AN EXAMINATION OF BASEL III AND THE NEW U.S. BANKING REGULATIONS

Andrew L. McElroy†

I. INTRODUCTION ................................................................. 7
II. ANALYSIS ........................................................................ 9
   A. THE RE-DEFINITION OF REGULATORY CAPITAL 
      AND THE MINIMUM CAPITAL RATIO .......................... 9
   B. THE CAPITAL CONSERVATION BUFFER ...................... 10
   C. THE COUNTERCYCLICAL CAPITAL BUFFER ............... 13
   D. GLOBAL SYSTEMICALLY IMPORTANT BANKS .............. 15
   E. THE LEVERAGE RATIO ..................................................... 17
   F. LIQUIDITY REQUIREMENTS .......................................... 20
   G. THE LIQUIDITY COVERAGE RATIO ............................ 21
   H. THE NET STABLE FUNDING RATIO .......................... 23
III. CONCLUSION .................................................................... 25

† J.D., Stanford Law School; M.Fin., Princeton University; Sc.B., Brown University. The author is a corporate law attorney at Sullivan & Cromwell in New York. He would like to give a special thank you to his family and friends, especially his loving parents. He would also like to thank Professors Joseph Grundfest and Michael Klausner for their guidance and support. Additionally, the Author would like to thank the editors and staff members of the Wake Forest Journal of Business and Intellectual Property Law for their many hours of hard work to prepare this Article for publication.
ABSTRACT
The Basel III framework represents a sea change in the banking industry in terms of the capital charges and liquidity requirements that banks will face. In order to respond to these new regulatory challenges, banks must adapt their decision-making paradigm in a strategic way that responds to the new rules and allows them to remain competitive. This framework, however, is a complex mosaic of consultative documents, incremental enhancements, revisions to those documents, academic research studies, and other references. With the publication of the revised Basel III capital rules in June 2011, the United States capital rules in June 2012, and the Basel III liquidity rules in January 2013, the major regulatory pieces are now in place, and the new banking regime is coming into focus. This Article synthesizes the relevant documents and explains their importance within the broader regulatory framework.
I. INTRODUCTION

The United States banking agencies have recently begun implementing the most sweeping reforms of U.S. banking law since the introduction of risk-based capital adequacy requirements in 1989. Now, as then, U.S. banking agencies are implementing much of the Basel framework, and the changes to U.S. banking law will be far-reaching: the re-definition of regulatory capital, the introduction of risk-based capital adequacy tests, a modification of the leverage ratio, and the introduction of liquidity requirements. The true import of these reforms, however, is understood only as the U.S. regulations contrast against the global standards of the Basel III framework. This Article examines how United States implementation of Basel III will influence the strategic decisions of bank managers as they structure their lending and other capital-intensive operations in the new regulatory regime.

These reforms come as the long-awaited regulatory response to the Financial Crisis of 2008, during which banks required emergency government assistance in order to remain solvent. The U.S. will pattern much of its reforms on the Basel Committee on Banking Supervision’s (“BCBS’s”) Basel III guidelines, which seek to promote financial stability through the international convergence of banking standards. The Group of 20 endorsed Basel III at the Seoul Summit, and the Bank for International Settlements approximates that twenty-seven countries and the European Union had begun implementation as of the end of October 2012. Although the objective of the Basel Accords is consistency in reporting standards across countries, national regulators are not required to implement Basel III in its entirety, and many countries adopt the guidelines with some modification. Swiss regulators, for example, have embraced stricter capital requirements. The United States supports the Basel Accords

3 See BASEL III, supra note 2, ¶ 1.
6 Jack Ewing, 2 Swiss Banks Facing Higher Capital Standards, N.Y. TIMES, continued . . .
and even required the largest U.S. bank holding companies to submit plans for compliance with Basel III and Dodd Frank. 

Basel III seeks to increase the stability of the global financial system by imposing heightened risk-weighted capital adequacy minimums that will make banks less vulnerable because they are required to hold more loss-absorbing capital on their balance sheets. 

The reforms begin with limiting the range of permissible regulatory capital by excluding assets that are pledged as collateral or otherwise encumbered and unable to absorb losses. Basel III applies the new regulatory capital definitions to four risk-weighted capital requirements: the minimum capital ratio, the conservation buffer, the countercyclical buffer, and the Global Systemically Important Bank (“G-SIB”) capital requirement. The minimum capital ratio provides an absolute floor for the capital base of a bank, the conservation buffer restricts shareholder distributions when capital falls to specified levels, and the countercyclical buffer allows national regulators to increase capital requirements when credit markets are unsustainably accelerating. The G-SIB capital requirement applies when banks become sufficiently large and interconnected. Therefore, the G-SIB capital requirement reduces the funding advantage for too-big-to-fail banks whose investors price in a perceived guarantee of governmental support.

While risk-weighted capital requirements form the bedrock of traditional bank regulation, Basel III also incorporates one non-risk-weighted capital requirement and two liquidity requirements in order to strengthen further bank balance sheets. The non-risk-weighted capital requirement is the leverage ratio, and it is intended to prevent banks from holding a portfolio of assets with low-risk weights.

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8 See Basel III, supra note 2, ¶ 1.

9 See Basel III, supra note 2, ¶¶ 8-9; infra Part II.A.

10 See infra Part II.A-D.

11 See Basel III, supra note 2, ¶¶ 49-50.

12 See Basel III, supra note 2, ¶ 129.


15 See Basel III, supra note 2, ¶ 14.

16 See Basel III, supra note 2, ¶ 37.
but high leverage. The policy concern centers around the amplified effect that highly levered banks exert on markets when they must sell their holdings. The liquidity requirement includes two provisions: The Liquidity Coverage Ratio will require banks to fund their operations such that they can survive a month-long disruption in credit markets and therefore provide regulators enough time to respond; and the Net Stable Funding Ratio will require banks to transition to longer-term funding in order to close the maturity mismatch between their assets and liabilities.

The purpose of this Article is to give practitioners and regulators a panoramic view of the new U.S. banking landscape in a way that highlights how—and perhaps as importantly, where—U.S. banks can be expected to finance and build their operations. The analysis is not at all straightforward because Basel III consists of dozens of consultative documents with accompanying empirical studies and other academic works. Similarly, the U.S. banking agencies have released a number of rulemakings that generally follow the Basel III framework, yet still make important departures. This Article assembles the relevant parts of these documents into a comprehensive explanation and analysis of the new U.S. banking regime.

II. ANALYSIS

A. The Re-Definition of Regulatory Capital and the Minimum Capital Ratio

Basel III introduces common equity tier 1 (“CET1”) capital as the most important category of regulatory capital. It can satisfy any of the risk-weighted capital ratios and has neither a cap on the amount that the bank may apply toward the ratio nor a haircut on its value. In particular, the minimum capital ratio requires CET1 capital of 4.5% of risk-weighted assets; the conservation buffer imposes distribution restrictions depending on the level of the bank’s CET1 capital; and the countercyclical buffer may require a further 2.5% of CET1 capital. The lynchpin criterion of the CET1 capital definition is that it be the “most subordinated claim in liquidation of the bank” because it is the most loss absorbing. Accordingly, CET1 capital principally

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17 See BASEL III, supra note 2, ¶ 38.
18 See BASEL III, supra note 2, ¶ 42.
19 See BASEL III, supra note 2, ¶ 50.
20 See BASEL III, supra note 2, ¶ 129.
21 See BASEL III, supra note 2, ¶ 142.
22 See BASEL III, supra note 2, ¶ 53.
includes common shares, retained earnings, and accumulated other comprehensive income.\textsuperscript{23}

Loss-absorbing capital is central to Basel III because it shields depositors from losses while maintaining the integrity of the fractional reserve banking system.\textsuperscript{24} In a deposit-taking institution, the loans that banks provide to borrowers include the assets of bank shareholders as well as those of depositors.\textsuperscript{25} Shareholder assets include cash and a number of financial instruments that can be categorized as CET1 capital, additional tier 1 capital, tier 2 capital, or none of those categories. If shareholders own an asset that is pledged as collateral or otherwise encumbered, then another party has an interest in the asset, so it is not fully loss-absorbing. Should too many debtors default on loans from the bank, then shareholders will lose their value and the losses will spill over to the depositors whose assets were lent out.\textsuperscript{26} Introducing CET1 capital as the center of the Basel III reforms prevents a scenario in which depositors are forced to absorb losses.\textsuperscript{27}

Specifically, the minimum capital ratio increases the required level of CET1 capital, additional tier 1 capital, and tier 2 capital in order to increase loss-absorbing capital and thereby reduce the chance of insolvency in adverse market conditions.\textsuperscript{28} As the name suggests, the minimum capital ratio is the absolute minimum amount of capital that a bank is permitted to hold on its balance sheet. Specifically, the minimum capital ratio requires that CET1 capital be at least 4.5\% of risk-weighted assets, tier 1 capital be at least 6.0\%, and total capital be at least 8.0\%.\textsuperscript{29} Basel III excludes from regulatory capital certain hybrid debt instruments and subordinated debt, and it entirely discards the tier 3 category that was a constituent of regulatory capital under Basel II.\textsuperscript{30}

\textbf{B. The Capital Conservation Buffer}

The Basel III framework imposes capital distribution restrictions on banks that have a capital conservation buffer (“conservation buffer”) of less than 2.5\% of risk-weighted assets in order to

\textsuperscript{23} See BASEL III, supra note 2, ¶ 52.
\textsuperscript{25} See id at 2.
\textsuperscript{26} See id at 3.
\textsuperscript{27} See BASEL III, supra note 2, ¶ 126.
\textsuperscript{28} See BASEL III, supra note 2, at Annex 1.
\textsuperscript{29} See BASEL III, supra note 2, at Annex 1.
\textsuperscript{30} See BASEL III, supra note 2, ¶ 9.
incentivize them to hold more CET1 capital on the balance sheet.\textsuperscript{31} The conservation buffer is additive with respect to the 4.5% CET1 minimum capital ratio, but unlike the minimum capital ratio, it is not, strictly speaking, mandatory.\textsuperscript{32} Taken together, however, the minimum capital ratio and the conservation buffer will subject banking organizations holding less than 7.0% CET1 capital to regulatory restrictions on dividend payments, share buybacks, and employee bonuses. In particular, the capital conservation structure features five CET1 levels with increasingly restrictive earnings retention limitations as the conservation buffer becomes lower and total CET1 capital approaches the 4.5% minimum capital ratio.

The BCBS advances twin policy rationales for the conservation buffer: to protect depositors as unwitting recipients of losses when capital reserves dry up and to protect banks from industry pressure to vie for investors by offering excessive capital distributions.\textsuperscript{33} With regard to the former rationale, the BCBS recognizes the inherent tradeoff between holding capital to strengthen the balance sheet and distributing capital to appease shareholders. If banks opt to hold more capital, they are better positioned to sustain exogenous shocks. If, in the alternative, banks make distributions and leave an insufficiently thin capital buffer, then the same losses may exceed the bank’s reserve of loss-absorbing capital. To the extent that losses exceed capital, the deficiency is foisted onto depositors, whose assets are irrecoverable in the failed investments. Bank managers are generally more responsive to shareholders than to depositors, and the conservation buffer serves to ameliorate the imbalance. Relatedly, the latter rationale holds that the conservation buffer shields otherwise prudent banks from an incentive to make competing capital distributions in order to maintain market share as other banks attract investors with greater dividend payments and share buybacks.

The BCBS states that the capital conservation buffer is not to be “viewed as establishing a new minimum capital requirement,”\textsuperscript{34} yet goes on to admonish that “banks should not choose in normal times to operate in the buffer range simply to compete with other banks and win market share.”\textsuperscript{35} Here, the BCBS tacitly acknowledges two distinct possibilities. In the first, supervisors adopt an expansive plain language interpretation of the dual “normal times” and “simply to compete” standards thereby inducing banks to observe the combined

\textsuperscript{31} See BASEL III, supra note 2, ¶ 129.
\textsuperscript{32} See BASEL III, supra note 2, ¶ 130.
\textsuperscript{33} See BASEL III, supra note 2, ¶¶ 126-27.
\textsuperscript{34} See BASEL III, supra note 2, ¶ 130.
\textsuperscript{35} See BASEL III, supra note 2, ¶ 132.
7.0% CET1 ratio in what amounts to a *de facto* minimum. In the second, banks hold less than the full conservation buffer by using an efficient breach analysis to choose the profit-maximizing bucket.

If the conservation buffer is not a new minimum, bank managers face a strategic optimization problem whereby they assess the expected value of earnings for each bucket subject to the distribution constraints in order to determine the one that maximizes shareholder value. The earnings for each bucket may vary considerably because a lower conservation buffer allows a bank to assume greater financial leverage, which is ultimately a driver of earnings. Furthermore, the optimal bucket choice may vary as bank managers’ expectations change. For example, a rational bank manager with private beliefs that markets will rise and volatility will fall may transfer the bank to a lower conservation buffer bucket from a higher one in order to use greater leverage.

In a further strategic complexity, the regulatory terms of the bucket will govern the way that investors realize gains by introducing a bias toward share price appreciation and away from dividends at lower conservation buffer buckets. Banks in more restrictive buckets will be unable to issue dividends, so investors will realize gains solely through increases in the share price. For example, a bank with only 4.5% CET1 capital must retain 100% of its earnings, so the share price bias is greatest in this bucket, where capital distributions are wholly prohibited. However, this bias may impose higher indirect costs on active investors who must sell shares in order to rebalance their portfolios instead of using cash from dividends.

Basel III establishes an exception for banks constrained by the conservation buffer restriction by permitting them to raise new capital for purposes of a distribution to existing shareholders. It is difficult to imagine a circumstance when a bank would avail itself of this narrow exception. In order to attract new investors, the share issue would require a favorable price, which would have a dilutive effect on the equity holdings of existing investors. By contrast, if the new share came out at an unfavorable price, the bank would encounter difficulty in fully subscribing the issue. Perhaps more importantly, a bank sends a negative market signal when it seeks to raise money from new investors, not to finance positive net present value projects, but to

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make capital distributions to existing shareholders.

Table 4. Individual Bank Minimum Capital Conservation Standards

<table>
<thead>
<tr>
<th>Common Equity Tier 1 Ratio</th>
<th>Minimum Capital Conservation Ratios (Expressed as a Percentage of Earnings)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.500% – 5.125%</td>
<td>100%</td>
</tr>
<tr>
<td>&gt; 5.125% – 5.750%</td>
<td>80%</td>
</tr>
<tr>
<td>&gt; 5.750% – 6.375%</td>
<td>60%</td>
</tr>
<tr>
<td>&gt; 6.375% – 7.000%</td>
<td>40%</td>
</tr>
<tr>
<td>&gt; 7.000%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Basel III (December 2010, Revised June 2011)

C. The Countercyclical Capital Buffer

The countercyclical capital buffer (“countercyclical buffer”) is a CET1 capital requirement of up to 2.5% imposed on a bank-specific or country-wide basis at the discretion of national authorities during periods of excess aggregate credit growth. Although the BCBS formally introduced the countercyclical buffer in Basel III, it concurrently released a document titled *Guidance for National Authorities Operating the Countercyclical Capital Buffer* ("GNAOCCB") that explicates the underlying policies and mechanics. In the aftermath of the financial crisis, critics panned banking regulations as pro-cyclical because booming credit markets provided steady bank profits that lowered required capital reserves and further increased lending. When credit markets reversed, the resulting losses drastically increased required capital reserves and virtually halted bank lending altogether. The countercyclical buffer is intended to be a flexible regulatory tool to prevent a recurrence of similar pro-cyclical effects. Accordingly, the stated purpose of the countercyclical buffer is to ensure active bank lending during market distress.

The GNAOCCB points to a statistic called the credit-to-GDP ratio as a standard criterion to help national authorities manage the countercyclical buffer, but this risk measure may prove unworkable.

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37 Although only CET1 capital presently satisfies this requirement, the provision contemplates the use of “other fully loss absorbing capital” in the future.

38 See Basel III, *supra* note 2, ¶ 139.

because of its reliance on long time horizons for the predictions. The basis for the credit-to-GDP ratio is a recent BIS working paper called *Countercyclical Capital Buffers: Exploring Options*, which finds that the size of credit markets relative to national economic output is a leading indicator of financial distress. The purpose of the indicator is to help national regulators determine when the relevant risk “crystallizes or dissipates” so that national regulators could increase or decrease the countercyclical buffer accordingly. The study regarding the credit-to-GDP ratio indicator, however, does not use the specificity contemplated in the countercyclical buffer provision. Instead, the credit-to-GDP model is deemed to be correct if it predicts a crisis and one “occurs any time within a three year horizon.” Provided that a statistically significant relationship persists, it will be difficult for national regulators to apply this methodology to the countercyclical buffer because the three-year period in the study is incompatible with the specificity of the “crystallises or dissipates” standard.

Moreover, the GNAOCCB establishes a preannouncement period for compliance with countercyclical buffer changes, but drafting ambiguity and a protracted compliance period may induce pro-cyclical effects when credit markets are already overheated. The purpose of the preannouncement period is to prevent banks from simultaneously rushing to capital markets when national authorities change the countercyclical buffer. The duration of the preannouncement period is unclear because the GNAOCCB states that any increases in the countercyclical buffer need to be preannounced by up to 12 months. The requirement that “increases . . . need to be preannounced” by a certain period suggests a lower bound. Still, the wording “up to 12 months” seems to establish an upper bound, so the time period is unclear. If the GNAOCCB is read to require a 12-month preannouncement, then this time lapse may overwhelm any leading indicator benefit of the credit-to-GDP ratio because the validity of the statistic is based on a three-year prediction horizon. A period of 12 months would account for one third of that time. Moreover, credit markets often change quickly, and markets may have already begun correcting themselves by the time the compliance date for the countercyclical buffer arrives. Thus, the present formulation of the

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40 See *Countercyclical Capital Buffer*, supra note 39, at 2-3.
42 See BASEL III, supra note 2, ¶ 138.
43 See Drehmann et al., supra note 41, at 15.
44 See BASEL III, supra note 2, at n. 49.
preannouncement requirement may render the countercyclical buffer ineffective or potentially harmful.

At the macroeconomic level, the countercyclical buffer may interfere with traditional monetary policy tools that regulators typically rely on to temper business cycles because changes in the capital requirement could distort the domestic money supply. Unlike other capital requirements, which are fixed, the countercyclical buffer changes at the discretion of national authorities. Under the fractional reserve banking system, even a small change in the countercyclical buffer may cause negative acceleration or a contraction of the domestic money supply. Under the theory of money nonneutrality, a shift in the domestic money supply will affect the national output in the short run. A regulatory conflict may arise because central banks alter the money supply in order to boost the economy during recessionary periods using the open market purchase and sale of government bonds. It is unclear what cross-effects will occur when open market operations coincide with changes in the countercyclical buffer, but the money supply may become less predictable and business cycles less manageable.

The countercyclical buffer could stifle foreign investment in developing countries because those nations are generally more vulnerable to the credit market conditions that will trigger higher capital requirements and increase the cost of extending banking services there. Emerging markets tend to exhibit greater variability in trade balances and currency valuation, so their credit markets are often more susceptible to acute fits of expansion and contraction. Banks that were considering new lending operations in those countries will increase the hurdle rate for investment in those countries in order to reflect the possibility of higher capital requirements. In turn, a higher hurdle rate on emerging market investment may deter some banks from expanding their lending operations to those countries. As a result, emerging markets may disproportionately bear the indirect burden of the countercyclical buffer, and the policy designed to foster reliable economic growth may blunt advances in precisely the countries where investment is needed most.

D. Global Systemically Important Banks

In November 2011, the BCBS released a consultative document that supplements a June 2010 release by outlining additional loss absorbency requirements for the largest banks, collectively known as
Global Systemically Important Banks (“G-SIBs”). In general, the G-SIB designation will apply to international banking organizations whose business models include extensive international capital markets activity and therefore increase systemic risk by virtue of their interconnectedness. An “indicator-based” quantitative test will be the formal mechanism that identifies the banks that qualify as G-SIBs and allocates them to one of five buckets with progressively greater CET1 surcharges.

<table>
<thead>
<tr>
<th>Bucket</th>
<th>Minimum Additional Loss Absorbency (Percentage of RWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>3.5%</td>
</tr>
<tr>
<td>4</td>
<td>2.5%</td>
</tr>
<tr>
<td>3</td>
<td>2.0%</td>
</tr>
<tr>
<td>2</td>
<td>1.5%</td>
</tr>
<tr>
<td>1</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

The objective of the G-SIB surcharge is to redress the unique negative externalities and spillover effects that these banks impose on the global financial system. The BCBS explains that a primary cause of these effects is the market belief that G-SIBs enjoy an implicit government guarantee of federal rescue funding because they are simply too-big-to-fail. This perception brings about preferential treatment from investors and moral hazard on the part of bank managers thereby leading to suboptimal risk levels. In effect, this surcharge seeks to offset the funding advantages by increasing net funding costs. In terms of public policy, the surcharge should serve the dual purposes of reducing the probability of a G-SIB failure and the impact of a failure on global financial stability.

The consultative document describes a bucketing approach whereby G-SIBs are placed in one of five categories according to their score on an indicator-based measurement approach. The “bucketing” descriptor is somewhat misleading because the proposed structure actually resembles a hierarchical system of levels similar to that of the conservation buffer. A high score places the bank into a

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46 See ASSESSMENT METHODOLOGY, supra note 45, ¶¶ 4–17.
47 See ASSESSMENT METHODOLOGY, supra note 45, ¶¶ 1-2.
48 See ASSESSMENT METHODOLOGY, supra note 45, ¶¶ 52-55.
high bucket corresponding to a more burdensome regulatory surcharge, which ranges from 1.0% to 2.5% for the first four buckets and 3.5% for the top bucket. The progressive nature of the surcharge provides an incentive for banking organizations to decrease their score and drop to a lower bucket.

Complete details of the quantitative indicator-based measurement approach are forthcoming, but it is clear that the highest buckets will be reserved for the largest banks with the broadest international presence. Accordingly, the BCBS explains that the indicator-based score will be comprised of five equally weighted categories: cross-jurisdictional activity, size, interconnectedness, substitutability, and complexity. These categories, in turn, are composed of equally weighted sub-categories. Notably, “size” is the only category that lacks further sub-categories, and therefore this metric carries greater relative weight in the calculation. While the BCBS has provided the arithmetical formula for the indicator-based test, it has not provided the threshold scores dividing one bucket from the next. The thresholds associated with the buckets will be reviewed every three years in order to reflect developments in the financial industry and the measurement of systemic importance.

In January 2011, the BCBS performed an indicator-based test and bucket allocation on 73 of the largest banking organizations using year-end 2009 financial data and furnished some summary statistics. While the names and scores of the banking organizations have not been released, the study reveals that twenty-seven of the seventy-three banks breached the threshold for the first bucket based solely on their score, and two qualified on the basis of supervisory judgment. None of the banks placed into the top bucket, meaning that every bank has an incentive not to increase its score, but at least four banks placed into the fourth bucket subject to the 2.5% surcharge. While the study relied on 2009 financial data, the study gives a sense of the scope and distribution of G-SIBs, and the BCBS indicated that the initial G-SIB designation will apply to twenty-eight banks.

E. The Leverage Ratio

While risk-weighted capital requirements will constrain banks with volatile assets, the leverage ratio is a raw capital requirement that will

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49 See ASSESSMENT METHODOLOGY, supra note 45, at Table 1.
50 See ASSESSMENT METHODOLOGY, supra note 45, at Table 1.
51 See ASSESSMENT METHODOLOGY, supra note 45, ¶ 70.
52 See ASSESSMENT METHODOLOGY, supra note 45, ¶ 53.
53 See ASSESSMENT METHODOLOGY, supra note 45, ¶¶ 53-54.
bind highly leveraged banks holding low-risk assets.\textsuperscript{54} In addition, the leverage ratio encompasses on- and off-balance sheet risk with certain netting prohibitions.\textsuperscript{55} Some jurisdictions, including the United States, Canada, and Switzerland, have already implemented leverage ratio regulations.\textsuperscript{56} As a non-risk-weighted capital requirement, the leverage ratio does not directly account for the riskiness of the portfolio assets, so it does not rely on internal risk models, such as value-at-risk. In addition, the leverage ratio will reflect some off-balance sheet exposures, such as the nominal value of derivatives. Initially, the BCBS will test the leverage ratio at 3\% until January 2017 and re-evaluate the appropriate level for the leverage ratio going forward.\textsuperscript{57}

Financial leverage may destabilize otherwise functional markets because a levered bank must sell more assets to unwind its position, thereby artificially increasing supply and depressing the mark-to-market clearing price. As prices drop further, a levered bank recognizes greater losses and therefore must sell more assets in a vicious cycle that may ultimately lead to a fire sale causing the market price to deviate from fundamentals. This price instability, in turn, impacts other market participants holding similar assets and using mark-to-market accounting because the downward price pressure from the fire sale forces them to write down their assets, thereby weakening their balance sheet.

The numerator of the leverage ratio is called the capital measure, and it is the sum of non-risk-weighted Tier I capital under the new Basel III definition.\textsuperscript{58} Most notably, the Basel III definition excludes certain intangible assets with indefinite lives, such as goodwill, and limits the use of deferred tax assets.\textsuperscript{59} The capital measure component of the leverage ratio is fairly straightforward and simply aggregates bank capital on a non-risk-weighted basis.

The denominator of the leverage ratio is called the exposure measure, which varies from traditional leverage calculations because it incorporates off-balance sheet risk, limits the use of netting, and provides specific rules for derivatives. If the bank has entered into an off-balance sheet agreement granting another entity the contractual

\textsuperscript{54} See BASEL III, supra note 2, ¶ 152.
\textsuperscript{56} STANDARD & POOR’S, supra note 55, at 4.
\textsuperscript{57} See BASEL III, supra note 2, ¶ 153.
\textsuperscript{58} See BASEL III, supra note 2, ¶ 154.
\textsuperscript{59} See BASEL III, supra note 2, ¶¶ 67, 69.
right to borrow liquid assets, then the exposure measure should reflect that possible outflow as a potential increase in leverage. In order to capture such outflows, the leverage ratio uses the credit conversion factor ("CCF") framework in Basel II. The leverage ratio calculation multiplies the off-balance sheet obligations with its corresponding CCF and adds the product to the exposure measure. For certain agreements—such as liquidity facilities, direct credit substitutes, and trade letters of credit—the CCF is 100%. A CCF of only 10% applies where the bank can cancel the commitment without notice because banks can limit the outflow of assets.

Netting rules for securities financing transactions and for derivatives follow Basel II rules, which permit netting of on-balance sheet transactions if the bank satisfies a four-part test. Under Basel II, netting is permitted if the bank: (1) has a basis to believe that netting is legally enforceable in the relevant jurisdictions regardless of solvency, (2) is able to determine the assets and liabilities of the counterparty subject to netting, (3) monitors and controls its roll-off risk, and (4) monitors and controls its exposures on a net basis.

The Current Exposure Method of Basel II controls the accounting of derivatives in the leverage ratio computation because the balance sheet represents only the market value, but the off-balance sheet notional value represents potential losses. For example, the price of a forward contract is typically zero at the time when the parties enter into the contract, even if the notional value is particularly large. As forward prices change, the fair market value of the contract incorporates gains and losses proportional to the notional amount of the derivative. The exposure measure seeks to reflect the notional amount of the derivative contract as a source of potential outflows.

By incorporating notional derivative values in the exposure measure of the leverage requirement, regulators provide an incentive for banks to transition derivatives trading from OTC markets to clearinghouses in order to avail themselves of favorable netting rules. The outstanding notional value of derivatives contracts dwarfs the market value, so banks have an incentive to net their exposure to remain compliant with the leverage requirement. At the time of the financial crisis, the notional value of the derivatives market was estimated at $600 trillion, but the market value was only 2-3% of that figure. Netting will provide relief from the effect of including the notional derivative value, but the four-part test for netting will be

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60 See BASEL III, supra note 2, ¶ 161.  
difficult to satisfy in OTC markets because banks would need to vet each counterparty individually. Moreover, the type of derivative may implicate foreign jurisdictions where derivatives law is not well settled.

F. Liquidity Requirements

Liquidity risk occurs when banks cannot service their payment obligations, even though they hold sufficient funds, because the assets are long-term investments that banks cannot readily convert to cash. In this way, liquidity risk and insolvency risk are related but separable because banks may be solvent yet lack the liquidity to make payments as they come due. Prior banking regulation focused on maintaining bank solvency, so the requirements dealt primarily with capital minimums and loss-absorbing capital. Basel III has broadened the scope of risk that it addresses and now incorporates liquidity requirements.

One primary source of liquidity risk is the maturity mismatch that occurs when banks finance long-term projects by repeatedly rolling over short-term debt. The process of rolling over debt involves borrowing funds on a short-term basis in the capital markets and, when the principal comes due, borrowing more funds with which to satisfy the original debt obligation. Repeated short-term borrowing allows banks to realize favorable rates because they avoid paying the liquidity premium that rational investors demand for long-term debt instruments. The maturity mismatch leads to liquidity risk when capital markets freeze up, and short-term financing is no longer available at similar rates.

The liquidity requirement, which was absent from Basel I and II, is a lesson learned from the financial crisis of 2008-2009, when solvent institutions depleted their cash reserves and nearly defaulted on their debt obligations because of an over-reliance on credit markets. The TED spread is the difference between the rate at which banks can lend from each other and the rate at which the United States federal government can borrow in the market. It serves as a proxy for the liquidity of short-term financing that is available in the private market. Typically, the TED spread remains between 10 and 50 basis points, but it spiked to 457 basis points in October 2008. Few economists believed that a disruption of this magnitude in the credit markets was possible, but the credit crunch has forced regulators to address liquidity disruptions as a distinct source of systemic risk.

Basel III addresses liquidity risk along two time horizons. First,

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62 See BASEL III, supra note 2, ¶ 35.
63 See BASEL III, supra note 2, ¶ 34.
the liquidity coverage ratio requires that banks hold assets liquid enough that they can survive a month-long seizure of credit markets.  

Second, the net stable funding ratio requires that banks select ways to fund their lending operations such that they rely less on the availability of short-term financing and can survive a year-long period of market distress.

G. The Liquidity Coverage Ratio

In January 2013, the BCBS released Basel III: The Liquidity Coverage Ratio and liquidity monitoring tools.  

The Liquidity Coverage Ratio (“LCR”) requires banking organizations to hold high-quality liquid assets sufficient to survive a thirty-day period of significant market distress. The underlying policy rationale maintains that a one-month period will provide regulators enough time to respond to the market disruption. Accordingly, Basel III provides that the LCR’s numerator is the value of the bank’s unencumbered high liquid quality assets, and the denominator is the estimated total net cash outflows over the thirty-day period. A compliant bank’s LCR must be greater than or equal to 100%, so unencumbered high-quality assets must meet or exceed estimated net cash outflows. The LCR will begin to be phased in on January 1, 2015.

The Liquidity Coverage Ratio:

\[
\frac{\text{Stock of High Quality Liquid Assets}}{\text{Total Net Cash Outflows Over the Next 30 Calendar Days}} \geq 100\%
\]

For purposes of the LCR calculation, there are two classes of high-quality liquid assets: Level 1 and Level 2. Level 2 assets, in turn, compose two subcategories called Level 2A and Level 2B. As a general heuristic, acceptable high-quality liquid assets should resemble those acceptable as reserves at the central bank. Still, Level 1 assets are more liquid and a better store of value, so Basel III incentivizes banks to hold Level 1 assets in two ways. First, the LCR imposes a

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64 See Basel III, supra note 2, ¶ 40.
65 See Basel III, supra note 2, ¶ 42.
66 See Basel III, supra note 2, ¶ 40.
67 See Basel III, supra note 2, ¶ 40.
69 See Liquidity Coverage Ratio, supra note 68, ¶ 51.
70 See Liquidity Coverage Ratio, supra note 68, ¶¶ 24-27.
15% haircut for Level 2 assets and none for Level 1 assets. This discount assumes that the value of Level 2 assets will decrease by 15% or less during periods of market distress. Second, there is a 40% cap on the value of Level 2 assets in the bank’s stock of high-quality liquid assets, though there is no such limit for Level 1 assets. This limitation prevents banks from holding too many Level 2 assets, even despite the haircut.

The LCR provision states that Level 1 assets are limited to coins and bank notes, central bank reserves that may be withdrawn in times of stress, and marketable securities guaranteed by sovereign entities, PSEs, the Bank of International Settlements, the International Monetary Fund, the European Central Bank and European Community or multilateral banks satisfying certain conditions, and sovereign debt with a 0% risk weighting under the Basel II Standardized Approach method. These are the most liquid assets. Level 2A assets are limited to marketable securities representing claims on or guaranteed by sovereigns, central banks, PSEs or multilateral development banks that have a 20% risk weighting under the Basel II Standardized Approach, trade in deep markets, have a proven record of liquidity, and are not an obligation of a financial institution. Other Level 2A assets include corporate debt not issued by a financial institution and covered bonds not issued by the bank, provided that they meet a certain credit assessment threshold, trade in a deep market, and have a proven record of liquidity. Additionally, high-quality liquid assets must be unencumbered, meaning not pledged as collateral or a credit enhancement.

Subject to the discretion of applicable national authorities, Level 2B assets may include full recourse residential mortgage-backed securities without structured products if the loan-to-value ratio does not exceed 80%, provided that the bank has not originated the mortgages and that the mortgages achieve a certain minimum credit rating. There is a 25% haircut for such residential mortgage-backed securities. Level 2B assets also include corporate debt securities that obtain a minimum credit rating, are not issued by a financial institution, and exhibit a “proven record as a reliable source of liquidity in the markets,” although there is a 50% haircut for such commercial paper.

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71 Liquidity Coverage Ratio, supra note 68, ¶¶ 49, 52.
72 Liquidity Coverage Ratio, supra note 68, ¶¶ 49, 51.
73 Liquidity Coverage Ratio, supra note 68, ¶ 50.
74 Liquidity Coverage Ratio, supra note 68, ¶ 52(a).
75 Liquidity Coverage Ratio, supra note 68, ¶ 52(b).
76 Liquidity Coverage Ratio, supra note 68, ¶ 31.
77 Liquidity Coverage Ratio, supra note 68, ¶ 54(a).
78 Liquidity Coverage Ratio, supra note 68, ¶ 54(b).
Finally, Level 2B assets may include common equity shares that are not issued by a financial institution, are exchange traded and centrally cleared, are part of a major stock index, exhibit a “proven record as a reliable source of liquidity in the markets,” and are denominated in the domestic currency. There is a 50% haircut for such common equity shares.  

The denominator of the LCR is total net cash outflows that would result from specified stress scenarios such as a partial loss of unsecured wholesale funding, a significant ratings downgrade, partial loss of retail deposits, collateral calls, and increased off-balance sheet exposure. Total net cash outflows is the difference between net cash outflows and net cash inflows, but the netting effect of cash inflows is limited to 75% of outflows. The effect of this rule is to require banking organizations to estimate cash outflows and hold at least 25% of that value in liquid assets.

The sum of outflows is calculated by estimating the loss of funding from retail deposits, unsecured wholesale funding, secured funding, and additional funding activities such as drawdown of credit facilities. The provision includes a fairly detailed explanation of run-off values applicable to these categories and sub-categories. For example, retail deposits grouped as “stable” for insured deposits or “less stable” for other deposits, and run-off rates of at least 5% and 10% apply respectively. The cash inflows are limited to contractual inflows that are fully performing and for which the bank has no reason to expect a default in the next thirty days.

H. The Net Stable Funding Ratio

The BCBS has not yet released a document providing the details of the Net Stable Funding Ratio (“NSFR”), though Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems and Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring explained that its purpose is to alleviate the maturity mismatch between the short-term funding and long-term investments of banks by encouraging longer-term funding.
The NSFR applies to the banking organization’s on- and off-balance sheet obligations. The numerator of the NSFR is the Available Stable Funds (“ASF”), which must exceed the denominator, which is the required stable funding (“RSF”). After an observation period, the NSFR minimum will become binding under Basel III on January 1, 2018.

The Net Stable Funding Ratio:
\[
\frac{\text{Available Amount of Stable Funding}}{\text{Required Amount of Stable Funding}} > 100\%
\]

The ASF calculation groups the banking organization’s funding sources by their reliability during a state of market stress. From most to least reliable funding, the ASF factors range from 100% to 0%, and these factors multiply the amount of funding. The resulting number is the numerator of the NSFR. For example, capital, preferred stock, and certain secured and unsecured borrowings qualify for the 100% ASF factor, meaning that this category of funding is the most reliable over a one-year period. The next categories, in order of decreasing reliability, are “stable” deposits, “less stable” deposits, unsecured wholesale funding, and other liabilities.

Similarly, the RSF, the denominator of the ratio, organizes assets in categories according to the estimated percentage that would not be monetized “on an extended basis during a liquidity event lasting one year.” These categories receive an RSF factor, which multiplies the amount of the banking organization’s assets in that category. The sum of all relevant FSR categories provides the denominator of the NSRF, which is the minimum amount of ASF. In addition, the NSRF includes a credit conversion factor, which multiplies certain off-balance sheet commitments to include them in the RSF calculation.

Ultimately, the NSFR will require banks to decrease the maturity mismatch between the long-term loans that they make and the short-term funding that they use, but some of the higher costs will be passed on to businesses that require the bank loans. Banks will continue to fund long-term projects because they represent profitable lending opportunities, but banks will need to pay a liquidity premium in order to secure long-term funds to lend to businesses. Still, banks will pass on the additional marginal cost to businesses whose projects will now

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84 See LIQUIDITY RISK MEASUREMENT, supra note 83, ¶ 120.
85 LIQUIDITY RISK MEASUREMENT, supra note 83, at Table 1.
86 LIQUIDITY RISK MEASUREMENT, supra note 83, ¶¶ 120, 123.
87 LIQUIDITY RISK MEASUREMENT, supra note 83, at Table 1.
88 LIQUIDITY RISK MEASUREMENT, supra note 83, ¶ 130 (emphasis in original).
offer a lower net present value because of the higher cost of capital. These additional costs may disproportionately fall to smaller businesses more than established ones that can access commercial paper markets directly if bank loans become too expensive. On balance, however, the maturity mismatch between bank assets and liabilities can lead to a funding breakdown as it did in October 2008, so the marginal costs of liquidity regulation, even if not borne equally by all companies, may improve the stability of credit markets.

III. Conclusion

The new Basel III capital regime will have broad implications in the strategic decision-making of bank managers and the policy choices of national regulators, so the overall impact of the new regulations remains an open question. The new definition of regulatory capital—and the importance of CET1 capital—will push banks to hold more retained earnings and other qualifying assets to meet the minimum capital ratio, capital conservation buffer, countercyclical capital buffer, and G-SIB requirements. While the liquidity requirements incentivize banks to transition to more liquid assets and longer-term funding, it remains unclear which markets banks will begin to rely on as the regulations push them to close the funding mismatch between their assets and liabilities.