

APOLLO

Outlook for US regional banks

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Apollo Global Management

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Unless otherwise noted, information as of April 8, 2023.

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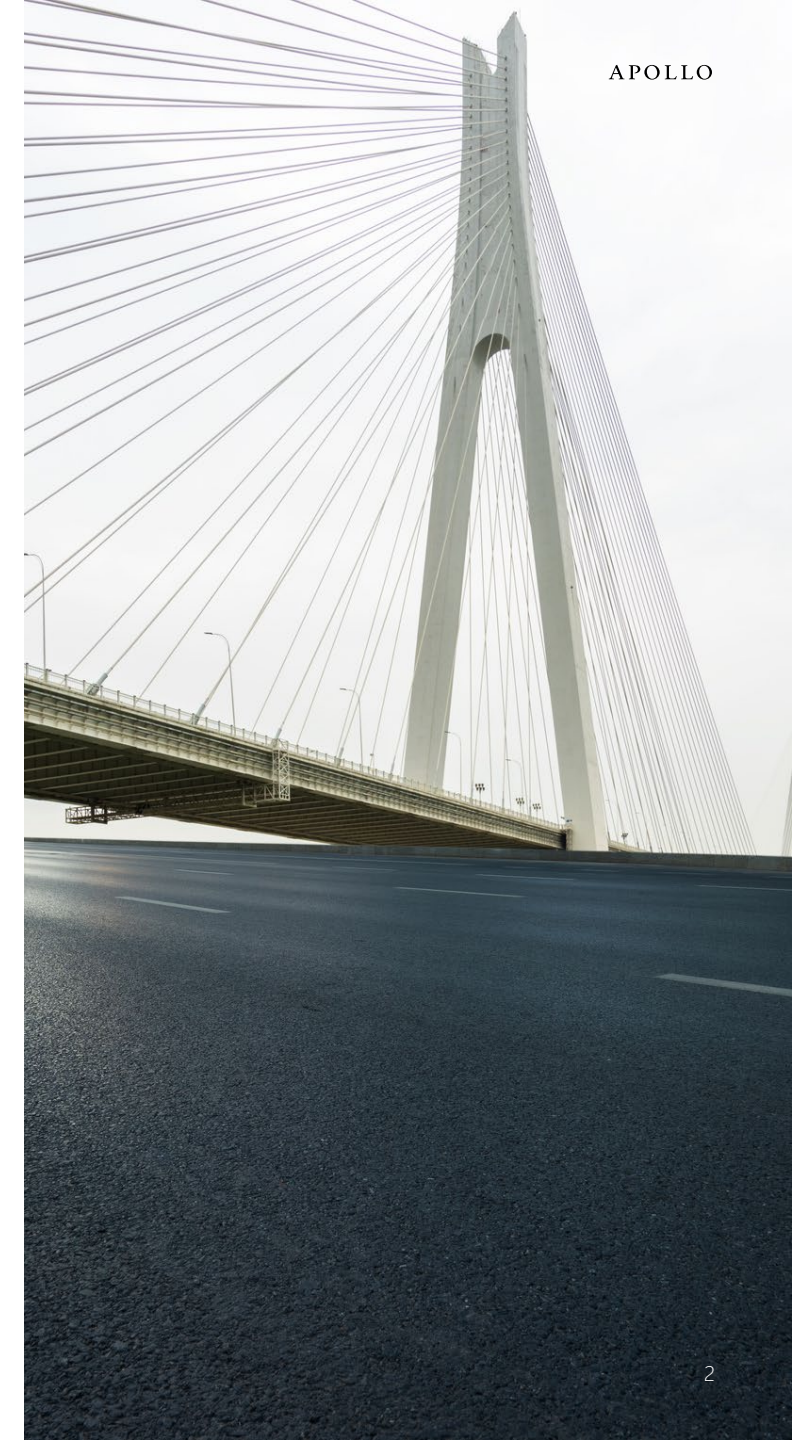
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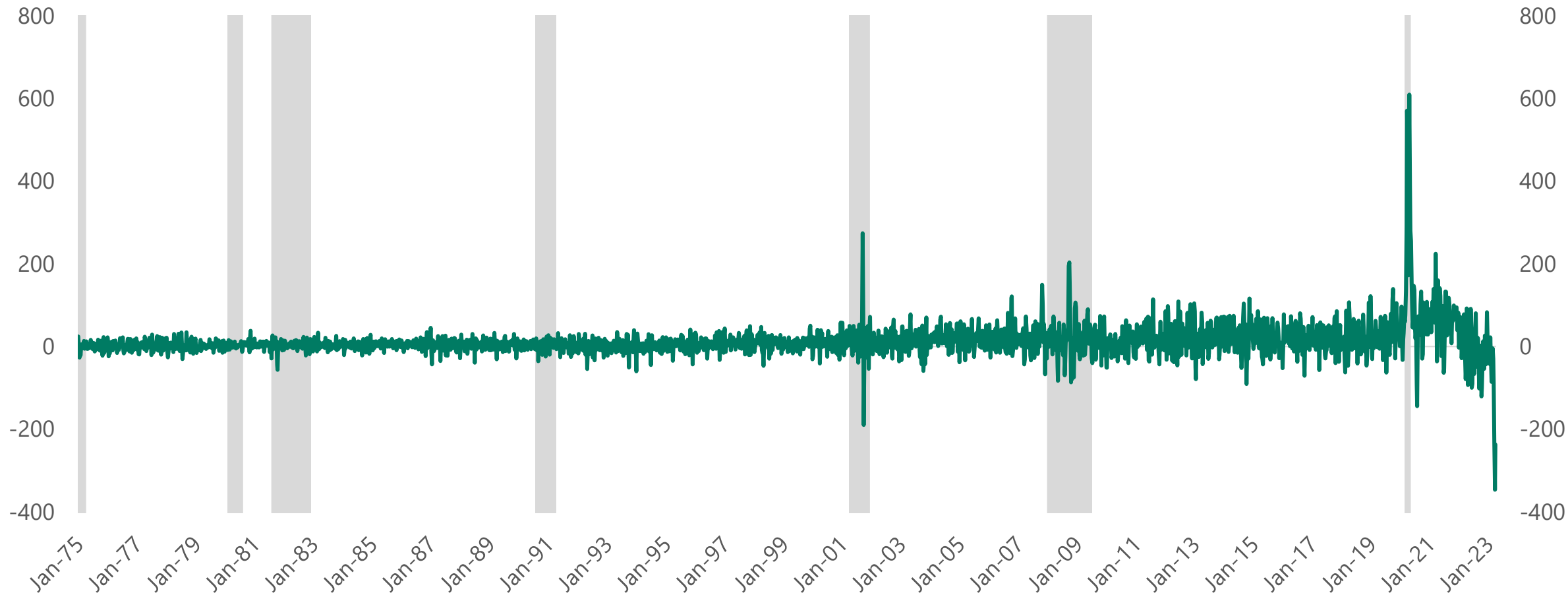
What is the banking sector response to the SVB collapse and associated deposit outflows? Cutting lending and selling mortgages

Largest 2-week decline in deposits

2w change, \$bn

— Deposits: All Commercial Banks

2w change, \$bn

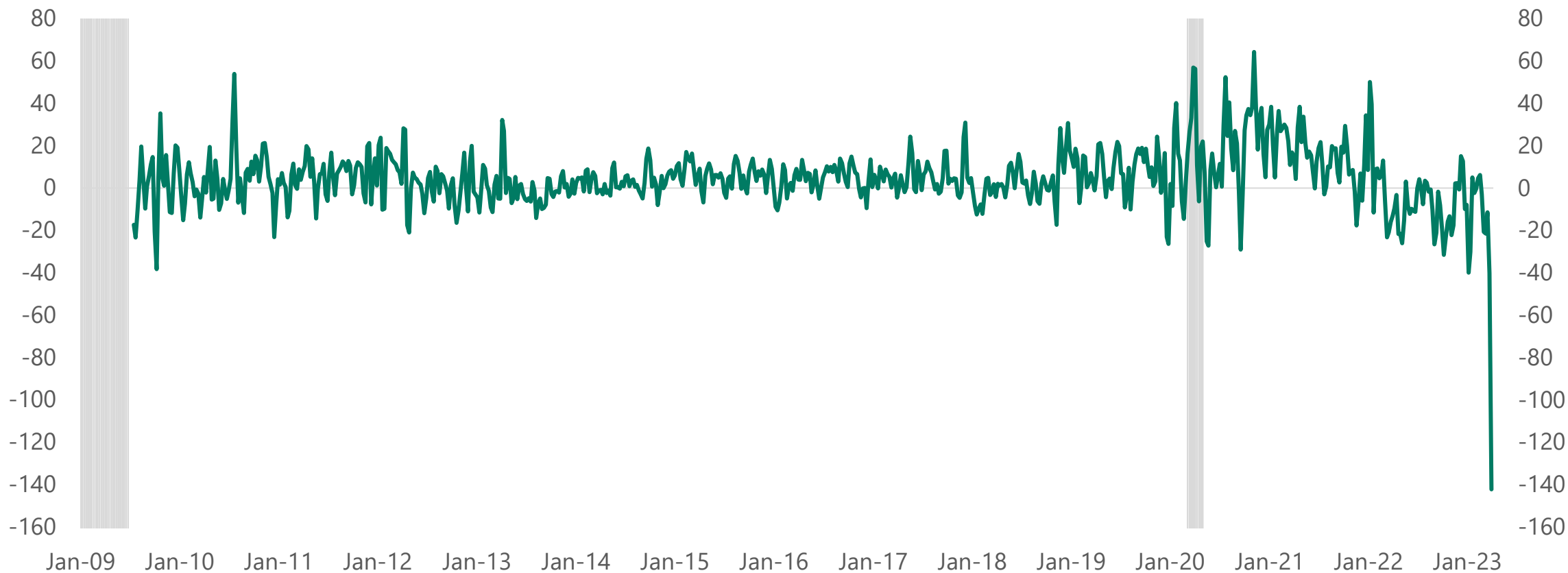


Largest 2-week decline in bank holdings of mortgages

2w change, \$bn

— Treasury & Agency securities: MBS: All Commercial Banks

2w change, \$bn

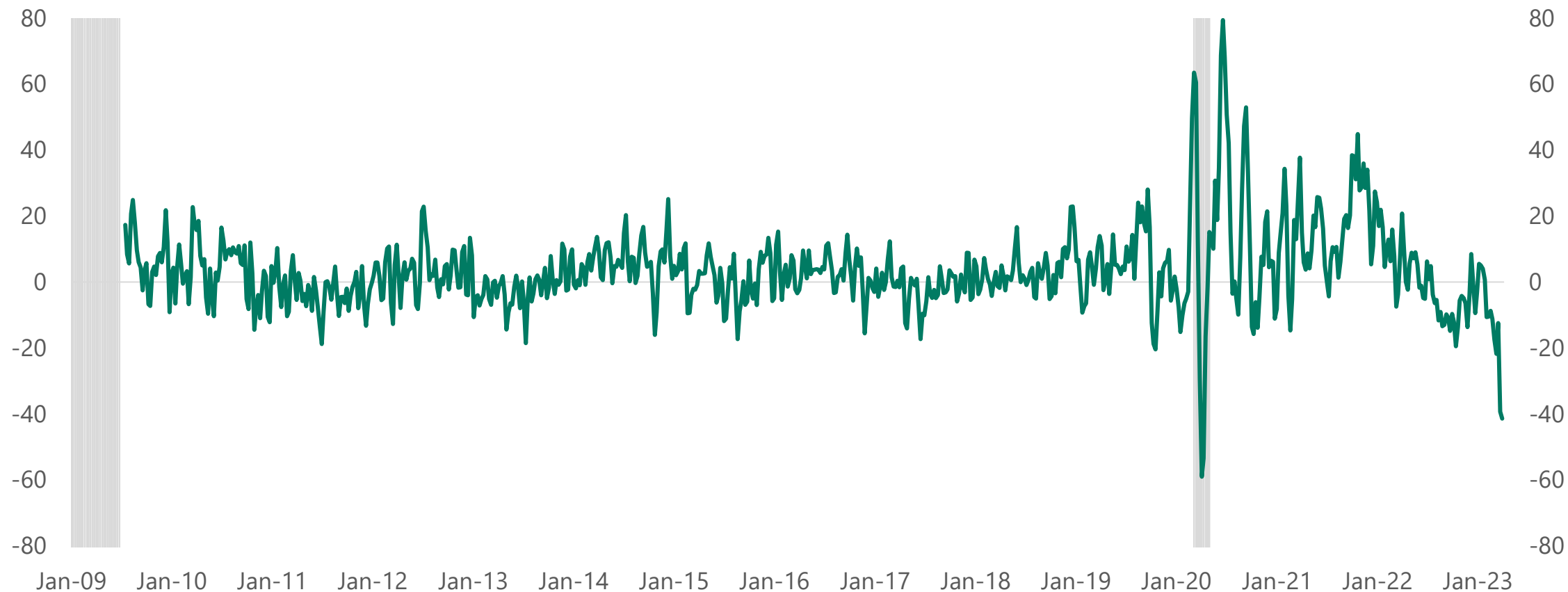


2-week change in bank holdings of Treasuries

2w change, \$bn

— Treasury and Agency securities: Non-MBS: All Commercial Banks

2w change, \$ bn



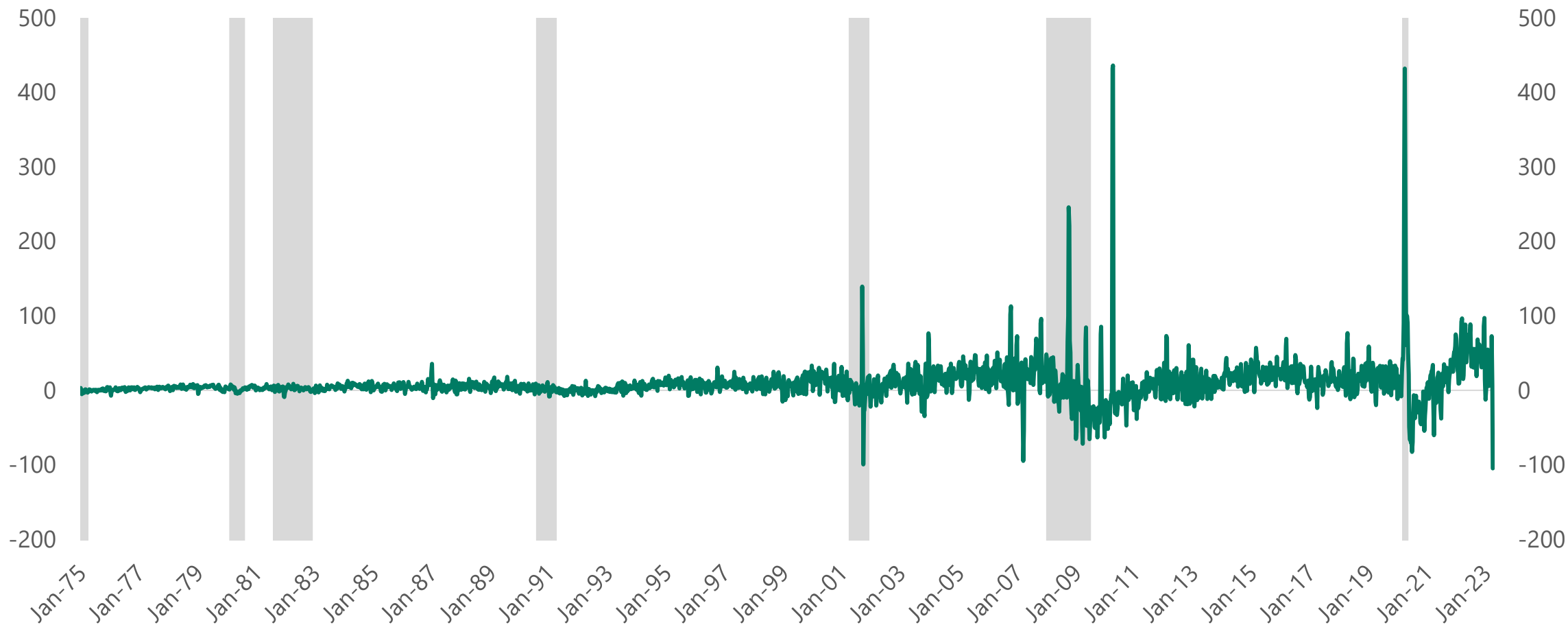
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Largest 2-week decline in bank lending

2w change, \$bn

Loans & Leases in Bank Credit: All Commercial Banks

2w change, \$ bn



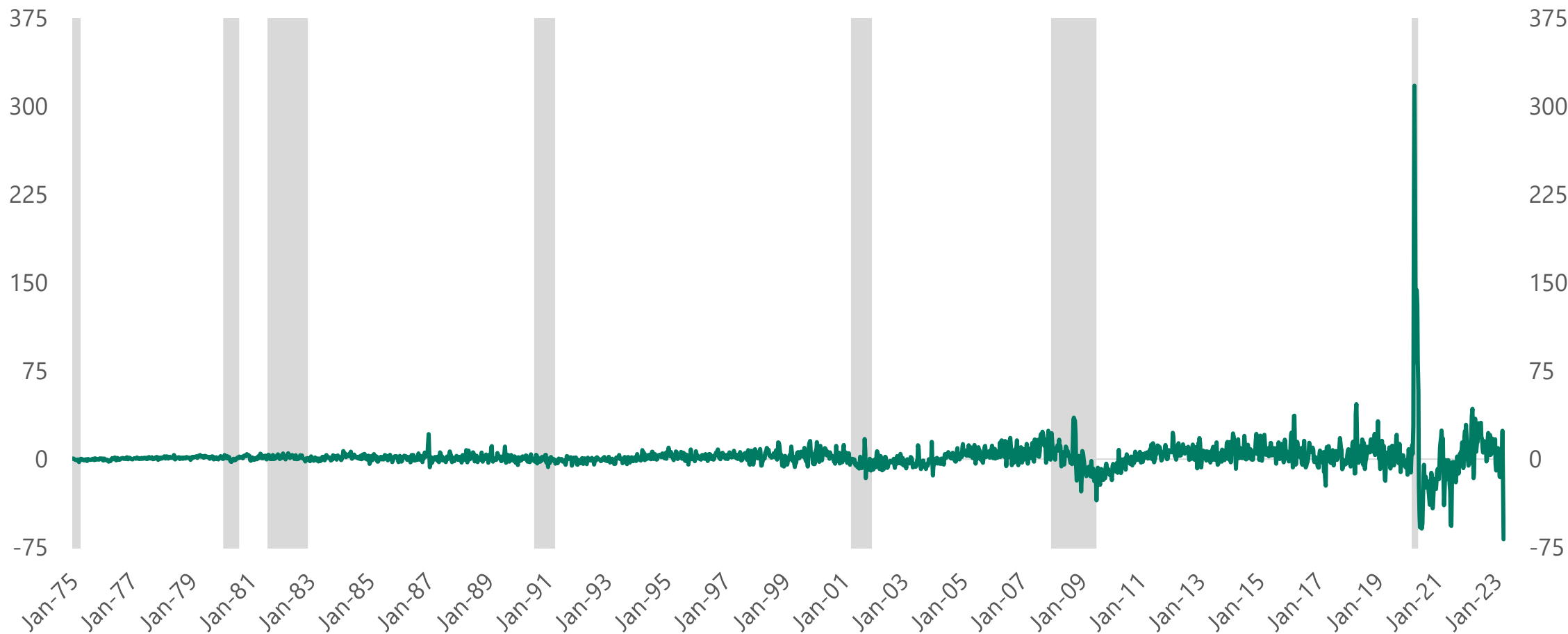
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Largest 2-week decline in lending to corporates

2w change, \$bn

— C & I Loans: Bank Credit: All Commercial Banks

2w change, \$ bn



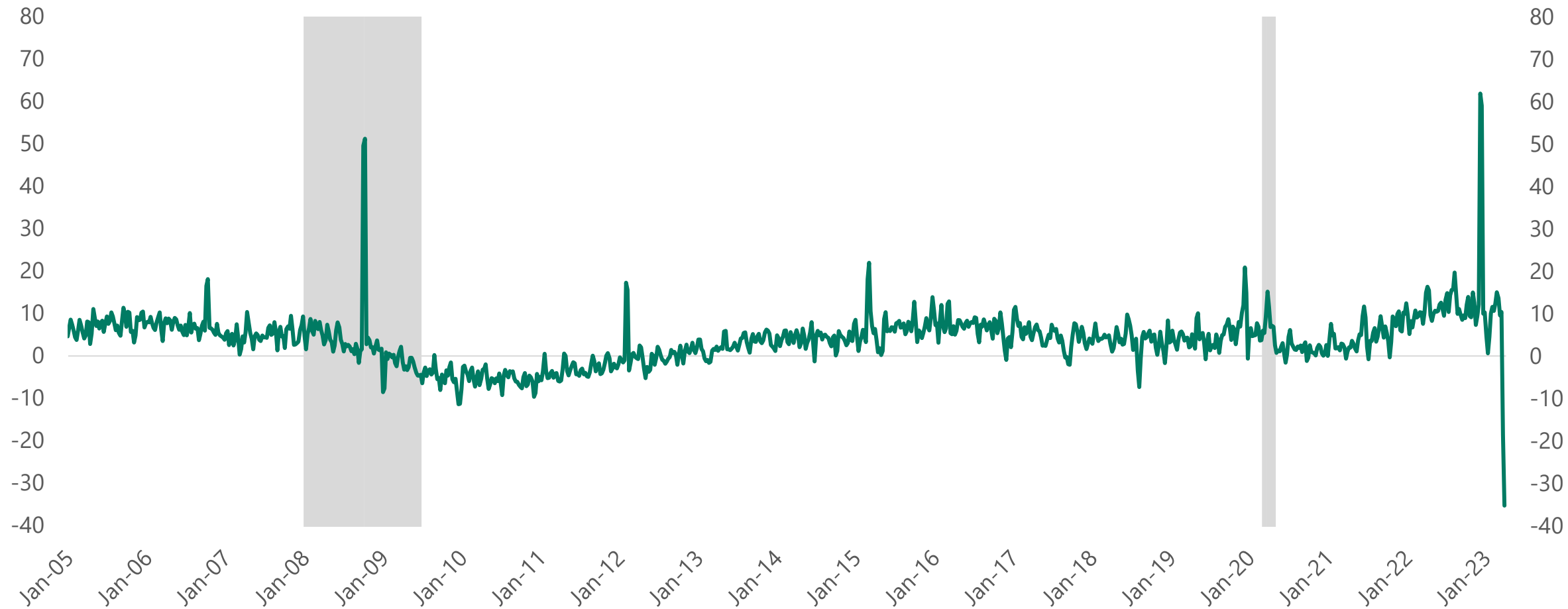
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Largest 2-week decline in real estate lending

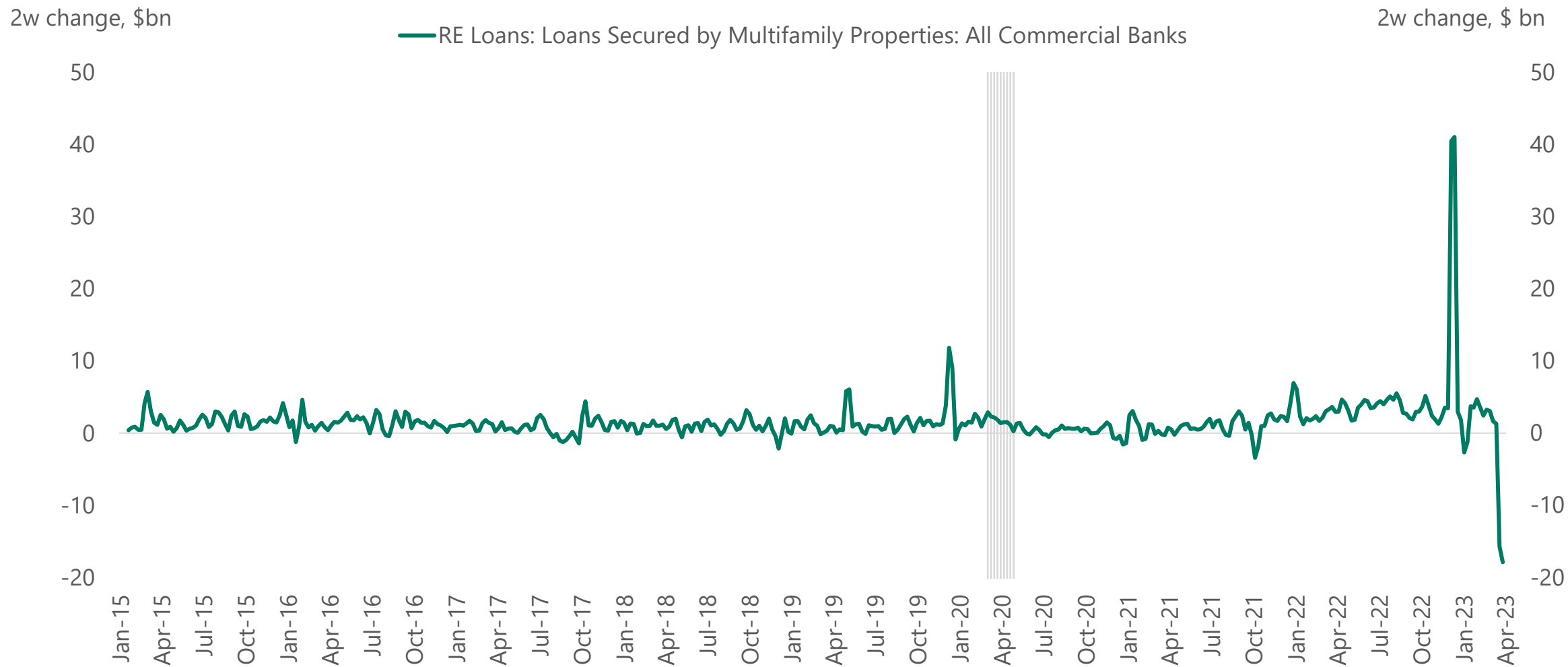
2w change, \$bn

— Real Estate Commercial Loans: All Commercial Banks

2w change, \$bn

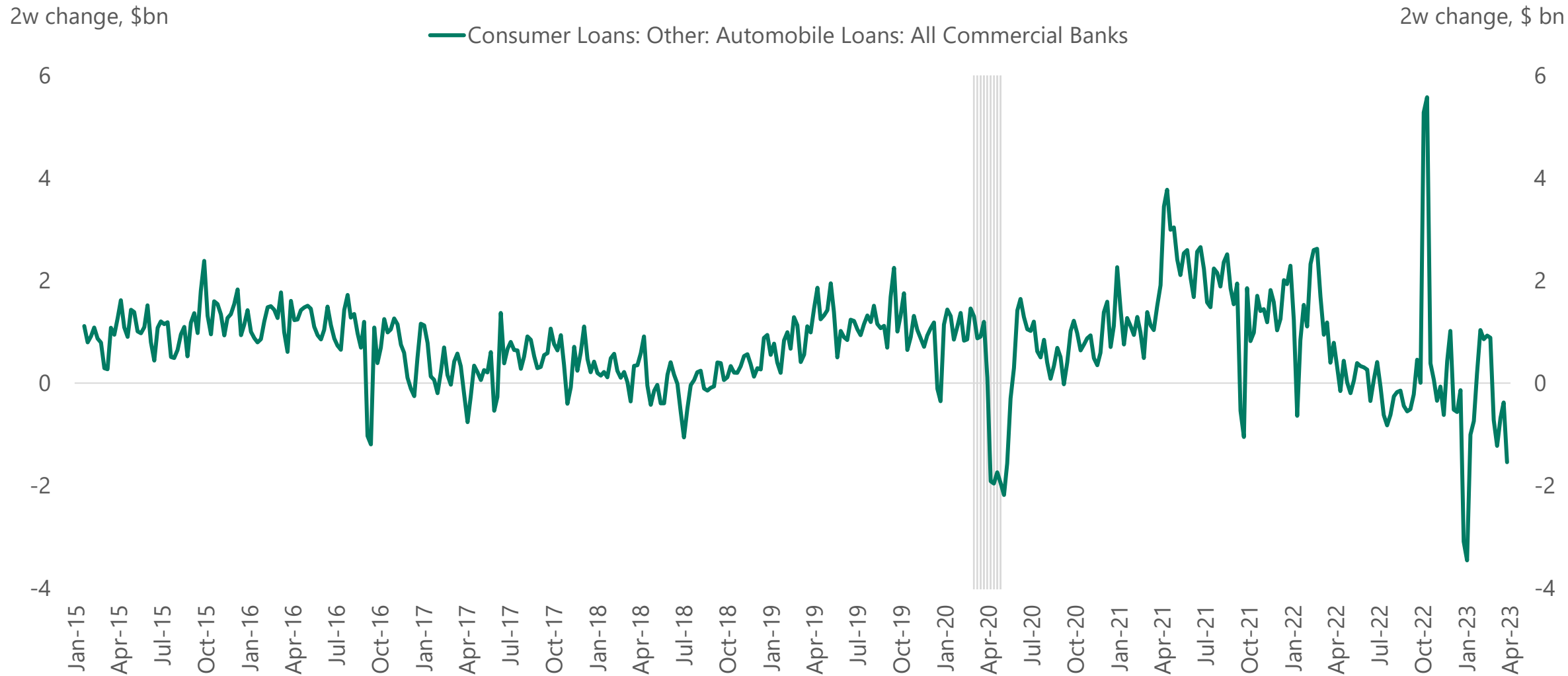


Largest 2-week decline in lending to multifamily construction



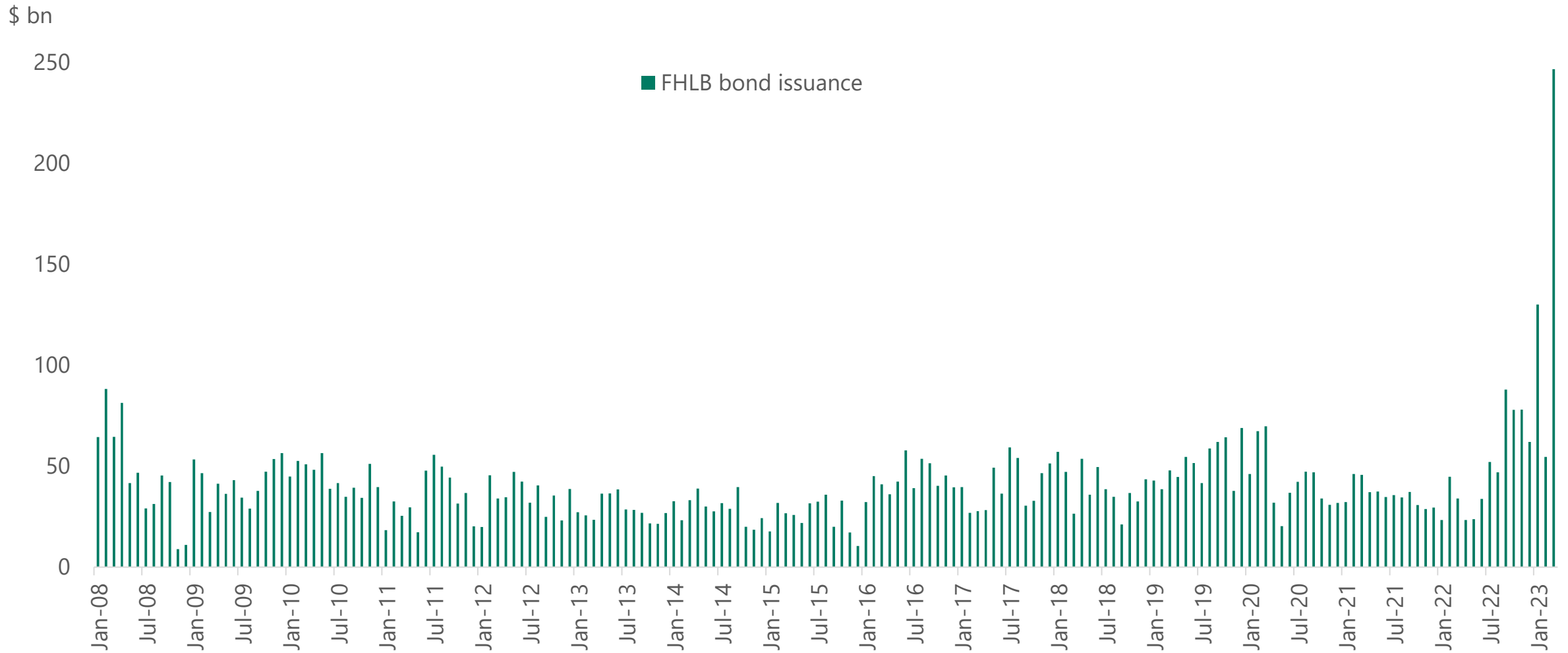
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Some decline in auto loan lending



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

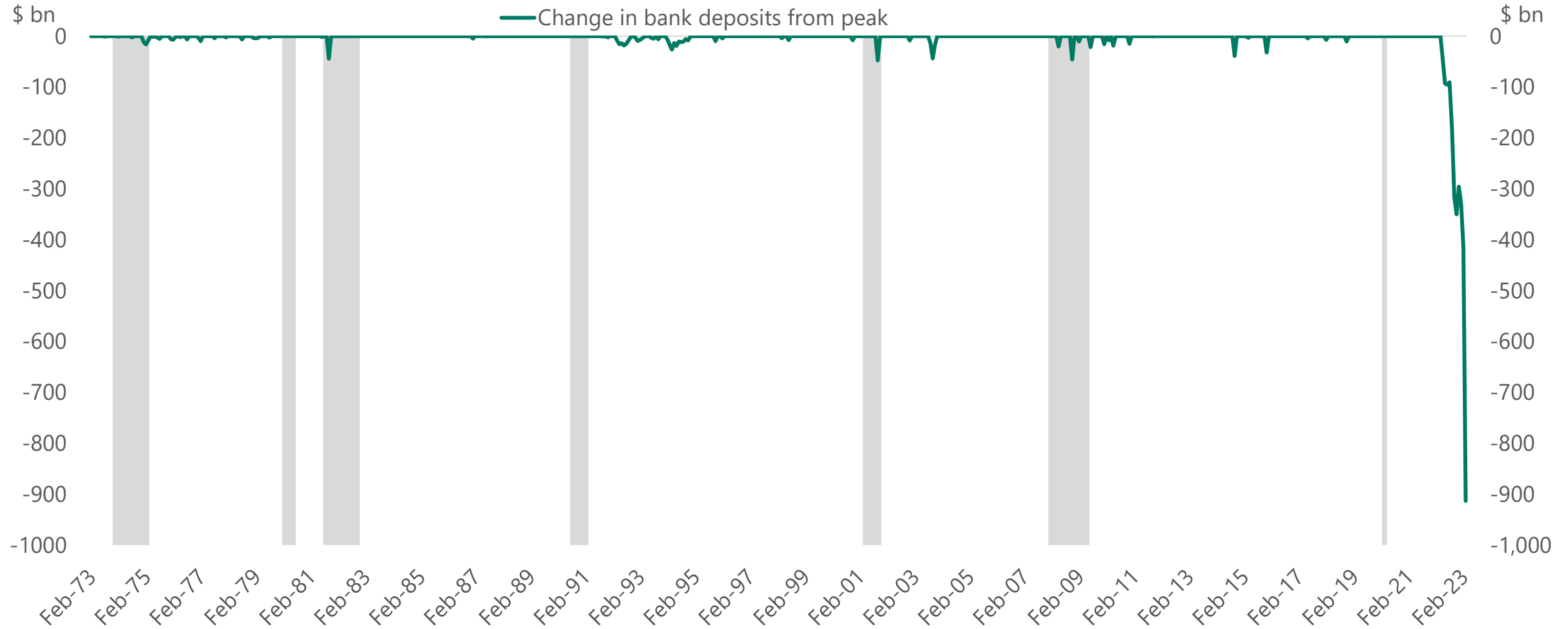
The FHLB system issued \$247bn in debt in March, significantly higher than in 2008



Source: FHLB, Haver, Apollo Chief Economist.

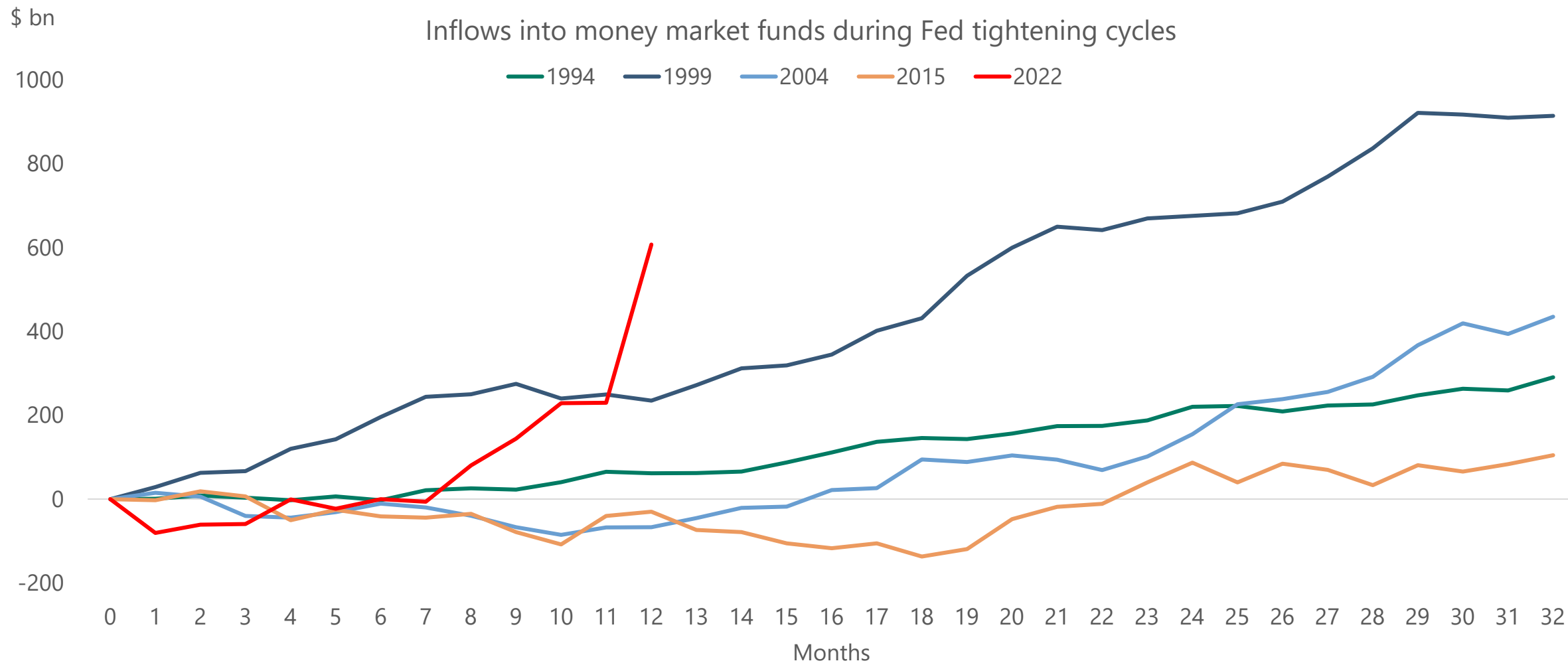
Overview

More than \$900bn in deposits have left the banks since the Fed began to raise interest rates, the biggest outflow on record

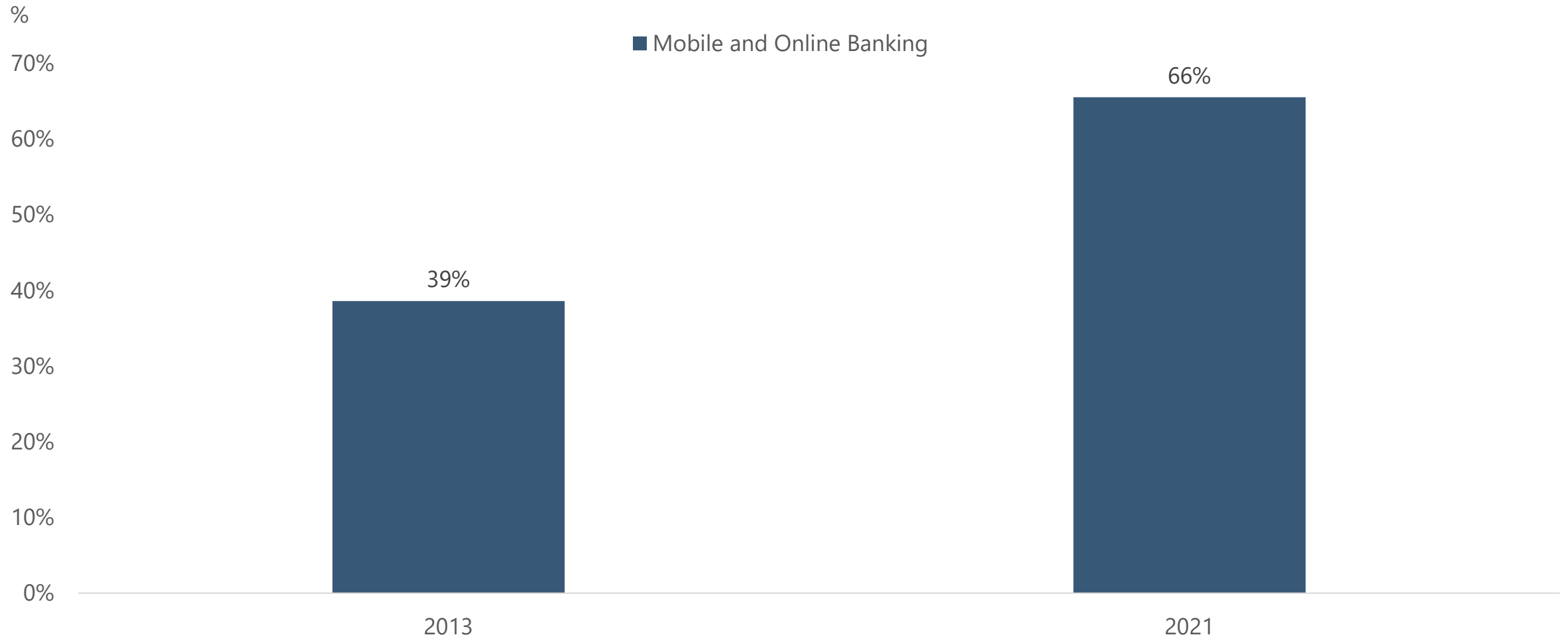


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. Note: March data as of 22nd March 2023. Peak is defined as the month before monthly outflows turn negative

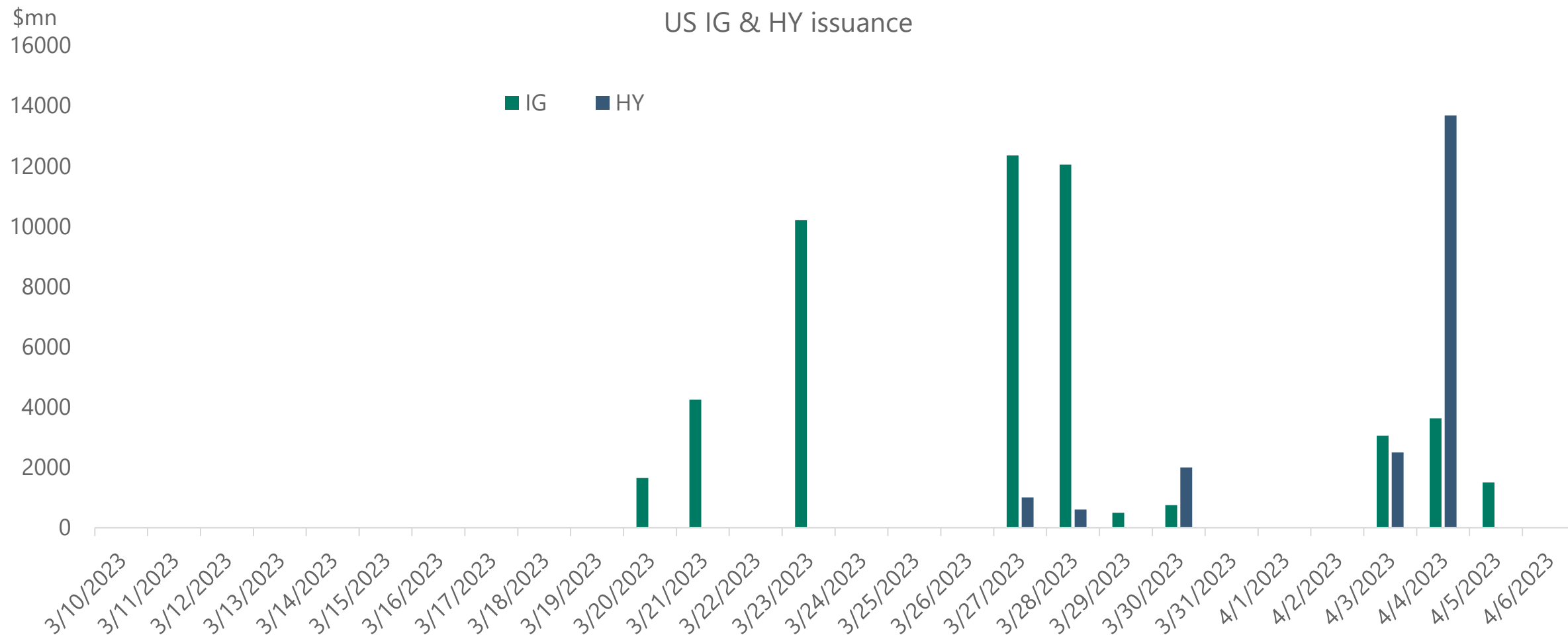
\$600bn inflows into money market funds during this Fed hiking cycle



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

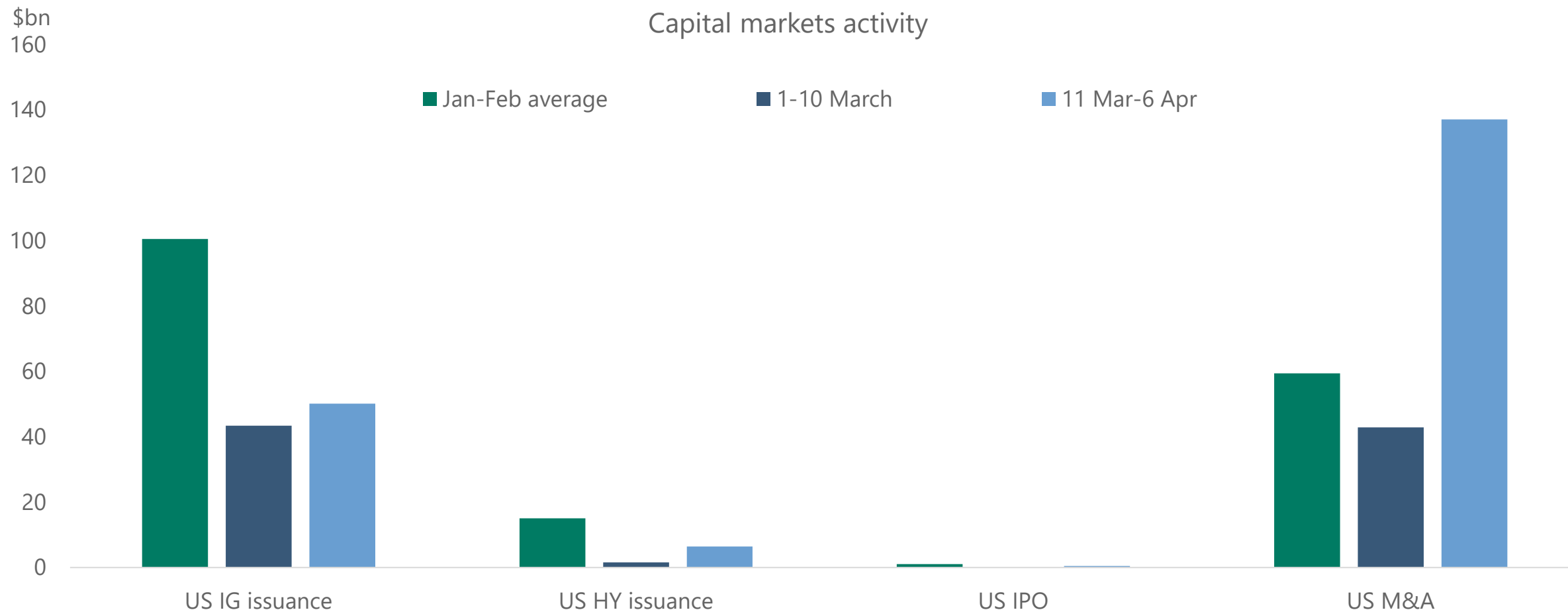


IG and HY primary issuance slowly coming back



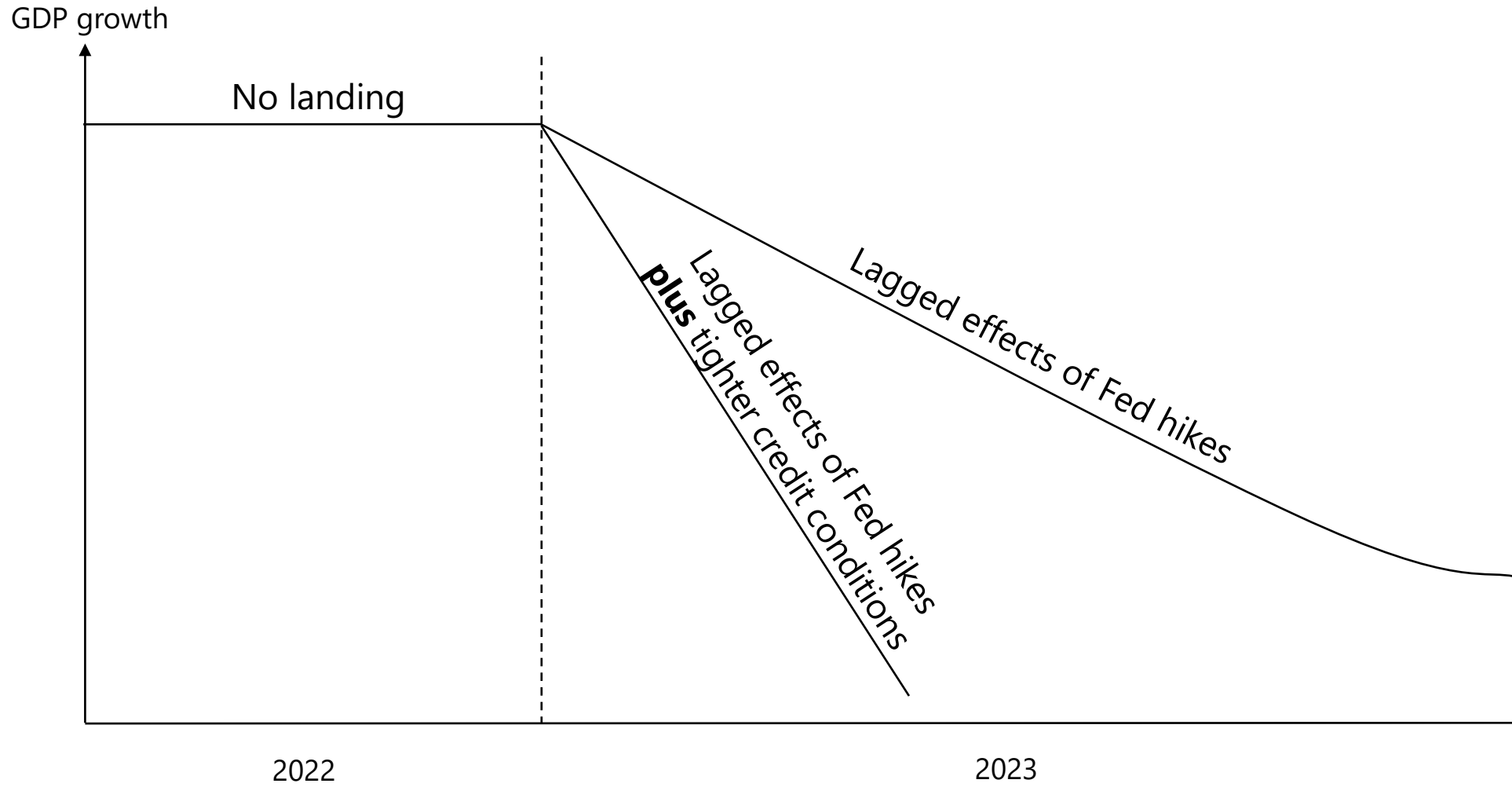
Source: Bloomberg, Apollo Chief Economist. Note: Data from NIM <GO>, IG excludes government and financials issuance.

US capital markets slowly starting to come back after SVB went under

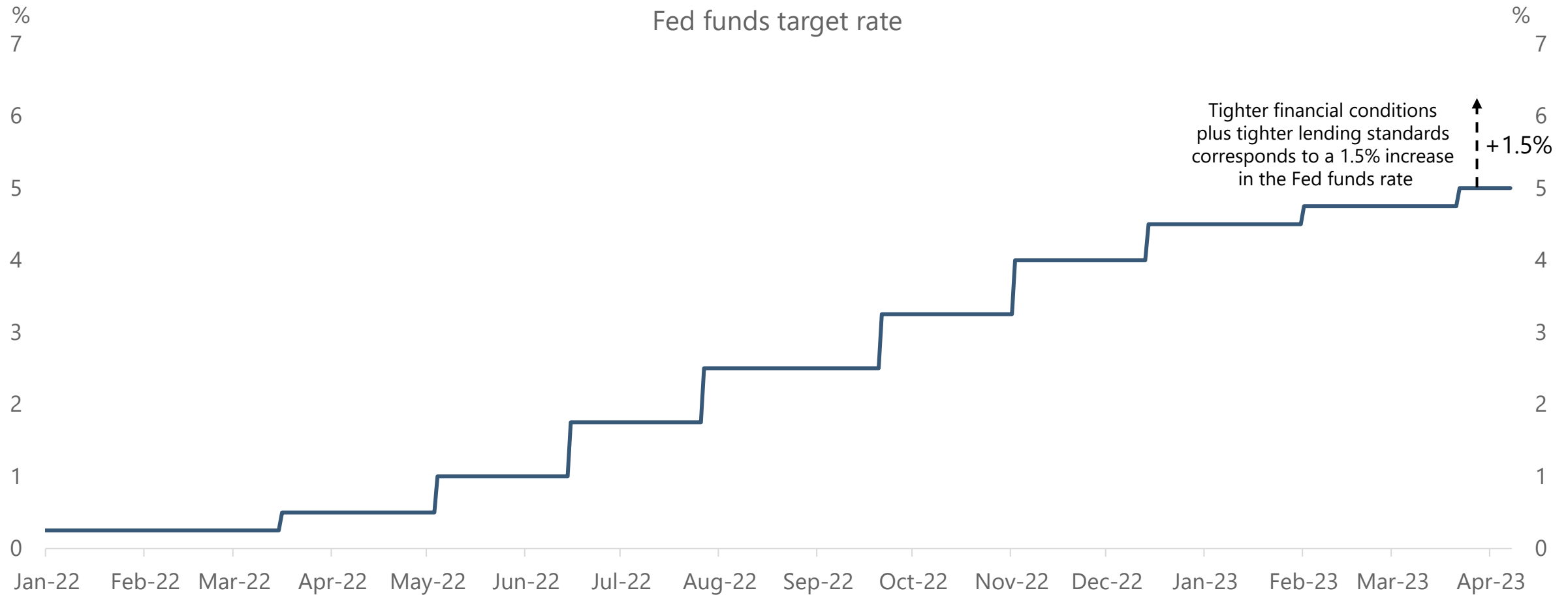


Source: Pitchbook LCD, S&P Capital IQ, Bloomberg, Apollo Chief Economist. (Note: Jan-Feb number here the average of the sum of those two months.)

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

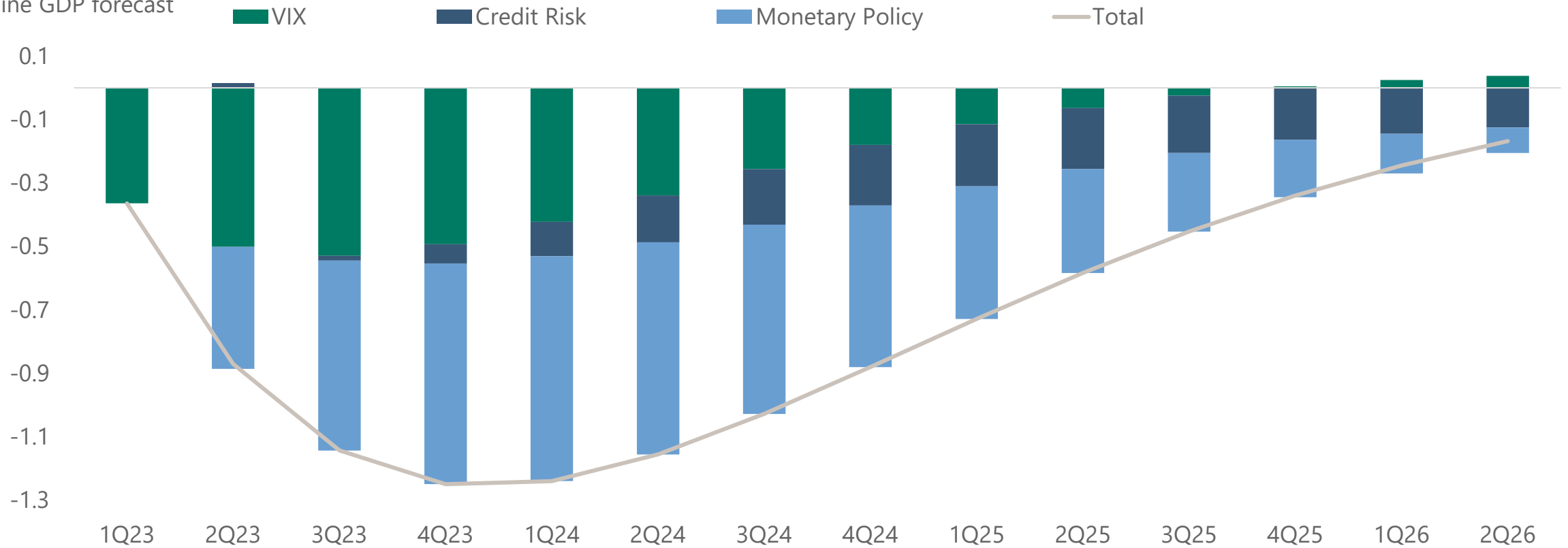


Source: Bloomberg, Apollo Chief Economist. Note: Two regression models with the Fed funds rate on the left-hand side were run to quantify the effect from tighter financial conditions and tighter lending standards, and the estimated coefficients show 0.5% higher Fed funds rate from tighter financial conditions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

Impact on GDP if the ongoing banking crisis continues

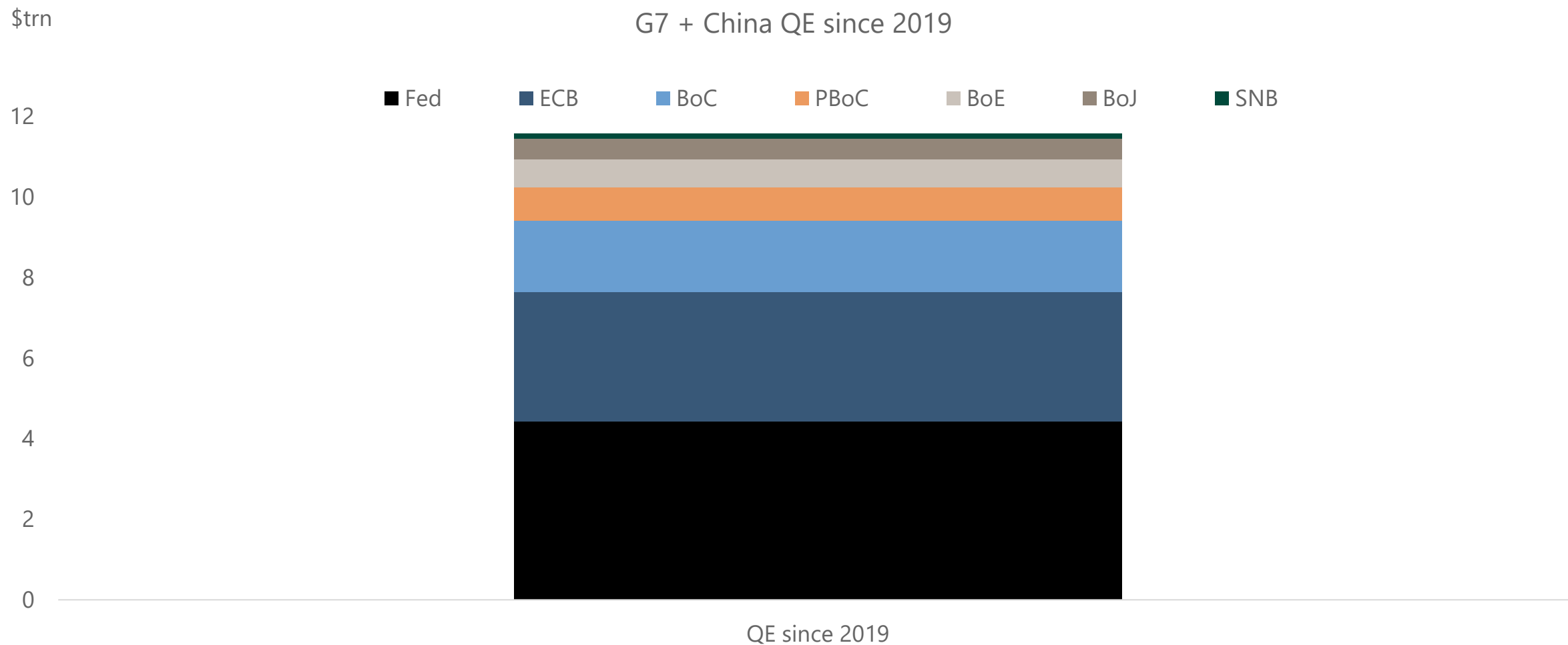
Shock to GDP level, compared with baseline forecast

% difference from baseline GDP forecast



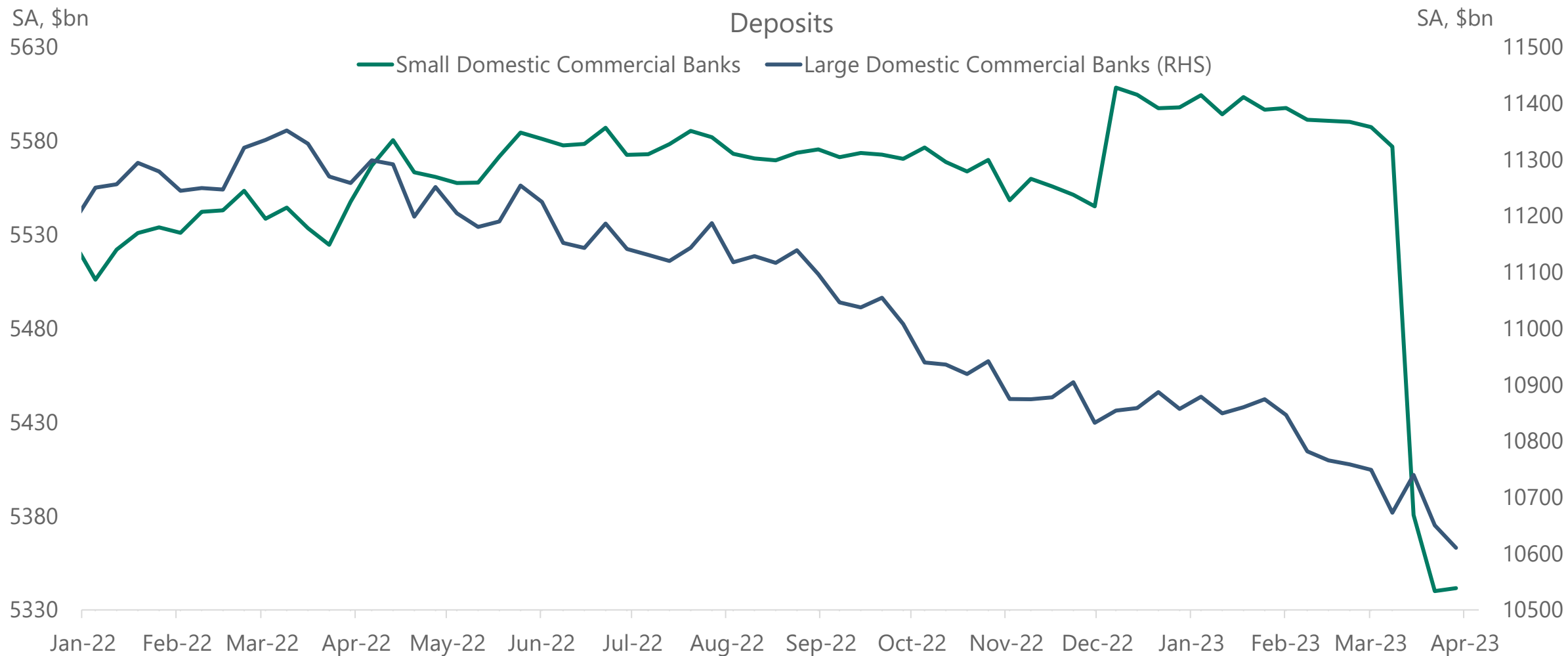
Source: Bloomberg, Apollo Chief Economist. Note: The chart shows difference in baseline forecast adding a 150bps shock to Fed funds rate and 30 bps to credit risk and a two standard deviation shock to VIX, all starting in 1Q23. VIX is currently two standard deviations from its mean since 2010.

QE added \$12trn to global liquidity since 2019

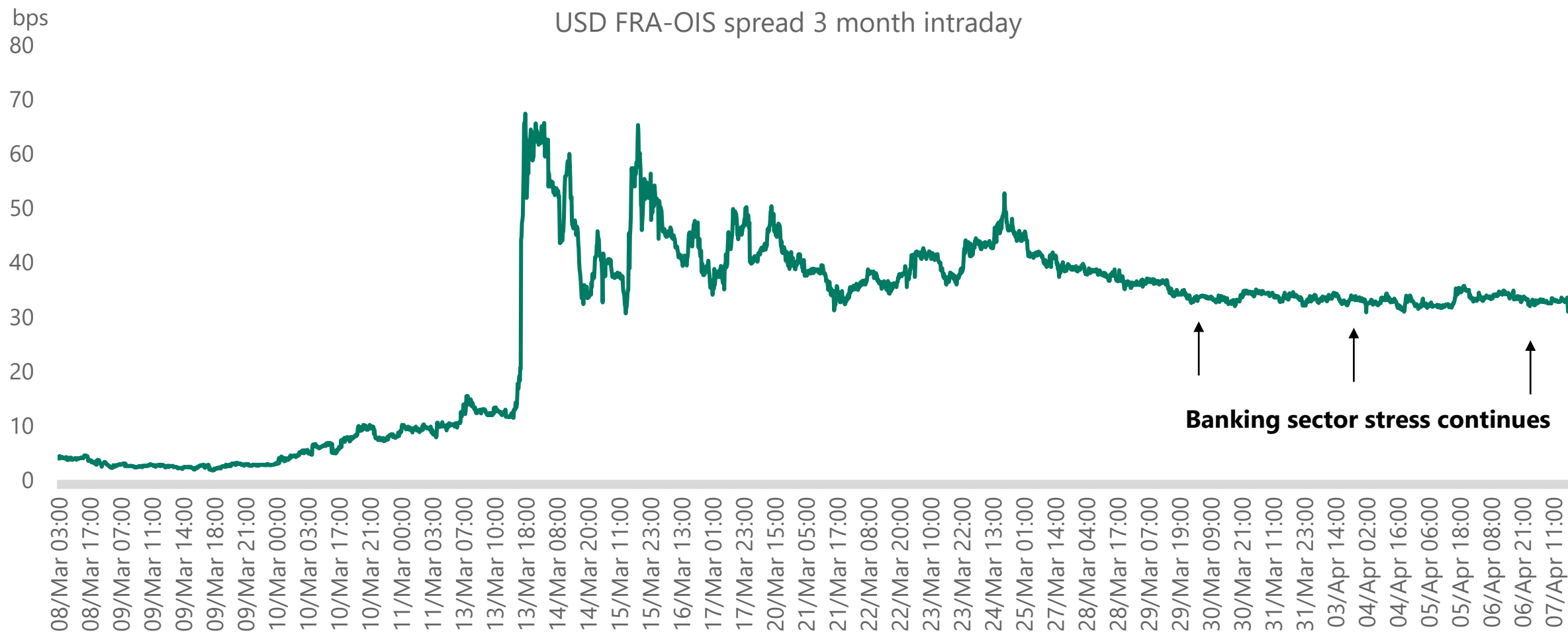


Bank funding pressures:
Deposits and market-based measures

Deposits in small and large banks

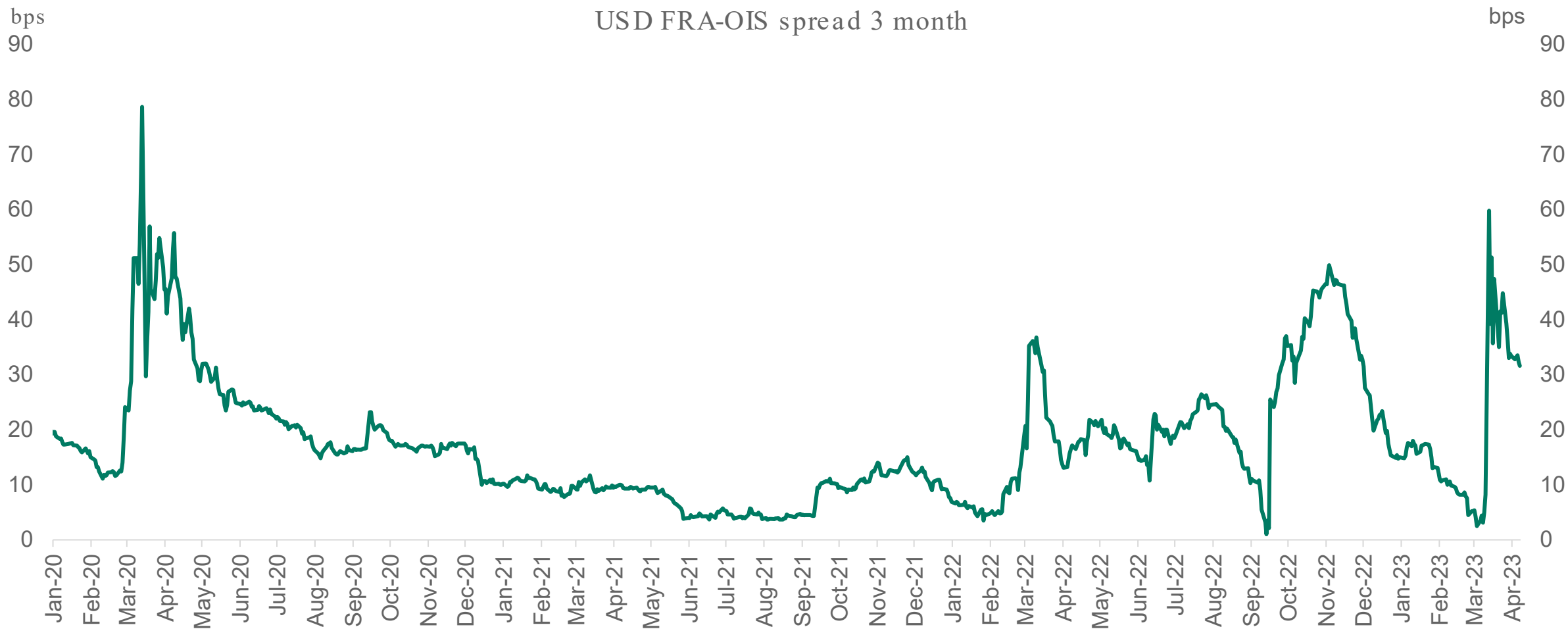


Bank funding costs remain high: FRA-OIS spread remains elevated



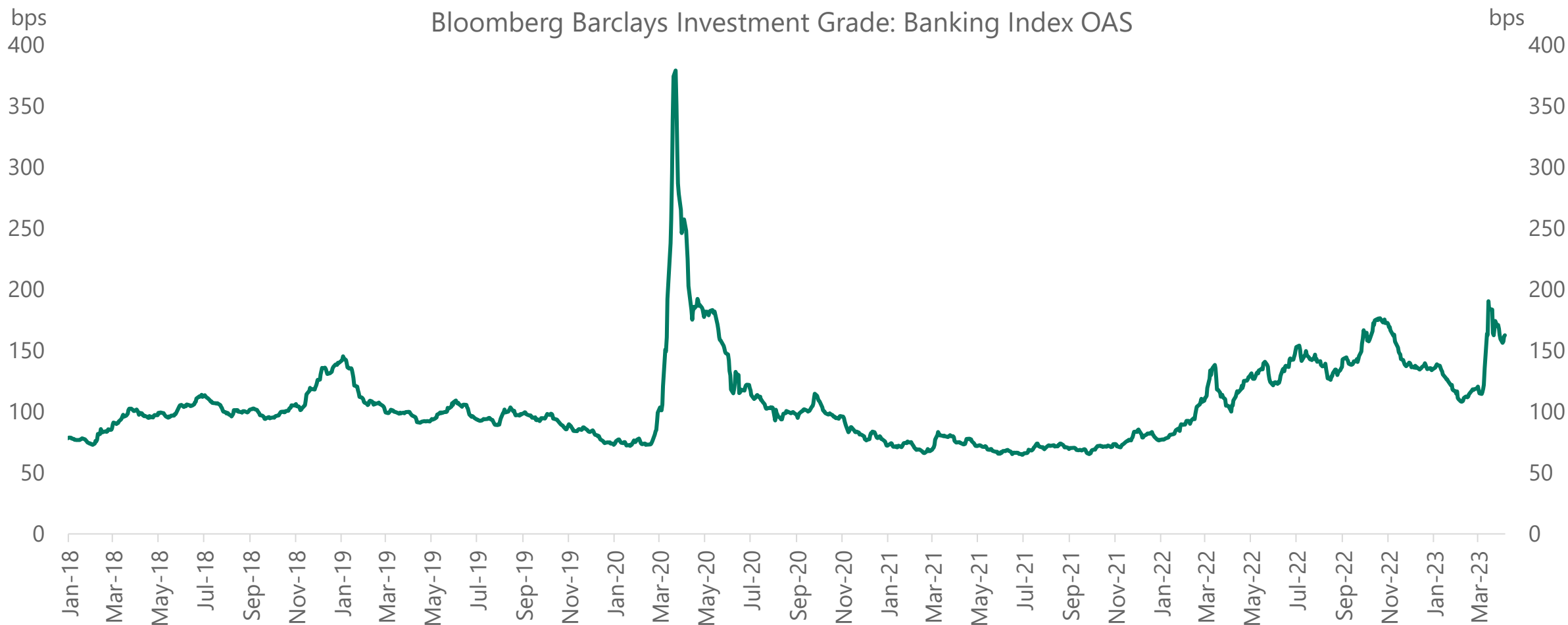
Source: Bloomberg. Note: Ticker used USFOSC1 BGN Currency. As of March 31, 2023.

FRA-OIS spread at levels seen in March 2020



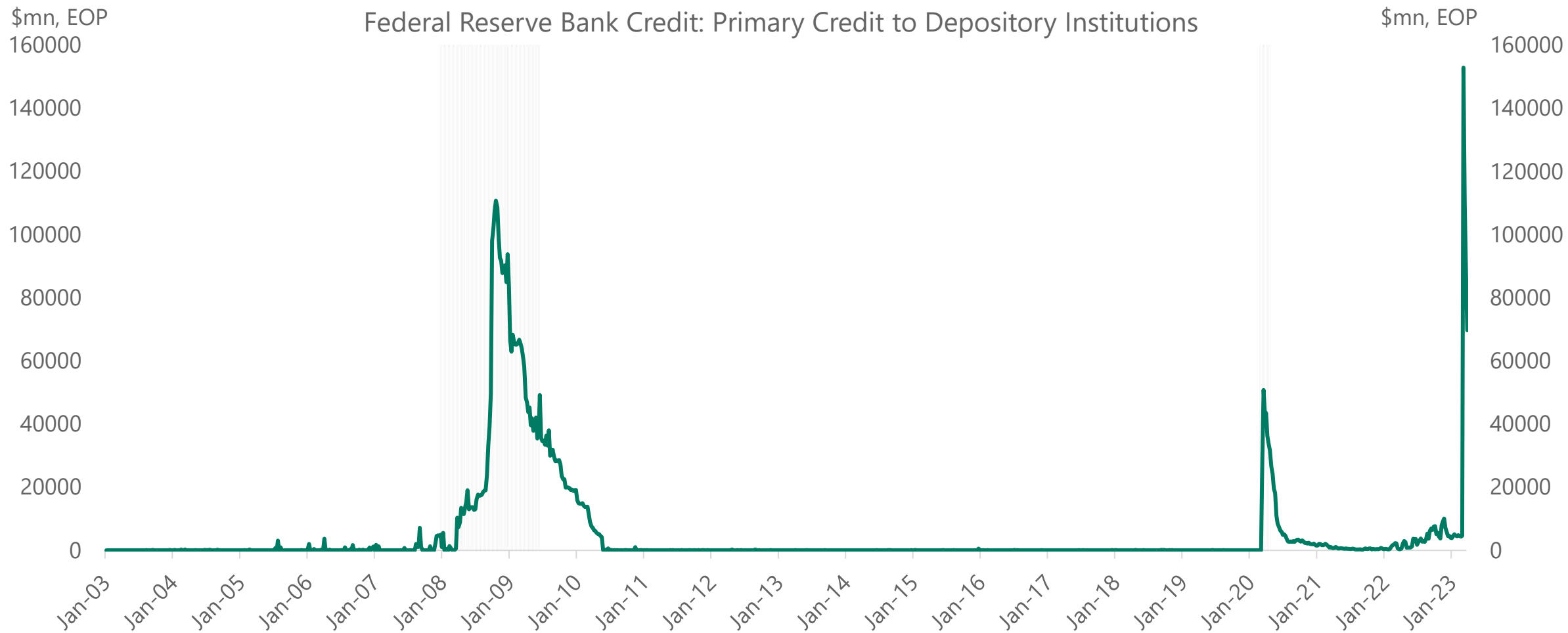
Source: Bloomberg. Note: Ticker used USFOSC1 BGN Currency. As of March 24, 2023.

IG OAS spreads for banks remain elevated



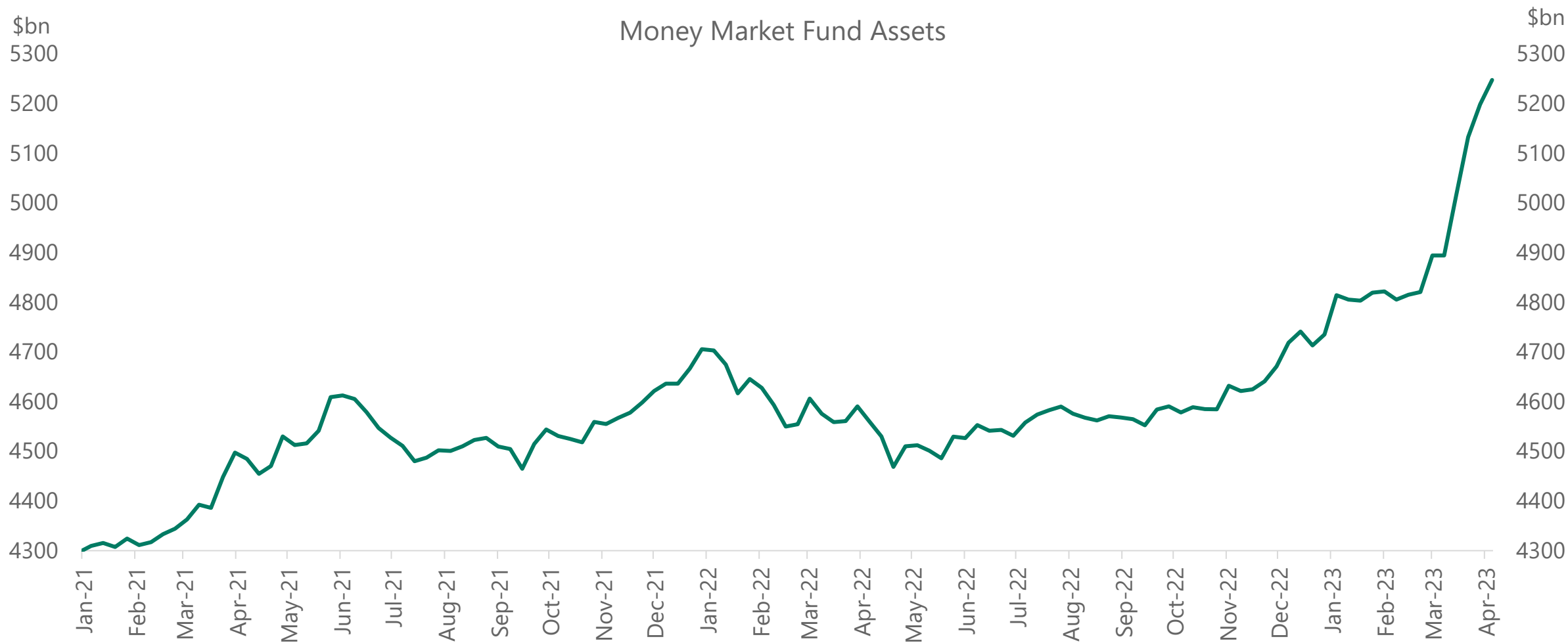
Source: Bloomberg, Apollo Chief Economist. Note: Ticker used I00408US Index. As of March 24, 2023.

Fed Discount Window borrowing higher than in 2008

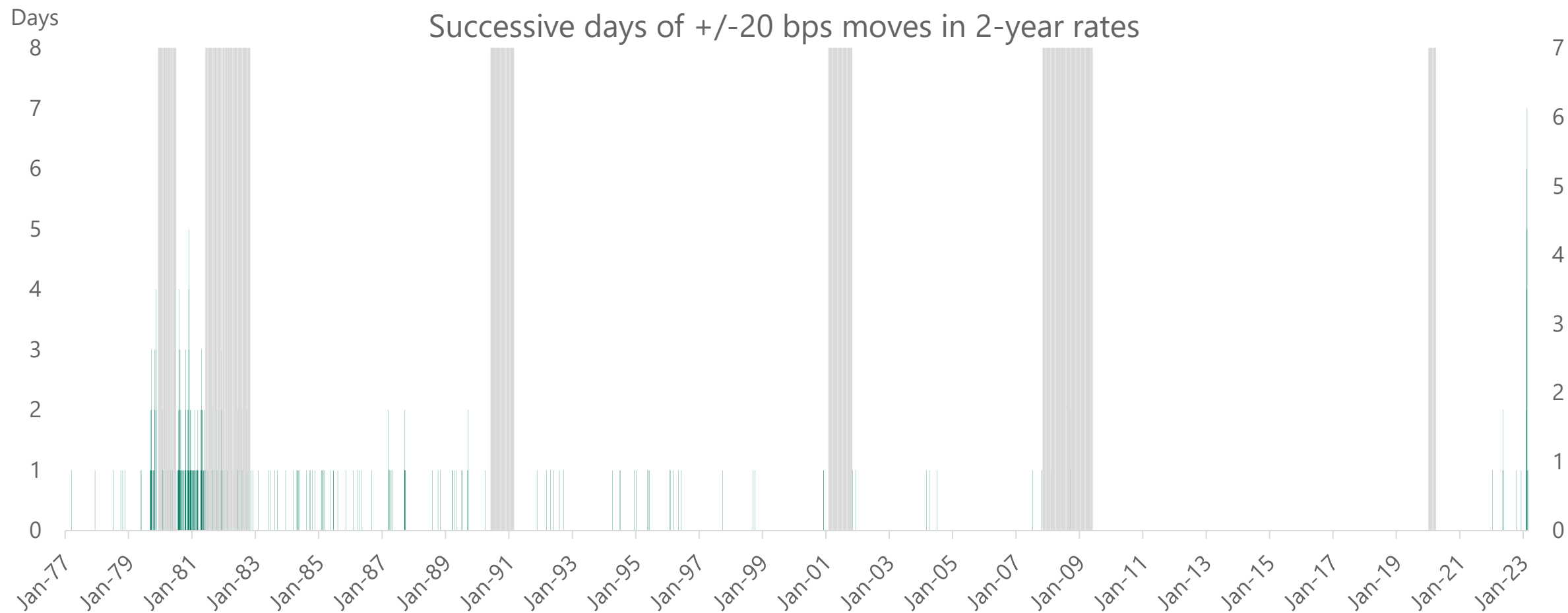


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

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

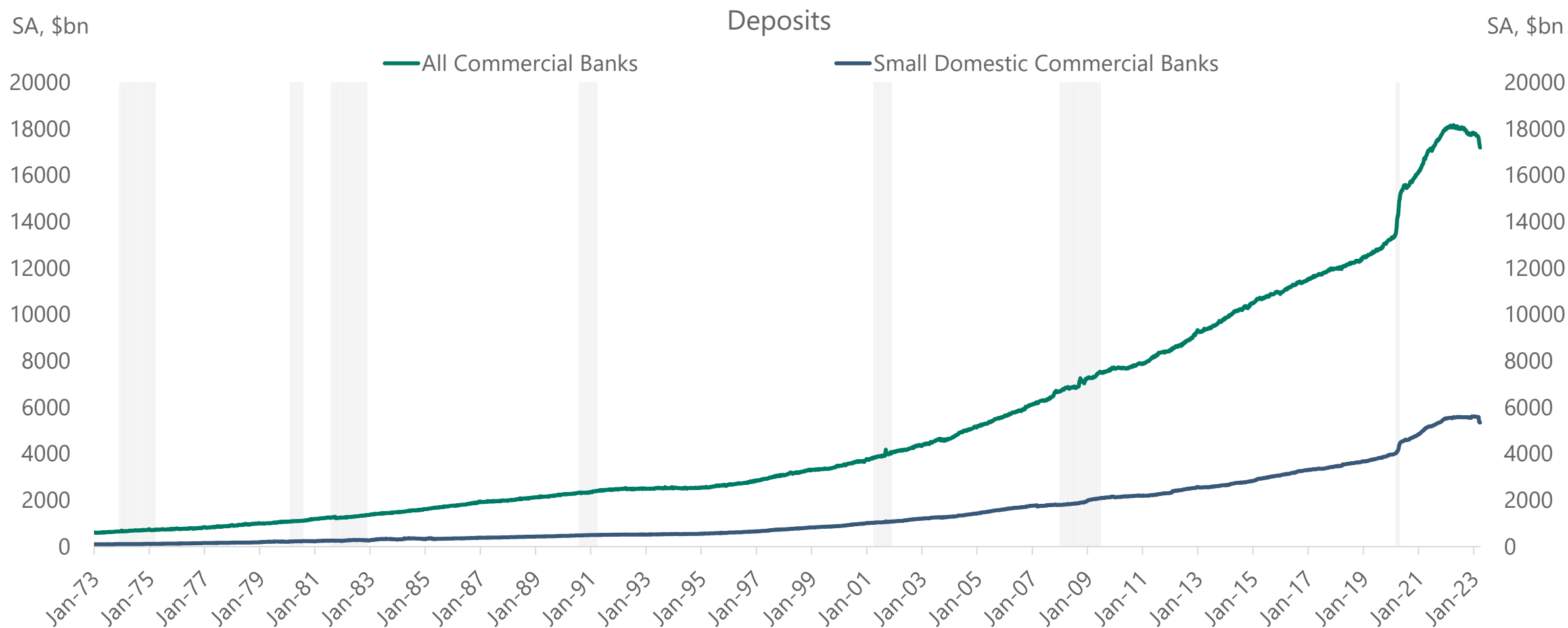


Record-high volatility in fixed income markets



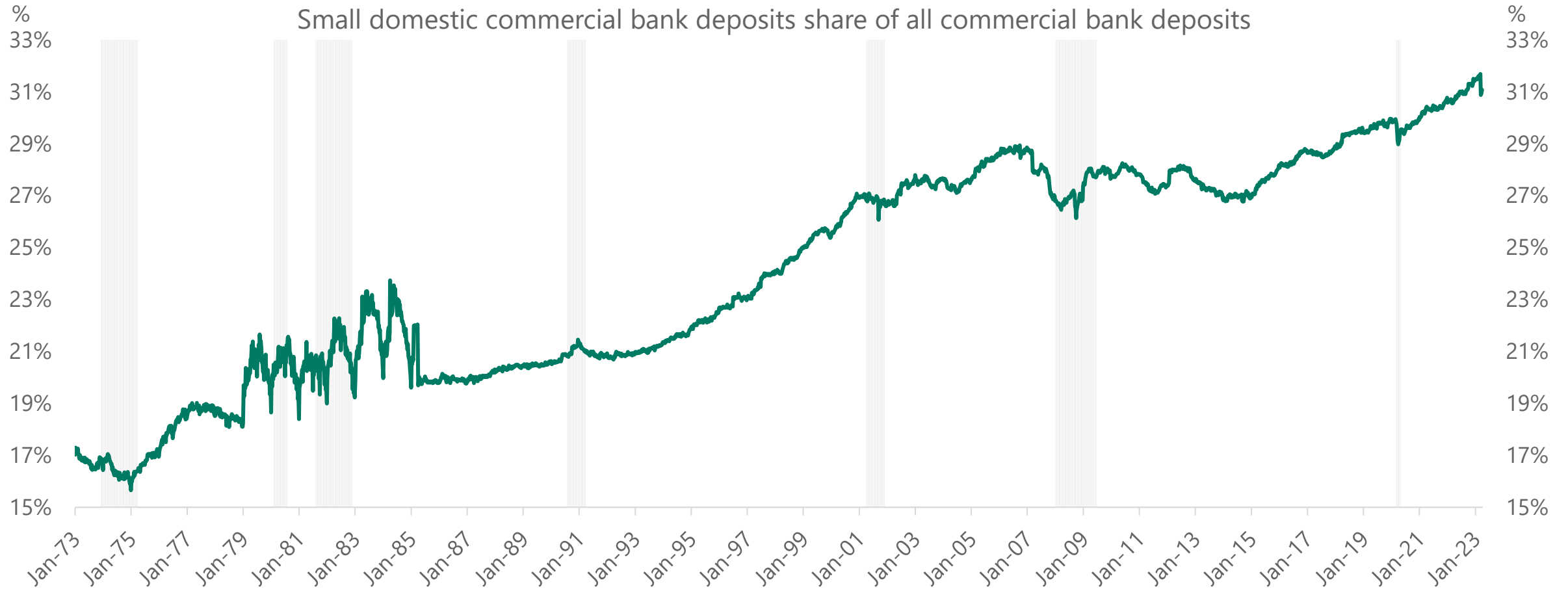
What is happening with deposits in regional banks?

Small banks account for roughly a third of all deposits in the banking sector



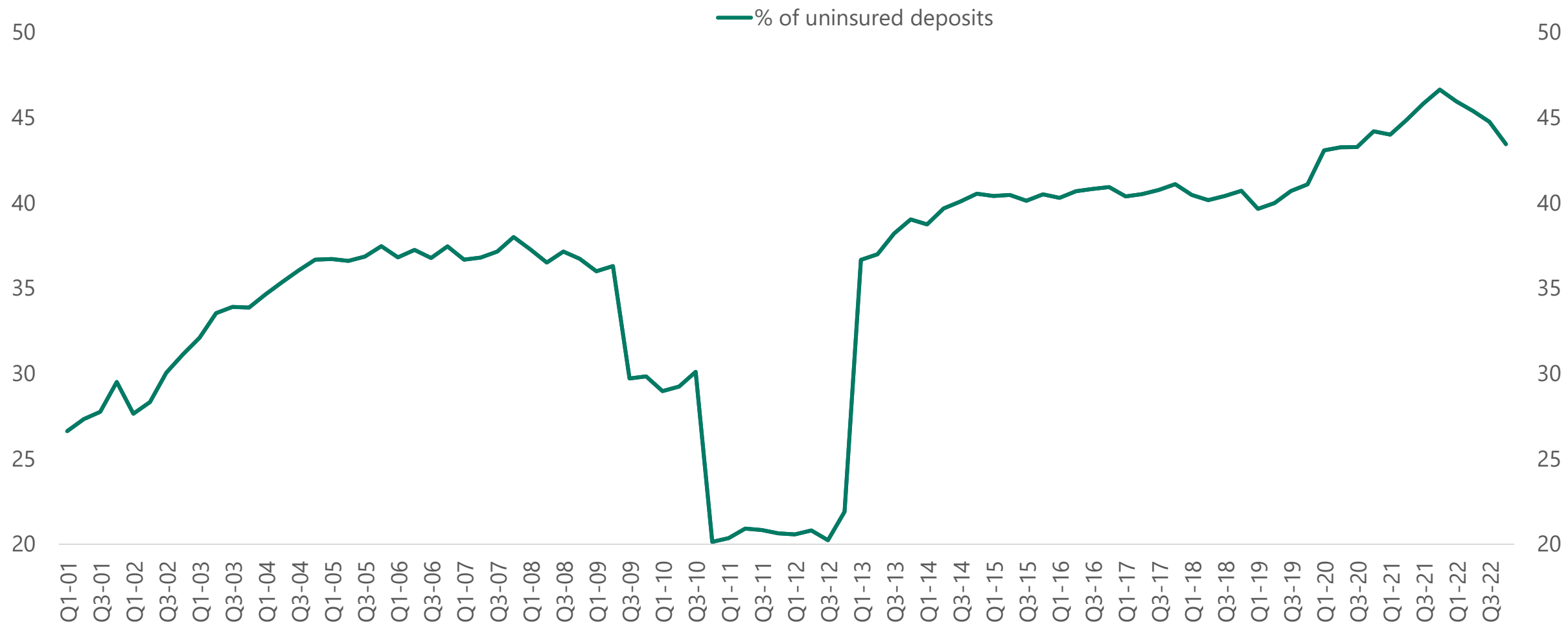
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

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



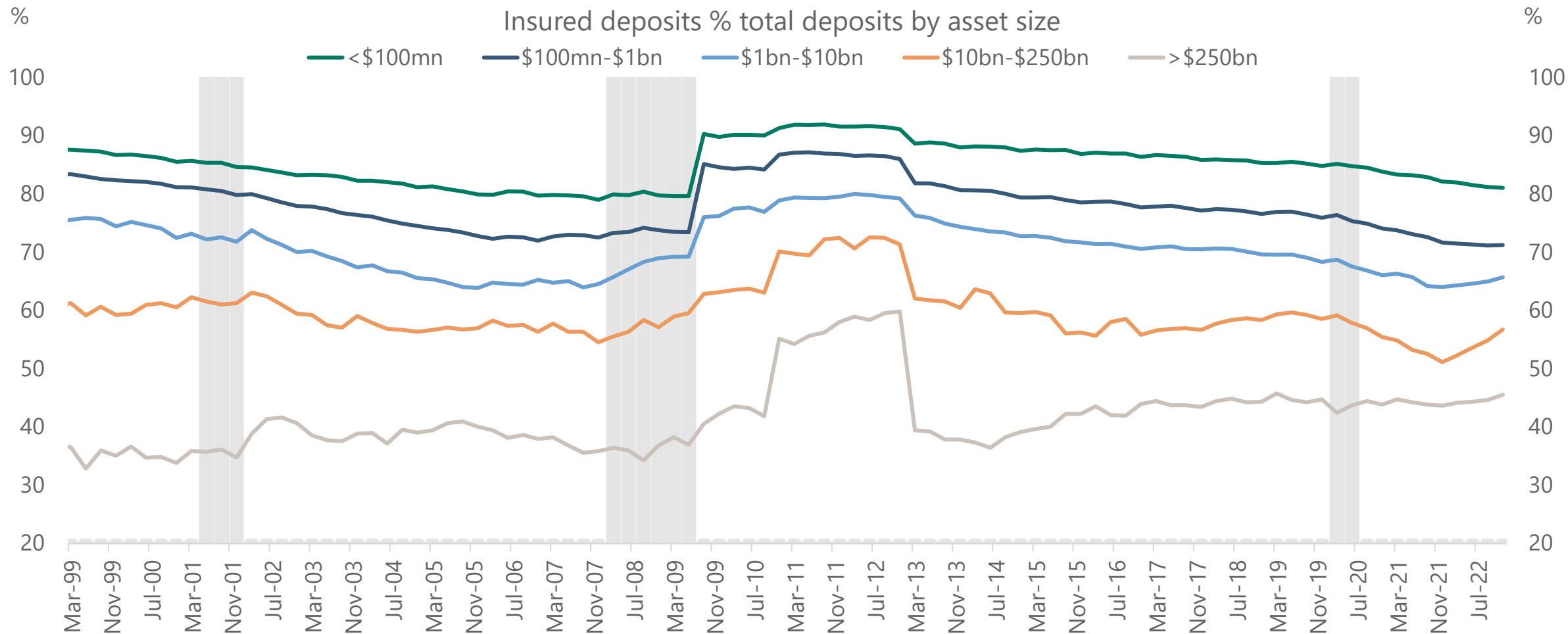
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Share of total bank deposits that are uninsured: 43%



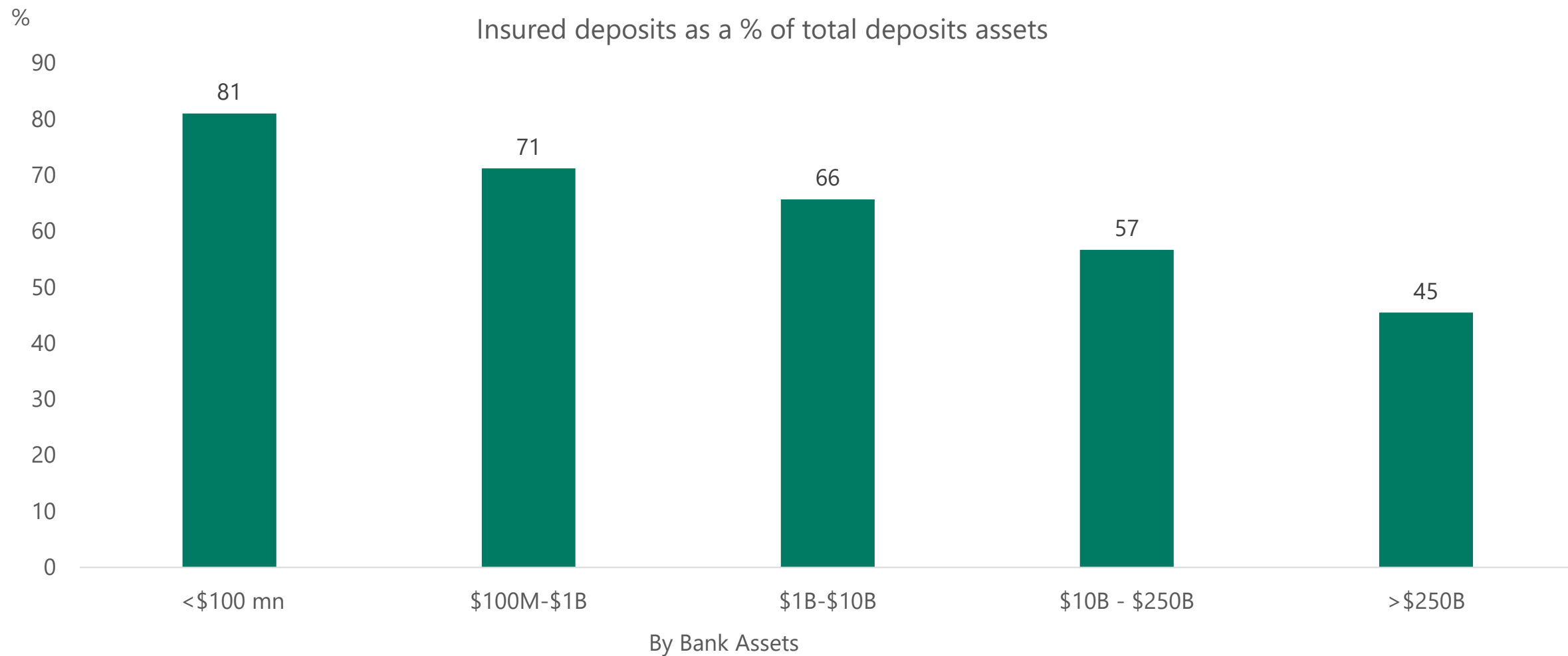
Source: FDIC, Haver Analytics, Apollo Chief Economist.

Share of insured deposits, by bank size

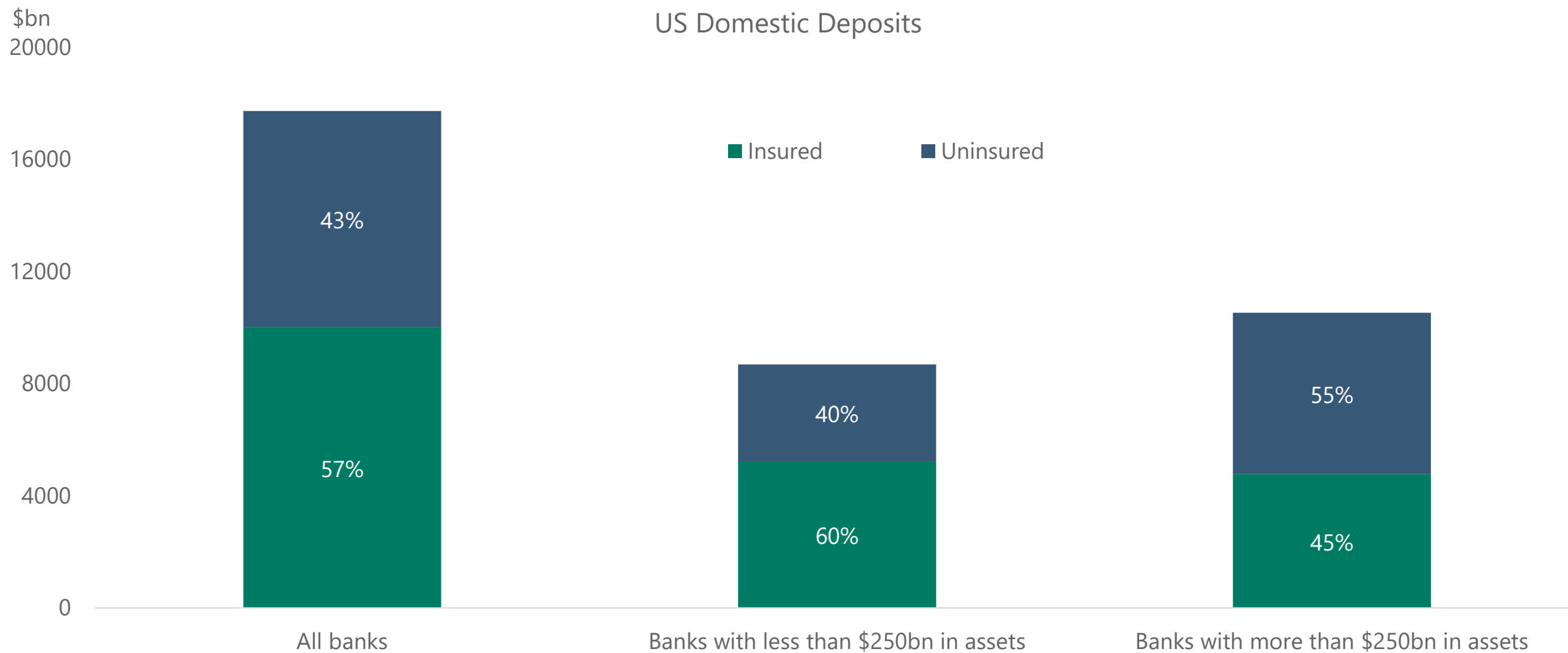


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Share of insured deposits, by bank size

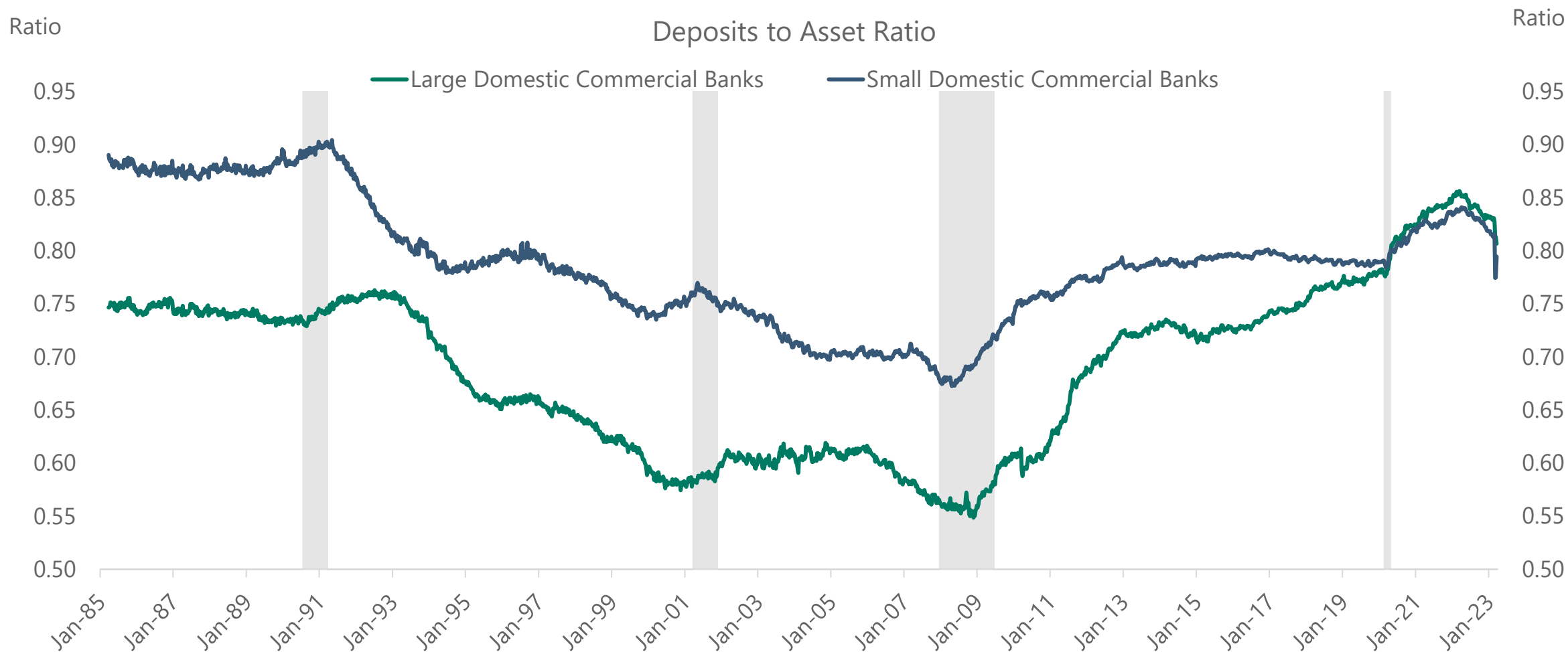


Share of insured deposits, by bank size



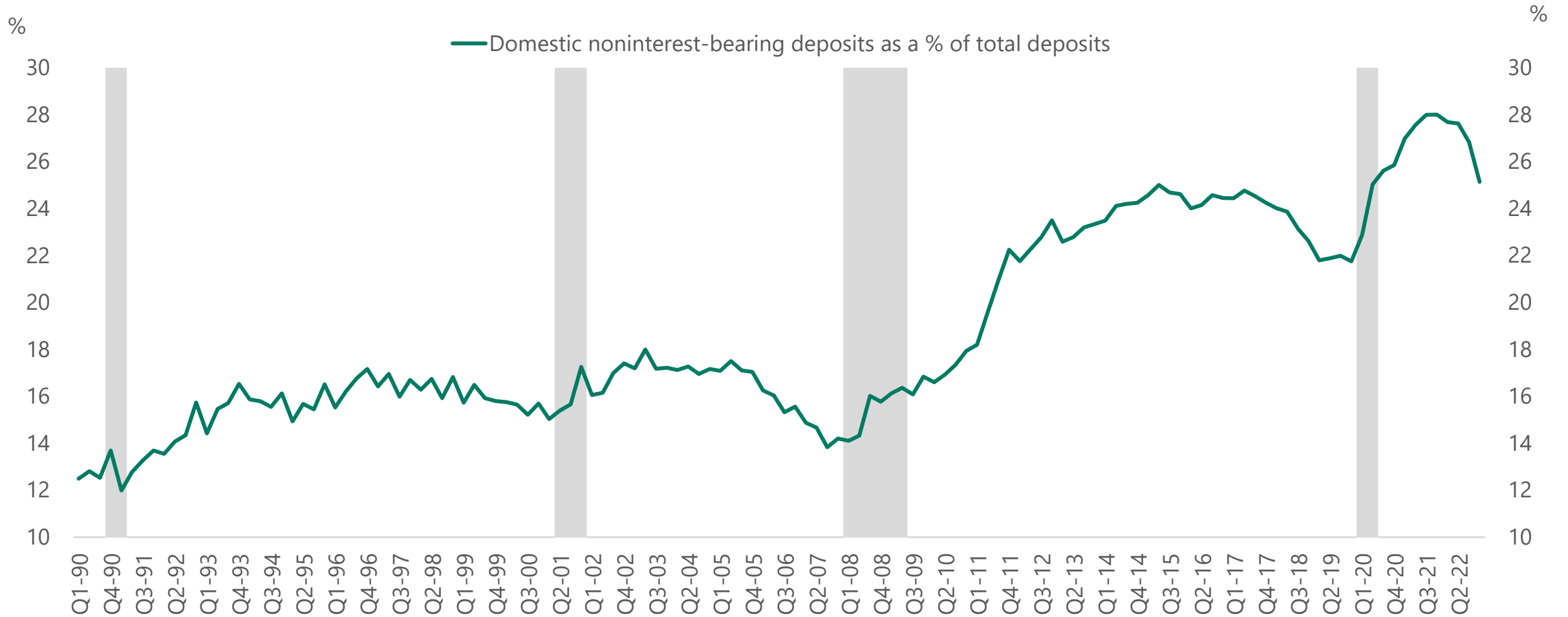
Source: FDIC, Haver Analytics, Apollo Chief Economist. As of Q4 2022

Deposit to asset ratio for large and small banks



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

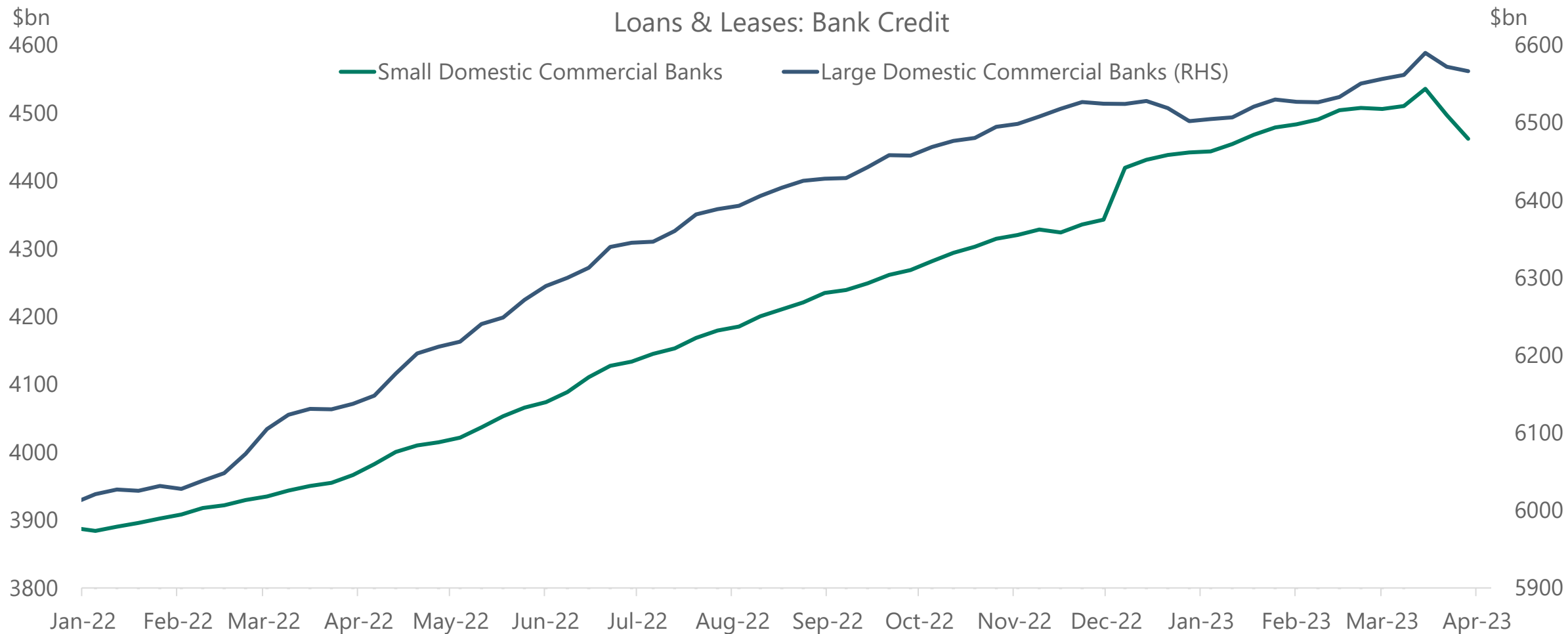
25% of all bank deposits pay zero interest rate



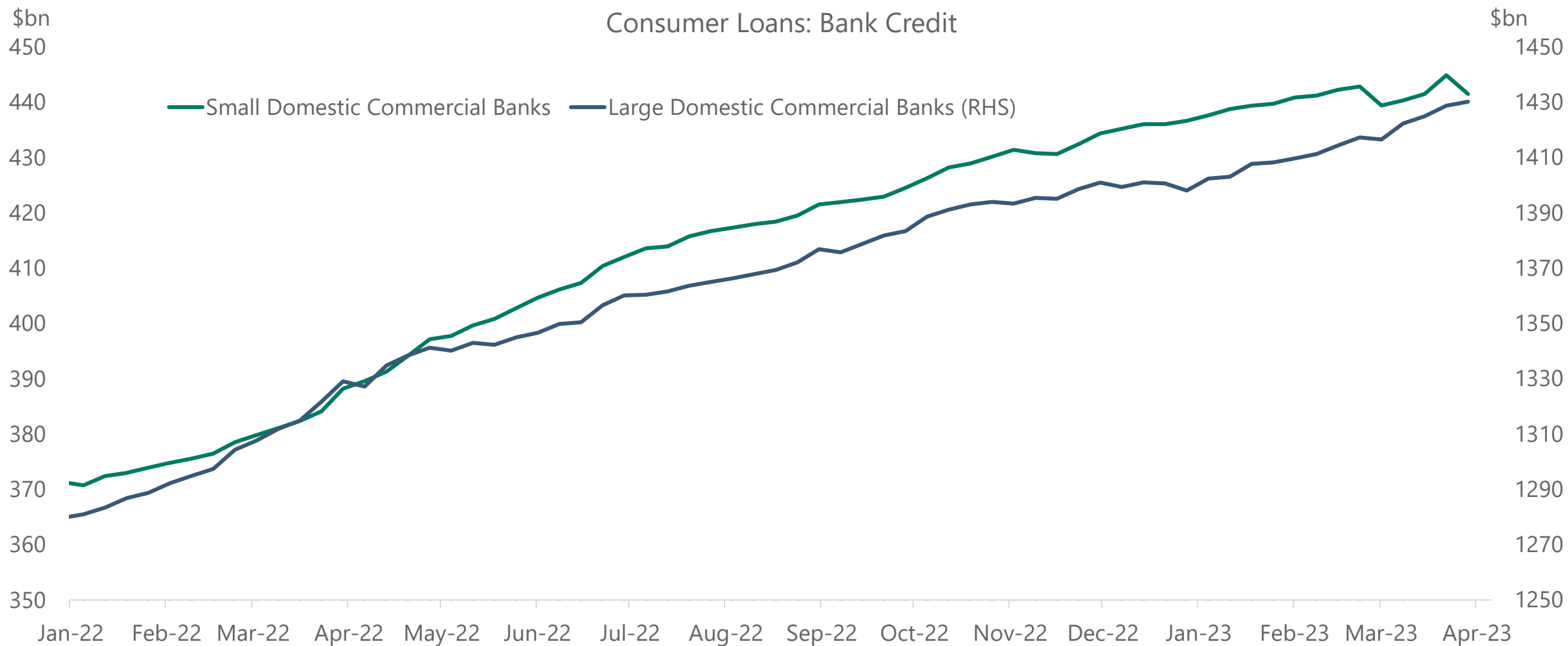
Source: FDIC, Apollo Chief Economist.

Weekly data for bank lending by small and large banks

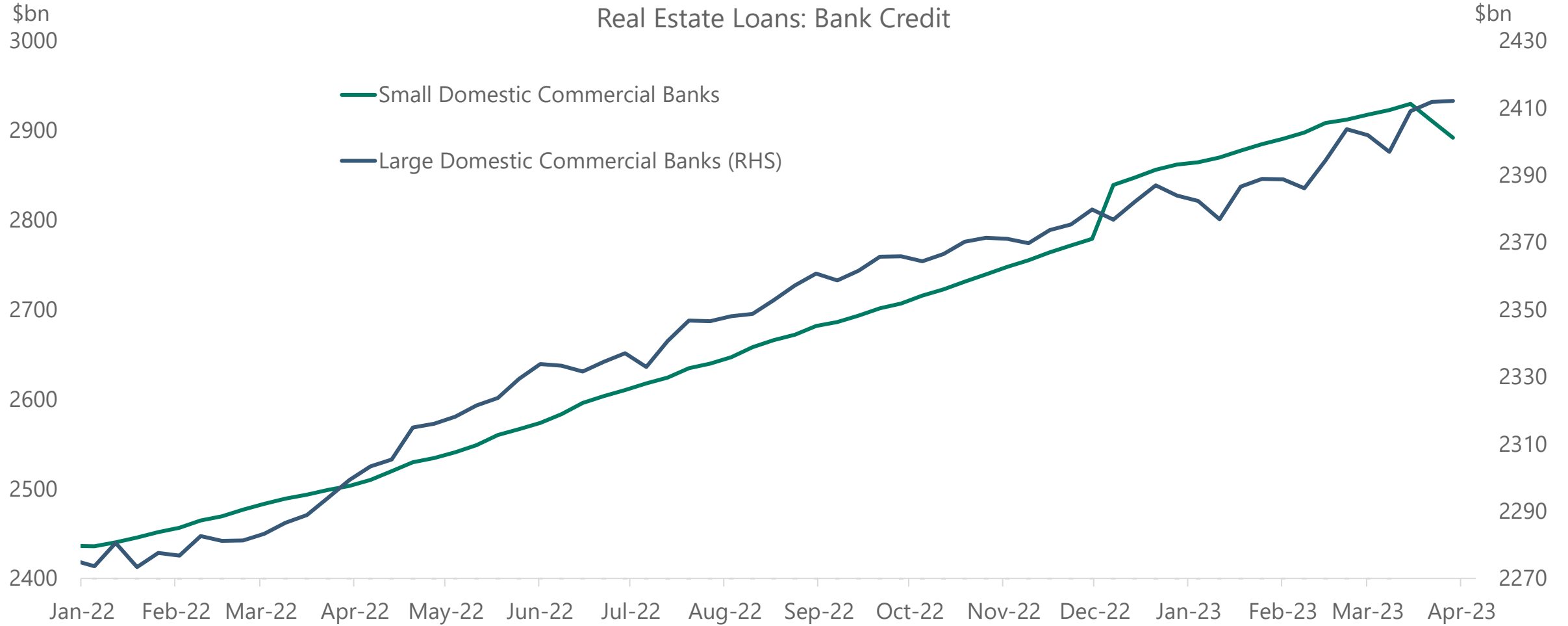
Weekly data for overall bank lending



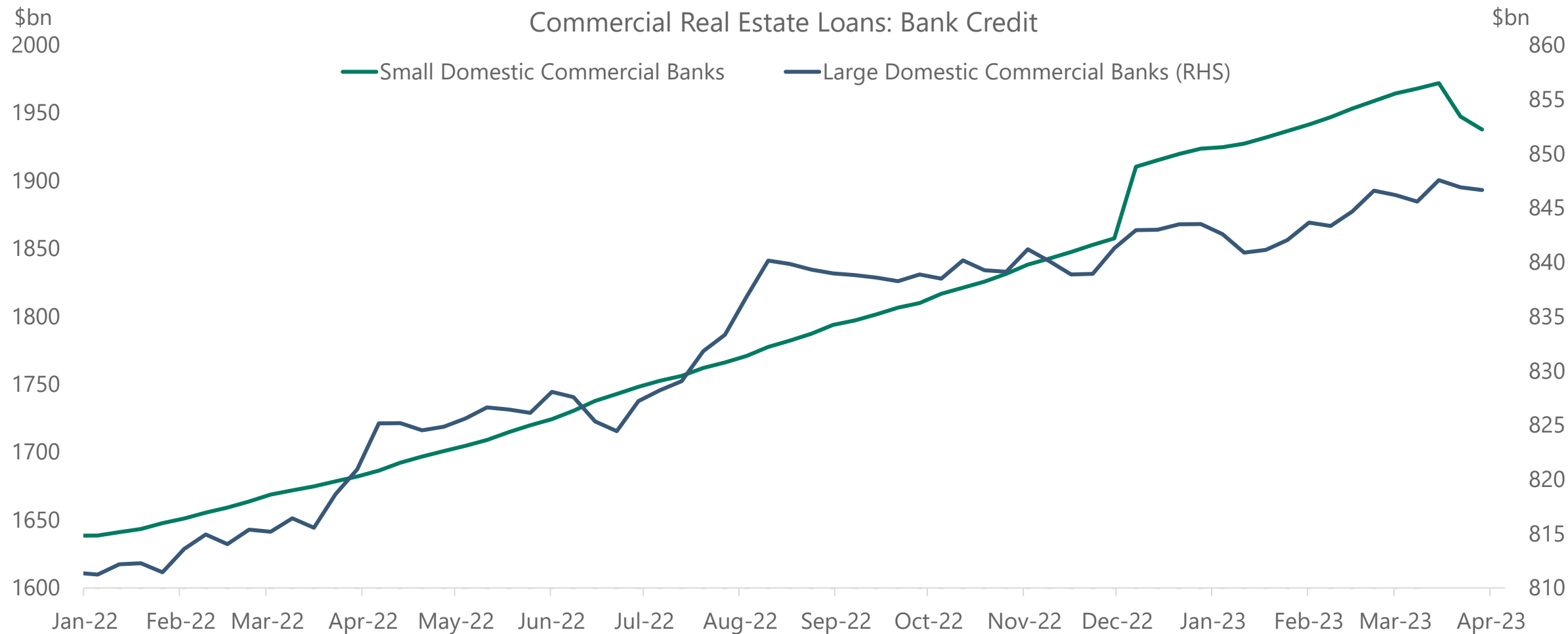
Weekly data for lending to consumers by small and large banks



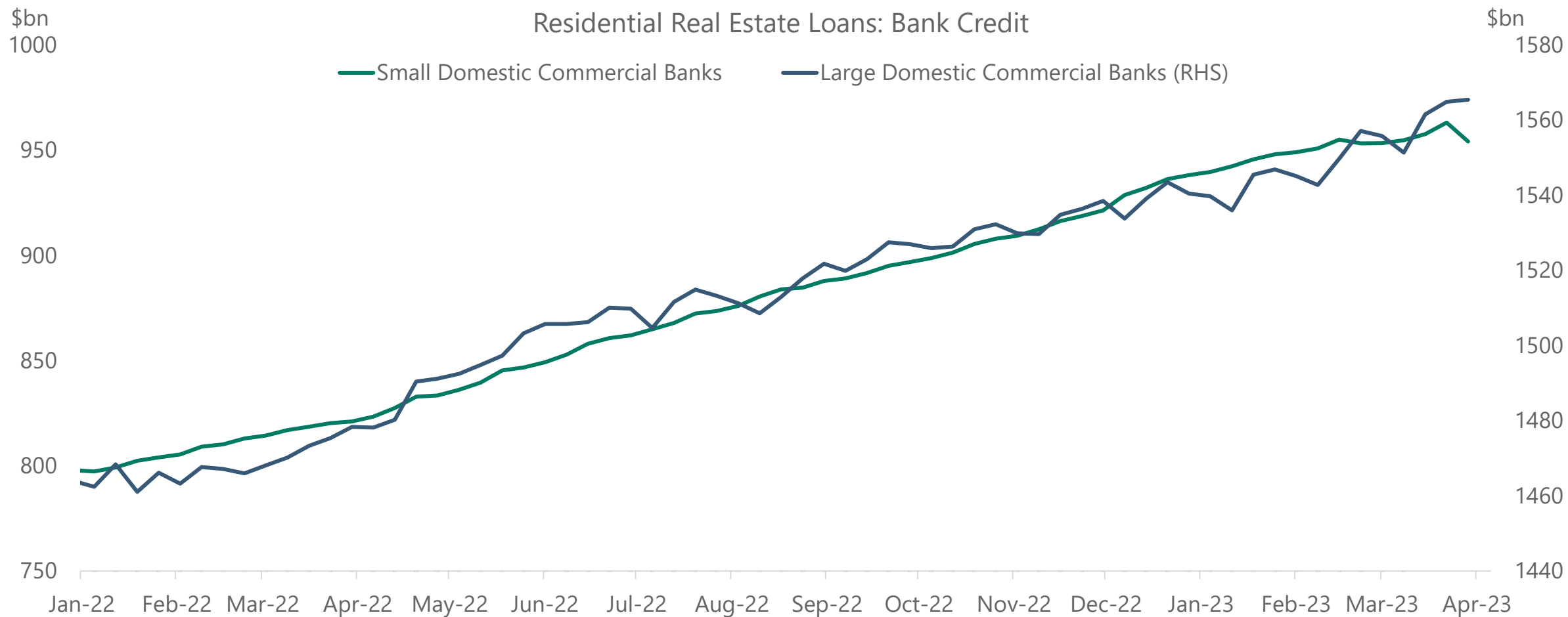
Weekly data for real estate lending by small and large banks



Weekly data for commercial real estate lending by small and large banks

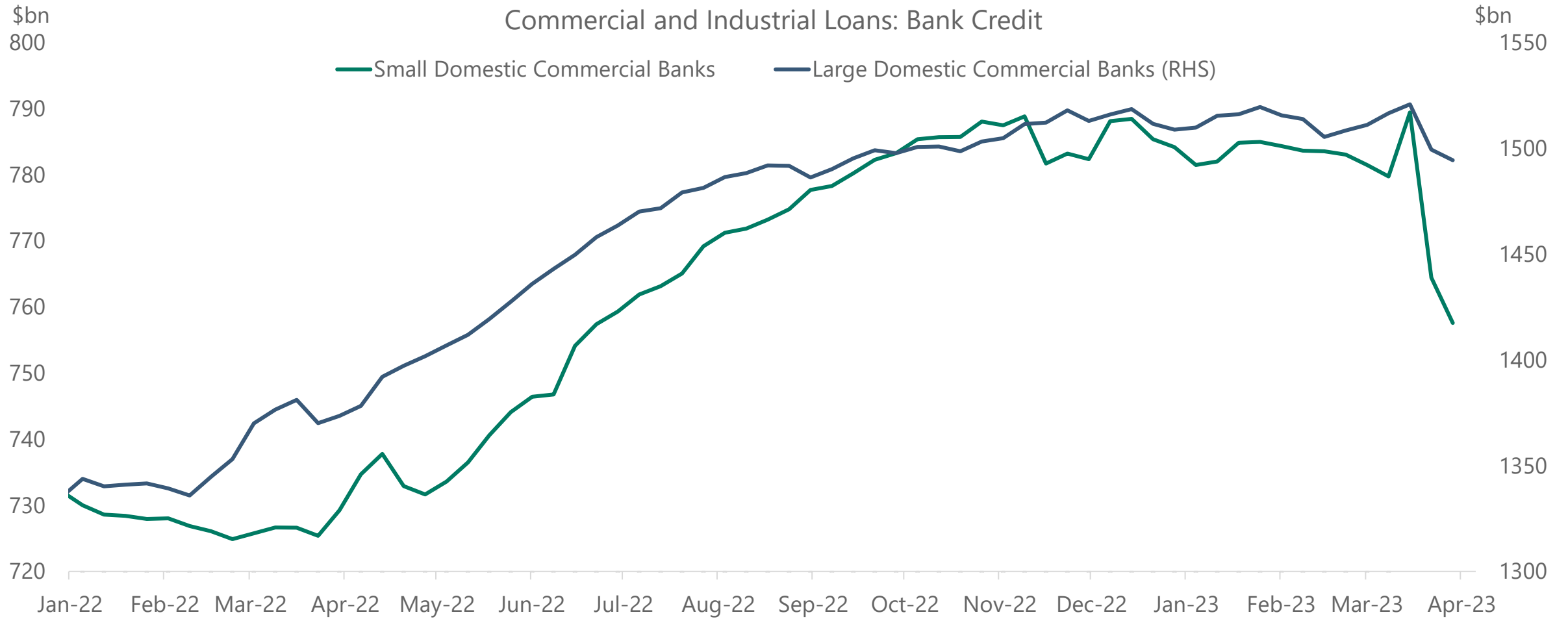


Weekly data for residential real estate lending by small and large banks

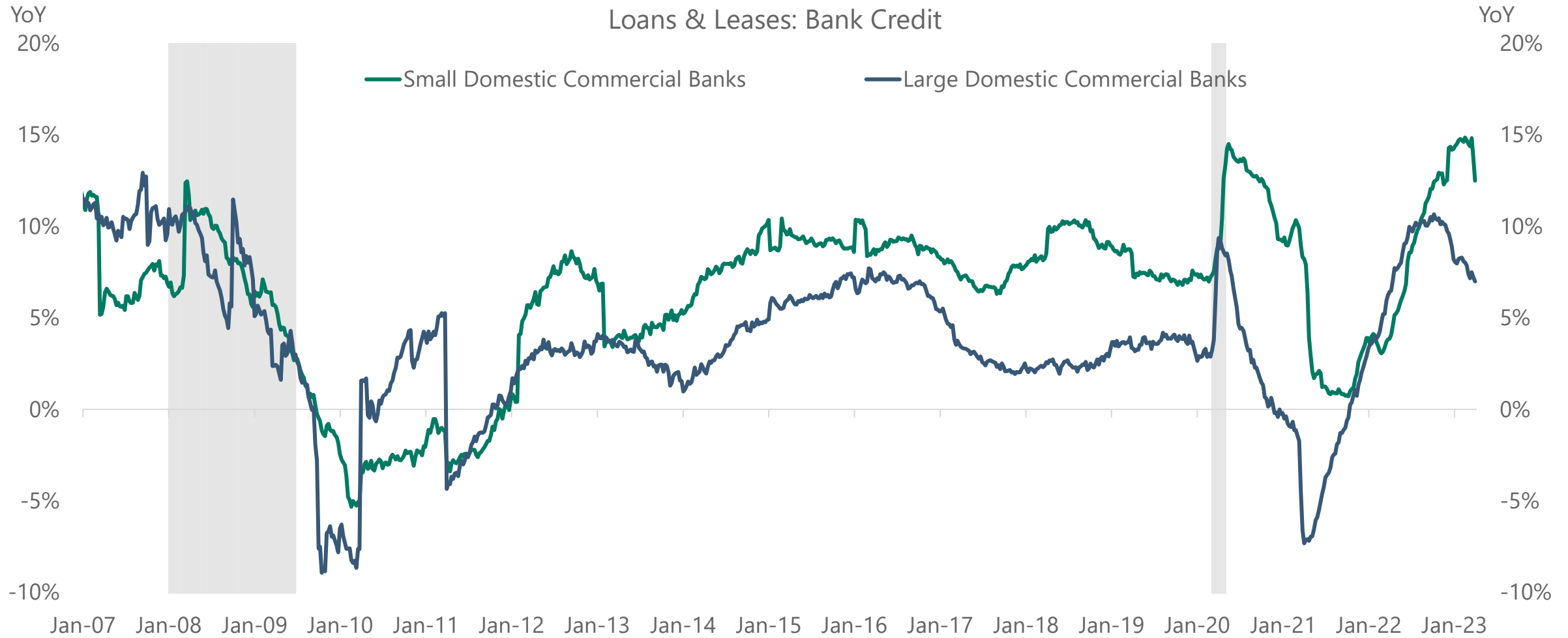


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

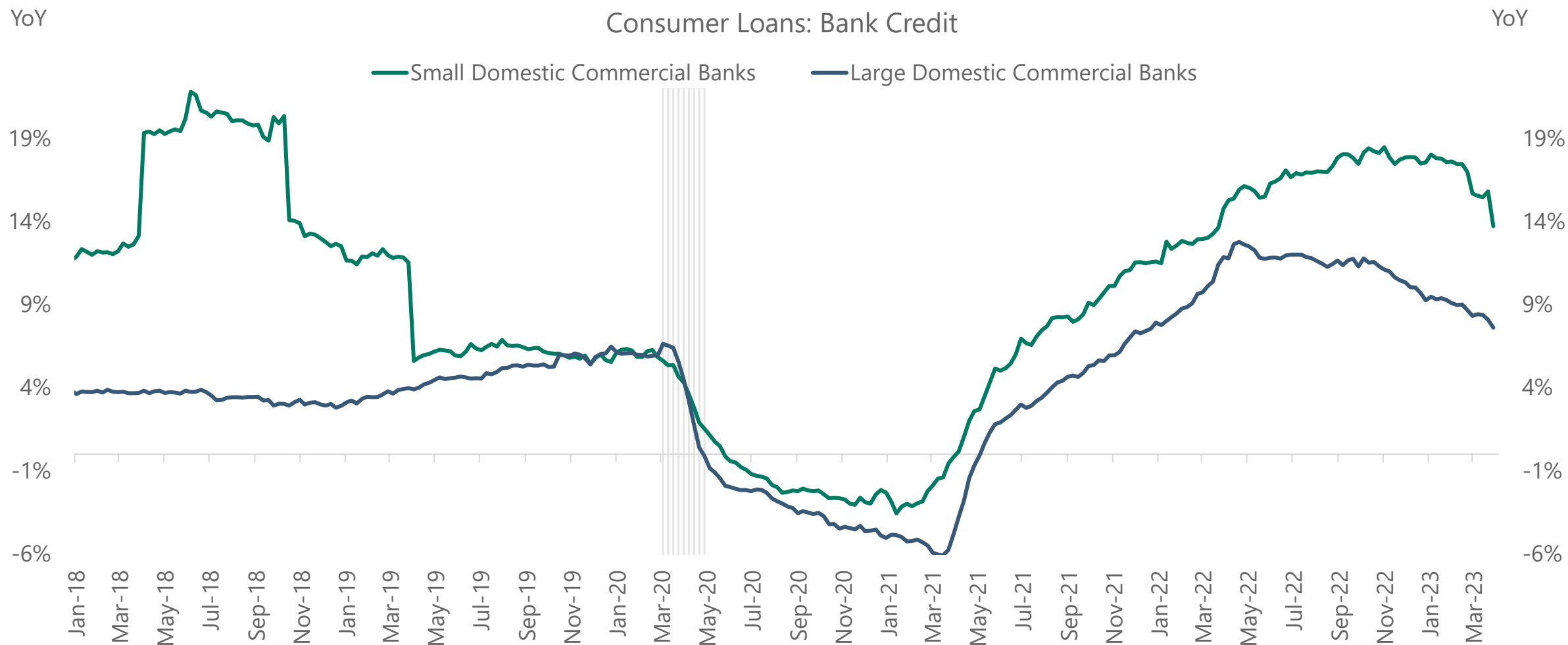
Weekly data for commercial and industrial lending by small and large banks



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

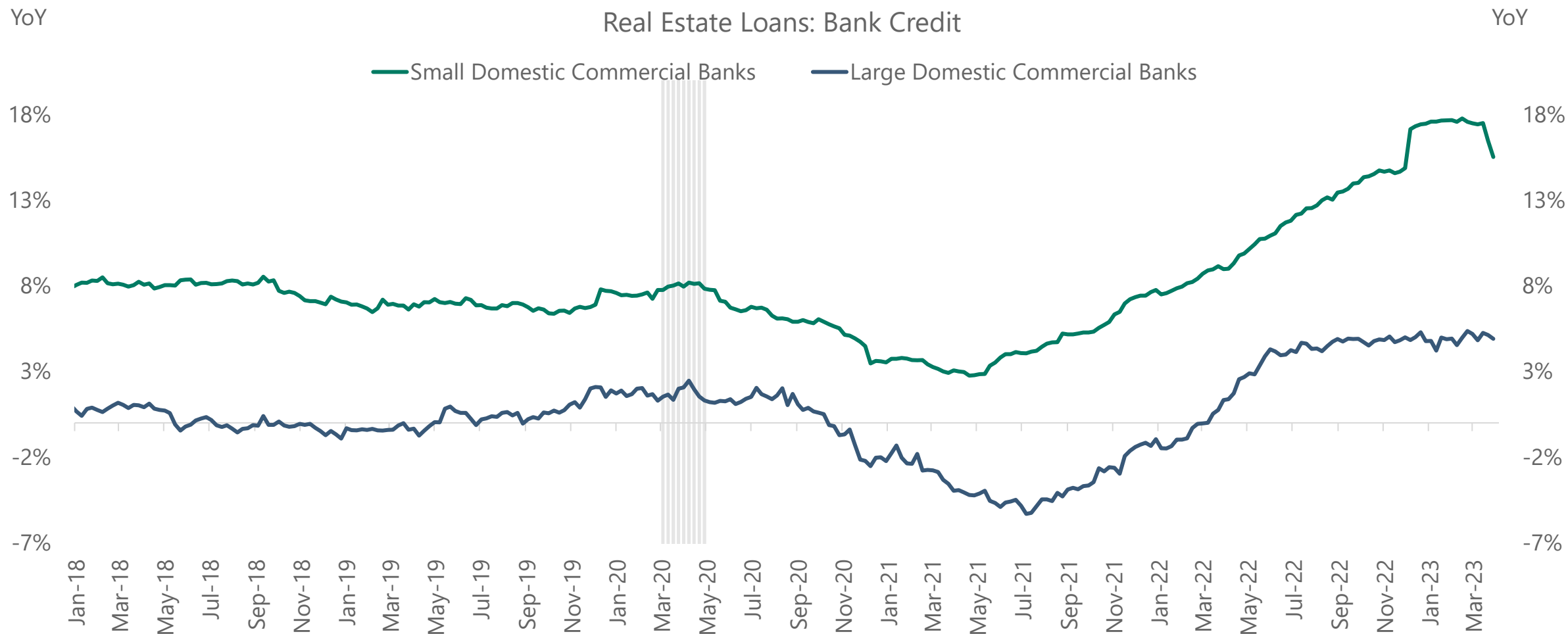


Lending to consumers has been growing faster for smaller banks



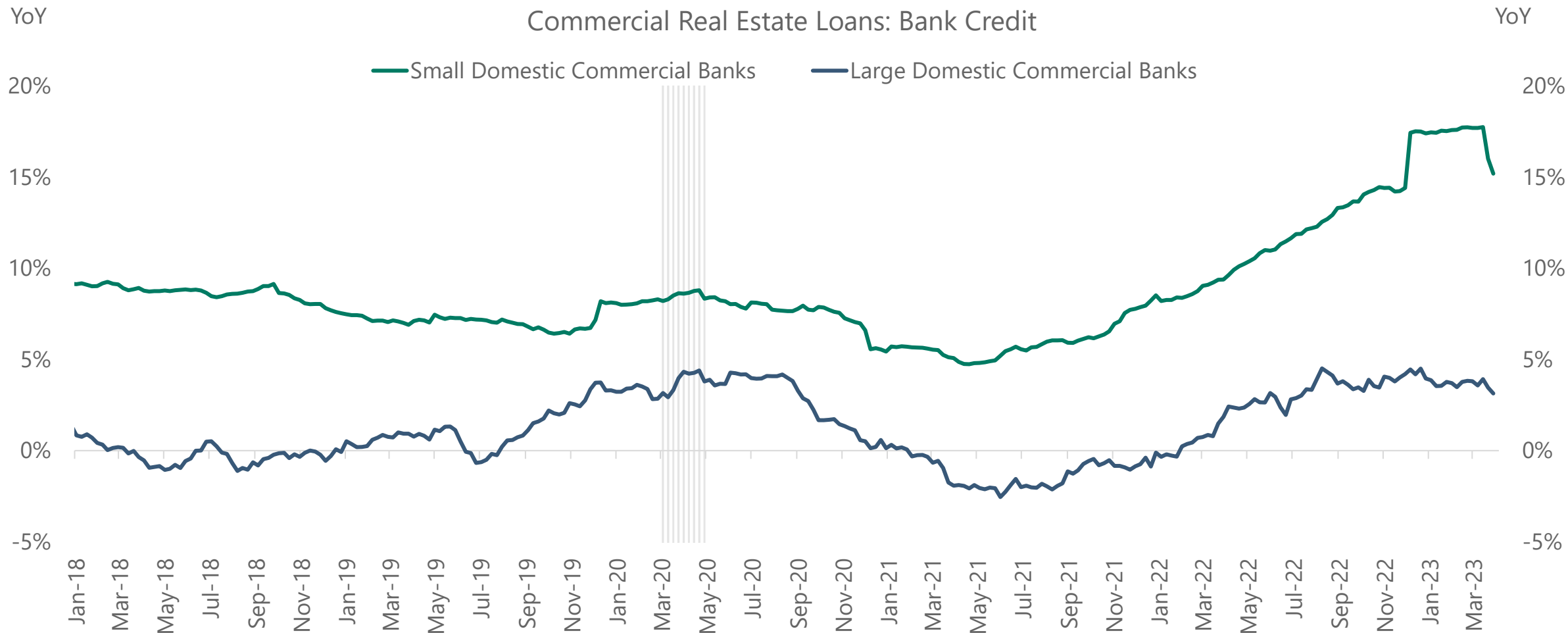
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Real estate lending has been growing faster for smaller banks



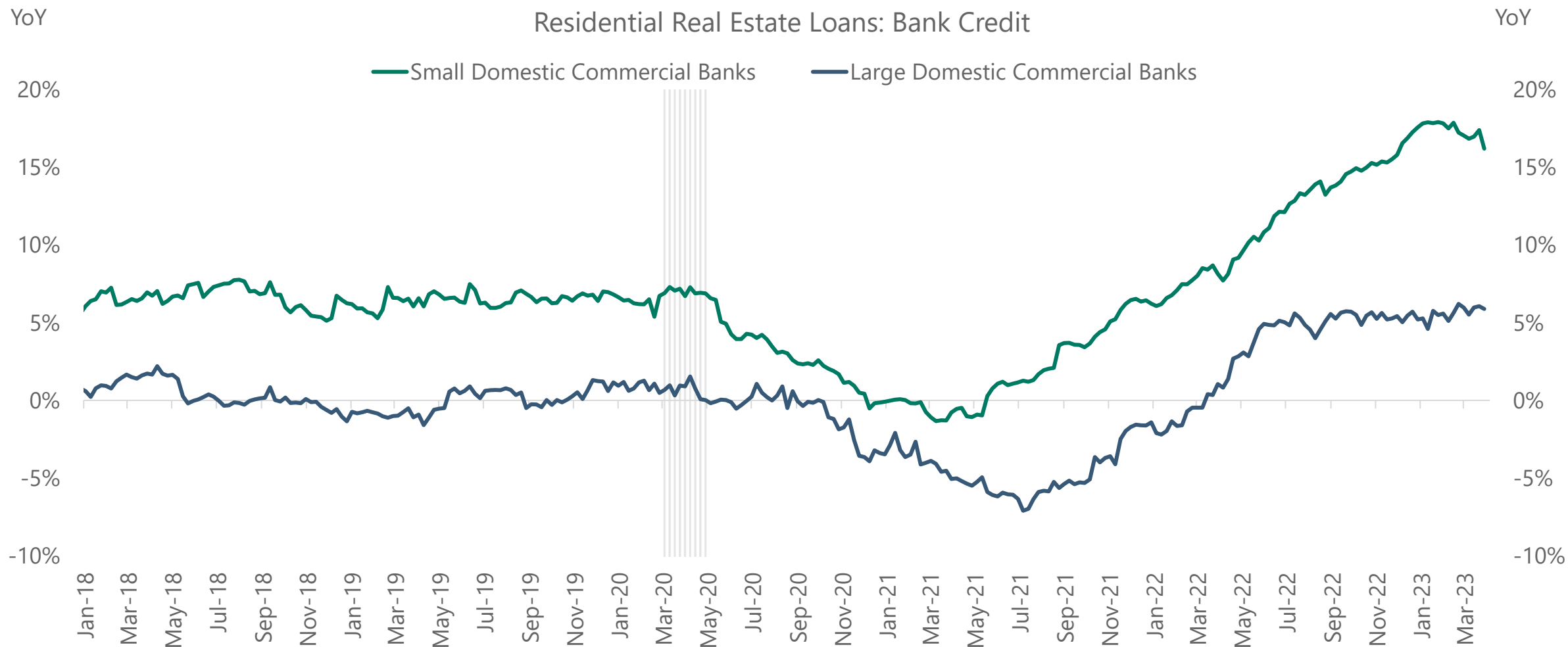
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Commercial real estate lending has been growing faster for smaller banks



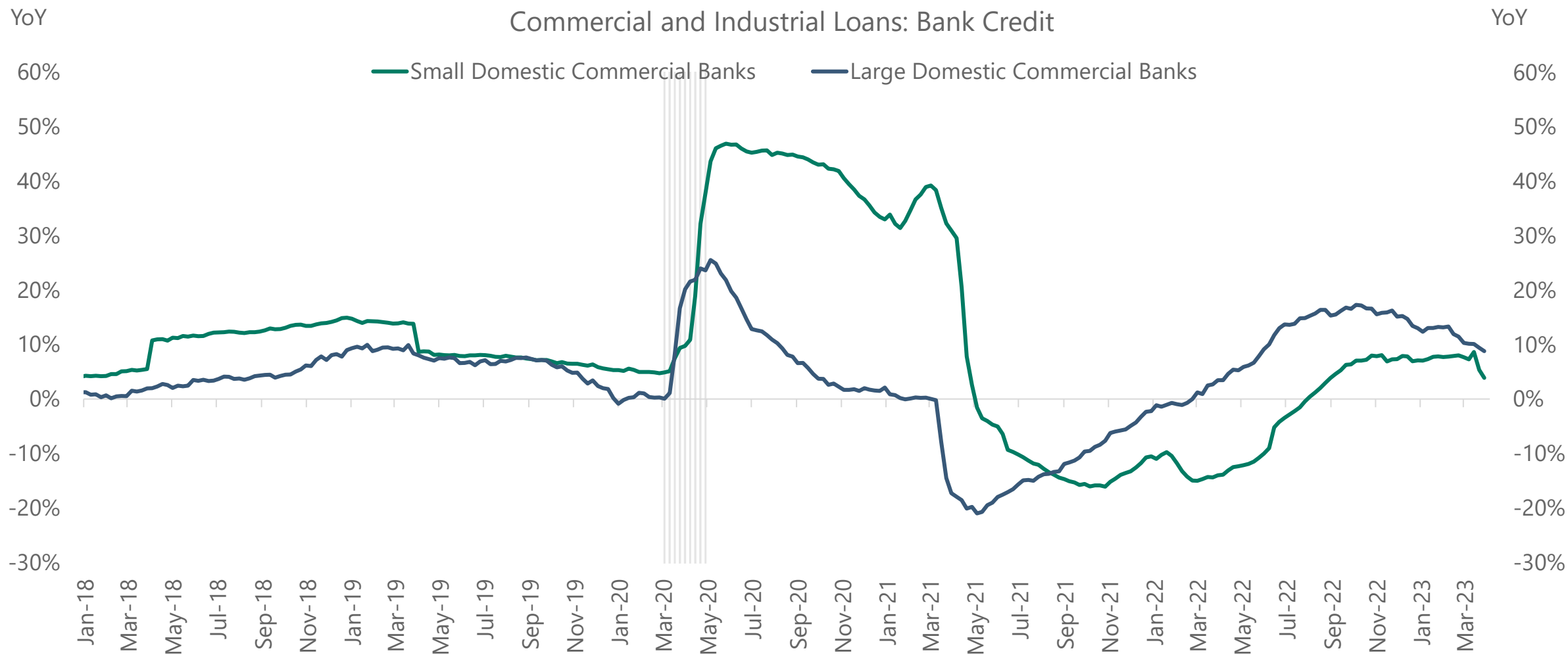
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Residential real estate lending has been growing faster for smaller banks



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

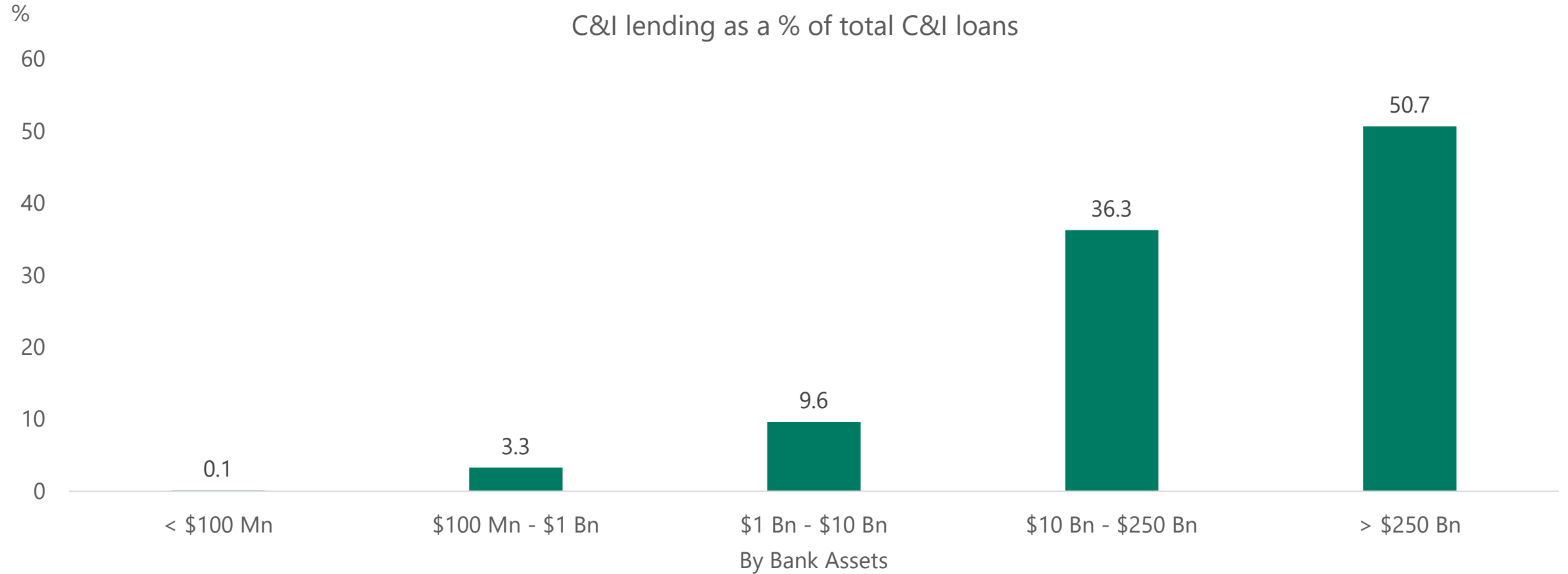
Lending to corporates among small and large banks



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

Small banks lend to small businesses

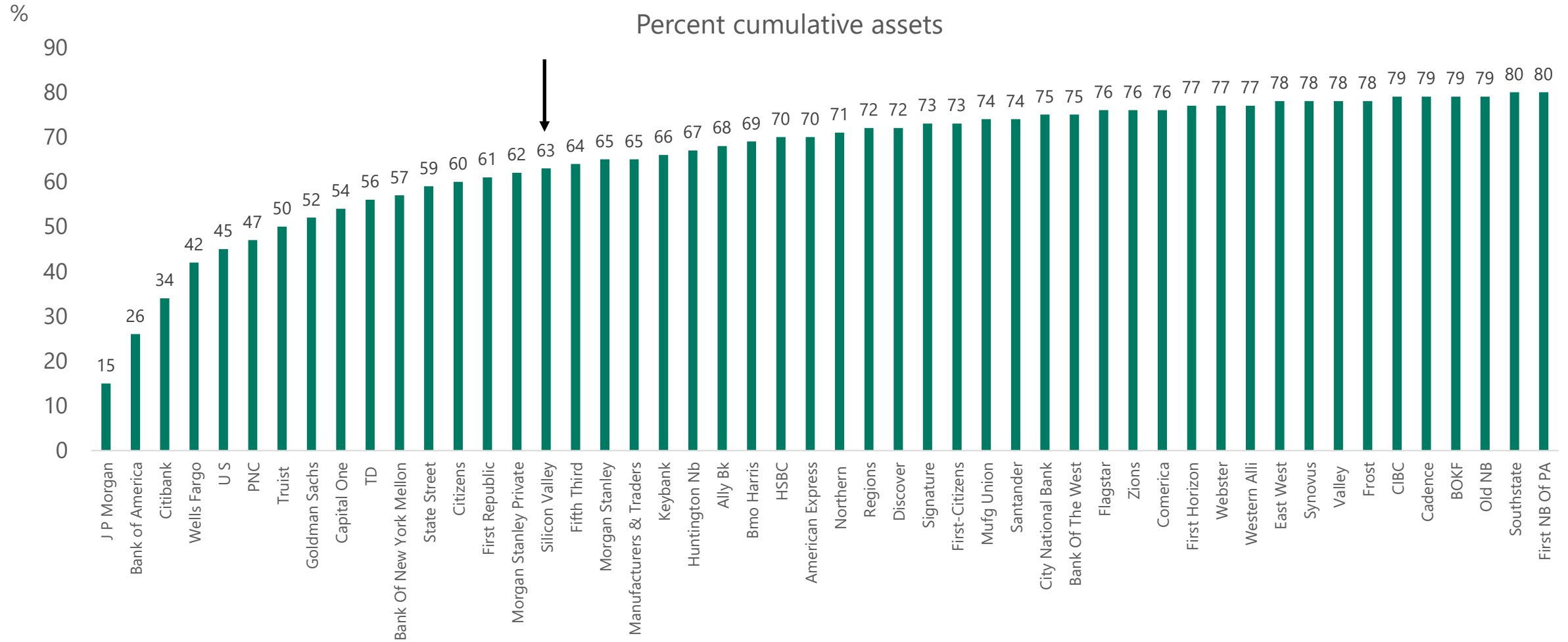
Banks with less than \$250bn in assets account for 50% of commercial and industrial lending



US banks by asset size:

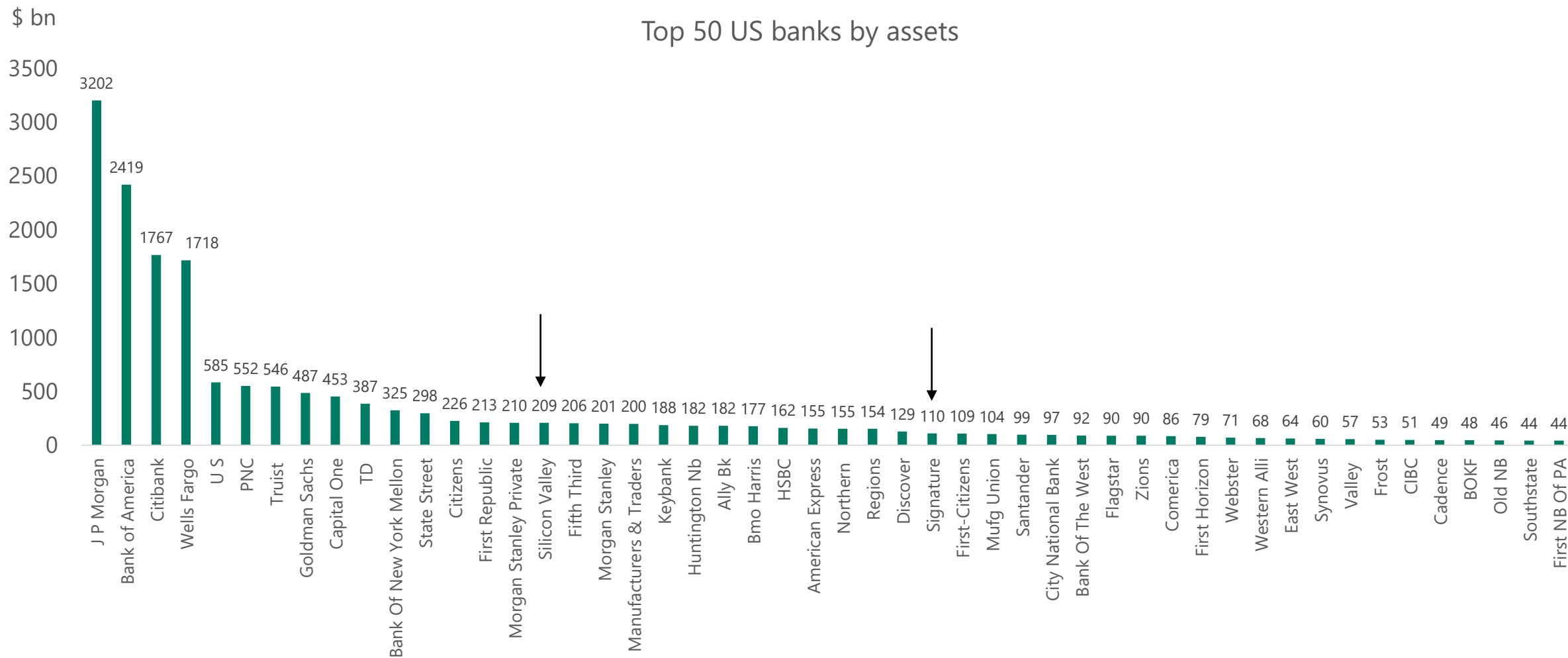
The importance of regional banks for the US economy

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



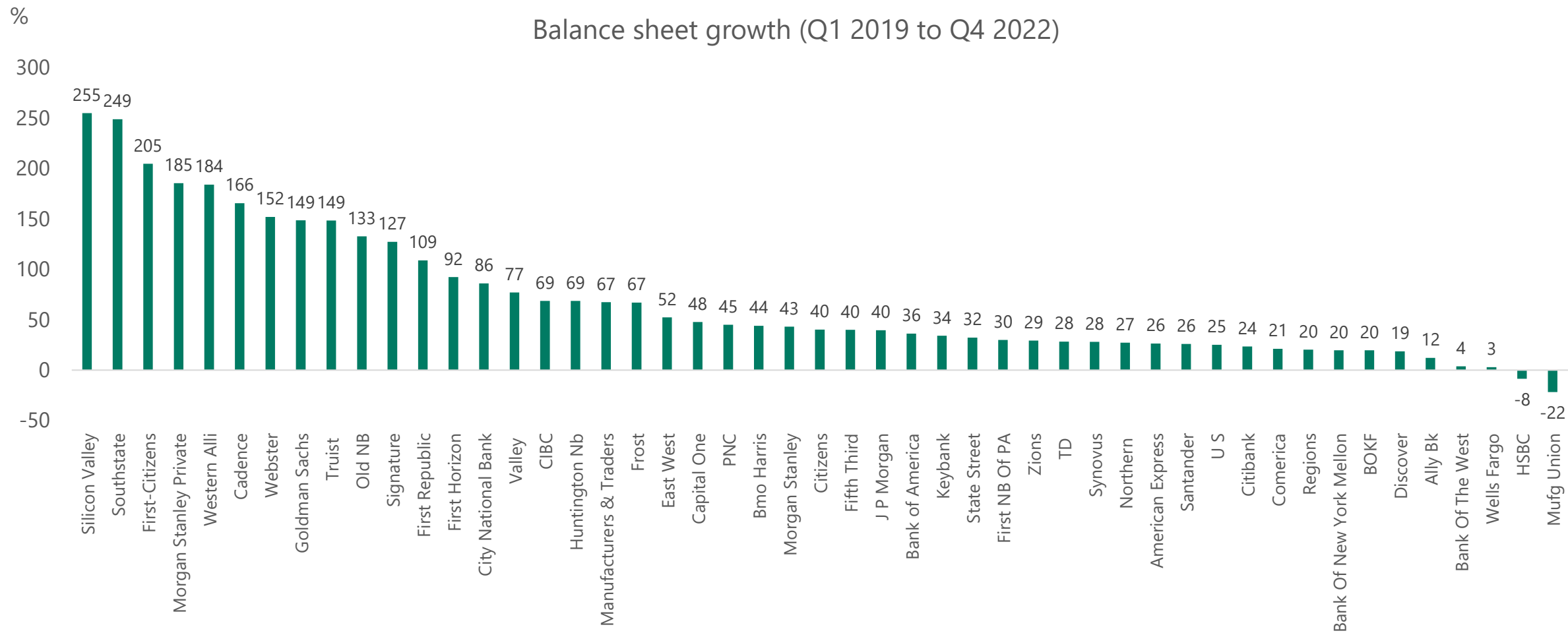
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022. Represents the views and opinions of Apollo's Chief Economist. Subject to change at any time without notice.

Top 50 US banks by assets



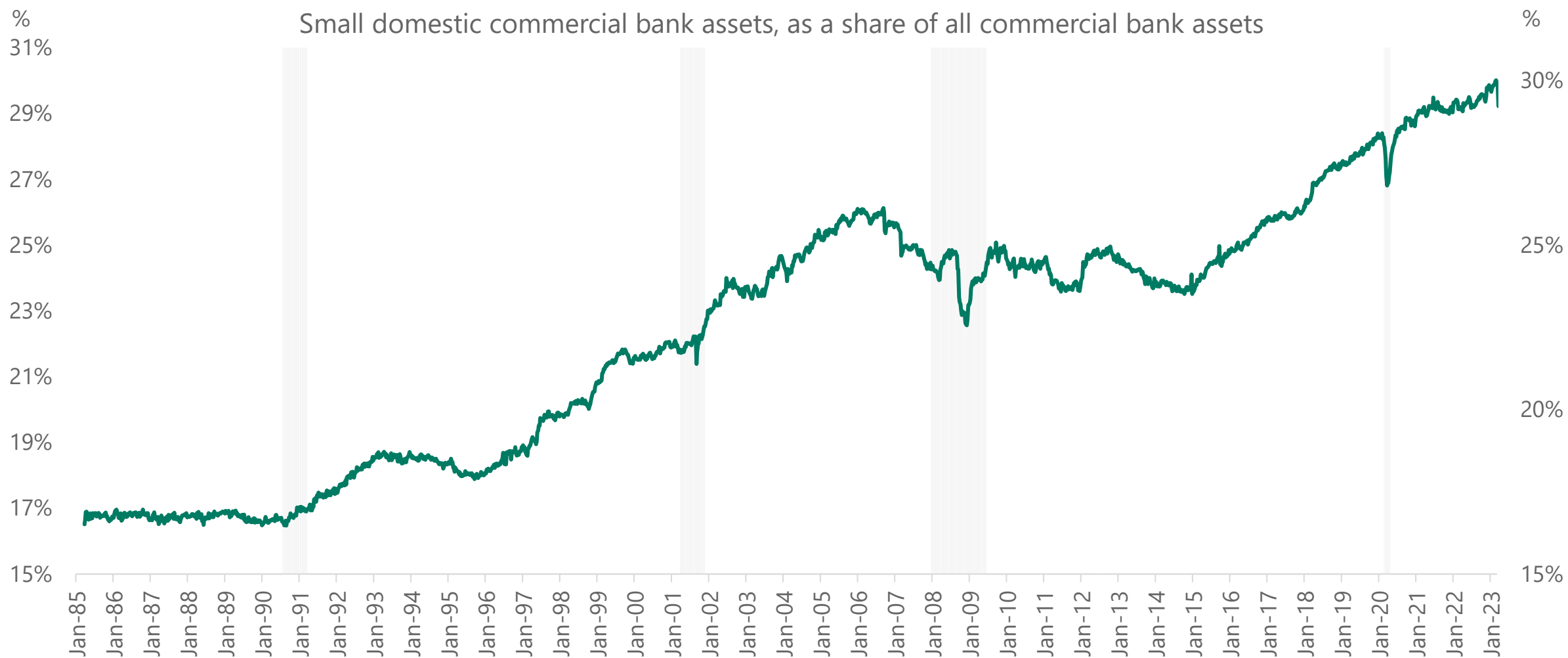
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist. As of Q4 2022.

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



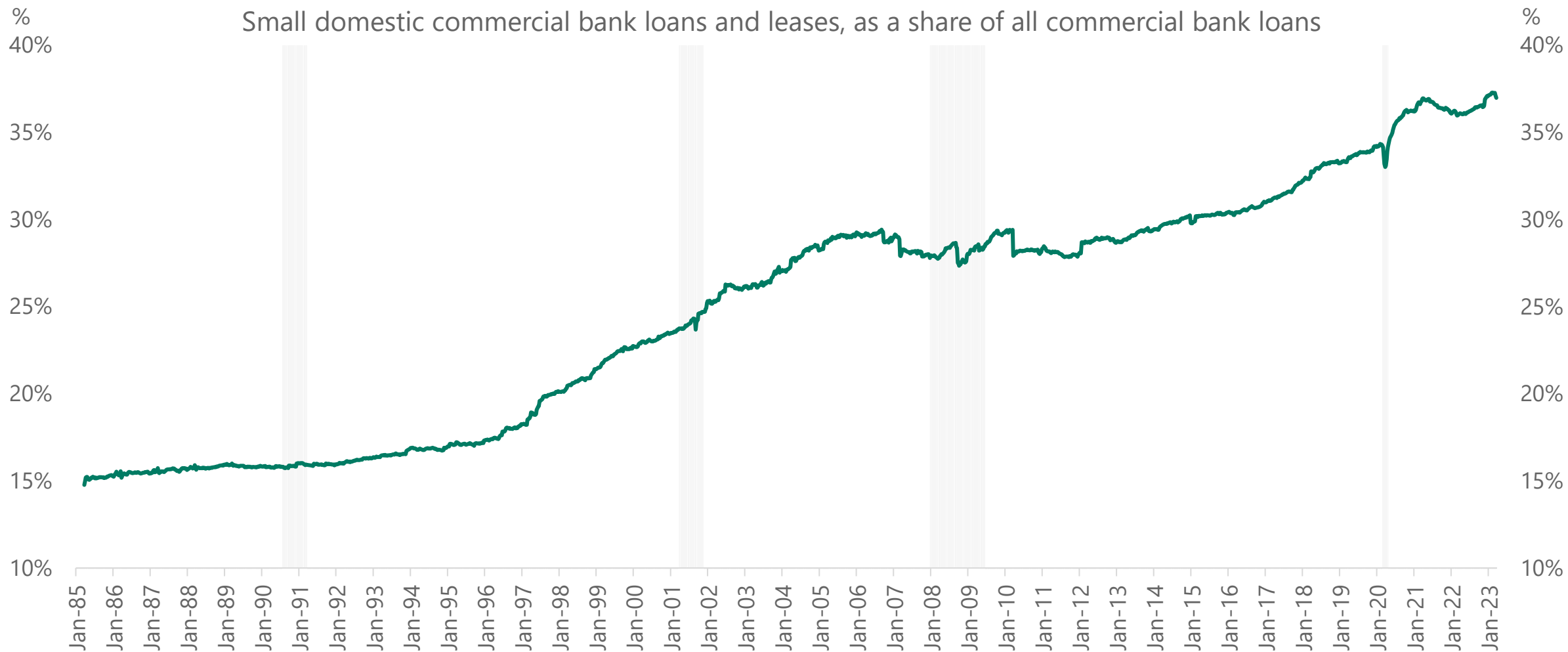
Source: FDIC, Apollo Chief Economist.

Small bank assets as a share of total banking sector assets



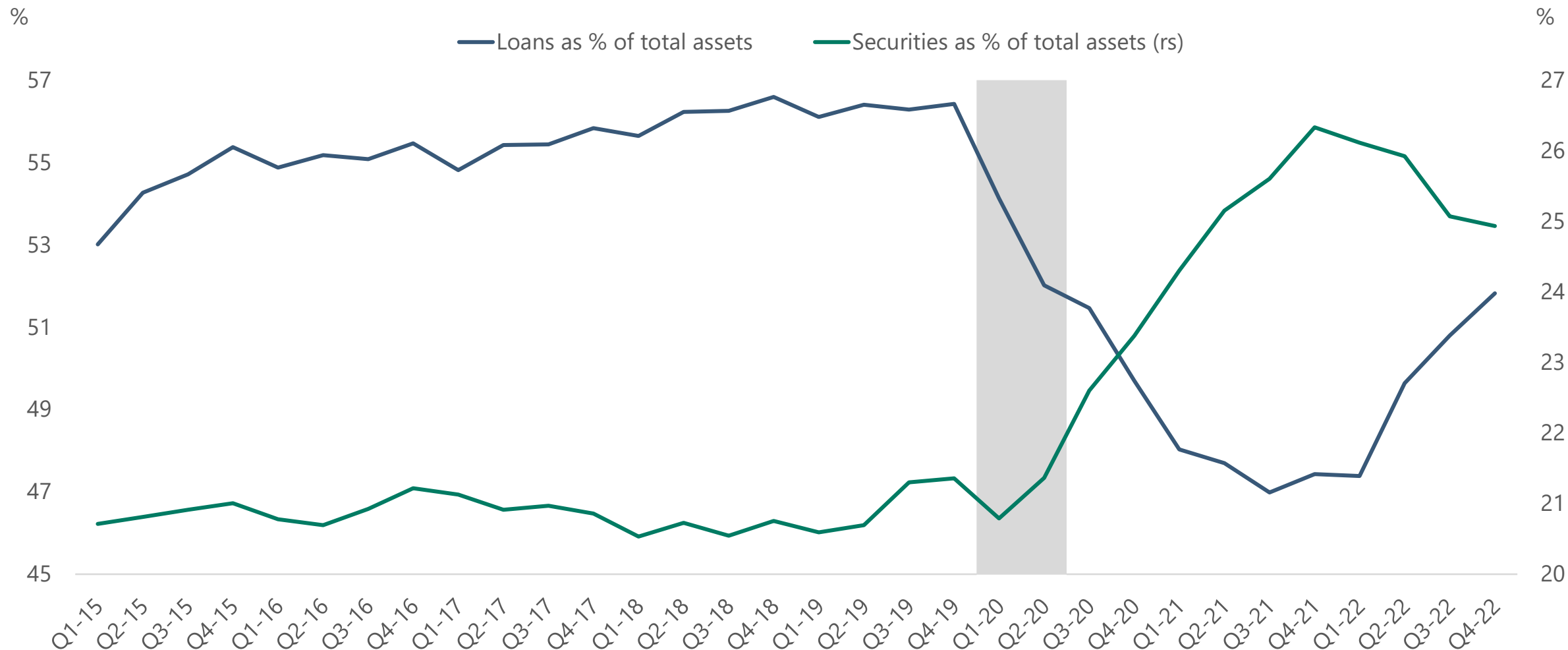
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Share of lending by smaller banks

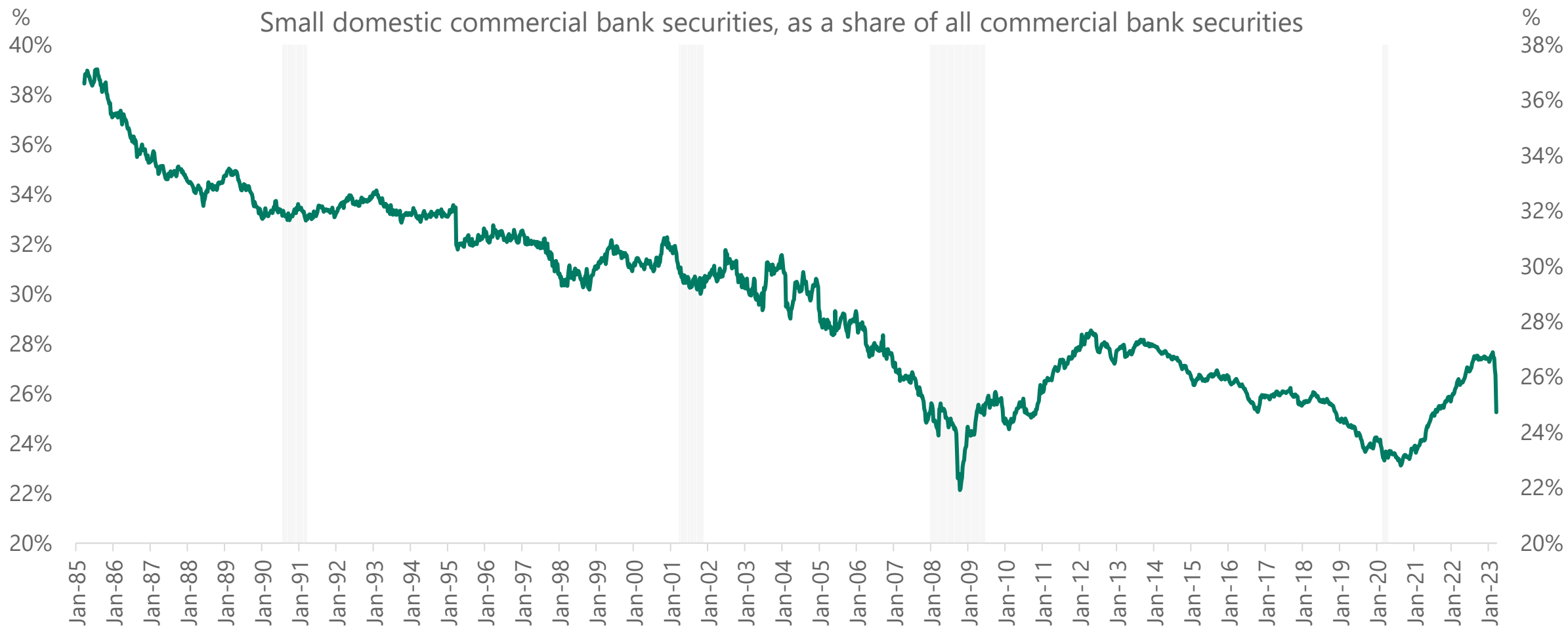


Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

During the pandemic, banks shifted from lending to holding securities

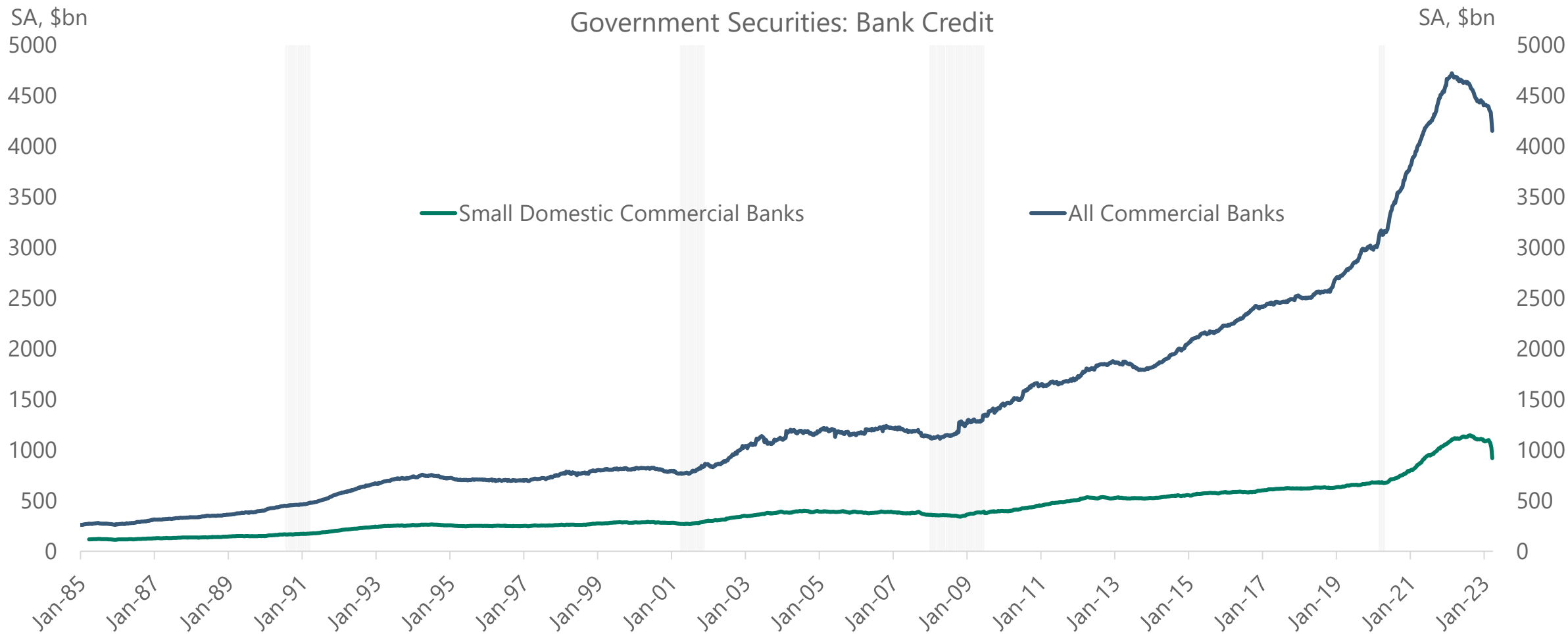


Share of securities in the banking sector held by small banks



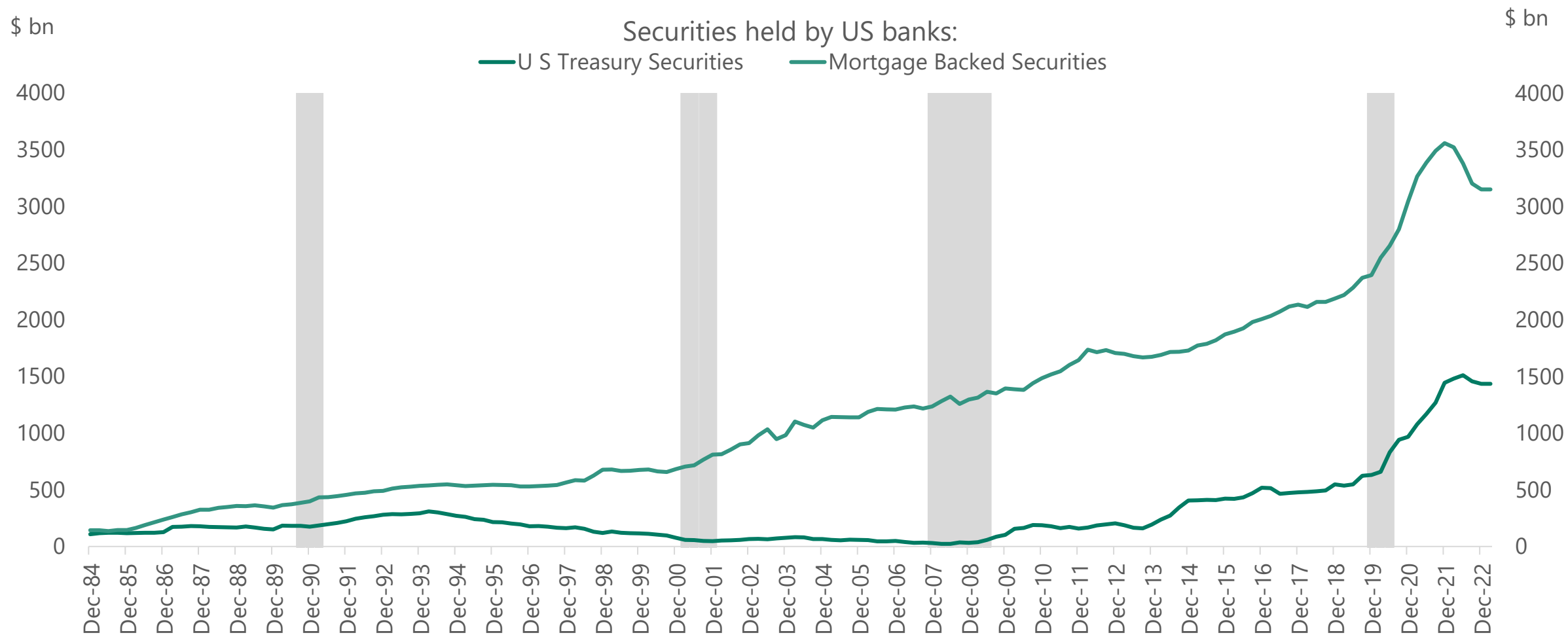
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Small banks hold \$1trn in Treasuries



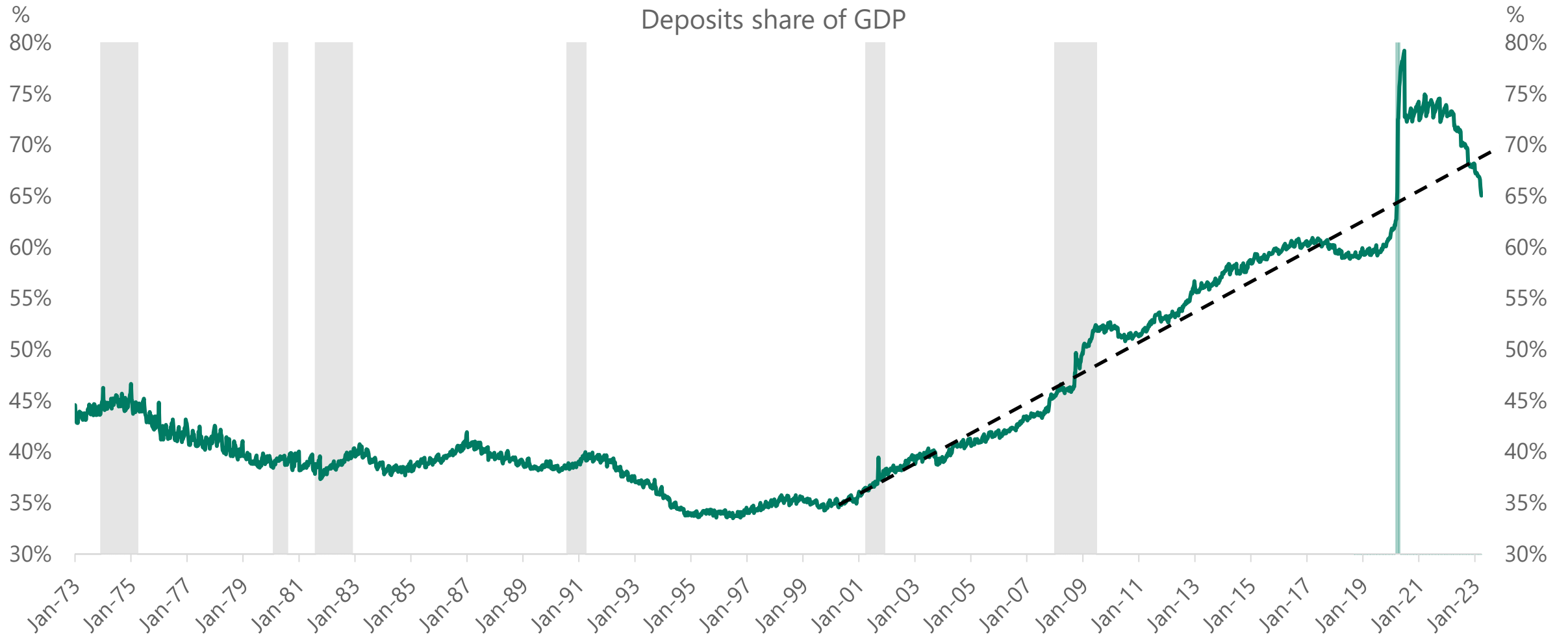
Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.

Securities held by FDIC-insured banks



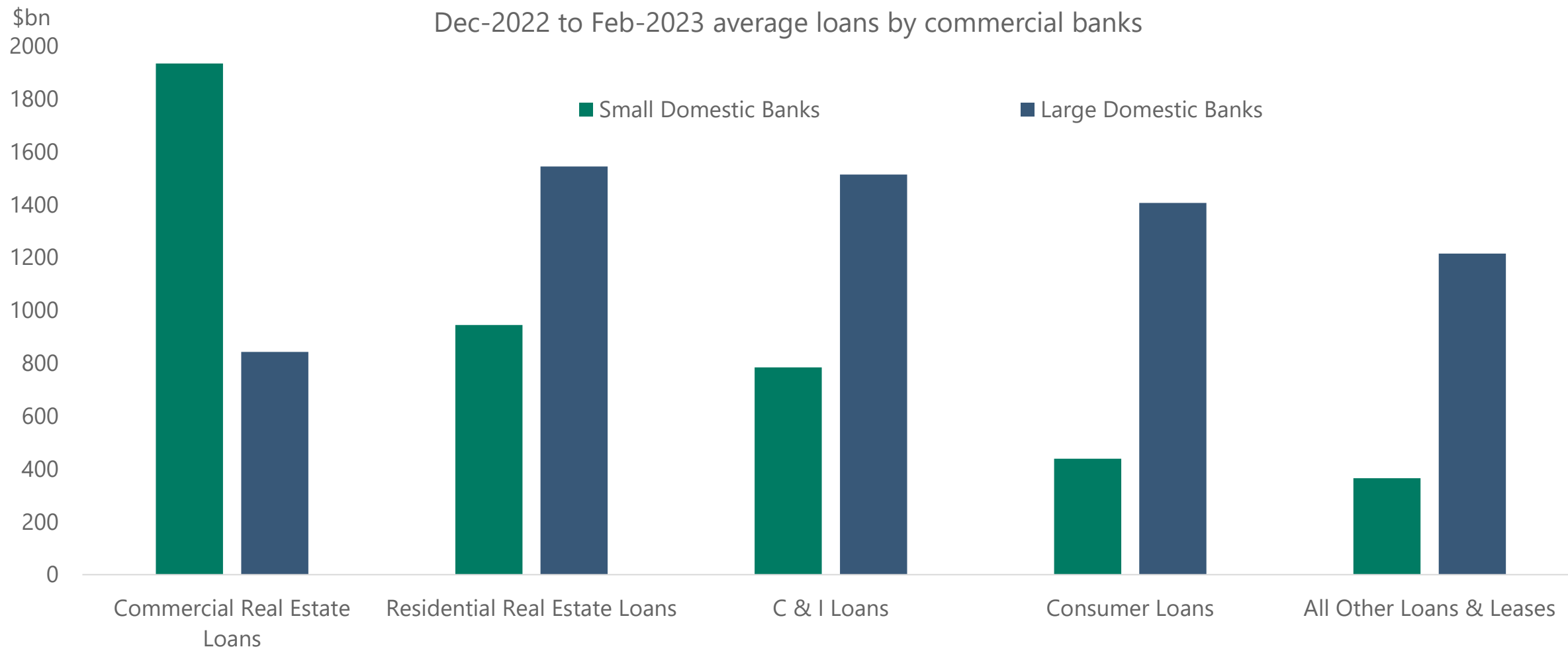
Source: FDIC, Bloomberg, Apollo Chief Economist.

Deposits as a share of GDP now below trend

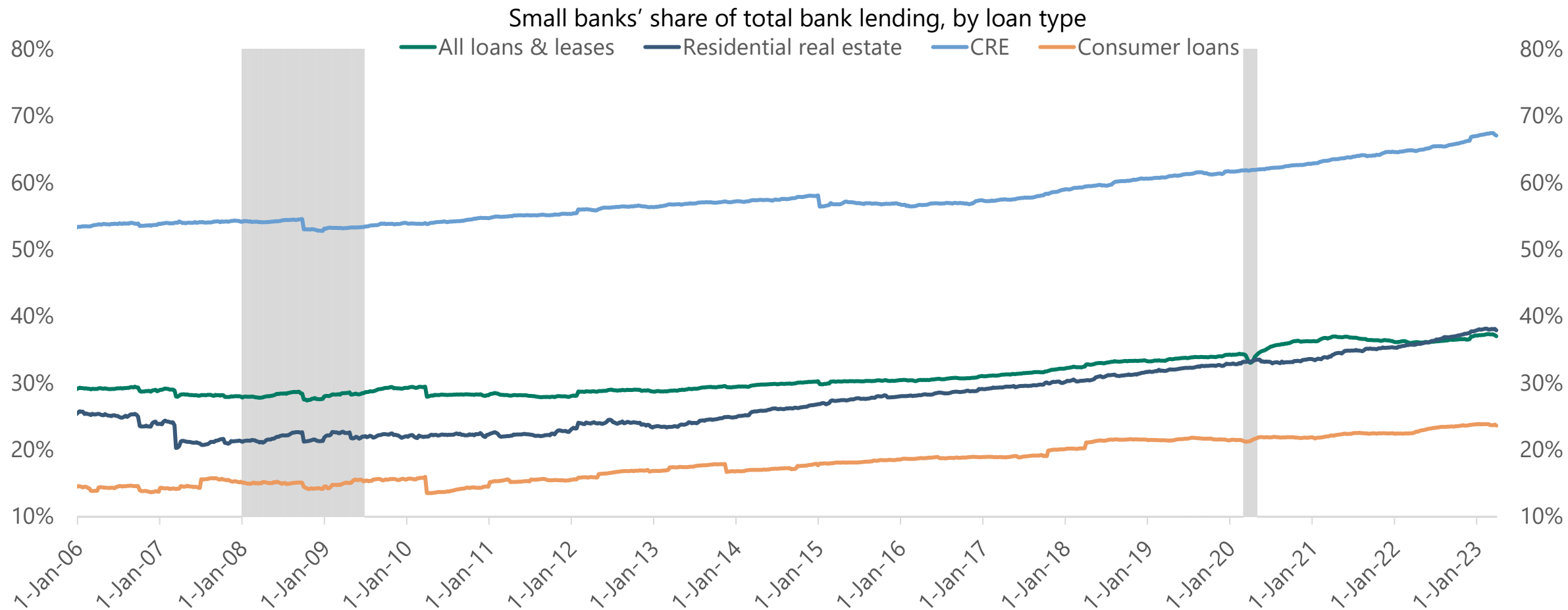


Regional banks' asset concentration in CRE

High concentration of commercial real estate in small banks



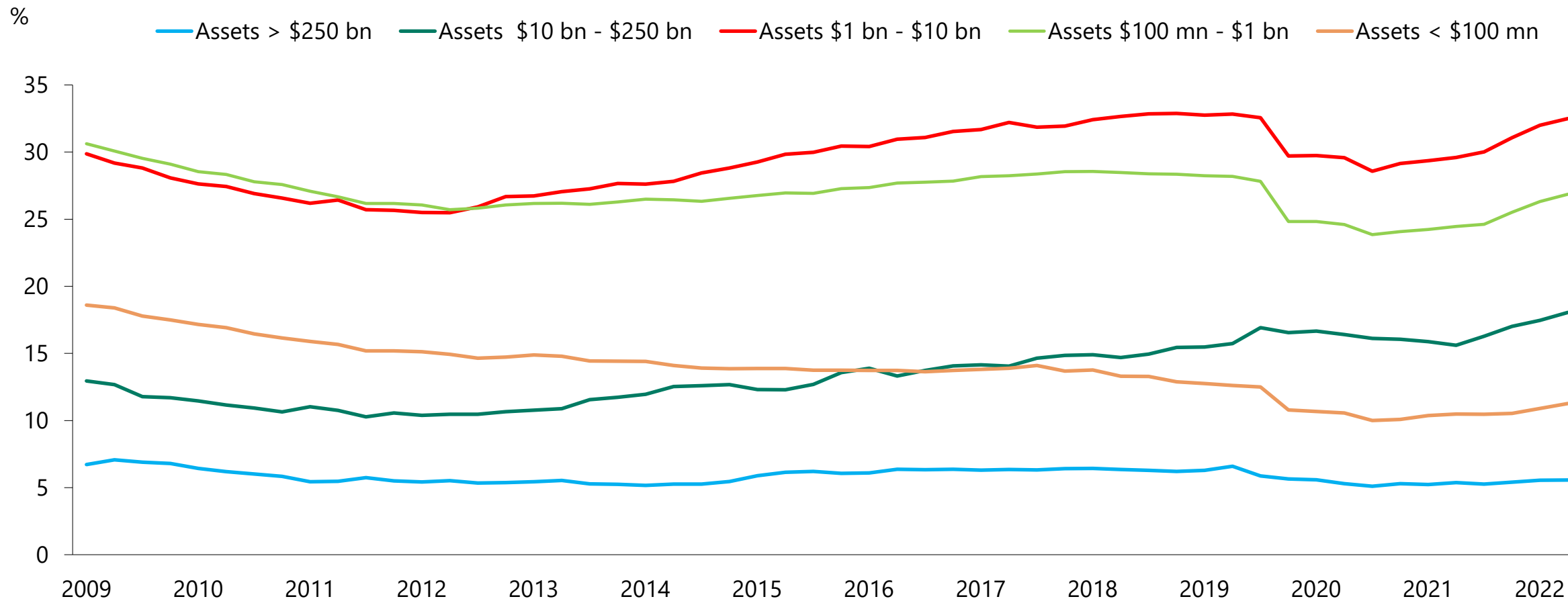
Small banks account for almost 70% of all commercial real estate loans outstanding



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

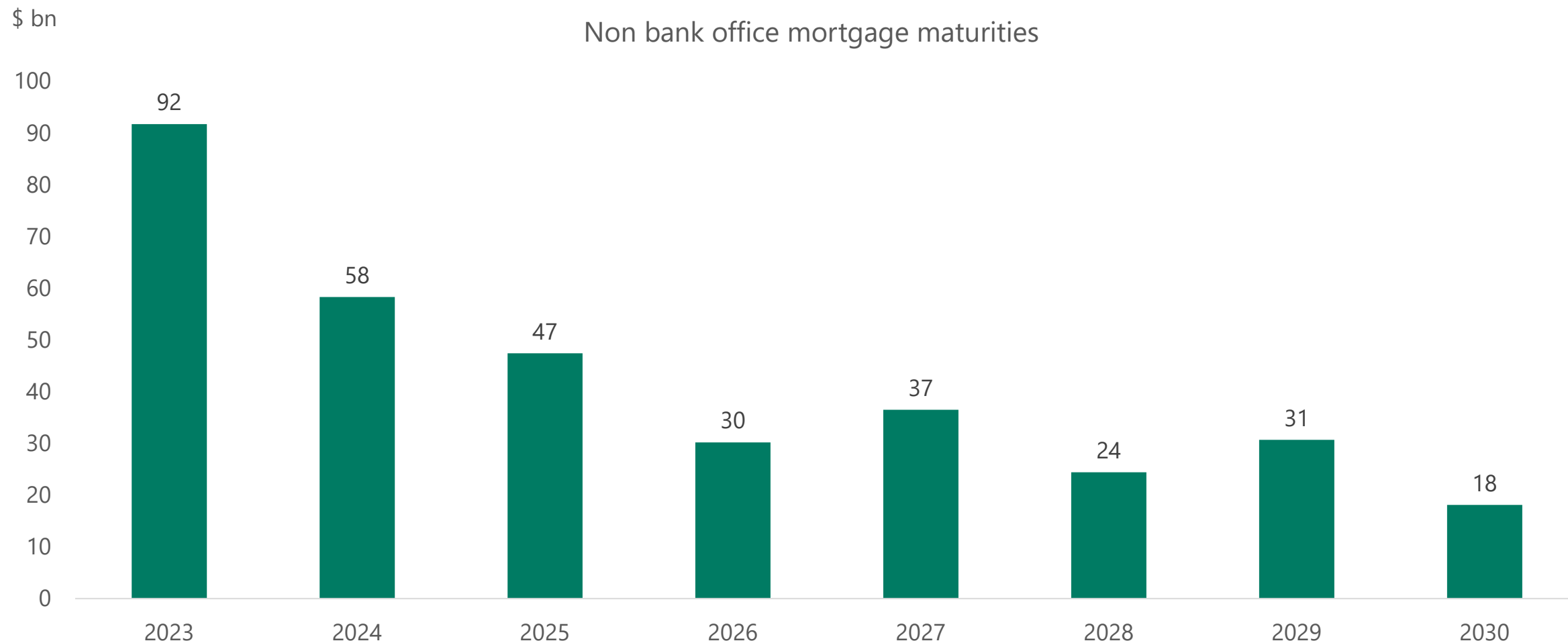
Banks with total assets between \$100mn and \$10bn are more exposed to CRE loans

Commercial Real Estate Loans, % of Total Assets

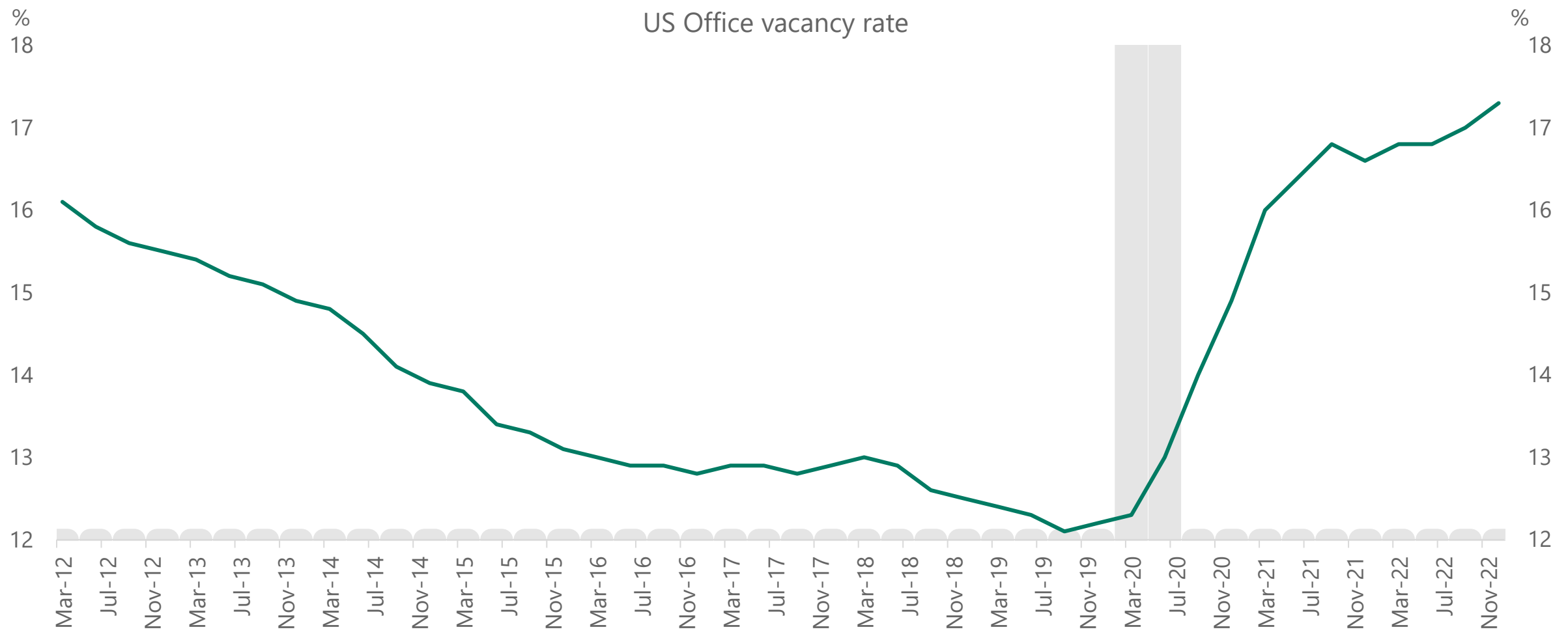


Source: FDIC, Apollo Chief Economist.

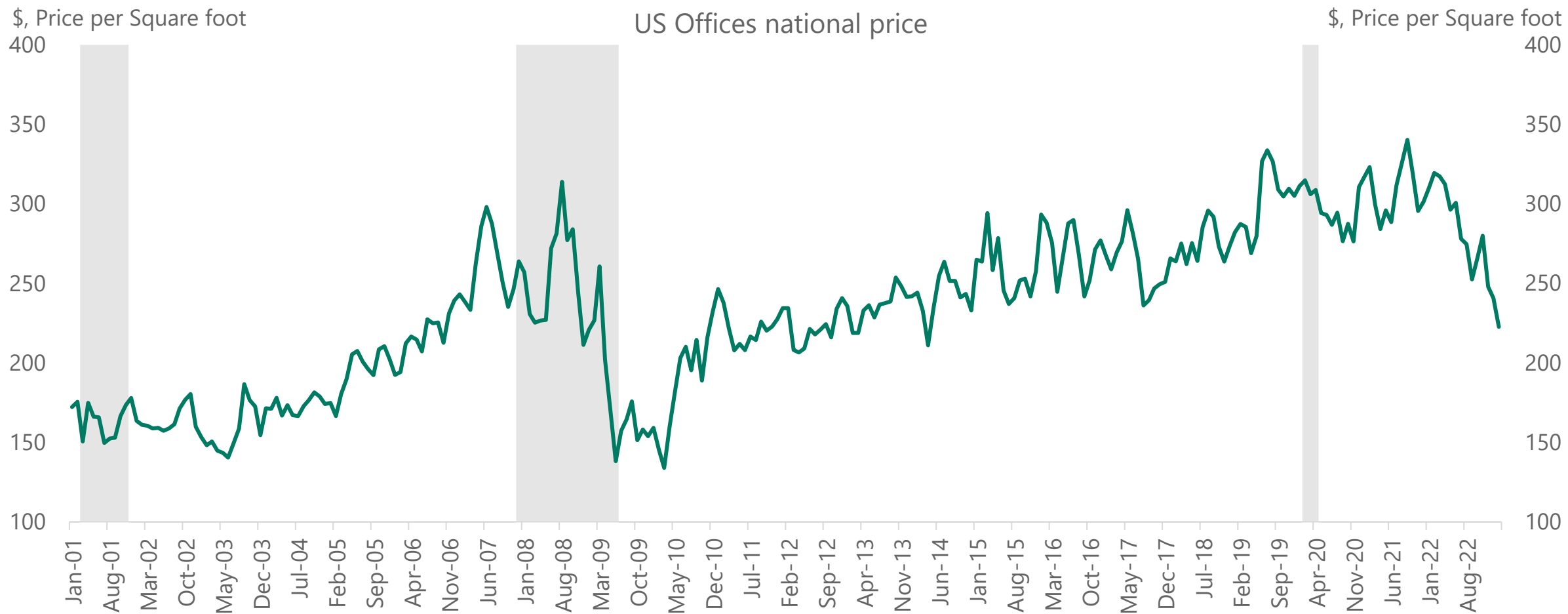
Nearly \$92 bn of nonbank office debt is set to mature this year



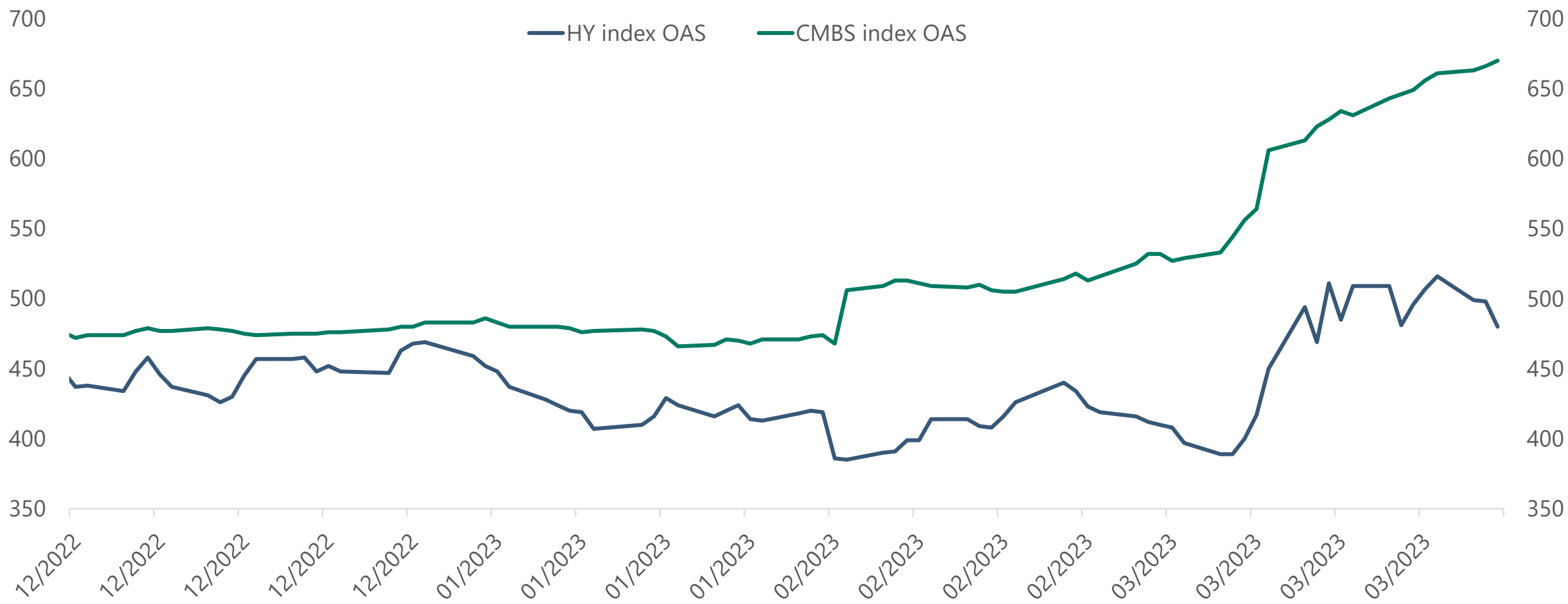
US Office vacancy rate rising



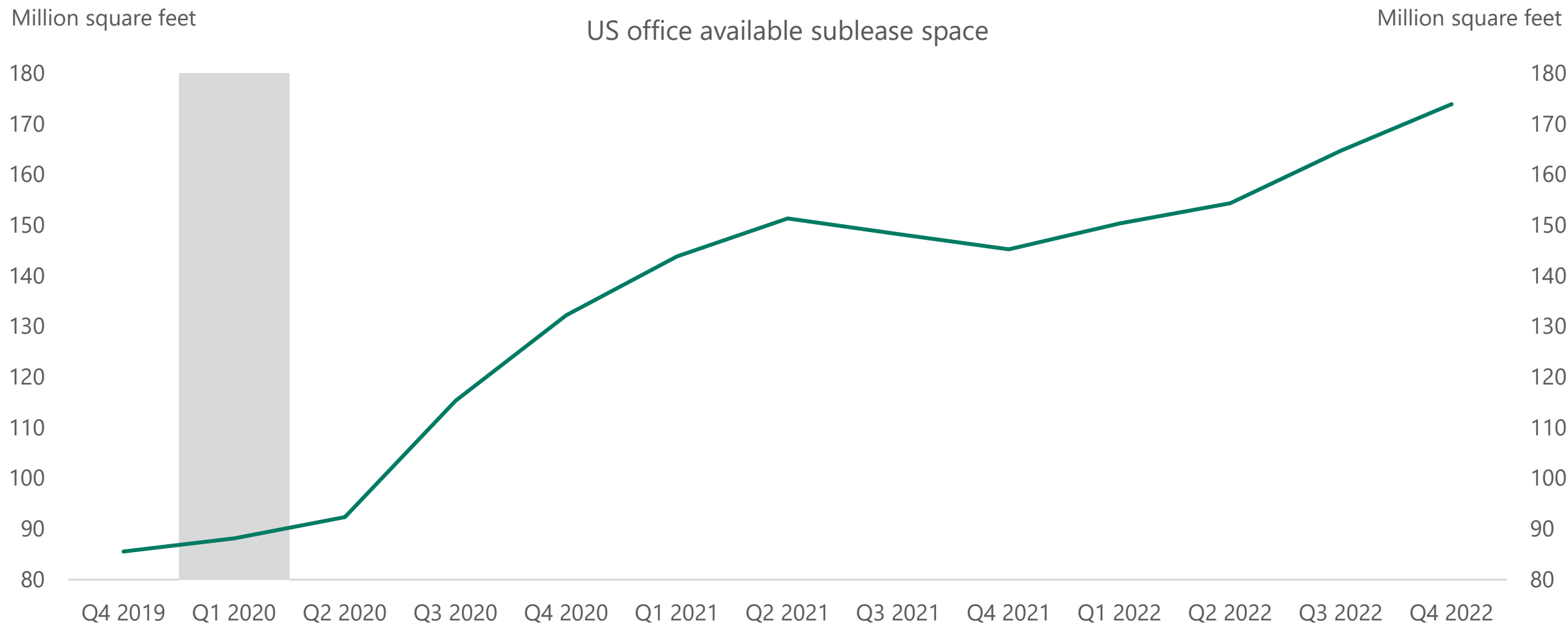
Price per square foot for US offices falling



CMBS spreads compared with HY spreads



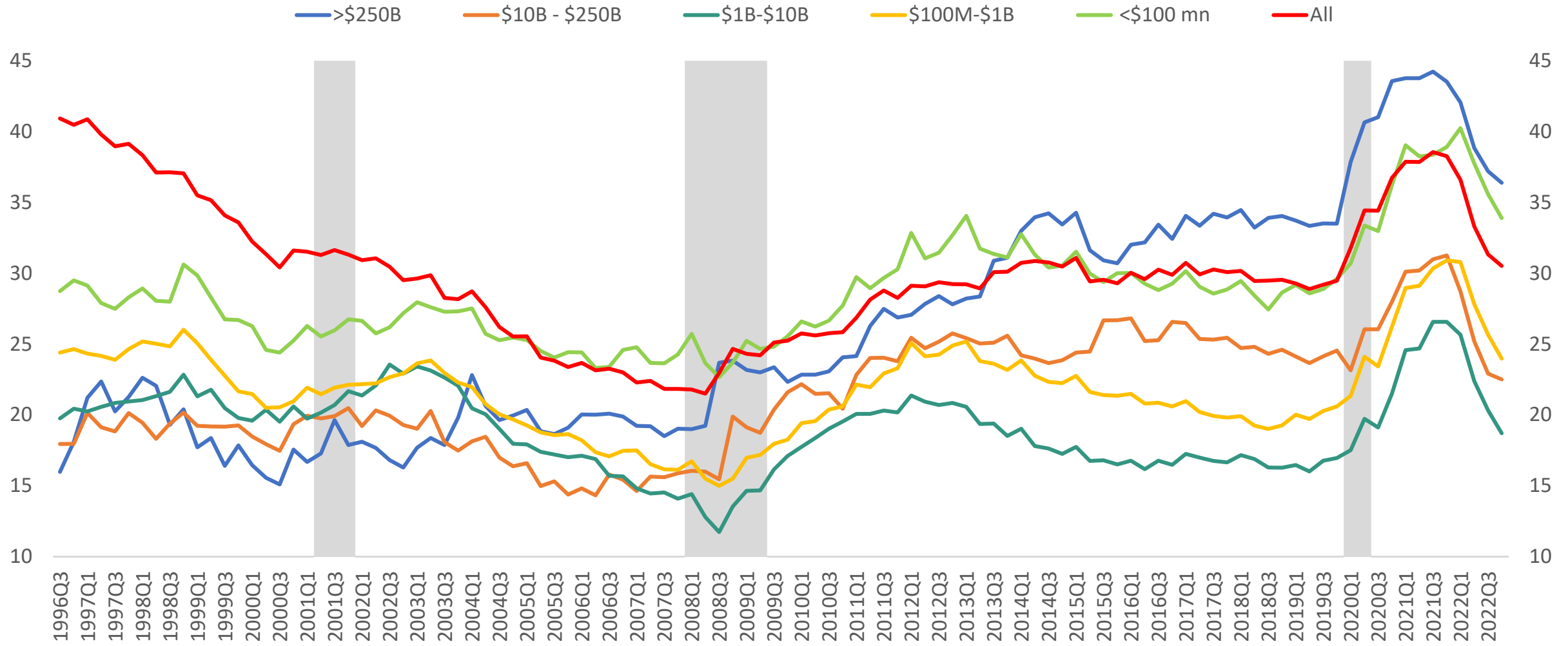
Available US office space rising



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

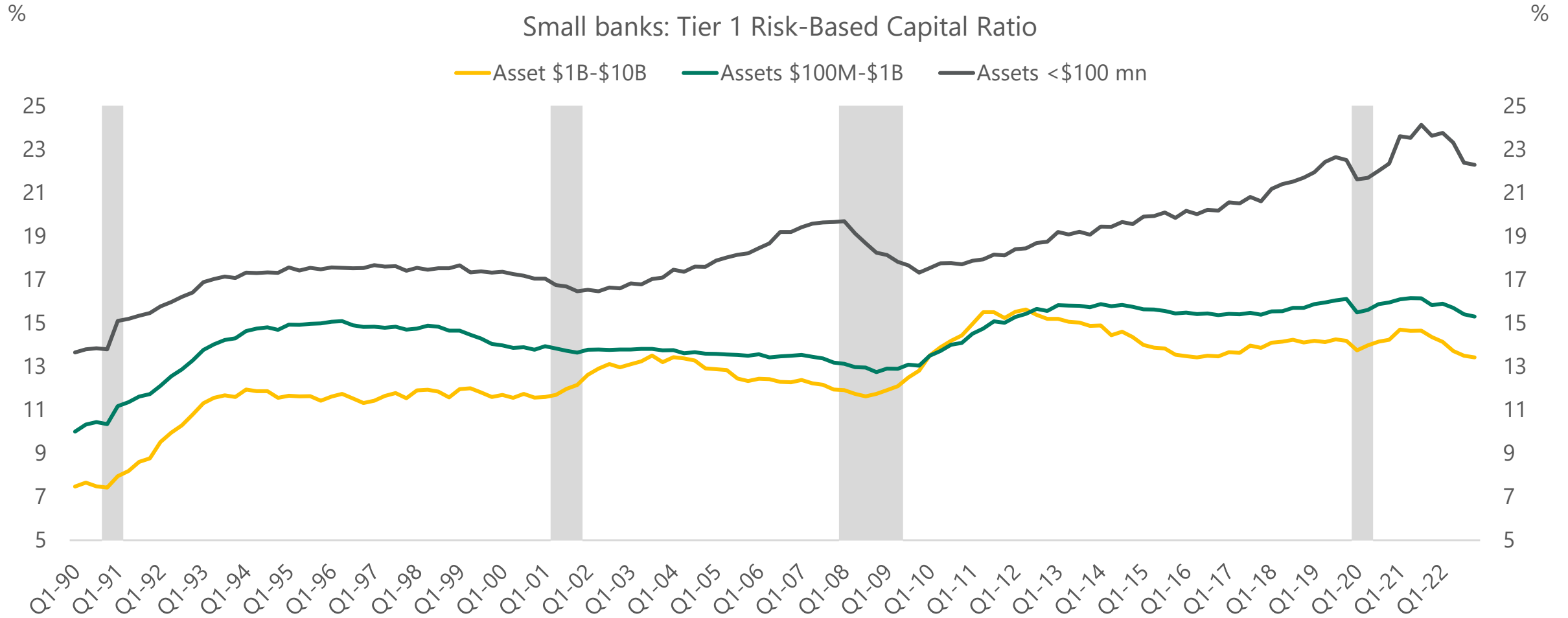
Measures of banking sector liquidity and capital ratios

Liquidity ratio, by bank assets: Largest banks have most liquidity



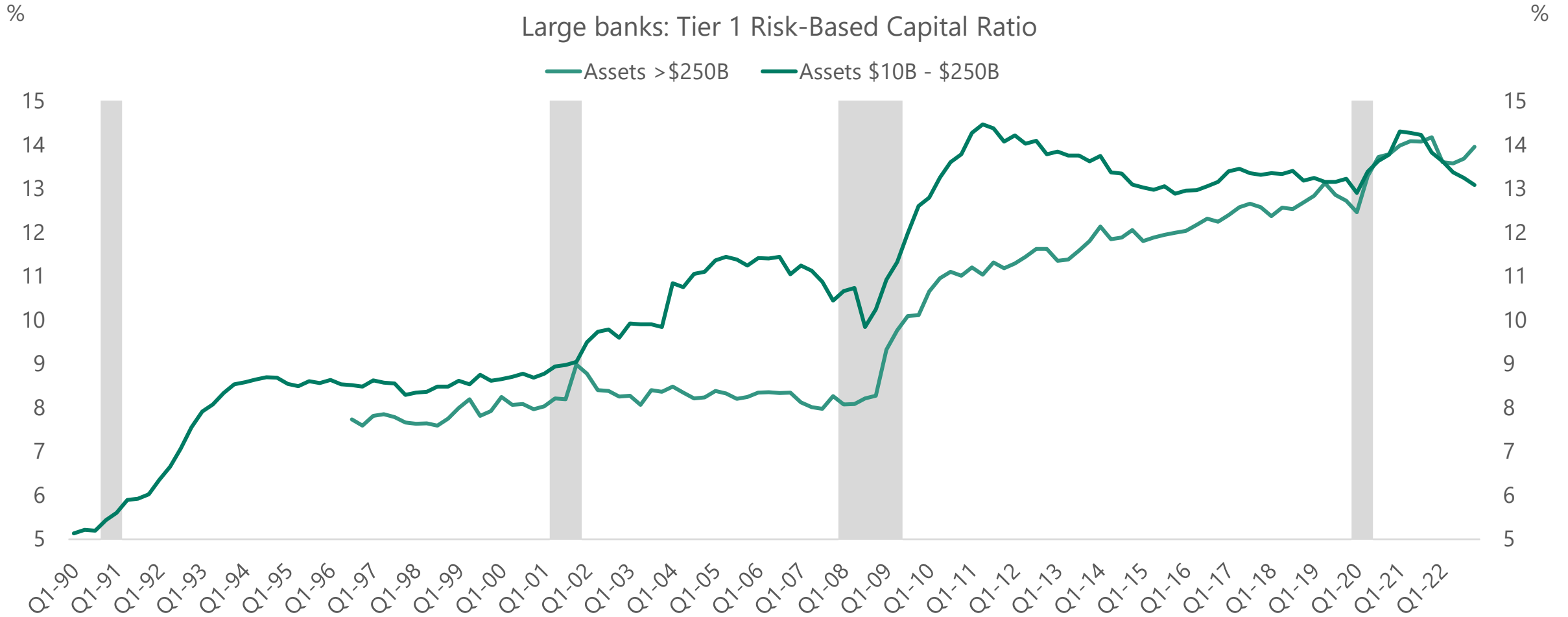
Source: FDIC, Bloomberg, Apollo Chief Economist.

Tier-1 risk-based capital ratio for smaller banks



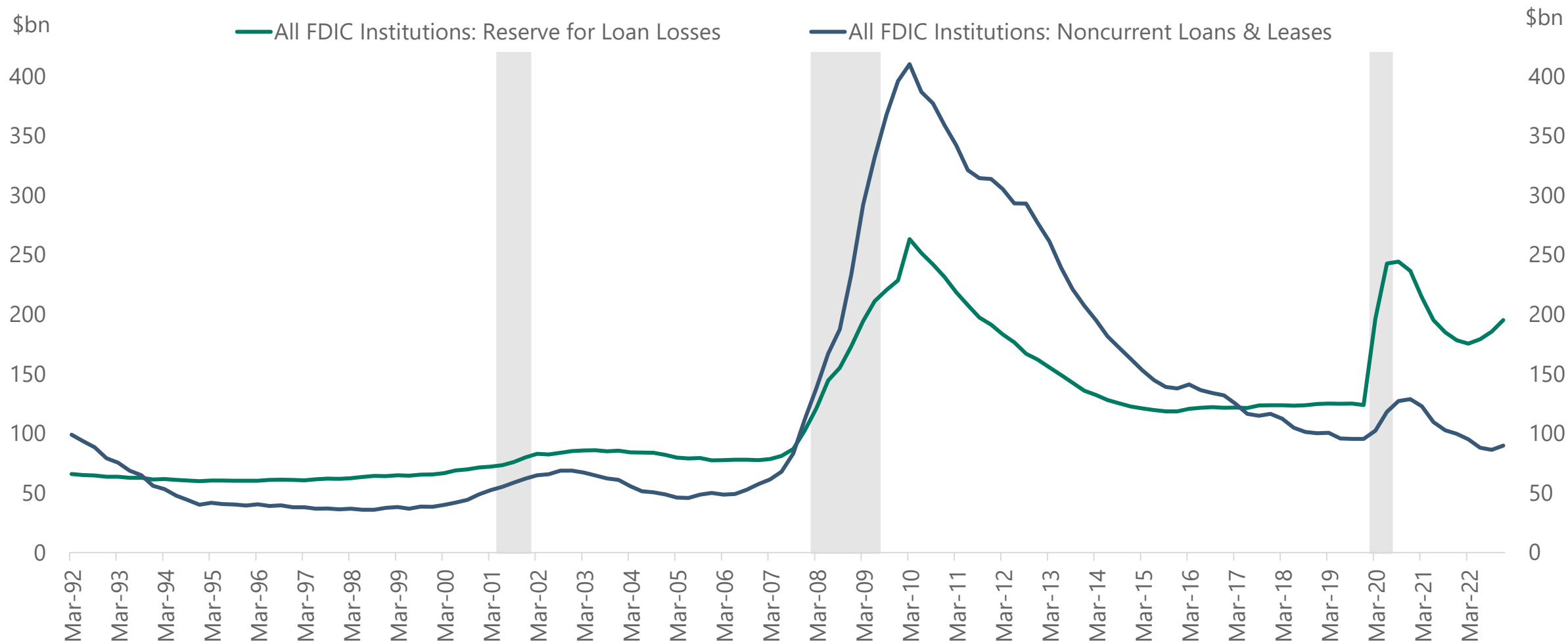
Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion.

Tier 1 risk-based capital ratio for larger banks

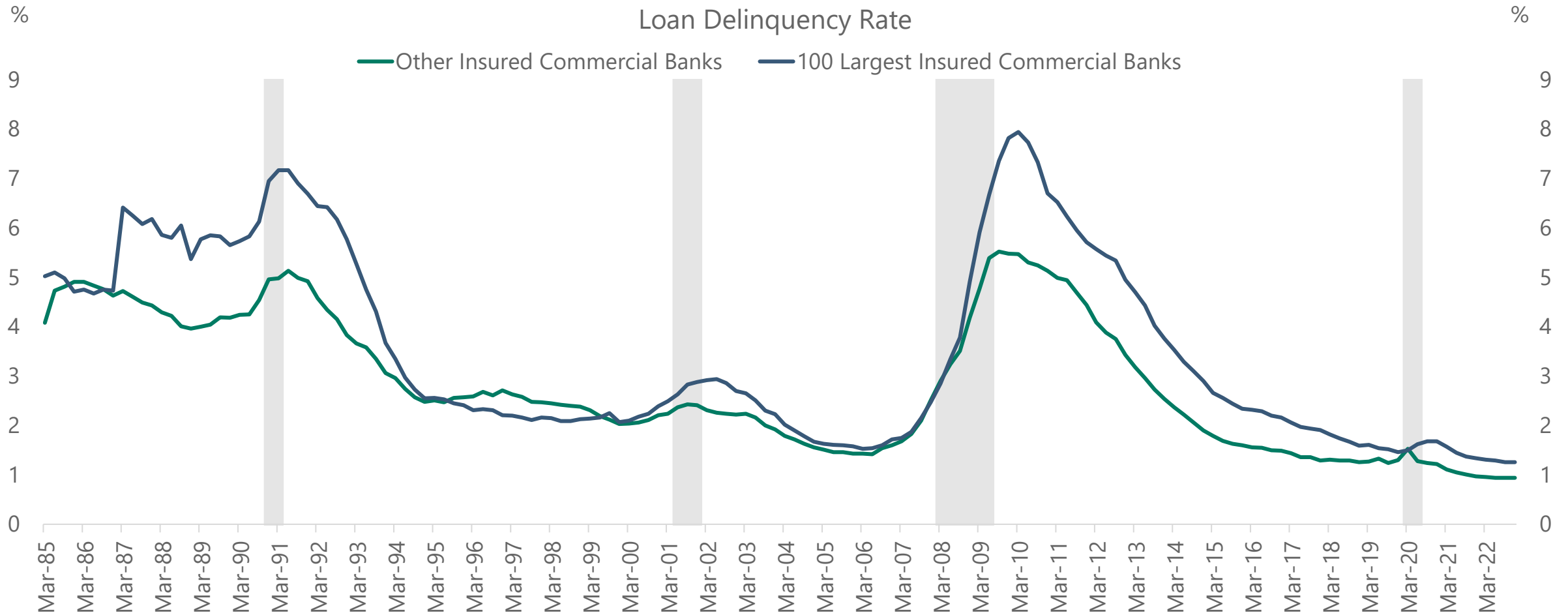


Source: FDIC, Apollo Chief Economist. Note: As per FDIC, large banks are defined as institutions with total assets of \$10 billion or more and small banks have total assets under \$10 billion..

Reserves for loan losses

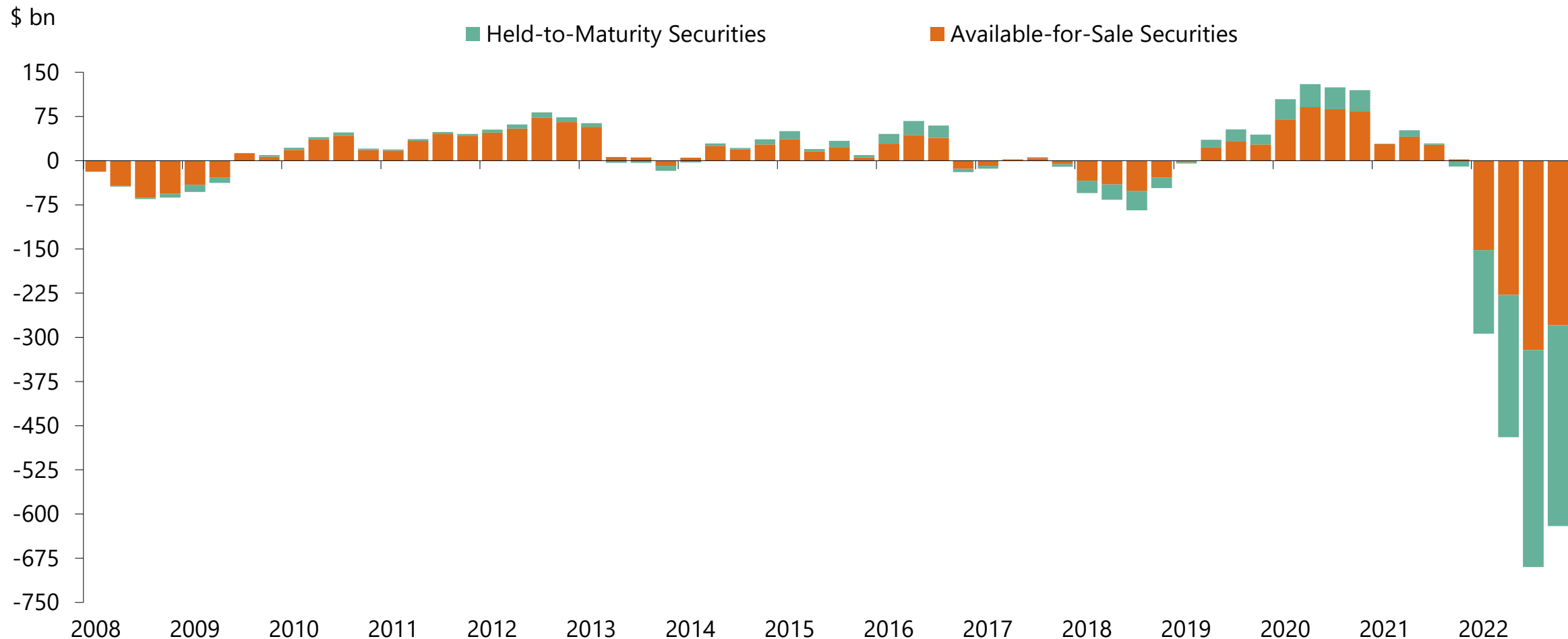


Loan delinquency rates for large and small banks



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

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



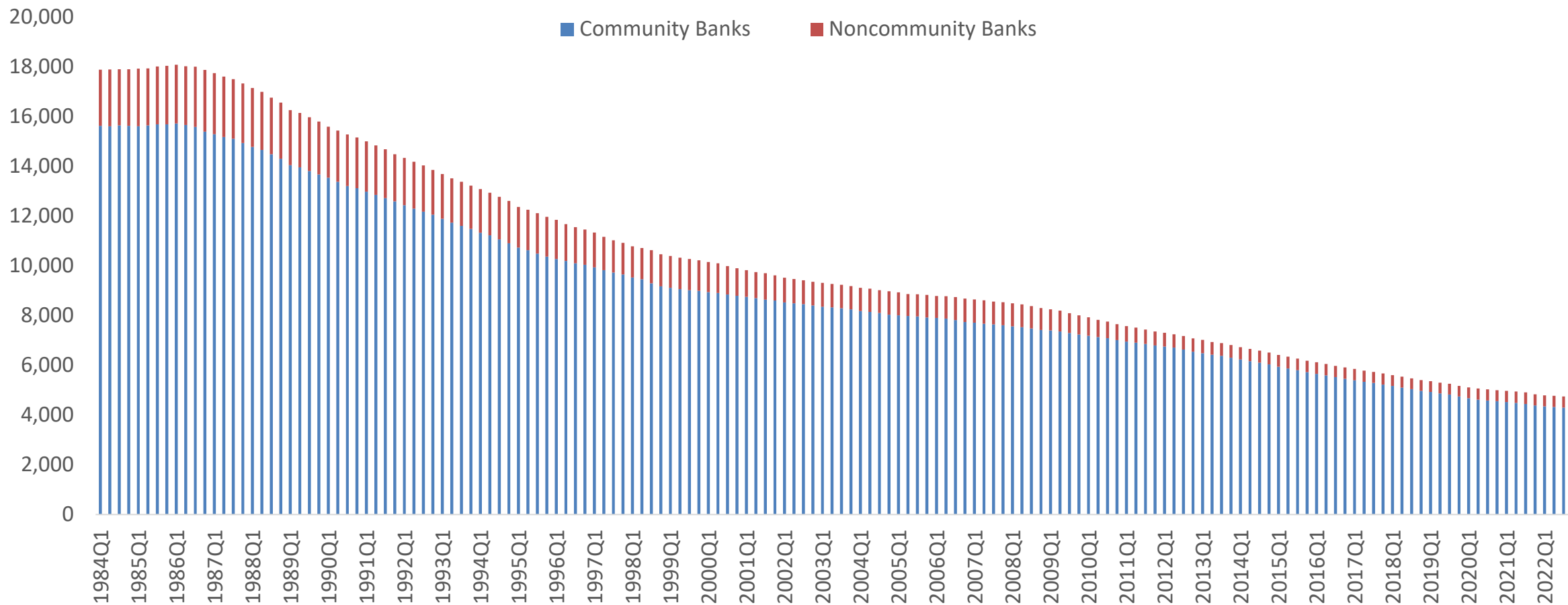
Community banks

90% of all banks in the US are community banks

Count of Banks

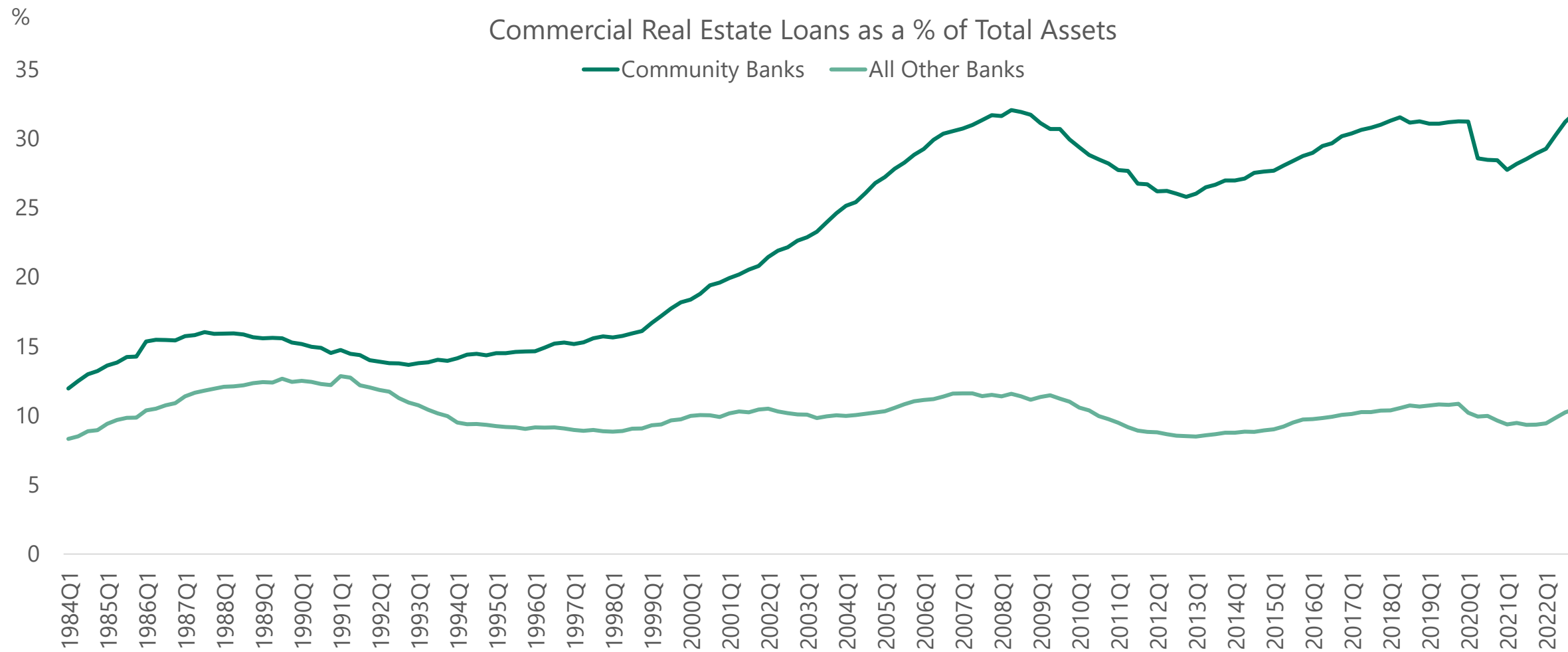
All Insured Institutions

Community Banks Noncommunity Banks



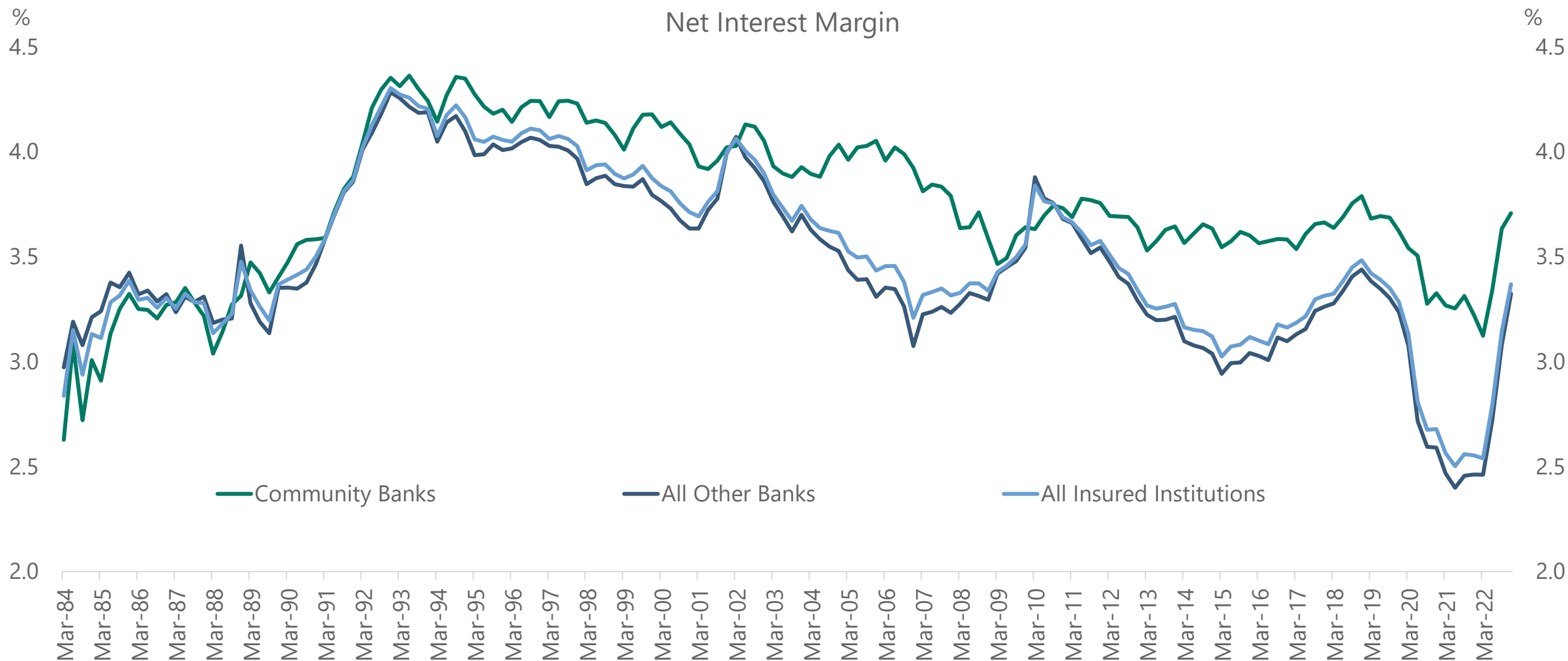
Source: FDIC, Apollo Chief Economist.

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



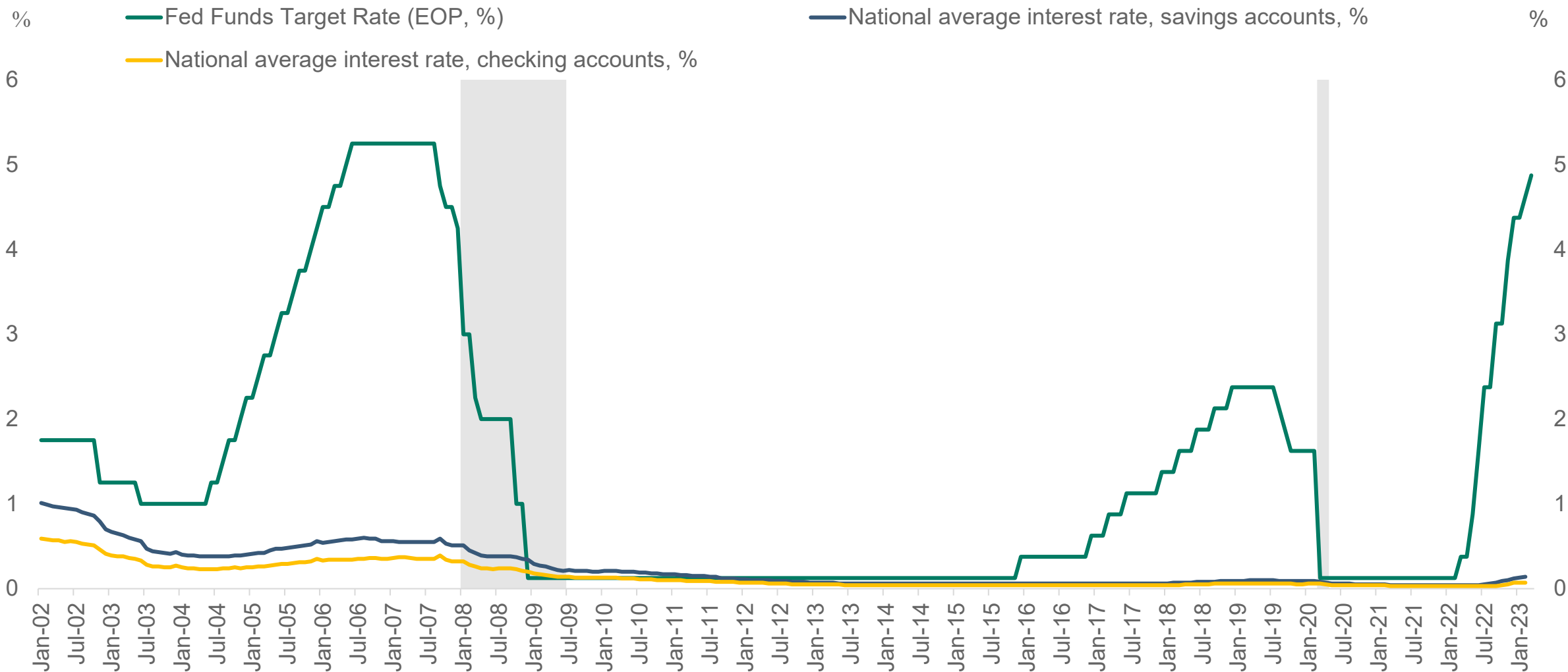
Source: FDIC, Apollo Chief Economist.

Net interest margin higher for community banks



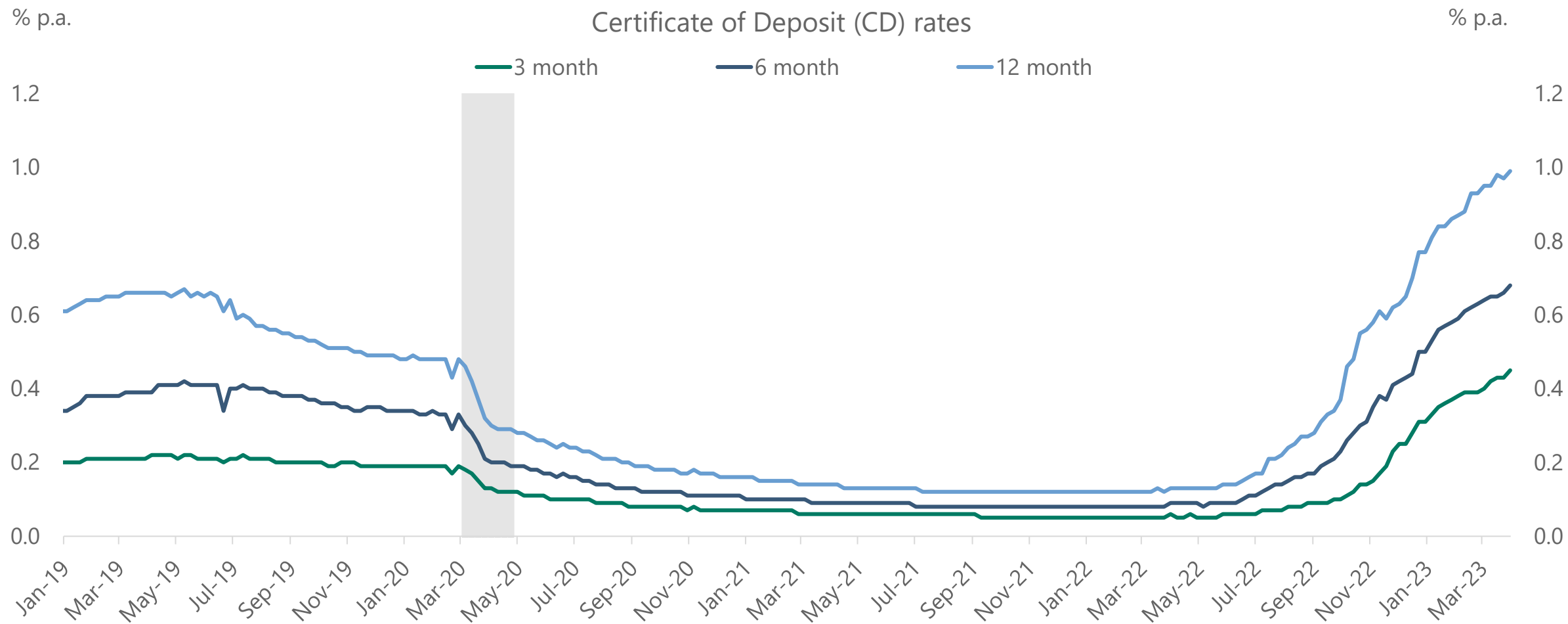
Fed funds rate versus national average
interest rate on checking accounts

Interest rate on checking accounts versus the Fed funds rate



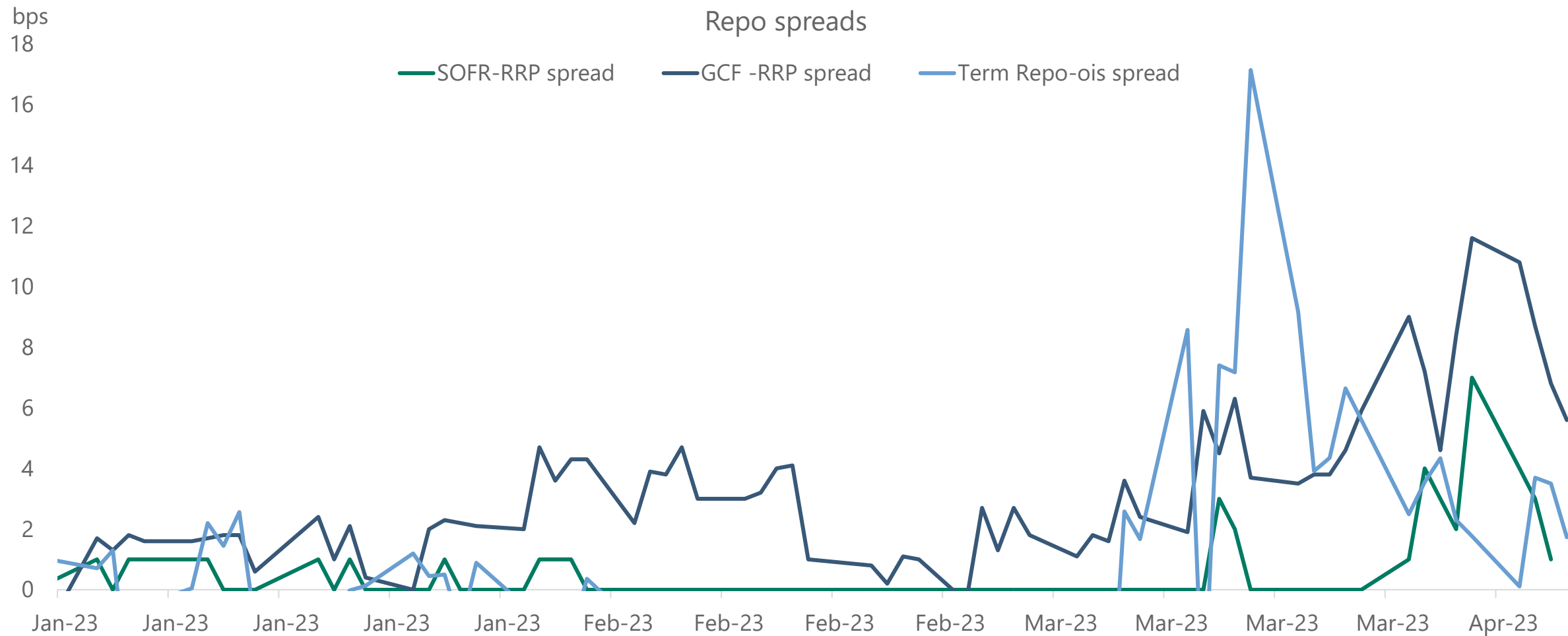
Source: FRB, RateWatch, Haver Analytics, Apollo Chief Economist.

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

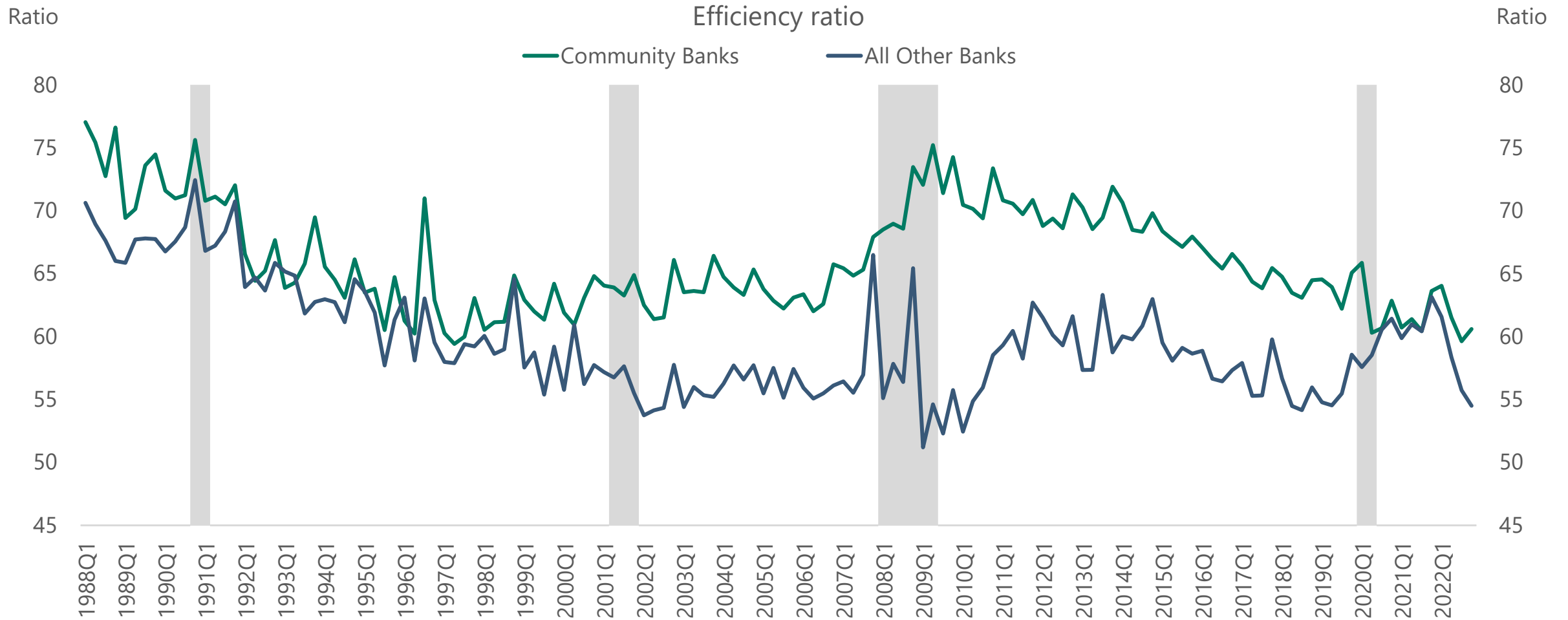


Source: RateWatch, Haver Analytics, Apollo Chief Economist. Note: For \$10,000 Minimum CD

Monitoring repo spreads for stresses in money markets

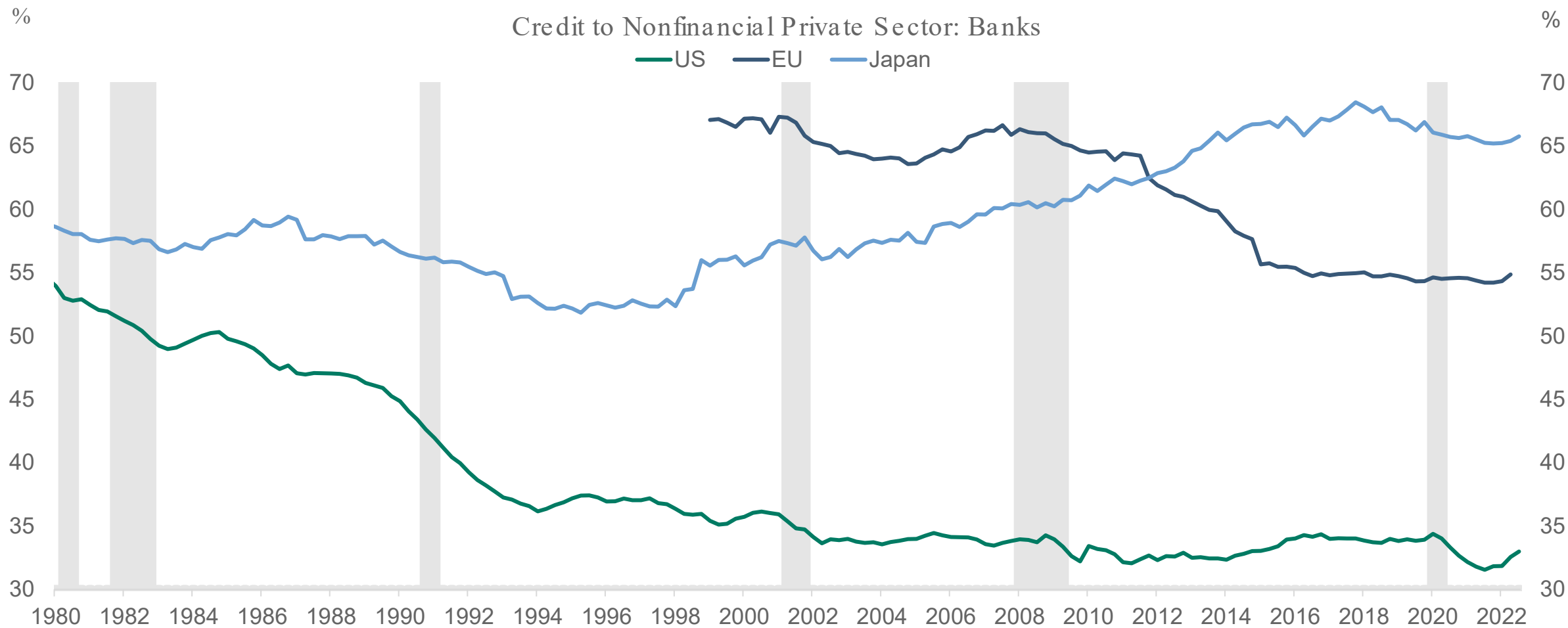


The average efficiency ratio for community banks is around 61% compared with 55% for noncommunity banks.

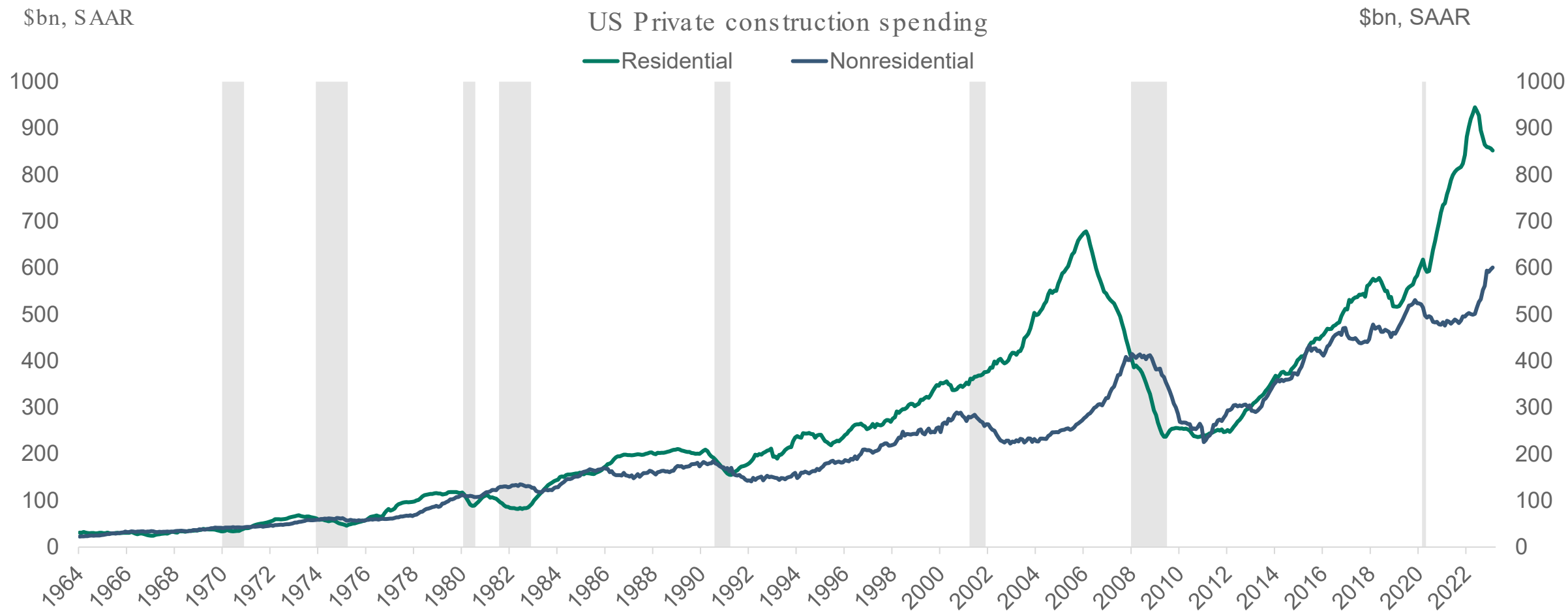


Source: Haver Analytics, Bloomberg, Apollo Chief Economist. A bank's efficiency ratio is defined as the ratio of a bank's non-interest expense to revenues. Higher efficiency ratios indicate less efficient banks.

Share of bank lending lower in the US



Residential construction spending elevated



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



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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.