Outlook for US regional banks

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

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Key themes for banks:

- CRE holdings
- Credit quality deterioration because of Fed hikes
- Held-to-maturity issues because of higher rates
- Duration of deposits
- Funding costs in wholesale markets for regional banks
- Basel 3 endgame
- Fed pivot boosting lending and capital markets activity
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Overview
Weekly Fed data shows small and large bank lending growth slowing

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
US banks hold half of CRE debt outstanding

CRE debt outstanding market share

Source: S&P Capital IQ, Apollo Chief Economist
Small banks account for almost 70% of all commercial real estate loans outstanding.
Banks with total assets between $100mn and $10bn are more exposed to CRE loans.
Non-owner-occupied CRE past-due and noncurrent loans

Source: FDIC, Apollo Chief Economist (PDNA stands for Past due and non-accrual rate defined as loans that are past due and are in non-accrual status)
Important differences between regional banks and money center banks

Source: FRB, Haver Analytics, Apollo Chief Economist
Price per square foot for US offices is down 40% from peak

Source: RCA, Bloomberg, Apollo Chief Economist
The amount of office space per worker has been declining

Source: REITS, BLS, Bloomberg, Apollo Chief Economist (Note: Office using employment includes professional and business services, Information and Financial activities)
Unrealized losses on investment securities for banks

Unrealized losses: $684bn

Source: FDIC, Apollo Chief Economist.
Unrealized losses making up more than 30% of bank equity capital

Source: FDIC, Haver Analytics, Apollo Chief Economist
What is the banking sector response to the SVB collapse and associated deposit outflows? Cutting lending and selling mortgages
SVB having a permanent effect

Cumulative loan growth for domestically chartered US commercial banks

Source: FRB, Bloomberg, Apollo Chief Economist
Bank stocks have underperformed the S&P500 since the SVB collapse

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

Source: Bloomberg, Apollo Chief Economist
Top 4 banks pay lower interest rates to consumers

- Regular savings
- 1 year CD

Source: S&P CapitalIQ Pro, Apollo Chief Economist
Funding costs for banks since SVB and FRB

US IG banking index bond spreads (maturing in 5-10 years)

Regional Banks

Diversified Banks

Source: ICE BofA, Bloomberg, Apollo Chief Economist. Note: Unweighted average spreads of bonds from ICE 5-10 Year US Banking Index, CPX 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.
$709bn in deposits have left the banks since the Fed began to raise interest rates
$1,245bn inflows into money market funds during this Fed hiking cycle
Rapid decline in bank lending

Source: FRB, Haver Analytics Apollo Chief Economist
Brokered deposits rising in US banks

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

Source: FRB, Haver Analytics, Apollo Chief Economist
Downside risks to nonfarm payrolls as a result of tighter credit conditions
Credit tightening points to a slowdown in consumer credit

Source: FRB, Haver Analytics, Apollo Chief Economist
Tighter credit conditions dragging down the economy
Tighter credit conditions dragging down the economy
Demand for corporate loans is at 2008 levels but starting to improve

Source: FRB, Bloomberg, Apollo Chief Economist.
Demand for commercial real estate loans is at 2008 levels

- Stronger Demand for Loans Secured by Nonfarm Nonresidential Structures
- Stronger Demand for Construction & Land Development Loans
- Stronger Demand for Loans Secured by Multifamily Residential Structures
- Net % of Dom Resp Reporting Stronger Demand for Commercial Real Estate Loans All

Source: FRB, Bloomberg, Apollo Chief Economist.
Banks are tightening lending standards significantly, near 2008 levels

Source: FRB, Bloomberg, Apollo Chief Economist.
Banks’ willingness to lend to consumers approaching 2008 levels

Source: FRB, Bloomberg, Apollo Chief Economist.
Lending standards are tightening for consumers, approaching 2008 levels

Source: FRB, Bloomberg, Apollo Chief Economist.
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

Source: FRB, Bloomberg, Apollo Chief Economist
Auto loan transitions to serious delinquency at 2008 levels

Source: FRBNY Consumer Credit Panel, Equifax, Haver Analytics, Apollo Chief Economist
Interest rate on credit cards

Credit Cards Assessed Interest

Fed starts raising rates

Source: FRB, Haver Analytics, Apollo Chief Economist
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

Source: FRBNY, Haver Analytics, Apollo Chief Economist
Small banks lend to small businesses
Banks with less than $250bn in assets account for 46% of commercial and industrial lending

C&I lending as a % of total C&I loans

Source: FDIC, Apollo Chief Economist. Data as of Q3 2023
Half of US employment is in firms with fewer than 500 employees

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

- <20 employees: 54%
- 20-99 employees: 16%
- 100-499 employees: 16%
- 500+ employees: 14%

Source: Census, Apollo Chief Economist
Lagged effects of Fed hikes combined with tighter credit conditions having a negative impact on the economy
Negative growth in deposits

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

Loans & Leases in Bank Credit: All Commercial Banks

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Negative growth in lending to corporates

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Decline in growth in real estate lending

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Decline in growth in lending to multifamily construction

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Negative growth in auto loan lending

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Decline in growth in banks’ credit card lending

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Bank funding pressures:
Deposits and market-based measures
SOFR spreads currently pricing aggressive Fed cuts in 2024
Fed Discount Window borrowing was higher during regional banking crisis than in 2008
Fed liquidity programs

$ bn

Fed liquidity program

Credit extensions to FDIC bridge banks
Discount window
Bank Term Funding Program
FIMA repo facility

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Fed liquidity borrowing higher during regional banking crisis than in 2008

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Borrowing through the Bank Term Funding Program

Fed's funding program

- Bank Term Funding Program
- Discount Window

Source: Federal Reserve Board, Bloomberg, Apollo Chief Economist.
What is happening with deposits in regional banks?
Small banks account for about 30% of total deposits in the banking sector, and the share has been rising since the 2008 financial crisis.
Share of total bank deposits that are uninsured: 39%
Share of insured deposits, by bank size

Source: FDIC, Haver Analytics, Apollo Chief Economist. As of Q2 2023
Share of insured deposits, by bank size

- **All banks**: 66% insured, 34% uninsured
- **Banks with less than $250bn in assets**: 32% insured, 68% uninsured
- **Banks with more than $250bn in assets**: 44% insured, 56% uninsured

Source: FDIC, Haver Analytics, Apollo Chief Economist. As of Q2 2023
Deposit to asset ratio for large and small banks

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
22% of deposits pay no interest

Source: FDIC, Apollo Chief Economist.
1% of bank accounts have a balance higher than $250k

Source: FDIC, Haver Analytics, Apollo Chief Economist
Weekly data for bank lending by small and large banks
Weekly Fed data shows small and large bank lending growth slowing
Lending to consumers is slowing for both small and large banks.
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.
Residential real estate lending is slowing for both small and large banks
Lending to corporates is slowing for both small and large banks
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

Source: FDIC, Apollo Chief Economist.
Small bank assets as a share of total banking sector assets

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<th>Value</th>
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<td>Jan-23</td>
<td>31%</td>
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Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Share of lending by smaller banks
During the pandemic, banks shifted from lending to holding securities, which made them more vulnerable to Fed hikes and higher rates.
Share of securities in the banking sector held by small banks

Small domestic commercial bank securities, as a share of all commercial bank securities

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Small banks hold about $868bn in Treasuries

Government Securities: Bank Credit

- Small Domestic Commercial Banks
- All Commercial Banks

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Securities held by FDIC-insured banks

Source: FDIC, Bloomberg, Apollo Chief Economist.
Deposits as a share of GDP

Source: Federal Reserve Board, BEA, Haver Analytics, Apollo Chief Economist
Regional banks’ asset concentration in CRE
US banks hold half of CRE debt outstanding
CRE composition and delinquency at US banks

Source: S&P Global Market Intelligence, Apollo Chief Economist
Small banks account for almost 70% of all commercial real estate loans outstanding.

Source: Federal Reserve Board, Haver Analytics, Apollo Chief Economist.
Banks with total assets between $100mn and $10bn are more exposed to CRE loans

Source: FDIC, Apollo Chief Economist.
Where are the problems in CRE?

Normalized as of 20 Feb 2020

- Apartment REITS - Since COVID
- Office REITS - Since COVID
- Shopping Mall REITS - Since COVID
- Industrial/Warehouse REITS since COVID
- Health Care REITS - Since COVID

Source: Bloomberg, Apollo Chief Economist
Nearly $58 bn of nonbank office debt is set to mature in 2024
US Office vacancy rate rising

Source: Bloomberg, Apollo Chief Economist
Available US office space

Source: CBRE, Bloomberg, Apollo Chief Economist.
CMBS spreads compared with HY spreads

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

Source: FRB, Haver Analytics, Apollo Chief Economist
Number of banks with CRE exposure rising

Number of US banks exceeding 2006 CRE loan concentration guidance

- CRE loans at least 300% of risk-based capital and 36-month CRE growth of 50% or higher
- C&D loans at least 100% of risk-based capital

Source: S&P Global Market Intelligence, Apollo Chief Economist. Note: CRE= commercial real estate and C&D= construction and development, data as of May 2023 and based on regulatory filings.
Residential construction spending elevated

Source: Census Bureau, Haver Analytics, Apollo Chief Economist.
U.S. REITs hold approximately $23 billion of debt maturing this year

Source: S&P Capital IQ, Apollo Chief Economist
Source: MBA, Apollo Chief Economist. Note: Other CRE includes multifamily, industrial/warehouse, hotel/motel, healthcare and others.
Delinquency rates rising for multifamily

CMBS loan delinquency by property type

Industrial
Retail
Regional Malls
Multifamily
Hotel
Office
Total
Retail ex Regional Malls

Source: Moody's Analytics, Apollo Chief Economist
Non-owner-occupied CRE past-due and noncurrent loans

Source: FDIC, Apollo Chief Economist (PDNA stands for Past due and non-accrual rate defined as loans that are past due and are in non-accrual status)
Measures of banking sector liquidity and capital ratios
Liquidity ratio, by bank assets: Banks from $1bn to $10bn have lower liquidity ratios
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.
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.
Sources of financing for small businesses
Banks are the most important source of financing for small businesses

Sources of financing for small businesses

% of firms surveyed

Financial services provider for small businesses

- Large bank
- Small bank
- Financial company that is not a bank
- Credit union
- None, business does not use financial services
- Other

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

Financial services provider for small businesses, by firm size

- Large bank
- Small bank
- Financial company that is not a bank
- Credit union
- None, business does not use financial services
- Other

Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist
Sources of financing for small businesses, by risk of the firm

Financial services provider for small businesses, by risk

<table>
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<tr>
<th>Source</th>
<th>High credit risk</th>
<th>Medium credit risk</th>
<th>Low credit risk</th>
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<tbody>
<tr>
<td>Large bank</td>
<td>50%</td>
<td>40%</td>
<td>10%</td>
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<tr>
<td>Small bank</td>
<td>30%</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>Financial company that is not a bank</td>
<td>20%</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>Credit union</td>
<td>10%</td>
<td>20%</td>
<td>70%</td>
</tr>
<tr>
<td>None, business does not use financial services</td>
<td>0%</td>
<td>0%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist
Sources of financing for small businesses, by firm industry

Financial services provider for small businesses

- Business support and consumer services
- Finance and insurance
- Healthcare and education
- Leisure and hospitality
- Manufacturing
- Non-manufacturing goods production & associated services
- Professional services and real estate
- Retail

Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist
Factors influencing where small businesses apply for a loan. Relationship is important for small bank lending

Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist
Purpose of seeking financing for small businesses

- Meet operating expenses: 65%
- Expand business, pursue new opportunity, or acquire business assets: 50%
- Replace capital assets or make repairs: 30%
- Refinance or pay down debt: 24%
- Other: 2%

Source: Small Business Credit Survey, Federal Reserve, Apollo Chief Economist. Note: 2022 survey, prior to 12 months of survey year.
Share of small firms applying for financing in the past 12 months

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

Originations of small loans to businesses, by size of loan, 2022

Source: Community Reinvestment Act, Apollo Chief Economist. [https://www.ffiec.gov/craadweb/naaghelp.htm](https://www.ffiec.gov/craadweb/naaghelp.htm)
Share of loans to small businesses, by loan size

Originations of small loans to businesses, by size of loan, 2022

Source: CRA, Apollo Chief Economist. [https://www.ffiec.gov/craadweb/raaahelp.htm](https://www.ffiec.gov/craadweb/raaahelp.htm)
92% of all loans to small businesses in the US are less than $100,000

Originations of small loans to businesses, by size of loan, 2022

Source: CRA, Apollo Chief Economist. [https://www.ffiec.gov/craadweb/raochelp.htm](https://www.ffiec.gov/craadweb/raochelp.htm)
Total loans vs loans to small businesses by neighborhood characteristic

Source: CRA, Apollo Chief Economist. [https://www.ffiec.gov/craadweb/raochelp.htm](https://www.ffiec.gov/craadweb/raochelp.htm)
Share of loans to small businesses by neighborhood characteristic

Source: CRA, Apollo Chief Economist. [https://www.ffiec.gov/craadweb/raahelp.htm](https://www.ffiec.gov/craadweb/raahelp.htm)
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.
Community banks
90% of all banks in the US are community banks

Source: FDIC, Apollo Chief Economist.
The average efficiency ratio for community banks is around 64% compared with 55% for noncommunity banks.
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.
Primary method of bank account access:
More and more households use mobile and online banking

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

ECB bank lending survey change in credit standards, past 3 months

- Loans to Enterprise
- Loans to households, consumer credit

Source: ECB Bank Lending Survey, Bloomberg, Apollo Chief Economist
Euro Area loan demand falling

Source: ECB Bank Lending Survey, Bloomberg, Apollo Chief Economist
Euro Area loan growth to households is slowing
Euro Area loan growth to businesses

Source: ECB, Bloomberg, Apollo Chief Economist.
The biggest US bank made $49.6bn for the year

Source: Bloomberg, Apollo Chief Economist
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.