

Banking & Financial Services

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Basel III: An Overview

By Peter King and Heath Tarbert

Of the regulatory changes affecting the banking industry, perhaps none is more significant than the overhaul of the capital adequacy framework for internationally active banks. This article presents an overview of the third Basel Capital Accord, known simply as Basel III. The article will highlight the major aspects of Basel III and outline how these regulatory changes will likely impact financial institutions around the world. In so doing, the article focuses on the following goal-driven features of Basel III:

- *Acknowledging the Shortcomings of Basel I & Basel II*
- *Increasing the Quality and Quantity of Capital*
- *Establishing Additional Buffers*
- *Introducing a Leverage Ratio*
- *Managing Counterparty Risks*
- *Improving Liquidity*
- *Dealing with SIFIs*
- *Implementing Basel III*

Acknowledging the Shortcomings of Basel I & Basel II

Basel III is unquestionably a direct response to the global financial crisis that began in 2007 and culminated in the most severe threat to the worldwide banking system since the Great Depression. But the roots of Basel III can be traced indirectly to the forces that produced Basel I and Basel II, as well as the shortcomings of both of those frameworks in addressing the capital requirements of internationally active banks.

Basel I

The business of banking depends inherently on leverage. At the most basic level, banks borrow from the market and depositors and lend to borrowers. This model assumes, of course, that banks will be able to realize their assets in order to repay depositors and the market.

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In practice, the amount a bank lends out significantly exceeds its deposit base, and there is often a mismatch between the short-term nature of the deposits and borrowings from the market (which are often repayable on demand or on short notice) and the long-term nature of loan portfolios. As is often said, banks are in the business of "transforming maturities." The overriding rationale of bank capital regulation has been to provide a cushion against losses sustained when the precariousness of the mismatch is exacerbated by defaulting borrowers or sharp declines in the quality of asset portfolios.

Throughout the 1980s and 90s, many countries experimented with banking and financial deregulation. The Basel Committee on Banking Supervision (the BCBS or the Basel Committee) was formed in 1974 to advise national financial regulators on common capital requirements for internationally active banks. At present, the Basel Committee's membership includes representatives from the central banks and prudential regulators of more than 25 nations.¹

In 1988, the BCBS devised the initial Basel Capital Accord, which was a coordinated response to some of the perceived failings of deregulation. Banks, in the rush to compete for larger market shares, had rapidly increased their domestic and foreign exposures. Because at some institutions these new exposures were not matched by increases in the institutions' capital bases, the minimum capital levels within the global financial system began to erode.² Deregulation also allowed internationally active banks to take advantage of differences in national treatment of similar assets for capital purposes. Some believed these inconsistencies were exploited across jurisdictions in a manner that was producing unhealthy competition and regulatory arbitrage.³ In short, national standards did not always link capital requirements to actual risk levels and did not always account for exposures beyond those reflected within the four corners of the balance sheet.⁴ Consequently, a regulatory consensus started to build around a set of global standards that would provide guidance on the proper capital levels for internationally active banks. The result was Basel I.

Basel I consisted of three main components. First, the BCBS standardized the minimum regulatory ratio for internationally active banks.⁵ Covered banks were required to hold sufficient regulatory capital to represent at least eight percent of their total assets on a risk-adjusted basis. Second, the Basel Committee established a basic definition of what was considered regulatory capital. Items qualifying as regulatory capital were divided into Tier 1 and Tier 2. Tier 1 capital generally represents the highest quality of capital, such as common equity and some types of preferred stock.⁶ Tier 2, capital on the other hand, largely comprises a range of lower-quality instruments often dubbed as “supplementary” capital. Examples of Tier 2 capital include subordinated term debt and certain hybrid instruments.⁷ Basel I required that at least half of a bank’s regulatory capital consist of Tier 1 capital.⁸ Third, the BCBS introduced a uniform process by which banks calculate their regulatory capital ratios. Put simply, these ratios are calculated by dividing a bank’s capital reserves by its assets. Those reserves, of course, can be deployed in the event that a bank sustains unexpected losses. To account for the different risk levels inherent in a wide variety of assets, the BCBS incorporated a rudimentary concept of risk-weighted assets (RWAs) into the Basel I framework. “Risk-weighting” assets involves categorizing a bank’s assets according to credit risk and then weighting each of these categories accordingly.⁹ Basel I used a “bucket” approach that consisted of several major categories of assets. For example, under Basel I most sovereign debt exposures were weighted at zero percent, residential mortgage loans were weighted at 50 percent, and unsecured commercial loans were weighted at 100 percent.¹⁰ Under the eight percent minimum standard, Basel I therefore required no capital for relevant sovereign debt, mandated that four percent capital be held against residential mortgage loans, and prescribed a full eight percent capital cushion per dollar of commercial loans.

Basel I’s achievement of uniform risk-weight categories ironically emerged as one of the framework’s greatest flaws. The categorical risk weights were not only crudely calibrated but they permitted, and indeed encouraged, regulatory arbitrage. For example, OECD member countries such as Greece or Iceland received the same zero percent risk weighting for their debt as the United States and the United Kingdom. The same was true with respect to the uniform 100 percent

weight attributed to all corporate debt, regardless of the credit standing of individual issuers. Banks learned they could chase higher yields at greater risks without necessarily having to incur additional capital. The failure to agree on uniform definitions of Tier 1 and Tier 2 capital was yet another major problem of Basel I, a development that led to some countries to permit banks to rely on instruments of questionable quality as part of their capital cushion. These and other flaws were thoroughly debated by commentators in the 1990s,¹¹ eventually resulting in a partial overhaul of the framework in the form of Basel II.

Basel II

The Basel Committee, seeking to offer a more comprehensive and risk-sensitive approach to capital regulation, formally adopted the new framework of Basel II in 2004. Basel II involved three so-called “pillars”: minimum capital requirements, the supervisory review process,¹² and market discipline.¹³ By far, the first pillar has been the most important—as well as the most controversial—part of Basel II. As mentioned, Basel I focused exclusively on the credit risk of a bank’s assets when calculating RWAs.¹⁴ Believing that original focus to be too narrow, the BCBS revised Basel I in 1996 by adding a market risk element to the RWA calculation.¹⁵ During the Basel II negotiations, operational risk was added as a third factor to be considered when calculating RWAs. Nevertheless, Basel II’s major contribution was its wholesale revision of Basel I’s rudimentary “bucket” approach to RWAs. With the aim of more accurately matching a bank’s capital requirements to the riskiness of its assets, Basel II provided three methods of assessing credit risk: a basic “standardized” approach and two variants of an “internal ratings-based” approach—foundational and advanced. Under the standardized approach, banks calculated RWAs not only by reference to Basel I’s elementary buckets, but also by the external credit ratings assessed for those assets by firms such as *Standard & Poor’s*, *Moody’s* Investor Service, and *Fitch* Ratings. The two internal ratings-based approaches were designed to permit banks perceived to be more sophisticated to rely in varying degrees on their own risk management models to calculate their RWAs and capital needs.

Despite Basel II’s emphasis on the latest risk assessment models, the recent global financial crisis showcased the limitations of that framework in a

number of areas. First, the crisis painfully demonstrated long-acknowledged ambiguities in the definition of Tier 1 capital. Banks naturally took advantage of the rather loose definition of Tier 1 (left largely intact from Basel I) by structuring financial products that enabled them to comply with Basel II with lower costs of capital. Indeed, some regulators observed that through the use of these instruments banks were able to comply technically with Basel II capital requirements while holding as little as 1 percent common equity on their balance sheets.¹⁶ Second, there were concerns regarding how banks structured their liabilities. For example, the capital requirements for trading book assets and securitizations under Basel II were comparatively low—especially when compared to assets registered on the banking book.¹⁷ Third, the financial crisis revealed critical flaws in the risk management models used by the majority of internationally active banks.¹⁸ Nor did the reputation of credit rating agencies fare much better during the crisis. A fourth flaw of Basel II, according to the BCBS, was a “failure to capture major on- and off-balance sheet risks, as well as derivative related exposures . . .”¹⁹ Finally, and perhaps most importantly, the crisis illuminated a de facto erosion in capital levels over the past two decades that had left far too many banks ill-equipped to absorb significant losses. In fact, insufficient capital buffers were particularly acute in the case of a number of systemically important financial institutions (SIFIs).²⁰

Basel III

In November 2010, the member states of the Group of Twenty (G20) officially endorsed Basel III, which represents a marked departure from the philosophy and substance of Basel I and II.²¹ It should come as no surprise that Basel III aims to increase the quality and quantity of capital that banks must hold. Alongside this development is the BCBS’s extensive reassessment of risk coverage assumptions and guidelines.²² What may prove to be the most innovative (and controversial) component of Basel III, however, pertains to the creation of a set of system-wide macroprudential measures. While the reforms introduced in Basel I and II were almost exclusively made at a microprudential or bank-specific level, Basel III introduces a set of tools and standards at the macroprudential level—such as a countercyclical buffer and a universal leverage ratio—to address systemic risk within the global financial system.²³

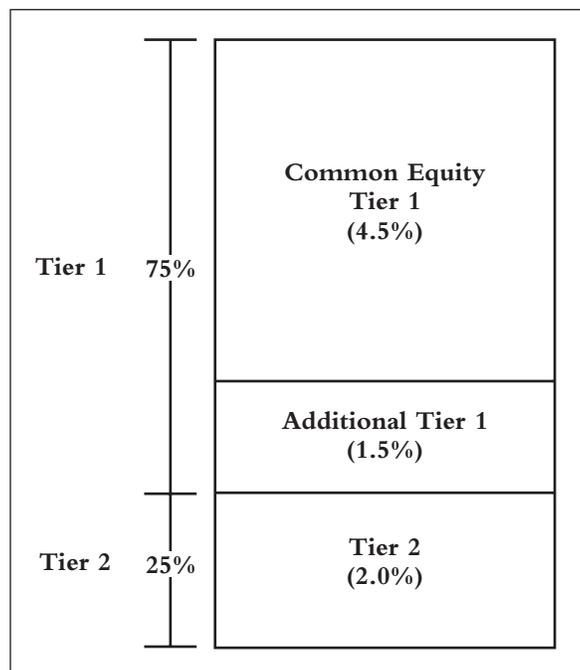
There is little question that the Basel Committee’s revised framework represents an important step in the right direction. But there are those who believe aspects of the reforms outlined above will hamper economic recovery. For its part, the BCBS admits that Basel III will have a modest impact on short-term growth, and has designed an implementation calendar with the hope of minimizing any deleterious effects on recovery.²⁴ Others have suggested more radical reform and a doing away with the risk-weighted approach altogether. It remains to be seen, however, whether national regulators will feel comfortable implementing reforms in the current economic environment. At bottom, both the pace of Basel III’s implementation and as well as its overall substance will be the factors driving its success or failure over the long haul.

Increasing the Quality and Quantity of Capital

Among the “highest priority issues” for the Basel Committee in designing Basel III was the “need to strengthen the quality, consistency, and transparency of the regulatory capital base.”²⁵ The reforms of Basel III seek to ensure that the capital base of every internationally active bank is backed by a high-quality buffer that can absorb losses during periods of economic distress.²⁶ Basel III aims to strengthen the fundamental definition of capital, with a focus on its overall quality, transparency, and consistency.²⁷

As mentioned above, Basel I set the risk-weighted capital requirement at eight percent, with total capital divided 50/50 between Tier 1 and Tier 2—a feature left largely unchanged by Basel II.²⁸ On its face, Basel III maintains the requirement that a bank’s “Total Capital” must be at least 8 percent of RWAs.²⁹ But Basel III requires that at least 75 percent of a bank’s Total Capital consist of Tier 1 capital, with only up to 25 percent of Total Capital consisting of Tier 2 capital. Furthermore, Basel III breaks down Tier 1 into two categories: “Common Equity Tier 1” and “Additional Tier 1.”³⁰ Common Equity Tier 1—as discussed below—must account for at least 4.5 percent of a bank’s RWAs. Stated differently, over 50 percent of a bank’s Total Capital and at least 75 percent of a bank’s Tier 1 capital must consist of Common Equity Tier 1 capital.³¹ Additional Tier 1 capital may make up the remainder of a bank’s capital within Tier 1, consisting of up to 25 percent of its Tier 1 capital in

Minimum 8% Total Capital Ratio



total.³² This revised capital requirement, along with the newly established capital buffers discussed further below will undoubtedly ensure that every bank subject to Basel III maintains a de facto capital ratio of well above 10 percent.

Common Equity Tier 1

A bank's Common Equity Tier 1 capital consists of the sum of the following elements:

- common stock satisfying certain criteria (outlined below);
- surplus from common stock issuances;
- retained earnings;
- other comprehensive income;
- minority interests in the common stock of consolidated subsidiaries; and
- certain regulatory adjustments.³³

Broadly speaking, Common Equity Tier 1 consists of the bank's common stock as well as any common stock surplus perhaps more commonly known as share premium or additional paid-in capital.³⁴ Basel III establishes strict criteria for shares to be classified as common equity, as shown in Appendix A.³⁵ The Basel Committee generally requires that the instrument at issue must:

- represent the most subordinated claim in the liquidation of a bank;
- have a perpetual principal;
- not be bought back, redeemed, or cancelled;
- have dividend features that are entirely discretionary at the option of the bank;
- be recognized under applicable accounting standards as equity; and
- be issued as part of an arms-length transaction with a third party.³⁶

Additional Tier 1

Additional Tier 1 capital essentially consists of various types of preferred stock and additional paid-in capital that do not otherwise satisfy the standards of Common Equity Tier 1.³⁷ For example, Additional Tier 1 includes preferred stock that is subordinated to depositors, general creditors, and the subordinated debt of the bank.³⁸ Furthermore, Additional Tier 1 also includes certain instruments issued by consolidated subsidiaries of a bank held by third parties.³⁹ These instruments otherwise meet the criteria of Additional Tier 1 capital, but are not issued by the parent bank. Finally, certain regulatory adjustments to capital are also included in Additional Tier 1 capital.⁴⁰ Like those instruments qualifying for Common Equity Tier 1, the instruments in the Additional Tier 1 category may not be subject to any credit sensitive features and must be issued by the bank to a third party in an arms-length transaction.⁴¹ The instruments included in this category must not contain a maturity date or any promise of redemption,⁴² and any dividends paid to the holders of these instruments must be solely at the bank's discretion.⁴³ Furthermore, there are strict rules for when these instruments may be callable, as outlined among other criteria for inclusion, in Appendix B.⁴⁴

Tier 2

The objective of Tier 2 capital is to provide loss absorption on a "gone-concern" basis.⁴⁵ While Tier 1—also referred to as "going-concern" capital—provides a bank with an authentic equity cushion, Tier 2 is absorbed by a bank as it becomes insolvent. Nevertheless, Tier 2 capital provides a cushion consisting of lower forms of equity and junior liabilities. Tier 2 includes preferred stock with non-perpetual and debt-like features as well as various types of subordinated debt.⁴⁶ Tier 2 also may consist of a variety of instruments that fail to qualify for Tier 1.⁴⁷ The Basel Committee's criteria for Tier 2

treatment generally requires that the instrument at issue is subordinated to depositors and general creditors; is neither secured nor guaranteed by the bank; has no credit sensitive dividend features; was issued to a third party in an arms-length transaction; and has no features that permit investors to accelerate payments in cases of insolvency, liquidation, or bankruptcy. Appendix C includes the full list of criteria.⁴⁸ Apart from the instruments described above, certain undiluted losses held in general loss reserves may also qualify for Tier 2 treatment.⁴⁹

Establishing Additional Buffers

Even during the early stages of the crisis, some banks continued to distribute dividends and to award staff bonuses.⁵⁰ These distributions arguably eroded capital reserves and reduced the ability of banks to absorb additional losses. For these and other reasons, the BCBS has required, as part of Basel III, two additional capital buffers intended to serve as further defenses against future losses: a capital conservation buffer and a countercyclical buffer. The common principle underlying both buffers is that banks should build up pools of capital during “good times,” *i.e.*, periods of strong growth, that can be drawn down during the inevitable “bad times” when unexpected losses may occur.⁵¹

Capital Conservation Buffer

The capital conservation buffer requires banks to hold an additional 2.5 percent of Total Capital in the form of Common Equity Tier 1, over and above the 4.5 percent minimum mentioned above. As a consequence, Basel III effectively brings the Common Equity Tier 1 requirement to a full seven percent of RWAs.⁵² At the same time, a bank may dip below the seven percent ratio in periods of stress, although the bank must rebuild the buffer through a reduction of discretionary distributions.⁵³ The BCBS contemplates these reductions would likely include decreases in dividend payments, share buy-backs, and staff bonus payments.⁵⁴ In the event a bank fails to do so voluntarily, Basel III encourages regulators to enforce reductions of discretionary distributions until the buffer is re-established.⁵⁵

Constraints on discretionary distributions vary according to the extent to which banks have eroded their capital conservation buffer. Banks with capital ranges that fall just shy of the 2.5 percent buffer will face minimal constraints, while those in danger of eroding the buffer completely will be forced to eliminate

Capital Conservation Buffer

Common Equity Tier 1 Ratio (percent)	Existing Buffer (percent)	Minimum Capital Conservation Ratio (percentage of earnings banks are required to hold to rebuild buffer)	Percentage of earnings ⁵⁶ available for discretionary distributions
4.5 - 5.125	0 - 0.625	100%	0%
> 5.125 - 5.75	0.625 - 1.25	80%	20%
> 5.75 - 6.375	1.25 - 1.875	60%	40%
> 6.375 - 7.0	1.875 - 2.5	40%	60%
> 7.0	2.5	0%	100%

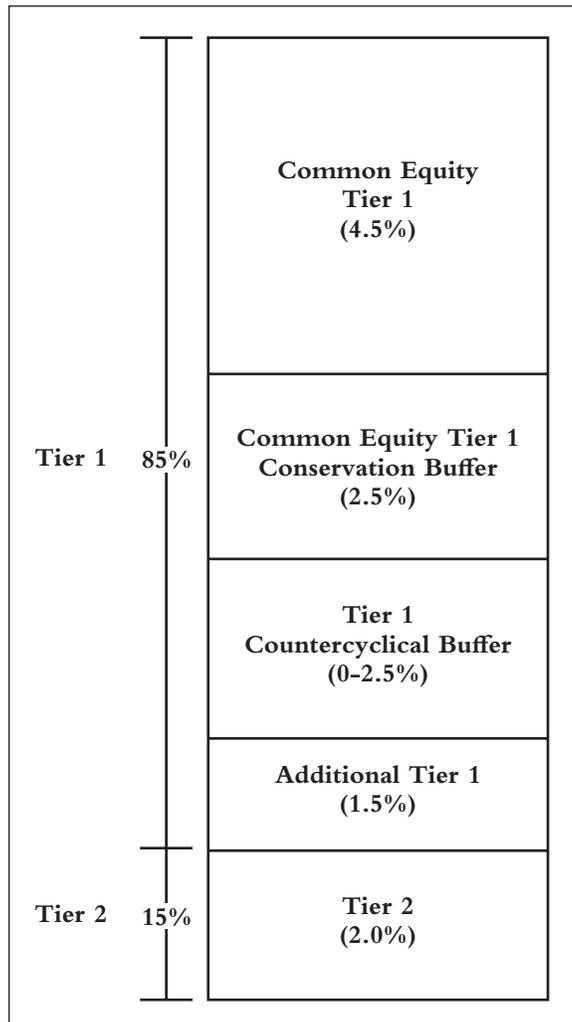
discretionary distributions altogether. The above table illustrates the sliding scale envisioned by the Basel Committee.

For example, consider a bank with a Common Equity Tier 1 ratio of 5.5 percent and a capital conservation buffer of only one percent. Because this ratio is below the standard of 2.5 percent, the bank would have to conserve 80 percent of its earnings in the subsequent year to rebuild the buffer, thereby limiting discretionary distributions to only 20 percent of its earnings. Banks can avoid these restrictions by recapitalizing the buffer through private sector capital raisings (each as rights issues).⁵⁷ While it is understood that banks may have to dip into the capital conservation buffer to absorb losses from time to time, institutions may not flexibly operate within the buffer range simply to enhance their competitive posture vis-à-vis other banks. Indeed, Basel III instructs regulators to use their discretion to impose time limits on banks operating within the buffer.⁵⁸

Countercyclical Buffer

The financial crisis demonstrated that losses incurred in the banking sector can be extremely large when a downturn is preceded by a period of excess credit growth. Readily-available credit engenders a build-up of loans and price increases which in turn often lead to asset bubbles.⁵⁹ When these bubbles eventually burst, prices go down, loans go unpaid, and banks begin to limit borrowing. As the reduction of credit availability pushes asset prices down further, the level of defaults

Potential 13% Capital Ratio (with Buffers)



increase even more.⁶⁰ To stave off this vicious cycle, Basel III requires a so-called “countercyclical buffer” to serve as a second pool of additional capital accumulated during periods of high credit growth. The buffer would theoretically act as a brake on the availability of credit during periods of high credit growth while simultaneously lessening pressure to restrict credit during a downturn.

As a practical matter, Basel III relies on each national jurisdiction to monitor credit growth in relation to objective measures such as GDP.⁶¹ If national authorities determine that credit has grown to be excessive, they are to impose a countercyclical buffer on banks operating within their jurisdiction.⁶² The buffer may range from zero percent to 2.5 percent depending on

financial stability factors in each jurisdiction. Once a national regulator determines that the build up of systemic risk has abated, it may lift the countercyclical buffer completely.⁶³ If a countercyclical buffer is announced in a jurisdiction, banks must comply within 12 months or face potential restrictions on discretionary distributions akin to those established for capital as part of the conservation buffer discussed above.⁶⁴

Introducing a Leverage Ratio

Basel III rejects the notion that capital requirements should be maintained solely on the basis of RWAs. Prior to the crisis, a number of banks and other financial institutions built up leverage that was seen as excessive, while still showing strong capital ratios as measured against RWAs.

As a result, the Basel Committee adopted an additional measure to reinforce existing risk-based capital requirements. Basel III’s “leverage ratio” is calculated by comparing Tier 1 capital with “total exposure,” without reference to RWAs. The overall target is a leverage ratio of at least 3 percent (*i.e.*, Tier 1 capital should be at least three percent of total exposure).

The leverage ratio of Basel III is still very much a work in progress. The key issue for the BCBS is the calculation of the denominator (*i.e.*, total exposure). Yet at this early stage, the Basel Committee has reached a consensus on several important principles:

- the assets of subsidiaries that are consolidated for accounting purposes must be excluded from the measure of total exposure if the investments in those entities are deducted from Tier 1 for regulatory purposes;
- in calculating total exposure, netting of loans and deposits will not be allowed and collateral and other forms of credit risk mitigation will be disregarded;
- derivatives will be included in exposures using the “loan equivalent” method prescribed by Basel II; and
- off-balance sheet items must be included in the calculation using a “credit conversion factor” of 100 percent.

Banks will need to do considerable work to prepare for the imposition of Basel III’s leverage ratio. They will effectively have to run one model to calculate their

risk-based capital requirements, and also a separate one to calculate their “total exposure” for purposes of the leverage ratio. It will be important to ensure consistency across jurisdictions, even if banks use different accounting methods.

The market will doubtless find this additional information helpful and interesting. But it is too early to say whether the additional measurement will have the desired positive effect on the lending behavior of banks. There is always a danger of unintended consequences if the leverage ratio is calibrated incorrectly, and for this reason banks will likely welcome a lengthy implementation period.

Managing Counterparty Risks

The shortcomings of the existing capital adequacy framework were particularly apparent in the assessment of risks arising from on- and off-balance sheet transactions and derivatives-related exposures. Basel II permitted banks to calculate risk on trading book assets using the Value-at-Risk (VaR) model. In general, the VaR model produced a lower capital charge than the rules applicable to the same assets if held as investments on the banking book. Indeed, the VaR model presupposed a certain degree of liquidity in trading assets. But leading up to the crisis banks built up large trading positions in derivatives and securitization products—positions that proved less liquid and more risky in times of market stress. The inevitable consequence was large losses.

Initial steps to amend this situation were advanced by the BCBS and implemented in 2009.⁶⁵ The VaR capital measure was supplemented by a further charge to account for turbulent market conditions. The stressed VaR capital charge is calculated using a stress calibrated VaR model—assuming a 12-month period of stressed financial conditions—to calculate the new higher capital charge. The rules relating to capital charges in Basel III on re-securitizations also have been standardized in both banking and trading books, thereby eliminating further capital arbitrage opportunities.⁶⁶

The BCBS continues to review its proposed treatment of trading book exposures and the securitization industry. However, it has also made numerous proposals aimed at mitigating counterparty credit risk in the derivatives and secured financing markets, as well as removing some of the anomalies in Basel III’s treatment

of securitizations. Two critical areas of focus for Basel III are counterparty credit risk and external ratings, including any so-called “cliff effects” associated with the latter.

Counterparty Credit Risk

Basel III emphasizes the importance of calculating a bank’s capital needs under the “worst case scenario.”⁶⁷ In doing so, the BCBS focuses on a number of key topics as discussed below.

Stress testing of default risk: Banks will be required to calculate their default risk capital charge using a stress calibration as part of the exposure calculation.⁶⁸ The stress calibration must be based on at least three years of historical data, which must include a period of actual increased credit spreads for a cross section of the bank’s counterparties or use market implied data. The data must be updated quarterly or more frequently if market conditions warrant it. To assess the adequacy of its stress models, the bank must measure its calculations against benchmark portfolios that share the same market susceptibilities as the bank and that are calculated using similar stress-calibrated data.

Credit valuation adjustment: In addition to default risk capital, banks will be required to hold capital against marked-to-market losses arising from a decline in counterparty creditworthiness.⁶⁹ Secured financing transactions are not covered unless potential losses in a given case are deemed material by the bank’s regulator.⁷⁰ The calculation will be made on the basis of a “bond equivalent” valuation, although the exact calculation methodology will depend on the bank’s approved models, e.g., whether offsetting is permitted, inclusion of hedging instruments, etc.⁷¹

Wrong-way risk: Another measure to improve counterparty credit risk evaluation is the identification and mitigation of “wrong-way risk.” This risk arises when a bank’s exposure to a counterparty increases as the counterparty’s creditworthiness declines. One common example is when a bank holds put options written by a company on its own shares. Under Basel III, banks will be required to monitor wrong-way risk both by analysis of defined sectors (e.g., industry and product) and by reference to specific transactions. In the latter case, capital charges will be assessed on the basis of stringent full value loss expectations.⁷² Furthermore,

such transactions will not be included in any transaction netting sets with that counterparty.⁷³

Asset value correlation for large institutions: To account for the potential systemic risk arising from the failure or default of a large market player, a set multiplier of 1.25 will be applied to the asset value correlation of exposures to (i) certain regulated financial institutions with assets of at least \$100 billion, and (ii) any unregulated financial companies regardless of size.⁷⁴

Collateralized counterparties: A variety of measures to improve collateral calculation and management have been proposed as part of Basel III. The BCBS has established minimum periods at risk for margin calculations on netting sets of transactions at five business days for repo-style transactions and ten business days for all others.⁷⁵ However, the minimum increases to twenty business days for sets exceeding 5,000 transactions, or for sets involving “hard to replace” derivatives or illiquid collateral.⁷⁶ A bank subject to Basel III is required to consider whether it would be able to replace trades if concentrated in a particular counterparty when assessing the appropriate period at risk. The period at risk must also be temporarily increased over the next two quarters if there have been more than two margin-call disputes on a particular netting set over the previous two quarters which have exceeded the period at risk.⁷⁷

There are also a number of high-level supervisory requirements relating to the management, supervision, and control of collateral management operations within institutions—including the allocation of resources by senior management to these operations in times of crisis. The Basel Committee has also instituted a requirement for at least annual reviews of the process, which must examine documentation, data verification and integrity, and the integration of counterparty credit risk measures into daily risk management. Basel III additionally includes express provisions on the reuse or rehypothecation of collateral (an issue which has caused particular problems in the aftermath of recent bank failures). Arguably the most important of these is the requirement that collateral management must track and report on both a bank’s own reuse of posted collateral and the extent to which it grants rights of reuse to its counterparties.⁷⁸

Central counterparties: The move toward a greater use of central counterparty (CCP) clearing in the over-the-

counter (OTC) derivatives markets is seen as a key factor in the reduction of risk in those markets, as evidenced in initiatives by both the U.S. and E.U. legislatures.⁷⁹ The Basel Committee seeks to encourage this movement by proposing a low capital charge of two percent on qualifying CCP exposures.⁸⁰ To qualify, the CCP must satisfy the criteria specified by the International Organization of Securities Commissions (IOSCO), including measures relating to capital, collateral maintenance, and governance. Exposures to non-qualifying CCPs will be treated as any other bilateral exposure.⁸¹

Enhanced counterparty credit risk management: The BCBS proposed further measures to improve the quality of counterparty risk assessment procedures and practices, with particular emphasis on the operation of these functions in times of market turbulence. Counterparty exposures and risks across products must be captured in a timely manner and subjected to regular and extensive stress testing. The integrity of the calculation models themselves must be ensured; models must be subjected to regular validation and testing (including back testing), and both banks and supervisors must be alert to consistency in their use. The importance of the risk management function in a bank’s operations must be supported by active involvement by senior management, recognition of the risk management exposure, models of day-to-day business operations (including the assessment of trading and exposure limits), and well-documented and understood policies and procedures. Risk management systems and procedures also must be reviewed at least annually, and banks must have an independent risk control unit—separate from business units—that makes daily assessments of risk measurement, credit exposure, and trading limits.

External Ratings and Cliff Effects

External ratings: Under Basel II, banks were permitted to use ratings by external credit assessment institutions (ECAIs) in assessing their own risk weights. The BCBS believed, however, that this led to banks failing to make their own independent assessments of risk. Basel III therefore supports the policy that banks make their own independent assessments of rated instruments. In addition, in order to qualify as an ECAI, a credit rating agency must comply with IOSCO’s “Code of Conduct Fundamentals for Credit Rating Agencies,” particularly with respect to the transparency of the ratings process.⁸² It is likely that the BCBS will issue further proposals

after it concludes its review of the securitization framework and the use of external ratings.

Credit protection: Basel III's credit risk mitigation provisions require that protection providers are "externally rated A- or better" or the equivalent. But this may lead to so-called "cliff effects" in the event of a credit downgrading. That is, by virtue of experiencing the downgrade, the bank must hold more capital. Yet its inability to increase its capital may lead to another downgrade, and the vicious cycle thereby repeats itself. The BCBS has proposed that this requirement be eliminated for non-securitization exposures.⁸³ For securitization exposures, credit protection will be recognized if the provider has minimum rating of BBB- and had a minimum rating of A- when the protection was provided.⁸⁴

Improving Liquidity

In some sense, the global financial crisis was not so much a capital crisis but rather a liquidity crisis, at least initially. As the ability to procure short-term funding tightened for banks and other institutions, many found they could not easily convert their assets into cash and were consequently forced to make use of central bank lending facilities. As the amount of central bank-eligible collateral available to those banks began to dwindle—combined with severe declines in value of the banks' illiquid assets—the liquidity predicament quickly began to lead to erosions in capital levels. Acknowledging that liquidity is as important to the future stability of the banking sector as capital adequacy, the BCBS published Principles for Sound Liquidity Risk Management and Supervision in 2008 and, more recently, promulgated the first harmonized liquidity standards as a key component of Basel III.⁸⁵ Specifically, the Basel Committee has introduced two minimum standards for liquidity: the Liquidity Coverage Ratio and the Net Stable Funding Ratio.⁸⁶

Liquidity Coverage Ratio

The Liquidity Coverage Ratio (LCR) is designed to ensure that an internationally active bank has sufficient unencumbered, high-quality liquid assets to offset the net cash outflows it could encounter under a month-long acute stress scenario that includes both systemic and institution-specific shocks.⁸⁷ That stress scenario assumes a downgrade of the bank's credit rating, a partial loss of deposits, a loss of unsecured wholesale funding,

an increase in secured funding haircuts, increases in derivative collateral calls, and calls on off-balance sheet exposures—including committed credit and liquidity facilities.

LCR Formula

$$\frac{\text{Stock of high-quality liquid assets}}{\text{Total net cash outflows over the next 30 calendar days}} \geq 100\%$$

The numerator of the LCR is the bank's "stock of high-quality liquid assets." These unencumbered assets must be liquid during times of stress and convertible into cash at little or no loss. They are characterized by low credit and market risk, ease and certainty of valuation, and low correlation with risky assets.⁸⁸ Operational requirements also apply—these assets must be unencumbered, managed for the purpose of using them as a source of contingent funds, and available for the bank to convert at any time to fill funding gaps.⁸⁹ High-quality liquid assets are divided into Level 1 and Level 2 assets. Level 1 assets, which are not subject to any haircut under the stress scenario, include cash and central bank reserves that can be drawn down in times of stress. They also include marketable securities representing claims on or guaranteed by sovereigns, central banks, multilateral development banks, and other public sector entities provided that the securities meet certain requirements.⁹⁰ Level 2 assets, on the other hand, are subject to at least a 15 percent haircut and may make up only 40 percent of the overall stock of high-quality liquid assets after the haircut has been applied.⁹¹ Level 2 assets include certain other marketable securities as well as certain corporate and covered bonds not issued by a financial institution.⁹²

The LCR requires that a bank's stock of high-quality liquid assets be at least equal to its total net cash outflows for the next 30 days, which is defined as the total expected cash outflows minus the total expected cash inflows in the stress scenario, up to a cap of 75 percent of expected outflows.⁹³ In other words, net cash outflows and the corresponding minimum for high-quality liquid assets, may not fall below 25 percent of the expected cash outflows for the 30-day stress scenario. In computing these components, outflows are calculated according to run-off assumptions based on the type of bank liability. For example, retail deposits are divided into "stable" and

“less stable” categories. The former consists of government insured or guaranteed deposits where withdrawal is unlikely or the deposits remain otherwise consistent. Stable deposits are assessed a run-off (outflow) rate, of five percent, whereas “less stable” retail deposits are subject to a minimum run-off rate of 10 percent.⁹⁴ Various other forms of funding may be subject to run-off factors of 5 percent, 10 percent, 25 percent, 75 percent, or 100 percent.⁹⁵ Unsecured funding provided by financial institutions such as banks, securities firms, insurance companies, and special purpose vehicles are subject to a run-off factor of 100 percent—a feature that no doubt stems from the instability those arrangements were perceived to have wrought during the crisis.⁹⁶ Basel III, however, includes a scheme which provides for reduced run-off factors for secured liabilities backed by Level 1, Level 2, or certain other assets.⁹⁷ Additionally, special rules apply to derivatives.

When calculating its expected cash inflows, a bank must include inflows from outstanding exposures that are fully performing and which the bank has no reason to expect to default within the 30-day horizon. In the case of reverse repos, the net inflow rate differs according to the asset quality of the collateral and certain other features.⁹⁸ A bank is assumed to be unable to draw from its lines of credit, while the inflows from performing loans are assumed to be 50 percent for retail and small business customers, 50 percent from non-financial wholesale counterparties, and 100 percent from financial institution counterparties (on the assumption that the bank would continue to extend half the loans to its non-financial wholesale counterparties and retail and small business customers but not to its financial counterparties due to their inherently more volatile credit risk in a stress scenario). Once again, derivatives are subject to special rules.⁹⁹

Once expected cash inflows for the 30-day stress scenario are determined, this amount is deducted from the expected cash outflows, up to a total of 75 percent of the outflows, as described above. The resulting net cash outflow corresponds to the minimum stock of high-quality liquid assets that Basel III’s LCR will require banks to maintain.

Net Stable Funding Ratio

Unlike the LCR, which aims to ensure short-term liquidity in times of intense stress, the Net Stable

Funding Ratio (NSFR) seeks to promote medium- and long-term funding by establishing minimum amounts of liquidity based on a bank’s assets and activities—including those related to off-balance sheet (OBS) commitments—over a one-year period of extended stress.¹⁰⁰ The NSFR requires that Available Stable Funding (ASF) exceed Required Stable Funding (RSF) for assets and OBS exposures.

NSFR Formula

$$\frac{\text{Available amount of stable funding}}{\text{Required amount of stable funding}} > 100\%$$

ASF is defined as the total amount of a bank’s regulatory capital, along with preferred stock with maturity of a year or more, liabilities with maturities of a year or more, and the portion of non-maturity deposits and term deposits and wholesale funding with maturity of less than a year that would be expected to stay with the institution for an extended period in an idiosyncratic stress event. As with the LCR outflow calculation, these funding sources are weighted differently depending on whether they are considered “stable” or “less stable” as well as depending on the nature of the entity providing the funding.¹⁰¹

RSF is based on the liquidity risk profiles of a bank’s assets and OBS exposures. It is calculated by multiplying an RSF factor assigned to each asset type by the value held in each asset class, then adding the amount of OBS activity multiplied by its RSF factor. These RSF factors are designed to approximate the amount of a particular asset that could not be monetized through sale or use as collateral in a secured borrowing on an extended basis during a year-long liquidity event. Cash and unencumbered securities with remaining maturities generally of less than one year will be assigned a factor of 0 percent, while encumbered assets will generally receive a 100 percent RSF weighting.¹⁰² Other assets and OBS exposures may be assigned RSF risk factors of 5 percent, 20 percent, 50 percent, 65 percent, 85 percent, and 100 percent depending on their relevant characteristics.¹⁰³

Dealing with SIFIs

Although the Basel Committee believes that increased capital and liquidity requirements will strengthen banks across-the-board, these efforts do not fully address the systemic risk posed by institutional interconnectedness

and financial institutions that are perceived to be “too-big-to-fail”—the so-called “SIFIs.” Consequently, the BCBS is working with the Financial Stability Board, a body established by the G20, to develop a series of proposals addressing SIFIs—such as capital and liquidity surcharges, tighter large-exposure restrictions, mandatory recovery and resolution plans, and contingent capital and bail-in debt requirements.¹⁰⁴ Of these proposals, the most important is arguably the possible requirement that all non-common Tier 1 and Tier 2 instruments issued by SIFIs contain terms that ensure the instruments must be written-off prior to any infusion of capital from the public sector.¹⁰⁵ These requirements will complement other system-wide reforms in order to make the pooling of risk less likely and address problems that might arise if a SIFI were to fail. To be sure, all of these SIFI-specific proposals remain in their formative stages. Although the BCBS was supposed to finalize a provisional methodology for assessing systemic importance in early 2011,¹⁰⁶ it appears that the methodology is still being developed. The Bank for International Settlements recently suggested that simple indicators such as bank size are reliable proxies for systemic importance, but there does not appear to be a consensus regarding how to define the class of SIFIs that will be subjected to capital surcharges or potential additional requirements under Basel III. Nor is there any consensus as to what those additional requirements will be.

Implementing Basel III

Although Basel III will likely improve the safety and soundness of financial institutions in the decades ahead, bankers and regulators alike are cautioning against moving too quickly on these reforms. With much of the global banking sector still recovering from the crisis, the BCBS has aimed to establish a timetable for Basel III implementation that balances the desire for increased capital and liquidity levels with the need to facilitate economic recovery. As set forth in further detail in Appendix D, the Basel Committee has adopted a phase-in approach for the new framework that generally begins in January 2013, and that will result in full implementation by January 2019.

Achieving a uniform Common Equity Tier 1 ratio of 4.5 percent and an overall Tier 1 capital ratio of 6.0 percent is arguably the Basel Committee’s highest priority. Consequently, implementation of Basel III’s core capital

requirements must occur by January 2015—nearly four years before some other features of the new framework. Once Basel III’s core capital ratios have been attained, the capital conservation buffer will be phased in beginning in January 2016 with an initial buffer of 0.625 percent. An additional 0.625 percent will be added to the buffer at the beginning of each additional year until the buffer reaches 2.5 percent. The implementation of the countercyclical buffer follows the same calendar as the capital conservation buffer, although national regulators may accelerate the implementation and size of the countercyclical buffer as circumstances dictate.

For its part, the leverage ratio will begin a “parallel run period” on January 1, 2013 that ends on December 31, 2016. During this period, banks will be required to calculate their leverage ratios and to disclose them publicly starting in January 2015. The requirement to maintain at least a 3 percent leverage ratio will come fully into force on January 1, 2017. Implementation of Basel III’s liquidity ratios will be more staggered: The LCR will be officially introduced as a minimum standard on January 1, 2015, while the NSFR will not officially come until three years later. There is no established time frame for any additional capital charge for SIFIs, but the Basel Committee is expected to coordinate its work on this topic with the U.S. Financial Stability Oversight Council and the European Systemic Risk Board as these bodies address SIFIs in their respective jurisdictions.

Conclusion

Basel III represents a significant milestone in the development of uniform capital requirements. In particular, Basel III’s emphasis on the quality and quantity of core capital—with the overriding goal of fortifying bank capital cushions on a global basis—is the framework’s very cornerstone. Furthermore, in attempting to correct the flaws of Basel I and II, the BCBS has designed a regime that incorporates liquidity requirements as well as a number of macroprudential tools directed at the reduction of systemic risk. None of these reforms, however, are expected to be implemented inexpensively. Capital is indeed critical, but capital is also costly. Over the next decade, regulators must necessarily weigh Basel III’s costs and benefits at each stage of the new regime’s implementation. At the same time, banks around the world must alter their business models to varying degrees in order to thrive under Basel III.

Appendix A

Criteria for classification as Common Equity Tier 1 for regulatory capital purposes ¹	
1.	Represents the most subordinated claim in liquidation of the bank.
2.	Entitled to a claim on the residual assets that is proportional with its share of issued capital, after all senior claims have been repaid in liquidation (i.e. has an unlimited and variable claim, not a fixed or capped claim).
3.	Principal is perpetual and never repaid outside of liquidation (setting aside discretionary repurchases or other means of effectively reducing capital in a discretionary manner that is allowable under relevant law).
4.	The bank does nothing to create an expectation at issuance that the instrument will be bought back, redeemed or cancelled nor do the statutory or contractual terms provide any feature which might give rise to such an expectation.
5.	Distributions are paid out of distributable items (retained earnings included). The level of distributions is not in any way tied or linked to the amount paid in at issuance and is not subject to a contractual cap (except to the extent that a bank is unable to pay distributions that exceed the level of distributable items).
6.	There are no circumstances under which the distributions are obligatory. Non payment is therefore not an event of default.
7.	Distributions are paid only after all legal and contractual obligations have been met and payments on more senior capital instruments have been made. This means that there are no preferential distributions, including in respect of other elements classified as the highest quality issued capital.
8.	It is the issued capital that takes the first and proportionately greatest share of any losses as they occur. ² Within the highest quality capital, each instrument absorbs losses on a going concern basis proportionately and pari passu with all the others.
9.	The paid in amount is recognized as equity capital (i.e. not recognized as a liability) for determining balance sheet insolvency.
10.	The paid in amount is classified as equity under the relevant accounting standards.
11.	It is directly issued and paid-in and the bank can not directly or indirectly have funded the purchase of the instrument.
12.	The paid in amount is neither secured nor covered by a guarantee of the issuer or related entity ³ or subject to any other arrangement that legally or economically enhances the seniority of the claim.
13.	It is only issued with the approval of the owners of the issuing bank, either given directly by the owners or, if permitted by applicable law, given by the Board of Directors or by other persons duly authorized by the owners.
14.	It is clearly and separately disclosed on the bank's balance sheet.
	<p>1. The criteria also apply to non joint stock companies, such as mutuals, cooperatives or savings institutions, taking into account their specific constitution and legal structure. The application of the criteria should preserve the quality of the instruments by requiring that they are deemed fully equivalent to common shares in terms of their capital quality as regards loss absorption and do not possess features which could cause the condition of the bank to be weakened as a going concern during periods of market stress. Supervisors will exchange information on how they apply the criteria to non joint stock companies in order to ensure consistent implementation.</p> <p>2. In cases where capital instruments have a permanent write-down feature, this criterion is still deemed to be met by common shares.</p> <p>3. A related entity can include a parent company, a sister company, a subsidiary or any other affiliate. A holding company is a related entity irrespective of whether it forms part of the consolidated banking group.</p>

Appendix B

Criteria for inclusion in Additional Tier 1 capital	
1.	Issued and paid-in.
2.	Subordinated to depositors, general creditors and subordinated debt of the bank.
3.	Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis bank creditors.
4.	Is perpetual, <i>i.e.</i> there is no maturity date and there are no step-ups or other incentives to redeem.
5.	May be callable at the initiative of the issuer only after a minimum of five years: <ol style="list-style-type: none"> a. To exercise a call option a bank must receive prior supervisory approval; and b. A bank must not do anything which creates an expectation that the call will be exercised; and c. Banks must not exercise a call unless: <ol style="list-style-type: none"> i. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank¹; or ii. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.²
6.	Any repayment of principal (e.g. through repurchase or redemption) must be with prior supervisory approval and banks should not assume or create market expectations that supervisory approval will be given.
7.	Dividend/coupon discretion: <ol style="list-style-type: none"> a. the bank must have full discretion at all times to cancel distributions/payments³. b. cancellation of discretionary payments must not be an event of default. c. banks must have full access to cancelled payments to meet obligations as they fall due. d. cancellation of distributions/payments must not impose restrictions on the bank except in relation to distributions to common stockholders.
8.	Dividends/coupons must be paid out of distributable items.
9.	The instrument cannot have a credit sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organization's credit standing.
10.	The instrument cannot contribute to liabilities exceeding assets if such a balance sheet test forms part of national insolvency law.
11.	Instruments classified as liabilities for accounting purposes must have principal loss absorption through either (i) conversion to common shares at an objective pre-specified trigger point or (ii) a write-down mechanism which allocates losses to the instrument at a pre-specified trigger point. The write-down will have the following effects: <ol style="list-style-type: none"> a. Reduce the claim of the instrument in liquidation; b. Reduce the amount re-paid when a call is exercised; and c. Partially or fully reduce coupon/dividend payments on the instrument.
12.	Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument.
13.	The instrument cannot have any features that hinder recapitalization, such as provisions that require the issuer to compensate investors if a new instrument is issued at a lower price during a specified time frame.
14.	If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special purpose vehicle – “SPV”), proceeds must be immediately available without limitation to an operating entity ⁴ or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Additional Tier 1 capital.
<ol style="list-style-type: none"> 1. Replacement issues can be concurrent with but not after the instrument is called. 2. Minimum refers to the regulator's prescribed minimum requirement, which may be higher than the Basel III Pillar 1 minimum requirement. 3. A consequence of full discretion at all times to cancel distributions/payments is that “dividend pushers” are prohibited. An instrument with a dividend pusher obliges the issuing bank to make a dividend/coupon payment on the instrument if it has made a payment on another (typically more junior) capital instrument or share. This obligation is inconsistent with the requirement for full discretion at all times. Furthermore, the term “cancel distributions/payments” means extinguish these payments. It does not permit features that require the bank to make distributions/payments in kind. 4. An operating entity is an entity set up to conduct business with clients with the intention of earning a profit in its own right. 	

Appendix C

Criteria for inclusion in Tier 2 Capital	
1.	Issued and paid-in
2.	Subordinated to depositors and general creditors of the bank
3.	Is neither secured nor covered by a guarantee of the issuer or related entity or other arrangement that legally or economically enhances the seniority of the claim vis-à-vis depositors and general bank creditors
4.	Maturity: <ol style="list-style-type: none"> a. minimum original maturity of at least five years b. recognition in regulatory capital in the remaining five years before maturity will be amortized on a straight line basis c. there are no step-ups or other incentives to redeem
5.	May be callable at the initiative of the issuer only after a minimum of five years: <ol style="list-style-type: none"> a. To exercise a call option a bank must receive prior supervisory approval; b. A bank must not do anything that creates an expectation that the call will be exercised;¹ and c. Banks must not exercise a call unless: <ol style="list-style-type: none"> i. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank²; or ii. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.³
6.	The investor must have no rights to accelerate the repayment of future scheduled payments (coupon or principal), except in bankruptcy and liquidation.
7.	The instrument cannot have a credit sensitive dividend feature, that is a dividend/coupon that is reset periodically based in whole or in part on the banking organization's credit standing.
8.	Neither the bank nor a related party over which the bank exercises control or significant influence can have purchased the instrument, nor can the bank directly or indirectly have funded the purchase of the instrument.
9.	If the instrument is not issued out of an operating entity or the holding company in the consolidated group (e.g. a special purpose vehicle or "SPV"), proceeds must be immediately available without limitation to an operating entity ⁴ or the holding company in the consolidated group in a form which meets or exceeds all of the other criteria for inclusion in Tier 2 capital.
	<ol style="list-style-type: none"> 1. An option to call the instrument after five years but prior to the start of the amortization period will not be viewed as an incentive to redeem as long as the bank does not do anything that creates an expectation that the call will be exercised at this point. 2. Replacement issues can be concurrent with but not after the instrument is called. 3. Minimum refers to the regulator's prescribed minimum requirement, which may be higher than the Basel III Pillar 1 minimum requirement. 4. An operating entity is an entity set up to conduct business with clients with the intention of earning a profit in its own right.

Appendix D

Phase-in arrangements (shading indicates transition periods - all dates are as of 1 January)										
	2011	2012	2013	2014	2015	2016	2017	2018	As of 1 January 2019	
Leverage Ratio	Supervisory monitoring		Parallel run 1 Jan 2013–1 Jan 2017 Disclosure starts 1 Jan 2015					Migration to Pillar 1		
Minimum Common Equity Capital Ratio			3.5%	4.0%	4.5%	4.5%	4.5%	4.5%	4.5%	
Capital Conservation Buffer						0.625%	1.25%	1.875%	2.50%	
Minimum common equity plus capital conservation buffer			3.5%	4.0%	4.5%	5.125%	5.75%	6.375%	7.0%	
Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials)				20%	40%	60%	80%	100%	100%	
Minimum Tier 1 Capital			4.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%	
Minimum Total Capital			8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	
Minimum Total Capital plus conservation buffer			8.0%	8.0%	8.0%	8.625%	9.25%	9.875%	10.5%	
Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital	Phased out over 10 year horizon beginning 2013									
Liquidity coverage ratio	Observation period begins				Introduce minimum standard					
Net stable funding ratio	Observation period begins							Introduce minimum standard		
* BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS app. 4 (2010) available at http://www.bis.org/publ/bcbs189.pdf										

Notes

- Members of the BCBS come from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States; see BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, HISTORY OF THE BASEL COMMITTEE AND ITS MEMBERSHIP (2009) available at <http://www.bis.org/bcbs/history.pdf>.
- FINANCIAL STABILITY INSTITUTE, BASEL III TUTORIAL 11 (2011) available at http://www.fsiconnect.org/lms/content/imported_5214/lo_3898/menu.html.
- Id.*
- Id.* at 3.
- BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, BASEL COMMITTEE: INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS 14 (1998) available at <http://www.bis.org/publ/bcbs111.pdf>.
- Id.* at 14.
- Id.*
- Id.*
- Id.* at 11.
- Id.*
- Heath P. Tarbert, Comment, *Are International Capital Adequacy Rules Adequate? The Basel Accord and Beyond*, 148 U. PA. L. REV. 1771, 1799 (2000) (outlining the “seven deadly sins” of Basel I).
- Pillar two encourages banks to develop their own risk management strategies, based on sound capital assessments and a

- comprehensive assessment of risks subject to each bank's specific situation. Pillar two also codifies the expectation of regulators that banks will strive not only to meet, but ultimately to surpass, the minimum capital requirements outlined in pillar one. Finally, pillar two emphasizes the direct role of bank boards of directors and senior management in ensuring Basel II compliance. See generally BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, PILLAR 2 (SUPERVISORY REVIEW PROCESS): CONSULTATIVE DOCUMENT (2001) available at <http://www.bis.org/publ/bcbsca08.pdf>.
13. Pillar three aims to increase market discipline by developing a set of disclosure requirements intended to allow market participants to assess key pieces of information on the capital adequacy of a bank. In enabling a more accurate assessment of each bank's activities by market participants, regulators had hoped that the market would reward those prudently managing their risks while penalizing banks with less robust risk management. See generally BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, PILLAR 3 (MARKET DISCIPLINE): CONSULTATIVE DOCUMENT (2001) available at <http://www.bis.org/publ/bcbsca10.pdf>.
 14. *Id.* at 2.
 15. FINANCIAL STABILITY INSTITUTE, BASEL III TUTORIAL 4 (2011) available at http://www.fsiconnect.org/lms/content/imported_5214/lo_3898/menu.html.
 16. *Id.*
 17. *Id.* at 7.
 18. While these models were quite accurate when used to assess risk under normal market conditions, the financial crisis proved that these same models drastically underestimated losses when assessing risk in extreme stress situations. FINANCIAL STABILITY INSTITUTE, BASEL III TUTORIAL 13 (2011) available at http://www.fsiconnect.org/lms/content/imported_5214/lo_3898/menu.html.
 19. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, BASEL III: A GLOBAL REGULATORY FRAMEWORK FOR MORE RESILIENT BANKS AND BANKING SYSTEMS 29 (2010) available at <http://www.bis.org/publ/bcbs189.pdf> [hereinafter *Basel III Framework*].
 20. The Financial Stability Board is still working on this issue, and the G20 has made it a goal to identify global SIFIs and evaluate the magnitude of additional loss absorbency required.
 21. GROUP OF TWENTY, THE G20 SEOUL SUMMIT LEADERS' DECLARATION (2010) available at http://www.g20.org/Documents2010/11/seoulsummit_declaration.pdf.
 22. MACROECONOMIC ASSESSMENT GROUP, BANK FOR INTERNATIONAL SETTLEMENTS, ASSESSING THE MACROECONOMIC IMPACT OF THE TRANSITION TO STRONGER CAPITAL AND LIQUIDITY REQUIREMENTS: FINAL REPORT, 2 (2010) available at <http://www.bis.org/publ/othp12.pdf>.
 23. Hervé Hannoun, Deputy General Manager, Bank for International Settlements, Speech at the BoJ-BIS High Level Seminar on Financial Regulatory Reform: Implications for Asia and the Pacific: The Basel III Capital Framework: A Decisive Breakthrough, 3 (Nov. 22, 2010) available at <http://www.bis.org/speeches/sp101125a.pdf>.
 24. MACROECONOMIC ASSESSMENT GROUP, BANK FOR INTERNATIONAL SETTLEMENTS, ASSESSING THE MACROECONOMIC IMPACT OF THE TRANSITION TO STRONGER CAPITAL AND LIQUIDITY REQUIREMENTS: FINAL REPORT (2010) available at <http://www.bis.org/publ/othp12.pdf>.
 25. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, STRENGTHENING THE RESILIENCE OF THE BANKING SECTOR: CONSULTATIVE DOCUMENT 13 (2009) available at <http://www.bis.org/publ/bcbs164.pdf>.
 26. *Id.*
 27. *Id.*
 28. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, BASEL II: INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS: A REVISED FRAMEWORK (2005) available at <http://www.bis.org/publ/bcbs111.pdf> [hereinafter *Basel II*].
 29. *Basel III Framework* at 12.
 30. *Id.*
 31. *Id.*
 32. *Id.*
 33. *Id.* (“Retained earnings and other comprehensive income include interim profit or loss. National authorities may consider appropriate audit, verification or review procedures. Dividends are removed from Common Equity Tier 1 in accordance with applicable accounting standards.”).
 34. *Basel III Framework* at 13.
 35. *Id.*
 36. *Id.*
 37. Additional Tier 1 capital consists of the following elements:
 - “Instruments issued by the bank that meet the criteria for inclusion in Additional Tier 1 capital (and are not included in Common Equity Tier 1);
 - Stock surplus (share premium) resulting from the issue of instruments included in Additional Tier 1 capital;
 - Instruments issued by consolidated subsidiaries of the bank and held by third parties that meet the criteria for inclusion in Additional Tier 1 capital and are not included in Common Equity Tier 1; and
 - Regulatory adjustments applied in the calculation of Additional Tier 1 capital.” *Id.* at 14.
 38. *Id.* at 15.
 39. *Id.*
 40. *Id.*
 41. *Id.*
 42. *Id.*
 43. *Id.*
 44. *Basel III* allows these instruments to be callable at the initiative of the issuer only after a minimum of five years:
 - a. “To exercise a call option a bank must receive prior supervisory approval; and

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- b. A bank must not do anything which creates an expectation that the call will be exercised; and
- c. Banks must not exercise a call unless:
- i. They replace the called instrument with capital of the same or better quality and the replacement of this capital is done at conditions which are sustainable for the income capacity of the bank; or
 - ii. The bank demonstrates that its capital position is well above the minimum capital requirements after the call option is exercised.” *Id.*
45. *Basel III Framework* at 18.
46. *Id.* at 17.
47. Additional Tier 2 capital comprises all of the following elements:
- “Instruments issued by the bank that meet the criteria for inclusion in Tier 2 capital (and are not included in Tier 1 capital);
 - Stock surplus (share premium) resulting from the issue of instruments included in Tier 2 capital;
 - Instruments issued by consolidated subsidiaries of the bank and held by third parties that meet the criteria for inclusion in Tier 2 capital and are not included in Tier 1 capital...;
 - Certain loan loss provisions...; and
 - Regulatory adjustments applied in the calculation of Tier 2 Capital.” *Id.*
48. *Id.*
49. *Id.*
50. Jamie Caruana, General Manager, Bank for International Settlements, Speech at the 13th Annual International Bank Conference: The Challenge Of Taking Macroprudential Decisions: Who Will Press Which Button(s)?, 3 (Sept. 24, 2010) available at <http://www.bis.org/speeches/sp100928.pdf>.
51. Nout Wellink, Chairman, Basel Committee of Banking Supervision, Remarks at the 16th International Conference of Banking Supervisors: A New Regulatory Landscape, 4 (Sept. 22, 2010) available at <http://www.bis.org/review/r101124b.pdf>.
52. *Basel III Framework* at 12.
53. *Id.* at 54.
54. The following items are considered to be distributions under Basel III: dividends, share buy-backs, discretionary payments on other Tier 1 instruments, and discretionary bonus payments to staff. Payments that do not result in depleting Common Equity Tier 1 below the 7% minimum, such as scrip dividends, are not considered distributions under Basel III. *Id.* at 56.
55. Hervé Hannoun, Deputy General Manager, Bank for International Settlements, Speech at the BoJ-BIS High Level Seminar on Financial Regulatory Reform: Implications for Asia and the Pacific: The Basel III Capital Framework: A Decisive Breakthrough, 10 (Nov. 22, 2010) available at <http://www.bis.org/speeches/sp101125a.pdf>.
56. Earnings are defined as “distributable profits calculated prior to the deduction of elements subject to the restriction on distributions.” *Basel III Framework* at 56.
57. *Id.* at 54–56.
58. *Id.* at 56.
59. Hervé Hannoun, Deputy General Manager, Bank for International Settlements, Speech at the BoJ-BIS High Level Seminar on Financial Regulatory Reform: Implications for Asia and the Pacific: The Basel III Capital Framework: A Decisive Breakthrough, 11 (Nov. 22, 2010) available at <http://www.bis.org/speeches/sp101125a.pdf>.
60. *Id.*
61. *Id.* at 12.
62. Internationally active banks will be subject to a weighted average of the buffers applied in each of the jurisdictions in which the bank had credit exposures.
63. *Basel III Framework* at 57.
64. *Id.* at 12; Jamie Caruana, General Manager, Bank for International Settlements, Speech at the 13th Annual International Bank Conference: The Challenge of Taking Macroprudential Decisions: Who Will Press Which Button(s)?, 3 (Sept. 24, 2010) available at <http://www.bis.org/speeches/sp100928.pdf>.
65. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL ENHANCEMENTS TO THE BASEL II FRAMEWORK (2009) available at <http://www.bis.org/publ/bcbs157.pdf>.
66. *Id.*
67. The new measures also identify specific areas of credit risk whilst encouraging their assessment and mitigation.
68. *Basel III Framework* at ¶ 98.
69. This requirement is known as the credit valuation adjustment, and will apply to any counterparty to an OTC derivatives counterparty that is not a central clearing counterparty. *Basel III Framework* at ¶ 99.
70. *Id.*
71. *Id.*
72. *Id.* at ¶ 101.
73. *Id.*
74. *Id.* at ¶ 102.
75. *Id.* at ¶ 103.
76. *Id.*
77. *Id.*
78. *Id.* at ¶ 107.
79. Proposals on the establishment and operation of CCPs, and a compulsory clearing obligation for certain OTC derivatives have been published in both the U.S. (as part of the Dodd Frank Wall Street Reform and Consumer Protection Act and the E.U. draft regulation published Sept. 15, 2010).
80. Under Basel II, 0 percent risk weight applied, and many anticipated that this standard would continue to apply. The BCBS determined, however, that imposing a small charge would encourage prudent risk monitoring practices and would also clarify that “even trade exposures to compliant CCPs are not risk free.” BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, CAPITALISATION OF BANK EXPOSURES

TO CENTRAL COUNTERPARTIES: CONSULTATIVE DOCUMENT (2010) available at <http://www.bis.org/publ/bcbs190.pdf>.

81. *Id.* at ¶ 9.

82. *Basel III Framework* at ¶ 120.

83. *Basel III Framework* at ¶ 120.

84. *Id.*

85. *Id.* at ¶ 34.

86. *Id.* at ¶ 38.

87. *Id.* at ¶ 40.

88. Ideally, they should also be central bank eligible. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, *BASEL III: INTERNATIONAL FRAMEWORK FOR LIQUIDITY RISK MEASUREMENT, STANDARDS AND MONITORING* ¶¶ 21–22 (2010) available at <http://www.bis.org/publ/bcbs188.pdf>.

89. *Id.* at ¶¶ 26–28.

90. Level 1 assets must be assigned a 0 percent risk weight and traded in large, active repo or cash markets with low concentration, they must have a proven record as a reliable source of liquidity in the markets, and they may not be an obligation of a financial institution or any affiliated entity. For non-0 percent risk-weighted sovereigns, a foreign sovereign or central bank debt security is still Level 1 if it is issued in domestic currencies by the sovereign or central bank in which the liquidity risk is being taken or in the bank's home country, and a domestic sovereign or central bank debt security is still Level 1 if issued in foreign currencies to the extent that holding the debt matches the currency needs of the bank's operations in that jurisdiction. *Id.* at ¶¶ 39–40.

91. *Id.* at ¶¶ 41–42.

92. *Id.*

93. *Id.* at ¶ 50.

94. *Id.* at ¶¶ 56–64.

95. *Id.* at ¶¶ 65–83.

96. *Id.* at ¶¶ 82–83.

97. *Id.* at ¶ 87.

98. *Id.* at ¶¶ 108–110.

99. *Id.* at ¶¶ 111–118.

100. *Id.* at ¶ 119.

101. *Id.* at ¶¶ 124–128.

102. *Id.* at ¶¶ 129–132.

103. *Id.* at ¶ 133.

104. *Basel III Framework* at ¶ 32.

105. BASEL COMMITTEE ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, *PROPOSAL TO ENSURE THE LOSS ABSORBENCY OF REGULATORY CAPITAL AT THE POINT OF NON-VIABILITY: CONSULTATIVE DOCUMENT 4-5* (2010) available at <http://www.bis.org/publ/bcbs174.pdf>; see also FINANCIAL STABILITY BOARD, *MACROPRUDENTIAL POLICY TOOLS AND FRAMEWORKS: UPDATE TO G20 FINANCE MINISTERS AND CENTRAL BANK GOVERNORS 8* (2011) available at http://www.financialstabilityboard.org/publications/r_1103.pdf.

106. FINANCIAL STABILITY BOARD, *REDUCING THE MORAL HAZARD POSED BY SYSTEMICALLY IMPORTANT FINANCIAL INSTITUTIONS: FSB RECOMMENDATIONS AND TIME LINES 12* (2010) available at http://www.financialstabilityboard.org/publications/r_101111a.pdf.