

**FEDERAL RESERVE BANK OF MINNEAPOLIS
HIGH AND EMERGING RISK LIST**

December 31, 2017

Financial Data as of September 30, 2017 (unless otherwise noted)

Summary of Key Risks

Cybersecurity Risk 

Cybersecurity risk remains high, with significant exposure and a stable trend. Cybersecurity is the universe of technologies, processes, and practices designed to protect networks, computers, programs, and data from attack, damage, or unauthorized access.

The high level of cybersecurity risk remains a function of both the frequency and the potential severity of losses that could result from a control breakdown. Researchers recently identified serious security flaws that are found in virtually all processors and will have a significant impact on U.S. financial institutions. The vulnerability affects all hardware systems (PCs, servers, network devices, etc.), and the processor chips themselves cannot be patched for this vulnerability. Software patches are becoming available, but vulnerable IT systems will likely remain across many public systems for some time because legacy systems or Internet of Things devices cannot be patched. Evidence from previous attacks also demonstrates that many systems remain unpatched well after the release of patches for known vulnerabilities. In addition to the attacks that will inevitably be developed to exploit these issues, the potential side effects of the software patches will also affect financial institutions. The software patches developed to resolve the vulnerability are expected to cause significant slowdowns in processing speed. Firms will not only need to consider this when patching their own systems, but also will likely be affected by the impacts on their service providers' systems. One clear point of impact will be the use of any cloud services.

The majority of Ninth District institutions outsource some portion of critical technology services. The trend of adopting cloud and virtualization technologies has increased this reliance on third parties. Examiners continue to cite issues in the field when institutions rely on outsourcing without appropriate oversight; this finding emphasizes the need to fully understand and control risks related to newly implemented cloud and virtual networks. These issues lead to problems in business continuity, disaster recovery performance, testing, and overall network resiliency. The impact of the new processor vulnerabilities and related patching will further highlight the need for adequate oversight of third parties.

Key Action Steps for Banks and Holding Companies

- Banks should ensure they have established and tested incident response plans and should consider including testing of scenarios such as ransomware or distributed denial of service (DDoS) attacks in their business continuity planning and disaster recovery plans (BCP/DR).
- Banks should provide staff with adequate job-specific training and resources related to awareness of social engineering schemes and ransomware in order to reduce the likelihood of successful attacks.
- Banks should also ensure strong controls are in place to monitor risks related to outsourcing and third-party relationships.

- Banks should ensure they have effective processes in place for timely patch management to protect against known vulnerabilities, and ensure they have a plan to patch for the recently identified processor vulnerabilities.
- Banks should fully understand the risks and required controls of any cloud or virtualization technology they have implemented or are considering.

Agricultural Credit Risk

Agricultural credit risk is elevated, with a high exposure and a stable trend. Agricultural credit risk consists of the direct and indirect credit risks related to agricultural producers and their communities.

Although stabilized, prices for the District's major crops remain low, constraining cash flow for many agricultural producers. Due to dry growing conditions across much of the western part of the District, preliminary estimates indicate that 2017 crop production was lower than in 2016 in many regions. Although this does not bode well for affected producers, bankers have indicated that in some cases support payments linked to the 2014 Farm Bill have been better than in the last few years. While these support payments will help crop producers' cash flow, producers' reliance on them indicates an agricultural economy that is still weak. Livestock production cash flows improved during 2017, allowing most operations to achieve at least modest improvement.

Low commodity prices have also contributed to a decline in farmland values. Although farmland prices were stable in 2017, sales were slow, with most farmland sales resulting from estate activity, and are not necessarily arm's length transactions. Based on the per acre production income generated in the District's crop-growing regions, it is likely that farmland prices would decline further if sales activity were more than thinly traded.

Key Action Steps for Banks and Holding Companies

- Institutions should carefully monitor cash flow projections and take prudent steps with borrowers when cash flow projections indicate difficulty. Actions taken by the bank should include consideration of the long-term viability and overall financial strength of the borrower, including borrower equity, operating efficiency, and outside debt.
- Institutions should ensure that their policies have guidelines for carryover debt, including establishing standards for acceptable structures when financing carryover debt.
- Institutions need to include their agricultural concentration risk in their liquidity and capital planning process to ensure adequacy relative to loan portfolio risk.
- The agricultural credit risk coordinator will develop an examination summary report before the next risk list for tier 1 and 2 agricultural banks reviewed between June 30, 2017, and May 31, 2018. The report will detail key supervisory findings, risk management trends, level of carryover debt, and overall credit risk management conclusions.

Consumer Compliance Risk

Consumer compliance risk is elevated, with a moderate level of exposure and a stable trend. Consumer compliance risk is the risk of legal or regulatory sanctions, financial loss, consumer harm, or damage to reputation and franchise value caused by failure to comply with or adhere to (1) consumer protection

laws, regulations, or standards, (2) the institution's own policies, procedures, code of conduct, and ethical standards, or (3) principles of integrity and fair dealing applicable to the institution's business activities.

The level of compliance risk is based on challenges related to mortgage lending requirements, pressures on compliance resources, enhanced fair lending oversight, and the actual and potential growth in higher-risk consumer products (such as indirect auto lending).

- In 2015, banks began complying with the Truth in Lending Act – Real Estate Settlement Procedures Act Integrated Disclosures (TRID) rule, which added significant complexity to the mortgage loan closing process. As the implementation phase for complying with TRID ends, the monitoring phase relating to issue identification and resolution, such as for potential software-related errors and tolerance errors, becomes more critical for managing TRID risks.
- During 2017, banks that are subject to the Home Mortgage Disclosure Act (HMDA) either began preparing for or continued ongoing preparation efforts to report mortgage loan data in compliance with the rule that becomes effective January 1, 2018, which modifies and adds numerous reporting fields. Countering this risk factor, modified coverage thresholds adopted in the rule will reduce the number of banks required to report HMDA data.
- Expanded indirect auto lending by some institutions requires greater oversight and controls to ensure that loan prices do not reflect discrimination based on a prohibited basis category. One Ninth District BHC with a subsidiary that engaged in indirect auto lending ceased this activity as of December 1, 2017, which over time will reduce compliance risk relating to this product.
- The interest rate environment might lead Ninth District SMBs to begin originating or increase originations of adjustable rate mortgages or home equity lines of credit, which are more complex loan products in terms of compliance risk.
- Pressures on or changes to compliance resources have contributed to a decrease in attention to Community Reinvestment Act (CRA) strategies and management, most notably relating to community development activities.

Overall, regulatory complexity has strained compliance resources at some institutions and increased the risk that other compliance areas will not receive appropriate levels of oversight.

Other challenges driving the consumer compliance risk level include staff changes, integration of compliance programs, and areas subject to heightened regulatory focus. Many institutions face significant challenges in hiring and retaining compliance staff with appropriate expertise. In particular, strong compliance officers will be difficult to replace if they retire or leave for other reasons. Mergers and acquisitions present the surviving entity with challenges in assimilating different cultures, new staff, and diverse practices. Heightened regulatory attention to fair lending means financial institutions must ensure their compliance management programs appropriately evaluate and respond to fair lending risks associated with the bank's products and markets. Also, regulatory focus on redlining under the CRA will require banks not only to define assessment areas that do not inappropriately exclude low- and moderate-income areas and minority populations but also to serve those areas. Finally, incentive compensation and sales practices have become subject to heightened regulatory attention.

Key Action Steps for Banks and Holding Companies

- Institutions should adapt their compliance risk management programs, including monitoring of resource levels, to reflect new risks when engaging in new activities or when existing programs are

subject to new regulations. Greater compliance risk will likely exist in organizations with any of the following conditions:

- New compliance officers or programs that appear to operate with declining or limited resources.
- Compliance resources that appear to be minimal or stressed.
- High inherent risk from mortgage loans, credit cards, overdraft programs, and indirect lending programs or new products.
- Institutions should review their assessment areas and resolve any potential or actual redlining issues.
- Institutions, particularly those classified as intermediate small banks under CRA, should review their CRA strategies and management to ensure that their lending and community development activities meet their CRA obligation and are sufficiently evidenced between evaluations.
- Institutions should monitor the effectiveness of their TRID implementation.

Below-Threshold but Potentially Significant Risks

In addition to the key risks already discussed, there are other potentially significant risks that banks and holding companies should monitor, including the following:

- **BSA/AML Compliance Risk:** BSA/AML risk has increased due to increasing regulatory expectations and rule changes, specifically the new Customer Due Diligence Requirements for Financial Institutions (CDD Rule), which requires financial institutions to fully comply with requirements by the May 11, 2018, applicability date. The new rule strengthens existing CDD requirements, and in addition, banks are now required to collect and verify identification documentation for beneficial owners of legal entity customers. This requirement creates a need for significant change in bank processes and requires information that may be difficult to obtain in some instances. The change also expands the active role that lending staff have in BSA/AML compliance and will require staff training and, in some cases, culture changes within lending departments.
- **Credit Concentrations:** While overall credit concentrations in the District remain lower than levels observed prior to the last recession, several institutions continue to operate with credit concentrations well in excess of industry norms. In addition, commercial real estate (CRE) concentrations have been rising in some institutions. Some higher concentration levels result from increased lending through the purchase of loans. Because of high and increasing risk in credit concentrations, SMBs should remain vigilant in maintaining prudent credit risk management practices and be mindful of existing regulatory guidance as they manage their credit concentrations and overall credit risk. In addition, specific to CRE concentrations (including construction and land development), we will continue to use expanded CRE concentration procedures to ensure banks are complying with risk management expectations for CRE lending.
- **Interest Rate Risk (IRR):** Ninth District banks generally appear reasonably positioned for gradual rate changes. The increased use of deposits from listing and brokered sources would suggest either that institutions are facing competitive challenges for limited deposits or that District banks are utilizing wholesale funding as a lower-cost alternative to augment balance sheets after three rate increases following the prolonged low-rate environment. Therefore, it is important for management to review the funding mix while challenging historical assumptions and model results. Key items to evaluate include:




- Identification of credits vulnerable to increases in interest rates.
- Whether deployed models adequately address all material risks (on- and off-balance-sheet risks).
- Whether assumptions consider the impact of large deposits and surge deposits and their related betas (management's deposit repricing to changes in market rates), decay rates (deposit average life), and deposit mix changes.
- Aggregate limits on deposits from wholesale sources.
- Whether scenario analysis is appropriate and identifies exposure under a variety of rate environments and stress scenarios.
- Assumptions related to those assets vulnerable to extension risk.
- Monitoring of changes in unrealized gains and losses in investment portfolios with longer duration.

Appendix I Risk List Process and definitions

We assess risks¹ for level of concern, level of exposure, and trend, as shown in the definitions table, below. While there is bias toward issues affecting state member banks (SMB), the process assesses risk exposure for all Ninth District banks and bank holding companies (BHC).

Key risks and the key action steps are summarized in order of risk severity. We also include brief discussions of risks that, although currently below the threshold for a complete write-up, have the potential to emerge as significant concerns in the near term. Finally, we do not comment on risk dimensions that are not currently significant areas of concern.

Definitions Table

<p>Level of Concern Measures the District’s assessment of the risk area, considering: (1) Prospects that the risk will give rise to an adverse financial impact, (2) Immediacy of the risk, and (3) Potential for losses. The focus is on inherent risk in the absence of controls or risk mitigants an institution may have implemented.</p>	<p>High – Current problem area, or one likely to become a problem area in the next 1 to 2 years, that, if realized, would have a significant impact on institutions in terms of operating losses, rating downgrades, impediment to strategic goals (e.g. M&A) or failures.</p> <p>Elevated – Either a current problem area that has a less significant impact on institutions than a high-risk area, or an area that is potentially high impact but less likely to develop in the next 1 to 2 years.</p> <p>Moderate – A concern that is notable for some reason, but the impact is not likely to be significant in the near term.</p> <p>Low – Little to no risk of a significant adverse impact in the next 1 to 2 years.</p>
<p>Level of Exposure Measures the relative percentage of institutions believed to face current or likely exposure to the risk at an elevated level.²</p>	<p>■ - Significant – Affects a substantial number of SMBs and holding companies.</p> <p>■ - Moderate – Affects a meaningful but not significant percentage of SMBs and holding companies.</p> <p>■ - Low – Affects only a few SMBs and holding companies.</p>
<p>Trend</p>	<p>  Increasing  Stable  Decreasing </p>

¹ Identified areas of risk that are potentially faced by Ninth District financial institutions, are shown in Appendix II.

²For example, all institutions face some degree of liquidity risk and interest rate risk. The exposure level measures the proportion of institutions believed to face a moderate or higher level of risk.

Appendix II – Table of Risks (level of concern, exposure and trends)

Risk	12/31/2016		6/30/2017		Current 12/31/2017		Trend
	Level of Concern	Exposure	Level of Concern	Exposure	Level of Concern	Exposure	
Credit Risk							
Commercial Real Estate Credit Risk	Moderate		Moderate		Moderate		↑
Commercial and Industrial Credit Risk	Moderate		Moderate		Moderate		↔
Agricultural Credit Risk	Elevated		Elevated		Elevated		↑
Energy Sector Credit Risk	Elevated		Moderate		Moderate		↔
Consumer Credit Risk	Moderate		Moderate		Moderate		↔
Residential Real Estate Credit Risk	Moderate		Moderate		Moderate		↔
Other Real Estate Owned Risk	Low		Low		Low		↔
Investment Securities Credit Risk	Moderate		Moderate		Moderate		↔
Market and Liquidity Risk							
Liquidity Risk	Low		Low		Low		↑
Interest Rate Risk	Moderate		Moderate		Moderate		↔
Operational Risk							
Cybersecurity Risk	High		High		High		↔
Other IT Risk	Moderate		Moderate		Moderate		↔
Fraud and Internal Controls Risk	Moderate		Moderate		Moderate		↔
Legal and Compliance Risk							
Bank Secrecy Act/Anti-Money Laundering/Office of Foreign Assets Control Risk	Elevated		Moderate		Moderate		↑
Consumer Compliance Risk	Elevated		Elevated		Elevated		↔
Financial Risk							
Earnings Risk	Elevated		Moderate		Moderate		↔

*Indicates change in level of concern.