July 1, 2014

Via Electronic Mail

Legislative and Regulatory Activities Division
Office of the Comptroller of the Currency
400 7th Street, SW
Suite 3E-218
Mail Stop 9W-11
Washington, DC 20219
regs.comments@occ.treas.gov
Docket ID OCC-2013-0016
RIN 1557 AD 74

Robert de V. Frierson, Secretary
Board of Governors of the Federal Reserve System
20th Street and Constitution Avenue, NW
Washington, DC 20551
regs.comments@federalreserve.gov
Docket No. R-1466
RIN 7100 AE-03

Robert E. Feldman, Executive Secretary
Attention: Comments/Legal ESS
Federal Deposit Insurance Corporation
550 17th Street, NW
Washington, DC 20429
comments@FDIC.gov
RIN 3064-AE04

Re: Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring

Ladies and Gentlemen:

The Clearing House Association L.L.C. ("**The Clearing House**"), together with the American Bankers Association, the Financial Services Roundtable and the International Association of Credit Portfolio Managers (the "**Associations**"),[1] appreciated the opportunity to meet with representatives of the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation (the "**Agencies**") earlier this year to discuss the U.S. proposed liquidity coverage ratio (the "**U.S. Proposal**").[2] As we discussed during our meeting, the Associations are providing you with the results of empirical analyses based on data collected and compiled by an independent third-party consultant. We are also providing additional information with

[1] Descriptions of the Associations are provided in Appendix F of this letter.
[2] 78 Fed. Reg. 71818 (Nov. 29, 2013).

respect to certain topics addressed in the comment letter, dated January 31, 2014 (the "**Joint Trades Comment Letter**"),[3] and discussed in our recent meetings.

I. Results of Empirical Analysis

To assist the Agencies with the implementation of the international liquidity standards ("**Basel LCR**") published by the Basel Committee on Banking Supervision, we have undertaken three separate analyses to quantify potential impacts of some of the unique elements of the U.S. Proposal, including (i) the "peak day" approach to measuring net outflows, (ii) the requirement that certain depository institution subsidiaries of bank holding companies that are advanced approaches Covered Banks ("**Covered Bank Holding Companies**") are also subject to the liquidity coverage ratio ("**LCR**"),[4] and (iii) the accelerated implementation of the LCR compliance requirements. Overall, these analyses lend support to our discussion in the Joint Trades Comment Letter of concerns regarding these unique elements.

A. Peak Day Analysis

As discussed in the Joint Trades Comment Letter,[5] the Associations recognize the merit of the "peak day" approach but have concerns with regard to the U.S. Proposal's assumption that all non-contractual deposits and commitments flow out on the first day of the 30-day calculation period. As a result, the Joint Trades Comment Letter encouraged the Agencies to proceed cautiously, and only after further study, in implementing a peak day approach particularly as it relates to the assumed timing of behavioral (*i.e.*, non-contractual) outflows. Based on the results of the empirical analyses discussed below, we continue to espouse this view.

The Preamble explains that, in the Agencies' view, a peak day approach, which diverges from the Basel LCR 30-day cumulative approach, is necessary to address the risk that a Covered Bank may have substantial contractual inflows late in a 30-day stress period and substantial outflows early in the period.[6] The peak day empirical analysis (see Appendix A) illustrates that, although using the peak day approach together with the first day outflow assumption reflected in the U.S. Proposal may result in a materially higher liquidity requirement as compared to the Basel LCR approach, the difference is largely driven by the assumed timing of behavioral – that is, non-contractual – outflows rather than as a result of contractual maturity mismatches, which is the stated purpose of the peak day approach.[7] To illustrate this effect, we have developed a representative hypothetical bank balance sheet and subjected it to the LCR under various scenarios (30-day cumulative approach, peak day approach with first day outflow assumption, peak day approach with steep deposit outflow assumption and peak day approach with straight line outflow assumption) attached as Appendix B. The results highlight the fact that

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[3] The Joint Trades Comments Letter was submitted by The Clearing House Association L.L.C., the American Bankers Association, the Securities Industry & Financial Markets Association, the Financial Services Roundtable, the Institute of International Bankers, the International Association of Credit Portfolio Managers and the Structured Finance Industry Group. Capitalized terms used herein and not otherwise defined are used with the meanings assigned to them in the Joint Trades Comment Letter.

[4] Specifically, this requirement would apply to depository institution subsidiaries that themselves are subject to the advanced approaches or have $10 billion or more in consolidated total assets.

[5] *See* Joint Trades Comment Letter, at 9-11.

[6] Preamble at 71833.

[7] *Id*.

assumptions relating to behavioral outflows contained in the peak day approach have a significant impact on the hypothetical bank's ability to meet the LCR requirement.

The peak day empirical analysis contained in Appendix A, which relies on data as of September 30, 2013 submitted by eight U.S. bank holding companies, is consistent with the examples contained in the hypothetical scenarios described in Appendix B. Using the peak day approach with a first day outflow assumption, as compared to either the Basel LCR cumulative approach or a peak day approach with a straight-line outflow assumption, results in a significantly more stringent requirement.

As noted above, we continue to believe the Agencies should not implement the peak day approach, at least not until its consequences and the details of its potential application—including, most importantly, the impact of behavioral outflows assumptions—is better understood and further analyzed. In the meantime, as part of the Pillar II supervisory review, the Agencies could address any contractual maturity mismatch concerns that actually arise at a particular Covered Bank. As the Agencies collect additional liquidity-related information through, for example, the 4G and 5G liquidity monitoring initiatives, the Agencies can revisit a peak day approach, particularly for non-contractual outflows, in the future if data demonstrates that contractual maturity mismatch concerns cannot sufficiently be addressed in the supervisory process.

B. Application of the LCR to Certain Subsidiary Depository Institutions

We continue to urge the Agencies to reconsider whether the objective of prudent liquidity risk management for Covered Bank Holding Companies is meaningfully advanced by requiring that depository institution subsidiaries of Covered Bank Holding Companies that themselves are mandatorily subject to the advanced approaches or have $10 billion or more in consolidated total assets, be separately subject to the LCR.[8] Our core concern with the layered application of the LCR to Covered Bank Holding Companies and their depository institution subsidiaries is the treatment of surplus liquidity held at the subsidiary depository institution level in excess of the minimum regulatory requirement that in many instances would be discounted or completely ignored in the Covered Bank Holding Company's LCR calculation. In addition, the LCR calculation at the standalone level could include intercompany transactions that increase the overall HQLA requirement but are eliminated on consolidation in the Covered Bank Holding Company LCR calculation. The empirical analysis (Appendix C), which is based on data as of March 31, 2014 submitted by 11 U.S. bank holding companies, including seven U.S. G-SIBs and four regional bank holding companies (that collectively have 17 insured depository institution subsidiaries subject to the U.S. Proposal), demonstrates that these concerns are well-founded.

Based on the analysis,[9] the amount of surplus liquidity required to fully meet the standalone depository institution requirement would, in fact, be substantial. Of the 17 subsidiary depository institutions, six currently operate at or above a 100% LCR. For those six institutions, the amount of surplus liquidity at the depository institution level that is excluded from the related Covered Bank Holding Company LCR calculation is $28 billion. When a liquidity buffer in excess of the minimum regulatory requirement is included—the more likely scenario and the one explicitly encouraged by the

[8] *See* Joint Trades Comment Letter, at 19-20.
[9] *See* Appendix C, at C-4.

Agencies[10]—surplus liquidity at the six subsidiary depository institutions would increase to $82 billion to achieve a 105% LCR and $165 billion to achieve a 110% LCR.[11]

The analysis also highlights an issue with the interplay between the subsidiary depository institution requirement and the peak day approach. If the Agencies decide to apply the LCR separately to subsidiary depository institutions, the "peak day" may be different for the bank holding company as compared to the subsidiary, as reflected on page C-5.[12]

C. Acceleration of the Implementation of the LCR Requirement

While U.S. banks have strong liquidity positions and liquidity management frameworks, we respectfully note that the Agencies may not have fully appreciated the U.S. banking organizations' readiness to implement the U.S. Proposal. Citing "the strong liquidity positions many U.S. banking organizations and other companies that would be subject to the proposal have achieved since the recent financial crisis,"[13] the U.S. Proposal would accelerate the implementation of the LCR in the United States as compared to the Basel LCR. In Part II.A.4 of the Joint Trades Comment Letter (p. 21-22), the Associations expressed their concern that the Agencies may not fully appreciate the magnitude of the HQLA shortfall—often referred to as the "distance to compliance"—faced by Covered Banks. We question whether an accelerated implementation timeframe is warranted based on our empirical analysis.[14]

Of the 17 depository institutions included in the depository institution subsidiary analysis,[15] 11 would have insufficient HQLA and would need to increase HQLA by a total of $280 billion to achieve a 100% LCR under the U.S. Proposal. Similarly, the Covered Bank Holding Companies for those depository institution subsidiaries that are not currently in compliance with the LCR under the U.S. Proposal would have a $99 billion shortfall to reach a 100% LCR.

Taking into account that Covered Banks almost certainly will need to maintain a buffer above 100% LCR, the analysis shows that the more realistic distance to compliance under the U.S. Proposal is even greater:

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[10] Preamble at 71846: "The agencies emphasize that the proposed rule's liquidity coverage ratio is a minimum requirement, and that companies should have internal liquidity management systems and policies in place to ensure they hold liquid assets sufficient to meet their liquidity needs that could arise in a period of stress."

[11] For purposes of the analysis, it was assumed that (i) current HQLA, net outflow, and balance sheet values remain constant, but HQLA is transferred from other entities to the depository institution and (ii) all incremental excess HQLA at the depository institution level is restricted by regulation and cannot be transferred to the bank holding company.

[12] Separately, a subsidiary depository institution's calculation of certain of the changes in derivative collateral under Section 32(f)(6) may reflect a different 30-day window and a different outflow amount from that calculated by the related Covered Bank Holding Company due to collateral flows between affiliates that are eliminated on consolidation.

[13] Preamble at 71821.

[14] *See* page C-2 of Appendix C.

[15] *Id.*

- For depository institution subsidiaries currently not in compliance with the LCR, there is a $359 billion shortfall for those institutions to reach 105% and a $437 billion shortfall for those institutions to reach 110%.

- For Covered Bank Holding Companies, the shortfall rises to $128 billion to reach 105% and $158 billion to reach 110%.[16]

II. Supplemental Responses

As discussed during our recent meetings, we are providing additional information to supplement the Joint Trades Comment Letter on the following topics:

- the potential application of the hypothetical unwind requirement to collateralized corporate trust account deposits;[17]

- a proposed alternative to the definition of "regulated financial company;"[18] and

- additional descriptions and examples of the issues relating to the outflow amounts assigned to derivative transactions.[19]

A. Collateralization of Corporate Trust Account Deposits

The Joint Trades Comment Letter includes a detailed discussion of the treatment of secured deposits of U.S. municipalities and Public Sector Entities ("**PSEs**") as secured funding transactions. In particular, the Joint Trades Comment Letter describes our concerns with the application of the "unwind requirement" to such secured deposits when calculating the amount of HQLA for purposes of the LCR.[20]

Like secured deposits of U.S. municipalities and PSEs, certain deposits in corporate trust accounts held by banks in the course of providing corporate trust services must be collateralized with securities acquired and held by the bank. Accordingly, under the U.S. Proposal, these secured deposits also would potentially be subject to the unwind requirement. For the reasons discussed in the Joint Trades Comment Letter with respect to secured U.S. municipal and PSE deposits, we believe that a Covered Bank should not be required to apply the hypothetical unwind requirement to secured corporate trusts account deposits when calculating HQLA for purposes of the LCR.

Deposits held in corporate trust accounts are typically collateralized[21] for one of three reasons:

- federal regulatory requirements obligate a bank to collateralize amounts in excess of FDIC insurance requirements that a bank self-deposits when the funds are awaiting investment or distribution (for example, 12 CFR 9.10, applicable to national banks);

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[16] The above numbers do not capture any potential overlap / ability to count HQLA in both the bank holding company and subsidiary depository institution calculations.
[17] *See* Joint Trades Comment Letter, at 22.
[18] *See* Joint Trades Comment Letter, at 65.
[19] *See* Joint Trades Comment Letter, at 33.
[20] *See* Joint Trades Comment Letter, at 22.
[21] Details of these collateral requirements are set forth in Appendix D.

- as discussed in the Joint Trades Comment Letter, state statutory requirements require municipal entities to ensure that their deposits are collateralized by the banks holding them; or
- contractual requirements have terms similar to the state statutory requirements when requested by a customer.

Each of these requirements has the same purpose, to ensure that the owner does not suffer any losses with respect to such funds in the event that the bank becomes insolvent and is put into receivership. Similar to secured U.S. municipal and PSE deposits, the amount of collateralized deposits is determined by the trust customer's level of activity and business requirements and, therefore, is unlikely to be susceptible to manipulation by a Covered Bank.

Accordingly, we urge the Agencies not to subject secured corporate trust deposits to the "unwind" provisions of the U.S. Proposal.[22] If the Agencies nevertheless determine to subject secured corporate trust deposits to an unwind mechanism for purposes of the HQLA calculation, we request, as we requested with respect to secured U.S. municipals and PSE deposits, that the Final U.S. LCR permit the use of the applicable LCR outflow assumption under Section 32 of the U.S. Proposal, subject to the proposed maximum of 15% without regard to the type of collateral for purposes of the unwind requirement. This approach is described in detail in the Joint Trades Comment Letter. [23]

B. Definition of "Regulated Financial Company"

The Joint Trades Comment Letter urged[24] that paragraph (2) of the definition of "regulated financial company," which includes all companies included on the Form FR Y-6 organizational chart of a depository institution holding company that is subject to the LCR, be eliminated from the definition of "regulated financial company." As noted in the Preamble, the purpose of identifying "regulated financial companies" and certain additional financial entities—namely, investment companies, non-regulated funds, pension funds, and investment advisers (collectively, "**Other Financial Entities**") —is to identify those companies that are likely to present "wrong way risk."[25] We continue to believe that the elimination of the Form FR Y-6 prong of the definition would not permit the introduction of significant additional wrong way risk in light of the breadth of the other prongs of the definition of "regulated financial company" and the inclusion of Other Financial Entities in the applicable provisions of the U.S. Proposal (*i.e.*, qualification as HQLA and establishment of certain outflow rates).

If the Agencies nonetheless believe that the definition of "regulated financial company" together with Other Financial Entities but without the Form FR Y-6 prong is insufficiently broad to capture wrong way risk concerns, we urge the Agencies to allow a Covered Bank the option to use in place of the Form FR Y-6 prong of the definition of "regulated financial company" the prong of the definition of "financial institution" in the Final U.S. rules implementing the Basel III risk-based capital framework[26] that includes companies "predominantly engaged" in financial activities (but without

[22] *See* Proposed Rules, §§21 (f) (1), (2) and (3).
[23] *See* Joint Trades Comment Letter, at 22.
[24] *See* Joint Trades Comment Letter, at 65-66.
[25] Preamble at 71824.
[26] *See* 78 Fed. Reg. 62164 (July 2, 2013).

reference to the ownership thresholds). Other than in the list of entities excluded from the respective definitions, this is the only difference between the two definitions.[27]

Providing this alternative will allow Covered Banks that are required to develop a methodology for identifying "financial institutions" (without regard to ownership interests) to rely on that same methodology for LCR purposes. Both the Form FR Y-6 provision and the "predominantly engaged" provision are part of a definition that is meant to capture entities that may pose wrong way risk concerns,[28] and therefore should equally address the Agencies' concerns in this regard. We recognize that permitting financial companies to use two different approaches to defining a class of entities may introduce some inconsistency in implementation across Covered Banks. Even exclusive use of the proposed Form FR Y-6 approach, however, also will result in significant inconsistencies because of the lack of granularity in the publicly available information regarding the entities included in a Covered Bank Holding Company's Form FR Y-6. Given the potential for inconsistency in both approaches, we urge the Agencies to allow Covered Banks to elect to use the "predominantly engaged" provision in order to minimize the specific operational challenges faced by each institution in implementing this definition.

C. Derivative Outflow Amounts

The Joint Trades Comment Letter addressed the Associations' concerns with the approach in the U.S. Proposal to determine collateral outflow amounts under Section 32(f) as they relate to derivative transactions.[29] The following discussion provides additional context for evaluating, and specific examples illustrating the consequences of, the approach to measuring derivative collateral outflow amounts included in the U.S. Proposal.

As discussed in the Joint Trades Comment Letter, the methodology for calculating collateral outflow amounts from derivative transactions will likely result in a significant overstatement of the liquidity risk profile of a Covered Bank's derivative portfolio that is well in excess of historical experience. To address this overstatement, a Covered Bank should be permitted to recognize collateral inflows in addition to collateral outflows either by including potential inflows under Section 33 of the U.S. Proposal or by calculating the outflow net of inflows. In addition, we recommend that, as an alternative option, Covered Banks should be permitted to calculate net outflow amounts from derivative transactions, including the related collateral outflow amount under Section 32(f)(6), under an approach that is based on a forward-looking measure that incorporates market and related net collateral impacts. For Covered Banks that elect to use this alternative approach and obtain supervisory approval to do so, it would replace the outflow calculations under Section 32(c) and Section 32(f)(6) (and, depending on the model developed by such Covered Bank, the additional outflows in Section 32(f)(1) through (5)) and the inflow calculation under Section 33(b).

1. Section 32(f)(2)—Potential Valuation Changes

Section 32(f)(2) requires a Covered Bank to recognize as an outflow 20% of the fair value of any non-Level 1 asset posted to the Covered Bank as collateral. This requirement to recognize an outflow

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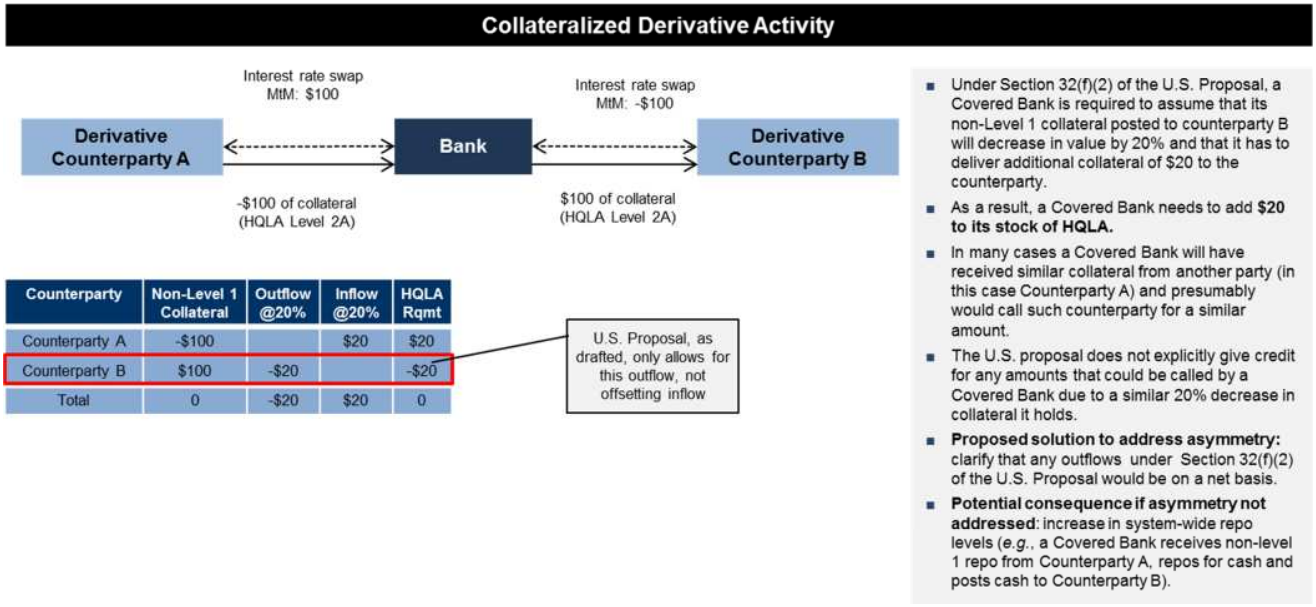
[27] A side-by-side comparison of the definitions of "regulated financial company" and "financial institution" is attached as Appendix E for ease of reference.
[28] *See* 78 Fed. Reg. 62062, 62134.
[29] *See* Joint Trades Comment Letter, at 33-36.

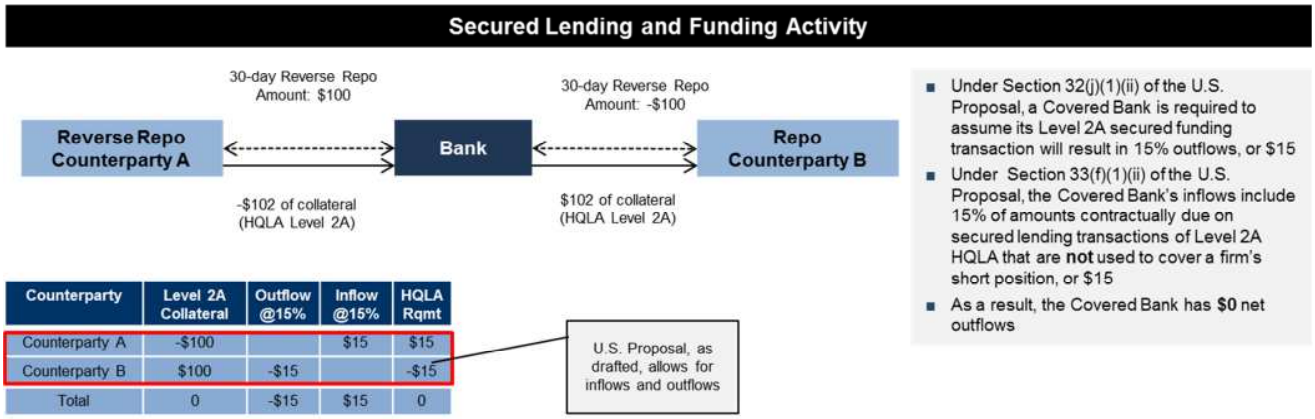
potentially overstates liquidity risk of potential changes in market value of collateral across a derivative collateral portfolio because a Covered Bank is not permitted to calculate the outflow on a net basis reflecting amounts of non-Level 1 assets posted to it. In many instances, a Covered Bank will pledge a particular security as collateral to secure its derivative liability because it has received such security from a counterparty to secure that counterparty's derivative liability. The following diagram illustrates how this may work:

Example 1



In contrast, if the Covered Bank in Example 1 had received the same collateral from Counterparty A as collateral in a secured lending transaction and financed such collateral in a secured funding transaction, there would be no outflows under the U.S. Proposal as noted in Example 2 below:

Example 2



In many respects the two examples described above are similar. For example, in both instances a Covered Bank's normal practices would typically involve the daily calculation and exchange of margin, with the ability to close out the trade and liquidate the collateral in the event of a default by the posting counterparty. As a result, we believe that such transactions should be treated in a consistent manner in the LCR to avoid any unnecessary market distortions. For example, a Covered Bank in the first transaction could reduce its inflows if it were to:

- Pledge the collateral it received from Counterparty A in a secured funding transaction with a term of greater than 30 days; and

- Pledge the proceeds from the secured funding transaction to Counterparty B to secure its collateral.

Such transaction would put the Covered Bank in a similar position to the hypothetical bank in Example 2 above, but its balance sheet, its repo activities and the overall level of interconnectedness between banks would likely increase.

At a minimum, we believe that Section 32(f)(2) of the U.S. Proposal should be revised to permit a Covered Bank when calculating its net outflow to use the net amount of collateral on a security-by-security basis and should only be required to include an outflow for each security where it is has net posted collateral. This could easily be accommodated in the text of the U.S. Proposal with the following text changes:

> *(2) Potential valuation changes. 20 percent of the fair value (as determined under GAAP) of any collateral posted to a counterparty by the [BANK] that is not a level 1 liquid asset, net of any identical collateral posted to the [BANK] by another counterparty.*

In the Preamble to the Final U.S. LCR, the Agencies could clarify that this net amount would need to be determined by the Covered Bank at an individual security level (*e.g.*, at a CUSIP level). Alternatively, the Agencies could include a separate inflow provision in Section 33.

2. Section 32(f)(5)—Collateral Substitution

Section 32(f)(5) includes a requirement for outflows where a Covered Bank has received collateral from a counterparty that could be substituted without the consent of the Covered Bank for collateral of a lower quality. As noted in the Joint Trades Comment Letter,[30] the assumptions underlying the collateral substitution requirements in Section 32(f)(5) do not reflect that a counterparty's right to substitute non-HQLA collateral is generally subject to a significant increase in haircuts that is designed to mitigate the liquidity risk associated with the substitution. As a result, Covered Banks' experience is that such substitutions are infrequent.

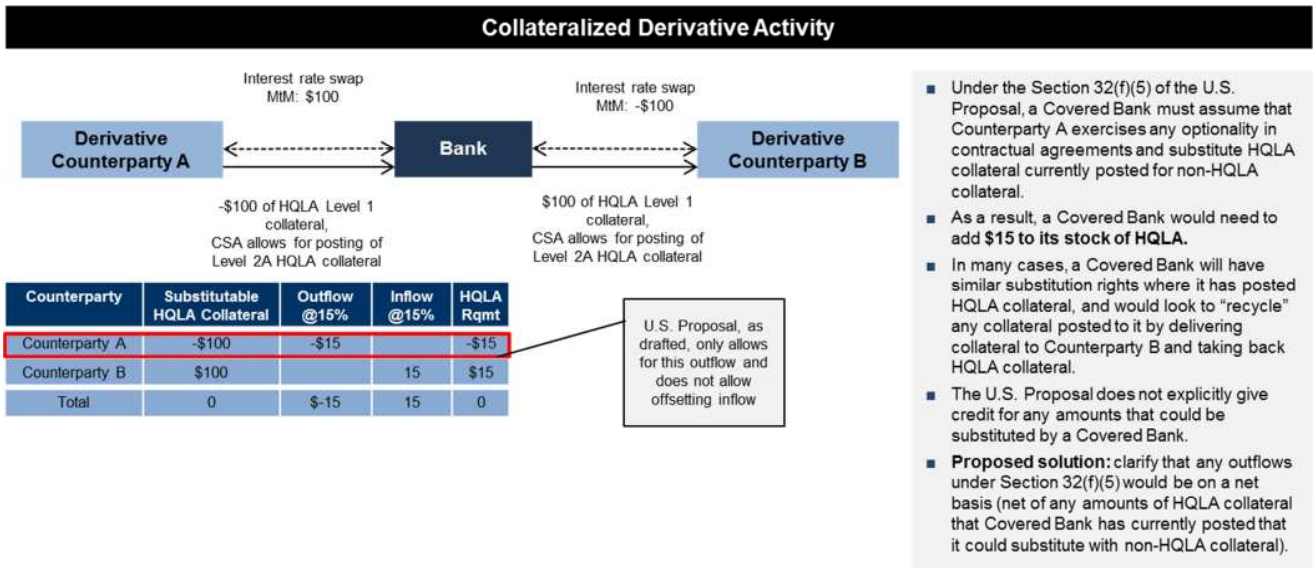
Furthermore, this approach introduces an asymmetry by ignoring that a Covered Bank could rehypothecate the collateral posted to it by posting such collateral to another counterparty to secure its

[30] *See* Joint Trades Comment Letter, at 34.

own derivative liabilities. In many instances, a Covered Bank rehypothecates cash and non-cash collateral posted to it by one counterparty to secure its derivative liability to another counterparty. In addition, with the increasing standardization of derivative terms, many Covered Banks maintain similar levels of "optionality" between agreements with counterparties in a derivative liability, on the one hand, and agreements with counterparties in a derivative asset, on the other. As a result, in practice, a Covered Bank may have optimized the collateral it has posted to its derivative counterparties by taking into account the type of collateral posted to it by other derivative counterparties. If, notwithstanding the increase in haircuts and infrequency of such substitutions discussed above, a Covered Bank's counterparties engage in material amounts of collateral substitution in a stressed period, such Covered Bank would continue to optimize its collateral management by "recycling" such collateral in postings with other counterparties.

The following example illustrates the application of 32(f)(5):

Example 3



Given the infrequency of collateral substitution and the mitigating actions a Covered Bank may take, we do not believe that collateral substitution involves sufficient liquidity risk to warrant inclusion as an outflow, and certainly not at the outflow rates prescribed in the U.S. Proposal. If the Agencies nonetheless believe an outflow is warranted, we believe the outflow should be calculated on a net basis. Such an approach could be accommodated in the Final U.S. LCR by making the text modifications suggested below to each of the sub-provisions in Section 32(f)(5):

> *(ii) 15 percent of the fair value of collateral posted to the [BANK] by a counterparty that the [BANK] includes in its HQLA amount as level 1 liquid assets, where: (1) under the contract governing the transaction the counterparty may replace the posted collateral with assets that qualify as level 2A liquid assets without the consent of the [BANK] and (2) the [BANK] is unable to reduce such outflow by replacing identical level 1 liquid assets collateral it has posted to a separate counterparty with such identical level 2A liquid assets collateral without the consent of such counterparty;*

3. Section 32(f)(6)—Derivative Collateral Changes

As noted in Part III.G of the Joint Trades Comment Letter,[31] Section 32(f)(6) treats the absolute value of the largest 30 consecutive day cumulative net mark-to-market collateral outflow or inflow over the preceding 24 months ("**look-back**") as an outflow. This look-back requirement is designed to capture cash flow movements which are not reflected in the calculations under Section 32(c) and Section 33(b). This selection of the 30-day period with the largest mark-to-market collateral movement, however, is unrelated to the Covered Bank's derivatives portfolio at the time it is calculating its LCR. The look-back is more correlated with historical absolute volatility of collateral cash flows and the historical volatility of the underlying derivatives transactions than a forward-looking estimate of the potential collateral inflows and outflows in a period of market-wide stress. In addition, the collateral outflows during the look-back window may be related to closing out derivatives positions rather than the result of increased liquidity risk. For example, if a Covered Bank had a fully collateralized position with a mark-to-market valuation of $500 million that matured during the prior 24-month period, the collateral look-back approach would reflect the $500 million outflow but would not reflect the offsetting $500 million close-out payment on the related derivative.

As discussed in Part III.G of the Joint Trades Comment Letter,[32] although further development would be required for many Covered Banks to implement a forward-looking approach, we recommend that the Agencies consider providing Covered Banks the ability to use an alternative method of calculating derivative and collateral net outflows on a forward-looking basis. We note that the Basel LCR describes a similar 30-day outflow assumption based on a 24-month look-back but explicitly provides in the same paragraph that "[s]upervisors may adjust the treatment flexibly according to circumstances."[33] European regulators have proposed implementing such a flexible approach, in particular by allowing banks to model derivatives collateral outflows on a forward-looking basis, rather than through a look-back, with the 24-month look-back approach as a backstop for firms that do not meet the criteria for the advanced approach.[34]

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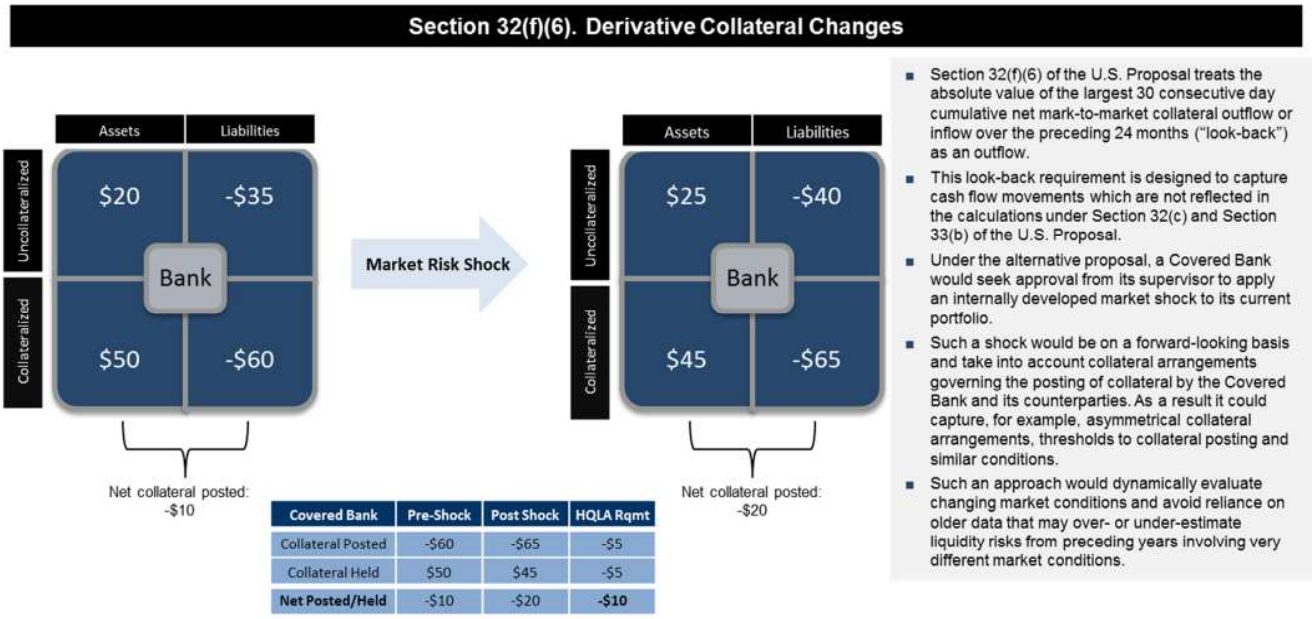
[31] *See* Joint Trades Comment Letter, at p. 33-36.
[32] *Id.*
[33] Basel LCR ¶ 123.
[34] European Banking Authority, Draft Regulatory Technical Standards: On additional liquidity outflows, available at: http://www.eba.europa.eu/-/eba-publishes-final-draft-technical-standards-on-additional-collateral-outflows. Under the draft approach, firms with approval for the internal models method for calculating counterparty credit risk would be eligible for the advanced approach.

The alternative approach suggested here would involve the determination of an appropriate market shock consistent with the stress scenario reflected in the LCR, which could be derived from approved models used by a Covered Bank. The largest U.S. banking organizations have been developing stress scenarios for capital planning purposes since the financial crisis, which could be used in this effort. Covered Banks would need to overlay the collateral impact of such a market shock, taking into account market movements on a counterparty-by-counterparty basis and the terms of the agreement with such counterparties relating to collateral. The example below illustrates how this approach could work in practice:

Example 4



Covered Bank	Pre-Shock	Post Shock	HQLA Rqmt
Collateral Posted	-$60	-$65	-$5
Collateral Held	$50	$45	-$5
Net Posted/Held	-$10	-$20	**-$10**

This forward-looking approach has the advantage of forcing banking organizations to dynamically evaluate changing market conditions, and avoids reliance on older data that may over- or under-estimate liquidity risks from preceding years with very different market conditions. Such a forward-looking approach, which we think is consistent with the "flexible" language of the Basel LCR, would result in more rigorous analysis of market conditions and, ultimately, better liquidity management. In addition, such an approach could also result in firms identifying specific trades that may be subject to "wrong way" risk, such as trades where the net collateral requirement increases in periods of market stress, and more efficiently and effectively allocate the costs of such trades through internal pricing mechanisms.

In addition, depending on the design of the model, such a calculation could be designed to dynamically capture all of the derivative and collateral related outflows in Sections 32(c) and 32(f), as well as the derivative cash inflows in Section 33(b). For example, such a model could take into account the potential valuation changes in Section 32(f)(2) and account for any increase or decrease in the mark-to-market of the derivative position that such collateral is securing. In addition, any excess collateral posted by counterparties as described in Section 32(f)(3) and any collateral "owed but not called" by the

Covered Bank as described in Section 32(f)(4) could be captured taking into account the adjustment to the mark-to-market of the underlying derivative transaction or transactions to which such outflows relate. Finally, any uncollateralized payables and receivables as described in Sections 32(c) and 33(b) could also be addressed using the same approach.

This forward-looking approach could be accommodated in the Final U.S. LCR by making the text modifications suggested below:

Section 32(f)(7) Advanced Approach for Derivative and Collateral Outflows. With advanced approval from the [AGENCY] and in lieu of one or more of the foregoing provisions of this Section 32(f) and 32(c), a [BANK] may calculate its derivative and collateral outflows using an internally developed methodology.

Section 33(b) Net derivative cash inflow amount. The net derivative cash inflow amount as of the calculation date is the sum of the net derivative cash inflow, if greater than zero, for each counterparty. The net derivative cash inflow amount for a counterparty is the sum of the payments and collateral that the [BANK] will receive from the counterparty 30 calendar days or less from the calculation date under derivative transactions less, if the derivative transactions are subject to a qualifying master netting agreement, the sum amount of the payments and collateral that the [BANK] will make or deliver to the counterparty 30 calendar days or less from the calculation date under derivative transactions. This paragraph does not apply to amounts excluded from inflows under paragraph (a)(2) of this section and does not apply if a [BANK] calculates its derivative and collateral outflows in accordance with § .32(f)(7).

* * *

Thank you for considering these comments. We would be pleased to discuss them with you at your convenience. If you have any questions or if we can help facilitate scheduling a meeting with you, please do not hesitate to contact David Wagner at 212.613.9883 (email: david.wagner@theclearinghouse.org).

Sincerely yours,

David Wagner
Executive Managing Director and
Head of Finance Affairs
The Clearing House

Alison Touhey
Senior Vice President
American Bankers Association

Richard Foster
Vice President & Senior Counsel for
Regulatory and Legal Affairs
Financial Services Roundtable

Som-lok Leung
Executive Director
IACPM

cc: The Honorable Thomas J. Curry
Office of the Comptroller of the Currency

Amy Friend
Office of the Comptroller of the Currency

Kerri Corn
Office of the Comptroller of the Currency

The Honorable Daniel Tarullo
Board of Governors of the Federal Reserve System

The Honorable Jerome Powell
Board of Governors of the Federal Reserve System

Scott Alvarez
Board of Governors of the Federal Reserve System

Michael Gibson
Board of Governors of the Federal Reserve System

Mark Van Der Weide
Board of Governors of the Federal Reserve System

Anna Lee Hewko
Board of Governors of the Federal Reserve System

David Emmel
Board of Governors of the Federal Reserve System

The Honorable Martin J. Gruenberg
Federal Deposit Insurance Corporation

Jeremiah Norton
Federal Deposit Insurance Corporation

George French
Federal Deposit Insurance Corporation

Rick Osterman
Federal Deposit Insurance Corporation

Kyle Hadley
Federal Deposit Insurance Corporation

Jason Cave
Federal Deposit Insurance Corporation

Bob Bean
Federal Deposit Insurance Corporation

William C. Dudley
Federal Reserve Bank of New York

Diane K. Dobbeck
Federal Reserve Bank of New York

Brett Waxman
The Clearing House

Ryan Pozin
The Clearing House

Impact of U.S. Liquidity Coverage Ratio – Empirical Data Results

- Empirical data of cash flow estimates to quantify the impact of different behavioral scenarios on the U.S. LCR NPR compared to the base case LCR ratio (described below) were collected from eight U.S. Bank Holding Companies (the "Participating Banks").

- The peak outflow analysis compared two alternative scenarios to the average of the Base LCR reported numbers of the Participating Banks (the "Base LCR Case"). The Base LCR reflects the cumulative net cash flows through 30 days, while the two scenarios reflect different assumptions about the timing of daily behavioral inflows and outflows across the 30-day period. In total, the Base LCR and the two scenarios capture the same dollar amounts and inflows / outflows.

- The empirical data shows that the impact of the peak day calculation is very sensitive to the assumptions around the timing of behavioral inflows and outflows. A summary of the impacts utilizing different behavioral timing assumptions is summarized below:

Scenario	Definition	Weighted Average LCR Impact (ppt)	Median LCR Impact (ppt)	Aggregate Cash Outflow Impact ($)
Base Case	The cumulative net cash outflows through day 30	**LCR:** 110%		**Net Cash Outflow:** $1,743.1 B
Scenario 1	All behavioral cash flows (both inflows and outflows) occur based on a straight line assumption (i.e., 1/30th of the cash flow each day).	-2	0	+ $29.7 B
Scenario 2	All behavioral cash flows (both inflows and outflows) occur on day 1.	-6	-3	+ $99.4 B

- For purposes of comparison, an example that demonstrates an even more conservative scenario would reflect behavioral outflows on day 1 while behavioral cash inflows occur on day 30. This example results in an even bigger reduction in the LCR; at least an additional 4 percentage point decline[1] from that observed in Scenario 2.

1. Amount noted is based on data collected from seven of the eight Participating Banks and compared to Scenario 2 for those same seven Banks.

Scenario #1: U.S. Proposal excludes Peak Day requirement – Base Scenario

- The simplified hypothetical balance sheet below is being presented for the purpose of assisting with the understanding of how the peak day requirement, as outlined in the U.S. proposed LCR, would apply in the following scenarios.

- Example Bank:

Base Hypothetical Balance Sheet for Scenarios 1 to 4	
High Quality Liquid Assets - Cash	30
High Quality Liquid Assets - U.S. Treasuries (UST)	40
High Quality Liquid Assets - U.S. Agencies	15
Loans to Non-FI (Contractual) - 3 Day	35
Loans to Non-FI (Contractual) - 15 Day	25
Loans to Non-FI (Contractual) - 3 Year	155
Total Assets	**300**
Non-FI Corporate Deposits (Non-Contractual)	270
Commercial Paper - 21 Day (Contractual)	0
Capital	30
Total Liabilities & Equity	**300**
Prescribed Haircut & Runoff Factors	
HQLA - UST / Cash	0%
HQLA - U.S. Agencies	15%
Loans to Non-FI (Contractual)	50%
Non-FI Corporate Deposits (Non-Contractual)	40%

Non-FI = Non-Financial Institution

- This example bank is funded primarily by Non-Financial Institution Corporate deposits; an example of a bank funded with retail deposits would face a similar situation as the subsequent pages depict.
- By applying the U.S. Proposal rules excluding the peak day requirement, the table below demonstrates that the example bank can be above minimum standards with the 30-day Basel LCR standard.
- Please note, the Scenarios do not take into account the 75% inflow cap that would be required under Section 30(d)(2) of the U.S. Proposal.

Appendix B – Hypothetical Scenarios

Scenario 1: U.S. Proposal Excluding Peak Day Requirement - Base Scenario

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8-15	Days 16-22	Days 23-30	Cum. 30 Day	
HQLA - Cash											30	(a)
HQLA - UST (Post-Haircut)											40	(b)
HQLA - U.S. Agencies (Post-Haircut)											13	(c)
Total HQLA											**83**	(d) = (a) + (b) + (c)
Contractual Loan Inflows											30	
Deposit Runoff											(108)	
Net (Outflows)/Inflows											(78)	(g) = (e) + (f)
Cumulative Net Outflows											**(78)**	(h) = (g)
Net Surplus											5	(i) = (d) + (h)
LCR Ratio											106%	(j) = (d) / -(h)

Scenario #2: Peak Day Requirement with Overnight Deposit Runoff

- By applying the U.S. Proposal (with the peak day requirement), the example bank would be required to adjust the composition of its balance sheet in order to comply with the peak day requirement.
- With an overnight deposit runoff assumption, approximately 40% of deposits run off on the very first day, zero percent runoff on the subsequent 29 days, and 40% cumulatively by day thirty.
- The peak day requirement would effectively convert the LCR to a Day 1 stress scenario.

Scenario 2: U.S. Proposal with Peak Day Requirement & Overnight Deposit Runoff

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8- 15	Days 16- 22	Days 23- 30	Cum. 30 Day	
HQLA - Cash	30										30	(a)
HQLA - UST (Post-Haircut)	40										40	(b)
HQLA - U.S. Agencies (Post-Haircut)	13										13	(c)
Total HQLA	**83**										**83**	(d) = (a) + (b) + (c)
Contractual Loan Inflows	–	–	18	–	–	–	–	13	–	–	30	(e)
Overnight Deposit Runoff	(108)	–	–	–	–	–	–	–	–	–	(108)	(f)
Net (Outflows)/Inflows	(108)	–	–	–	–	–	–	–	–	–	(78)	(g) = (e) + (f)
Cumulative Net Outflows	**(108)**	**(108)**	**(91)**	**(91)**	**(91)**	**(91)**	**(91)**	**(78)**	**(78)**	**(78)**	**(78)**	(h) = Day X (g) + Day X-1 (h)
Net Surplus	(25)	(25)	(8)	(8)	(8)	(8)	(8)	5	5	5	5	(i) = Day 1 (d) + (h)
LCR Ratio	77%										106%	(j) = Day 1 (d) / -(h)

Scenario #3: Peak Day Requirement with Steep Deposit Outflows

- By applying the U.S. Proposal peak day requirement with a sample steep deposit runoff assumption, the table below demonstrates that the example bank is appropriately above the minimum standards for every one of the 30 days.
- With the steep deposit runoff assumption, approximately 8% of deposits run off on the very first day, followed by another 32% runoff in the subsequent 29 days, and 40% cumulatively by Day 30.

Scenario 3: U.S. LCR Proposal with Peak Day Requirement & Sample Steep Deposit Runoff

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8-15	Days 16-22	Days 23-30	Cum. 30 Day	
HQLA - Cash	30										30	(a)
HQLA - UST (Post-Haircut)	40										40	(b)
HQLA - U.S. Agencies (Post-Haircut)	13										13	(c)
Total HQLA	**83**										**83**	(d) = (a) + (b) + (c)
Contractual Loan Inflows	–	–	18	–	–	–	–	13	–	–	30	(e)
Steep Deposit Runoff	(22)	(22)	(9)	(8)	(3)	(3)	(9)	(16)	(10)	(7)	(108)	(f)
Net (Outflows)/Inflows	(22)	(22)	9	(8)	(3)	(3)	(9)	13	(10)	(7)	(78)	(g) = (e) + (f)
Cumulative Net Outflows	**(22)**	**(44)**	**(35)**	**(43)**	**(46)**	**(49)**	**(58)**	**(61)**	**(71)**	**(78)**	**(78)**	(h) = Day X (g) + Day X-1 (h)
Net Surplus	61	39	47	40	37	34	24	21	11	5	5	(i) = Day 1 (d) + (h)
LCR Ratio	373%										106%	(j) = Day 1 (d) / -(h)

Scenario #4: Peak Day Requirement with Straight-line Deposit Runoff

- By applying the U.S. Proposal peak day requirement with a straight-line deposit runoff assumption, the table below demonstrates that the example bank is above the minimum standards for every one of the 30 days.
- With the straight-line deposit runoff assumption, approximately 1% of deposits run off on the first day, and 40% cumulatively by Day 30.

Scenario 4: U.S. Proposal with Peak Day Requirement & Straight-line Deposit Runoff

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8-15	Days 16-22	Days 23-30	Cum. 30 Day	
HQLA - Cash	30										30	(a)
HQLA - UST (Post-Haircut)	40										40	(b)
HQLA - U.S. Agencies (Post-Haircut)	13										13	(c)
Total HQLA	**83**										**83**	(d) = (a) + (b) + (c)
Contractual Loan Inflows	–	–	18	–	–	–	–	13	–	–	30	(e)
Straight-line Deposit Runoff	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(29)	(25	(29)	(108)	(f)
Net (Outflows)/Inflows	(4)	(4)	14	(4)	(4)	(4)	(4)	(16)	(25)	(29)	(78)	(g) = (e) + (f)
Cumulative Net Outflows	**(4)**	**(7)**	**7**	**3**	**(1)**	**(4)**	**(8)**	**(24)**	**(49)**	**(78)**	**(78)**	(h) = Day X (g) + Day X-1 (h)
Net Surplus	79	76	89	86	82	79	75	59	34	5	5	(i) = Day 1 (d) + (h)
LCR Ratio	2299%										106%	(j) = Day 1 (d) / -(h)

Deposit Outflows – Comparison

Deposit Runoffs Under Different Modelling Alternatives

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8-15	Days 16-22	Days 23-30	Cum. 30 Day
Overnight Runoff	(108)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(108)
	40%	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**40%**
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**	**Days 8-15**	**Days 16-22**	**Days 23-30**	**Cum. 30 Day**
Sample Steep Runoff	(22)	(22)	(9)	(8)	(3)	(3)	(9)	(16)	(10)	(7)	(108)
	8%	**8%**	**3%**	**3%**	**1%**	**1%**	**3%**	**6%**	**4%**	**2%**	**40%**
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**	**Days 8-15**	**Days 16-22**	**Days 23-30**	**Cum. 30 Day**
Straight-line Runoff	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(29)	(25)	(29)	(108)
	1%	**1%**	**1%**	**1%**	**1%**	**1%**	**1%**	**11%**	**9%**	**11%**	**40%**

Balance Sheet Supporting Scenario #5 Analysis – Incremental Wholesale Borrowing

- Under the U.S. Proposal (with peak day requirement and overnight deposit outflows), as shown in Scenario #2, the example bank would be incentivized to comply with the LCR by issuing short maturity instruments that cover the first few days/weeks.
  - In the example, $25 billion of short-term wholesale funding is issued and invested in balance sheet cash.

Base Balance Sheet for Scenarios 1 to 4	
High Quality Liquid Assets - Cash	30
High Quality Liquid Assets - U.S. Treasuries (UST)	40
High Quality Liquid Assets - U.S. Agencies	15
Loans to Non-FI (Contractual) - 3 Day	35
Loans to Non-FI (Contractual) - 15 Day	25
Loans to Non-FI (Contractual) - 3 Year	155
Total Assets	**300**
Non-FI Corporate Deposits (Non-Contractual)	270
Commercial Paper - 21 Day (Contractual)	0
Capital	30
Total Liabilities & Equity	**300**

Adjusted Balance Sheet for Scenario 5	
High Quality Liquid Assets - Cash	55
High Quality Liquid Assets - U.S. Treasuries (UST)	40
High Quality Liquid Assets - U.S. Agencies	15
Loans to Non-FI (Contractual) - 3 Day	35
Loans to Non-FI (Contractual) - 15 Day	25
Loans to Non-FI (Contractual) - 3 Year	155
Total Assets	**325**
Non-FI Corporate Deposits (Non-Contractual)	270
Commercial Paper - 21 Day (Contractual)	25
Capital	30
Total Liabilities & Equity	**325**

$25bn CP issuance invested in cash

Prescribed Haircut & Runoff Factors	
HQLA - UST / Cash	0%
HQLA - U.S./ Agencies	15%
Loans to Non-FI (Contractual)	50%
Non-FI Corporate Deposits (Non-Contractual)	40%

Non-FI = Non-Financial Institution

Scenario #5: Peak Day Requirement with Overnight Deposit Runoff & Short-Term Borrowing

- By applying the U.S. Proposal (with the peak day requirement and overnight deposit outflows) to a balance sheet composition that introduces incremental borrowings, the table below demonstrates that the example bank would be able to comply with the U.S. Proposal. An example bank would be incented to issue short-term instruments, either CP or TDs.

Scenario 5: U.S. Proposal with Peak Day Requirement & Overnight Deposit Runoff & Incremental Short Term Borrowings

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Days 8-15	Days 16-22	Days 23-30	Cum. 30 Day	
HQLA - Cash	55										55	(a)
HQLA - UST (Post-Haircut)	40										40	(b)
HQLA - U.S. Agencies (Post-Haircut)	13										13	(c)
Total HQLA	**108**										**108**	(d) = (a) + (b) + (c)
Contractual Loan Inflows	–	–	18	–	–	–	–	13	–	–	30	(e)
Overnight Deposit Runoff	(108)	–	–	–	–	–	–	–	–	–	(108)	(f)
Contractual CP Outflows	–	–	–	–	–	–	–	–	(25)	–	(25)	(g)
Net (Outflows)/Inflows	(108)	–	18	–	–	–	–	13	(25)	–	(103)	(h) = (e) + (f) + (g)
Cumulative Net Outflows	**(108)**	**(108)**	**(91)**	**(91)**	**(91)**	**(91)**	**(91)**	**(78)**	**(103)**	**(103)**	**(103)**	(i) = Day X (h) + Day X-1 (i)
Net Surplus	(0)	(0)	17	17	17	17	17	30	5	5	5	(j) = Day 1 (d) + (i)
LCR Ratio	100%										105%	(k) = Day 1 (d) / -(i)

- The U.S. Proposal's peak day requirement may encourage short-term borrowing to solve the overnight deposit outflow assumption by focusing the bank on its most binding constraint, which will typically be the very first day.

Appendix C – Subsidiary Insured Depository Institution Analysis

- Data as of March 31, 2014 for 17 insured depository institutions ("IDIs") to quantify the impact of the U.S. Proposal were collected from 11 U.S. bank holding companies (7 U.S. G-SIBs and 4 regional banks) (the "Participating Banks").
- The impacts quantified include the proposed U.S. Proposal's requirement to calculate the LCR at an IDI level, the requirement to capture intercompany transactions in the inflows and outflows of the IDI LCR, and the limitations around fungibility of HQLA by entity.

$ in millions	Consolidated BHC LCR Calculation[1]	IDI LCR (11 IDI's <100%)[2]	IDI LCR (6 IDI's >100%)[2]
LCR %	**105%**	**82%**	**117%**
Excess/ (Deficit)		**A (279,532)**	**73,351**
HQLA	**2,114,121**	**1,293,439**	**500,337**
Level 1	1,732,830	1,037,788	412,835
Level 2A	393,231	281,193	78,714
Level 2B	21,104	6,229	8,788
Level 2 Cap	33,044	31,771	-
External NFO	**2,016,678**	**1,342,078**	**362,828**
External Inflows	797,005	43,252	75,625
External Outflows	2,813,683	1,385,330	438,453
Internal NFO C		**230,892**	**64,158**
Internal Inflows	-	108,556	-
Internal Outflows	-	339,449	64,158
Trapped excess HQLA[3]			B *27,937*

A Of the 17 IDIs analyzed, there are 11 that currently fall below the 100% LCR requirement. In order to achieve 100% LCR at the IDI level, those IDIs would need to increase HQLA by a total of $280B, a 22% increase from their current IDI HQLA.

B There are 6 IDIs that are currently at or above the 100% LCR requirement. Within those IDIs, there is $28B of excess HQLA that is "trapped", or that would not be counted towards the consolidated BHC LCR under the U.S. Proposal[3].

C There is $295B of internal net funding outflows across all 17 IDI LCRs, which represent 16% of the HQLA currently held at the IDIs.

Table notes / assumptions:

1. The Consolidated BHC LCR values do not equal the sum of the values in the two IDI LCR columns because some firms have additional entities with HQLA and net funding outflows.
2. Data for the 17 IDI LCR calculations were split across two columns so that an individual IDI's deficit was not netted against another IDI's surplus.
3. Trapped excess HQLA has been identified by firms as HQLA that is not available for transfer to the top-tier parent entity during times of stress due to statutory, regulatory, contractual, or supervisory restrictions.

Impact of U.S. Liquidity Coverage Ratio – Data results

- The U.S. LCR Proposal currently requires a minimum $280B increase in HQLA or decrease in outflows at the IDI level. However, this number is probably understated as firms will likely aim to target an IDI LCR >100%.
  - For the IDIs currently not compliant, there is a $359B distance to 105% LCR compliance and a $437 billion distance to 110% LCR compliance.[1]
  - For the Consolidated Bank Holding Companies currently not compliant, there is a $99B distance to 100% LCR compliance, a $128B distance to 105% LCR compliance, and $158B distance to a 110% LCR compliance.[1]
- Also, it is important to note that firms already hold a large portion of HQLA at the IDI level: 85% of total HQLA is already being held at the IDI level for the Participating Banks.

1. Amounts stated do not capture any potential overlap or ability to count HQLA in both the BHC and IDI calculations.

Appendix C – Subsidiary Insured Depository Institution Analysis

- Suggested revisions to the U.S. Proposal that reduce the potential for trapped liquidity and negative impacts on the consolidated BHC LCR include:
  - Alignment of IDI level LCR calculations to the consolidated BHC LCR (*i.e.*, exclusion of intercompany inflows / outflows in IDI level calculations); and
  - Ability to include excess HQLA at the consolidated BHC in IDI level calculations.
- The analysis below summarizes the impact to the current data and calculations if the U.S. Proposal is to be revised as noted:

Proposed Revision	Impact
Exclusion of intercompany inflows / outflows in IDI level calculations	• $295B improvement in aggregate IDI calculation ($404B of outflows, $109B of inflows); • 12 IDI LCRs can be improved, with the LCR improvement ranging from 3 percentage points to over 3000 percentage points (median of 17 percentage points); and • Within these 12, 3 IDI LCRs would improve from < 100% to > 100%.
Ability to include excess HQLA at the consolidated BHC in IDI level calculations	• Of the 11 IDIs with < 100% LCR, 3 hold excess HQLA at the consolidated BHC level that could improve their IDI LCR; and • Ability to count the excess HQLA at the consolidated BHC level towards the 3 IDI level LCRs can reduce their deficits by a range of 77-100%.

Appendix C – Subsidiary Insured Depository Institution Analysis

- Firms' efforts to further increase their IDI LCR surplus by transferring HQLA to the IDI entity would cause a reduction in their BHC consolidated LCR[1].
- There is currently approximately $28B of trapped HQLA in the Participating Bank IDIs, but the effect is probably understated since 11 of the IDIs included in the sample are operating at < 100% LCR.
- The magnitude of trapped HQLA and its impact on the consolidated BHC LCR would increase, assuming IDIs begin operating at the following LCR targets:

IDI LCR Targets	Current	105%[2,3]	110%[2,3]	Greater of Consolidated BHC LCR or 105%[3,4]
Trapped HQLA ($)	$28 B	$82 B	$165 B	$174 B
Aggregate % Point Reduction in Consolidated BHC LCR		4%	8%	8%

1. Assumes that current HQLA, net outflow, and balance sheet values remain constant.
2. Some IDIs experience a reduction in excess HQLA while others experience an increase.
3. Assumes all incremental excess HQLA at the IDI level is restricted due to regulations and can not be transferred to the BHC.
4. Targets an IDI LCR that is equal to the current LCR for the consolidated BHC or 105%, whichever is greater.

Appendix C – Subsidiary Insured Depository Institution Analysis

- Under the current U.S. Proposal, there is the potential for peak net cumulative third-party outflows to occur on different days for the Consolidated BHC and the IDI. A simplified example detailing this occurrence can be found below.

Peak Day

	Day	1	2	3	4	5	6	7	8-15	16-22	23-30
IDI	Deposit Runoff	-2	-2	-2	-2	-2	-2	-2	-16	-14	-16
	Net Cumulative Third-Party Outflows	-2	-4	-6	-8	-10	-12	-14	-30	-44	-60
Other Entities	Free Credits	-150	0	0	0	0	0	0	0	0	0
	Margin Debits	0	0	10	20	30	40	50	50	50	50
	All Other Flows	-40	-30	-20	-10	0	0	0	0	0	0
	Net Cumulative Third-Party Outflows	-190	-220	-230	-220	-190	-150	-100	-50	0	50
Consolidated BHC	**Net Cumulative Third-Party Outflows**	**-192**	**-224**	**-236**	**-228**	**-200**	**-162**	**-114**	**-80**	**-44**	**-10**

Difference of $54

- The peak net cumulative third-party outflow for the consolidated group is $236 and occurs on day 3. This occurs when an entity has significant overnight outflows (*e.g.*, loss of free credits) with offsetting inflows in later periods (*e.g.*, unwind of margin debits).
- On a standalone basis, the peak net cumulative third-party outflow for the IDI is $60 and occurs on day 30. This occurs when an entity experiences continual runoff through the duration of the 30 days (*e.g.*, deposits runoff).
- There is potential for Days 4-30 net cumulative third-party outflows to impact the standalone IDI LCR that would not be included in the Consolidated BHC Day 1-3 LCR. In this example, a $54 HQLA shortfall will occur.

Information on internal LCR inflows and outflows by entity

- The table below provides insight into the internal inflows and outflows at the IDI level and the legal entities with which they are transacting.

Total LCR Internal NFO:	**$295,050**

LCR Internal Inflows:	**$108,556**
Parent	$0 *0%*
Other legal entities[1]	$91,925 *85%*
Across IDIs[2]	$16,631 *15%*

LCR Internal Outflows:	**$403,607**
Parent	$172,559 *43%*
Other legal entities[1]	$214,417 *53%*
Across IDIs[2]	$16,631 *4%*

1. "Other legal entities" refers to transactions between an IDI that is subject to the standalone LCR calculation and non-IDI affiliates (i.e., legal entities, besides the parent, that do not consolidate into the IDI). This would potentially include transactions with broker-dealers.
2. "Across IDIs" refers to transactions occurring between IDIs that are subject to the standalone LCR calculation. This will only occur when a bank has two or more IDI LCR calculations and there are inflows and outflows occurring between those IDIs.

APPENDIX D

REQUIREMENTS FOR MAINTAINING COLLATERAL;
TYPES OF COLLATERAL HELD AS SECURITY

REGULATORY REQUIREMENTS

Federal regulations state that if a national bank has investment discretion or discretion over distributions with respect to a fiduciary account, such bank may not allow funds awaiting investment or distribution to remain uninvested and undistributed any longer than is reasonable for the proper management of the account and consistent with applicable law.[35] The regulations allow a national bank to deposit fiduciary account funds that are awaiting investment or distribution in the commercial, savings, or other department of the bank, unless prohibited by applicable law.[36] However, the regulations also require a bank that deposits such amounts in its own accounts to set aside collateral to secure such deposits to the extent such deposits are not insured by the FDIC. Thus, under 12 CFR 9.10(b), banks are required to set aside appropriate collateral as security under the control of fiduciary officers and employees for self-deposits that exceed FDIC insurance coverage. The market value of collateral set aside must at all times equal or exceed the amount of the uninsured fiduciary funds. To determine collateral requirements, a bank must have procedures in place to identify all self-deposits of fiduciary funds awaiting investment or distribution and the applicable FDIC insurance coverage for these funds. In 2010 the OCC recognized, in a bulletin on the fiduciary activities of national banks, the benefits of self-depositing fiduciary funds, as it stated that such deposits can provide a bank with increased liquidity, stable funding, and low-cost deposits.[37] In that bulletin, the OCC also stated that

> [c]ollateral must be appropriate when pledged and continue to be appropriate as long as it remains pledged. If the pledged collateral characteristics change so that the collateral no longer meets the requirements of 12 CFR 9.10(b)(2), conforming collateral must replace the ineligible collateral. Pledged collateral must be valued frequently enough to ensure that its value equals or exceeds the bank's pledge requirement at all times. Market activity, price volatility of the pledged securities, and the amount by which the actual collateral exceeds required collateral will dictate the frequency of valuation.

Banks provide corporate trust services and serve as trustee for issuances of corporate and municipal bonds, mortgage-backed and asset-backed securities, and collateralized debt obligations. In many of those transactions, banks hold funds that are subject to periodic distributions (primarily principal and interest distributions) or subject to withdrawal upon the satisfaction of certain contractual provisions (such as construction escrows or payments for adding assets to the collateral backing the related securities). These banks collateralize those amounts in compliance with the self-depositing fiduciary rule set forth in 12 CFR 9.10(b).

[35] 12 CFR 9.10(a).
[36] 12 CFR 9.10(b).
[37] OCC Bulletin 2010-37 (the "**2010 OCC Bulletin**").

APPENDIX D

STATUTORY REQUIREMENTS

In addition to the requirements set forth in 12 CFR 9.10(b), bank corporate trust departments are required by many of their municipal customers to comply with state statutory requirements with respect to deposits they hold in such customers' trust accounts. Many banks have relationships with municipalities in many parts of the country. State laws and/or regulations typically require municipalities to require banks holding municipal funds to collateralize such deposits.[38] Although each state has slightly different rules relating to the issue, the general tenor of the laws are the same: in order to protect state and local government funds, such laws require banks holding such amounts to collateralize such deposits to the extent that the deposits are not protected by deposit insurance. The state laws typically require collateral with a value at least equal to between 100-110% of the amount of the related deposits, so there are circumstances in which the amount of collateral exceeds the amount of the related deposit. Also, unlike the temporary deposits collateralized because of 12 CFR 9.10(b), the funds collateralized because of statutory requirements must be collateralized throughout the life of the relevant transaction, not just prior to distribution.

CONTRACTUAL REQUIREMENTS

Similar to the statutory requirements noted above, certain of the transaction documents governing deposits held by corporate trust departments of banks contain requirements that the funds must be collateralized. The effect on banks is the same as the statutory requirements - deposits held pursuant to such documents must be collateralized (but in accordance with document standards rather than state law requirements).

TYPES OF COLLATERAL HELD AS SECURITY

The collateral held by banks to satisfy the requirements above depends in part on the reason for the requirement. Twelve CFR 9.10(b)(2) specifies the following as acceptable collateral for deposit accounts that must be collateralized:

> (i) Direct obligations of the United States, or other obligations fully guaranteed by the United States as to principal and interest;
>
> (ii) Securities that qualify as eligible for investment by national banks pursuant to 12 CFR part 1;
>
> (iii) Readily marketable securities of the classes in which state banks, trust companies, or other corporations exercising fiduciary powers are permitted to invest fiduciary funds under applicable state law;
>
> (iv) Surety bonds, to the extent they provide adequate security, unless prohibited by applicable law; and

[38] *See*, *e.g.*, Minn. Stat. § 118A.03, 20 NCAC 07 .0107, 30 ILCS 235/1, with respect to Minnesota, North Carolina and Illinois.

(v) Any other assets that qualify under applicable state law as appropriate security for deposits of fiduciary funds.

As noted in the 2010 OCC Bulletin:

> [c]ollateral must be appropriate when pledged and continue to be appropriate as long as it remains pledged. If the pledged collateral characteristics change so that the collateral no longer meets the requirements of 12 CFR 9.10(b)(2), conforming collateral must replace the ineligible collateral. Pledged collateral must be valued frequently enough to ensure that its value equals or exceeds the bank's pledge requirement at all times. Market activity, price volatility of the pledged securities, and the amount by which the actual collateral exceeds required collateral will dictate the frequency of valuation.

The 2010 OCC Bulletin also notes, regarding the rate of return on such deposits:

> Twelve CFR 9.10(a) requires that with "respect to a fiduciary account for which a national bank has investment discretion, the bank shall obtain for funds awaiting investment or distribution a rate of return that is consistent with applicable law."[39] While national banks are not required to obtain the absolute maximum rate of return for fiduciary funds awaiting investment or distribution, they must ensure and be able to demonstrate that the rate paid on self-deposits is consistent with applicable law and with their fiduciary responsibilities.

Note that 12 CFR 9.10 is fairly broad with respect to the collateral that can be used to satisfy the collateralization requirement. The state statutes/regulations tend to have some more specificity. An example of state collateral requirements can be seen in the relevant Illinois statute:

> (1) in bonds, notes, certificates of indebtedness, treasury bills or other securities now or hereafter issued, which are guaranteed by the full faith and credit of the United States of America as to principal and interest;
>
> (2) in bonds, notes, debentures, or other similar obligations of the United States of America, its agencies, and its instrumentalities;

[39] Applicable law includes applicable federal or state law, court order, or governing instrument. For accounts subject to ERISA, 29 U.S.C. 1108(b)(4) permits a national bank that is a fiduciary or other party-in-interest to a plan to self-deposit plan funds, if, in addition to other requirements, the deposits bear a reasonable interest rate.

(3) in interest-bearing savings accounts, interest-bearing certificates of deposit or interest-bearing time deposits or any other investments constituting direct obligations of any bank as defined by the Illinois Banking Act;

(4) in short term obligations of corporations organized in the United States with assets exceeding $500,000,000 if (i) such obligations are rated at the time of purchase at one of the 3 highest classifications established by at least 2 standard rating services and which mature not later than 270 days from the date of purchase, (ii) such purchases do not exceed 10% of the corporation's outstanding obligations and (iii) no more than one-third of the public agency's funds may be invested in short term obligations of corporations; or

(5) in money market mutual funds registered under the Investment Company Act of 1940, provided that the portfolio of any such money market mutual fund is limited to obligations described in paragraph (1) or (2) of this subsection and to agreements to repurchase such obligations.[40]

Other states have their own lists (*see*, *e.g.*, 20 NCAC 07 .0201 and Minn. Stat. § 118A.03-.05), but the idea of each one is the same – the collateral is intended to be relatively risk-free in order to protect the collateral of the government entities whose funds a bank holds.

[40] 30 ILCS 235/2.

APPENDIX E

Financial Institution Means:	**Regulated Financial Company Means:**
(1) A bank holding company;	(1) A bank holding company;
savings and loan holding company;	savings and loan holding company (as defined in section 10(a)(1)(D) of the Home Owners' Loan Act (12 U.S.C. 1467a(a)(1)(D));
nonbank financial institution supervised by the Board under Title I of the Dodd-Frank Act;	nonbank financial institution supervised by the Board of Governors of the Federal Reserve System under Title I of the Dodd-Frank Act (12 U.S.C. 5323);
depository institution;	(3) A depository institution;
foreign bank;	foreign bank;
credit union;	credit union;
industrial loan company, industrial bank, or other similar institution described in section 2 of the Bank Holding Company Act;	industrial loan company, industrial bank, or other similar institution described in section 2 of the Bank Holding Company Act of 1956, as amended (12 U.S.C. 1841 et seq.);
national association, state member bank, or state non-member bank that is not a depository institution;	national bank, state member bank, or state non-member bank that is not a depository institution;
insurance company;	(4) An insurance company;
securities holding company as defined in section 618 of the Dodd-Frank Act;	(5) A securities holding company as defined in section 618 of the Dodd-Frank Act (12 U.S.C. 1850a);
broker or dealer registered with the SEC under section 15 of the Securities Exchange Act;	broker or dealer registered with the SEC under section 15 of the Securities Exchange Act (15 U.S.C. 78o);
futures commission merchant as defined in section 1a of the Commodity Exchange Act;	futures commission merchant as defined in section 1a of the Commodity Exchange Act of 1936 (7 U.S.C. 1 et seq.);
swap dealer as defined in section 1a of the Commodity Exchange Act;	swap dealer as defined in section 1a of the Commodity Exchange Act (7 U.S.C. 1a);
security-based swap dealer as defined in section 3 of the Securities Exchange Act;	or security-based swap dealer as defined in section 3 of the Securities Exchange Act (15 U.S.C. 78c;
(2) Any designated financial market utility, as defined in section 803 of the Dodd-Frank Act;	(6) A designated financial market utility, as defined in section 803 of the Dodd-Frank Act (12 U.S.C. 5462); and
(3) Any entity not domiciled in the United States (or a political subdivision thereof) that is supervised and regulated in a manner similar to entities described in paragraphs (1) or (2) of this definition;	(7) Any company not domiciled in the United States (or a political subdivision thereof) that is supervised and regulated in a manner similar to entities described in paragraphs (1) through (6) of this definition (*e.g.,* a foreign banking organization, foreign insurance company, foreign securities broker or dealer or foreign designated financial market utility).

(4) Any other company: (i) Of which the [BANK] owns: (A) An investment in GAAP equity instruments of the company with an adjusted carrying value or exposure amount equal to or greater than $10 million; or (B) More than 10 percent of the company's issued and outstanding common shares (or similar equity interest), and (ii) Which is predominantly engaged in the following activities: (A) Lending money, securities or other financial instruments, including servicing loans; (B) Insuring, guaranteeing, indemnifying against loss, harm, damage, illness, disability, or death, or issuing annuities; (C) Underwriting, dealing in, making a market in, or investing as principal in securities or other financial instruments; or (D) Asset management activities (not including investment or financial advisory activities). (5) For the purposes of this definition, a company is "predominantly engaged" in an activity or activities if: (i) 85 percent or more of the total consolidated annual gross revenues (as determined in accordance with applicable accounting standards) of the company is either of the two most recent calendar years were derived, directly or indirectly, by the company on a consolidated basis from the activities; or (ii) 85 percent or more of the company's consolidated total assets (as determined in accordance with applicable accounting standards) as of the end of either of the two most recent calendar years were related to the activities	(2) A company included in the organization chart of a depository institution holding company on the Form FR Y-6, as listed in the hierarchy report of the depository institution holding company produced by the National Information Center (NIC) Web site, provided that the top-tier depository institution holding company is subject to a minimum liquidity standard under this part;
(6) Any other company that the [AGENCY] may determine is a financial institution based on activities similar in scope, nature, or operation to those of the entities included in (1) through	(*Note:* in the definition of HQLA, the obligations of "identified companies," like the obligations of regulated financial companies, are excluded from HQLA. Certain funding provided by these

(4).	entities is also assigned a 100% outflow rate. Identified company is defined as "any company that the [AGENCY] has determined should be treated the same for the purposes of this part as a regulated financial company, investment company, non-regulated fund, pension fund, or investment adviser, based on activities similar in scope, nature, or operations to those entities.")

Financial Institution Does Not Include:	**Regulated Financial Company Does Not Include:**
(i) GSEs;	(i) U.S. government-sponsored enterprises;
(ii) Small business investment companies, as defined in section 102 of the Small Business Investment Act of 1958 (15 U.S.C. 662);	(ii) Small business investment companies, as defined in section 102 of the Small Business Investment Act of 1958 (15 U.S.C. 661 et seq.);
(iii) Entities designated as Community Development Financial Institutions (CDFIs) under 12 U.S.C. 4701 et seq. and 12 CFR part 1805;	(iii) Entities designated as Community Development Financial Institutions (CDFIs) under 12 U.S.C. 4701 et seq. and 12 CFR part 1805; or
	(iv) Central banks, the Bank for International Settlements, the International Monetary Fund, or a multilateral development bank.
(iv) Entities registered with the SEC under the Investment Company Act of 1940 (15 U.S.C. 80a-1) or foreign equivalents thereof;	
(v) Entities to the extent that the [BANK]'s investment in such entities would qualify as a community development investment under section 24 (Eleventh) of the National Bank Act; and	
(vi) An employee benefit plan as defined in paragraphs (3) and (32) of section 3 of ERISA, a "governmental plan" (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code, or any similar employee benefit plan established under the laws of a foreign jurisdiction.	

APPENDIX F

The Clearing House. 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.

The American Bankers Association. The American Bankers Association represents banks of all sizes and charters and is the voice for the nation's 14 trillion banking industry and its 2 million employees. Learn more at www.aba.com.

The Financial Services Roundtable. As *advocates for a strong financial future*™, FSR represents the largest integrated financial services companies providing banking, insurance, payment and investment products and services to the American consumer. Member companies participate through the Chief Executive Officer and other senior executives nominated by the CEO. FSR member companies provide fuel for America's economic engine, accounting directly for $92.7 trillion in managed assets, $1.2 trillion in revenue, and 2.3 million jobs.

The International Association of Credit Portfolio Managers. The International Association of Credit Portfolio Managers (IACPM), with 89 member institutions located in 17 countries, is an industry association dedicated to the advancement of credit portfolio management. Founded in 2001, the organization's programs of meetings, studies, research and collaboration are designed to increase awareness of the value and function of credit portfolio management among financial markets worldwide, and to discuss and resolve issues of common interest to its members.