
Risk Review

2023



FDIC

FEDERAL DEPOSIT
INSURANCE CORPORATION



Risk Review

2023

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INTRODUCTION

The FDIC was created in 1933 to maintain stability and public confidence in the nation’s financial system. A key part of accomplishing this mission is the FDIC’s work to identify and analyze risks that could affect banks. The *Risk Review* summarizes the FDIC’s assessment of risks related to conditions in the U.S. economy, financial markets, and the banking industry. The analysis of the banking industry pays particular attention to risks that may affect community banks. As the primary federal regulator for most community banks, the FDIC has a unique perspective on these institutions.¹

The 2023 *Risk Review* provides an overview of banking conditions for 2022 through early 2023, including key developments that emerged from the stress in the banking sector in March 2023.² The failure of three large banking institutions in March and May highlighted certain risks to the banking sector.³

The *Risk Review* presents key risks to banks in five broad categories—credit risk, market risk, operational risk, crypto-asset risk, and climate-related financial

risk. The credit risk areas discussed are agriculture, commercial real estate, consumer lending, energy, housing, leveraged lending and corporate debt, nonbank financial institution lending, and small business lending. The market risk areas discussed are liquidity and deposits, and net interest margins and interest rate risk. The discussion of operational risk examines the potential negative impact to banks from cyber threats and illicit activity. Crypto-asset risk, a new section in the 2023 *Risk Review*, discusses the FDIC’s approach to understanding and evaluating crypto-asset-related markets and activities. Monitoring these risks is among the FDIC’s top priorities. The discussion of climate-related financial risk focuses on the physical risk of severe weather and climate events to the banking system.

Section 1 is an executive summary. Section 2 is an overview of economic, financial market, and banking industry conditions. Sections 3 through 7 include analysis of the key credit, market, operational, crypto-asset, and climate-related financial risks facing banks.

¹Unless otherwise noted, “community banks” are FDIC-insured institutions that meet the criteria for community banks that was developed for the [FDIC Community Banking Study](#), published in December 2012. Thresholds for certain criteria are adjusted upward quarterly and described in “Notes to Users” for the FDIC Quarterly Banking Profile. See, for example: page 35 of the [FDIC Quarterly Banking Profile, First Quarter 2023](#). Noncommunity banks are banks that do not meet these criteria.

²This report contains banking information available as of March 31, 2023. Unless otherwise noted, banking industry data are for FDIC-insured institutions from Consolidated Reports of Condition and Income (Call Reports), with data beginning in 1984. This report defines the pre-pandemic level as fourth quarter 2019, unless noted otherwise.

³For more information on the three bank failures that occurred between March and May 2023, see “[Remarks by Chairman Martin J. Gruenberg on “Oversight of Financial Regulators: Financial Stability, Supervision, and Consumer Protection in the Wake of Recent Bank Failures” Before the Committee on Banking, Housing, and Urban Affairs, United States Senate,](#)” May 18, 2023.

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SECTION 1

Executive Summary

The banking industry demonstrated resilience despite weaker economic conditions, sharply higher interest rates, high inflation, and financial market stress in early 2023. Stress in certain large banking institutions along with severe liquidity strains resulted in the failure of Silicon Valley Bank and Signature Bank in March and First Republic Bank in May.⁴ The FDIC, Federal Reserve, and Treasury took swift and decisive action to restore public confidence in the banking system, but banking conditions remained stressed and vulnerable to additional adverse market developments.

Weaker economic conditions and higher interest rates in 2022 continued through early 2023. The U.S. economy expanded at a markedly slower pace in 2022, with growth decelerating to less than half of the strong growth in 2021 and increased expectations for recession. Disruption to supply chains impeded economic growth in 2022. While these pressures abated and inflation moderated by early 2023, labor supply shortages remained. The economy has been supported by strong labor markets and continued growth in personal incomes, even as other sectors such as housing began to slow.

Interest rates rose sharply in 2022 as the Federal Reserve raised short-term interest rates to combat sustained high inflation. Treasury yields rose across all maturities. Shorter-term interest rates rose more than longer-term interest rates, causing the yield curve to invert in 2022 and remain inverted at most tenors through first quarter 2023. An inverted yield curve makes lending conditions more challenging for banks.

Financial market conditions tightened considerably starting in 2022 on rising interest rates, high inflation, and concerns over a potential recession. Bond markets faced several challenges as rising interest rates and bond market volatility weighed on both new issuances and performance. Stocks generally performed worse in 2022 than in any year since 2008. Although corporate earnings largely surpassed expectations in 2022, financial market conditions worsened throughout the year due to strong inflationary pressures and a tight labor market. The failure of three large banks, two in first quarter 2023 and one in the second quarter, introduced a renewed bout of stress primarily in the banking sector. Financial market conditions stabilized to some degree by the end of first quarter, but interest rates and funding costs remained elevated.

Despite these challenges and the market stress in early 2023, the banking industry demonstrated resilience, but industry performance moderated from 2022. Bank net income was roughly unchanged in first quarter 2023 after excluding accounting gains associated with the acquisition of two failed banks. Banking sector profitability moderated in 2022 after strong gains in 2021 as increased provision and noninterest expenses offset higher net interest income. Net interest margins (NIMs) improved in 2022 as interest rates rose, but NIMs began to decline in first quarter 2023 as higher funding costs offset increased asset yields on an aggregate basis. Deposit outflow from the banking industry, which started in mid-2022, continued at a faster rate in first quarter 2023. However, asset quality metrics for the banking industry overall remained favorable through first quarter 2023, and the industry remained well capitalized. After surging in 2022, the volume of unrealized securities losses moderated in first quarter 2023 but remained elevated.

⁴The [banking failures](#) included Silicon Valley Bank of Santa Clara, CA on March 10, 2023; Signature Bank of New York, NY on March 12, 2023; and First Republic Bank of San Francisco, CA on May 1, 2023.

Key Risks to Banks

Credit Risks: Asset quality remained generally favorable as of first quarter 2023 despite modest deterioration. Weaker economic conditions and higher interest rates may challenge bank loan portfolios, including credit card, commercial and industrial, residential real estate, and commercial real estate (CRE) loans.

- **Agriculture:** The agricultural sector had another strong year with record profits despite widespread drought conditions. Loan growth and higher loan yields boosted farm bank earnings in first quarter 2023 following a down year in 2022. Stronger farm sector financial conditions led to improved farm bank asset quality through first quarter 2023, but higher interest rates and production costs pose challenges in 2023.
 - **Commercial Real Estate:** Banks have substantial exposure to CRE lending as CRE loans comprised a quarter of total loans held by the banking industry as of first quarter 2023. CRE loans as a share of total industry assets have grown and approached their 2009 peak. Most CRE property types performed well in 2022, but some challenges continued into 2023, particularly among office properties. With a structural decline in office demand and weak rent growth, some borrowers may have difficulty refinancing. Longer-term leases, which are prevalent in the office sector, helped to insulate office properties from reduced occupancy earlier in the pandemic, but more office leases are scheduled to expire over the next three years in some large markets. While aggregate banking industry CRE asset quality metrics remained favorable in first quarter 2023, challenges to loan performance include higher interest rates, difficulty refinancing particularly for loans secured by some office properties, and economic uncertainty.
 - **Consumer Lending:** Consumer debt increased, owing primarily to strong growth in credit card balances. While a strong labor market supported consumer incomes, consumers faced higher inflation that constrained budgets. Consumer savings declined, and declines in equity prices pressured some consumer balance sheets.
- Potential signs of consumer loan problems emerged at banks, as the total past-due rate on credit cards and auto loans rose. While asset quality remained generally favorable, trends in consumer loan performance could deteriorate in 2023 if the labor market or economic growth weakens. Auto loans in particular showed concerning asset quality trends that may worsen if auto prices normalize from high levels.
- **Energy:** Energy prices softened during the second half of 2022 as oil prices receded from earlier highs and were more stable through early 2023. Despite the decline in prices, the energy industry remained profitable, supporting employment in energy-concentrated states. Bank loan exposure to oil and gas firms continued to decline in 2022 from 2021 levels. Community bank asset quality in energy-concentrated states continued to improve through first quarter 2023. Despite strength in 2022, the outlook for conditions in the energy sector weakened by year-end and remained uncertain in early 2023.
 - **Housing:** The housing market began to slow in mid-2022 as mortgage rates rose sharply. Through early 2023, home price appreciation declined from 2022 highs. But home prices nationally remained elevated and above the pre-pandemic level, aided by strong demand and a limited supply of homes for sale. High home prices and increased mortgage rates continued to reduce the affordability of homes, particularly for first-time home buyers. With the sharp rise in long-term mortgage rates, mortgage originations declined last year and through first quarter 2023, but banks reported higher residential mortgage loan balances and increased residential construction and development lending. Asset quality metrics for residential mortgage loans remained favorable, but early signs of potential credit deterioration have emerged.

- **Leveraged Lending and Corporate Debt:** Corporate borrowing conditions deteriorated in 2022 and through first quarter 2023 as high inflation, rising interest rates, and an economic slowdown challenged corporate borrowers. Corporate debt issuance slowed sharply. Issuance of leveraged loans, a subset of the corporate debt market, declined normalizing from the record issuance in 2021. Slowing economic growth and continued high interest rates could weigh on corporate debt markets and pose credit risk for the banking industry, while limited near-term corporate debt maturities should mitigate some risks. Rising corporate defaults would affect holders of corporate debt securities, including banks.
- **Nonbank Financial Institution Lending:** Bank lending to nonbank financial institutions (NBFIs) continued to increase, led by growth in the larger banks. Community bank exposure to nonbank entities, primarily in the form of line of credit facilities to nonbank mortgage lenders, remained limited and declined through first quarter 2023, according to supervisory observations. The banking industry is increasingly exposed to the broad and varied risks from nonbank business activities. Asset quality of NBFIs loans remained favorable in first quarter 2023, but banks remain vulnerable to adverse developments in nonbank institutions.
- **Small Business Lending:** Small business conditions weakened from high inflation and labor market shortages. Conditions varied across industries as consumer spending patterns shifted toward services. Small business loans declined in 2022, primarily reflecting the winding down of lending under the Paycheck Protection Program. While asset quality remained sound, small businesses reported concerns about the weaker outlook, which may be a source of risk for banks during 2023.

Market Risks: Market risks were primarily related to the effects of higher interest rates. Deposit outflows along with high levels of unrealized losses could pressure liquidity for some banks in 2023. The banking industry benefited from strong loan growth and higher NIMs in 2022, but higher funding costs reduced NIMs in early 2023.

- **Liquidity and Deposits:** Higher unrealized losses made securities portfolios a less effective liquidity source. Deposit levels continued to grow among community banks in 2022 through first quarter 2023 despite the overall decline in deposits for the banking industry. Community bank loan growth remained strong and outpaced deposit growth, causing liquid assets to contract and wholesale funding to increase. High interest rates remain a significant source of liquidity risk for banks.
- **Net Interest Margins and Interest Rate Risk:** Higher interest rates initially supported higher NIMs, particularly as loan growth strengthened. These trends began to reverse in first quarter 2023, as funding pressures rose and loan growth slowed. The sharp rise in interest rates in 2022 caused widespread depreciation in securities portfolios, and banks with a higher share of long-term assets reported higher depreciation in investment portfolios and lower growth in NIMs than other institutions.

Operational Risk: Operational risks, including cybersecurity risks and risks related to illicit financial activity, remained elevated across the banking industry.

- Operational risk remains one of the most critical risks to banks. Geopolitical events continue to increase the likelihood of cyber attacks on banks. The banking industry's software infrastructure remains vulnerable to cyber attacks including ransomware attacks and threats against third-party service providers. Robust customer due diligence policies and anti-money laundering and countering the financing of terrorism programs reduce the U.S. financial system's susceptibility to illicit financial activity risks.

Crypto-Asset Risk: Crypto-assets present novel and complex risks that are difficult to fully assess.

- The crypto-asset sector experienced significant market volatility in 2022. Growth in the crypto-asset industry corresponded with an increasing interest by some banks to engage in crypto-asset activities. The FDIC has been generally aware of the rising interest in crypto-asset-related activities through its normal supervision process. However, as this interest has accelerated, the FDIC determined that more information was needed to better understand the risks associated with these activities. The FDIC, in coordination with the other federal banking agencies, continues to closely monitor crypto-asset-related activities of banking organizations. As warranted, the FDIC will issue additional statements related to engagement by banking organizations in crypto-asset-related activities. The FDIC also has developed processes to engage in robust supervisory discussions with banking organizations regarding proposed and existing crypto-asset-related activities and provide case-specific supervisory feedback.

Climate-Related Financial Risk: Climate-related financial risk includes physical risk and transition risk. The *Risk Review* is a retrospective look at risks, and the discussion in this section focuses on physical risk from severe weather and climate events.

- In 2022, severe weather and climate-related events included three hurricanes, an extensive wildfire, and a prolonged drought in the West. Estimated damages from severe weather and climate events in 2022 were among the most costly. The FDIC is expanding efforts to understand climate-related financial risk in a thoughtful and measured manner that emphasizes a risk-based approach and collaboration with other supervisors and the industry. The FDIC recognizes that risk management practices in this area are evolving and will continue to encourage banks to consider climate-related financial risk in a manner that allows them to prudently meet the financial services needs of their communities.

SECTION 2

Overview of the Economy, Financial Markets, and Banking Industry

Economy

- The U.S. economy continued to expand in 2022 and first quarter 2023 but at a notably slower pace than in 2021, and recession concerns increased.
- Labor markets remained strong, with higher growth in payroll employment and wages, but showed signs of moderating late in 2022 and into 2023.
- Inflationary pressures increased and supply chain issues continued, challenging businesses and consumers.
- Monetary policy tightened in response to inflation; higher market interest rates may weaken economic conditions and pose risks for banks.

Economic growth slowed markedly in 2022, but the economy avoided a recession. Full-year growth was 2.1 percent in 2022, down from 5.9 percent in 2021. The slowdown reflected a contraction in real gross domestic product (GDP) in the first and second quarters of 2022 (Chart 1). Despite these declines, an economic recession was not officially determined as other economic indicators were strong.⁵ The contraction during the first half of 2022 was due primarily to declines in exports and government spending. Inventory investment, mainly in retail trade and residential investment, also declined during the year. Economic growth turned positive in the second half of 2022 supported by government spending and a strong rebound in exports, particularly in energy. Continued growth in consumer spending also helped support economic growth. After peaking in third quarter 2022, economic growth slowed through first quarter 2023, when GDP increased at an annual rate of 1.3 percent. Consumer spending rose despite continued high inflation, while inventories and residential fixed investment declined. During 2022, professional forecasters increased the odds

of a recession in the next 12 months, despite the economy's positive growth in the third and fourth quarters. The odds of a recession beginning in 2023 remained elevated.⁶

Supply chain bottlenecks continued to impede economic growth in 2022. While U.S. manufacturing output continued to grow since pandemic-related restrictions eased in 2021, producers continued to experience backlogs and long delivery times in 2022. These conditions resulted in higher producer prices, which contributed to increased prices overall last year. Other countries also continued to experience supply chain disruptions, including lockdowns in China that had ripple effects throughout global production chains. Slowing global demand in the final months of 2022 brought backlogs and delivery times for domestic production closer to historical norms. Conditions improved further in first quarter 2023 as shipping costs and production delays continued to fall.

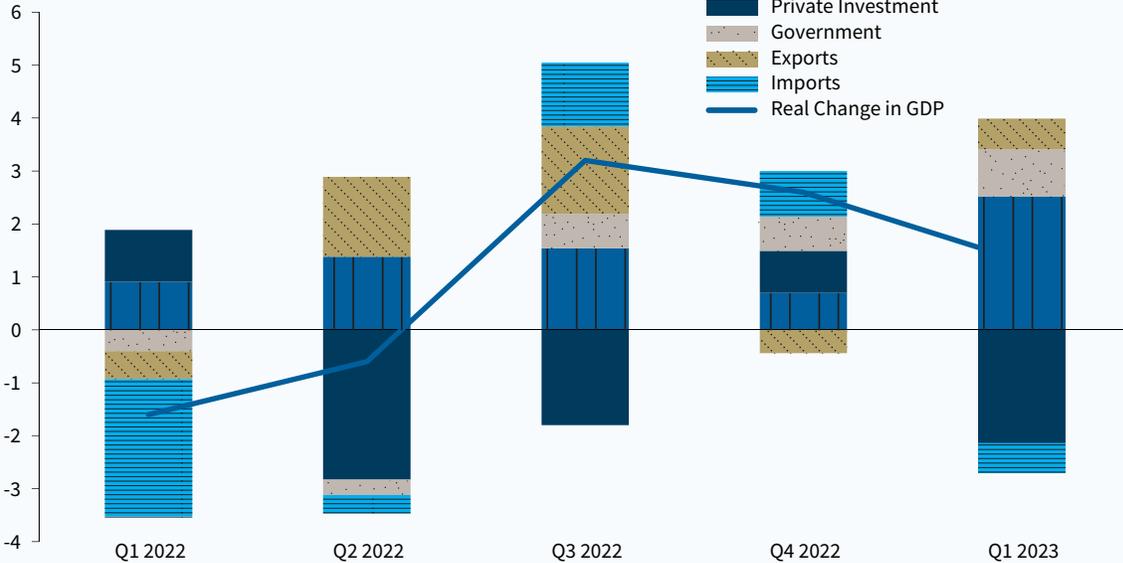
⁵Recessions in the United States are characterized by a broad-based decline in activity as determined by the National Bureau of Economic Research Business Cycle Dating Committee and include indicators for the labor market, consumer and business spending, industrial production, and incomes.

⁶Blue Chip economic forecasts included a special question on the odds of a recession from June to September that increased every month.

CHART 1

After Contracting in the First Half of 2022, Growth Resumed at a Lower Pace

Contribution to Change in GDP
Percent



Source: Bureau of Economic Analysis (Haver Analytics).
Note: Data are quarterly through first quarter 2023.

The labor market remained tight, and many industries continued to face labor market shortages last year as job openings reached an all-time high in first quarter 2022. While job openings remained historically elevated through first quarter 2023, labor market tightness began to ease. The ratio of unemployed workers to job openings remained below one and near historic lows, suggesting there are not enough workers available to fill all open positions in the economy (Chart 2). The labor force participation rate edged up but remained below its pre-pandemic level in each month of 2022 and the first three months of 2023 due to pandemic-related factors and retirements.⁷ The unemployment rate remained near historic lows during 2022 and through the first quarter of 2023, one of the many signs of continued labor market tightness. Payroll job growth remained solid, though the monthly average declined throughout last year. In July 2022, payroll employment surpassed the peak set in February 2020 before the onset of the COVID-19 recession. The pace of job gains varied among specific industries with some ending 2022 well above pre-pandemic employment levels

from March and April 2020. Payroll growth continued in first quarter 2023, although at a slower pace than one year earlier. Wage growth remained strong in 2022 and broadened across industries, but it subsided in the second half of the year. Wage growth slowed in first quarter 2023 but remains above levels consistent with the Federal Reserve's target inflation, feeding into inflationary pressures.

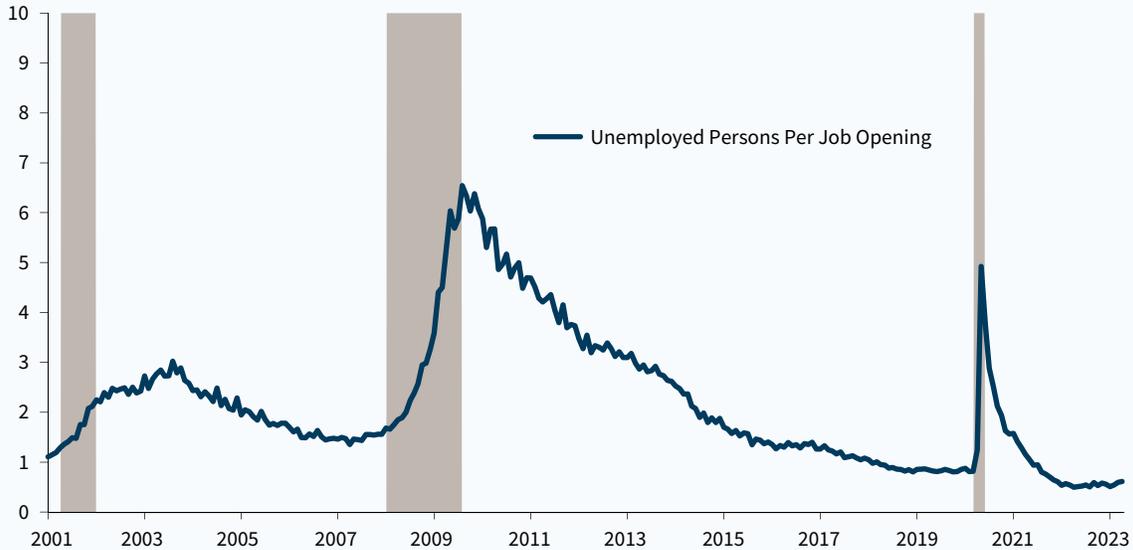
Inflationary pressures continued to increase in the first half of 2022, reaching the highest levels in decades, but moderated through early 2023 partly due to lower energy prices (Chart 3). The consumer price index (CPI) peaked at 9.1 percent in June 2022 and recorded the largest 12-month increase since November 1981. Inflation in the early months of 2022 was driven by an acceleration in food and energy prices. Energy prices remained high into early summer 2022 with gasoline peaking above \$5 a gallon nationally before falling in the second half of the year. Annual core CPI, which excludes the more volatile categories of food and energy, also peaked last June at 5.9 percent. Increasing rents and rent equivalents

⁷The pre-pandemic level is defined as February 2020 for this section on the economy.

CHART 2

Labor Markets Remain Tight and the Number of Unemployed Persons Per Job Opening Is Near Historic Lows

Number of Unemployed Persons Per Job Opening

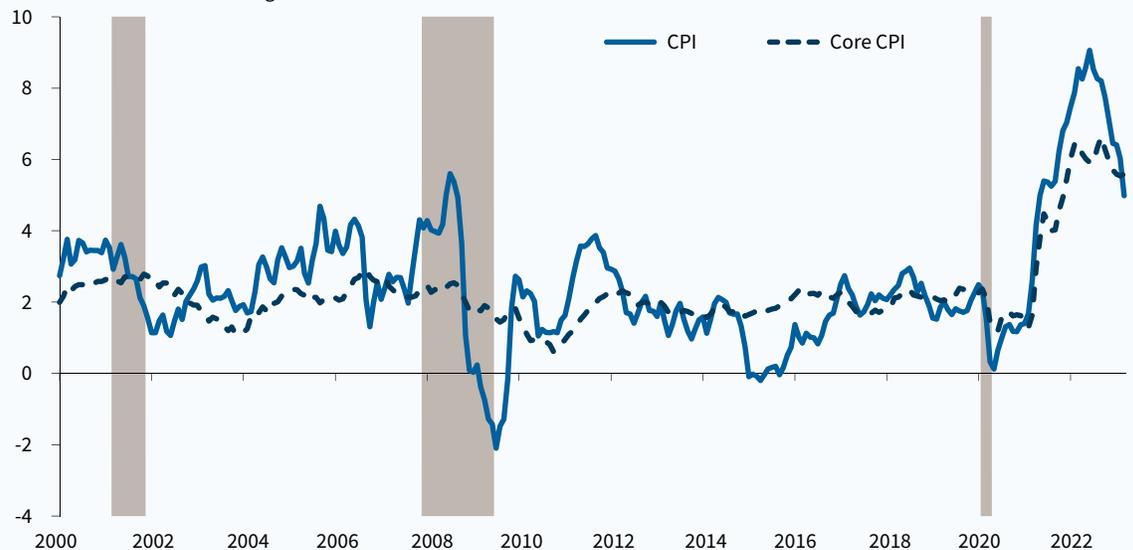


Source: Bureau of Labor Statistics (Haver Analytics).
Note: Shaded areas indicate recession. Monthly data as of March 2023.

CHART 3

Both Headline and Core Consumer Price Index Peaked in Mid-2022 at Multi-Decade Highs and Remain Elevated

Year-Over-Year Percent Change

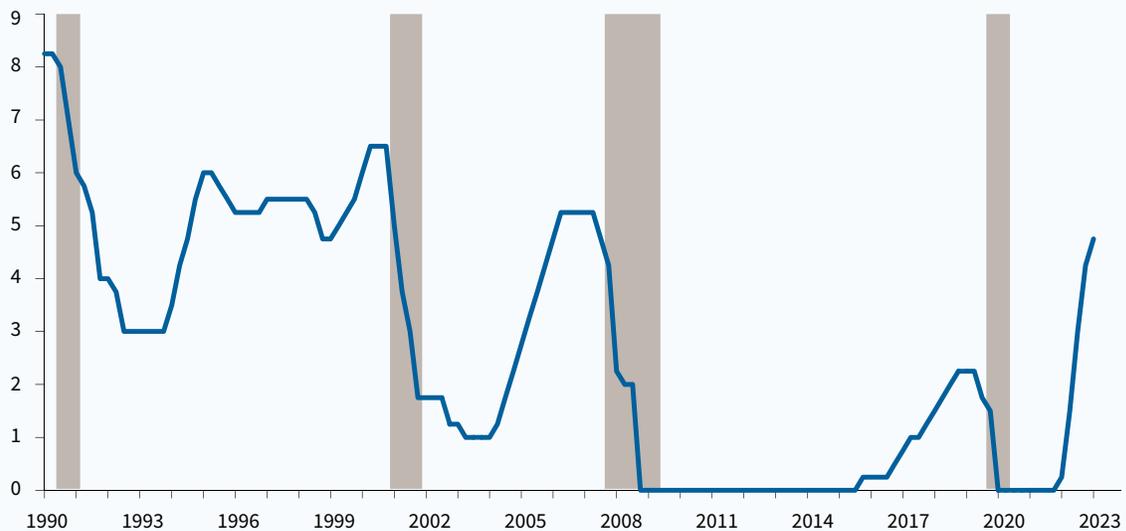


Source: Bureau of Labor Statistics (Haver Analytics).
Note: Shaded areas indicate recession. Monthly data as of March 2023.

CHART 4

The Federal Reserve Began Increasing the Federal Funds Rate in March 2022 and Hiked Rates at Each Subsequent Meeting

Federal Funds Target Rate
Percent



Source: Federal Reserve Board (Haver Analytics).

Note: Data point to lower limit of federal funds target rate. Quarterly data as of March 2023.

in the second half of the year added to inflationary pressures for shelter, a core component of CPI. Prices for many other categories that contributed the most to inflation moderated in first quarter 2023. However, inflation remained well above the Federal Reserve's 2 percent target in early 2023.

In response to sustained high inflation and a strong labor market, the Federal Reserve Federal Open Market Committee (FOMC) tightened monetary policy at seven of eight FOMC meetings held in 2022—every meeting but January. The 75 basis point hike in the federal funds rate in June 2022 was the largest one-month increase since 1994 (Chart 4). The federal funds rate ended December 2022 in a range of 4.25 to 4.5 percent, up from 0 to 0.25 percent at the start of the year. Rate hikes continued in February and March 2023 and ended first quarter in a range of 4.75 to 5.0 percent. The FOMC also ceased net asset purchases in early March 2022 and began reducing its

securities holdings in June, which further contributed to tighter financial conditions. The Federal Reserve communicated its commitment to doing whatever necessary to restore price stability and maintain a strong labor market.

As the federal funds rate increased, shorter-term interest rates rose more than longer-term interest rates, and interest rate spreads between shorter- and longer-dated bonds fell. The Treasury yield curve inverted in July 2022 and remained inverted at most tenors for the rest of 2022 and into 2023. An inverted yield curve often heightens discussion of whether a recession will occur soon, as the yield curve has inverted before almost every recession since World War II. Even without a recession, an inverted yield curve makes lending conditions more challenging for banks.

Prolonged inflationary pressures and higher interest rates challenge economic conditions and may pose risks to banks. While higher interest rates may improve earnings for some lenders, weaker economic conditions could slow demand for business and consumer credit and impede asset quality. Industries vulnerable to higher interest rates, such as autos and housing, could weaken; new business formations could slow; and household and business

spending could decline. As highlighted in the FDIC's [2022 Risk Review](#), higher inflation could pose credit risks to some lenders if borrowers cannot stay current on loans due to higher prices, particularly if household incomes do not keep pace with rising expenses or if businesses face declining sales due to a reduction in consumer spending. These conditions may contribute to a more challenging operating environment for banks throughout 2023.

Financial Markets

- Financial market conditions began to tighten considerably in 2022 as interest rates rose sharply and concerns about the economic outlook grew.
- Bond markets faced several challenges in 2022 as higher interest rates and volatility weighed on both new issuances and performance. While bond market volatility persisted in early 2023, performance improved and issuance picked up relative to much of 2022.
- Equity market volatility rose in 2022, and equity prices declined for banking stocks in early 2023.
- While financial market conditions contributed to banking stress in early 2023, broader financial markets were largely unaffected by bank failures.
- Financial market conditions stabilized to some degree by the end of first quarter 2023, but interest rates and funding costs remained elevated.

Interest rates began to rise sharply in 2022, exceeding market expectations. Several major central banks increased interest rates to combat inflation in 2022, with the Federal Reserve raising short-term interest rates more aggressively than at any time in the past 40 years. The 425 basis point increase in the target range for the federal funds rate in 2022 was far higher than the 100 basis point increase markets expected at the beginning of the year (Chart 5). Along with rate increases, the Federal Reserve began to significantly reduce its balance sheet in June 2022, and the Federal Reserve's asset holdings fell \$364 billion by the end of the year. The reduction in the Federal Reserve's asset purchases further contributed to rising market interest rates.

Rates across the U.S. Treasury yield curve increased, and portions of the curve inverted in 2022. Treasury yields rose sharply in 2022, with the two-year Treasury yield rising 368 basis points to 4.41 percent and the ten-year yield rising 236 basis points to 3.88 percent (Chart 6). Other maturities on the Treasury yield curve increased at a similar rate. Much of the yield curve was inverted in the second half of 2022, meaning yields on shorter-term securities were higher than yields on longer-term securities. The two-year Treasury yield was higher than the ten-year yield from July through the end of the year, exceeding the ten-year yield by as much as 84 basis points in early December and by 107 basis points on March 8, 2023. Real interest rates, which exclude the component of yields that reflect inflation expectations (as measured by yields on Treasury Inflation-Protected Securities), also moved significantly higher in 2022.

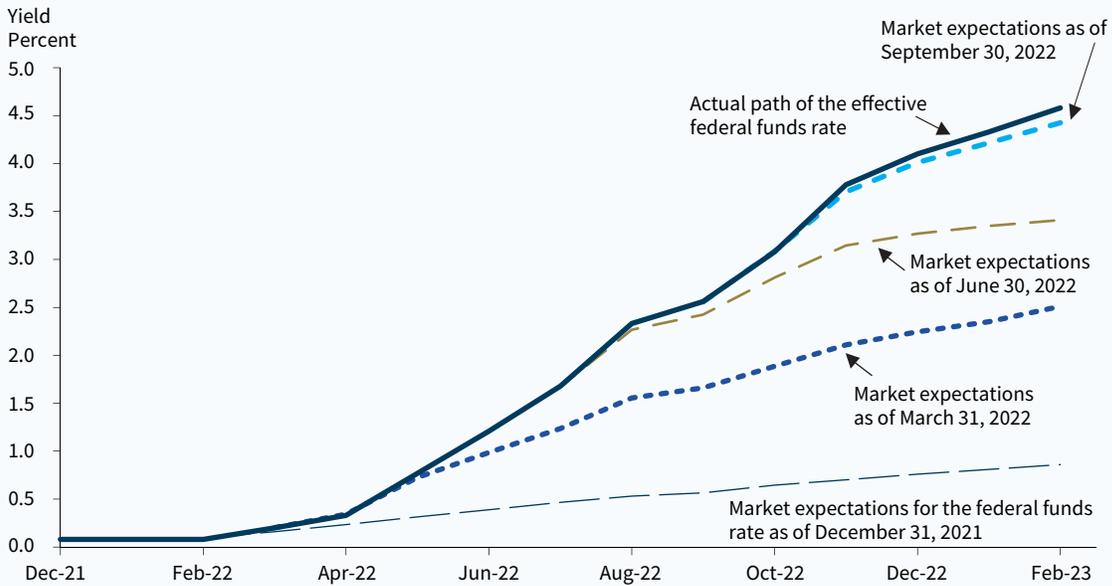
Despite federal funds rate increases that continued through at least May 2023, rates across U.S. Treasury yields did not sustain a comparable increasing trend from October 2022 through May 2023. Yields decreased during the market stress that occurred in March 2023. Treasury volatility heightened in the spring of 2023 as traders weighed expectations for persistent inflation, which tends to increase rates, against expectations for an economic slowdown, which has the opposite effect.

Rising interest rates, inflation, and a potential recession all contributed to financial market stress in 2022. Financial asset prices dropped substantially across most asset types in 2022. Globally, stocks and bonds lost more than \$30 trillion in a year marked by sustained periods of heightened volatility. Even commodity prices, which initially added to inflation and caused interest rates to rise, fell significantly in the second half of 2022. Prices of many financial assets began to rebound in fourth quarter 2022 and into first quarter 2023. Overall, financial market conditions stabilized to some degree by the end of first quarter 2023, but interest rates and funding costs remained elevated.

The corporate bond market began to face several challenges in 2022 as rising interest rates and bond market volatility weighed on both new issuances and performance. While bond market volatility persisted in early 2023, performance improved and issuance picked up relative to much of 2022. Investment grade issuance fell 16.2 percent year over year in 2022 on a dollar basis, down for the second consecutive year. High-yield bond issuance fell 77.0 percent year over year, down from record issuance in

CHART 5

The Actual Path of the Effective Federal Funds Rate in 2022 Exceeded Market Expectations



Sources: Bloomberg and Federal Reserve (Federal Reserve Economic Data).
Note: Market expectations for the federal funds rate are derived from the 30-day federal funds futures contract price in which the implied rate is 100 minus the futures price. Data are monthly through February 2023.

CHART 6

Interest Rates Across the U.S. Treasury Curve Increased in 2022



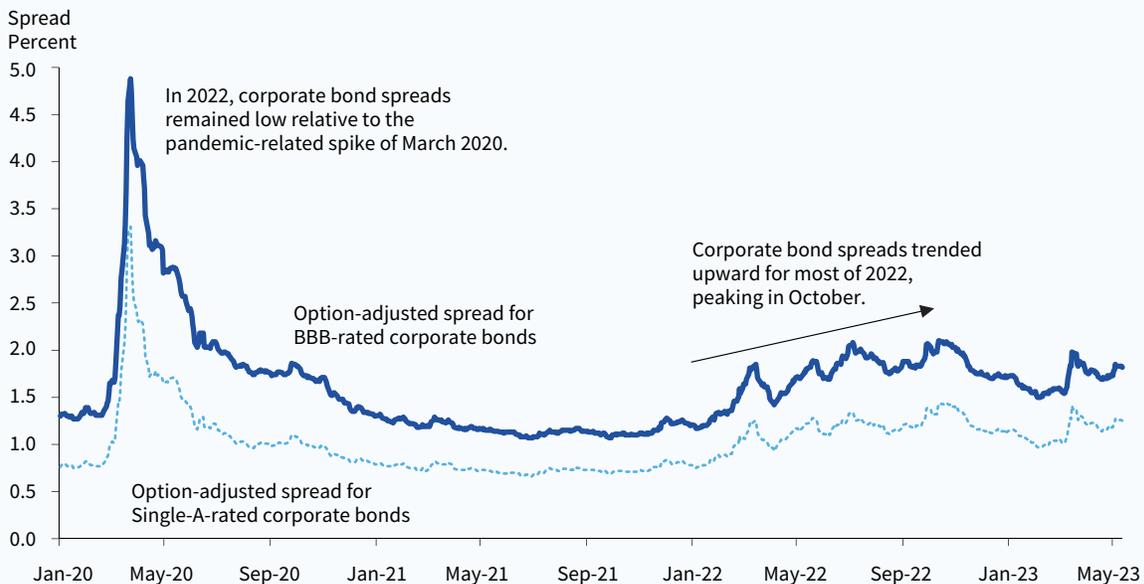
Source: Federal Reserve Board (Federal Reserve Economic Data).
Note: Data are daily through May 11, 2023.

2021, as recessionary fears and rising interest rates dampened investor appetite. Yields on corporate bonds rose significantly in 2022, resulting in negative investment performance for both investment grade and high-yield corporate bonds. Investment grade bonds produced a total return of negative 15.4 percent in 2022, and high-yield bonds managed a total return of negative 11.2 percent.⁸ Corporate bond spreads also rose. The ICE BofA Single-A U.S. Corporate Index Option-Adjusted Spread rose 36 basis points, and the BBB U.S. Corporate Index Option-Adjusted Spread rose 51 basis points during the year (Chart 7). Despite rising spreads, default rates for corporate bonds did not worsen in 2022 and ended the year at 2.0 percent, well below the 4.7 percent long-term average. Continued consumer spending, a low unemployment rate, solid corporate earnings, and ample liquidity helped keep default rates low over the year. In first quarter 2023, corporate bond issuance increased relative to fourth quarter 2022 but was down 14.9 percent year over year.

The municipal bond market experienced a sell-off and closed 2022 at \$4.0 trillion outstanding, roughly the same size as in 2021. Municipal bond prices decreased in 2022, with the Bloomberg Municipal Bond Index down 8.5 percent for the year. New issuances for municipal bonds declined 21.3 percent in 2022 from 2021 issuance levels. Higher interest rates created significant challenges for raising new debt or refinancing existing debt. A decline in taxable municipal bond sales, which are particularly sensitive to higher interest rates, also drove the drop in issuances. Municipal bond funds experienced significant outflows in 2022 as municipal retail investors pulled their money to stem losses. In fourth quarter 2022, the lack of new issuances and easing concerns over inflation helped to soften some of the selling pressures, resulting in the municipal bond market recovering more than a third of its losses by year-end. Despite a recovery in prices, municipal bond issuance remained subdued in first quarter 2023.

CHART 7

The Spread Between Corporate Bond Yields and Benchmark Interest Rates Increased in 2022



Source: ICE Data Services, LLC (Federal Reserve Economic Data).
Note: Data are daily through May 12, 2023.

⁸Investment grade bond results as measured by the ICE BofA U.S. Corporate Index. High-yield bond results as measured by the ICE BofA U.S. High Yield Index.

Commodity prices moderated in 2022 after rising earlier in the year and continued to decline in first quarter 2023. Commodity prices increased 8.7 percent in 2022 but were volatile early in the year. Driven by booming demand, commodity prices were already rising in 2022, and fears of supply shortages from the war in Ukraine caused the trend to accelerate. Commodity prices increased 45.9 percent through early June 2022 but declined 25.5 percent from June 9 through the end of last year. The price pattern of peaking in the first half of 2022 and declining through the first quarter 2023 was consistent across a variety of commodities, including oil, grains, industrial metals, and lumber.

Stocks generally performed worse in 2022 than in any year since 2008 but began to rebound in October 2022 and continued on an upward trend through first quarter 2023. The Standard and Poor's (S&P) 500 Index ended 2022 with a total return of negative 18.1 percent. The Dow Jones Industrial Average reported a total return of negative 6.9 percent, and the NASDAQ reported a total return of negative 32.5 percent. Although corporate earnings largely surpassed expectations in 2022, financial market conditions worsened throughout the year due to inflationary pressures and a tight labor market. Stocks largely rebounded in early 2023, while stock market volatility declined.

Bank stock performance was similar to the broader market in 2022 despite higher interest rates, but bank stocks declined in early 2023 following bank failures. The KBW Bank Index, which consists of 24 national U.S. money centers and regional banks, ended 2022 with a total return of negative 21.4 percent. The KBW Bank Index lagged the S&P 500 for most of the year despite starting the year strong. The S&P Financials Sector Index, which reflects 67 constituents of the S&P 500, had a total return of negative 10.5 percent. The S&P Financials Sector Index mirrored the performance of the S&P 500 for most of 2022 but outperformed during the fourth quarter's bear market rally.

Bank stock performance diverged from the broader market following the failures of Silicon Valley Bank and Signature Bank of New York in March 2023. The KBW Bank Index had a total return of negative 25.1 percent year-to-date through May 15, 2023, while the S&P Financial Sector Index had a total return of negative 5.6 percent over the same period. Some bank stock prices declined in excess of 50 percent from early March through early May. While broader financial market conditions stabilized in early 2023, financial market conditions for banks remained tight.

Banking Industry

- The banking industry was resilient in first quarter 2023, with high net income even after a period of stress and adjusting for one-time acquisition gains.
- Net interest income and net interest margin (NIM) substantially increased in 2022 as market rates rose, but higher funding costs amid shifts in deposit flows and intensified competition for deposits led to a decline in NIM in first quarter 2023.
- Community banks reported lower net income in first quarter 2023 from the prior quarter. Despite NIM compression, community banks continued to report a higher NIM than the banking industry overall.
- Unrealized losses on securities portfolios declined in first quarter 2023 from 2022 highs but remained a significant risk to bank liquidity and access to funding sources.
- After strong loan growth across several portfolios in 2022, loans held by the banking industry declined slightly in first quarter 2023.
- Despite modest weakening, overall asset quality metrics remained favorable through first quarter 2023; however, the banking industry continued to face key downside risks.

Despite the period of stress in early 2023, the banking industry was resilient.⁹ Net income for the first quarter remained high even after excluding accounting gains associated with the acquisition of two failed banks during the quarter (Chart 8). Quarterly net income in first quarter 2023 grew 16.9 percent from fourth quarter 2022; excluding the effects on incomes of the acquirers of the two failed banks, quarterly net income for the industry was roughly the same as in the prior quarter. Strong growth in noninterest income more than offset the effects of lower net interest income and increased noninterest expense.

Net income for community banks declined 4.2 percent in first quarter 2023 from the prior quarter in large part due to lower net interest income and noninterest income. These declines more than offset the benefit of decreased provision and lower noninterest expenses. Community bank quarterly NIM improved on an annual basis in first quarter 2023 but declined from the prior quarter. The rising cost of deposits quarter over quarter more than offset an increase in yields on assets and constrained community bank NIM. In

first quarter 2023, net income reported by community banks increased 6.1 percent from the year-earlier quarter, driven by higher net interest income. Higher interest rates benefited community bank earnings through most of 2022 before the meaningful rise in funding costs during first quarter 2023, which more than offset yield gains.

Banking industry results for first quarter 2023 included only the first few weeks of the banking stress that began in early March and continued after the quarter's end. As a result, this year's first quarter earnings did not fully capture the effects of the industry's response to that stress, which continued into the second quarter. Changes in flows and competition for deposits, as well as lending conditions and reliance on more expensive funding sources, will influence banking conditions through the rest of 2023.

Net income for the banking industry in 2022 was lower than in 2021, as higher provision expense and noninterest expense offset improved net interest income.¹⁰ Industry net income fell 5.8 percent to \$263.0 billion in 2022 but remained above pre-

⁹ On March 8, 2023, Silvergate Bank announced its intent to self-liquidate. On March 10, 2023, Silicon Valley Bank (SVB) was closed by the California Department of Financial Protection and Innovation (CADFPI). Contagion effects from SVB's failure began to spread through traditional media, social media, and short sellers to other banks with perceived similar risk characteristics, notably those with high levels of uninsured deposits, concentrations of customers in the venture capital and tech industries, and high levels of unrealized losses on securities. Contagion effects initially manifested in large declines in stock prices and then in deposit outflows at certain other banks. For two of these banks—Signature Bank and First Republic Bank—deposit outflows became deposit runs and exposed other weaknesses that could not be overcome, leading to their failure. On March 12, 2023, Signature Bank of New York was closed by the New York State Department of Financial Services (NYSDFS). On May 1, 2023, First Republic Bank was closed by the CADFPI.

¹⁰ Noninterest expense rose 5.4 percent, primarily due to rising labor costs and higher advertising and marketing expenses, as noninterest income fell 3.1 percent due to lower net gains on loan sales.

pandemic averages (Chart 8).¹¹ Provision expense, the amount set aside by institutions to protect against future credit losses, rose \$82.6 billion, from negative \$31.0 billion in 2021 to positive \$51.6 billion in 2022. Provision expenses increased as loans grew and concerns about the economic outlook increased. Pre-provision net revenue, a measure of core profitability, rose 21.7 percent because of substantial growth in net interest income.¹² In 2022, both pre-provision net revenue and net interest income reached record highs since data collection began in 1984.

Community banks also reported marginally lower net income in 2022, down 0.3 percent to \$30.4 billion, as higher net interest income did not offset lower noninterest income, higher noninterest expense, realized losses on securities, and higher provision expense.¹³ Similar to the banking industry overall, pre-provision net revenue among community banks rose on strong growth in net interest income.

Rising interest rates contributed to record gains in NIM for both the banking industry and community banks in 2022, but NIMs compressed in first quarter 2023 as competition for deposits increased funding costs. Net interest income grew 20.0 percent in 2022 as strong growth in interest income outpaced growth in interest expense. In 2022, the full-year industry-wide NIM expanded 41 basis points to 2.95 percent, the largest annual expansion since data collection began in 1984 (Chart 9). Net interest income grew 12.9 percent for community banks, while full-year NIM rose 17 basis points to 3.45 percent, the largest annual expansion for community banks since 1992. In first quarter 2023, community banks continued to report higher NIMs than the overall banking industry.

Significant growth in net interest income also drove the reduction in the efficiency ratio for the banking industry to 53.02 in first quarter 2023, down from 57.71 in 2022 and 61.15 in 2021.¹⁴ From a year earlier, the industry's NIM rose 77 basis points in the first quarter but fell 7 basis points from fourth quarter 2022. Despite the decline, the banking industry's NIM of 3.31 percent in first quarter 2023 remained above its

pre-pandemic average of 3.25 percent. In first quarter 2023, NIM declined for banks of all asset size groups from the prior quarter, except banks with total assets less than \$100 million. The decline in NIM reflects the cost of deposits (i.e., the interest banks pay on deposits) rising at a faster rate than yields on loans (i.e., the interest banks charge on loans), a reversal of the trend experienced in 2022 when yields on loans increased at a faster rate than cost of deposits. During first quarter 2023, banks reported increased competition for deposit funding from banks and other sources. There was also a shift in deposits from transaction and savings accounts, typically lower-yielding accounts, to time deposits, such as certificates of deposit, which historically pay higher interest rates than traditional savings accounts.

Total industry deposits declined for the fourth consecutive quarter through first quarter 2023. In 2022, deposits fell 2.5 percent, the largest year-end decline on record. While this reduction offset to some extent the unprecedented growth in deposits reported during the pandemic, total deposits remained elevated at the end of last year. The banking stress experienced in first quarter 2023 accelerated the outflow of deposits from the banking system, causing total deposits to decline at a record rate on a quarterly basis (down 2.5 percent) and on an annual basis (down 6.0 percent) early this year. Total deposits were \$18.7 trillion in first quarter 2023, as the reduction in uninsured deposits (down 8.2 percent) outpaced the growth in insured deposits (up 2.5 percent). However, total deposits for community banks slightly increased 0.5 percent as growth in insured deposits (up 3.7 percent) outpaced the decline in uninsured deposits (down 6.3 percent). (See the Market Risk—Liquidity and Deposits section of this report for more analysis of deposit shifts across bank asset groupings.)

¹¹ The "pre-pandemic average" refers to the period first quarter 2015 through fourth quarter 2019.

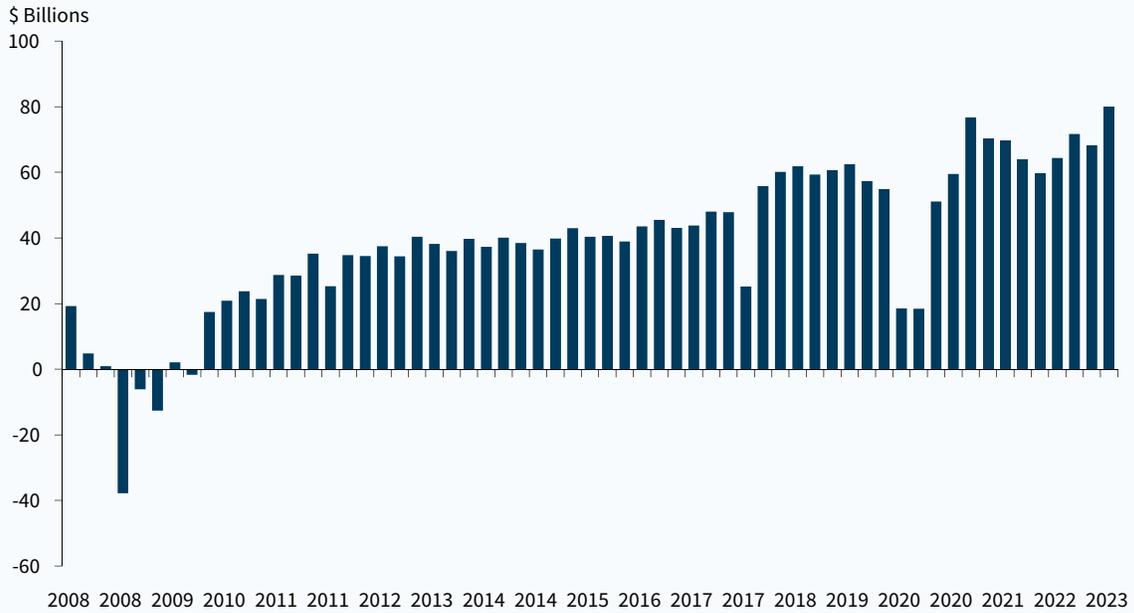
¹² Pre-provision net revenue is calculated as net interest income plus noninterest income minus noninterest expense; it excludes expenses related to goodwill.

¹³ Noninterest income decreased 15.8 percent, while noninterest expense increased 5.3 percent.

¹⁴ Efficiency ratio is noninterest expense as a percentage of net interest income plus noninterest income. The reduction in this ratio indicates that banks were more efficient in producing revenue.

CHART 8

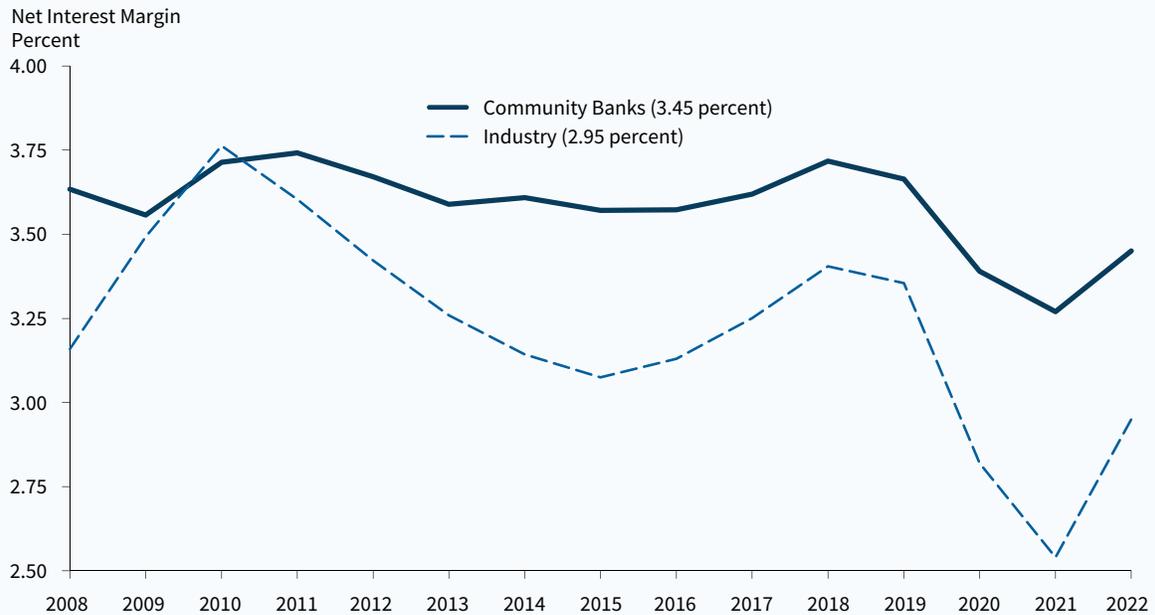
Quarterly Net Income Remained High in First Quarter 2023



Source: FDIC.
 Note: Quarterly data as of first quarter 2023. Net income was roughly flat over the quarter after excluding acquisition gains.

CHART 9

Full-Year Net Interest Margins Rebounded and Significantly Widened in 2022



Source: FDIC.
 Note: Annual data as of fourth quarter 2022.

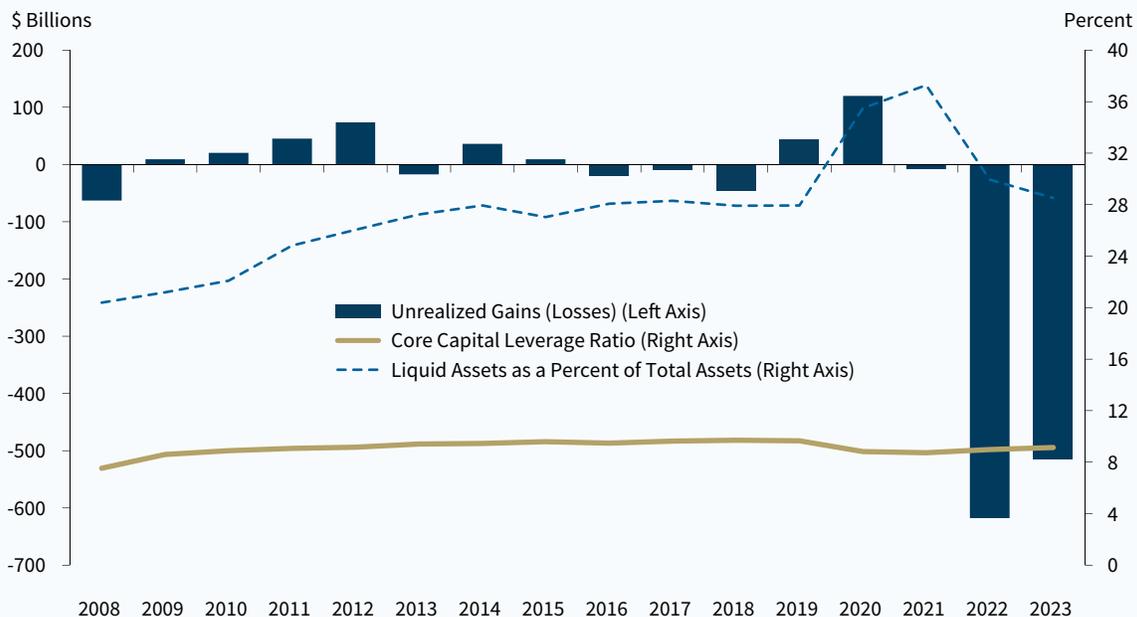
Higher interest rates coupled with longer asset maturities may present challenges to the banking industry. The banking industry’s share of longer-term loans and securities relative to assets increased to 39.7 percent in 2022 before declining to 38.5 percent in first quarter 2023.¹⁵ Community banks also reported a slight decline in first quarter from the prior quarter, from 54.7 percent of total assets, a recent high, to 53.9 percent of total assets. Despite the slight decline, both industry and community banks’ share of longer-term assets to total assets remained above the pre-pandemic level in first quarter 2023. (See the Market Risk—Net Interest Margins and Interest Rate Risk section of this report for more information on the effects of long-term assets to total assets on bank NIM performance.)

Although the higher level of longer-term loans and securities helped preserve NIMs during a period of lower interest rates, unrealized losses remained high

in the first quarter and could continue to pressure industry earnings (Chart 10). In first quarter 2023, unrealized losses on securities declined to \$515.5 billion, down 16.5 percent from \$617.8 billion in fourth quarter 2022.¹⁶ The decline was primarily due to declines in medium- and long-term market interest rates in the first quarter. Unrealized losses present a significant risk should banks need to sell investments and realize losses to meet liquidity needs.

While the banking industry was well capitalized at year-end 2022 and in first quarter 2023, continued depreciation of bank investment portfolios may negatively affect capital if banks are forced to sell investments at a loss to meet liquidity needs. Depreciation of the investment portfolio could also adversely affect the ability of banks to pledge collateral or meet margin requirements when seeking access to wholesale or other sources of alternative funding. As noted at the outset of this report, liquidity

CHART 10
Unrealized Losses Remained Elevated Through First Quarter 2023



Source: FDIC.
 Note: Data as of first quarter 2023. Data for 2008-2022 are annual and as of December 31. Data for 2023 is as of March 31. Unrealized losses on securities solely reflect the difference between the market value as of quarter-end and the book value of non-equity securities.

¹⁵ Longer-term loans and securities have maturities greater than three years.

¹⁶ Unrealized losses on securities reflect the difference between the market value as of quarter-end and the book value of non-equity securities.

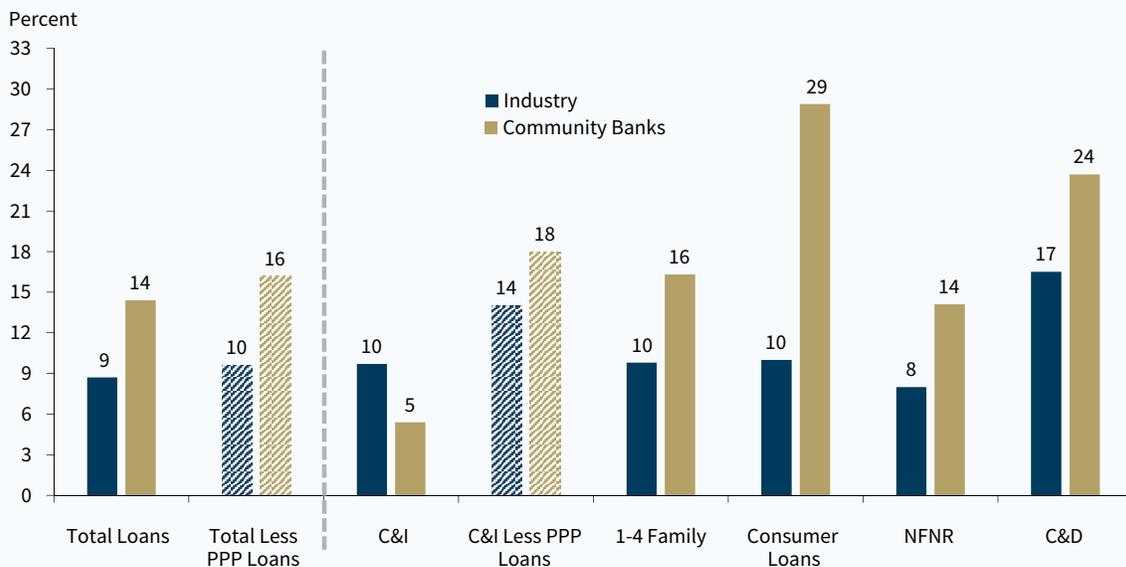
risks came to the fore for some banks in March 2023. In response, the FDIC, Federal Reserve, and Treasury took steps to protect the economy by strengthening public confidence in the banking system.¹⁷ To address funding issues arising from lower collateral values, banks utilized the Federal Reserve’s liquidity facilities, including the new Bank Term Funding Program (BTFP), with borrowing rising to \$64.6 billion as of March 31, 2023.¹⁸

After reporting strong loan growth in 2022, banking industry loan balances declined slightly in first quarter 2023. Total loans for the industry grew 8.7 percent in 2022 and 9.6 percent net of Paycheck Protection Program (PPP) loans (Chart 11). The loan growth rate without PPP loans last year was double the industry’s average annual growth rate for the five-year period preceding the pandemic. Commercial and industrial loans, 1–4 family residential mortgages, and consumer loans represented the largest share of loan

growth in 2022. Construction and development loans increased for both community and noncommunity banks during 2022 but represented a smaller share of total industry loans. Community banks reported 14.4 percent total loan growth in 2022 and 16.2 percent net of PPP loans.

In first quarter 2023, banking industry loans declined modestly (down 0.1 percent), reflecting loans transferred to the FDIC as receiver and the seasonal decline in credit card loan balances (down 2.6 percent). Excluding the loans transferred out of the banking system to the FDIC, total loans increased modestly (up 0.4 percent) quarter over quarter, led by increased 1–4 family residential mortgages and loans to nondepository institutions. (See the Credit Risk—Housing and Nonbank Financial Institutions. Lending sections of this report for more information.) Community banks reported stronger loan growth than the banking industry as a whole in first quarter 2023,

CHART 11
Annual Change in Loan Balances Was Driven by C&I Loans



Source: FDIC.

Note: Data as of fourth quarter 2022. Loan portfolios are presented from left to right in descending order of annual dollar growth. "PPP" is Paycheck Protection Program, "C&I" is commercial and industrial, "NFNR" is nonfarm nonresidential, and "C&D" is construction and development.

¹⁷ See the remarks cited in footnote 3 of this report. Also see FDIC, “[Joint Statement by the Department of the Treasury, Federal Reserve, and FDIC](#),” press release, March 12, 2023; and Board of Governors of the Federal Reserve System, “[Federal Reserve Board Announces It Will Make Available Additional Funding to Eligible Depository Institutions to Help Assure Banks Have the Ability to Meet the Needs of All Their Depositors](#),” press release, March 12, 2023.

¹⁸ The BTFP provides qualified institutions with eligible securities the ability to access longer-term (one year) funding at par, which should alleviate the need to sell those securities at a loss in times of stress, as happened at Silvergate Bank and SVB. For more information, see <https://www.federalreserve.gov/monetarypolicy/bank-term-funding-program.htm>.

up 1.8 from the previous quarter and 15.0 percent from first quarter 2022. Growth in real estate loans, nonfarm nonresidential, and 1–4 residential mortgages fueled the growth. Recent surveys indicate that loan demand may be waning and underwriting standards are tightening, which may hinder loan growth rates in coming quarters.¹⁹

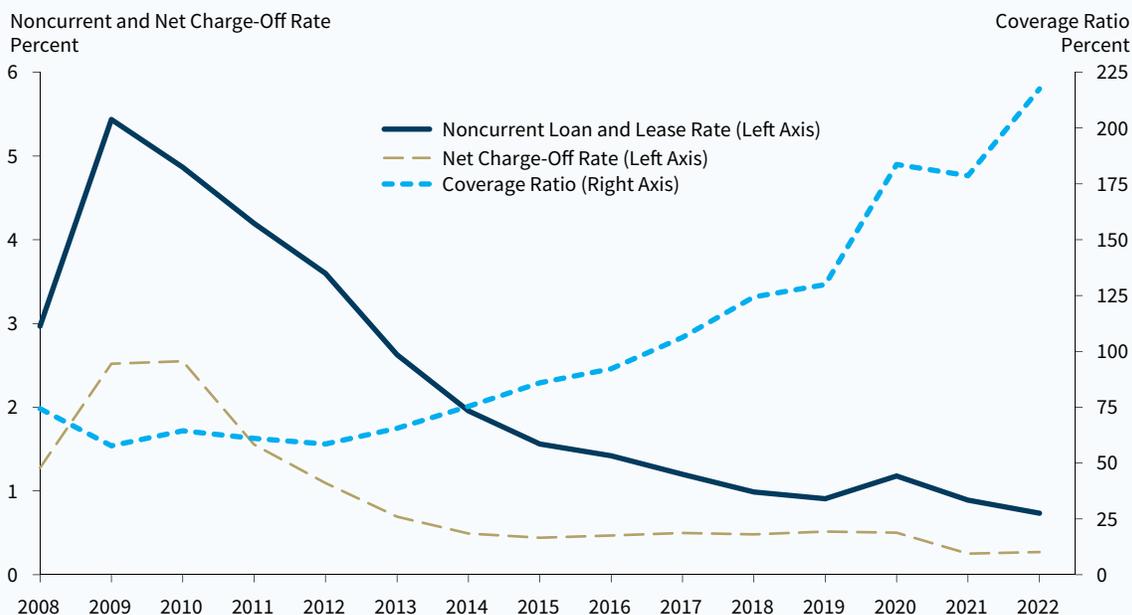
Despite a modest rise in noncurrent and net charge-off rates, asset quality indicators remained favorable through first quarter 2023.

After rising slightly at the end of 2022, the early-stage past-due rate (loans and leases 30 to 89 days past due) declined slightly in first quarter 2023 to 0.52 percent, in part a reflection of seasonal improvement in auto loans and lower delinquencies on 1–4 family residential mortgages. The total early-stage past-due loan rate remained below the pre-pandemic average of 0.66 percent. The noncurrent loan rate for the banking industry increased 2 basis points in first quarter 2023

to 0.75 percent but was still well below the high of 5.44 percent at year-end 2009. The net charge-off rate increased to 0.41 percent from 0.36 percent at the end of 2022 (Chart 12). The coverage ratio for the industry, which compares the amount of loan-loss reserves to total noncurrent loans, increased to 219.5 percent in first quarter 2023, the highest level on record.²⁰ While aggregate delinquency measures remained low among banking industry through first quarter, commercial real estate lenders face challenges, particularly among loans backed by office properties in some large, urban markets should conditions continue to weaken this year. (See the Credit Risk—Commercial Real Estate section of this report for more information.)

In 2022, community banks also reported a modest increase in early-stage loan delinquencies as the early-stage past-due rate rose 3 basis points to 0.36 percent. The noncurrent loan rate decreased 14 basis points in 2022 to 0.44 percent, the lowest level for community

CHART 12
Asset Quality Indicators Remain Favorable



Source: FDIC.
Note: Annual data as of fourth quarter 2022.

¹⁹ Board of Governors of the Federal Reserve System, [Senior Loan Officer Opinion Survey on Bank Lending Practices](#), April 2023.

²⁰ Data collection began in 1984.

banks on record. In first quarter 2023, the early-stage past-due rate and noncurrent loan rate rose by 1 basis point. The net charge-off rate fell 2 basis points to 0.09 percent. Community banks also reported a coverage ratio of 272.9 percent in first quarter 2023, slightly lower than the record high of 274.2 percent in fourth quarter 2022.

While the banking industry was resilient through first quarter 2023, the industry continues to face significant downside risks in 2023. The banking industry continued to face considerable risks in early 2023 after several bank failures and industry stress. At year-end 2022, the FDIC’s “Problem Bank List” was at a record low 39 institutions since data collection began in 1984. The number of problem banks increased

to 43 in first quarter 2023, still low by historical standards.²¹ Two banks failed in first quarter 2023, with a subsequent failure in May 2023. These were the first failures since October 2020.

As first quarter 2023 came to an end, risks to bank performance included the effects of inflation, rising market rates, slower economic growth, and geopolitical uncertainty. Collectively, these risks could pressure industry earnings, result in slower loan growth and deterioration in asset quality, and lead to a return to more normalized metrics from pre-pandemic periods. The FDIC is focused on monitoring banking industry conditions, including the effects of bank failures on overall banking conditions and stability.

²¹ Banks on the FDIC’s Problem Bank List have a CAMELS composite rating of “4” or “5” due to financial, operational, or managerial weaknesses, or a combination of such issues. The number of banks on the list increased by four from the previous quarter, reflecting movement from banks coming on and off the list.

SECTION 3

Credit Risks

Agriculture

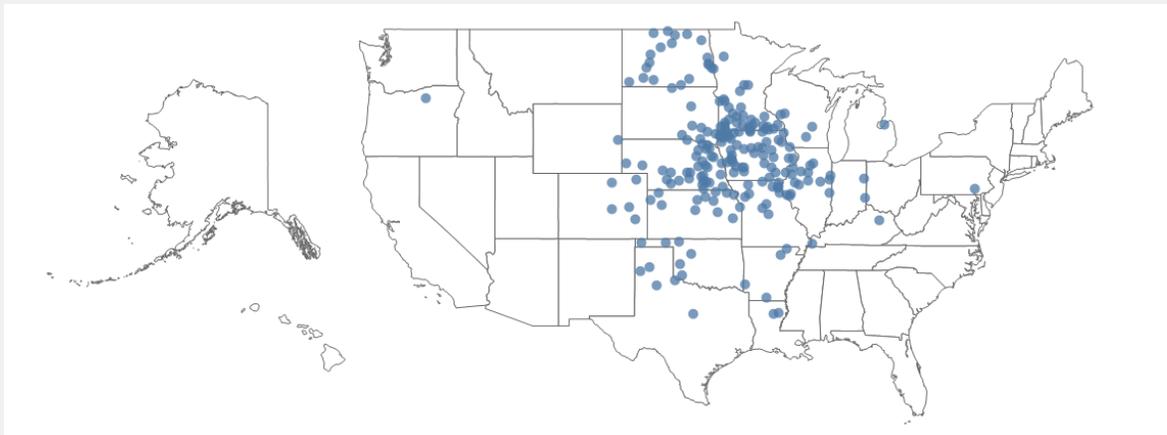
- The agricultural sector earned record profits in 2022 despite widespread drought conditions. Farm income is forecast to decline in 2023 due to higher interest rates and rising expenses but remain above its long-term average.
- Loan growth and higher loan yields boosted farm bank earnings in first quarter 2023 following a down year in 2022.²² Liquidity ratios at farm banks declined from previous highs but remained above the ten-year average.
- Stronger farm sector financial conditions led to improved farm bank asset quality through first quarter 2023, but higher interest rates and production costs pose challenges.

There were 1,015 farm banks comprising more than one-fifth of all banks as of first quarter 2023. All but 11 of these banks are also considered community banks by the FDIC's definition (see Glossary of Terms). In first quarter 2023, agricultural loans held by all banks totaled \$183.6 billion.

- Community banks hold 69 percent (\$127 billion) of total agriculture loans.
- More than 20 percent of farm banks (220 banks, or 4.7 percent of all banks) hold a concentration of agricultural loans above 300 percent of capital (tier 1 capital and credit loss reserves for loans and leases).
- Exposure to agriculture lending is concentrated in the Midwest.

Regional Exposure to Agricultural Lending

Dots on the map represent the 220 banks with total agricultural loans above 300 percent of capital.



Source: FDIC.

²² Unless otherwise noted, banking data are for farm banks only.

The agricultural sector earned record profits in 2022 despite widespread drought conditions. The U.S. Department of Agriculture (USDA) forecasts that 2022 net farm income rose 15.5 percent year over year to \$162.7 billion, a record high on an inflation-adjusted basis.²³ Growth in crop and livestock revenues more than offset higher production expenses and lower government payments (Chart 13).²⁴ Higher commodity prices drove nearly all of the increase in crop and livestock revenue. Prices for various crops climbed to record or near-record highs in the first half of 2022 as the war in Ukraine and the U.S. drought caused supply challenges.²⁵ Prices retreated through first quarter 2023 but remained relatively high for corn, soybeans, and wheat.

During 2022, the share of the nation in moderate or worse drought conditions neared the share recorded during the historically severe drought in 2012 (Chart 14).²⁶ Poor pasture conditions from drought contributed to herd liquidation for many cattle producers, which boosted cattle prices.²⁷ In addition, the price of poultry and eggs rose considerably in 2022 after an outbreak of bird flu, which was the nation's most severe on record.²⁸

Farm income is forecast to decline in 2023 due to higher interest rates and rising expenses but remain above its long-term average. The USDA forecast indicates that farm income will decline nearly 16 percent in 2023 from the 2022 level.²⁹ Factors expected to reduce income include higher interest costs, production costs, and higher purchase costs for livestock and poultry, combined with lower commodity prices.³⁰ Nonetheless, farm income is projected to remain 20.8 percent above the prior 20-year average.

Lower prices and higher input costs will likely tighten crop producer profit margins in 2023, particularly for those producers who rent a significant share of their farmland. Cattle ranchers, on the other hand, are likely to see margins expand because of price strength on the heels of 2022 herd liquidation combined with lower feed costs. Improved drought conditions throughout much of the United States during the first half of 2023 should also benefit the cattle sector.

Strong net farm income bolstered farm real estate (farmland) values in 2022 for a second consecutive year last year. Average U.S. farmland values increased an estimated 12.4 percent on an annual basis in 2022, the largest year-over-year increase since 2006, according to the August 2022 USDA Land Values Summary report.³¹ Three midwestern states—Iowa, Kansas, and Nebraska—reported farmland value increases of more than 20 percent. Cropland values rose 14.3 percent, while pastureland values increased 11.5 percent. First quarter agricultural condition surveys from various Federal Reserve Banks indicated farmland values continued to increase but at a much slower pace than in 2022.

²³ See USDA, [2023 Farm Sector Income Forecast](#), February 7, 2023. The 2022 forecast will become an estimate with the USDA's next forecast release scheduled for August 31, 2023.

²⁴ According to the USDA, crop and livestock receipts increased \$88.7 billion, while production expenses rose \$52.6 billion in 2022. This was the largest nominal year-over-year increase in production expenses on record.

²⁵ For example, wheat prices received by farmers increased 27 percent during the first five months of 2022. Corn and soybean price swings mirrored those of wheat. A decline in the sunflower supply pressures substitutes including soybeans.

²⁶ See the Climate-Related Financial Risk section of this report for more information on U.S. drought conditions in 2022.

²⁷ A survey conducted in late 2022 by the Farm Bureau found that 61 percent of respondents reported selling off portions of their herd, with an average reduction of 33 percent. As of January 1, 2023, the USDA reports that cattle inventories declined 3.6 percent from a year earlier, the largest decline since 1986.

²⁸ According to the USDA, 57.8 million birds were affected by bird flu in 2022, surpassing the previous record of 50.5 million in 2015. The outbreak has continued in 2023, although at a slower pace, with an additional nearly 1 million birds affected from January 1, 2023, through the end of May 2023. As the bird flu outbreak has slowed, egg prices have declined in first quarter 2023, falling more than 20 percent from fourth-quarter 2022 levels. However, prices are still well above historical prices.

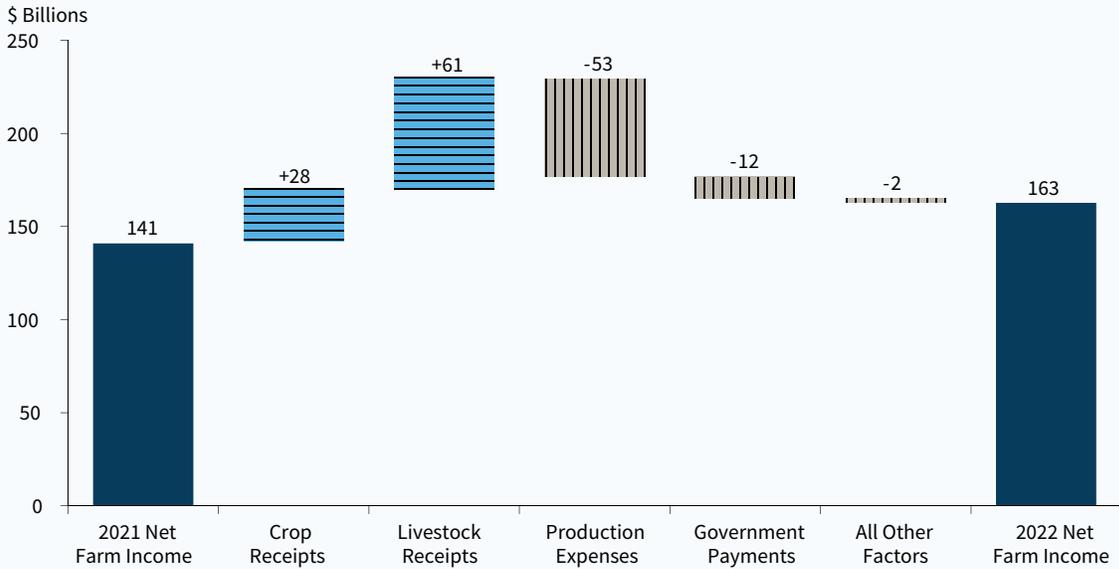
²⁹ See USDA, [2023 Farm Sector Income Forecast](#).

³⁰ The USDA forecast suggests that rising interest rates will drive interest costs higher by 22.4 percent and that livestock and poultry purchase costs will increase 13.6 percent. On an inflation-adjusted basis, production expenses are projected to increase \$5.7 billion (1.3 percent) in 2023, following an 11 percent increase in 2022.

³¹ The land value summary is an annual report with the next release scheduled for August 2023.

CHART 13

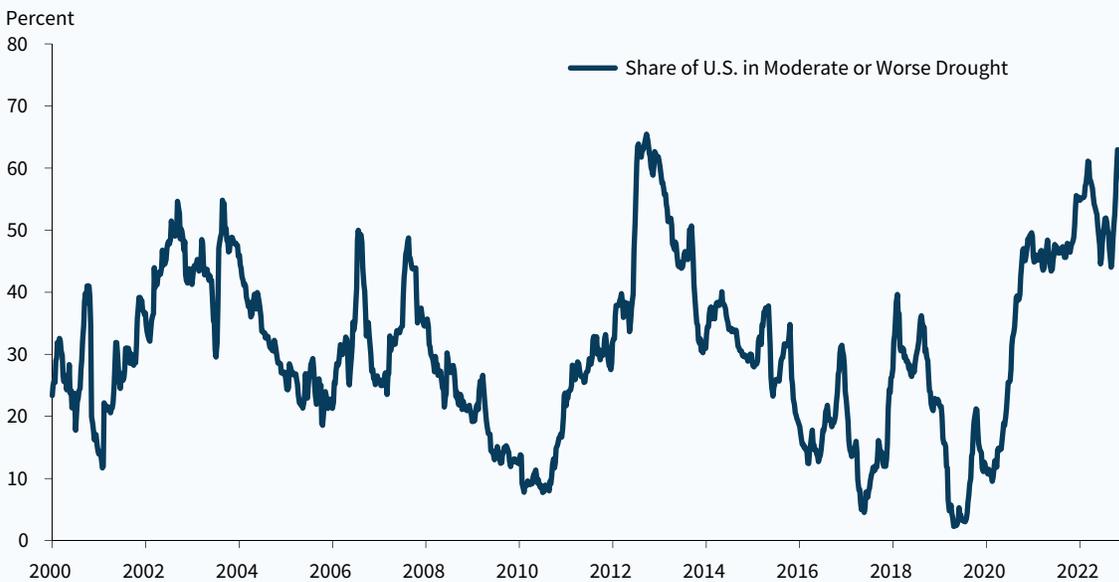
Net Farm Income Increased in 2022 as Higher Revenues More Than Offset Higher Expenses



Source: U.S. Department of Agriculture.
Note: Nominal dollars. Bars show category contribution to net farm income change, with horizontal stripe bars adding to income and vertical stripe bars subtracting from income. Receipt values include home consumption and inventory adjustments.

CHART 14

U.S. Drought Conditions Were Widespread in 2022, Nearing Conditions Recorded During the Historically Severe Drought of 2012



Source: National Drought Mitigation Center (University of Nebraska Lincoln).
Note: Weekly data from January 4, 2000, to December 27, 2022.

The steep rise in farmland values during 2022 outpaced the increase in rents charged to use farmland, causing the ratio of farmland value to rents to reach their highest levels for both cropland and pasture land since data collection began in 1998 (Chart 15). These record ratios suggest that farmland rents may need to increase, thereby pressuring producer margins, in order to return the ratio closer to the historical level. Alternatively, farmland values may decline, weakening the collateral position of farm real estate loans.³²

Loan growth and higher loan yields boosted farm bank earnings in first quarter 2023 following a down year in 2022. The median year-over-year total loan growth for farm banks increased to 8.6 percent in fourth quarter 2022 and 9.3 percent in first quarter 2023. More specifically, agricultural loan growth at farm banks increased to 6.1 percent in first quarter 2023 from 5.4 percent in fourth quarter 2022, with both agricultural production and farm real estate loans increasing (Chart 16). This marked the second consecutive quarter of annual growth in agricultural production loans following a decline in eight of the previous ten quarters. The growth in loans likely reflects increased financing for higher agricultural input costs and a decline in government support payments. Growth in farm loans contributed to an increase in the median agricultural loan to capital concentration ratio, which rose to 209 percent in first quarter 2023, up from 205 percent a year earlier but below the recent first quarter previous peak of 234 percent in 2019.

The median pretax return on assets (ROA) for farm banks for full-year 2022 declined 13 basis points from one year earlier to 1.17 percent on lower net interest margins (NIMs) and a decline in noninterest income. The median farm bank ROA for first quarter 2023 improved to 1.29 percent, up 32 basis points from first quarter 2022. Improved NIM from the combination of loan growth and higher asset yields contributed to the rise in ROA.

Despite recent declines, liquidity ratios at farm banks remained above the long-term average, even though farm banks reported deposit outflows in first quarter 2023. Loan growth contributed to lower on-balance sheet liquidity ratios at farm banks. Consistent with overall bank industry trends, deposits reported by farm banks expanded 3.3 percent in 2022 before contracting nearly 1 percent from a year earlier in first quarter 2023. The combination of increased loan growth and declining deposits led the median on-balance sheet liquidity ratio to decline to 26.6 percent, down from 33.6 percent a year ago. Despite the decline, liquidity ratios reported by farm banks remained above the long-term average of 25.5 percent as of first quarter 2023.

Strong farm income helped improve farm balance sheets and asset quality, but higher interest rates may challenge the farm sector. The record incomes during 2022 allowed producers to replenish working capital and contributed to favorable agricultural asset quality at farm banks. According to surveys of agricultural credit conditions by several Federal Reserve banks, loan repayment rates on agricultural loans increased in 2022 compared to one year earlier.³³ Consistent with these surveys, nearly half (45.3 percent) of farm banks reported having no past-due agricultural loans, a slight improvement from 2021. Further, only 10 percent of farm banks reported agricultural loan net charge-offs in 2022, and the charge-off rate among these banks remained low.

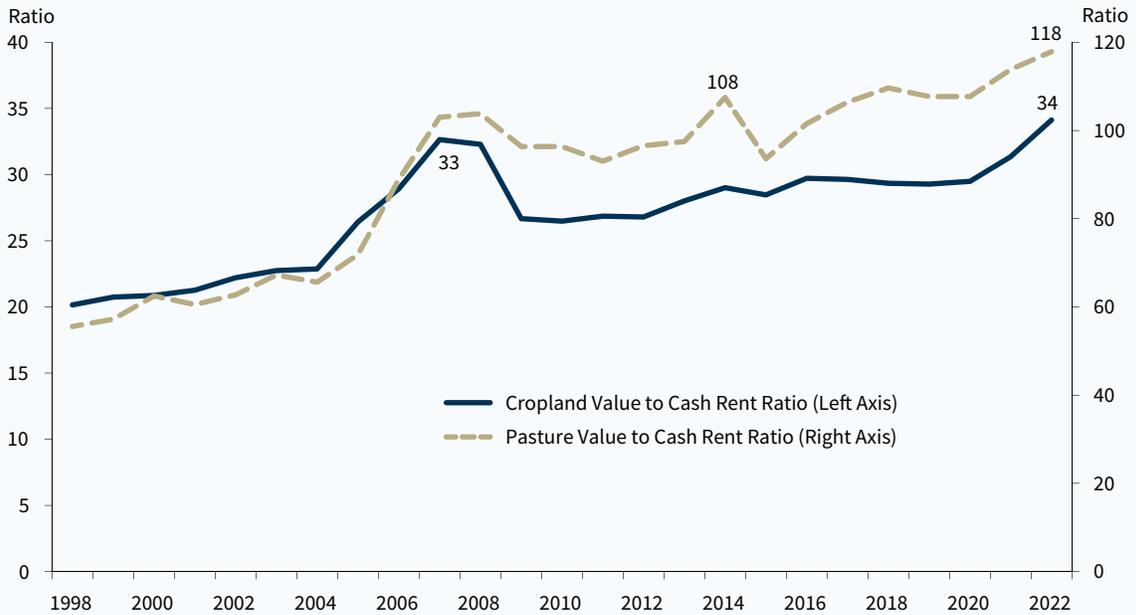
This favorable asset quality trend continued in first quarter 2023. Total agricultural loan past-due and net charge-off ratios remained low, with similar improvements in past-due ratios compared to a year earlier. Among farm banks that report agricultural loans that were past-due or in nonaccrual, the median agricultural loan past-due ratio declined 29 basis points in first quarter 2023 compared to one year earlier and was historically low at 0.72 percent. However, interest rates on operating and real estate loans rose during 2022 and first quarter 2023, which may tighten producer profit margins and adversely affect asset quality of some farm banks this year.

³² For example, the ratio of cropland land values to cash rents was last near its current level in 2008; the following year, cash rent increased 15.8 percent, while values fell 4.3 percent.

³³ [Federal Reserve District Agricultural Credit Surveys for Chicago, Dallas, Kansas City, and Minneapolis Districts, as of first quarter 2023.](#)

CHART 15

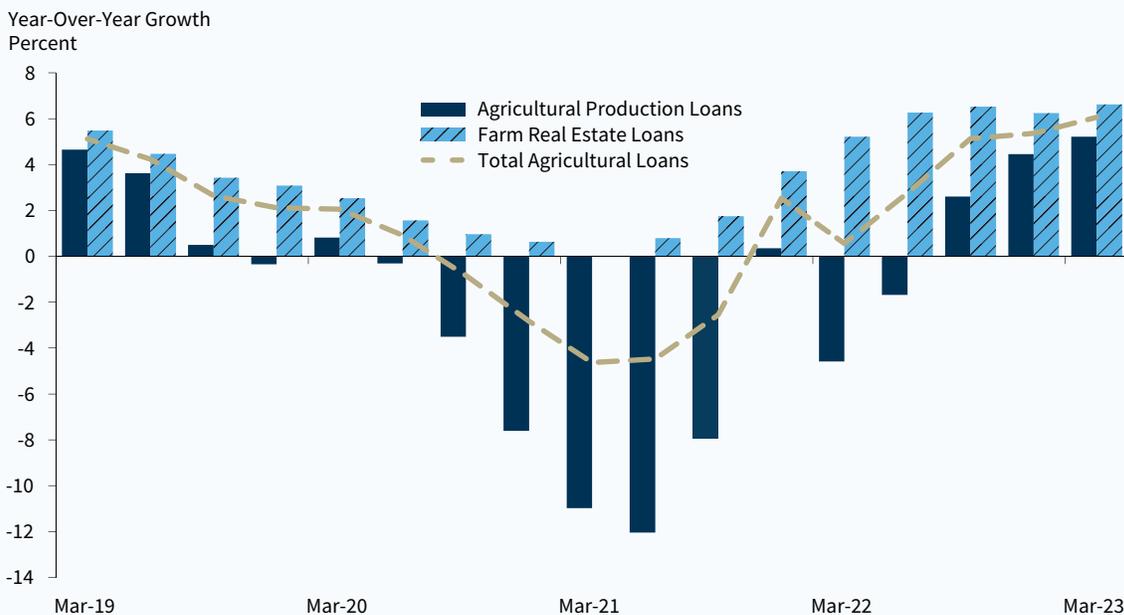
Land Value to Cash Rent Ratios Have Surpassed Their Prior Peaks



Source: U.S. Department of Agriculture.
Note: Data are annual through 2022.

CHART 16

Agricultural Loan Growth Rebounded in 2022 and Early 2023



Source: FDIC.
Note: Data are quarterly figures among farm banks through March 31, 2023.

Commercial Real Estate

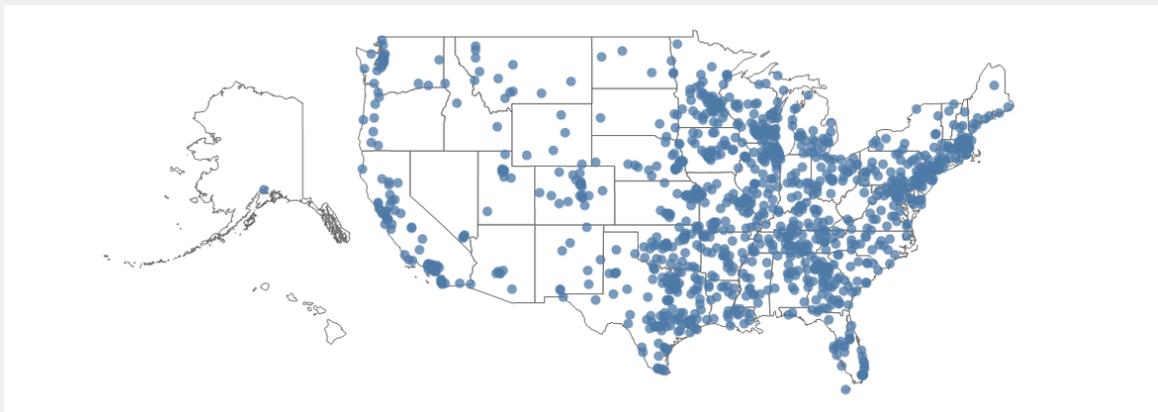
- Most commercial real estate (CRE) property types performed well in 2022, but some challenges continued into 2023, particularly for office properties.
- Bank CRE lending grew and community bank lending remained important to the CRE industry.
- Aggregate CRE asset quality metrics remained favorable, but higher interest rates and economic uncertainty pose risks to CRE loan portfolios.

Bank-held CRE loans reached more than \$3.0 trillion by the end of first quarter 2023.

- Community banks hold 28 percent (\$865 billion) of the CRE loans on bank balance sheets, a share that remains outsized compared to their holdings of 15 percent of total loans.
- Elevated concentrations in CRE lending persist; 30 percent of banks (1,402 banks) have an elevated concentration of CRE loans defined as exceeding 300 percent of capital (tier 1 capital and credit loss reserves for loans and leases) or construction and development (C&D) loans exceeding 100 percent of capital.
- All FDIC Regions saw a rise in the median CRE loan concentration level compared to a year earlier; exposure remained the heaviest in banks headquartered in the West and the Northeast.

Regional Exposure to CRE Lending

Dots on map represent the 1,402 banks (30 percent of all banks) with a concentration of CRE loans, as defined above.



Source: FDIC.

Note: U.S. territories are not included in the map; one bank in Guam with a concentration of CRE loans is not shown.

Four of the five major CRE property types ended 2022 with sound fundamentals, while the office market faced increasing risks through first quarter 2023. Industrial properties continued to benefit from strong demand for warehousing and distribution. Of the major property types, industrial had the highest rent and price growth, while the vacancy rate for industrial properties remained near an all-time low at the end of 2022.³⁴ Conditions in the industrial market remained strong into 2023. But as economic conditions weakened and the pace of construction remained high, some industrial markets became saturated, with supply consistently exceeding demand.

Demand for multifamily properties continued to benefit from the tight single-family housing market. Relatively low single-family home affordability kept many would-be first-time homebuyers in the rental pool. Still, elevated rent levels discouraged some potential renters, and rent growth slowed in late 2022 and into first quarter 2023. Multifamily property price growth also continued to slow.

Retail properties continued to perform well into 2023, supported by sustained consumer spending. Net absorption, the share of space leased net of space vacated, has remained positive for more than two

³⁴ Unless otherwise noted, CRE data are from CoStar as of first quarter 2023.

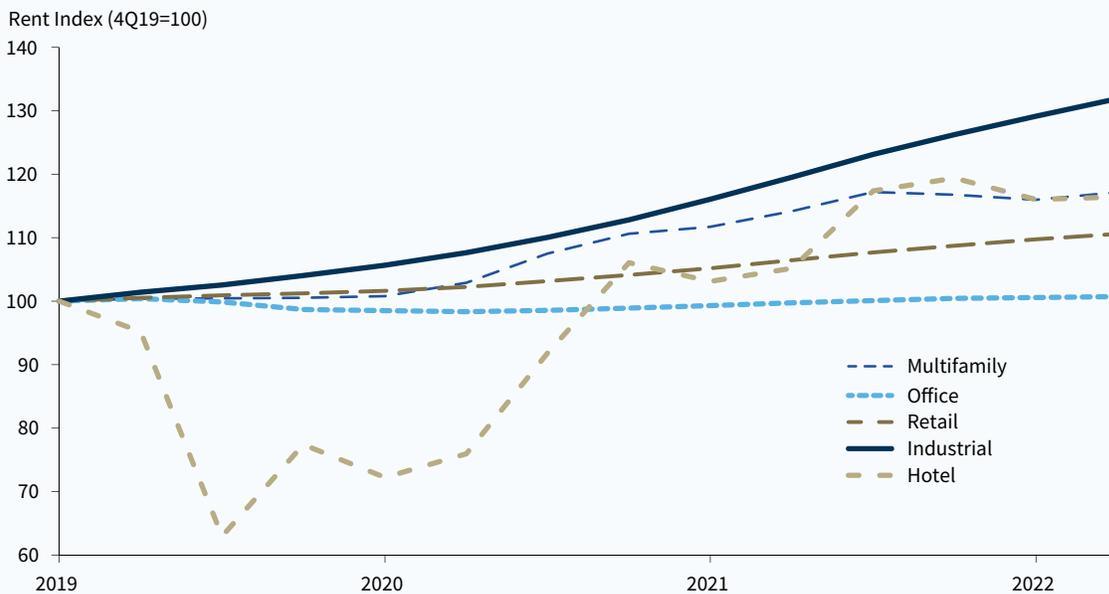
years. The national vacancy rate on retail properties reached a 15-year low, and retailers opened more stores than they closed. Very little new space was added between 2018 and 2022, keeping the market relatively tight.

Consumers also contributed to recovery in the lodging sector. Unleashing pent-up demand for travel, consumers accepted rising hotel room rates. In March 2023, average daily room rates were higher than the March 2019 level in 98 percent of U.S. markets. Similarly, revenue per available room exceeded the 2019 level in 87 percent of markets.³⁵

Unlike other major property types, office fundamentals weakened as the shift to remote work adversely affected office demand, particularly in some larger urban markets. Nationally, office rents remained near pre-pandemic levels in first quarter 2023 in contrast to higher rental rates for the other major property types (Chart 17). While the overall office rental rate

has been relatively stable through first quarter 2023, anecdotal evidence suggests that office property owners have decreased effective rents by increasing rent concessions, such as free rent and allowances for tenant improvements. The increased amount of subleased office space, space that is currently leased but offered by the original tenant for sublet, also has pressured office rents. The amount of office space offered for sublease rose as some companies reduced their office footprint before the expiration date of their existing lease agreement. Office space available for sublease, which is leased at rents discounted from the underlying lease agreement, has increased considerably in the nation's largest office markets and exceeded levels during the Great Recession. San Francisco, with its concentration of tech firms, had the highest rate of sublease availability at 6.3 percent at the end of first quarter 2023, followed by Seattle at 3.2 percent.

CHART 17
Rents for Most Property Types Grew in 2022



Source: CoStar.
Note: Quarterly data through first quarter 2023. Hotel "rent" data are three-month moving averages of the Average Daily Rate, which is reported monthly.

³⁵ CoStar, monthly data as of March 2023.

Office conditions also have been pressured by weakening net absorption of office space since the start of the pandemic. Net absorption has been mostly negative the past three years, which means that more office space has been vacated than has been newly leased from the start of the pandemic through March 2023. Negative net absorption contributed to an increase in the national office vacancy rate from 9.6 percent in first quarter 2020 to 12.8 percent in first quarter 2023. Industry forecasts project further increases in the national office vacancy rate through 2023. Low office attendance by workers suggests weakness in office properties. Access card swipes at a sample of U.S. office buildings indicates attendance was only one-half the pre-pandemic level in early 2023.³⁶

Factors such as reduced occupancy and softening rents has weighed on office property values. Reports suggest that the value of some office properties declined considerably from the beginning of the pandemic through late 2022.³⁷

Banks reported CRE loan growth, contributing to a rise in median CRE loan concentration levels. At first quarter 2023, 98 percent of banks held CRE loans and CRE was the largest loan category for almost half of all banks. CRE loans held by the banking industry have increased every quarter since first quarter 2013. CRE loans comprised a quarter of total loans held by the banking industry, similar to the last cycle peak in 2009. However, CRE loans were about 13 percent of total banking assets at year-end 2022 and through first quarter 2023; this is lower than the 14 percent reported in first quarter 2009.

Growth occurred across all CRE loan types, as well as in unfunded CRE loan commitments, in the four-quarter period ending first quarter 2023. Loans for existing nonfarm nonresidential real estate properties made up the largest portion of the CRE loan portfolio at 58 percent.³⁸ Multifamily loans remained the second-largest CRE loan category, despite a slight decline in first quarter 2023 after increasing in 2022. About 16 percent of the CRE loan portfolio consists of C&D loans, historically the highest risk CRE loan type. Unfunded CRE loan commitments decreased

to \$653 billion at first quarter 2023, after reaching a record high of nearly \$675 billion at year-end 2022, but remain above the last cycle peak in 2007. The unfunded commitments are mostly made up of C&D.

Since first quarter 2022, the industry's median ratio of CRE loans to capital grew from 185 percent to 194 percent, with median concentrations rising across all FDIC Regions. Banks headquartered in the West had the highest median level of CRE loans to capital at 281 percent, followed by banks in the Northeast at 241 percent.

Community bank lending continued to be important to the CRE industry. Community bank CRE loans rose 8 percent from first quarter 2022. Community banks held an outsized proportion of CRE loans: 28 percent of the banking industry's CRE loans compared with only 15 percent of the banking industry's total loans. Community banks headquartered in rural or smaller metropolitan areas held 64 percent of the CRE loan volume reported by banks headquartered in those areas, outpacing community banks in larger metropolitan areas, which held 24 percent of CRE loans reported by banks headquartered in those areas. More than 29 percent of community banks held an elevated concentration of CRE loans to capital, the highest share in more than 12 years.

CRE asset quality metrics remained favorable as past-due CRE loans were generally low, but the outlook remains uncertain. In first quarter 2023, the median CRE past-due loan rate among banks was 0.15 percent and was low across all FDIC Regions. The median past-due rate of 0.19 percent for the subset of 1,402 banks with an elevated CRE concentration level also was historically low compared to previous years. Aggregate CRE loan charge-offs were within historic norms in 2022 and through first quarter 2023.

A modest rise in delinquency rates of commercial mortgage-backed securities (CMBS) may signal a shift in CRE market performance.³⁹ CMBS data provide insight into asset quality by property type that is not available from Call Report data. CMBS

³⁶ Kastle, "Back to Work Barometer," as of May 22, 2023.

³⁷ Peter Grant, "Shrinking Office Building Values Are Becoming a Dilemma for City Budgets," *Wall Street Journal*, December 13, 2022.

³⁸ Nonfarm nonresidential real properties include business and industrial properties, offices, hotels, churches, and other similar properties.

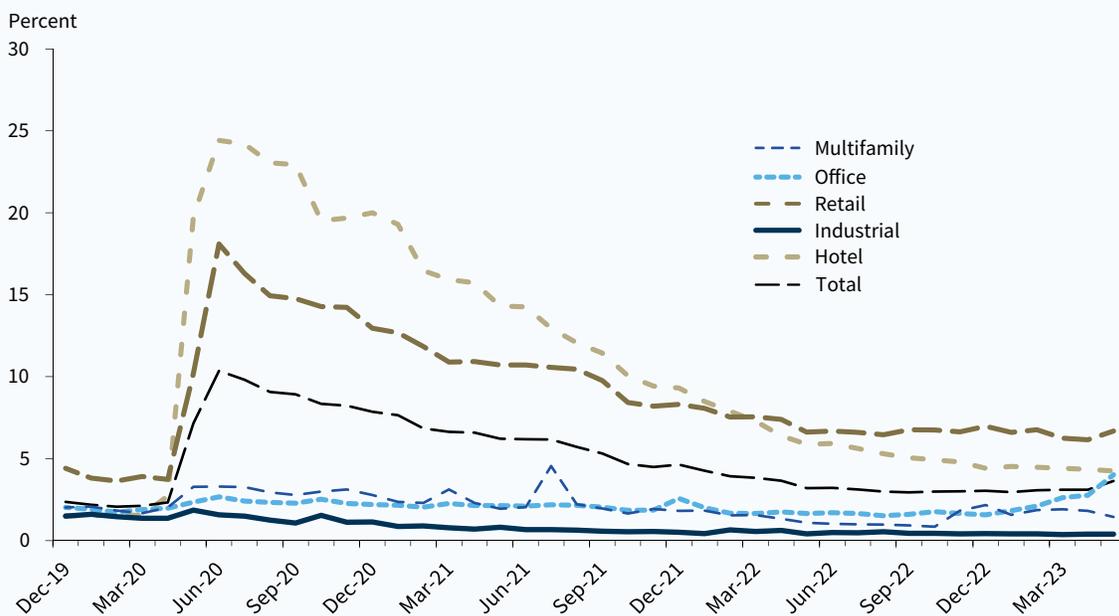
³⁹ CMBS data from Trepp as of May 2023.

delinquency rates steadily improved well into 2022 as retail and hotel loan performance stabilized and other property types showed little change. However, CMBS delinquency rates on office properties began to rise in 2023 (Chart 18). In addition, the share of CMBS loans that are not past due but are in special servicing, meaning loans that are not delinquent but exhibit other potential performance issues, increased particularly among office properties. The increase in CMBS delinquency rates, though small, and the rise in specially serviced CMBS could indicate an inflection point for overall CRE asset quality. Monitoring CMBS delinquency trends also is important as more than 40 percent of banks hold CMBS securities, and CMBS holdings represent at least one-quarter of capital at more than 10 percent of banks.⁴⁰

Higher interest rates and the prospect for weaker economic conditions may stress bank CRE portfolios and constrain loan growth. The high level of unfunded CRE loan commitments may suggest that CRE loans are poised to grow. However, according to an April 2023 survey by the Federal Reserve, bankers reported tighter lending policies and weaker demand for all types of CRE loans over the past year.⁴¹ They also expect to tighten lending standards in 2023 across all loan categories, including CRE.

The office sector is particularly vulnerable to deterioration. With a structural decline in office demand and weak rent growth, some borrowers may have difficulty refinancing. Longer-term leases, which are prevalent in the office sector, helped to insulate

CHART 18
Delinquency Rates Among CMBS Office Loans Are Trending Upward



Source: Trepp.
 Note: Data are monthly figures through May 2023, compiled from Trepp Loan Compendium Deal List.

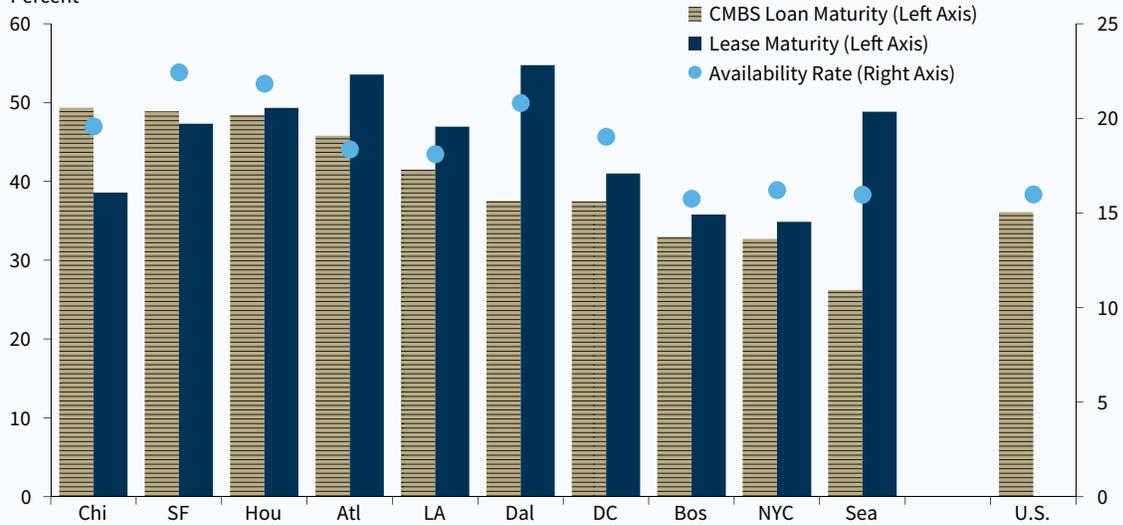
⁴⁰ Defined as CMBS securities held by banks as a share of tier 1 capital plus credit loss reserves for loans and leases.

⁴¹ Board of Governors of the Federal Reserve System, [Senior Loan Officer Opinion Survey on Bank Lending Practices](#), April 2023.

CHART 19

Several U.S. Markets With Substantial Available Space Have a High Share of Loans and Leases Maturing in the Next Few Years

Share of the Volume of Office Loans/Leases Maturing in 2023–2025
Percent



Sources: Trepp (CMBS Loan Maturity) and CoStar (Lease Maturity and Availability Rate).
Note: Loan maturity data as of February 15, 2023, shown as a share of total maturities through 2033 for each MSA. Lease maturity data and availability rate as of first quarter 2023. Lease maturity data not available at the U.S. level.

office property owners from reduced occupancy as tenants continued to pay during 2022. However, the inability to renew expiring leases at viable rental rates, office value erosion, and higher loan-to-value ratios could make refinancing more difficult for some property owners without raising additional capital. A sample of leases in some of the nation’s largest markets shows a preponderance of expirations in

the next few years (Chart 19). Even absent further economic slowdown, some borrowers may face potentially higher interest rates and debt servicing costs or encounter other challenges refinancing. Amid these evolving challenges for banks and their borrowers, strong risk-management practices are essential for operating sound CRE lending programs.

Consumer Lending

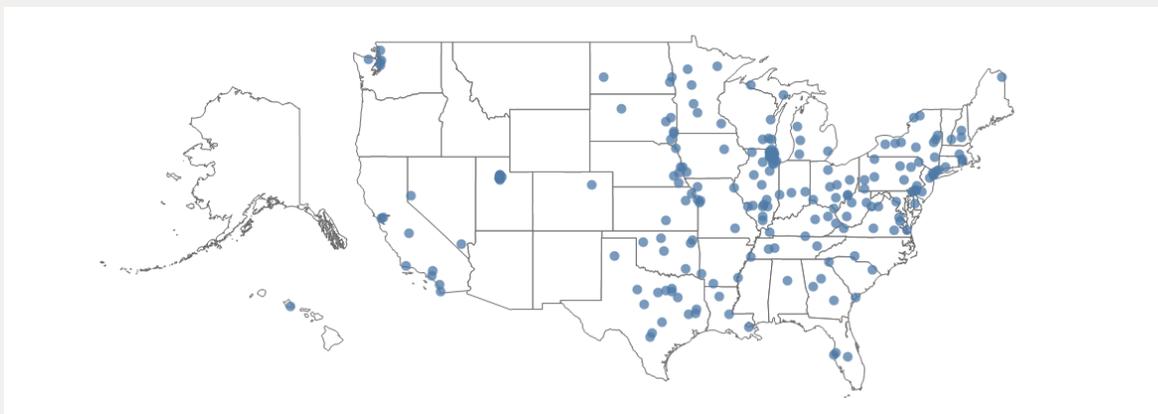
- Strong labor markets continued to support consumers, but a combination of factors including high inflation, rising interest rates, increased consumer debt, and stock market declines strained consumer balance sheets in 2022 and first quarter 2023.
- Credit card loans led consumer loan growth at banks, while auto loan growth slowed.
- Asset quality measures for most consumer loan types were better than pre-pandemic levels through first quarter 2023 but showed early signs of weakening. Auto loan asset quality worsened, though net charge-offs remained low.

Consumer loans held by FDIC-insured institutions totaled \$2.0 trillion as of first quarter 2023.

- Community banks hold 4.1 percent (\$84 billion) of total banking industry consumer loans.
- Concentration in the industry remains low. Only 4.7 percent of all banks (221 banks) hold a concentration of consumer loans above 100 percent of capital (tier 1 capital and credit loss reserves for loans and leases), including several credit card banks with concentrations above 300 percent.
- Sixty-seven percent of banks (148 banks) with a concentration of consumer loans are community banks.

Regional Exposure to Consumer Lending

Dots on the map represent the 221 banks (4.7 percent of all banks) with total consumer loans above 100 percent of capital.



Source: FDIC.

Note: U.S. territories are not included in the map; three banks in Puerto Rico and one bank in Guam that have a concentration of consumer loans are not shown.

Strong labor markets supported consumers, but high inflation and rising interest rates strained household budgets. As the unemployment rate hovered near historically low levels, strong labor markets helped support nominal income. The tight labor market contributed to stronger nominal wage growth, but wage gains did not keep up with inflation in 2022, causing real disposable personal income (DPI) to fall from a year earlier (Chart 20). The decline also reflected the end of government support programs, which had contributed to strong income growth in 2020 through first quarter 2021. Real DPI grew quarter over quarter in the second half of 2022 and first quarter 2023 as

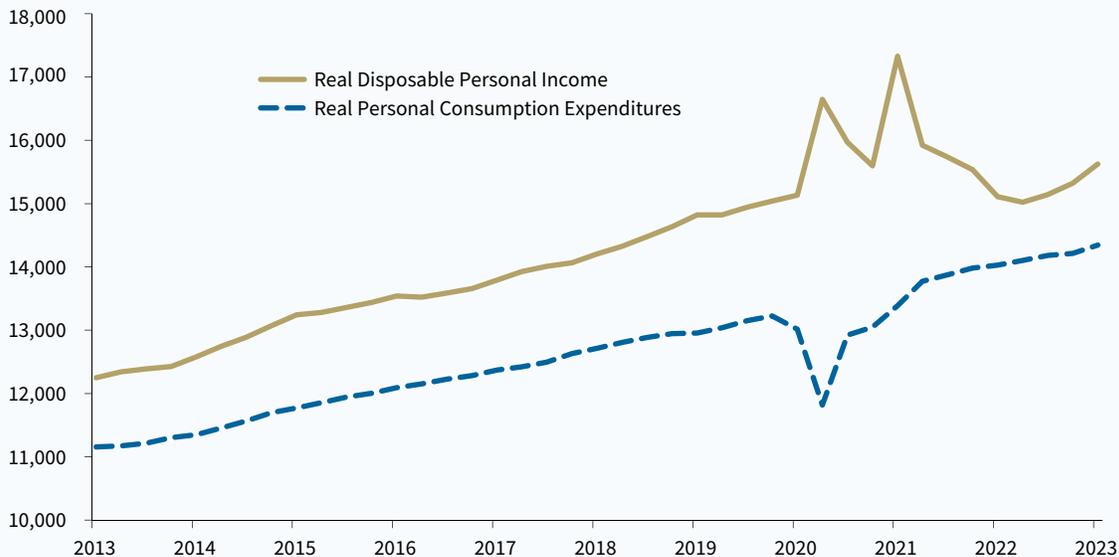
inflation moderated, and real DPI rose above the year-earlier level in the first quarter. Real consumer spending continued to grow in 2022 and first quarter 2023.

Higher inflation contributed to the decline in the household savings rate from the highs in 2020 and first quarter 2021 to near historic lows by the end of third quarter 2022 (Chart 21). In fourth quarter 2022 and first quarter 2023, the savings rate rose but remained below its 2019 pre-pandemic level. Higher inflation may have also contributed to increased consumer debt levels and a rise in the household debt-to-income ratio. In 2022, consumers were paying more for their

CHART 20

Real Income Declined in 2022 After Growing Strongly in 2020 and 2021

Real Income and Spending
\$ Billions



Source: Bureau of Economic Analysis (Haver Analytics).

Note: Income and spending are seasonally adjusted at an annual rate. Quarterly data through first quarter 2023.

purchases even as they may have cut back on other spending. Mortgage debt also increased last year. Together, these factors contributed to an increase in the total household debt-to-income ratio. After declining during the pandemic, the ratio of household debt to income normalized in 2022, rising to pre-pandemic levels.

Stock market declines also stressed household balance sheets. The S&P 500 fell about 18 percent in 2022 and ended first quarter 2023 up 7.5 percent from the start of the year. Lower stock market value since 2021 contributed to a year-over-year decline in aggregate household assets in the second half of 2022 and first quarter 2023. Higher debt and lower asset values caused household net worth to decline from a year earlier in the second half of 2022 and first quarter 2023.

Consumer loan balances at banks grew from a year earlier in 2022 and in first quarter 2023 led by strong credit card loan growth. Credit card loans are about half of all consumer loans held by banks; auto loans and other consumer loans make up the other half. Credit card loans rebounded strongly in 2022 and first quarter 2023 after falling from second quarter 2020 through second quarter 2021 (Chart 22). Credit card loans surpassed their pre-pandemic level in second quarter 2022 and by first quarter 2023 were about 14 percent higher than in first quarter 2019.⁴² Growth of auto loan balances slowed for the banking industry overall in 2022 and first quarter 2023 but accelerated at community banks.⁴³

⁴² Credit card loan balances are highly seasonal and rise from first quarter to fourth quarter, so we compare first quarter 2019 to first quarter 2023.

⁴³ Community banks hold a relatively small share, 6 percent, of total auto loan balances held by the banking industry.

CHART 21

The Savings Rate Fell Close to Historical Lows in 2022 After Spiking During the Pandemic

Personal Savings as a Share of Disposable Income
Percent

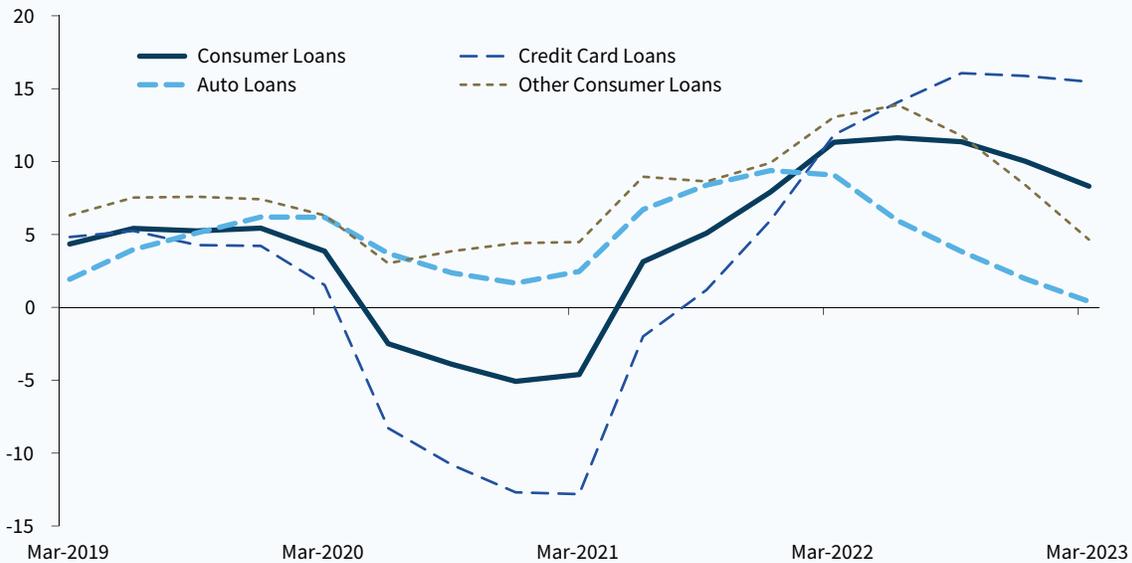


Source: Bureau of Economic Analysis (Haver Analytics).
Note: Monthly data through March 2023.

CHART 22

Credit Card Loans Led Loan Growth at Banks in 2022

Year-Over-Year Growth
Percent



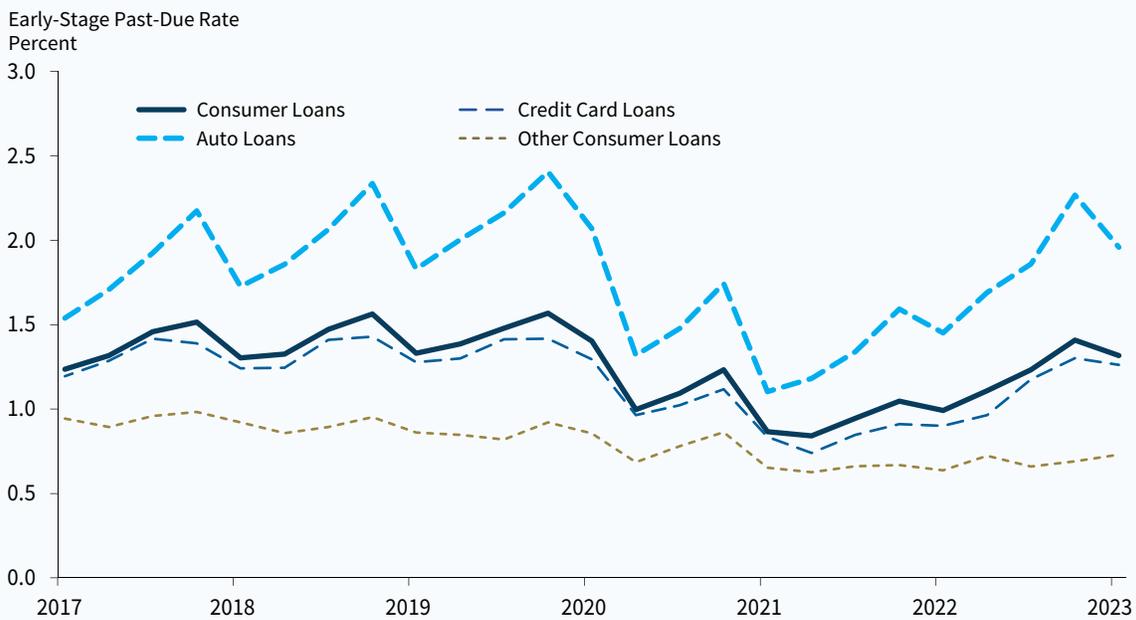
Source: FDIC.
Note: Quarterly data through first quarter 2023.

Early signs of consumer loan performance problems emerged at banks, primarily among auto loans, but consumer loan asset quality measures generally remained favorable. Early-stage past-due rates—the share of loan balances 30 to 89 days delinquent—for auto and credit card loans rose throughout 2022 and fell in first quarter 2023 following seasonal trends (Chart 23). The early-stage past-due rate for credit cards in first quarter was about the same as the rate in first quarter 2019, while the rate for auto loans was above its first quarter 2019 level. In first quarter 2023, total consumer loans also exhibited similar trends for noncurrent rates—the share of loans more than 90 days past due or in nonaccrual status.

While overall asset quality measures for total consumer loans remained favorable in 2022, auto loan delinquencies worsened. Both the early-stage past-due rate and noncurrent rate for auto loans rose in first quarter 2023 to above their pre-pandemic levels. Net charge-offs for auto loans rose to their pre-pandemic level, even as high vehicle prices may have lessened losses from charged-off loans.

The trends in consumer loan performance could deteriorate in 2023 if the labor market or economic conditions soften. The concerning asset quality trends in auto loans may worsen if auto prices normalize.

CHART 23
Early-Stage Past-Due Rates Are Rising, Especially for Auto Loans



Source: FDIC.
 Note: Quarterly data through first quarter 2023.

Energy

- Energy prices softened during second half 2022 as oil prices receded from earlier highs and were more stable through early 2023.
- Despite the decline in prices, the energy industry remained profitable, supporting employment in energy-concentrated states.⁴⁴
- Bank loan exposure to oil and gas firms continued to decline in 2022 from 2021 levels.
- Community bank asset quality in energy-concentrated states continued to improve through first quarter 2023.
- Despite strength in 2022, the outlook for conditions in the energy sector weakened by year-end and remained uncertain in early 2023.

Oil markets were volatile in 2022, and oil prices rose on average before moderating in the second half of the year through early 2023. In 2022, daily West Texas Intermediate (WTI) oil prices were at their most volatile since 2014.⁴⁵ The volatility reflected a sharp increase in prices early in 2022, followed by a sharp correction through the end of the year (Chart 24). Oil prices averaged almost \$95 per barrel in 2022, more than 39 percent higher than the year before, but averaged around \$76 in January through May 2023. An observable sharp upward movement in WTI oil prices during the first half of 2022 can be attributable to disruptions in energy supplies caused by geopolitical tensions in Ukraine that began in late February 2022. Sanctions imposed by sovereigns on Russia and other independent corporate actions taken in response to Russia's invasion of Ukraine also contributed to increased supply risks and higher oil prices. However, in the second half of the year, oil prices eased. According to the Energy Information Administration, crude oil prices were generally decreasing due to growing concerns around weakening global economic conditions. Uncertainties over the duration of China's pandemic-related lockdowns in 2022 added to those concerns, and rapid withdrawals from the Strategic Petroleum Reserve helped relieve supply challenges and contributed to softening oil prices.

In March and April 2023, Russia and several OPEC+ members announced oil production cuts of 1.7 million barrels per day (bpd) in addition to the 2 million bpd of cuts announced in October 2022. Overall, the cuts would take about 3 percent of the world's petroleum production off the market beginning in May through the end of 2023. The decision to cut oil production could result in significantly higher oil prices.

Despite the decline in oil prices, the industry remained profitable and employment growth in energy-concentrated states continued to outpace that of non-energy states. Strong demand sustained energy prices above breakeven rates for most companies. Economic conditions in energy-concentrated states are highly sensitive to changes in energy-related jobs. In 2022, energy-concentrated states had more than eight times the concentration of mining and logging employment than the rest of the nation. For the year ending first quarter 2023, nonfarm employment in energy states grew a combined 3.7 percent, a full percentage point faster than the 2.7 percent increase in employment growth for non-energy states. Better performance for energy states during this period was due in part to job growth in the mining and logging sector. Aggregate mining and logging employment in energy states grew more than twice as fast (9.8 percent) as that of non-energy states (4.2 percent).⁴⁶ Energy states continued to receive a boost from higher energy prices, which stimulate

⁴⁴ For this analysis, energy-concentrated states are Alaska, Colorado, Louisiana, New Mexico, North Dakota, Oklahoma, Texas, and Wyoming. Together, these states accounted for 78 percent of U.S. oil production and 66 percent of natural gas in December 2021.

⁴⁵ Standard deviation was used to calculate oil price volatility, based on author's calculations using Energy Information Administration/Thompson Reuters oil price data.

⁴⁶ Mining and logging employment numbers for Delaware and Hawaii were omitted from the non-energy total because they were aggregated along with their construction employment numbers. Cross-referencing with detailed Quarterly Census of Employment and Wages jobs data from the Bureau of Labor Statistics indicates very little energy employment in those two states, however.

CHART 24

Geopolitical Concerns Caused Oil Prices to Rise Sharply in the First Half of 2022 Before Falling in the Second Half Due to Recession Fears



Source: Energy Information Administration.
Note: Data are daily for the year 2022 through May 22, 2023.

domestic energy production and demand for energy-related employment. Energy segments that benefited from higher prices were liquefied natural gas, refining, and renewable energy.

Bank lending to the oil and gas industry declined in 2022, continuing a trend since the start of the pandemic; however, current exposure to the industry exhibits relatively modest credit risk, given strength in the oil and gas industry during the year.

Results of the 2022 Shared National Credit (SNC) review indicate that loan commitments to the oil and gas sector declined almost 16 percent from year-end 2019 through 2022, with most of the decline occurring in 2021.⁴⁷ As global demand for oil plummeted in 2020, the share of oil and gas loans in the SNC program that were rated special mention or adversely classified reached 23.3 percent.⁴⁸ Banks responded to weaker conditions in the energy industry by reducing credit allocations and, in some cases, by exiting entirely due to asset quality and environmental, social, and governance-related concerns.

After the decline in 2020, oil demand began to strengthen in 2021 and 2022 as industry profits jumped and oil and gas firms reduced debt. Among 11 industry sectors represented in the S&P 500, the S&P Energy Index's performance ranked first in 2021 and 2022. In 2022, losses exceeded 18 percent across the S&P 500, but the Energy Index gained almost 66 percent. Other than a small gain in the utility sector, energy was the only sector to record a gain over the year. The sector's strong equity performance was the result of higher prices combined with a collective focus on selectively funding new projects and returning excess cash flow to shareholders. Consistent with improved industry conditions, the share of oil and gas loans in the SNC program that received special mention and adverse classifications declined sharply to 3.9 percent. A continuing trend of declining oil prices during the first five months of 2023 compressed the favorable gap between oil prices and breakeven rates, which could moderate the strength in the oil and gas industry in early 2023.

⁴⁷ Oil and gas sector lending is not available at the bank level in Call Report data. However, the Shared National Credit (SNC) Program, which reviews large, syndicated loans by industry sectors that are held by banks, may serve as a proxy for bank loan exposure to the oil and gas industry. The SNC Program assesses risk in complex credit loan commitments to borrowers in excess of \$100 million that are shared by multiple regulated financial institutions. SNC reports can be found at <https://www.occ.treas.gov/publications-and-resources/publications/shared-national-credit-report/index-shared-national-credit-report.html>.

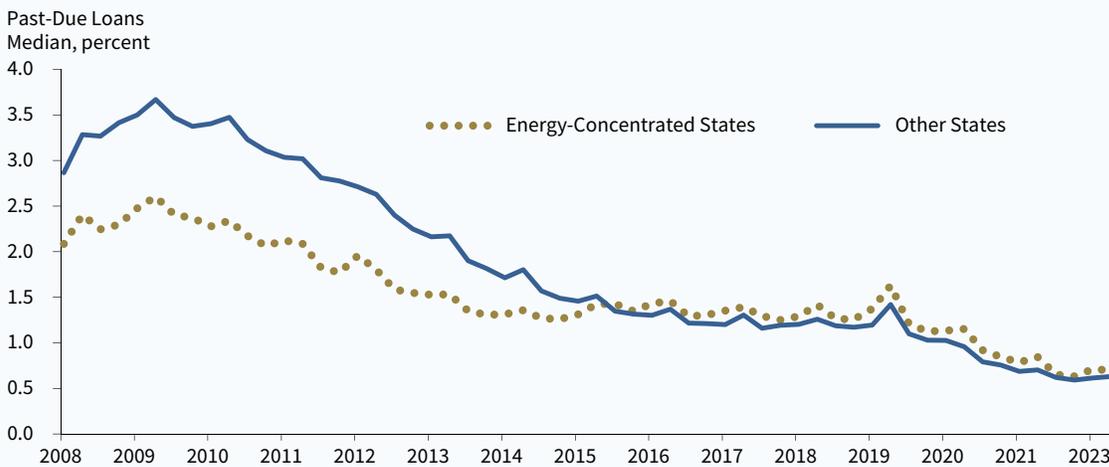
⁴⁸ According to the Energy Information Administration, global oil consumption declined 9.3 percent in 2020, far more than any period on record since 1974.

Asset quality of community banks in energy-concentrated states continued to improve, reflecting stronger conditions in the sector. While community banks generally do not lend directly to the energy sector, these banks are often active lenders and providers of banking services in energy-concentrated areas. Asset quality improvement in community banks in energy-concentrated states was similar to that of community banks in other states. The total past-due loan rate for community banks headquartered in energy-concentrated states was 0.70 percent in first quarter 2023, excluding government-guaranteed Paycheck Protection Program loans, down from 0.84 percent one year earlier and only slightly higher than the 0.63 percent for community banks not headquartered in energy-concentrated states (Chart 25). The total past-due rate for commercial and industrial loans for community banks in energy-concentrated states improved modestly in first quarter 2023 from a year earlier and was near its historical low since data collection began in 1984. Still, the past-due rate remained more than double the near-historic low rate of community banks in other states.

Despite strength in 2022, the outlook for the energy industry weakened through early 2023. Softening macroeconomic conditions, geopolitical events, and the potential for future supply disruptions will make it challenging to sustain the 2022 favorable trends in the energy sector. Several elements of uncertainty suggest oil market volatility could continue in 2023, including weak or recessionary prospects for the domestic and global economy, potential changes in Russian oil production, and the redistribution effects of oil and gas supply lines amid sanctions and oil import bans. According to the June 2023 Energy Information Administration Short-Term Energy Outlook, prices are forecast to soften further but are expected to remain above \$70 per barrel by fourth quarter 2023.⁴⁹ Additional pressure on supply side fundamentals is also evident with the moves by OPEC+ to reduce production to stabilize global markets.⁵⁰ These factors should help support economic and banking conditions in states reliant upon employment in the energy sector.

CHART 25

Despite Extreme Oil Price Volatility, Community Bank Past-Due Loans Have Remained Low and Stable in Energy-Concentrated States



Source: FDIC.
 Note: Includes all community banks as defined by the December 2012 *FDIC Community Banking Study*. Past-due loans exclude Paycheck Protection Program loans. Energy-concentrated states are Alaska, Colorado, Louisiana, New Mexico, North Dakota, Oklahoma, Texas, and Wyoming. Data are quarterly through March 31, 2023.

⁴⁹ *Short Term Energy Outlook*, U.S. Energy Information Administration, June 2023, p 29.

⁵⁰ OPEC, “[33rd OPEC and Non-OPEC Ministerial Meeting](#),” press release, October 5, 2022.

Housing

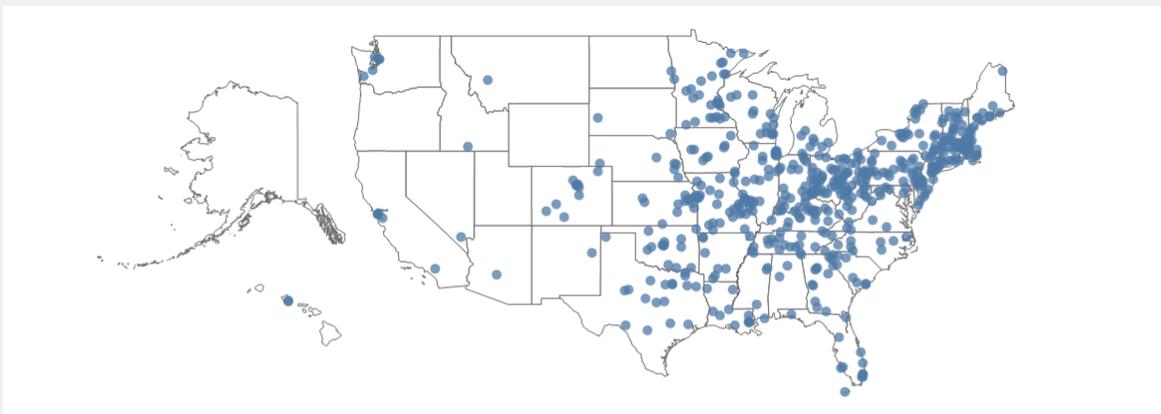
- The housing market continued to slow from pandemic highs as mortgage rates rose sharply from 2022 lows and remained elevated through first quarter 2023.
- With higher mortgage rates and uncertain economic conditions, the pace of home price appreciation slowed considerably from mid-2022 peaks through first quarter 2023. Home prices remain high, supported by a historically low supply of homes for sale.
- Mortgage originations fell as the housing market weakened, but banks reported higher residential loan balances early in 2023 and increased residential construction and development (C&D) lending.
- While residential mortgage loan asset quality and underwriting remained favorable through first quarter 2023, early signs of potential credit deterioration emerged.

Residential loans held by banks totaled \$2.78 trillion as of first quarter 2023.

- Of the \$2.78 trillion in residential loans, community banks hold 17 percent (\$474.6 billion).
- Almost 13 percent of all banks (604) hold a concentration of residential loans above 300 percent of capital (tier 1 capital and credit loss reserves for loans and leases).
- Slightly more than 40 percent of community banks (1,777) report that residential mortgage loans are the largest lending segment by dollar volume within their loan portfolio.
- Exposure to the residential market, in terms of total residential loans to total loans, is highest in the Northeast.

Regional Exposure to Residential Lending

Dots on the map represent the 604 banks (12.9 percent of all banks) with total 1–4 residential loans above 300 percent of capital.



Source: FDIC.

Sharply higher mortgage rates in 2022 contributed to a slowdown in the housing market later in the year that continued into first quarter 2023. After declining to historically low levels, the average rate on a 30-year fixed-rate mortgage rose sharply in 2022. Between January and October 2022, the weekly rate increased from 3.52 percent to 7.16 percent, the largest increase in one year since 1994. By March 2023,

the 30-year fixed-rate mortgage had eased to 6.40 percent but remained relatively high.⁵¹

As mortgage rates rose sharply in 2022, residential construction declined as home sales weakened and home price gains slowed nationwide. Real private residential fixed investment fell 10.6 percent in 2022, the largest annual decline since 2009.⁵² Residential

⁵¹ Mortgage Bankers Association.

⁵² Census Bureau and Bureau of Economic Analysis, annual permits and real private residential fixed investments data through 2022.

construction continued to decline in first quarter 2023. Sales of new and existing homes also began to decline in 2022, but new home sales listings edged up in first quarter 2023 as builders offered incentives, such as rate buy-downs, to attract potential buyers. Existing home sales continued to decline in first quarter 2023.

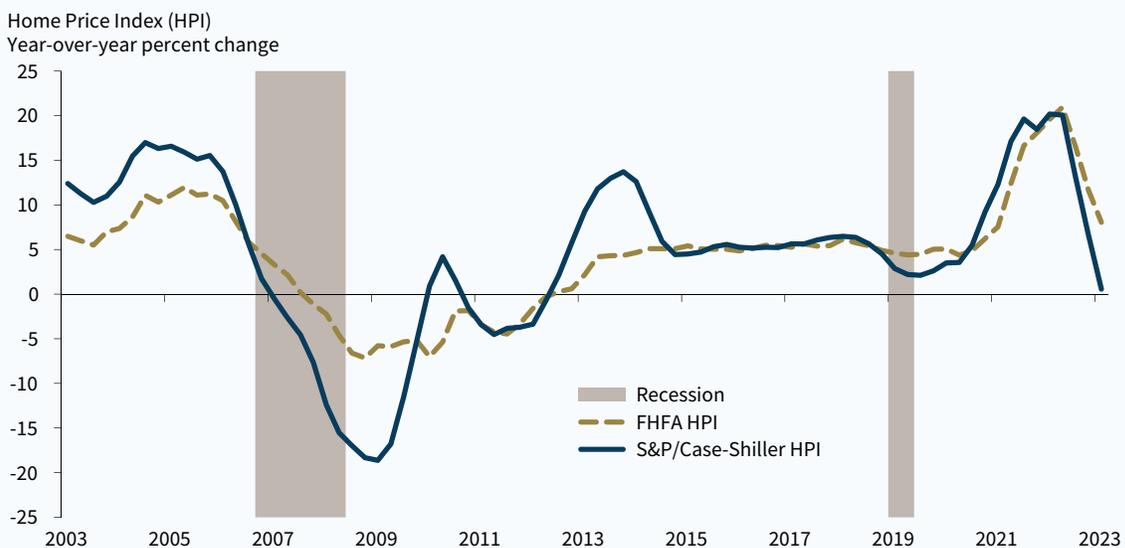
With higher mortgage rates and uncertain economic conditions, the pace of home price appreciation slowed considerably from mid-2022 through first quarter 2023. After increasing at double-digit rates from first quarter 2021 to fourth quarter 2022, home price growth slowed nationally to single-digits during first quarter 2023 (Chart 26).⁵³ During the pandemic when home prices increased rapidly across the country, metro areas including Boise and Phoenix experienced peak home price appreciation of more than 30 percent.⁵⁴ Appreciation rates have since slowed from recent highs, but prices remained well above pre-pandemic levels as of first quarter 2023. As of March 2023, home price growth had slowed the

most among more expensive markets in the West, such as Seattle and San Francisco, where remote work options led to out-migration, which pushed home prices noticeably below their peak. Since reaching peak levels, home prices have fallen faster than the nation in nine of the nation's 20 largest markets, according to S&P CoreLogic Case-Shiller.⁵⁵ In contrast, Tampa and Miami led the nation in home price gains from pre-pandemic levels through first quarter 2023 as in-migration into the Southeast supported home price appreciation in these markets where home prices remain near their recent highs.⁵⁶

Despite easing home price appreciation in the second half of 2022 through first quarter 2023, housing affordability remained well below pre-pandemic levels for the nation. The National Association of Realtor's Housing Affordability Index was 108.1 in first quarter 2023, much lower than its pre-pandemic level of 178.4 and below the historical average of 143.3.⁵⁷

CHART 26

U.S. Home Price Growth Slowed in Mid-2022 and Trended Lower Through First Quarter 2023



Sources: S&P Dow Jones Indices, Federal Housing Finance Agency, and National Bureau of Economic Research (Haver Analytics).
Note: Data are quarterly seasonally adjusted figures through first quarter 2023.

⁵³ Federal Housing Finance Agency, quarterly home price data through first quarter 2023.

⁵⁴ S&P CoreLogic Case-Shiller, quarterly home price data through March 2023.

⁵⁵ S&P CoreLogic Case-Shiller, monthly home price data through March 2023.

⁵⁶ Ibid.

⁵⁷ An affordability index above 100 signifies more than enough income to qualify for a mortgage loan on a median priced home with a down payment of 20 percent. An index above 100 is deemed to be affordable, while an index below 100 is deemed to be unaffordable.

CHART 27

Mortgage Origination Volumes Dropped Sharply in 2022 Following Elevated Levels the Prior Two Years

Total Mortgage Origination Volumes
\$ Billions



Source: Mortgage Bankers Association (Haver Analytics).
Note: Data are annual through 2022 for 1-4 unit family loans expressed in billions.

Housing prices remained high supported in part by a limited supply of homes for sale. Housing supply, which includes existing homes and new homes for sale, has been relatively tight following the decline in the construction of single-family homes after the large excess supply of new home construction during the housing cycle in the late-2000s.⁵⁸ Housing supply edged up in 2022 but remained lower than the pre-pandemic level through May 2023.⁵⁹ Existing homes for sale represent the largest share of single-family housing supply; however, the sharp rise in mortgage rates has hindered the inventory of existing homes. Anecdotal evidence suggests homeowners with low fixed-rate mortgages, which make up a large share of homeowners, have been reluctant to list their homes for sale.⁶⁰ The share of new homes for sale also declined since late 2021 through early 2023 after rising early in the pandemic.

Residential mortgage activity slowed in 2022 following rapid gains the previous two years. For the year ending 2022, mortgage origination volume across all types of mortgage lenders decreased 49 percent from a year earlier, according to the Mortgage Bankers Association.⁶¹ After spiking in 2020 and 2021, origination of new mortgages to purchase a home in 2022 returned closer to levels before the pandemic. Mortgages originated for refinancing declined in 2022, reaching a record low, as many existing homeowners had already locked into historically low fixed-rate mortgages (Chart 27). In first quarter 2023, mortgages to purchase a home decreased 30 percent year over year and approached the first quarter 2020 level, and refinancings continued to decline.

⁵⁸ Existing homes represent nearly 90 percent of homes for sale nationally. Existing homes for sale increased from a record low of 1.6 months in January 2022 to 2.9 months in December 2022 as demand softened due to higher mortgage rates and increased economic uncertainty.

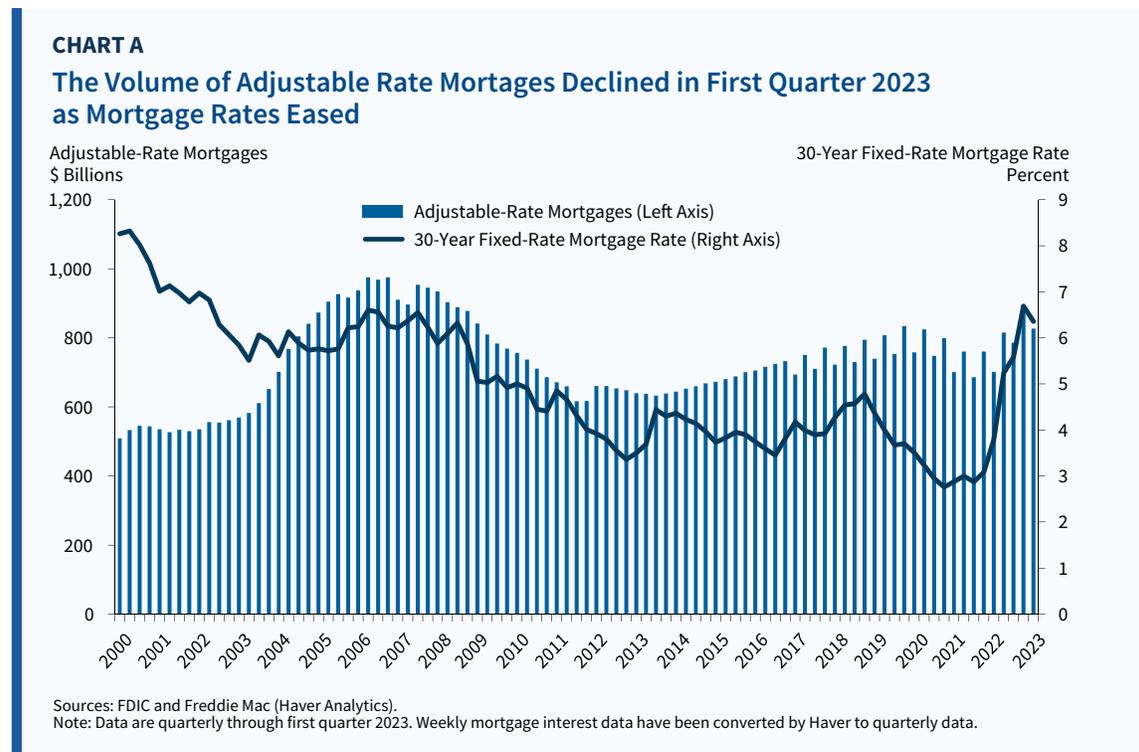
⁵⁹ National Association of Realtors.

⁶⁰ Lotfi Karoui, Vinay Viswanathan, and Ronnie Walker, "Inventory Is Tipping the Scales," Goldman Sachs, May 31, 2023.

⁶¹ Mortgage origination volume estimates include only single-family (1-4 unit), closed-end, first lien, home purchase or refinanced loans that were originated through the retail, consumer direct, broker wholesale, or non-delegated correspondent production channels. The estimates exclude subordinate liens, HELOCs and home equity loans, and purchased loans (i.e., loans originated through the delegated correspondent channel to avoid double counting loans).

Adjustable-Rate Mortgages (ARMs) Rose as Long-Term Mortgage Rates Increased

As fixed mortgage rates rose sharply during 2022, demand for ARMs increased. Aggregate bank holdings of ARMs rose from 28 percent of total residential mortgage loans to 33 percent during 2022. As long-term mortgage rates eased in early 2023, the ARM share at banks declined slightly in first quarter 2023 to 30 percent (Chart A). Banks headquartered in states that experienced the highest home price appreciation rates reported a larger share of ARMs to total residential loans during the period. For example, ARMs as a share of total residential loans were 58 percent for banks headquartered in California and 50 percent for banks headquartered in Florida, traditionally among the highest in the nation, and well above the national average. Despite the increase, the share of ARMs remained lower than in the early 2000s housing cycle, and industry studies indicate that underwriting is stronger for ARMs in this cycle.



Although residential mortgage originations declined, the banking industry reported higher residential loan balances through first quarter 2023, including loans for residential C&D.⁶² Banks reported residential loans totaling \$2.78 trillion as of first quarter 2023, up 9.5 percent from one year earlier and the highest amount since 2008. These loans were the largest loan segment for nearly half of all

banks.⁶³ Both community banks and noncommunity banks reported an increase in residential loans from a year earlier. One-to-four family residential loans, which represent 90 percent of total residential mortgage loans, drove the increase; home equity loans accounted for most of the remainder. Balances of home equity lines of credit (HELOCs) increased 3.3

⁶² Federal Deposit Insurance Corporation, Call Reports. Total residential loans include real estate loans secured by 1–4 family residential properties (home equity lines of credit plus all other 1–4 family residential real estate loans).

⁶³ Federal Deposit Insurance Corporation, Call Reports. Call Report data for total residential loans are in dollars.

percent in first quarter 2023 on an annual basis. Both noncommunity banks and community banks reported an increase in HELOCs.

Mortgage balances rose as banks may have retained them on their balance sheets rather than selling them. During first quarter 2023, residential mortgage loans sold declined nearly 24 percent from the previous quarter and 69 percent from a year earlier. In contrast, residential mortgage loans sold rose at a quarterly average of 3.1 percent before the pandemic.⁶⁴ During first quarter 2023, bank mortgage portfolios included long-term fixed rate mortgages originated when mortgages rates were lower, reducing their market value as interest rates rose. A greater share of longer-term fixed rate mortgages with lower yields could challenge net interest margins (see the Net Interest Margins and Interest Rate Risk Section of this report for more information).

A higher volume of total residential mortgage loans contributed to a rise in the ratio of residential mortgage loans to capital to 133 percent as of first quarter 2023, up from 122 percent one year earlier but below the pre-pandemic median of 138 percent in fourth quarter 2019. Nearly 13 percent of all banks reported total residential loans to capital above 300 percent, up moderately from last year but below the 17 percent peak reached in 2011.

Although construction of new homes has slowed, 1–4 family residential C&D loans reached \$105.4 billion in first quarter 2023, up 14 percent from a year earlier and the highest balance since third quarter 2009. Both community banks and noncommunity banks reported an increase in 1–4 family residential C&D loan balances last year. While funded amounts increased, the amount of unfunded C&D commitments declined by 6 percent to \$95 billion in first quarter 2023 but remained higher than the pre-pandemic level. Nearly 97 percent of banks with high C&D concentrations are community banks, consistent with the long-term trend.⁶⁵

While residential mortgage loan asset quality remained favorable through first quarter 2023, early signs of potential credit deterioration emerged.

After peaking in fourth quarter 2020 following the onset of the pandemic, asset quality measures for residential mortgage loans remained favorable in first quarter 2023. The aggregate total residential mortgage loan past-due rate declined to 1.93 percent in first quarter 2023 from 2.40 percent one year earlier, and the noncurrent rate declined to 1.35 percent. These measures remained below the pre-pandemic levels and well below peak rates following the housing downturn a decade ago. However, the early-stage past-due rate on residential mortgage loans ticked up to 0.58 percent in first quarter 2023, slightly higher than a year earlier (Chart 28).⁶⁶

The total past-due rate on 1–4 family residential C&D loans rose to 0.69 percent in first quarter 2023, up from one year earlier and the previous quarter but below the pre-pandemic level of 0.97 percent in fourth quarter 2019. Similar to trends for residential mortgage loans, the early-stage past-due rate on 1–4 family residential C&D loans rose to 0.50 percent in first quarter 2023 from 0.38 percent the previous quarter but remained lower than the pre-pandemic level. The noncurrent rate on 1–4 family residential C&D loans also remained low at well below 1 percent. While overall residential mortgage loan asset quality measures remained low by historical standards as of first quarter 2023, slight increases in past-due rates on residential mortgage loans and residential C&D loans could indicate potential weakness among some mortgage borrowers.

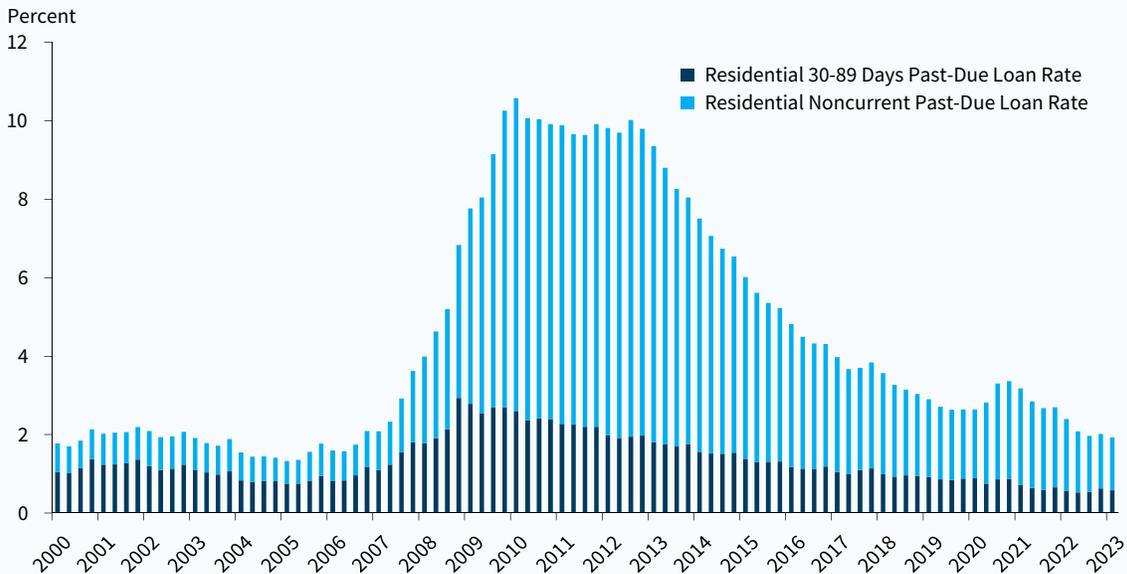
⁶⁴In this reference, the pre-pandemic period refers to first quarter 2015 through fourth quarter 2019.

⁶⁵High concentration is defined as banks with 1–4 residential C&D loans greater than 50 percent of capital.

⁶⁶Federal Deposit Insurance Corporation, Call Reports. Noncurrent 1–4 family residential loans are those secured by 1–4 residential properties 90 days or more past due and in nonaccrual status. Excluding Government National Mortgage Association (GNMA) noncurrent balances, the noncurrent rate reported by the banking industry declined from 1.35 percent to 0.93 percent. Thirty-four percent of the decline in 1–4 residential noncurrent loans was due to lower rebooked GNMA noncurrent balances, which fell 21 percent from the year-earlier level.

CHART 28

Residential Mortgage Asset Quality Remained Favorable in 2023, but the Early-Stage Delinquency Rate Moved Slightly Higher Over the Previous Year



Source: FDIC.
Note: Data are quarterly through first quarter 2023.

Bank residential mortgage lenders may face increased headwinds in 2023 if housing market conditions deteriorate further, but low delinquency rates and relatively sound underwriting are likely to help those lenders. Forecasts for home price trends vary; some forecasts indicate that home prices may decline in 2023 or continue to appreciate at a slower pace than in 2022.⁶⁷ The housing outlook remains challenged by economic uncertainty with a prospect of a recession, high inflation and interest rates, supply constraints, and sharp changes in net in-migration patterns. Even with weaker housing activity, many industry forecasts suggest that home prices nationally will remain above their pre-pandemic level in the absence of a severe recession.

Despite early signs of deterioration, the total past-due rate on residential mortgages reported by the banking industry remained favorable in first quarter

2023, and industry reports suggest that residential mortgage underwriting remained relatively sound. According to an April 2023 Federal Reserve survey, in response to weakening conditions, a growing share of bank respondents tightened underwriting standards on residential real estate loans in first quarter 2023.⁶⁸ A larger share of current residential mortgages outstanding is to borrowers with high credit scores, nearly 61 percent, almost double the share reported during the Great Recession.⁶⁹ However, banks with less diversified business models that have relied heavily on residential mortgage activity may face increased risk should the decline in the housing market and mortgage originations that occurred last year become more severe.

⁶⁷ CoreLogic Case-Shiller, Federal Housing Finance Agency, and S&P Dow Jones (Moody's Analytics) annual home price forecast data through 2023 ; Goldman Sachs, "Why The Global Housing Market Has Further to Slide," March 22, 2023; CoreLogic, "U.S. Home Price Insights – May 2023," May 2, 2023; Zillow, "Zillow Home Value and Sales Forecast: June 2023," June 12, 2023.

⁶⁸ Board of Governors of the Federal Reserve System, [Senior Loan Officer Opinion Survey on Bank Lending Practices](#), April 2023.

⁶⁹ New York Fed Consumer Credit Panel/Equifax. As of first quarter 2023, 60.7 percent of all mortgages were originated to borrowers with a credit score of 760 or higher, compared with 30.7 percent reported in first quarter 2008.

Leveraged Lending and Corporate Debt

- Corporate borrowers continue to face challenges of high inflation, rising interest rates, and an economic slowdown.
- Corporate bond and leveraged loan markets have experienced stress; prices and issuance declined, while spreads have increased through early 2023.
- Defaults and distress ratios rose through early 2023 but remained low relative to past stress periods.
- Banks remained exposed to corporate debt through both direct credit risk exposure and investment banking activities, and indirectly through changes in macroeconomic conditions.

Corporate borrowing conditions deteriorated in 2022 and through first quarter 2023 amid rising interest rates, high inflation, and growing expectations of a possible recession. U.S. price inflation rose to the highest level in decades in late 2021 and into 2022, prompting the Federal Reserve to rapidly increase interest rates, which pushed up interest rates for corporate borrowers.⁷⁰ Spreads on corporate debt widened amid concerns about the adverse effects of inflation and the outlook for an economic recession, further pushing up borrowing costs.⁷¹ While spreads moved markedly higher from 2021 levels in 2022 and at the start of 2023, they remained well below levels reached during the crisis periods of the early months of the pandemic and the Great Recession. Leveraged loan distress ratios and default rates also rose from the low levels in 2021 but likewise remained well below previous crisis periods through early 2023 (Chart 29).⁷² Bank business lending conditions tightened beginning in the second half of 2022 and through first quarter 2023, with net lending standards tightening significantly for both commercial and industrial (C&I) and commercial real estate (CRE) loans.⁷³ Secondary market loan prices declined and market price volatility increased in 2022. Price declines were more pronounced for lower-rated borrowers. Loan prices stabilized in early 2023 but remained below 2021 levels.⁷⁴

Corporate debt issuance slowed sharply, especially for lower-rated and more highly leveraged borrowers. Corporate bond issuance declined as well, with investment grade issuance falling nearly 15 percent and high-yield issuance falling almost 80 percent to its lowest level since 2008.⁷⁵ Despite lower debt security issuance, growth in corporate loans was robust, leading to an increase in total corporate debt in 2022. However, the increase was slower relative to growth in GDP and corporate profits through the end of 2022, reducing the corporate debt-to-GDP ratio to below 2020 and 2021 levels and the corporate debt-to-profits ratio to the lowest point since 2015 (Chart 30).⁷⁶ Total issuance in the leveraged loan market, a subset of the corporate debt market, sharply declined in 2022 and into first quarter 2023 to pre-pandemic levels, normalizing from the record issuance in 2021 (Chart 31). Leveraged loan issuance fell by nearly half in 2022, driven by a sharp decline in institutional leveraged loans, which are generally sold to insurers, pension funds, collateralized loan obligations (CLOs), and other types of investors. Merger and acquisition activity, which typically drives growth for leveraged loans, peaked in 2021 but was depressed in 2022 and first quarter 2023, reducing institutional leveraged loan issuance to a 12-year low.⁷⁷

⁷⁰ Bureau of Labor Statistics and the Board of Governors of the Federal Reserve System.

⁷¹ ICE BofA High Yield Index option-adjusted spread and ICE BofA U.S. Corporate Index option-adjusted spread.

⁷² PitchBook Leveraged Commentary & Data (LCD).

⁷³ Board of Governors of the Federal Reserve System, Senior Loan Officer Opinion Survey on Bank Lending Practices.

⁷⁴ PitchBook LCD.

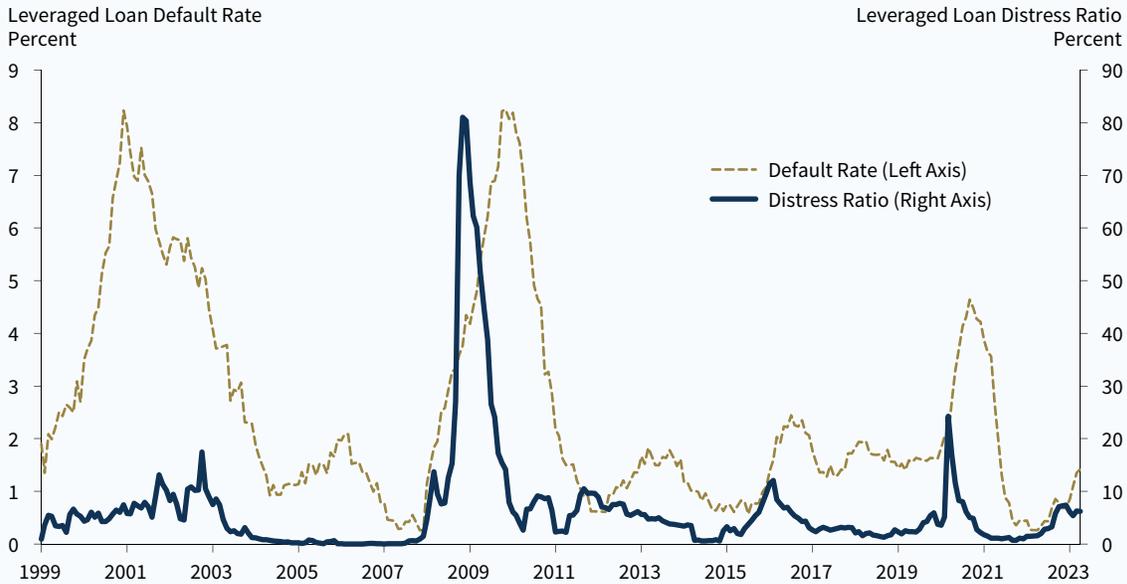
⁷⁵ Ibid.

⁷⁶ Board of Governors of the Federal Reserve System, Financial Accounts of the United States; Bureau of Economic Analysis.

⁷⁷ PitchBook LCD.

CHART 29

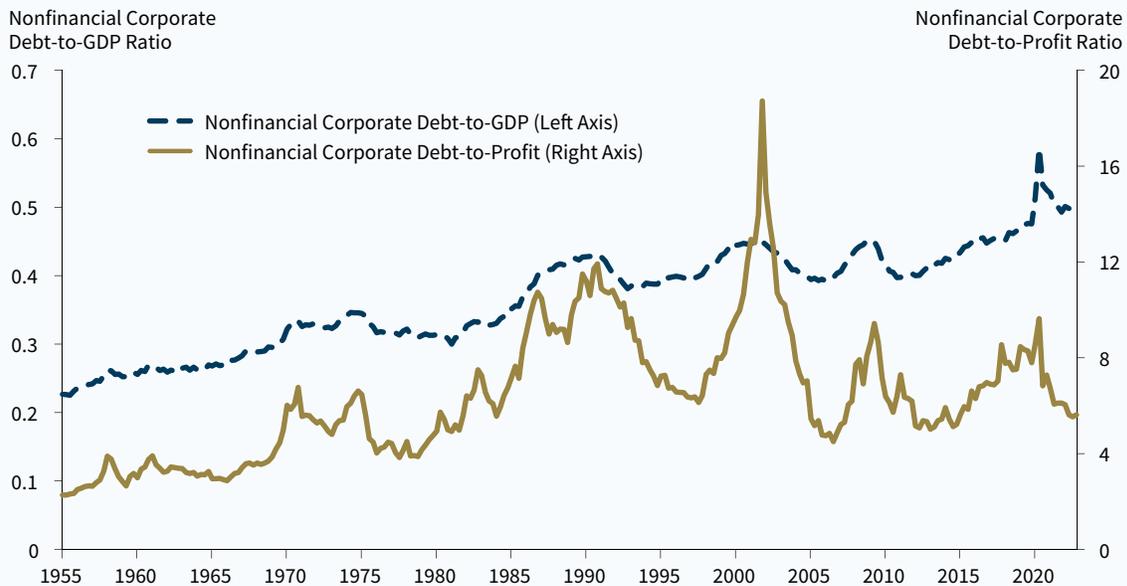
Leveraged Loan Distress and Default Rates Rose in 2022 and Early 2023 but Remain Below the Levels Reached in Past Stress Periods



Source: PitchBook Leveraged Commentary & Data.
 Note: Default rate is lagging 12-month rates. Distress ratio is the share of loans priced below 80 (par is 100). Monthly data through April 2023.

CHART 30

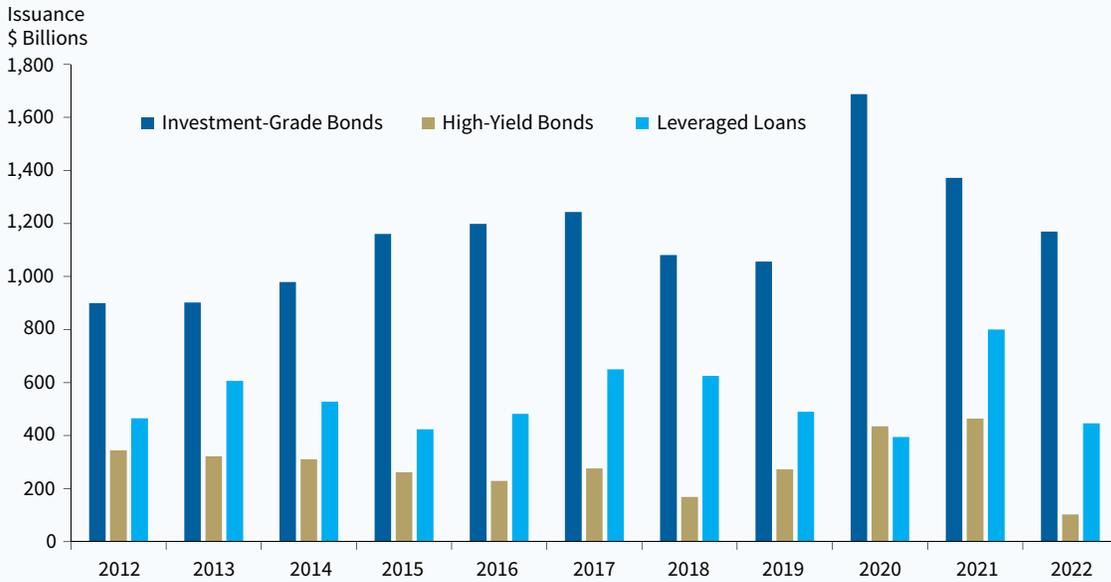
Corporate Debt Relative to GDP and Corporate Profits Moderated in 2022 Relative to 2020 and 2021 Levels



Sources: Federal Reserve Board and Bureau of Economic Analysis (Haver Analytics).
 Note: Nonfinancial corporate debt includes loan and debt security liabilities. Nonfinancial corporate profit is quarterly before tax and includes inventory valuation adjustment at a seasonally adjusted annual rate. Quarterly data through fourth quarter 2022.

CHART 31

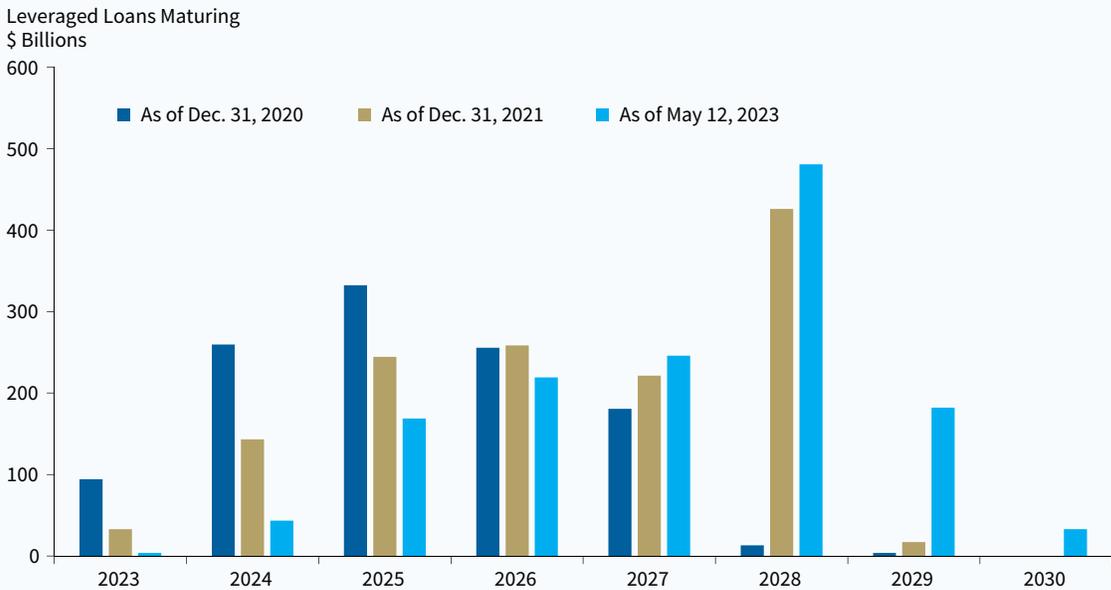
High-Yield Corporate Bond Issuance Fell to Decade Low, While Leveraged Loan and Investment-Grade Bond Issuance Moderated



Source: PitchBook Leveraged Commentary & Data.
 Note: Annual data from 2012 through 2022.

CHART 32

Leveraged Loan Borrowers Extended Maturities Into the Late 2020s, Reducing Near-Term Refinancing Risks



Source: PitchBook Leveraged Commentary & Data.
 Note: Based on yearly data through May 2023.

Banks face direct and indirect exposure to corporate debt and leveraged lending markets.

The banking industry has direct exposure to risks in corporate debt through holdings of debt securities, bilateral loans, participation in syndicated loans, and lending to originators of private credit transactions. The highest risk segment of corporate debt is typically loans to companies with higher debt levels called leveraged loans. Leveraged loans are typically floating rate, so credit risk is the primary risk to banks from direct loan holdings, while holdings of fixed-rate corporate bonds expose banks to interest rate risk and credit risk.⁷⁸ Bank holdings of syndicated loans, which include leveraged loans, rose to more than \$1.36 trillion in fourth quarter 2022, up more than 20 percent from year-end 2021.⁷⁹ In addition, bank holdings of CLOs, which contain leveraged loans, increased to at least \$174 billion in first quarter 2023, up 13 percent from the end of 2021. CLO holdings are concentrated in the largest banks, with the top four banks by assets accounting for 72 percent of estimated bank-held CLOs and the top 20 banks by CLO holdings accounting for 97 percent of total CLO holdings.⁸⁰ While banks typically hold the higher-rated parts of CLOs, they also have a variety of exposures to nonbank financial institutions that hold or arrange CLO securities. These interconnected risks may expose banks to stress in the underlying leveraged loan market in ways that are difficult to measure.

Banks also earn noninterest income from underwriting and arranging corporate bond and leveraged loan issuances, making them susceptible to reduced revenue from these activities when issuance volumes fall. These types of underwriting activities are primarily confined to the largest banks.

While direct exposures to corporate debt markets through lending activities and securities holdings are typically concentrated in larger banks, the banking industry faces indirect exposures through the effects

of corporate debt distress on economic conditions. Significant corporate debt distress could exacerbate an economic downturn by forcing firms to pull back on investment and lay off employees. This reduction in employment and business activity could lead to increased delinquencies and defaults for bank C&I, CRE, and other loans.

Slowing economic growth and continued high interest rates could weigh on corporate debt markets and pose credit risk for the banking industry, while limited near-term corporate debt maturities should mitigate some risks.

Corporations extended their debt maturities between 2020 and 2022, taking advantage of lower interest rates in the early part of the pandemic and thereby limiting refinancing needs in 2023 and 2024, which could help to mitigate default risk in the near term (Chart 32).⁸¹ However, an uncertain economic outlook, including the possibility of a recession, could lead to lower corporate profitability, which could adversely affect repayment and increase refinancing risks across some issuers, particularly those in adversely affected industries.⁸² In addition, borrowing costs could continue to rise further through 2023 if benchmark interest rates, such as Treasuries, continue to rise or if the market perceives higher credit risk in the corporate debt market, which could translate into increased spreads on corporate debt relative to Treasury rates.⁸³ These factors could constrain the ability of corporations to service their debt.⁸⁴ Rising corporate defaults would affect holders of corporate debt securities, including banks. Analysts expect corporate defaults to increase through 2023 but remain at or below long-term averages before increasing further in 2024, in line with past default cycles.⁸⁵ Corporations facing financing constraints could pull back on employment and investment, propagating their distress into other parts of the economy.

⁷⁸ Banks may hedge a portion of this credit risk through use of credit derivatives such as credit default swaps. For more information on the amount of credit derivatives held by FDIC-insured banks, see [FDIC Quarterly Banking Profile Table VI-A](#).

⁷⁹ Board of Governors of the Federal Reserve System, *Financial Accounts of the United States—Enhanced Financial Accounts*.

⁸⁰ Federal Deposit Insurance Corporation, Call Reports. CLO data are reported only by banks with at least \$10 billion in assets, so these numbers do not include any holdings by banks below that threshold.

⁸¹ PitchBook LCD.

⁸² S&P Global, “U.S. Weekly Economic Commentary: 2023 Recession;” The Conference Board, “December Economic Update 2022.”

⁸³ Board of Governors of the Federal Reserve System, “[Summary of Economic Projections](#),” December 14, 2022.

⁸⁴ Deutsche Bank, “Default Study—2023: Return of the Boom-Bust Cycle,” May 31, 2023.

⁸⁵ S&P Global Ratings, “Credit Conditions North America Q2 2023,” March 28, 2023; Deutsche Bank, “Return of the Boom-Bust Cycle.”

Nonbank Financial Institution Lending

- As the nonbank financial sector has continued to expand, so has lending by banks to nonbank financial institutions (NBFIs).
- Loans to NBFIs remained concentrated among the largest banks, and funded balances continued to rise through first quarter 2023.
- Community bank exposure to NBFIs remained small, and outstanding loans to these institutions contracted through first quarter 2023.
- While credit quality measures on NBFIs loans remained favorable, bank exposure to risks of nonbank business activities has increased.

The banking industry continued to increase lending to nonbanks through first quarter 2023.

The nonbank financial sector continued to expand, with direct bank lending to NBFIs growing in tandem. Banks held \$761 billion in funded loan commitments to NBFIs in first quarter 2023, a record high.⁸⁶ During first quarter 2023, a quarter of relatively tepid overall total loan growth in the banking industry, the year-over-year growth rate in NBFIs lending continued to outpace growth rates in all other major loan portfolios (Chart 33).

Banks lend to many different types of NBFIs, including investment firms, financial vehicles, nonbank real estate lenders, insurers, transaction processors, and other entities. Banks provide credit-line commitments to these firms, and NBFIs rely on these lines as a key source of liquidity for day-to-day operations and for funds to lend or to invest.

Loans to NBFIs are concentrated among global systemically important banks (GSIBs) and represented a considerable share of GSIB capital in first quarter 2023. GSIBs represent more than 60 percent of loans to NBFIs at insured institutions. GSIBs reported 9.2 percent growth in funded NBFIs balances year over year in first quarter 2023.⁸⁷ Funded NBFIs loan concentrations at GSIBs reached 50.9 percent of capital in first quarter 2023, up from 39.5 percent at year-end 2019 (Chart 34).⁸⁸ In addition to credit-line commitments, GSIBs issue term loans, asset-based loans, and other facilities to nonbanks. While GSIBs

lend to a wide variety of nonbank entities, their largest commitments tend to be to investment firms and financial vehicles.

Community bank exposure to nonbank entities has declined through first quarter 2023. Only 8.8 percent of community banks had funded commitments to nonbanks, and their loan commitments to NBFIs declined 18.6 percent from year-end 2021. These loans account for a small portion—0.95 percent—of total community bank lending. Supervisory observations suggest that most lending to NBFIs by community banks is through warehouse lines of credit to nonbank mortgage companies. As mortgage origination declined amid rising interest rates, many nonbank mortgage companies reduced their credit-line usage at banks.

The nonbank mortgage industry was challenged by a decline in housing activity that occurred in late 2022 as mortgage rates rose. Nonbank mortgage companies could come under further pressure in a potential recession and sustained high interest rate environment. Some nonbank mortgage lenders loosened underwriting standards and offered new products to maintain origination volume while maintaining limited loss-absorbing capacity. Nonbank mortgage servicers could face acute liquidity pressures in the event of widespread delinquencies as some servicers have to repurchase distressed mortgages while maintaining investor payments.⁸⁹

⁸⁶ Loans to nonbank financial institutions were first reported on Call Reports in first quarter 2010.

⁸⁷ The eight U.S. GSIBs are Bank of America, Bank of New York Mellon, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley, State Street Corporation, and Wells Fargo.

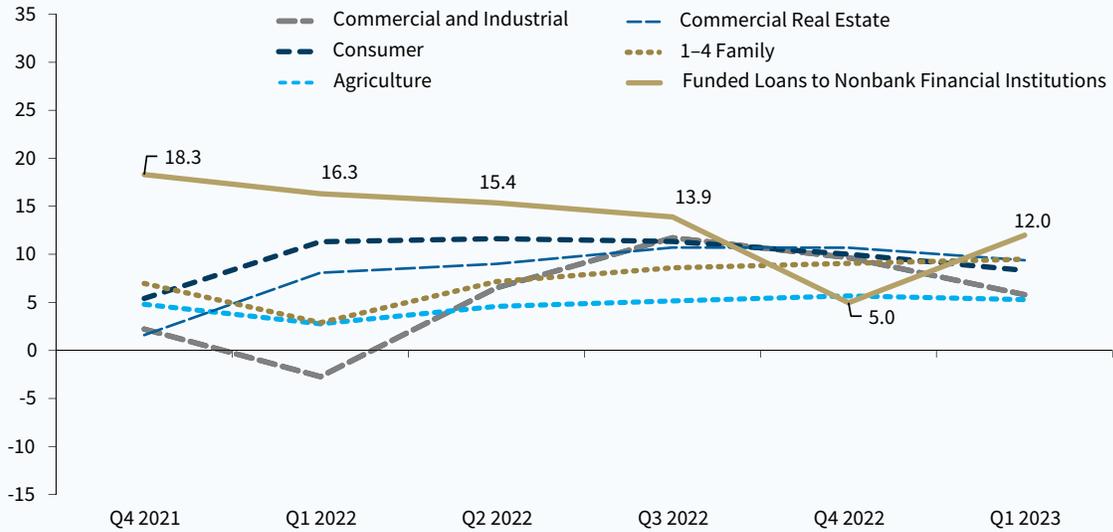
⁸⁸ Capital is defined as tier 1 capital and credit loss reserves for loans and leases.

⁸⁹ Financial Stability Oversight Council, 2022 Annual Report.

CHART 33

Growth in Nonbank Financial Institution Lending Outpaced Other Major Loan Categories

Annual Loan Growth Rate
Percent

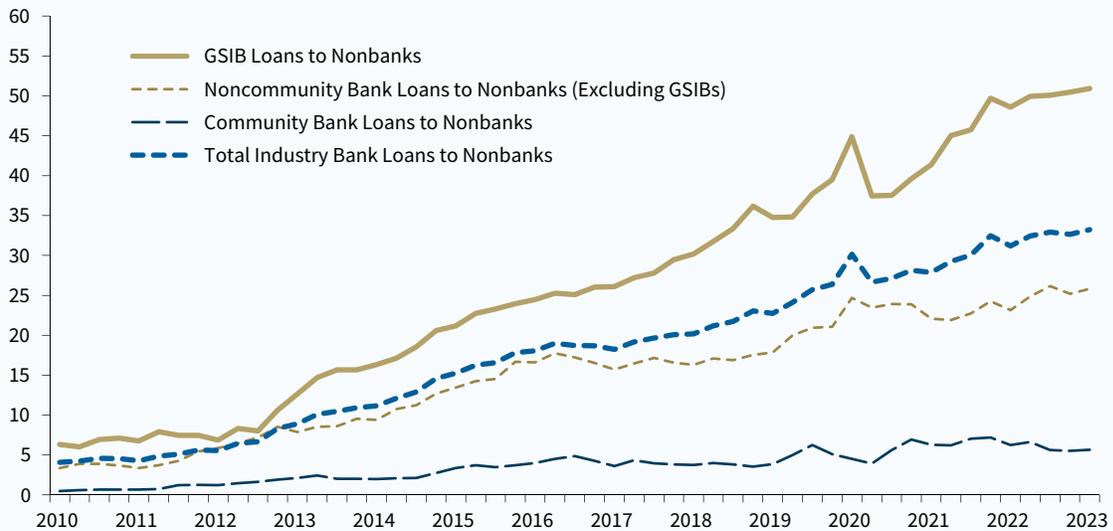


Source: FDIC.

CHART 34

GSIBs Have the Highest Concentration of Loans to Nonbank Financial Institutions

Funded Nonbank Financial Institution Loans to Tier 1 Capital Plus Credit Loss Reserves for Loans and Leases
Percent



Source: FDIC.
Note: Quarterly data through first quarter 2023.

Despite current favorable credit risk metrics, bank exposures to nonbanks pose potential future risks.

While asset quality measures remained favorable on bank loans to NBFIs through first quarter 2023, some NBFIs do not have access to stable funding sources, making them vulnerable to credit distress during periods of market disruptions and economic weakness. In exchange for higher yield, some NBFIs that extend credit may assume higher credit and liquidity risks than those typically borne by banks. Bank lending to riskier NBFIs can thus indirectly transmit increased credit and liquidity risks to their own balance sheets. Similarly, some research has found that compared with banks, NBFIs serve riskier borrowers and limit lending more during financial shocks.⁹⁰ For example, some research suggests that NBF loan origination during the Great Recession declined 96 percent compared with 26 percent for banks. During the pandemic, NBF loan originations declined 85 percent, while bank lending increased.⁹¹ NBFIs could experience defaults from their borrowers or losses due to weakened investments, which would affect their ability to repay debt.

In addition to higher delinquencies or defaults, a drawdown by NBFIs on credit lines in a time of stress could translate into liquidity pressures at banks that extend credit to NBFIs. At the onset of the pandemic in early 2020, NBFIs drew down their lines at banks amid increased economic uncertainty. In first quarter 2020, funded NBF loan surged \$86.1 billion (17.6 percent) from the prior quarter, while unfunded commitments to these institutions shrank \$44.0 billion (10.3 percent). The utilization rate on NBF lines of credit, defined as total funded commitments to NBFIs provided by banks as a percentage of total funded and unfunded commitments, increased to 60 percent, up from 53 percent in fourth quarter 2019 before the start of the pandemic.⁹² While the utilization rate on credit lines to NBFIs was approximately 54 percent in first quarter 2023, relatively unchanged from year-end 2022 and down from the 2020 high, the banking industry's loan exposure to nonbanks has increased since before the pandemic, both in terms of dollar amount and as a share of capital.

⁹⁰ Iñaki Aldasoro, Sebastian Doerr, and Haonan Zhou, "[Nonbank Lending During Crises](#)," Bank for International Settlements and Princeton University, June 2023.

⁹¹ Quirin Fleckenstein, Manasa Gopal, German Gutierrez Gallardo, and Sebastian Hillenbrand, "[Nonbank Lending and Credit Cyclicalities](#)," NYU Stern School of Business, June 2020.

⁹² The NBF utilization of lines of credit is defined as funded loans to NBFIs as a percent of total funded and unfunded commitments to bank and nonbank entities (RC-L.1.e.(2)).

Small Business Lending

- High inflation and labor market shortages challenged small businesses in 2022. Small business conditions varied across industries as consumer spending patterns shifted toward services.
- Community banks remained an important source of small business lending.
- Commercial and industrial (C&I) loan asset quality, a proxy for small business loan performance, remained relatively sound through first quarter 2023, but uncertain small business conditions may be a source of credit risk.

Small businesses have faced higher inflation and labor market shortages since 2021 and experienced a shift in consumer spending patterns that benefited some businesses more than others.⁹³

The National Federation of Independent Business (NFIB) reported that labor market shortages and inflation remained a top concern for small businesses in May 2023. Twenty-five percent of owners reported inflation as their single most important business problem, up from 2021 levels but down from a peak of 37 percent in July 2022. About the same share of

respondents reported quality of labor a concern, and 44 percent of owners reported they had job openings that were hard to fill.⁹⁴

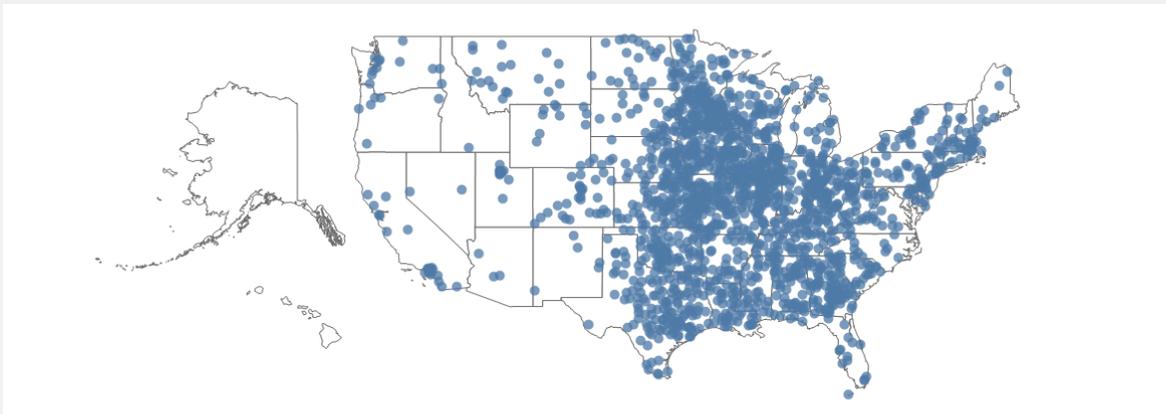
Recent trends in consumer spending may affect conditions for small businesses and the formation of new small businesses across industries. While real personal consumption expenditures (PCE) growth slowed from strong levels in 2021, it remained closer to pre-pandemic rates through first quarter 2023. After broad gains in consumer spending across industries

Small business lending is a key component of many bank lending portfolios nationwide.

Almost 40 percent of banks (1,865) have total small business loans greater than 75 percent of total commercial and industrial (C&I) loans as of December 31, 2022.* Small business loans are defined as C&I loans less than \$1 million.

Regional Exposure to Small Business Lending

Dots on the map represent the 1,865 banks (40 percent of all banks) with small business loans above 75 percent of total C&I loans at the end of fourth quarter 2022.



Source: FDIC.

Note: U.S. territories are not included in the map. Three banks in Guam and one bank in the Federated States of Micronesia with a concentration of small business loans are not shown.

* Small business loans data are reported only in second quarter and fourth quarter of the year.

⁹³ Despite overall growth in 2022, PCE growth was down considerably from 2021 and declined during the last two months of 2022. Weakness during the end of 2022 could signal future challenges for small businesses. See U. S. Bureau of Economic Analysis, [Table 2.3.6U](#), Real Personal Consumption Expenditures by Major Type of Product and Major Function, accessed January 31, 2023.

⁹⁴ NFIB Small Business Optimism Index, May 2023.

in 2021, consumer spending shifted from goods to services in 2022. Services spending was led by growth in recreation, transportation, and food services and accommodation, such as restaurants and take-out services. The decline in goods expenditures was led by reduced spending on motor vehicles and parts and food and beverages in 2022 that improved in first quarter 2023.⁹⁵ Consistent with the shift from goods to services consumption since 2021, new applications for small businesses rose for service-based businesses, such as accommodation and food services, and declined for retail trade and transportation and warehousing (Chart 35).⁹⁶

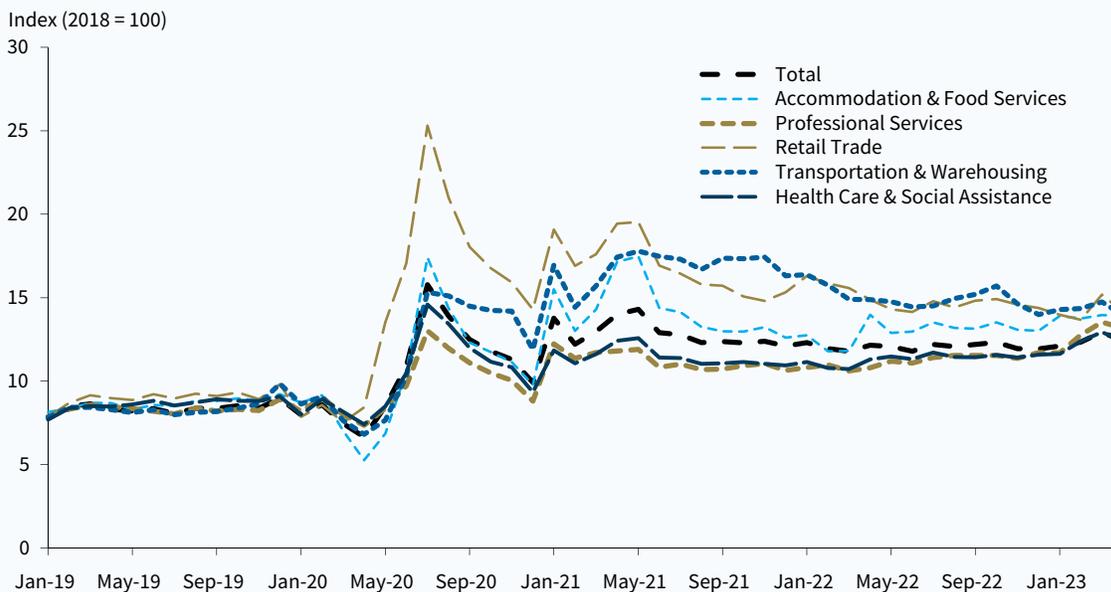
Banks reported a continued slowdown in small business lending in 2022, reflecting the winding down of Paycheck Protection Program (PPP) lending. Small business loans are defined as C&I loans less than \$1 million and are reported in Call Reports semiannually on June 30 and December 31. The banking industry’s small business lending portfolio also includes Small Business Administration lending.

After rising in 2020 primarily due to the introduction of the PPP program, small business lending declined for both community and noncommunity banks in 2022, reflecting in part the forgiveness and repayment of most PPP loans. The amount of small business loans outstanding normalized to the 2019 level by year-end 2022 (Chart 36).⁹⁷

Community banks remained an important source of small business lending. Community banks maintained an outsized share of the banking industry’s total small business loans in 2022 at 23.6 percent, despite holding only 14.7 percent of total industry loans. This share is significantly higher than the community bank share of total C&I loans, which was 9.5 percent at year-end 2022. Total small business loans at community banks declined by \$50.9 billion from 2020 through year-end 2022, reflecting in part the decline in PPP loans outstanding. While the amount of PPP loans held by community banks that meet the small business loan definition is not available,

CHART 35

Business Applications Have Increased for Certain Service Industries Since 2021



Source: Census Bureau (Haver Analytics).
Note: Monthly data through April 2023.

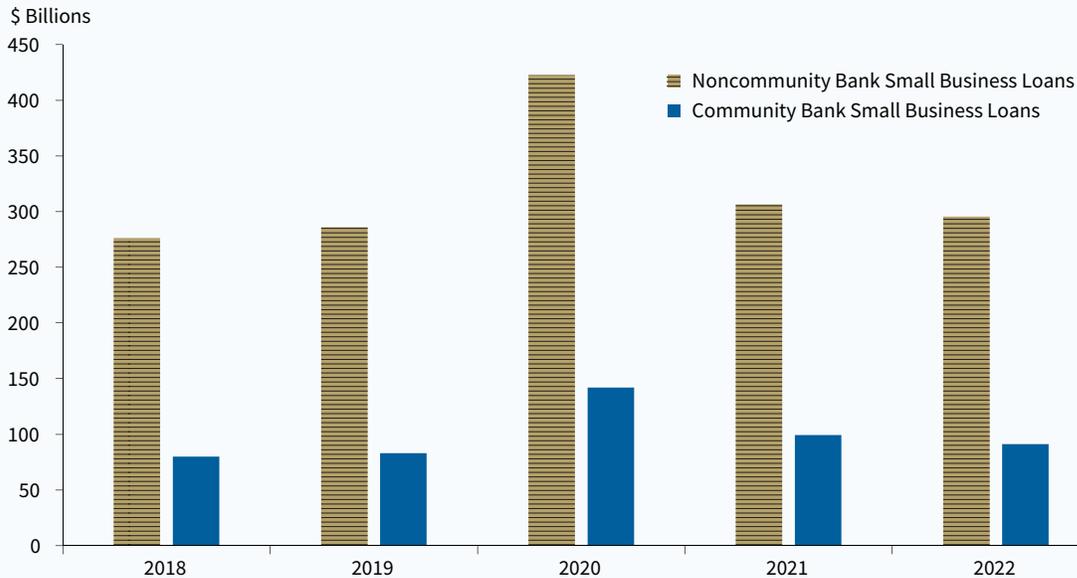
⁹⁵ The food and beverage category is solely for purchases for off-premise consumption.

⁹⁶ U.S. Census Bureau, “[Business Formation Statistics Monthly Data Release](#),” press release, May 12, 2023.

⁹⁷ Banks report C&I loans less than \$1 million semiannually as of June 30 and December 31, and these measures do not include delinquency rates. Lines of credit, CRE loans, and other types of loans that may not be separately identified in Call Report data.

CHART 36

Small Business Loans Have Declined in Recent Years, Returning to Pre-Pandemic Levels



Source: FDIC.

Note: Annual data from 2018 to 2022. Small business loans include loans made under the Paycheck Protection Program.

by year-end 2022 only \$2.2 billion in total PPP loans was outstanding at community banks as the program ended, down from \$105.2 billion at year-end 2020.

While small business loans held by community banks declined in 2022, community banks continued to make business loans. Annual C&I loan growth, net of PPP loans, reported by community banks was 18.0 percent in fourth quarter 2022. C&I loan growth slowed in first quarter 2023 to 0.7 percent, reflecting bank concerns about economic uncertainties.

The community bank early-stage past-due and noncurrent rate on C&I loans remained relatively low through first quarter 2023. In the absence of asset quality data reported by banks for small business loans, loan performance measures for banking industry C&I loans have historically been a good proxy for small business loan performance. The C&I early-stage past-due rate and the noncurrent rate reported by community banks declined at the onset of the pandemic and remained favorable through

first quarter 2023. Both rates were below levels reported by noncommunity banks. C&I asset quality of noncommunity banks also remained below the pre-pandemic averages as of first quarter 2023 (Chart 37).

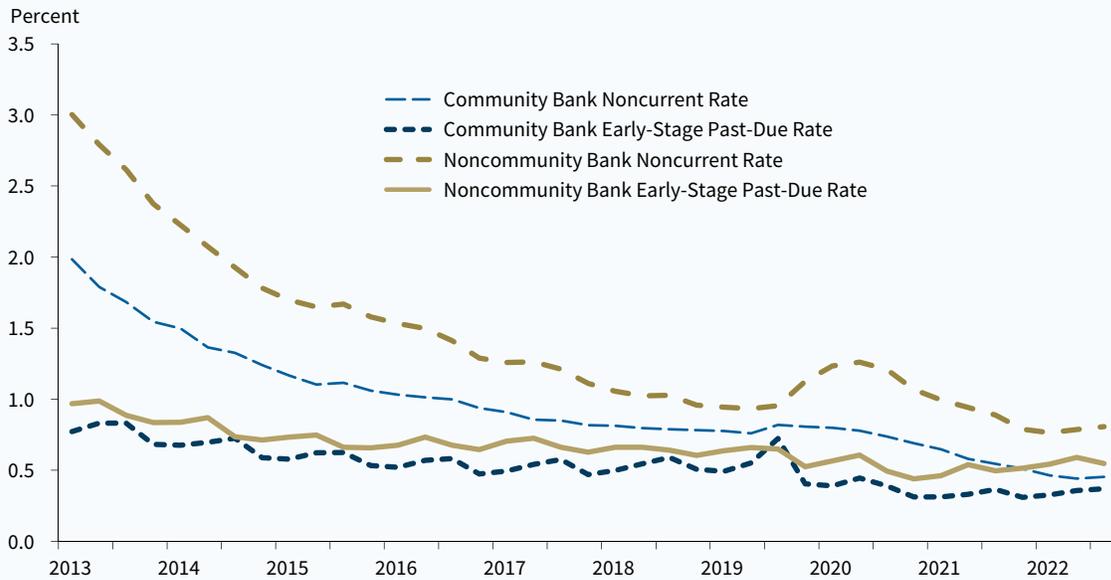
Small businesses reported weaker conditions in early 2023, which may be a source of credit risk for banks. Small business owners reported concerns about conditions in the near term. The May 2023 NFIB survey reported that the Optimism Index remained low at 89.4, down from 2021 levels.⁹⁸ Further, a net negative 50 percent of survey respondents said they believed that business conditions will improve over the next six months, according to the survey.⁹⁹ The last net positive survey response for this measure was in November 2020. Higher interest rates combined with weaker business conditions may make it more difficult for small business owners to meet their debt repayment requirements and may pressure asset quality of bank loans to small businesses in 2023.

⁹⁸ NFIB Small Business Optimism Index, May 2023.

⁹⁹ Net numbers reflect the difference between respondents who report a positive belief or position and those who report a negative belief or position, meaning negative numbers represent more negative than positive responses.

CHART 37

Community Bank Commercial and Industrial Loan Early-Stage Past-Due and Noncurrent Rates Are Lower Than Noncommunity Bank Rates



Source: FDIC.
Note: Quarterly data through first quarter 2023.

SECTION 4

Market Risks

Liquidity and Deposits

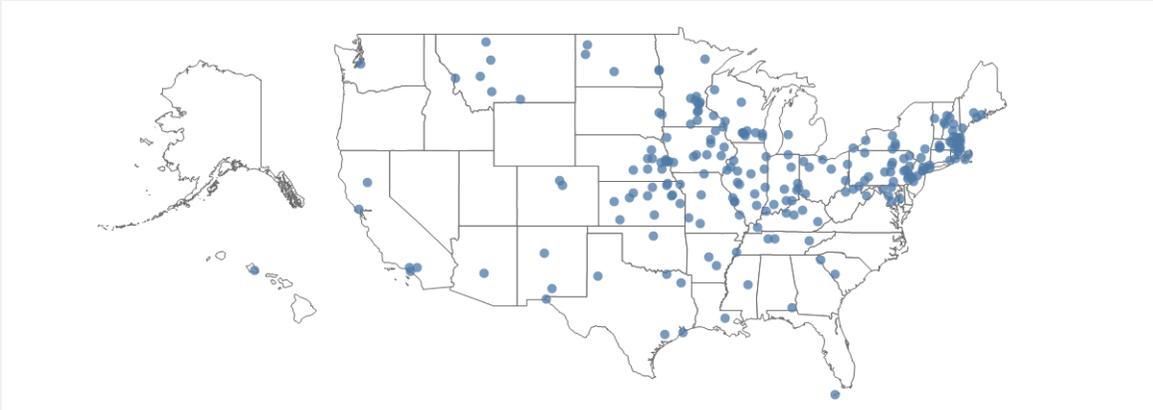
- Liquid asset levels among community banks declined during 2022 and continued to fall in first quarter 2023, in part reflecting securities losses and higher loan growth reducing cash balances. Liquid assets remained above the pre-pandemic level.
- Deposit levels grew among community banks, despite the decline in the industry overall.
- Community banks increased holdings of brokered deposits and Federal Home Loan Bank (FHLB) borrowings in 2022 and first quarter 2023 compared with 2021, and high unrealized securities losses remain a concern.
- Rising interest rates and changing economic conditions may contribute to increased liquidity risk.

On-balance sheet liquidity includes noninterest-bearing cash, interest-bearing cash, unpledged securities, federal funds sold, and securities purchased under resale agreements. With interest rates rising, many community bank securities portfolios reflect unrealized losses, making those assets a less favorable primary liquidity option.

- About 96 percent of community banks report some degree of unrealized losses in their securities portfolio, with 36 percent of community banks reporting unrealized losses higher than 25 percent of tier 1 capital.
- Short-term liquid asset ratios among community banks increased slightly in first quarter 2023 due to increased cash holdings.
- However, more community banks (198) report short-term liquid assets below 2 percent of total assets through first quarter 2023 compared to pre-pandemic 2019.

Five Percent of Community Banks Report Low Levels of Short-Term Liquid Assets

Dots on the map represent the 198 community banks (4 percent of all banks) that report short-term liquid asset ratios below 2 percent total assets in first quarter 2023



Source: FDIC.

Note: Short-term liquid assets include all cash balances, securities with maturities less than one year, federal funds sold, and securities purchased under agreement to resell.

Liquid assets among community banks declined in 2022 and continued to fall in first quarter 2023.

Among community banks, liquid assets to total assets declined to 20 percent at year-end 2022, down from nearly 27 percent in 2021 (Chart 38). This ratio continued to decline in first quarter 2023, with liquid assets falling to 19 percent of total assets and nearing the 2019 pre-pandemic level of 18 percent. Most liquid assets (more than 64 percent) were composed of securities, which depreciated considerably in 2022 amid rising interest rates. Although reduced from the 2021 level, the community bank liquidity ratio, which reflects the effects of unrealized losses, continued to exceed the 2019 pre-pandemic level through first quarter 2023. For many community banks, cash assets increased significantly early in the pandemic, with much of that increased liquidity the result of household stimulus money and proceeds from small business Paycheck Protection Program loans.

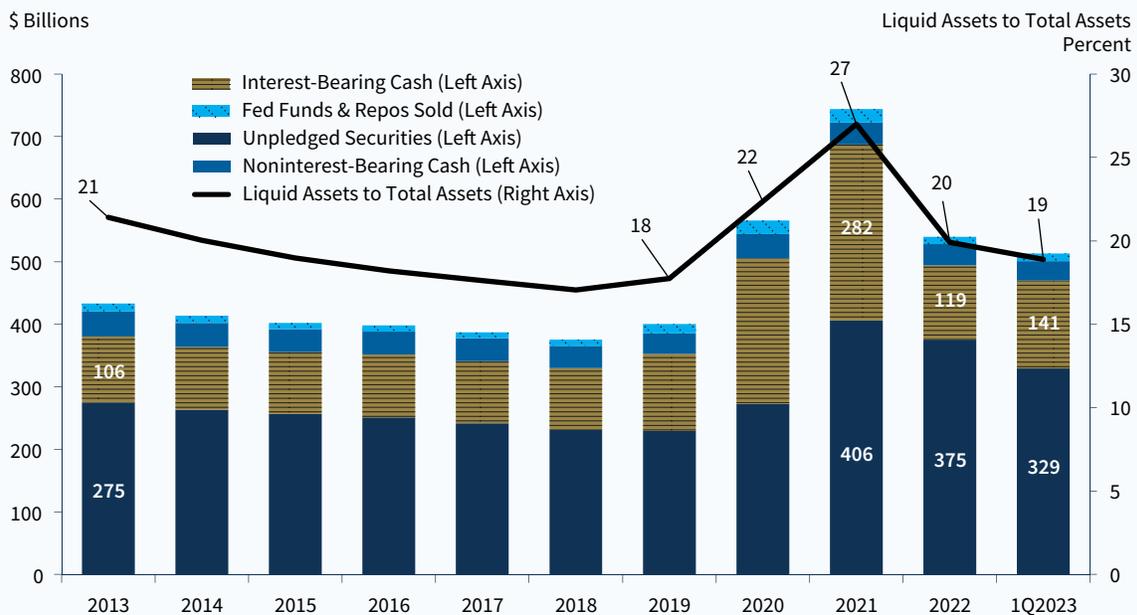
The most readily available liquidity sources, such as cash and due from accounts and federal funds sold, decreased the most since 2021. However, cash

balances rose in first quarter 2023 as banks increased wholesale funding in response to uncertainty caused by recent bank failures. This caused short-term liquidity to improve during the quarter despite the overall decline in total liquid assets. Among community banks, the median short-term liquid assets to total assets ratio decreased from 14.5 percent in 2021 to 8.0 percent in 2022 before improving slightly to 8.6 percent in first quarter 2023. Noncommunity banks reported a similar trend in short-term liquid assets to total assets, with the ratio decreasing from 12.1 percent in 2021 to 6.0 percent in 2022 before improving to 7.7 percent in first quarter 2023.

Community bank deposits grew, even as deposits declined for the total industry through first quarter 2023.

After unprecedented deposit growth during the pandemic, deposits reported by the banking industry began to normalize with total industry deposits declining by 4.9 percent between 2021 through early 2023, bringing total deposits to \$18.7 trillion at first quarter 2023. High inflation and rising interest rates contributed to the decline in deposits, creating

CHART 38
Community Bank Liquid Assets Decreased



Source: FDIC.
Note: The liquid assets to total assets ratio is a weighted average. Annual data except for first quarter 2023.

increased deposit competition for some banks. A reduction in uninsured deposits in first quarter 2023 contributed to the decline in total industry deposits. Although down considerably from the 2021 level, aggregate industry deposits remained much higher than the 2019 pre-pandemic level of \$14.5 trillion.

Despite the aggregate industry decline in deposits, community bank deposits grew 3.5 percent in 2022 and 0.5 percent in first quarter 2023. The bank failures in March 2023 prompted depositor concerns and resulted in withdrawal pressures for uninsured deposits. Community banks tend to rely less on uninsured deposits than noncommunity banks and therefore tend to be less vulnerable to outflows of uninsured deposits.¹⁰⁰ As of first quarter 2023, banks with assets under \$10 billion, most of which are considered community banks, reported a median uninsured deposits to total assets ratio of 20 percent compared to the largest banks, which reported

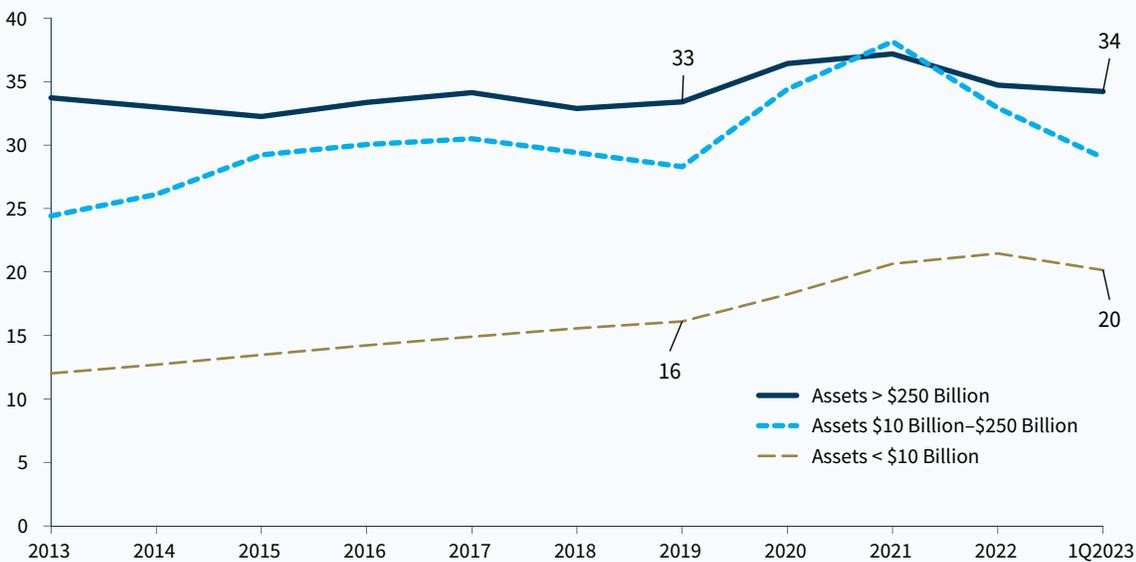
median uninsured deposits to total assets above 34 percent in first quarter 2023 (Chart 39). In first quarter 2023, noncommunity banks reported a 1.3 percent decline in total deposits, with most of that drop in uninsured deposit balances. Although community banks experienced a similar rate of uninsured deposit runoff, growth in insured balances of 3.7 percent more than offset a runoff of uninsured deposits during the quarter.

Community banks reported stronger loan growth and utilized cash balances. Loan growth increased for community and noncommunity banks in 2022, with community banks reporting loan growth of 14.4 percent compared to noncommunity bank loan growth of 7.8 percent. Loan growth continued modestly into first quarter 2023, with community banks reporting loan growth at 1.8 percent compared to first quarter loan growth for noncommunity banks at 1.0 percent (see the Banking Industry section of this report for

CHART 39

Small Banks Relied Less on Uninsured Deposits to Fund Assets

Median Uninsured Deposits to Total Assets
Percent



Source: FDIC.

Note: Most banks under \$10 Billion in assets are classified as community banks. Annual data except for first quarter 2023.

¹⁰⁰ The estimated amount of uninsured domestic deposits is derived by subtracting the multiple of the standard maximum deposit insurance amount, as defined under 12 CFR 330.1(o) (currently \$250,000), and the number of deposit and retirement accounts of more than the standard maximum deposit insurance amount (Schedule RC-O, Memoranda Items 1.b.(2) and 1.d.(2)) from the amount of deposit and retirement accounts of more than the standard maximum deposit insurance amount (Schedule RC-O, Memoranda Items 1.b.(1) and 1.d.(1)). Public deposits above the standard maximum deposit insurance amount equally are considered uninsured, even if the amounts are collateralized.

more information on loan growth trends). As loan demand outpaced deposit growth, community banks used on-balance sheet liquidity to fund new loans in 2022, primarily by drawing down interest-bearing cash accounts (Chart 38). On-balance sheet cash positions improved in first quarter 2023 as more community banks began building up cash from wholesale funding sources to safeguard liquidity.

As liquid asset levels contracted, wholesale funding among community banks increased.

Rising interest rates contributed to high unrealized losses on securities during 2022, and market stress concerns in first quarter 2023 led more banks to secure precautionary borrowing. Instead of liquidating securities and realizing losses, more community banks supported growing loan demand with increased wholesale funding, such as FHLB borrowings and brokered deposits. Through first quarter 2023, community banks reported that wholesale funding

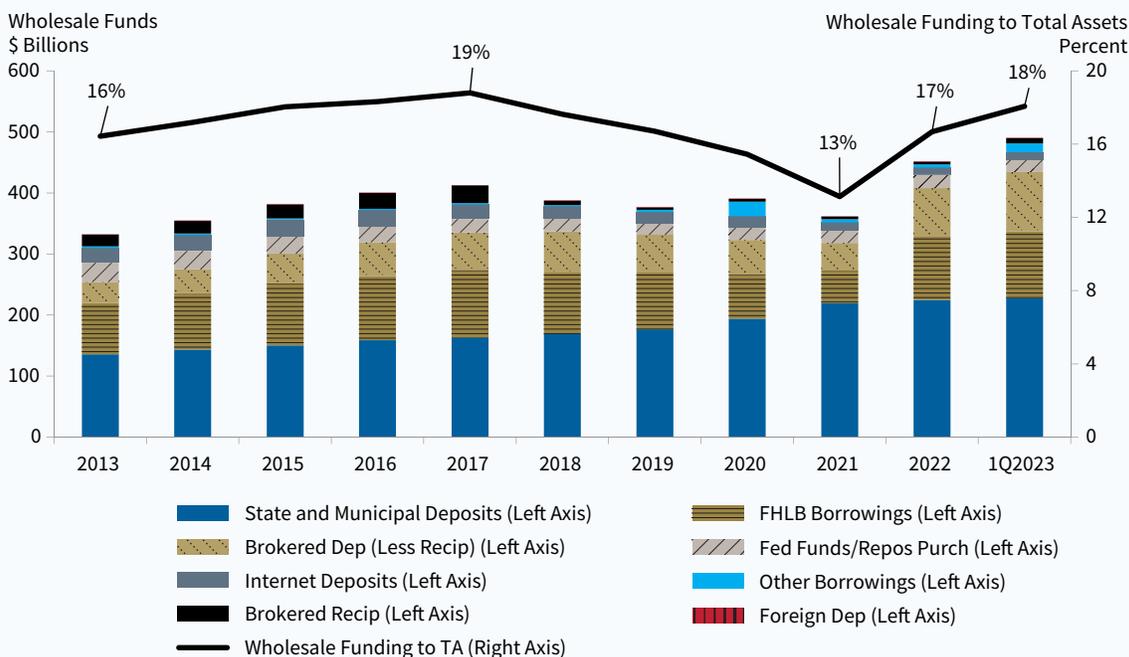
made up more than 18 percent of total assets, up from 13 percent in 2021 and above the 2019 pre-pandemic level (Chart 40).

For those banks with significant unrealized losses, certain counterparties such as the FHLB and large municipal or institutional depositors may impose restrictions on funding. To manage these and other risks to bank liquidity arising from securities depreciation, the Federal Reserve created the Bank Term Funding Program (BTFP) in March 2023. The BTFP provides liquidity to deposit institutions by lending at par against eligible collateral.¹⁰¹

The composition of wholesale funds held by banks tends to vary between community and noncommunity banks. Traditionally, community banks report a higher proportion of municipal and state funds compared to noncommunity banks (noncommunity banks report more in brokered deposits).¹⁰² Through first quarter

CHART 40

Community Banks Relied More on Brokered Deposits and FHLB Borrowings



Source: FDIC.

¹⁰¹ For more information, see the Federal Reserve’s description of the [Bank Term Funding Program](#).

¹⁰² Many states require banks to secure the uninsured or entire balance for deposits of government entities such as state or local municipalities, with some states also imposing placement requirements that include minimum condition standards, such as specific capital levels, for the bank receiving the deposits.

2023, municipal and state funds accounted for more than 46 percent of wholesale funds reported by community banks, followed by FHLB borrowings at 22 percent and brokered deposits at 20 percent. In comparison, noncommunity bank wholesale funds tend to be more widely sourced, led by brokered deposits at 25 percent, FHLB borrowings at 19 percent, and other borrowings at 15 percent. In response to the bank failures in March 2023, both community banks and noncommunity banks reported increased precautionary borrowings in the first quarter as many banks looked to build up cash.

Rising interest rates and changing economic conditions may contribute to increased liquidity risk. Continued inflationary concerns and expectations for sustained higher interest rates may heighten liquidity risk among community banks, particularly if securities portfolios depreciate further, loan growth continues, and core deposits recede from pandemic highs. In addition, social media and increased digitalization may amplify the speed and severity of deposit outflow, which may shorten available reaction time at points of deposit stress. The FDIC continues to focus on liquidity risks across the banking industry, including the impacts of bank failures on liquidity at institutions and implementing appropriate supervisory actions.

Net Interest Margins and Interest Rate Risk

- Rising interest rates benefited full-year net interest margin (NIM) in 2022, which increased sharply from 2021. But funding pressures intensified for many banks in first quarter 2023, causing NIM to decline.
- Many banks increased the share of long-term securities on their balance sheets in 2020 and 2021 amid weak loan demand (net of Paycheck Protection Program loans), contributing to greater interest rate risk across the industry.
- Banks with a higher share of long-term assets have reported more depreciation in investment portfolios and less NIM improvement than other institutions.
- Banks could find managing NIM more difficult in 2023 should interest rates remain elevated or continue to rise amid increasing competition for deposits.

The banking industry's annual NIM rose last year from the record low set in fourth quarter 2021, but quarterly NIM declined slightly in first quarter 2023. Industry-wide full-year NIM rose from a record low 2.54 percent in fourth quarter 2021 to 2.95 percent in fourth quarter 2022, reflecting higher asset yields and strong loan growth in the final three quarters of 2022. Noncommunity banks reported a greater increase in NIM than did community banks, with a 45 basis point increase to 2.89 percent in 2022, and more than 80 percent of noncommunity banks reporting an increase. NIM at community banks rose 17 basis points to 3.45 percent, with nearly two-thirds of community banks reporting an increase (Chart 41).

While annual NIM performance was strong in 2022, quarterly trends showed mounting pressure from rising funding costs in late 2022 and early 2023. Quarterly NIM growth slowed from a record high 35 basis point increase in third quarter 2022 to a 23 basis point increase in the fourth quarter before declining 7 basis points in first quarter 2023 as the rise in funding costs more than offset higher asset yields (Chart 42). NIM compression affected all bank asset size groups in first quarter 2023 except for the smallest asset size group, those banks with total assets less than \$100 million.¹⁰³ Although down from the prior quarter, the banking industry's first quarter 2023 NIM of 3.31 percent remained above the pre-pandemic average. Community bank NIM, which declined by a larger

amount than the industry overall, remained higher than that of noncommunity banks.¹⁰⁴ The last time quarterly NIM declined was first quarter 2022, when it declined by 1 basis point.

In contrast to first quarter 2023, bank funding costs did not rise as fast as short-term market rates last year, allowing banks to benefit from higher NIMs despite an inverted yield curve. During 2022, the increase in NIM was primarily due to two factors: the steep rise in asset yields that outpaced rising funding costs and strong growth in loan balances throughout 2022. Higher interest rates in 2022 lifted asset yields, which drove the increase in NIM. Reference rates of various maturities, such as the prime rate, SOFR, LIBOR, and the ten-year Treasury, all rose in 2022 as the Federal Reserve continued to raise its target rate.¹⁰⁵ As is typical in rising interest rate environments, most banks were able to reprice their assets upward more quickly than their liabilities.¹⁰⁶ Industry-wide quarterly annualized asset yields rose 183 basis points year over year to 4.54 percent in fourth quarter 2022, while quarterly annualized funding costs rose only 100 basis points in the same period. As a result, between fourth quarter 2021 and fourth quarter 2022, NIM for the banking industry rose 82 basis points, setting another record as the largest year-over-year increase in quarterly NIM in available data.¹⁰⁷ All components of interest income contributed to the increase in industry yield, but the largest driver of the increase was interest

¹⁰³ See the first quarter 2023 [FDIC Quarterly Banking Profile](#) for asset size groupings.

¹⁰⁴ The "pre-pandemic average" refers to the period first quarter 2015 through fourth quarter 2019.

¹⁰⁵ SOFR is the Secured Overnight Financing Rate. LIBOR is the London Interbank Offered Rate.

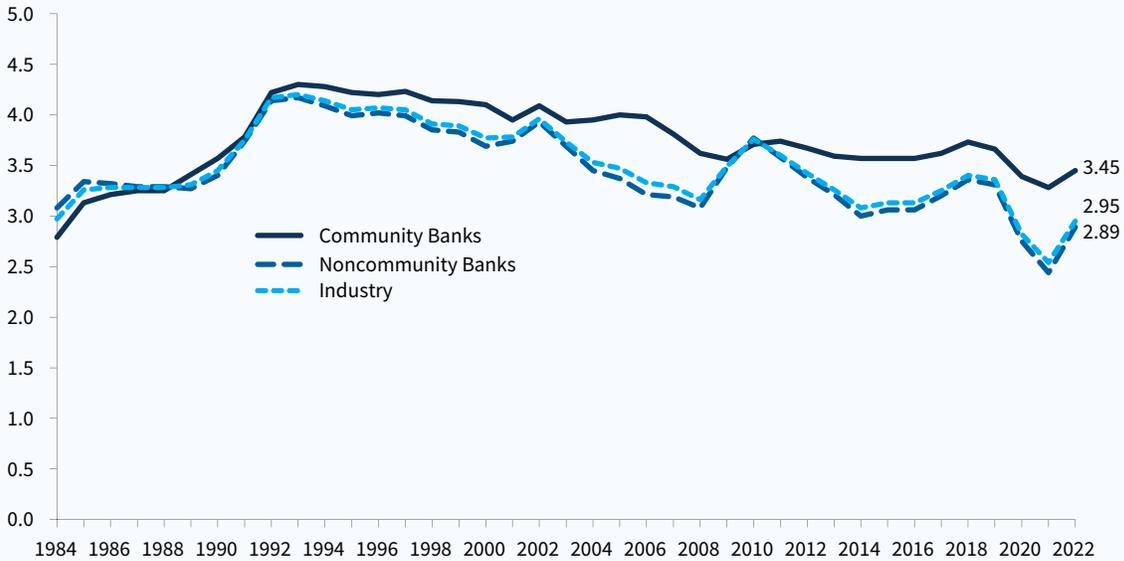
¹⁰⁶ Angela Hinton and Chester Polson, "[The Historic Relationship Between Bank Net Interest Margins and Short-Term Interest Rates](#)," *FDIC Quarterly* 15, no. 2 (2021), article 1.

¹⁰⁷ The discrepancy between the increase in yields minus the increase in funding costs and the change in NIM is due to rounding.

CHART 41

NIM Rose in 2022 for the First Time Since 2018

Full-Year Net Interest Margin
Percent



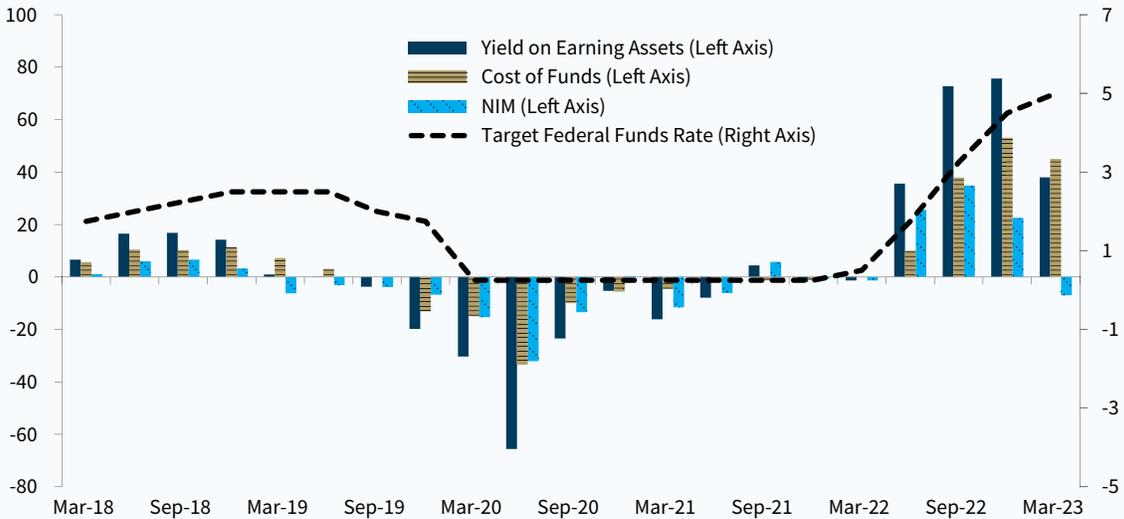
Source: FDIC.

Note: Full-year weighted average net interest margin as of fourth quarter each year.

CHART 42

NIM Declined in First Quarter as the Average Cost of Funds Rose More Than the Average Yield on Earning Assets

Quarter-Over-Quarter Change in Industry NIM Components
Basis points



Source: FDIC.

Note: Quarterly weighted average yield on earning assets and cost of funds; quarterly data through first quarter 2023. Target Federal Funds Rate is upper limit of target.

income on loans. Among loan categories, loans secured by non-1–4 family real estate and commercial and industrial loans contributed the most to the increase in asset yields. After loans, the next largest contributor to the increase in industry asset yields between December 2021 and December 2022 was cash and balances due from depository institutions. Total loans and cash and due from balances were also the largest contributors to the increase in asset yields reported in first quarter 2023.

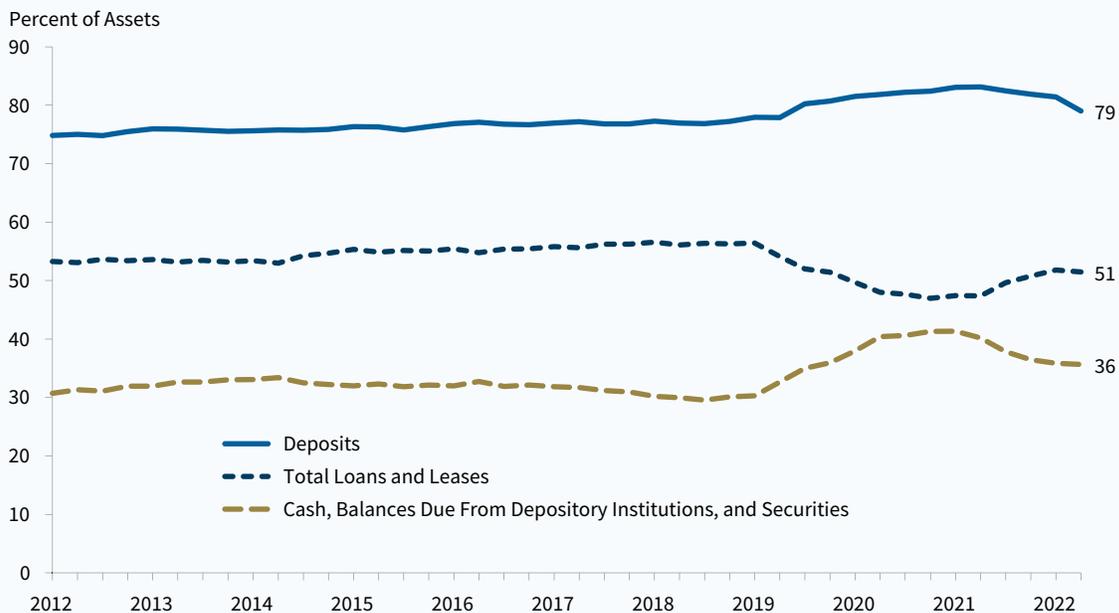
Strong loan growth during 2022 shifted earning asset composition and enhanced the positive effect of higher loan yields on NIM before slowing in first quarter 2023. The industry reported strong nominal loan growth of 8.7 percent in 2022, well above historical annual loan growth rates. Strong loan growth in 2022 shifted the industry composition of bank assets away from record-level holdings of lower-yielding cash and securities back toward greater

proportions of higher-yielding loans. By first quarter 2023, the industry ratio of cash and securities to assets had declined from a record high 41.3 percent in fourth quarter 2021 to 35.6 percent, and the industry ratio of loans to assets had risen from a record low 47.0 percent in third quarter 2021 to 51.5 percent (Chart 43). In contrast to loan growth during 2022, loan balances declined 0.1 percent in first quarter 2023, moderating the positive effects of lending activity on NIM. This contributed to the slowing of growth in asset yields in first quarter: growth in asset yields declined from more than 70 basis points per quarter in third and fourth quarter 2022 to 38 basis points in first quarter 2023.

Industry funding costs continued to rise through first quarter 2023, driven by expense on time deposits. Industry-wide quarterly funding costs rose 100 basis points to 1.16 percent between December 2021 and December 2022. At that time, this was the

CHART 43

Bank Balance Sheet Compositions Began to Normalize in 2022



Source: FDIC.
Note: Quarterly data through first quarter 2023.

largest year-over-year increase since third quarter 2006.¹⁰⁸ The largest contributors to the increase in funding costs throughout 2022 were savings deposits and interest-bearing transaction accounts. Noncommunity banks, which typically hold greater shares of rate-sensitive deposit accounts, reported a much larger increase in the cost of interest-bearing deposits than community banks (126 basis points versus 70 basis points). Deposit balances declined in the final three quarters of 2022 and first quarter 2023, bringing their share relative to assets closer to pre-pandemic levels and pressuring banks to raise rates on deposit products. Funding costs rose 45 basis points in first quarter 2023 as banks attempted to stem deposit outflows or sought alternative sources of funding. In contrast to 2022, the largest contributor to the increase in funding costs in first quarter 2023 was time deposits. As was the case in 2022, noncommunity banks reported a larger increase in their total funding costs and cost of interest-bearing deposits in first quarter 2023 than did community banks.

Banks with a higher share of long-term assets to total assets reported a smaller increase in NIM and larger depreciation in securities portfolios than their counterparts.¹⁰⁹ Banks that started 2022 with the highest share (top one-third) of long-term assets to total assets reported a 19 basis point increase in quarterly NIM between fourth quarter 2021 and first quarter 2023. Banks with the lowest share (bottom one-third), on the other hand, reported an increase of 98 basis points. Banks with a higher proportion of long-term assets that were locked in at lower rates had fewer opportunities to benefit from rising rates.

The sharp rate hikes in 2022 caused significant depreciation in the market value of bank investment portfolios, reducing the value of long-term securities the most. (See the Banking Industry section of this report for more information on unrealized losses on securities). Banks with the highest share of long-term securities (those maturing or repricing in three years or more) to total assets reported a rate of depreciation

on those securities of 9.8 percent in first quarter 2023, while banks with the lowest share reported depreciation of only 6.3 percent. Although 2022 proved to be a challenging year in terms of unrealized losses on bank investment portfolios, pressure lessened in first quarter 2023 as medium- and long-term interest rates declined and securities issued during lower interest rate environments continued to mature.

Banks could find managing NIM more difficult in 2023 should interest rates remain elevated or continue to rise amid increasing competition for deposits. For the greater part of 2022, banks were generally able to pass interest rate increases on to borrowers while maintaining low funding costs. However, toward the end of 2022, bank funding costs began to rise more steeply, and growth in asset yields moderated. By first quarter 2023, the increase in funding costs outpaced the increase in asset yields. As depositors seek stability and search for yield, it is plausible that increased deposit runoff could pressure banks to continue to raise deposit rates from last year's low levels to remain competitive for deposits, which would add further upward pressure on funding costs. Given the uncertainty surrounding interest rates and the economy in 2023, loan growth may continue to be subdued and therefore provide less support to net interest income and NIM than was the case in 2022. While upward pressure on bank funding costs suggests a weak outlook for NIM in 2023, unrealized losses on investment portfolios may abate, absent additional rate shocks.

¹⁰⁸ Industry-wide quarterly funding costs rose 102 basis points year over year in third quarter 2006.

¹⁰⁹ Long-term assets are those maturing or repricing in more than three years. Banks with the lowest share of long-term assets to total assets are those in the bottom third of institutions, with a share of 39.7 percent or less as of fourth quarter 2021. Banks with the highest share of long-term assets to total assets are those in the top third of institutions, with a share of 51.8 percent or more.

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SECTION 5

Operational Risk

- Operational risk remains one of the most critical risks to banks.
- Geopolitical events continue to increase the likelihood of cyber attacks on banks.
- The banking industry’s software infrastructure remains vulnerable to cyber attacks, including ransomware attacks and threats against third-party service providers.
- Robust customer due diligence (CDD) policies and anti-money laundering (AML) and countering the financing of terrorism (CFT) compliance programs reduce the U.S. financial system’s susceptibility to illicit financial activity risks.

Operational risk remains one of the most critical risks to banks. The increase in the number and sophistication of cyber attacks poses serious challenges to operational risk management across the banking industry. According to a bank risk management survey, cybersecurity risk was the top near-term risk for banks.¹¹⁰ Technology advances require bank managers to continuously improve cybersecurity and other internal controls to create operational resilience and mitigate the risk that their bank will suffer a significant service disruption.

In 2022, geopolitical events continued to increase the likelihood of cyber attacks on banks. The Microsoft Digital Defense Report, published in November 2022, stated that cyber attacks targeting critical infrastructure for many firms around the world jumped from 20 percent of all nation-state attacks to 40 percent. This large increase in malicious activity was attributed to Russia’s attempts to damage Ukrainian infrastructure, along with aggressive espionage targeting of Ukraine’s allies, including the United States.¹¹¹

The banking industry’s information technology infrastructure remains vulnerable to cyber attacks, including ransomware attacks and threats against third-party providers. Ransomware continues to pose a significant threat to U.S. critical infrastructure sectors, including finance and banking, as the number of attacks continue to increase. Ransomware is a form

of malicious software designed to encrypt files on a device, rendering any files and the systems that rely on them unusable. Malicious actors then demand ransom in exchange for decryption. Reports of such attacks as of 2021 exceeded recent year totals (Chart 44). Ransomware has the potential to disrupt core business activities, resulting in operational outages. It can also result in an inability to access critical business and customer data. Banks reduce the risk of a ransomware attack’s success and minimize its negative impacts by applying effective cybersecurity risk management and mitigation principles.

Ransomware typically leverages known software vulnerabilities, compromised credentials, or phishing emails targeting bank employees to gain access to networks through remote access channels. Ransomware developers and operators continue to advance their tactics and tools and offer their services to others using a Ransomware-as-a-Service model.

Cyber threats to third-party providers of software, hardware, and computing services remain an important source of risk to the financial industry (inset box). Security risks arising from compromised third-party software include disclosure of credentials or confidential data, corruption of data, installation of malware, and application outages. These problems can result in lost time, money, and customer trust. In addition, supply chain attacks on third-party software and computing services have the potential to

¹¹⁰ Andrés Portilla, Martin Boer, and Hillary Veals, “12th Annual EY-IIF Bank Risk Management Survey,” January 11, 2023.

¹¹¹ Microsoft, “Microsoft Digital Defense Report 2022,” November 7, 2022.

negatively affect the security and operations of a bank. IBM's annual Cost of a Data Breach Report showed one in five data breaches were due to a software supply chain compromise.¹¹² The threat of compromise from Log4J (a ubiquitous Java-based script) vulnerabilities that can allow access to network operations and data lingers. As of November 2022, security firms estimate approximately one-third of all downloads of the script were still pulling a vulnerable version. The U.S. government has warned that the "endemic" script is expected to persist "in the wild" for at least a decade.¹¹³

Quantum computing will pose new risks to critical infrastructure systems.

While quantum computing promises greater computing speed and power, it also has the potential to render current encryption methods vulnerable. In general, traditional encryption relies on complex mathematical problems (encryption algorithms) that take an immense amount of time for classic computers to solve without knowing the encryption key. However, quantum computers use a different computing architecture that can solve certain types of problems much faster, including some encryption algorithms. With the release of quantum computing to the public, current encryption methods may become inadequate.¹¹⁴

Money laundering is also a key component of operational risk. Money laundering, which is the practice of filtering illicit proceeds through a series of transactions in order to camouflage the illegal nature of the funds, continues to pose risks to the banking industry because it facilitates and conceals crime. Further, the United States is vulnerable to terrorist financing and other forms of illicit finance because

much of the global economy is interconnected with the U.S. economy and financial system. The federal banking agencies, in conjunction with the U.S. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN), are updating their AML/CFT program regulations to address priorities identified by FinCEN.¹¹⁵ FinCEN recognizes that not every priority will be relevant to every bank, but each bank should review and incorporate, as appropriate, each priority based on the bank's broader risk-based AML/CFT program. Banks need not incorporate the priorities into their risk-based AML/CFT programs until the effective date of the final revised regulations.

If a bank does not know the customer with whom a bank is conducting business, the U.S. financial system is more susceptible to money laundering, terrorist financing, and other illicit financial activity risks. Banks implement CDD policies, procedures, and processes to assess and mitigate risks associated with customers and the products and services offered by the bank. Still, the inability to know the beneficial owner of accounts maintained at U.S. financial institutions presents risk to the U.S. financial system. In 2016, the United States implemented the beneficial ownership rule requiring financial institutions to identify and verify beneficial owners of legal entity customers when a new account is opened. This approach will change once the Corporate Transparency Act (CTA) is fully implemented. The CTA will require certain companies to disclose to FinCEN their beneficial ownership information when they are formed (or for non-U.S. companies, when they register with a state to do business in the United States); they will also be required to report changes in beneficial owners. Beneficial ownership information helps address the risk within the United States, whereby criminals have historically been able to take advantage of the lack of uniform laws and regulations pertaining to the disclosure of an entity's beneficial owners.¹¹⁶ These revisions are expected to help facilitate law enforcement investigations and make it more difficult

¹¹² IBM, "[Cost of a Data Breach Report 2022](#)," July 2022.

¹¹³ Cyber Safety Review Board, "[Review of the December 2021 Log4j Event](#)," July 11, 2022.

¹¹⁴ Cybersecurity and Infrastructure Security Agency, "[Preparing Critical Infrastructure for Post-Quantum Cryptography](#)," CISA Insights, August 2022.

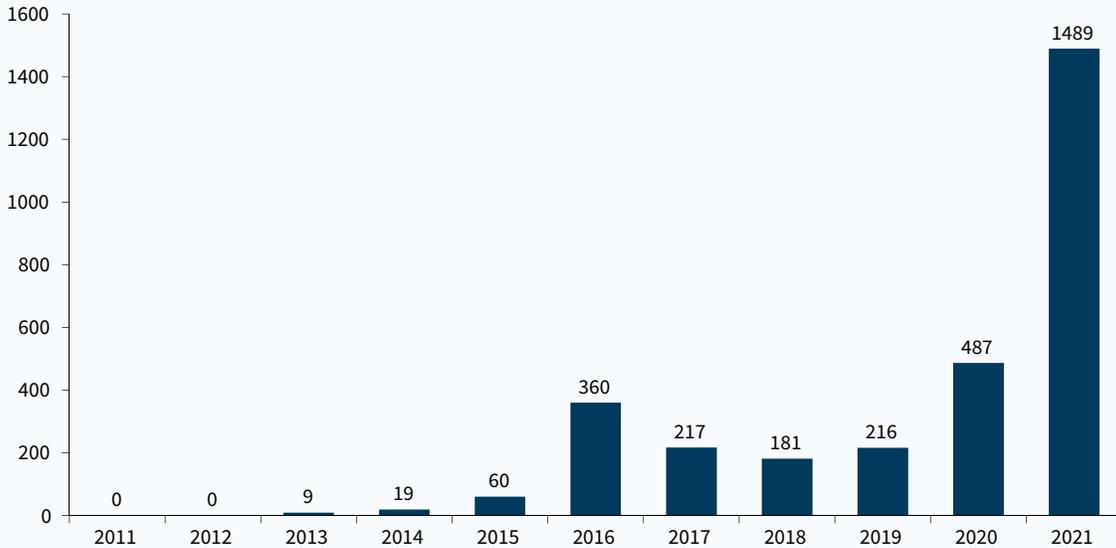
¹¹⁵ Financial Crimes Enforcement Network, "[Anti-Money Laundering and Countering the Financing of Terrorism National Priorities](#)," U.S. Department of the Treasury, June 30, 2021.

¹¹⁶ U.S. Department of the Treasury, "[2022 National Money Laundering Risk Assessment](#)," February 2022.

CHART 44

Ransomware Attacks Increased Significantly in Recent Years

Ransomware-Related Suspicious Activity Reports
Number of reports filed



Source: Financial Crimes Enforcement Network.
Note: Annual data from 2011 to December 2021.

for illicit actors to hide behind corporate entities registered in the United States or foreign entities registered to do business in the United States.¹¹⁷

Bank reliance on third parties to perform AML/CFT compliance services or act as an intermediary between the bank and its customers may be a source of risk. Third parties used by a bank may not be subject to AML/CFT laws and regulations. Excessive use of third-party relationships can limit bank staff's knowledge of customer account activity and impede the ability to verify the identity of a customer or beneficial owner of a legal entity customer, perform CDD procedures, or identify the beneficiary or recipient of a financial transaction, product, or service.

The dynamic nature of sanctions regulations increases the risk that banks process transactions for a sanctioned party. Financial authorities and governments use economic and trade sanctions based

on foreign policy and national security goals against targeted individuals and entities such as foreign countries, regimes, terrorists, international narcotics traffickers, and those engaged in certain activities such as the proliferation of weapons of mass destruction or transnational organized crime. Since Russia's invasion of Ukraine, the Office of Foreign Assets Control (OFAC) and the Department of State issued approximately 1,500 new and 750 amended sanctions (i.e., changes to sanctions programs). Inadequate interdiction software implementation, ineffective supplemental processes (manual or automated), unknown gaps in sanctions screening systems, and untimely updates to a bank's interdiction software increase the risk of processing transactions for a sanctioned party.¹¹⁸ The FinCEN and the U.S. Department of Commerce's Bureau of Industry and Security (BIS) issued joint alerts urging banks to be vigilant against efforts by individuals or entities to evade BIS export controls implemented in connection with the Russian Federation's invasion of Ukraine.¹¹⁹

¹¹⁷ Ibid.

¹¹⁸ Interdiction software screens and detects transactions associated with parties recorded on the Specially Designated Nationals and Blocked Persons List issued by the OFAC and sanctions lists from other relevant jurisdictions.

¹¹⁹ "FinCEN and the U.S. Department of Commerce's Bureau of Industry and Security Urge Increased Vigilance for Potential Russian and Belarusian Export Control Evasion Attempts," FIN-2022-Alert003, June 28, 2022; and "Supplemental Alert: FinCEN and the U.S. Department of Commerce's Bureau of Industry and Security Urge Continued Vigilance for Potential Russian Export Control Evasion Attempts," FIN-2023-Alert004, May 19, 2023.

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SECTION 6

Crypto-Asset Risk

- The crypto-asset sector experienced significant market volatility in 2022.
- Crypto-asset-related activities can pose novel and complex risks to the U.S. banking system that are difficult to fully assess.
- The FDIC, in coordination with the other federal banking agencies, has taken steps to closely monitor crypto-asset-related activities of banking organizations.

The crypto-asset sector experienced significant market volatility in 2022, exposing several vulnerabilities. In 2022, growth in the crypto-asset industry corresponded with an increasing interest by some banks to engage in crypto-asset activities.

Crypto-assets present novel and complex risks that are difficult to fully assess.¹²⁰ Part of the difficulty in assessing these risks arises from the dynamic nature of crypto-assets, the crypto marketplace, and the rapid pace of innovation. Some of the key risks associated with crypto-assets and crypto-asset sector participants include those related to fraud, legal uncertainties, misleading or inaccurate representations and disclosures, risk management practices exhibiting a lack of maturity and robustness, and platform and other operational vulnerabilities. Possible contagion risk within the crypto-asset sector resulting from interconnections among certain crypto-asset participants may present concentration risks for banks with exposure to the crypto-asset sector. Susceptibility of stablecoins to run risk can create the potential for deposit outflows for banks that hold stablecoin reserves.¹²¹

The FDIC and other banking regulators have taken several steps in light of these emerging risks.

The FDIC has generally been aware of some banks' interest in crypto-asset-related activities through its

normal supervision process. However, as this interest has accelerated, the FDIC determined that more information was needed to better understand the risks associated with these activities. Hence in April 2022, the FDIC issued Financial Institution Letter (FIL) 016-2022, which asks FDIC-supervised institutions to notify the FDIC of the crypto-related activities in which they are engaged in or intend to engage in.¹²² This FIL notes various crypto-related activities, including acting as crypto-asset custodians; maintaining stablecoin reserves; issuing crypto and other digital assets; acting as market makers or exchange or redemption agents; participating in blockchain and distributed ledger-based settlement or payment systems, including performing node functions; and related activities such as finder activities and lending. This list is not all inclusive and does not mean that the activity is permissible for FDIC-supervised institutions. These institutions were asked to provide necessary information that would allow the FDIC to assess the safety and soundness, consumer protection, and financial stability implications of such activities.

While not specific to crypto-assets, the FDIC finalized a rule on May 17, 2022, to help address instances in which firms misrepresent the availability of deposit insurance in violation of the law. On July 29, 2022, the FDIC issued a fact sheet to the public on FDIC deposit insurance and crypto companies and an

¹²⁰ The Financial Stability Oversight Council's report on digital assets describes crypto-assets as private sector digital assets that depend primarily on the use of cryptography and distributed ledger or similar technologies, [Report on Digital Asset Financial Stability Risks and Regulation 2022](#).

¹²¹ Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, [Joint Statement on Crypto-Asset Risks to Banking Organizations](#), January 3, 2023.

¹²² Federal Deposit Insurance Corporation, [Notification and Supervisory Feedback Procedures for FDIC-Supervised Institutions Engaging in Crypto-Related Activities](#), FIL-16-2022, April 7, 2022.

advisory to FDIC-insured institutions on deposit insurance and dealings with crypto companies.¹²³ Both documents address risks, concerns, and risk management and governance considerations related to misrepresentations and misconceptions about deposit insurance coverage in the context of crypto-assets. Since 2022, the FDIC has taken action against more than 85 entities that were misrepresenting the nature, extent, or availability of deposit insurance. In some instances, these firms had made misleading claims in connection with crypto-assets.¹²⁴ For example, on August 19, 2022, the FDIC issued letters to five companies that had made false representations stating or implying that crypto-assets were eligible for FDIC insurance, demanding that they and their officers, directors, and employees cease and desist from making false and misleading statements about FDIC deposit insurance.¹²⁵ Also, on December 13, 2022, the FDIC Board of Directors issued for public comment a proposed rule to amend its regulations on use of the official FDIC sign and to clarify the FDIC regulation regarding misrepresentations of deposit insurance.¹²⁶

More recently in January 2023, the FDIC, the Federal Reserve, and the Office of the Comptroller of the Currency (OCC) released a joint statement on crypto-asset risks to banking organizations.¹²⁷ The statement reminds banking organizations that they should ensure that crypto-asset-related activities can be performed in a safe and sound manner, are legally permissible, and comply with applicable laws and regulations, including those designed to protect consumers (such as fair lending laws and

prohibitions against unfair, deceptive, or abusive acts or practices). Also, in February 2023, the FDIC, Federal Reserve, and OCC issued a Joint Statement on Liquidity Risks to Banking Organizations Resulting from Crypto-Asset Market Vulnerabilities on the liquidity risks to banking organizations presented by certain sources of funding from crypto-asset-related entities.¹²⁸ This statement highlights key liquidity risks associated with crypto-assets and crypto-asset sector participants that banking organizations should be aware of. In particular, certain sources of funding from crypto-asset-related entities may pose heightened liquidity risks to banking organizations due to the unpredictability of the scale and timing of deposit inflows and outflows. The statement reminds banking organizations to apply existing risk management principles and provides examples of practices that could be effective. The agencies also continue to emphasize that banking organizations are neither prohibited nor discouraged from providing banking services to customers of any specific class or type, as permitted by law or regulation.

The FDIC, in coordination with the other federal banking agencies, continues to closely monitor crypto-asset-related exposures of banking organizations. As warranted, the FDIC will issue additional statements related to engagement by banking organizations in crypto-asset-related activities. The FDIC also has developed processes to engage in robust supervisory discussions with banking organizations regarding proposed and existing crypto-asset-related activities.

¹²³ Federal Deposit Insurance Corporation, [Fact Sheet: What the Public Needs to Know About FDIC Deposit Insurance and Crypto Companies](#), July 28, 2022; and [Advisory to FDIC-Insured Institutions Regarding FDIC Deposit Insurance Coverage and Dealings with Crypto Companies](#), FIL-35, 2022, July 29, 2022.

¹²⁴ Federal Deposit Insurance Corporation, [Remarks by Chairman Martin J. Gruenberg at the Cities for Financial Empowerment Fund 2023 Bank On National Conference](#), May 23, 2023.

¹²⁵ Federal Deposit Insurance Corporation, [“FDIC Issues Cease and Desist Letters to Five Companies for Making Crypto-Related False or Misleading Representations about Deposit Insurance,”](#) news release, August 19, 2022.

¹²⁶ Federal Deposit Insurance Corporation, [FDIC Official Sign and Advertising Requirements, False Advertising, Misrepresentation of Insured Status, and Misuse of the FDIC’s Name or Logo](#), 87 Fed. Reg. 78017–78037 (Dec. 21, 2022); and [Notice of Proposal on FDIC Official Sign and Advertising Requirements, False Advertising, Misrepresentation of Insured Status, and Misuse of the FDIC’s Name or Logo](#), FIL-52-2022, December 13, 2022.

¹²⁷ [Joint Statement on Crypto-Asset Risks to Banking Organizations](#), January 3, 2023.

¹²⁸ Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency, [Joint Statement on Liquidity Risks to Banking Organizations Resulting From Crypto-Asset Market Vulnerabilities](#), February 23, 2023.

SECTION 7

Climate-Related Financial Risk

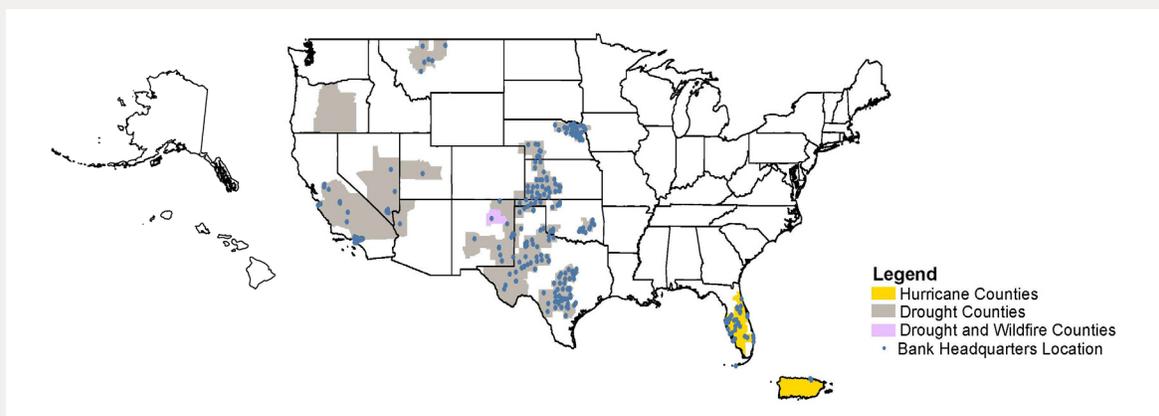
- Increased frequency and severity of severe weather and climate events present challenges and emerging risks to the banking industry.¹²⁹
- In 2022, severe weather and climate events included three hurricanes, an extensive wildfire, and a prolonged drought in the West. Estimated damages from these events were among the most costly since reporting began.¹³⁰
- The FDIC is expanding efforts to better understand climate-related financial risk in a thoughtful and measured approach that emphasizes collaboration with other supervisors and industry.
- The FDIC will continue to encourage financial institutions to consider climate-related financial risk in a manner that allows banks to prudently meet the financial services needs of their communities.

Severe weather and climate events in 2022 exposed banks to increased physical risk.

- Eighteen severe weather and climate events (over \$1 billion in estimated damages) occurred in the United States in 2022, including three hurricanes, wildfires, and a major drought.
- The counties affected by those hurricanes, drought, and wildfires were home to 353 bank headquarters and 7,543 bank branches.
- Of the 353 institutions affected by the severe weather and climate events in 2022, 309 (87.5 percent) were headquarters of community banks and 1,596 (21 percent) were community bank branches.

Regional Exposure to 2022 Severe Weather and Climate Events

Dots on the map represent the 353 banks headquartered in counties affected by severe hurricanes, wildfires, and drought in 2022.



Sources: NOAA National Centers for Environmental Information, Federal Emergency Management Agency (FEMA), National Interagency Fire Center, U.S. Drought Monitor, and FDIC.

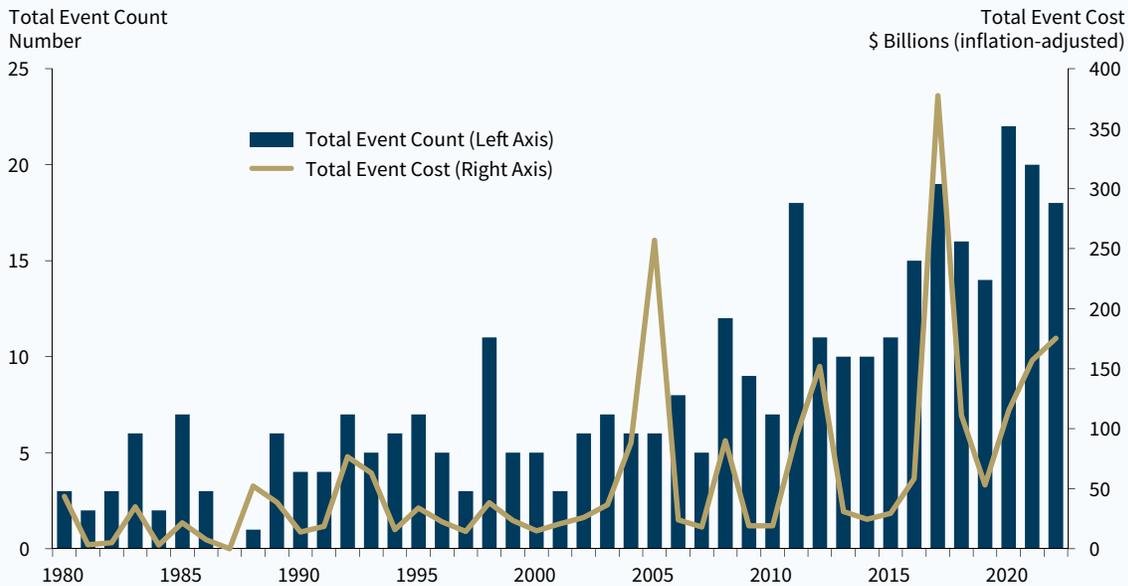
Note: Hurricane counties are FEMA disaster-declared counties eligible for individual assistance for Hurricanes Ian, Nicole, and Fiona. Wildfire counties are counties within the perimeter of the Hermits Peak/Calf Canyon Fire in New Mexico, the largest and most destructive wildfire in 2022 in the contiguous United States. All of the counties that were affected by the wildfire also experienced “exceptional drought” conditions in 2022. Drought counties are counties that experienced 12 weeks of exceptional drought during 2022. Bank structure data as of first quarter 2023.

¹²⁹ Banks are likely to be affected by both the physical risks and transition risks associated with climate change, collectively referred to as “climate-related financial risk.” The *Risk Review* is a retrospective review of risks in 2022, and this section focuses solely on physical risk from severe climate and weather events that occurred in 2022 through early 2023.

¹³⁰ “Severe” weather and climate events in this report are those that caused at least \$1 billion in damages. See NOAA, National Centers for Environmental Information, [Billion-Dollar Weather and Climate Disasters](#) (2023). Estimates are as of June 8, 2023, and are adjusted for inflation using the 2023 Consumer Price Index.

CHART 45

Estimated Damages From United States Severe Climate and Weather-Related Events in 2022 Were Among the Most Costly



Source: NOAA-NCEI.

Note: Natural disasters include droughts, floods, freezings, severe storms, tropical cyclones, wildfires, and winter storms that caused at least \$1 billion in damages. Data are annual figures from 1980 through 2022.

Increased frequency and severity of climate and weather events present challenges and emerging risks to the banking industry.

Historically, the financial industry and banks in particular have effectively managed the effects of severe weather events, such as hurricanes, wildfires, and drought. However, changes in climate conditions, including increasing frequency and intensity of severe climate and weather events and other natural disasters, will likely pose additional risks to the financial system and challenges to individual banks.

The financial system, including banks, will likely be affected by both physical and transition risk associated with climate change. Together, these risks are referred to as climate-related financial risks. Physical risks generally refer to the financial losses resulting from harm to people and property from climate-related events, such as hurricanes, wildfires, and drought, and longer-term climate shifts such as sea level rise. Transition risks generally refer to financial risks to

certain institutions or industry sectors that arise over time from the process of adjusting toward a lower-carbon economy, which may be prompted by changes in climate and environmental policy, technology, or market sentiment.¹³¹ The *Risk Review* is a retrospective review of risks in 2022, and this section focuses solely on physical risk from severe climate and weather events that occurred last year. As such, transition risks, which are prospective and may take longer to manifest, are not included in this retrospective discussion.

The severe climate and weather events in 2022 were among the most costly since reporting began.

The frequency and estimated cost of severe climate and weather events on an inflation-adjusted basis have steadily increased since the National Oceanic and Atmospheric Administration (NOAA) started tracking these events in 1980 (Chart 45). Since 1980, there have been 357 severe climate and weather events, defined as events with estimated inflation-adjusted

¹³¹ Martin J. Gruenberg, “[The Financial Risks of Climate Change](#),” American Bankers Association Annual Convention, October 3, 2022.

direct damages of \$1 billion or more.¹³² These events are estimated to have cumulatively cost more than \$2.5 trillion. In 2022, NOAA reported 18 separate \$1 billion climate and weather events, slightly fewer than in the record years of 2020, when 22 events occurred, and 2021, when 20 events occurred. However, the \$175.2 billion in estimated damages to structures and business interruptions from the 2022 severe climate and weather events was higher than in each of the previous two years and was the third-highest amount since 2000 on an inflation-adjusted basis.

During the first five months of 2023, there were nine separate severe climate and weather events in the United States, resulting in estimated damages of \$23.7 billion. These included seven separate rounds of thunderstorms and tornadoes in the South and Central United States, a flooding event in California, and a winter storm in the Northeast. Comparatively, only 2017 and 2020 had a greater number of severe climate and weather events in the first five months of the year than 2023.

In 2022, three severe hurricanes struck the continental United States and Puerto Rico, causing more overall estimated damages than hurricanes in the 2021 season. Hurricanes Ian, Nicole, and Fiona caused an estimated \$117.6 billion in damages, an increase of 39 percent from the 2021 season. Estimated damages from the 2022 hurricanes were more costly than those reported in 2021 because two of the storms affected the highly populated and densely developed Florida coastline. Hurricane Ian in Florida was the most destructive of the 2022 hurricanes with \$114 billion in estimated damages and is estimated to be the third-costliest hurricane to hit the mainland United States to date. Shortly after Ian, Hurricane Nicole in Florida caused an estimated \$1 billion in damages. Nicole was relatively mild in strength but covered a large geographic area, including several areas still recovering from Hurricane Ian, compounding the existing damage and the recovery timeline in those

areas. Hurricane Fiona in Puerto Rico disrupted power to the entire island, severely damaging its power grid, which remained in a fragile state after Hurricane Maria in 2017 caused the largest blackout in U.S. history. Fiona is estimated to have caused \$2.6 billion in damages and is expected to weigh on the island's ongoing recovery from long-running fiscal issues.

The 2022 wildfire season in the western United States caused an estimated \$3.2 billion in damages, making it less costly than the previous two seasons.

Wildfires are historically common in the western United States, but they have become more severe in recent years. The most destructive wildfire of the 2022 season occurred in northern New Mexico. The fire destroyed more than 900 structures and burned more than 340,000 acres, making it the largest fire by acres burned in New Mexico's history. The burn scar left by the fire contributed to flooding that significantly affected residents in the area as well as the entire city of Las Vegas, New Mexico. The city's water supply continued to be threatened by debris and ash through early 2023 and could take years to fully resolve. The three western states highly susceptible to wildfires—California, Oregon, and Washington—all experienced a milder wildfire season. Despite having one of their warmest summers on record in 2022, well-timed precipitation kept fires from spreading and resulted in a lower economic impact.¹³³ California's wildfire season in particular was moderate compared to the 2021 and 2020 seasons, which rank as two of the most severe in the state's history.¹³⁴ Although the 2022 wildfire season was relatively mild compared to the past few years, ongoing drought in the West and hotter temperatures created conditions favorable for wildfire formation.¹³⁵

Excessive heat in 2022 exacerbated drought conditions and reduced agriculture production.

According to NOAA, 2022 ranked as the third-hottest summer on record. Higher temperatures and persistent drought conditions affected large portions

¹³² More than one dozen public and private sector data sources help capture NOAA's estimates for the direct costs (both insured and uninsured) of weather and climate events. These costs include physical damage to residential, commercial, and municipal buildings; material assets (content) within buildings; time element losses such as business interruption or loss of living quarters; damage to vehicles and boats; public assets including roads, bridges, levees; electrical infrastructure and offshore energy platforms; agricultural assets including crops, livestock, and commercial timber; and wildfire suppression costs. See NOAA's "[Billion Dollar Weather and Climate Disasters FAQ](#)."

¹³³ Jim Carlton, "[Wildfire Season in U.S. West Ends With Fewer Blazes, Less Damage](#)," Wall Street Journal, November 17, 2022.

¹³⁴ Office of Governor Gavin Newsom, "[Governor Newsom and Cal Fire Announce the End of Peak Wildfire Season for Most of California](#)," news release, November 17, 2022.

¹³⁵ The number of wildfires and acres burned during the 2022 western wildfire season were higher than the ten-year average. "Mild" refers to the resulting economic impact of these fires, which was considerably lower in 2022 than in the previous two seasons.

of the United States. Nearly half (49.6 percent) of the continental United States reported some degree of drought late last year, the highest percentage since the Drought Monitor was established 20 years ago. In five states—New Mexico, Texas, Oregon, Nevada, and California—the worst drought conditions affected almost 30 percent of counties in each state.¹³⁶ Although this is down from nine states with more than 30 percent of counties in exceptional drought in 2021, the combination of drought severity and duration is causing increased losses for agricultural producers and a shortage of water supplies. For example, in Texas, cotton production in 2022 declined 60.3 percent from the prior year.¹³⁷ Further, the 2022 drought reduced the number of cattle produced in Texas, across the Central Plains, and in the western half of the United States.¹³⁸

Drought conditions have also reduced water supplies. Three successive years of drought in California have caused water allocations for agriculture to decline, forcing many of the state’s cattle producers to reduce their herds, rice producers to cut back on planting, and fruit growers to remove whole sections of orchards. Some reservoirs in the state reached critically low levels last year, but strong precipitation in late 2022 and early 2023 helped replenish some water levels. However, almost none of the storms reached the Colorado River basin, which supplies water to several western states and remained low at the start of 2023.

While insurance policies may cover some or all of the loss associated with many severe climate and weather events, policies may become more expensive or unavailable. Access to private insurance protection to cover losses for a particular geographic area or business activity, particularly residents and businesses in areas facing increasing severity and frequency of severe weather events, has begun to evolve and become less accessible.¹³⁹ In addition, while government support may provide assistance with costs associated with many severe weather events, it may not always fully cover losses. Overreliance on insurance and government support

may therefore present additional risks, as these types of assistance may not be able to compensate for losses to the same extent as they have in the past, which may affect the ability of smaller institutions to mitigate climate-related financial risk.

The FDIC is in the early stages of understanding and addressing financial risks posed by climate change and intends to expand efforts in a thoughtful and measured approach that emphasizes collaboration with other supervisors and industry. The FDIC is working with domestic and international financial regulatory counterparts to better understand and address climate-related financial risks. The FDIC is also working with banking industry stakeholders to maintain a meaningful dialogue on climate-related risks and to support institutions as they develop plans to identify, monitor, and manage these risks.

To enhance the understanding of climate-related financial risks, the FDIC in 2022 established an internal cross-disciplinary working group to assess the safety and soundness and financial stability considerations associated with climate-related financial risks and to develop broad understanding of climate-related financial risk in all of its forms. The FDIC is also coordinating with interagency peers and is participating on the Financial Stability Oversight Council’s Climate-Related Financial Risk Committee. Further, as climate change is a global issue, the FDIC joined the Network of Central Banks and Supervisors for Greening the Financial System to foster collaboration and share best practices for addressing climate-related financial risk globally.¹⁴⁰

The FDIC recognizes that risk management practices in this area are evolving and will continue to encourage banks to consider climate-related financial risk in a manner that allows them to prudently meet the financial services needs of their communities. As an initial step to promote a consistent understanding of effective management of this emerging risk, in March 2022 the FDIC issued

¹³⁶ The areas most affected by drought in 2022 were those with the worst drought conditions—what the U.S. Drought Monitor calls “exceptional”—for at least 12 weeks in 2022. See <https://droughtmonitor.unl.edu/>.

¹³⁷ U.S. Department of Agriculture, Cotton and Wool Outlook, June 2023 Table 10 Cotton Production Compared to June 2022 Table 10 Cotton Production.

¹³⁸ Elena Bruess, “[In Texas Drought, Hay Shortage Hits San Antonio-Area Ranchers](#),” San Antonio Express News, December 14, 2022.

¹³⁹ State Farm General Insurance Company, “[State Farm General Insurance Company: California New Business Update](#),” news release, May 26, 2023; California Department of Insurance, “[Insurance Commissioner Dave Jones Releases Report Addressing Fire Insurance Availability Issues](#),” news release, January 4, 2018; and California Department of Insurance, “[Wildfire Survivors Now Covered by New Insurance Protections](#),” news release, July 27, 2021.

¹⁴⁰ Gruenberg, “[The Financial Risks of Climate Change](#).”

a proposed Statement of Principles for Climate-Related Financial Risk Management for Large Financial Institutions. The principles provide a high-level framework for the safe and sound management of exposures to climate-related financial risk and are intended to support efforts by large financial institutions to focus on key aspects of climate-related financial risk management.¹⁴¹ The draft principles

are substantially similar to the principles issued by the Office of the Comptroller of the Currency (OCC) in December 2021 and the Federal Reserve Board in December 2022.¹⁴² After reviewing comments received on the proposed principles, the FDIC intends to coordinate with the OCC and Federal Reserve in issuing any final guidance.

¹⁴¹ Federal Deposit Insurance Corporation, “[FDIC Issues Request for Comment on Statement of Principles for Climate-Related Financial Risk Management for Large Financial Institutions](#),” news release, March 30, 2022.

¹⁴² Board of Governors of the Federal Reserve System, “[Federal Reserve Board Invites Public Comment on Proposed Principles Providing a High-Level Framework for the Safe and Sound Management of Exposures to Climate-Related Financial Risks for Large Banking Organizations](#),” news release, December 2, 2022. The news release states that the Board’s proposed principles are substantially similar to proposals issued by the FDIC and the OCC.

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ACRONYMS AND ABBREVIATIONS

ADC	Acquisition, Development, and Construction
C&I	Commercial and Industrial
Call Reports	Consolidated Reports of Condition and Income
CLO	Collateralized Loan Obligation
CRE	Commercial Real Estate
FDIC	Federal Deposit Insurance Corporation
FEMA	Federal Emergency Management Administration
FHLB	Federal Home Loan Bank
FinCEN	Financial Crimes Enforcement Network
GDP	Gross Domestic Product
KBW	Keefe, Bruyette, and Woods (Bank Index)
LCD	Leveraged Commentary and Data (S&P)
NASDAQ	National Association of Securities Dealers Automated Quotations (Market Index)
NIM	Net Interest Margin
PPP	Paycheck Protection Program
S&P	Standard and Poor's (S&P 500)
SBA	Small Business Administration
USDA	U.S. Department of Agriculture

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GLOSSARY OF TERMS

Blockchain	A type of distributed ledger technology that is the foundational innovation underlying the crypto-asset ecosystem. <i>See also</i> Crypto-Assets.
Bond	A certificate of indebtedness issued by a government or corporation.
Call Report	A report of a bank’s financial condition that is filed quarterly with the FDIC and known officially as the Report of Condition and Income.
Central Bank	An institution that oversees and regulates the banking system and quantity of money in the economy. The Federal Reserve System is the central bank of the United States.
Collateral	Property required by a lender and offered by a borrower as a guarantee of payment on a loan. Also, a borrower’s savings, investments, or the value of the asset purchased that can be seized if the borrower fails to repay a debt.
Collateralized Loan Obligations (CLOs)	Securitization vehicles backed predominantly by commercial loans. <i>See also</i> Warehouse Lending.
Community Bank	FDIC-insured institutions that meet the criteria for community banks that was developed for the FDIC Community Banking Study , published in December 2012. Thresholds for certain criteria are adjusted upward quarterly and described in “Notes to Users” for the FDIC Quarterly Banking Profile. <i>See, for example:</i> page 35 of the FDIC Quarterly Banking Profile, First Quarter 2023 .
Crypto-Assets	Private sector digital assets that depend primarily on the use of cryptography and distributed ledger or similar technologies. The term encompasses many assets commonly referred to as “coins” or “tokens” by market participants. <i>See also</i> Stablecoins.
Default	Failing to promptly pay interest or principal when due.
Early-Stage Past-Due Loans and Leases	Loans and leases 30 to 89 days past due and still accruing interest.
Farm Bank	A bank with agricultural production loans plus real estate loans secured by farmland equal to or exceeding 25 percent of total loans and leases.
Federal Funds Rate	The interest rate at which a depository institution lends funds that are immediately available to another depository institution overnight.
Great Recession	The protracted economic contraction from December 2007 through June 2009. The collapse of the U.S. housing market in 2007 became the most severe financial crisis since the Great Depression. The financial crisis, in turn, resulted in the Great Recession, the effects of which spread throughout the global economy.

High Yield	A term that is generally synonymous with noninvestment grade, which refers to the lowest-rated bonds subjected to third-party credit risk assessments by nationally recognized statistical ratings organizations. In the United States, noninvestment grade bonds are typically rated Ba1 or below by Moody's or BB+ or below by Standard & Poor's or Fitch.
Investment Grade	Generally, the highest-rated bonds subjected to third-party credit risk assessments by nationally recognized statistical rating organizations. In the United States, investment-grade bonds are typically rated Baa3 or above by Moody's or BBB- or above by Standard & Poor's or Fitch.
Leveraged Loans	Numerous definitions of leveraged lending exist throughout the financial services industry and commonly contain some combination of the following: <ul style="list-style-type: none"> • Proceeds used for buyouts, acquisitions, or capital distributions. • Transactions in which the borrower's total debt divided by EBITDA (earnings before interest, taxes, depreciation, and amortization) or senior debt divided by EBITDA exceeds 4.0X EBITDA or 3.0X EBITDA, respectively, or other defined levels appropriate to the industry or sector. • A borrower recognized in the debt markets as a highly leveraged firm, which is characterized by a high debt-to-net-worth ratio. • Transaction in which the borrower's post-financial leverage, as measured by its leverage ratios (for example, debt-to-assets, debt-to-net-worth, debt-to-cash flow, or other similar standards common to particular industries or sectors), significantly exceeds industry norms or historical levels.
Long-Term Assets	Loans and debt securities with remaining maturities or repricing intervals of more than five years.
Negative Equity	A situation in which a borrower's mortgage principal is greater than the value of the underlying collateral, often real estate.
Net Interest Margin	The difference between interest and dividends earned on interest-bearing assets and interest paid to depositors and other creditors, expressed as a percentage of average earning assets. No adjustments are made for interest income that is tax exempt.
Nonbank	Firms that are not part of or affiliated with FDIC-insured depository institutions.
Noncurrent Loans and Leases	The sum of loans and leases 90 days or more past due, and loans and leases in nonaccrual status.
OPEC+	An alliance formed in December 2016 of top oil-producing countries including members of the Organization of the Petroleum Exporting Countries (OPEC) and ten non-OPEC partner countries.
Problem Banks	Institutions with financial, operational, or managerial weaknesses that threaten their continued financial viability. Federal regulators assign a composite rating to each financial institution based upon an evaluation of financial and operational criteria. The rating is based on a scale of 1 to 5 in ascending order of supervisory concern. Depending upon the degree of risk and supervisory concern, problem banks are rated either "4" or "5."

Real Gross Domestic Product	The total market value of all final goods and services produced in an economy in a given year calculated by using a base year's price for goods and services; nominal GDP adjusted for inflation.
Rebooked Loans	Bank repurchases of delinquent single-family mortgage loans backing mortgage-backed securities that are recorded on the mortgage banking schedule in bank Call Reports.
Short-Term Liquid Assets	Cash and due from accounts, federal funds sold, securities purchased under resale agreements, and securities maturing in less than one year.
Stablecoins	A type of crypto-asset designed to maintain a stable value relative to a national currency or other reference asset or assets.
Total Past-Due Loans and Leases	Loans and leases 30 to 89, or 90 days or more past due, and loans and leases in nonaccrual status.
Treasury Yield	The effective interest rate paid by the U.S. government to borrow money for different lengths of time. It is the return on investment on the government's debt obligations.
Warehouse Lending	<p>Short-term funding of a mortgage lender based on the collateral of warehouse loans (in mortgage lending, loans that are funded and awaiting sale or delivery to an investor). This form of interim financing is used until the warehouse loans are sold to a permanent investor.</p> <p>Warehouse financing is also extended in the arrangement of CLOs and to other securitization firms. In this context, warehouse financing is a line of credit the CLO manager uses to purchase assets. Upon the CLO's closing, the CLO repays the warehousing lenders using the proceeds from the sale of the notes, and the CLO becomes the owner of the assets. The CLO manager uses warehousing to manage market risk when the manager purchases assets for the deal's portfolio; the warehouse provider assumes the risk of any mark-to-market losses in the portfolio during the warehousing period.</p>
Wholesale Funding	Federal funds purchased and securities sold under agreement to repurchase; borrowings from the Federal Home Loan Bank; brokered and listing service, municipal and state, and foreign deposits; and other borrowings such as from the Federal Reserve's Payment Protection Program Liquidity Facility.

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FDIC-015-2023

FDIC FEDERAL DEPOSIT
INSURANCE CORPORATION