

WHITE PAPER ON BASEL III ENDGAME PROPOSAL

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I. Executive Summary

In July 2023, U.S. regulators issued the Basel III Endgame Proposal (the “Proposal”) “that would substantially revise the capital requirements applicable to large banking organizations and to banking organizations with significant trading activity.” The Proposal involves a substantial increase in capital requirements for large U.S. banks, with estimated increases ranging from 16 percent to 25 percent, and has generated much comment and debate. While it is crucial to maintain a well-capitalized and resilient banking system, it is also crucial to consider the potential unintended consequences for the system of raising bank capital requirements above where they are today.

In this paper, I hope to contribute to this debate by examining some of the potential consequences of the proposed changes. In order to do so, it is crucial first to articulate the objectives of the banking and financial system. I believe that a goal of the banking and financial system and its regulation should be to support and enhance sustainable economic growth, consistent with consumer protections and integrity of the markets. I also believe that financial stability and resilience is a crucial goal to reduce risks to sustainable economic growth and to ensure that banks and the financial system can support households and businesses at all times, including at times of stress.

The key question, then, in assessing the Proposal is to consider the costs, benefits, and trade-offs in raising capital requirements above where they currently stand. In this paper, I consider the consequences, intended and unintended, and trade-offs of the proposed changes not only on the banking system but also on the financial system and the U.S. economy as a whole. After describing how bank capital has increased since the Global Financial Crisis and how the non-bank sector has grown to challenge banks, I briefly outline the main changes to capital regulation embodied in the Proposal and assess potential consequences that are important to consider when weighing the cost-benefit trade-offs of requiring banks to hold more capital.

First, all other things equal, increasing capital requirements for banks will increase their cost of lending and undertaking various bank activities. This has consequences through two channels. One channel is that banks would in part or in full pass on the increase in the costs to borrowers, end-users, or other customers. Low- and moderate-income borrowers as well as minority businesses, for example, may face higher costs and lower availability of credit. Increases in risk weights for certain equity investments may reduce banks’ willingness to invest in clean energy projects. Entrepreneurial companies as well as pension funds and mutual funds may face higher costs.

Second, banks may choose to reduce their activities or even withdraw from providing some products or services. Banks may step back from supporting hedging by farmers as well as making markets, leading to, for example, higher costs of trading and hedging and lower liquidity that could increase market volatility. Not only may the impact fall disproportionately on certain groups, it also could reduce investment. Reduced investment can lead to lower productivity growth, reducing both wage growth for workers and overall economic growth.

Moreover, the Proposal will also likely accelerate the migration of lending and other activities from the bank to non-bank sector and may further constrain banks’ capacity to make markets, that in turn can result in lower liquidity, increase volatility, and raise cost of trading – all

factors that could adversely affect overall financial stability, especially in times of stress. If banks have disincentives to make markets, market liquidity may suffer and market dysfunction requiring central bank action to stabilize markets may become more frequent.

In the non-bank sector, regulators and supervisors tend to have much less information and less ability to monitor and rein in risks, especially in the run up to and in times of crisis. Thus, rather than conserving supervisory resources and providing greater cushions against shocks, increasing capital requirements could paradoxically require greater vigilance by supervisors and generate more fragile interconnections, thereby potentially reducing the overall safety and soundness of the system.

I conclude by urging the Agencies to undertake a more in-depth cost-benefit analysis that thoroughly considers the consequences – intended or unintended – and trade-offs of the Proposal, particularly in light of comments raised by a wide variety of groups that believe they may be adversely affected by the proposed changes. The Agencies should consider those costs as well as the potential risks of further migration of banking activities into the non-bank sector where regulators and supervisors have less ability to monitor the buildup of risks and to respond in crises.

II. Introduction, Objectives, and Conceptual Framework

A strong capital base provides the foundation of safety and soundness in the financial system and is crucial to resiliency in the face of shocks and to mitigating the likelihood of financial crises. A key question is whether there may be unintended consequences of raising capital requirements from current levels for households, businesses, and consumers, as well as, potentially, for stability of the financial system as a whole.

In July 2023, the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation (the “Agencies”) issued the Basel III Endgame Proposal (the “Proposal”) “that would substantially revise the capital requirements applicable to large banking organizations and to banking organizations with significant trading activity.”¹ The Proposal involves a substantial increase in capital requirements for large U.S. banks and has generated much comment and debate.² I hope to contribute to this debate by examining some of the potential consequences of the proposed changes.

In order to do so, it is crucial first to articulate the objectives of the banking and financial system.³ I believe that a goal of the banking and financial system and its regulation should be to support and enhance sustainable economic growth, consistent with consumer protections and integrity of the markets. I also believe that financial stability and resilience is a crucial goal to reduce risks to sustainable economic growth and to ensure that banks and the financial system can support households and businesses at all times, including at times of stress.⁴

A large body of research suggests that a deep and developed financial system is a driving force behind economic development and growth.⁵ Evidence from across countries and from the US suggest that a primary mechanism for the positive growth impacts appears to be through increasing the efficiency of the allocation of capital to the highest return projects and giving the less affluent access to capital that they would not have in a less developed system.⁶

The Global Financial Crisis (“GFC”) 2008/2009 revealed a number of fragilities in the system. Going into the GFC, for example, lending standards were inadequate, balance sheets were fragile and the level of capital in the system was too low. Reforms since this time have built significant resilience. It was crucial to increase the quality and quantity of loss-absorbing capital for banks above what it was pre-crisis. Due largely to the post-crisis regulatory framework, including capital, liquidity, stress testing, and resolution planning, the U.S. banks have increased their capital substantially.⁷

The key question, then, in assessing the Proposal is to consider the costs, benefits, and trade-offs in raising capital requirements above where they currently stand.⁸ As Federal Reserve Chair Jerome Powell so clearly explained:

“High levels of capital are essential to enable banks to continue to lend to households and businesses and conduct financial intermediation, even in times of severe stress. But raising capital requirements also increases the cost of, and reduces access to, credit. And the proposed very large increase in risk-weighted assets

for market risk overall requires us to assess the risk that large U.S. banks could reduce their activities in this area, threatening a decline in liquidity in critical markets and a movement of some of these activities into the shadow banking sector.”⁹

In this paper, I will examine the risks that Chair Powell describes by considering consequences, intended and unintended, and trade-offs of the proposed changes not only on the banking system but also on the financial system and the U.S. economy as a whole. In particular, I will review potential impacts stemming from the proposed changes in credit and operational risk-weighted assets (“RWAs”) calculations, as well as changes in market risk requirements, such as the introduction of the Fundamental Review of the Trading Book (“FRTB”), as well as changes in Credit Valuation Adjustment (“CVA”) risks, and proposed minimum haircut floors for Securities Financing Transactions (“SFTs”) on (a) credit provision and its availability and cost for credit end-users, including households and businesses; (b) lending, trading, and market making activities of banks and the consequences for market liquidity, and (c) overall stability and resilience of the U.S. financial system.

As the Chair notes, in evaluating the Proposal’s impact on the overall stability and resilience of the system, it is important to consider the potential impacts of the migration activities from the highly-regulated banking sector to the less well-regulated non-bank sector. In the non-bank sector, regulators and supervisors tend to have much less information and less ability to monitor and reign in risks, especially in the run up to and in times of crisis. Giving incentives to move activities away from banks and to non-banks will likely simply shift risks and make it more difficult to identify risk concentrations and fragile interconnections in the system. It also may channel efforts in financial innovation to create instruments that may evade particular capital requirements but not reduce risks to an individual institution or to the system as a whole. Thus, rather than conserving supervisory resources and providing greater cushions against shocks, increasing capital requirements could paradoxically require greater vigilance by supervisors, generate more fragile interconnections, and thereby potentially reduce the overall safety and soundness of the system.¹⁰

Furthermore, recent research suggests that non-banks tend to be less likely to provide support to borrowers in times of stress than banks do.¹¹ Thus, non-banks play less of a “shock absorber” role than banks. Also, if banks have disincentives to make markets, market liquidity will be likely to suffer and market dysfunction requiring central bank action to stabilize markets may become more frequent.

In addition, some households and businesses will find credit less available and more expensive. Not only may this be a disproportionate burden for certain groups, it could also reduce investment.¹² Reduced investment can lead to lower productivity growth, reducing both wage growth for workers and overall economic growth.

The rest of this white paper is organized as follows:

In **Section III**, I present the evolution of the U.S. banking system post-GFC and show that banks have substantially increased their capital since the GFC. The U.S. banks have also shown resilience to recent shocks. At the same time, the non-bank sector, sometimes called “shadow” banking or Non-Bank Financial Intermediation (“NBF”) sector, has significantly increased, partially as a result of the added regulatory burden imposed on

banks post-GFC. While it is crucial to maintain a well-capitalized and resilient banking system, it is also crucial to consider the potential unintended consequences for the system of raising bank capital requirements above where they are today.¹³

Section IV briefly describes key changes of the Proposal that will have the potential to affect end-users, lending, trading, and market making activities of banks and summarizes estimates for common equity tier 1 (“CET1”) capital increases for the largest bank holding companies. These estimates range from 16 percent to 25 percent.

In **Section V**, I examine the potential consequences of the Proposal on U.S. households, businesses, and consumers. Among other groups, I examine the Proposal’s potential impact on low and middle income (“LMI”) and minority homeowners and private firms. The Proposal also will likely accelerate the migration of lending and other activities from the bank to non-bank sector and may further constrain banks’ capacity to make markets, which in turn would likely result in lower liquidity, higher volatility, and higher costs of trading – all factors that could adversely affect overall financial stability, especially in times of stress.

I offer a brief summary and conclusion in **Section VI**.

III. Background and Context: Evolution of the U.S. Banking and Financial System Since the Global Financial Crisis

In this section, I will describe how U.S. banks have increased their capital substantially since the GFC but at the same time they have lost market share to the non-bank financial sector.

A. U.S. G-SIBs and Other Banks Have Substantially Increased Quality and Quantity of Their Capital Since the Global Financial Crisis

A financial institution's capital is crucial to its safety and soundness because it represents the ability of that institution to absorb losses on the value of its assets.

In response to the GFC, the Basel Committee on Banking Supervision ("BCBS") of the Bank of International Settlements ("BIS") introduced a number of measures, known as the Basel III reforms, to increase "quality, consistency and transparency of the capital base."¹⁴ The Basel Committee sets out the standards that are then implemented by national regulators in their jurisdictions. **Exhibit 1** provides an overview of the Basel III capital framework.¹⁵

Exhibit 1: Overview of Basel III Capital Framework Applicable to All Bank Holding Companies (“BHCs”)

RISK-BASED CAPITAL REQUIREMENTS, that is, capital relative to a bank’s Risk-weighted Assets (RWA) that involves adjusting each type of asset for its relative risk.

Total Capital, defined as the sum of Common Equity Tier 1 Capital, Additional Tier 1 Capital, and Tier 2 Capital, *i.e.*, the total amount of capital available to absorb losses. Bank holding companies (“BHCs”) are required to hold at minimum 8 percent of their RWA as Total Capital (before capital buffers.)

Common Equity Tier 1 (CET1), a new category of capital introduced after the GFC that is the highest quality regulatory capital, as it absorbs losses immediately when they occur. It is the sum of common shares (equivalent for non-joint stock companies) and stock surplus, retained earnings, other comprehensive income, qualifying minority interest and regulatory adjustments. BHCs are required to hold at minimum 4.5 percent of their RWA as CET1 (before capital buffers).

Tier 1 Capital is equal to Common Equity Tier 1 Capital plus the “[s]um of capital instruments meeting the criteria for AT1 and related surplus, additional qualifying minority interest and regulatory adjustments.” BHCs are required to hold at minimum 6 percent of their RWA as Tier 1 Capital (before capital buffers).

Capital Buffers:

- Stress Capital Buffer (SCB) applies to large banks subject to supervisory stress testing administered by the Federal Reserve as part of the Federal Reserve’s annual Comprehensive Capital Analysis and Review (“CCAR”) framework. The Federal Reserve uses the results under the severely adverse scenario from its supervisory stress test to determine the banking organization’s SCB requirement for the coming year.
 - Capital Conservation Buffer (CCB) is a buffer above the requirement capital minima for banks that are not subject to CCAR.

LEVERAGE-BASED CAPITAL REQUIREMENTS, that is, capital relative to total assets, not using risk-weighted assets.

Leverage Ratio, defined as the ratio of Tier 1 Capital to assets. BHCs are required to maintain a 4 percent leverage ratio. To achieve “Well-capitalized” status, BHCs must maintain a 5 percent leverage ratio.

- Supplementary Leverage Ratio (SLR), defined as the ratio of Tier 1 Capital to on-balance sheet and certain off-balance sheet exposures. BHCs subject to the SLR must maintain a minimum SLR of 3 percent.

These regulations also imposed additional capital requirements on global systematically important banks (“G-SIBs”). **Appendix C** contains the current list of G-SIBs. The Financial Stability Board determines a list of G-SIBs annually based on size, complexity, interconnectedness, substitutability, and cross-jurisdictional scores.¹⁶ G-SIBs requirements include:

- An incremental G-SIB surcharge above minimum capital requirements that increases with banks’ systemic importance indicators;¹⁷

- Total Loss-Absorbing Capital (“TLAC”), which is intended to ensure that G-SIBs have enough equity and bail-in debt to pass losses to investors, recapitalize as a going concern and minimize the risk of a government bailout.¹⁸ From January 1, 2022, G-SIBs are required to hold a TLAC amount of 18 percent in terms of risk-weighted assets, or 6.75 percent of the leverage exposure measure.¹⁹
- Enhanced Supplementary Leverage Ratio (e-SLR), which specifies that U.S. G-SIBs must meet an *enhanced* SLR of 5 percent at the consolidated level and 6 percent at the depository level.²⁰ **Appendix D** describes the full set of capital requirements that currently apply to U.S. G-SIBs.

Since the GFC, the U.S. G-SIBs and other banks have increased the quality and quantity of their capital substantially. **Exhibit 2** shows that the U.S. G-SIBs capital and Tier 1 Leverage ratios increased on average from 8.4 percent to 14.5 percent and from 5.6 percent to 6.8 percent from 2007 to 2022, respectively. The 2023 Financial Stability Oversight Council (“FSOC”) Annual Report noted that the CET1 Ratio for the U.S. G-SIBs is “on par with the highest levels observed in more than 20 years ... reflect[ing] more stringent requirements that resulted from the 2022 Federal Reserve Stress Tests and, in some cases, a higher G-SIB capital surcharge.”²¹ The Federal Reserve’s supervisory stress tests have played an important role in ensuring the largest banks have sufficient capital to withstand severe macroeconomic shocks.

Exhibit 2: Changes in Tier 1 Capital and Leverage Ratios for the U.S. G-SIBs from 2007 to 2022

	Fiscal Year Ended					
	2007			2022		
	Assets (\$ Billions)	Tier 1 Capital Ratio	Tier 1 Leverage Ratio	Assets (\$ Billions)	Tier 1 Capital Ratio	Tier 1 Leverage Ratio
[1] BANK OF AMERICA CORPORATION	\$1,716	6.9%	5.1%	\$3,051	13.0%	7.0%
[2] BANK OF NEW YORK MELLON CORP.	\$198	9.3%	6.5%	\$406	14.1%	5.8%
[3] CITIGROUP INC.	\$2,188	7.1%	4.0%	\$2,417	13.9%	7.1%
[4] GOLDMAN SACHS GROUP, INC.	\$1,120	N/A	N/A	\$1,442	15.8%	7.3%
[5] JPMORGAN CHASE & CO.	\$1,562	8.4%	6.0%	\$3,666	14.9%	6.6%
[6] MORGAN STANLEY	\$1,045	N/A	N/A	\$1,180	17.2%	6.7%
[7] STATE STREET CORPORATION	\$143	11.2%	5.3%	\$301	15.4%	6.0%
[8] WELLS FARGO & COMPANY	\$575	7.6%	6.8%	\$1,881	12.1%	8.3%
Weighted Average:		7.6%	5.2%		14.2%	7.0%
Simple Average:		8.4%	5.6%		14.5%	6.8%

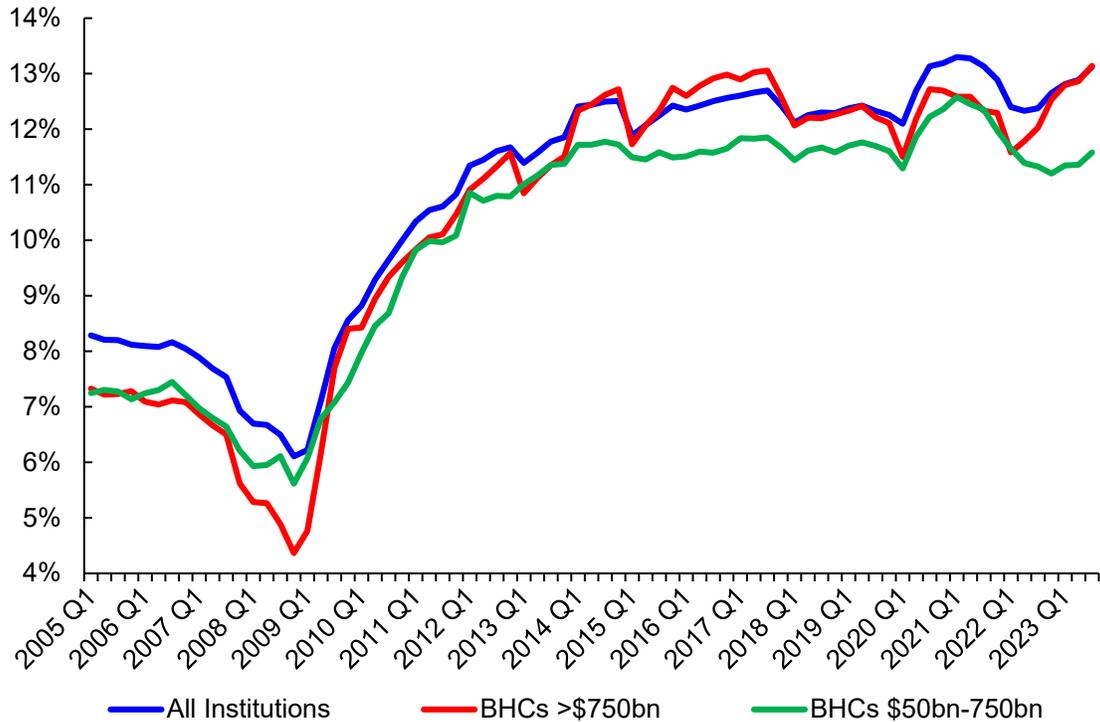
Notes: Reports the smaller of the ratios under standardized and advanced approaches where applicable. Goldman Sachs and Morgan Stanley did not report Tier 1 Capital or Leverage Ratios in fiscal year 2007. Average was computed over U.S. G-SIBs that reported a ratio in each fiscal year. Weighted Average is weighted by Total Assets as reported in companies’ 10-Ks.

Sources: Companies SEC Form 10-Ks.

More generally, capital ratios for U.S. bank holding companies (“BHCs”) have increased markedly since the GFC. **Exhibit 2**, for example, illustrates how CET1²² capital ratios have evolved over time. The aggregate CET1 capital ratio for all banking institutions has increased from almost 7 percent in Q4 2007 to more than 13 percent in Q3 2023. The

CET1 capital ratio for BHCs with more than \$750bn in total assets has more than doubled from 5.6 percent in Q4 2007 to 13.1 percent in Q3 2023.

**Exhibit 3: U.S. Bank Holding Companies' CET1 Capital Ratios
Q1 2005 – Q3 2023**



Source: Federal Reserve Bank of New York Research and Statistics Group, Quarterly Trends for Consolidated U.S. Banking Organizations (https://www.newyorkfed.org/research/banking_research/quarterly_trends).

In addition, the current levels of capital for U.S. G-SIBs are above the minimum regulatory capital requirements. See **Exhibit 4**. As of Q3 2023, for example, the CET1 ratio for all U.S. G-SIBs weighted by asset size is 13.3 percent compared to the required CET1 ratio of 11.6 percent under the standardized approach, and 13.7 percent compared to 10.0 percent required under the advanced approach. Similarly, the weighted average Tier 1 Leverage Ratio is 7.3 percent compared to the required 4.0 percent and the well-capitalized threshold of 5.0 percent, and the actual supplemental leverage (“SLR”) ratio is 6.1 percent compared to the required BHC e-SLR of 5.0 percent.

**Exhibit 4: U.S. G-SIBs Required and Actual CET1 and Leverage Ratios
As of September 30, 2023**

U.S. G-SIB	Assets (\$ Billions)	CET1			
		Standardized Approach		Advanced Approach	
		Required	Actual	Required	Actual
BANK OF AMERICA	\$3,153	10.4%	11.9%	9.5%	13.5%
BANK OF NEW YORK MELLON	\$405	8.5%	11.9%	8.5%	11.4%
CITIGROUP INC.	\$2,368	12.0%	13.6%	10.5%	12.5%
GOLDMAN SACHS GROUP, INC.	\$1,577	13.8%	14.8%	10.0%	14.8%
JPMORGAN CHASE & CO.	\$3,898	12.5%	14.3%	11.0%	14.5%
MORGAN STANLEY	\$1,169	13.3%	15.6%	10.0%	16.1%
STATE STREET CORPORATION	\$284	8.0%	11.0%	8.0%	12.2%
WELLS FARGO & COMPANY	\$1,909	9.2%	11.0%	8.5%	12.0%
	Weighted Average:	11.6%	13.3%	10.0%	13.7%
	Simple Average:	11.0%	13.0%	9.5%	13.4%

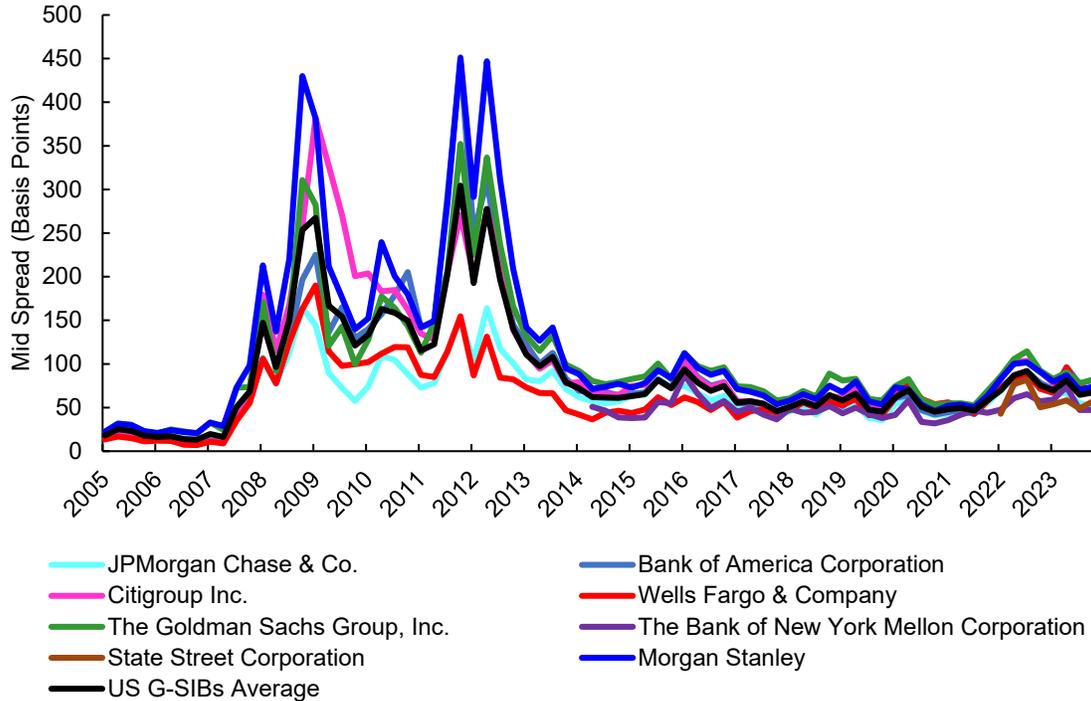
U.S. G-SIB	Assets (\$ Billions)	Leverage			
		Tier 1 Ratio		Enhanced-SLR	
		Required	Actual	Required	Actual
BANK OF AMERICA	\$3,153	4.0%	7.3%	5.0%	6.2%
BANK OF NEW YORK MELLON	\$405	4.0%	6.1%	5.0%	7.2%
CITIGROUP INC.	\$2,368	4.0%	7.4%	5.0%	6.0%
GOLDMAN SACHS GROUP, INC.	\$1,577	4.0%	7.1%	5.0%	5.6%
JPMORGAN CHASE & CO.	\$3,898	4.0%	7.1%	5.0%	6.0%
MORGAN STANLEY	\$1,169	4.0%	6.8%	5.0%	5.5%
STATE STREET CORPORATION	\$284	4.0%	5.8%	5.0%	6.3%
WELLS FARGO & COMPANY	\$1,909	4.0%	8.3%	5.0%	6.9%
	Weighted Average:	4.0%	7.3%	5.0%	6.1%
	Simple Average:	4.0%	7.0%	5.0%	6.2%

Notes: Weighted Average is weighted by Assets.

Sources: Company 3Q 2023 SEC Forms 10-Qs.

A market-based perspective on the ability of banks to withstand losses comes from the credit default swap (“CDS”) market. CDS contracts on U.S. G-SIBs provide a market pricing mechanism on the likelihood that a bank will default on its debt obligations. CDS spreads increase (decrease) when the probability of default on the underlying debt increases (decreases), holding all else equal. As **Exhibit 5** shows, CDS spreads are dramatically lower over the last decade than during the twin GFC and the Eurozone Crises.²³

**Exhibit 5: 5-Year Credit Default Swap (CDS) Spreads for the U.S. G-SIBs
2005-2023**



Notes: CDS values are as of beginning of each month.

Source: S&P Capital IQ.

To summarize the current U.S. bank capital position, as stated in the most recent Supervision and Regulation Report by the Board of Governors of the Federal Reserve System, issued in November 2023:

“The banking sector remains sound overall, and most banks continue to report capital levels above regulatory requirements. ... Regulatory capital ratios increased during the first half of 2023. The industry’s aggregate common equity tier 1 (CET1) capital ratio rose to 12.5 percent as of June 30, 2023, a fourth consecutive quarterly increase (figure 1). This reflects over \$2 trillion in CET1 capital across the banking system. However, tangible capital levels, which include declines in the fair values of securities but exclude intangible assets such as goodwill, remained under pressure for many banks. ... Large financial institutions’ capital positions remain above minimum regulatory ratios, although unrealized losses on securities and other assets have weighed on their tangible capital. As of June 30, 2023, their aggregate CET1 capital ratio was 12.3 percent. Supervisors continue to closely monitor capital levels and, in June, completed the annual stress test for 23 large financial institutions. This year, the supervisory severely adverse scenario included a severe global recession accompanied by a period of heightened stress in commercial and residential real estate, as well as corporate debt markets. The stress test results show that the 23 large banks subject to the test this year have sufficient capital to absorb more than \$540 billion in losses and continue to lend to households and businesses under stressful conditions.”²⁴

B. The Share of Non-Banks Relative to Banks Has Increased Over Time, and Increases in Capital Requirements and Regulatory Burden Faced by Banks Contributed to the Growth of the Non-Bank Financial Institutions

In the immediate aftermath of the GFC, I, as well as others,²⁵ warned that the nature of competition in financial services meant that the effects of post-financial crisis higher capital requirements “raise significant concerns about migration of credit-creation activity to the shadow banking sector, and the potential for increased fragility of the overall financial system that this might bring.”^{26, 27} In other words, simply moving a risky activity off of banks’ balance sheets does not mean that the risk disappears. Instead, it might move to different areas within the financial system where it becomes more difficult to observe, measure, and monitor. Indeed, we have seen an increase in non-banks undertaking functions that were previously primarily undertaken by banks, and this change is, in part, an unintended (or, in part, intended) consequence of the post-GFC reforms. See **Exhibits 6-9** below.

Moving more activity into the non-bank sector relative to the banking sector is likely to involve a number of risks that may be difficult to identify and monitor, given that the non-bank sector is less transparent and has less oversight than the banking sector. While regulators around the world are intending to deepen their understanding of the risks in the non-bank sector, they are just beginning to explore this, for example, the System Wide Exploratory exercise of the Bank of England is undertaking this year.²⁸ In the U.S., the Financial Stability Oversight Council announced in May that it would explore proposals to classify shadow banks as systemically important.²⁹ Given that these efforts are in exploratory state, it will take significant time to build regulation for these entities. In addition to differences in regulations, issues that will be important to consider are the amount of leverage, liquidity risks, risk concentrations and correlations, cyclicalities, and potentially fragile interconnections within the non-bank sector as well as to the banking sector. These issues become more important as activities increasingly migrate away from banks.

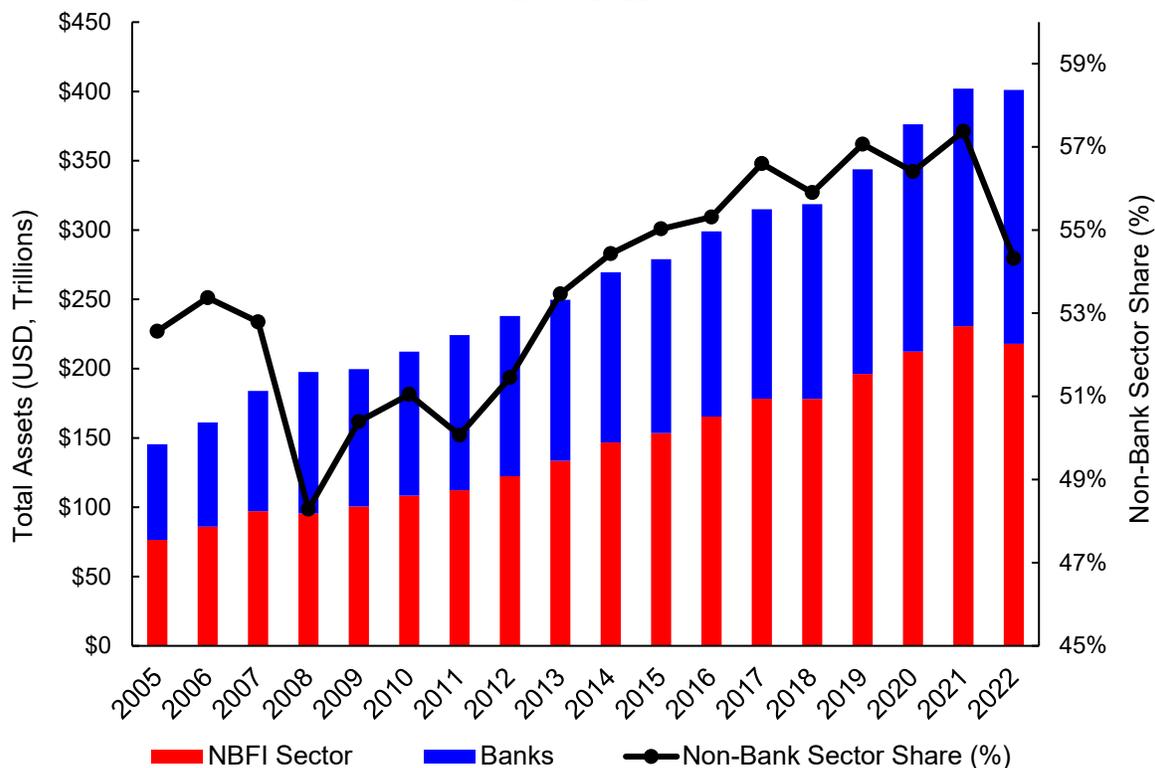
Increased capital requirements and regulatory burden faced by banks, and financial innovation since the GFC have all contributed to the rise of the non-bank sector. There is a wide range of studies of the growth of non-banks that find that increased capital and regulatory requirements on banks have helped to fuel the growth of the non-bank sector. Irani et al. (2020), for example, summarizes the academic literature on the regulatory issue by saying “that regulatory burdens, in the form of rising capital requirements and greater scrutiny, may reduce traditional banks’ balance sheet capacity and thus result in a migration of banking activities toward unregulated shadow banks that can escape these costs.”³⁰ Plantin (2015) argues that tightening bank capital requirements may spur a surge in shadow banking activity leading to “an overall larger risk on the money-like liabilities of the formal and shadow banking institutions.”³¹

Of course, technological innovation is also a contributor to the rise of non-banks. Buchak et al. (2018) analyze the relative importance of regulatory burdens versus innovation in the rise of the non-bank sector. They find the regulatory burdens are the main driving force. They estimate that 60 percent of shadow bank growth from 2007 to 2015 was due to regulatory constraints, including capital requirements, and only 30 percent was due to technological innovation.³² In addition, some the technological innovation we have seen may be driven by attempts to avoid regulation, as Martin and Parigi (2009) argue.³³

Interestingly, Lerner et al. (2021) find that most of the financial innovation since the GFC has been done by information technology firms and non-banks, rather than in traditional banking system.³⁴ The rise not only of non-bank financial institutions but information technology firms that are not financial institutions make it even more difficult for banking and financial regulators to get a handle on the risks and potential fragile interconnections in the non-bank sector.

The migration of traditional bank activities to the non-bank sector post-GFC is evident from the increase of the total global financial assets held by the non-bank sector from 2009 to 2022. As **Exhibit 6** shows, the total global non-bank sector’s relative share of total global financial assets was 54.3 percent in 2022, accounting for \$217.9 trillion compared to \$100.62 trillion in 2009.³⁵ While there was a decrease in the non-banks’ share in 2022, the Financial Stability Board noted that this decline primarily reflects “valuation losses in mark-to-market asset portfolios, particularly in investment funds.”³⁶ Given that “[m]arket prices have generally rebounded since the analysis presented in this report for 2022,”³⁷ it is thus likely that this decline will be reversed in 2023.

**Exhibit 6: Global Bank and Non-Bank Financial Assets
2005-2022**

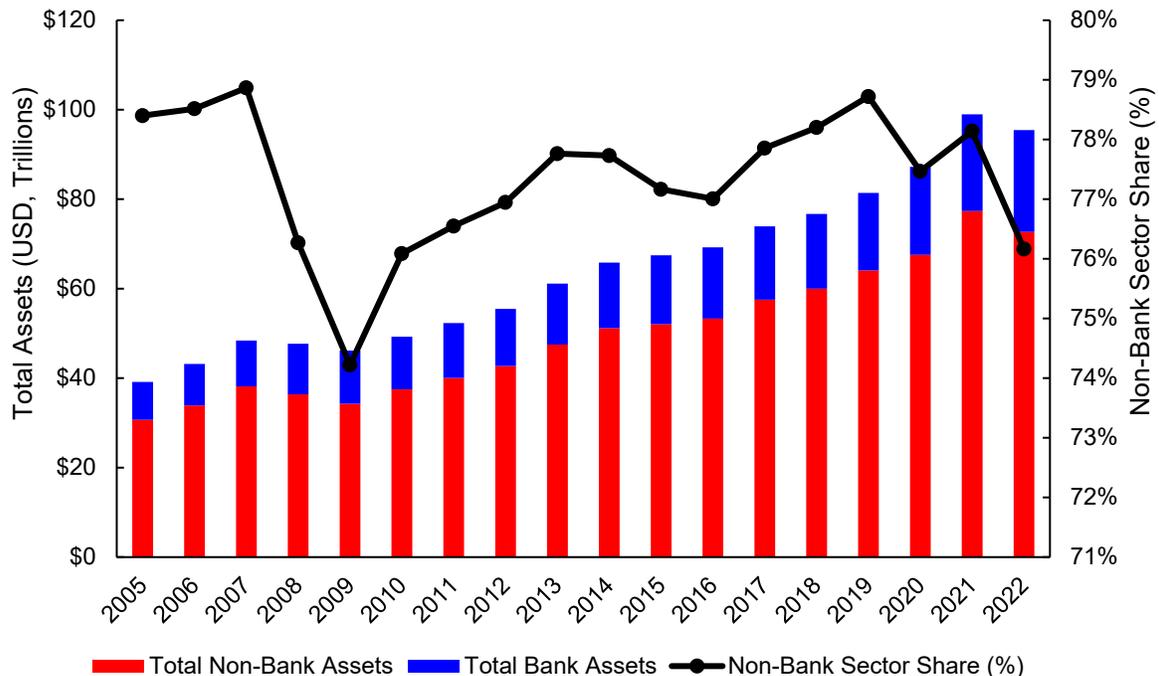


Source: Financial Stability Board, Global Monitoring Report on Non-Bank Financial Intermediation 2023 (<https://www.fsb.org/2023/12/global-monitoring-report-on-non-bank-financial-intermediation-2023/>). The FSB defines the Non-Bank Sector as “a broad measure of all non-bank financial entities, composed of all financial institutions that are not central banks, banks or public financial institutions.” See “Global Monitoring Report on Non-Bank Financial Intermediation,” Financial Stability Board, December 20, 2022, p. 3.

In the U.S., we observe a similar strong growth in the non-bank sector as shown in

Exhibit 7. Since 2009, for example, non-bank financial assets increased from \$30.7 trillion to \$72.7 trillion in 2022, while bank assets increased from \$11.9 trillion to \$22.8 trillion in 2022.

**Exhibit 7: Bank and Non-Bank Financial Assets in the United States
2005 - 2022**



Notes: Total Non-Bank Financial Institutions' Assets calculated as total of mutual funds, ETFs, REITs, closed-end funds, insurance companies, pension funds, hedge funds, MMFs, and security brokers / dealers per "Interconnectedness, Innovation and Unintended Consequences: What macroprudential policy can do to assess fragilities outside of the banking sector – speech by Randall S. Kroszner," given at the Federal Reserve Bank of Cleveland and Office of Financial Research's 2023 Financial Stability Conference, November 16, 2023.

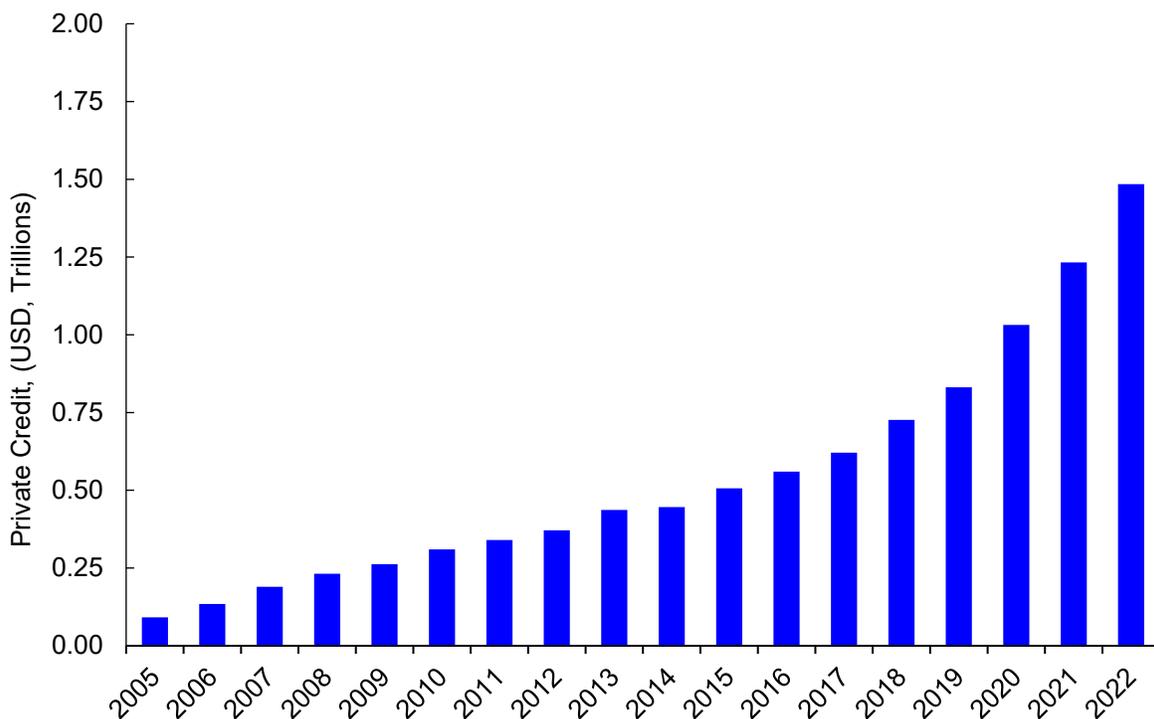
Sources: FRED, Federal Reserve Bank of St. Louis (Commercial Banks: <https://fred.stlouisfed.org/series/TLAACBW027SBOG>); (Mutual Funds: <https://fred.stlouisfed.org/series/BOGZ1LM654090000Q>); (Money Market Funds: <https://fred.stlouisfed.org/series/MMMFFAQ027S>); (ETFs: <https://fred.stlouisfed.org/series/BOGZ1FL564090005Q>); (Pension Funds: <https://fred.stlouisfed.org/series/BOGZ1FL594090005Q>); (Closed-End Funds: <https://fred.stlouisfed.org/series/BOGZ1FL554090005Q>); (Hedge Funds: <https://fred.stlouisfed.org/series/BOGZ1FL624090005A>); (Insurance Companies: <https://fred.stlouisfed.org/series/BOGZ1FL544090005Q>); (REITs: <https://fred.stlouisfed.org/series/BOGZ1FL644090005Q>); (Security Brokers/Dealers: <https://fred.stlouisfed.org/series/BOGZ1FL664090005Q>).

To be more specific, banks have been losing market share to non-banks in core parts of their traditional lending function. Private credit is a prominent example of a rapidly growing direct non-bank competitor to bank lending. Private credit firms are non-banks that work directly with borrowers to negotiate and originate privately held loans that are not traded in public markets.³⁸ As **Exhibit 8** shows, the global private credit market has estimated assets under management ("AUM") of \$1.5 trillion as of year-end 2022, up from

roughly \$500 billion at year-end 2015.³⁹ Private credit saw its highest net inflows in 2022, with a growth of 29 percent.⁴⁰

This fast-growing sector may involve increasing risks that are difficult for regulators and supervisors to observe. This “boom in private credit has been moving a huge portion of corporate borrowing away from public view ... into the more opaque realm of private funds.”⁴¹ According to a September 28, 2023 Moody’s Investors Service Report, private credit is increasingly concentrated with “[t]he largest private debt managers continu[ing] to dominate industry fundraising and build[ing] scale.”⁴² U.S. regulators have been expressing concern with the rise in private credit as a financial system vulnerability that warrants continued monitoring: “...the growth in the private credit market has garnered increased attention in the financial press. Private credit is a relatively opaque segment of the broader financial market that warrants continued monitoring.”⁴³

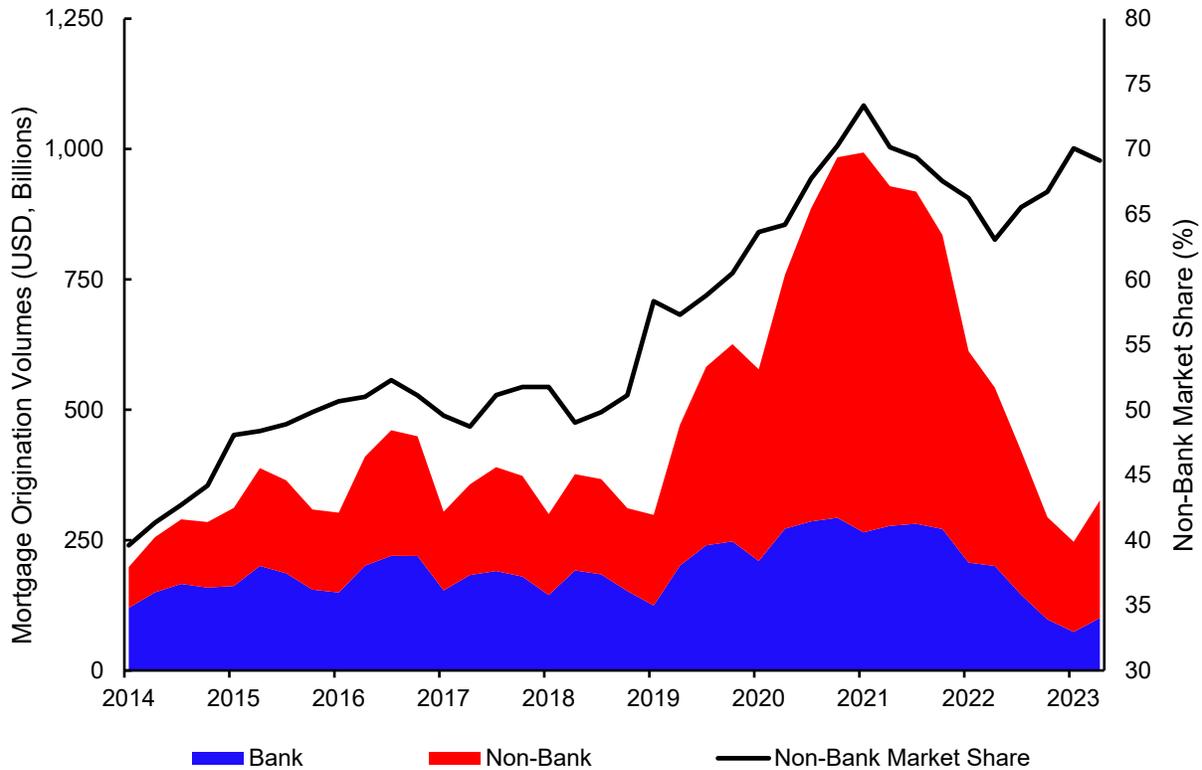
**Exhibit 8: Global Private Credit Assets Under Management
2005-2022**



Source: Financial Stability Oversight Council, Annual Report 2023 (<https://home.treasury.gov/policy-issues/financial-markets-financial-institutions-and-fiscal-service/fsoc/studies-and-reports/annual-reports>).

In addition, banks have been losing market share in the mortgage market to non-banks. The share of non-bank mortgage lending has risen from 40 percent in 2014 to be 70 percent of market share in 2023. See **Exhibit 9**. As discussed in **Section V**, higher risk weights for some types of residential mortgages in the Proposal could accelerate this shift by further.

**Exhibit 9: Mortgage Origination Volumes
2014 - Q2 2023**



Source: Financial Stability Oversight Council, Annual Report 2023
<https://home.treasury.gov/system/files/261/FSOC2023AnnualReport.pdf>.

As the 2023 Financial Stability Oversight Council’s Report explains, the origination of mortgages by the non-bank sector could face liquidity strains during times of high delinquencies and stress for non-banks could lead to larger systemic issues:

“In contrast to the bank lending and servicing model, nonbank mortgage companies lack access to deposits for short term financing. ... most nonbank mortgage originators rely on short-term wholesale funding, the majority of which is uncommitted lines that can be quickly pulled in times of stress. In addition, nonbanks do not have access to liquidity back-stops that could provide bridge funding if traditional lending lines tighten or close.... The rapid rise in interest rates significantly slowed mortgage originations, adversely impacting earnings for nonbanks due to their monoline business model. Inflationary pressures have begun to put pressure on household incomes, which could result in increased borrower delinquencies and strain on servicers of loans that require payments to investors even when borrowers are delinquent. Given nonbanks’ large market share, stress for these nonbanks could lead to larger system issues...”⁴⁴

IV. Key Elements of the Basel III Endgame Proposal and Their Impact on Capital Requirements

On July 27, 2023, the Agencies published a proposal that would substantially increase the capital requirements applicable to large banks and to banks with significant trading activity. The stated goal of the Proposal is to enhance banks' resilience and to reduce risks to U.S. financial stability and costs to the FDIC in case of material distress or bank failures.^{45, 46}

The Agencies state that they assessed "the likely effect of the proposal on economic activity and resilience, and expect that the benefits of strengthening capital requirements for large banking organizations outweigh the costs."⁴⁷ The Proposal, however, contains only a very broad qualitative assessment of the Proposal's effect on "economic activity," and no specific analyses on which they based this assessment.⁴⁸

In contrast, other jurisdictions when proposing Basel III reforms implementations have attempted to quantify the effect of the changes. When the Bank of England issued its consultation paper to implement Basel 3.1 reforms in November 2022, for example, it quantified the various incremental changes, such as the operational compliance costs, costs associated with banks adjusting their balance sheets, and concluded with an analysis of the impact on the U.K.'s GDP. Although there are always caveats in undertaking such an analysis, it would be valuable for the Agencies to go further in the direction of cost-benefit analysis as the UK has done.⁴⁹

The Proposal is estimated to result in substantial increases in bank capital requirements even though the Basel Committee on Banking Supervision ("BCBS") said that in proposing the standards for the finalizing of Basel III "the Committee focused on not significantly increasing capital requirements."⁵⁰

Based on year-end 2021 data, the Agencies estimate that there will be a 16 percent increase in CET1 capital requirements for all bank holding companies, with the increase principally affecting the largest and most complex banks.⁵¹ For G-SIBs and bank holding companies larger than \$700 billion in total assets or \$75 billion or more in cross-jurisdictional (that is, Category I or II bank holding companies), the Agencies estimate that the Proposal would increase CET1 capital requirements by 19 percent.⁵² The estimates also do not include any additional increases stemming from the G-SIB Surcharge Proposal.⁵³

Using more recent data from Q2 2023, banking trade groups estimate that the Proposal without the G-SIB capital surcharge will increase the capital requirements for U.S. G-SIBs by 25 percent.⁵⁴ If the G-SIB Surcharge is included, the banks estimate that the expected changes in CET1 capital requirements will be 30 percent for the U.S. G-SIBs.⁵⁵ In other words, estimates of the increase in the capital requirements for U.S. G-SIBs range from 19 percent to 25 percent.⁵⁶

The Federal Register version of the Proposal is more than 300 pages and encompasses revisions that "would include replacing current requirements that include the use of banking organizations' internal models for credit risk and operational risk with standardized approaches and replacing the current market risk and credit valuation adjustment risk requirements with revised approaches."⁵⁷ My focus here is to highlight some of the key changes that will drive the increases in capital requirements and that have

potentially important implications for households, firms, markets, and economic activity and, hence, are relevant for cost-benefit analysis of the Proposal. See the summary in **Exhibit 10**. In **Section V**, I will discuss the potential impact of these changes on end-users, financial stability, and the economy.

Exhibit 10

Highlights of Key Proposed Changes

Credit Risk

- Increase risk weights by 20 percentage points across all residential mortgages
- Allow 65 percent risk weights for a corporate exposure to a company that is investment grade *only if* a company also has a publicly traded security outstanding or that is controlled by a company that has a publicly traded security outstanding; otherwise at risk weight of 100 percent
- Eliminate the 100 percent risk weight for non-significant equity exposures
- Introduce 400 percent risk weight for certain equity exposures that are not publicly traded
- Introduce minimum haircut floors for Securities Financing Transactions (“SFTs”)

Operational Risk

- Replace Internal Models with Standardized Approach that includes a new Business Indicator Component (“BIC”) comprised of i) interest, lease, and dividend component, (ii) “business services” component, and (iii) financial component. Revenues from fee-based activities in the “business services” component are not netted against expenses, in contrast to the other two components.

Market Risk

- Adopt a new Fundamental Review of the Trading Book (“FRTB”) to assess market risk under stress conditions
- Overlaps with Global Market Shock (“GMS”) from the stress tests

Credit Valuation Adjustment (“CVA”) Risk

- Include client facing cleared derivatives transactions
-

Credit Risk: Risk weights for residential real estate exposures are set based on the loan-to-value (“LTV”) ratio of the mortgage.⁵⁸ As **Exhibit 11** demonstrates, the Proposal would raise the risk weights for each LTV “band” by 20 percent above the Basel III requirements.⁵⁹ The Proposal, for example, would increase the risk weight in the U.S. for high loan-to-value mortgages (with LTVs over 80 percent) from 50-percent risk weight applied under the current standardized approach to 60 percent to 90 percent.^{60, 61}

**Exhibit 11: Residential Real Estate (RRE) Risk Weights
Basel III vs. U.S. Proposal**

LTV Bands (%)	< 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100	> 100
General RRE							
Basel III	20%	25%	30%	30%	40%	50%	70%
U.S. Proposal	40%	45%	50%	50%	60%	70%	90%
<i>Difference</i>	20%	20%	20%	20%	20%	20%	20%
Income-producing RRE							
Basel III	30%	35%	45%	45%	60%	75%	105%
U.S. Proposal	50%	55%	65%	65%	80%	95%	125%
<i>Difference</i>	20%	20%	20%	20%	20%	20%	20%

Sources: “High-level summary of Basel III reforms,” Basel Committee on Banking Supervision, December 2017, p. 4; Basel III Endgame Proposal, p. 64048.

Credit Risk (continued): The Proposal would introduce a new more favorable 65 percent risk weight for corporate exposures which are investment grade (rather than 100 percent) only if the company has a publicly traded security outstanding or is controlled by a company that has a publicly traded security outstanding.⁶² Currently, there is no requirement in prudential regulation for securities to be listed on an exchange.

Credit Risk (continued): The Proposal suggests a number of changes to the calculation of standardized risk-weighted assets for equity exposures.⁶³ The Proposal eliminates the 100 percent risk weight for non-significant equity exposures whose aggregate adjusted carrying value does not exceed 10 percent of the banking organization’s total capital.⁶⁴ Instead, an equity exposure that is not publicly traded and is not an equity exposure to an investment firm, would receive a 400 percent risk weight using the new Standardized Approach.⁶⁵

Credit Risk (continued) – Securities Financing Transactions (SFTs): As part of credit risk mitigation, the Proposal also introduces minimum haircut floors for certain SFTs, such as “margin loan and repo-style transactions with unregulated financial institutions that banking organizations must meet in order to recognize the risk-mitigation benefits of financial collateral.”⁶⁶ The Proposal requires “a banking organization to receive a minimum amount of collateral ... [and] the application of haircut floors would determine the minimum amount of collateral exchanged. A banking organization would treat in-scope transactions with unregulated financial institutions that do not meet the proposed haircut floors as repo-style transactions or eligible margin loans where the banking organization did not receive any collateral from its counterparty.”⁶⁷

Operational Risk: For the largest banks,⁶⁸ the Proposal replaces the existing internal models methodology for operational risk with a Standardized Approach. The Standardized Approach calculates RWAs as a function of two components: the Business Indicator Component (“BIC”), which is a proxy for bank’s size and the Internal Loss Multiplier (“ILM”), which is a proxy for bank’s historical losses over a 10 year horizon and is set under the Proposal at no less than one.⁶⁹ The BIC has three components that encompass a bank’s financial activities: (a) an interest, lease, and dividend component (to capture lending and investment activities); (b) a “business services” component (to capture fee-based and commission-based activities, as well as other financial activities not captured by the other

components of the BIC); and (c) a financial component (to capture trading activity).⁷⁰ The Proposal, however, does not allow the netting of expenses against fee-based income for the “business services” component, as it does for the other two components. The Proposal also does not provide for a cap on total fee-based income (i.e., “business services” component), as it does for interest, lease, and dividend income. Operational risk is also currently included in the Federal Reserve’s supervisory stress testing.⁷¹

Market Risk: As part of the proposed market risk framework, the Proposal adopts a Fundamental Review of the Trading Book (FRTB), designed to assess market risk under extreme stress conditions.⁷² This market risk, however, is also taken into account through the Global Market Shock (“GMS”) component of the Federal Reserve’s supervisory stress testing, that similarly measures general market distress and heightened uncertainty. In other words, the same shock affects the capital determined by both the FRTB and GMS.

Credit Valuation Adjustment (CVA): The Proposal would also introduce new requirement to address the CVA risk.⁷³ Currently the CVA RWAs are calculated as part of advanced approaches and are not separately calculated as part of a Standardized Approach. One of the important proposed changes in the CVA framework is the treatment of exposures arising from client clearing transactions: banks would now be required to raise the level of capital that they hold for centrally cleared derivatives as for non-centrally cleared derivatives.⁷⁴ In addition, similar to FRTB, CVA risk is also currently incorporated into the Federal Reserve’s supervisory stress testing.⁷⁵

In the next section, I will discuss the likely impacts of the above changes on the cost and availability of credit for borrowers, on banks’ lending, trading and market making practices and their provision of other financial services, and on the financial system and economy as a whole.

V. Potential Consequences of the Basel III Endgame Proposal

The changes described in the previous section would result in increases of required capital and banks' funding costs for lending, credit provision, trading activities, and other financial services. As the Agencies indicate in the Proposal, they believe changes in the credit risk and operational risk could result in "a slight reduction in bank lending could result from the increase in capital requirements" and there could be "small changes in loan portfolio allocations."⁷⁶ The banks indeed stated that the higher capital requirements will translate into higher costs of borrowing for their customers.⁷⁷ The Agencies also indicate that the changes in market risk, CVA risk and operational risk "could ... increase banking organizations' costs of engaging in market making activities."⁷⁸

The extent of the trade-offs from higher capital requirements are empirical questions that are important to analyze in assessing the costs and benefits of the Proposal. In response to higher capital charges, banks might in part or in full pass on the increase in the costs to borrowers, end-users, or other customers, and/or non-banks not subject to the Proposal might outcompete the banks to undertake some of these services.

In the next subsection, I outline a framework to analyze the channels through which higher costs can affect borrowers and end-users of financial services and well as the likelihood that activities would migrate away from banks to the non-bank sector. I then apply the framework to examine potential consequences for credit costs and availability, hedging, clearing, and trading for various groups and to consider their comments of what they judge to be the likely impacts. I also examine how the Proposal is likely to accelerate the migration of financial activities away from the banking sector and potential consequences for financial stability and the economy. I then finish this section by examining the potential impact of the Proposal on the effectiveness and competitiveness of the U.S. banking system.

A. Framework

Regulators recognize that increased capital requirements can increase the cost of credit and access to it. As I noted at the start of the paper, in July 2023, Federal Reserve Chair Jerome Powell stated: "High levels of capital are essential to enable banks to continue to lend to households and businesses and conduct financial intermediation, even in times of severe stress. But raising capital requirements also increases the cost of, and reduces access to, credit. And the proposed very large increase in risk-weighted assets for market risk overall requires us to assess the risk that large U.S. banks could reduce their activities in this area, threatening a decline in liquidity in critical markets and a movement of some of these activities into the shadow banking sector."⁷⁹

In this section, I develop a framework to analyze the arguments that Chair Powell outlines before turning to discussions of potential consequences of the Proposal for different users of financial services and for the system as a whole. These provide elements that can be considered when assessing the costs, benefits, and trade-offs of the Proposal.

An increase in capital requirements can affect financial and economic activity through a couple of channels. First, all other things equal, increasing capital requirements on banks will increase their cost of undertaking those activities. One channel is that banks

would in part or in full pass on the increase in the costs to borrowers, end-users, or other customers. Many studies have found some pass through of increased capital costs.⁸⁰

Second, banks may choose to reduce their activities or even withdraw from providing some products or services. As described above in **Section III.B.**, we have witnessed a large migration of banking activities away from banks to the non-bank financial sector in large part driven by increasing regulatory requirements on banks relative to their non-bank competitors.⁸¹

While there may be many impacts of the Proposal, we can group most of the impacts under two broad categories. First would be credit provision including lending to households and business. Proposed capital changes relating to credit risk weights and operational risk would directly affect credit provision. Second would be trading, market making, hedging, and associated services. Here, it would be primarily changes to the FRTB's revised market risk framework, CVA, and operational risk that would have an impact on these services. These changes are summarized in **Exhibit 10** in **Section IV**.

In addition to the impacts on households and businesses, there could be important impacts on the functioning and stability of markets, as banks pull back from some activities and some of those migrate to the non-bank sector. First, banks tend to stick with their customers in stress situations and help to work through orderly reworking of terms whereas non-banks typically do not.⁸² (More on this below.) If more credit provision is done by non-banks, then an adverse economic shock is more likely to be amplified rather than dampened, potentially making the economic activity more volatile and less resilient in the face of macroeconomic shocks.

Second, banks have traditionally been important market-makers and liquidity providers in both normal and stress times. If banks retreat from some of these activities, markets could be less liquid and more fragile. Non-banks may step in but, as noted above, and they tend to be less likely to continue to make markets and provide liquidity during times of stress. In addition, since there is much less disclosure and regulation of non-banks relative to banks, it becomes more difficult for regulators, supervisors, and market participants to monitor the buildup of risk concentrations and fragile interconnections in the system. This opacity can make it more difficult not only to discover vulnerabilities and anticipate stresses but also to deal with those stresses when they crystalize. While the U.K. is undertaking an exploratory exercise to understand better risks in the non-bank financial sector, it is really the first of its kind to be undertaken.⁸³ It will take much time before regulators, supervisors, and market participants will have anything close to a line of sight into the risks of the non-bank financial sector that approaches that of the banking sector.

Finally, there can be impacts on growth and employment. Private firms that don't have access to public debt and equity markets depend relatively heavily on banks as a source of funding. With reduced access to and/or more expensive bank funding that could be a consequence of higher capital requirements, research at the Bank for International Settlements, as well as researchers affiliated with the Federal Reserve and the U.S. Department of Treasury, find that private firms cut back on investment.⁸⁴ (More on this below.) Lower investment can translate into lower productivity growth. Productivity growth is crucial to overall economic growth as well as wage growth. While certainly financial instability and crises can harm economic growth and employment, it is valuable to consider

the impact of increasing capital from current levels on resilience versus the potential negative impact on investment by private firms, as well as the other unintended consequences outlined in this framework.

B. Summary of Impacts of the Proposed Changes on End-Users

As described above, the increased capital requirements for credit, operational, market, and CVA risks could raise the banks' cost of providing credit thus affecting the cost and availability of credit for many end-users. As noted above, one channel of impact of the Proposal would be to increase cost or reduce the availability of credit provision as well as other services. Numerous industry groups and end-users filed comments on the Proposal consistent with these concerns. For example, representatives of large publicly-traded businesses, manufacturers, small companies, pension plans, private firms, farmers, and entrepreneurs have argued that the higher capital requirements in general stemming from changes in higher risk-weighted assets for operational, market, credit and CVA risks will increase the cost of borrowing and decrease availability of financing.⁸⁵ These commenters argue that other changes, including the limiting effect of the listing requirement for investment grade corporates and a 400 percent risk weight for non-significant equity exposure will negatively affect retirement savings plans and the wealth accumulation associated with them, as well as the cost of borrowing for various American businesses, including those that invest in clean energy projects.⁸⁶

Another channel, as noted above, is that banks may choose to reduce their activities or even withdraw from providing some products or services. Consistent with this, changes in the CVA risk and treatment of client clearing for derivatives transactions are expected to impact the costs and availability of clearing services, as farmers and other derivatives end-users argue.⁸⁷ Moreover, increases in market risk and CVA risk are expected to impact hedging costs for derivatives end-users.⁸⁸ **Exhibit 12** gives an overview of the potential impacts and groups likely to be affected by the Proposal.⁸⁹ **Appendix E** provides a more detailed summary of potential impacts identified by end-users in their comment letters. I discuss the impact on pension funds and mutual funds, as well as mortgage borrowers in more detail in **Section V.C** and **D**.

Exhibit 12
Summary of Potential Impacts on Households, Businesses, and Markets

Impact	End-Users
Higher Cost and Lower Availability of Financing	Entrepreneurs Small Firms Private Firms Publicly-traded firms First-time homebuyers Low- and Middle- Income mortgage borrowers Minority mortgage borrowers Manufacturers Construction projects Clean energy projects Pension funds and mutual funds
Higher Cost and Lower Availability of Clearing Services	Farmers, ranchers, agricultural producers Derivatives end-users
Higher Costs of Hedging	Farmers, ranchers, and agricultural producers Pension funds and mutual funds Derivatives end-users
Lower Liquidity, Higher Trading Costs, and Greater Market Volatility	Investment funds/buy side Mutual funds Publicly-traded firms Derivatives end-users Farmers, ranchers, and agricultural producers

C. Impact of the Proposed Changes on Private Companies, and Other Corporate Entities, including Pension Funds and Mutual Funds

As mentioned in **Section IV** the Proposal only allows a lower risk-weight of 65 percent for corporate exposure if the company is internally-rated “investment grade” and if it has securities listed on an exchange. Many highly-rated companies, however, do not have securities listed on an exchange. Wells Fargo, for example, has said that out of approximately 10,000 commercial customers that meet the “investment grade” requirement, only 1,800 would meet both requirements.⁹⁰ The new requirements could result in higher costs and possibly lower availability of credit for many private firms.^{91, 92} That could have an impact on their ability to invest, grow, and create jobs.⁹³

The Proposal explains that “publicly-traded corporate entities are subject to enhanced transparency and market discipline as a result of being listed publicly on an exchange. A banking organization would use these simple criteria, which complement a banking organization’s due diligence and internal credit analysis, to determine whether a corporate exposure qualifies as an investment grade exposure.”⁹⁴ There are, however, many corporate entities that are also subject to enhanced transparency but do not list securities on an exchange.

Mutual funds and pension funds, for example, are highly regulated and file public disclosures that generally are at least as rigorous as those that apply to publicly-traded corporate entities.⁹⁵ Mutual funds, for example, must provide a copy of the fund’s prospectus to shareholders and also file annual and semi-annual reports with the Securities and Exchange Commission, containing financial statements, performance, average annual total return information, and information regarding policies on borrowing and concentration,

as well as the identity of officers and directors.⁹⁶ They typically also calculate and publicly disclose on a daily basis, the net asset value of their investments.⁹⁷ In addition, many pension funds release information, such as audited financial statements, that is comparable to information releases associated with publicly traded securities.⁹⁸

D. *Impact of the Proposed Changes Stemming from Real Estate Risk Weights*

As discussed in **Section III.B**, banks have been losing market share to non-banks in the mortgage market. Given the substantial increase in risk-weights for residential real estate exposure for banks, the Proposal would likely accelerate that migration away from banks to more opaque lenders where it is more difficult for regulators and market participants to monitor risk, concentration, and potentially fragile interconnections.

The Proposal could also have a large impact on particular types of mortgage borrowers, including first time home buyers and low and moderate income borrowers. The Federal Reserve’s vice chair for supervision Michael Barr indicated that the Agencies “care very much about access to credit for low and moderate income borrowers.”⁹⁹ Yet, comments filed by numerous groups raised concerns that the changes to the residential real estate (“RRE”) risk weights could disproportionately disadvantage low and moderate income, Black, and Hispanic mortgage borrowers (e.g., Goodman and Zhu 2023).¹⁰⁰ See also comment letters from underserved groups.¹⁰¹

Consistent with the concerns raised by a number of groups representing low-income and minority households, a Bloomberg analysis of a large sample of mortgages originated between 2018 and 2022 found that borrowers with mortgages originated by non-banks paid higher fees than borrowers with mortgages originated by banks.¹⁰² The higher proposed real estate risk weights for banks could further increase the shift of minority and LMI borrowers to more costly non-bank lenders.

In contrast to banks, non-banks are not subject to the Community Reinvestment Act (“CRA”). Under the CRA, the Federal Reserve and other federal banking regulators encourage financial institutions to help meet the credit needs of the communities in which they do business in, including low-to-moderate income neighborhoods. A 2020 National Community Reinvestment Coalition report argues that the CRA should apply to non-banks as well given that “banks’ share of home lending has stood at less than half of total lending.”¹⁰³

F. *Potential Unintended Consequences of Migration of Activities from Banks to Non-Banks*

As explained in **Section III**, the market share of non-banks providing credit in the U.S. has been increasing rapidly driven in large part by regulatory burdens faced by banks as well as technological and financial innovation. The Proposal has the potential to further accelerate this migration into the non-bank sector.

i. Non-banks withdraw support during times of financial stress

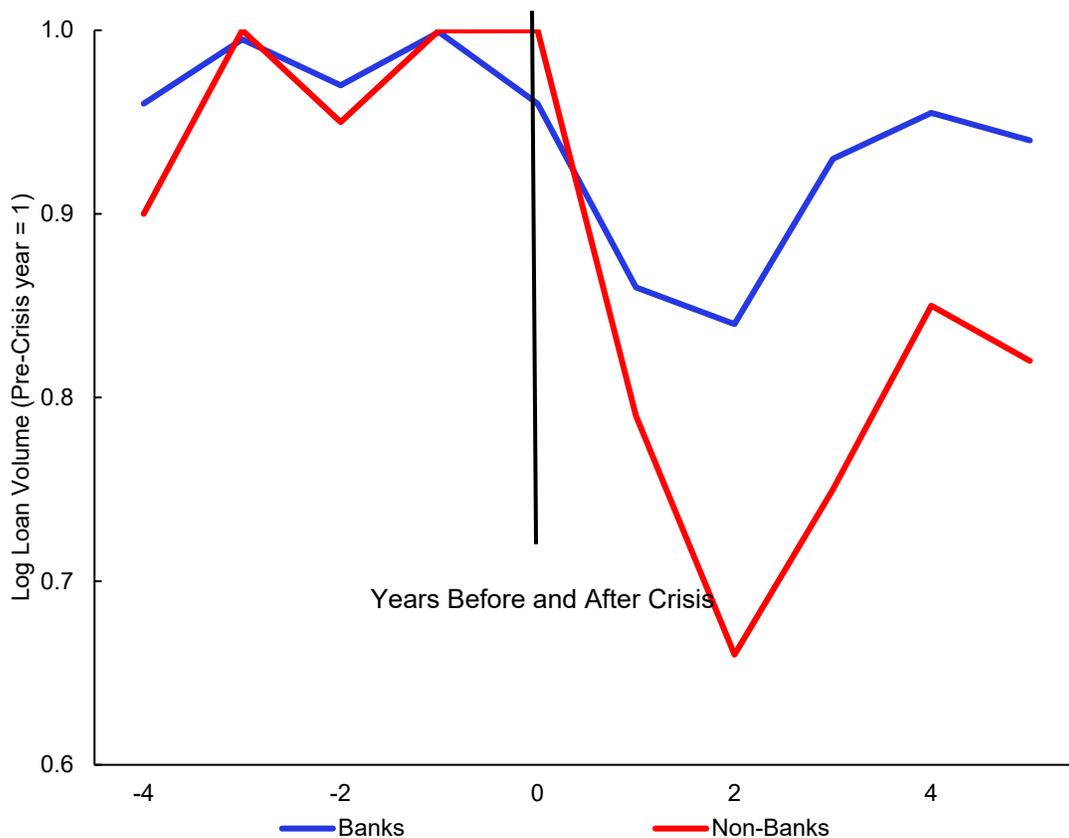
An important question when assessing the financial stability impacts of increases in bank capital that are likely to accelerate the rise of the non-bank sector concerns whether non-banks act as a “shock absorber” or “shock amplifier” relative to banks in times of stress. When assessing the costs and benefits of the Proposal, it is important to consider the net impact on the financial stability and the economy rather than only the impact on the banks.

A recent study by researchers at the BIS and Princeton have looked at this question and find that non-banks do not appear to act as “shock absorbers” in times of stress.¹⁰⁴ They compare how banks and non-banks react to stress and find that non-banks cut their lending by about 50 percent more than banks during and after a crisis. **Exhibit 13**, reproduced from their study, illustrates that after a crisis hits (time 0 in the exhibit) lending declines by both banks and non-banks but the fall off is much steeper for non-banks.¹⁰⁵ This difference persists for years after the crisis hits.

The authors then dig deeper to look at the real economic impacts of this decline in lending by the non-bank sector. They investigate whether the firms borrowing from the non-banks simply switch to other sources of funding when the non-banks pull back and find that they do not. In other words, there does not appear to be a substitute available for the decrease in non-bank lending. They then take the analysis a step further to see how this affects the ability of the non-bank borrowers to invest during and after crisis. They find that the firms borrowing from the non-banks invest less.¹⁰⁶ Lower investment, all other things equal, would slow economic recovery from a crisis.

Their findings have important implications for assessing the potential unintended consequences of the Proposal.¹⁰⁷ The authors find that the growth of non-bank lenders could intensify shocks and increase the potential for financial instability: “while regulation enacted after the Great Financial Crisis has arguably made banks more resilient, non-banks’ greater presence and sharper contraction in lending might offset some of these gains during crises.” In addition, the rise in non-bank lending relative to bank lending and combined with increasing debt levels may intensify a financial crisis. Hence, they characterize their finding on the pull-back in non-bank lending and its impacts on investment “a particularly worrying finding.”

Exhibit 13: Bank and Non-Bank Lending Around a Crisis



Note: “This figure plots the evolution of average new credit in logs in the years prior to, during, and after a financial crisis. Series are normalized to a value of one in the year of the crisis. A value of 0 on the x-axis denotes the year of the banking crisis in the borrower country...Both lender types see a decline in loan origination during the crisis and the following years, but non-banks see a stronger fall. There are no differential pre-trends.”

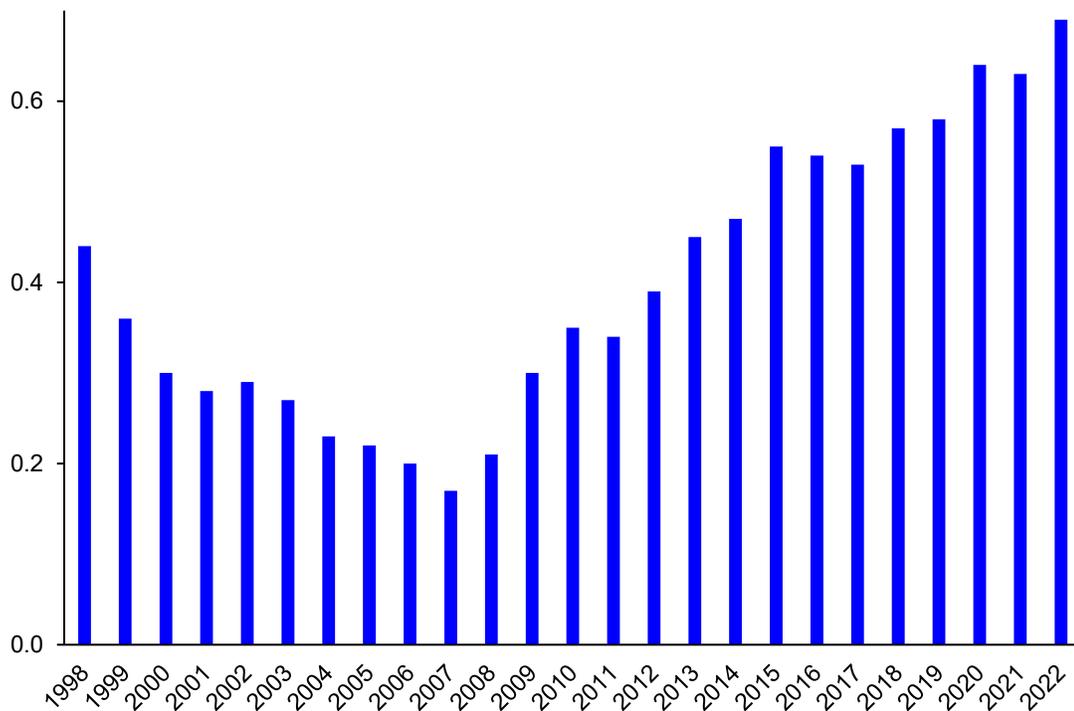
Source: Reproduction of Figure 1 in Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, “[Non-bank lending during crises](#),” *BIS Working Papers* No 1074, February 2023.

- ii. *Banks’ capacity to make markets may be constrained, potentially resulting in lower liquidity, greater volatility, and higher costs of trading, and contributing to financial instability*

The Agencies note without quantification that the Proposal could “increase banking organizations’ costs of engaging in market-making activities.”¹⁰⁸ In addition, the Agencies state that “higher capital requirements on trading activity may also reduce banking organizations’ incentives to engage in certain market making activities and may impair market liquidity.”¹⁰⁹ The examples below indicate the potential of increases in capital requirements to result in unintended consequences for lower liquidity, higher trading costs, and greater volatility, and potentially contributing to financial instability. The Agencies should carefully analyze such potential impacts when weighing the costs and benefits of the Proposal.

Illustrating these concerns about unintended consequences is research by Duffie (2023) who argues that increases in bank capital requirements can harm liquidity in the U.S. Treasury market and, as a consequence, there may be greater volatility and more potential for financial instability. He notes that, since 2007, the size of primary dealer balance sheets per dollar of Treasuries outstanding has shrunk by a factor of nearly four, which he attributes, in part, to regulatory capital constraints. Likewise, over the same period, the amount of Treasuries outstanding relative to the size of primary dealer balance sheets has grown by a factor of four. See **Exhibit 14**. While the capital requirements may be motivated by a desire to promote bank resilience, they reduce the flexibility and use of dealer balance sheets.¹¹⁰ He adds that the situation in March 2020 (i.e., the start of COVID-19) raises concerns over the capacity of dealers to intermediate stressed economic conditions.¹¹¹ He concludes that “the current intermediation capacity of the US Treasury market impairs its resilience. The risks include losses of market efficiency, higher costs for financing US deficits, potential losses of financial stability, and reduced safe haven services to investors”¹¹² and that these negative impacts are likely to increase over time.¹¹³ Similarly, they could increase the frequency of so-called “flash crashes.”¹¹⁴

Exhibit 14: The Ratio of US Treasuries Outstanding to Primary Dealer Assets 1998-2022



Source: Reproduction of figure 2 in Darrel Duffie, “Resilience Redux in the US Treasury Market,” Federal Reserve Bank of Kansas City Working Paper, August 13, 2023.

Prior examples of regulatory changes demonstrate that tightening capital regulations makes it more difficult for banks to respond during a financial shock. For example, during the onset of COVID-19 pandemic, existing rules for banks were binding in a stress situation, undermining banks’ ability to act as shock absorbers. Relaxing rules, such as excluding

U.S. Treasuries and reserve balances with the Federal Reserve in the calculation of the leverage ratio,¹¹⁵ allowed the banks to provide liquidity and credit would have not been possible if the rules had not been suspended.¹¹⁶

Another example of constrained capacity and reduced market liquidity results from the interaction of the Volcker Rule with capital requirements. After the GFC, financial regulators in the U.S. attempted to bring back some of the separations between investment and commercial banking. The Volcker Rule, which was enacted in 2010 and implemented in 2013, prohibits banks from engaging in proprietary trading or from using depositors' funds to invest in "risky" securities.¹¹⁷ The Volcker Rule was widely criticized for its potential unintentional consequences. For example, in 2017, the top risk official of the International Monetary Fund ("IMF") said that regulations to prevent speculative bets are hard to enforce and that the Volcker Rule could unintentionally diminish liquidity in the bond market.¹¹⁸ In September 2016, the Fed's Finance and Economics Discussion Series ("FEDS") made a similar argument, saying that the Volcker Rule will reduce liquidity due to a reduction in banks' market-making activities.¹¹⁹ In October 2019, the "CFA Institute has expressed concern that restrictions on market-making could hurt markets for illiquid instruments like fixed-income securities and urged regulators to monitor implementation carefully to make changes quickly if the new rules are seen to significantly and negatively affect liquidity in these markets."¹²⁰ Academic studies have also noted that the Volcker Rule has a "deleterious effect on corporate bond liquidity and that dealers subject to the rule become less willing to provide liquidity during stress times."¹²¹

In response to such criticisms and concerns, the Volcker Rule was modified. This example underscores the potential for unintended consequences of rules and the consequences of the interaction of capital requirements with other rules that banks face.¹²²

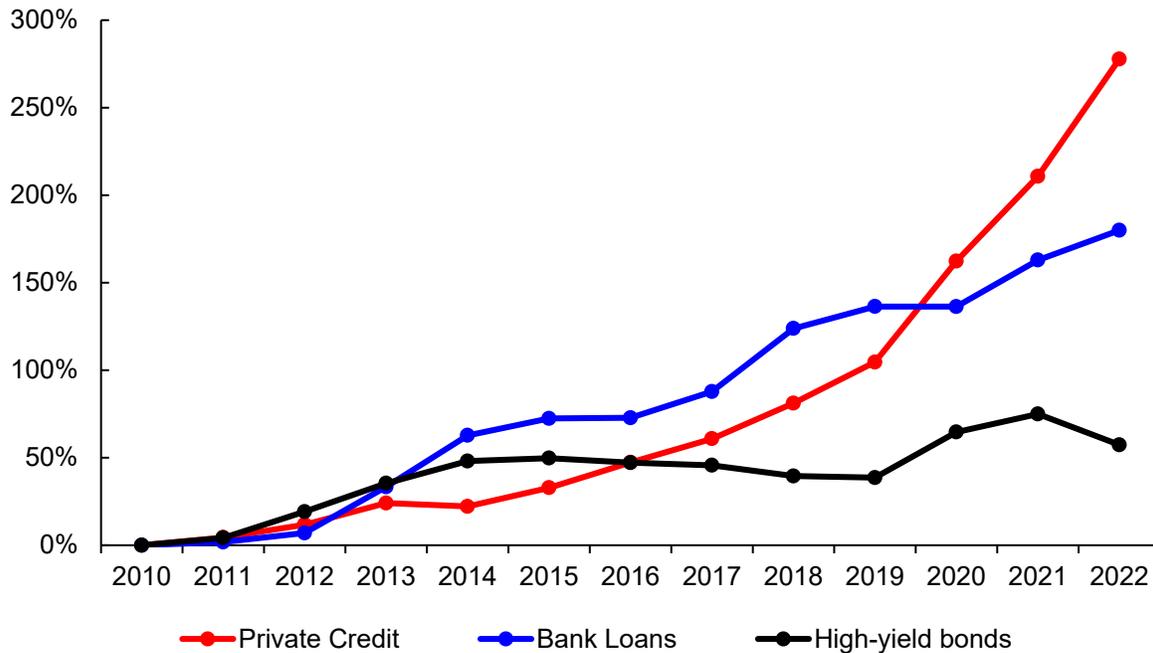
iii. Much lending has migrated from banks to private credit providers, where it is much more difficult to monitor the risks

As discussed in **Section III**, banks face substantial competition from private credit providers where the risks are more difficult to monitor than in the banks.

The growth in private credit has been particularly rapid over the last five years relative to the growth in bank loans as well as high-yield debt. **Exhibit 15**, which reproduces a chart from *The Wall Street Journal*, shows how private credit has grown much more rapidly than bank lending or junk bond issuance since 2010.¹²³ As the article explains:

"This shift [to private credit and away from bank lending] is accelerating a trend more than a decade in the making. Hedge funds, private-equity funds and other alternative-investment firms have been siphoning away money and talent from banks since a regulatory crackdown after the 2008-09 financial crisis. Lately, many on Wall Street say the balance of power—and risk—has hit a tipping point. ... Companies are using private debt to retire bank debt at unprecedented levels. ... The loans are expensive, but for many companies they are the only option. ... The [private credit] industry has been expanding ever since fallout from the 2008-09 financial crisis curbed banks' risk appetite. Holding leveraged-buyout loans worsened their scores on regulatory stress tests."¹²⁴

Exhibit 15: Growth of Private Credit relative to Bank Loans and High-yield Bonds, 2010-2022



Sources: Barclays, as sourced in The Wall Street Journal, “The New Kings of Wall Street Aren’t Banks. Private Funds Fuel Corporate America,” October 8, 2023 (<https://www.wsj.com/finance/fed-rate-hikes-lending-banks-hedge-funds-896cb20b>).

Moody’s Investors Service has also raised concerns about the risks of migrating so much lending from the banking system to the private credit sector. In particular, Moody’s stated in a September 2023 report that:

[T]he rapid growth in private equity has concentrated a larger segment of economic activity into the hands of a fairly small number of large, opaque asset managers. ... Alternative asset managers are turning to individual investors, introducing liquidity risk into the private fund market where it did not exist before. Increased concentrations, conflicts of interest and lack of regulation underscore risks. The rapid growth of PE has pushed more economic activity into the hands of a few large asset managers, with strategies that increase leverage for mostly middle market businesses. Lack of visibility will make it difficult to see where risk bubbles may be building. These trends could have repercussions for the broader economy. ... Moreover, within the private credit market, which is less regulated and more opaque, defaults are difficult to measure.¹²⁵

F. Differences between the Proposal with Basel Endgame in Other Jurisdictions and Impacts Potential Impacts on the U.S. Banking and Financial System

One of the goals of the Basel Committee was to “level the playing field among international banks competing cross-border”¹²⁶ and for Basel III finalization “the Committee focused on not significantly increasing capital requirements.”¹²⁷

To the extent that the Proposal raises capital requirements above those in other jurisdictions, there are three potential consequences that are important to consider. First, cost of financing may become relatively higher and availability of credit relatively lower for households and businesses in the U.S. relative to other countries. Second, it could drive more migration of activities to the non-bank sector in the U.S. relative to such migration in other countries. Third, there may be lower liquidity and more fragility in U.S. markets as U.S. banks pull back from making markets.

Some differences between the Proposal and the Basel standards as applied in other jurisdictions include: higher credit risk weights for real estate across all LTV bands; replacement of internal models with a Standardized Approach for credit risk; the requirement for an “investment grade” private company to have securities listed on an exchange to receive a reduced risk weight; and minimum haircut floors for certain types of SFT transactions.¹²⁸

The European Banking Authority (“EBA”), for example, recommended to withhold the implementation of the minimum haircut floors framework for SFTs in the E.U. because it “could theoretically lead to a more risky situation for institutions than the status quo (since banks could have the incentive to go unsecured on their SFTs that do not satisfy the haircut floors)...”¹²⁹

The Proposal could also raise international competitiveness issues for large U.S. banks to the extent that the capital changes would raise their costs relative to competing banks in other countries. The Chair of the Supervisory Board of the European Central Bank (“ECB”) Andrea Enria, for example, has said that if the U.S. Proposal’s changes were applied to the E.U. G-SIBs, the E.U. G-SIBs would have to hold significantly more capital.¹³⁰ Higher capital requirements for U.S. banks, thus, could potentially drive activity to both non-banks and banks outside the U.S.¹³¹

VI. Summary and Conclusions

Strong levels of capital in the banking system are crucial to the safety and soundness of banking institutions individually and to the resilience and stability of the banking and financial system as a whole. Heading into the GFC, bank capital levels were inadequate. Subsequently, the post-GFC reforms have ensured that banks – particularly large banks -- have increased their capital ratios dramatically and that there is a much more robust set of rules around liquidity, stress-testing, etc. These reforms have made banks and the banking system resilient to the macroeconomic, health, and geopolitical shocks that have occurred in the last few years.

The U.S. bank regulatory Agencies have recently proposed revisions to the bank capital requirements under the heading Basel III Endgame. This Proposal, if implemented as proposed, would increase bank capital levels for the largest banks substantially. Estimates for the G-SIBs range from 16 percent to 25 percent from current levels.

As Federal Reserve Chair Jerome Powell as well as many others have argued, while high capital levels in the banking system are critical for banks to provide their financial intermediation functions in both normal and stress times, there may be costs associated with raising capital requirements on U.S. banks further from current levels. In judging the appropriateness of the Proposal, it is important to consider the potential impact of the proposed changes on households, businesses, consumers, and other end-users of the system as well as unintended consequences that could reduce rather than increase financial stability for the system as a whole.

There are two key channels through which higher capital requirements could have such consequences. First, banks may pass on some of these additional costs to borrowers resulting in higher costs for some households and businesses. Second, banks may reduce their activities or even withdraw completely as they face non-bank competitors that are not subject to these regulations. Low- and moderate-income borrowers as well as minority businesses, for example, may face higher costs and lower availability of credit. Increases on risk-weights for certain equity investments may reduce their willingness to invest in clean energy projects. Entrepreneurial companies as well as pension funds and mutual funds may face higher costs for borrowing and for bank services due to their inability to meet the securities listing requirement. Banks may step back from supporting hedging by farmers as well as making markets, leading to, for example, higher costs of trading and hedging and lower liquidity that could increase market volatility. More broadly, the higher bank capital requirements could further accelerate the migration of banking activities to non-banks that typically face less, if any, regulation and supervision.

The bank regulatory Agencies have provided in the Proposal only a very high-level qualitative analysis of costs and benefits but have not provided analyses supporting their conclusions that the benefits of the Proposal outweigh the costs. I would urge the Agencies to provide a more in depth cost-benefit analysis that thoroughly considers the consequences – intended or unintended – and trade-offs of the Proposal, particularly in light of comments raised by a wide variety of groups that believe they may be adversely affected by the proposed changes. The Agencies should consider those costs as well as the potential risks of further migration of banking activities into the non-bank sector where regulators and supervisors have less ability to monitor the buildup of risks and to respond in crises.

VII. Endnotes

¹ [“Regulatory Capital Rule: Large Banking Organizations and Banking Organizations With Significant Trading Activity,”](#) Federal Register / Vol. 88, No. 179/Monday, September 18, 2023 / Proposed Rules (“Basel III Endgame Proposal”), p. 64028.

² See comments at <https://www.fdic.gov/resources/regulations/federal-register-publications/2023/2023-regulatory-capital-rule-large-banking-organizations-3064-af29.html>; https://www.federalreserve.gov/apps/foia/ViewAllComments.aspx?doc_id=R-1813&doc_ver=1; <https://www.regulations.gov/docket/OCC-2023-0008/comments?sortBy=postedDate&sortDirection=desc> (last accessed February 1, 2024). See also **Section IV** on estimates of capital requirement increases.

³ The following paragraphs draw material and wordings directly from Randall S. Kroszner, “Stability, growth and regulatory reform,” Banque de France, *Financial Stability Review*, No. 16, April 2012 and Randall S. Kroszner, “Commentary: regulating finance and regulators to promote growth,” Proceedings, Economic Policy Symposium, Jackson Hole, Federal Reserve Bank of Kansas City, 2011.

⁴ Randall S. Kroszner, [“Interconnectedness, Innovation and Unintended Consequences: What macroprudential policy can do to assess fragilities outside of the banking sector,”](#) Speech given at the Federal Reserve Bank of Cleveland and Office of Financial Research’s 2023 Financial Stability Conference, November 16, 2023.

⁵ See, e.g., Ross Levine, “Regulating finance and regulators to promote growth,” Proceedings, Economic Policy Symposium, Jackson Hole, Federal Reserve Bank of Kansas City, 2011.

⁶ See, e.g., Ross Levine, “Regulating finance and regulators to promote growth,” Proceedings, Economic Policy Symposium, Jackson Hole, Federal Reserve Bank of Kansas City, 2011 and Randall S. Kroszner and Philip E. Strahan, “What Drives Deregulation? Economics and Politics of the Relaxation of Bank Branching Restrictions,” *The Quarterly Journal of Economics*, Vol 114, No. 4, November 1999, pp. 1437-1467.

⁷ To complete the post-crisis reform process, the Basel Committee on Banking Supervision (“BCBS”) published [“Basel III: Finalising post-crisis reforms,”](#) December 2017 and said that a “key objective of the revisions in this document is to reduce excessive variability of risk-weighted assets.” (p.1). BCBS also undertook a quantitative impact study and, “[a]s a result of this assessment, the Committee focused on not significantly increasing overall capital requirements.” (p.1). See also **Section V. F.**

⁸ Numerous U.S. regulators have characterized the current U.S. banking system as “well-capitalized” and having a strong capital position. For example: “Several Council members noted that the U.S. banking system is well capitalized and has significant liquidity to help withstand headwinds in the current environment, reflecting the important regulatory reforms undertaken since the global financial crisis.” ([Financial Stability Oversight Council Meeting](#), June 16, 2023); “Our financial sector is strong and stable, our regulators are applying lessons learned to ensure that oversight remains robust, and we remain vigilant in monitoring potential vulnerabilities.” ([Statement from Secretary of the Treasury Janet L. Yellen on the International Monetary and Financial Committee](#), October 10, 2023); “Our banking system is sound and resilient, with strong capital and liquidity.” ([Transcript of Chair Powell’s Press Conference](#), March 22, 2023).

⁹ [“Statement by Chair Jerome H. Powell,”](#) Board of Governors of the Federal Reserve System, July 27, 2023.

¹⁰ Randall S. Kroszner, “Stability, growth and regulatory reform,” *Banque de France, Financial Stability Review*, No. 16, April 2012, p. 90.

¹¹ Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, [“Non-bank lending during crises,”](#) *BIS Working Papers No 1074*, February 2023. See also **Section V.F.i.**

¹² See **Section V.F.ii.**

¹³ Randall Kroszner, “A shipping disaster’s lessons for Dodd-Frank,” *Financial Times*, July 30, 2015.

¹⁴ [“Basel III, A global regulatory framework for more resilient banks and banking system,”](#) Basel Committee on Banking Supervision, December 2010 (rev June 2011).

¹⁵ See, e.g., [“Understanding the Current Regulatory Capital Requirements Applicable to US Banks,”](#) SIFMA, February 6, 2023; [“Introduction to Bank Regulation: Leverage and Capital Ratio Requirements,”](#) Congressional Research Service, January 11, 2019; [“Basel III leverage ratio framework – Executive summary,”](#) BIS, October 25, 2017; “Countercyclical capital buffer (CCYB),” BIS, October 23, 2023; [“Definition of capital in Basel III – Executive Summary,”](#) BIS, June 27, 2019; [“Introduction to Bank Regulation: Leverage and Capital Ratio Requirements,”](#) Congressional Research Service, January 11, 2019. See also **Appendix A**.

¹⁶ BIS, [G-SIB Score data](#).

¹⁷ Jared Berry, Akber Khan, and Marcelo Rezende, “How Do U.S. Global Systemically Important Banks Lower Their Capital Surcharges?” *FEDs Notes*, January 31, 2020.

¹⁸ TLAC includes certain debt instruments in addition to equity capital. Joseph G. Haubrich, [“A Brief History of Bank Capital Requirements in the United States,”](#) *Cleveland Federal Reserve*, February 28, 2020. See also <https://www.risk.net/definition/total-loss-absorbing-capacity-tlac>.

¹⁹ See <https://www.risk.net/definition/total-loss-absorbing-capacity-tlac>.

²⁰ See [“Introduction to Bank Regulation: Leverage and Capital Ratio Requirements,”](#) Congressional Research Service, January 11, 2019.

²¹ [“2023 Annual Report,”](#) Financial Stability Oversight Council, p. 52.

²² Common Equity Tier 1 Capital is equal to the “[s]um of common shares (equivalent for non-joint stock companies) and stock surplus, retained earnings, other comprehensive income, qualifying minority interest and regulatory adjustments.”) Ratios are relative to risk-weighted assets. [“Definition of capital in Basel III – Executive Summary,”](#) Bank of International Settlements, June 27, 2019. See also **Appendix A**.

²³ Note that the average CDS spread is higher over the last decade than prior to the GFC in 2008. I argue that at least some of that difference is due to a reduced “Too Big to Fail” premium, that is, reduced likelihood of a taxpayer-financed bail out of bond holders, with the post-GFC reforms in the U.S. See Randall Kroszner “A Review of Bank Funding Cost Differentials,” *Journal of Financial Services Research*, 2016, 49(2), pp. 151-74.

²⁴ [“Supervision and Regulation Report,”](#) Board of Governors of the Federal Reserve System, November 2023, pp. 1, 3, and 18.

²⁵ See Chapter 2 in Randall S. Kroszner and Robert Shiller, “Reforming U.S. Financial Markets: Reflections Before and Beyond Dodd-Frank,” Cambridge MA: MIT Press, 2011; Kroszner and William Melick, “The Response of the Federal Reserve to the Recent Banking and Financial Crisis” in Jean Pisani-Ferry, Adam Posten, and Fabrizio Saccomanni, eds., “An Ocean Apart? Comparing Transatlantic Response to the Financial Crisis,” Brussels: Bruegel Institute and Peterson Institution for International Economics, 2011; and Kroszner, “Stability, Growth and Regulatory Reform,” in *Financial Stability Review: Public Debt, Monetary Policy and Financial Stability*, Banque de France, Paris, April 2012, pp. 87-93.

²⁶ See [An Analysis of the Impact of ‘Substantially Heightened’ Capital Requirements on Large Financial Institutions](#), Anil Kashyap, Jeremy Stein and Samuel Hanson, May 2010.

²⁷ I use Financial Stability Board’s definition of the non-bank sector, which they call Non-Bank Financial Intermediation or “NBFi.” See “Global Monitoring Report on Non-Bank Financial Intermediation,” Financial Stability Board, December 20, 2022, p. 3. (“The NBFi sector is a broad measure of all non-bank financial entities, composed of all financial institutions that are not central banks, banks or public financial institutions. Other financial intermediaries (OFIs) are a subset of the NBFi sector, composed of all financial institutions that are not central banks, banks, public financial institutions, insurance corporations (ICs), pension funds (PFs), or financial auxiliaries. OFIs include money market funds (MMFs), hedge funds (HFs), other investment funds (OIFs), captive financial institutions and money lenders, central counterparties (CCPs), broker-dealers (BDs), finance companies (FinCos), trust companies (TCs), and structured finance vehicles (SFVs). The narrow measure of NBFi is composed of NBFi entities that

authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks (i.e. credit intermediation that involves maturity/liquidity transformation, leverage or imperfect credit risk transfer) and/or regulatory arbitrage, according to the methodology and classification guidance used in the FSB's annual NBFIs monitoring exercise. These include: MMFs, Fixed Income Funds, Credit Hedge Funds, Real Estate Funds, Finance companies, Leasing/factoring companies, Consumer Credit Companies, Broker-Dealers, Custodial Accounts, Securities Finance Companies, Credit Insurance Companies, Financial Guarantors, Monoline Insurers, Securitization vehicles, structured finance vehicles, asset-backed securities, other financial auxiliaries.”)

²⁸ Randall S. Kroszner, [“Interconnectedness, Innovation and Unintended Consequences: What macroprudential policy can do to assess fragilities outside of the banking sector,”](#) Speech given at the Federal Reserve Bank of Cleveland and Office of Financial Research’s 2023 Financial Stability Conference, November 16, 2023.

²⁹ “Shadow banks increasingly in regulators’ sights,” *Banking Risk & Regulation*, May 2, 2023.

³⁰ Rustom M. Irani, Rajkamal Iyer, Ralf R. Meisenzahl, José-Luis Peydró, “The Rise of Shadow Banking: Evidence from Capital Regulation,” *The Review of Financial Studies* 34 (2021), 2181-2235, p. 2186.

³¹ Guillaume Plantin, “Shadow banking and bank capital regulation,” *The Review of Financial Studies* 28 (2015), 146-175, pp. 146-148.

³² Greg Buchak, Gregor Matvos, Tomasz Piskorski, Seru, Amit, [“Fintech, regulatory arbitrage, and the rise of shadow banks,”](#) *Journal of Financial Economics* 130.3 (2018), 453-483, p. 453.

³³ Antoine Martin and Bruno M. Parigi, “Bank Capital Regulation and Structured Finance,” *NBER Working Paper Series*, July 2011, p. 2.

³⁴ Josh Lerner, Amit Seru, Nick Short and Yuan Sun, [Financial Innovation in the 21st Century: Evidence from U.S. Patents \(nber.org\)](#), July 2021 (revised March 2023).

³⁵ [“Global Monitoring Report on Non-Bank Financial Intermediation,”](#) Financial Stability Board, December 18, 2023, pp. 6-7, Graph 1-1.

³⁶ [“Global Monitoring Report on Non-Bank Financial Intermediation,”](#) Financial Stability Board, December 18, 2023, p. 2.

³⁷ [“Global Monitoring Report on Non-Bank Financial Intermediation,”](#) Financial Stability Board, December 18, 2023, p. 2.

³⁸ “Private Credit: Outlook and Considerations, Understanding Private Credit,” Morgan Stanley, September 15, 2023.

³⁹ [“2023 Annual Report,”](#) Financial Stability Oversight Council, p. 34.

⁴⁰ “The Global Banking Annual Review 2023, The Great Banking Transition,” *McKinsey & Company*, October 2023, p. 30.

⁴¹ “How Risky Is Private Credit? Analysts Are Piecing Together Clues,” *The Wall Street Journal*, November 10, 2023.

⁴² “Syndicated and private lenders will spar as LBOs revive, upping systemic risk,” *Moody’s Investors Service*, September 28, 2023, p. 1.

⁴³ [“2023 Annual Report,”](#) Financial Stability Oversight Council, p. 20.

⁴⁴ [“2023 Annual Report,”](#) Financial Stability Oversight Council, pp. 25-26.

⁴⁵ Basel III Endgame Proposal, p. 64032. There have been multiple explanations for the motivation of the Proposal. For example, the director of the FDIC Board, Jonathan McKernan commented at a recent ISDA conference on trading book capital that “[t]his proposal has been years in the making and has little, if anything, to do with the events of March. [referring to the regional banking crisis, including SVB failure.]” See [“Remarks by Jonathan McKernan, Director, FDIC Board of Directors, at ISDA’s Conference on Trading Book Capital: Basel III Implementation,”](#) FDIC, December 12, 2023. On the other hand,

Michael Barr, vice chair for supervision at the Fed, said an overhaul was justified by the failures of large lenders, including SVB: “The events of this year reinforce the need for strong capital in the system,’ Barr said in response to a question at the event. ‘Many people thought of systemic risk as just being about the global systemically important banks and not about other institutions that were large and could cause problems. I think that was a mistake.” See <https://www.thomsonreuters.com/en-us/posts/investigation-fraud-and-risk/svbs-failure-future-crises/>.

⁴⁶ On the same date, the Agencies also submitted a proposal to modify capital rules related to G-SIBs surcharge. See “[Regulatory Capital Rule: Risk-Based Capital Surcharges for Global Systemically Important Bank Holding Companies; Systemic Risk Report \(FR Y–15\)](#),” Federal Register / Vol. 88, No. 169 / Friday, September 1, 2023 / Proposed Rules (“G-SIB Surcharge Proposal”).

⁴⁷ Basel III Endgame Proposal, p. 64030.

⁴⁸ Basel III Endgame Proposal, Section V, p. 64167.

⁴⁹ See Bank of England CP16/22, Appendix 7: Aggregated cost benefit analysis (CBA), November 2022.

⁵⁰ See BCBS, “[Basel III: Finalising post-crisis reforms](#),” December 7, 2017, p. 1. See also [GHOS Media Conference](#), statement by Mario Draghi (at the time, Chair of the Group of Governors and Heads of Supervision and President of the European Central Bank), December 7, 2017: “This will reduce excessive variability of risk-weighted assets without significantly increasing capital requirements in the aggregate of course,” and “The focus of the exercise was not to increase capital. As a matter of fact, the GHOS almost a year ago endorsed this review by the Basel Committee, provided it wouldn’t create a significant capital increase in the aggregate of the banking system.”

⁵¹ Basel III Endgame Proposal, p. 64169.

⁵² Basel III Endgame Proposal, p. 64169.

⁵³ Basel III Endgame Proposal, p. 64169.

⁵⁴ Letter from BPI, FSF, ABA, December 22, 2023. If the G-SIB Surcharge is included, the banks estimate that the expected changes in CET1 capital requirements will be 30 percent for the U.S. G-SIBs. See Letter from BPI, FSF, ABA, December 22, 2023, pp. 2-3.

⁵⁵ Letter from BPI, FSF, ABA, December 22, 2023. If the G-SIB Surcharge is included, the banks estimate that the expected changes in CET1 capital requirements will be 30 percent for the U.S. G-SIBs. See Letter from BPI, FSF, ABA, December 22, 2023, pp. 2-3.

⁵⁶ As I note in **Section V.F** below, the implementation of Basel III was not intended to significantly increase capital requirements. See BCBS, “[Basel III: Finalising post-crisis reforms](#),” December 7, 2017, p. 1. For example, when Bank of England issued a consultation paper to implement Basel 3.1 reform, it estimated that CET1 capital will increase on average by only 3.1 percent. See Bank of England CP16/22, Appendix 7: Aggregated cost benefit analysis (CBA), November 2022, p. 19. As described further below in **Section V.F.**, the Chair of the Supervisory Board of the European Central Bank (“ECB”) Andrea Enria, for example, has said that if the U.S. capital rules were applied to E.U. G-SIBs, the E.U. G-SIBs would have to hold more capital. See “[Banking supervision beyond capital](#),” Speech by Andrea Enria, Chair of the Supervisory Board of the ECB, at the EUROFI 2023 Financial Forum organized in association with the Spanish Presidency of the Council of the EU, September 14, 2023.

⁵⁷ Basel III Endgame Proposal, p. 64028. This proposal when it was published prior to the Federal Register version was more than 1,000 pages.

⁵⁸ Basel III Endgame Proposal, p. 64048.

⁵⁹ “High-level summary of Basel III reforms,” Basel Committee on Banking Supervision, December 2017, p. 4 and Basel III Endgame Proposal, p. 64048.

⁶⁰ Basel III Endgame Proposal, p. 64048.

⁶¹ “High-level summary of Basel III reforms,” Basel Committee on Banking Supervision, December 2017, p. 4. Currently, the largest banks use internal models or Standardized Approach and report the larger of

the two. The current Standardized Approach has 50 percent risk weight to all first lien mortgages that are not in default.

⁶² Basel III Endgame Proposal, p. 64054.

⁶³ The Proposal refers to this as “Expanded Risk-Based Approach” or ERB. See Basel III Endgame Proposal, p. 64030.

⁶⁴ Basel III Endgame Proposal, p. 64076.

⁶⁵ Basel III Endgame Proposal, p. 64076.

⁶⁶ Basel III Endgame Proposal, p. 64059.

⁶⁷ Basel III Endgame Proposal, p. 64063.

⁶⁸ That is G-SIBs and bank holding companies with more than \$700 billion more in total assets or \$75 billion or more in cross-jurisdictional activity that are not G-SIBs.

⁶⁹ Basel III Endgame Proposal, p. 64083.

⁷⁰ Basel III Endgame Proposal, p. 64083.

⁷¹ See e.g., “Stress Test Methodology,” Board of Governors of the Federal Reserve System, June 2023, p. 10.

⁷² Basel III Endgame Proposal, p. 64092.

⁷³ Basel III Endgame Proposal, p. 64150.

⁷⁴ Basel III Endgame Proposal, p. 64151. (“Consistent with this industry practice, the proposal would not consider a cleared transaction or an SFT to be a CVA risk covered position and therefore would not extend the CVA risk-based capital requirements to such positions... [however] The proposed definition of a CVA risk covered position would include client facing derivative transactions and would recognize the potential CVA risk of such exposures through the risk-based requirements for these exposures.”).

⁷⁵ See e.g., “Stress Test Methodology,” Board of Governors of the Federal Reserve System, June 2023, p. 14 and p. 58.

⁷⁶ Basel III Endgame Proposal, p. 64167.

⁷⁷ For example, David Solomon, CEO of Goldman Sachs, testified that as a result of the Proposal “the cost of providing credit to our clients like manufacturers and food producers, pension funds, mutual funds, insurance companies, small businesses and energy companies will increase. These costs will likely get passed on to consumers, resulting in higher transportation costs, increased home energy bills, reduced returns on retirement plans and higher food prices. For example, it would quadruple our capital requirements for clean energy tax equity projects and would increase our capital eight times for important transactions that we enter into with pension funds to improve their returns for retirees.” See, Hearing Before the United States Senate Committee on Banking, Housing, and Urban Affairs, Testimony of David Solomon, December 6, 2023, p. 5. See also, Mr. Gorman (Morgan Stanley): “As it stands, the proposal would increase the cost of capital and borrowing across the U.S. economy – not just to large corporations and small businesses, but also to pensions, municipalities, and endowments.” See Hearing Before the United States Senate Committee on Banking, Housing, and Urban Affairs, Testimony of James P. Gorman, December 6, 2023, p. 2.

⁷⁸ Basel III Endgame Proposal, p. 64167.

⁷⁹ [“Statement by Chair Jerome H. Powell,”](#) Board of Governors of the Federal Reserve System, July 27, 2023.

⁸⁰ See, e.g., Jihad Dagher, Giovanni Dell’Ariccia, Luc Laeven, Lev Ratnovski, and Hui Tong, “Benefits and Costs of Bank Capital,” IMF Staff Discussion Note SDN/16/04, 2016 and Martin Birn, Olivier de Bandt, Simon Firestone, Matías Gutiérrez Girault, Diana Hancock, Tord Krogh, Hitoshi Mio, Donald Morgan, Ajay Palvia, Valerio Scalone, Michael Straughan, Arzu Uluc, Alexander H. von Hafften, and Missaka Warusawitharana, “The Costs and Benefits of Bank Capital – A Review of the Literature,”

Journal of Risk and Financial Management, Vol. 13, 1-26, 2020. Jamie Dimon, CEO of JP Morgan, similarly testified that “[m]ortgages and small business loans will be more expensive;” “[s]aving for retirement or college will be harder” as the “cost of banking products ... will go up and feed through to customers;” “[c]onsumer prices will rise;” and [g]overnment infrastructure projects and corporate development will become more expensive.” See also Hearing Before the United States Senate Committee on Banking, Housing, and Urban Affairs, Testimony of Jamie Dimon, December 6, 2023, pp. 3-4.

⁸¹ See, e.g., Greg Buchak, Gregor Matvos, Tomasz Piskorski, Seru, Amit, ["Fintech, regulatory arbitrage, and the rise of shadow banks,"](#) Journal of Financial Economics 130.3 (2018), 453-483.

⁸² See, e.g., Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, ["Non-bank lending during crises,"](#) *BIS Working Papers No 1074*, February 2023.

⁸³ Randall S. Kroszner, ["Interconnectedness, Innovation and Unintended Consequences: What macroprudential policy can do to assess fragilities outside of the banking sector,"](#) Speech given at the Federal Reserve Bank of Cleveland and Office of Financial Research's 2023 Financial Stability Conference, November 16, 2023.

⁸⁴ See, e.g., Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, ["Non-bank lending during crises,"](#) *BIS Working Papers No 1074*, February 2023, p.21 (“Table 7 shows that non-bank connected firms see a significantly stronger decline in loan volumes and investment rates. ... For the investment rate, column (3) also shows a significant negative effect of non-bank exposure during crises.”). See also Aymeric Bellon, Christine L. Dobridge, Erik Gilje, and Andrew Whitten, ["The Secular Decline in Private Firm Leverage,"](#) November 2023, who find that lending to private firms declines following the post-GFC increases in capital requirements and that this in turn leads to lower investment by these firms. (“One statutory change of note—enacted as part of the Dodd-Frank Act in 2010—required banks to hold more capital against risky assets on the balance sheet. Banks needing to boost capital holdings may have reduced business lending to do so... and therefore we hypothesize that the capital requirements change could have been a factor reducing private firm leverage. As public firms have easier access to public debt and syndicated loan markets, we would not expect the same effect for public firms.” And “While the rise in non-traditional financing sources post-GFC has been well documented, these results suggest that private firms may have remained financially constrained over the sample period and that alternative sources of capital have not filled the full gap in post-GFC bank lending to private firms... [W]e document that the deleveraging of private firms is strongly related to a bank lending supply shock and linked with reduced investment.”)

⁸⁵ See, e.g., [Comment Letter from Business Roundtable](#), December 21, 2023.

⁸⁶ See, e.g., Comment Letter from [Farmer Mac](#), January 16, 2024.

⁸⁷ See, e.g., Comment Letter from [Farmer Mac](#), January 16, 2024; Comment Letter from [Coalition for Derivatives End-Users](#), January 16, 2024.

⁸⁸ Comment Letter from [Coalition for Derivatives End-Users](#), January 16, 2024.

⁸⁹ Comment Letters reviewed to summarize the impacts are: [Comment Letter from Business Roundtable](#), December 21, 2023; Comment Letter from [SC Small Business Chamber of Commerce](#), October 30, 2023; Comment Letter from [Nevada Assembly](#), October 18, 2023; Comment Letter from [City of Milwaukee Mayor](#), November 28, 2023; Comment Letter from [Dane County](#), November 16, 2023; Comment Letter from [National Housing Conference](#) et al, July 24, 2023; Comment Letter from [Wisconsin Building Trades Council](#), November 8, 2023; Comment Letter from [Farmer Mac](#), January 16, 2024; Comment Letter from [Coalition for Derivatives End-Users](#), January 16, 2024; Comment Letter from [Investment Company Institute](#), January 16, 2024; Comment Letter from [ERISA Industry Committee](#), January 16, 2024; Comment Letter from [CalPERS](#), December 22, 2023.

⁹⁰ Comment Letter from [Wells Fargo](#), January 16, 2024.

⁹¹ See, e.g., Comment Letter from [Business Roundtable](#), December 21, 2023 and **Appendix E**. State Street Corporation also mentions in its Comment Letter that “custody banks” such as State Street provide the following credit needs to mutual funds and pension funds: “• Access to liquidity, including the provision of overdraft protection, to address settlement delays or the non-receipt of funds, generally on an overnight

basis; • Short-dated loans in order to accommodate various liquidity needs, such as the processing of redemptions ahead of the receipt of funds from the sale of investment assets, and the timely payment of management fees and other expenses; and • Execution of foreign exchange transactions related to assets held by the investment fund, resulting from, among other things, the purchase or sale of foreign assets and the conversion of foreign income payments into base currency.” See Comment Letter from [State Street Corporation](#), January 16, 2024.

⁹² According to the U.S. Census Bureau, the U.S. economy has over 28 million companies but only a tiny fraction of these have securities listed on an exchange. <https://www.census.gov/data/tables/2020/econ/susb/2020-susb-annual.html> (see U.S. & states, 6 digit NAICS table, column Establishments.) CRSP, 4,162 for US Common stock traded on the NYSE, AMEX, NASDAQ as of 7/31/23.

⁹³ See e.g., Aymeric Bellon, Christine L. Dobridge, Erik Gilje, and Andrew Whitten, “[The Secular Decline in Private Firm Leverage](#),” November 2023, (“One statutory change of note—enacted as part of the Dodd-Frank Act in 2010—required banks to hold more capital against risky assets on the balance sheet. Banks needing to boost capital holdings may have reduced business lending to do so... and therefore we hypothesize that the capital requirements change could have been a factor reducing private firm leverage. As public firms have easier access to public debt and syndicated loan markets, we would not expect the same effect for public firms.” And “While the rise in non-traditional financing sources post-GFC has been well documented, these results suggest that private firms may have remained financially constrained over the sample period and that alternative sources of capital have not filled the full gap in post-GFC bank lending to private firms... [W]e document that the deleveraging of private firms is strongly related to a bank lending supply shock and linked with reduced investment.”)

⁹⁴ Basel III Endgame Proposal, p. 64054. See also “[Mutual Funds and Exchange-Traded Funds \(ETFs\) – A Guide for Investors](#),” SEC.

⁹⁵ See, e.g., Comment Letter from California Public Employees’ Retirement System, December 22, 2023.

⁹⁶ “[Mutual Funds and Exchange-Traded Funds \(ETFs\) – A Guide for Investors](#),” SEC.

⁹⁷ See e.g., FINRA, Mutual Funds, available at [Mutual Funds | FINRA.org](#).

⁹⁸ See Comment Letter from [California Public Employees’ Retirement System](#), December 22, 2023. (“CalPERS provides at least as much transparency into its activities as most publicly-traded companies. For example, each year, CalPERS is statutorily required to publicly release an Annual Comprehensive Financial Report, [footnote omitted] which includes audited financials that are compliant with the Government Accounting Standards Board reporting requirements. [footnote omitted] That document also includes information related to the governance, risks, and funded status of the public pension fund. [footnote omitted] CalPERS also releases a statutorily-required [footnote omitted] Annual Investment Report that provides complete transparency into its holdings. [footnote omitted] Webcasts and transcripts of all CalPERS’ Board of Administration meetings are publicly available. [footnote omitted] CalPERS’ is subject to the California Public Records Act, which provides the public, investors, and banks with far greater access to documents and information about CalPERS than is generally available regarding issuers of publicly traded securities. [footnote omitted] CalPERS also publishes all of its investment policies on its website. [footnote omitted] Put simply, while not being subject to the exact same federal regulatory requirements as publicly-traded issuers of securities, highly regulated, transparent, low-risk public pension funds also have significant statutory and regulatory safeguards that compel the disclosure of that same type of information to the public.”)

⁹⁹ “Bank chiefs attack US plan for tougher capital rules,” *Financial Times*, December 1, 2023.

¹⁰⁰ Laurie Goodman and Jun Zhu, “[Bank Capital notice of Proposed Rulemaking: A Look at the Provisions Affecting Mortgage Loans in Bank Portfolios](#),” September 2023, p.1 (stating “Among other provisions, this proposal would make significant changes in the capital requirements for single-family residential mortgages held in bank portfolios. In particular, the capital charges rise significantly for loans with high loan-to-value (LTV) ratios. Our analysis suggests the proposed capital levels exceed what would be needed even to protect banks from a repeat of the Great Recession. Moreover, the changes—contrary to

the intentions of the Community Reinvestment Act (CRA)—would disproportionately disadvantage low- and moderate-income (LMI) borrowers and communities, as well as Black and Hispanic borrowers.”).

¹⁰¹ See, e.g., Comment letter from National Housing Conference, Mortgage Bankers Association, NAACP, National Association of Realtors, National Urban League, July 24, 2023; Comment letter from the [Harris County Homeownership Collaborative](#) in Harris County, TX, August 11, 2023; Comment letter from [Wisconsin State Senate, Melissa Agard](#).

¹⁰² “Borrowers Turned to Nonbank Lenders for Mortgages – And It’s Costing Them,” Bloomberg News, December 18, 2023. Further analysis of the data is needed to control for the full set of individual borrower characteristics.

¹⁰³ [“Expanding CRA To Non-Bank Lenders And Insurance Companies,”](#) NCRC, August 27, 2020.

¹⁰⁴ Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, [“Non-bank lending during crises,”](#) *BIS Working Papers No 1074*, February 2023, p. 2.

¹⁰⁵ Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, [“Non-bank lending during crises,”](#) *BIS Working Papers No 1074*, February 2023, p. 2.

¹⁰⁶ Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, [“Non-bank lending during crises,”](#) *BIS Working Papers No 1074*, February 2023 (“To analyze whether exposure to non-banks has real effects in terms of firm investment, we aggregate the data to the firm-year level. If firms can easily substitute syndicated loans from non-banks with other forms of credit (e.g. bonds or trade credit), the substitution could offset the credit contraction of individual non-banks. Changes in non-banks’ loan supply will only have real effects if firms can at most partially substitute the fall in non-bank credit. . . . Table 7 shows that non-bank connected firms see a significantly stronger decline in loan volumes and investment rates. . . For the investment rate, column (3) also shows a significant negative effect of non-bank exposure during crises. . . Taken together, these results suggests that firms are unable to perfectly substitute the fall in syndicated lending from non-banks with other sources. Moreover, firms with a limited ability to substitute across lenders are more affected by the contraction in non-bank credit.”).

¹⁰⁷ Iñaki Aldasoro, Sebastian Doerr and Haonan Zhou, [“Non-bank lending during crises,”](#) *BIS Working Papers No 1074*, February 2023. The authors explain that “[t]aken together, . . . [the] results indicate that the growth of non-bank lenders could intensify financial instability and have repercussions for the real economy during adverse events. . . . As corporate indebtedness has reached historical highs (IMF, 2021), the rising footprint of non-bank lenders and the strong contraction in their lending to highly-leveraged borrowers during crises is a particularly worrying finding. Moreover, [the] results for the global syndicated loan market suggest that non-bank lenders do not act as shock absorbers or asset insulators during financial crises (Elliott et al., 2021; Chodorow-Reich et al., 2021).” Note that David Elliott, Ralph Meisenzahl, and José-Luis Peydró (2023) [“Nonbank lenders as global shock absorbers: Evidence from U.S. monetary policy spillovers,”](#) Bank of England Working Paper find evidence of that non-banks may act as shock absorbers outside of the U.S.

¹⁰⁸ Basel III Endgame Proposal, p. 64167.

¹⁰⁹ Basel III Endgame Proposal, p. 64170.

¹¹⁰ Darrel Duffie, [“Resilience Redux in the US Treasury Market,”](#) Federal Reserve Bank of Kansas City Working Paper, August 13, 2023, p. 4.

¹¹¹ Darrel Duffie, [“Resilience Redux in the US Treasury Market,”](#) Federal Reserve Bank of Kansas City Working Paper, August 13, 2023.

¹¹² Darrel Duffie, [“Resilience Redux in the US Treasury Market,”](#) Federal Reserve Bank of Kansas City Working Paper, August 13, 2023, p.2.

¹¹³ Darrel Duffie, [“Resilience Redux in the US Treasury Market,”](#) Federal Reserve Bank of Kansas City Working Paper, August 13, 2023, pp. 15-16 (“The implications of dealer capacity limits for Treasury market resilience may worsen in future years because the quantity of Treasury securities that investors may wish to liquidate in a crisis is growing far more rapidly than the size of dealer balance sheets. In 2020 alone, the stock of marketable US Treasuries held by the public increased from about \$17 trillion to

about \$21 trillion. In July 2023, The US Congressional Budget Office (2023) projected that the total amount of Treasury security debt will rise from 98 percent of US gross domestic product (GDP) in 2023 to 177 percent of GDP in 2052, far above the previous peak of 106% of GDP in 1946. Yet the dealer balance sheets are not even keeping up with GDP. For example, from 2010 to 2022, the ratio of total primary-dealer assets, at the holding company level, to GDP went down by 18.5%. The stress on dealer balance sheets of handling future surges in trade demands could also be magnified by increases in the volatility of Treasury prices.”).

¹¹⁴ See, e.g., [“Liquidity Risk after the Crisis,”](#) CATO Journal, Winter 2018.

¹¹⁵ <https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200401a.htm> and <https://www.fdic.gov/news/press-releases/2020/pr20060.html>.

¹¹⁶ When the Proposal was announced, Governor Michelle W. Bowman stated that: “We should also take this opportunity to address known shortcomings in leverage requirements, including the enhanced supplementary leverage ratio (eSLR). In stressed conditions during the pandemic, the operation of the eSLR disrupted Treasury market intermediation, and required ad hoc, short-term changes to address these unintended consequences and to give banks more flexibility to engage in lending.” See [Statement by Governor Michelle W. Bowman](#), July 27, 2023.

¹¹⁷ [“Volcker Rule: A federal regulation that prohibits banks from using their depositors’ funds to invest in risky investments,”](#) Corporate Finance Institute.

¹¹⁸ “IMF Calls Volcker Rule Hard to Enforce and Threat to Liquidity,” *Bloomberg*, May 2, 2017.

¹¹⁹ [“Finance and Economics Discussion Series, Divisions of Research & Statistics and Monetary Affairs: The Volcker Rule and Market-Making in Times of Stress,”](#) Federal Reserve, September 2016.

¹²⁰ [“Volcker Rule & Proprietary Trading,”](#) CFA Institute, Research & Policy Center, October 29, 2019.

¹²¹ Jack Bao, Maureen O’Hara, Xing (Alex) Zhou, “The Volcker Rule and corporate bond market in times of stress,” *Journal of Financial Economics*, 130, 95-113, 2018, p.12. See also Randall S. Kroszner, “Stability, growth and regulatory reform,” *Banque de France, Financial Stability Review*, No. 16, April 2012 and Chapter 2 in Randall S. Kroszner and Robert Shiller, “Reforming U.S. Financial Markets: Reflections Before and Beyond Dodd-Frank,” Cambridge MA: MIT Press, 2011.

¹²² [“Volcker Rule: A federal regulation that prohibits banks from using their depositors’ funds to invest in risky investments,”](#) Corporate Finance Institute.

¹²³ “The New Kings of Wall Street Aren’t Banks. Private Funds Fuel Corporate America,” *The Wall Street Journal*, October 8, 2023.

¹²⁴ “The New Kings of Wall Street Aren’t Banks. Private Funds Fuel Corporate America,” *The Wall Street Journal*, October 8, 2023.

¹²⁵ “Syndicated and private lenders will spar as LBOs revive, upping systemic risk,” *Moody’s Investors Service*, September 28, 2023, pp.1-2 and 6.

¹²⁶ [“Upgrading the Basel standards: from Basel III to Basel IV?,”](#) European Parliament Briefing; Basel III Endgame Proposal, p. 64030.

¹²⁷ BCBS, [“Basel III: Finalising post-crisis reforms,”](#) December 7, 2017, p. 1.

¹²⁸ The real estate exposure risk weights are 20 percentage points higher than Basel III requirements across all LTV ratios. Other countries have adhered to Basel’s risk weights. For the E.U., see [“How the EU’s Banking Package 2021 has started the Basel 4 endgame,”](#) EY, November 15, 2021; for U.K., see [“CP16/22 – Implementation of the Basel 3.1 standards: Credit risk – standardised approach,”](#) November 2022; for Canada see [“Capital Adequacy Requirements \(CAR\) \(2023\) Chapter 4 – Credit Risk – Standardized Approach,”](#) January 31, 2022.

The Proposal prohibits the use of internal models for credit risk, which are not prohibited by Basel. See Basel III Endgame Proposal, p. 64028. This change alone is estimated to result in substantial additional required capital for U.S. G-SIBs, which is not required in other countries. For example, the E.U. banks

can continue using internal models for credit risk with permission from the ECB. See “[Internal ratings-based \(IRB\) approach: new developments](#),” ECB, August 16, 2023.

The Proposal allows the credit risk weight for a corporate issuer to only be lowered from 100 percent to 65 percent if two conditions are met: (1) the firm has an investment grade rating; and (2) the firm has a security listed on an exchange. Basel III Endgame Proposal, p. 64054. This requirement, while proposed by Basel III, has not been implemented by other countries in the E.U, Canada, or the U.K. In Canada, the bank can waive the public listing requirement for counterparties with annual sales of more than \$75 million. See “[Capital Adequacy Requirements \(CAR\) – Chapter 4 – Credit Risk – Standardized Approach](#),” Office of the Superintendent of Financial Institutions, February 2023/April 2023. In the E.U., for unrated corporates with a probability of default (PD) of less than 0.5 percent, the standardized risk weight is set at 65 percent rather than 100 percent for a transition period. See “[How the EU’s Banking Package 2021 has started the Basel 4 endgame](#),” EY, November 15, 2021. See also, Bank of England, “[CP16/22 – Implementation of the Basel 3.1 standards: Credit risk – standardised approach](#),” November 30, 2022, Section 3.99.

The Proposal introduces minimum haircut floors for certain SFTs. See Basel III Endgame Proposal, p. 64059. However, other countries, such as the U.K. and Canada, have decided not to adopt the minimum haircut floors framework. This illustrates the potential of unintended consequences that could potentially harm rather than promote financial stability. See “The Federal Reserve Should Remove ‘Gold Plating’ in the Basel 3 Endgame,” SIFMA, November 8, 2023. See also European Banking Authority, “Policy Advice on the Basel III Reforms on Securities Financing Transactions (SFTs),” August 2, 2019, p.18.

¹²⁹ European Banking Authority, “Policy Advice on the Basel III Reforms on Securities Financing Transactions (SFTs),” August 2, 2019, p.18. Some of the unintended consequences of the minimum haircut requirements for SFTs were outlined in ISLA, “[Prudential Banking Rules: Basel III Endgame & the Buy Side](#),” stating: “While these exemptions are welcomed, they will however require banks to deploy additional resources to identify which beneficial owners are exempt and which are not, increasing costs. Furthermore, with regards to the re-investment of cash, banks may need attestations from the buy side that re-investment is conducted in line with the rule. This may be problematic for agent lenders, who collect securities from hundreds of beneficial owners, further reducing visibility as to whether a beneficial owner’s re-investment is in line with the rule. Finally, banks providing leveraged funding to hedge funds will be impacted by minimum haircut rules, and may therefore have to increase collateral held for those portfolios,” p. 14. Wells Fargo also commented in its comment letter: “The proposed haircut floor requirement would create unwarranted cliff effects that do not reflect the underlying counterparty credit risk of such transactions. The measurement of the haircut floor requirement would also be subject to the volatility of the underlying collateral valuations, and when combined with the cliff effects of the application, would make for unpredictable results. Other jurisdictions, including the European Union and United Kingdom, have recognized this misalignment with the underlying risks and have not adopted minimum haircut floor requirements as a part of their Basel implementations.” See [Wells Fargo Comment Letter](#), January 16, 2024, p. 9.

¹³⁰ “[Banking supervision beyond capital](#),” Speech by Andrea Enria, Chair of the Supervisory Board of the ECB, at the EUROFI 2023 Financial Forum organized in association with the Spanish Presidency of the Council of the EU, September 14, 2023 (“The more relevant question to ask is: would European banks face lower requirements under the current US prudential framework? Relative to their actual requirements today, we find the average requirement for European banking union significant institutions as a whole would be somewhat higher under the US rules. The requirements would be significantly higher for the European G-SIBs, while they would be lower for most medium size and smaller European banks in the sample. What drives this result? If we set aside the US gold-plating of international standards in the area of G-SIB buffers and leverage ratio requirements, this result stems from the way in which risk weighted assets are calculated....”).

¹³¹ “Into the Great Unknown,” *Morgan Stanley & Oliver Wyman*, 2023.

APPENDIX A

Glossary of Terms

Term/Acronym/Abbreviation	Definition
ABA	American Bankers Association
AMEX	American Stock Exchange
AT1	Additional Tier 1 Capital. Noncumulative perpetual preferred stock and related surplus, and qualifying minority interest.
BCBS	Basel Committee on Banking Supervision
BDs	Broker-Dealers
BHCs	Bank Holding Companies
BIC	Business Indicator Component – an input into operational risk weighted assets calculation under the Proposal. Under the proposal, the business indicator would be based on the sum of the following three components: an interest, lease, and dividend component; a services component; and a financial component. Each component would serve as a measure of a broad category of activities in which banking organizations typically engage.
BIS	Bank of International Settlements
BPI	Bank Policy Institute
CAR	Capital Adequacy Requirements
Category I Bank Holding Company	U.S. Global Systemically Important Banks (G-SIBs)
Category II Bank Holding Company	Banking organizations with \$700 billion or more in total assets or \$75 billion or more in cross-jurisdictional activity that are not G-SIBs.
Category III Bank Holding Company	Banking organizations that are not subject to Category I or Category II thresholds and that have either: \$250 billion or more in total assets; or \$100 billion but less than \$250 billion in total assets and \$75 billion or more of any of the following non-bank assets, weighted short-term wholesale funding (STWF), or off-balance-sheet exposures.
Category IV Bank Holding Company	Banking organizations that are U.S. depository institution holding companies or U.S. intermediate holding companies with at least \$100 billion in total assets that do not meet any of the thresholds specified for Categories I-III.
CBA	Cost-Benefit Analysis

CCAR	Comprehensive Capital Analysis and Review. The Comprehensive Capital Analysis and Review is a stress-test regime for large US banks. It aims to establish whether lenders have enough capital to cope with a severe economic shock, and assesses their risk modelling practices. CCAR is an integral part of the US Federal Reserve's oversight of risk management and internal controls at these firms. Bank holding companies with consolidated assets of at least \$50 billion are required to submit annual capital plans to the Fed describing their internal processes for determining capital adequacy, as well as planned capital distributions and the policies governing them. Banks must test their capital ratios against three regulator-set scenarios: baseline, adverse, and severely adverse. Banks file annual CCAR submissions to the Fed, containing projected revenues, losses, reserves and capital ratios under the supervisory scenarios as well as internally developed idiosyncratic scenarios from each bank. The Fed usually publishes the results of each year's CCAR by the end of June. The regulator evaluates each bank's CCAR submission by running bank-supplied financial data through its own internal models. The results of the Fed's models are compared to the results of the bank's models to determine whether it has met the minimum capital requirement under CCAR. CCAR is intended to stave off the possibility of a bank failing to maintain adequate capital to withstand economic shocks such as took place during the financial crisis. The Supervisory Capital Assessment Program – the direct precursor to CCAR – was rolled out in early 2009 as part of the Obama administration's efforts to restore confidence in the US banking system post-crisis. CCAR runs in parallel with a similar set of stress tests for smaller US lenders, known as DFAST, or the Dodd-Frank Act Stress Test.
CCB	Capital Conservation Buffer. Buffer above the requirement capital minima for banks that are not subject to CCAR.
CCP	Central Counterparties
CCyB	Countercyclical Capital Buffer. Buffer above the requirement capital minima for banks that are not subject to CCAR. Basel III allows for a Countercyclical Capital Buffer ("CCyB") which can be set by national authorities given macroeconomic and financial market factors.
CDS	Credit Default Swap
CET1 Capital	Common Equity Tier 1 Capital. Composed of common

stock and surplus, retained earnings, accumulated other comprehensive income (unless an opt-out is chosen) and qualifying minority interest.

CET1 Capital Ratio	CET 1 Capital divided by Risk-Weighted Assets.
CFA Institute	Chartered Financial Analyst Institute
CIT	Collective Investment Trust
CRA	Community Reinvestment Act
CRSP	Center for Research in Security Prices, The University of Chicago Booth School of Business
CVA	Credit Valuation Adjustment
EBA	European Banking Authority
ECB	European Central Bank
e-SLR	Enhanced Supplementary Leverage Ratio. The e-SLR rule requires the largest, most interconnected U.S. top-tier bank holding companies to maintain a supplementary leverage ratio greater than 3 percent plus a leverage buffer of 2 percent to avoid limitations on the firm's distributions and certain discretionary bonus payments.
ETF	Exchange-Traded Funds
EY	Ernst & Young
FDIC	Federal Deposit Insurance Corporation
FEDS	Finance and Economics Discussion Series
FFIEC	Federal Financial Institutions Examination Council
FIA	Futures Industry Association
FRTB	Fundamental Review of the Trading Book
FSB	Financial Stability Board
FSF	Financial Services Forum
FSOC	Financial Stability Oversight Council
FX	Foreign Exchange
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GMS	Global Market Shock
G-SIBs	Global Systemically Important Banks. BIS BCBS

committee developed a methodology to identify Global Systemically Important Banks post GFC. The Committee believes that global systemic importance should be measured in terms of the impact that a bank's failure can have on the global financial system and wider economy, rather than the risk that a failure could occur. This can be thought of as a global, system-wide, loss-given-default (LGD) concept rather than a probability of default (PD) concept. In light on this, BCBS reviewed the selected indicators that reflect the size of banks, their interconnectedness, the lack of readily available substitutes or financial institution infrastructure for the services they provide, their global (cross-jurisdictional) activity and their complexity to determine which banks are classified as G-SIBs.

HF	Hedge Funds
IC	Insurance Corporations
ILM	Internal Loss Multiplier – input into operational risk weighted assets calculation under the Proposal. ILM is a scalar introduced by the Proposal that increases operational risk capital requirements based on a banking organization's historical operational loss experience. This multiplier would depend on the ratio of a banking organization's average annual total net operational losses to its business indicator component. The proposal would require the internal loss multiplier to be no less than one.
IMF	International Monetary Fund
IRB	Internal Ratings-Based
ISDA	International Swaps and Derivatives Association
ISLA	International Securities Lending Association
LBOs	Leveraged Buyouts
LMI	Low-to-Moderate Income (LMI) means any census tract (or equivalent geographic area defined by the Bureau of the Census) in which at least 50% of households have an income less than 60 percent of the Area Median Gross Income (AMGI), or which has a poverty rate of at least 25%.
LTV	Loan-To-Value
MMF	Money Market Funds
NAACP	National Association for the Advancement of Colored

	People
NASDAQ	National Association of Securities Dealers Automated Quotations
NBER	The National Bureau of Economic Research
NBFI	Non-Bank Financial Intermediation. The NBFI sector is a broad measure of all non-bank financial entities, composed of all financial institutions that are not central banks, banks or public financial institutions. Other financial intermediaries (OFIs) are a subset of the NBFI sector, composed of all financial institutions that are not central banks, banks, public financial institutions, insurance corporations (ICs), pension funds (PFs), or financial auxiliaries. OFIs include money market funds (MMFs), hedge funds (HFs), other investment funds (OIFs), captive financial institutions and money lenders, central counterparties (CCPs), broker-dealers (BDs), finance companies (FinCos), trust companies (TCs), and structured finance vehicles (SFVs). The narrow measure of NBFI is composed of NBFI entities that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks (i.e. credit intermediation that involves maturity/liquidity transformation, leverage or imperfect credit risk transfer) and/or regulatory arbitrage, according to the methodology and classification guidance used in the FSB's annual NBFI monitoring exercise. These include: MMFs, Fixed Income Funds, Credit Hedge Funds, Real Estate Funds, Finance companies, Leasing/factoring companies, Consumer Credit Companies, Broker-Dealers, Custodial Accounts, Securities Finance Companies, Credit Insurance Companies, Financial Guarantors, Monoline Insurers, Securitization vehicles, structured finance vehicles, asset-backed securities, other financial auxiliaries.
NYSE	New York Stock Exchange
OFIs	Other Financial Intermediaries
OIFs	Other Investment Funds
OTC	Over-The-Counter
PD	Probability of Default
PE	Private Equity
PFs	Pension Funds
PwC	PricewaterhouseCoopers

REIT	Real Estate Investment Trust
RRE	Residential Real Estate
RWA	Risk-Weighted Assets
SCB	Stress Capital Buffer. Applies to large banks subject to supervisory stress testing administered by the Federal Reserve as part of the Federal Reserve's annual CCAR framework.
SEC	Securities and Exchange Commission
SFTs	Securities Financing Transactions
SFVs	Structured Finance Vehicles
SIFMA	Securities Industry and Financial Markets Association
SLR	Supplementary Leverage Ratio. Tier 1 Capital as a percentage of on-balance sheet and certain off-balance sheet exposures.
SVB	Silicon Valley Bank
TCs	Trust Companies
Tier 1 Capital	Common Equity Tier 1 Capital plus the sum of capital instruments meeting the criteria for AT1 and related surplus, additional qualifying minority interest and regulatory adjustments.
Tier 1 Capital Ratio	Tier 1 Capital divided by Risk-Weighted Assets
Tier 2 Capital	Sum of capital instruments meeting the criteria for Tier 2 and related surplus, additional qualifying minority interest, qualifying loan loss provisions and regulatory adjustments.
Tier 1 Leverage Ratio	Tier 1 Capital as a percentage of total on-balance sheet assets.
TLAC	Total Loss-Absorbing Capital. Includes common equity, subordinated debt and some senior debt, unsecured, with a maturity of at least one year.
Total Capital	Sum of Common Equity Tier 1 Capital (CET1), Additional Tier 1 Capital (AT1), and Tier 2 Capital.
U.S. G-SIBs	Identified per the FSB's 2023 List of G-SIBs (available at https://www.fsb.org/2023/11/2023-list-of-global-systemically-important-banks-g-sibs/) domiciled in the U.S.

APPENDIX B

List of Exhibits

1. Overview of Basel III Capital Framework Applicable to All Bank Holding Companies (“BHCs”)
 2. Changes in Tier 1 Capital and Leverage Ratios for the U.S. G-SIBs from 2007 to 2022
 3. U.S. Bank Holding Companies’ CET1 Capital Ratios, Q1 2005 – Q3 2023
 4. U.S. G-SIBs Required and Actual CET1 and Leverage Ratios as of September 30, 2023
 5. 5-Year Credit Default Swap (CDS) Spreads for the U.S. G-SIBs, 2005-2023
 6. Global Bank and Non-Bank Financial Assets, 2005-2022
 7. Bank and Non-Bank Financial Assets in the United States, 2005-2022
 8. Global Private Credit Assets Under Management, 2005-2022
 9. Mortgage Origination Volumes, 2014 - Q2 2023
 10. Highlights of Key Proposed Changes
 11. Residential Real Estate (RRE) Risk Weights - Basel III vs. U.S. Proposal
 12. Summary of Potential Impacts on Households, Businesses, and Markets
 13. Bank and Non-Bank Lending Around a Crisis
 14. The Ratio of US Treasuries Outstanding to Primary Dealer Assets, 1998-2022
 15. Growth of Private Credit Relative to Bank Loans and High-yield Bonds, 2010-2022
-

APPENDIX C

2023 List of G-SIBs

1. Agricultural Bank of China
 2. Bank of America
 3. Bank of China
 4. Bank of Communications
 5. Bank of New York Mellon
 6. Barclays
 7. BNP Paribas
 8. China Construction Bank
 9. Citi
 10. Deutsche Bank
 11. Goldman Sachs
 12. Groupe BPCE
 13. Groupe Credit Agricole
 14. HSBC
 15. Industrial and Commercial Bank of China
 16. ING
 17. JP Morgan Chase
 18. Mitsubishi UFJ FG
 19. Mizuho FG
 20. Morgan Stanley
 21. Royal Bank of Canada
 22. Santander
 23. Societe Generale
 24. Standard Chartered
 25. State Street
 26. Sumitomo Mitsui FG
 27. Toronto Dominion
 28. UBS
 29. Wells Fargo
-

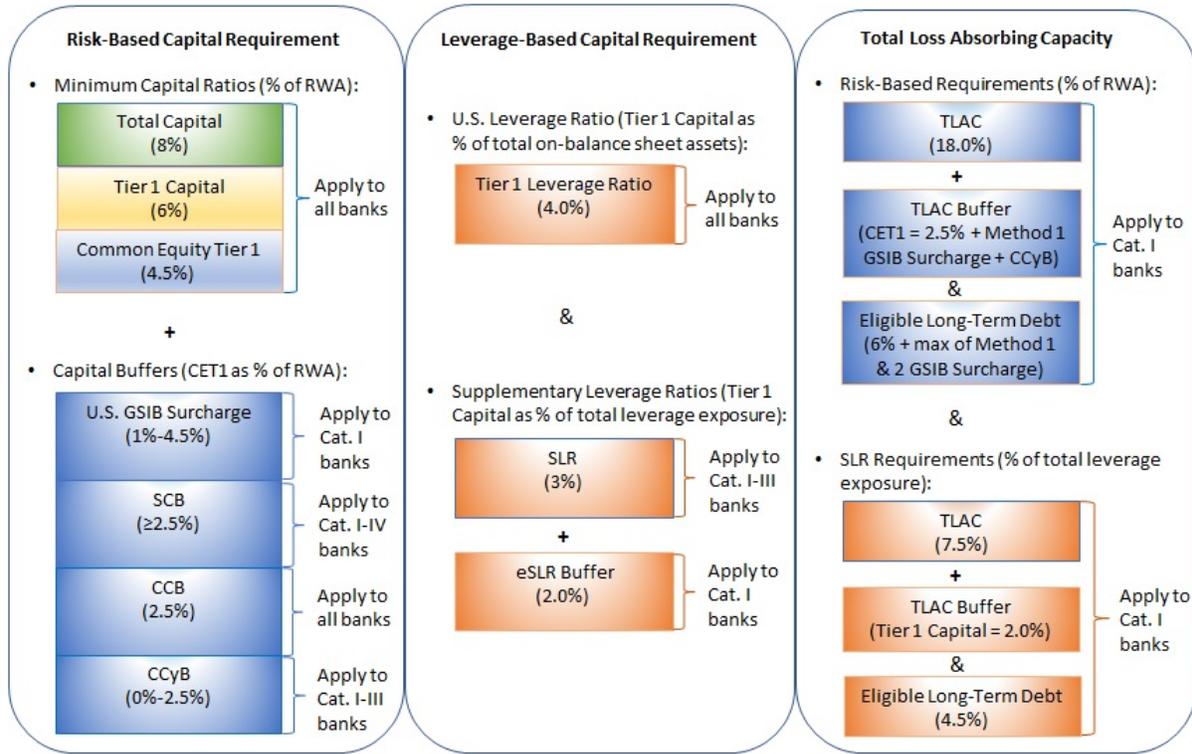
Note: Identified per the FSB's 2023 List of G-SIBs, available at:

<https://www.fsb.org/2023/11/2023-list-of-global-systemically-important-banks-g-sibs/>.

Source: FSB.

APPENDIX D

Current U.S. Regulatory Capital Rules



Source: Figure 1 in "Understanding the Current Regulatory Capital Requirements Applicable to US Banks," SIFMA, February 6, 2023.

APPENDIX E

Impacts of the Proposed Changes Identified by End-Users

- **Derivatives End-Users:** The Coalition for Derivatives End-Users, which represents hundreds of companies that use derivatives to manage commercial risks associated with their businesses through hedging, filed a comment letter that explains that the banks that would be subject to the new capital requirements serve as critical counterparties to end-users for their derivatives transactions.¹ These banking organizations also serve as capital market intermediaries, sources of credit, underwriters of corporate debt and as liquidity providers. Derivatives end-users are “particularly concerned that specific aspects of the trading book components of the Basel III Endgame reforms [i.e., the impacts of market risk and CVA risk changes] could lead to reduced bank participation in certain financial markets— which would increase risk to financial stability and the broader U.S. economy by concentrating these products in less transparent markets and would increase costs for end-users.”² Derivatives end-users further argue that “the nearly 60 percent increase in the capital requirements for banks’ trading activities is expected to significantly impact commercial hedging activities. For example, the cost of hedging foreign exchange risks would likely increase, as would the costs of entering long-dated interest rate swaps.”³ Separately, the Futures Industry Association (“FIA”) expressed serious concern with the proposed capital treatment of client derivatives clearing activities.⁴ The FIA’s quantitative study estimates that the two Proposals (Basel III Endgame and G-SIBs surcharge) would “collectively increase the capital required to engage in client clearing activities by more than **80 percent**...”⁵ [emphasis in original], which “could decrease end users’ access to clearing services, lead to increased prices for end users, and increase systemic risk....”⁶
- **Farmers, Ranchers, and Other Agricultural Goods Producers:** Similar to other companies that use derivatives to hedge risks, farmers use cleared derivatives for hedging price risks. Farmers argue that the “strength of central clearing depends ... on the participation of banks and other institutions as members of clearinghouses”⁷ and that “two thirds of all customer funds in the US clearing system are held by US banks.”⁸ Moreover, “the number of futures commission merchants that clear exchange-traded derivatives for clients has fallen by 50% over the past 20 years.”⁹ Consequently, this group argues that if the Proposal is implemented as drafted “GSIBs will cease providing futures commission merchant (FCM) services” and this “contraction in the availability of clearing services will have a disproportionate impact on agriculture.”¹⁰
- **Small Businesses:** Small business owners believe that “The proposed changes to capital requirements would lead to more stringent lending standards and decreased access to affordable credit; in doing so, small businesses ... will have less access to the financial resources and assistance they need to remain open, particularly during this period of

¹ [Comment letter from Coalition for Derivatives End-Users](#), January 16, 2024.

² [Comment letter from Coalition for Derivatives End-Users](#), January 16, 2024, p. 2.

³ [Comment letter from Coalition for Derivatives End-Users](#), January 16, 2024, p. 3.

⁴ [Comment Letter from the FIA](#), January 16, 2024.

⁵ [Comment Letter from the FIA](#), January 16, 2024, p. 2.

⁶ [Comment Letter from the FIA](#), January 16, 2024, p. 2.

⁷ [Comment Letter from National Council of Farmer Cooperatives, Commodity Markets Council, National Cattlemen's Beef Association, National Grain and Feed Association, American Farm Bureau Federation, National Milk Producers Federation, National Pork Producers Council, American Cotton Shippers Association, Farm Credit Council](#), December 11, 2023.

⁸ [Comment Letter from National Council of Farmer Cooperatives, Commodity Markets Council, National Cattlemen's Beef Association, National Grain and Feed Association, American Farm Bureau Federation, National Milk Producers Federation, National Pork Producers Council, American Cotton Shippers Association, Farm Credit Council](#), December 11, 2023.

⁹ [Comment Letter from National Council of Farmer Cooperatives, Commodity Markets Council, National Cattlemen's Beef Association, National Grain and Feed Association, American Farm Bureau Federation, National Milk Producers Federation, National Pork Producers Council, American Cotton Shippers Association, Farm Credit Council](#), December 11, 2023.

¹⁰ [Comment Letter from National Grain and Feed Association](#), January 16, 2024.

economic uncertainty.”¹¹ Financial Services Forum explains: “The problem arises from a provision of both the Basel and U.S. proposals that severely limits the application of Investment Grade status to only the largest public companies. Specifically, the only companies that are eligible to be classified as investment grade are companies that have ‘publicly traded securities outstanding,’ such as debt or equity securities. ... This unnecessary limitation will have the effect of creating a ‘two-tiered’ credit system in which loans to creditworthy, public companies will require less capital than creditworthy small businesses. ... As a result, bank lending to small businesses will be disadvantaged relative to lending to larger public corporations because smaller companies will be excluded from the investment grade classification.”¹² (See additional discussion in **Section V.C**)

- **Minority Business Owners:** Minority business owners argue that “overregulation of these financial institutions lead to the development of economic issues, especially for communities of color who own small businesses. This is because these banks would seek to reduce access to their financial services to anyone that they deem to be an investment risk. In practice, this would mean fewer loans available for small businesses and overall greater reduction in access to credit. These actions would especially impact the Black business owners...”¹³
- **Entrepreneurs:** Entrepreneurs similarly state that “This over-regulation of the banking sector would create economic obstacles for current and up-and-coming businesses in the region. Right now, these entrepreneurs rely on banks to provide them with the capital they need to fund various parts of their operations. This can include helping with stock shelves, expanding the total number of employees, and purchasing much-needed equipment. However, this may be severely disrupted by raising capital requirements, as it would lead banks to withhold loans from any borrower, they deem to be a risk to their portfolio.”¹⁴
- **Minority, Low Income, and First-time Home Borrowers:** As described in more detail below (see **Section V.D.**), the changes in the proposed risk weights for real estate could result in adverse effects on minority and low income mortgage borrowers and could reduce mortgage lending by banks. These groups filed multiple comment letters including the statement “Today, about 46 percent of Black Americans and 49 percent of Hispanics are homeowners, compared to 75% of white Americans. It has long been said that homeownership in America is the key to building financial stability and generational wealth. The proposed changes to capital requirements would increase borrowing costs, diminish banks’ opportunities to engage in equitable lending practices, and make homeownership less tenable for millions of lower-income Americans, especially Black and brown folks who have long been excluded from opportunities to build wealth.”¹⁵
- **Construction/Infrastructure Projects:** Certain state representatives, such as those from Wisconsin, for example, argue that: “Our state has relied on construction jobs and projects as part of our economic rally. This includes helping drive record job growth that contributed to a historically low unemployment rate this year. Many of these developments are able to move forward so quickly because they have steady access to capital and funding through financial institutions such as banks. Nonetheless, raising capital requirements would put these ongoing construction projects and developments at a stand still. This is because banks would make it harder and more expensive to obtain such capital, all with the intention

¹¹ See, e.g., [Comment Letter from Imagination Tree Learning Center](#).

¹² “[Capital Insights: New Bank Capital Rules Will Handicap Small Businesses](#),” Financial Services Forum, August 14, 2023.

¹³ [Comment Letter from the Winning Platform LLC](#).

¹⁴ [Comment Letter from Nevada Assembly District 6](#), October 18, 2023.

¹⁵ [Comment letter from Wisconsin State Senate, Melissa Agard](#).

of reducing their risk. This would certainly harm the construction industry, which would be unable to take advantage of the new federal infrastructure spending coming into the state.”¹⁶

- **Manufacturers:** The National Association of Manufacturers expressed: “The Proposed Rule, if implemented, would have significant adverse consequences for manufacturers of all sizes throughout the U.S. In particular, it would harm smaller manufacturers who lack access to the capital markets and must rely on bank funding, manufacturers who do not have publicly traded securities, and manufacturers who rely on banks to help them manage financial risks.”¹⁷ Specifically, the manufacturers argue that they “depend on the banking system to help them manage the risks inherent in modern manufacturing, finance capital expenditures (including investments in innovation), and provide necessary working capital.”¹⁸
- **Insurance Companies:** A group of eight insurance companies commented on the impact of the Proposal’s “corporate exposures provision for credit risk that requires a company to have publicly traded securities outstanding to receive a lower risk weight.”¹⁹ The insurers argue that this provision fails to recognize that all U.S. insurers are highly regulated and subject to enhanced transparency. And added that the Proposal would have “the unintended consequence of banks favoring less creditworthy insurance companies.”²⁰
- **Renewable/clean energy:** These groups argue that tax equity investments, which are largely provided by domestic U.S. banks, have been a critical source of financing for renewable/clean energy projects.²¹ “Under existing regulatory capital rules, tax equity receives a 100% risk weight so long as a bank’s total equity investments are below 10% of its capital.”²² “The excess equity investments exceeding 10% of a bank’s capital would be assessed at 400% risk weight, i.e., quadrupling the capital requirement.”²³ The Proposal no longer has the 10 percent threshold test. This means that all non-publicly traded equity investments (except for investments in low-income housing), including tax equity investments in renewable/clean energy projects, would now impose a 400 percent risk weight. “In 2021, roughly 50% of the total US wind and solar capacity projects are financed by US GSIB banks, through the tax equity market.”²⁴ “According to policy analysis firm Capstone, annual tax equity investments in the clean energy sector could shrink by 80-90% under the proposed rule changes.”²⁵ Consequently, the American Council on Renewable Energy states that this “would make it prohibitively expensive for the banks to extend tax equity financing,” which would “threaten to derail the clean energy transition.”²⁶

¹⁶ [Comment Letter from Wisconsin State Representative, Wisconsin State Representative, Jodi Emerson.](#)

¹⁷ [Comment Letter from National Association of Manufacturers](#), January 10, 2024, p. 2.

¹⁸ [Comment Letter from National Association of Manufacturers](#), January 10, 2024, p. 2.

¹⁹ [Comment Letter from Guardian Life Insurance Company of America, Massachusetts Mutual Life Insurance Company, Nationwide Mutual Insurance Company, New York Life Insurance Company, Northwestern Mutual Life Insurance Company, Securian Financial Group, Inc., TruStage Financial Group, and Western & Southern Financial Group](#), January 16, 2024, p. 1.

²⁰ [Comment Letter from Guardian Life Insurance Company of America, Massachusetts Mutual Life Insurance Company, Nationwide Mutual Insurance Company, New York Life Insurance Company, Northwestern Mutual Life Insurance Company, Securian Financial Group, Inc., TruStage Financial Group, and Western & Southern Financial Group](#), January 16, 2024, p. 2.

²¹ See, e.g., [Comment Letters from American Council on Renewable Energy](#), August 22, 2023 and [City of Norfolk](#), October 20, 2023. See also, “[Basel III and the Looming Threat to Tax Equity Market and Clean Energy Industry](#),” Capstone, October 2, 2023; “[Big U.S. banks warn capital hikes could weigh on green energy, equity products](#),” Reuters, October 13, 2023; “[The tax equity rule with ‘dire’ consequences for clean energy](#),” Renewable Energy World, October 9, 2023.

²² [Letter to Dr. Lael Brainard \(Director of National Economic Council\) from American Council on Renewable Energy](#), August 22, 2023.

²³ [Letter to Dr. Lael Brainard \(Director of National Economic Council\) from American Council on Renewable Energy](#), August 22, 2023.

²⁴ [Comment Letter from Farmer Mac](#), January 16, 2024, p. 3.

²⁵ [Comment Letter from Farmer Mac](#), January 16, 2024, p. 3.

²⁶ [Letter to Dr. Lael Brainard \(Director of National Economic Council\) from American Council on Renewable Energy](#), August 22, 2023.

- America's Businesses:** Members of Business Roundtable, which is an association of more than 200 CEOs of America's leading companies, representing every sector argue that the higher capital requirements would "impose enormous burdens on America's businesses, including lower credit availability, less liquid capital markets and higher costs."²⁷ Specifically, they comment that the "new framework for market risk [FRTB] and the new additive requirements for derivative transactions [CVA-related changes] would significantly raise the costs for U.S. public companies to hedge business and operating risks (e.g., interest rate, foreign exchange and commodity risks);"²⁸ "[t]he narrow scope of the lower 'investment grade' risk weight may increase borrowing costs for private creditworthy businesses. ... [placing] small and growing companies at a competitive disadvantage;"²⁹ "[t]he minimum haircut floors for securities financing transactions could result in reduced liquidity across debt and equity markets. For example, securities borrowing and lending enhances market liquidity and improves price discovery, but the proposed changes would make it significantly more expensive for large banks to engage in these activities, which could result in worse execution;"³⁰ "[t]he proposed 400 percent risk weight for equity exposures that are not publicly traded would limit access to funding for new companies."³¹
- Buy Side:** Firms that purchase investment securities, such as investment management firms, pension funds, mutual funds, hedge funds, etc. will also be affected by the Proposal. This has profound implications for investors and U.S. retirees. ISLA, a non-profit industry association, which includes over 190 institutional investors, asset managers, custodial banks, private brokers and service providers, concludes that "the buy side will experience a number of effects driven by ... changes on the sell side."³² These include: "Reduction in securities lending volumes; Increase in costs of hedging and foreign exchange activity; Reduction in market liquidity; and Reduction in economic activity."³³ Specifically, it concludes that a "fall in returns to savers and pensioners may result in a decline in future consumption, negatively impacting the future rate of economic growth, and potentially feeding through to lower levels of investment and employment."³⁴ A comment letter filed by the Investment Company Institute, whose members serve more than 100 million investors, also expresses concerns that because the buy side participants rely on liquidity provision from banking organizations, the Proposal "would decrease existing liquidity, particularly in markets that continue to rely the most on banking entities ... including the fixed income and derivatives markets and the less liquid portions of the equities markets. A reduction of existing liquidity would have detrimental effects for regulated funds and CITs, leading to wider bid-ask spreads, less quoted depth, lower trading volumes, and greater price impact. All of this ultimately would contribute to higher costs for investors, including the everyday Americans using these investment vehicles to save."^{35, 36}

²⁷ [Comment letter from Business Roundtable](#), December 21, 2023, p. 2.

²⁸ [Comment letter from Business Roundtable](#), December 21, 2023, p. 4.

²⁹ [Comment letter from Business Roundtable](#), December 21, 2023, p. 4.

³⁰ [Comment letter from Business Roundtable](#), December 21, 2023, p. 5.

³¹ [Comment letter from Business Roundtable](#), December 21, 2023, p. 5.

³² ["Prudential Banking Rules: Basel III Endgame & the Buy Side,"](#) ISLA, p. 8.

³³ ["Prudential Banking Rules: Basel III Endgame & the Buy Side,"](#) ISLA, p. 8.

³⁴ ["Prudential Banking Rules: Basel III Endgame & the Buy Side,"](#) ISLA, p. 8.

³⁵ [Comment Letter from Investment Company Institute](#), January 16, 2024, pp. 9-10.

³⁶ The Proposal will also affect the asset management and wealth management business within the banking organizations that provide these services. For example, FSF argues that the Proposal would "penalize banking organizations' efforts to make fund investments, including seed investments." See [Comment Letter from FSF](#), January 16, 2024, p. 96. It explains: "In addition, banking organizations use the 100% bucket for investments in funds, including seed investments that generate fee income as part of their asset management businesses in an effort to diversify their revenue streams and build resilience. The Proposal's approach to equity risk (and, for that matter, operational risk) would raise capital costs associated with fund investments to a prohibitively high level. This would be aggravated, in the case of non-dealer banking organizations, by the requirement in the Proposal to measure most investment fund exposures using trading book rules. ... For example, seed investments in registered funds that are not market risk covered positions would be subject to a 250% risk weight, and 'skin in the game' investments made in private funds that are not

market risk covered positions would be subject to a 400% risk weight. Not only would this undermine decades of financial regulatory policy, but also it would reduce the resiliency of these banking organizations by discouraging diversification into fee-related activities, undermining the Agencies' rationale for proposing these changes." See [Comment Letter from FSF](#), January 16, 2024, pp. 96-97.