

Basel Finalization:

The History and Implications for Capital Regulation
Part I: Introduction

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BASEL PRIMER SERIES: INTRODUCTION

In his inaugural speech as the new Federal Reserve Vice Chair for Supervision, Michael Barr said that releasing a proposal to implement the [2017 reforms to the Basel III capital framework](#) is one of his key priorities. These changes are called the “Basel Finalization” package in this post. In that same speech, Barr also announced that the Federal Reserve would undertake a “holistic review” of the U.S. capital framework that presumably would inform any published proposal to implement the Basel Finalization package. Both this holistic review and implementation of the Basel Finalization package will likely breathe new life into long-debated questions about the appropriate scope, structure, and content of the U.S. capital requirements. This is a particularly opportune time to take stock of where we are and where we may be going on the final leg of the post-crisis capital journey.

To that end, this is our first in a series of posts to help readers assess an upcoming proposal from U.S. regulators to implementing the Basel Finalization package, which is expected in the first or second quarter of 2023. Today’s post will remind readers of the purpose of capital requirements and the principles underlying the Basel framework and its evolution over the last several decades, culminating in the 2017 Basel Finalization revisions issued by the Basel Committee on Banking Supervision (“BCBS”). Future posts will highlight major open questions that U.S. regulators will need to address and resolve when implementing the Basel Finalization package in the United States and present a framework for evaluating the U.S. proposal when it is issued.

Purpose and Function of Bank Capital Requirements

At a fundamental level, capital adequacy requirements force banks to fund a certain amount of their assets with shareholder equity as opposed to solely through debt. The purpose of capital requirements is twofold. First, by making it less likely that banks will fail, capital requirements protect both bank depositors and government providers of deposit insurance. Second, when banks are less likely to fail, the resonance of a bank failure is also less likely to affect other banks and the financial system, easing the possibility of financial instability or of deepening economic downturns.

Unlike other forms of debt, bank deposits have a convenience value for bank customers. Specifically, depositors can use deposit accounts as “money” to pay for goods and services on-demand. In return for this convenience, depositors willingly accept a lower return on their deposits vis-à-vis other debt instruments that do not support payments capabilities. The convenience value of deposits effectively makes bank deposits cheaper and more stable relative to other forms of debt financing. As a result, banks prefer to fund themselves with a high level of deposits.

Without capital requirements, banks would have an incentive to finance themselves with too many deposits from the perspective of those that offer deposit insurance. From the government’s perspective, the absence of capital requirements could also result in too many bank failures. Each profit-maximizing bank would not factor the externalities that its failure would have on the rest of the financial system into its funding and business decisions.

For these reasons, for [hundreds](#) of years, banks have been subject to some form of capital requirement that serves as a buffer against potential losses, thereby reducing the risk that a bank would fail. One knock on impact to higher capital requirements, however, is that they increase the cost of borrowing for consumers and businesses. Because banks must rely on a more expensive funding source for their activities, including lending, they must increase the cost of their banking services offered to businesses and consumers, including loans. Although reducing the risk of bank failure benefits the economy and society at large, increasing the costs of banking services—and in particular,

assets (because higher-risk assets tend to reap higher returns, and banks will therefore tend to hold more of them); and (2) disincentivize holding low-risk assets (whose returns relative to capital required are unduly low).

We should also note that risk-based requirements may vary even more than leverage requirements, depending on which *types* of risks they attempt to separately capture and incorporate for purposes of calculating a bank's RWA. For example, as we will describe, although the Basel capital framework originally focused on the holistic risk of various types of assets, over time it has introduced more specific methodologies that attempt to differentiate and separately measure the credit risk, market risk, operational risk, and other risks of particular assets and activities. Such a differentiated approach tends to further reinforce the general advantages and disadvantages of risk-based capitals requirements—that is, risk-sensitivity and complexity, respectively.²

Notably, as we discuss in this series, the Basel Finalization package includes major changes in risk-based capital requirements.

Required Ratios

Although they are perhaps the most straightforward component of capital regulation, required ratios have also evolved considerably over time. As we will discuss, the Basel capital framework now includes a host of different required ratios that vary depending on the measure of capital or assets used in the calculation, and the nature of the requirement (that is, mandatory minimum versus buffer).

The Basel Finalization package makes relatively modest changes to the Basel framework's system of required ratios.

Forms of Requirement—Mandatory Minimums Versus Buffers

Another important aspect of any requirement are the consequences of noncompliance. Traditionally, bank capital requirements focused solely on mandatory minimums. If not met, these definitive legal requirements could result in significant penalties or sanctions. More recent innovations in the Basel capital framework introduced new requirements that take the form of buffers which, if not met, could result in a more limited set of restrictions (e.g., restrictions on dividends, share repurchases, or certain executive compensation payouts).

Revisiting International Standards for Capital Adequacy—The Evolution of Basel

International efforts to harmonize minimum capital adequacy requirements began several decades ago and have proceeded in three broad phases: Basel I, II, and III. We next outline the key contributions and developments of each phase.

Basel I: Minimum Requirements Based on Risk-Weighted Assets

In the 1980s, minimum capital requirements were emphasized as a mainstay of banking regulation. But concerns grew over lack of a consistent international approach, which created an unfair advantage for banks in nations with less stringent requirements.³ The Basel Committee on Banking Supervision (BCBS) at the Bank for International

² The global systemically important banks are subject to 12 separate capital requirements: six risk-based capital requirements, two leverage-based requirements, and four requirements for total loss absorbing capacity.

³ In the United States, the International Lending Supervision Act (ILSA) of 1983 mandated that the banking agencies set minimum levels of capital for the banking institutions under their supervision. ILSA also contained a directive to promote international coordination. 12 U.S.C. 3907 (“The Chairman of the Board of Governors of the Federal Reserve System and the Secretary of the Treasury shall encourage governments, central banks, and regulatory authorities of other major banking countries to work toward maintaining and, where appropriate, strengthening the capital bases of banking institutions involved in international lending.”).⁴ For example, there was no differentiation among corporate loans,

categories (known as the Standardized Approach [SA]) based partly on external credit assessments, which were therefore more risk-sensitive.

Basel II also introduced an additional capital requirement for operational risk, defined as the “risk of loss resulting from failed internal processes, people, and systems” or from external events (unrelated to general business conditions) such as natural disasters.

Shortly after the U.S. regulators proposed a rule in November 2007, the financial crisis of 2008 erupted. As a result, the U.S. never fully adopted Basel II. The conditions that led to the crisis made it clear to the international regulatory community that further revisions to the capital framework were necessary.

Basel III: Higher and More Stringent Capital Standards

In 2011, in response to the financial crisis and resulting recession, the BCBS published a revised set of international capital standards, known as [Basel III](#). Overall, Basel III made capital requirements more stringent and simplified some elements of the A-IRB framework.

Most notably, Basel III increased the quantity and quality of regulatory capital and imposed new capital buffers on top of regulatory minimums. For example, Basel III introduced a new capital measure of common equity tier 1 (or CET1), which is narrower than the previously used tier 1 capital category and introduced a new regulatory minimum risk-based capital ratio for CET1 of 4.5 percent. The tier 1 capital regulatory minimum increased from 4 to 6 percent. Basel III also introduced “capital buffer” requirements, including a “capital conservation buffer” (CCB) set at 2.5 percent of total RWAs. The largest banks are also subject to a countercyclical capital buffer (CCyB) that regulators can raise amid elevated financial vulnerabilities.

Basel III also created the category of “global systemically important banks” (GSIBs) and assigned them a special capital surcharge (which functions as another buffer) intended to account for their systemic risk. Exactly 30 banks worldwide (including 8 U.S. banks) are currently designated as GSIBs based on the Basel III methodology. In addition to meeting elevated capital requirements, these banks are required to meet total loss-absorbing capacity (TLAC) requirements established by the Financial Stability Board. The U.S. implementation of the TLAC standard also includes a mandatory long-term debt (LTD) minimum requirement to offer so-called “bail-in” capital.

Turning to Basel III’s changes to RWAs, although Basel III simplified the securitization component of the A-IRB framework, it introduced a new capital charge for potential mark-to-market losses associated with the deterioration in the creditworthiness of a counterparty. This charge is known as credit valuation adjustment risk, or CVA risk. Basel III also codified a revised standardized approach for calculating credit risk that was more risk sensitive than prior standardized approaches.

Implementation of Basel III in the United States: Convergence and Divergence

Although U.S. regulators implemented the new Basel III framework in 2013, it was not simply a carbon copy of the Basel Committee’s version because of the following three key contextual factors.

Dodd-Frank Act Constraints

Importantly, prior to the U.S. implementation of the Basel III framework, several new statutory constraints on U.S. bank capital regulation were introduced by the Dodd-Frank Act in 2010. Most significant among these is section 171 of the Dodd-Frank Act, also known as the “Collins Amendment.” This required the U.S. banking agencies to establish minimum leverage and risk-based capital requirements that were not less than the generally applicable leverage and risk-based capital requirements for insured depository institutions under the prompt corrective

action regulations. They could also not be quantitatively lower than the above requirements in effect for insured depository institutions as of the date of enactment of the Dodd-Frank Act (July 21, 2010).

Essentially, the Collins Amendment has the effect two “floors” on U.S. capital requirements—minimum standards for internationally active U.S. banks must be no less stringent than (1) those that apply to all insured depository institutions generally, which has been and remains requirements based solely on standardized approaches; and (2) those that applied to insured depository institutions as of July 2010. Notably, when implementing Basel III, U.S. regulators chose to impose the Collins Amendment’s floor much more broadly than required by the statute, requiring that a standardized approaches floor be applied not only to mandatory minimum capital requirements but ~~to~~ to all capital requirements and buffers. No such floor exists in the original Basel III framework, although the 2017 Basel Finalization package did introduce an alternative “output floor”, as we describe further below.

A further statutory complexity is section 939A of Dodd-Frank, which bars the U.S. regulators from incorporating external credit ratings in their capital rule. As a result, when implementing Basel III in 2013, U.S. regulators did not permit banks to assign risk weights under the standardized approach using external credit assessments, such as those from Moody’s and Standard & Poor’s. This eliminated another important element of risk sensitivity in the Basel III framework as promulgated by the BCBS.

Variations in Large and Small Bank Capital Rules

Implementation of Basel III was further complicated by U.S. differentiation in bank capital rules for larger and smaller banks. Specifically, although the Basel I framework has largely been applied uniformly to all U.S. banks, the 1996 market risk capital requirements and (to the extent implemented) the Basel II A-IRB were only applicable to the very largest U.S. banks. The combined effect of the Collins floor and the nature of Basel III have led to further bifurcation of U.S. capital regulation.

Most (but not all) Basel III changes to the standardized approaches were effectively implemented in 2013 for all U.S. banks. Specifically, the “U.S. version” of the standardized approaches applicable to all banks does not currently include charges for CVA and operational risk that were part of Basel III’s revised standardized approach. However, as part of the 2013 implementation, the largest U.S. banks were also made subject to Basel III’s advanced approaches (subject to the standardized floor), which do include charges for CVA and operational risk. As a result, although the largest U.S. banks are now effectively subject to the highest capital requirements among standardized and advanced approaches, the U.S. version of the former varies from the Basel III version. Most notably, the U.S. standardized approach excludes CVA and operational risk components and does not allow the use of external credit ratings to apply differentiated risk weights.

With respect to minimum capital requirements and methods for calculating capital levels and RWAs, the 2013 U.S. regulations implementing Basel III remain largely intact today.⁸

⁸ Over the last few years, the United States has implemented regulatory tailoring, which changed the thresholds at which certain capital and other prudential requirements apply. The Fed also integrated the stress tests with the point-in-time capital requirements by replacing the fixed capital conservation buffer with the stress test capital buffer, based on the results of the supervisory stress tests. The objective was to integrate the stress tests with the ongoing non-stress capital requirements and simplify the capital framework. The simplification comes from eliminating five capital requirements in the stress tests and using the results of the stress tests, including the prefunding of 1 year of dividends on common stock, to set the size of the SCB. The SCB is also floored at 2.5 percent and only applies to the capital requirements calculated under the standardized approach. For the advanced approaches capital requirements, it retains the flat 2.5 percent of risk-weighted assets as the capital conservation buffer.

U.S. Exceptionalism

Finally, U.S. implementation in 2013 and since has been marked by a consistent U.S. tendency for “super-equivalence”—that is, gold-plating of the Basel III framework by implementing additional or more stringent standards beyond those contained in the BCBS version of Basel III or required under Dodd-Frank noted above. Beyond the Collins Amendment, two other instances of such gold-plating are most relevant here:

- **Higher GSIB Surcharges.** The United States requires each GSIB to calculate its GSIB surcharge amount using *both* the internationally agreed method (“Method 1”) and a U.S.-specific method (“Method 2”), which generally results in higher GSIB surcharges. The binding capital requirements applicable to U.S. GSIBs are therefore higher than what they would be under an unmodified implementation of the Basel standards. Method 1 scores are also recalibrated annually using aggregate data from all relevant banks, while Method 2 scores are calculated using fixed coefficients that have not been adjusted to account for economic growth since its inception. Currently, the weighted average GSIB capital surcharge under the U.S.’s Method 2 is 2.9 percent, 1.1 percentage point higher than the average surcharge calculated under Method 1.
- **Stress Capital Buffer.** All U.S. firms with at least \$100 billion in total assets are also subject to an entirely separate and incremental set of capital requirements under which a U.S.-specific “stress capital buffer” (“SCB”), calculated on the basis of a periodic supervisory stress test and that can therefore fluctuate, is used in place of the Basel III static CCB.⁹ This SCB must be maintained on top of the requirements calculated using RWAs from the U.S. version of the standardized approaches.

Basel Finalization: Higher Risk Sensitivity of SA and Guardrails on Internal Models

The 2011 Basel III package primarily focused on increasing the level and stringency of capital requirements. Before we describe the changes from the Basel Finalization package, it is important to note that since the 2008 global financial crisis, U.S. regulators have more than doubled the capital requirements of large banks. Prior to the changes implemented by the Dodd-Frank Act in 2010, a bank holding company was considered well-capitalized if its tier 1 risk-based capital ratio exceeded 6 percent. Currently, large banks are required to hold nearly 13 percent of tier 1 risk-based capital ratio to avoid restrictions on capital distributions. When Basel III was adopted in 2014, both higher capital requirements as well as increases in risk-weighted assets resulted in significantly higher capital levels at banks. More recently, capital requirements for the GSIB banks have increased further due to a number of factors, including higher stress capital buffers and rising GSIB surcharges due to general economic growth and inflation.

One of the most important issues from Basel III was the perceived lack of risk sensitivity of the standardized approach for credit risk. The Basel Finalization package increases the risk sensitivity by establishing new exposure classes and recalibrating the risk weights for most existing exposure classes. Generally, the Basel Finalization standardized approach for credit risk offers more granular treatment and segmentation of exposures than under current U.S. capital rules. For example, whereas the Basel III standardized approach assigned a flat minimum risk weight to all residential mortgages, the Basel Finalization revisions vary residential mortgage risk weights, depending on the loan-to-value ratio of the mortgage.

One way the revised standardized approach increases risk sensitivity is by distinguishing between banks in jurisdictions that allow the use of external credit ratings for regulatory purposes, and banks incorporated in

⁹ Other jurisdictions use supervisory adjustments (such as the UK’s Pillar 2 requirements) to supplement regulatory capital requirements to account for risks not well captured in the Basel III framework.

jurisdictions that do not allow the use of such ratings. The latter must apply the “standardized credit risk assessment approach” (which does not incorporate external credit ratings) for certain exposures. This generally results in less granularity and higher risk weights, which mitigates the added risk sensitivity from the Basel Finalization package, compared with jurisdictions that allow the use of external credit ratings. The United States would lose some of the benefits of added risk sensitivity as a result of Section 939A of the Dodd-Frank Act, which prohibits the use of external credit ratings, as set out above.¹⁰

Another goal of international regulators in negotiating the Basel Finalization package was reducing perceived variability in the risk weights obtained using each bank’s own internal models under the A-IRB approach, even considering differences in risk profiles and business models across institutions. Although this variability could be limited through supervisory review and approval of bank models (as exists in the U.S.), some regulators nevertheless thought that there could still be significant differences between model outputs across various jurisdictions.

Because of this perceived variability, regulators concluded that A-IRB was too complex, and the modelling of certain portfolios undermined comparability and robustness. Regulators therefore sought to narrow the range of potential Basel-compliant RWA outcomes that banks could generate. Essentially, in the ongoing balancing act between risk sensitivity and transparency/consistency, regulators determined that the A-IRB approach tilted too far toward the former. As a result, the Basel Finalization package significantly constrains banks’ ability to use internal models to calculate RWAs.

In addition to addressing variation by imposing restrictions on internal models, the Basel Finalization package also introduces an aggregate limit on the capital benefits that a bank can derive from using its internal models. Under the Basel Finalization output floor, bank RWAs must be calculated as the higher of either (1) total RWAs calculated using the approaches that the bank has supervisory approval to use, in accordance with the Basel capital framework (including both standardized and internal risk-based approaches); and (2) 72.5 percent of total RWA calculated using *all* the Basel framework’s standardized approaches, including those for operational risk and CVA.¹¹ The output floor generally applies to all Basel framework regulatory capital minimums and buffer requirements, including the capital conservation buffer and GSIB surcharge.

Fundamental Review of the Trading Book

Although the 2017 Basel changes to the international capital framework are perhaps the most extensive and far-reaching post-crisis capital reforms, because they will touch all internationally active banks and their borrowers, other developments under the Basel framework have been unfolding concurrently. Chief among these is the “Fundamental Review of the Trading Book” (or “FRTB”), an international standard finalized by the BCBS in 2019 that (as the name suggests) fundamentally changed the minimum capital requirements for market risk (those applicable to banks’ trading activities). These changes will significantly increase market risk capital requirements for the largest U.S. banks, and U.S. regulators are likely to implement them along with the Basel Finalization reforms. For purposes of this series, we will consider FRTB along with the 2017 Basel Finalization revisions.

Key Questions for U.S. Implementation

The unique regulatory capital framework already in place in the United States, and the statutory restrictions with which U.S. regulators must comply in implementing the Basel Finalization package, raise important questions

¹⁰ Pub L. No. 111-203, section 939A, 124 Stat. 1376, 1887 (July 21, 2010).

¹¹ The standardized approaches to be used when calculating the output floor include credit risk, counterparty credit risk, CVA risk, securitization framework, market risk, and operational risk.

about the eventual shape of the Basel Finalization proposal and, ultimately, the final rule. We will treat each of these questions in greater detail in subsequent posts in this series but present a brief overview here of some of the most prominent.

Structure. For the largest banks, the U.S. capital requirements are not based on a single set of risk-based capital required through a single method of RWA calculation. As we mentioned, the largest banks must calculate their capital ratios using both an advanced approaches RWA and a standardized approach RWA—a feature that we refer to throughout this series as the “dual RWA” approach. They then use the lower capital ratio of the two calculations to determine whether they comply with applicable capital standards. The dual RWA approach also has different elements in each of the standardized and advanced approach calculations; because of this, they are effectively bound by the higher of the two requirements.

In addition, when assessing compliance for purposes of the standardized RWA measure, large U.S. banks are subject to the U.S.-specific stress capital buffer (which can fluctuate annually), floored at the Basel framework’s static 2.5-percent capital conservation buffer. Whether the U.S. retains this dual RWA approach—and which Basel Finalization revisions it plans to implement for which RWA calculations, which buffers, and which firms—will significantly influence the overall changes in capital requirements for firms both individually and in the aggregate.

Scope. By its terms, the Basel framework applies “on a consolidated basis to internationally active banks.” However, this is not the basis on which U.S. regulations differentiate among firms for purposes of gradating capital requirements. Currently, only GSIBs and firms with \$700 billion or more in total assets or \$75 billion or more on cross-jurisdictional activity are required to calculate capital requirements using the advanced approaches (that is, using a dual RWA approach). Other firms only calculate their RWA using the standardized approach, which does not currently include separate RWA components for operational risk or CVA.

It remains unclear whether the United States will effectively expand the application of Basel standards to smaller U.S. firms by more closely aligning the U.S. “version” of the standardized approaches to the newly revised Basel version. This would include standardized charges for CVA and operational risk, along with revisions to the standardized approach for credit risk. If U.S. regulators only apply the revised Basel standardized approaches to internationally active banks, a separate question arises about whether and how elements of that approach that are more risk sensitive or calibrated lower are harmonized with the existing U.S. standardized approach applicable to smaller banks. Differences in capital requirements across lenders could have unintended consequences, as it may lead to a migration of riskier activities to entities with the lowest requirements.

Changes in Capital Levels. In his departing remarks in December 2021, former Federal Reserve Board Vice Chair for Supervision Randy Quarles indicated that U.S. implementation of the remaining elements of Basel III could increase capital requirements by as much as 20 percent for the largest U.S. firms.¹² U.S. firms capital levels have significantly increased since the financial crisis from Dodd-Frank implementation as well as Basel III. U.S. capital requirements moved up even higher in 2022, driven by higher stress capital buffers, and GSIB surcharges have continued to rise. The increase in capital buffers post-pandemic in part accounted for the growth in bank size, resulting from the unprecedented monetary and fiscal stimulus needed to avoid a larger economic fallout from the pandemic, as well as inflation.

Whether and how U.S. regulators decide to offset any further capital requirement increases that would result from Basel Finalization will be a key driver of what overall U.S. capital requirements emerge after full implementation of the Basel Finalization package, including FRTB. This could be accomplished, for example, by adjusting certain

¹² It is unclear whether this assessment included potential implementation of elements of the Basel framework outside the 2017 revisions, such as FRTB.

elements of the Basel Finalization package or other existing elements of the U.S. capital framework, such as the U.S.-specific GSIB surcharge methodology, stress testing practices or other capital requirements.¹³

Implementation Elsewhere. Since the international regulatory community adopted the Basel Finalization package in 2017, the COVID-19 pandemic has tested the existing capital and prudential framework. That experience has yielded new insights into the potential strengths and weaknesses of the Basel reforms.

Political developments since 2017 may also have shifted priorities for some national-level policymakers. As a result, certain jurisdictions' proposals to implement the 2017 revisions have varied from the Basel Finalization package in differing ways.¹⁴ It remains to be seen whether the U.S. proposes similar adjustments, and what the significance any remaining cross-border differences might have for overall financial stability and competitiveness.

Disclaimer: The views expressed do not necessarily reflect those of the Bank Policy Institute's member banks, and are not intended to be, and should not be construed as, legal advice of any kind.

¹³ For example, BPI has previously discussed how FRTB implementation could require firms to overcapitalize for market risk. *On the Overcapitalization for Market Risk Under the U.S. Regulatory Framework* (April 21, 2022), available at <https://bpi.com/on-the-overcapitalization-for-market-risk-under-the-u-s-regulatory-framework/>.

¹⁴ For example, the EU issued its proposal to implement Basel III endgame at the end of 2021. We discuss some elements of the EU proposal in our post *Basel III Endgame and the Cost of Credit for American Business* (Jan. 10, 2022), available at <https://bpi.com/basel-iii-endgame-and-the-cost-of-credit-for-american-business/>.