The Federal Reserve System is the central bank of the United States. It performs five key functions to promote the effective operation of the U.S. economy and, more generally, the public interest.

The Federal Reserve

- **conducts the nation’s monetary policy** to promote maximum employment and stable prices in the U.S. economy;

- **promotes the stability of the financial system** and seeks to minimize and contain systemic risks through active monitoring and engagement in the U.S. and abroad;

- **promotes the safety and soundness of individual financial institutions** and monitors their impact on the financial system as a whole;

- **fosters payment and settlement system safety and efficiency** through services to the banking industry and U.S. government that facilitate U.S.-dollar transactions and payments; and

- **promotes consumer protection and community development** through consumer-focused supervision and examination, research and analysis of emerging consumer issues and trends, community economic development activities, and administration of consumer laws and regulations.

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Supervision and Regulation Report

May 2022
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Preface

The Federal Reserve Board publishes its semiannual Supervision and Regulation Report to inform the public and provide transparency about its supervisory and regulatory policies and actions, as well as current banking conditions.
Summary

The banking system remains strong overall, with robust capital and liquidity and improved asset quality. Supervisors continue to focus on firms’ management of capital and liquidity, as well as cybersecurity. While supervisors continue to focus on these core areas, the Federal Reserve is also reviewing the risks created by the increasing use of technology by financial institutions. The Federal Reserve is enhancing its supervisory approaches in response to these risks.

This report focuses on developments in three areas:

1. **Banking System Conditions** provides an overview of current financial conditions in the banking sector. In the second half of 2021, banking conditions continued to be strong. Risk monitoring will continue for potential impacts from the pandemic and new geopolitical risks.

2. **Regulatory Developments** provides an overview of the Federal Reserve’s recent regulatory policy work.

3. **Supervisory Developments** provides an overview of the Federal Reserve’s supervisory programs and priorities. In addition to core supervisory work, the Federal Reserve is focused on industry changes involving financial technology (fintech) and third-party service providers. The report also highlights differences in supervisory approaches with respect to large, community, and regional banking organizations.
Banking System Conditions

The banking system remains strong overall, with robust capital and liquidity and improved asset quality.

Overall, the banking system remains strong, although uncertainty is increasing because of the ongoing geopolitical tensions and the associated impacts. Capital and liquidity positions are robust, allowing banks to continue to support the economy and preparing them to withstand potential adverse market events. In the second half of 2021, asset quality metrics improved, bank profitability remained solid despite pressure on net interest margins (NIMs), and loan growth picked up.

Banks continue to report high levels of capital and liquidity.

The banking industry ended 2021 with strong capital positions. Since the pandemic began, the industry has added nearly $230 billion in additional common equity tier 1 (CET1) capital, providing support for lending and a buffer against losses. The aggregate CET1 capital ratio was 12.65 percent at year end, slightly above its five-year average (figure 1).

Banks also finished the year with ample liquidity. Liquid assets, such as cash and securities, now make up 28 percent of total assets at banks (figure 2). Strong deposit growth has spurred the

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**Figure 1. Aggregate common equity tier 1 (CET1) capital ratio**

![Figure 1](image1.png)

Note: CET1 capital ratio is the ratio of common equity tier 1 capital to risk-weighted assets. See appendix A for further information. Community bank leverage ratio adopters (currently, about 37 percent of firms) are excluded.

Source: Call Report and FR Y-9C.

**Figure 2. Liquid assets as a share of total assets**

![Figure 2](image2.png)

Note: Liquid assets are cash plus estimates of securities that qualify as high-quality liquid assets as defined by the liquidity coverage ratio requirement.

Source: FR Y-9C.
increase in liquid assets and allowed banks to reduce their reliance on more volatile forms of funding.

**Banks reported lower delinquency rates in most loan categories.**

Several asset quality indicators showed improvement in the second half of 2021. The aggregate loan delinquency rate fell below 1 percent and now stands at the lowest level since late 2006. The improvement was broad based, with banks reporting lower delinquency rates across most major loan categories (figure 3). The one exception was in consumer loans, where the delinquency rate remained low but increased slightly in the fourth quarter of 2021. An increase in late car loan payments drove the change.

At the same time, modified loan balances continued to decline as government pandemic programs come to an end. Loans modified in accordance with section 4013 of the Coronavirus Aid, Relief, and Economic Security (CARES) Act fell for the sixth consecutive quarter to less than 25 percent of their peak (figure 4).

Large banks’ internal risk ratings improved across most sectors. Ratings in commercial real estate (CRE) sectors most affected by the pandemic, such as hotel and retail properties, continue to lag other CRE sectors but have shown consistent improvement. Likewise, commercial and industrial (C&I) loan ratings in hard-hit sectors, such as the entertainment and recreation industry, improved throughout 2021.

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1 See appendix A for the definition of loan modifications under section 4013 of the CARES Act.
After stabilizing in 2021, market indicators of bank health have weakened since the start of the year.

The strength of the banking system is reflected in market assessments of bank risk, including the market leverage ratio and credit default swap (CDS) spreads. The market leverage ratio is a market-based measure of a firm’s capital position, where a higher ratio indicates more market confidence in the firm’s financial strength. CDS spreads are a market-based measure of a firm’s risk, where a lower spread indicates more market confidence in the firm’s financial health. The aggregate market leverage ratio and average CDS spread for LISCC firms deteriorated sharply in the first quarter of 2020, but both indicators had recovered to their pre-pandemic levels by the end of 2021.

Because of increased uncertainty related to the Russian invasion of Ukraine, both market indicators deteriorated during the first quarter of 2022. In March 2022, the aggregate market leverage ratio declined to just under 9 percent, its lowest level since February 2021. The average CDS spread began rising in mid-January 2022 and has approached 100 basis points, its highest level since the Spring of 2020 (figure 5). Market indicators for European banks have largely followed the same trend as those for U.S. firms, with slightly worse performance.

U.S. banks’ direct exposure to Russia and Ukraine is limited. To date, the impact on bank operations has been modest. However, because of geopolitical tensions, U.S. banks have heightened their cyber defenses. Some have begun to exit from the region. U.S. banks have also taken steps to ensure compliance with sanctions imposed on Russian banks, companies, and individuals. Secondary impacts stemming from the war, such as increasing commodity prices and volatility related

Figure 5. Average credit default swap (CDS) spread and market leverage ratio (daily)

Note: The market leverage ratio is the ratio of a firm’s market capitalization to the sum of market capitalization and the book value of liabilities. Averages are calculated from available observations for the eight LISCC firms (Bank of America Corporation; The Bank of New York Mellon Corporation; Citigroup Inc.; The Goldman Sachs Group; JPMorgan Chase & Co.; Morgan Stanley; State Street Corporation; and Wells Fargo & Company).

Source: Bloomberg.
to energy, metals, and agricultural products, have significantly affected some markets and bank customers. The Federal Reserve is closely monitoring the effects on bank performance and their customers.

**Bank profitability declined in the last three quarters of 2021 but remains sound.**

Bank profitability, as measured by return on average assets (ROAA) and return on equity (ROE), declined in the last three quarters of 2021 back to pre-pandemic levels (figure 6). The decline is due to reduced benefits from negative provision expense and lower trading income at large banks. Bank revenues remain comparable with their pre-pandemic levels.

The banking industry’s NIM, which is a measure of a bank’s yield on its interest-bearing assets after netting out interest expense, continued to fall in the fourth quarter of 2021, as lower yielding assets increased faster than loans. Many large banks are projecting NIM to expand in 2022 as interest rates earned on bank assets are expected to rise while funding costs remain low.

**Loan growth accelerated in the second half of 2021 after a sluggish start.**

While total loan balances were roughly flat in the first half of 2021, loan growth accelerated in the second half of 2021. Loan balances increased across all major loan categories, with the largest growth rates reported in the consumer and other loan categories (figure 7). The growth reported in the other loans category is primarily driven by growth in loans to nonbank financial institutions and is discussed in greater detail in box 1. In the first quarter of 2022, loan balances have continued to grow, but the pace of growth slowed relative to the fourth quarter of 2021 for most loan categories. The only exception was the consumer loan category.

Consumer loan growth was strong in the fourth quarter of 2021. Credit card balances increased at their highest quarterly rate since the first quarter of 2003, and other consumer loans increased at a brisk pace. Residential real estate (RRE) loan balances grew in the second half of 2021, posting

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2 In the H.8, “Assets and Liabilities of Commercial Banks in the United States,” this category includes loans to nondepository financial institutions and loans not categorized elsewhere.
quarter-over-quarter growth in both the third and fourth quarters. The third quarter increase marked the first quarterly growth for RRE balances since the first quarter of 2020.

Business loans also grew in the second half of 2021, as CRE and C&I loans increased. CRE loans showed the steadiest increase of the major loan categories. CRE loans are the only major category to increase in every quarter since the pandemic began. In contrast, C&I loan balances declined for five straight quarters, from the third quarter of 2020 through the third quarter of 2021. The decline reflected repayments from borrowers who drew down credit lines in the first half of 2020 and forgiveness of Paycheck Protection Program loans. The decline reversed in the fourth quarter of 2021, with C&I loans increasing more than 3 percent (figure 8). Respondents to the Federal Reserve’s Senior Loan Officer Opinion Survey on Bank Lending Practices covering the fourth quarter of 2021 reported stronger C&I loan demand from businesses of all sizes.\(^3\) Banks also reported easing standards and terms for C&I loans, citing improved economic conditions and increased competition.

\(^3\) See the January 2022 “Senior Loan Officer Opinion Survey on Bank Lending Practices” at https://www.federalreserve.gov/data/sloos/sloos-202201.htm.
**Box 1. Trends in Loans to Nonbank Financial Institutions**

Bank lending to nonbank financial institutions (NBFIs) has grown rapidly, growing 22 percent in 2021 (figure A). This contrasts with most other bank lending categories that slowed during the pandemic.

![Figure A. Loans to nonbank financial institutions (annual growth)](#)

Note: Data are for all commercial banks.

NBFIs engage in a wide range of activities, some of which are opaque and complex. Generally, NBFIs serve as intermediaries, borrowing from banks and investing in securities or lending to companies and households. While many NBFIs offer similar products as banks, they do not have full banking licenses and are subject to different regulatory requirements. NBFIs offer many different types of consumer lending, such as mortgages, auto loans, and credit cards.

One area of significant growth is bank loans to NBFIs focused on mortgage lending. These U.S. non-bank mortgage lenders issued 71 percent of all mortgages originated in 2021.¹ NBFIs also provide loans to companies and investment funds. For example, aviation finance and equipment lending are also supported by loans from NBFIs.

Rapid growth in loans made by NBFIs could increase risk to banks, given the host of potential risks that NBFI activities present. The Federal Reserve will continue to monitor these loans, working with other regulators as appropriate, given relatively limited transparency into the wide range of activities in which NBFIs engage.

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¹ Source: Mortgage Lender Trends (Top 100 Lenders), *Inside Mortgage Finance* origination surveys and the Bank and Thrift Call Reports.
Regulatory Developments

The Federal Reserve has taken several policy actions since the publication of the last *Supervision and Regulation Report* in November 2021. These actions continue to promote the safety and soundness, transparency, and efficiency of the banking system. Significant actions are detailed in table 1 below, and all Supervision and Regulation (SR) and Community Affairs (CA) letters are available on the Board’s public website.4

<table>
<thead>
<tr>
<th>Date issued</th>
<th>Rule/guidance</th>
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</thead>
<tbody>
<tr>
<td>1/10/2022</td>
<td>Federal Reserve Board finalizes technical rule that will streamline reporting requirements for member banks related to their subscriptions to Federal Reserve Bank capital stock. Federal Reserve Board press release: <a href="https://www.federalreserve.gov/newsevents/pressreleases/bcreg20220110a.htm">https://www.federalreserve.gov/newsevents/pressreleases/bcreg20220110a.htm</a></td>
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<tr>
<td>1/28/2022</td>
<td>Federal Reserve Board invites public comment on proposed guidance to implement a framework for the supervision of certain insurance organizations overseen by the Board. Federal Reserve Board press release: <a href="https://www.federalreserve.gov/newsevents/pressreleases/bcreg20220128a.htm">https://www.federalreserve.gov/newsevents/pressreleases/bcreg20220128a.htm</a></td>
</tr>
</tbody>
</table>

(continued)

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4 The Federal Reserve publishes SR and CA letters to address significant policy and procedural matters related to the Federal Reserve System’s supervisory responsibilities and its consumer compliance supervisory responsibilities, respectively. SR letters are available on the Board’s public website at https://www.federalreserve.gov/supervisionreg/srletters/srletters.htm, and CA letters are available at https://www.federalreserve.gov/supervisionreg/caletters/caletters.htm.
Table 1.—continued

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Link</th>
</tr>
</thead>
</table>

Over the past four years, the Federal Reserve continued to engage with other financial regulators and the public on the risks and benefits created by the increasing use of technology by financial institutions. The agencies have issued guidance to the financial industry on a wide range of topics to address these risks. These topics included operational resilience, third-party relationship risk management, system authentication and access management, and community bank due diligence on prospective relationships with fintech companies.5 The Federal Reserve also published a paper describing the landscape of partnerships between community banks and fintech companies.6

The agencies issued joint statements to encourage innovative approaches for banking organizations to comply with Bank Secrecy Act (BSA) and anti-money-laundering requirements and to inform the public about their preliminary analysis on crypto-asset issues and planned work on crypto-related policy initiatives.7 The agencies have also solicited the public for information on how financial institutions use artificial intelligence (AI) in their activities.8

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These publications and recent public outreach as highlighted in box 2 support the financial industry's continued innovation in using technology to provide efficient financial services in a safe-and-sound manner.

**Box 2. The Fed Hosts a Data and Connectivity Symposium**

In March 2022, the Federal Reserve Board conducted a Data and Connectivity Symposium to explore the transformation of financial services due to digitization and new data-driven business models. The Board convened academics, technical experts, and industry practitioners to discuss the

- greater connectedness across the banking industry through novel partnerships between banks and technology companies,
- increase in banks’ use of third parties to provide a broad range of services and enhance internal operations, and
- evolution of banking and implications for the safety and soundness of banks and consumer protection.

A video of the symposium is available to the public at https://www.youtube.com/watch?v=EFxHZ41LjB1.
Supervisory Developments

The Federal Reserve supervises financial institutions to assess their safety and soundness and compliance with laws and regulations. This section provides an overview of key supervisory developments. The section distinguishes large financial institutions versus community and regional banking organizations. Supervisory approaches and priorities differ across these groups.

The Federal Reserve also has responsibility for certain laws and regulations relating to consumer protection and community reinvestment. The scope of the Federal Reserve’s supervisory jurisdiction varies based on the consumer law or regulation and on the asset size of the state member bank. Consumer-focused supervisory work is designed to promote a fair and transparent marketplace for financial services and to ensure supervised institutions comply with applicable federal consumer protection laws and regulations.

More information about the Federal Reserve’s consumer-focused supervisory program can be found in the Federal Reserve’s 107th Annual Report 2020.9

Supervisors are monitoring geopolitical events.

The Russian invasion of Ukraine has increased the risk environment for banks. U.S. banks’ direct financial exposures to Russia and Ukraine appear limited and manageable. Indirect exposure through market volatility, such as the recent volatility in commodities markets, has had limited impact on U.S. banks to date. U.S. banks are well capitalized and have substantial liquidity buffers to withstand the increased volatility and potential for losses. Bank funding markets have remained stable. While some of the large, internationally active U.S. banks have operations in Russia and Ukraine, those operations are not significant. As a result of the crisis, U.S. banks have reduced activity in these international markets.

U.S. banks continue to work with governments to implement sanctions, both U.S. sanctions and sanctions levied in other jurisdictions in which U.S. banks operate. U.S. banks have also adopted a heightened cybersecurity alert level, given the significant risk of attacks on the financial services industry.

As geopolitical events continue to affect the banking sector, supervisors will continue to monitor the situation and engage with other government agencies when appropriate.

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Supervision continues to adapt to the changing environment.

The Federal Reserve is assessing the risks created by the changing financial landscape and changes to bank business models. Technology is transforming how banks operate. Banks are exploring and adopting technologies such as AI, data analytics, and cloud computing. They are also developing new technology-based products and services and enhancing their back-office operations. These technological advances offer benefits to consumers, banks, and the financial system at large. However, banks’ use of technology also generates risks that must be managed.

In addition to adopting new technologies, many firms are increasingly relying on third-party service providers for their operational and technology infrastructure. As a result, third-party service providers play an increasingly critical role in maintaining the operational resilience of individual financial institutions and overall financial markets. The interconnectedness of the financial system, service provider concentrations, and the lack of substitutes for these services make these third parties critical.

The Federal Reserve supports responsible innovation, including technology innovation by banks and by third parties who provide services to them. The innovation page on the Board’s public website is a source for the most recent information on the supervisory approach to innovative technology. Innovation should, however, be paired with appropriate processes for identifying and managing risks. The Federal Reserve is updating its supervisory programs to ensure examiners are equipped to assess the risks posed by these innovations and industry changes. Two notable areas where supervisory programs are being enhanced is the third-party service provider program (box 3) and the review of fintech used by supervised institutions (box 4).

Key Supervisory Priorities

While supervisory programs are adapting to the risks posed by technology and innovation, supervisors continue to monitor capital, liquidity, and risk management across all portfolios. This includes a continued focus on cybersecurity risks. In large bank supervision, resolution plans are currently under review jointly with the FDIC. Recent work in the risk-management area has focused on prime brokerage activities and related counterparty risks, informed in part by the Archegos default. In community and regional bank supervision, credit and operational risks continue to be supervisory priorities.

Supervised Institutions

The Federal Reserve supervises bank holding companies, savings and loan holding companies, and state member banks of varying size and complexity. The Federal Reserve follows a risk-focused approach by scaling its supervisory work to the size and complexity of an institution.

- Firms identified as posing elevated risk to U.S. financial stability are supervised by the Large Institution Supervision Coordinating Committee, or LISCC, program.
- U.S. firms with assets of $100 billion or more that are not supervised by the LISCC program and all foreign banking organizations are supervised by the Large and Foreign Banking Organization, or LFBO, program.
- Regional banking organizations (RBOs)—U.S. firms with total assets between $10 billion and $100 billion—are supervised by the RBO program.
- Community banking organizations (CBOs)—U.S. firms with less than $10 billion in total assets—are supervised by the CBO program.

Table 2 provides an overview of the organizations supervised by the Federal Reserve, by portfolio, including the number of institutions and total assets in each portfolio.

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Box 3. Third-Party Service Provider Supervision

The Bank Service Company Act (BSCA) provides authority to the Federal Reserve, Federal Deposit Insurance Corporation (FDIC), and Office of the Comptroller of the Currency (OCC) to regulate and examine certain services performed by third parties on behalf of insured depository institutions and their affiliates. Services identified in the BSCA include activities such as check and payment processing, back-office services, accounting, and data processing services. When a service is covered by the BSCA, the agencies can regulate and examine the activity to the same extent as if the financial institution performed the service.

The banking agencies conduct examinations of the service providers that pose significant risk to client financial institutions and the financial sector. Examinations of technology service providers focus on the management of technology, integrity of data, confidentiality of information, availability of services, and compliance. Examination results are provided to the service provider and to client financial institutions. The examination results can help financial institutions with their ongoing monitoring of third-party service provider risk.

The interagency program for supervising technology service providers has been in place for several years. However, the use of third-party service providers and technology-based products and services is expanding and evolving quickly. The number, type, and concentration of providers are also changing and, as a result, third-party service providers continue to play an important role in the financial sector.  

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Table 2. Summary of organizations supervised by the Federal Reserve (as of 12/31/2021)

<table>
<thead>
<tr>
<th>Firm description</th>
<th>Definition</th>
<th>Number of institutions</th>
<th>Total assets ($ trillions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large Institution Supervision Coordinating Committee (LISCC)</strong></td>
<td>Eight U.S. global systematically important banks (G-SIBs)</td>
<td>8</td>
<td>14.6</td>
</tr>
<tr>
<td>State member banks (SMBs)</td>
<td>SMBs within LISCC organizations</td>
<td>4</td>
<td>1.1</td>
</tr>
<tr>
<td><strong>Large and foreign banking organizations (LFBOs)</strong></td>
<td>Non-LISCC U.S. firms with total assets $100 billion and greater and FBOs</td>
<td>173</td>
<td>10.0</td>
</tr>
<tr>
<td>Large banking organizations (LBOs)</td>
<td>Non-LISCC U.S. firms with total assets $100 billion and greater</td>
<td>17</td>
<td>4.8</td>
</tr>
<tr>
<td>Large FBOs (with IHC)</td>
<td>FBOs with combined U.S. assets $100 billion and greater</td>
<td>11</td>
<td>3.1</td>
</tr>
<tr>
<td>Large FBOs (without IHC)</td>
<td>FBOs with combined U.S. assets $100 billion and greater</td>
<td>7</td>
<td>1.0</td>
</tr>
<tr>
<td>Small FBOs (excluding rep offices)</td>
<td>FBOs with combined assets less than $100 billion</td>
<td>108</td>
<td>1.1</td>
</tr>
<tr>
<td>Small FBOs (rep offices)</td>
<td>FBO U.S. representative offices</td>
<td>30</td>
<td>0.0</td>
</tr>
<tr>
<td>State member banks</td>
<td>SMBs within LFBO organizations</td>
<td>9</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Regional banking organizations (RBOs)</strong></td>
<td>Total assets between $10 billion and $100 billion</td>
<td>86</td>
<td>2.6</td>
</tr>
<tr>
<td>State member banks</td>
<td>SMBs within RBO organizations</td>
<td>27</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Community banking organizations (CBOs)</strong></td>
<td>Total assets less than $10 billion</td>
<td>3,602*</td>
<td>3.0</td>
</tr>
<tr>
<td>State member banks</td>
<td>SMBs within CBO organizations</td>
<td>665</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Insurance and commercial savings and loan holding companies (SLHCs)</strong></td>
<td>SLHCs primarily engaged in insurance or commercial activities</td>
<td>6 insurance 4 commercial</td>
<td>0.9</td>
</tr>
</tbody>
</table>

* Includes 3,546 holding companies and 56 state member banks that do not have holding companies.

Large Financial Institutions

This section of the report discusses the supervisory approach for large financial institutions, which are U.S. firms with assets of $100 billion or more and foreign banking organizations with combined U.S. assets of $100 billion or more. These firms are within either the LISCC portfolio or the LFBO portfolio. Large financial institutions are subject to regulatory requirements that are tailored to the risk profiles of these firms. Appendix A provides an overview of key regulatory requirements.

Supervisory efforts for large financial institutions focus on four components:

1. capital planning and positions,
2. liquidity risk management and positions,
3. governance and controls, and
4. recovery and resolution planning.\(^{11}\)

Box 4. Fintech Is Transforming the Banking Industry

Fintech can be defined as technologically enabled innovation in financial services that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services.¹

Fintech is transforming how banks operate. The recent expansion of fintech activities is a result of abundant data, greater connectivity, cheaper computer processing power, and consumer demand for convenient, customized, and low-cost financial services. For example, some fintech companies develop alternative methodologies to assess the creditworthiness of a borrower. Other fintech firms develop computer software allowing for a seamless integration of bank services, such as account authentication and payment processing, with nonbank products. These advances offer benefits to consumers and the financial system. These benefits come with risks that may affect bank safety and soundness and consumer protection.

Risks stemming from fintech activities are not unique but reflect traditional banking risks (e.g., operational, cybersecurity, liquidity, and reputational risks). As with any new activity, banks are expected to ensure appropriate controls are established to support new fintech products and services. As banks engage in these activities, they should develop and implement risk-management practices and controls at a pace that aligns with their growth.

The use of fintech is prevalent across banks of all sizes; however, the approaches to adopting fintech vary across different segments of the banking sector.

• Large financial institutions often use a combination of service providers and internal capabilities when developing fintech solutions. For example, they may purchase data from service providers to support AI models that assist in making lending decisions.

• Smaller institutions rely more extensively on service providers when engaging in technology products and services. Smaller firms may engage directly with a variety of service providers, such as Application Programming Interface (API) lending, and payment platforms. By working with third-party technology providers, smaller institutions can compete with larger banks by offering a wider range of services to customers.

The Federal Reserve has established a System Fintech Supervisory Program to identify, monitor, and assess the range of risks arising from supervised firms’ fintech activities. The program is developing a coordinated supervisory strategy for fintech activities. The strategy will be tailored to supervised firms’ size and complexity.


The Federal Reserve’s assessment of a firm is reflected in the firm’s supervisory rating under the LFI rating system.¹² As of the end of 2021, over half of the large financial institutions are rated in satisfactory condition. Federal Reserve supervisors have observed that firms are generally meeting supervisory expectations with respect to capital planning and positions and liquidity risk management and positions. However, some firms continue to face challenges, particularly related to governance and controls.

Large financial institutions continue to report strong capital and liquidity positions.

Large financial institutions have remained well capitalized. The aggregate CET1 capital ratio for large financial institutions in the fourth quarter of 2021 was 12.8 percent. Large financial institutions have sufficient capital to continue lending to households and businesses in periods of stress.

Liquidity is at historic highs at large financial institutions, driven by strong deposit growth during the pandemic. Large financial institutions continue to maintain sufficient liquid assets to meet liquidity needs for a 30-day stress scenario.

Box 5. Large Financial Institution Supervisory Priorities

Capital
- Trading and counterparty credit risk management, including areas such as concentrations, hedging, and client leverage
- Risks associated with the evolving interest rate environment and the expiration of pandemic relief measures, including interest rate risk and credit risk
- Readiness for future updates to the capital framework and reviews of risk-weighted assets under the capital rule

Liquidity
- Internal liquidity stress testing scenarios, assumptions, and methodologies
- Independent liquidity risk management
- Nonbank subsidiary liquidity risk
- Collateral management
- Contingency funding plans

Governance and controls
- Operational resilience, including cybersecurity and information technology risks
- Compliance risk management, including Bank Secrecy Act/anti-money-laundering programs and Office of Foreign Assets Control compliance
- Third-party vendor risk management

Recovery and resolution planning
- Resolution plan and critical operations reviews
- International coordination
Cybersecurity remains a high priority.

Cybersecurity is a critical component of operational resilience and remains the top risk identified at supervised firms. Cyber threats and attacks increased with the onset of the pandemic and are an increasing concern resulting from geopolitical unrest. Increasing ransomware attacks are a risk in the financial sector.

The Federal Reserve conducts joint cybersecurity examinations with the other federal banking agencies for the LISCC institutions. Examinations in 2021 focused on cybersecurity governance and the management of aging technology assets. Several themes were identified during these exams. In the area of governance, examiners noted that firms are integrating cybersecurity strategies with broader technology and business operating strategies. Competition for talent and turnover was also highlighted as a challenge.

Examiners observed a range of practices for managing aging technology assets as those assets reach the end of their useful lives or end of support provided by vendors. The stronger practices observed include adopting a dedicated program for managing the risks of aging assets, creating and maintaining a comprehensive inventory, carrying out risk-based prioritization of replacement of aged systems, and detailed reporting.

Interagency examinations will continue during 2022, with two areas of focus. One focus area will review controls in place to manage access to a firm’s systems and information. Another focus area will review a firm’s processes and tools used to detect and respond to ransomware attacks. Particularly while the Russian invasion of Ukraine heightens geopolitical tensions, examiners will continue to regularly monitor firms’ efforts to maintain effective cyber defenses.

Resolution plan reviews are underway.

Recovery and resolution planning is one of the four core areas of supervision (box 5) for the largest banks. Firms’ resolution plans are reviewed jointly by the Federal Reserve and the FDIC. Currently the agencies are reviewing plans submitted by the eight LISCC firms in July 2021, one new LFBO firm in September 2021, and 16 LFBO firms in December 2021. In addition to the standard elements prescribed in the resolution plan rule, the agencies required each firm to submit information about the firm’s pandemic responses and integration of any changes or lessons learned into resolution-related capabilities. In particular, the information request asked

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13 These 25 firms’ public resolution plans are available on the Federal Reserve Board’s public website at https://www.federalreserve.gov/supervisionreg/resolution-plans.htm.

14 The LISCC targeted information request may be found on the Federal Reserve Board’s public website at https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20200701a1.pdf; and the LFBO targeted information request may be found on the Federal Reserve Board’s public website at https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20201209a4.pdf.
about a firm’s experience during the pandemic related to reporting and escalation of information, operational continuity, and parent company support for foreign banking organizations.

Prime brokerage services can pose significant risks.

Some large banks offer a suite of services to large investment funds known as prime brokerage. These services include the ability to borrow securities or cash, cash management, and access to research. An important aspect of these services is lending. The investment funds typically obtain loans secured by equities or other securities through the prime broker.

Prime brokerage services can pose significant liquidity and credit risks to the bank providing these services. These risks are heightened by the complexity of prime brokerage services and lack of transparency into the trading and investing activities of the investment fund clients, particularly trading activities with other counterparties. Strong risk management and controls are critical to the safety and soundness of a bank that provides these services.

Liquidity shortfalls and credit losses associated with prime brokerage activities occurred during the financial crisis of 2007–08. Since then, these services have grown in complexity, resulting in other risk-management failures. Most recently, the default of Archegos Capital Management (Archegos) highlighted gaps in bank risk management (box 6).

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**Box 6. The Archegos Default: Addressing Gaps in Risk Management**

As noted in the November 2021 *Supervision and Regulation Report*, the Federal Reserve and other regulators conducted a supervisory review after the Archegos Capital Management default. Archegos was an investment firm with large exposures to a small number of U.S. and Chinese technology and media companies. It defaulted on March 26, 2021, causing over $10 billion in losses across several large banks. The review looked at due diligence practices, counterparty credit risk management, margining practices, and how banks exit relationships with fund clients when the client defaults.

As a result of the review, the Federal Reserve in December 2021 issued supervisory guidance to remind banking organizations with large derivative portfolios and relationships with investment funds of supervisory expectations for counterparty credit risk management that were previously articulated in interagency guidance. The guidance also highlights the expectation that banking organizations should be capable of identifying and monitoring the risk associated with the fund client at the outset and throughout the relationship. Banks need to understand the risk posed by their clients and have adequate tools to manage it. Tools include ongoing due diligence on clients, risk-sensitive margining practices, and strong independent risk-management oversight of the business.

Accordingly, the Federal Reserve supervises banks for the risks associated with prime brokerage services along key areas, including capital and liquidity. Since the financial crisis of 2007–08, the Federal Reserve has conducted several reviews of banks’ prime brokerage services. This includes evaluating firms’ assessment and strategies for management of stress events that could affect its investment fund clients.

**Community and Regional Banking Organizations**

This section of the report discusses the financial condition and supervisory approach for banking organizations with assets less than $100 billion, including CBOs, which have less than $10 billion in total assets, and RBOs, which have total assets between $10 billion and $100 billion.

**CBOs and RBOs generally remain in stable financial condition as pandemic-related concerns have abated.**

CBOs and RBOs have demonstrated resilience throughout the pandemic. More than 99 percent of CBOs and all RBOs have capital ratios above well capitalized minimum requirements as of the end of 2021. Tier 1 leverage ratios have declined following the emergence of the pandemic, as increased levels of cash and lower risk assets persist due to growth in deposits over the past two years. NIMs remain low or have recovered slightly, while ROAAs remained mostly robust throughout the period.

Total problem loan rates continued to decrease for most community and regional banks. Problem loan rates for commercial real estate, residential real estate, and other loans were lower or relatively flat for the latter part of 2021. The balances of loans modified because of COVID–19 (section 4013 loans) at CBOs and RBOs continued to decline, ending at 1.4 percent and 0.6 percent of total loans as of the end of 2021, respectively.15

**Though issues have not materialized, credit risk remains an elevated concern.**

While credit conditions have generally recovered since the onset of the pandemic, uncertainties continue to persist. Federal Reserve examiners have noted during recent examinations that credit risk may be increasing at community and regional banks because of their exposure to certain sectors particularly impacted by the pandemic. CBOs and RBOs are often more concentrated than larger banks in commercial real estate lending, a loan category that has been particularly impacted by the pandemic.

15 See appendix A for the definition of loan modifications under section 4013 of the CARES Act.
Cash positions have reduced liquidity risk.

Cash positions have been elevated throughout the pandemic. CBOs and RBOs have yet to fully deploy their elevated cash positions into lending due to persistent uncertainty in the economy and a low level of loan demand. CBOs and RBOs have stated that they expect loan demand to increase, resulting in business opportunities to deploy their excess liquidity. Increased cash positions have also led many banks to reduce their use of noncore funding sources. As a result, liquidity risk has generally fallen for these banks. Liquidity risk may increase as banks begin to deploy excess liquidity and as stimulus programs continue to unwind.

CBOs and RBOs continue to face operational risks.

Information technology risks and cybersecurity remain top concerns. Operational risk issues can arise from dependence on or increased activities with third-party technology providers. Smaller banks can also be vulnerable to cyberattacks and outages, as they may have less robust information technology infrastructure than larger institutions or may be more reliant on third-party vendors for their services. Additionally, small banks report challenges with hiring and retaining qualified information technology and cybersecurity staff.

Examination activities have not resulted in significant concerns.

During the second half of 2021, few CBO and RBO examinations and inspections resulted in downgrades to supervisory ratings. As of the end of 2021, nearly 97 percent of CBOs and RBOs are rated satisfactory or strong. The number of outstanding supervisory findings for CBOs and RBOs continued to decline during this period.

CBO and RBO supervision programs continue to transition from pandemic approaches.

As Federal Reserve examinations continue to transition out of pandemic approaches, examiners are maintaining their focus on high-risk activities. The Federal Reserve’s supervision program for community and regional banking organizations (box 7) will include some on-site examination presence in 2022. Each Reserve Bank is considering local pandemic conditions as well as the ability

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**Box 7. CBO and RBO Supervisory Priorities**

**Credit Risk**
- Loan modifications and underwriting practices
- Credit concentrations
- High-risk loan portfolios
- Reserve practices and levels, and implementation of Current Expected Credit Losses (CECL)

**Capital**
- Capital adequacy, needs, and vulnerabilities

**Operational Risk**
- Information technology and cybersecurity
of supervised institutions to accommodate examiners at their offices. For example, the Federal Reserve has improved the process for the exchange of information (box 8).

The federal bank regulatory agencies provided temporary regulatory relief for CBOs that had grown in size, in part, because of participating in pandemic response programs. The Federal Reserve temporarily delayed transitioning CBOs that crossed the $10 billion asset level into the RBO supervision program. This temporary relief expired at the end of 2021. Those institutions that crossed and remained above this asset threshold have transitioned to the RBO portfolio. Between the end of 2019 and the first quarter of 2022, 23 institutions have transitioned to the RBO portfolio.

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**Box 8. New Supervision Central App Aids Collaboration between Banks and Examiners**

In June 2021, the Federal Reserve launched Supervision Central, a cloud-based application. The application allows the secure exchange of information between examiners and state member banks and holding companies with less than $100 billion in total assets. Supervision Central provides these supervised institutions with a simple method to upload documents with an easy drag-and-drop function. The application also facilitates information exchange and collaboration between state examiners and Federal Reserve Bank examiners. This functionality should reduce the likelihood of redundant information requests by examiners to an institution.

Since launching Supervision Central, the Federal Reserve has received positive feedback. To learn more, please visit the Supervision Central Help Site at [https://www.supervisioncentral.org](https://www.supervisioncentral.org).

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Appendix A: Data Sources and Terms

Data Sources

The Supervision and Regulation Report includes data both on institutions supervised by the Federal Reserve System and some institutions outside Federal Reserve supervision. The report reflects data through March 21, 2022. This appendix details these sources.

FFIEC Call Reports

The FFIEC Consolidated Reports of Condition and Income, also known as the Call Report, is a periodic report that is required to be completed by every national bank, state member bank, insured nonmember bank, and savings association as of the last day of each calendar quarter. The details required to be reported depend on the size of the institution, the nature of the institution’s activities, and whether it has foreign offices. Call Report data are a widely used source of timely and accurate financial data regarding a bank’s financial condition and the results of its operations. The data collected from the Call Report are used to monitor the condition, performance, and risk profiles of reporting institutions individually and as an industry.

FR Y-9C

The Consolidated Financial Statement for Holding Companies, also known as the FR Y-9C report, collects basic financial data from domestic bank holding companies (BHCs), savings and loan holding companies (SLHCs), U.S. intermediate holding companies of foreign banking organizations (U.S. IHCs), and securities holding companies (SHCs). Initiatives to reduce reporting costs for firms led to increases in the minimum asset size thresholds for reporting from $500 million to $1 billion, and from $1 billion to $3 billion effective March 2015 and September 2018, respectively. In addition, BHCs, SLHCs, U.S. IHCs, and SHCs meeting certain criteria may be required to file this report, regardless of size. However, when such BHCs, SLHCs, U.S. IHCs, or SHCs own or control, or are owned or controlled by, other BHCs, SLHCs, U.S. IHCs, or SHCs, only top tier holding companies must file this report for the consolidated holding company organization. The information contained in the report is as of the last day of each calendar quarter.

H.8—Assets and Liabilities of Commercial Banks in the United States

The H.8 release provides an estimated weekly aggregate balance sheet for all commercial banks in the United States. The H.8 release is primarily based on data that are reported weekly by a sample of approximately 875 domestically chartered banks and foreign-related institutions. Data
for domestically chartered commercial banks and foreign-related institutions that do not report weekly are estimated at a weekly frequency based on quarterly Call Report data.

**Notes on Data Sources and Terms**

**All Other Loans**

All other loans include loans to nondepository financial institutions, loans for purchasing or carrying securities, and loans that are not categorized and reported elsewhere in Schedule RC-C, part I of the Call Report (or Schedule HC-C of the FR Y-9C report).

**CAMELS Ratings**

Following an examination of a commercial bank, the examiner’s conclusions regarding the overall condition of the bank are summarized in a composite rating assigned in accordance with guidelines provided under the Uniform Financial Institution Rating system (CAMELS). The composite rating represents an overall appraisal of six key assessment areas (components) covered under the CAMELS rating system: Capital, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk.

In addition to and separate from the interagency Uniform Financial Institutions Rating System, the Federal Reserve assigns a risk-management rating to all SMBs. The summary, or composite, rating, as well as each of the assessment areas, including risk management, is delineated on a numerical scale of 1 to 5, with 1 being the highest or best possible rating. Thus, a bank with a composite rating of 1 requires the lowest level of supervisory attention while a 5-rated bank has the most critically deficient level of performance and therefore requires the highest degree of supervisory attention.

When appraising the six key assessment areas and assigning a composite rating, the examiner weighs and evaluates all relevant factors for downgrades and upgrades of supervisory ratings.

**Commercial Real Estate (CRE) Loans**

CRE loans are the sum of construction, land development, and other land loans; loans secured by multifamily residential properties; and loans secured by nonfarm nonresidential properties.

Note: H.8 commercial real estate data include loans secured by farmland.

**Common Equity Tier 1 (CET1)**

Common equity capital is currently evaluated using a CET1 capital ratio, which was introduced into the regulatory capital framework in 2014, consistent with international Basel III reforms. The CET1
capital ratio is defined as CET1 capital, which consists primarily of common stock and retained earnings, as a percent of risk-weighted assets. Advanced approaches institutions are required to report risk-weighted assets using an internal model-based approach and a standardized approach. An advanced approaches institution is subject to the lower of the ratios. CBOs that have opted into the community bank leverage ratio (CBLR) framework are not required to report a CET1 capital ratio and risk-weighted assets.

From 2006 through 2013, tier 1 common capital was used to measure common equity capital for all firms. In 2014, both tier 1 common capital (for non-advanced approaches firms) and CET1 capital (for advanced approaches firms) were used. From 2015 to present, CET1 capital has been used for all firms.

**Community Bank Leverage Ratio Framework**

The CBLR framework, which became effective January 1, 2020, allows qualifying CBOs to adopt a simple leverage ratio to measure capital adequacy. To qualify for the framework, a CBO must have less than $10 billion in total consolidated assets, have limited trading activity and off-balance-sheet exposure, meet the leverage ratio requirement, and not be part of an advanced approaches banking organization. The leverage ratio requirement for the CBLR framework was temporarily lowered to 8 percent beginning in the second quarter of 2020 through the remainder of calendar year 2020. The requirement was set at 8.5 percent for calendar year 2021 and returned to its previous 9 percent level beginning January 1, 2022.

The leverage ratio requirement for the CBLR framework is defined with respect to tier 1 capital as a percent of average total consolidated assets for the quarter as reported on Schedule RC-K on the Call Report or Schedule HC-K on Form FR Y-9C, as applicable. A CBLR banking organization with a ratio above the requirement will not be subject to other capital and leverage requirements.

**Consumer Loans**

Consumer loans include credit cards, other revolving credit lines, automobile loans, and other consumer loans (includes single payment and installment loans other than automobile loans, and all student loans).

**Credit Default Swap Spread**

The five-year credit default swap spread is the premium payment expressed as a proportion of the notional value of the debt that is being insured against default (typically $10 million in senior debt) in basis points. Data are based on daily polls of individual broker-dealers worldwide. Note that these broker quotes are typically not transaction prices. Data provided are for LISCC firms only.
Credit Loss Reserves

Credit loss reserves represent the allowance for credit losses on a bank’s portfolio of financial instruments carried at amortized cost (including loans held for investment, held-to-maturity debt securities, trade receivables, reinsurance receivables, and receivables that relate to repurchase agreements and securities lending agreements), net investment in leases as a lessor, and off-balance-sheet credit exposures not accounted for as insurance or derivatives. Credit loss reserves are recorded on a bank’s balance sheet.

Note: For banks that have not yet adopted the Current Expected Credit Loss (CECL) methodology, credit loss reserves represent the allowance for losses on a bank’s portfolio of loans and leases held for investment.

Delinquent Loans

Delinquent loans are the sum of 90+ days past due loans and nonaccrual loans.

Liquid Assets

Liquid assets are cash plus estimates of securities that qualify as high-quality liquid assets, as defined by the Board’s liquidity coverage ratio rule.

Loan Modifications under Section 4013 of the CARES Act

Section 4013 of the CARES Act (and further amendments by the Consolidated Appropriations Act, 2021) allowed financial institutions to suspend the requirements to classify certain loan modifications as troubled debt restructurings. To be an eligible loan under section 4013, a loan modification must be: (1) related to COVID-19; (2) executed on a loan that was not more than 30 days past due as of December 31, 2019; and (3) executed between March 1, 2020, and the earlier of (a) 60 days after the date of termination of the National Emergency or (b) January 1, 2022 (referred to as the “applicable period”).

Market Leverage Ratio

The market leverage ratio—defined as the ratio of the firm’s market capitalization to the sum of market capitalization and the book value of liabilities—can be considered a market-based measure of firm capital (expressed in percentage points). Data provided are for LISCC firms only.

Prime Brokerage

Some large banks offer a suite of services to large investment funds known as prime brokerage. These services include the ability to borrow securities or cash, cash management, access to research, and providing connections to potential investors. An important aspect of these services
is lending. The investment funds typically obtain loans secured by equities or other securities through the prime broker.

**Provisions**

Provisions represent the amount necessary to adjust credit loss reserves to reflect management’s current estimate of expected credit losses. Provisions are recorded as an expense item on the bank’s income statement.

Note: For banks that have not adopted the CECL methodology, provisions represent the amount needed to make the allowance for losses on a bank’s portfolio of loans and leases adequate to absorb management’s estimate of loan and lease losses.

**Residential Real Estate Loans**

Residential real estate loans refer to loans secured by 1 to 4 family residential properties, including: revolving, open-end loans secured by 1 to 4 family residential properties and extended under lines of credit; closed-end loans secured by first liens on 1 to 4 family residential properties; and closed-end loans secured by junior (i.e., other than first) liens on 1 to 4 family residential properties.

**Top Holder**

All data, unless otherwise noted, refer to the top-holder data. This population generally comprises top-tier Call Report filers and top-tier Y-9C filers, including depository SLHCs and foreign banking organizations. In instances where a top-tier holding company does not file the Y-9C, we combine financial data of subsidiary banks/thrifts to approximate the consolidated financial data of the holding company. Commercial and insurance SLHCs, cooperative banks, and nondeposit trust companies are excluded from the top-holder population.

**Tailoring of Regulation**

In October 2019, the Board adopted rules that tailor its regulations for domestic and foreign banks and holding companies to match their risk profiles more closely. The rules establish a framework that sorts institutions with $100 billion or more in total assets into four categories based on several factors, including asset size, cross-jurisdictional activity, reliance on weighted short-term wholesale funding (wSTWF), nonbank assets (NBA), and off-balance-sheet exposure (table A.1).
<table>
<thead>
<tr>
<th>Firm type</th>
<th>Category I: U.S. G-SIBs</th>
<th>Category II: &gt;=$700b total assets or &gt;=$75b in cross-jurisdictional activity</th>
<th>Category III: &gt;=$250b total assets or &gt;=$75b in NBA, wSTWF, or off-balance-sheet exposure</th>
<th>Category IV: Other firms with $100b to $250b total assets</th>
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<td>Ally Financial</td>
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<td>Goldman Sachs</td>
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<td>SVB Financial</td>
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<td>Foreign firms (standards vary by legal entity)</td>
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<td>Barcys US</td>
<td>BMO Financial</td>
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<td>BNP Paribas USA</td>
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<td>MUFG</td>
<td>DWS USA</td>
<td>HSBC North America</td>
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<td>UBS Americas</td>
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# Appendix B: Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AI</td>
<td>artificial intelligence</td>
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<td>API</td>
<td>Application Programming Interface</td>
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<td>BHC</td>
<td>bank holding company</td>
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<td>BSA</td>
<td>Bank Secrecy Act</td>
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<td>BSCA</td>
<td>Bank Service Company Act</td>
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<td>CA</td>
<td>Consumer Affairs</td>
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<td>CARES Act</td>
<td>Coronavirus Aid, Relief, and Economic Security Act</td>
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<td>CBLR</td>
<td>community bank leverage ratio</td>
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<td>CBO</td>
<td>community banking organization</td>
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<td>CDS</td>
<td>credit default swap</td>
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<td>CECL</td>
<td>current expected credit loss</td>
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<td>CET1</td>
<td>common equity tier 1</td>
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<td>CRE</td>
<td>commercial real estate</td>
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<td>C&amp;I</td>
<td>commercial and industrial lending</td>
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<td>FBO</td>
<td>foreign banking organization</td>
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<td>FDIC</td>
<td>Federal Deposit Insurance Corporation</td>
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<td>FFIEC</td>
<td>Federal Financial Institutions Examination Council</td>
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<td>HELOC</td>
<td>home equity line of credit</td>
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<td>IHC</td>
<td>intermediate holding company</td>
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<td>LBO</td>
<td>large banking organization</td>
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<td>LFBO</td>
<td>large and foreign banking organization</td>
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<td>LFI</td>
<td>large financial institution</td>
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<td>LISCC</td>
<td>Large Institution Supervision Coordinating Committee</td>
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<td>NBA</td>
<td>nonbank assets</td>
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<td>nonbank financial institution</td>
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<td>NIM</td>
<td>net interest margin</td>
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<td>NMB</td>
<td>state nonmember bank</td>
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<td>OCC</td>
<td>Office of the Comptroller of the Currency</td>
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<td>PPP</td>
<td>Paycheck Protection Program</td>
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<td>RBO</td>
<td>regional banking organization</td>
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<td>Abbr</td>
<td>Full Form</td>
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<tr>
<td>ROAA</td>
<td>return on average assets</td>
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<tr>
<td>ROE</td>
<td>return on equity</td>
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<td>RRE</td>
<td>residential real estate</td>
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<td>SHC</td>
<td>securities holding company</td>
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<tr>
<td>SLHC</td>
<td>savings and loan holding company</td>
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<td>SMB(s)</td>
<td>state member bank(s)</td>
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<td>SR</td>
<td>Supervision and Regulation</td>
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<tr>
<td>U.S. G-SIB</td>
<td>global systemically important bank in the United States</td>
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<tr>
<td>wSTWF</td>
<td>weighted short-term wholesale funding</td>
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