MRV ASSOCIATES

House Financial Services Committee
Subcommittee on Financial Institutions and Monetary Policy

A Holistic Review of Regulators: Regulatory Overreach and Economic Consequences

Testimony of
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EXECUTIVE SUMMARY

Chairman Barr, Ranking Member Foster, and distinguished members of the Subcommittee on Financial Institutions and Monetary Policy, thank you for the opportunity to appear before you. I am Mayra Rodríguez Valladares, Managing Principal of MRV Associates. My testimony today is based on my professional experience of three decades consulting to and training professionals at banks, insurance companies, and financial regulatory agencies in over thirty countries on a wide range of risks that can threaten financial institutions' safety and soundness. Especially since 2003, I have spent countless hours working with bank supervisory entities in both advanced and emerging markets. With regulators, I have analyzed and helped write compliance and supervisory manuals. I have delivered a wide range of bank regulatory and capital markets courses to federal and state bank and financial regulators. I have also provided consulting and training services to numerous lenders, traders, compliance officers, auditors, analysts, technologists, and risk managers at financial institutions globally. Previously, I had investment banking and capital markets analyst roles at JPMorgan and BT.AlexBrown in London, and I began my career as a foreign exchange analyst at the Federal Reserve Bank of New York.

It has only been fifteen years since Lehman Brothers collapsed and wreaked havoc on people's lives, even in places around the globe, very far from Wall Street. It is way too early to say that "this time is different."[1] It never is. Financial institutions with poor risk management, insufficient capital, or low level of liquidity, all too often fail, painfully disrupting the lives of Americans. "Financial instability often follows periods when financial institutions, like investors and policy makers, have underestimated risks."[2]

Every time bank regulators in any country want to update bank regulations or implement new ones, there are always voices that claim that regulation will reduce lending or hurt an economy in other ways. Since 2010 when Basel III and Dodd-Frank rules started being designed and implemented incrementally, U.S. banking assets have almost doubled. In the same period, US banks' net income has risen by 225%. Those banks which are publicly traded have increased dividend payouts to record highs. And banks' contributions to political campaigns have risen 150%. With those returns on wealth and income, an overwhelming majority of U.S. taxpayers would volunteer themselves to be regulated.

Also, imagine how much more capitalized U.S. banks would be if in the last twenty-three years, their misdeeds had not cost them over a quarter of a trillion dollars in fines. Just the ten largest banks in the U.S. paid $218 billion in fines[3] due to violations and abuses in the areas of bank regulations, securities trading, consumer accounts opening and lending, anti-trust laws, fraud, money laundering, sanctions violations, and terrorism financing. Imagine how much better off banks and the U.S. economy would be if those billions of dollars were used for capital and

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[1] Reinhart, Carmen, and Kenneth Rogoff. This Time is Different: Eight Centuries of Financial Folly, 2009.
[2] Behavioral Finance and Financial Stability, Harvard Business School.
[3] "100 Most Penalized Companies," Good Jobs First, Violations Tracker, August 2023.

liquidity buffers to make the banking system safer, not to mention to lend to people and small companies that do not have access to capital markets.

U.S. banks were resilient between 2020 through February 2023 even while being impacted during the unprecedented economic stress brought on by COVID-19. Basel III and the Wall Street Reform and Consumer Protection Act (Dodd-Frank) capital, liquidity, stress test, and living will requirements were critical in helping banks succeed in surviving unexpected losses. Even as robust as those frameworks are, however, they probably would not have been enough. Fiscal and monetary policy stimuli bolstered banks' balance sheets and were critical to economic and financial stability.[4]

Banks are not at historically high levels of capital.[5] And the current measures of capital do not include all risks. Importantly, pandemics, country, economic, credit, market, liquidity, and operational risks continue to manifest themselves differently. Bank rules need to be reviewed and revised periodically. Presently, banks are being impacted by the elevated interest rate environment and rising defaults in some consumer and corporate sectors. In addition to those risks, banks now also face cybersecurity,[6] climate change,[7] rising civil unrest domestically, and geopolitical threats. It is imperative that US banks are resilient,[8] especially due to the aforementioned threats. Unfortunately, those risks are barely covered if at all, by the so-called Basel III Endgame or the capital or liquidity stress tests required by Title I of the Dodd-Frank Act. Anytime that a large American bank fails, or even threatens to do so, Americans' jobs and their mental and emotional well-being are threatened. Moreover, given the size of our banks and how they are interconnected here and with corporations and institutions around the world, there are also adverse consequences to the global financial system when there are significant weaknesses here.

By updating changes to Basel III and Dodd-Frank, U.S. bank regulators are fulfilling their mission of ensuring the safety and soundness of the American banking system. Most large banks can meet the updated capital requirements; those that cannot are fully capable of shedding risky assets to be well-capitalized and liquid. Moreover, banks have myriads of tools to lower risk-weights, known as risk optimization.[9] The U.S. bank regulators' proposed capital and bank resolution plan enhancements will not be final probably until next year; implementation is still one to two years away; hence it is impossible to 100% determine the exact cost to banks.

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[4] Horwich, Jeff. "Is the COVID -19 financial shock a good measure of bank strength?" Federal Reserve Bank of Minneapolis, June 3, 2022.

[5] Haubrich, Joseph G., "A Brief History of Bank Capital," Federal Reserve Bank of Cleveland.

[6] Rodríguez Valladares, Mayra. "Almost Half Of America's Banks Have Less Than Satisfactory Federal Reserve Supervisory Ratings," Forbes, November 30, 2019.

[7] Rodríguez Valladares, Mayra, Testimony on "Addressing Climate as a Systemic Risk: The Need to Build Resilience within Our Banking and Financial System" June 30, 2021.

[8] Rodríguez Valladares, Mayra. "Banks Should Implement Principles for Operational Resilience," Forbes, April 3, 2021.

[9] By improving data quality collection, using financial derivatives, selling loans and securities into special purpose vehicles, reducing investments in very illiquid assets or in complex securitizations and derivatives, banks can reduce risk weights. In the market, this is known as risk optimization.

Even before their Notice for Proposed Rulemaking, bank regulators inform the industry that they are working on updating or creating new rules. Regulators then launch the proposed rules and take comments from the public. The public comment is at least 90 days; in the case of the Basel III Endgame, it is over 120 days. After the comment period, regulators analyze the comments, and many months later, they finalize the rule. Once the final rule is announced, banks are normally given a timeline of one to two years to incrementally implement rules. Given the length of the process and that banks do not implement rules all at once, banks' professionals have ample time to conduct internal gap analysis to determine what personnel or technological resources they need to be able to comply with the rules. Under no circumstances should the proposed capital and bank resolution rules be withdrawn. The process is working as it should.

BANKS ARE SPECIAL

Financial institutions, including banks, do fail. And when they do, their adverse impact is felt not only domestically, but also globally given the significant interconnections between financial institutions, corporations, and ordinary individuals. In turn, financial or economic instability in other countries comes back to hurt our banks, companies, and individuals. Of the twelve, largest financial institution failures in the U.S., nine were depository institutions, that is, banks.

The 12 Largest Financial Institution Failures (by asset size)[10]

Financial Institution	Assets, USD billion	Type	Failure Date
Lehman Brothers	639	Securities Firm	September 15, 2008
Washington Mutual Bank	307	Bank	September 25, 2008
First Republic Bank	212	Bank	May 1, 2023
Silicon Valley Bank	209	Bank	March 10, 2023
Continental Illinois National Bank and Trust	111	Bank	May 17, 1984
Signature Bank	110	Bank	March 12, 2023
American Savings and Loan Association	73	Savings and Loan	September 7, 1988
Conseco Finance Corporation	52	Diversified Financial Services	December 19, 2002
IndyMac Bank, F.S.B.	31	Bank	July 1, 2028
Colonial Bank	26	Bank	August 14, 2009
First Executive Corporation	19	Insurance	April 11, 1991
First Republic Bank-Dallas, N.A.	17	Bank	July 29, 1998

Banks are particularly special,[11] because their loans help individuals and companies of every size reach our goals for economic vitality and growth. Banks are also crucial to any economy because they are interconnected to each other, as well as to school districts, municipalities, pension funds, securities firms, the insurance and reinsurance sector, securities firms, hedge funds, asset managers, wealth funds, not-for-profit foundations, home offices and sovereign wealth funds. These interconnections exist, because banks lend to these entities or are in derivative contracts with many of these actors, and because school districts, municipalities, and the aforementioned other financial institutions (OFIs) also invest in stocks and bonds issued by banks. Often banks

[10] Data compiled by the author from Atlas Magazine, Bankrate, The Street, and Pew Research Center sources. Any errors and/or omissions are mine.
[11] Corrigan, E. Gerald. "Are Banks Special?" March 1, 2020 (Revised from 1983.)

also manage the payroll and provide other important services to these entities. The collapse of a bank or even the threat thereof, almost immediately hurts the well-being of all of these entities, not to mention that of their employees. In short, bank instability has an outsized influence on the health of "Main Street".

564 US banks have collapsed since 2001; over 50% failed during the financial crisis of 2008-2010. Since Basel III and Dodd-Frank rules started being implemented in 2012, far fewer banks have failed.

Recent Bank Failures in the U.S.

Since start of Basel III and Dodd-Frank

Year	Number of bank failures
2023	3
2022	0
2021	0
2020	4
2019	4
2018	0
2017	8
2016	5
2015	8
2014	18
2013	24
2012	51

Before Basel III and Dodd-Frank

Year	Number of bank failures
2011	92
2010	157
2009	140
2008	25
2007	3
2006	0
2005	0
2004	4
2003	3
2002	11
2001	4

Source: Bankrate, May 1, 2003.

Bank crises lead to higher unemployment. During the financial crisis of 2007-2009, for example, unemployment in the U.S. doubled from 5% to 10.6% at its peak.[12] The U.S. financial crisis also spilled over to numerous other countries, adversely impacting their financial institutions, increasing their unemployment levels and decreasing their citizens' wages as well.[13] By the end of the 2007-2009 recession, the U.S. unemployment rate was higher than most other industrialized countries, and remained that way in the months following the recession.[14]

[12] "The Recession of 2007-2009," Bureau of Labor Statistics, February 2012.
[13] "The Great Recession and the Job Crisis," United Nations, 2011.
[14] "Spotlight on Statistics The Recession of 2007-2009," Bureau of Labor Statistics, February 2012.

Even after financial crises end, unemployment tends to persist and wages[15] are slow to grow, if they even rise at all.[16] In the case of the US, the damage of the financial crisis was felt for many years after the recession had ended.[17] Those without college degrees suffered more than those with college degrees, And people of color,[18] with or without college degrees, suffered more than their white counterparts.

Bank crises cause significant loss of wealth. During the 2007-2009 financial crisis, wealth losses in the U.S. ranged from 44 to 50 percent for Hispanic families, to 31 to 34 percent for African American families, and 10 to 13 percent for white families.[19]

Banks and other corporations often barely pay sufficient severance to those whom they have laid off. The unemployed people then must rely on their savings if they have any. They then become a challenge for state tax coffers since the unemployed will collect benefits. Bank executives, boards of directors, or the big risk takers, who are the ones that cause banks to fail, are not required to pay more into state coffers when they cause a crisis.

INTERNATIONAL STANDARD SETTERS

Given the interconnections between financial institutions, corporations, and individuals, several international standard setters exist with the members' focus being financial transparency and stability. The U.S. is an influential member of all the international standard setting bodies[20] for financial institutions that make recommendations about accounting, banking, climate change, code of conducts, derivatives, financial stability, fraud, money laundering, and securities.

For the purposes of this hearing, the most relevant international standard setters in which the U.S. takes an active role, are the Financial Stability Board (FSB) and the Basel Committee on Banking Supervision (BCBS).

The Financial Stability Board

The Financial Stability Board (FSB) makes recommendations about the stability of the global financial system to international standard setters. It coordinates with standard setters such as the Basel Committee on Banking Supervision, the International Organizations of Securities Commissions, and the International Accounting Standards Board. The FSB works on numerous issues relevant to banks and other financial institutions such as climate-related risks, cross-border

[15] "Unemployment and Earnings Losses: A Look at Long-term Impacts of the Great Recession of American Workers," Brookings Institution, November 4, 1011.
[16] "Spotlight on Statistics The Recession of 2007-2009," Bureau of Labor Statistics, February 2012.
[17] Center on Budget and Policy Priorities. "Chart Book: The Legacy of the Great Recession," June 6, 2019.
[18] Philo, Alexa. "Hearing Entitled: Implementing Basel III: What's the Fed's Endgame?" September 14, 2023, pp. 9-10.
[19] Signe-Mary McKernan, Caroline Ratcliffe, Eugene Steuerle, and Sisi Zhang. "Impact of the Great Recession and Beyond Disparities in Wealth Building by Generation and Race," April 2014.
[20] "Standard Setting Agencies," International Monetary Fund.

payments, crypto assets, cyber resilience, fintech, non-bank financial intermediation, accounting, auditing, crisis management, derivatives markets, globally systemically important financial institutions, LIBOR, market fragmentation, and post-2008 financial crisis reforms.[21]

In 2015, the FSB issued the Total Loss Absorption Capacity Standard for Systemically Important Banks. The purpose of the TLAC standard is to give guidance to countries to require "sufficient loss-absorbing and recapitalization capacity available in resolution for authorities to implement an orderly resolution that minimizes impacts on financial stability, maintains the continuity of critical functions, and avoids exposing public funds to loss." [22] Overwhelmingly, globally systemically important banks (G-SIBs) have been the focus of the design and implementation of these standards.

In 2019, in its Review of the Technical Implementation of the Total Loss Absorption Capacity Standard, the FSB found that progress globally had been "steady and significant in both the setting of external TLAC requirements by authorities and the issuance of external TLAC by G-SIBs. TLAC has been instrumental in enhancing the resolvability of G-SIBs, strengthening cooperation between home and host authorities, and boosting market confidence in authorities' capabilities to address too-big-to-fail risks." [23]

Basel Committee on Banking Supervision

The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential[24] regulation of banks. The Group of 10[25] created the Basel Committee in 1974.[26] Its mandate is to strengthen the regulation, supervision and practices of banks globally in order to enhance financial stability.[27] While the BCBS is best known for creating The Basel Capital Accord[28] a framework for minimum capital standards for internationally active banks, the members of the BCBS have designed very useful principles, quantitative impact studies, and consultative documents used by thousands of banks and bank regulators around the world. The BCBS is also an important forum for regular cooperation on banking supervisory matters. Its forty-five members are comprised of central banks and bank supervisors from twenty-eight jurisdictions.

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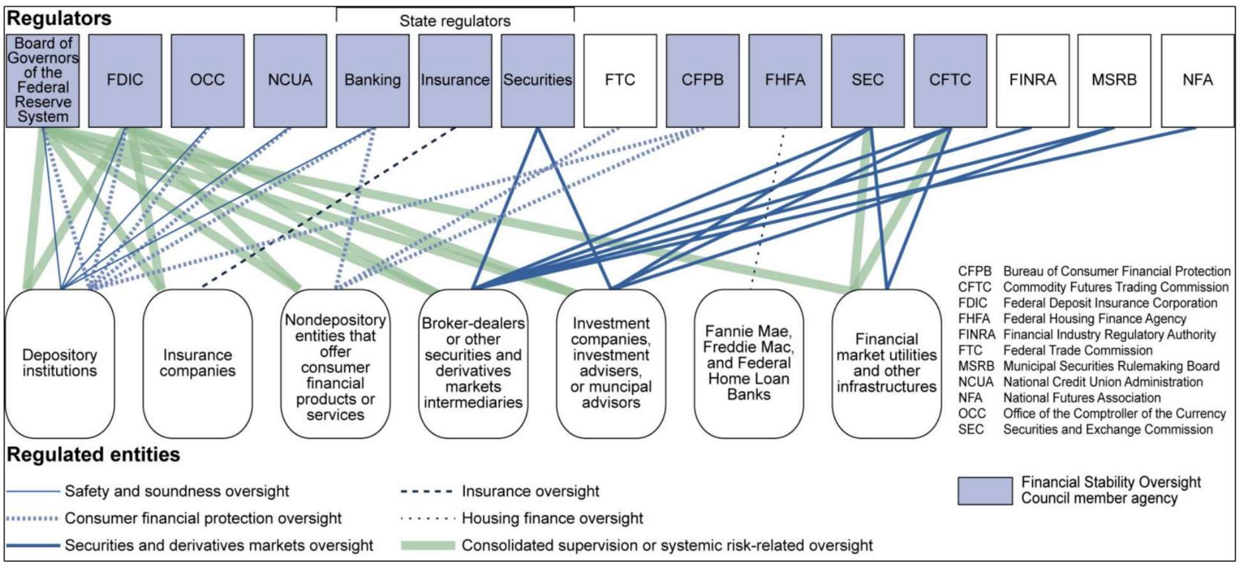
[21] FSB.
[22] "FSB Issues Final Total Loss-Absorbing Capacity Standard for Global Systemically Important Banks," Financial Stability Board, November 9, 2015.
[23] "Review of the Technical Implementation of the Total Loss-Absorbing Capacity (TLAC) Standard," Financial Stability Board, July 2, 2019.
[24] Prudential regulation encompasses risk management, capital, liquidity, and leverage requirements to make banks safer and more sound.
[25] The Group of 10, established in 1962, is comprised of eleven countries: Belgium, Canada, France, Italy, Japan, the Netherlands, the United Kingdom, and the United States. Switzerland joined in 1964, but the name remained the same.
[26] History of the Basel Committee, BCBS.
[27] The Basel Committee Charter was updated June 5, 2018.
[28] The Basel Accord was finalized in 1988 and has been revised several times. The latest version updated was updated in 2017; the update is often referred to as the Basel III Endgame.

FINANCIAL REGULATION IN THE U.S.

Financial regulation is a very broad term and encompasses multiple areas. In the U.S., financial regulations cover a very heterogenous industry and multiple financial products. Regulations are centered around safety and soundness (also known as prudential regulation), financial and risk disclosures and reporting, standard setting, competition, and price and rate setting.[29]
Due to the size and complexity of the U.S. financial system, there are numerous federal and state regulators responsible for regulating, supervising, and examining financial institutions.



Source: Government Accountability Office (GAO), Financial Regulation, GAO-16-175, February 2016.[30]

For decades, off- and on-site supervision of banks in the U.S. has been a risk-based approach rather than only a compliance based one. Off-site supervisors and on-site examiners can ask for a wide range of risk reports from banks. But if banks are not required to measure liquidity risk under stress (the Liquidity Coverage Ratio), conduct stress tests or measure interest rate risk in a consistent manner, that information does not exist for supervisors and examiners. Importantly as was the case for Silicon Valley Bank, that information also did not exist for investors, rating agencies, or legislators. All these actors can only discipline banks when banks are required to measure and disclose more about their risks.

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[29] Labonte, Marc. "Who Regulates Whom? An Overview of the U.S. Financial Regulatory Framework," Congressional Research Service, March 10, 2020.
[30] "Financial Regulation: Complex and Fragmented Structure Could Be Streamlined to Improve Effectiveness," Government Accountability Office, February 25, 2016.

THE BANKING SECTOR SINCE BASEL III and DODD-FRANK

Well-regulated banks are essential to any economy; the failure of one bank, especially a large one can lead to systemic risk.[31] "The banking system . . . is a 'public good' that benefits the nation over and above the profits that it earns for the banks' shareholders. Systemic risks to the banking system are risks for the nation as a whole. Although the management and shareholders of individual institutions are, of course, eager to protect the solvency of their own institutions, they do not adequately take into account the adverse effects to the nation of systemic failure. Banks left to themselves will accept more risk than is optimal from a systemic point of view. That is the basic case for government regulation of banking activity and the establishment of capital requirements."[32]

To keep up with changes in the global economy, markets, and the size and complexity of banks, from time to time we must revisit risk management, liquidity, capital, and resolution requirements. The American people, especially those, who are not even beneficiaries of banks' profits should be at the heart of what legislators and regulators design in terms of laws, regulations, and supervisory processes for all financial institutions, but especially banks.

Even academics who have been advocates of deregulation are starting to see that less regulation is not necessarily a good thing.[33] Increased bank regulations do not adversely affect growth in gross domestic product. Whereas bank crises do cause GDP to decline. In fact, bank crises are always in the top five causes of sovereign default. Even when bank crises do not cause a sovereign default, they do often affect the cost of borrowing of the sovereigns, making it harder and more expensive for them to borrow for the needs of their countries.

When banks get into trouble from a capital or liquidity perspective, that is when they curb their lending. When companies no longer have access to the level of loans they need, they lay people off, especially if companies are already leveraged to begin with.

Bank Regulations and Lending

The statistician W. Edwards Deming once famously said, "In God we trust; all others bring data." He might well have been talking about bank regulations. Repeatedly, there are industry-supported efforts to roll back[34] bank regulation claiming that these rules "kill lending." These assertions need to be backed up by data. Bank regulations have not slowed down banks' lending, asset growth, earnings, dividend payouts, share buybacks, or their political contributions to legislators.

[31] "Systemic risk is the risk that a default by one financial institution will create a "ripple effect" that leads to defaults by other financial institutions and threatens the stability of the financial system." Hull, J., Risk Management and Financial Institutions, 2012.
[32] Feldstein, Martin. The Risk of Economic Crisis, January 1991.
[33] Wallheimer, Brian. "Why Less Regulation Isn't Necessarily Better," Chicago Booth Review, February 25, 2019.
[34] Rodríguez Valladares, Mayra "Dodd-Frank is Not the Enemy. Bad Loans Are," Bank Think American Banker, April 20, 2017.

Recent Basel analyses showed greater improvements for banks globally that were more heavily impacted by the Basel III reforms, "suggesting that the reforms were an important driver of this increased resilience. Greater resilience did not come at the expense of banks' cost of capital, as banks more heavily impacted by the reforms also saw a greater decrease in their cost of capital. There is no robust evidence and only some indication that banks with lower initial [Common Equity] CET1 ratios and [Liquidity Coverage Ratio] LCRs had lower loan growth than their peers. As the overall intent of the reforms has been to strengthen the banking system and mitigate contagion to other parts of the financial system, the report also analyses market-based systemic risk measures, which showed improvement following implementation of the reforms."[35]

Globally, bank lending grew in aggregate after the Basel III reforms both for banks above the initial median of a given regulatory ratio and banks below the initial median of that regulatory ratio, for each of the four regulatory ratios under analysis.[36] Importantly, increases in capital requirements do not have to lead to cuts in lending, especially since banks can shed riskier assets to reduce their risk weights.

In 2020, World Bank researchers found that bank "capital can help banks smooth the supply of credit during crisis years. In times of economic turmoil, banks with larger capital buffers are somewhat protected from cuts in lending."[37] In fact, countries with better capitalized banking systems in 2006, prior to the start of the financial crisis, experienced higher lending growth during and after the crisis. According to Professors Stephen G. Cecchetti and Kermit L. Schoenholtz, "higher capital did not slow the economy. Second, we reported on research at the BIS establishing that better capitalized banks experience lower funding costs, higher growth of debt funding, and higher growth of lending volumes."[38]

Importantly, when banks are better capitalized, their probability of default declines. This leads to a decline in banks' borrowing costs. Credit rating agencies, lenders, and bond investors react favorably when banks' credit quality is higher. As Professor Juliane Begenau points out in her research, the reduction in cost of borrowing allows banks to continue lending and in fact can allow them to lend more than when their credit quality was poorer.[39] The Federal Reserve Bank of Philadelphia's research[40] has also found that better-capitalized banks create more funding liquidity and lend more even during times when cash deposit balances are falling.

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[35] "Evaluation of the Impact and Efficacy of the Basel III Reforms," Basel Committee on Banking Supervision, December 2022.

[36] "Evaluation of the Impact and Efficacy of the Basel III Reforms -Annex," December 2022.

[37] "Bank Capital Regulation ," Global Financial Development Report, 2019/2020, World Bank, Chapter 3 p. 85.

[38] Cecchetti, Stephen and Kermit Schoenholtz. "Better Capitalized Banks Lend More and Lend Better," December 5, 2016.

[39] Begenau, Juliane "Capital Requirements, Risk Choice, and Liquidity Provision in a Business Cycle Model," Standford Graduate School of Business, January 14, 2019.

[40] Thankor, Anjan and Edison Yu. "Funding Liquidity Creation By Banks," February 2023.

Banks that perform poorly on stress tests because they are not well capitalized, tend to reduce lending. Yet, "those banks may not increase the supply of loans that perform well under the stress test. This portfolio rebalancing thus can lead to an overall reduction of credit supply relative to banks that don't experience large stress-test losses."[41]

Additionally, in 2019 the Financial Stability Board found that Basel III rules had not hurt lending to small-medium enterprises in the Basel Committee jurisdictions.[42] In fact, what impacts small businesses adversely are often poor due diligence and underwriting processes at banks. According to an analysis conducted by Moody's Analytics, "although small business loans constitute more than a quarter of the lending volume in the US, most banks do not have effective systems and practices to accurately and efficiently assess small business risk and seamlessly conduct lending activities." Importantly, Moody's research also found that "small businesses also face a unique set of challenges that make the process of getting credit difficult, including:

- Lack of knowledge of their credit risk and how they can improve their business credit standing.
- Opacity of banks' credit assessment process and expectations.
- Inconsistent requirements among banks in terms of the lending process, necessary data, and documentation.
- Difficulty in maintaining current and accurate financial reporting due to manual processes and lack of expertise.[43]

Bank regulations do not need to lead to a reduction in loans to credit worthy individuals and companies of all sizes to meet capital ratios. A capital ratio is comprised of a numerator and a denominator. Banks can increase the numerator, that is, they can issue more equity and loss absorbing debt issuance. Banks can also increase the numerator by increasing their retained earnings and reducing dividend payouts and share buybacks. To reduce the denominator, banks can reduce risks. For example, banks can reduce holdings of riskier assets such as poor credit quality loans, below investment grade bonds, securitizations, and derivatives that consume more capital. Moreover, they can use credit and interest rate derivatives to mitigate risks in their loans, securities, or derivatives assets, which in turn reduces their risk weights helping them meet capital requirements.

Bank Credit Quality

As of mid-September 2023, globally systemically important banks and large regional banks in the U.S. have a credit rating, ranging from A – AA-. The banks that are rated in the A range are considered of high credit quality with "a strong capacity for timely payment of financial

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41 Bräuning, Falk and José L. Fillat. "The Impact of Regulatory Stress Tests on Bank Lending and Its Macroeconomic Consequences," Research Department Working Papers, Federal Reserve Bank of Boston, December 12, 2020.

42 Rodriguez Valladares, Mayra, "Basel III Rules Have Not Hurt Lending To Small-Medium Enterprises," Forbes, June 7, 2019.

43 Arun, Avinash, and Helene Page. "The Future of Small Lending," Moody's Analytics, November 2016.

commitments which may be more vulnerable to changes in circumstances/economic conditions."[44] The banks in the AA range are considered to be a very high credit quality with a "very strong capacity for timely payment of financial commitments which is not significantly vulnerable to foreseeable events."[45]

Current Credit Ratings

Entity Name	Long-Term Issuer Default Rating	Rating Outlook
American Express Company	A	Stable
Bank of America Corporation	AA-	Stable
Citigroup Inc.	A	Stable
Fifth Third Bancorp	A-	Stable
Huntington Bancshares Incorporated	A-	Stable
JPMorgan Chase & Co.	AA-	Stable
Morgan Stanley	A+	Stable
State Street Corporation	AA-	Stable
TD Bank, N.A.	AA-	Stable
The Bank of New York Mellon Corporati	AA-	Stable
The Goldman Sachs Group, Inc.	A	Stable
The PNC Financial Services Group, Inc.	A+	Stable
Truist Financial Corporation	A+	Stable
Wells Fargo & Company	A+	Stable

Source: Data from FitchRatings as of September 15, 2023.

Asset Growth

At the beginning of 2010, when many of us were still reeling from the financial crisis, assets at banks in the U.S. were $11.7 trillion. Now U.S. banks hold assets of $22.8 trillion,[46] an increase of almost 100%. This significant level of bank asset growth surpasses U.S. GDP growth from 2010 to August 2023; GDP in 2010 was $15 trillion in 2010 and as of the end of June 2023 it stood at $26.8 trillion, an increase of 79%.[47] Even as different Basel III and Dodd-Frank rules started being implemented in the years between 2010-2016, asset growth at U.S. banks did not slow down.

[44] FitchLearning, September 2023.
[45] Ibid.
[46] "Total Assets, U.S. Commercial Banks," Federal Reserve Bank of St. Louis, September 6, 2023.
[47] Bureau of Economic Analysis, August 30, 2023.

Total Assets, U.S. Commercial Banks

Source: FRED, Federal Reserve Bank of St. Louis.

J.P. Morgan now represents about 14% of total U.S. banking assets; the ten largest banks in the U.S. represent about 55% of all banking assets.[48] Given their asset size and interconnectedness to each other, these banks' financial health is especially critical to the economy.

Rank	Bank / Holding Co Name	Consolidated Assets ($ Millions)
#1	JP Morgan Chase Bank	$3,267,963
#2	Bank of America	$2,518,290
#3	Citibank	$1,721,547
#4	Wells Fargo	$1,687,507
#5	US Bancorp	$590,460
#6	Truist Bank	$564,837
#7	PNC Bank	$556,314
#8	Goldman Sachs	$490,799
#9	Capital One	$469,432
#10	TD Bank	$401,245

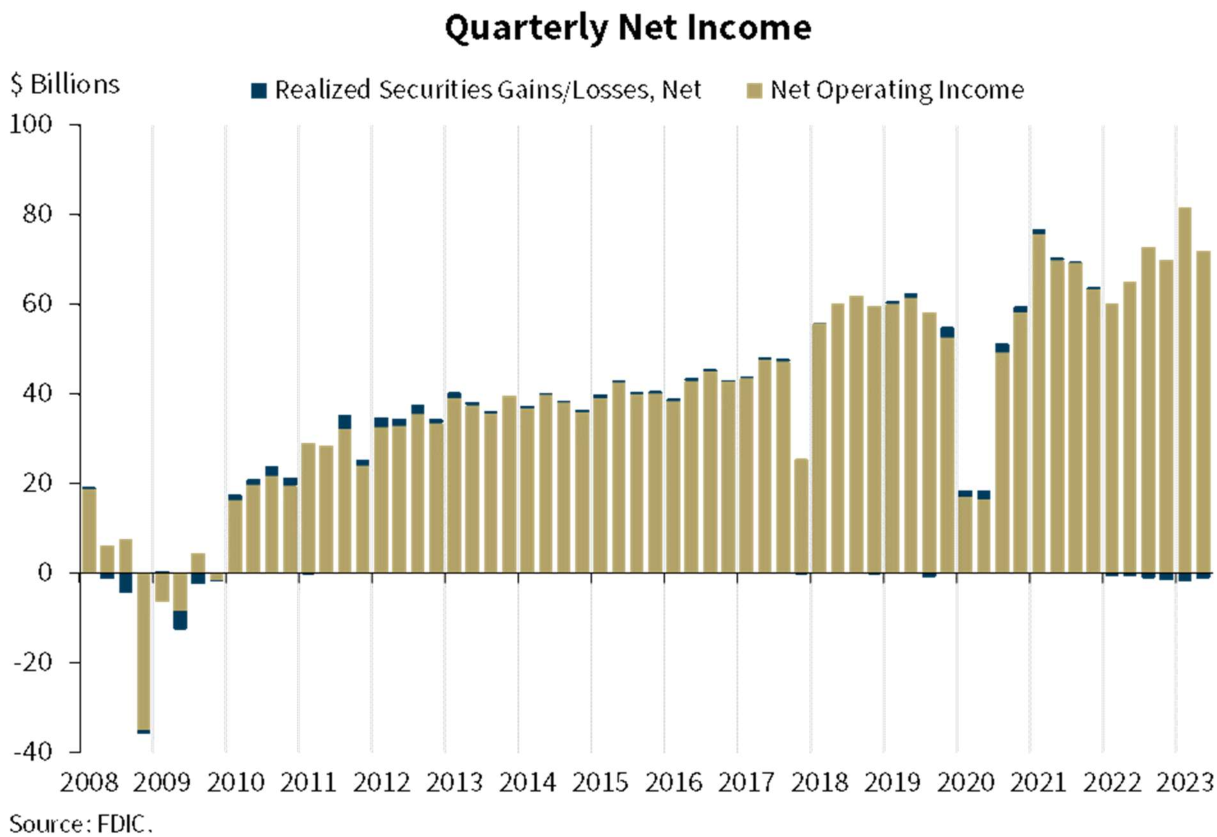
Source: Visual Capitalist.[49]

Earnings

In 2010, banks' net income was about $20 billion; as of the second quarter of 2023, the aggregated net income of U.S. banks was at historic highs of $70.8 billion,[50] almost a rise of

[48] "Large Commercial Banks," Federal Reserve Statistical Release, June 30, 2023.
[49] Koop, Avery. "Visualized: The 100 Largest U.S. Banks by Consolidated Assets," June 26, 2023.
[50] "Quarterly Banking Profile," FDIC Quarterly, Volume 17, Number 3, September 15, 2023.

255%. Even in the years of significant capital, derivatives, leverage, and liquidity rules implementation of 2012-2016, bank earnings rose every year.



Dividends

In 2022, banks in the U.S. paid record-high levels of dividends, $59.01 billion industrywide.[51] This is an increase of 7% from 2021, which had been the previous record-high dividend payout of $55.30 billion. Not only have banks been increasing their dividend pay-outs, they have also significantly increased their share buybacks.[52] Both dividends and funds utilized for share buy backs could be used for banks capital or liquidity, increasing their safety and soundness. This would increase their credit quality and lower their cost of borrowing, again helping them continue to lend to the real economy.

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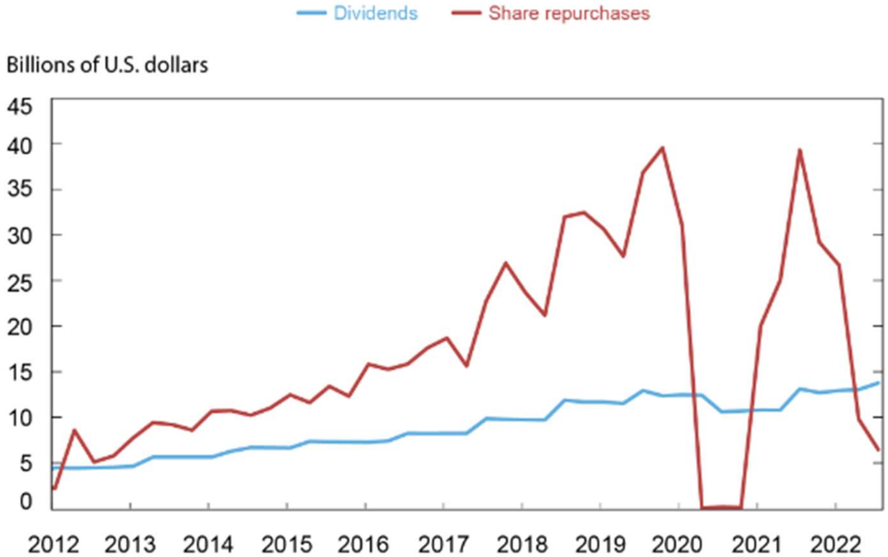
[51] "US Bank Dividends Reach ALL-Time High in 2022," SP Global, April 12, 2023.
[52] Hirtle, Beverly, and Sarah Zebar. "Bank Profits and Shareholder Payouts: The Repurchase Cycle," January 9, 2023.

Dividends and Share Repurchases
Twenty-one Large Bank Holding Companies, 2012:Q1-2022:Q3

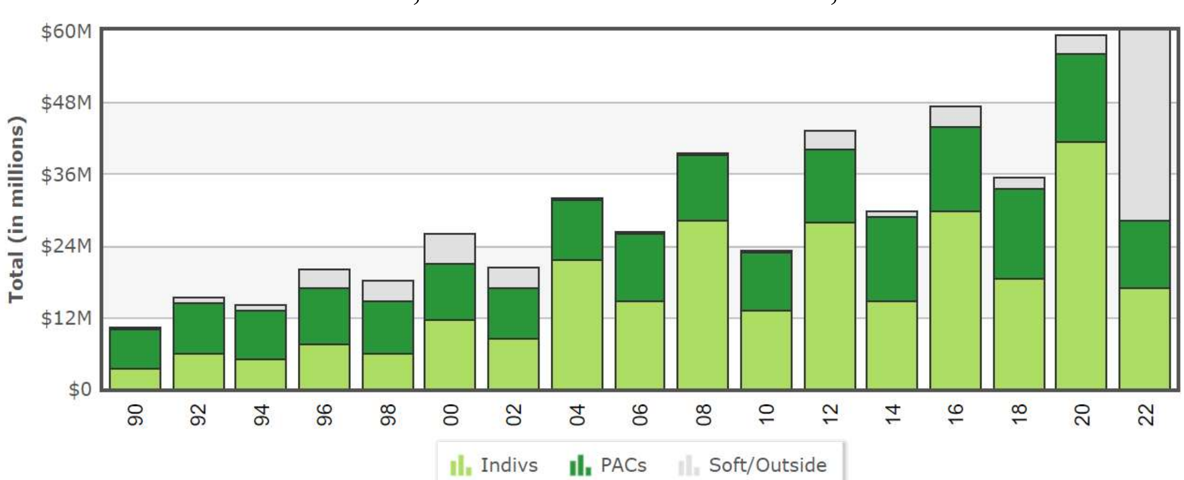


Source: FR Y-9C.
Note: For a time-consistent sample, the data cover twenty-one of the thirty-four bank holding companies subject to the Federal Reserve's shareholder payout restrictions during the COVID-19 pandemic.

Political Contributions

In 2010, banks' political campaign contributions totaled about $24 million. By 2022, banks' political contributions rose to $60 million,[53] an increase of 150%.

Commercial Banks, Political Contribution Trends, 1990 - 2022



[53] Open Secrets.

Individual banks, as well as trade associations, are significant contributors to political campaigns and wield enormous influence on legislation as well as rule making.

Top Contributors From the Banking Sector, 2022

Client/Parent	Total
American Bankers Assn	$9,896,000
Citigroup Inc	$5,290,000
Independent Community Bankers of America	$4,792,615
Truist Financial	$4,425,000
Wells Fargo	$4,010,000

RENEWED GLOBAL FOCUS ON BANK REGULATIONS

This year's bank failures in the U.S. and Switzerland have renewed regulators' attention on the state of regulations implemented in the years immediately following the 2007-2009 financial crisis. Several countries released or preparing updates on existing international and local national regulatory frameworks.[54]

Global

- **ESG, 2023-24:** BCBS to assess if changes are needed to prudential regime to address climate-related financial risks and how banks and supervisors use climate scenario analysis
- **MACROPRUDENTIAL, 2023-24:** BCBS guidance to limit the risks of banks' interconnections with NBFIs
- **IRRBB, 2023-24:** BCBS to update shock scenarios included in IRBB standard
- **RESOLUTION, by End-2023:** FSB to publish report on effectiveness of resolution framework
- **DIGITAL ASSETS, July 2023:** FSB to finalise recommendations on the regulation of cryptoasset activities and global stablecoin arrangements
- **OP. RISK, 2023-24:** BCBS to develop supervisory principles on banks' outsourcing practices and reliance on third and fourth-party service providers

Asia-Pacific

- **BASEL, 2H23:** Hong Hong, Malaysia, Singapore and Taiwan to finalise adoption of Basel III end-game legislation
- **BUFFERS; 2H23:** South Korea to confirm introduction of a stress capital buffer linked to supervisory stress test
- **IRRBB, 3Q23:** APRA to finalise revised IRRBB standards and calculation of related capital charge for IRB banks
- **LIQUIDITY, 2023:** New Zealand to consider adoption of LCR and NSFR
- **DIGITAL ASSETS, 2023:** HKMA to consult on adoption of BCBS' prudential treatment of cryptoasset exposures
- **ESG, 2023:** HKMA to integrate climate risk as part of supervisory stress test

Europe

- **BASEL, 2H23:** EU, Switzerland and the UK to finalise implementation of Basel III 'endgame' rules
- **STRESS TESTING; July 2023:** Publication of EU-wide stress test results
- **STRESS TESTING; 3Q23:** Publication of results of UK annual cyclical scenario stress-test
- **ESG, July 2023:** EBA to deliver a report on the feasibility of incorporation of environmental risks in Pillar 1 framework
- **BUFFERS, 2H23:** Report and potential draft EU legislation revising the macroprudential capital framework, including capital buffers regime
- **RESOLUTION, 2H23:** EU legislators to discuss amendments to EU crisis management and deposit insurance (CMDI) framework
- **ESG, 2H23:** EBA to consult on ESG risk management guidelines and internal climate stress testing
- **OTHER, 2H23; UK:** Treasury consultation on ring-fencing reforms

Americas

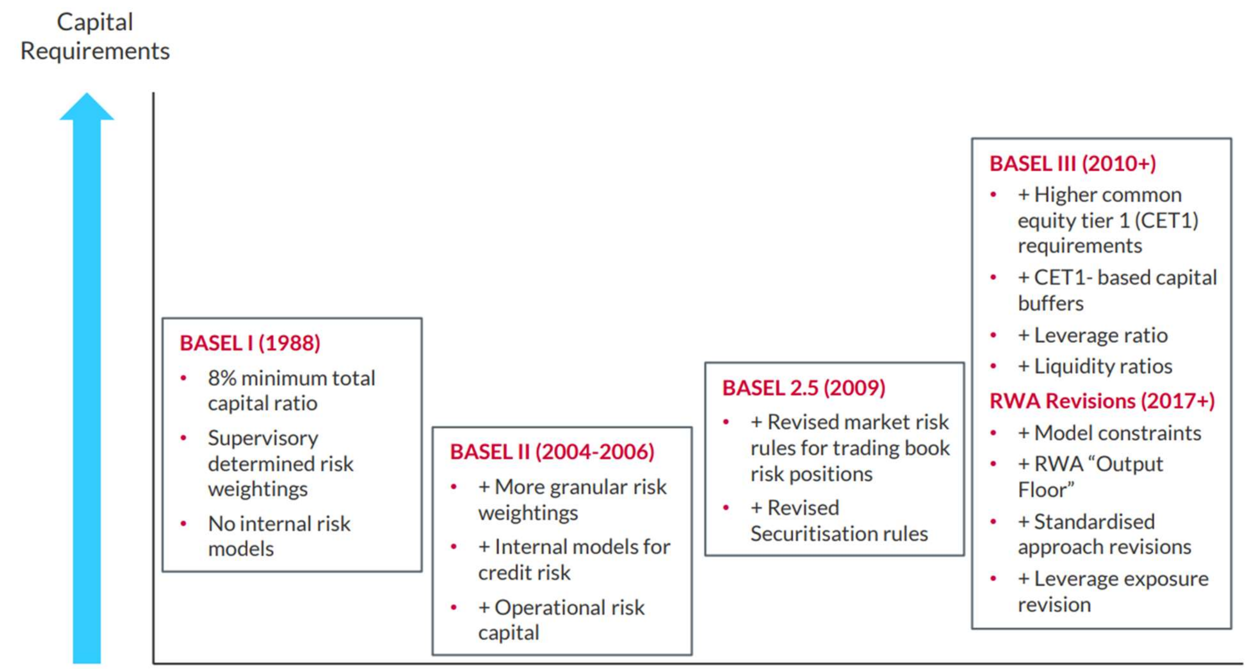
- **BASEL, BUFFERS, LEVERAGE RATIO,**
- **2-3Q23:** US draft implementing final Basel III rules
- **RESOLUTION, 3Q23:** US draft rule expanding TLAC requirements to large non-G-SIBs
- **DIGITAL, 2H23:** US authorities proposals (regulation or supervision) to mitigate systemic financial risks posed by digital assets
- **ESG, 2023:** US federal supervisors to conduct pilot climate scenario analysis exercise
- **MACROPRUDENTIAL, 2H23:** Canada's OSFI to tighten debt serviceability restrictions on residential mortgage loans
- **OP. RISK; 3Q23:** OSFI to consult on operational resilience guidance

[54] Hussain, Monsur and Francois Xavier Deucher. "Global Bank Regulatory Webinar," FitchRatings, July 13, 2023.

BASEL III ENDGAME

It is important to consider why Basel Committee members, including the U.S. decided to update and strengthen the Basel III framework. The Basel Committee on Banking Supervision, of which the U.S. is a founding member, has always been aware that economies, markets, and business cycles change. Banks are much larger and more complex than when the Basel Committee was first created in 1974 and from when The Basel Accord, now referred to as Basel I, was finalized in 1988. We should all be very worried if bank regulators from counties with large banking sectors like ours were still using regulations based only on Basel I.

Progression of The Basel Accord



Source: Fitch Ratings

Basel Committee members have repeatedly stated their concern about banks' flexibility in use of internal models to measure their credit, market, and operational risk. These measurements greatly influence banks risk weights and hence their capital levels to help them sustain unexpected losses.[55]

In his excellent paper, 'Math Gone Mad,' Durham University's Professor of Finance and Economics Kevin Dowd argues that 'most risk models, regulatory risk models, in particular, are textbook examples of the ritualistic fetishes associated with primitive tribes.' Legislators and the market have allowed banks to treat regulatory capital models as if they were 'ritual implements with magical properties and is the very essence of superstition.'[56]

[55] Rodriguez Valladares, Mayra. "Signs for Hope in Basel's Bank Agenda," The New York Times, January 28, 2015.
[56] Dowd, Kevin. "Math Gone Mad," September 3, 2014.

Whether we are talking about credit, market, or operational risk models, regulatory capital models are comprised of three components: inputs comprised of data if they exist and assumptions, a processing mechanism that transforms the inputs into estimates, and a reporting element that translates the estimates into useful information for business executives. Regulatory capital models could be very useful to market participants, the media, and importantly regulators, if all the three components were disclosed uniformly and in a timely manner to the market; we are very far from having market transparency, which exchange commissions like the US SEC, should really push. Stanford Professor Anat Admati, correctly argues that 'banks' opacity makes it difficult to be reassured by regulators' stress tests' which themselves, rely a lot on banks' data and calculations.[57]

In 2013, the Basel Committee released an analysis where it found that even banks of a similar profile were coming up with very different risk weights when measuring the credit and market risks of their assets, both loans and securities. At the time, I wrote that the fact that large banks had too much flexibility in their model design, inputs, and calculations, was one of the worst kept secrets on Wall Street.[58] The larger the bank, the more that it has professionals and technological resources to be flexible or outright manipulate inputs to models. In other words, modelers can choose qualitative and quantitative assumptions to make the model give the risk and capital levels they want.

Model flexibility was a primary driver for the Basel Committee to update the Basel III framework. It finalized the update on Basel III on December 2017. Boards of Directors, executives, risk managers, and modelers at banks around the world have known about these updates for over five years.

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[57] Rodríguez Valladares, Mayra. "Maddening Models," American Banker, November 4, 2015.
[58] Rodríguez Valladares, Mayra. "More Transparency Needed in Risk Weights," American Banker, July 23, 2013.

Basel III Reform Summary

Reforms/topics	BCBS status	Key requirements/changes	Key implications	Creditor impact
Regulatory capital To be potential review	Standard issued Dec 10; implementation between Jan 13 and Jan 19 Under review, report in 1Q22	• Stricter definition of eligible capital, non-filtering of Other Comprehensive Income • Doubling of CET1 requirement, increased deductions from CET1 • AT1 conversion/write-down based on CET1 trigger; simpler Tier 2 structure • Possible review of role of hybrid instruments, from coronavirus pandemic	• Improved going-concern loss-absorbency, reduction in return on equity metrics • Uncertainty regarding asset class	• (+) Higher capital buffers; • (-) For AT1 holders, uncertainty of regulatory driven embedded-call option
RWAs Significant changes	• CVA: final Jul 20, live Jan 23 • SA-CCR: live Jan 17 • Securitisation: live Jan 19 • Market risk: updated Jan 19, go live Jan 23 • Credit/Op Risk: Final issued end-17, live Jan 23+ • Output (capital) floor: Final issued end-17, live Jan 23+ • **Crypto assets proposal June 21**	• Credit valuation adjustment revisions broaden scope, eliminates use of models • Standardised Counterparty Credit Risk improves collateral and netting recognition • Securitisation regime increases RW floors, sensitivity of non-modelled approach • Final market risk standards overhauls all approaches but especially the non-modelled approach, while setting a high bar for validating, approving models • Basel III revisions constrain internal risk models via input floors, no loss-given default for large corp/FIs; Revised SA credit and op risk increase risk sensitivity • Permanently restricts modelled capital requirements as 72.5% of hypothetical standardised outcomes, per risk class. Five-year phase-in from Jan **2023** • Consults **on 1250% risk weight to the maximum of long and short crypto positions**	• Promotion of more risk-sensitive standardised approaches in preference to use of internal model approaches; simplification of approach options and potential improved comparability across banks; more conservative RWAs • **Disincentivises crypto holdings**	• (+) More conservative and comparable RWAs, increased capital buffer; mildly negative for some loss of risk sensitivity regarding capital allocation on assets
Additional capital buffers Some changes; Potential changes	Final issued Dec 10; implementation between Jan 13 and Jan 19 • Under review, report in 1Q22	• Fulfilled via CET1, subject to limits on distributions if pierced: Capital conservation buffer (CCB, 2.5% of RWAs) for prudency; countercyclical capital buffer (CcyB, 0%-2.5% RWA) as private credit growth extension of CCB • G-SIB buffer (1%-3.5% of RWAs), updated annually (domestic buffer discretionary) • Basel review on capital buffers may result in potential changes to buffer regime- in light of banks' hesitation to pierce capital buffers during the 2020-2021 pandemic	• Improved going-concern loss-absorbency, reduction in return on equity metrics (ceteris paribus), less procyclical capital ratios • Potential changes to buffer calibration	• (+) Increased capital buffers generally creditor positive; • (-) If buffers pierced, constraints on hybrid debt distributions
Leverage ratio Some changes	• Ratio disclosure from Jan 15; live from Jan 18 • Revisions Dec 17, live Jan 23	• Global minimum 3% ratio (Tier 1 capital/leverage exposure) at consolidated entity • Revisions subject G-SIBs to AT1 buffer (50% of CET1-based buffer); change exposure definition (exempt true-sale securitisations, central bank reserves temporarily; unsettled trade clarification; cash variation margining)	• Blunt guard-rail against the "optimisation" of RWAs, increases capital carried on lower-risk assets (e.g. cash, high-quality residential mortgages/sovereign)	• (+) Check against model risk, leads to more conservative capital allocation • (-) Incentivises high RWAs
Liquidity regime	LCR: Final issued Jan 13; disclosures due from Jan 15 NSFR: Final issued Oct 14, disclosures due from Jan 18	• Short-term (30-day) liquidity coverage ratio (LCR) requires >100% ratio of high-quality liquid assets (HQLA) during a 30-day stressed outflow • Longer-term (1-year) net stable funding requirement (NSFR) ratio requires >100% 1-year funding against stable funding requirements (regulatory capital and >1-year debt recognised as stable funding)	• Incentivises the gathering of deposits, longer-term wholesale funding, reduces short-term wholesale funding reliance. Increases desirability of high-quality liquid securities	• (+) More robust liquidity • (-) Cost of funding and cost of carry of high-quality liquid assets
Interest rate risk in the banking book	Basel standards issued Apr 16; reporting and disclosures due from Jan 18	• Retain Pillar 2 risk capture (vs Pillar 1 requirements), prescribed disclosures • Six prescribed shock and stress scenarios, capture of credit spread risks • Updated supervisory standards, use of standardised method as sanction	• Greater standardisation of behavioural and modelling assumptions, may level playing field, increased comparability	• (+) Resilience from updated stresses and improved transparency/ comparability
Bank resolution/TLAC	TLAC final standard Nov 15	Refer to Fitch Bank Resolution Primer	• Refer to Fitch Bank Resolution Primer	• (-) Increased burdensharing
Enhanced Pillar 3 disclosures Significant changes	Basel standards issued Jan 15; implementation by end-16; Consolidated templates issued Mar 17, updated Dec 18	• Disclosures via fixed-form quantitative templates, more detailed tables • Credit data more granular, increased frequency (up to quarterly vs annual) • Draft guidelines published Jul 16 include new TLAC disclosure templates and increase scope of fixed-form templates; consolidates all Basel disclosures • Updated December 2018 template reflects final Basel III reforms	• More granular fixed-form quantitative tables; more prescriptive qualitative disclosures; to be presented in one document	• (+) Improved transparency, comparability • (+) TLAC disclosures aid debt loss and recovery analysis

Source: Fitch Ratings, Basel Committee for Banking Supervision, Financial Stability Board

Timeline

In the U.S. bank regulators have released their version of the Basel III Final Rules in the form of a Notice for Proposed Rulemaking on July 27, 2023.[59] The timeline in the U.S. for the so-called Basel III Endgame implementation is very reasonable. The three bank regulators have given banks over 120 days to comment on the U.S. rules proposed on July 27, 2023. Normally the comment period is about 90 days. U.S. regulators have a very democratic process for rule writing. Even before the proposed rules were released, trade associations[60] asked for a 120-day comment period, and the agencies granted this request. Regulators invite public comment on any proposed rules for banks. Not only do banks, other financial institutions (OFIs), legislators, trade

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[59] Office of the Comptroller of the Currency, Federal Reserve Board, and Federal Deposit Insurance Corporation. Basel III Notice of Proposed Rulemaking, July 27, 2023.

[60] American Bankers Association, Bank Policy Institute, Financial Services Forum, Institute of International Bankers, Securities Industry and Financial Markets Association (SIFMA), Forthcoming Proposal to Implement the Basel Agreement of 2017 (Joint Trades)

associations, consumer groups, consultants, rating agencies, and academics participate in the comment process, so can any individual submit comments.

Regulators read and analyze the comments before finalizing the rules. Once the three regulators finalize the rules, they give banks time to implement the rules. In this case, large banks would begin transitioning to the updated Basel III framework on July 1, 2025, and banks have until July 1, 2028, to be in full compliance. The public comment period has already started, and the bank regulatory agencies have started to collect data to in order to refine their estimate of the proposal's impact.

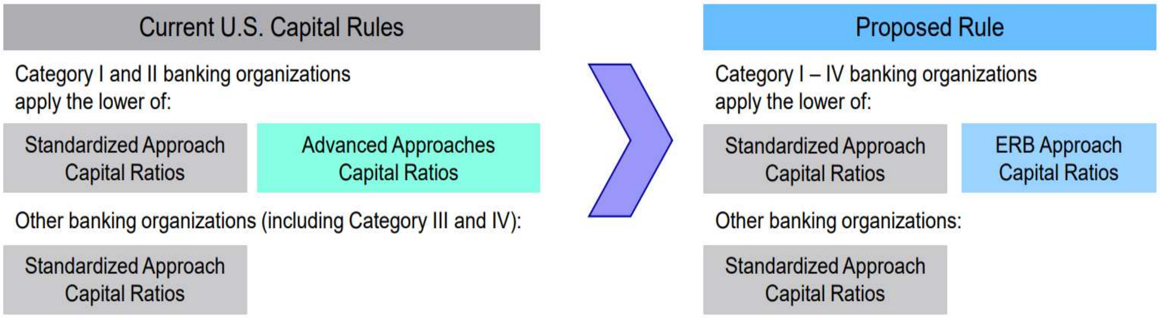
Additionally, many banks have already been conducting gap analyses to review what personnel or technological resources they might need to comply. Importantly, bank regulators always encourage bank professionals tasked with key regulation implementation roles to reach out to them to discuss if problems are arising with implementation.

Basel III Final Rules Global Implementation

Jurisdiction	Timeline begins (E*)
BCBS	January 1, 2023
European Union	January 01, 2025**
United Kingdom	January 01, 2025 (E)
Canada	Fiscal Q2 2023
Australia	January 1, 2023
China	January 01, 2024 (E)
Hong Kong	January 01, 2024 (E)
Japan	March 31, 2024 (E)
Singapore	July 1, 2024
United States	July 1, 2025 (E)
Hong Kong	January 01, 2024 (E)
Japan	March 31, 2024 (E)
Singapore	July 1, 2024
United States	July 1, 2025 (E)

Highlights of Proposed Regulatory Capital Rule

The main drivers of the proposed U.S. Basel III rules are (1) improving the risk sensitivity of capital requirements, (2) reducing banks' reliance on their internal models for credit and operational risks, (3) improving comparability of capital requirements and (4) conservatism. The Basel III reforms include revised credit risk approaches, standardized operational risk approach, credit valuation adjustment framework, leverage ratio revisions, and an aggregate output floor. The proposed rule consists of amendments applicable to large banking organizations and to banking organizations with significant trading activity.



Source: Graphic by Davis-Polk.[61]

Unrealized Losses and Gains

It is important that regulators are proposing that unrealized gains and losses from certain securities be included in banks' capital ratios. Silicon Valley Bank's failure has demonstrated how quickly values of securities can decline when interest rates change. As depositors and market participants became aware of the extent of Silicon Valley Bank's mounting unrealized losses, it quickly became illiquid and undercapitalized.

Operational Risk

The proposed changes to operational risk measurement by the U.S. bank regulators are long-overdue. Operational risk comprises a threat to an institution's earnings and liquidity due to problems with people, processes, technology/systems, and external events (i.e., third party vendors, civil unrest, terrorism, and natural disasters.) Operational risk often plays a very significant role in the cause of a banking crisis. And it certainly played a big part in the 2007-2009 financial crisis as exemplified by cases of internal and external fraud, over dependence in models, and lack of due diligence in lending and securitization underwriting.[62]

For fifteen consecutive years, concern about cyber risk security has been in the top ten operational risk concerns of institutions in the financial industry; presently it is the top concern.[63]

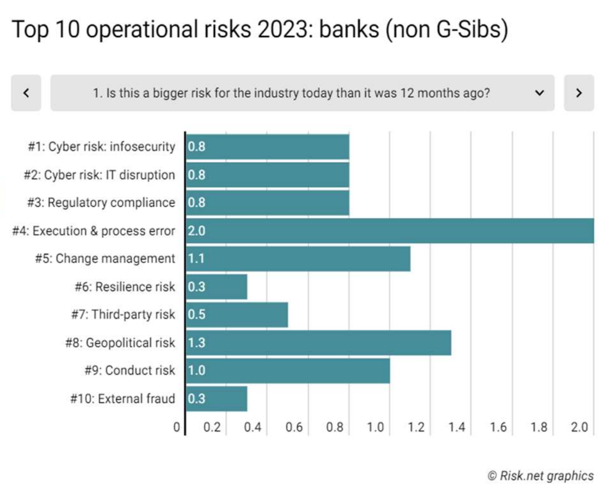
[61] "U.S. Basel III Endgame Proposed Rule," Davis-Polk. September 14, 2023.
[62] Examples of settlements and financial fraud, U.S. Department of Justice.
[63] "Top Operational Risks for 2023," Risk.net, March 8, 2023.

Top 10 Operational Risk Concerns For the Financial Industry

Risk	2023	2022	Change
Cyber risk: information security	1	5	↑
Regulatory compliance	2	10	↑
Cyber risk: IT disruption	3	1	↓
Third-party risk	4	7	↑
Resilience risk	5	6	↑
Execution & process errors	6	–	↑
Change management	7	–	↑
Geopolitical risk	8	4	↓
Data & records management	9	–	↑
Conduct risk	10	8	↓

Source: Risk.net Staff

For both globally systemically important banks (G-SIBs) and those that are not G-SIBs, cyber risk security issues are also the top concern.[64]



Operational risk is a significant source of risk for US banks. Banks lose millions of dollars every year due to failing to identify, measure, control or monitor operational risk exposures. From 2000- August 2023, the twenty largest bank operational risk fines internationally due to process weaknesses and violations totaled about $325 billion.[65] 67% of those fines, or $218 billion, were imposed on US headquartered banks.

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[64] Ibid.

[65] "100 Most Penalized Companies," Good Jobs First, Violations Tracker, August 2023.

Banks with the Largest Fines (2000 – 2023)

Institutiuon	Headquarters	USD bn)	Key Triggers
Bank of America	US	87.0	Mortgage, securities, and consumer abuses
JPMorgan	US	39.0	Securities violations, investor protection, consumer protection violations
UBS	Switzerland	31.0	Securities violations, investor protection, consumer protection violations
Wells Fargo*	US	27.5	Concealed losses, fictitious accouts, Ponzi schemes, consumer abuses
Citigroup	US	27.0	Securities violations, investor protection, consumer protection
Deutsche Bank	Germany	20.0	Fraud, securities vuilations consumer abuses
Goldman Sachs	US	19.0	Securities violations, investor protection, foreign corruption practices
NatWest	UK	14.0	Price fixing, securities violation, price fixing
Credit Suisse Group	Switzerland	11.8	Pricing misdeeds, money laudering, aiding tax evaders
Morgan Stanley	US	10.5	Securities violations, investor protection, price fixing
BNP Paribas	France	10.3	Economic sanctions, price fixing, investor protection violations
Barclays	UK	7.5	Price fixing, securities and investor protection violations
HSBC	UK	7.4	AML deficencies, price fixing, securities and banking violations
Societe Generale	France	2.3	Unauthorized trading, economic sanctions, and price fixing
Danske Bank	Denmark	2.1	AML deficencies
Standard Charter	UK	2.0	Economics sanctions, AML deficiencies, price fixing
Truist	US	1.7	Consumer protection, false act claims, and mortgage abuses
US Bancorp	US	1.6	AML deficencies, Fake Claims Act, consumer protections violations
Bank of New York	US	1.6	Benefit plan administrator, banking, and investor protection violations
State Street	US	1.2	Benefit plan administratorviolations, investor protection violations, and fraud

The latest available data shows that of the five largest operational risk losses at financial institutions in August four were at banks.

Top 5 Operational Risk Losses at Financial Institutions in August 2023[66]

1. Wells Fargo - $200 million
Wells to pay USD 200 million for staff misuse of personal devices and record-keeping failures
*2. Société Générale - $110 million
SocGen to pay USD 110 million for staff misuse of personal devices and record-keeping failures
*2. BNP Paribas - $110 million
BNP to pay USD 110 million for staff misuse of personal devices and record-keeping failures
3. Allstate - $90 million
Allstate pays USD 90 million to settle claims it misled investors over underwriting standards
4. Wells Fargo - $75 million
Wells Fargo to pay USD 75 million for charging excessive advisory fees on legacy accounts
5. Corficolombiana - $60.6 million
Corficolombiana to pay USD 60.6 million to SEC and DoJ over bribery and corruption scheme

*Disclaimer: ORX News added two losses at number 2 as the loss amounts were identical; however, the events were unrelated, therefore considered two separate loss events.

[66] O.R.X. September 2023.

Operational risk identification, measurement, control, and management has long been the most neglected part of overall risk management at banks.[67] Until the Basel Committee included operational risk in Basel II in 2006, banks globally tended to define operational risk in different ways, even in the same institution. Not having a uniform decision across an enterprise then makes it very difficult to properly identify, measure, and control operational risk.

Even when operational risk was included in Basel II, it was the least robust part of Pillar I, in comparison to credit and market risks. Additionally, in just about every jurisdiction, banks spent significantly more time trying to comply with credit and market risk measurements, while operational risk received a lot less attention. Moreover, allowing the largest banks the flexibility to use models to measure operational risk has also meant that it is very difficult for market participants to understand the extent of operational risk banks have and how it is being mitigated, if at all, in some cases. Improving the performance of operational risk models would enable bank risk managers "to make more informed risk decisions by better matching economic capital and risk appetite and allows regulators to enhance their understanding of banks' operational risk."[68]

Under the proposed method to measure operational risk, capital would be calculated using:

- A Business Indicator (BI) metric - a financial statement calculation designed to capture the volume of activities that carry operational risks, a proxy for an institution's risk profile
- An Internal Loss Multiplier (ILM) – a measure of the aggregate historical operational risk losses in relation to the size of an institution[69]

What is Missing from Basel III NPR?

The proposed rules do not require that regional banks in Category III measure their liquidity risk during periods of economic, credit or market stress. The Liquidity Coverage Ratio is one of the most important changes from Basel II and was finalized in the US Basel III rules in 2015. Unfortunately, due to the Economic, Growth, Recovery, and Regulatory Relief and Consumer Protection Act of 2018, banks the size of Silicon Valley Bank and First Republic were not required to calculate their LCR or to report it to the market. This was a big mistake. If bank regulators, market participants, academics, consultants, and journalists had had access to those banks' liquidity levels under simulated stresses, collectively they could have imposed market discipline. Most financial institutions that have failed, such as Lehman Brothers or Silicon Valley Bank, did so because they were illiquid.

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[67] Rodríguez Valladares, Mayra "BankOp Risk: Ignored More Than a Bridesmaid," American Banker, February 22, 2013.
[68] Curti, Filippo, and Marco Migueis. "The Information of Past Losses in Operational Risk," Finance and Economics Discussion Series, Federal Reserve Board, August 11, 2022.
[69] Carrivick, Luke. "Fed Announces Basel III Endgame," O.R.X. August 1, 2023

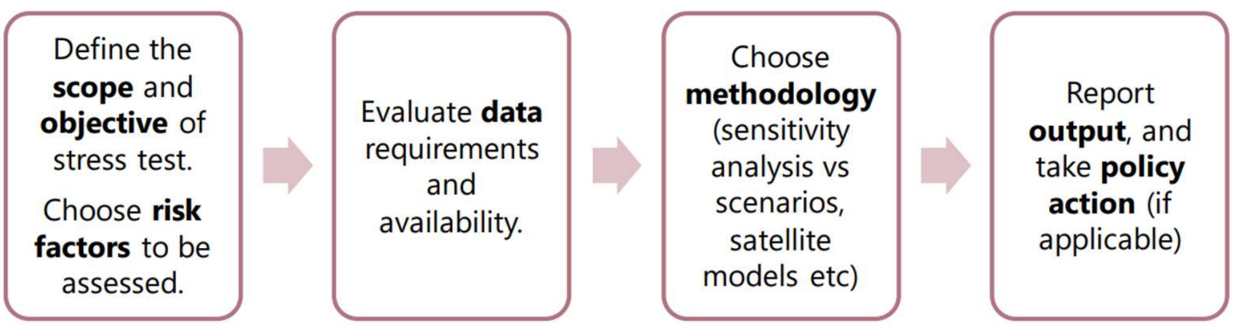
THE WALL STREET REFORM and CONSUMER and PROTECTION ACT

Due to the 2007-2009 financial crisis, legislators passed the Wall Street Reform and Consumer Protection Act (also known as Dodd-Frank Act) in 2010. Amongst many important requirements, Title I of the Dodd-Frank Act contains requirements for banks to evaluate their levels of capital and liquidity under economic, credit, and market stress scenarios. Title I also requires large banks to write Bank Recovery and Resolution Plans (living wills.)

Stress Tests

It is important to note that guidance on portfolio and enterprise-wide stress tests for banks has existed under Pillar II of Basel II since 2006. Now, under Basel III, Pillar II recommends that banks have independent professionals who can evaluate the Internal Capital Adequacy Assessment Process (ICAAP) conducted by banks. Pillar II recommends that every quarter banks design their own scenarios to run portfolio and enterprise-wide stress tests. They should disclose scenarios to regulators. Banks are recommended to incorporate interest rate and liquidity shocks on a quarterly basis.[70] The key is to disclose the stress test results not only to regulators, but also to the public. Market discipline is at the cornerstone of Basel III's third pillar, 'Risk Disclosures.'

General Steps of Stress Tests



Source: Bank for International Settlements, 2013.

Comprehensive Capital Analysis Review

The Comprehensive Capital Analysis Review (CCAR) under Dodd-Frank's Title I is an annual exercise for the largest banks. The qualitative and quantitative aspects help banks and regulators determine under periods of economic, credit, or market stresses, banks would still be sufficiently capitalized to withstand unexpected losses and continue to serve their important roles as financial intermediaries. Every year the Federal Reserve designs and publishes the scenarios that are to be used in the stress tests.[71] Banks can design their own models and use their own data to run the

[70] "Overview of Pillar II supervisory review practices and approaches," Basel Committee on Banking Supervision.
[71] "2023 Stress Test Scenarios," Board of Governors of the Federal Reserve System, February 2023.

scenarios. They send the models to the Federal Reserve; what banks send in is not public. The Federal Reserve then announces if the banks passed or failed the test; it also publishes a report detailing whether banks passed or failed.[72] Passing means that even with the stressed scenarios, banks should be capitalized, at least at a minimum. If a bank fails, it must take action to ensure that it is well capitalized.

Repeatedly, banks and trade associations have criticized the Federal Reserve for not publishing its model design. Doing so would enable banks simply to pick and choose inputs for the Fed's model. They would then all 'pass' the test.

Over twenty of the U.S.' banks are subject to the Federal Reserve's stress test; this is the quantitative portion of the Comprehensive Capital Analysis Review. However, due to tailoring rules too many domestically important regional banks are not subject to these tests.

[72] "2022 Federal Reserve Stress Test Results," Board of Governors of the Federal Reserve System, June 2022.

Banks Subject to Stress Tests in 2023

Bank	Subject to global market shock	Subject to counterparty default	Subject to exploratory market shock[1]
Bank of America Corporation	X	X	X
The Bank of New York Mellon Corporation		X	X
Barclays US LLC	X	X	
BMO Financial Corp.			
Capital One Financial Corporation			
The Charles Schwab Corporation			
Citigroup Inc.	X	X	X
Citizens Financial Group, Inc.			
Credit Suisse Holdings (USA), Inc.	X	X	
DB USA Corporation	X	X	
The Goldman Sachs Group, Inc.	X	X	X
JPMorgan Chase & Co.	X	X	X
M&T Bank Corporation			
Morgan Stanley	X	X	X
Northern Trust Corporation			
The PNC Financial Services Group, Inc.			
RBC US Group Holdings LLC[2]			
State Street Corporation		X	X
TD Group US Holdings LLC			
Truist Financial Corporation			
UBS Americas Holding LLC			
U.S. Bancorp			
Wells Fargo & Company	X	X	X

Note: The information listed in this table is based on third quarter 2022 data. BMO Financial Corp., Citizens Financial Group, Inc., and M&T Bank Corporation are on a two-year stress test cycle; therefore, they were included in last year's stress test and would normally be included next in 2024. In connection with their recent applications, the Board required these firms to receive a new capital requirement this year based on the 2023 stress test. The 2023 stress test and capital requirement will include the effects of the recent acquisitions by Citizens Financial Group, Inc. and M&T Bank Corporation.

1 As in the supervisory stress test, the exploratory market shock for The Bank of New York Mellon Corporation and State Street Corporation will only include the counterparty default component. Their exploratory market shock component will not include mark-to-market losses on their trading or credit valuation adjustments exposures.

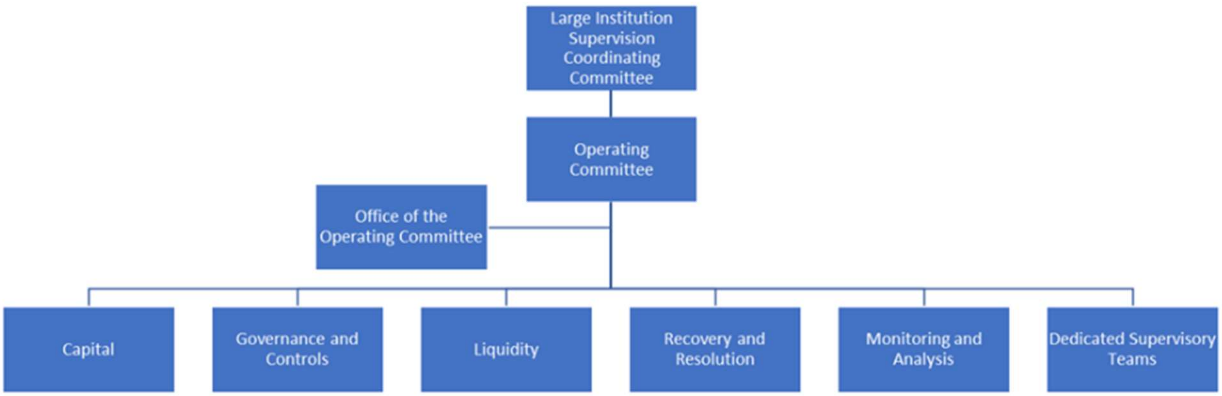
2 RBC US Group Holdings LLC elected to opt into the 2023 stress test.

Source: Federal Reserve, February 2023.

Comprehensive Liquidity Analysis Review

Another type of stress test, and receiving far less public attention, is the Comprehensive Liquidity Analysis Review. The Large Institution Supervision Coordinating Committee (LISCC) liquidity program assesses the adequacy of LISCC firms' liquidity position and liquidity risk-management practices through both horizontal and firm-specific examinations, in-depth reviews, and analyses conducted throughout the year. The CLAR is the horizontal component of this program. Currently, the U.S.' eight globally systemically important banks are part of this liquidity review. "CLAR and the firm-specific liquidity assessments are conducted on a forward-looking basis, analyzing the firms' liquidity risk-management practices and resiliency under normal and stressed conditions. Since CLAR only targets a select population of liquidity risk topics each year, firm-specific events help ensure that the Federal Reserve evaluates and considers the most critical inherent risk and risk-management areas in the assessment of a firm."[73]

LISCC Supervisory Program Structure



Source: Board of Governors of the Federal Reserve System

Scenarios are even more important for liquidity risk measurement than for credit risk, rate risk or operations risk. The need for liquidity arises in very different ways for banking situations. The range of potential risk scenarios is far more varied. "Both the nature and size of a liquidity event vary by scenario. Customer and counterparty options to withdraw indeterminate maturity deposits, draw-under loan commitments and prepay loans will be exercised differently under different conditions."[74]

What Is Missing From Current Regulatory Stress Tests?

Currently, not all risks are covered fully, or in some cases at all, in CCAR or CLAR. These are important risks that we need to explore in depth to strengthen our banking system.

- Cybersecurity
  - U.S. banks have been through the depression, September 11, and the great recession. Yet, none of us have a playbook for a significant cybersecurity attack. Are banks well capitalized and liquid if there were to be a massive cybersecurity attack?
- Climate Change
  - Are banks able to identify which of their banking or trading portfolios are impacted by the deleterious effects of the physical and transition risks of climate change and by how much?

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[73] "Large Institution Supervision Coordinating Committee," Board of Governors of the Federal Reserve System.
[74] Matz, Leonard "Scenario Analysis and Stress Testing", in Liquidity Risk Measurement and Management: A Practitioner's Guide to Global Best Practices, Leonard Matz and Peter Neu (eds), John Wiley & Sons, 2007.

- Are they prepared for how climate change could affect their fee generating business lines such as investment banking, asset management, or custody services?
    - Have banks begun collecting the necessary data and designing models to help them determine what level of capital they will need to sustain unexpected losses brought about by climate change?
- Domestic Terrorism and Civil Unrest
    - Are banks calculating how rising gun violence, domestic terrorism, or civil unrest can impact their operational resilience?
- Geopolitical Risks
    - The recent Russian invasion of Ukraine and recurring trade and national security tensions with China periodically spillover to stock and bond prices. How exactly are banks incorporating current or anticipated geopolitical risks into their risk, capital, or pricing models?
- Challenges to the dollar as the reserve currency
    - Are banks prepared for a day in which the dollar is not the reserve currency anymore as other countries compete against us for that role?

We do not know the answers to the above questions because neither the capital nor liquidity stress tests require that these questions be answered.

Bank Recovery and Resolution Plans

Dodd-Frank's Title I and II addressed bank resolution in the case of bank failure. Title I requires banks to write a bank recovery and resolution plan in which they describe:

- their hundreds of legal entities and what functions exist
- what internal and external factors could cause a bank to fail,
- how might risk managers solve the identified problems, and
- if the problems cannot be solved, what recommendations does the bank for how it could be resolved.

Proposal to Expand Resolution Planning

On August 29, 2023 U.S. bank regulators issued a notice of proposed rulemaking that would expand the banks subject to resolution planning. This guidance would apply to bank holding companies and foreign banking organizations with more than $250 billion in total assets but that are not the largest and most complex companies, which are already subject to guidance on resolution planning. The guidance covers key areas of potential vulnerability, such as capital, liquidity, and operational capabilities that could be needed in resolution.[75] The public can comment until November 30, 2023.

[75] "Agencies Propose Guidance to Enhance Resolution Planning at Large Banks," Board of Federal Reserve System and the Federal Deposit Incorporation Income, August 29, 2023.

To protect Americans, not only is it imperative that banks not fail, but that if they do, they bail themselves in as opposed to being bailed out by us. To that end, on August 29, 2023, the Federal Reserve Board and the Federal Deposit Insurance Corporation voted unanimously to issue a notice of proposed rulemaking that would require banks with $100 billion or more in assets to issue long-term debt (LTD) and other measures that could be used to absorb losses in the event of such a bank's failure. LTD requirements, which currently apply to U.S. GSIBs, to all Category II, III, and IV bank holding companies (BHCs), traditional savings and loan holding companies, and intermediate holding companies of foreign banking organizations that are not GSIBs, as well as to insured depository institutions (IDIs) that are not consolidated subsidiaries of U.S. GSIBS and that (1) have at least US$100 billion in consolidated assets or (2) are affiliated with IDIs that have at least US$100 billion in consolidated assets

Since the proposal to issue long-term debt has barely been released, it is difficult to quantify with certainty how this requirement might impact banks' earnings or ratings. Issuing LTD might initially lead modestly to higher borrowing costs for regional banks. However, the proposed capital increase could lower its borrowing costs if the market and rating agencies interpret better capitalized banks as safer. According to Fitch Ratings, the LTD "proposal would add modestly to existing earnings pressures on ratings but would also reduce loss severity for bank holding company (BHC) senior bondholders and increase protection for bank-level creditors."[76]

The FDIC's existing IDI resolution plan rule requires banks with over US$50 billion in total assets to periodically submit to the FDIC a resolution plan demonstrating how they could be resolved in an orderly and timely manner in the event of receivership. Banks with US$50 billion to US$100 billion in assets have not had to submit such plans since 2018 because of a moratorium adopted by the FDIC. Under the FDIC's NPR, the moratorium would be lifted, and the FDIC would make several modifications to the rule designed to support the FDIC's resolution readiness for material distress and the failure of large IDIs.[77]
I concur with Moody's Investors Services analysts that since the proposal increases the amount of holding company senior or bank subordinated debt that would be outstanding at failure, the proposal is "credit positive for depositors and bank-level senior unsecured creditors. A larger volume of holding company debt and/or bank subordinated debt (i.e., more junior debt instruments with a banking organizations liability structure) would provide greater loss-absorbency at failure, reducing the likely severity of loss for more senior creditors (i.e., depositors and bank-level senior creditors) in resolution."[78]

[76] "Proposed US Regional Bank Debt Requirements to Drive Mixed Rating Actions," Fitch Ratings, September 7, 2023.
[77] "Federal Reserve Board, OCC, and FDIC Propose New Rules and Guidance for Bank Resolutions" Arnold & Porter, September 11, 2023.
[78] Fanger, David and Jill Cetina, Anna Arsov, and Matt Cohen "Proposed Rules to Expand Lon-Term Debt and Resolution Plans to More US Banks Potentially Credit Positive," Moody's Investors Services, September 11, 2023.

Current and Proposed State of Prudential Regulatory Tailoring for US banks by Category/Asset Size

This Moody's graphic provides an overview of the current and proposed state of prudential regulatory tailoring for US banks in light of the July capital rule and August proposals. Existing enhanced prudential requirements for US banks are shown in black, new regulatory requirements are shown in red and strengthening elements of existing prudential requirements are shown in blue. Banks with assets below $50 billion are not subject to any of these standards, which Moody's views as credit negative for the capital and liquidity of these banks.

			Category A				Category B
			Category I	Category II	Category III	Category IV	
			US G-SIBs	**=> $700 billion in total assets or => $75 billion cross jurisdictional activity**	**=>$250 billion total assets or => $75 billion in nonbank assets, weighted short-term wholsale funding (wSTWF) or off-balance sheet exposure**	**Other firms with $100 billion to $250 billion in total assets**	**Firms with $50 billion to $100 billion in total assets**
	TLAC	TLAC/Long-term debt	✓	✓	✓	✓	
Capital	Stress testing	Stress testing: Company run (DFAST)	✓ (Annual)	✓ (Annual)	✓ (Every two years)		
Capital	Stress testing	Stress testing: Supervisory	✓ (Annual)	✓ (Annual)	✓ (Annual)	✓ (Every two years)	
Capital	Stress testing	CCAR: Quantitative	✓	✓	✓	✓ (Every two years)	
Capital	Stress testing	CCAR: Qualitative	✓	✓	✓		
Capital	Risk-based capital	Annual capital plan submission	✓	✓	✓	✓	
Capital	Risk-based capital	**Expanded risk-based approach**	✓	✓	✓	✓	
Capital	Risk-based capital	G-SIB surcharge	x				
Capital	Risk-based capital	Countercyclical capital buffer	✓	✓	✓	✓	
Capital	Risk-based capital	No opt-out of AOCI capital impact	✓	✓	✓	✓	
Capital	Leverage capital	Standard supplementary leverage ratio		✓	✓	✓	
Capital	Leverage capital	Enhanced supplementary leverage ratio	✓				
Liquidity	Standardized	Full daily liquidity coverage ratio	✓	✓			
Liquidity	Standardized	Reduced liquidity coverage ratio			✓		
Liquidity	Standardized	Net stability funding ratio (proposed)	✓	✓	✓ (Reduced unless >$75 billion in wSTWF)		
Liquidity	Internal	Liquidity stress test	✓ (Monthly)	✓ (Monthly)	✓ (Monthly)	✓ (Quarterly)	
Liquidity	Internal	Liquidity risk management	✓	✓	✓	✓ (Tailored)	
Liquidity	Internal	Liquidity buffer	✓	✓	✓	✓	
Liquidity	Internal	FR 2052a reporting	✓ (Daily)	✓ (Daily)	✓ (Monthly; daily if >$75 billion in wSTWF)	✓ (Monthly)	
	Other prudential standards	Risk committee	✓	✓	✓	✓	
	Other prudential standards	Risk management	✓	✓	✓	✓	
	Other prudential standards	Single-counterparty credit limit	✓ (G-SIB specific requirements)				
	Other prudential standards	Resolution plans	x	x	x	x	✓

Banks under $50-$100 billion in total assets are not subject to these enhanced prudential expectations.
Source: Federal Reserve, Moody's Investors Service

Appendix I

Recommendations From My Senate Banking Testimony May 17, 2023[79]

'Strengthening Accountability at the Federal Reserve: Lessons and Opportunities for Reform'

Revise Title IV of S2155 to Reinstate Dodd-Frank's Definition of Systemically Important

S2155 gutted essential parts of Dodd-Frank's Title I, such those that designated banks over $50 billion as domestically systemically important. S2155 also influenced the supervisory culture and tone at regulatory entities. By designating banks above $50 billion as domestically systemically important, much more of the banking sector would be better regulated and supervised. This would send a strong signal to regulators to impose enhanced prudential standards on these types of banks to strengthen these banks and minimize systemic risk if they were to fail.

Remove Heads of Banks From Federal Reserve District Boards

While there is debate as to the extent of power of district boards over off-site supervision or on-site bank examinations, it cannot be denied that board members meet repeatedly with presidents and other key members of the Federal Reserve district banks. According to Becker's response to Senator Hagerty during the 'Examining the Failures of Silicon Valley Bank and Signature Bank,' Becker met with the Federal Reserve Bank of San Francisco monthly and sometimes more frequently.[80]

To avoid even the appearance of conflicts of interest, boards would be better served without these individuals on these boards. The boards would be better served by ensuring that they have a diversity of skills sets on their boards that could support them in providing oversight over Federal Reserve district banks.

Reform Remuneration for CEOs and Key Bank Professionals

Despite multiple financial crises in my lifetime, not much has been accomplished in reforming how executives and key bank professionals are remunerated. As I know from having worked at two banks, a bank's profitability influences not only how executives are paid, but also, often all the way down to the most junior employees. This means that even when professionals know of wrongdoing at a bank, no one wants to stand up and inform any boss or even more difficult, bank regulators. Remuneration that is tied to bank profitability also influences risk managers and traders about hedging strategies and asset-liability management. Implementing hedges and

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[79] Testimony of Mayra Rodriguez Valladares, "Strengthening Accountability at the Federal Reserve: Lessons and Opportunities," United State Senate Committee on Banking, Housing, and Urban Affairs, May 17, 2023.
[80] "Examining the Failures of Silicon Valley Bank and Signature Bank," Senate Banking Hearing, May 16, 2023.

reallocating portfolios often means reduced profits for banks; when this is the case, too many professionals prefer not to change things so that their bouses are not impacted.

Legislators and not-for-profit organizations are proposing different ways in which remuneration should be reformed. Clawing bank executives' bonuses when their banks fail should be explored. The bi-partisan bill *Failed Bank Executives Clawback Act* correctly points out that "currently, the Federal Deposit Insurance Corporation's (FDIC) ability to claw back executive compensation in the event of a bank failure is limited. The *Failed Bank Executives Clawback Act* would give federal bank regulators the tools they need to hold executives of failed banks responsible for the costs those failures exact on the rest of the banking system and the economy and require the FDIC to act to prevent the unjust enrichment of bank executives."[81]

Additionally, it is important to remember that Section 956 was not finalized. As explained by Public Citizen "the regulators wisely proposed that a significant portion of senior executive bonus pay be deferred into a fund. In the case of misconduct or failure, this fund would be forfeited, either to help pay for the resolution of the bank, or to pay fines associated with the misconduct (instead of having shareholders effectively pay the fines). This dynamic would essentially deputize and incentivize all bankers to police one another."[82]

Require Transparency from Banks About Their Assets and Liabilities

Large banks should disclose the amount and concentrations of assets as well as liabilities at least once a month to the public, if not more frequently. We know they can do this, because there is a Federal Reserve weekly report 'H8' that shows assets and liabilities at a high, anonymized level. Banks of the size of Silicon Valley Bank should have the technological and professional capacity to report asset and deposit levels on a weekly basis to the public.

Utilize All of the Federal Reserve's Existing Powers to Escalate Identified Risks at Banks and Impose Enforcement Actions on Non-Compliant Banks

According to Barr's report "the Federal Reserve generally does not require additional capital or liquidity beyond regulatory requirements for a firm with inadequate capital planning, liquidity risk management, or governance and controls."[83] Since its inception, national discretion is built into The Basel Accord framework, so that adopting countries have some flexibility in implementing rules that are most appropriate to their own circumstances.[84] As a member of the Basel Committee on Banking Supervision, the Federal Reserve can recommend stricter rules for our banks if it is appropriate for our circumstances.

[81] "Warren, Hawley, Cortez Masto, Braun Introduce Bipartisan Bill to Claw Back Compensation From Failed Bank Executives," Failed Bank Executives Clawback Act, March 29, 2023.
[82] Naylor, Bart, "Letter to Senate Banking Committee Re Banker Accountability for Recent Bank Failures - Public Citizen," May 3, 2023.
[83] Review of the Federal Reserve's Supervision and Regulation of Silicon Valley Bank, April 28, 2023, p. 2.
[84] Basel Capital Framework National Discretions. Basel Committee on Banking Supervision, November 2014.

In 2011, the Government Accountability Office recommended that the Federal Reserve and other bank regulators modify the existing Prompt Corrective Action Framework. The GAO recommended that:

> "to improve the effectiveness of the PCA framework, the heads of the Federal Reserve, FDIC, and OCC should consider additional triggers that would require early and forceful regulatory actions tied to specific unsafe banking practices and also consider the other two options--adding a measure of risk to the capital category thresholds and increasing the capital ratios that place banks into PCA capital categories--identified in this report to improve PCA. In considering such improvements, the regulators should work through the Financial Stability Oversight Council to make recommendations to Congress on how PCA should be modified."[85]
>
> In response to GAO's recommendation, the "FDIC, OCC, and the Federal Reserve began to consider the option of adding non-capital triggers to the prompt corrective action (PCA) framework in a January 2013 Federal Financial Institutions Examination Council (FFIEC) meeting, among other options to improve PCA. Following this meeting, the three agencies established a working group under the FFIEC Task Force on Supervision entitled Corrective Program Best Practices to review the regulators' enforcement practices and tools and to consider these options. As of June 2015, the regulators were still considering the pros and cons of options for modifying PCA but had not taken any further action related to adding non-capital triggers. Also, during 2013, FDIC, OCC, and the Federal Reserve adopted final rules related to regulatory capital that included increasing the capital ratios that place banks into PCA capital categories, another option GAO recommended that the regulators consider. Since these actions to date did not require legislative changes, the regulators have not approached Congress with proposals to modify PCA. While these actions address our recommendation that the regulators consider options to improve PCA, we continue to believe that incorporating non-capital triggers would enhance the PCA framework by encouraging earlier action and giving the regulators and banks more time to address deteriorating conditions before capital is depleted."[86]

The Federal Reserve has guidance for how examiners communicate findings to supervised banks. Matters Requiring Attention (MRAs) and Matters Requiring Immediate Attention (MRIA).[87] Yet, there is no define timeline for either. Hence, the tone at the top of bank supervision is critical. If the tone is to not be strict with banks, this filters down to examiners and enforcement. "In some cases, when follow-up indicates the organization's corrective action has not been satisfactory, the initiation of additional formal or informal investigation or enforcement action may be necessary. In such cases, examiners should consult with enforcement staff. Such

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[85] "Bank Regulation: Modified Prompt Corrective Action Framework Would Improve Effectiveness," Government Accountability Office, June 23, 2011.
[86] Ibid.
[87] Supervisor y Considerations for the Communication of Supervisory Findings,

consultation should be made in accordance with existing guidance to Reserve Bank supervisory staff on the processing of enforcement actions, which provides that recommendations concerning formal enforcement actions should be submitted simultaneously to both the Board's Legal Division and Division of Banking Supervision and Regulation."[88]

Require Improvements in the Monitoring of Banks' Interest Rate Risk Models

Regulators need to take a closer look at models, especially those for interest rate and liquidity risk measurements. According to the last SVB annual report, the bank was measuring interest rate risk by using Economic Value Equity, which uses market values of assets and liabilities.[89] It did not disclose what assumptions for discount rate it was using. If this information were disclosed, we could determine what SVB's net economic value of equity was. In its Net Interest Income simulation, SVB disclosed that applied interest rate shocks of 100 and 200 basis points hikes and decreases.[90] Given federal funds rate hikes by that time in 2022, SVB should have been applying larger shocks, more like 300 or even 400 basis points. Regulators need to require that relevant discount rates and interest rate shocks are applied to these interest rate risk measurements. Banks should be transparent about interest rate risk. I have worked with community banks that conduct gap analysis to test when they may have more liabilities than assets. There is no reason bigger banks cannot calculate this.

Reinstate The Liquidity Standard for All Large Bank Organizations

Bank regulators should require that banks that are $50 bn calculate and report the Liquidity Recovery Ratio.[91] Had SVB been required to calculate and report this measure, regulators and market participants would have seen that high-quality liquid assets, declining in market value, would not cover net stressed cash outflows. Under the LCR, banks must test the effect of deposit decreases on their liquidity. Banks that are $100 billion in asset size should disclose their LCR at least once a month if not more often. Presently, our G-SIBs report LCR to their district Fed daily. This information is incredibly useful to bank regulators. And making it public through Basel III Pillar III's risk disclosures would help the market discipline banks.

The Fed should also require these banks to calculate and report on the Net Stable Funding Ratio. This liquidity measure gives insight into whether a bank has the necessary stable funding for a twelve-month period.

Provide Strong Protections for On-site Examiner and Off-Site Supervisors

If off-site supervisors or on-site examiners discover that their findings about risks at banks are not being escalated, they need to be able to report this to the head of bank supervision without fear of reprisal.

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[88] Ibid, p. 3.
[89] SVB Annual Report 2022, pp. 89-90
[90] SVB Annual Report 2022, p. 90.
[91] Frequently Asked Questions on the Tailoring Rules Effective January 13, 2020.

Appendix II

SILICON VALLEY BANK FAILURE[92]

The Economic Growth, Recovery, Resolution and Consumer Protection Act (S2155) of 2018 led the Federal Reserve to create tailoring rules for US banks based on their size. Due to the 2019 tailoring rules, Silicon Valley Bank (SVB) was not required to comply with two key components of Basel III: measurement of interest rate risk in the banking book (IRRBB) and the Liquidity Standard, comprised of the Liquidity Coverage Ratio and the Net Stable Funding Ratio.

To measure interest rate risk in the trading book, banks typically use Value-at-Risk models which use market rates. However, to measure interest rate risk in the banking book, which includes loans and held-to-maturities securities, bankers have a lot more flexibility in the models they use, many which do not include market rates as the data inputs. This can lead to significant understatement of what potential losses are. Also, since books use such a variety of models, it makes it difficult for regulators, lenders, and investors to make meaningful comparisons between banks' disclosed risks in the banking book. Due to these challenges, the Basel Committee on Banking Supervision has updated several times rules about how to measure interest rate risk in the banking book in ways that would make the measurements less flexible for banks and more useful to market participants to compare risks. "Market actors' consensus suggests that if the banks affected by SVB had been subject to IRRBB, the huge interest rate risk they were carrying would have been identified earlier, and flagged to a regulator who could have acted to address the issue, potentially saving the bank in the process."[93] Silicon Valley Bank could have used a variety of gap analysis and interest rate hedges to mitigate its interest rate risk. Yet, such actions reduce net income. When compensations of executives, board members, and/or employees depends on banks' profitability, this influences how much of a bank's portfolio risk managers want to hedge.

Importantly, banks the size of SVB were and are not required to measure the Liquidity Coverage Ratio. The LCR requires banks to calculate and report the level of their high-quality liquid assets (HQLA) cover their net cash outflows in period of stress. HQLA are measured as a market value. If SVB had been required to calculate and report the LCR to regulators and disclose the results to market participants, its inability to meet cash outflows in a stressed period would have been visible. Using data from SVB's 2022 annual report, I applied strict criteria for cash inflows not coming in as default rates go up and deposits leaving as interest rate hikes increased. I estimated that LCR would have been at about 65% which is significantly below the 100% minimum requirement. Two other analyses show that the LCR would have been in the range of

[92] Rodríguez Valladares, Mayra. Testimony Excerpt from Hearing "Strengthening Accountability at the Federal Reserve: Lessons and Opportunities for Reform," May 17, 2023.
[93] Van Doorsselaere, Jeroen "Wake-up Call for Banks or Regulators?" March 23, 2023.

75%[94] to 101%[95] Certainly, different analysts can come up with different assumptions to calculate LCRs, but it is clear that SVB would not have met even the minimum Basel III requirement for the LCR.

The Net Stable Funding Ratio, which purpose is to show if a bank has sufficient stable sources of funding for a twelve-month period, was also not required of banks the size of SVB. Given the types of deposits that SVB had, this ratio also would have been very useful for regulators and market participants.

SVB did comply with Basel III's Pillar III risk disclosures, which at twelve pages were very thin and only concentrated on credit risk. In its fourth quarter 2022 Pillar III disclosures, SVB did not mention interest rate risk in the banking book or liquidity risk.[96]

Additionally, due to tailoring rules, SVB was also not subject to the Federal Reserve's annual horizontal review of domestic and foreign-owned large banking organizations (LFBOs) liquidity risk management practices, including internal liquidity stress testing (ILST) assumptions and methodologies, and buffer monetization and composition. At the end of 2022, the Federal Reserve Bank did send a letter to former CEO Greg Becker that such a horizontal review would take place the weeks of January 3 – March 10, 2023.[97]

Tailoring rules also meant that since SVB was not designated as a systemically important bank, as it would have been under Dodd-Frank's Title I, SVB was not required to conduct supervisory stress tests known as the Dodd-Frank Act Stress Test (DFAST), the quantitative component of the Comprehensive Capital Analysis Review (CCAR). Without stress tests, banks can grow faster without many consequences. Before the tailoring rules, the more that SVB's assets grew, such as long-term bonds and loans, SVB would have had to increase capital, because such assets consumer more capital than shorter-term ones. By the time that SVB became a Category IV bank on July 2021, it was only required to conduct the Dodd-Frank Act Stress Test biennially. When it failed, it had not conducted such a test.

Importantly, interest rates are part of DFAST. The 2022 DFAST incorporated six measures of interest rates: the rate on 3-month Treasury securities; the yield on 5-year Treasury securities; the yield on 10-year Treasury securities; the yield on 10-year BBB-rated corporate securities; the interest rate associated with conforming, conventional, 30-year fixed-rate mortgages; and the prime rate. Additionally, the 2022 Supervisory Stress Test Methodology describes how interest rate movements are part of the modeling process to determine the impact of loans and securities in the held-to-maturity assets of the banking book.[98]

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[94] Feldberg, Greg. "Lessons from Applying the Liquidity Coverage Ratio to Silicon Valley Bank," Yale School of Management, March 27, 2023.
[95] Nelson, Bill. "Update on SVB's LCR," Bank Policy Institute, March 27, 2023.
[96] SVB Basel III Pillar III Risk Disclosures, 2022.
[97] Entry Letter: 2023 Horizontal Liquidity Review (HLR), Federal Reserve Bank of San Francisco November 17, 2022.
[98] "2022 Supervisory Stress Test Methodology," Board of Governors of the Federal Reserve System, pp. 11-13.

In 2022, SVB was required to write a bank recovery and resolution plan for the first time. Since like other banks, it was only required to disclose the executive summary.[99] In addition to describing how a bank should be failed if it were to fail, a recovery and resolution plan also provides a lot of confidential information to the Federal Reserve and to the FDIC about a bank's structure, shared funding and liquidity facilities, and many details about a bank's balance sheet. Hence, while market participants do not see these details, regulators receive incredibly important information about a bank's risks.

[99] SVB 2022 Covered Insured Depository Institution Resolution Plan.

Appendix III

Top Bank Political Contributors 2021-2022[100]

Contributor	Amount
Amalgamated Bank	$25,104,645
Wells Fargo	$2,788,445
American Bankers Assn	$2,713,333
Woodforest National Bank	$2,609,707
JPMorgan Chase & Co	$1,657,935
Independent Community Bankers of America	$1,095,816
Bank of America	$1,085,433
PNC Financial Services	$1,060,305
First Premier Bank	$1,018,340
1st Financial Bank USA	$989,966
Citigroup Inc	$978,953
Regions Financial	$960,398
First Republic Bank	$848,753
Citizens First Bank	$756,626
Truist Financial	$646,757
US Bancorp	$639,991
Arvest Bank Group	$499,543
Ally Financial	$449,019
Huntington Bancshares	$395,586
Intrafi Network	$391,279

Contributions to:

Democrats
Republicans
Liberal Groups
Conservative Groups
Nonpartisan

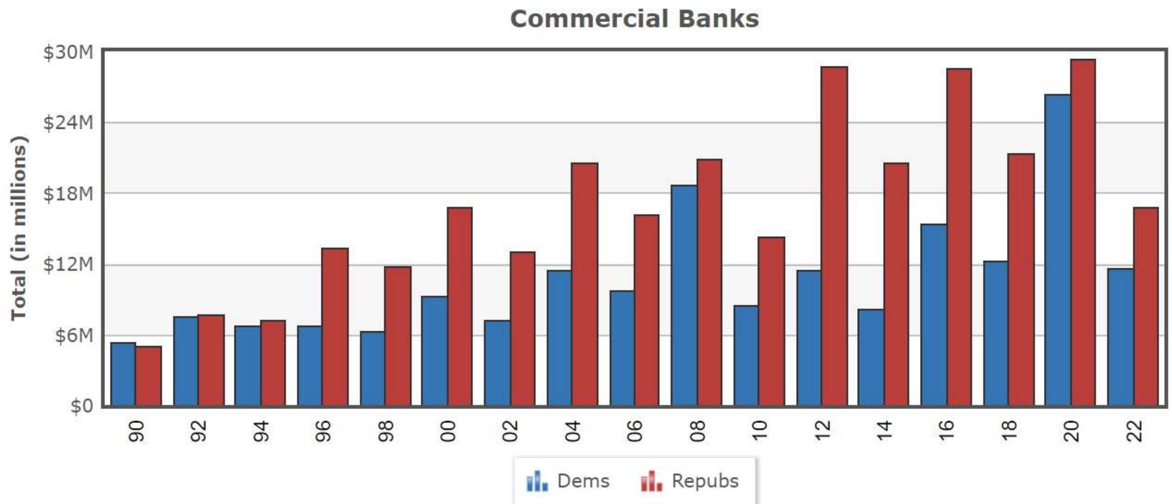
[100] "Top Bank Political Campaign Contributors," Open Secrets.

Top 20 Recipients of Banks' Political Contributions[101]

Rank	Candidate	Office	Amount
1	Warnock, Raphael (D-GA)	Senate	$400,448
2	McHenry, Patrick (R-NC)	House	$366,265
3	Schumer, Charles E (D-NY)	Senate	$291,684
4	Scott, Tim (R-SC)	Senate	$274,476
5	Hill, French (R-AR)	House	$245,400
6	Britt, Katie Boyd (R-AL)		$242,747
7	Luetkemeyer, Blaine (R-MO)	House	$221,710
8	Barr, Andy (R-KY)	House	$207,990
9	Huizenga, Bill (R-MI)	House	$181,255
10	Wagner, Ann (R-MO)	House	$171,987
11	Walker, Herschel (R-GA)		$169,969
12	Emmer, Tom (R-MN)	House	$164,178
13	Rubio, Marco (R-FL)	Senate	$160,177
14	Gottheimer, Josh (D-NJ)	House	$158,222
15	Beatty, Joyce (D-OH)	House	$156,750
16	Budd, Ted (R-NC)	House	$155,825
17	Kelly, Mark (D-AZ)	Senate	$150,697
18	Hassan, Maggie (D-NH)	Senate	$149,598
19	Johnson, Ron (R-WI)	Senate	$149,089
20	Steil, Bryan (R-WI)	House	$148,650

[101] Open Secrets. Methodology: The numbers on this page are based on contributions from PACs and individuals giving $200 or more. All donations took place during the 2021-2022 election cycle and were released by the Federal Election Commission on Monday, March 20, 2023.

Party Split, 1990-2022



Appendix IV

Articles Relevant To This Testimony by Mayra Rodríguez Valladares

10 Ways to Strengthen Accountability At the Fed And U.S. Banks
Fitch Ratings Downgrades Loom For U.S. Banks Significantly Exposed To CRE Loans
Regional Bank Turmoil in the U.S. Is Far From Over
PacWest Bancorp's Imminent Demise Shows Bank Turmoil Is Widening To Smaller Banks
The Federal Reserve's Interest Rate Increases Create Default Risk In Major Sectors
With First Republic Takeover, JPMorgan Is America's Most Globally Systemically Important Bank
To Know Why Silicon Valley Bank Failed, Congress Should Ask Former CEO Greg Becker
First Republic Bank's Earnings Call Did Not Inspire Confidence
First Republic Bank's Financial Ratios Will Reveal Serious Trouble
Regional Banks' Financial Results Fail To Impress Investors
What To Watch For With U.S. Regional Banks This Week
Big U.S. Banks Are Preparing For An Impending Recession
Investors Eyes Should Be On Leveraged Finance Markets
Deutsche Bank Should Disclose Its Current Liquidity Levels To Investors
From Ferdinand Marcos To Russian Oligarchs, Troubled Credit Suisse Is A Repeat Offender
How Trump's Deregulation Sowed the Seeds for Silicon Valley Bank's Demise
Warning Signals About Silicon Valley Bank Were All Around Us
Why The Federal Reserve Should Prioritize Taxpayers Over Senate Republicans In Setting Bank Capital Standards
High Interest Rates Will Continue To Challenge Most Sectors Of The Economy
As The Fed Fights A 40-Year Inflation High, Investors Must Remain Vigilant
Leveraged Loan Default Volume In The U.S. Has Tripled This Year
Probability Of Default Is Rising For High Yield Bonds And Leveraged Loans
The U.S. Leveraged Finance Market Is At A Record $3 Trillion
Weakening Bank Rules Is Bad For Taxpayers And Investors
Basel III Rules Have Not Hurt Lending To Small-Medium Enterprises
Bank Reform Benefits Significantly Outweigh Costs
Financial Crises: The Enemy Is Amnesia
U.S. Banks Need To Be Safer For The Sake of Main Street
Big Banks Should Increase Capital Now Before The Next Downturn
Why Do Republicans Want To Gut Bank Regulations Even More?