MERCATUS CENTER
George Mason University

POLICY BRIEF

Fundamentals: Bank Regulation and Supervision

Thomas Hoenig and Stephen Matteo Miller

April 2025

Bank regulation refers to the written rules that define acceptable behavior and conduct for financial institutions. Bank supervision refers to the enforcement of these rules. Federal and state governments have long been involved in regulating and supervising banks with the aim of maintaining the banking system's safety and soundness. This policy brief discusses how bank regulation and supervision has evolved over time.

Some Historical Context on Bank Regulation and Supervision

The core components of US capital markets have long included the commercial banking industry and a vibrant securities market for equity and bonds.[1] Since the nation's founding, the commercial banking industry—because of its central role in both the payment and lending systems—has received special attention from both state[2] and federal governments. Throughout this time the industry's performance has been volatile,[3] often placing it at the center of recurring economic and financial crises. This volatility has led to an ever-greater role for the federal government in overseeing industry operations and business conduct.[4]

The federal government's role in bank supervision and regulation began with the National Bank Act of 1864, which created the Office of the Comptroller of the Currency (OCC) to charter and supervise banks with federal charters.[5] The federal government's role in supervising banks expanded with the Federal Reserve Act of 1913, giving the Federal Reserve Board authority to supervise state banks that chose to be members of the Federal Reserve System.[6] With the Banking Act of 1933, the Federal Deposit Insurance Corporation (FDIC) was created, and, in addition to insuring bank deposits, the FDIC was given authority to supervise state-chartered banks outside the Federal Reserve system.[7]

Throughout the 19th century, bank regulation and supervision tended to focus on two key policy areas designed to restrict excessive risk-taking by bank owners. The first policies were in regards to equity capital requirements and required bank owners to maintain a certain level of capital—a

source of bank funding, such as bank-owners' stock, not prone to bank runs—to absorb bank losses.[8] The second was contingent liability, which required bank owners to pay at least some of the costs associated with bank creditor losses when banks failed. Contingent liability was successful, but regulators eliminated it after the Great Depression due to faulty thinking at the time. Regulators erroneously attributed the thousands of bank failures during that period to the ineffectiveness of contingent liability, even though emergency lending from the Federal Reserve was the real reason the weak banks didn't close early and thereby failed.[9]

Bank Supervisors

Today, both state and federal bank supervisors exercise significant control over how banks operate. They have the authority to examine operations, oversee management and director actions, and monitor compliance with the laws and regulations. Over time, this process has evolved into "risk-based" supervision, focused on **C**apital adequacy, **A**sset quality, **M**anagement, **E**arnings, and **L**iquidity and **S**ensitivity to market risk, which is summarized into what is referred to as the CAMELS rating.[10] The largest banks have on-site, full-time federal supervision personnel to monitor bank activities. A bank that receives a poor CAMELS score can be submitted to formal supervisory actions and to restraints on its activities until its performance ratings improve.

Levels of Supervision

Supervisors monitor banks at a micro and macro level. Macro-level supervision sets supervisory policy and industry standards for resilience, such as equity capital amounts, liquidity standards, and loan concentration limits. The Federal Reserve, OCC, and FDIC each set macro standards for the banking industry. Each also supervises the industry at the micro level through on-site examinations to determine if a given bank is conducting its activities in a safe and sound manner. Micro-level supervision refers to a bank's on-site examination of operations, during which time the CAMELS ratings are determined.

Bank supervisors examine thousands of banks annually, assuring that banks are run soundly and enhancing public trusts in the industry. However, supervisors are not error proof. For example, when inflation rose quickly in 2021 and 2022 and the Federal Reserve began rapidly increasing interest rates, many banks began experiencing significant losses in their government securities portfolio.[11] Since such losses were spread throughout the industry, the regulators were slow to distinguish which banks were most at risk.

Three large regional banks, starting with Silicon Valley Bank, failed in 2023, surprising both the regulators and the public. In response, regulators invoked a systemic risk exception to guarantee all bank deposits. For those who looked at the data leading up to these failures, however, it was clear that the market value of capital for each of these banks had already been deteriorating in

2022.[12] This leads to one of the most controversial topics in banking: How much capital should investors provide to maximize industry resilience against unexpected financial shocks?

Bank Capital Regulation

One of the key components of macro-prudential supervision is the setting of minimum capital standards. Bank capital is the amount of investor money required to fund a bank's activities. The idea is that should a bank fail, bank capital investors will absorb losses before uninsured depositors, the FDIC, or taxpayers do. Capital is the most stable funding, and the more investor capital the industry uses to fund itself, the less likely the industry is to experience a crisis, and the less costly a bank failure will be to the FDIC and to taxpayers. Unfortunately, since the 1988 Basel Accords, establishing acceptable capital requirements has become extraordinarily complex and opaque and currently accounts for nearly 20 percent of the industry's regulatory volume.[13]

There are two principal means by which supervisors and the market measure the adequacy of bank capital:[14]

1. The leverage ratio. This is equity capital divided by total assets. It is a long-accepted and easily understood measure of capital. The leverage ratio lets the user know how much capacity a bank has in order to absorb losses without entering insolvency.
2. The risk-weighted capital ratio. Designed by regulators, this is equity capital divided by a total asset measure, which is supposed to reduce (or increase) the asset measure if a bank invests in assets deemed more (or less) risky by the regulator. The aim of risk-weighted capital ratios is to reduce the amount of capital needed to cover expected losses on those assets. However, the process of estimating appropriate risk weights for each asset class is highly complex, opaque, and difficult for the public to understand, and sometimes the risk weights fail to appropriately measure actual risk.[15]

Thus, in addition to the question of how much capital is enough,[16] there is also controversy regarding which capital measure is best: the risk-weighted capital ratio or the leverage ratio. Since the 1990s, regulatory authorities have focused on risk-weight measures as opposed to the leverage ratio due to political compromise in order to get more countries to sign onto the new capital regulation. However, over the last 30 years, regulators have continually revised the risk-based measures due to shortcoming arising from the unintended distortions that the risk weights create because they favor some asset classes over others.

Concluding Comments

Banking has a long history of funding business and government, and the importance of this role cannot be overstated. The industry has been an essential part of US economic growth and success. However, it also has experienced recurring economic and financial crises, and because of this

and its pivotal role within the economy, banking has long been subjected to heavy regulation and supervision. Bank capital remains at the center of how banks are regulated and supervised, and it will remain a critical issue for bank management, the regulators, and the public.

About the Authors

Thomas Hoenig is a distinguished senior fellow at the Mercatus Center at George Mason University. He researches and comments on economics, money and banking, and related policy topics and provides economic outlook and related services to investment firms and businesses across the country. Before joining the Mercatus Center, Hoenig was with the Federal Reserve for 38 years, beginning as an economist and then becoming a senior officer in banking supervision. Hoenig was President and Chief Executive Officer of the Federal Reserve Bank of Kansas City and a member of the Federal Reserve System's Federal Open Market Committee from 1991 to 2011. He served as Vice Chairman of the Federal Deposit Insurance Corporation from 2012 until 2018. He also served as Chair of the FDIC's Bank Appeals and Audit Committees and Director of NeighborWorks America, which was established by Congress in 1978 to address housing issues nationwide. He also served as a member of the International Association of Deposit Insurers' board from 2012 to 2017 and as the President and Chairman from October 2015 to October 2017. Hoenig is from Fort Madison, Iowa, and received a PhD in economics from Iowa State University.

Stephen Matteo Miller is a senior research fellow at the Mercatus Center at George Mason University. His research focuses on financial market crashes and crises and financial regulation. He has published his findings in academic journals such as the *Journal of Financial Stability*, the *Journal of Regulatory Economics*, *Quantitative Finance*, *Economic Record*, and the *Multinational Finance Journal*. After graduating from George Mason University with a PhD in economics, Miller worked as a World Bank consultant for several years before joining the department of economics at Monash University in Melbourne, Australia, as a research fellow. At the end of the first year of the research fellowship, he became a tenured lecturer and taught undergraduate and graduate classes in macroeconomics and financial economics for six years. He also administered the honors program and the PhD program. Before joining Mercatus, Miller was a visiting assistant professor in the department of economics at Bryn Mawr College in Bryn Mawr, Pennsylvania.

Notes

1. For a discussion of how the emergence of the US financial system contributed to early US growth, see Peter Rousseau and Richard Sylla, "Emerging Financial Markets and Early US Growth," *Explorations in Economic History* 42 (2005): 1–26. For an empirical examination of how equity markets rather than credit finance spur growth, see also James Brown, Gustav Martinsson, and Bruce Petersen, "Law, Stock Markets, and Innovation," *Journal of Finance* 68, no. 4 (2013): 1517–49, and James Brown, Gustav Martinsson, and Bruce Petersen, "Stock Markets, Credit Markets, and Technology-led Growth," *Journal of Financial Intermediation* 32 (2017): 45–59.

2. For a history of the origins of state government supervision of banks see Kris James Mitchener and Matthew Jaremski, "The Evolution of Bank Supervisory Institutions: Evidence from American States," *The Journal of Economic History* 75, no. 3 (2015): 819–59.

3. For a discussion of the volatility of the US banking system and how it contributed to the rise of securities markets see Michael Bordo, Angela Redish, and Hugh Rockoff, "Why Didn't Canada Have a Banking Crisis in 2008 (or in 1930, or 1907, or . . .)?" *Explorations in Economic History* 68, no. 1 (2015): 218–43. For a brief discussion of the structure of the banking system and its crises throughout history, see Stephen Matteo Miller, "How to Think About Banks, Banking Crises, and Banking Policy Debates in the United States," (Mercatus Policy Brief, Mercatus Center at George Mason University, February 2025).

4. See Chapter 5 in Robert Higgs, *Crisis and Leviathan* (Independent Institute, 2012). For a discussion of how the severity of crises spurred the federal government's growing oversight of banking see James Barth and Stephen Matteo Miller, "US Financial Crises and Growing Federal Oversight of Banking" in *Encyclopedia of Financial Crises*, ed. Sara Hsu Elgar (Edward Elgar Publishing, 2023), 463–72. For a discussion of fiscal and economic costs of crises, see also Stephen "Steph" Miller, "The Cost of Crises Revisited," *FinRegRag*, December 11, 2023, https://www.finregrag.com/p/the-costs-of-crises-revisited.

5. For a history of the origins of federal government supervision of banks see Eugene White, "To Establish a More Effective Supervision of Banking: How the Birth of the Fed Altered Bank Supervision," in *A Return to Jekyll Island: The Origins, History and Future of the Federal Reserve*, ed. Michael D. Bordo and William Robards (Cambridge University Press, 2013), 7–54. For the National Bank Act of 1864, see "National Bank Act," FRASER, Federal Reserve Bank of St. Louis, last accessed January 21, https://fraser.stlouisfed.org/title/national-bank-act-1113.

6. For the Federal Reserve Act of 1913, see "Federal Reserve Act : Public Law 63-43, 63d Congress, H.R. 7837: An Act to Provide for the Establishment of Federal Reserve Banks, to Furnish an Elastic Currency, to Afford Means of Rediscounting Commercial Paper, to Establish a More Effective Supervision of Banking in the United States, and for Other Purposes," FRASER, Federal Reserve Bank of St. Louis, last accessed January 21, 2025, https://fraser.stlouisfed.org/title/federal-reserve-act-966. Among other benefits, national banks and state Fed member banks each own shares in their regional Federal Reserve Bank, which entitles them to dividends from the Federal Reserve System's income (see section 7).

7. For the Banking Act of 1933, see "H.R. 5661, A Bill to Provide for the Safer and More Effective Use of the Assets of Banks, to Regulate Interbank Control, to Prevent the Undue Diversion of Funds into Speculative Operations, and for Other Purposes: 73d Congress, 1st Session," FRASER, Federal Reserve Bank of St. Louis, last accessed January 21, 2025, https://fraser.stlouisfed.org/title/hr-5661-a-bill-provide-safer-effective-use-assets-banks-regulate-interbank-control-prevent-undue-diversion-funds-speculative-operations-purposes-360.

8. Capital requirements were not at the outset defined by a bank's deposits or assets, as they have been since the Great Depression, but by the size of the town in which the bank was located. See Chapter 1 of Eugene White, *The Regulation and Reform of the American Banking System, 1900–1929* (Princeton University Press, 1983), 10–62.

9. For a discussion of the success of federal efforts to implement contingent liability for national banks and how it was erroneously thought to have not been effective, see Eugene White, "To Establish a More Effective Supervision of Banking."

10. See Julie L. Stackhouse, "The ABCs of CAMELS," Federal reserve Bank of St. Louis (blog), July 23, 2018, https://www.stlouisfed.org/on-the-economy/2018/july/abcs-camels.

11. For a discussion of how the bank failures and banking system-wide stresses unfolded in 2023, see Erica Xuewei Jian, Gregor Matvos, Tomasz Piskorski, and Amit Seru, "Monetary Tightening and US Bank Fragility in 2023: Mark-to-Market Losses and Uninsured Depositor Runs?," *Journal of Financial Economics* 59 (2024): 103899.

12. For a discussion of how the Basel capital ratios masked the deteriorating capital of the failed banks see Stephen "Steph" Miller, "So Which Is It: Too Much, Just Enough Or Not Enough Bank Capital?," *FinRegRag*, May 22, 2023, https://substack.com/home/post/p-123133876 and Stephen "Steph" Miller, "Basel III Endgame Not Likely the End of the Regulatory Capital Revisions." *FinRegRag*, July 12, 2023, https://substack.com/home/post/p-134603537.

13. For a discussion of the history of the Basel Accords and how it has spurred the growth of increasingly complex bank capital regulation see James Barth and Stephen Matteo Miller, "On the Rising Complexity of Bank Regulatory Capital Requirements: From Global Guidelines to Their United States (US) Implementation" *Journal of Risk and Financial Management* 11, no. 4 (2018): 77 and Richard Herring, "The Evolving Complexity of Capital Regulation," *Journal of Financial Services Research* 53 (2018): 183–205.

14. See James Barth and Stephen Matteo Miller, "On the Rising Complexity of Bank Regulatory Capital Requirements."

15. For a brief summary of how we got risk-weighted capital and how it have occasionally failed to keep banks well capitalized at the worst time see Stephen "Steph" Miller and Tom Hoenig, "Why Risk-Weighted Capital Regulation Misleads," *FinRegRag*, September 26, 2024, https://www.finregrag.com/p/why-risk-weighted-capital-regulation. For a discussion of why the complexity of risk-weighting can still fail to account for risks that matter to banks, see Stephen "Steph" Miller, "So Which Is It: Too Much, Just Enough Or Not Enough Bank Capital?."

16. For a discussion of the benefits and costs of simpler, higher capital regulation see James Barth and Stephen Matteo Miller, "Benefits and Costs of a Higher 'Leverage" Ratio,'" *Journal of Financial Stability* 38 (2018): 37-52. For a summary of the findings in this paper, see James Barth and Stephen Matteo Miller, "Yes, the Benefits of a Higher Leverage Ratio Can Exceed the Costs," (Mercatus Policy Brief, Mercatus Center at George Mason University, April 5, 2018).