Bank Director

Breakout II: The Future of Community and Regional Banking

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Acquire or Be Acquired 2023

The Future of Community and Regional Banking

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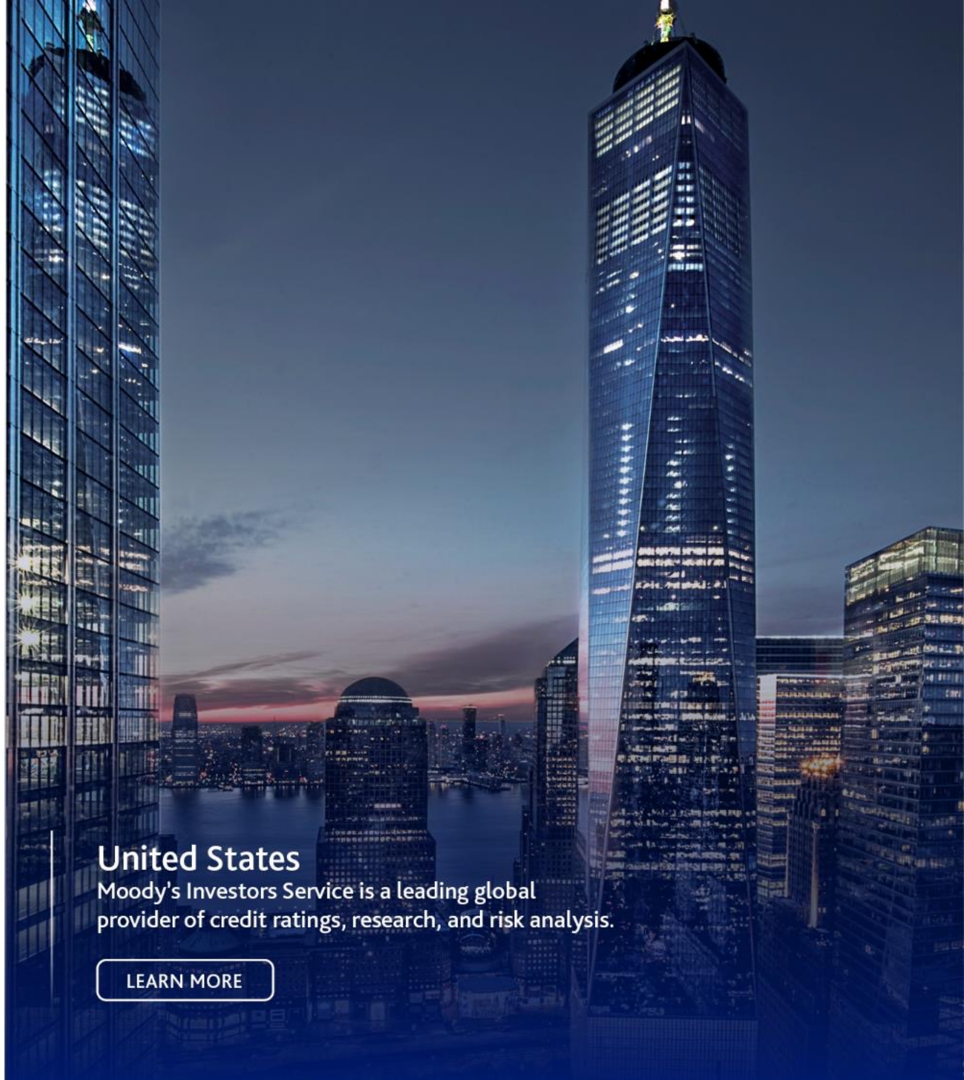


The 2023 US bank outlook is stable

Negative

What could change outlook to negative

- Inflation proves sticky and higher rates for longer have more adverse impact on asset quality.
- Market disruptions or asset price shocks trigger rising market and credit losses that sharply lower profitability.
- Central bank tightening reduces deposits, materially increasing market funding and reducing profitability.

Stable

Drivers of a stable outlook

- Profitability is supported by higher interest rates, noninterest income diversity, prudent cost discipline and only a moderate increase in provisions.
- Capitalization is sound.
- Prudent underwriting in residential mortgage and credit cards; construction lending down.
- Funding and liquidity will remain a credit strength even as they revert toward pre-pandemic levels.
- Increase in unemployment will be moderate.

Positive

What could change outlook to positive

- Macroeconomic recovery coupled with lower inflation, lower business and consumer debt levels and an improved geopolitical climate.
- Stable problem loans and net charge-offs that preclude the need for reserve builds.
- Improved capital levels, with higher buffers above regulatory minimums.
- Sustainably higher profitability.

The stable outlook reflects our view of credit fundamentals in the US banking sector over the next 12 months. Sector outlooks are distinct from rating outlooks, which, in addition to sector dynamics, also reflect issuers' specific characteristics and actions. A sector outlook does not represent a sum of upgrades, downgrades or ratings under review, or an average of rating outlooks.

Higher net interest margins counter effects of mild US recession and weaker asset quality

Operating environment deteriorating

Baseline is that slowing growth and tighter financial conditions tip the US into a mild recession in mid-2023.

The baseline is also for the US unemployment rate to rise gradually from its exceptional low of 3.5% as of end 2022 to a more normal level.

Key to the baseline forecast are for inflation to decline to around 3% by year-end 2023 and the Fed funds rate to peak at 5.0%-5.25%.

Asset quality deteriorating

Asset quality metrics are unsustainably strong and will weaken, though to a moderate level.

Rising interest rates have increased debt-servicing costs and refinancing risk for some borrowers.

US G-SIBs* generally at or above day one current expected credit losses (CECL). However, banks will need to build additional loan loss reserves as economic inputs relevant to CECL estimates begin to point toward higher losses.

Profitability improving

Rising interest rates have boosted net interest margin (NIM) and net interest income (NII) for most banks and will likely provide a full-year boost.

Fee income provides revenue diversity, though some sources are pressured by tighter financial conditions.

Trading revenue will moderate while investment banking fees will recover from a weak 2022.

Revenue growth will support positive operating leverage.

Capital stable

Risk-based capital requirements are increasing for some of the largest US banks, but unrealized losses on available-for-sale (AFS) securities are a capital headwind for these banks.

Among large US regional banks, capitalization has declined, and we only expect modest further capital reductions given some banks' publicly stated capital targets.

Funding and liquidity stable

Funding and liquidity are likely to retrace toward more normal levels.

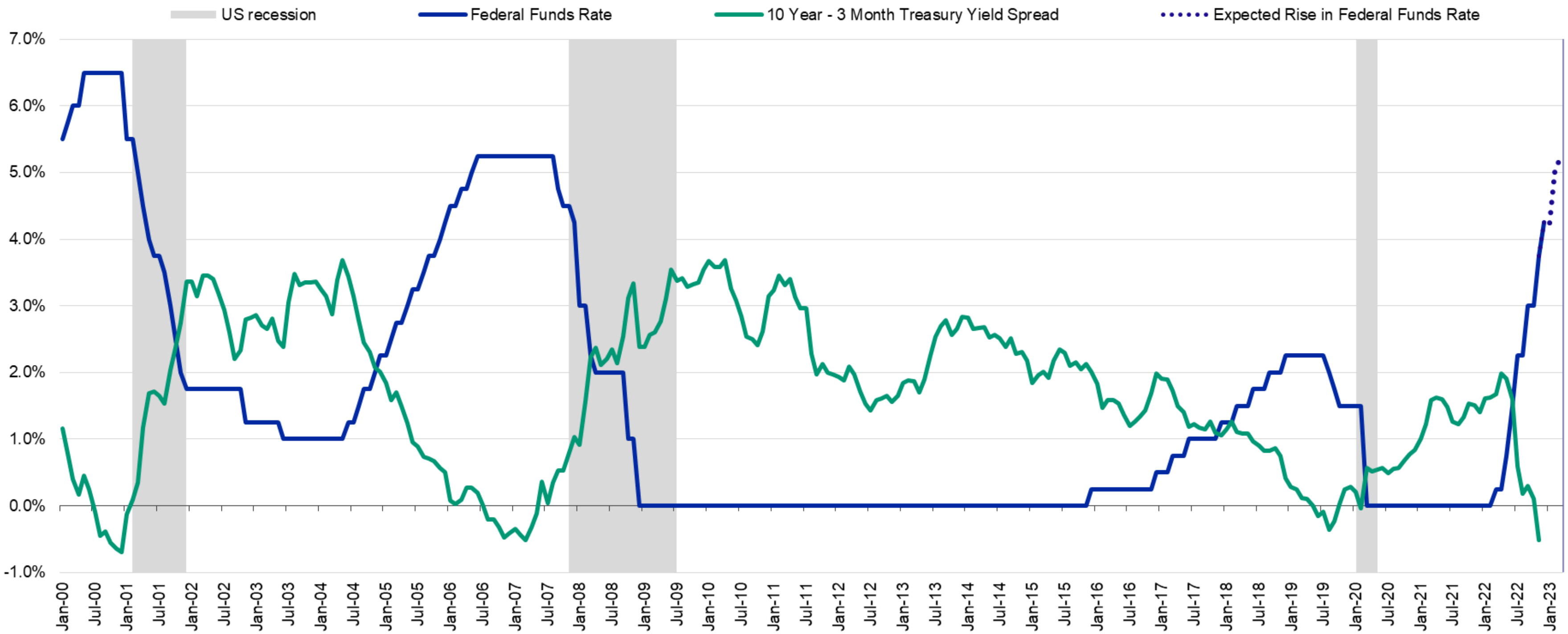
The US banking system's loan to deposit ratio is near multi-decade lows, even as loan growth exceeds deposit growth, but securities holdings are high. ~$900 billion in Fed quantitative tightening could reduce bank funding further unless money funds move cash balances out of Fed and into T-bills.

Some US banks have increased wholesale funding and begun to run down liquidity to fund loan growth, with deposit growth stalled.

**G-SIBs = global systemically important banks.*

Challenges for banks ahead

Interest rates rising and financial conditions tightening, posing risks to banks' asset quality and liquidity



The charts above show data from 31 January 2000 – 31 December 2022

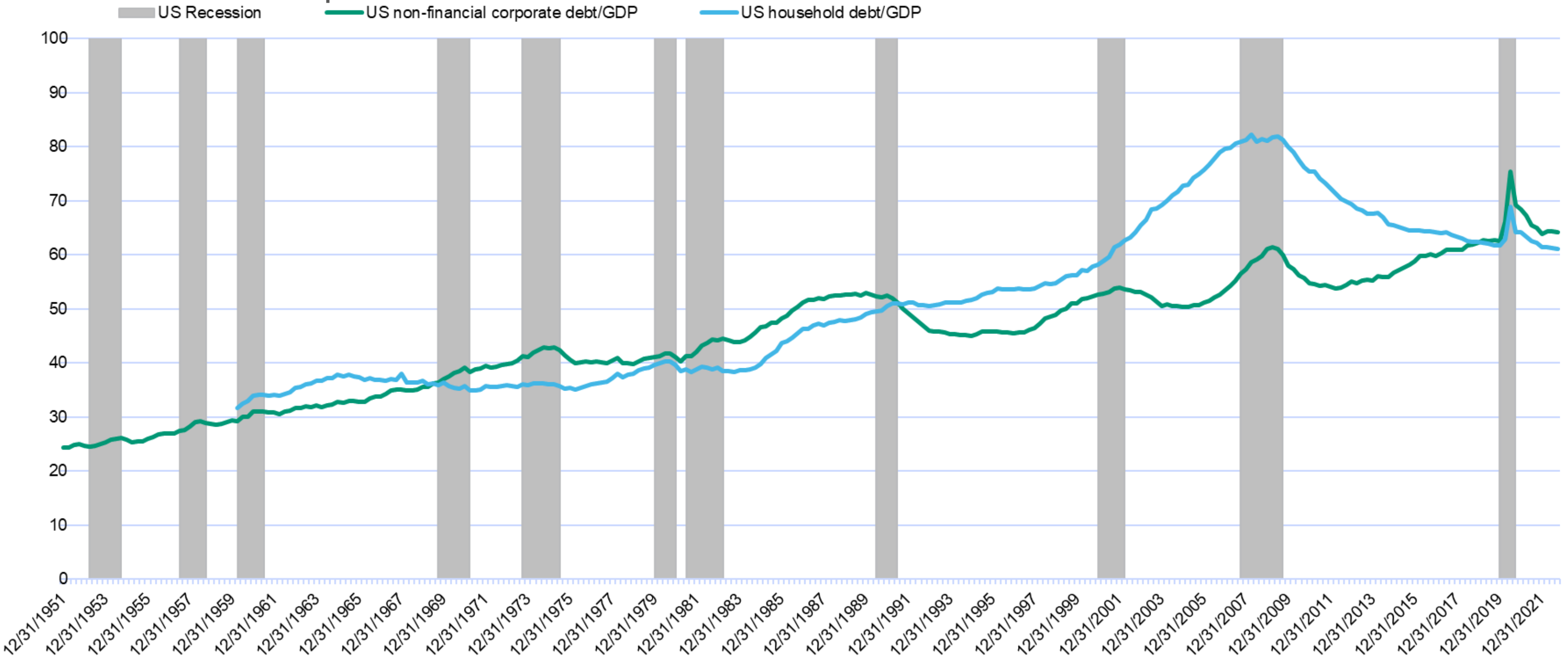
Source: U.S. Board of Governors of the Federal Reserve System, Bloomberg, Moody's Investors Service

Big picture reflections as 2023 starts

- Macro outlook on bank funding
  - Market failed to predict extent of Fed tightening; will it do better in 2023?
  - Fed quantitative tightening reduces bank deposits
    - Fed funds path influences where money funds keep their cash – in T-bills or at the Fed
    - Treasury debt limit dynamics are expected to reduce T-bill supply in H2 2023, implying money funds hold more cash at the Fed
    - Money funds compete with banks for reserve balances at the Fed – so where money funds invest their cash is relevant to bank deposit competition – both deposit beta and deposit runoff.

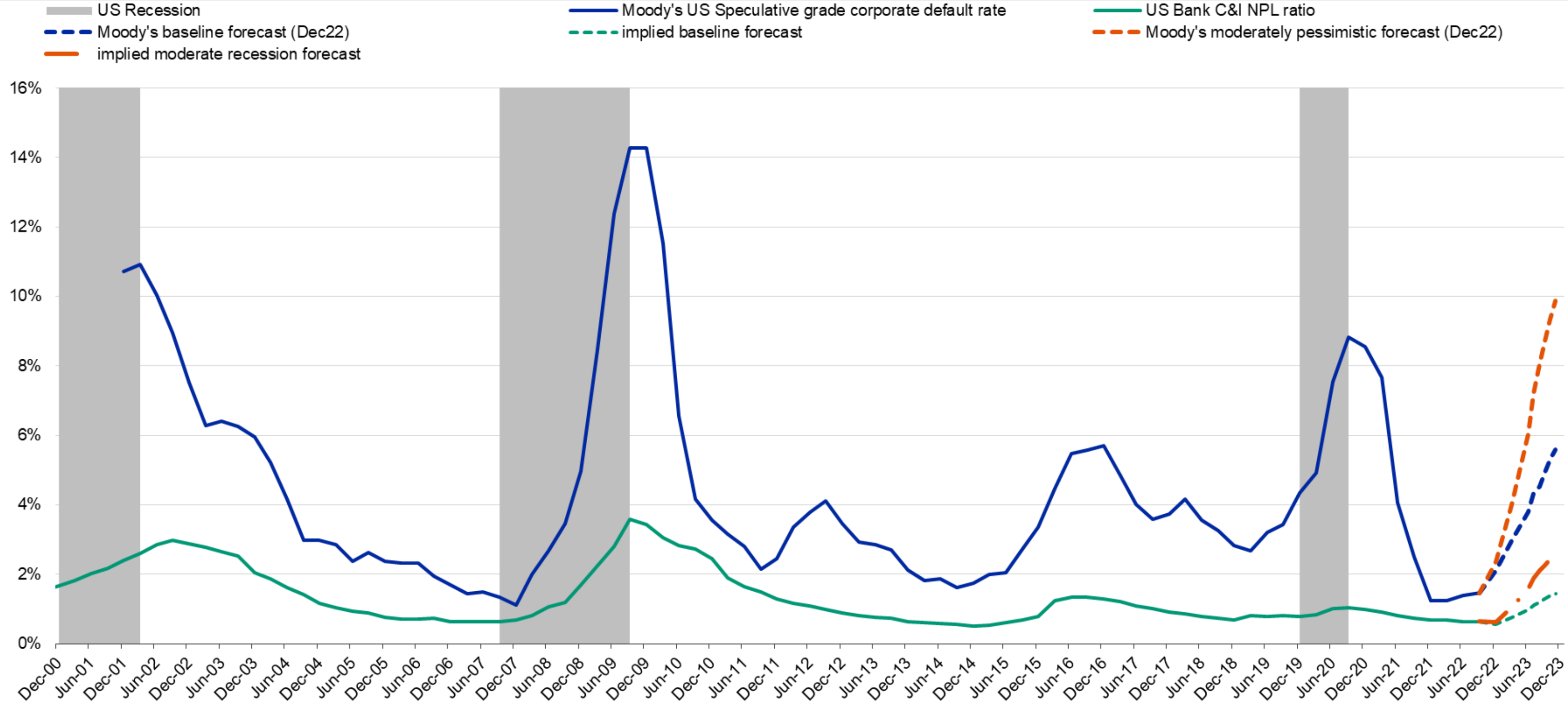
With mild recession likely in 2023, US corporate leverage is at highest level late-cycle since WW II era

US non-financial corporate debt/GDP and US household debt/GDP



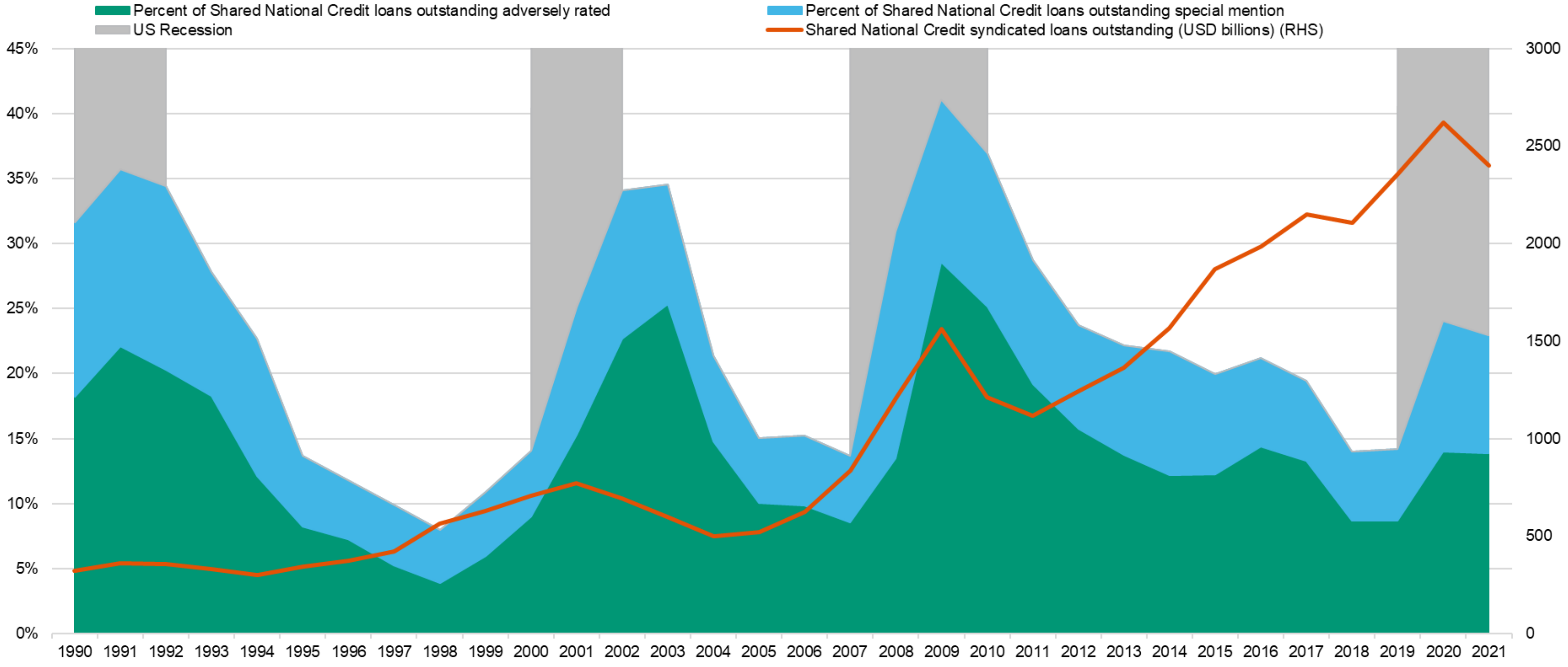
Source: Haver, Federal Reserve Board, National Bureau of Economic Research, Moody's Investors Service

Moody's baseline macro and corporate default forecasts imply US C&I non-performing loans (NPLs) rise to 1.3% in 2023



C&I = Commercial and Industrial. Source: Haver, Company Reports, Moody's Investors Service

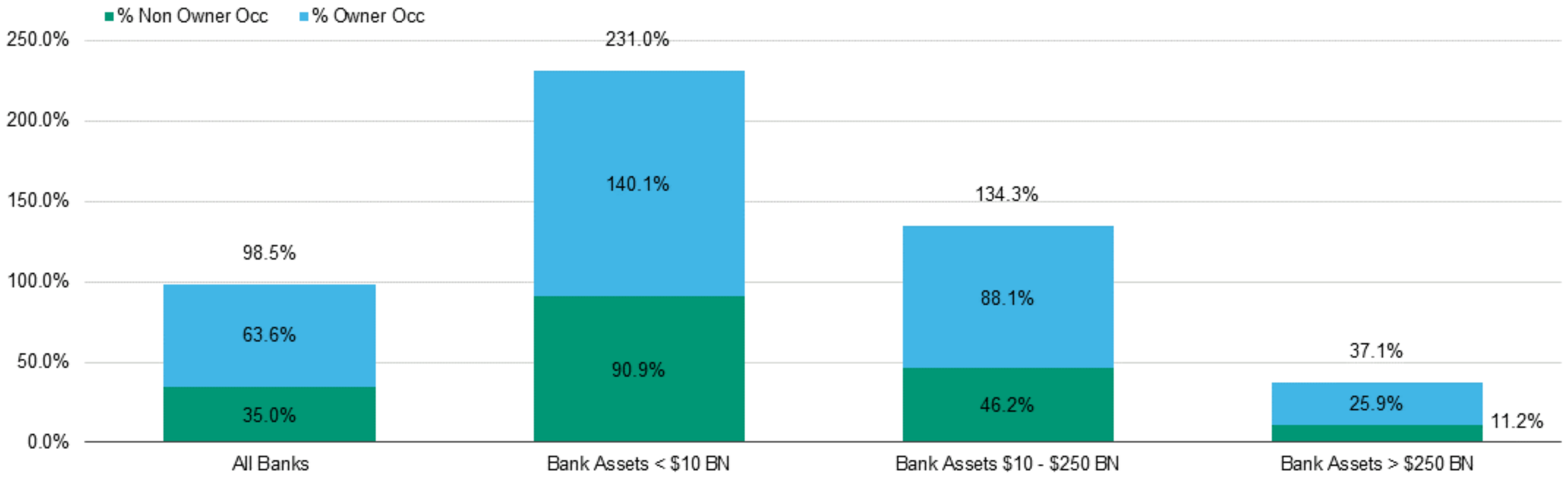
Shared National Credit trends suggest asset quality already weakening in US syndicated leverage lending



Source: Haver, Federal Reserve, Moody's Investors Service

Regional and community banks generally are more CRE concentrated

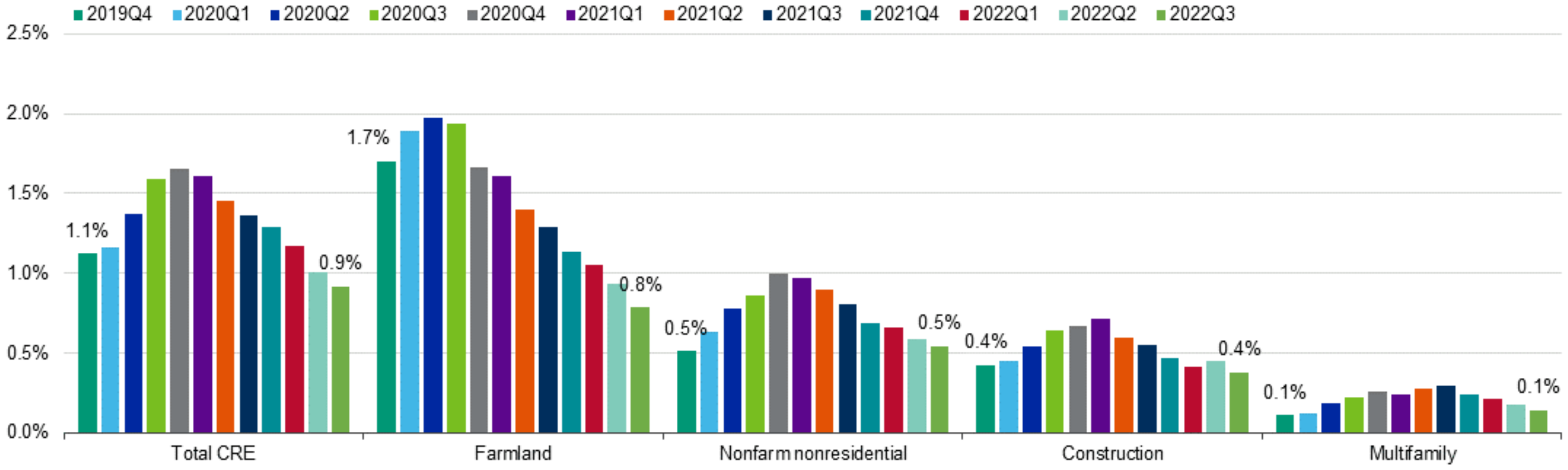
US bank CRE loans as % TCE by asset size, 30 Sept 2022



Source: FDIC Statistics on Depository Institutions, Moody's Investors Service

With higher rates and weaker economy, differentiation in the quality of banks’ CRE underwriting will surface

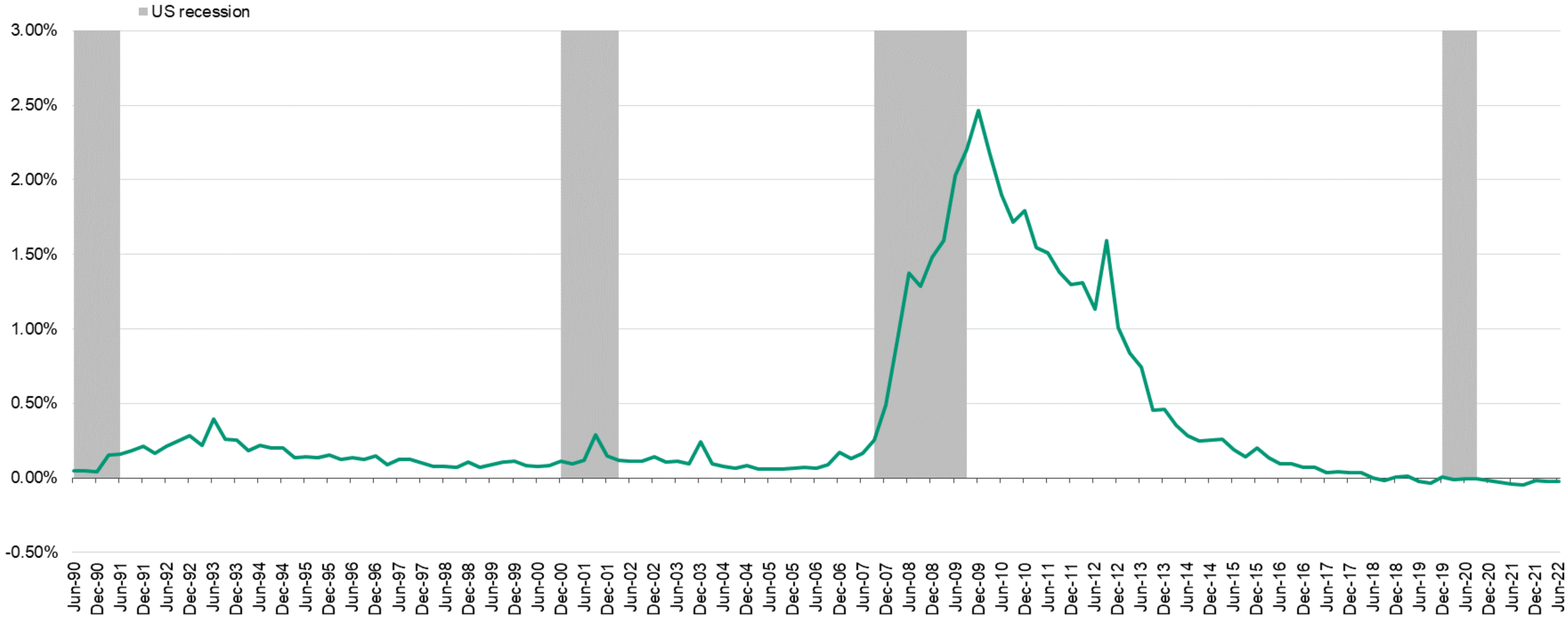
US banks CRE nonaccrual and 90+ past due loans, 31 Dec 2019 - 30 Sept 2022



Source: FDIC Statistics on Depository Institutions, Moody’s Investors Service

US residential mortgage charge-offs expected to be most comparable to 1990-91 and 2001 recessions

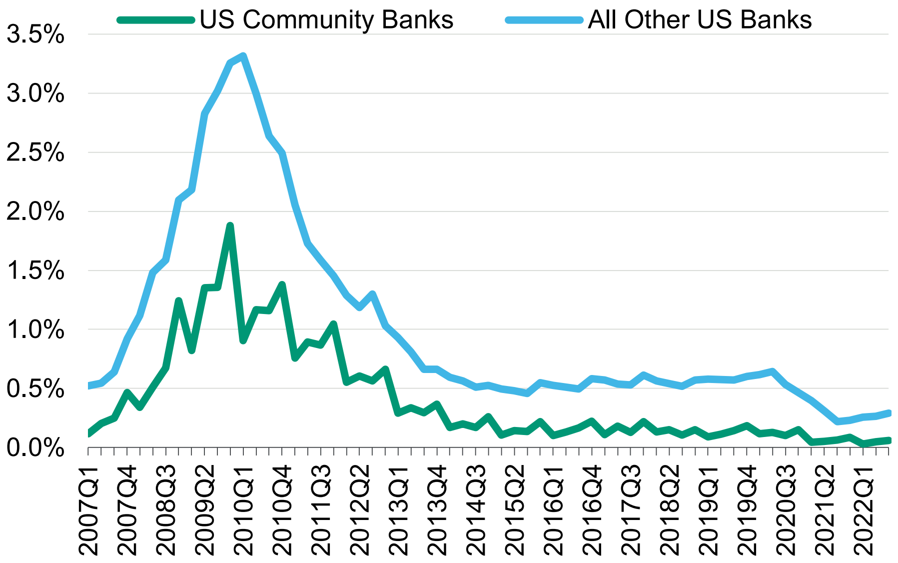
Bank residential mortgage charge-off %

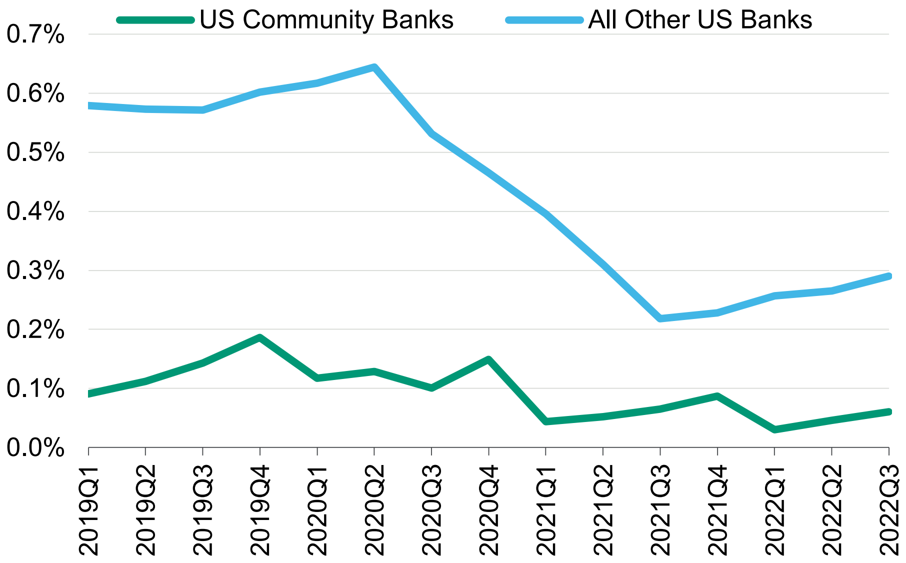


Source: FDIC, Moody's Investors Service

Net charge-offs have been unsustainably low

Net charge-off ratio: Left chart Q1 2007 - Q3 2022, Right chart Q1 2019 - Q3 2022

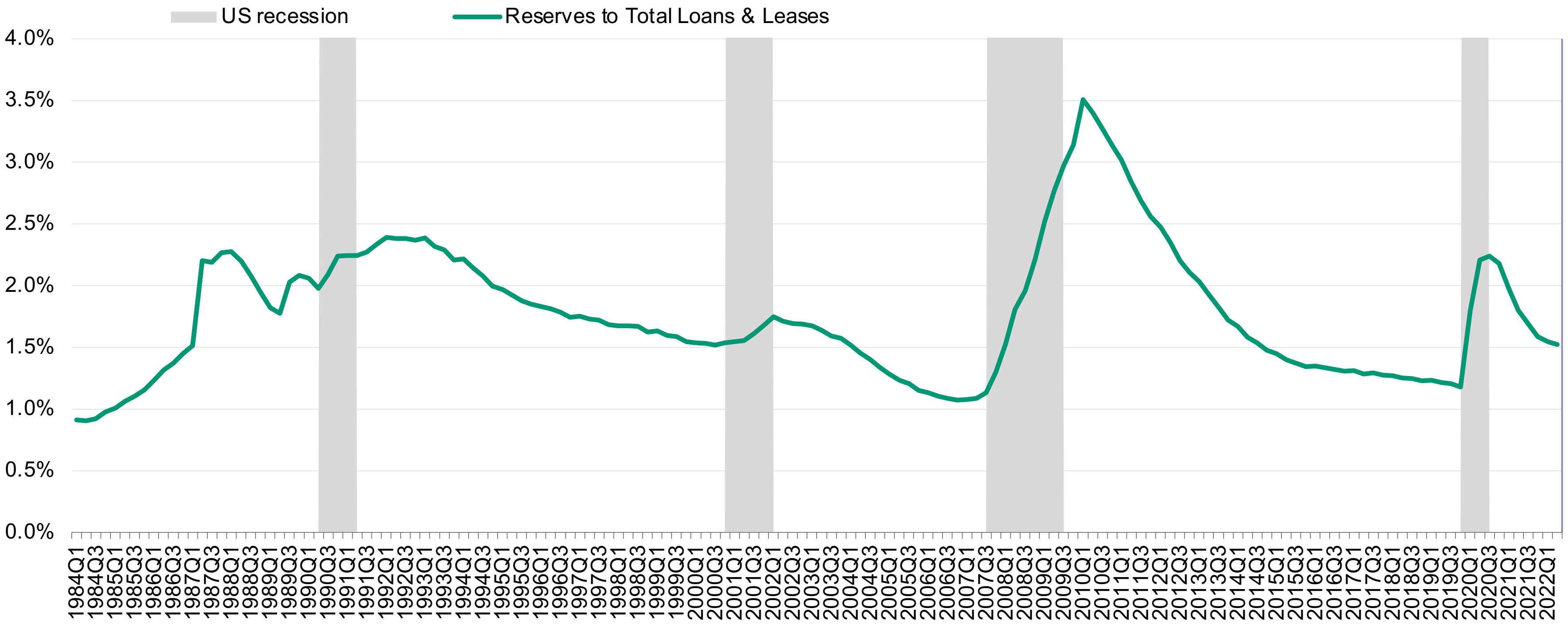




Source: FDIC, Moody's Investors Service

US banks' reserve coverage adequate, but more build likely

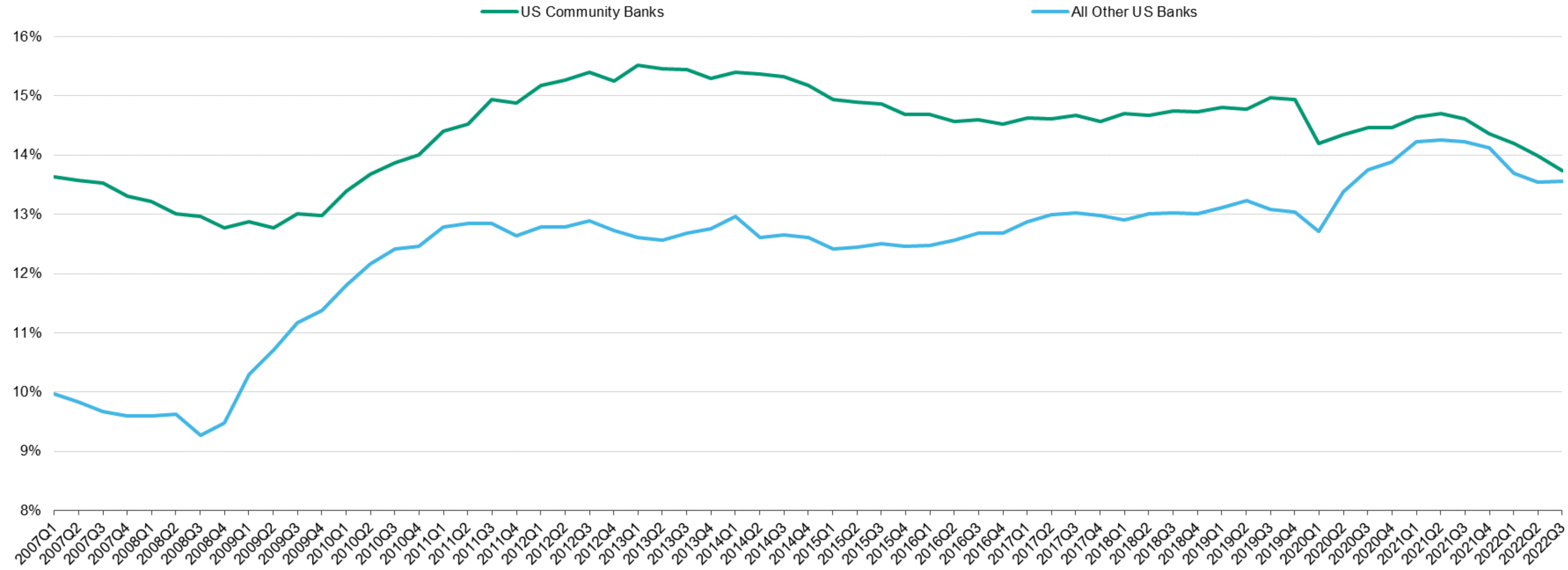
Loan loss reserves to total loans and leases, Q1 1984 – Q2 2022



Source: Haver, FDIC, Moody's Investors Service

The capital gap between community banks and all other US banks has narrowed significantly

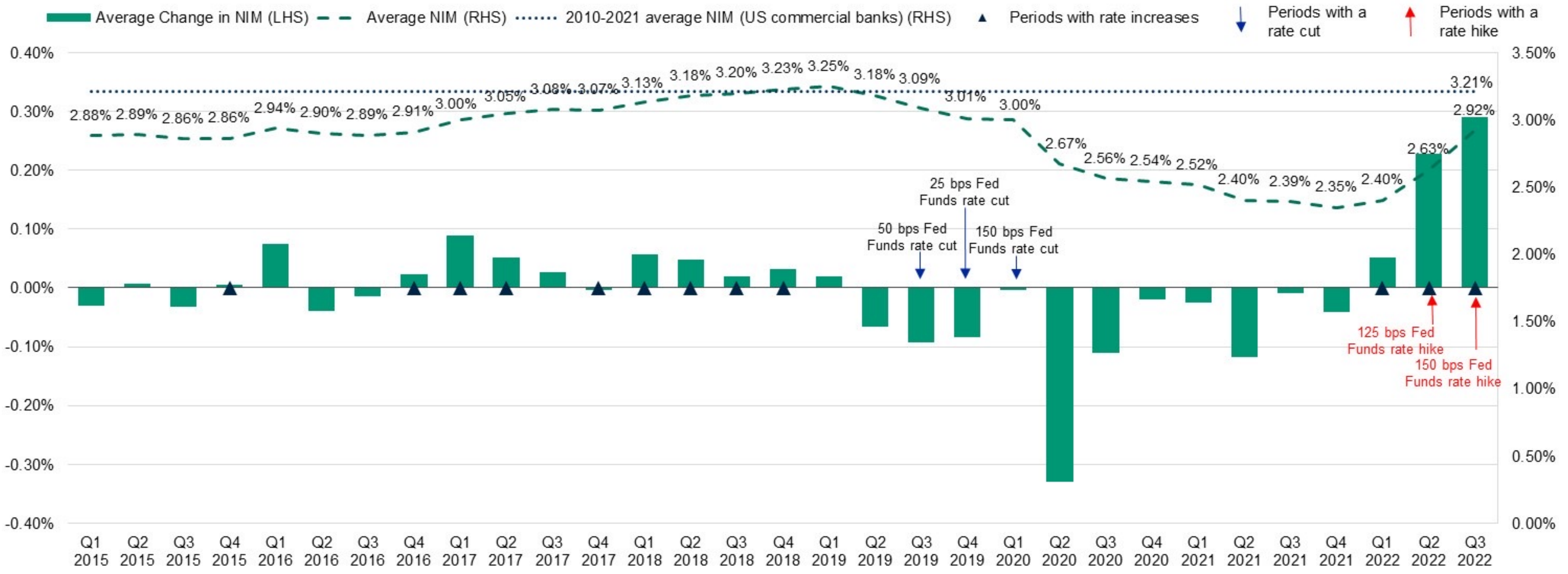
Tier 1 risk-based capital ratio



Beginning in Q1 2020, the ratio does not include institutions that have a CBLR election in effect as of the report date. 37% of community banks have elected to use the community bank leverage ratio (CBLR) framework.
Sources: FDIC and Moody's Investors Service

US regional bank net interest margins accelerated in Q3; close to pre-pandemic levels

Quarterly change in banks' average net interest margin (NIM), Q1 2015 – Q3 2022

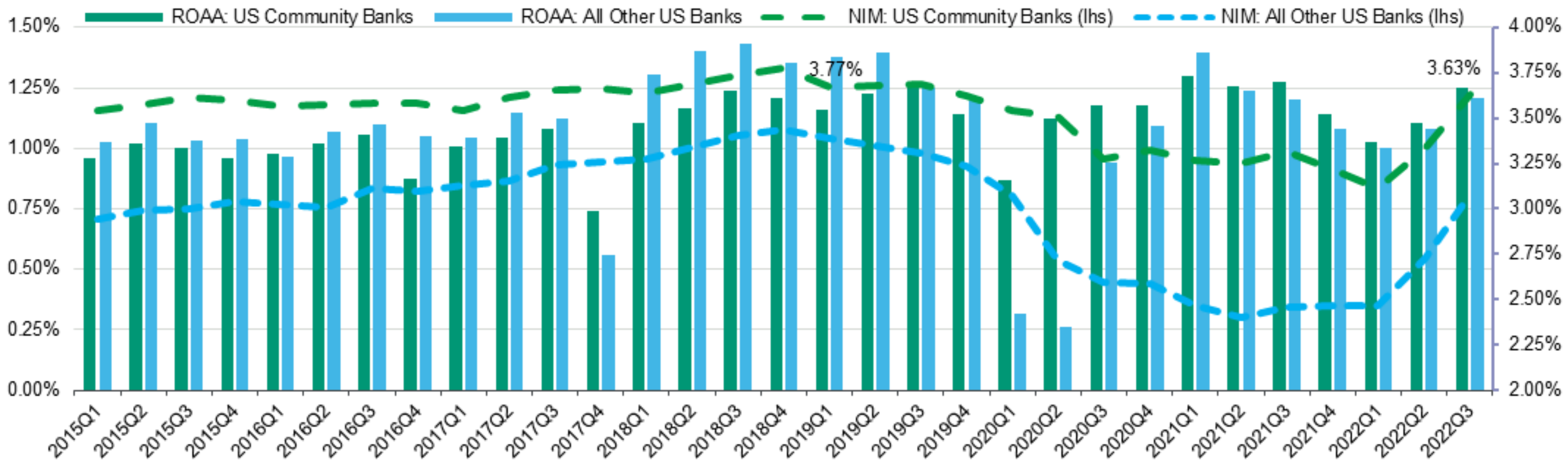


1) The x-axis labels show each bank's Baseline Credit Assessment (BCA). 2) The blue dashed line represents the average net interest margin of the following banks: BAC, C, CMA, CFG, FITB, FRC, HBAN, JPM, KEY, MTB, PNC, SIVB, TFC, USB, WFC, and ZION. From Q1 2015 – Q3 2019, the peer group included BBT and STI, but not TFC. 3) The orange dotted line represents the average net interest margin of aggregate US commercial banks from 2010 – 2021.

Source: Company reports, US Federal Reserve, Moody's Investors Service

Higher NIM at community banks and closer to pre-pandemic level

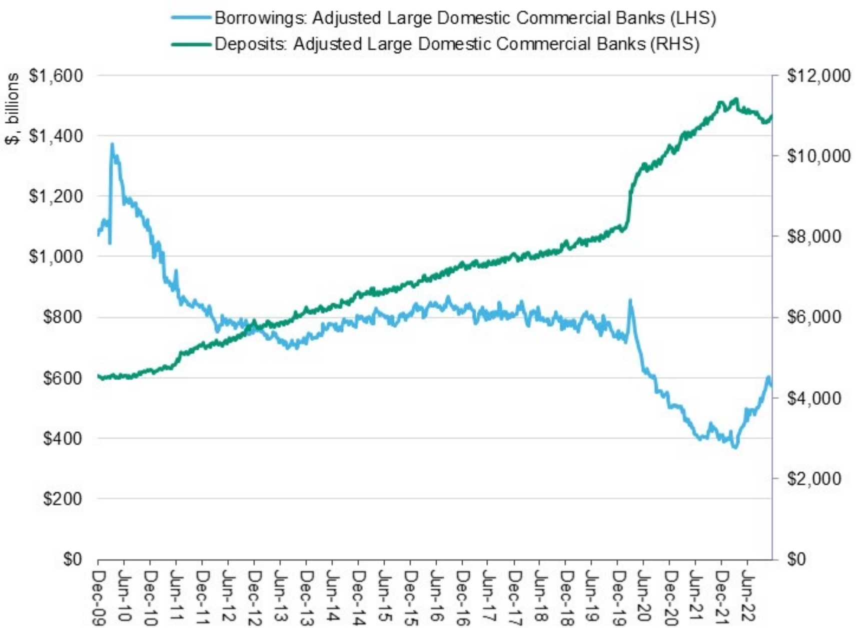
ROAA and NIM

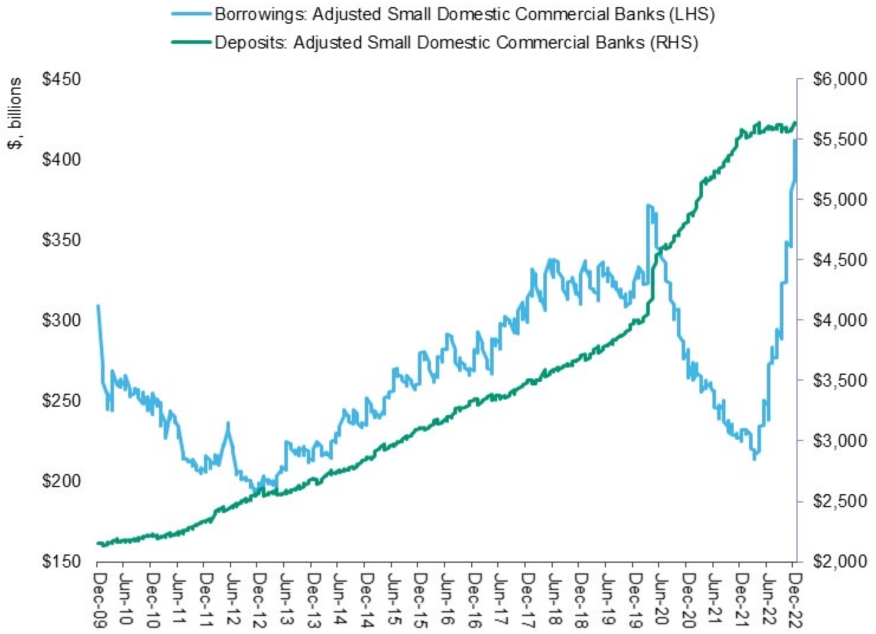


Source: FDIC, Moody’s Investors Service

Smaller US banks' marketable borrowing levels exceed pandemic peak; large US banks seeing deposit outflows

Total deposits and borrowings for small vs. large domestic commercial banks, Dec 2009 – Dec 2022

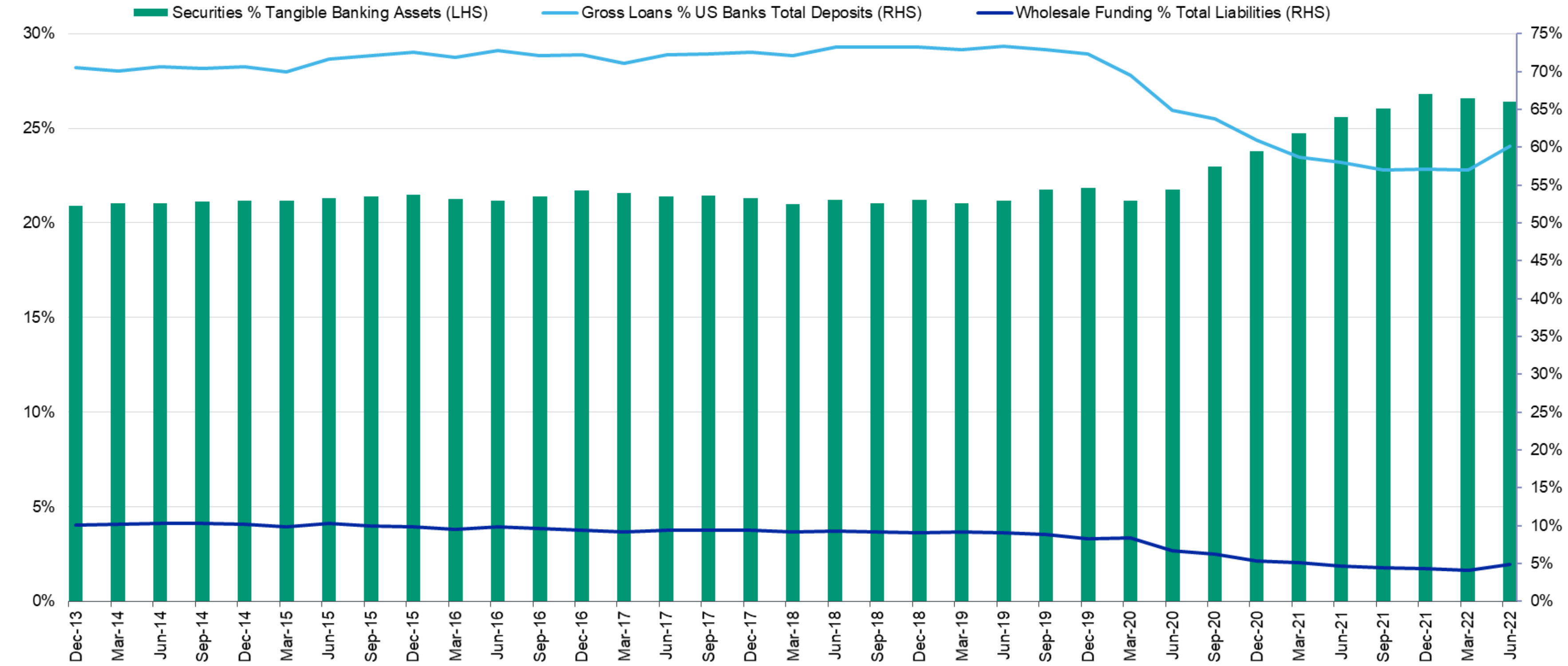




1) Adjusted for mergers. 2) The large domestic commercial banks are defined as the top 25 domestically chartered commercial banks. The small domestic commercial banks are defined as all the domestically chartered commercial banks not included in the top 25

Source: Haver, Moody's Investors Service

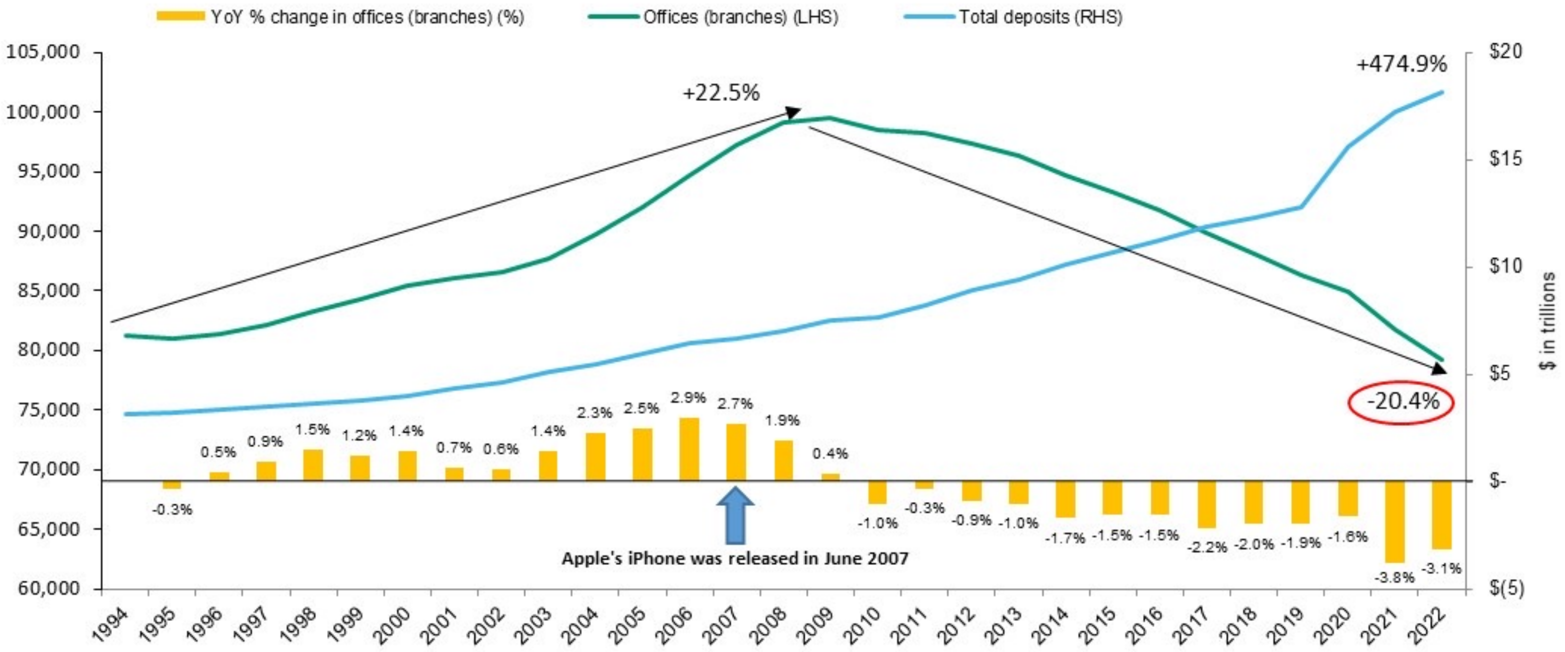
US banks' loan-to-deposits low; banks bought securities to protect NIM and these holdings now have mark-to-market losses



Source: FDIC, Moody's Investors Service

Branch density is less important for deposit gathering

Change in bank office branches 1994-2022



Source: FDIC, Moody's Investors Service

Four Components to MIS Integration of ESG

New ESG scores will assist in transparently and systematically demonstrating the impact of ESG on credit ratings

Credit Ratings & Research

How is ESG integrated into credit ratings?

ESG factors taken into consideration for all credit ratings. Greater transparency in PRs, as well as Credit opinions. Credit Impact Score (CIS) is an output of the rating process that indicates the extent, if any, to which ESG factors impact the rating of an issuer or transaction.

ESG Scores

How is a specific issuer exposed to ESG risks/benefits?

Issuer Profile Scores (IPS) are issuer-specific scores that assess an entity's exposure to the categories of risks in the ESG classification from a credit perspective. IPSs, where available, are inputs to credit ratings.

ESG Classification

What is ESG?

Our classification reports describe how we define and categorize E, S and G considerations that are material to credit quality. New environmental classification sharpens focus on physical climate risks.

Heat Maps

Is ESG material to credit quality?

Heat maps provide relative ranking of various sectors along the E and S classification of risks.

ESG Classification System Incorporates Credit Relevant Considerations

Our assessment of ESG risks is framed by the classification

Environmental

- Physical climate risks
- Carbon transition
- Water management
- Waste and pollution
- Natural capital

Social

Private sector	Public sector
Customer relations	Access to basic services
Demographic and societal trends	Demographics
Human capital	Education
Health and safety	Health and safety
Responsible production	Housing
	Labor and income

Governance

Private sector	Public sector
Financial strategy & risk management	Institutional structure
Management credibility & track record	Policy credibility and effectiveness
Organizational structure	Budget management
Board structure, policies & procedures	Transparency and disclosure
Compliance & reporting	

Source: Moody's Investors Service

Banking sector overall cyber risk score = High

Sector-level cyber risk is scored Low, Moderate, High or Very High, reflecting our assessment of two equally weighted factors: cyber risk exposure and mitigation

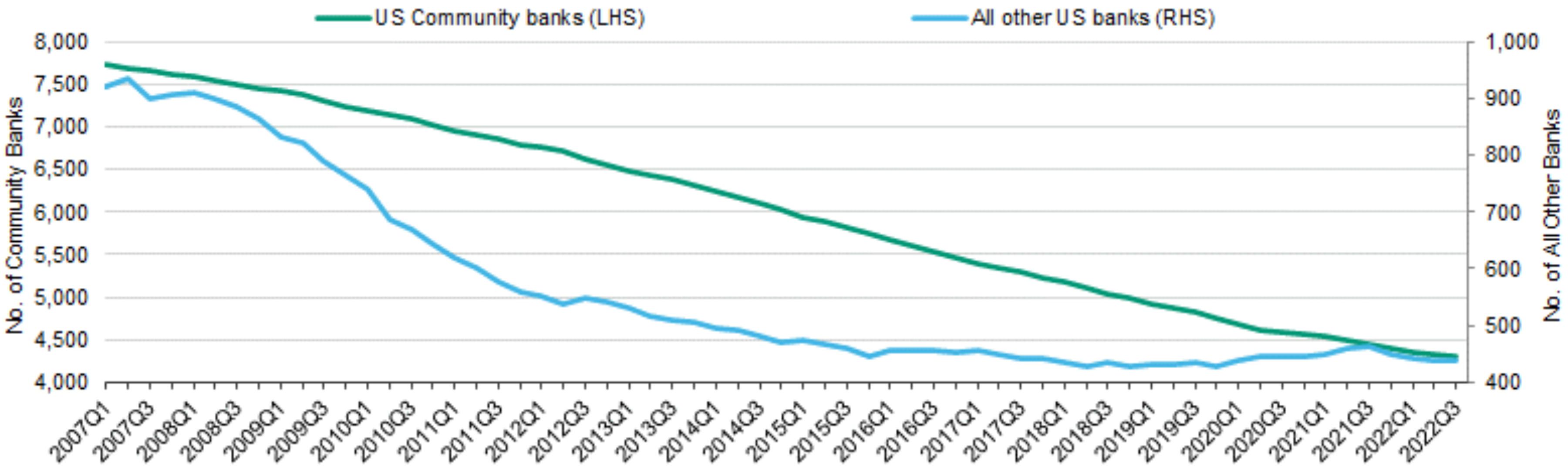
Exposure		Mitigants		
Systemic role: **Very High** Banks have a Very High systemic role score given that they are at the center of all financial transactions.	**Digitization:** **Very High** A large digital footprint and customer transactions on the externally facing internet provide hackers with more vectors to launch a cyber attack.	**Perimeter vulnerability:** **Moderate** Banks are among the best prepared based on the strength of cybersecurity controls and protocols for predicting and preventing threats.	**Basic cyber practices:** **Low** The banking sector is among the most prepared with strong proactive governance, management, and risk transfer measures that help improve resilience.	**Estimated financial impact:** **Low** Measured based on historical financial losses and a consequence ratio (the likelihood of a high-consequence, sector wide cyber incident, relative to sector wide revenue).

Source: Moody's Investors Service; Cyber heat map: Risks are rising, but many sectors are boosting defensive capabilities, 28 Sept 2022

Appendix

U.S. banking sector consolidation continues

The number of FDIC-registered banks in the US



Source: FDIC, Moody's Investors Service

Moody’s rated US community banks

Moody's Rated US Community Bank	Abbreviated name	BCA	Outlook
Amarillo National Bancorp, Incorporated	Amarillo	a3	STA
First Merchants Corporation	First Merchants	a3	STA
Washington Federal, Inc.	Washington	a3	NEG
INTRUST Financial Corporation	INTRUST	baa1	STA
Hilltop Holdings, Inc.	Hilltop	baa1	STA
WSFS Financial Corporation	WSFS	baa1	POS
Axos Financial, Inc.	Axos	baa2	RUR
Berkshire Hills Bancorp, Inc.	BHLB	baa2	POS
Dime Community Bancshares, Inc.	Dime	baa2	STA
Peapack-Gladstone Financial Corporation	Peapack	baa2	STA
Merchants Bancorp	Merchants	baa3	STA

Information flow for Moody's typical rating process

Our process is efficient, timely and focused

Pre-Committee Call
- Discuss key credit issues

Post-Committee Call
- Rating notification and explanation prior to publication

Rating publication

Preparation → Management Meeting → Analysis → Rating Committee → Publication → Monitoring

Management Meeting – Analysis	2-6 weeks
Rating Committee	1-3 days
Publication	1 day*

Preparation
- Rating Application
- Team assigned
- Information provided and reviewed

Follow up Q&A

Rating Committee
- Reviews, votes and concludes on Rating

Issuer reviews draft press release

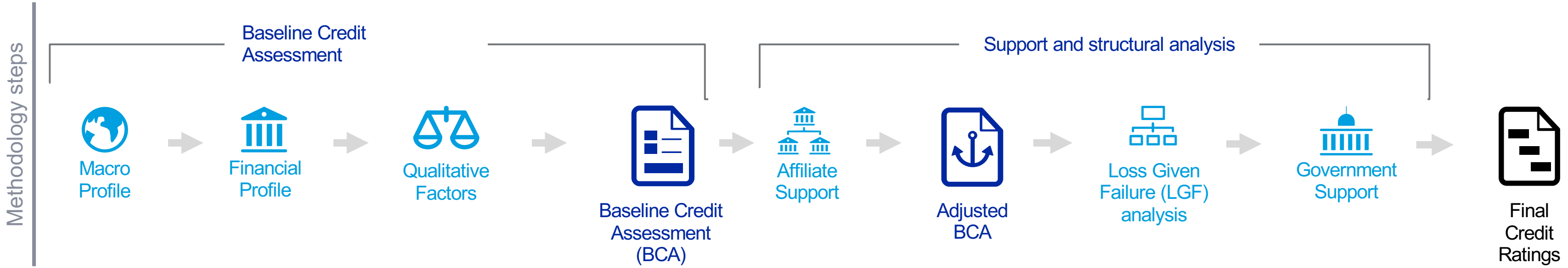
Ongoing monitoring
- Financial Reporting
- Investor calls
- Calls and meetings with Moody's

Note: Moody's has a strict separation policy between the analytical team and the commercial team. Our analysts are not permitted to engage in, or be privy to, any fee discussions

** Time to publication may differ according to local regulations. In some jurisdictions, for first time ratings, new issuers can have up 60 days to decide whether to publish*

Moody's Bank Methodology

A sequential analysis taking into account a new form of "resolution" and generating ratings for each instrument class



Baseline Credit Assessment	Support and Structural Analysis
The BCA analyses a bank's financials and operating environment to capture its **stand-alone probability of default**	Moody's individual credit ratings speak to **each credit instrument's expected loss**

Baseline Credit Assessment

The BCA analyses a bank's financials and operating environment to capture its **stand-alone probability of default**

BCA Components:

- **Macro Profile:** Captures the bank's operating and economic environment
- **Financial Profile:** Captures the bank's financial health, gauging key solvency and liquidity ratios, together with Macro Adjusted Scores and judgments, creating a forward looking assessment
- **Qualitative Factors:** Adjust Financial Profile to reflect non-financial qualitative judgments

Support and Structural Analysis

Moody's individual credit ratings speak to **each credit instrument's expected loss**

Support and Structural Analysis:

- **Affiliate Support:** Adjusts the BCA to capture the likelihood of affiliate support from parent and/or cooperative group support, resulting in the Adjusted BCA
- **The Loss Given Failure (LGF) analysis:** Captures the risks different creditors are exposed to in the event of the banks failure, absent government support
- **Government Support:** Captures the extent to which risk to each creditor class is mitigated by public support and adds uplift at the instrument class level

Source: Moody's Investors Service

What do our financial ratios mean

SOLVENCY (65% weight) The combination of a bank's risk, and its capacity to absorb any resultant losses from capital and earnings	ASSET RISK (25% weight) is measured by the Problem Loans / Gross Loans ratio, which signals potential problems, credit losses and pressure on solvency that disadvantage bondholders. Most bank failures stem from credit risk, since even a small deterioration in the value of an institution's assets can have a significant effect on its solvency given the bank's typically high balance sheet leverage.	WORST OF
	CAPITAL (25% weight) is measured by Tangible Common Equity / Risk-weighted Assets. Good capital levels are important since the greater the risk of unexpected losses, the more capital a bank needs to hold to protect bondholders and maintain the creditor confidence necessary to fund itself.	LATEST AVAILABLE
	PROFITABILITY (15% weight) as measured by Net Income / Total Assets, helps determine an institution's ability to generate capital, and is a complementary indicator of its ability to absorb losses and recover from shocks.	WORST OF
LIQUIDITY (35% weight) The combination of the mismatch between the maturity of a bank's assets and its liabilities, the reliability of funding, and its capacity to meet cash outflows from liquid reserves	FUNDING STRUCTURE (20% weight) as measured by Market Funds / Tangible Banking Assets, has a strong bearing on the bank's potential to need assistance. If a bank makes significant use of unreliable funding sources (short-term or from risk-sensitive counterparties), it is more likely to suffer difficulties refinancing its debt.	LATEST YEAR-END
	LIQUID RESOURCES (15% weight) as measured by Liquid Assets / Tangible Assets, is an indicator of a bank's ability to attain funding from credit-sensitive investors. If a bank has a stock of high-quality liquid instruments that it can sell or repo for cash, it will be better able to respond to the changing behavior of its counterparties.	LATEST YEAR-END

Ratio rationale

The ratios necessarily fluctuate over time, and their significance varies. For the problem loan ratio and profitability ratio, we review the latest three year-end ratios as well as the most recent intra-year ratio where applicable, and base our starting point ratio on the weaker of the average of this period and the latest reported figure. This reduces the inherent cyclicality of these ratios while ensuring that we capture sudden deterioration. Improvements thereby have a slower impact, which reflects our view that they should be proven over time. For the capital ratio, we use the latest provided figure. For the funding structure and liquid asset ratios, we use the latest year-end figures as we believe them to be the most representative and reliably.

Due to national differences in the implementation and the phase-in period of the Basel III Accord, we use the Tangible Common Equity, TCE, as the numerator for our capital ratio since it is close to the narrowest and now most prevalent regulatory measure of capital, Common Equity Tier 1. We focus on pure common equity and exclude "hybrid" instruments. TCE also caps the contribution of deferred tax assets at 10% of the total and excludes minority interest.

Source: Moody's Investors Service

What do our ratings and assessments mean

Moody's Ratings and Assessments

Rating / Assessment	Measure	Definition
Counterparty Risk Assessment	Probability of default measure	COUNTERPARTY RISK ASSESSMENT (CR ASSESSMENT) Counterparty risk assessments are opinions on the likelihood of a default by an issuer on certain senior operating obligations and other contractual commitments, including payment obligations associated with covered bonds (and certain other secured transactions), derivatives, letters of credit, third party guarantees, servicing and trustee obligations and other similar operational obligations that arise from a bank in performing its essential client-facing operating functions. CR assessments are assigned to legal entities in banking groups and, in some instances, other regulated institutions with similar bank-like senior obligations. CR assessments do not take into consideration the expected severity of loss in the event of default.
Counterparty Risk Rating	Expected loss measure	COUNTERPARTY RISK RATING: CRRs are opinions of the ability of entities to honor the uncollateralized portion of non-debt counterparty financial liabilities (CRR liabilities) and also reflect the expected financial losses in the event such liabilities are not honored.
Deposits	Expected loss measure	DEPOSIT RATINGS Our Long-Term Bank Deposit Rating is an expected loss measure, which considers both the likelihood of default and severity of loss, and our opinion of a bank's ability to repay its foreign and/or domestic currency deposit obligations with an original maturity of one year of more. It takes intrinsic strength (the BCA) as a starting point and further incorporates our view of the expected financial loss in the case of a default (our Loss Given Failure or LGF analysis) as well as any government support that may be provided. Applies to the most junior class of uninsured deposits, such as large corporate or institutional deposits, including term deposits with maturities of over one year. Short-term ratings are used for deposits of less than 13 months original maturity and are mapped from the LT deposit rating in four rating categories (Prime-1, Prime-2, Prime-3, Not Prime).
Senior unsecured	Expected loss measure	LONG-TERM SENIOR UNSECURED DEBT RATING / ISSUER RATING It is an expected loss measure that expresses our opinion of the ability of debt-issuing banks to honour their current and future senior unsecured debt and debt-like obligations with an original maturity of one-year or more. As with Deposit Ratings it takes intrinsic strength as a starting point and further incorporates our view of the expected financial loss in the case of a default as well as any government support that may be provided. If the rated entity has no senior debt outstanding, we may assign an Issuer Rating as a placeholder. SHORT-TERM DEBT Short-term debt ratings are used for debt of less than 13 months original maturity, including commercial paper, and are an expected loss measure. These are mapped from the long-term debt rating in four categories.
Subordinated AT1 rating / Hybrid rating	Expected loss measure	JUNIOR SECURITIES Like deposits and senior debt, these securities are rated as part of our LGF post-failure analysis. We may remove additional notches from the instrument rating to reflect the risk that the instruments could suffer losses before an institution reaches the point of failure (e.g. coupon suspension or principal is converted to equity or written down, in the case of non-viability or high trigger contingent capital securities).
Baseline Credit Assessment (BCA)	Probability of default measure	BASELINE CREDIT ASSESSMENT (BCA) The BCA expresses the likelihood of an issuer defaulting on one or more of its debt obligations, or requiring financial or other support to avoid such a default, and does not provide an opinion on the severity of any loss. It is our opinion of a debt issuer's standalone intrinsic strength, without any external support. To determine our Adjusted BCA we incorporate into the BCA our assessment of the likelihood of support for the issuer from affiliates (a parent, group, or cooperative structure).

Source: Moody's Investors Service

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