The Clearing House
At the Center of Banking Since 1853

October 21, 2013

Office of the Comptroller of the Currency
250 E Street, S.W.
Mail Stop 2-3
Washington, D.C. 20219
Attention: Legislative and Regulatory Activities Division
Docket ID OCC-2013-0008
RIN 1557-AD69

Board of Governors of the Federal Reserve System
20th Street & Constitution Avenue, N.W.
Washington, D.C. 20551
Attention: Robert de V. Frierson, Secretary
Docket No. R-1460
RIN 7100-AD99

Federal Deposit Insurance Corporation
550 17th Street, N.W.
Washington, D.C. 20429
Attention: Robert E. Feldman, Executive Secretary
RIN 3064-AE01

Re: Regulatory Capital Rules: Regulatory Capital, Enhanced Supplementary Leverage Ratio Standards for Certain Bank Holding Companies and Their Subsidiary Insured Depository Institutions

Ladies and Gentlemen:

The Clearing House Association L.L.C. ("**The Clearing House**")[1] appreciates the opportunity to comment on the notice of proposed rulemaking (the "**Proposing Release**") by the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation (the "**Agencies**") entitled *Regulatory Capital, Enhanced Supplementary*

[1] Established in 1853, The Clearing House is the oldest banking association and payments company in the United States. It is owned by the world's largest commercial banks, which collectively employ over 2 million people and hold more than half of all U.S. deposits. The Clearing House Association L.L.C. is a nonpartisan advocacy organization representing – through regulatory comment letters, amicus briefs and white papers – the interests of its owner banks on a variety of systemically important banking issues. Its affiliate, The Clearing House Payments Company L.L.C., provides payment, clearing and settlement services to its member banks and other financial institutions, clearing almost $2 trillion daily and representing nearly half of the automated clearing-house, funds transfer, and check-image payments made in the U.S. *See* The Clearing House's web page at www.theclearinghouse.org.

Leverage Ratio Standards for Certain Bank Holding Companies and Their Subsidiary Insured Depository Institutions (the "**U.S. Leverage Proposal**").[2]

The Clearing House has consistently supported a leverage capital ratio that, as described by the Basel Committee on Banking Supervision (the "**Basel Committee**"), acts as a "simple non-risk based 'backstop'" to risk-based capital measures.[3] The Clearing House believes that such a properly-formulated leverage ratio requirement supports the goals of safety and soundness by ensuring that significant resources will be available to absorb losses during periods of prolonged economic stress in instances where a risk-based capital measure may not fully account for a bank's capital needs.

We are deeply concerned, however, that, by substantially increasing the calibration (*i.e.,* the required ratio) of the 2010 Basel III capital framework's supplementary leverage ratio (the "**supplementary leverage ratio**")[4] for the U.S. banks identified by the Financial Stability Board as global systemically important banks (or "**G-SIBs**"),[5] the U.S. Leverage Proposal will reverse the intended and proper relationship between leverage and risk-based capital measures. Such a reversal would have major and negative public policy implications, distorting a covered bank's[6] decision-making and affecting customers, markets and economies in ways that have not been thoroughly analyzed and are not well understood. Our concern is particularly pronounced if the U.S. Leverage Proposal is combined with other initiatives – most importantly, potential changes under consideration by the Basel Committee to revise its supplemental leverage ratio framework in a way that would substantially increase many covered banks' "**Exposure Measure**" (*i.e*., the supplementary leverage ratio's denominator) (the "**BCBS Proposed Revisions**").

---

2 78 Fed. Reg. 51101 (Aug. 20, 2013).

3 Basel Committee, *Revised Basel III Leverage Framework and Disclosure Requirements* (June 2013) at ¶2.

4 The U.S. Leverage Proposal would implement its 5%/6% supplementary leverage ratio (i) for U.S. G-SIBs that are bank holding companies by adding a 2% buffer on top of the 3% minimum requirement, with the buffer operating like the capital conservation buffer under the Basel III capital framework (that is, imposing progressively more strict limitations on dividends and executive compensation the further the bank holding company falls into the buffer zone) and (ii) for their depository institution subsidiaries by requiring a 6% supplementary leverage ratio for "well capitalized" status under the Agencies' prompt corrective action regulations. Because of the restrictions and consequences of a bank holding company falling into its buffer zone or a depository institution falling out of well capitalized status, the proposed 5%/6% ratios operate as minimum requirements for all practical purposes, just like the capital conservation buffer under the Basel III capital framework is acknowledged to set minimum requirements.

5 The U.S. Leverage Proposal would apply, by its terms, to advanced approaches bank holding companies having $700 billion or more in total consolidated assets or $10 trillion or more in assets under custody and their depository institution subsidiaries, but the Proposing Release makes clear that the criteria represent "reverse engineering" to cover banks that are G-SIBs. Under these criteria, the U.S. banks that meet those thresholds are the eight U.S. G-SIBs. These banks are Bank of America Corporation, The Bank of New York Mellon Corporation, Citigroup, Inc., The Goldman Sachs Group, Inc., JPMorgan Chase & Co., Morgan Stanley, State Street Corporation, and Wells Fargo & Company.

6 We are using the term "**covered bank**" in this letter to mean any financial institution that may be subject to the U.S. Leverage Proposal, whether a holding company or a depository institution.

Such a reversal would be problematic because there are several significant and important public policy reasons why any leverage ratio should be a backstop, rather than the primary, capital ratio. First, as has long been acknowledged, there is a fundamental conceptual flaw in a leverage ratio in that it ignores risk, notwithstanding that capital is specifically intended to act as a buffer to risk.[7] Second, a leverage ratio distorts incentives around risk-taking, risk management, and the allocation of capital by treating higher-yielding risky and lower-yielding non-risky assets alike. Third, a leverage ratio effectively taxes, and thereby discourages, the holding of low-yield, low-risk assets that are vital to the economy and the national interest, such as home mortgages and government securities. Fourth, a leverage ratio masks from the public and supervisors relative levels of risk among banking institutions (which is the antithesis of the objectives sometimes asserted for a leverage ratio—that it be simple and transparent). By potentially making leverage the principal ratio, the U.S. Leverage Proposal would run directly counter to these important regulatory policy considerations.

As a preliminary matter, we note the substantial challenge and uncertainty involved in commenting on a U.S. Leverage Proposal that would re-calibrate the supplementary leverage ratio for U.S. G-SIBS and is based on the currently-agreed Basel III framework while, at the same, the Agencies and other members of the Basel Committee are contemplating changing that framework at an international level in significant ways. Accordingly, in this letter we take a holistic approach to commenting on the U.S. Leverage Proposal, taking into account relevant aspects of the BCBS Proposed Revisions to better inform our response. For this same reason, The Clearing House believes that it is exceedingly important that banking regulators, both internationally and domestically, consider possible changes to the supplementary leverage ratio holistically and not on an incremental basis, addressing separately proposals that would change the ratio's calibration, calculation of the Exposure Measure and the type of capital used for the ratio's numerator. Such a fractured approach to standard-setting, particularly in so significant an area as minimum leverage capital ratios, will inherently exacerbate the difficulties associated with analyzing and understanding the potential impact of revised standards on covered banks, their customers, and markets and the economy, and thereby raise the serious risk of unintended consequences.

Many of our fundamental views and concerns as to the proper framework and approach for considering the U.S. Leverage Proposal were articulated in our letter of September 20, 2013 (the "**TCH BCBS Leverage Letter**") to the Basel Committee regarding the BCBS Proposed Revisions.[8] Given the extraordinary importance of these issues to covered banks as well as their customers, markets and the economy, in this letter we both (i) elaborate on certain points made in the TCH BCBS Leverage Letter and (ii) respond to certain specific questions raised by the Agencies in the U.S. Leverage Proposal. We ask, however, that the Agencies consider all the comments in the TCH BCBS Leverage Letter when

---

[7] Basel Committee, *International Convergence of Capital Measurement and Standards* (July 1988), ¶ 28.

[8] The BCBS Proposed Revisions focused on two aspects of the supplementary leverage ratio's Exposure Measure – the treatment of derivative transactions and securities funding transactions ("**SFTs**") – and do not address the supplementary leverage ratio's calibration or numerator (other than to note, repeating the language from the 2010 Basel III capital framework, that the calibration and numerator remain open as items for further study). We are enclosing for your convenience a copy of the TCH BCBS Leverage Letter.

establishing the supplementary leverage ratio, including with respect to both the U.S. Leverage Proposal and the Agencies' participation in the Basel Committee process.

The Clearing House appreciates the importance of assisting the Agencies by providing, where possible, quantitative analysis relevant to regulatory initiatives. For that reason, The Clearing House conducted a study, *Assessing the Supplementary Leverage Ratio* ("**The Clearing House Leverage Study**"),[9] which analyzes the potential impact of the U.S. Leverage Proposal and the BCBS Proposed Revisions on the U.S. banking industry, products offered by U.S. banks and U.S. markets.[10] The Clearing House has previously provided to each of the Agencies a copy of The Clearing House Leverage Study and believes it underscores the importance and utility of quantitative analysis of the supplementary leverage ratio that holistically assesses the potential impact, separately and together, of both the U.S. Leverage Proposal and the BCBS Proposed Revisions.

Part I of this letter is an executive summary of our key concerns and recommendations with respect to the U.S. Leverage Proposal; Part II addresses our key concerns and recommendations in more detail; and Part III responds to certain specific questions posed by the Agencies in the Proposing Release.

I. Executive Summary

The Clearing House has five key concerns with the Agencies' proposal to adopt a super-equivalent supplementary leverage ratio for U.S. G-SIBs, as contemplated by the U.S. Leverage Proposal.

First, neither covered banks nor the Agencies can accurately evaluate the impact or consequences of the U.S. Leverage Proposal's recalibration on the covered banks at this point because there is substantial uncertainty as to what changes may be made in the Exposure Measure, whether pursuant to the BCBS Proposed Revisions or otherwise, and the Agencies have not yet published a notice of proposed rulemaking providing the details of any G-SIB capital surcharge that they may adopt as part of the risk-based capital framework.[11] We strongly believe the Agencies should not proceed with a re-

---

[9] The Clearing House Leverage Study includes data that covers all U.S. G-SIB assets and approximately 93% of total assets of U.S. advanced approaches banks, which together comprise approximately 65% of overall U.S. industry assets (the "**Participating Banks**"). The Clearing House Leverage Study's results with respect to advanced approaches banks are scaled on a straight-line basis, based on total consolidated assets, to adjust for advanced approaches banks that are not Participating Banks.

[10] In addition, The Clearing House participated in a joint study (the "**Global Study**" and, together with The Clearing House Leverage Study the "**Studies**") with the Global Financial Markets Association ("**GFMA**") to assess the global impact of the proposals on banks and relevant product markets. The Clearing House and GFMA have shared the results of the Studies with each of the Agencies.

[11] In his opening statement at the meeting of the Board of Governors of the Federal Reserve System on July 2, 2013 ("**Tarullo Opening Statement**") to approve the Agencies' Basel III-based capital rules, Governor Daniel K. Tarullo noted that a proposal to implement the G-SIB capital surcharge would follow after the Basel Committee completed final methodological refinements to its framework for capital surcharges on banking organizations of global systemic importance. The Basel Committee did so in July 2013 when it published, *Global Systemically Important Banks: Updated Assessment Methodology and the Higher Loss Absorbency Requirement*.

calibration of the supplementary leverage ratio for any group of banks, whether that re-calibration involves a super-equivalent measure for U.S. G-SIBs or some other measure, until informed decisions have been made on other key regulatory initiatives of relevance, including possible changes to the Exposure Measure as well as the G-SIB surcharge, through appropriate rulemaking proceedings. It is simply premature for the Agencies to change the calibration of the supplementary leverage ratio – and covered banks cannot provide fully informed commentary on a proposed change in the calibration – until all relevant proposals are resolved and their full impact can be considered together. Because the supplemental leverage ratio is not currently intended to become effective in the United States until January 1, 2018, there is more than ample time to permit these other initiatives to be completed and any re-calibration of the ratio to be considered and addressed thereafter without any delay in the intended pace of regulatory capital reform.

Second, the supplementary leverage ratio, however it is calibrated, should act only as a backstop to risk-based measures, even as applied to U.S. G-SIBs. If the U.S. Leverage Proposal and the BCBS Proposed Revisions were adopted as proposed, and even assuming the Agencies implement a G-SIB surcharge as expected to increase the stringency of risk-based capital requirements, their combined effect would turn the supplementary leverage ratio into the binding constraint for banks holding a substantial majority of the U.S. banking assets affected by the U.S. Leverage Proposal. Based on the results of The Clearing House Leverage Study, the supplementary leverage ratio would become the binding constraint for U.S. G-SIBs holding 67% of the aggregate total consolidated assets of those eight banks. As a binding constraint for a significant proportion of affected assets under ordinary circumstances, the supplementary leverage ratio would change incentives and drive business decisions for covered banks in a way that may well have adverse consequences for those banks and their customers and is likely to harm financial stability.

Third, the conceptual flaws inherent in any leverage ratio make it particularly unsuited to be the binding constraint under ordinary circumstances because, under a leverage ratio, assets require the same amount of capital regardless of risk and therefore sound risk management distinctions cannot be made based on the actual need for capital. Ignoring risk runs counter to decades of progress in the regulation, supervision, and internal management of banks. It is crucial that any potential benefits of the U.S. Leverage Proposal be carefully and thoughtfully weighed against the real risks to covered banks, markets and financial stability that may be posed by a leverage ratio that acts as a binding constraint under ordinary circumstances.

Fourth, assuming that changes in the Exposure Measure are made as contemplated under the BCBS Proposed Revisions, we think it is exceedingly important that other changes be made to the Exposure Measure to ensure that it accurately and realistically measures exposure among and across various exposure types, particularly as applied to certain key, low-risk business activities and business models. The failure to do so will only further exacerbate the negative consequences to banks, consumers, markets and the economy of a leverage ratio that acts as a binding constraint under ordinary circumstances. At the least, the credit conversion factors ("**CCFs**") that apply to off-balance sheet ("**OBS**") commitments for purposes of the supplementary leverage ratio's Exposure Measure should be revised. They bear no relationship to accurate and realistic measures of exposures arising out of OBS exposures and, if the supplementary leverage ratio becomes binding on banks holding meaningful amounts of banking assets (whether G-SIBs or otherwise), these CCFs would distort decision-making in ways that adversely affect both banks' risk profiles and the services banks make available to

customers, including the pricing of those services. Additionally, bank deposits with national central banks, such as the Federal Reserve Banks, should be excluded from the Exposure Measure in order to accommodate increases in banks' assets, both temporary and sustained, that occur as a result of macro-economic factors and monetary policy decisions, particularly during periods of financial market stress. Finally, assets such as U.S. government obligations securing public sector entity ("**PSE**") deposits should be excluded from the Exposure Measure. Banks must acquire and maintain such collateral; including such collateral in the Exposure Measure will result in additional capital costs for banks that may be passed on to PSEs.

Fifth, imposing a supplementary leverage ratio that is more stringent than the leverage ratio requirement in other jurisdictions—such that it acts as a binding constraint for a substantial portion of the assets of many covered banks, but not those of their non-U.S. competitors—risks placing covered banks and U.S. markets at a competitive disadvantage. Any change in the calibration of the supplementary leverage ratio should only be made as part of an international standard, applied equally across national boundaries. Until the components of the numerator and denominator have been set, the Agencies cannot know what the impact of a super-equivalent proposal will be and the extent of the impact on the competitiveness of covered banks and markets.

II. Key Concerns and Recommendations

A. Any re-calibration of the supplementary leverage ratio should only be considered after other regulatory initiatives relevant to the re-calibration – namely, revisions to the Exposure Measure and the Agencies' G-SIB surcharge proposal – are finalized.

We strongly urge the Agencies to defer consideration of the supplementary leverage ratio's re-calibration for U.S. G-SIBs until the other key initiatives that bear on whether the supplementary leverage ratio will properly act as a back-stop or will become the binding constraint for those banks have been completed – including, (i) the Basel Committee's completion of its re-evaluation of the Exposure Measure commenced with the BCBS Proposed Revisions and (ii) the Agencies' proposal and adoption of their regulations addressing the G-SIB surcharge.

The Clearing House does not object in principle to a re-calibration of the supplementary leverage ratio in order to assure that it continues to act as a prudent back-stop to risk-based measures for U.S. G-SIBs, so long as any such re-calibration is addressed as an international standard consistently applied across national boundaries (discussed further in Part II.E) and its effect and impact can be fully analyzed and understood. However, until the international process through the Basel Committee of considering revisions to the Exposure Measure is completed, and until the Agencies address the G-SIB surcharge for affected U.S. banks, it simply is not possible to accurately evaluate the impact of the re-calibration included in the U.S. Leverage Proposal. The Agencies' Basel III-based capital rules, adopted in July 2013, follow the Basel III capital framework in making the supplementary leverage ratio effective commencing January 1, 2018. Accordingly, there is ample time for the Agencies to address any new calibration of the supplementary leverage ratio, together with bank regulators in other jurisdictions, well in advance of the ratio's effective date.

B. The U.S. Leverage Proposal and the BCBS Proposed Revisions, if both were adopted as proposed, taken together, would become more binding than risk-based capital requirements under normal circumstances for most covered banks with the potential for damaging outcomes for the safety and soundness of those banks, their customers, markets and financial stability.

The Clearing House supports a leverage ratio as a non-risk based backstop to risk-based capital measures. A leverage ratio that includes accurate and realistic measures of exposure and is appropriately calibrated promotes safety and soundness by ensuring that banks have significant resources available in times of stress to absorb losses in instances where a risk-based capital measure may not fully account for a bank's capital needs. In the Proposing Release, the Agencies note that "the increase in stringency of the leverage and risk-based standards should be more closely calibrated to each other so that they remain in an effective complementary relationship."[12] A closer calibration may well be appropriate but only so long as the supplementary leverage ratio does not become the binding constraint for most covered banks at most times. We are concerned, however, that the supplementary leverage ratio as calibrated under the U.S. Leverage Proposal, when taken together with the BCBS Proposed Revisions, may fundamentally change the traditional role of the supplementary leverage ratio from a backstop to the primary binding constraint for many covered banks.[13]

For some products, if the supplementary leverage ratio becomes the binding constraint, covered banks will be forced to take some action—which may include reducing volumes of certain products and, in that connection, raising prices—to come into compliance.[14] Lower-risk assets would be particularly hard hit because it will be more difficult for covered banks to conduct the related business at a high enough volume to earn a sufficient return. Indeed, if a bank meets its risk-based capital ratio requirements but still needs more capital to meet its leverage ratio requirements, it is precisely because lower-risk assets are treated no differently from higher-risk assets for the purpose of calculating the denominator of the leverage ratio. The incremental capital needed to meet the leverage ratio requirements is thus needed to cover assets that present low credit and market risk and that, as a general rule, generate lower returns.

---

12 78 Fed. Reg. 51105-51106

13 Governor Stein noted in a recent speech, in the context of evaluating the appropriateness of using a liquidity-linked capital surcharge instead of a higher leverage ratio to help solve the fire-sale problem in SFTs, that a liquidity-linked capital surcharge may be preferable to a higher leverage ratio "because the surcharge is embedded into the existing risk-based capital regime, which should in principle be the constraint that binds most firms." Governor Jeremy C. Stein, *The Fire-Sales problem and Securities Financing Transactions*, Oct. 4, 2013 (the "**Stein SFT Speech**").

14 Annex A includes illustrative examples of the risk-based and supplementary leverage exposure-based capital requirements that identifies for a range of sample products which capital requirement is the higher capital requirement, as well as what the capital requirement would be if both the Proposed Revisions and the U.S. Leverage Proposal were implemented as proposed.

Moreover, a leverage ratio that functions as the binding constraint could actually undermine rather than promote financial stability and could actually contribute to, rather than mitigate, systemic risk because, among other things, it may:

- Penalize covered banks for holding high quality liquid assets of the type required by Basel III framework's liquidity coverage ratio ("**LCR**"),[15] which would both (i) cut directly against the global policy consensus around limiting liquidity risk as a threat to banks and markets that is at least as important as addressing the risk of insufficient leverage capital and (ii) inevitably increase risks for those covered banks and the financial system in times of stress by incentivizing covered banks to respond to that penalty by holding a lesser amount of high quality liquid assets than they otherwise would;

- Discourage covered banks from holding excess reserves that facilitate global payment and settlements systems;

- Punish or effectively limit low-risk business activities that are liability driven—for example, trust, custody, and safekeeping activities—including those that attract and act as a safe haven for deposit inflows during times of general financial stress;

- Make it substantially more costly for covered banks to comply with increased margin requirements—particularly initial margin—for cleared and uncleared derivatives transactions; and

- Act as a disincentive to covered banks from holding assets that are lower risk and produce lower returns, counter to sound risk management practices and supervisory expectations.

Furthermore, the approach taken in the BCBS Proposed Revisions to measuring exposure has the potential to exacerbate these distortions because the measures of exposure are inaccurate and unrealistic. As we discuss in detail in the TCH BCBS Leverage Letter, exposures arising from derivatives and SFTs as measured under the BCBS Proposed Revisions grossly overstate risk and therefore create the potential for serious distortions. This treatment of derivatives and SFTs will not only affect the availability and/or pricing for these products, but will also have indirect impacts on markets that may be felt even more broadly. The market for U.S. Treasuries, for example, relies heavily on reverse repurchase and repurchase agreements for financing and will almost certainly be adversely affected if the leverage ratio effectively penalizes this type of financing activity. A reduction in participation in the markets for U.S. Treasuries and other sovereign securities is likely to have an adverse impact on the liquidity and volatility of those markets, increasing the cost of government debt, which could have meaningful consequences in the real economy.[16] A distorted measure of exposure for derivative transactions could also have a disproportionate and adverse impact on derivatives cleared through central counterparties ("**CCPs**") despite the policy objective of the United States and the international

---

[15] Basel Committee, *Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools* (January 2013).

[16] *See* Part II.B of the TCH BCBS Leverage Letter.

community, acting through the G-20, of reducing risk in the financial system by encouraging clearance of standardized derivatives and other financial products though CCPs.[17] This is especially the case for client-clearing activity as both the client and CCP legs (to the extent they generate trade exposures) of the transaction are included in a bank's Exposure Measure under the BCBS Proposed Revisions.

The measures of other exposures included in the denominator but not addressed in the BCBS Proposed Revisions raise similar concerns.[18] In particular, the application of a 100% CCF to OBS exposures is particularly problematic when the leverage ratio becomes the binding constraint for U.S. G-SIBs that are among the largest lenders to commercial businesses. To the extent these businesses rely on committed credit lines as a funding source (including as a funding "safety net" in times of market uncertainty and stress), the pool of available credit to support economic expansion will be constrained.

C. The flaws inherent in any leverage ratio make it particularly ill-suited to function as the binding constraint in normal circumstances. Moreover, any potential benefits of an increased leverage requirement must be properly balanced against the likelihood of adverse consequences for covered banks, their customers, markets and financial stability resulting from a leverage ratio that acts as a binding constraint.

The Clearing House recognizes the potential benefit of a leverage ratio as a non-risk based backstop to risk-based capital measures, but believes it is inappropriate as the binding constraint. We agree with the Agencies that "each type of requirement offsets potential weaknesses of the other."[19] The deficiencies of leverage are widely recognized—leverage is a blunt tool that ignores relative risk in a bank's balance sheet and thereby treats banks of the same size equally irrespective of their relative risk. This risk-insensitivity can create the perverse incentive to reduce the amount of low-risk assets a bank holds to regulatory minimums, as noted above. At the same time, that insensitivity to risk is why leverage can be a useful check on risk-weighted approaches, which are susceptible to misjudgments of risk. Because of the embedded risk-insensitivity, however, deficiencies in leverage measures cannot be fixed. Risk-based measures that are found to mis-weight assets, in contrast, can be recalibrated by national regulators to address inaccuracies.[20]

---

17 *See* Part II.E of the TCH BCBS Leverage Letter.

18 *See* Part II.C of the TCH BCBS Leverage Letter and the further discussion in Part II.D of this letter.

19 78 Fed. Reg. 51105.

20 The Agencies recite in Part II.A of the Proposing Release the view of some commenters that "risk-based capital measures are less transparent and more subject to manipulation than leverage ratios." We strongly disagree with that view. As discussed above in this letter, leverage as a capital measure is in fact the least transparent—it masks risk. With respect to the potential for manipulation of risk-based measures, we believe the key issue is consistent supervisory review of models across jurisdictions, not manipulation. Industry participants have addressed these issues at length in comments responding to the Basel Committee's discussion paper, *The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Complexity* (July 2013). *See, e.g.*, the letter, dated October 11, 2013, of the Institute of International Finance and the International Swaps and Derivatives Association addressing that discussion paper.

Given the clear shortcomings of leverage-based capital standards, including the perverse incentives it creates, a strong case must be made to justify a change from the traditional role of the leverage limit as a backstop. As a basis for the U.S. Leverage Proposal, the Proposing Release cites to the Agencies' experience that strong capital is an important safeguard for financial institutions in times of financial or economic stress and that higher capital standards generally would reduce the economic disruptions caused by these institutions.[21] The Agencies point to the supplementary leverage ratio as a potential means of reducing the likelihood of resolutions and allowing regulators more time to tailor resolution efforts in the event they are needed.[22] Although we do not dispute this effect on potential resolutions—any increase in capital by its nature decreases both the probability of default and loss given default—the Agencies offer no discussion in this regard of the ways in which a binding leverage ratio may undermine the safety and soundness of covered banks as discussed in Part II.B nor do they discuss whether a more stringent leverage ratio is the best means or even a good means to achieve this goal. The Agencies do not appear to take into account that increased capital comes at some cost,[23] particularly since any incremental capital above what is required to satisfy risk-based capital requirements will be attributable to lower-risk assets that generate lower returns, and so do not attempt to quantify these costs against the potential benefits of this resolution policy goal. Moreover, it is not clear that a binding leverage ratio is a necessary or even good way to attempt to achieve these resolution policy goals,[24] especially in light of the Federal Reserve's recent announcement of its intention to propose in the near future that U.S. G-SIBs hold additional gone-concern capital to absorb losses in the event of insolvency to achieve precisely the same resolution policy objective.[25]

Moreover, the cost-benefit analysis presented in the Proposing Release is based on a quantitative impact study that does not reflect the BCBS Proposed Revisions. As such, it cannot be a meaningful or complete analysis if the BCBS Proposed Revisions (or other revisions) are made to the

---

21 We also note that among the rationales the Agencies assert for the U.S. Leverage Proposal is a "perception" or "existence" of a "too-big-to-fail" problem. This assertion is unsubstantiated and unsupported in the Agencies' Proposing Release, and The Clearing House respectfully submits it is incorrect. The Agencies' Proposing Release also cites three federal statutes as authorizing the U.S. Leverage Proposal: the International Lending Supervision Act (12 U.S.C. §§ 3901-3911); the Federal Deposit Insurance Act's prompt corrective action provisions (12 U.S.C. § 1831o); and Section 165 of the Dodd-Frank Act (12 U.S.C. § 5365). We note that none of these statutes authorizes the Agencies to implement capital rules for the purpose of establishing competitive equality, notwithstanding several references in the Agencies' notice of proposed rulemaking to competitive matters as one of the imperatives for addressing "too-big-to-fail".

22 78 Fed. Reg. 51103.

23 *See, e.g.*, Oxford Economics Study, *Analyzing the impact of bank capital and liquidity regulations on US economic growth* (April 2013) ("**Oxford Study**") available at http://www.theclearinghouse.org/index.html?f=074940 for a discussion of potential costs of increased capital.

24 The Stein SFT Speech recognizes, in the context of whether an aggressively calibrated leverage ratio or a risk-based capital surcharge would be useful in addressing the SFT fire-sale problem, the potential for unintended consequences that may work counter to policy goals when traditional prudential requirements, such as risk-based and leverage capital requirements, are used to try to address systemic risk.

25 *See* Tarullo Opening Statement.

denominator. The analysis necessarily underestimates the distance to compliance for the covered banks if further changes are made to the denominator. Similarly, it does not take into account the fact that the likely effect of the two proposals would be to turn the leverage ratio into the binding constraint for a substantial portion of the assets of many covered banks. Accordingly, the analysis will likely underestimate the effects not only on the covered banks themselves, but on the financial markets more generally. An accurate cost-benefit analysis is particularly critical here where the effect of the covered banks' coming into compliance may undermine financial stability contrary to the purpose of the rule. The Agencies note in the Proposing Release that any changes to the supplementary leverage ratio as a result of the BCBS Proposed Revisions would be incorporated into the U.S. supplementary leverage ratio through a rulemaking process with opportunity for comment.[26] If the calibration already has been established, however, the comment process will not be meaningful unless the calibration can be fundamentally reconsidered at that time.

D. The Agencies should work within the Basel Committee to revisit comprehensively the calculation of the Exposure Measure and its components, in particular by (i) conforming the supplementary leverage ratio's treatment of OBS exposures to the treatment in Basel II standardized approach, (ii) excluding national central bank placements held in the national currency from the Exposure Measure, and (iii) assets securing the deposits of PSEs.

The BCBS Proposed Revisions address only two aspects of the Exposure Measure – the treatments of derivative transactions and SFTs. As discussed at length in the TCH BCBS Leverage Letter, we strongly believe that national regulators, acting through the Basel Committee, should revisit the Exposure Measure more comprehensively.[27]

First, we believe that the supplemental leverage ratio's credibility would be enhanced if the regulatory community articulated a standard for establishing the components of the Exposure Measure. We strongly believe that the standard for each component (including on-balance sheet, OBS, derivative and SFT exposures) should be to arrive at as accurate and realistic a measure of the relevant exposure as possible, with no bias toward overstatement or understatement. Distorting contributions of particular assets or activities to the Exposure Measure inevitably will distort banks' fundamental business decisions, not only in ways that are at cross purposes with other regulatory initiatives (for example, the LCR and liquidity regulation more broadly, as noted above) but also affecting what products banks make available to consumers or commercial entities and at what prices.

Second, we strongly believe that three aspects of the Exposure Measure not addressed in the BCBS Proposed Revisions should be addressed and revised – namely, (i) the supplementary leverage ratio's CCFs for OBS exposures should be replaced with the CCFs used in the Basel II standardized approach, (ii) placements at national central banks held in the national currency should be excluded

---

[26] 78 Fed. Reg. 51105.

[27] See Part II.B of the TCH BCBS Comment Letter for a discussion of this issue.

from the Exposure Measure, and (iii) assets securing deposits of PSEs should be excluded from the Exposure Measure.[28]

With respect to the CCFs for OBS exposures, the supplementary leverage ratio's use of a 100% CCF for OBS items and a 10% CCF for unconditionally cancelable commitments is not supported by experience, even in extreme circumstances. The supplementary leverage ratio's CCFs are inherently distortive because they are not premised on the objective of establishing the most accurate and realistic exposure amounts that can be established under the circumstances but instead with a "worst case" bias replicating the Basel Committee's proposed treatment of large exposures.[29] Indeed, the 2008 financial crisis experience suggests that the CCFs are well beyond a reasonably conceivable worst case. Although the CCFs used in the Basel II standardized approach are themselves conservative, they have the benefit of having been used and accepted for a substantial period of time as part of a Basel Committee framework that, insofar as Exposure Measures are concerned, should have the same objective—to be an accurate and realistic measure. This becomes critical if the supplementary leverage ratio becomes the binding constraint. Credit and liquidity facilities, unconditionally cancellable facilities and trade finance transactions tend to be low-margin businesses because of their low risk, and this is reflected in the pricing. If banks need to reduce their Exposure Measure to comply with the supplementary leverage ratio, these low-risk, low-margin businesses inevitably will be affected.

The impact on low-risk business activities and business models also is evident in the context of central bank placements. Liabilities-driven business activities and business models, such as custody banking, result in substantial central bank deposits because banks hold the operational cash accounts of institutional investors used in the management of investment assets. This includes residual cash, which varies according to the investor's view of financial market risk. For example:

- During periods of market uncertainty or stress, as investors choose not to reinvest cash arising from their assets held at banks that are not on those banks' balance sheets, those cash amounts customarily are invested in deposits at the respective banks, which are on balance sheet and increase total assets and liabilities (and, hence, the Exposure Measure).

- Deposits can also vary as a result of normal course payment, clearing and settlement activities, as they are used to satisfy clients' settlement obligations arising from the purchase and sale of securities and other assets.

A binding leverage ratio may limit the ability of banks (whether custody banks or banks more generally) to accept deposits, particularly during periods of systemic stress. In addition, global payment systems are likely to be adversely affected by a reduction in central bank balances, which may occur if the leverage ratio becomes binding. These balances exist across the system and are used by banks to reduce the risk of payment failures and facilitate consistent and smooth payment flows. We strongly

---

[28] *See* Parts II.C, II.D, and II.E of the TCH BCBS Comment Letter for a more extensive discussion of these issues.

[29] Basel Committee, *Consultative Document: Supervisory Framework for Measuring and Controlling Large Bank Exposures* (March 2013).

believe these concerns should be addressed by excluding national central bank placements in the national currency from the Exposure Measure. Excluding these assets would have absolutely no impact on banks' potential for actual economic leverage—it neither permits banks to apply those excess funds to make loans nor increases banks' equity in a manner that permits increased lending.

Finally, most U.S. PSEs, such as states, counties, municipalities, public utilities and similar entities must under applicable laws maintain deposits that have been collateralized with U.S. government obligations. A bank holding PSE deposits must purchase the U.S. obligations to collateralize these deposits. This collateral will result in additional capital costs for banks because the collateral is included in the Exposure Measure. This in turn could have an adverse impact on PSEs because of steps that banks may take to address the increased capital cost, which may include reduced rates on PSE deposits. To avoid these impacts for U.S. PSEs, assets securing U.S. PSE deposits should be excluded from the Exposure Measure.

E. Any change in the calibration of the supplementary leverage ratio should only be made as part of an international standard, applied equally across national boundaries. If a super-equivalent supplementary leverage ratio is the binding constraint only for U.S. G-SIBs, they will be placed at a competitive disadvantage as compared to their non-U.S. competitors.

We strongly believe that any re-calibration of the supplementary leverage ratio, whether for G-SIBs or otherwise, should only be addressed through the Basel Committee in a manner that is comparable internationally. Although recognizing the establishment of an international leverage ratio as an "important achievement," the Agencies note that "…further steps could be taken to ensure that the risk-based and leverage capital requirements effectively work together to enhance safety and soundness at the largest, most systemically important banking organizations."[30] The determination of whether additional steps should be taken and what those steps should be, however, should be made at the international level rather than by national regulators on an individual basis. In particular, especially because of the recognized deficiencies inherent in leverage measures that cannot be corrected, the Agencies should not unilaterally increase the supplementary leverage ratios' calibration for U.S. G-SIBs such that it becomes the binding constraint for covered banks holding a substantial portion of such banks' aggregate assets without comparable adjustments in other jurisdictions. To do so would eliminate the fundamental rationale for and benefits of internationally harmonized capital requirements.

Application of a super-equivalent leverage requirement to U.S. G-SIBs that becomes the binding constraint inevitably will place them at a disadvantage because they will be required to maintain higher capital relative to their competitors in other jurisdictions. Moreover, meeting the credit needs of customers will carry a higher capital cost for these U.S. G-SIBs, which will likely lead to higher prices for their customers. This in turn may cause at least some customers to seek out banks in other jurisdictions that are able to offer the same products at lower prices. Customers may still seek out banks that are subject to rigorous capital requirements, but there likely will be banks in jurisdictions that are subject to

[30] 78 Fed. Reg. 51105.

the Basel III capital framework, as well as other rigorous prudential requirements, but which are not operating under a super-equivalent regime. The incremental benefit that a customer may derive from transacting with a bank that is subject to a more stringent leverage requirement is difficult to quantify—but a lower price is tangible and recognizable. That clear and immediate benefit is likely to drive customer behavior.

III. Responses to Certain Questions in the Proposing Release

Question 1: How would proposed strengthening of the supplementary leverage ratio for covered BHCs and their subsidiary IDIs contribute to financial stability and thus economic growth?

The premise of Question 1 appears to be based on the perception that more capital is always better. As discussed in Part II.C of this letter, particularly if the requirement is unmoored from the economic reality of specific assets and exposures, that view does not take into account the reality that increased capital comes at a cost and at some point the cost may outweigh the benefits. Moreover, the increased capital from a leverage measure as the binding constraint for a significant number of banks, and the resulting distortions in banks' decision-making, may actually increase systemic risk and affect customers, markets and economies in ways that have not been thoroughly analyzed and are not well understood.[31] For example, if the U.S. Leverage Proposal and the BCBS Proposed Revisions are implemented as proposed, covered banks will be placed under substantial pressure to reduce their in participation in the markets for U.S. Treasuries and other sovereign securities, which is likely to have an adverse impact on the liquidity and volatility of those markets. This would likely have the effect of increasing the cost of government debt, which could have meaningful consequences in the real economy.

Further discussion of this topic is provided in Part II.B of this letter and Part II.A of the TCH BCBS Leverage Letter.

Question 4: Would the proposal create any risk-reducing incentives and around what specific activities? Would the proposal create incentives for subject banking organizations to take additional risk and if so, would this effect be expected to limit the safety-and-soundness benefits of the proposal?

Because the leverage ratio treats all assets the same regardless of their relative risk, the leverage ratio masks risk and has the inherent potential to produce the wrong risk incentives because there is no capital benefit from a risk-adverse portfolio and no capital detriment from a risk-prone portfolio. When faced with a leverage ratio that acts as a binding constraint, banks therefore have a disincentive to hold assets that are lower risk and produce lower returns relative to other, higher-risk assets. As a result of this effective "tax" on the safest and most liquid assets, banks may manage their stock of low-risk liquid assets to comply with regulatory minimums. This could have the effect of

---

[31] *See*, *e.g.*, Oxford Study noting the "…uncertainty around the potential macroeconomic effects of regulatory reform proposals for banks, and…the need for such proposals to be carefully structured and calibrated to prevent unnecessary damage to economic growth" available at http://www.theclearinghouse.org/index.html?f=074940.

limiting, indeed even outweighing, the desired safety and soundness benefits of the proposal, as well as the goals of increased financial stability.

Further discussion of this topic is provided in Parts II.B and II.C of this letter and Part II.A of the TCH BCBS Leverage Letter.

Question 5: What are commenters' views on the proposed calibration of the leverage standards? Is the proposed 6 percent well-capitalized standard for subsidiary IDIs and the proposed 5 percent minimum supplementary leverage ratio plus leverage buffer for covered BHCs appropriate or should these requirements be higher or lower? In particular with regard to covered BHCs, what are the advantages and disadvantages of establishing the minimum supplementary leverage ratio plus leverage buffer at 5 percent for all covered BHC's versus establishing the amount between 4 and 5.5 percent according to each covered BHC's risk-based capital surcharge (that is, to reflect the minimum supplementary leverage ratio of 3 percent plus between 1 and 2.5 percent depending upon each covered BHC's risk-based capital surcharge)? With respect to the subsidiary IDIs of covered BHCs, the agencies seek commenters' views on what, if any, specific challenges these institutions would face in meeting the proposed well-capitalized threshold of 6 percent beginning on January 1, 2018.

The calibration should not be viewed in isolation. Until the numerator and denominator are set, the impact of the calibration cannot be fully understood. Moreover, the proper calibration of the supplementary leverage ratio as a back-stop measure for U.S. G-SIBs cannot be evaluated meaningfully until the Agencies address the G-SIB surcharge. We encourage the Agencies to consider the calibration together with the numerator and denominator as ultimately revised by the Basel Committee, as well as the G-SIB surcharge, and establish a calibration that will not cause the leverage ratio to become the binding constraint to which many U.S. G-SIBs will manage.

The Agencies note in the Proposing Release that if the BCBS finalizes changes in the definition of the total leverage exposure measure, the Agencies will consider incorporating those changes into the U.S. supplementary leverage ratio through a rulemaking process with the opportunity for notice and comment. We believe, however, that because the appropriate calibration is driven by the components of the ratio, the more logical and efficient approach would be to wait until those components are known. Because the effective date of the supplementary leverage ratio is not until January 1, 2018, there is no need for the Agencies to determine the calibration ahead of the finalization of the components of the ratio and the establishment of the G-SIB surcharge.

Question 6: The agencies solicit commenters' views on whether a strengthened leverage ratio requirement would enhance the competitive position of U.S. banking organizations relative to foreign banking organizations by enhancing the relative safety of the U.S. banking system. Alternatively, could the proposed strengthened leverage ratio requirement place U.S. banking organizations at a competitive disadvantage relative to foreign banking organizations and if so, in what areas?

As discussed in Part II.E, we believe that the U.S. Leverage Proposal has the potential to undermine the competitive position of U.S. G-SIBs relative to their foreign competitors. This is particularly the case because any incremental capital above what is needed to comply with risk-based capital requirements would be unrelated to credit, market or other risk.

Question 10: The agencies are interested in comment on the appropriate measure of capital that should be used as the numerator of the supplementary leverage ratio. Among the many measures of capital used by banks, regulators and the market, the agencies considered the following measures: (1) Common equity tier 1 capital, (2) tier 1 capital, (3) total capital, and (4) tangible equity (as these terms are defined in the agencies' capital regulations as of the date of the issuance of this proposed rule, including the 2013 revised capital approaches). What are the advantages and disadvantages of each of these as well as alternative measures?

As discussed in Part III.B of the TCH BCBS Leverage Letter, we believe Tier 1 capital is the appropriate measure of capital for the numerator of the supplementary leverage ratio. The elements of Tier 1 capital – including but not limited to CET1 – are intended to absorb "absorb losses on a going-concern basis."[32] Indeed, the Agencies' Basel III-based capital rules further strengthen the definition of Tier 1 capital to ensure its loss absorbing character for going concerns. Tier 1 capital no longer includes hybrid instruments that proved not to be adequately loss absorbing during the financial crisis;[33] instead, the "predominant form of Tier 1 capital must be common shares and retained earnings."[34] In addition, most Tier 1 capital must be instruments that are "subordinated," grant the banking organization "full discretion at all times to cancel dividends or other capital distributions on the instrument without triggering an event of default," have no maturity date, or do not contain "any other term or feature that creates an incentive to redeem."[35] Tier 1 capital instruments beyond CET1, such as perpetual non-cumulative preferred stock, are clearly the type that would absorb unexpected losses on a going concern basis.

Question 11: What, if any, alternatives to the definition of total leverage exposure should be considered and why?

We strongly believe that national regulators, including the Agencies, should comprehensively review the Exposure Measure to ensure that each of its components provides an accurate and realistic measure of exposure. The Basel Committee's narrow approach in the BCBS Proposed Revisions, addressing only derivative transactions and SFTs, is not sufficient. At the least, regulators should import into the supplementary leverage ratio the Basel II standardized approach's CCFs for OBS exposures to avoid distorting decision-making by banks in ways that will have a negative effect on their risk profiles and the services they offer to customers. In addition, placements at central banks should be excluded from the Exposure Measure (including, in the case of U.S. banks, deposits maintained at the Federal Reserve) to accommodate increases in banks' assets, both temporary and sustained, that occur as a

---

[32] Office of the Comptroller of the Currency and Federal Reserve System, Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule at 112.

[33] *Id.*

[34] Basel Committee, *Basel III: A Global Framework for More Resilient Banks and Banking Systems* (Dec. 2010, *revised* June 2011) at *¶ 9.*

[35] *Id.* at 109-110.

result of macro-economic factors and monetary policy decisions, particularly in times of market stress. Assets securing deposits of PSEs, typically U.S. government obligations and similar assets, should also be excluded from the Exposure Measure to avoid unintended consequences for PSEs that are required by applicable laws to have such collateral.

Further discussion of this topic is provided in Parts II.C, II.D, and II.E of TCH BCBS Leverage Letter and Part II.D of this letter.

* * *

If you have any questions or need further information, please contact me at 212-612-9211 (email: brett.waxman@theclearinghouse.org).

Respectfully submitted,

Brett Waxman
Senior Vice President
and Associate General Counsel

cc: Hon. Daniel K. Tarullo
Board of Governors of the Federal Reserve System

Hon. Thomas J. Curry
Office of the Comptroller of the Currency

Hon. Martin J. Gruenberg
Federal Deposit Insurance Corporation

The Honorable Mary Miller
Department of the Treasury

Mr. Cyrus Amir-Mokri
Department of the Treasury

Mr. Matthew Rutherford
Department of the Treasury

Mr. George French
Federal Deposit Insurance Corporation

Mr. Jason Cave
Federal Deposit Insurance Corporation

Mr. Robert Bean
Federal Deposit Insurance Corporation

Mr. Karl Reitz
Federal Deposit Insurance Corporation

Mr. Martin Pfinsgraff
Office of the Comptroller of the Currency

Mr. Charles Taylor
Office of the Comptroller of the Currency

Mr. Roger Tufts
Office of the Comptroller of the Currency

Ms. Margot Schwadron
Office of the Comptroller of the Currency

Mr. Amrit Sekhon
Office of the Comptroller of the Currency

Mr. Michael Gibson
Board of Governors of the Federal Reserve System

Mr. Arthur W. Lindo
Board of Governors of the Federal Reserve System

Ms. Anna Lee Hewko
Board of Governors of the Federal Reserve System

Mr. Mark E. Van Der Weide
Board of Governors of the Federal Reserve System

Ms. Norah Barger
Board of Governors of the Federal Reserve System

Mr. Steven Merriett
Board of Governors of the Federal Reserve System

Ms. Sviatlana Phelan
Board of Governors of the Federal Reserve System

Mr. William Dudley
Federal Reserve Bank of New York

Ms. Dianne Dobbeck
Federal Reserve Bank of New York

Mr. H. Rodgin Cohen
Sullivan & Cromwell LLP

Mr. Mark J. Welshimer
Sullivan & Cromwell LLP

Ms. Andrea R. Tokheim
Sullivan & Cromwell LLP

Mr. Michel Araten

Mr. Luigi de Genghi
Davis Polk & Wardwell LLP

Annex A

The Clearing House
At the Center of Banking Since 1853

An Illustration of the Risk-Based and Supplementary Leverage Exposure-Based Capital Requirements for Various Products

October 21, 2013

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Explanatory Notes

- The examples on the following pages highlight the Required Regulatory Capital under the risk based capital and proposed leverage ratio capital frameworks for comparative purposes;
- In the calculations shown:
  - Where applicable, Exposure = Notional * CCF;
  - RWA= Exposure * RW;
  - "Capital Required" = RWA (Or Exposure)* Operating Capital Ratio (e.g., 10% T1C, 10% CET1, 7% Tier 1 Capital, etc.);
  - "Operating Capital Ratio" is determined using the ratio applicable to each product for each regulatory capital framework;
  - The outlined box indicates that the relatively higher capital requirement either under Basel 3 Standardized (Basel 3S), or Proposed US Supplementary Leverage (note that Basel 1 will only produce a higher capital requirement in 2014); and
  - "Combined US and BCBS Leverage Requirement" is the Capital Required if both the proposed US proposed supplementary leverage ratio and the BCBS proposed exposure measure are adopted; products where this capital requirement is relatively high is shown in blue text.

Assumptions

- All calculations assume a $100mm notional amount, unless indicated otherwise
- Leverage ratio requirements assume an operating buffer of 100 bps to account for fluctuations in AOCI and deposit levels

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirements
Assumed operating capital ratio	**10% T1C**	**10% CET1**	**7% Tier 1 Capital (assuming bank level)**	**4% Tier 1 Capital**	**7% Tier 1 Capital (assuming bank level)**
Undrawn Revolver BBB rated Obligor: Corporate 3 year maturity Unsecured	▪ CCF = 50% ▪ Exposure = $50mm ▪ RW = 100% ▪ RWA= $50mm ▪ **Capital Required = $5.00mm**	▪ CCF = 50% ▪ Exposure = $50mm ▪ RW = 100% ▪ RWA = $50mm ▪ **Capital Required = $5.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Undrawn Revolver BBB rated Obligor: Securities Firm 3 year maturity Unsecured	▪ CCF = 50% ▪ Exposure = $50mm ▪ RW = 20% ▪ RWA= $10mm ▪ **Capital Required = $1.00mm**	▪ CCF = 50% ▪ Exposure = $50mm ▪ RW = 100% ▪ RWA= $50mm ▪ **Capital Required = $5.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ CCF = 100% ▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Term Loan BBB rated Obligor: Securities Firm 3 year maturity Unsecured Fully utilized	▪ Exposure = $100mm ▪ RW = 20% ▪ RWA= $20mm ▪ **Capital Required = $2.00mm**	▪ Exposure = $100mm ▪ RW = 100% ▪ RWA= $100mm ▪ **Capital Required = $10.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Sovereign Loan to Turkey CRC = 4 3 year maturity Unconditional guarantee	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA= $0mm ▪ **Capital Required = $0.00mm**	▪ Exposure = $100mm ▪ RW = 100% ▪ RWA=$100mm ▪ **Capital Required = $10.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
Vanilla Interest Rate Swap (Cash Collateral) Fully collateralized BBB rated corporate 5 year maturity MTM = $0.245mm (5 bps in-the-money or ITM)	▪ Exposure = $0.50mm ▪ RW = 50% ▪ RWA= $0.25mm ▪ **Capital Required = $0.025mm**	▪ Exposure = $0.50mm ▪ RW = 100% ▪ RWA=$0.5mm ▪ **Capital Required = $0.050mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**	▪ Exposure = $0.990mm (Double count of cash collateral received) ▪ **Capital Required = $0.04mm**	▪ Exposure = $0.990mm (Double count of cash collateral received) ▪ **Capital Required = $0.069mm**
Vanilla Interest Rate Swap (US Treasury Collateral) Fully collateralized BBB rated corporate 5 year maturity MTM = $0.245mm (5 bps ITM)	▪ Exposure = $0.50mm ▪ RW = 50% ▪ RWA= $0.25mm ▪ **Capital Required = $0.025mm**	▪ Exposure = $0.50mm ▪ RW = 100% ▪ RWA=$0.5mm ▪ **Capital Required= $0.050mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**	▪ Exposure = $0.745mm (Treasury collateral off-BS) ▪ **Capital Required = $0.03mm**	▪ Exposure = $0.745mm (Treasury collateral off-BS) ▪ **Capital Required = $0.052mm**
Vanilla Interest Rate Swap (Cash Collateral) Fully collateralized BBB rated corporate 5 year maturity MTM = $4.90mm (100 bps ITM)	▪ Exposure = $0.50mm ▪ RW = 50% ▪ RWA=$0.25mm ▪ **Capital Required = $0.025mm**	▪ Exposure = $0.50mm ▪ RW = 100% ▪ RWA=$0.5mm ▪ **Capital Required = $0.050mm**	▪ Exposure = $5.40mm ▪ **Capital Required = $0.378mm**	▪ Exposure = $10.30mm (Double count of cash collateral received) ▪ **Capital Required = $0.412mm**	▪ Exposure = $10.30mm (Double count of cash collateral received) ▪ **Capital Required = $0.721mm**
Vanilla Interest Rate Swap (Uncollateralized) BBB rated Securities firm 5 year maturity MTM = $0.245mm (5 bps ITM)	▪ Exposure = $0.745mm (higher exposure because uncollateralized) ▪ RW = 20% ▪ RWA=$0.2mm ▪ **Capital Required = $0.02mm**	▪ Exposure = $0.745mm ▪ RW = 100% ▪ RWA=$0.7mm ▪ **Capital Required = $0.07mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.03mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**
Vanilla Interest Rate Swap Qualifying CCP (QCCP) 5 year maturity MTM = $0.245mm (5 bps ITM)	▪ Exposure = $0.745mm ▪ RW = 50% ▪ RWA=$0.4mm ▪ **Capital Required = $0.04mm**	▪ Exposure = $0.745mm ▪ RW = 2% ▪ RWA=$0.02mm ▪ **Capital Required = $0.002mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.03mm**	▪ Exposure = $0.745mm ▪ **Capital Required = $0.052mm**

Note: Under both the Basel Committee's leverage ratio proposal and the US supplementary leverage ratio included in the final US Basel 3 rules, the leverage exposure for centrally cleared derivatives is double counted. The leverage exposure for a centrally cleared transaction, using the examples above, would be the sum of the capital requirement for a client-facing trade (represented by either one of the first two examples) and the capital requirement of the QCCP-facing position (the last example).

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
Equity Option QCCP Notional = $4B 1 year maturity MTM = $493mm	▪ Exposure = $730mm ▪ RW = 50% ▪ RWA= $365mm ▪ **Capital Required = $36.5mm**	▪ Exposure = $730mm ▪ RW = 2% ▪ RWA=$14.6mm ▪ **Capital Required = $1.46mm**	▪ Exposure = $730mm ▪ **Capital Required = $51.1mm**	▪ Exposure = $730mm ▪ **Capital Required = $29.2mm**	▪ Exposure = $730mm ▪ **Capital Required = $51.1mm**
Commodity Forward Non-precious metal Notional = $14mm A rated 1 year maturity MTM = $0mm	▪ Exposure = $1.40mm ▪ RW = 50% ▪ RWA=$0.7mm ▪ **Capital Required = $0.07mm**	▪ Exposure = $1.40mm ▪ RW = 100% ▪ RWA=$1.4mm ▪ **Capital Required = $0.14mm**	▪ Exposure = $1.40mm ▪ **Capital Required = $0.10mm**	▪ Exposure = $1.40mm ▪ **Capital Required = $0.06mm**	▪ Exposure = $1.40mm ▪ **Capital Required = $0.10mm**
Financing of a Securitization Senior Tranche of SPV Attachment 30, Detachment 100 Performing Auto Leases Collateral 3 year maturity	▪ Exposure = $100mm ▪ RW = 100% ▪ RWA= $100mm ▪ **Capital Required = $10.00mm**	▪ Exposure = $100mm ▪ RW = 20% ▪ RWA=$20mm ▪ **Capital Required = $2.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Written Credit Derivative (with longer dated purchased protection) OECD Bank counterparties (1 long / 1 short) US Treasury Collateral rec'd / posted Non-IG reference asset Notional (written and purchased) = $15mm Maturity written = 2 year Maturity purchased = 3 year MTM = +$1.0mm long / ($1.4)mm short	▪ Exposure = $3.00mm ▪ RW = 20% ▪ RWA=$0.6mm ▪ **Capital Required = $0.06mm**	▪ Exposure = $3.04mm ▪ RW = 20% ▪ RWA=$0.6mm ▪ **Capital Required = $0.06mm**	▪ Exposure = $4.00mm (MTM long + PFE add-on for written and purchased) ▪ **Capital Required = $0.28mm**	▪ Exposure = $4.00mm (MTM long + PFE add-on for written and purchased) ▪ **Capital Required = $0.16mm**	▪ Exposure = $4.00mm (MTM long + PFE add-on for written and purchased) ▪ **Capital Required = $0.28mm**
Written Credit Derivative (with shorter dated purchased protection) OECD Bank counterparties (1 long / 1 short) US Treasury Collateral rec'd / posted IG reference asset Notional (written and purchased) = $6.6mm Maturity written = 3 year Maturity purchased = <3 year MTM = less than $0.1mm long and short	▪ Exposure = $0.66mm ▪ RW = 20% ▪ RWA=$0.1mm ▪ **Capital Required = $0.01mm**	▪ Exposure = $0.66mm ▪ RW = 20% ▪ RWA=$0.1mm ▪ **Capital Required = $0.01mm**	▪ Exposure = $0.66mm (MTM long + PFE add-on for written and purchased) ▪ **Capital Required = $0.05mm**	▪ Exposure = $6.92mm (written notional + PFE add-on for purchased only) ▪ **Capital Required = $0.28mm**	▪ Exposure = $6.92mm (written notional + PFE add-on for purchased only) ▪ **Capital Required = $0.48mm**

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
Reverse Repo (US Treasury) 2% over-collateralized Repo = 5 day maturity Collateral > 5 year maturity BBB rated corporate FIN 41 Netting of $90mm applied	▪ Exposure = $10mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0.00mm**	▪ Exposure = $0.088mm (Treasury haircut = 4%) ▪ RW = 100% ▪ RWA=$0.1mm ▪ **Capital Required = $0.01mm**	▪ Exposure = $10mm ▪ **Capital Required = $0.70mm**	▪ Exposure = $100mm (no recognition of netting) ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm (no recognition of netting) ▪ **Capital Required = $7.00mm**
Reverse Repo (US Agency) 2% over-collateralized Repo = 5 day maturity Collateral > 5 year maturity BBB rated corporate FIN 41 Netting of $90mm applied	▪ Exposure = $10mm ▪ RW = 20% ▪ RWA=$2mm ▪ **Capital Required= $0.20mm**	▪ Exposure = $0.377mm (Agency haircut = 8%) ▪ RW = 100% ▪ RWA=$0.4mm ▪ **Capital Required = $0.04mm**	▪ Exposure = $10mm ▪ **Capital Required = $0.70mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Reverse Repo (US Treasury) Fully collateralized Repo = 5 day maturity Collateral > 5 year maturity Central Bank No FIN 41 applied	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0.00mm**	▪ Exposure = $2.83mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
Margin Loan (Prime Brokerage) Hedge fund receives loan of $100mm secured by cash on deposit of $50mm	▪ Exposure = $100mm ▪ RW = 10% ▪ RWA=$10mm ▪ **Capital Required = $1.00mm**	▪ Exposure = $50mm ▪ RW = 100% ▪ RWA=$50mm ▪ **Capital Required = $50.00mm**	▪ Exposure = $50mm ▪ **Capital Required= $3.50mm**	▪ Exposure = $100mm ▪ **Capital Required= $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required= $7.00mm**
Margin Loan (Prime Brokerage) Hedge fund receives loan of $100mm secured by publicly-traded equity of $110mm	▪ Exposure = $100mm ▪ RW = 10% ▪ RWA=$10mm ▪ **Capital Required = $1.00mm**	▪ Exposure = $17.5mm (Publicly-traded equity haircut = 25%) ▪ RW = 100% ▪ RWA = $17.5mm ▪ **Capital Required = $1.75mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**

Note: Securities Financing Transactions examples exclude the counterparty credit risk exposure required under the Proposed BCBS Leverage Requirement. This amount is de minimis in the examples provided.

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
Residential Mortgage Wholesale Exposure Notional = $2.71mm CLTV = 95% 15 year remaining maturity Rate Modification	▪ Exposure = $2.71mm ▪ RW = 100% ▪ RWA=$2.71mm ▪ **Capital Required = $0.271mm**	▪ Exposure = $2.71mm ▪ RW = 100% ▪ RWA=$2.71mm ▪ **Capital Required = $0.271mm**	▪ Exposure = $2.71mm ▪ **Capital Required = $0.190mm**	▪ Exposure = $2.71mm ▪ **Capital Required = $0.108mm**	▪ Exposure = $2.71mm ▪ **Capital Required = $0.190mm**
Securities-Based Lending LMA Notional Facility Amount = $5.00mm Drawn = $3.60mm Cash Collateral = $2.00mm	▪ CCF = 0% ▪ Exposure = $3.60mm ▪ RW = 44% ▪ RWA=$1.60mm ▪ **Capital Required = $0.160mm**	▪ CCF = 0% ▪ Exposure = $3.60mm ▪ RW = 44% ▪ RWA=$1.6mm ▪ **Capital Required = $0.160mm**	▪ CCF = 10% ▪ Exposure = $5.74mm (drawn + 10% of undrawn + cash collateral received) ▪ **Capital Required = $0.402mm**	▪ CCF = 10% ▪ Exposure = $5.74mm (drawn + 10% of undrawn + cash collateral received) ▪ **Capital Required = $0.230mm**	▪ CCF = 10% ▪ Exposure = $5.74mm (drawn + 10% of undrawn + cash collateral received) ▪ **Capital Required = $0.402mm**
Margin Loan (Retail) Individual receives loan of $100mm secured by cash on deposit of $50mm	▪ Exposure = $100mm ▪ RW = 10% ▪ RWA=$10mm ▪ **Capital Required = $1.00mm**	▪ Exposure = $50mm ▪ RW = 100% ▪ RWA=$50mm ▪ **Capital Required = $5.00mm**	▪ Exposure = $50mm ▪ **Capital Required= $3.50mm**	▪ Exposure = $100mm ▪ **Capital Required= $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required= $7.00mm**
Margin Loan (Retail) Individual receives loan of $100mm secured by publicly-traded equity of $110mm	▪ Exposure = $100mm ▪ RW = 10% ▪ RWA=$10mm ▪ **Capital Required = $1.00mm**	▪ Exposure = $17.5mm (Publicly-traded equity haircut = 25%) ▪ RW = 100% ▪ RWA=$17.5mm ▪ **Capital Required = $1.75mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
HELOC Unconditionally cancelable commitment Notional Line = $100k Drawn = $40k 2nd lien; 1st lien owned CLTV = 80% FICO = 760	▪ CCF = 0% ▪ Exposure = $40k ▪ RW = 50% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ CCF = 0% ▪ Exposure = $40k ▪ RW = 50% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $3.22k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $1.84k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $3.22k**
HELOC Unconditionally cancelable commitment Notional Line = $100k Drawn = $40k 2nd lien; 1st lien not owned CLTV = 80% FICO = 760	▪ CCF = 0% ▪ Exposure = $40k ▪ RW = 100% ▪ RWA=$40K ▪ **Capital Required = $4.00k**	▪ CCF = 0% ▪ Exposure = $40k ▪ RW = 100% ▪ RWA=$40K ▪ **Capital Required = $4.00k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $3.22k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $1.84k**	▪ CCF = 10% ▪ Exposure = $46k ▪ **Capital Required = $3.22k**
HELoan Loan Amount = $40k 1st lien owned CLTV = 90% FICO = 760	▪ Exposure = $40k ▪ RW = 50% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ Exposure = $40k ▪ RW = 50% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ Exposure = $40k ▪ **Capital Required = $2.80k**	▪ Exposure = $40k ▪ **Capital Required = $1.60k**	▪ Exposure = $40k ▪ **Capital Required = $2.80k**
HELoan Loan Amount = $40k 2nd lien; 1st lien not owned CLTV = 90% FICO = 760	▪ Exposure = $40k ▪ RW = 100% ▪ RWA=$40K ▪ **Capital Required = $4.00k**	▪ Exposure = $40k ▪ RW = 100% ▪ RWA=$40K ▪ **Capital Required = $4.00k**	▪ Exposure = $40k ▪ **Capital Required = $2.80k**	▪ Exposure = $40k ▪ **Capital Required = $1.60k**	▪ Exposure = $40k ▪ **Capital Required = $2.80k**

ILLUSTRATIVE EXAMPLES OF THE RELATIVE CAPITAL REQUIREMENTS

Product	Basel 1 Risk-weighted Capital Requirement	Basel 3S Risk-weighted Capital Requirement	Proposed US Supplementary Leverage Requirement	Proposed BCBS Leverage Requirement	Combined US & BCBS Leverage Requirement
Residential Mortgage FNMA Guarantee Loan Amount = $397k 1st Lien CLTV = 70% FICO = 764 30 year maturity	▪ Exposure = $397k ▪ RW = 20% ▪ RWA=$79.4k ▪ **Capital Required = $7.94k**	▪ Exposure = $397k ▪ RW = 20% ▪ RWA=$79.4k ▪ **Capital Required = $7.94k**	▪ Exposure = $397k ▪ **Capital Required = $27.79k**	▪ Exposure = $397k ▪ **Capital Required = $15.88k**	▪ Exposure = $397k ▪ **Capital Required = $27.79k**
Residential Mortgage Non-Defaulted FHA Loan Amount = $145k 1st Lien CLTV = 90% FICO = 760 30 year maturity	▪ Exposure = $145k ▪ RW = 20% ▪ RWA=$29K ▪ **Capital Required = $2.90k**	▪ Exposure = $145k ▪ RW = 20% ▪ RWA=$29K ▪ **Capital Required = $2.90k**	▪ Exposure = $145k ▪ **Capital Required = $10.15k**	▪ Exposure = $145k ▪ **Capital Required = $5.80k**	▪ Exposure = $145k ▪ **Capital Required = $10.15k**
Auto Loan New Purchase Loan Amount = $20k FICO = 760	▪ Exposure = $20k ▪ RW = 100% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ Exposure = $20k ▪ RW = 100% ▪ RWA=$20K ▪ **Capital Required = $2.00k**	▪ Exposure = $20k ▪ **Capital Required = $1.40k**	▪ Exposure = $20k ▪ **Capital Required = $0.80k**	▪ Exposure = $20k ▪ **Capital Required = $1.40k**
Consumer Credit Card Notional Line = $20k Drawn = $6k FICO = 760	▪ CCF = 0% ▪ Exposure = $6k ▪ RW = 100% ▪ RWA=$6K ▪ **Capital Required = $0.60k**	▪ CCF = 0% ▪ Exposure = $6k ▪ RW = 100% ▪ RWA=$6K ▪ **Capital Required = $0.60k**	▪ CCF = 10% ▪ Exposure = $7.40k ▪ **Capital Required = $0.518k**	▪ CCF = 10% ▪ Exposure = $7.40k ▪ **Capital Required = $0.296k**	▪ CCF = 10% ▪ Exposure = $7.40k ▪ **Capital Required = $0.518k**
Cash On deposit with central bank	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0mm**	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**
US Treasury Security Available-for-sale	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0mm**	▪ Exposure = $100mm ▪ RW = 0% ▪ RWA=$0mm ▪ **Capital Required = $0mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $4.00mm**	▪ Exposure = $100mm ▪ **Capital Required = $7.00mm**