



Office of the
Comptroller of the Currency

Semiannual Risk Perspective

From the National Risk Committee

Spring 2019

Contents

- About This Report ii
- Executive Summary1
- Part I: Operating Environment.....3**
 - Consensus Forecast: Economy Slows to Long-Term Potential Pace,
Yield Curve Remains Flat.....3
 - When the Economy Operates Above Full Potential, Inflation or Other Imbalances
Typically Develop.....5
- Part II: Bank Performance7**
 - Bank Condition and Financial Performance Are Strong7
 - Capital Levels Remain Near Historical Highs.....7
 - Tax Cuts and Expanding Net Interest Margins Spur Bank Performance8
 - Asset Quality Metrics Remain Strong10
 - Market Risk Is Challenging Banks to Navigate in Uncertain Rate Environment.....11
- Part III: Special Topics in Emerging Risks.....12**
 - Assessing Financial Innovation and Related Impacts to Strategic Risk.....12
- Part IV: Trends in Key Risk Themes.....18**
 - A. Credit Quality Is Strong, but Risk Has Been Building18
 - B. Operational Risk Is Elevated as Banks Respond to an Evolving and
Increasingly Complex Operating Environment20
 - C. Advances in Technology Pose Challenges for BSA/AML/OFAC, Fair Lending, and
Compliance With Consumer Protection Regulations22
 - D. Increased Competition for Deposits May Result in Changes in Funding Mix or Costs.....24
- Part V: Supervisory Actions26**
 - Number of Banks Rated 4 or 5 Is Low26
 - Outstanding MRA Concerns Declined26
 - Outstanding Enforcement Actions Continue to Decline.....27
- Abbreviations29
- Index of Figures.....30

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 agency also examines services provided by certain third parties.²

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, as well as officials from the OCC's policy units. The NRC meets quarterly and issues guidance to examiners that provides perspective on industry trends and highlights issues warranting 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 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 OCC publishes the report twice a year, drawing on the most current data as available. The spring 2019 report reflects bank data as of December 31, 2018, unless otherwise indicated.

The OCC welcomes feedback on this report 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.

² The OCC examines certain third-party entities for the services they provide to national banks and federal savings associations based on authorities provided by 12 USC 1867(c) of the Bank Service Company Act. The OCC conducts these examinations in coordination with other federal banking agencies.

Executive Summary

The condition of the federal banking system is strong. The financial performance of banks making up the federal banking system strengthened in 2018, driven primarily by stronger operating performance, compared with the same period in 2017. Bank earnings benefited from the Tax Cuts and Jobs Act in 2018; pretax earnings improved markedly due to gains in the net interest margin (NIM) that drove higher net interest income. The weighted average return on equity (ROE) improved significantly in 2018 because of the change in tax law, revenue gains, and lower provision expense. Asset quality, as measured by traditional metrics such as delinquencies, nonperforming assets, and losses, is strong and stable. Capital and liquidity remain at or near historical highs. While U.S. economic growth is widely expected to slow in 2019,³ the economic environment is expected to support loan growth and bank profitability for the remainder of the year.

This report highlights key risk themes facing the federal banking system. These key risk themes are credit, operational, compliance, and interest rate risk. The financial services sector continues to experience rapid growth in financial technology (fintech) and regulatory technology (regtech),⁴ which touch each of these risk themes. The OCC monitors these risks closely and implements actions to address concerns.

- Credit quality is strong when measured by traditional performance metrics like delinquencies, problem loans, and loan losses. The OCC, however, continues to remind bankers and examiners to assess the quality and timeliness of credit risk identification, risk mitigation, and loan loss reserve methodology. Successive years of growth, incremental easing in underwriting, risk layering, and building credit concentrations result in accumulated risk in loan portfolios. It is important that bankers prepare for a potential cyclical downturn by understanding the credit risk embedded in their banks and how external elements such as interest rates, economic factors, and nonbank lending activities could affect that risk. Banks should have appropriate risk management practices in place.
- Operational risk is elevated as banks adapt to a changing and increasingly complex operating environment. Key drivers for operational risk include persistent cybersecurity threats as well as innovation in financial products and services, and increasing use of third parties to provide and support operations that are not effectively understood, implemented, and controlled. Other drivers include the expected increase in mergers and acquisitions activity that is not well-planned and executed, as well as fraud. The potential for operational disruptions underscores the need for effective change management and operational resilience when implementing new products, services, and technologies and when maintaining existing operations.
- Compliance risk related to Bank Secrecy Act/anti-money laundering (BSA/AML) remains high. Banks are challenged to effectively manage money-laundering risks in a complex, dynamic global operating and regulatory environment. BSA/AML compliance risk

³ The Board of Governors of the Federal Reserve System (March 20, 2019) and Blue Chip Indicators (April 2019) project slowing economic growth for 2019 and 2020.

⁴ Regtech includes any technology or software created to address regulatory challenges and help companies understand regulatory requirements and stay compliant.

management systems should be commensurate with the risk associated with a bank's products, services, customers, and geographic footprint.

- Interest rate risk and the related liquidity risk implications pose potential challenges to earnings given the uncertain rate environment, competitive pressures, changes in technology that have made it easier for customers to move funds, and untested depositor behavior after an extended low-rate environment. These factors increase the difficulty in forecasting liability costs. NIMs have increased because of banks' ability to restrain increases in deposit costs and maintain a favorable funding profile. Even though short-term interest rates may stay near current levels for the rest of this year, there is potential that increasing liability costs may raise competitive pressures for core deposit rates and cause a shift to more wholesale funding, from non-maturity deposits (NMD) to time deposits or a combination.

Many banks face additional challenges that pose risks to the industry. These challenges include strong competitive pressures from nonbanks, embedded credit risk from successive years of easing in underwriting practices and low interest rates, and evolving technology in the financial services sector. Strategic risk may be elevated for some banks because of competition. Sources of competition include fintech companies and other nonbank financial services providers. These firms may influence customer expectations for delivery of financial services, and bank management should consider if and how this affects their business model. Another driver of strategic risk is merger and acquisition activity.

Other issues that warrant awareness among bankers and examiners that may develop into key risks include

- challenges to compliance management systems and change management processes because of new products, services, and technologies, and maintaining sufficient staffing and expertise to address these risks.
- low prices for agricultural commodities that result in lower cash flow and increased farm carryover debt for agricultural borrowers. Recent mass flooding events will likely adversely affect these borrowers.
- implementation of the current expected credit losses (CECL) standard, which may pose operational and strategic risk to some banks when measuring and assessing the collectability of financial assets.

This edition of the *Semiannual Risk Perspective* also highlights the risks posed by strategic risk, which is included in part III of this report as a special topic in emerging risks.

Part I: Operating Environment

Annual U.S. real gross domestic product (GDP) growth accelerated to 2.9 percent in 2018,⁵ matching the previous expansion-high set in 2015. The tax cuts that became effective in 2018 spurred consumer spending and investment. Increased government spending also contributed to faster economic growth. Hiring increased with employers creating 2.7 million jobs in 2018 compared with 2.2 million in 2017, and hiring improved in the goods-producing, private services, and government sectors. In the first quarter of 2019, more than half a million jobs were added, putting the economy on pace to add more than 2 million jobs for the ninth consecutive year.⁶

Consensus Forecast: Economy Slows to Long-Term Potential Pace, Yield Curve Remains Flat

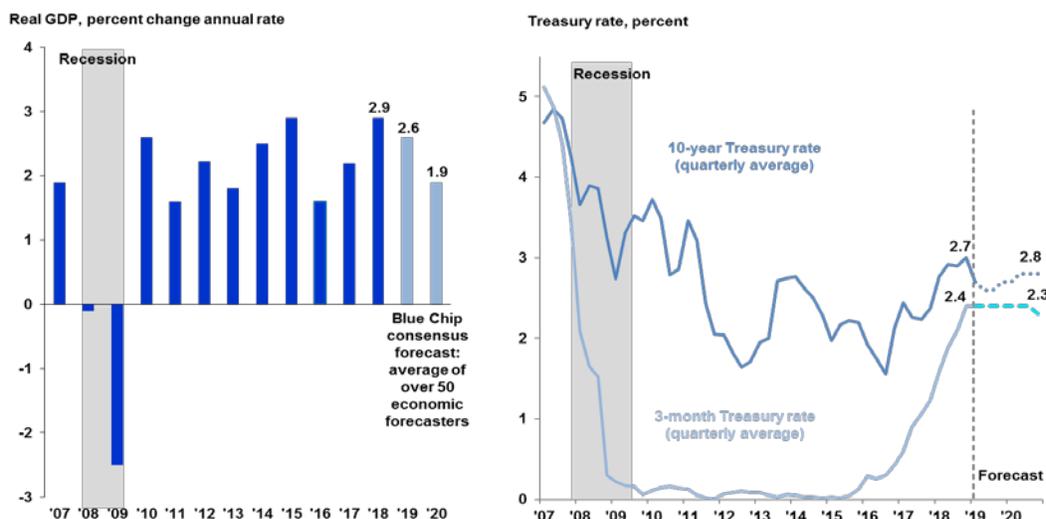
U.S. economic growth slowed modestly in the fourth quarter of 2018, and the Blue Chip Consensus Forecast⁷ is that the economy will fall back to its long-term potential rate of growth in the next two years. Fading stimulus from the tax cuts, the drag of higher interest rates on housing markets, shortages of skilled workers in some industries, the overhang from rapid growth in corporate debt, global trade and policy uncertainty, and slower growth abroad may temper U.S. economic growth in the next two years. The Blue Chip Consensus Forecast expects annual GDP growth to slow to 2.6 percent in 2019 and 1.9 percent in 2020, the latter of which is in line with the Congressional Budget Office (CBO) estimate of the long-term trend for U.S. economic growth (see figure 1). The CBO's estimate maintains high employment across sectors and a low and stable rate of inflation. The consensus forecast is for the three-month Treasury rate to move to 2.3 percent and the 10-year rate to reach 2.8 percent in the fourth quarter of 2020.

⁵ U.S. Bureau of Economic Analysis.

⁶ U.S. Bureau of Labor Statistics.

⁷ Blue Chip Indicators (May 2019).

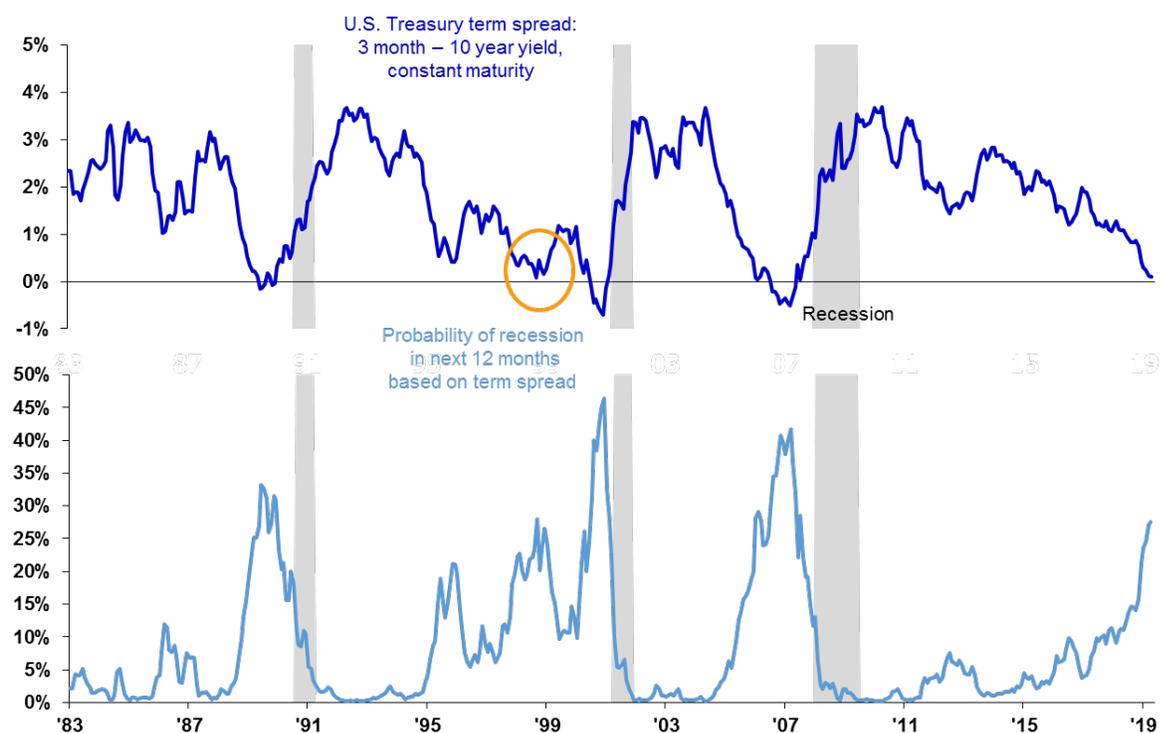
Figure 1: GDP and Yield Curve Forecasts



Source: BEA, Federal Reserve Board (historical through first quarter of 2019); Blue Chip Indicators (May 2019)

A widely referenced model of recession probability from the Federal Reserve Bank of New York indicates that the likelihood of a near-term recession increased over the past year. This is consistent with the flattening of the Treasury yield curve, which is a signal of investor concerns of recession, though only an inverted yield curve over a prolonged period would send a strong recessionary signal. Although the yield curve inverted by a couple of basis points for one week in late-March 2019, prolonged inversions of at least 10 basis points have preceded prior recessions. While the yield curve typically inverts two to eight quarters before recessions, the current flatness may persist while the economy expands. This pattern occurred in the late 1990s. The consensus economic forecast expects that the three-month to 10-year yield spread will average 30 basis points through the end of 2020. Thus, while the likelihood of a recession developing over the next year is elevated, the current flatness of the yield curve is consistent with a slowing but expanding economy as occurred in the late-1990s (see figure 2).

Figure 2: U.S. Treasury Yield Curve and the Probability of Recession

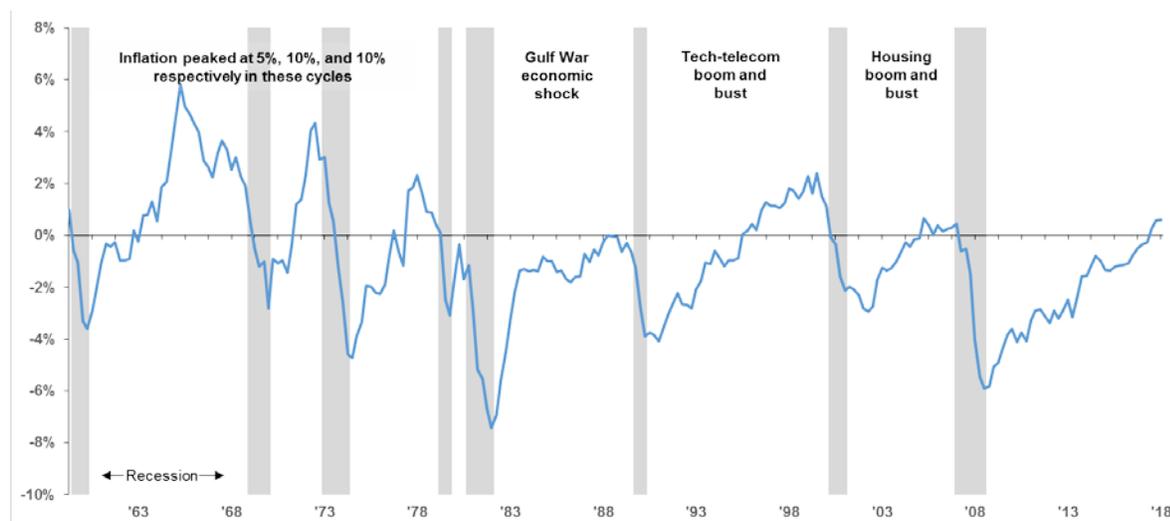


Source: Federal Reserve Bank of New York, Federal Reserve Board /Haver Analytics; (data through April 2019)

When the Economy Operates Above Full Potential, Inflation or Other Imbalances Typically Develop

With economic growth having accelerated over the past two years overall and the expansion in its 10th year, the output level of the economy is estimated to be above its long-term potential (see figure 3). Economists refer to this as a positive output gap. During each of the three economic expansions between 1960 and 1980, inflation accelerated as the output gap expanded. During the past two expansions, once the economy operated with a positive output gap, imbalances manifested themselves in the tech-telecom and housing boom-bust cycles respectively. These imbalances were corrected in each of the recessions that followed, but it was not the positive output gap itself that caused the subsequent recessions. Therefore, while the economy is now in the late-expansory phase of the cycle, a period when inflation or unsustainable asset values have developed in the past, it is uncertain how long this phase will last.

Figure 3: U.S. Output Gap as Percent of Potential GDP



Source: Congressional Budget Office, Bureau of Labor Statistics, and Haver Analytics; (data through February 2019)

Note: Potential GDP is estimate of long-run trend level of production that maintains high employment across sectors and a low, stable inflation rate.

In the current economic environment, banks' risk management is of heightened significance. Loan growth could slow along with economic growth. Slower loan growth as anticipated in the January 2019 "Senior Loan Officer Opinion Survey on Bank Lending Practices," published by the Board of Governors of the Federal Reserve System, combined with a persistently flat yield curve in the consensus forecast, could make maintaining NIMs and revenue growth challenging after 2019. Bank management should review their loan growth, funding, and credit risk management strategies. Also, banks with meaningful risk exposure should conduct sensitivity analysis⁸ and evaluate the impact of a faster or slower growth than the consensus forecast. The diversity in predictions around the consensus forecast implies that sensitivity analyses including economic scenarios remain prudent risk management tools.

⁸ Sensitivity analysis may be used to estimate the impact from a change in one or more key variables.

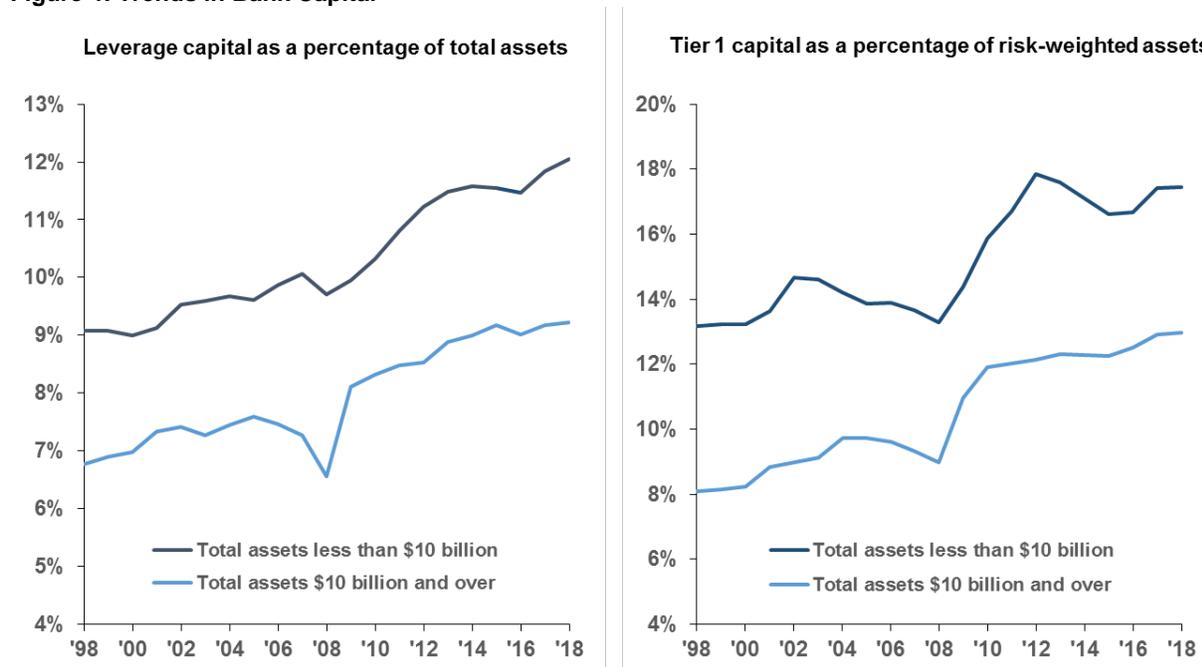
Part II: Bank Performance

Bank Condition and Financial Performance Are Strong

Capital Levels Remain Near Historical Highs

Bank capital serves as an important cushion against unexpected losses and plays a critical role in the safety and soundness of individual banks and the federal banking system. Banks have increased their risk-based capital (RBC) ratios to all-time highs since the advent of RBC in the early-1990s. Similarly, leverage capital ratios increased since 2008. The increase in the risk-based and the leverage ratios has been most pronounced since the sharp decreases that occurred during the Great Recession (see figure 4). Banks with \$10 billion or more in total assets show an upward trend since 2010. The tier 1 ratio's upward trend from 2008 to 2012 has slightly reversed for banks with less than \$10 billion in assets as lending has increased during the economic recovery. These higher ratios are noteworthy given the increase in the quality of regulatory capital and the increase in risk sensitivity in the calculation of risk-weighted assets in the post-crisis reforms.

Figure 4: Trends in Bank Capital

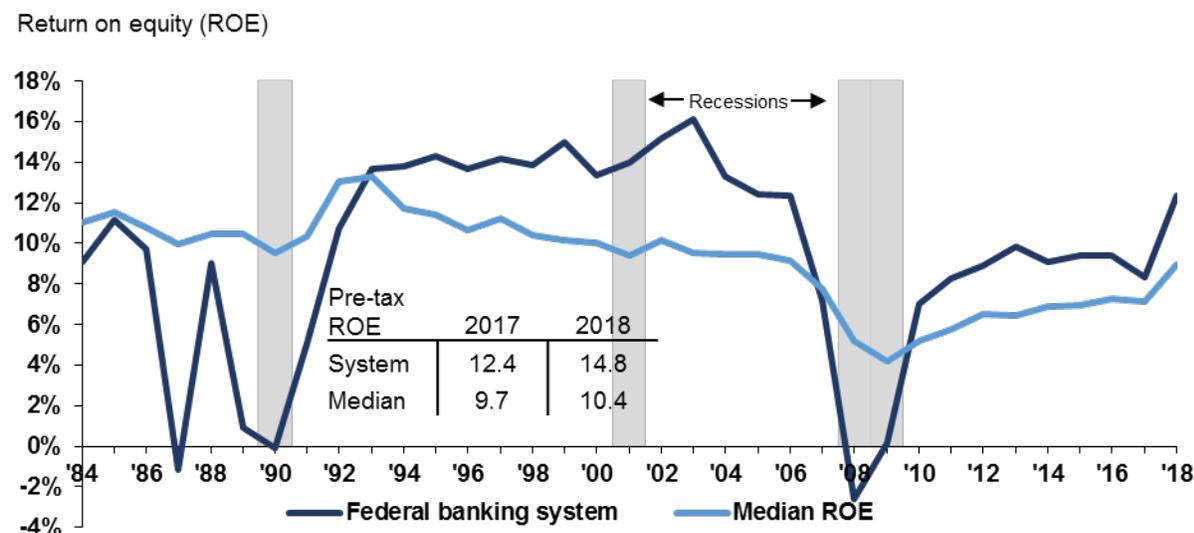


Source: Integrated Banking Information System (OCC)

Tax Cuts and Expanding Net Interest Margins Spur Bank Performance

Federal banking system profitability benefited from strong underlying performance and tax cuts in 2018.⁹ ROE jumped to 12.3 percent, exceeding 10 percent for the first time since 2006 (see figure 5). Pre-tax ROE increased sharply to 14.8 percent, indicating the strength in fundamental financial performance driven by increases in net interest income and well-managed expenses. The average small bank, represented by the median, saw a healthy increase in ROE to 10.4 percent.

Figure 5: Trend in Bank Return on Equity



Source: Integrated Banking Information System (OCC)

Note: Annual data through year-end 2018. 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). Pre-tax ROE data are merger-adjusted for banks in continuous operation between the first quarter of 2010 and the fourth quarter of 2018.

Net income grew 50 percent to \$161 billion from the prior year with tax cuts accounting for about half of the increase (see table 1). Pre-tax income rose 14 percent to \$204 billion, reflecting strong revenue growth. Net interest income grew at an 8 percent pace, spurred by margin expansion at banks of all sizes. Noninterest income growth rose 5 percent from a nearly flat performance in 2017. Slower noninterest expense growth and lower provisions also aided earnings.

⁹ 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

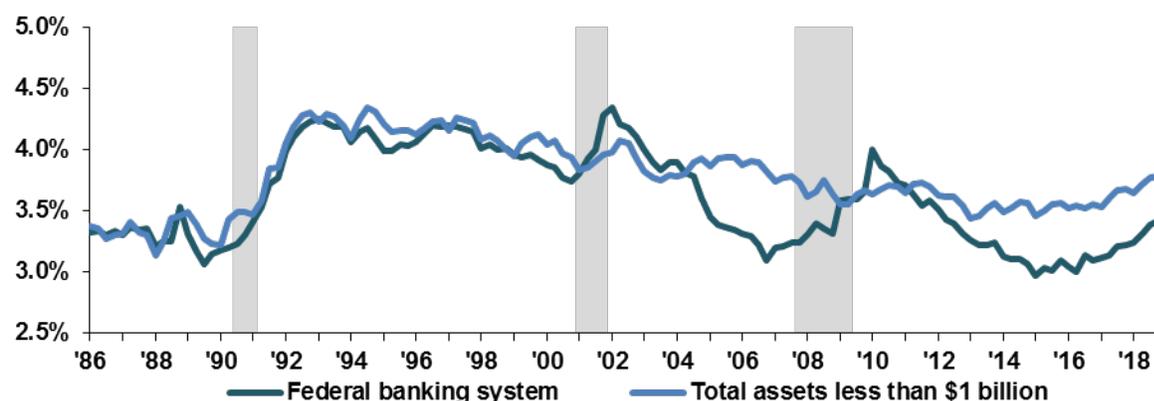
	Federal banking system			Banks with total assets of less than \$1 billion		
	12/31/2016	12/31/2017	12/31/2018	12/31/2016	12/31/2017	12/31/2018
Year-to-date revenue in billions of dollars						
Net interest income	307.4	332.3	358.3	7.4	7.8	8.3
Noninterest income	183.6	183.0	192.9	2.3	2.3	2.2
Realized securities gains and losses	2.7	1.9	0.5	0.1	0.0	0.0
Year-to-date expenses in billions of dollars						
Provision expense	35.9	37.9	36.7	0.3	0.4	0.3
Noninterest expense	285.5	299.9	310.6	7.0	7.1	7.3
Pre-tax net income	171.7	179.0	204.0	2.5	2.6	2.9
Income taxes	54.2	71.4	42.8	0.4	0.6	0.4
Net income	117.6	107.5	161.2	2.1	2.0	2.5

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 fourth quarter of 2018. Banks with total assets less than \$1 billion exclude credit card and trust institutions. Pre-tax net income includes discontinued operations.

NIMs expanded as asset yields rose faster than funding costs (see figure 6). Funding costs benefited from the level of low-cost core deposits¹⁰—currently nearly 60 percent of assets, a 25-year high. Over the past year, NIMs rose 17 basis points to 3.3 percent, the highest margin since 2012 for the federal banking system. At small banks under \$1 billion in assets, margins expanded by 11 basis points to 3.7 percent, the highest margin since 2011.

Figure 6: Trend in Net Interest Margins



Source: Integrated Banking Information System (OCC)

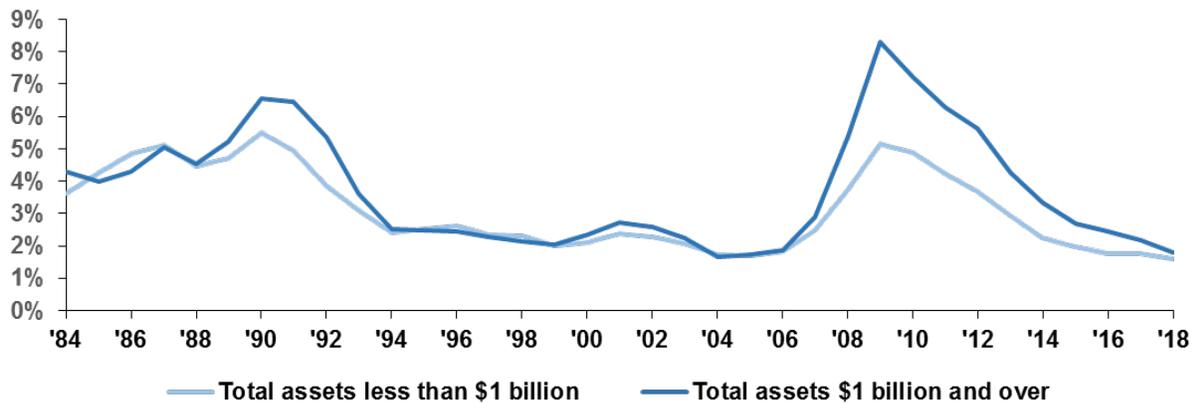
Note: Quarterly data through the fourth quarter of 2018. Less than \$1 billion excludes credit card and trust institutions.

¹⁰ Core deposits are total domestic deposits excluding large time deposits of more than \$250,000 and brokered deposits. Before 2010, core deposits excluded time deposits between \$100,000 and \$250,000.

Asset Quality Metrics Remain Strong

Historical asset quality metrics remain strong. Delinquent and nonperforming loans (NPL) in the federal banking system remained below their long-term average in 2018. The total of 30+ day past due loans plus nonaccrual loans continued to decline, reaching the lowest level since 2005 for banks with total assets less than \$1 billion (see figure 7). Similarly, banks with total assets of \$1 billion or more touched the lowest level of delinquencies since 2006 as of December 31, 2018.

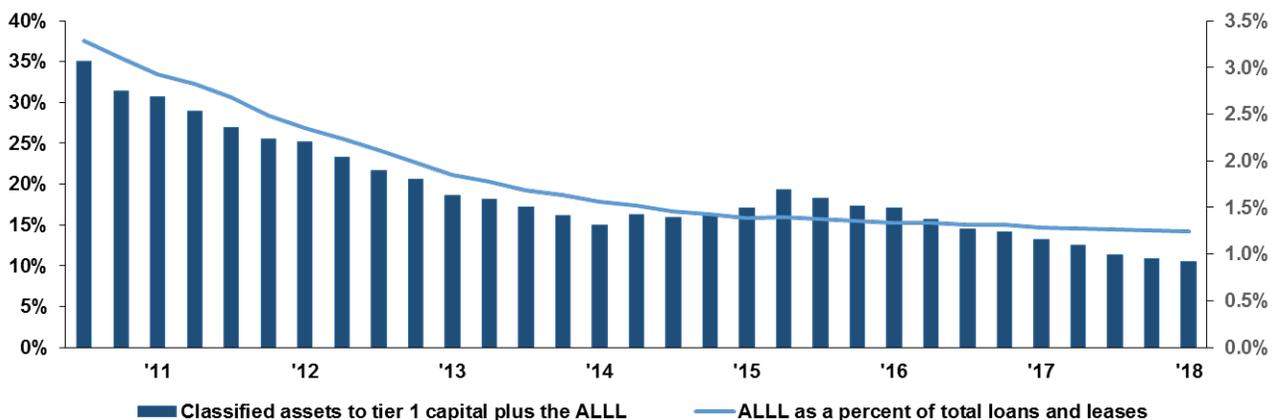
Figure 7: Trend in Weighted-Average 30+ Day Past Due Plus Nonaccrual Loans



Source: Integrated Banking Information System (OCC)

Classified assets declined as a percentage of tier 1 capital plus the allowance for loan and lease losses (ALLL) and were at 10 percent as of the fourth quarter of 2018 (see figure 8). The ALLL has declined as a percentage of total loans but has stabilized around 1.2 percent.

Figure 8: Recent Trends in Classified Assets and ALLL

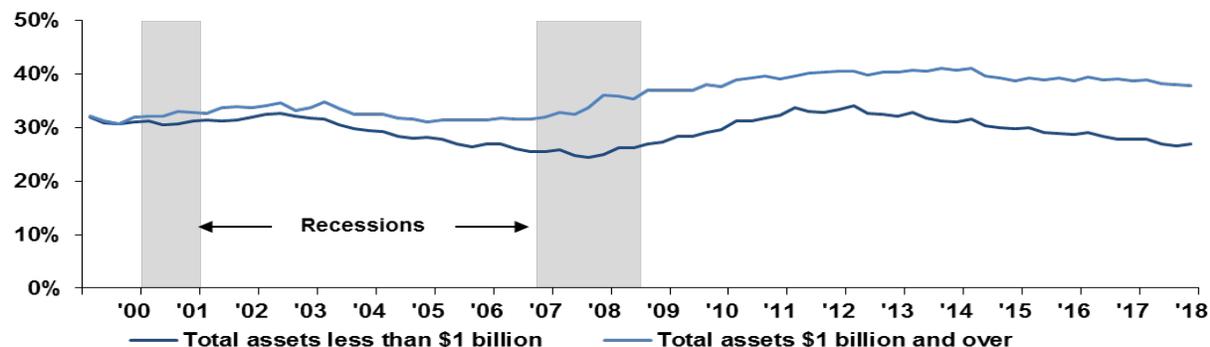


Source: Integrated Banking Information System (OCC)

Market Risk Is Challenging Banks to Navigate in Uncertain Rate Environment

Liquidity remains good across banks (see figure 9). Banks with total assets of \$1 billion and over are operating with high levels of liquid asset across all categories. Banks with total assets less than \$1 billion continue to redeploy into somewhat less liquid assets. Cash levels remain heightened across all banks in aggregate, as reductions in total liquidity are primarily a function of changes in the securities portfolio.

Figure 9: Trend in Liquid Assets to Total Assets

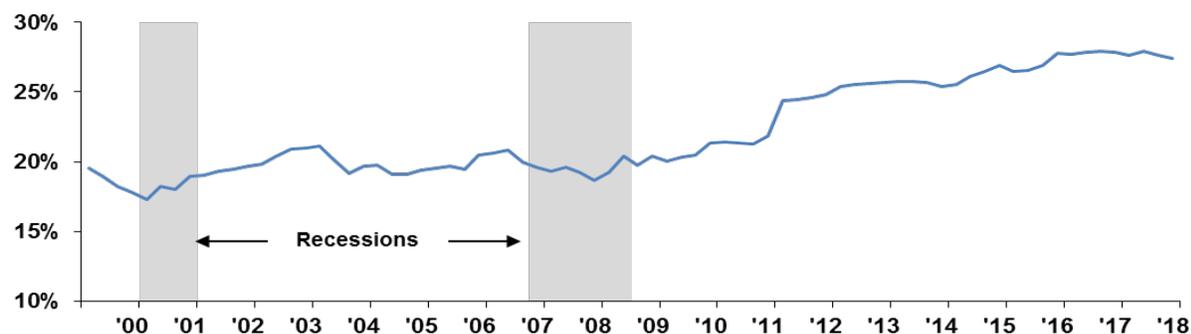


Source: Integrated Banking Information System (OCC)

Sensitivity to market risk is a challenge for bank management to navigate but has been somewhat mitigated by current stability in deposit repricing rates. Constrained use of wholesale funding and sustained high levels of deposit funding (77 percent of total assets) can offset liquidity risk. Elevated cash balances are a positive, but bank management should ensure that liquidity levels support the risk in the bank’s strategy as well as projections and expectations of depositor behavior.

While deposits remain stable in aggregate, banks have extended maturities on a portion of assets (see figure 10). Lengthening asset time to repricing reduces bank management’s ability to benefit from higher rates. Although depositor behavior is more stable than historical experience, it is important for bank management to understand depositor expectations noting the increased extension of asset repricing and reduction in liquid assets by banks with total assets less than \$1 billion.

Figure 10: Trend in Long-Term Assets to Total Assets



Source: Integrated Banking Information System (OCC)

Part III: Special Topics in Emerging Risks

Assessing Financial Innovation and Related Impacts to Strategic Risk

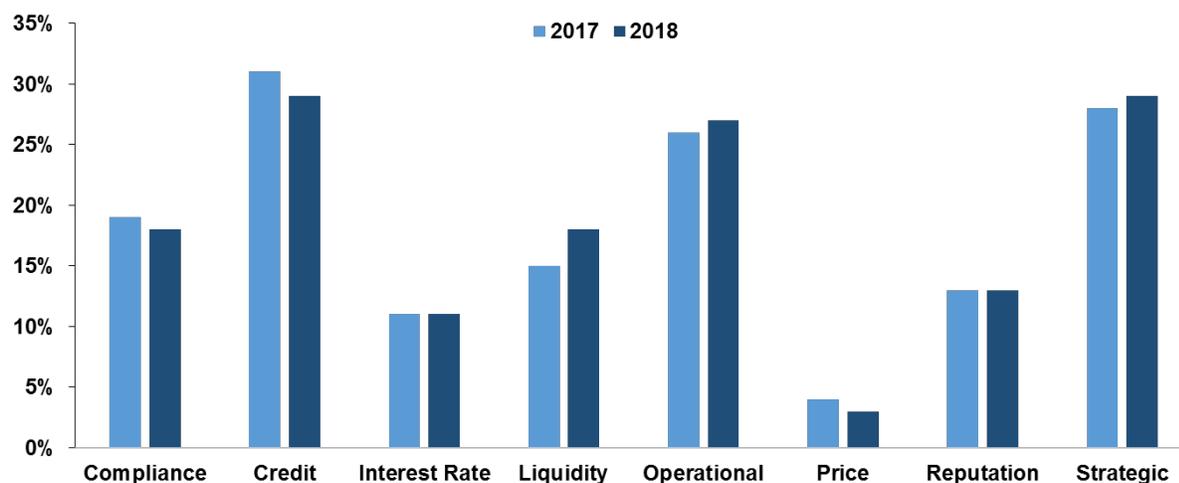
The OCC defines strategic risk as the risk to current or projected financial condition and resilience arising from adverse business decisions, poor implementation of business decisions, or lack of responsiveness to changes in the banking industry and operating environment. Supervisory findings indicate that strategic risk is elevated for many banks.

Rapid developments in fintech and “big tech” firms, evolving customer preferences, and the popularity of mobile technology applications have significantly changed the way banks operate and consumers conduct their banking and financial activity. While innovation is not new to the banking industry, the pace of change and the transformative nature of technology may result in a more complex operating environment. Innovation can enhance a bank’s ability to compete by introducing new ways to meet customer product and service needs, improve operating efficiencies, and increase revenue. Changing business models or offering new products and services can, however, elevate strategic risk when pursued without appropriate corporate governance and risk management. New products, services, or technologies can result in greater reliance on third parties by some banks and a concentration of service providers by the industry as a whole. Management should consider this concern as part of its risk management assessments. Banks that do not assess business relevancy and impacts from technological advancement or innovation, or are slow adopters to industry changes, may be exposed to increasing strategic risk. A bank’s decision to make incremental or fundamental changes should align with its business strategy and risk appetite.

Strategic Risk Poses Challenge for Many Banks

Strategic risk is elevated for many banks. As of December 31, 2018, the OCC’s risk assessment system showed that 29 percent of banks exhibit moderate and increasing or high levels of strategic risk, representing a slight increase year-over-year across all OCC-supervised banks (see figure 11). Drivers of higher strategic risk include rapid industry changes, poor business decisions, imprudent or incomplete change management plans, pressure to reduce expenses and control costs, the burden of some legacy technology systems, resource limitations, and need for scale of operations.

Figure 11: Percentage of Banks With Moderate and Increasing or High Risk Assessment



Source: OCC

Changes in the Federal Banking Industry

Many banks' earnings have returned to pre-crisis levels. Banks have invested significant time and resources addressing supervisory concerns and have improved quantitative metrics to levels that have not been seen in many years in asset quality, capital, and liquidity. Still, the federal banking system is facing challenges from market factors, including an uncertain trajectory for market interest rates, increased competition for deposits, effective implementation of new and emerging technologies, and changing customer expectations.

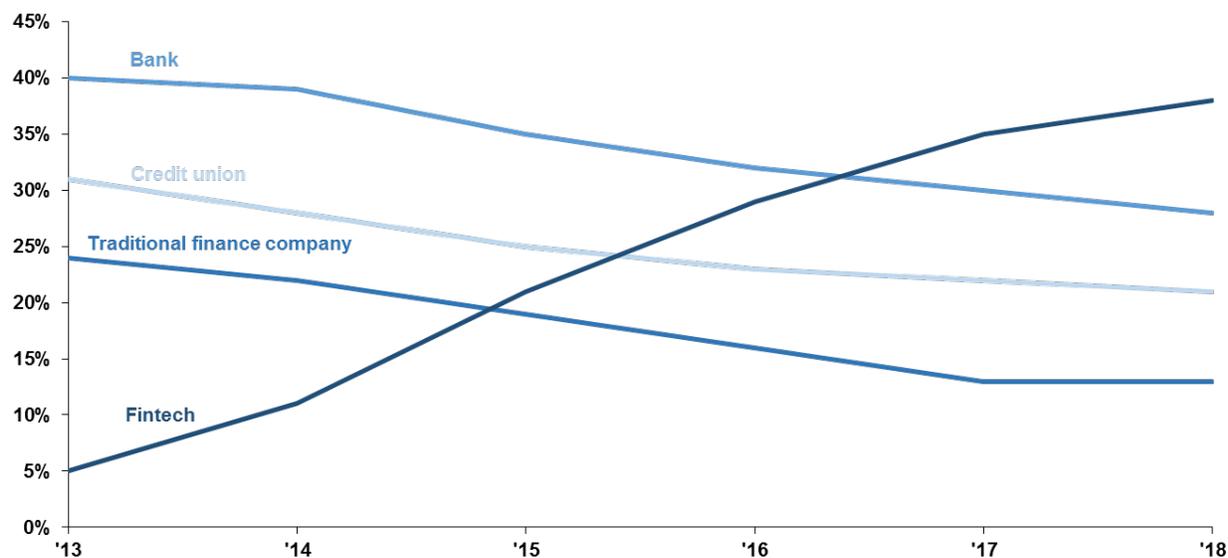
In the past few years, there has been a trend toward investing in and leveraging technology that is more efficient, reduces costs, and increases speed to market. Examples include cloud computing, credit partnerships, and mobile banking applications, each of which has been implemented across the industry, regardless of bank size. Larger organizations are also investing, or considering investing in, artificial intelligence (AI) to automate, augment, or replicate information-gathering or human decision-making processes. Distributed ledger technology also may have the potential to transform how transactions are processed and settled.

Many community and midsize banks rely on older core-processing systems, whether outsourced or in-house. Cloud-based solutions are more prevalent now and are offering efficiency and agility to address legacy systems, which include core processing and other applications. Cloud-based solutions may provide more efficient integration with other systems and the ability to implement new and innovative technologies. The transition from legacy systems, however, can be complex and expensive. Community and midsize banks' movement to cloud-based solutions has been slow and calculated, focusing on less critical systems and applications. This reticence stems from the significant investment (time and money) required to change core systems, limited choices of core system providers, and management's reluctance to move critical activities to unproven solutions.

Advances in technology promote the development of new products and services that may offer banks new delivery channels, access to new customers, and the opportunity to improve user experience. For example, new technology offers a banking relationship that exists only on a mobile device. Institutions can offer person-to-person payments designed to compete with nonbank offerings. Banks are using technology to compete for deposits outside of their branch networks, and nonbank firms are looking to add deposit-taking capabilities. Automated systems are changing the role of traditional financial advisors in the marketplace and altering the way loan products can be marketed, underwritten, delivered, and sold.

While banks look to innovate and leverage new technologies, a significant number of fintech¹¹ firms and other nonbanks provide products and expanded services traditionally offered only by banks (e.g., payment processing, retail loans, and small business banking). These firms are accelerating payment availability and loan approval processes. For example, borrowers are increasingly turning to fintech lenders for unsecured personal loans. This trend has enabled these firms to increase their market share rapidly (see figure 12). Fintech lenders went from the lowest originator to the top in this market in just over three years. Increased competition from fintech firms is not restricted to personal unsecured lending and is evident to a varying degree in other areas of financial services, including mortgage, commercial, other retail, and small business lending. Fintech firms, however, have not yet gained similar levels of market share outside of the personal unsecured market. In the coming months and years, competitive pressure for customers, deposits, and loans will likely affect banks of all sizes and business models.

Figure 12: Percentage of Total Unsecured Personal Loan Originations by Lender Type



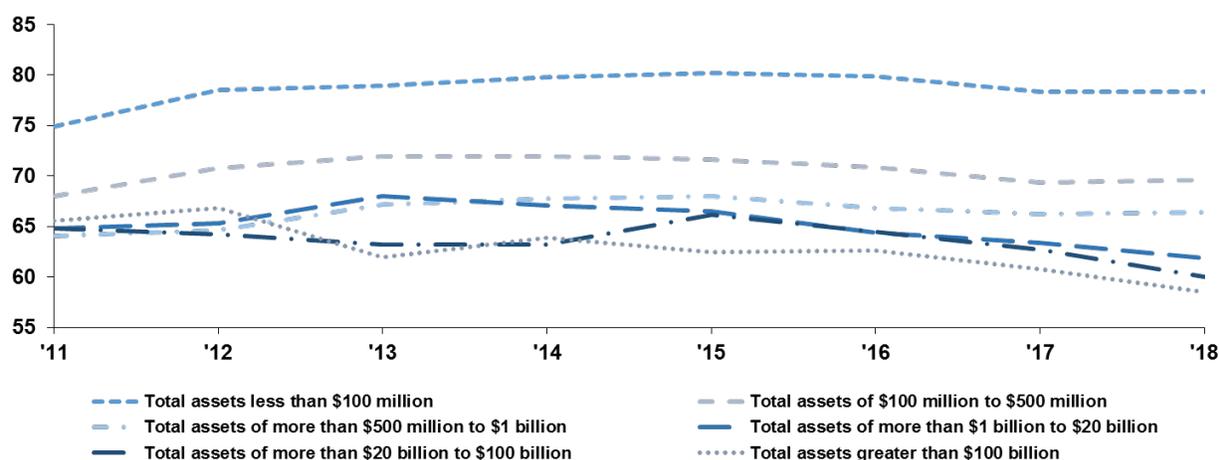
Source: TransUnion news release, "FinTechs Continue to Drive Personal Loan Growth," February 21, 2019

¹¹ This includes products and companies that employ newly developed digital and online technologies in the banking and financial services industries.

Operational Efficiency Remains a Challenge for Small Banks

Operational efficiency through expense management and finding or expanding revenue sources is a key strategic issue. Although stable for several years, the median efficiency ratio¹² remains elevated for banks with total assets under \$500 million, notwithstanding the current economic environment (see figure 13). There is a clear advantage in economies of scale as total assets increase that is evident in the stratification of efficiency ratios. The data show larger banks may have the greatest ability to invest directly in the technology, staff, and controls to develop and introduce new products and services. The use of third parties, including service providers and fintech firms, has made it more efficient and effective for many banks, including community banks, to leverage technical expertise and gain economies of scale necessary to offer increasingly sophisticated products and services.

Figure 13: OCC Median Efficiency Ratio by Total Asset Size



Source: Integrated Banking Information System (OCC)

Implications for the Federal Banking Industry

Rapid changes in the industry are forcing banks to reevaluate their business strategies. Banks are determining how to effectively respond to competitive market pressures, adapt to changing customer preferences, and identify business opportunities that align with their corporate strategy and core competencies. These challenges require banks to evaluate their market regardless if they are local, national, or internationally competitive. The OCC recognizes the importance of banks developing and implementing new products, services, and operational approaches. The OCC encourages responsible innovation¹³ to guide any effort to meet customer needs, enhance safety and soundness, and improve internal operations.

The OCC has observed substantial variance in adoption of innovation—by technology type and by bank size—within the federal banking system. Some banks are combining resources through

¹² The efficiency ratio is the ratio of a bank's non-interest expense to revenues. Higher efficiency ratios indicate less efficient banks and lower ratios indicate more efficient banks.

¹³ See *Supporting Responsible Innovation in the Federal Banking System: An OCC Perspective* (March 2016).

consortiums and making other collaborative arrangements to share the cost of developing and acquiring new technologies. Others have increasingly relied on third-party service providers or fintech relationships to enable more efficient and effective operations and deliver innovative products. Still others continue to take a wait-and-see approach, which may affect their ability to retain or attract new customers. A slow-adopter strategy adds risk because the speed of change, combined with the lengthy process to evaluate and implement newer technology solutions, can result in loss of customers or market share before the bank can respond.

The challenge of adapting to the current environment may prove difficult for banks lacking the financial resources to invest in technology. The burden of legacy systems as well as the reliance on core processing firms can inhibit banks, especially when compared with nonbank competitors that typically start with more advanced or nimble systems architecture. Competition for talent is becoming more acute as banks build their innovation divisions or strive to supervise their third-party relationships and collaboration arrangements. Larger banks may have the budget to support more robust technology investments. At the same time, some smaller banks looking to innovative solutions may find their business models more nimble and adaptable to collaboration with a nonbank firm to strengthen bank operations and customer acquisition. Overall, banks should focus on their core competencies and identify compatible opportunities and technologies that increase efficiency and reach customers effectively.

Corporate Governance and Risk Management

Strategic risk management is now in the forefront as the financial services industry continues a decades-long process of disintermediation aided by new entrants and more powerful technology. Strategic risk increases not only when innovation is pursued without appropriate planning and governance but also when banks fail to keep pace with change. The board, in consultation with bank management, should establish the bank's strategy and risk appetite and take actions designed to properly prepare the bank to adapt, leverage, and profit from evolution in its customer base and larger industry.

Good corporate governance and effective risk management are fundamental for banks to adapt successfully to change. Banks of all sizes should verify that corporate governance and risk management are effective when considering new products, services, and processes. This includes consulting OCC guidance related to strategic planning,¹⁴ evaluating new products and services,¹⁵ collaborating,¹⁶ and managing third-party relationships.¹⁷

¹⁴ See the "Corporate and Risk Governance" booklet of the *Comptroller's Handbook*.

¹⁵ See OCC Bulletin 2017-43, "New, Modified, or Expanded Bank Products and Services: Risk Management Principles."

¹⁶ See OCC, *An Opportunity for Community Banks Working Together Collaboratively*, and OCC Bulletin 2018-36, "Bank Secrecy Act/Anti-Money Laundering: Interagency Statement on Sharing Bank Secrecy Act Resources."

¹⁷ See OCC Bulletin 2013-29, "Third-Party Relationships: Risk Management Guidance," and OCC Bulletin 2017-21, "Third-Party Relationships: Frequently Asked Questions to Supplement OCC Bulletin 2013-29."

The board and management should ensure new or revised business practices align with the bank's risk appetite. As part of the evaluation, management should understand the resources, skill sets, technology, and operational support necessary for new products and services. This evaluation should help identify the needed modifications to existing operations, policies, procedures, personnel, and systems. Management should review innovative products and processes from end-to-end to ensure that they are delivered as intended and disclosed with the appropriate compliance risk evaluation.

A bank collaborating with a nonbank firm to offer innovative products and services should consider whether such a relationship helps the bank achieve its strategic objectives. Management should conduct proper due diligence and confirm that the bank has appropriate controls in place. Third-party practices should be accompanied by initial and ongoing due diligence and appropriate oversight. The lack of proper due diligence, oversight, and controls over third-party relationships can result in elevated reputation, strategic, operational, and compliance risks.

Part IV: Trends in Key Risk Themes

A. Credit Quality Is Strong, but Risk Has Been Building

Credit quality remains strong as measured by historical performance metrics that include delinquencies, NPLs, net charge-off rates, and ALLL balances in relation to problem loans. The prolonged economic expansion, abundant market liquidity, and favorable credit risk performance indicators have led to greater risk taking as lenders and investors search for higher yields. Increased risk is evident through eased underwriting, a higher tolerance for policy exceptions, and high concentrations in commercial real estate (CRE) lending, particularly in smaller banks.

The results of the 2018 Shared National Credit review identified that many leveraged loan transactions have weak structures with increased reliance on revenue growth or anticipated cost savings and synergies to support borrower repayment capacity. Borrowers possess greater control over lending relationships, and market dynamics are changing. Nonbank entities have increased their participation in the leveraged lending market through purchases of loans or direct underwriting and syndication of exposure. More leveraged lending is being transferred to these nonbank entities. The Shared National Credit review noted that the dollar volume of adversely risk rated loans, as a percentage of total loans, remains elevated compared with levels experienced at a similar point in the prior economic cycle. A material downturn in the economy could result in a significant increase in classified exposures and higher losses. Banks' risk management processes and limits should keep pace with changes in the leveraged lending market, and bank management should fully consider the potential direct and indirect risks associated with these loans.

Most of the credit risk associated with leveraged loans is outside the federal banking system with much less transparency, making it more difficult to monitor. Accordingly, the OCC has been discussing with bank boards and management the potential effect on the financial system from originating and distributing weakly underwritten loans to leveraged borrowers. Additionally, banks should evaluate whether their borrowers have critical suppliers or vendors that are highly leveraged, which may adversely affect a borrower's business operations or ability to service debt in an economic downturn.

Credit risk is heightened in banks with material agricultural exposure because of depressed agricultural commodity prices, rising operating costs, declining land values in certain geographies, and poor weather conditions in some areas. These banks are primarily community banks located in the central, western, and southern regions of the United States. While some of these banks have material concentrations in direct agricultural lending, others are at risk because they are located in areas highly dependent on agricultural-related industries and income. In the aggregate, agricultural loans represent less than 10 percent of community bank lending and less than 1 percent of all outstanding loans.

Lending to non-depository financial institutions (NDFI) grew 20 percent in 2018 and is a key driver for overall commercial loan growth. At year-end 2018, loans to NDFIs represented 9.8 percent of all commercial loans, up from about 6 percent five years ago. The NDFI category comprises a broad collection of borrowers, including investment firms and financial vehicles,

nonbank creditors, rental and leasing companies, securities firms and investment banking, nonbank real estate credit, and transaction processing firms. Banks with NDFI exposure should measure and manage the credit risks associated with such lending, particularly how credit risks can be manifested indirectly through market events.

CRE lending remains highly concentrated in some banks, principally community banks. In the aggregate, CRE loans grew only 1.4 percent in 2018. In community banks, CRE loans grew 7.8 percent in 2018 and represent about 70 percent of commercial loans and 42 percent of all loans. As a result, the agency maintains its attention on the quality of CRE lending and concentration risk management. While growth in CRE exposure continues, the number of banks with high concentrations has declined slightly. Approximately 6.8 percent of OCC-supervised banks report total CRE exposure greater than 300 percent of capital, or construction and development loans greater than 100 percent of capital, or both. This level is down from 7.5 percent from year-end 2017 and 2016, respectively. Examiners note generally sound CRE risk management practices across supervised banks.

Uncertain interest rate and economic forecasts have the potential to elevate credit risk. From low points in 2016 to high points in 2018, market interest rates rose 150 to 200 basis points before moderating in 2019. Rising rates can affect borrowers' cash flows and repayment capacity and may contribute to eased underwriting and increased refinancing risk for commercial and consumer borrowers. Recently, however, there has been increased economic consensus for a slowing economy and a higher probability of recession. Such a slowdown could adversely affect borrowers through weaker revenue or income, higher unemployment, and lower asset values. Banks should plan for this economic uncertainty by identifying potentially vulnerable borrowers, reviewing the quality and thoroughness of credit control functions, and ascertaining any experience or operational gaps in collections and workout functions.

Retail credit risk has remained stable during a period of steady growth. Risk taking has been benign across risk segments leading to stronger overall bank portfolios. Most of the increase in retail loan risk taking has occurred outside the federal banking system, particularly increased volumes of subprime lending by nonbank lenders. Banks should understand whether they bear any indirect risk exposure to this external activity through other forms, such as securities or trading activities, NDFI lending, or bank partnerships with nonbank firms.

Several factors are increasingly affecting credit risk in mortgage markets. For example, nonbank lenders now originate more than 50 percent of government-supported mortgages and hold significant volumes of mortgage servicing rights. Additionally, more risk layering has been noted in government-supported, first-time home purchase mortgages. Risk layering refers to loans that contain a combination of low credit bureau scores, high debt-to-income, high loan-to-value, and/or other higher risk characteristics. As rates have risen, the volume of refinance transactions has decreased and potentially riskier cash-out refinance transactions are starting to re-emerge. The potential for incrementally higher credit risk also stems from easing of residential mortgage underwriting, changes in origination processes for documentation and verifications, and an

expansion of products such as non-qualified mortgage loans in both the larger market and banks.¹⁸

The ratio of ALLL to total loans remains relatively stable at approximately 1.2 percent, while coverage of NPLs gradually increases as the volume of NPLs declines for commercial and retail loan portfolios. While coverage trends are consistent with historical quality and performance indicators, banks' ALLL methodologies should appropriately consider credit risks that may have accumulated from successive years of eased underwriting, higher concentrations, and changes in portfolio characteristics. Fourth quarter 2018 call report data on disaggregated ALLL balances (reported by banks with more than \$1 billion in assets) disclosed an aggregate commercial loan ALLL at 1.0 percent of outstanding commercial loans, slightly below 1.1 percent at the end of 2017. Call report data reflect reserves of 1.6 percent for outstanding retail loans, consistent with 1.7 percent reported at year-end 2017. The aggregate retail reserve rates are driven by the large volume of credit card loans in the largest banks.

The effective dates for CECL are staggered according to an institution's characteristics and range from March 31, 2020 (U.S. Securities and Exchange Commission filers) to March 31, 2022, call reports.¹⁹ Banks are preparing for implementation, with more advanced efforts evident at those banks implementing CECL in the first quarter of 2020. Changes in a bank's level of loan loss reserves may occur and may be significant, depending on several factors, including the average life of loans in the bank's portfolio, the tenor and advance rates of its loan products, the nature of its borrowers' repayment, and its forecasts for material loss drivers.

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

Cyber Threats Continue to Increase and Evolve

Cyber threats continue to target vulnerabilities in bank and third-party systems. Depending on their objectives, malicious actors may seek to expose or obtain large quantities of personally identifiable information and intellectual property, facilitate misappropriation of funds and data, corrupt information, and disrupt business activities. Failure to maintain proper cybersecurity controls, both internally and for third-party service providers, can lead to material adverse impacts on a bank or collection of banks, with interdependent activities affecting the financial sector more broadly, if attacks succeed. Banks are generally responding well to common cyber events, but malicious actors continue to improve their tools and tactics, requiring banks to continually reassess and validate their cybersecurity controls.

Social engineering, such as spear phishing, is the primary method for targeting banks, and actors continually refine tactics to target key personnel with access to highly sensitive information.

¹⁸ Nonqualified mortgages include mortgages that do not meet the qualified mortgage standards to qualify for a conclusive or rebuttable presumption of compliance with the ability to repay requirements in Regulation Z under 12 CFR 1026.43.

¹⁹ The effective date for CECL is based on an entity's status as a public business entity and its U.S. Securities and Exchange Commission filing status as described in Accounting Standards Codification 326-10-65-1.

User awareness training and testing are essential to reducing the risk of unauthorized access and preventing breaches. Deploying strong authentication mechanisms to prevent malicious actors from gaining access to banking systems or information is another key control. System access by staff with privileged access, such as systems and database administrators; those with access to sensitive customer and corporate information, such as compliance and human resource personnel; and staff with the ability to move funds should be covered by robust controls, including strong authentication.

The use of unpatched or unsupported software and hardware by banks and their third parties is another common vulnerability that may be exploited. A strong process for managing system and software inventories and a sound system development life cycle that requires regular maintenance, patching, timely updates, and disposition at end-of-life are important to protect against this vulnerability. Additionally, identifying vendors who may have access to data and control systems and who perform key operations is important to protect the entire enterprise.

The OCC expects banks to exercise continued diligence with respect to third parties. Cyber crime and espionage increasingly target third-party service providers because of the potential to access multiple networks from a single point. Before establishing a third-party relationship, bank management should understand remote access, system interfaces, access entitlements, the third party's ability to implement the appropriate controls to manage risk and security, and responsibilities of the third-party and bank in the case of an incident.

Maintaining systems resilience is critical because of the increasing operational risk and potential impact of operational disruptions. These can occur because of operational system or application failures, cyber attacks, or natural disasters. Banks should implement appropriate operational controls and processes and regularly validate the operational resilience of the enterprise to ensure customer service continuity as well as fulfilling interdependent operations of the financial system. Bank management should designate appropriate personnel for key responses, including personnel from operations, business units, public affairs, and legal, as well as personnel for coordination with service providers, law enforcement, and other government entities.

Use of Third-Party Service Providers Is Increasing

Banks increasingly rely on third-party service providers for technology and other solutions to compete in a rapidly evolving financial market. The use of service providers has made it more efficient and effective for many banks, especially community banks, to leverage the technical expertise and gain economies of scale necessary to offer sophisticated products and services. Bank management should properly manage the risks that arise from relying on third-party service providers for payments, transaction processing, maintaining sensitive information, and other critical functions. Moreover, 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 interagency partners, examines the services offered to banks by many of the large service providers to ensure appropriate supervisory oversight of these risks.

C. Advances in Technology Pose Challenges for BSA/AML/OFAC, Fair Lending, and Compliance With Consumer Protection Regulations

Compliance risk related to BSA/AML remains high. Complex, dynamic money laundering, terrorist financing, and other criminal activities challenge banks in complying with BSA/AML requirements. Bank management should periodically reassess and, when necessary, adjust BSA/AML compliance risk management systems commensurate with the risk associated with their products, services, customers, and geographic footprint. Illicit transaction activity is no longer just associated with traditional financial products and services. Virtual currency and crypto assets present novel vulnerabilities that criminals can exploit as well.

The OCC has identified improvements in banks' BSA/AML risk management systems, including risk assessments, policies and procedures, and associated controls. The identified improvements are generally commensurate with changes in risk profiles associated with growth (organic and through mergers and acquisitions), the introduction of new products and services, substantial changes in customer volume or types, and significant increases in transaction volume.

While overall trends have been positive, the BSA/AML-related deficiencies identified by the OCC stem from three primary causes: inadequate customer due diligence and enhanced due diligence, insufficient customer risk identification, and ineffective processes related to suspicious activity monitoring and reporting, including the timeliness and accuracy of Suspicious Activity Report filings. Talent acquisition and staff retention to manage BSA/AML compliance programs and associated operations present ongoing challenges, particularly at smaller regional and community banks.

The OCC expects banks to monitor changes to regulatory requirements and to implement system or process changes, as appropriate, to comply with those requirements. One such change is the Financial Crimes Enforcement Network's final rule on "Customer Due Diligence Requirements for Financial Institutions" implemented in May 2018. Necessary updates to training, quality assurance, independent testing, and controls are expected to be in place during the FY 2019 examination cycle.

The OCC reviews banks' systems for managing risks related to complying with U.S. economic and trade sanctions programs administered and enforced by the Office of Foreign Assets Control (OFAC). The complexity of the requirements underlying these programs poses challenges for some banks. It is important for banks to maintain effective policies and procedures for screening against OFAC's Specially Designated Nationals and Blocked Persons List and other sanctions lists. Bank management should have processes for diligently reviewing and monitoring for the comprehensive prohibitions under sectoral and geographic, as well as list-based, sanctions programs to effectively manage associated compliance and operational risks.

In the fourth quarter of 2018, the OCC, the other federal banking agencies, and FinCEN published (1) "Bank Secrecy Act/Anti-Money Laundering: Interagency Statement on Sharing Bank Secrecy Act Resources" (OCC Bulletin 2018-36) to address instances in which banks may decide to enter into collaborative arrangements to share resources to manage their BSA/AML obligations more efficiently and effectively and (2) "Bank Secrecy Act/Anti-Money Laundering:

Joint Statement on Innovative Efforts to Combat Money Laundering and Terrorist Financing” (OCC Bulletin 2018-44) to encourage banks to consider, evaluate, and, where appropriate, responsibly implement innovative approaches to meet their BSA/AML compliance obligations, in order to further strengthen the financial system against illicit financial activity. Banks with a community focus, less complex operations, and lower-risk profiles for money laundering or terrorist financing are entering into collaborative arrangements with other banks for sharing BSA resources in the areas of internal control, independent testing, and training. In addition, banks are also exploring opportunities to improve the efficiency and effectiveness of their BSA/AML compliance programs through advanced technologies such as AI and machine learning. The OCC monitors risks that may be associated with implementing innovative technologies and expects banks to employ sound due diligence and validation practices when assessing and implementing technology solutions, including those designed to enhance BSA/AML compliance functions. Banks should also be mindful of privacy and data governance issues.

Banks Continue to Face Consumer Compliance Challenges

The level of compliance risk related to compliance management systems is moderate. Developments in fintech and the popularity of mobile technology applications offer banks access to new payment delivery channels and customers. These technologies promote the development of new products and services but may also increase risk exposure. In the highly competitive environment with nonbanks, particularly in the residential mortgage market, banks are seeking to improve operating efficiency, and many are considering introducing new consumer products.

Bank management should be aware of the potential fair lending risk with the use of AI or alternative data in their efforts to increase efficiencies and effectiveness of underwriting. It is important to understand and monitor underwriting and pricing models to identify potential disparate impact and other fair lending issues. New technology and systems for evaluating and determining creditworthiness, such as machine learning, may add complexity while limiting transparency. Bank management should be able to explain and defend underwriting and modeling decisions.

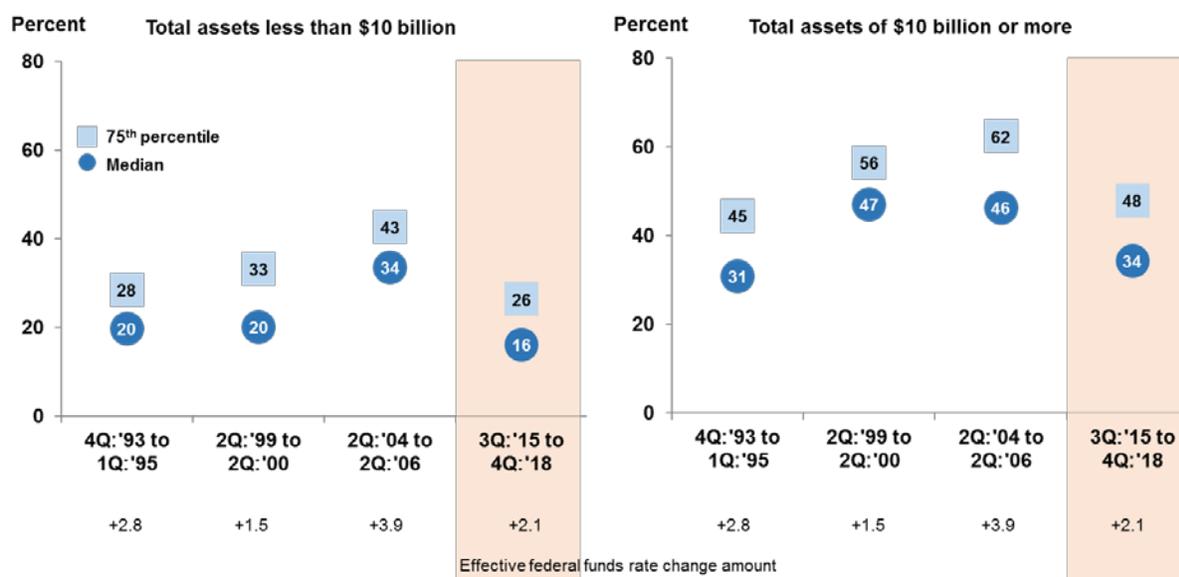
The OCC has linked many consumer compliance risk management concerns to weaknesses in change management processes. For example, some banks have failed to involve the compliance function when evaluating changes in, or additions to, products or services, which increases compliance risk.

Attracting and retaining competent staff to manage compliance operations and risks remain a challenge, particularly at smaller regional and community banks. Some banks use third parties to supplement and support existing compliance operations. Such practices should be accompanied by initial and ongoing due diligence and appropriate oversight. The absence of, or gaps in, due diligence, oversight, and controls may result in elevated risk levels and increase the potential for violations of laws or regulations or other risks associated with potential consumer harm. For more information, refer to OCC Bulletins 2013-29 and 2017-21.

D. Increased Competition for Deposits May Result in Changes in Funding Mix or Costs

Growth in overall deposits and NMDs (such as traditional savings accounts), an uncertain rate environment, and technological advances that make it easier for depositors to move money could result in markedly different depositor behavior than in previous economic cycles. Bank managers should be vigilant about the risk of potentially underestimating future liability costs and liquidity risk. The interest-bearing deposit costs have increased with respect to increases in the federal funds rate, known as the deposit repricing rate or deposit beta. The increase has been relatively low, however, since the Board of Governors of the Federal Reserve System began increasing the federal funds rate in late 2015 at both the median and 75th percentile when compared with prior interest rate cycles (see figure 14). For example, for banks with total assets greater than \$10 billion, the federal funds rate increased by 210 basis points from the third quarter of 2015 to the fourth quarter of 2018, but the median deposit rate only increased by 34 percent of that rate change.

Figure 14: Interest Rate Cycle, Interest-Bearing Deposit Beta



Source: Integrated Banking Information System (OCC)

Note: Includes national banks only because of data limitations. Data are merger-adjusted for institutions in continuous operation in each time period. Deposit beta is the change in funding cost divided by the change in the effective federal funds rate.

Lower liability costs continue to be supported by a favorable liability funding mix, but there are signs that the mix may shift. Deposit funding remains at a historically high level of 78 percent of assets. Lower-cost NMDs fund 60 percent of assets and have declined modestly after peaking at 61 percent in the third quarter of 2018. Banks with \$10 billion or more in assets experienced a 2.3 percent decrease in non-interest-bearing liabilities, such as demand deposit accounts, since year-end 2016. Both trends could indicate the beginning of a shift in deposit mix away from lower-cost NMDs to higher-cost time deposits. Absent increases in deposit rates, this would increase overall liability cost and could compress NIMs. The level of non-deposit funding, such as term borrowings and repos, remains low in comparison to the last 20 years.

Technological advances contribute to the difficulty in estimating deposit stability and potential funding pressures. Investments in online and mobile banking have increased the ability and speed with which customers can execute transactions. The increased functionality may directly affect deposit stability by allowing depositors to quickly move funds between institutions. Less sophisticated banks may be required to invest in technology that matches the features available at other institutions to maintain customer satisfaction. Many banks are seeking to improve their infrastructure and product offerings organically or through mergers and acquisitions. Moreover, an increasing number of internet, mobile banking, fintech, and other asset and wealth management providers have increased offering low-risk, higher-yielding products that may directly compete with bank deposits.

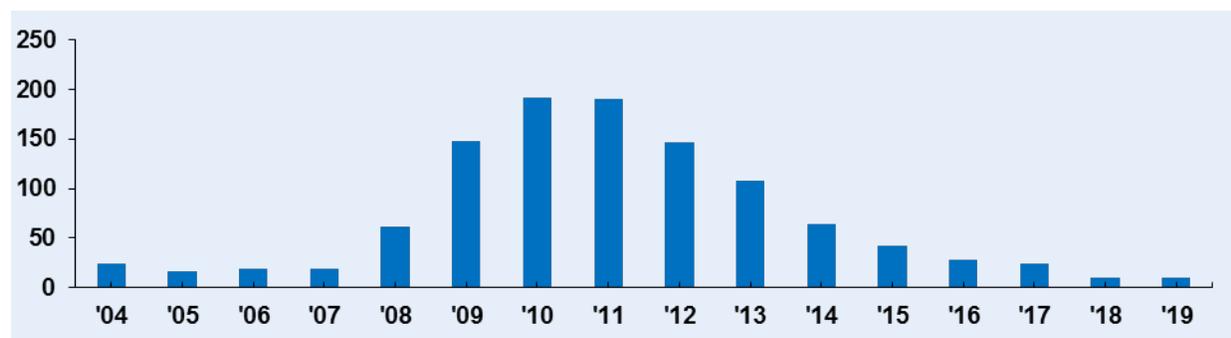
Regulatory guidance may help banks measure and manage interest rate and liquidity risk and outlines prudent risk management practices. Refer to OCC Bulletin 2010-1, “Interest Rate Risk: Interagency Advisory on Interest Rate Risk Management,” which highlights several practices, such as sensitivity and stress testing of deposit assumptions or dynamic balance sheet modeling. These practices may help quantify the risk if deposit price sensitivity is underestimated or there is a shift in liability mix. OCC Bulletin 2010-13, “Final Policy Statement: Interagency Policy Statement on Funding and Liquidity Risk Management,” highlights how practices, such as stress testing and comprehensive contingency funding plans, may help banks manage risks from competitive pressures and shifts in liability cost or mix.

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 year-end 2010 and is at the lowest level since 2005 (see figure 15). The decline results from a variety of factors that include recapitalizations and improvements in risk management and merger and acquisition activity.

Figure 15: Number of OCC-Supervised Banks Rated 4 or 5



Source: OCC

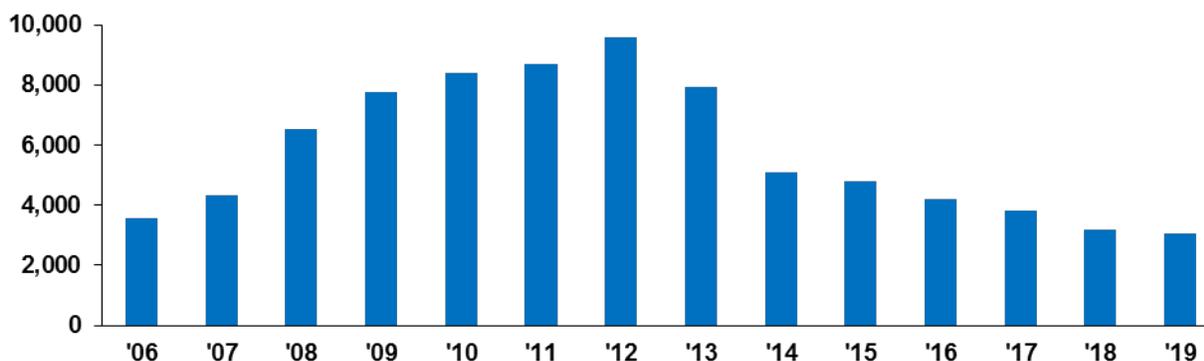
Note: Data for 2019 are as of March 31. All other data are as of year-end. Includes federal savings associations since July 21, 2011.

Outstanding MRA Concerns Declined

The OCC communicates supervisory concerns to a bank's board and management in the form of matters requiring attention (MRA) or enforcement actions (EA). Supervisory concerns include practices, or lack of practices, that deviate from sound governance, internal controls, or risk management principles.²⁰ Such deviations, if not addressed appropriately, could adversely affect a bank's condition including its financial performance or risk profile, result in violations of laws or regulations, and result in EAs. The number of outstanding MRA concerns peaked in 2012 and declined steadily through March 31, 2019, to the lowest level since 2006 (see figure 16).

²⁰ See OCC Bulletin 2018-18, "Comptroller's Handbook: Revised and Updated Booklets and Rescissions."

Figure 16: Number of MRA Concerns Outstanding



Source: OCC

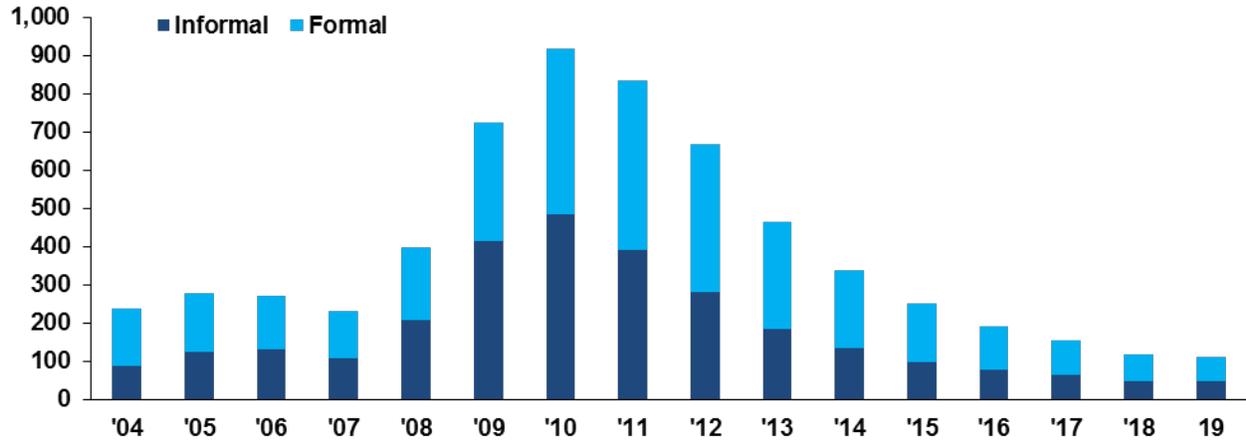
Note: Data for 2019 are as of March 31. All other data are as of year-end. Includes federal savings associations since July 21, 2011.

As of March 31, 2019, the top three MRA concern risk areas for midsize and community banks were operational (36 percent), credit (27 percent), and compliance (23 percent). For large banks, the top three MRA concern risk areas were operational (44 percent), compliance (29 percent), and credit (17 percent).

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 publicly available and include cease-and-desist/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 entered into with the OCC. The number of EAs outstanding against banks has steadily declined since peaking in 2010 (see figure 17), reflecting improvement in banks' risk management practices, recapitalization efforts, and other factors. Compliance or operational failures continue to be the leading cause of EAs. These EAs address a lack of appropriate governance, oversight, and risk management systems and controls.

Figure 17: Number of Outstanding Enforcement Actions



Source: OCC

Note: Data for 2019 are as of March 31. All other data are as of year-end. Includes federal savings associations since July 21, 2011.

Abbreviations

AI	artificial intelligence
ALLL	allowance for loan and lease losses
AML	anti-money laundering
BSA	Bank Secrecy Act
CECL	current expected credit losses standard
CRE	commercial real estate
EA	enforcement action
fintech	financial technology
GDP	gross domestic product
MRA	matter requiring attention
NDFI	non-depository financial institution
NIM	net interest margin
NMD	non-maturity deposit
NPL	nonperforming loan
NRC	National Risk Committee
OCC	Office of the Comptroller of the Currency
OFAC	Office of Foreign Assets Control
regtech	regulatory technology
ROE	return on equity

Index of Figures

- Figure 1: GDP and Yield Curve Forecasts 4
- Figure 2: U.S. Treasury Yield Curve and the Probability of Recession 5
- Figure 3: U.S. Output Gap as Percent of Potential GDP 6
- Figure 4: Trends in Bank Capital..... 7
- Figure 5: Trend in Bank Return on Equity 8
- Table 1: Trends in Bank Net Income 9
- Figure 6: Trend in Net Interest Margins 9
- Figure 7: Trend in Weighted-Average 30+ Day Past Due Plus Nonaccrual Loans..... 10
- Figure 8: Recent Trends in Classified Assets and ALLL 10
- Figure 9: Trend in Liquid Assets to Total Assets 11
- Figure 10: Trend in Long-Term Assets to Total Assets 11
- Figure 11: Percentage of Banks With Moderate and Increasing or High Risk Assessment..... 13
- Figure 12: Percentage of Total Unsecured Personal Loan Originations by Lender Type 14
- Figure 13: OCC Median Efficiency Ratio by Total Asset Size 15
- Figure 14: Interest Rate Cycle, Interest-Bearing Deposit Beta..... 24
- Figure 15: Number of OCC-Supervised Banks Rated 4 or 5..... 26
- Figure 16: Number of MRA Concerns Outstanding..... 27
- Figure 17: Number of Outstanding Enforcement Actions 28