Office of the
Comptroller of the Currency

Semiannual Risk Perspective

From the National Risk Committee

Fall 2019

Contents

About This Report

The Office of the Comptroller of the Currency (OCC) charters, regulates, and supervises national banks and federal savings associations and licenses, regulates, and supervises the federal branches and agencies of foreign banking organizations.[1] The OCC supervises these banks to ensure they operate in a safe and sound manner, provide fair access to financial services, treat customers fairly, and comply with applicable laws and regulations.

The OCC's National Risk Committee (NRC) monitors the condition of the federal banking system and identifies key risks. The NRC also monitors emerging threats to the system's safety and soundness and ability to provide fair access to financial services and treat customers fairly. NRC members include senior agency officials who supervise banks of all sizes and develop bank supervisory policy. The NRC meets quarterly and issues guidance to examiners that provides perspective on industry trends and highlights issues requiring attention.

The OCC's *Semiannual Risk Perspective* addresses key issues facing banks, focusing on those that pose threats to the safety and soundness of banks and their compliance with applicable laws and regulations. This fall 2019 report presents data in five main areas: the operating environment, bank performance, special topics in emerging risks, trends in key risks, and supervisory actions. The report reflects data as of June 30, 2019, unless otherwise indicated.

The OCC welcomes feedback by email: NRCReport@occ.treas.gov.

[1] Throughout this report, the term "banks" refers collectively to national banks, federal savings associations, and federal branches and agencies.

Executive Summary

Key Takeaways

- Bank financial performance is sound.
- Key risk themes:
  - Operational risk is elevated as banks adapt to an evolving technology environment and persistent cybersecurity risks.
  - Banks should prepare for a cyclical change while credit performance is strong.
  - Interest rate risk is increasing due to recent volatility in market rates. Interest rate risk is elevated as lower rates could compress net interest margins.
  - The OCC is increasing regulatory oversight amid London InterBank Offered Rate's (Libor) anticipated cessation.
  - Banks face strategic risks from non-depository financial institutions, use of innovative and evolving technology, and progressive data analysis capabilities.

Bank financial performance is sound, in part, because of a favorable credit environment and the longest economic expansion in U.S. history. Net income in the federal banking system grew 8.2 percent from the same period a year ago. Asset quality is strong and stable. Lower interest rates with a flat or inverted U.S. yield curve are expected to compress net interest margins (NIM) and profitability. Leverage and risk-based capital ratios are at record levels providing strong loss absorption capacity.

The key risk themes facing the federal banking system are operational risk, credit risk, and interest rate risk. The industry adoption of financial technology and regulatory technology is growing and evolving rapidly. The OCC monitors these risks closely and implements actions to address concerns.

- Operational risk is elevated as banks adapt to a changing and increasingly complex operating environment. Key drivers elevating operational risk include the need to adapt and evolve current technology systems for ongoing cybersecurity threats. Technology advances and innovation in core banking systems result in a challenging operational environment and potential risks if not effectively understood, implemented, and controlled. Other drivers include the increasing use of third-party service providers, which requires effective planning and ongoing oversight, and the continued threat of fraud. The potential for operational disruptions underscores the need for effective controls and operational resilience to help ensure the ongoing delivery of financial products and services in a safe and sound manner.
- Banks should prepare for a cyclical change while credit performance remains strong. Credit risk has accumulated in many portfolios. Prudent credit risk management practices include identifying borrowers that are most vulnerable to reduced cash flows from slower than anticipated economic growth. Direct and indirect credit risk should be actively managed, as substantial credit is held outside of the federal banking system. Bank management should understand how risk outside the system could migrate into the banking system or affect borrowers or the bank's credit risk. In addition, preparation for a potential cyclical downturn includes maintaining robust credit control functions, particularly credit review, problem loan identification, and workout, collections, and collateral management.
- Recent volatility in market rates has led to increasing levels of interest rate risk. The

complexity of asset/liability management is exacerbated by the recent yield curve inversions. Aggregate NIMs are lower than they were before previous periods of declining interest rates. Even if the yield curve steepens, but overall interest rates decline, NIMs could be negatively affected by asset-sensitive balance sheets. Net interest income (NII) comprises 78 percent of net operating income and is the main driver of profitability. Declines in NII would have a material impact on overall bank profitability.

- The Libor will likely cease to be an active index by the end of 2021. Many market and banking participants use Libor as a benchmark for pricing financial instruments. The OCC is increasing regulatory oversight of this area to evaluate bank awareness and preparedness for Libor's anticipated cessation. Examiners will evaluate whether banks have begun to assess their exposure to Libor in assets and liabilities to determine potential impacts and develop risk management strategies.
- Banks face strategic risks from non-depository financial institutions (NDFI), use of innovative and evolving technology, and expanding data analysis capabilities. NDFI's are strong competitors to bank lending models. Banks continue to invest in research and development to incorporate sophisticated capabilities (e.g., artificial intelligence and machine learning) into Bank Secrecy Act (BSA), anti-money laundering (AML) compliance programs, and sanctions imposed by the Office of Foreign Assets Control under the U.S. Department of the Treasury. The OCC has observed that banks show an increasing interest in sharing utilities to implement BSA/AML and sanctions processes and controls.

The following issues may develop into key risks and warrant awareness among bankers and examiners:

- Low prices for agricultural commodities have negatively affected agricultural cash flows, which are well below their 2012 peak, and have led to increased farm carryover debt for agricultural borrowers. Recent flooding and international trade disputes could adversely affect some borrowers and segments of the farming industry.
- The current expected credit losses (CECL) methodology becomes effective in 2020 for most banks that file with the U.S. Securities and Exchange Commission (SEC) and in 2023 for all other banks. All banks should continue preparing for CECL implementation, regardless of their CECL effective date.

Refer to part III of this report, which highlights cybersecurity risks as a special risk topic.

Part I: Operating Environment

In July 2019, the current U.S. economic expansion of more than 10 years became the longest in U.S. history. This trend has benefited banks' financial performance. U.S. real gross domestic product (GDP) growth, which reached a cycle high in 2018 due in part to the tax cut stimulus, slowed modestly in the first half of 2019. Manufacturing activity slowed more sharply than the rest of the economy, and job growth slowed primarily in the manufacturing, construction, and mining industries. Overall, the labor market remains healthy, with the unemployment rate near a 50-year low and the economy on pace to add more than 2 million jobs for the ninth consecutive year.

Headwinds facing the U.S. economy strengthened in 2019. Economic growth is weaker than expected in some of the United States' major export countries, and projections of global economic growth have been lowered. Manufacturing and trade flows remain weak, with geo-political uncertainty dampening capital expenditures and business investment in developed and emerging markets. Slowing growth and contained inflationary pressures have prompted more than 20 central banks, including the Federal Reserve, to cut key interest rates in the first eight months of 2019.

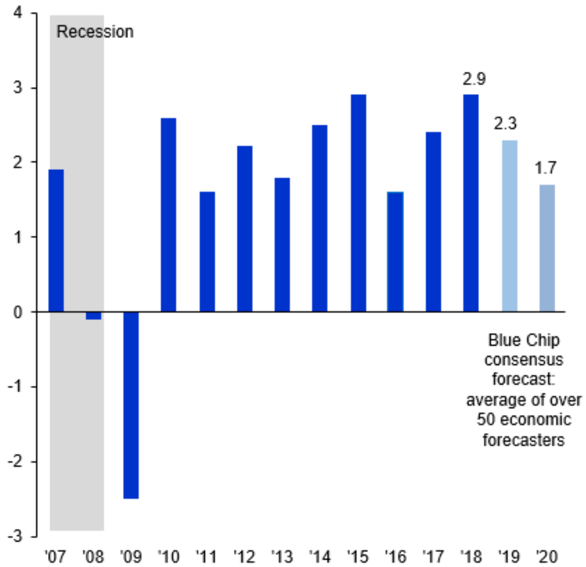
The slowdown in global growth and the rising tariffs between the United States and China have weighed on business confidence and the U.S. bond market. The Business Roundtable CEO Economic Outlook Index has declined for five consecutive quarters after peaking in the first quarter of 2018. The 10-year Treasury yield fell below 2 percent in August 2019, and was below the three-month Treasury yield for June, July, and August. This inversion of the yield curve historically indicates market participants' expectations that the economy will weaken and result in lower short-term interest rates. Some of the inversion may be attributed to foreign investors buying U.S. bonds because U.S. yields are higher than in their home countries.

The consensus forecast indicates that the economy will continue to slow down toward its long-run potential rate of growth, but the risk of a recession is rising. Fading stimulus from the tax cuts, shortages of skilled workers in some industries, slower economic growth abroad, and global trade policy uncertainty are likely to temper U.S. economic growth. The Blue Chip Consensus Forecast (see figure 1) expects annual real GDP growth to slow to 2.3 percent in 2019 and 1.7 percent in 2020. The 2020 forecast is in line with the Congressional Budget Office's estimate of the long-run trend level of U.S. economic growth that maintains high employment across sectors and a low and stable rate of inflation. The more than 50 economic forecasters in the October 2019 Blue Chip survey (see figure 1) assessed the probability of a recession starting in 2020 at 39 percent.

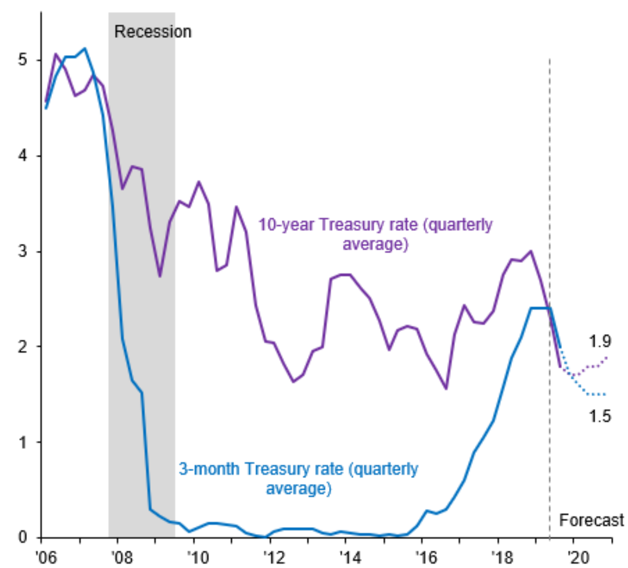
Slower U.S. and global growth and low interest rates provide a more challenging environment for bank performance. Loan growth and economic growth could slow further, and if combined with an inverted yield curve, could make maintaining NIMs and revenue growth increasingly difficult for banks. Credit quality could begin to deteriorate as slower economic growth reveals debt service difficulties by weaker borrowers.

Figure 1: GDP and Yield Curve Forecasts

Real GDP, percent change annual rate



Treasury rates, in percent



Source: U.S. Bureau of Economic Analysis, Board of Governors of the Federal Reserve System (historical data through 4Q:2019); Blue Chip Economic Indicators (October 2019)

Part II: Bank Performance

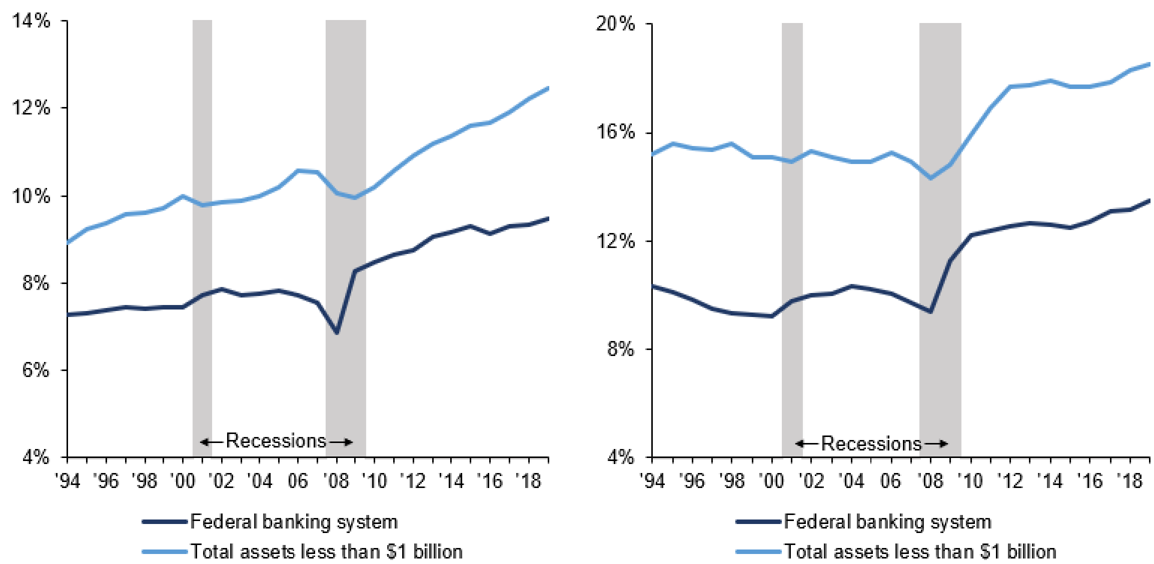
Bank Condition and Financial Performance Are Sound

Capital Levels Reach Historical Highs

Capital supports bank operations, serves as an important cushion against unexpected losses, and plays a critical role in the safety and soundness of the federal banking system. Bank capital ratios are at their highest level since the advent of risk-based capital in the early 1990s. As of June 30, 2019, the overall federal banking system is at record-high leverage and tier 1 risk-based capital ratios (see figure 2). For the federal banking system, the tier 1 leverage ratio increased from 6.87 percent at the trough in 2008 to 9.47 percent. Tier leverage ratio for banks with less than $1 billion increased from 10.07 percent in 2008 to 12.46 percent in 2019. Tier 1 capital ratios have gone from 9.4 percent at the trough in 2008 to 13.5 percent in 2019. For banks with less than $1 billion in total assets, tier 1 capital ratios hit a low in 2008 of 14.3 percent and came in at 18.5 percent in as of June 2019.

Figure 2: Trends in Bank Capital

Tier 1 leverage ratio **Tier 1 capital ratio**



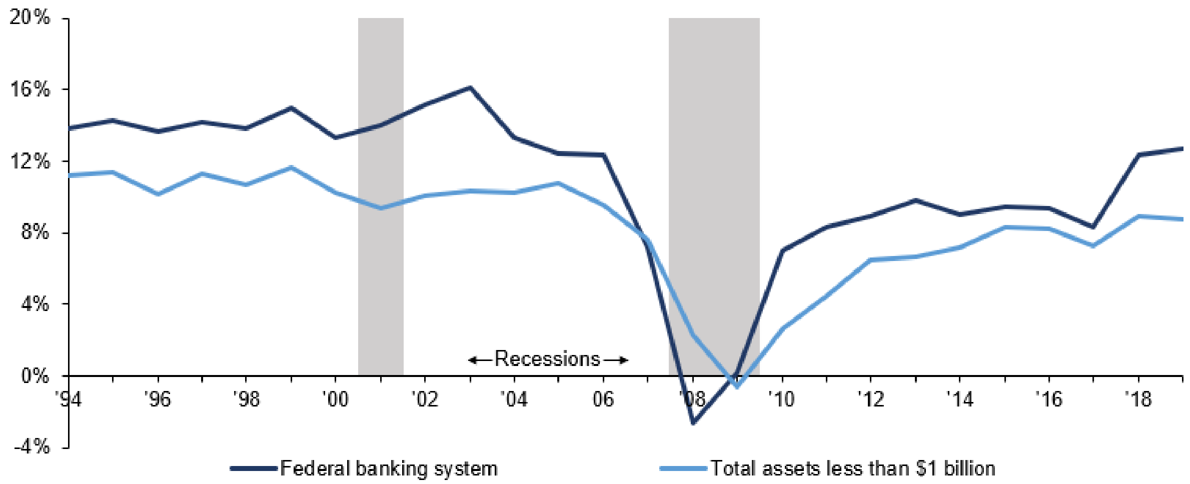
Source: Integrated Banking Information System (OCC)

Note: Annual data through year-end 2018; data for 2019 as of June.

Lower Taxes and Flat Expenses Help Banks Maintain Performance

The federal banking system's profitability continues to benefit from lower taxes and control of expenses.[2] Banks reported a return on equity of 12.7 percent, which is above the pre-crisis level of 2006 for the first time (see figure 3). Banks with less than $1 billion in total assets saw a slight decline in their return on equity, but the level is still solid.

Figure 3: Trend in Bank Return on Equity



Source: Integrated Banking Information System (OCC)

Note: Annual data through year-end 2018; 2019 year-to-date annualized. Banks with less than $1 billion in total assets exclude credit card and trust institutions. The 2008 results are the sum of quarterly net income and include estimates from consolidated financial statements for bank holding companies to restore income eliminated because of purchase accounting treatment of Countrywide (second quarter of 2008), Washington Mutual (third quarter of 2008), Wachovia, National City, and Downey (fourth quarter of 2008).

Net income grew 8.22 percent to $85 billion from the same period a year ago (see table 1). NII grew only 4 percent over the same period, because loan growth is below historical averages and more banks are facing a flat or declining NIM. Revenue growth was affected by a drop in noninterest income, due primarily to fee income from business lines negatively affected by the lower interest rate environment and due to servicing fee income and gains (losses) on sale of loans.

[2] The Tax Cuts and Jobs Act passed in December 2017 effectively cut tax rates for all banks except subchapter S banks (typically smaller banks), which pass income through directly to owners to be taxed at personal tax rates of the owners.

Table 1: Trends in Bank Net Income

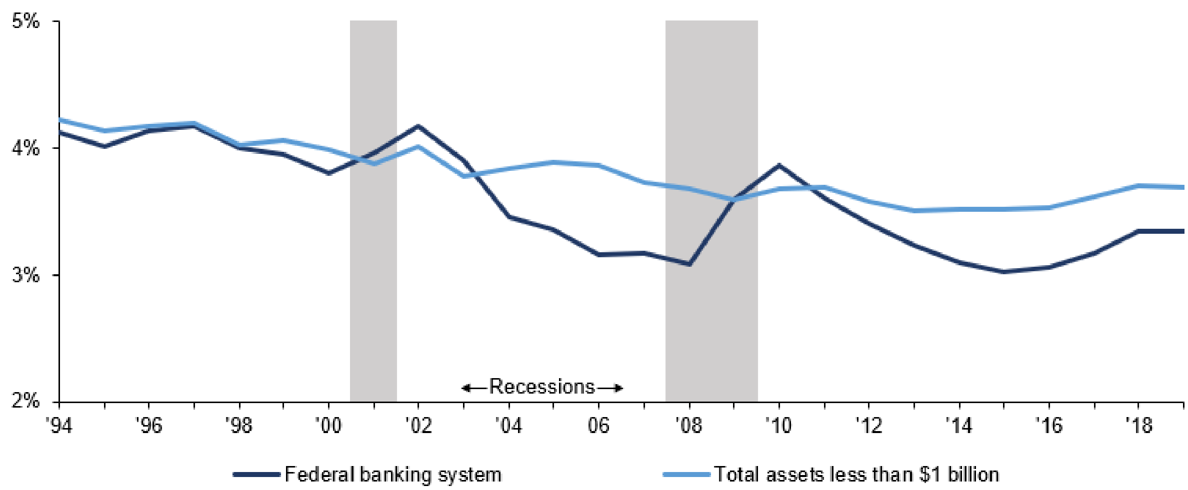
	Federal banking system				Banks with total assets of less than $1 billion			
	06/30/2017	06/30/2018	06/30/2019	Year over year % change	06/30/2017	06/30/2018	06/30/2019	Year over year % change
Year-to-date revenue in billions of dollars								
Net interest income	162.7	175.7	183.5	4.4%	3.7	3.9	4.1	4.7%
Noninterest income	93.1	98.4	95.4	-3.0%	1.1	1.1	1.1	6.2%
Year-to-date expenses in billions of dollars								
Provisioning	17.8	17.7	19.3	9.1%	0.13	0.13	0.13	–4.6%
Noninterest expense	146.9	155.4	154.2	–0.8%	3.4	3.5	3.7	4.9%
Income taxes	29.3	22.4	21.6	–3.5%	0.23	0.18	0.20	10.9%
Net income	**62.8**	**78.7**	**85.2**	**8.2%**	**1.0**	**1.2**	**1.3**	**7.1%**

Source: Integrated Banking Information System (OCC)

Note: Data are merger-adjusted and held constant for banks in continuous operation from the first quarter of 2010 to the second quarter of 2019. Banks with less than $1 billion in total assets exclude credit card and trust institutions.

NIMs for banks of all sizes were flat through the second quarter of 2019. This contrasts with the last few years, when NIM expanded and was a driver behind the improved financial performance of OCC-supervised banks (see figure 4).

Figure 4: Trend in Net Interest Margins

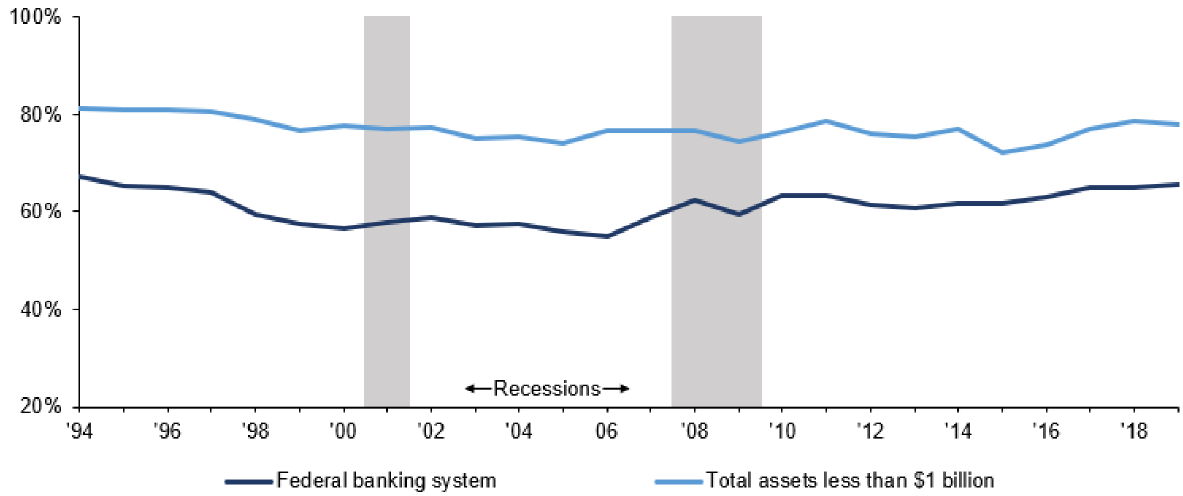


Source: Integrated Banking Information System (OCC)

Note: Annual data through the fourth quarter of 2018 and annualized for the first half of 2019. Banks with less than $1 billion in total assets do not include credit card and trust institutions.

NII is a key income source for all banks, and especially for community banks that receive close to 80 percent of their net revenues from NII (see figure 5). Since the financial crisis of 2008, the overall banking system has seen a slight increase in the reliance on NII from about 60 percent to 67 percent.

Figure 5: Trend in Net Interest Income as a Share of Net Operating Revenue

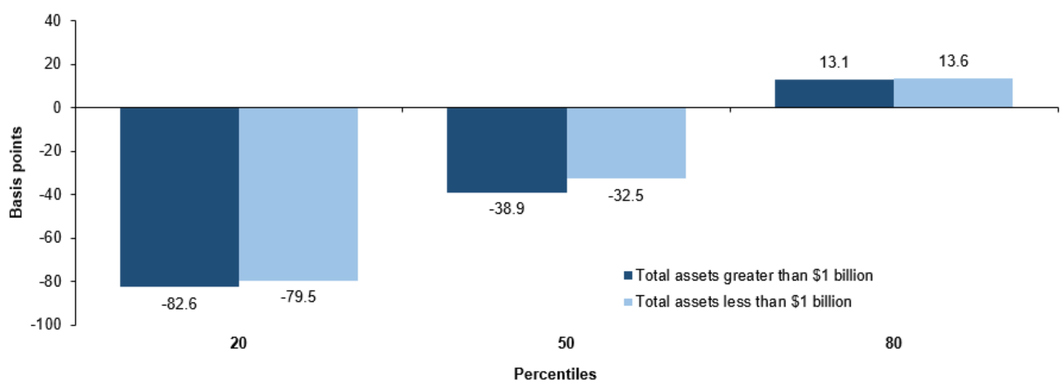


Source: Integrated Banking Information System (OCC)

Note: Annual data through the fourth quarter of 2018 and annualized for the first half of 2019. Banks with less than $1 billion in total assets do not include credit card and trust institutions.

Because the future path of interest rate movements is difficult to predict, it helps to look back at what a near-zero rate environment meant for NIM earlier in the decade. There was significant NIM compression for banks when policy rates hovered near zero despite a positive sloping yield curve. Figure 6 shows a distribution for the top 20th percentile, the median, and the bottom 20th percentile of the change in NIM in basis points from first quarter of 2010 to first quarter of 2015 for banks with total assets greater than and less than $1 billion. For the median banks, there was a reduction in NIM of greater than 30 basis points. The impact of very low rates translated to NIM stress for most banks, although the top 20th percentile of banks did see some gains.

Figure 6: Change in Net Interest Margin, First Quarter of 2010 to First Quarter of 2015



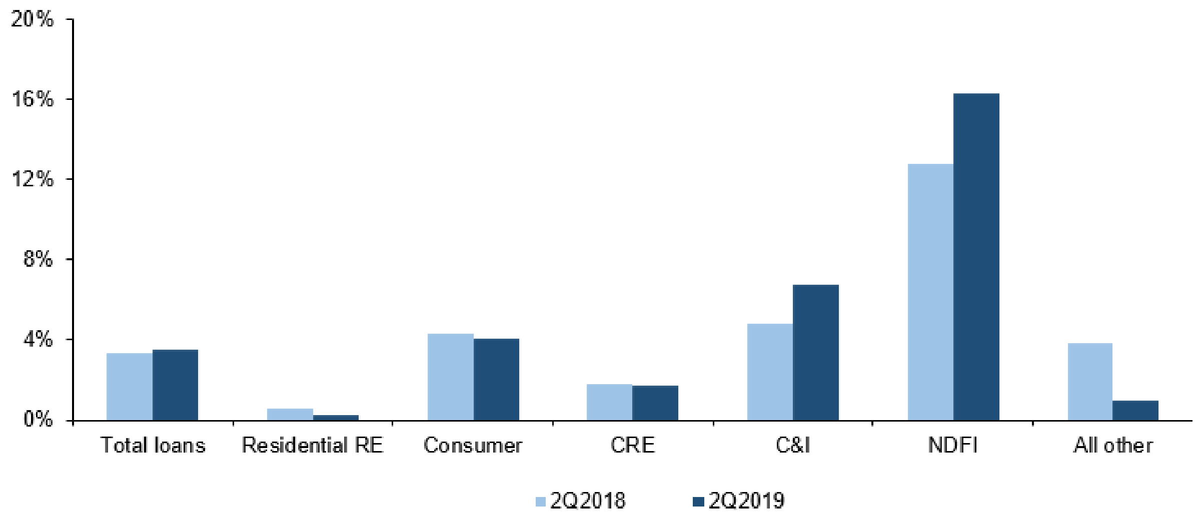
Source: Integrated Banking Information System (OCC)

Note: Data are merger-adjusted for institutions in continuous operation between the first quarter of 2010 and second quarter of 2019.

Loan Growth Is Soft

Despite the overall solid profitability trends and performance of banks, total loan growth has been tepid in some key categories. Ongoing weakness in residential and commercial real estate weighed down overall lending. Recent changes in key interest rates might provide potential for renewed loan growth. An area of strength for the federal banking system has been loans to both financial and nonfinancial businesses shown in commercial and industrial (C&I) and NDFI categories (see figure 7). Of note, C&I and NDFI lending increased over the past year and have been consistent growth areas in this economic cycle. While loans to NDFIs have been a growing share of lending in this cycle, they remain less than 10 percent of all loans and concentrated in a few banks. Loan growth is a key offset for a possible lower rate environment and a key driver of bank NII.

Figure 7: Year-Over-Year Change in Loans



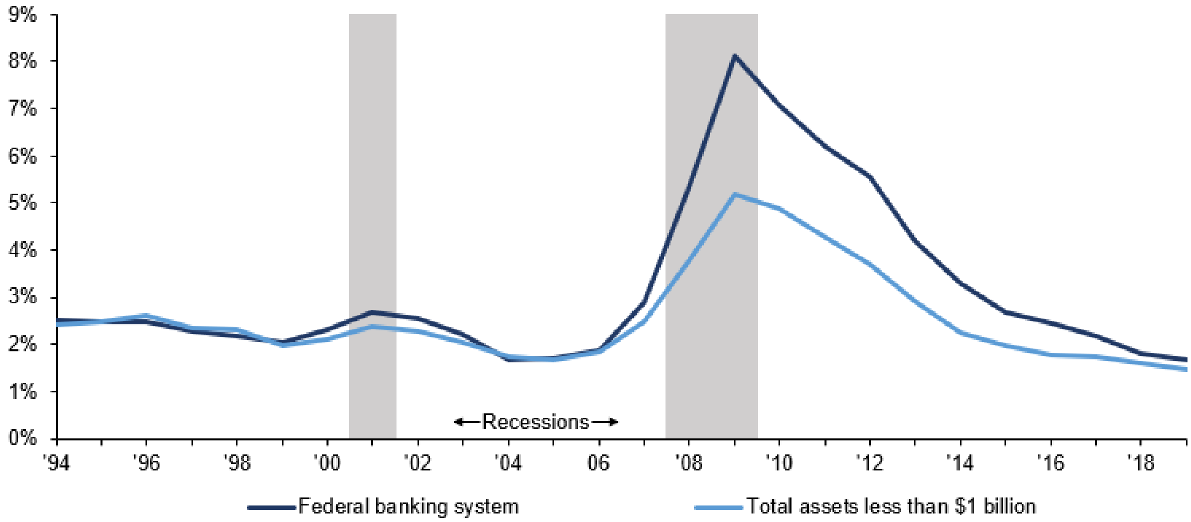
Source: Integrated Banking Information System (OCC)

Note: Data are merger-adjusted and held constant for banks in continuous operation from the first quarter of 2010 to the second quarter of 2019. Banks with less than $1 billion in total assets do not include credit card and trust institutions. CRE includes commercial mortgages and construction loans. All other includes agriculture loans and loans to governments, banks, and municipalities.

Asset Quality Metrics Remain Strong

Delinquent and nonperforming loans in the federal banking system remained below their long-term averages. The total of 30+ day past due loans plus nonaccrual loans continued to decline, reaching the lowest level in 25 years for the federal banking system (see figure 8). Similarly, banks with $1 billion or less in total assets experienced the lowest level of delinquencies since 2004.

Figure 8: Trend in Weighted-Average 30+ Day Past Due Plus Nonaccrual Loans



Source: Integrated Banking Information System (OCC)

Note: Annual data through year-end 2018; data for 2019 as of June 2019.

Part III: Special Topic in Emerging Risks

Cybersecurity

Cybersecurity continues to be a key concern as breaches and operational outages occur across all industries, including the financial sector. Banks have generally implemented appropriate security programs, but continuous vigilance is necessary to adapt to the changing cyber threat landscape. It is essential that management implements and maintains appropriate security tools and internal controls to protect their operations and sensitive data. Additionally, bank boards of directors and senior management should be aware of the types of cybersecurity risks facing their banks and should foster a strong cybersecurity risk culture.

Malicious external and internal actors use a variety of techniques to circumvent controls. Common attack methods targeting banks include phishing, ransomware, and business email compromise (human interfaces), as well as exploiting process weaknesses, such as unpatched systems, misconfigured networks, or other system vulnerabilities. Excessive or improper systems access rights remain a persistent concern that can exacerbate damage caused by other internal failures. To circumvent bank controls, malicious actors target not only bank staff and processes but also bank customers and third parties.

Banks generally have appropriate controls for operational stability and protection of bank and customer data. There had been an observed increase in cybersecurity-related matters requiring attention (MRA) when the OCC implemented the Cybersecurity Assessment Tool into our supervisory program. Bank management strengthened risk management processes and controls to address concerns. As a result, cybersecurity-related matters trends have decreased and have remained relatively stable over recent quarters, reflecting increasing maturity of banks' cybersecurity programs. Trends in this area have improved; however, cybersecurity remains a significant risk area for banks, with opportunities for further improvement. When examiners identify issues, most MRAs focus on general policy and security program governance concerns. Examiners note that the most common specific control deficiencies relate to the following:

- **Patch management:** Institutions continue to experience challenges with maintaining effective patch management programs. Large institutions with complex technology operations often face challenges with identification, risk rating, testing, and implementing a large volume of system patches and updates on a timely basis. Less complex institutions face challenges with retaining the technical resources needed to identify and implement patches required to manage changing threats and vulnerabilities on an ongoing basis.
- **Network configuration:** Misconfigured security settings on firewalls and network control devices or other system misconfigurations can create security gaps allowing malicious actors to gain access to banks' internal networks to remove sensitive data or conduct unauthorized transactions.
- **Access management:** Excessive or inappropriate access rights can provide malicious actors (internal and external) with unauthorized access and lead to compromised systems and bank or customer data.

Maintenance of basic cybersecurity controls, including effective inventory management of information technology systems, strong configuration standards, comprehensive patch management programs, and processes to manage end-of-life systems, is critical. Strong authentication programs, appropriate use of data encryption, and appropriate security tools assist in identifying and mitigating malicious attacks. Appropriate risk management processes to continually test and validate the effectiveness of these controls include thorough network vulnerability assessments and penetration testing, as well as processes to address necessary corrective actions in a timely manner.

While banks have taken appropriate steps to improve their risk posture, even the best maintained and protected networks are at risk of breaches or operational outage. OCC examiners evaluate the appropriateness of incident response and training programs to mitigate the impact to bank services availability or exposure of customer data. Banks and their service providers report that some of the common attacks include the following:

- **Phishing incidents:** Malicious actors have been successful in executing malware and circumventing controls through successful phishing of bank employees. Successful attempts provide a gateway to exploit unpatched and other system vulnerabilities.
- **Compromised credentials:** Malicious actors have used stolen logon credentials to exploit weak authentication controls and to remove sensitive data or initiate fraudulent transactions.
- **Automated teller machine (ATM) exploits:** Malicious actors have continued to focus on card skimming and cash-out attacks on ATMs. ATMs that were successfully compromised typically had not been updated or patched.

A well-documented and comprehensive incident response program that includes internal and external stakeholders and that addresses threats commensurate with their probability and impact is as important as preventive controls. Banks with strong, tested incident response programs have demonstrated the ability to mitigate financial and reputation risks. Bank directors and senior management play a key role in the incident response program, providing direction for the development and maintenance of a current, comprehensive, and tested plan that is updated to reflect real-world incidents, best practices, and lessons learned from industry exercises.

Banks should consider partnering with the Financial Services Information Sharing and Analysis Center to share threat information; subscribing to technical alerts from the U.S. Department of Homeland Security's Cybersecurity and Infrastructure Security Agency[3] to receive information on current security issues, vulnerabilities, and exploits; and self-reporting incidents through the Federal Bureau of Investigation's Internet Crime Complaint Center. Engaging with these information-sharing entities provides timely access to cyber intelligence as well as a means for institutions to better protect themselves from known threats. For more information, see the FFIECs "Cybersecurity Resource Guide for Financial Institutions."[4]

Additionally, banks may be required to file Suspicious Activity Reports (SAR) with the Financial Crimes Enforcement Network for certain cyber events resulting in fraud. When filing a

[3] For more information, visit https://www.us-cert.gov/ncas/alerts.

[4] For more information, visit https://www.ffiec.gov/cybersecurity.htm

SAR, banks should provide pertinent available information about the event and associated suspicious activity, including cyber-related information.

As institutions increasingly rely on third parties to help reduce costs and enhance technological capabilities, they should have processes to ensure that cybersecurity controls are appropriate for the outsourced operations. An institution's use of third-party systems and services does not diminish the responsibility of the institution's senior management to ensure that the outsourced activity is conducted in a safe and sound manner and in compliance with applicable laws.

The bank's cybersecurity program should be part of an overall operational resilience framework. Operational resilience is the ability of a bank to deliver business services when operations are unavailable or degraded. Successful resiliency plans assess end-to-end processes and have continuity plans for key business processes that address different potential outages, including those from cyber-related threats.

Part IV: Trends in Key Risks

A. Operational Risk Is Elevated as Banks Respond to an Evolving and Increasingly Complex Operating Environment

Sound risk management includes fully assessing the use and impact of critical third parties as part of strategic and governance processes. Banks increasingly rely on third-party service providers for technology and other solutions to compete in a rapidly evolving financial marketplace. The use of third-party service providers has increased efficiency for many banks, especially community banks, and allows these banks to leverage technical expertise necessary to offer sophisticated products and services. Sound governance and controls should be part of any new internal technology development or reliance on a third party. As always, banks should manage the risks that arise from reliance on third-party service providers for payments, transaction processing, maintaining sensitive information, and other critical functions.

From an industry-wide perspective, consolidation in the bank technology service provider industry has resulted in fewer entities providing certain critical services. This consolidation can increase risk to the banking sector if not properly managed. The OCC, working with other bank regulatory agencies, examines the services offered to banks by many third-party providers to support safe, sound, and fair access to the federal banking system.

Other Potential Contributors to Elevated Operational Risk

Potential economic pressures from falling or stagnant interest rates, a maturing economic cycle, and other factors may challenge banks in maintaining or increasing profitability. During these times, banks have traditionally cut costs to maintain margins. Key control functions and processes, such as risk management, audit, compliance, and staff development, should be evaluated to ensure sound risk management oversight during economic stress. Cost-cutting strategies aimed at enhancing near-term returns should balance profitability with the maintenance of proper controls.

Banks continue to seek merger and acquisition opportunities to scale growth and lower costs. Merger and acquisition activity can result in increased operational risk, as the new consolidated institution often needs to sustain or build a stronger culture; develop appropriate governance, risk management, and control functions; integrate platforms and staffing; and implement strategic initiatives. A bank involved in a merger or acquisition should develop a clear and appropriately detailed change management strategy that sufficiently addresses people, processes, and systems.

B. Credit Quality Remains Strong

Credit quality remains strong, as measured by traditional performance metrics, such as classified and special mention assets, delinquencies, non-performing assets, net charge-off rates, and allowance for loans and lease loss balances. These metrics are lagging indicators that may not fully capture embedded risk from elevated corporate borrowing, higher corporate leverage, eased underwriting standards, and agricultural sector challenges. The consensus forecast indicates slower economic growth, which has the potential to elevate credit risk. Slower economic growth could affect borrowers through weaker revenue and earnings and slower asset value growth. The OCC encourages banks to actively identify potentially vulnerable borrowers, review the quality and thoroughness of the credit control functions, and evaluate and address any personnel experience or operational gaps in collections, workout functions, and personnel.

The OCC continues to assess bank lending practices and expects banks to promptly identify changes in credit risk, employ effective risk mitigation strategies, and maintain appropriate loan loss allowance methodologies. Continuous years of growth, weaker underwriting, risk layering, and higher credit concentrations have embedded risk in portfolios. In addition, ongoing uncertainty around trade tariffs and other geopolitical factors, including Brexit and increased tensions in the Middle East, have the potential to erode business and consumer confidence. It is important that bankers prepare for a potential downturn by understanding the credit risk accumulated in their banks as well as how external elements such as economic factors and lending activities by nonbank entities could affect the resiliency of their credit portfolios. Trends in MRAs are slightly lower compared to 2018 and are centered in credit administration, underwriting controls, risk assessment, and policy gaps. MRAs are a lagging indicator, and management should actively prepare for cyclical issues affecting banks' and borrowers' financial condition.

Despite slower loan growth, credit availability remains healthy and banks continue to search for yield through loans while interest rates remain low. Competition remains fierce, particularly from nonbank entities including NDFI's, and banks may face pressure to reduce costs, including those associated with risk control units. It is precisely at this point in the credit cycle when reinforcement of the importance of risk control units and assessment of their resiliency for potentially weaker economic conditions is warranted.

Risk in leveraged lending remains elevated but has been relatively stable in 2019. Examiners note higher leverage levels across a wide range of credit types, with many leveraged loans exhibiting marginal or weak transaction structures, aggressive repayment assumptions, or marginal repayment capacity. Although higher risk, leveraged loans held in bank portfolios are generally of satisfactory credit quality, and holdings of collateralized loan obligations are generally of high quality. Borrowers are exercising greater control in establishing leveraged lending terms and market participants are accepting higher levels of leverage. Significant leveraged loan exposure exists outside the federal banking system, resulting in less transparency and more uncertainty on the systemic credit impact from a material economic downturn. Both direct and indirect exposure to highly leveraged companies, including suppliers, and the potential impact from a shift in market sentiment and liquidity in the leveraged lending sector should be analyzed. It is important that banks consider the potential cumulative effect on the U.S. financial system from underwriting and distribution of weakly underwritten loans. A material downturn in the economy could result in a significant increase in classified exposure and higher losses, particularly in leveraged credits that exhibit layered risk.

Agricultural lending risk is increasing. Severe weather, depressed commodities prices, higher operating costs, and trade tensions have increased risks in some banks with agricultural lending exposure. These banks are primarily community banks in the central, western, and southern regions of the United States, where severe weather has led to late planting in certain areas, lower cattle weight, and the potential for reduced yields. Inflation-adjusted prices for corn, soybeans, and wheat are at or below their 20-year averages. Prices for milk are below the 20-year average, and dairy cattle lending is showing significant stress. In aggregate, agricultural loans represent less than 10 percent of community bank outstanding commercial loans and less than 1.5 percent of all commercial loans. While agricultural lending is considered an increasing risk, most banks with concentrations in agricultural lending have historically managed through similar circumstances, and the average age of agricultural-concentrated banks is 103 years. Banks should proactively work with impacted borrowers to assess potential risks. Inflation-adjusted aggregate net farm cash income for fiscal year 2018 is well below its 2012 peak, but is at its 20-year average supported by government payments. Aggregate farm return on equity is positive, and cropland values have been largely stable over the past year.

NDFIs continue to disrupt retail lending markets and affect commercial lending. NDFIs originate over 50 percent of government-supported mortgages, hold a majority of mortgage servicing rights, lead in market share for unsecured personal loans, and participate in direct leveraged and other forms of commercial lending. While bank lenders have largely maintained a disciplined approach in their underwriting, they continue to face increasing competition from NDFIs. In addition, banks' lending to NDFIs continues to expand, increasing the direct credit risk to these firms. Loans to NDFIs represent 10 percent of all commercial loans, unchanged from year-end 2018 but increased from about 6 percent five years ago. Banks should analyze and understand the credit risks associated with lending to this sector, including correlation risk, and how credit risks can manifest indirectly through market events and other industry exposures. In addition, bankers need to consistently monitor how they respond to this competition and maintain control processes to stay within risk tolerances.

Commercial real estate (CRE) lending remains highly concentrated, primarily in the community bank sector. About 7 percent of OCC-supervised banks report either total CRE exposure greater than 300 percent of capital or construction and development loans greater than 100 percent of capital. These levels have remained relatively consistent since 2016. Examiners note sound CRE risk management across OCC-supervised banks; nonetheless, the OCC maintains its supervisory focus on CRE lending and the quality of credit risk management because CRE remains the primary lending product of banks, with 79 percent of banks having CRE concentrations over 25 percent of capital.

Retail credit risk is stable, and banks have generally maintained discipline in their approach to retail lending. While examiners have observed some incremental loosening of underwriting standards in retail products, bank portfolios are generally stronger overall because of relatively benign risk taking and improved consumer financial health. On a nominal basis, U.S. household debt totals $13.86 trillion and is $1.2 trillion higher than its previous peak in the third quarter of 2008. When viewed on an inflation indexed basis, the volume of household debt is about 8 percent below the third quarter of 2008 peak, and the ratio of total household debt-to-GDP is well below its 2008 peak. Retail portfolio resiliency has been strengthened by an improvement in households' ability to service debt payments. The household debt service ratio is near a 30-year low. Nevertheless, student debt that has increased $880 billion during this expansion may pose challenges for individuals carrying high student debt in qualifying for mortgages or other loans. It may also limit consumer spending and serve as a drag on future economic growth.

Overall, the aggregate allowance for loan and lease losses[5] in OCC-supervised banks is appropriate, and the volume of nonperforming loans continues to decline for commercial and retail loan portfolios. CECL becomes effective in 2020 for most institutions that file with the SEC. The Financial Accounting Standards Board has approved a delay in CECL's effective date to 2023 for small reporting companies, as defined by the SEC, and non-public business entities, as defined by the Financial Accounting Standards Board.

Large banks are appropriately preparing for CECL. The majority of midsize and community banks are relying on a service provider for CECL preparedness. The OCC expects aggregate day-one impact from CECL is expected to be moderate; however, individual banks may experience significant changes in their allowance for credit losses depending on several factors, including the life of the loans in the banks' portfolios, the tenor and advance rates of their loan products, the nature of their borrowers' repayment behavior, and the banks' forecasts for material credit loss drivers. Focus should remain on timely implementation plans and appropriate governance. Although the CECL effective date for most banks has been delayed, all banks should continue preparing for CECL implementation.

C. Interest Rate Risk and Libor

Historically, NIMs stagnate or decline in flat, inverted, or declining interest rate environments. The average U.S. bank derives 66 percent of its net operating income from NII, making margin a key driver of overall earnings performance. Community and regional banks have higher reliance on NII. Large banks have more diversified sources of income, but the share of net operating income from NII has been increasing. NIM for all U.S. banks is lower than in previous periods of declining interest rates. Because of the importance of NII to overall earnings performance, declines in NII may have a material impact on overall U.S. bank profitability.

Table 2: Net Interest Margins for All U.S. Banks in the Last Quarter Before Reduction in the Fed Funds Rate

Net interest margins for all U.S. banks			
	Fourth quarter 2000	**Second quarter 2007**	**Second quarter 2019**
All banks	3.76%	3.71%	3.33%

Source: Federal Reserve Bank of St. Louis

[5] As CECL is implemented, the term "allowance for loan and lease losses" will be replaced with "allowance for credit losses."

The OCC analyzes bank interest rate risk projections to assess how NII might change in different interest rate environments. The analysis shows that 75 percent of OCC-supervised banks expect lower NII in a declining rate environment, with a median reduction of 3 percent in a negative 1 percent shock scenario. OCC-supervised banks are exposed to reductions in interest rates due to asset-sensitive balance sheets. Since 2010, U.S. banks have reported more short-term assets than liabilities. As interest rates decline, more assets will reprice to lower yields than liabilities, leading to a reduction in NII.

Banks should review their potential exposure to declining interest rates. Appropriate action should be taken if exposures exceed established risk limits. The cost of mitigating unwanted interest rate exposure typically rises as the adverse interest rate scenario becomes more likely.

Libor’s anticipated cessation by year-end 2021 may increase operational and other risks to the industry. An accurate inventory of balance-sheet assets, liabilities, and off-balance-sheet contracts that may be affected by a movement to an alternative rate, including assets serviced by third parties, will help a bank determine its risk exposure. The inventory should include an assessment of financial instruments acquired during a merger or acquisition that may not be included within primary systems.

Libor’s anticipated cessation poses compliance and reputation risks associated with moving clients to a new rate or offering new products or services that are tied to a new and untested index. Assessment of these risks should include analysis of customer impact, repapering contracts, updating system applications, revising and testing models, and ensuring appropriate contractual fallback language and disclosures to clients.

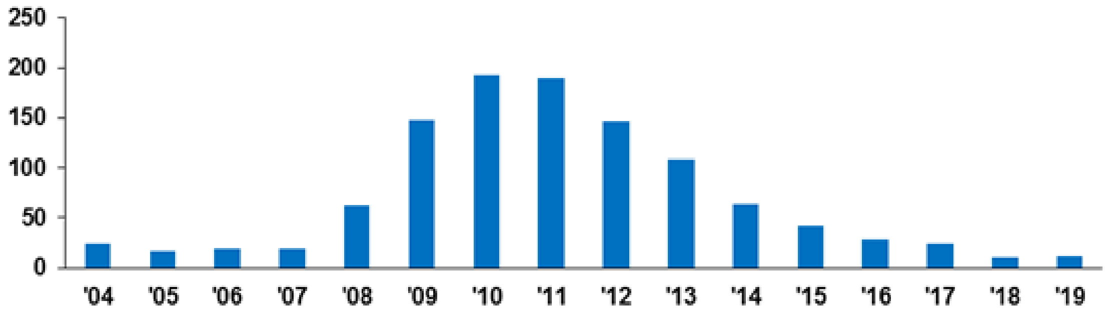
The anticipated cessation likely would affect consumer products, such as adjustable rate mortgages, private student loans, credit cards, reverse mortgages, and home equity lines of credit. Disclosures and communication with consumers should be easily comprehensible for consumers and investors. Banks should seek to minimize expected pricing issues with observable, objective rules that are determined before Libor cessation. In addition, management should assess whether third-party providers are similarly on track to modify their systems considering the pending changes. The OCC is increasing oversight of this area through 2020 and 2021.

Part V: Supervisory Actions

Number of Banks Rated 4 or 5 Is Low

The number of OCC-supervised banks with composite ratings of 4 or 5 has declined since the end of 2010 and has been flat in 2018 and 2019 (see figure 9). The decline is attributable to merger and acquisition activity, failures or liquidations, benign market conditions, and composite rating upgrades resulting from recapitalizations and improvements in risk management.

Figure 9: Number of OCC-Supervised Banks Rated 4 or 5



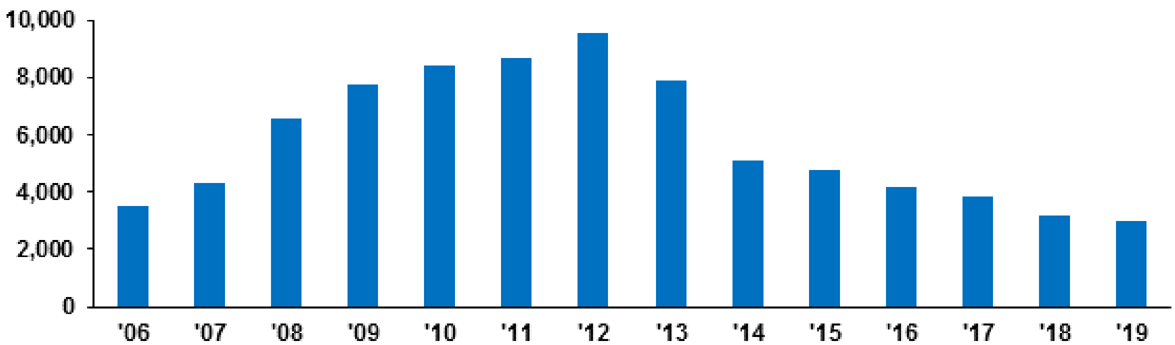
Source: OCC

Note: All data are as of year-end except 2019, which is as of June 30.

Outstanding MRA Concerns Declined

The OCC communicates supervisory concerns to a bank's board and management in the form of MRA concerns or enforcement actions (EA). Supervisory concerns include practices that deviate from sound governance, internal control, or risk management principles.[6] Such deviations, if not addressed appropriately, could adversely affect a bank's condition or risk profile, result in violations of laws or regulations, or result in EAs. Figure 10 shows the decrease in the number of outstanding MRA concerns since 2012.

Figure 10: Number of MRA Concerns Outstanding



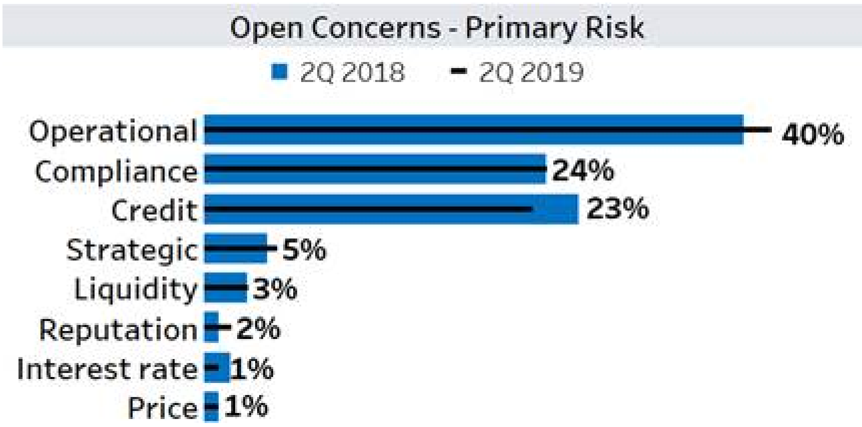
Source: OCC

Note: All data are as of June 30, 2019.

[6] See OCC Bulletin 2019-44, "Comptroller's Handbook: Revised and Updated Booklets and Rescissions."

As of June 30, 2019, the top three combined MRA concerns are operational (40 percent), compliance (24 percent), and credit (23 percent) (see figure 11). The top three concerns for midsize and community banks are operational (38 percent), credit (28 percent), and compliance (22 percent). The top three MRA concerns for large banks are operational (45 percent), compliance (28 percent), and credit (17 percent).

Figure 11: Open MRAs by Primary Risk Types



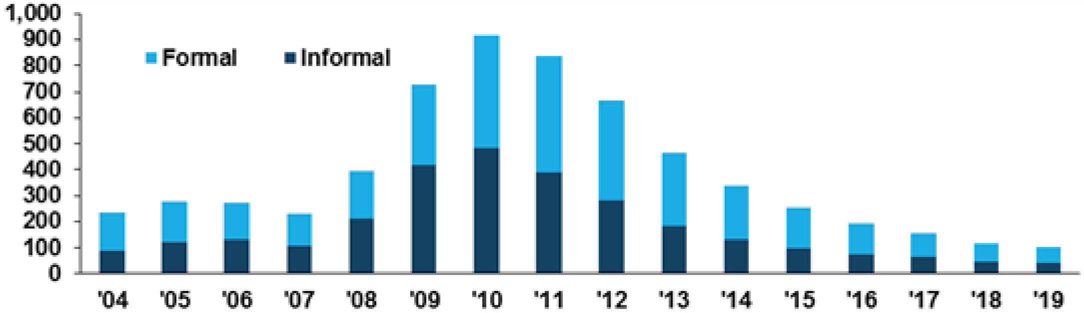
Source: OCC

Note: All data are as of June 30, 2019

Outstanding Enforcement Actions Continue to Decline

The OCC uses EAs to address more acute deficiencies requiring corrective action. Informal EAs include commitment letters, operating agreements, conditions imposed in writing, memorandums of understanding, individual minimum capital ratios, and notices of deficiency issued under 12 CFR 30. Formal EAs are made available to the public and include cease-and-desist and consent orders, capital directives, prompt corrective action directives, formal agreements, safety and soundness orders issued under 12 CFR 30, and civil money penalties. Generally, the OCC may take these actions for violations of laws or regulations; deficient practices, including those that are unsafe or unsound; or violations of final orders, conditions imposed in writing, or written agreements with the OCC. The number of EAs outstanding has steadily declined since peaking in 2010 (see figure 12), reflecting improving market conditions, overall improvement in banks' risk management practices, recapitalization efforts, and other factors. Compliance or operational failures are the leading cause of EAs in the current environment. These EAs address a lack of appropriate governance, oversight, and risk management systems and controls.

Figure 12: Number of Outstanding Enforcement Actions



Source: OCC

Note: All data are as of year-end except 2019, which is as of June.

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