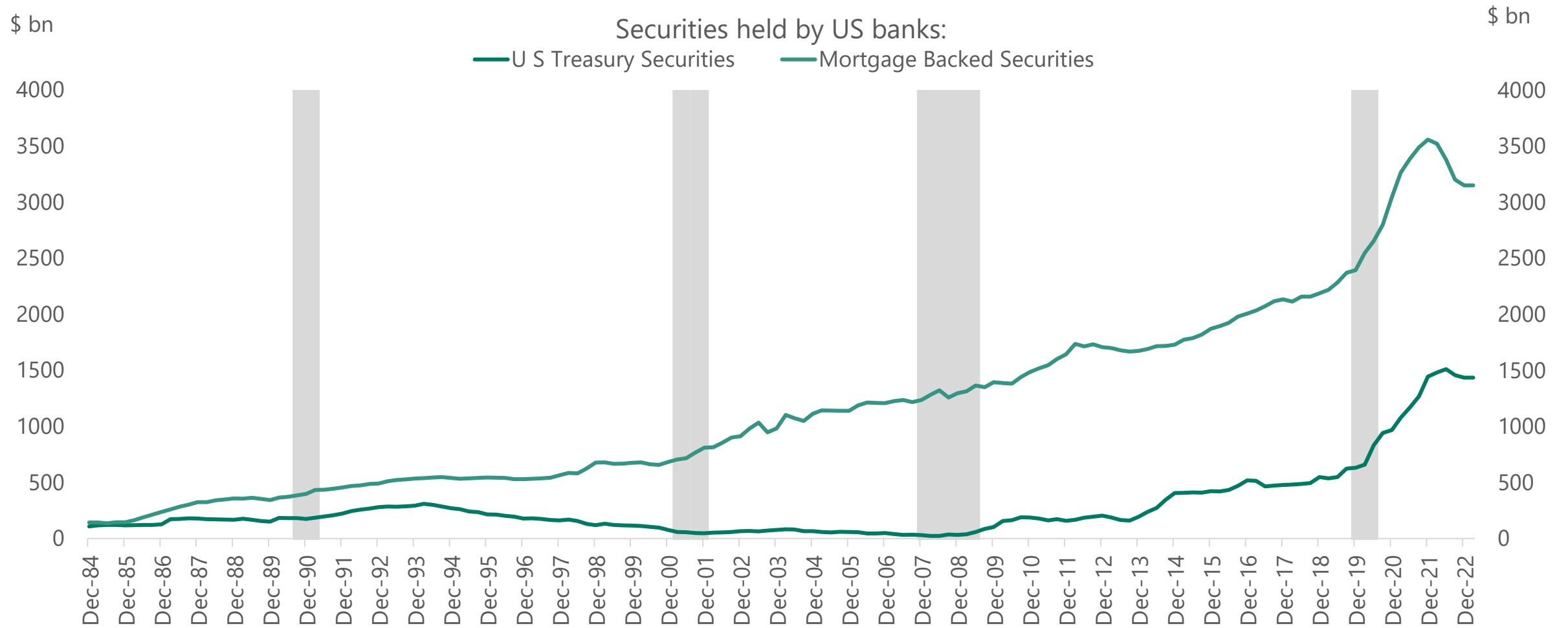
Share of securities in the banking sector held by small banks



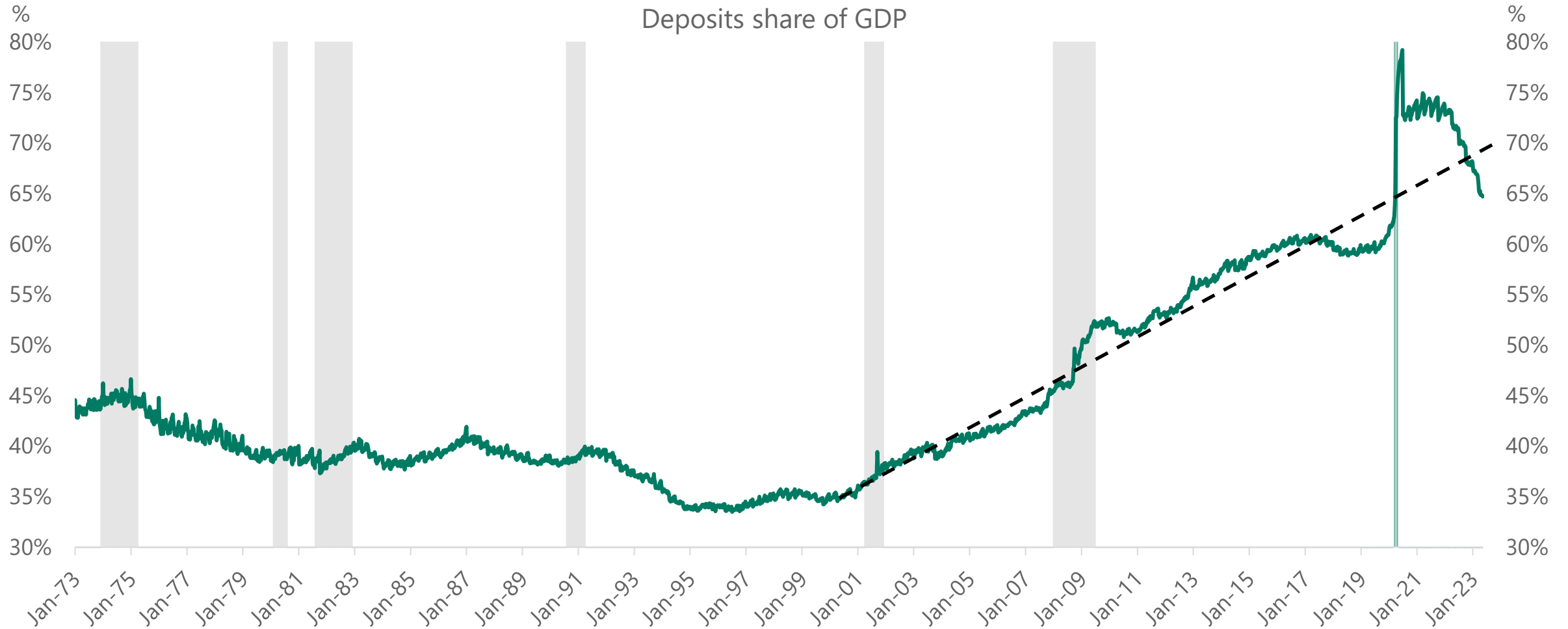
Small banks hold about \$1trn in Treasuries



Securities held by FDIC-insured banks

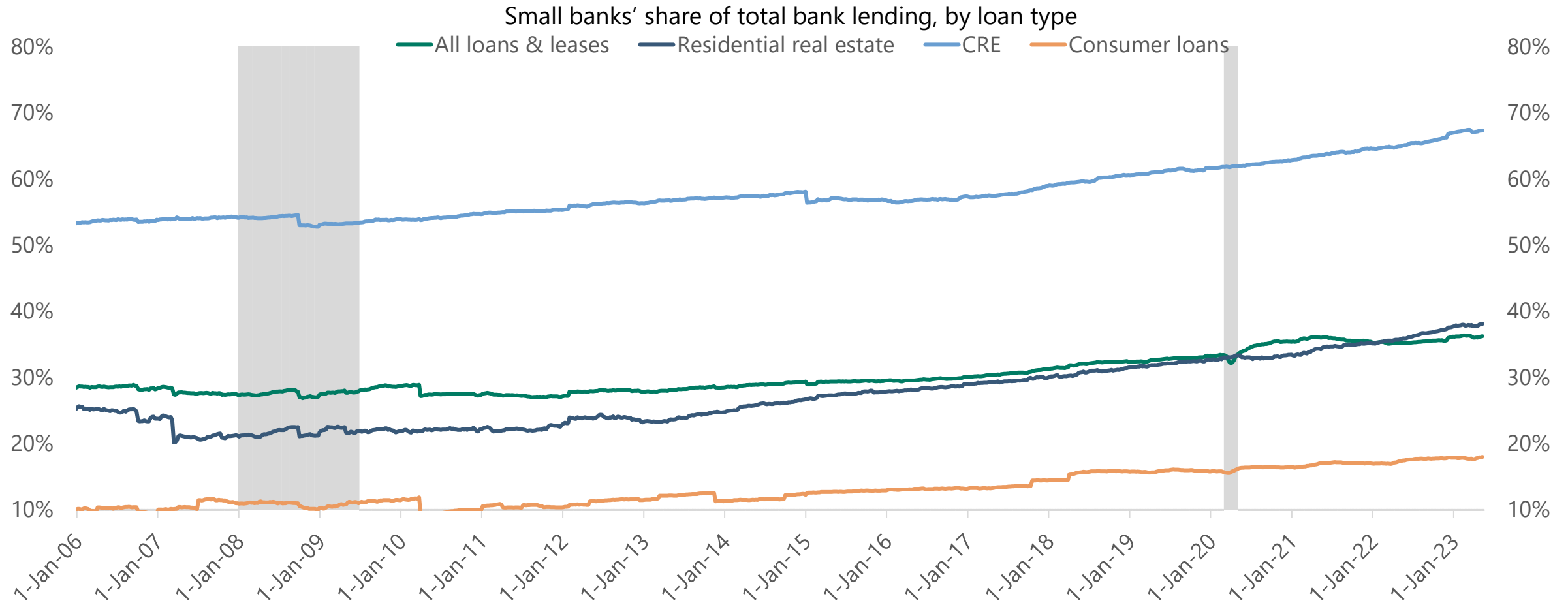


Deposits as a share of GDP now below trend

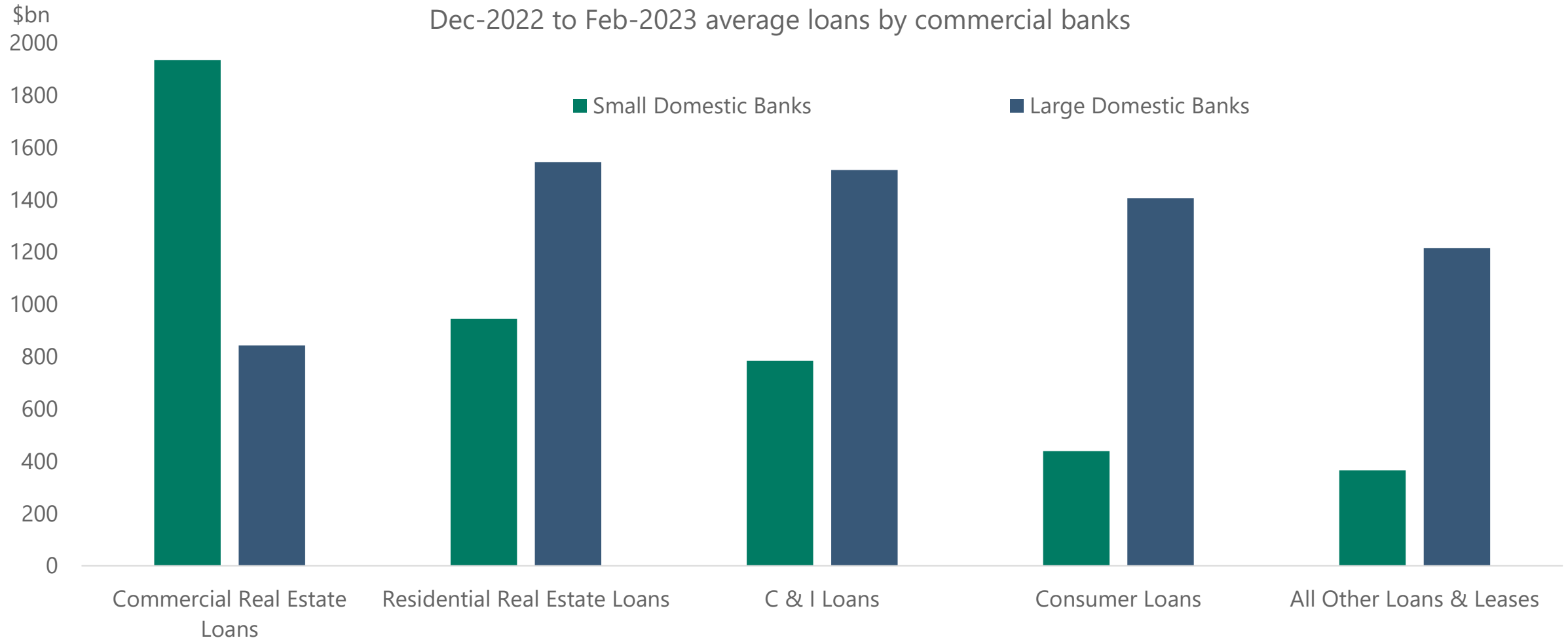


Regional banks' asset concentration in CRE

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

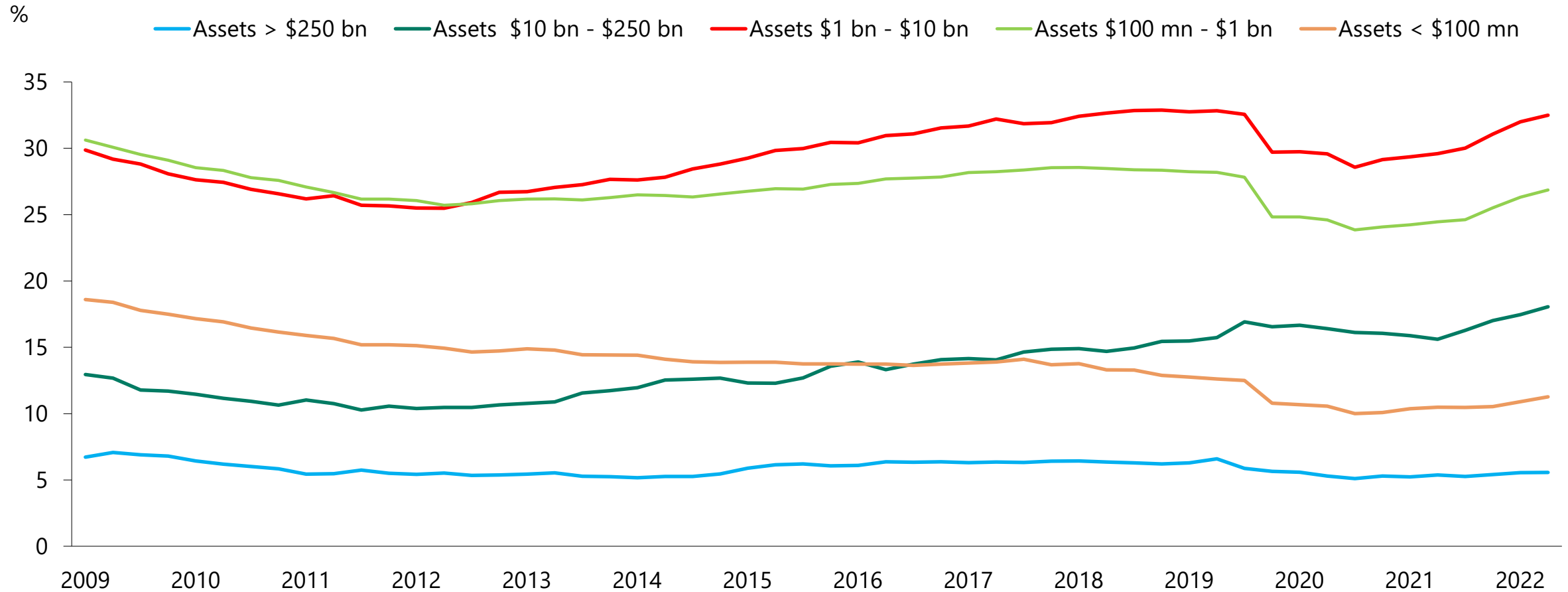


High concentration of commercial real estate in small banks



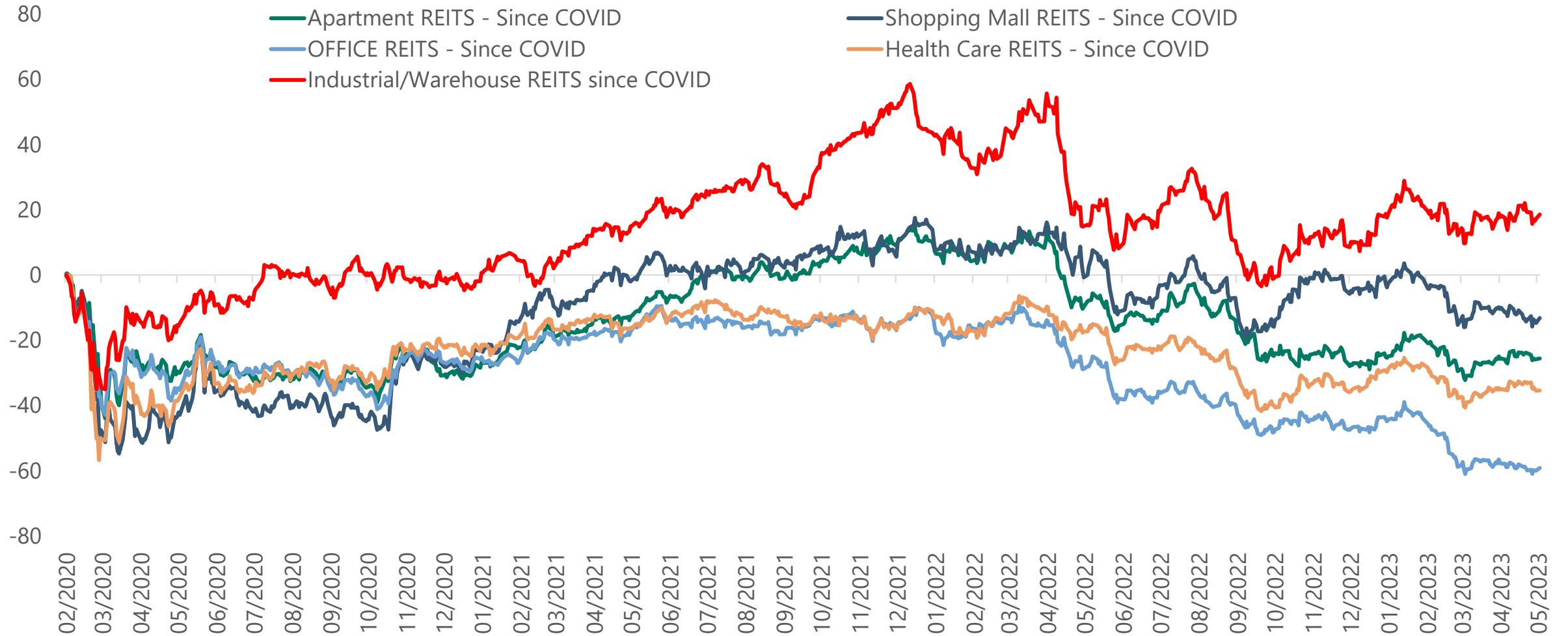
Banks with total assets between \$100mn and \$10bn are more exposed to CRE loans

Commercial Real Estate Loans, % of Total Assets

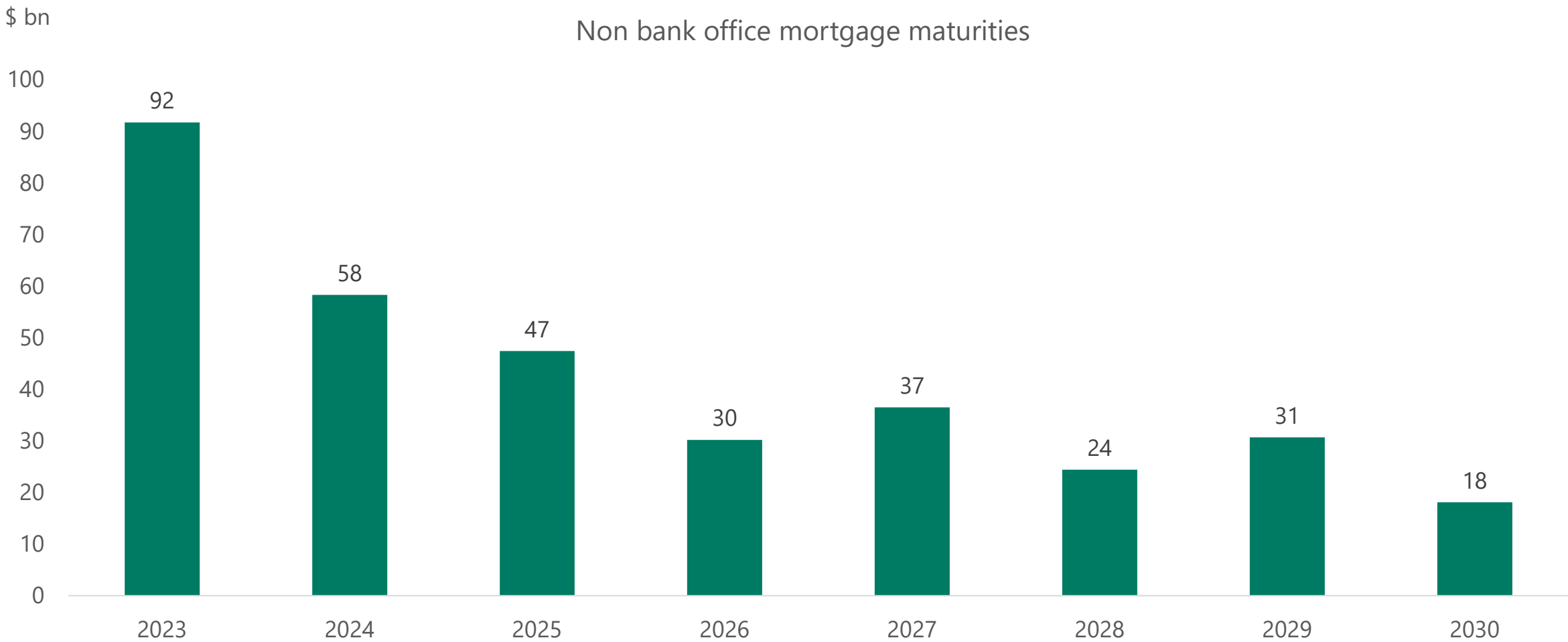


Where are the problems in CRE?

Normalized as of 20 Feb 2020

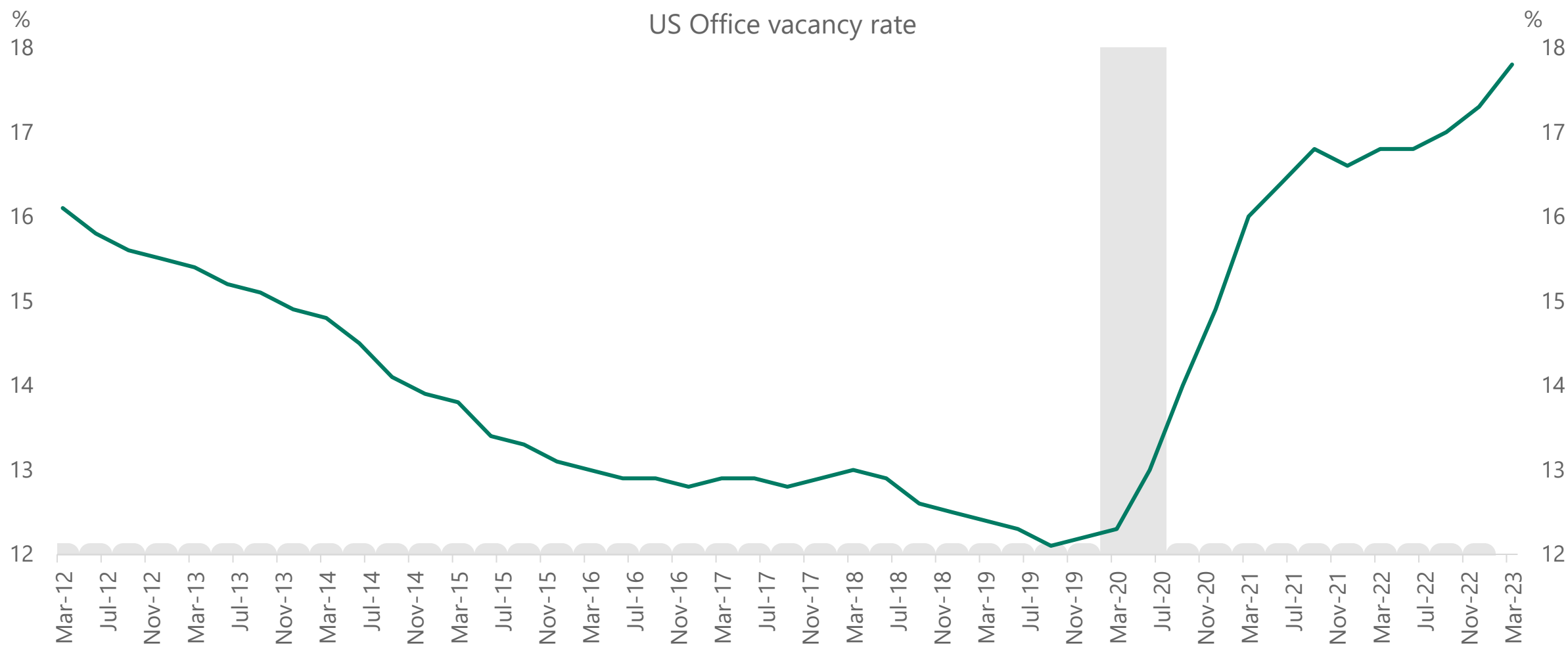


Nearly \$92 bn of nonbank office debt is set to mature this year

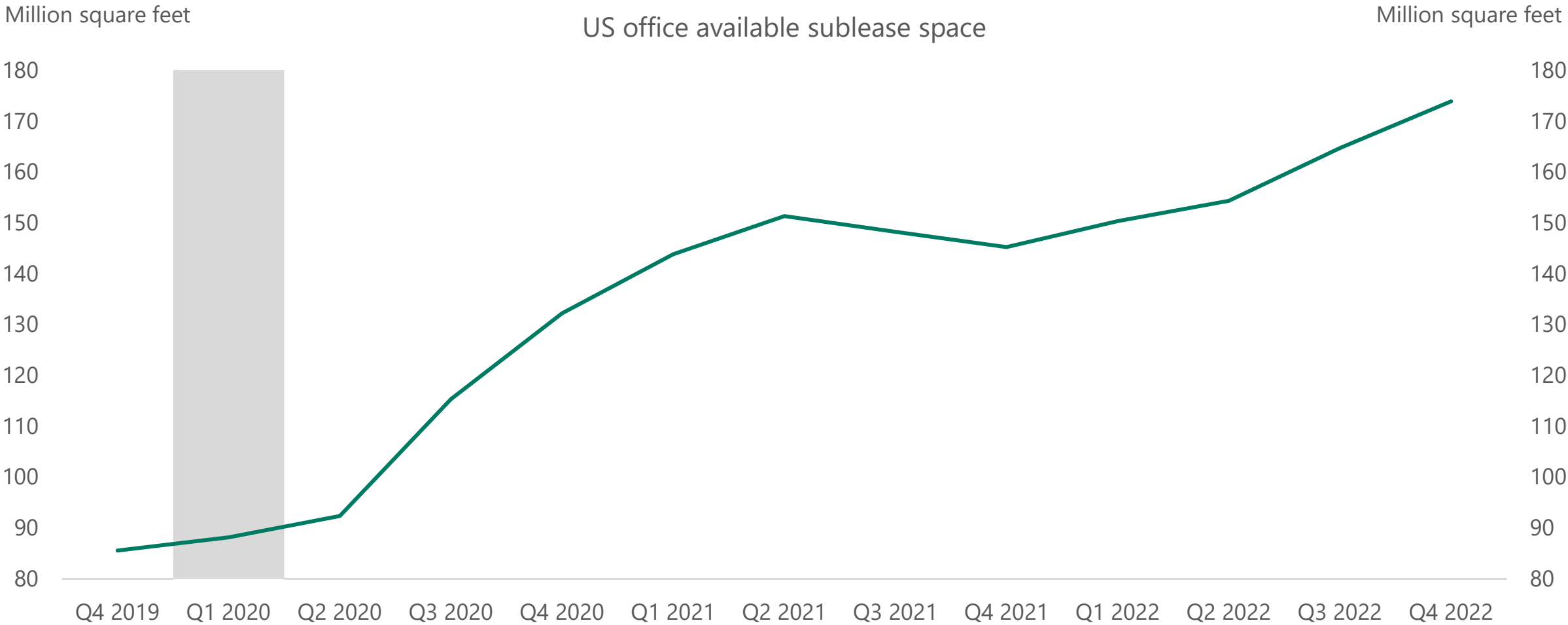


Source: MBA, Bloomberg, Apollo Chief Economist

US Office vacancy rate rising

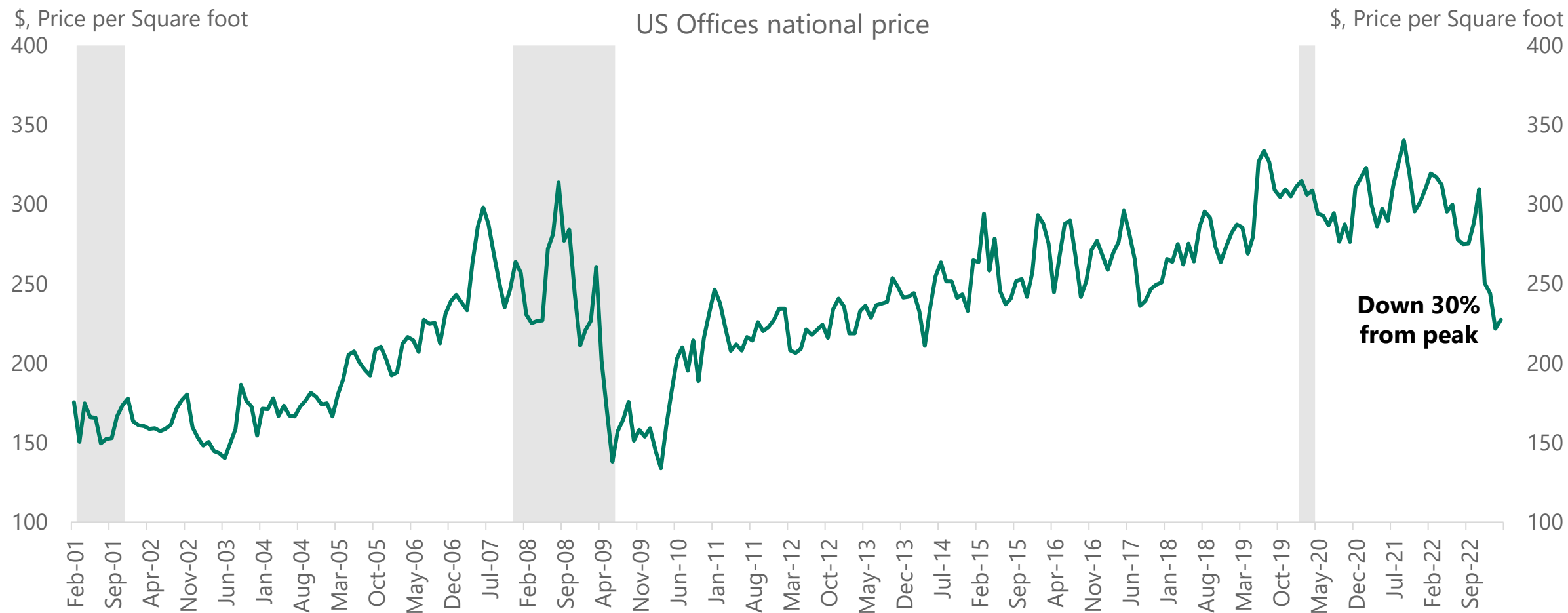


Available US office space rising

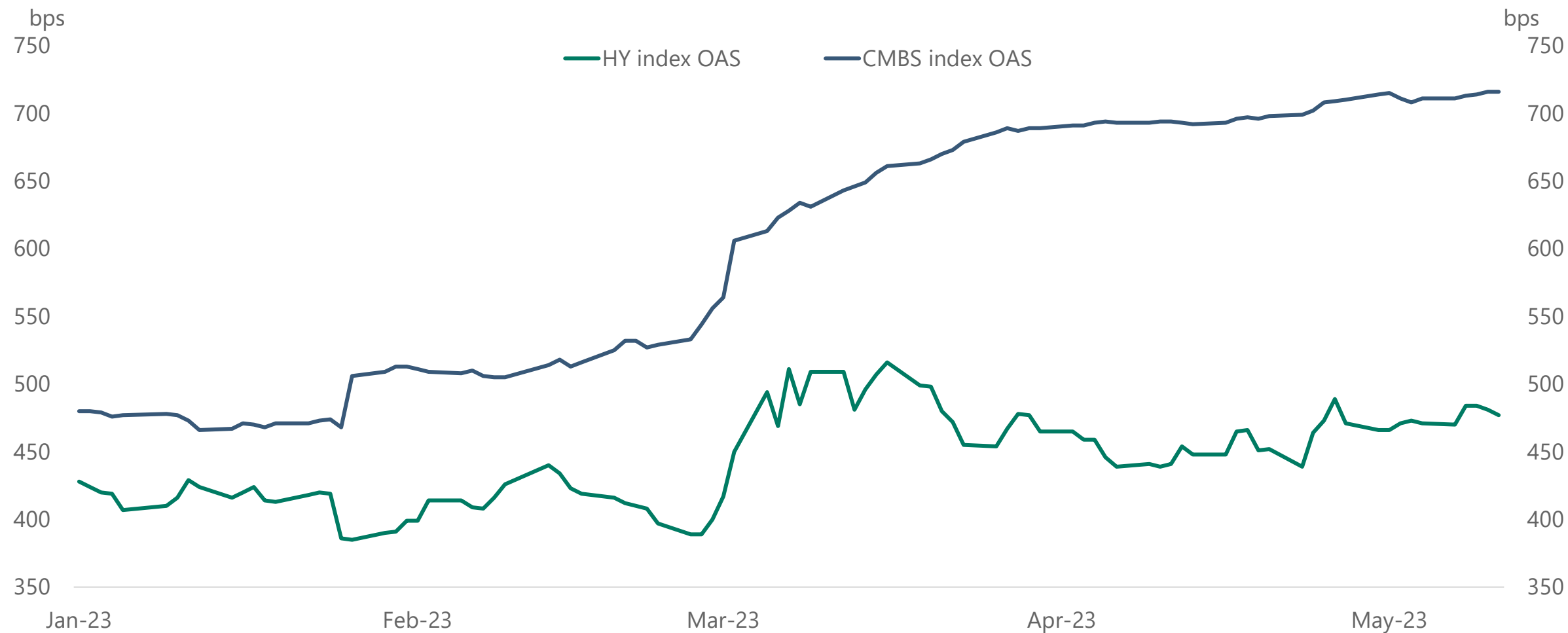


Source: Savills US Markets, Bloomberg, Apollo Chief Economist.

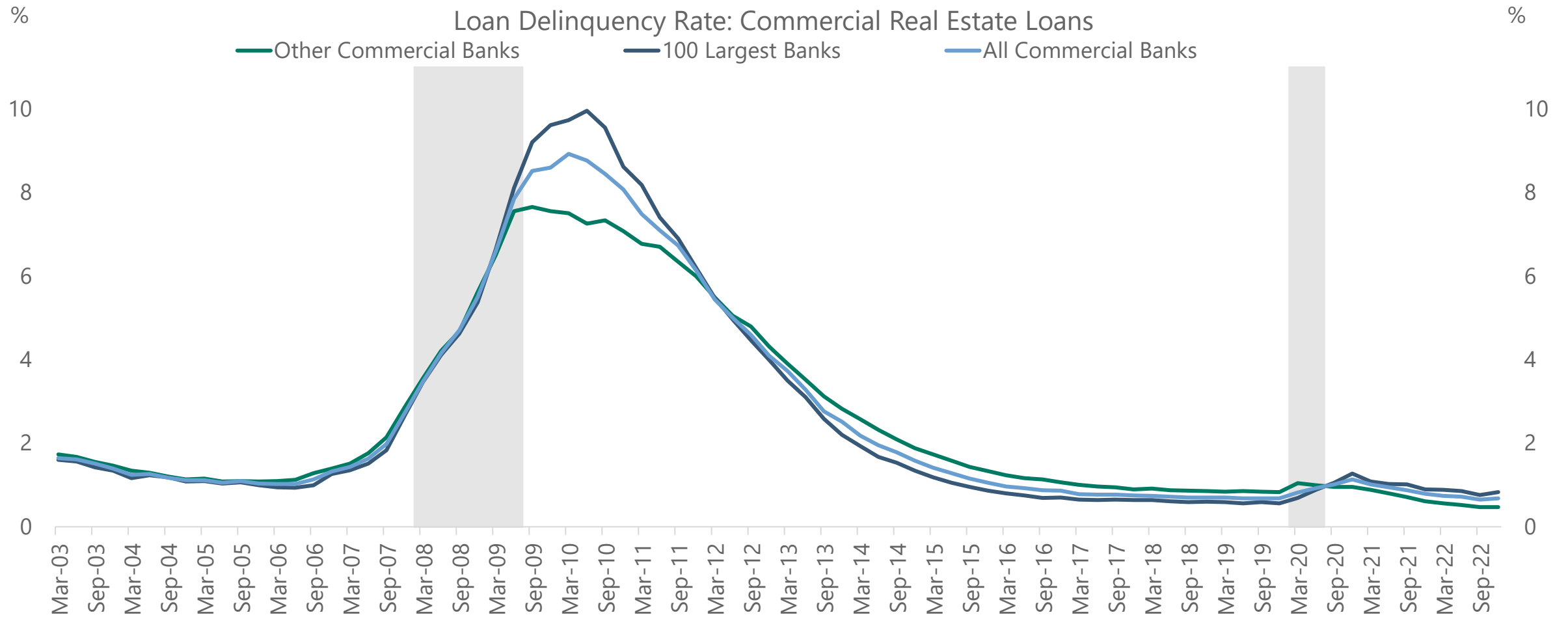
Price per square foot for US offices falling



CMBS spreads compared with HY spreads

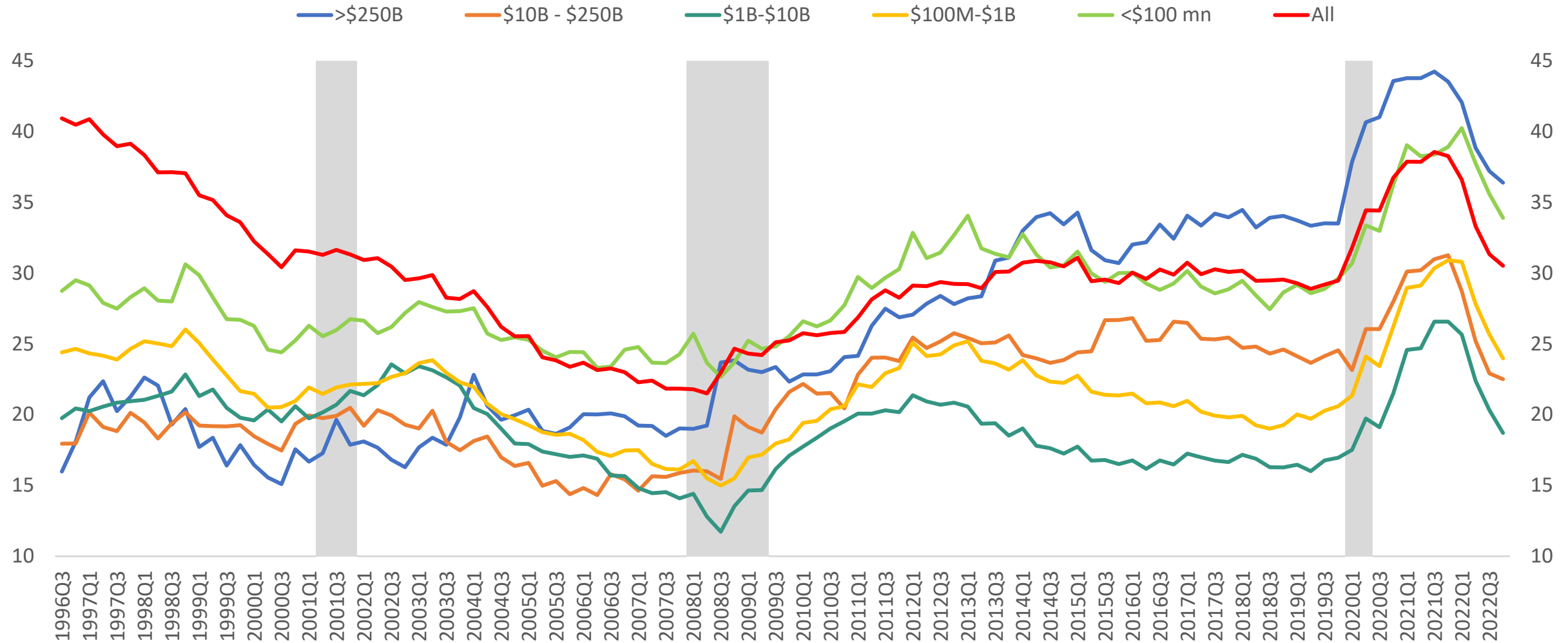


CRE delinquency rate

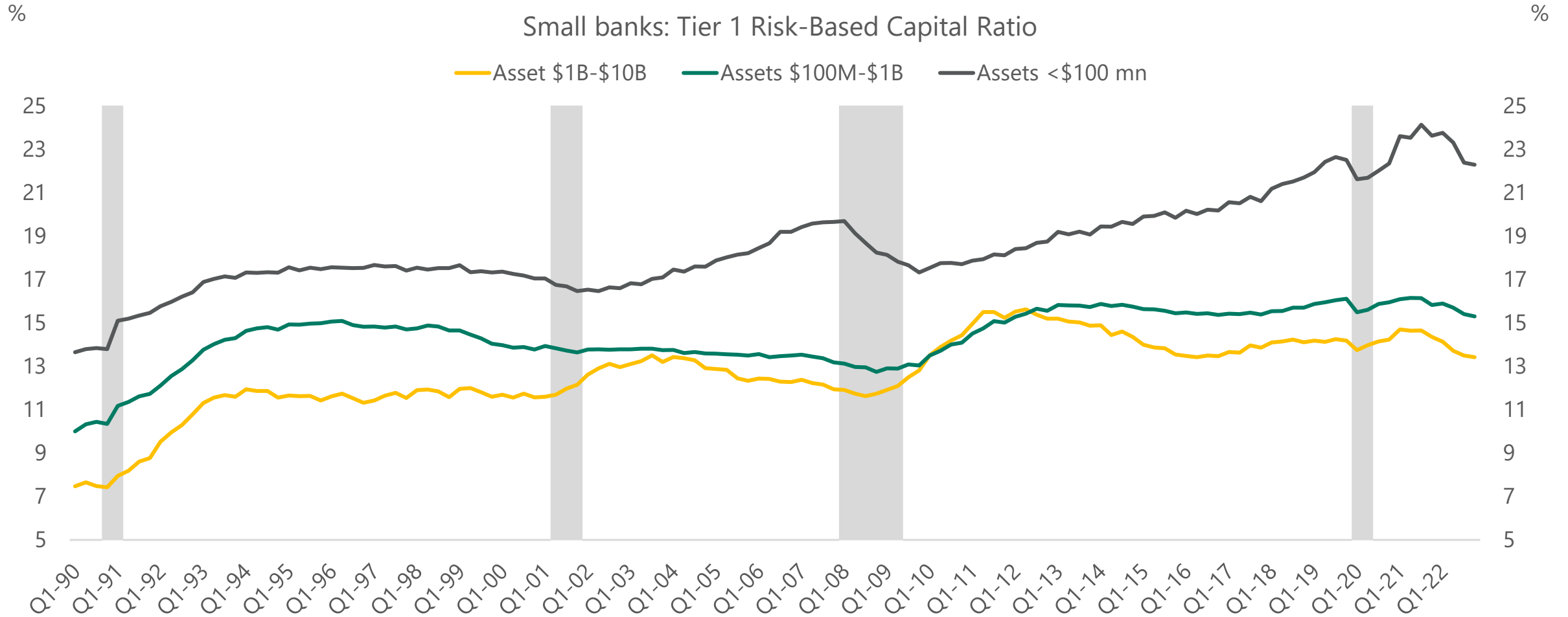


Measures of banking sector liquidity and capital ratios

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

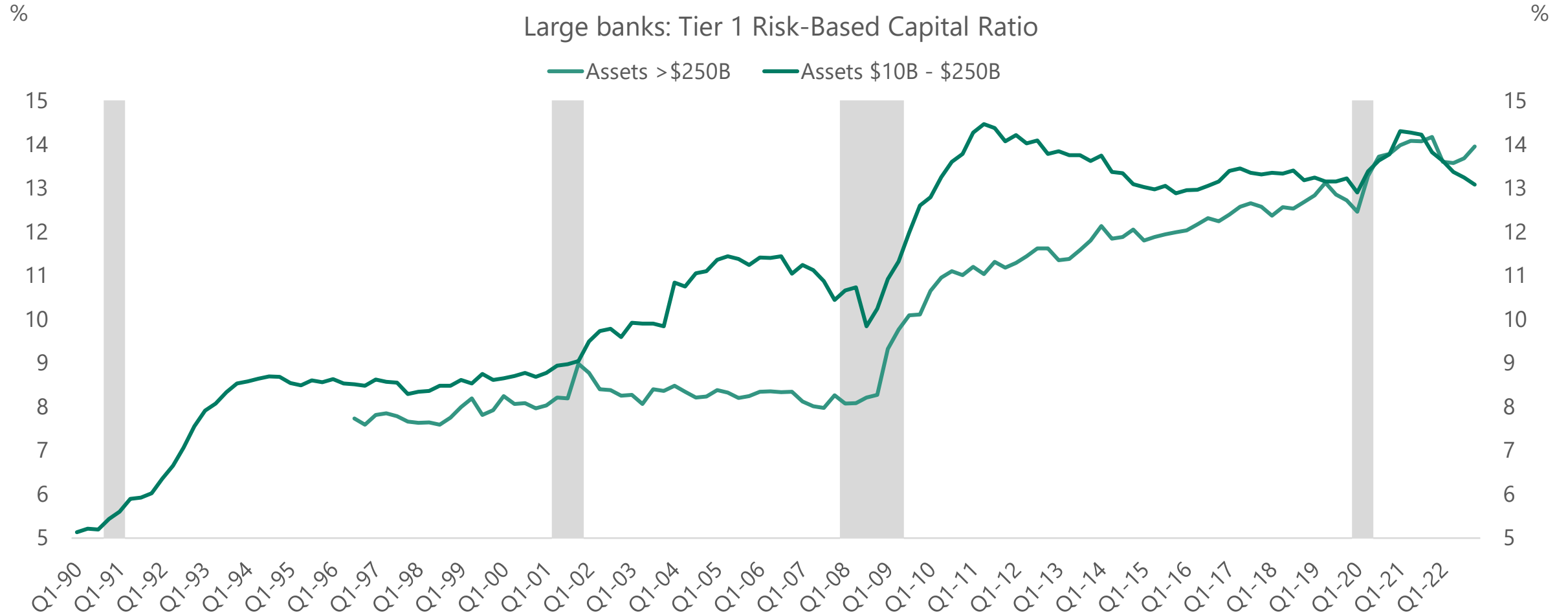


Tier-1 risk-based capital ratio for banks, by size



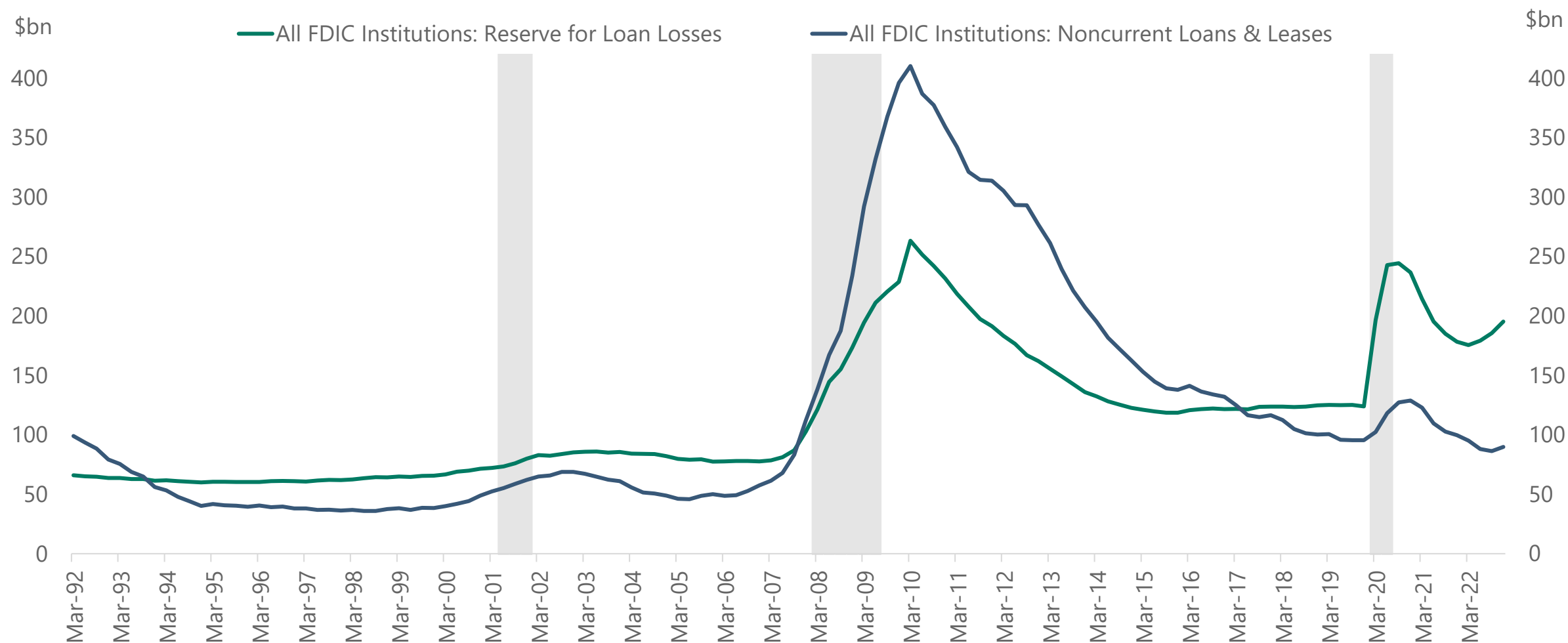
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion.

Tier 1 risk-based capital ratio for larger banks

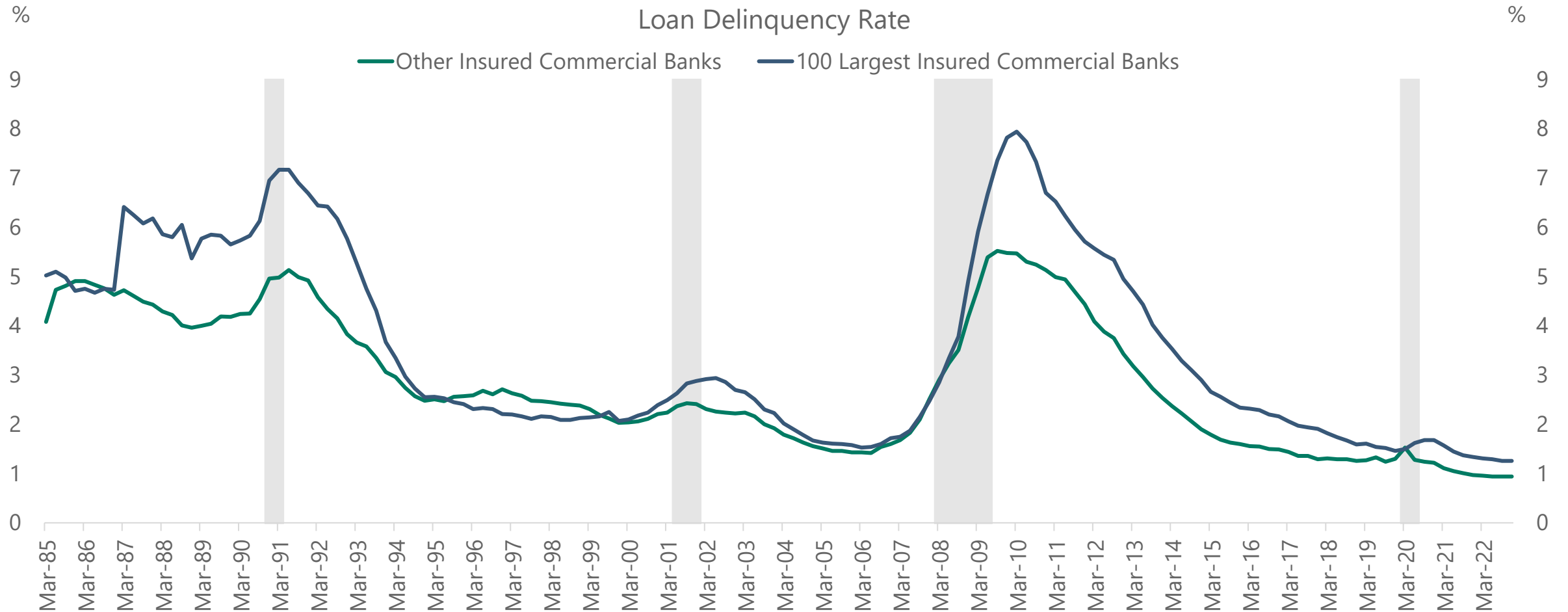


Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion..

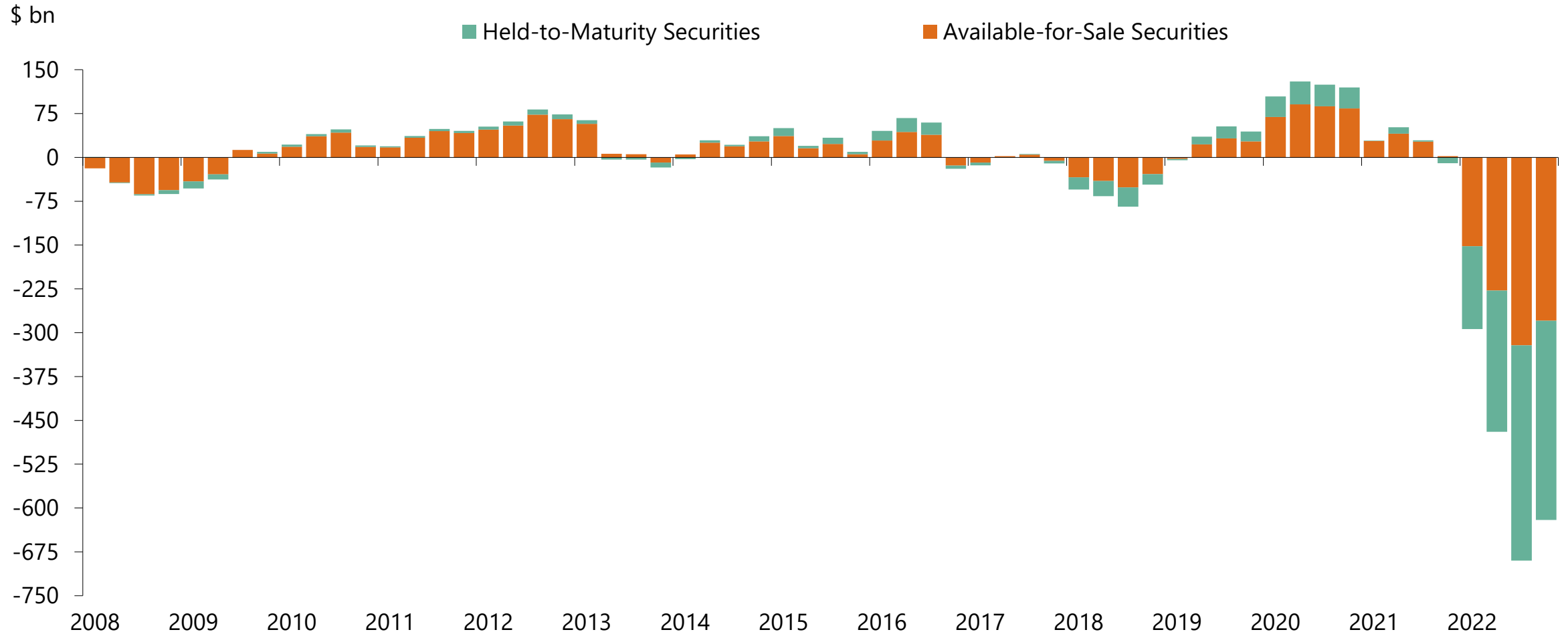
Reserves for loan losses



Loan delinquency rates for large and small banks

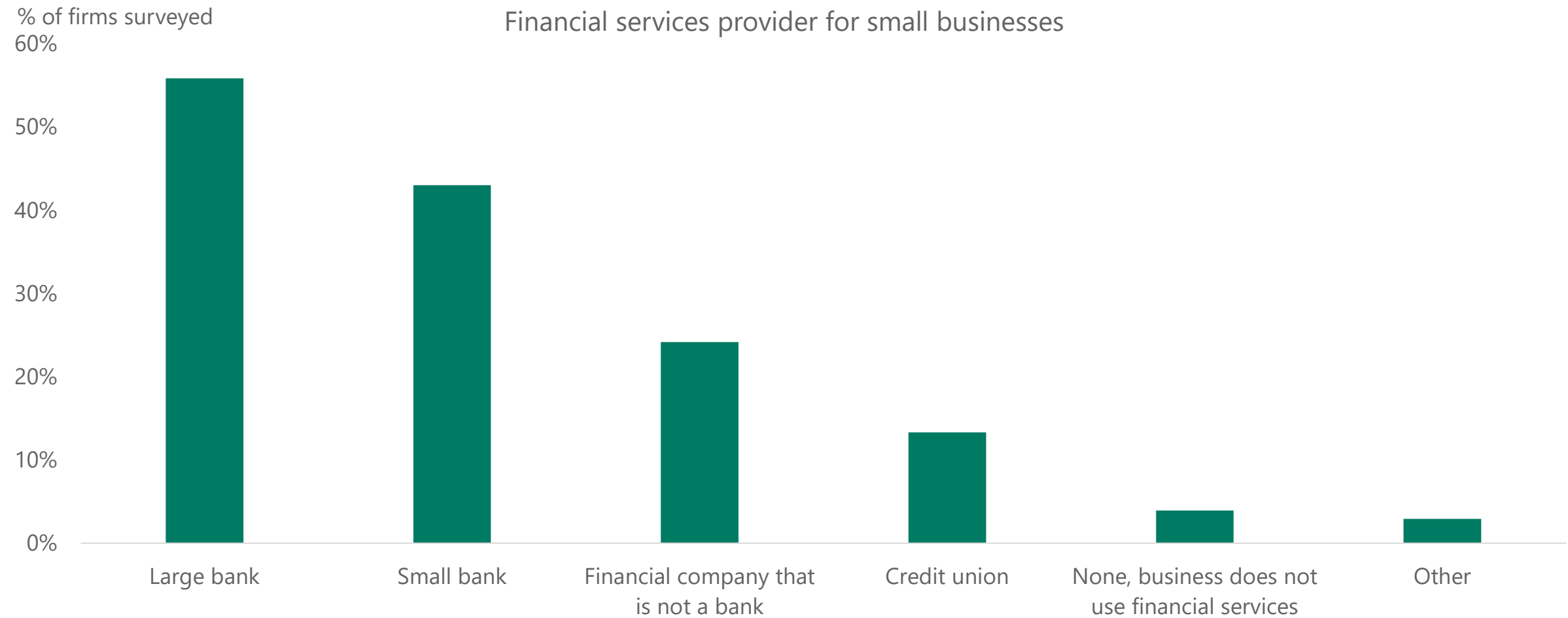


Unrealized Gains (Losses) on investment securities for banks, as of 2022Q4



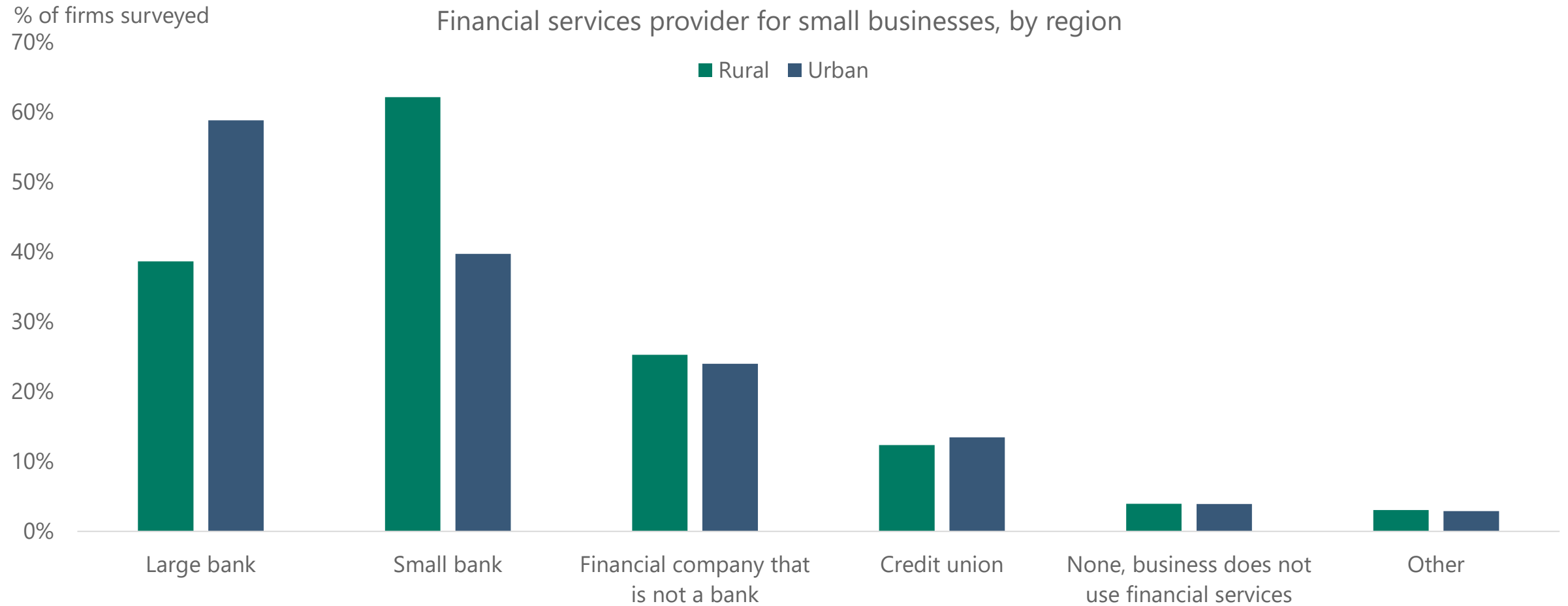
Sources of financing for small businesses

Sources of financing for small businesses

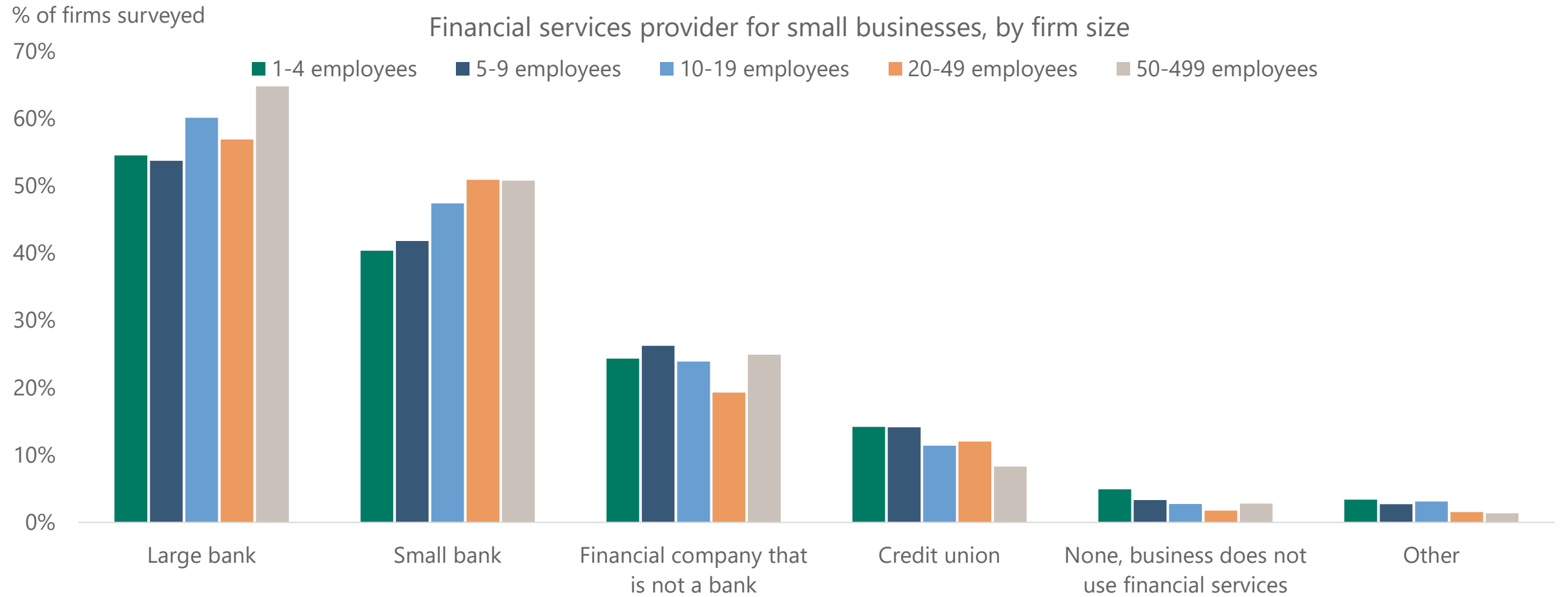


Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist

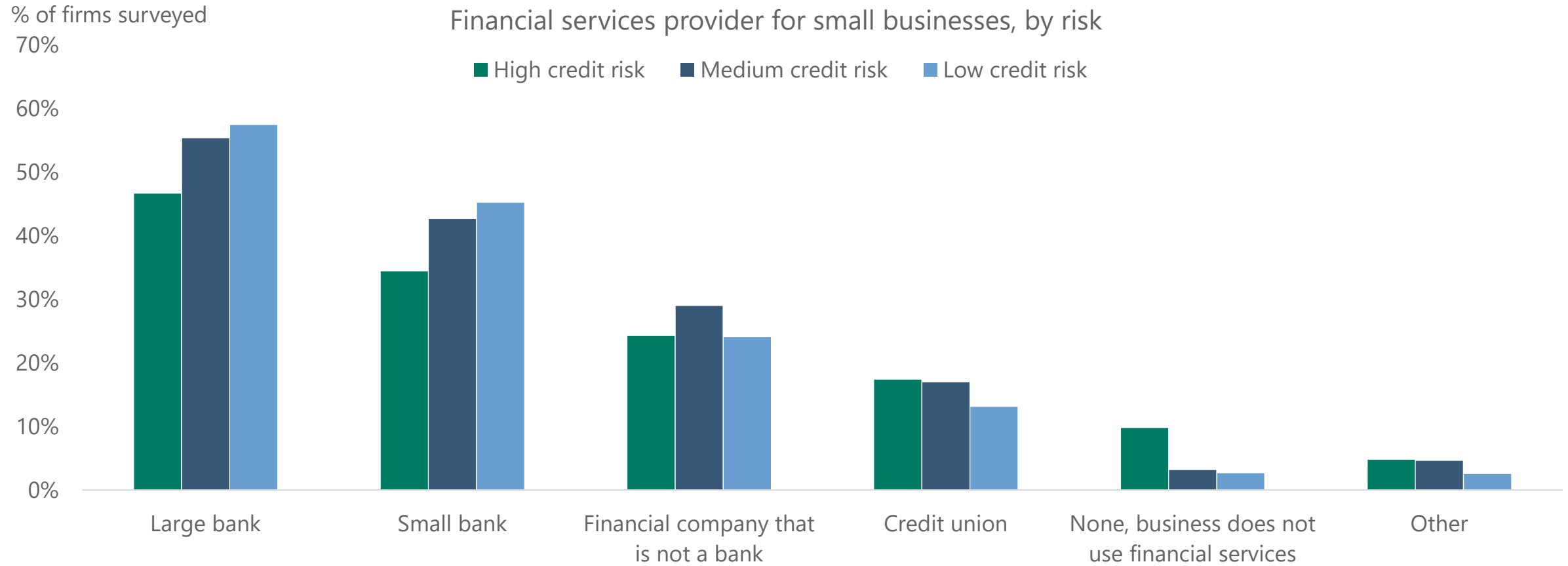
Small banks provide 60% of lending for small businesses in rural areas and 40% in urban areas



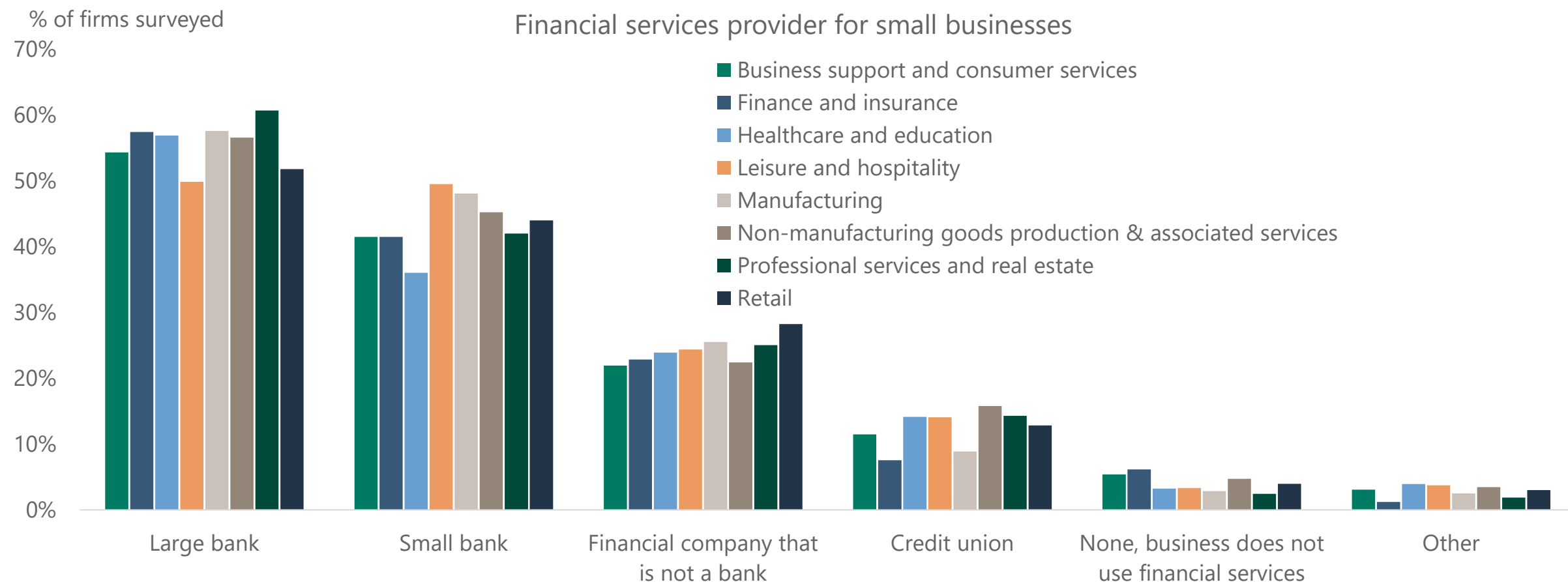
Sources of financing for small businesses, by firm size



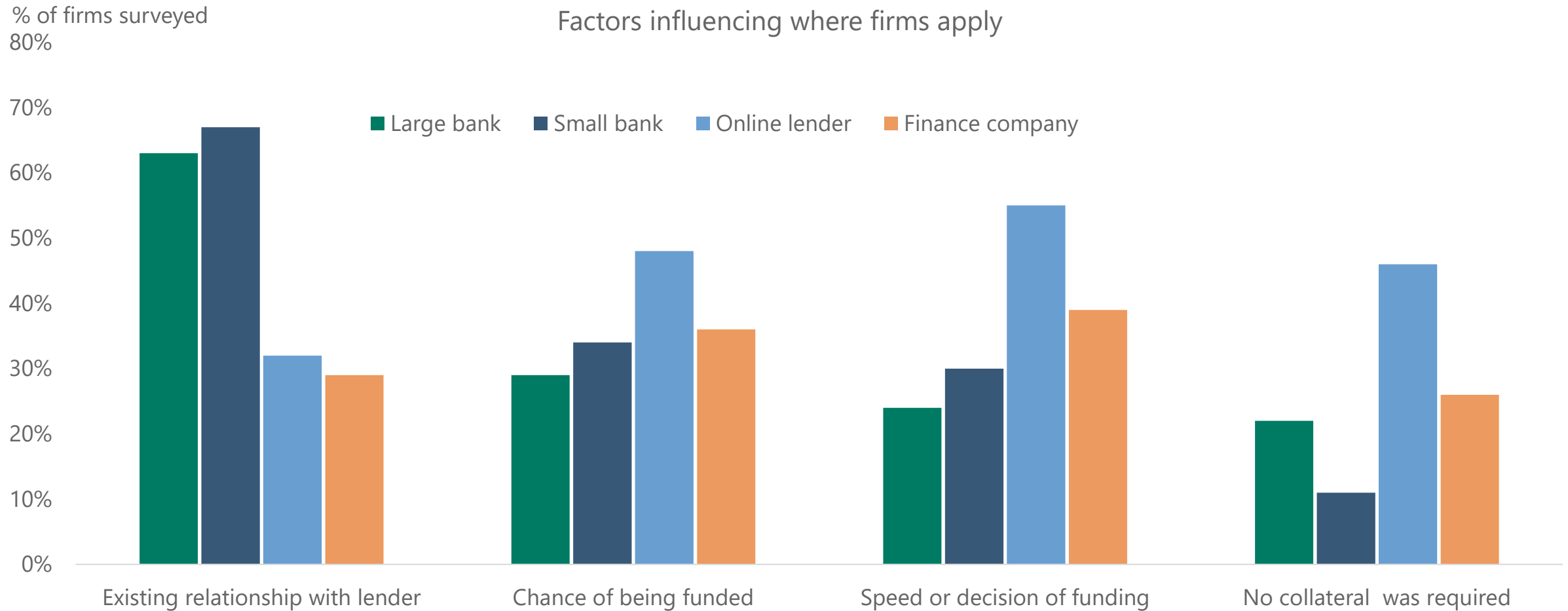
Sources of financing for small businesses, by risk of the firm



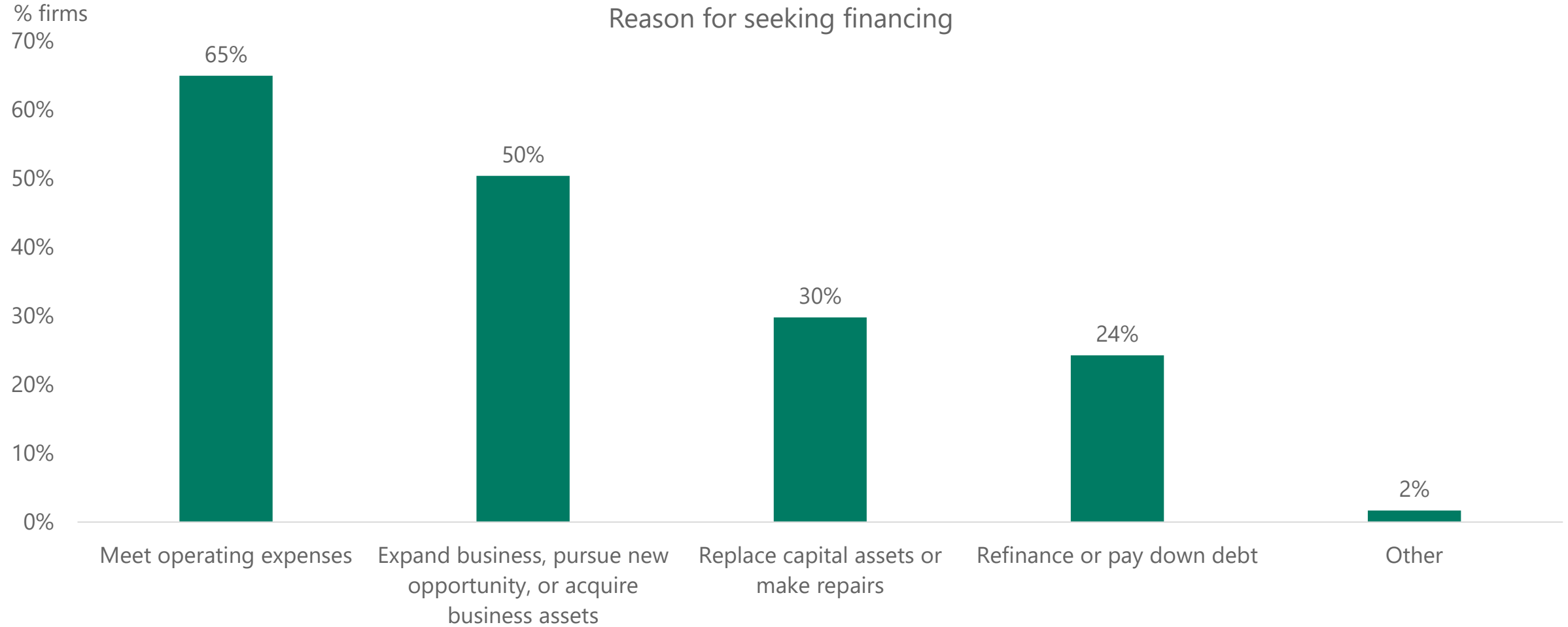
Sources of financing for small businesses, by firm industry



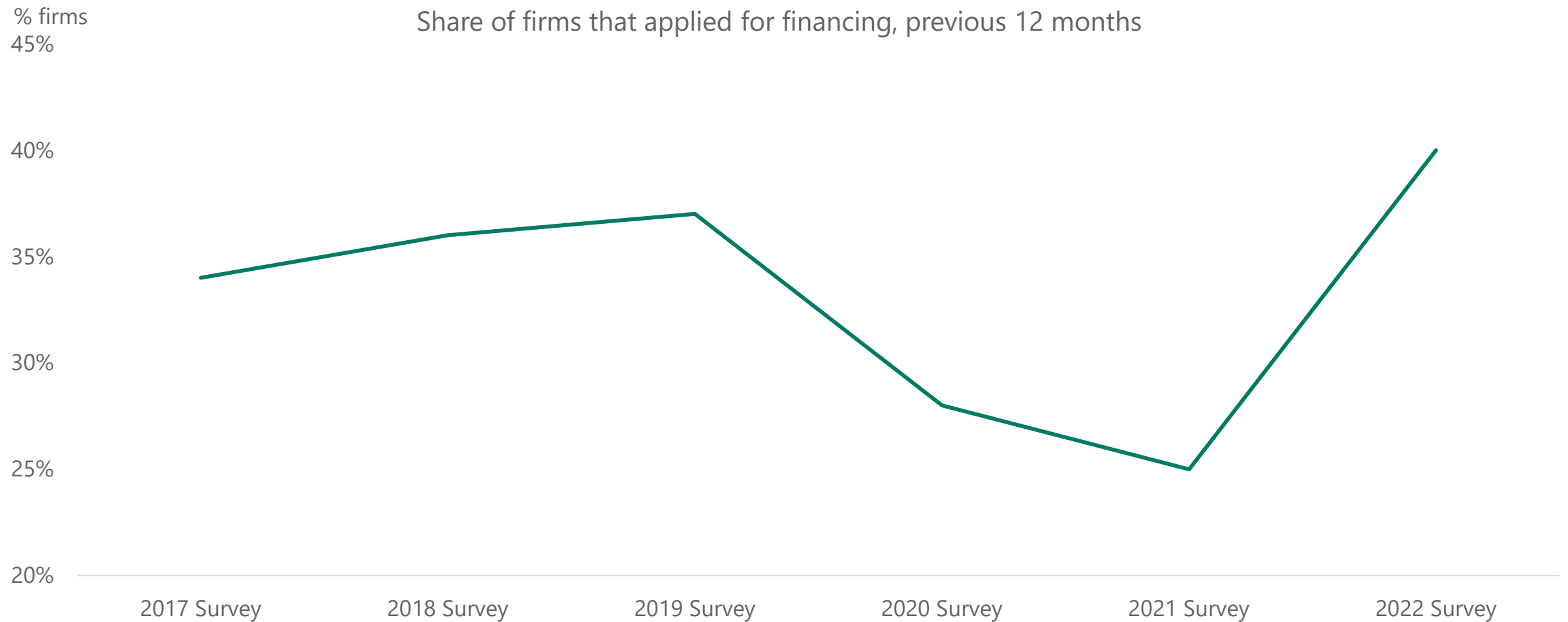
Factors influencing where small businesses apply for a loan. Relationship is important for small bank lending



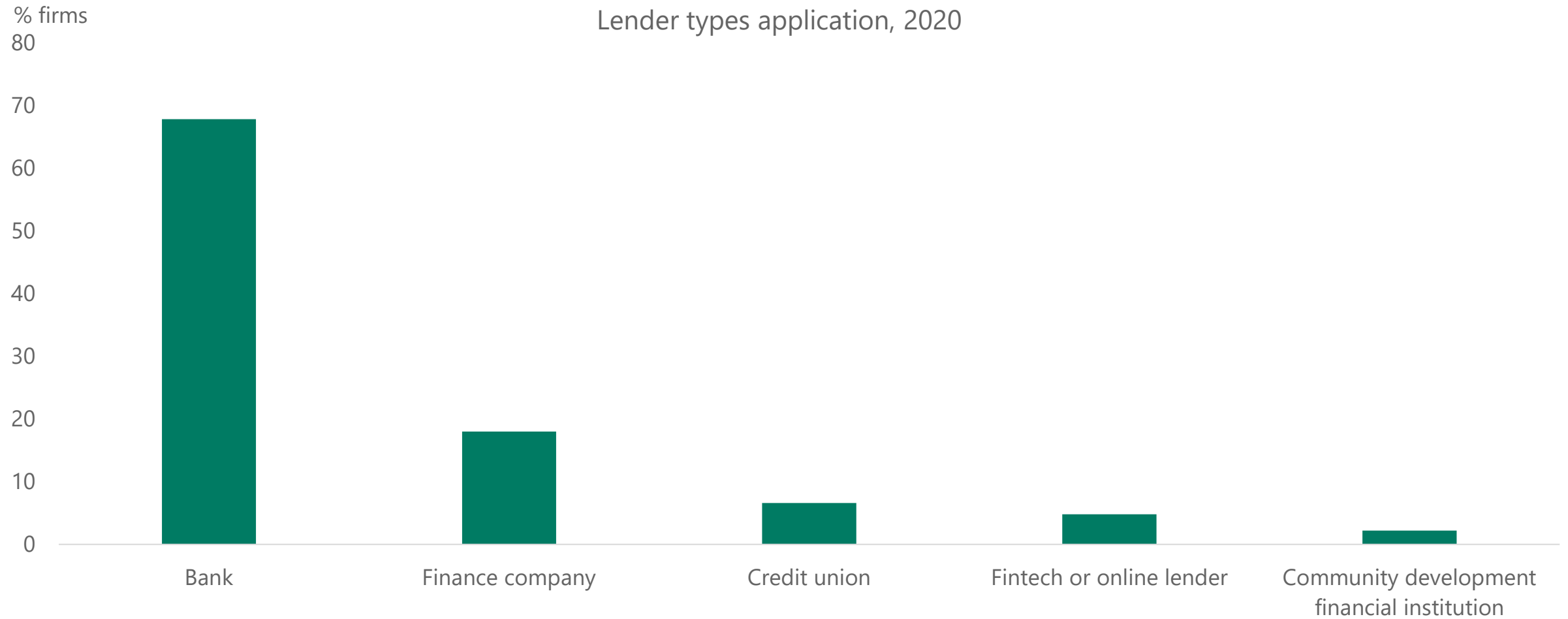
Purpose of seeking financing for small businesses



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

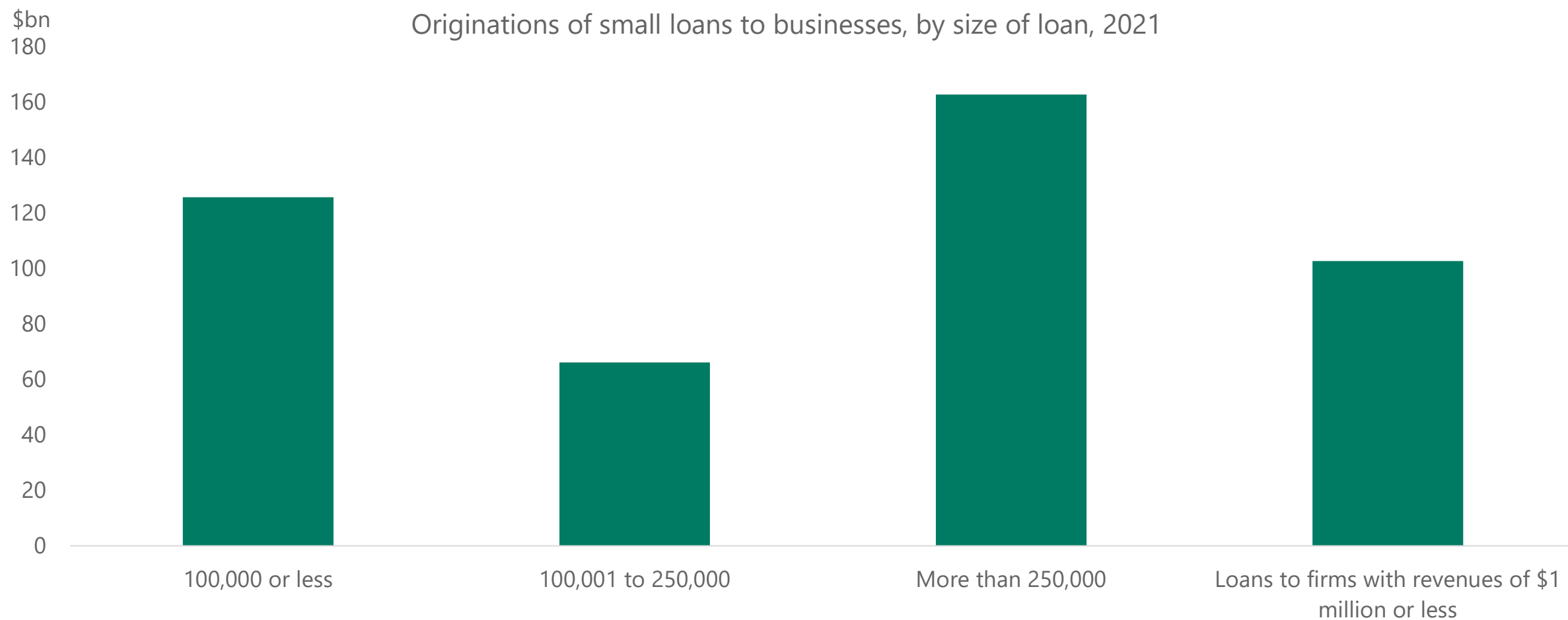


Banks are the most important source of financing for small businesses

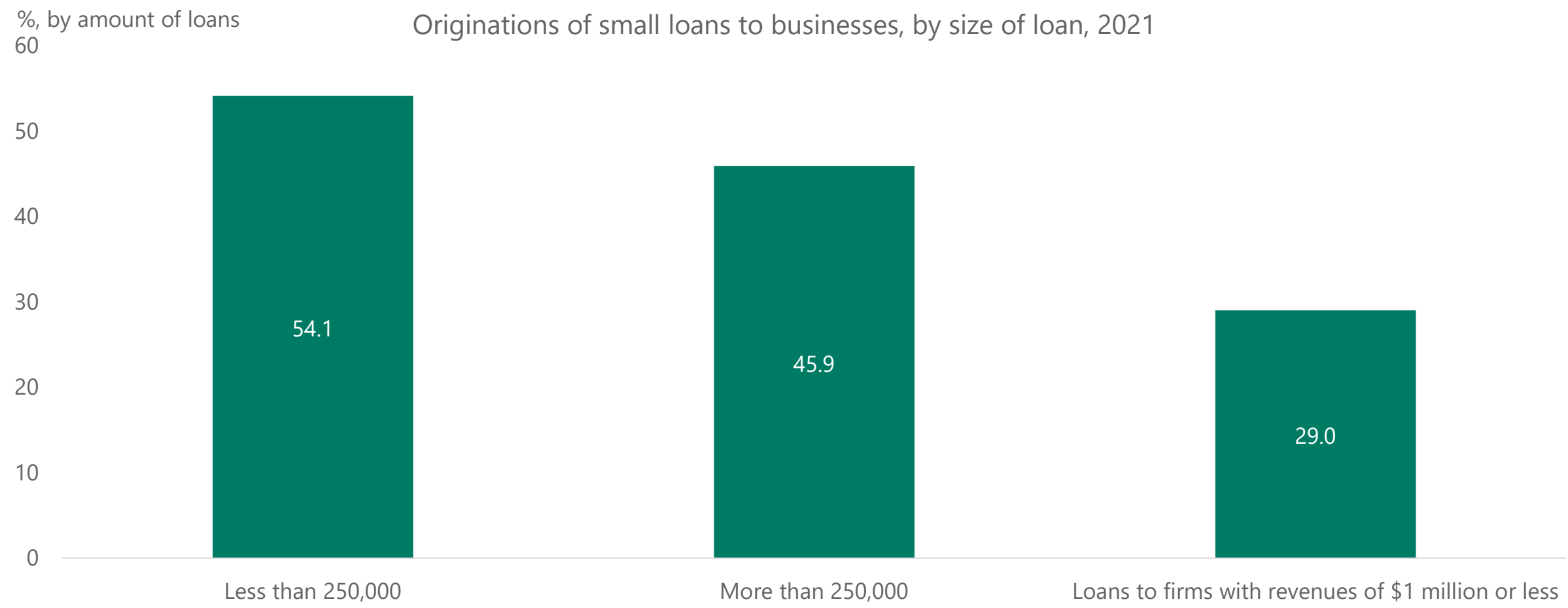


Small business loans

Size of small loans to businesses



Share of loans to small businesses, by loan size



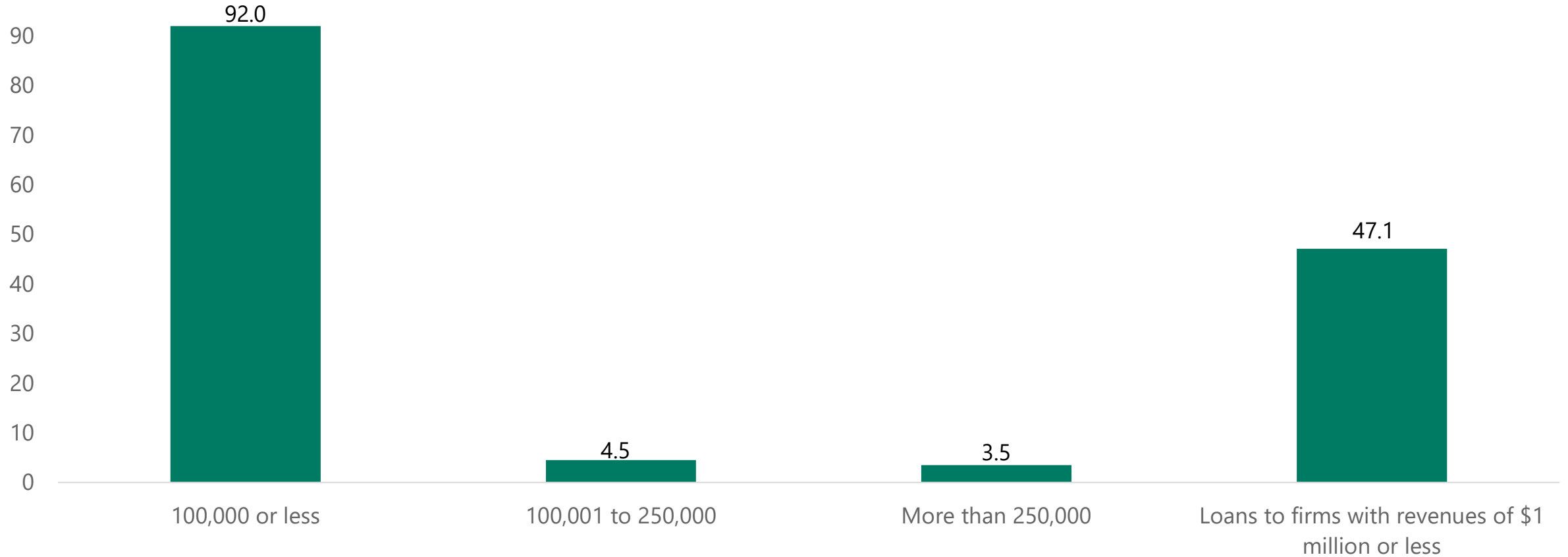
Source: CRA, Apollo Chief Economist. <https://www.ffiec.gov/craadweb/naaghelp.htm>

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

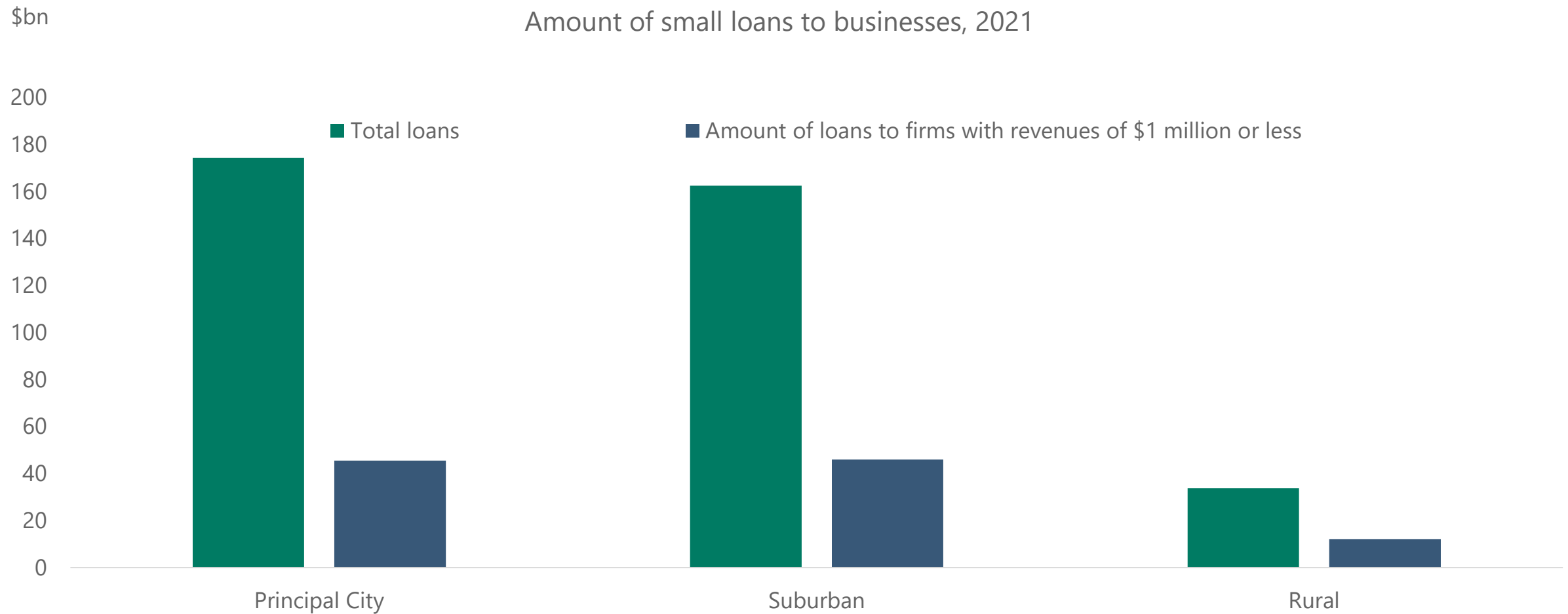
%, by number of loans

100

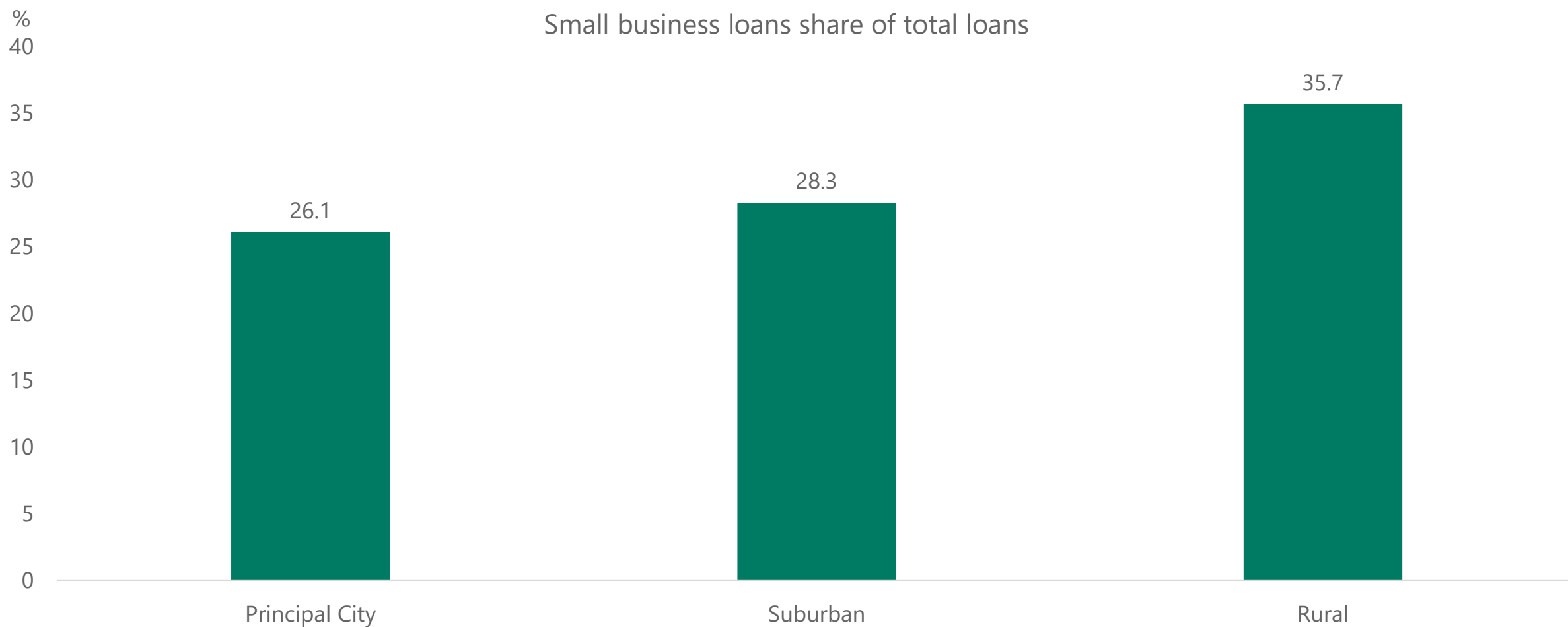
Originations of small loans to businesses, by size of loan, 2021



Total loans vs loans to small businesses by neighborhood characteristic

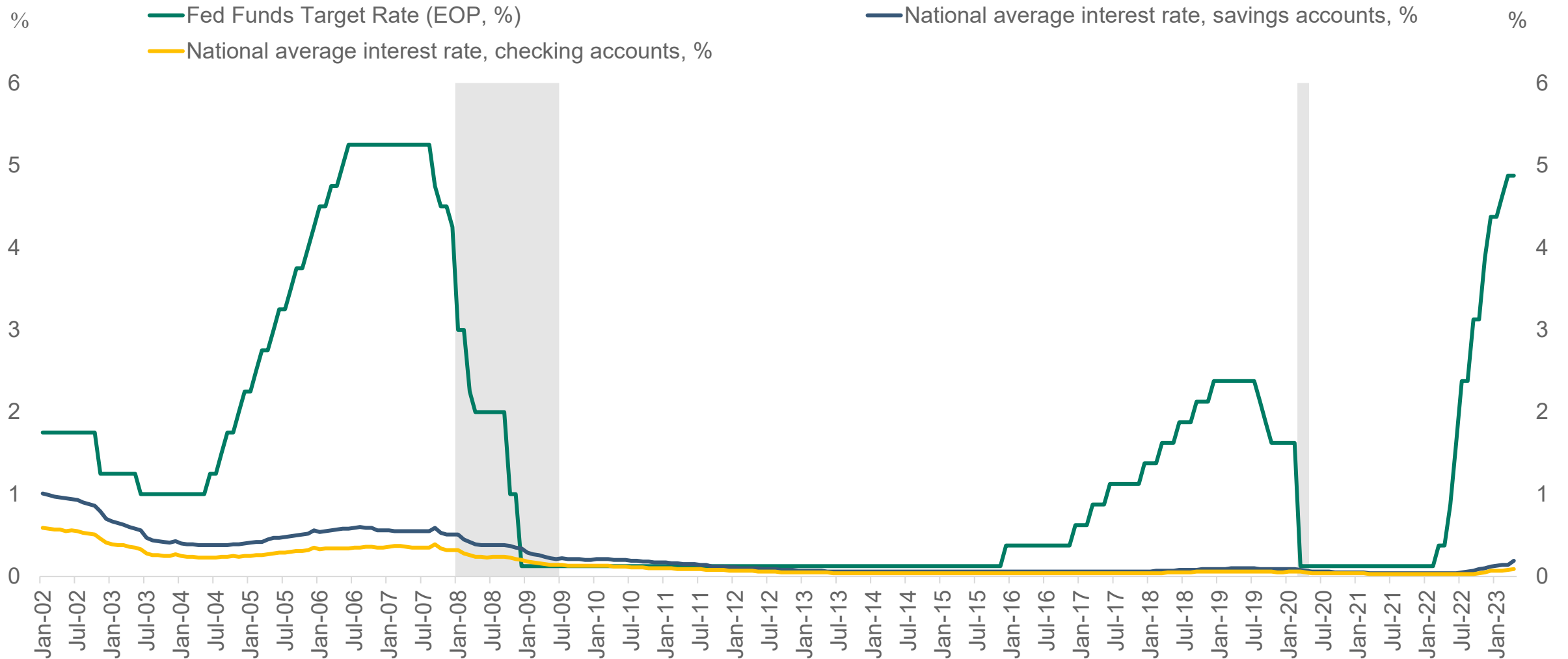


Share of loans to small businesses by neighborhood characteristic

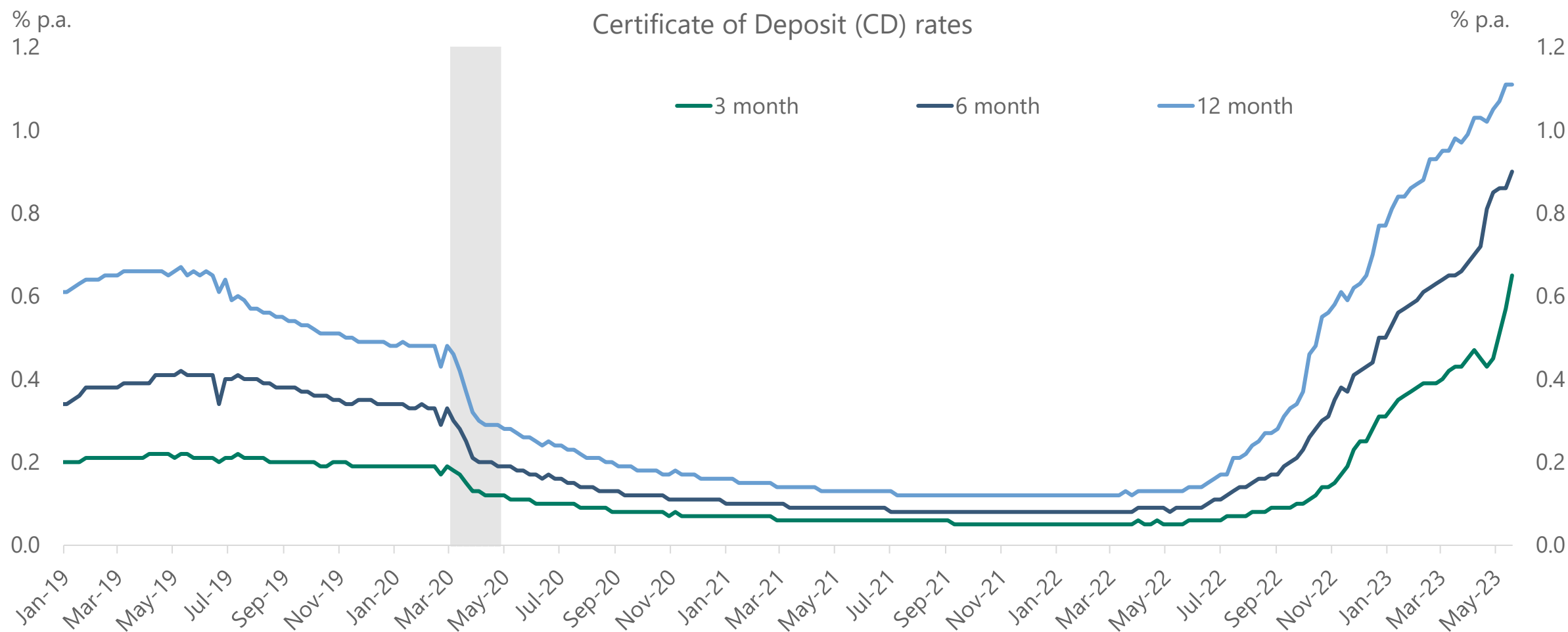


Fed funds rate versus national average
interest rate on checking accounts

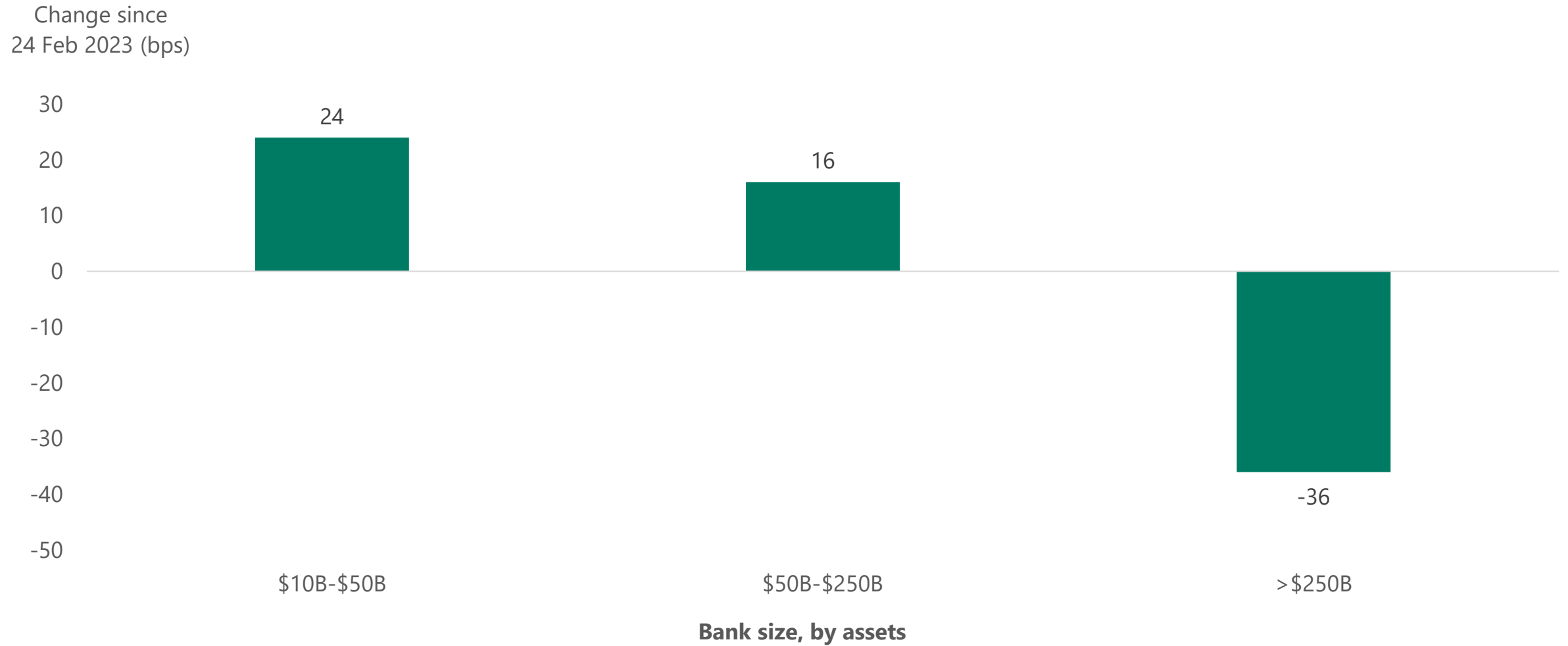
Interest rate on checking accounts versus the Fed funds rate



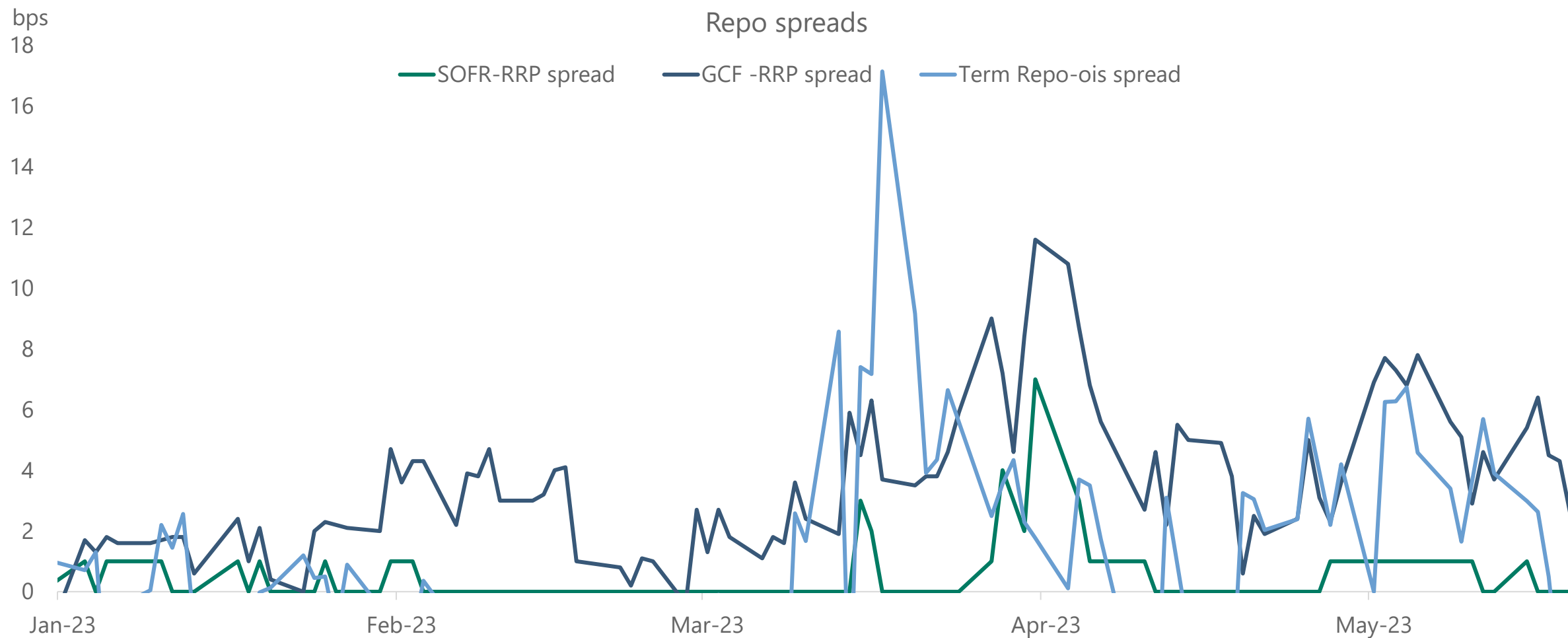
CD rates have slowly increased as the Fed has raised interest rates



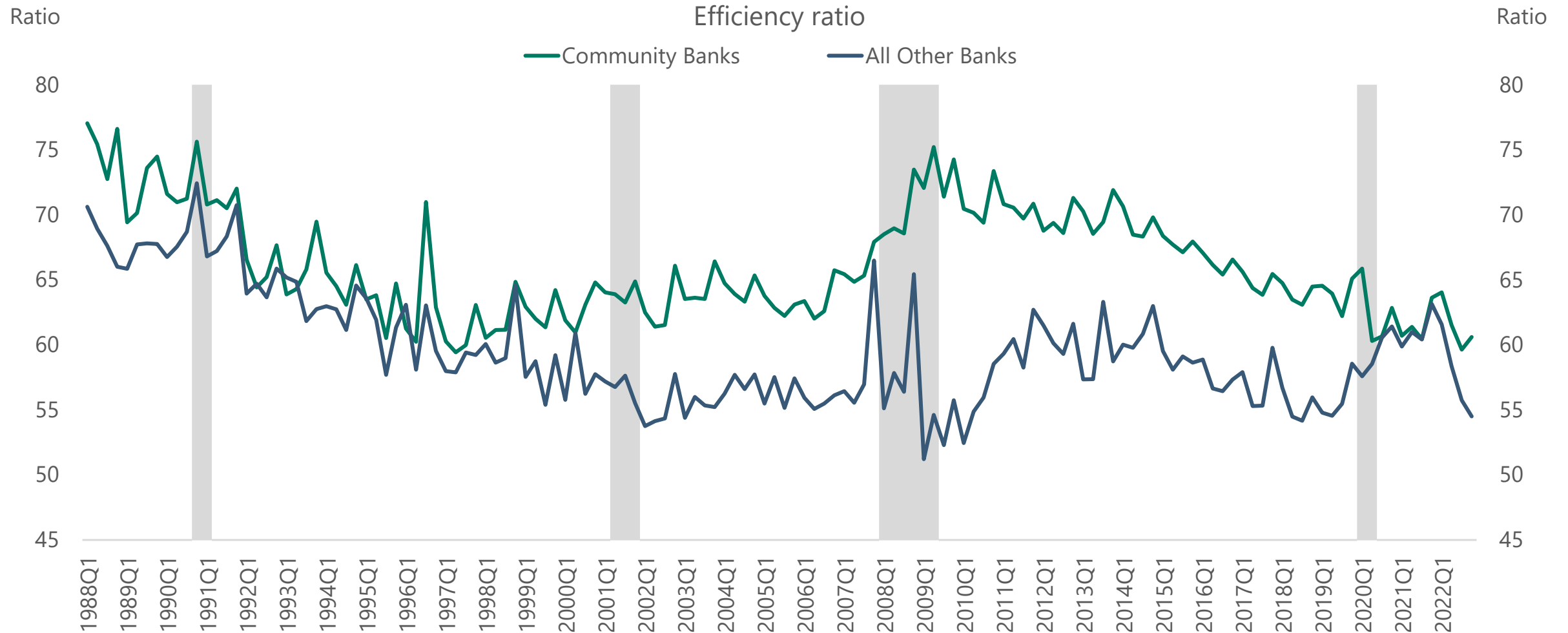
After SVB: Change in 3-month CD rates at US banks, by size of bank



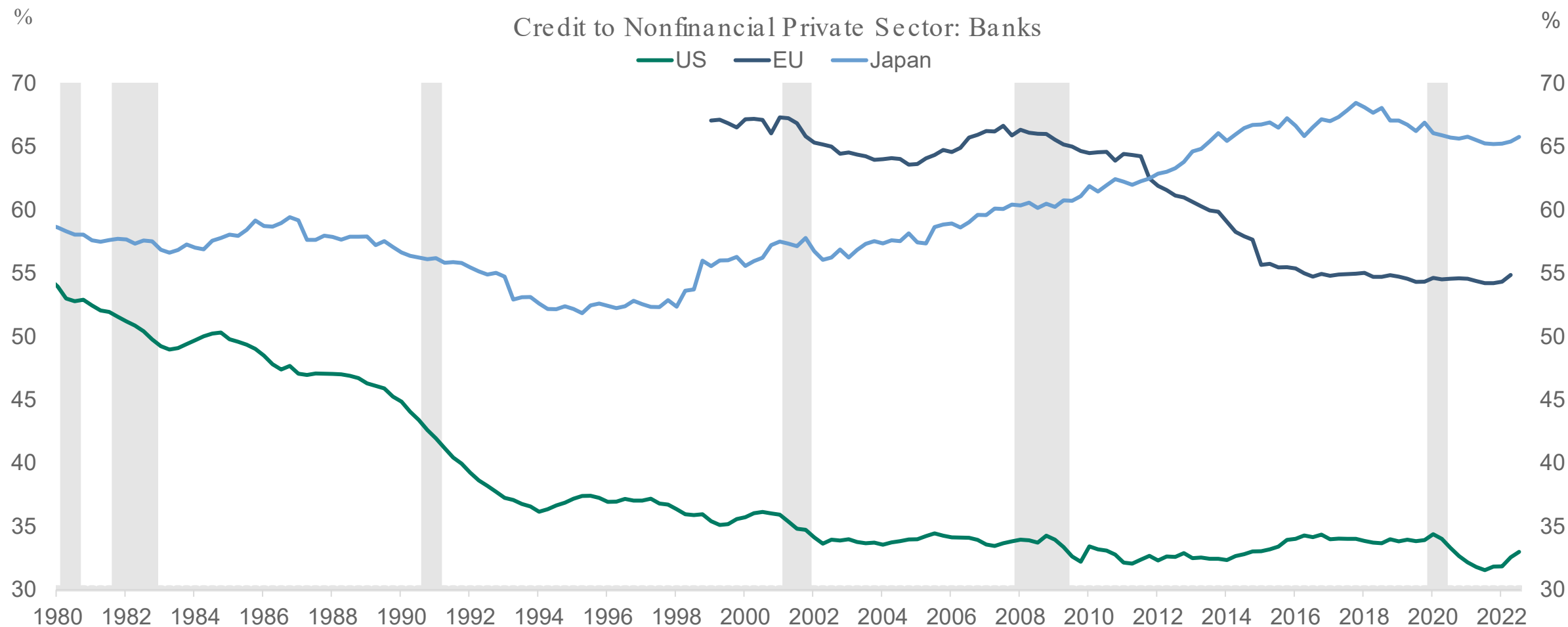
Monitoring repo spreads for stresses in money markets



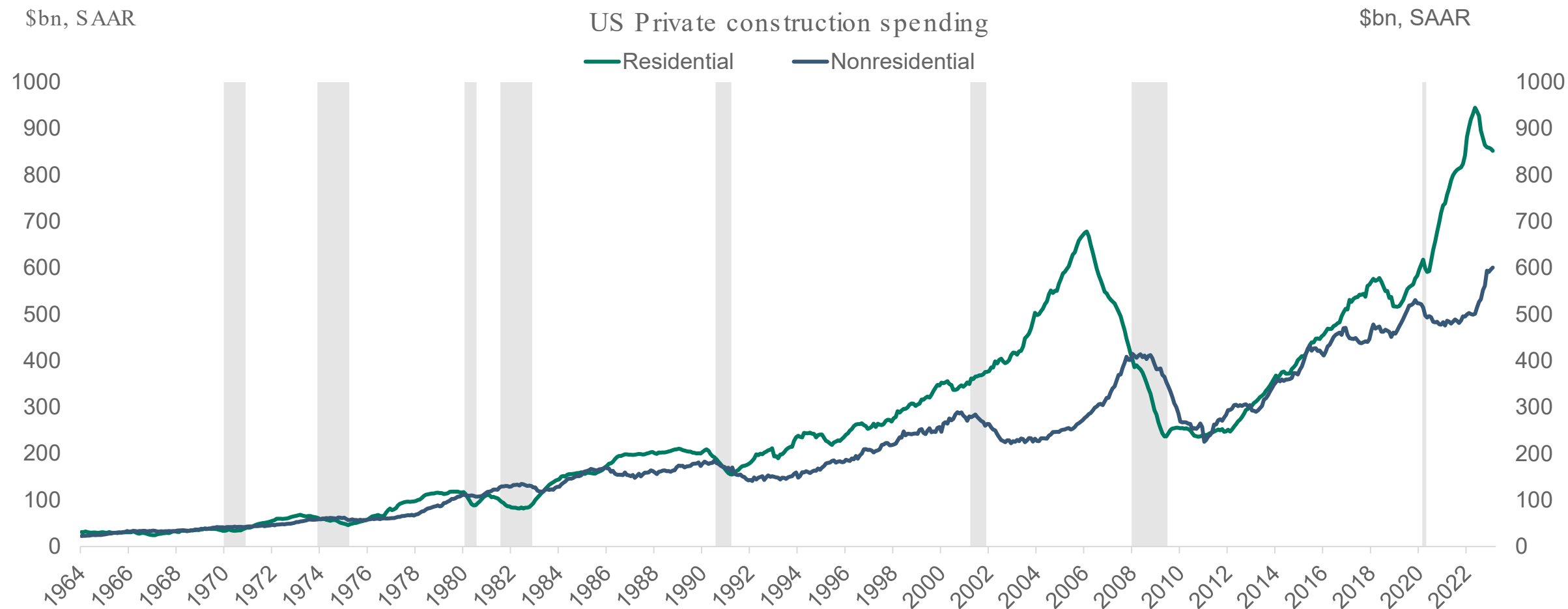
The average efficiency ratio for community banks is around 61% compared with 55% for noncommunity banks.



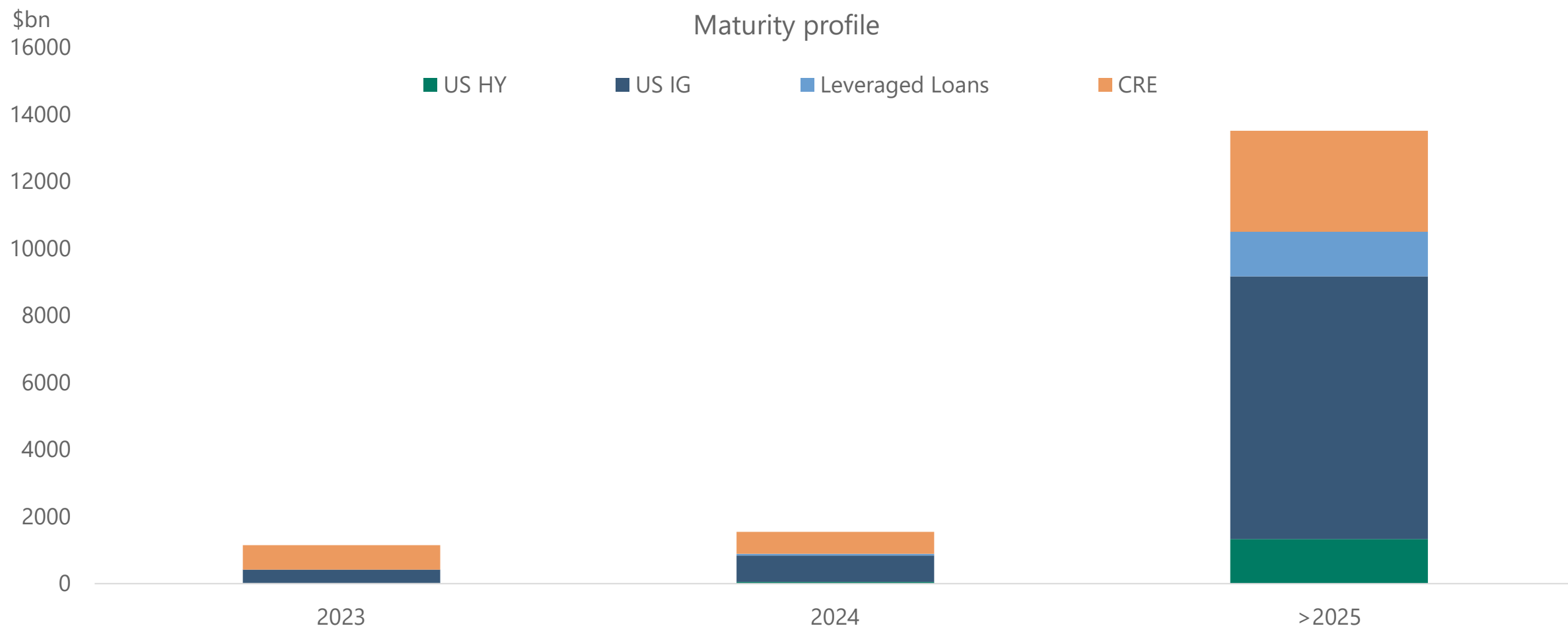
Share of bank lending lower in the US



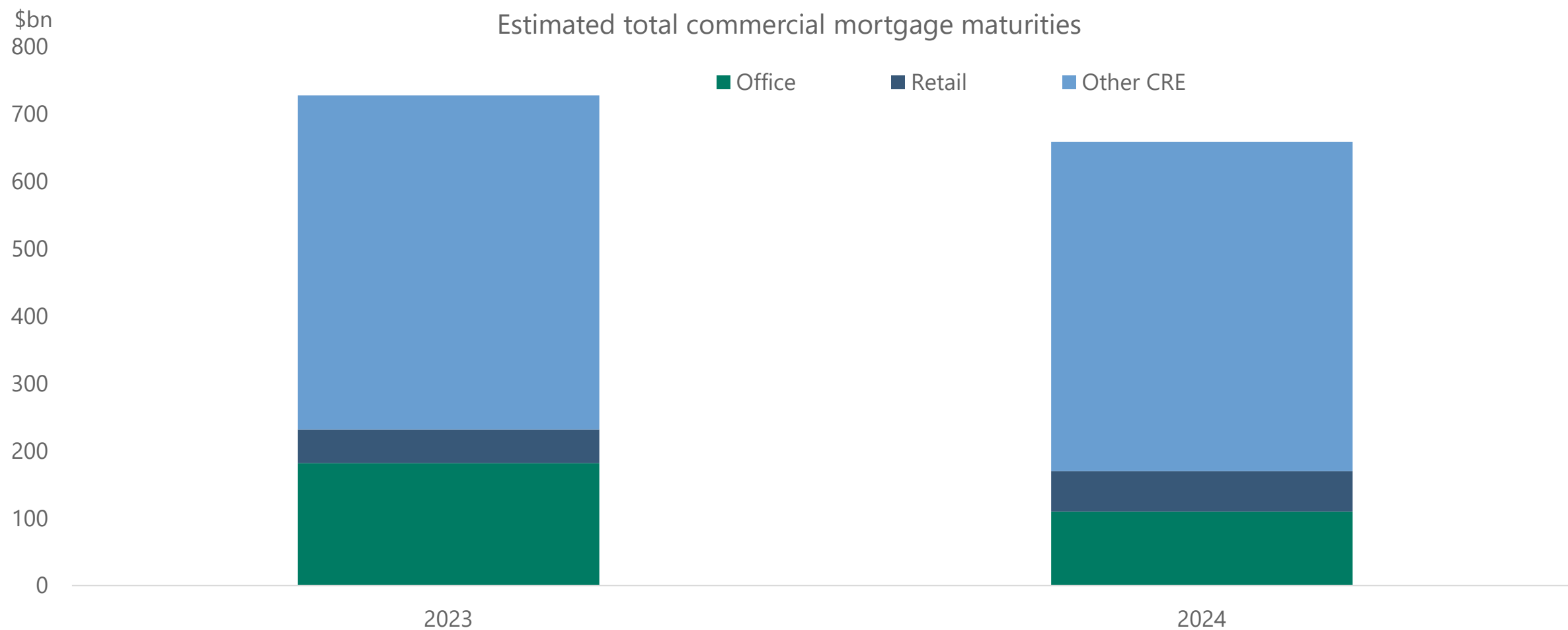
Residential construction spending elevated



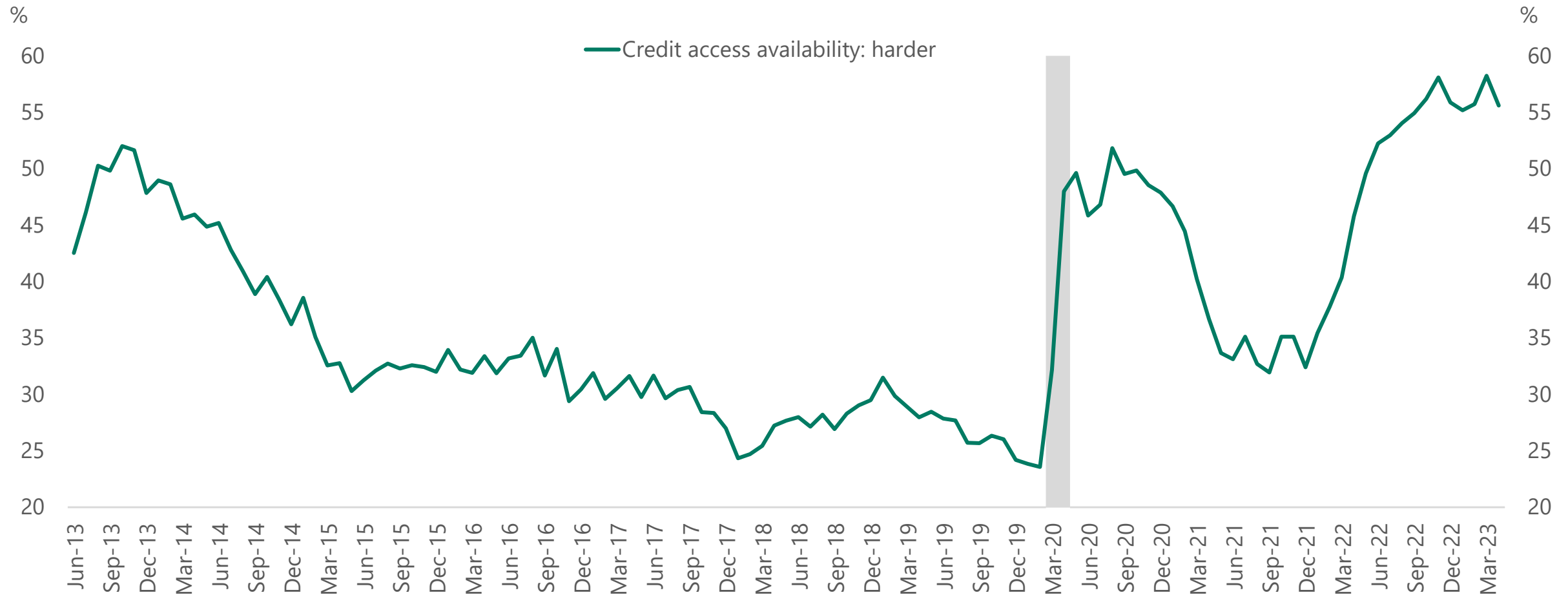
Maturity profile for US fixed income



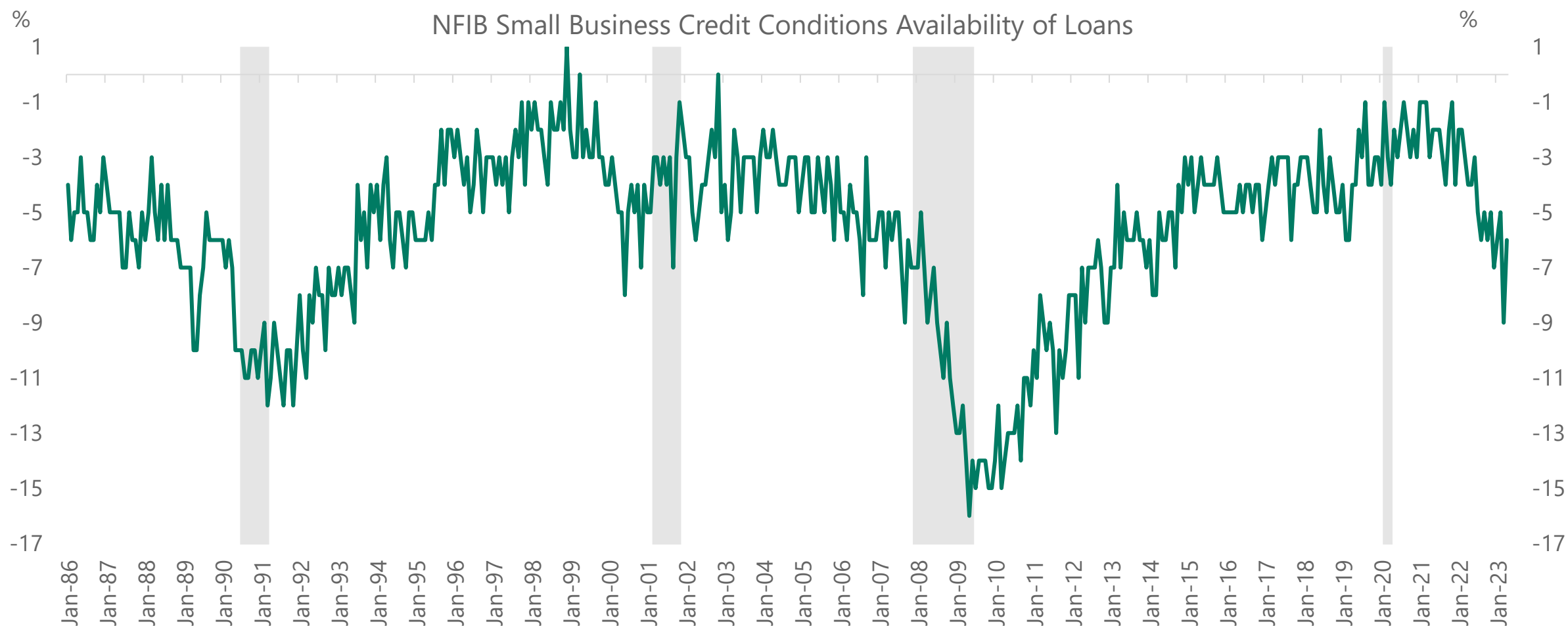
CRE maturity profile



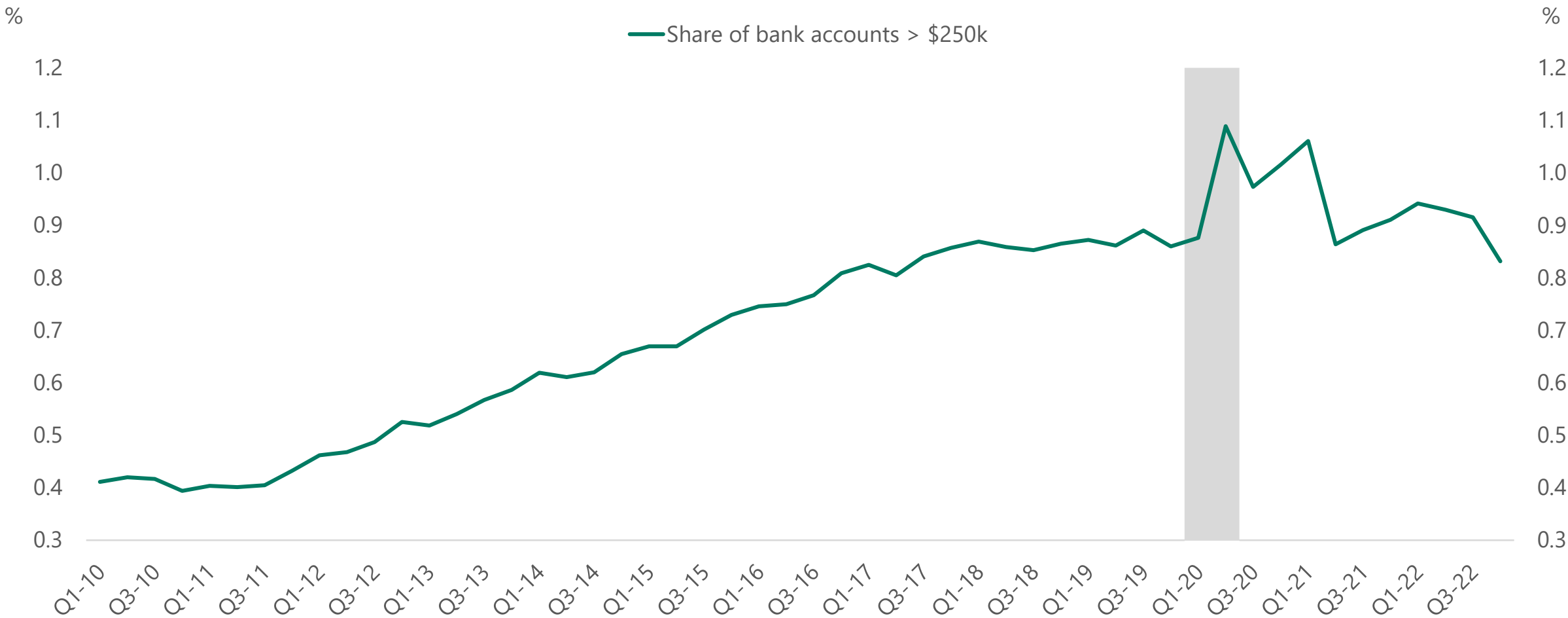
The share of households reporting it is harder to obtain credit than one year ago



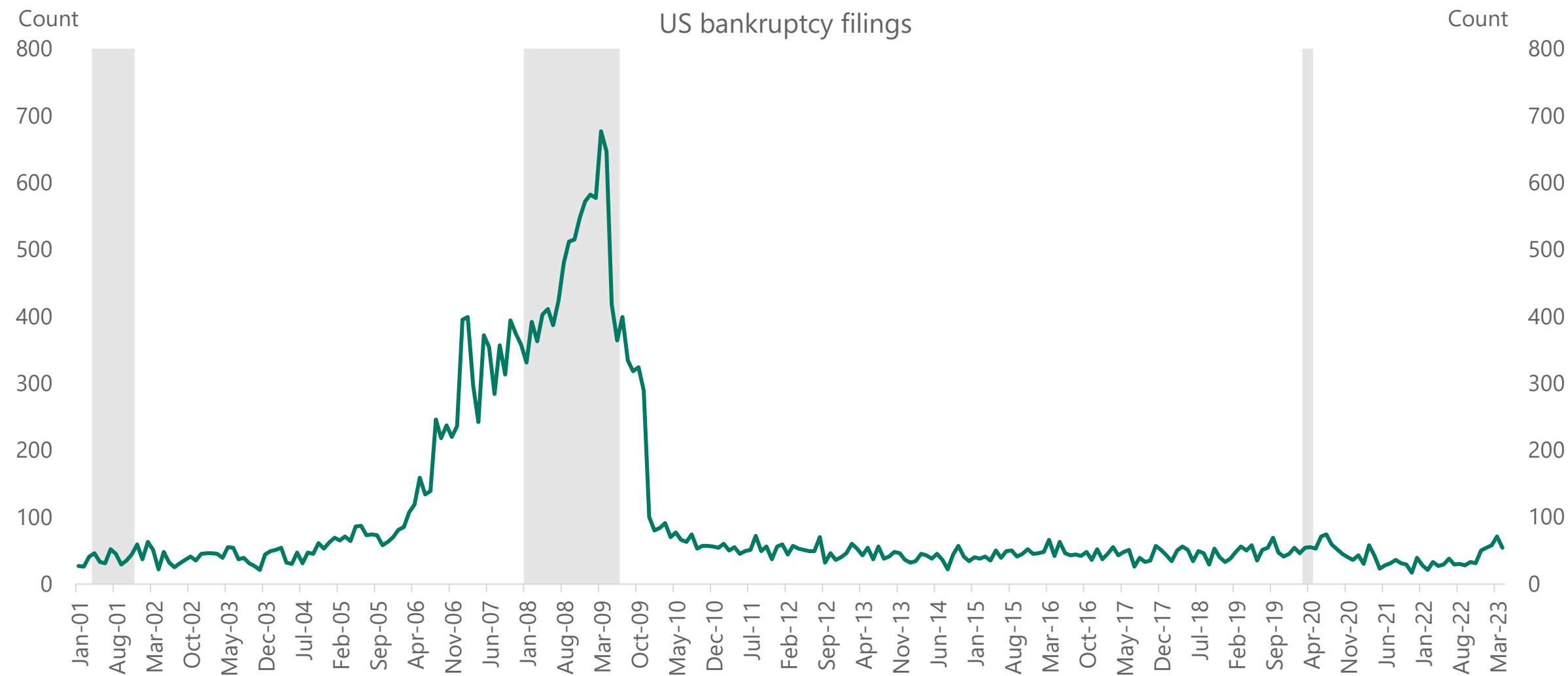
Percentage of small firms reporting that financing is harder to get



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



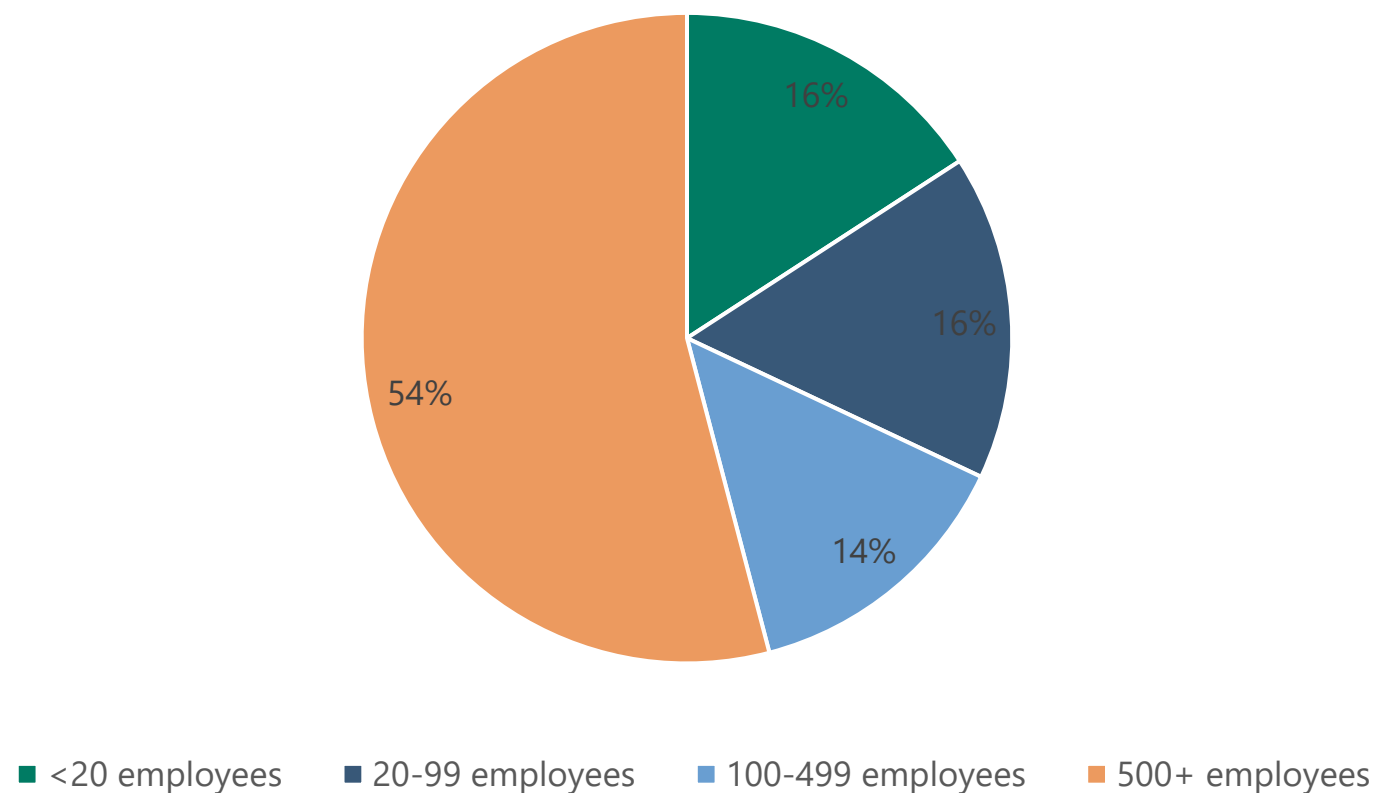
Bankruptcy filings



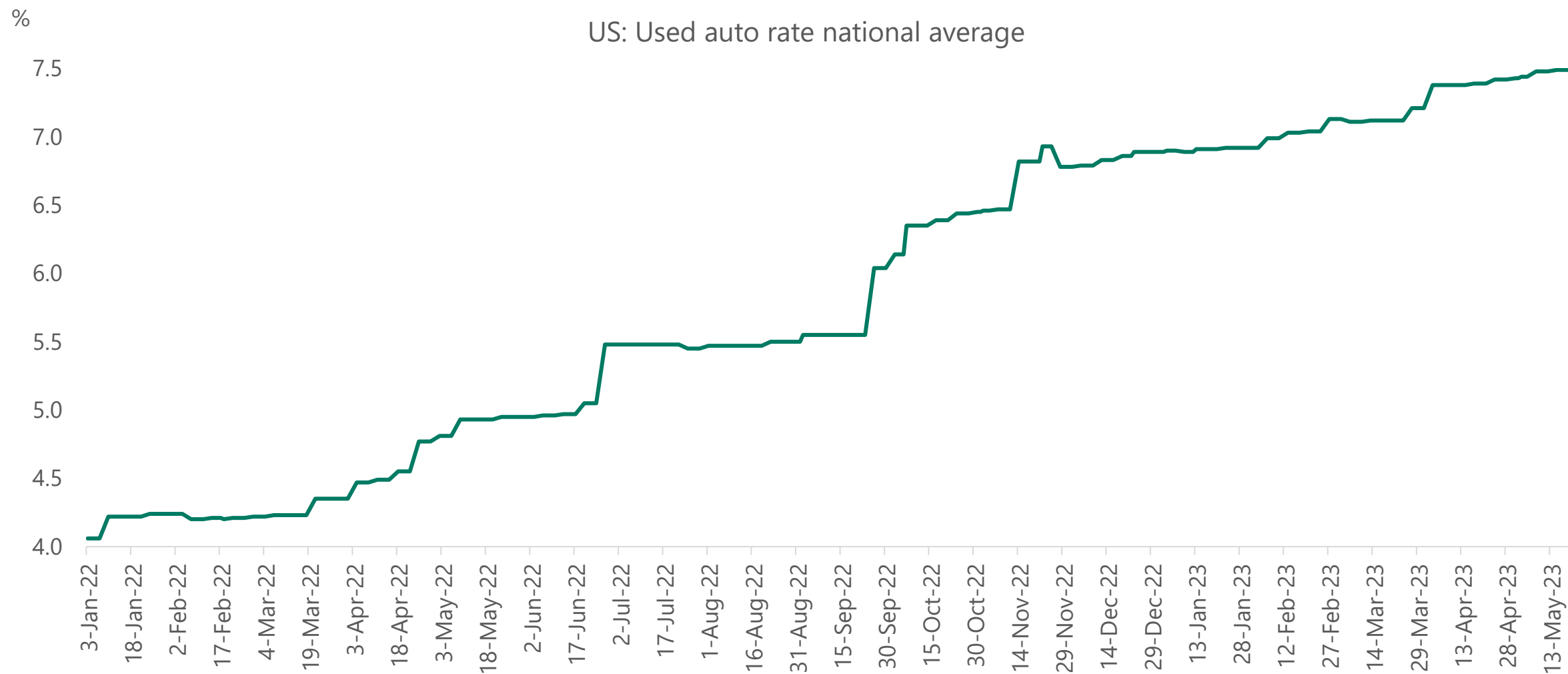
Source: S&P Capital IQ, Bloomberg, Apollo Chief Economist. Note: Bankruptcy figures include public companies or private companies with public debt with a minimum of \$2 million in assets or liabilities at the time of filing, in addition to private companies with at least \$10 million in assets or liabilities.

Half of US population employed in firm size of <500 employees

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



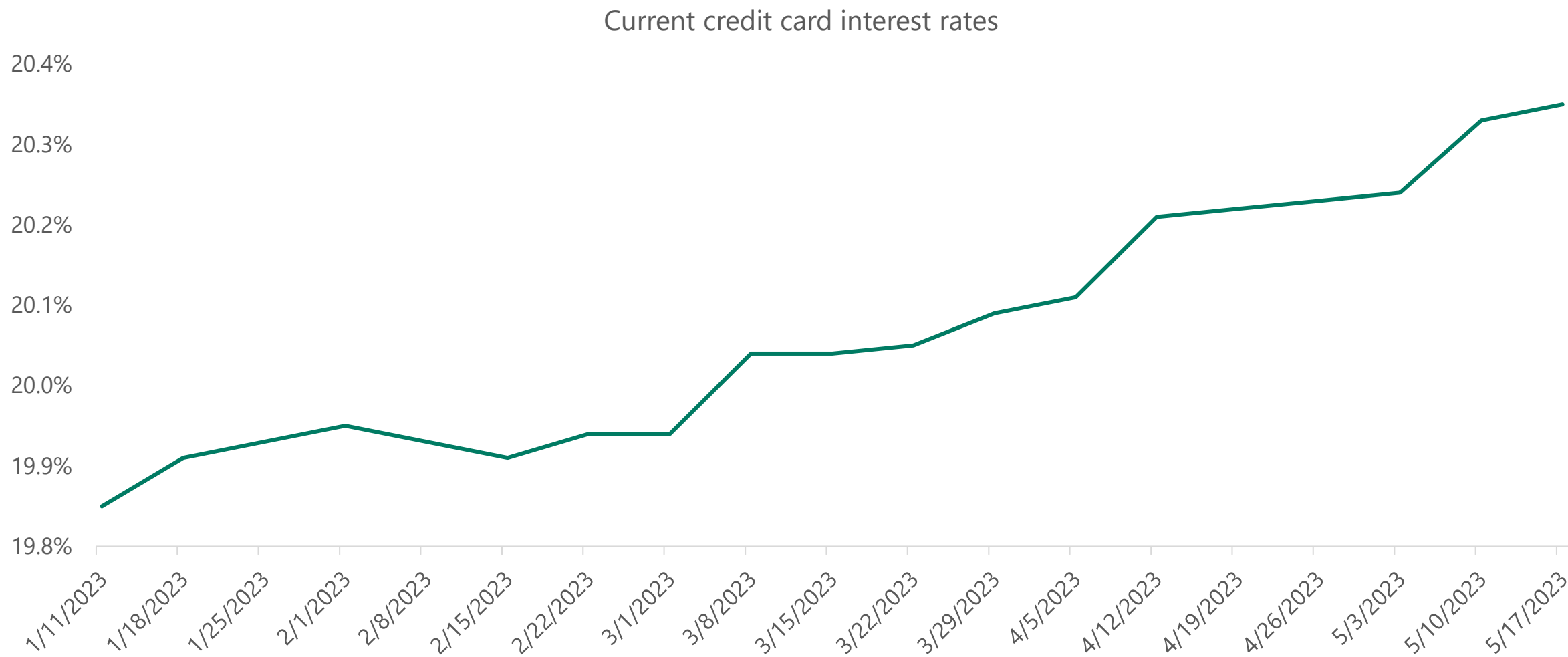
Interest rate on auto loans



Commercial Bank auto loan rates highest since 2008

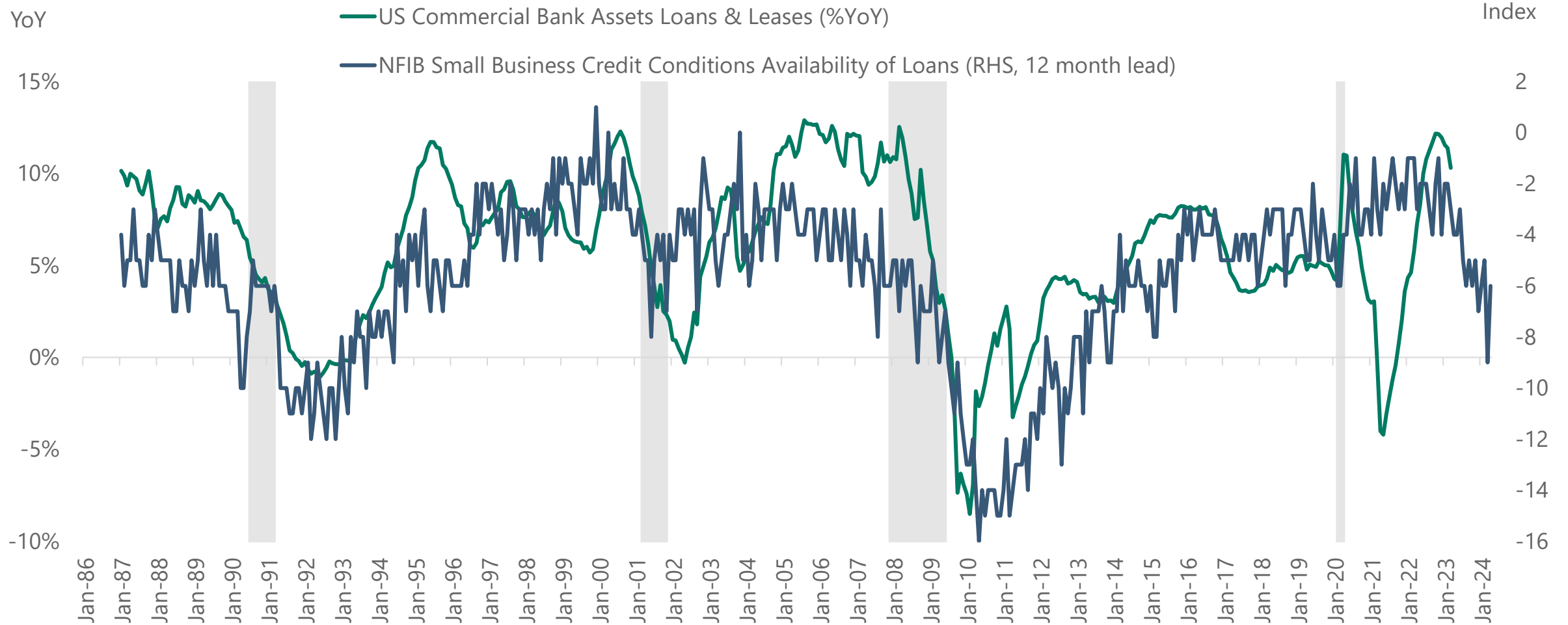


Interest rate on credit cards

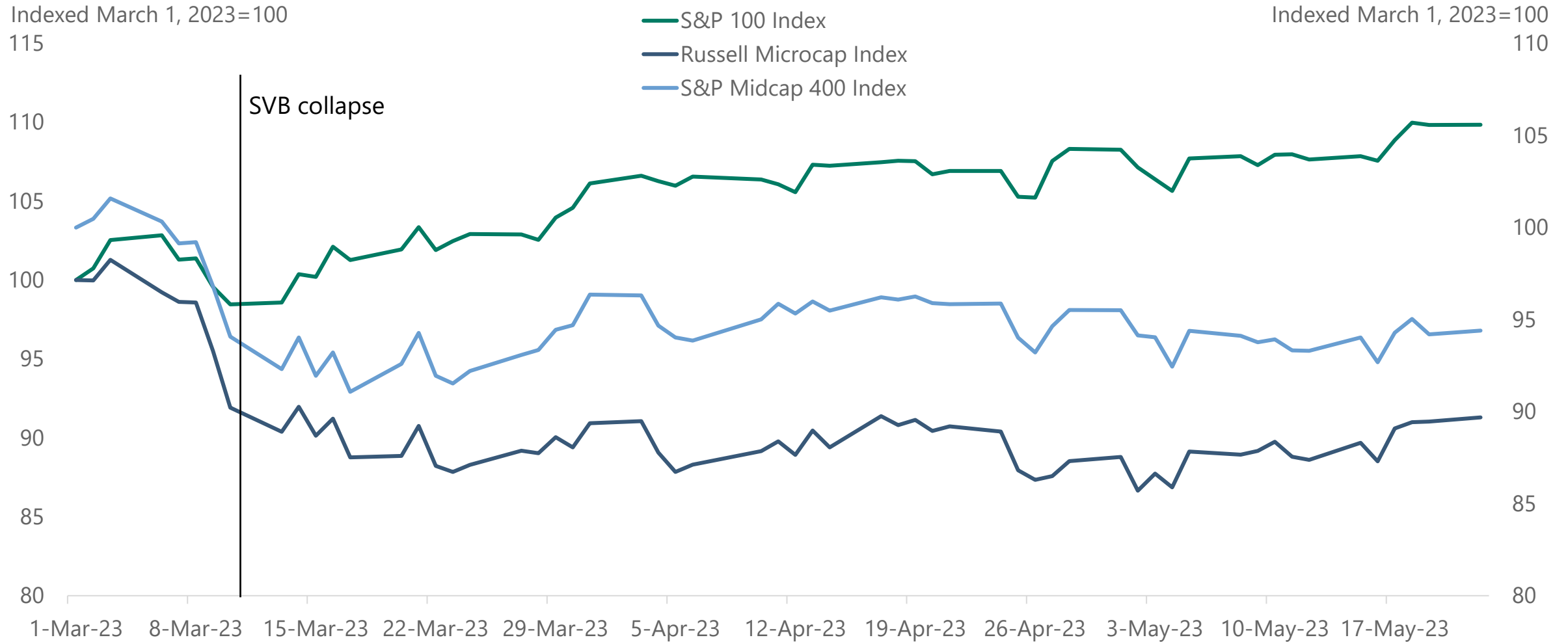


Source: Bankrate.com, Apollo Chief Economist

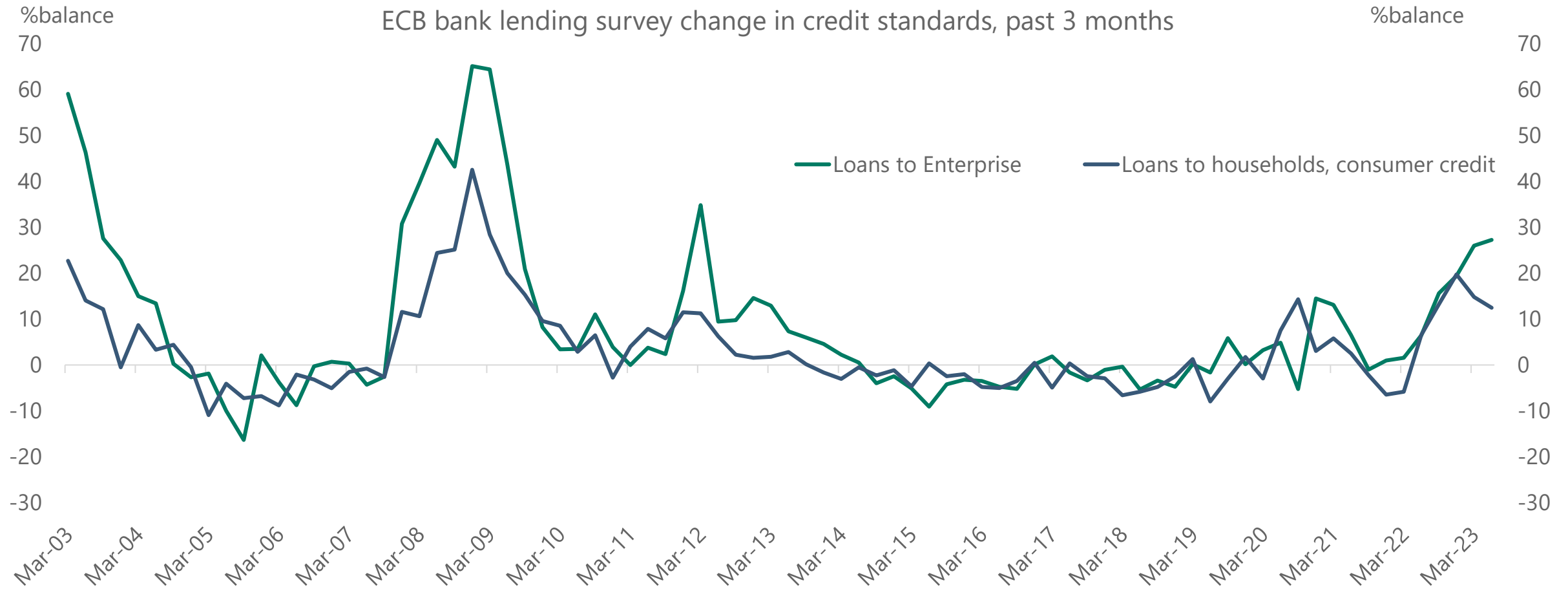
Loan growth expected to fall



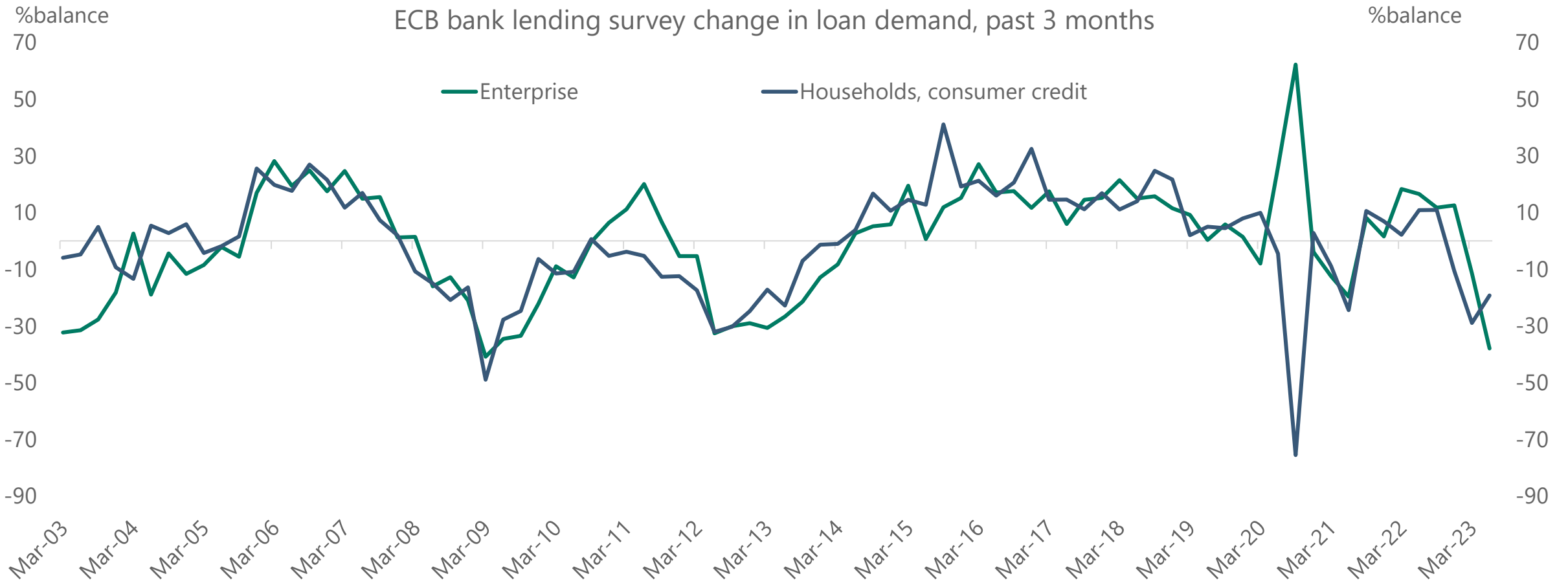
Banking crisis having negative impact on small and medium-sized companies



Euro Area credit conditions tightening



Euro Area loan demand falling



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

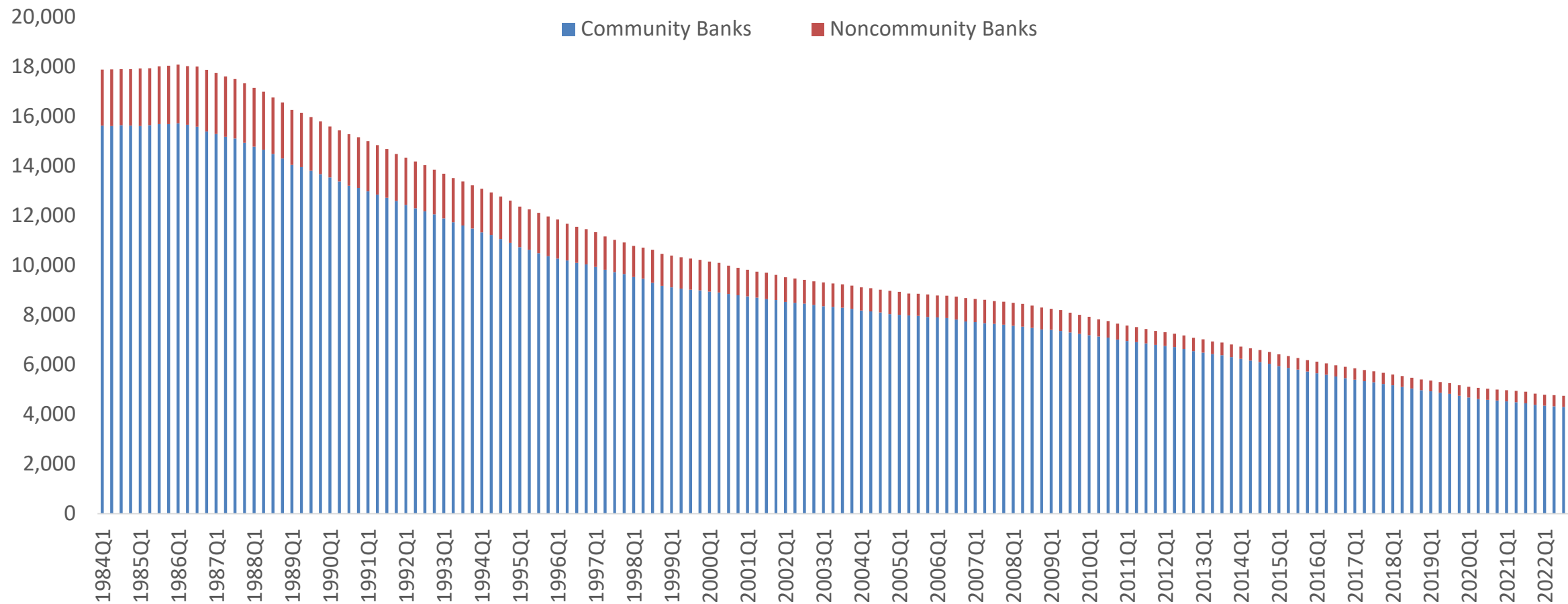
Community banks

90% of all banks in the US are community banks

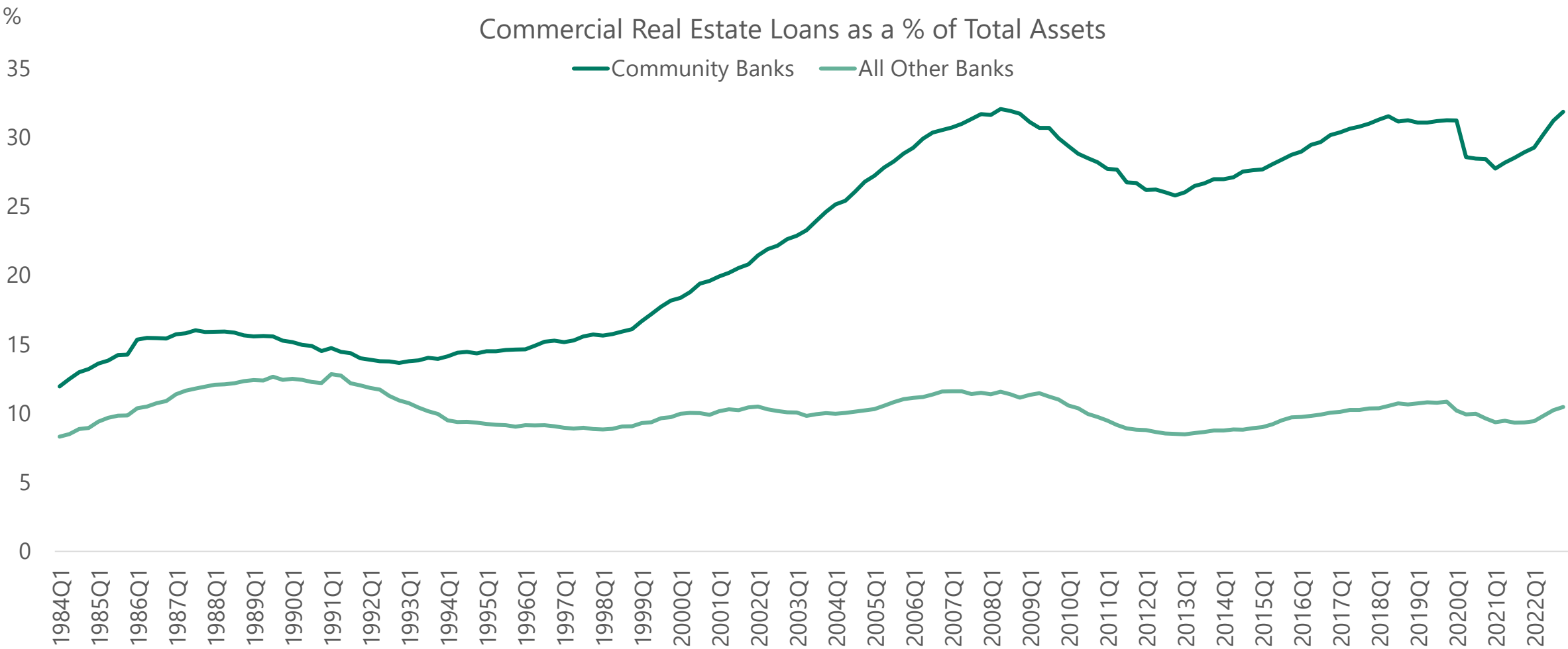
Count of Banks

All Insured Institutions

Community Banks Noncommunity Banks

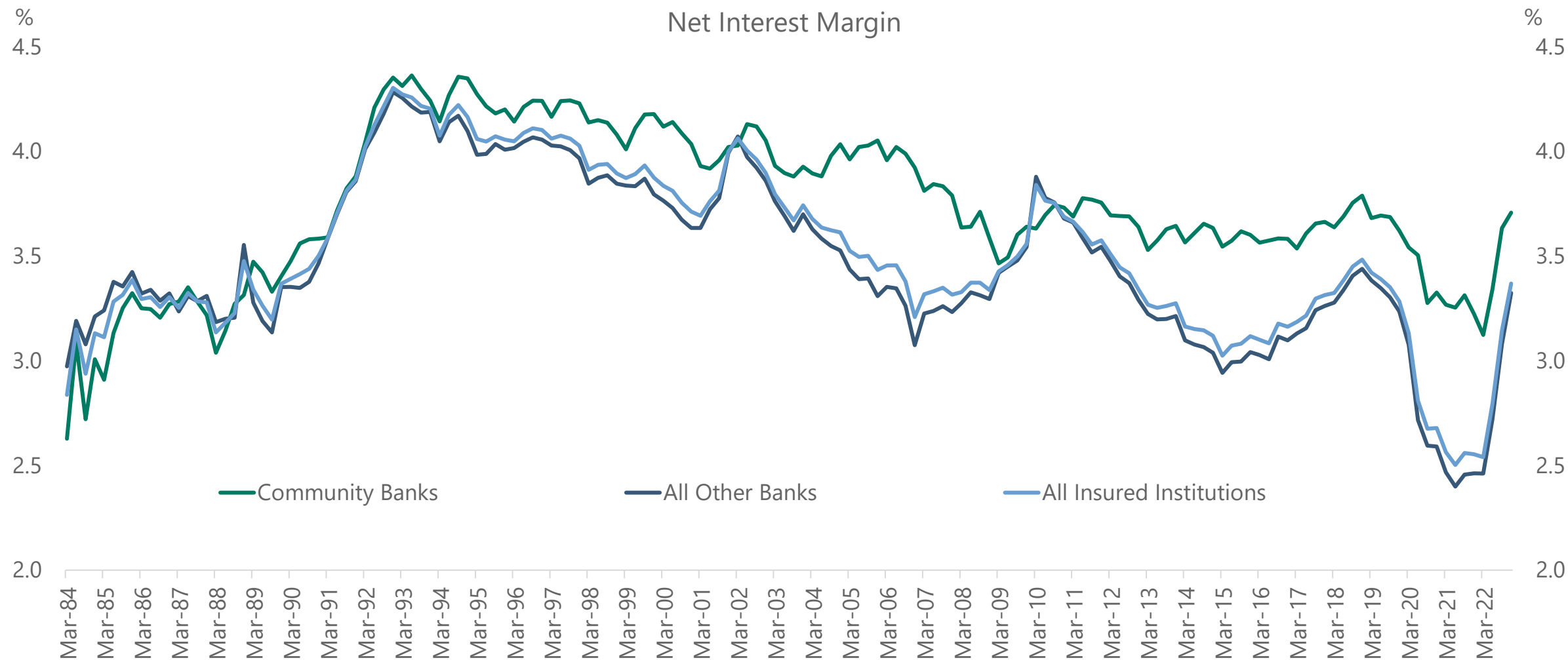


CRE loans make up a significant share of community banks' assets



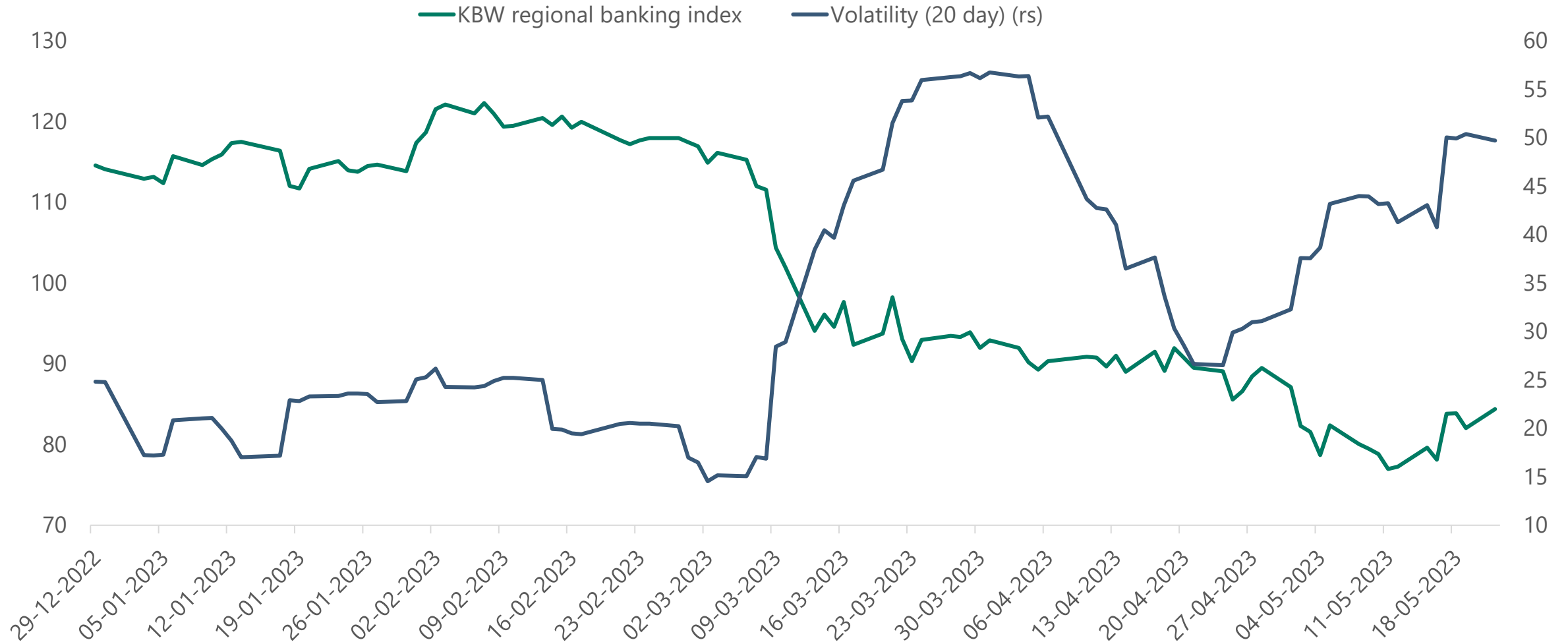
Source: FDIC, Apollo Chief Economist.

Net interest margin higher for community banks



Source: FDIC, Apollo Chief Economist.

Regional Bank volatility picks up





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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 at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

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