

Meeting Between Staffs of the Federal Reserve Board, the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), and the International Swaps and Derivatives Association
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Summary: Staffs of the Federal Reserve Board, FDIC, and OCC met with representatives of the International Swaps and Derivatives Association to discuss the notice of proposed rulemaking to establish the Net Stable Funding Ratio (NSFR) in the United States. Specifically, the representatives discussed the treatment of potential valuation changes in a firm's derivatives portfolio under the proposed NSFR.

Attachment

NSFR – Future Funding Risk Alternatives – 2nd ISDA QIS Analysis

1. Background

ISDA and GFMA would like to present the key findings from the industry's second Net Stable Funding Ratio (NSFR) Quantitative Impact Study (QIS) on potential alternatives to the Basel Committee on Banking Supervision's (BCBS) 20% RSF AddOn for derivatives liabilities. The QIS, conducted by the Global Association of Risk Professionals (GARP), comprises data submitted by 15¹ banks to the BCBS as a part of the March 2017 monitoring exercise based on December 2016 data. The objective of this initiative is to analyse the aggregate impacts of different alternative approaches designed to account for the future funding risk of derivatives.

The industry has previously expressed concerns with the 20% RSF AddOn that applies to gross derivatives liabilities (GDLs). As stated in our 2016 industry response to the European Commission's (EC) Consultation Paper on the NSFR² as well as our 2016 industry response to US Agencies' NSFR proposal³, the industry does not believe it is appropriate to include in the NSFR a requirement to capture future derivative funding risk. Such a requirement is already included in the Liquidity Coverage Ratio (LCR), and the NSFR does not include other sources of similar contingent risk. Moreover the calibration of the 20% GDL RSF AddOn approach is extreme and not sufficiently grounded.

The measure will result in an additional funding requirement of €159 billion (\$167 billion) for 14 of the 15 participating banks having provided this impact data, which is estimated to correspond to an industry-wide funding requirement of €367 billion (\$386 billion) to be allocated to derivatives portfolios globally⁴. This is not only unjustifiably large, but the additional requirement will need to be funded longer term, and will therefore be more expensive. These additional costs may have a significant negative impact on the liquidity of derivatives markets and the ability of end users to hedge financial risks at an acceptable cost.

As stated in our 1st NSFR QIS from May 2017, if policymakers insist on incorporating a future funding risk requirement, the industry believes the 20% GDL RSF AddOn is not an appropriate measure of a bank's contingent derivative funding risk as it is both disproportionate and risk-insensitive. The industry therefore welcomes the BCBS decision to revisit the 20% GDL RSF AddOn, and work towards a more credible alternative proposal, informed by additional data collected under the Basel III monitoring exercise.

2. Executive Summary

In its 2nd NSFR QIS, the industry has further assessed alternative approaches reflecting future funding risk from derivatives with the aim of identifying a credible approach that is:

- Non-volatile and predictable, as long term funding strategies cannot be adjusted frequently;
- Risk sensitive, adaptable to the heterogeneous portfolios of every institution and to every businesses-mix;
- Proportionate to expected funding requirement;
- Easy to implement and consistent with the existing liquidity risk framework.

¹ Bank of America, BNP Paribas, Citi, Commerzbank, Credit Agricole, Credit Suisse, Deutsche Bank, Goldman Sachs, Intesa San Paolo, JPMorgan Chase, Morgan Stanley, Natixis, Nomura, Nordea and Societe Generale

² <http://www2.isda.org/attachment/ODQ3OQ==/AFME-ISDA-IIF%20EC%20NSFR%20Response.pdf>

³ [http://www2.isda.org/attachment/ODY5NQ==/ISDA%20US%20NPR%20NSFR%20Response%20FINAL%20\[050816\].pdf](http://www2.isda.org/attachment/ODY5NQ==/ISDA%20US%20NPR%20NSFR%20Response%20FINAL%20[050816].pdf)

⁴ Based on assumption that the 14 banks having provided figures for ratio ALT.1.A represent 43% of the global banking industry.

This 2nd NSFR QIS has been performed using data from the “NSFR additional” worksheet of the BCBS Monitoring Workbook. The following table summarizes the key findings:

Approaches	Assessment	Additional funding requirements*	Industry Considerations
Basel 20% GDL RSF AddOn	<ul style="list-style-type: none"> Potentially volatile Non risk sensitive Conservatively calibrated Easy to implement 	Additional funding requirement of €367bn across the industry.	The proposed Basel 20% GDL AddOn is disproportionate and non-risk sensitive and does not capture future derivative funding risk.
Floor based on 20% of GDL	<ul style="list-style-type: none"> Moderately volatile Floor is non risk sensitive Acts as an effective backstop Easy to implement 	20% of GDL is equivalent to 40% of the main Basel NSFR RSF for derivatives.	Whilst non-risk sensitive, a floor based on 20% GDL acts as an effective backstop to derivatives funding requirements and is easy to implement.
Historical Look-Back Approaches	<ul style="list-style-type: none"> Moderately volatile Backward looking Conservatively calibrated Not difficult to implement 	Additional funding requirement of €26bn to €345bn across the industry. (6%-93% smaller than 20% GDL AddOn depend. on methodology)	Any HLBA alternative approach is by definition backward looking and would need to include a forward looking component to constitute a potential alternative.
SA-CCR Single Netting Set (SNS)	<ul style="list-style-type: none"> Potentially volatile Risk sensitive Very conservatively calibrated Burdensome calculation currently 	Additional funding requirement of €1.30tr across the industry. (equivalent to 3.55x the 20% GDL AddOn**)	SA-CCR based approaches as tested are not appropriate for calculating future funding requirements for derivatives portfolios without substantial recalibrations and modifications.
SA-CCR Absolute Value AddOn (EU Commission’s approach)	<ul style="list-style-type: none"> Very volatile Inaccurately risk sensitive Conservatively calibrated Burdensome calculation currently 	Additional funding requirement of €378bn across the industry. (similar to the 20% GDL AddOn**)	They are either too volatile or extremely conservatively calibrated.

*Based on NSFR QIS 2 results and assumption that the 14 banks building ratio ALT.1.A represent 43% of the global banking industry

**Calculated by comparing [SA-CCR + 10% of uncollateralized GDL] with 20% of GDL

Industry Recommendation

In the absence of any credible risk-sensitive alternative to the 20% GDL RSF AddOn approach, the industry supports an approach using 20% of GDL as a floor to the main derivatives Required Sable Funding calculation. Such a measure would act as a backstop to derivatives funding requirements and would be easy to implement.

All other alternatives examined thus far, based on either SA-CCR or HLBA variants, are inherently flawed in that they either (i) are conservatively calibrated, (ii) produce requirements that are disproportionate to the funding risk associated with derivatives portfolios, (iii) are highly volatile, or (iv) in the case of the HLBA, backward looking.

Finally, the industry is concerned with proposals to apply an AddOn for unmargined derivatives⁵. It is understood that such a measure is designed to account for contingent funding risk associated with future collateral or contractual cash outflows that would be generated from the activation of ratings downgrade triggers on unmargined trades. However, the calibration of such a measure based on 10% of GDL⁶ would grossly overestimate the risk it is trying to capture. The industry firmly thinks that such a measure should not be retained. Consistently, a 20% GDL floor excluding unmargined derivatives could be contemplated.

⁵ The data collected by the BCBS on downgrade risk in the "NSFR Additional" panel of the Monitoring Workbook significantly overstates the actual funding risk arising from unmargined trades, as the collected data reflects downgrade risks for both margined and unmargined derivatives.

⁶ As proposed in the European Commission’s CRR II package.

3. Analysis of the alternative approaches

a. The 20% of GDL Floor Approach

Floor definition: RSF for derivatives is equal to the maximum of:

- Derivatives RSF + 85% of Initial Margin (IM) posted on house accounts,
- 20% of GDL

The following two approaches were assessed and compared to 20% of GDL:

- BCBS Derivatives RSF + 85% of Initial Margin (IM) posted on house accounts: difference between derivatives assets (net of some cash VM received⁷) and derivatives liabilities (net of cash and non-cash VM posted) + 85% of IM posted on house trades; and
- EC Proposed Derivatives RSF + 85% of IM posted on house accounts: difference between derivatives assets (net of cash and non-cash VM received) and derivatives liabilities (net of cash and non-cash VM posted) + 85% of IM posted on house trades.

Required funding under BCBS Derivatives RSF + 85% of house IM posted is **2.50x** the 20% GDL approach and shows a relatively small standard deviation (47% of ratio value). The 20% GDL floor is therefore equivalent to **40%** of the main Basel NSFR RSF for derivatives. (*Ratio COMP.N.IR.12*)

EC Proposed Derivatives RSF + 85% of house IM posted is **1.74x** the 20% GDL approach and also shows a relatively small standard deviation (53% of ratio value). The 20% GDL floor is therefore equivalent to **57%** of the main EC NSFR RSF for derivatives. (*Ratio COMP.N.IR.13*)

b. HLBA Approaches

The industry tested three main HLBA⁸ variants:

- Approach HLBA 1: calculated using the average of the annual differences in net margined derivatives assets and liabilities measured over 8 quarters;
- Approach HLBA 2: calculated using the average absolute value of the annual differences in net margined derivatives assets and liabilities measured over 8 quarters; and
- Approach HLBA 3: largest absolute net 30-day collateral flow.

Approach HLBA 1 - (*Ratio COMP.N.IR.14*)

- Required funding (considering 2016Q4 as last quarter) under approach 1 is **93% smaller** than 20% of GDL.
- Similar values, in terms of magnitude, can be observed considering 2015Q4 and 2014Q4 as for 2016Q4. It is worth noting that such an approach **could potentially lead to negative values**.
- A **very significant dispersion** was observed among participating banks' results, with standard deviations of the ratio close to **6x the ratio value**.

⁷ Meeting the conditions as specified in paragraph 25 of the Basel III leverage ratio framework

⁸ It is worth noting that HLBA approaches considered under this QIS have different methodologies to the HLBA approach considered by the BCBS.

Approach HLBA 2 - (Ratio COMP.N.IR.38)

- Required funding (considering as last quarter 2016Q4) under approach 2 is in aggregate **approximately equivalent** (only 6% smaller) to 20% of GDL.
- It is worth noting that such an approach is floored and **cannot lead to negative values**.
- The dispersion across responding banks is reasonably contained.

Approach HLBA 3 - (Ratio COMP.N.LCR.2)

- Required funding based on largest absolute net 30-day collateral flow is in aggregate **38% smaller** than the 20% GDL.
- The dispersion across responding banks is limited.

Industry View

The tested HLBA alternatives showed meaningful dispersion among participating bank's results. While it is possible that the calibration of the HLBA, using an appropriate confidence interval, would return a lower funding requirement than 20% of GDL, its backward-looking nature may require banks to increase funding at the same time as their derivatives book is being unwound or deleveraged. This would prevent banks from being able to manage their funding requirements on a dynamic basis. Any HLBA alternative which doesn't include a forward looking component would not be an appropriate alternative.

We think that an HLBA approach with a high confidence interval should be avoided, as it is not consistent with the milder stress scenario of the NSFR compared to the LCR (as the NSFR is not a one-year LCR). Furthermore, such a stress scenario is already funded under the LCR requirements.

c. Modified versions of SA-CCR

The industry tested two main variants based on the SA-CCR methodology:

- The **Absolute Value AddOn** (AVA) approach⁹ – the absolute value of the difference between the sum of the PFE AddOns for netting sets (gross of collateral) with negative market values and the sum of the PFE AddOns for netting sets (gross of collateral) with positive market values
- The **Single Netting Set** (SNS) approach – where all individual counterparty netting sets in a given derivatives portfolio are combined into a single netting set

Both versions, which are applied to margined trades only, exclude the replacement cost (given it is already part of the NSFR calculation) and the application of the 1.4 alpha factor from the calculation (given it was to account for model risk in capital requirement calculation), and apply maturity factors calculated for netting sets not subject to a margin agreements.

The AVA approach - (Ratio COMP.A.2A, COMP.A.4)

- Required funding under the AVA approach for margined trades is in aggregate **8% smaller** than 20% of GDL.
- However, as required under the current EC proposals, the AVA approach is combined with a 10% GDL requirement on unmargined trades. This means the required funding for the

⁹ Note this is a replication of the EC's proposed SA-CCR alternative, which solely applies to margined trades. The EC has also proposed this be combined with required funding of 10% of unmargined GDL.

combined approach is in aggregate **approximately equivalent** (just 3% higher) to 20% of GDL.

- The AVA approach is complex and the following drawbacks could be highlighted:
 - The application of SA-CCR to individual netting sets as opposed to all netting sets combined is inconsistent with the goal of assessing the potential funding need at global portfolio level, its results are not proportionate to expected funding requirement and not in line with how firm would typically margin their derivatives position i.e at the portfolio level.
 - Daily NPV moves and so respective changes in a netting set value from asset to liability would alter the estimated funding need and create instability (cf. Annex 1)
 - It could imply some extra effort for banks which have not in place such framework of calculation

The SNS approach - (Ratio COMP.A.1A, COMP.A.3)

- Required funding under the SNS approach for margined trades is significantly larger than the AVA approach, being equivalent to **3.44x** 20% of GDL.
- As with the AVA approach, when combined with a 10% GDL requirement on unmargined trades, the required funding is equivalent to **3.55x** 20% of GDL.
- Similarly to the AVA approach, the SNS approach results are **disproportionate compared to expected funding requirements**, potentially volatile and could imply significant implementation efforts for banks.

Instability of AVA and SNS approaches

Both sets of results from the AVA and SNS approaches exhibit a high degree of dispersion among participating banks, which suggests the impacts are heterogeneous and heavily portfolio dependent. Standard deviations for AVA and SNS approaches, excluding the 10% GDL requirement on unmargined trades, spread between 71% and 124% of the ratios values comparing them with the 20% GDL amount.

Industry View

In general, we believe that using SA-CCR – an exposure measure designed for capital purposes – is not appropriate for calculating future funding requirements for derivatives portfolios without substantial recalibration and modifications, as well as an observation period given it is a new measure whose impact is not well-understood by industry or policy-makers in the liquidity context.

There is an inherent conservatism built into the approach: the potential future exposure (PFE) AddOns are calculated at a counterparty level, no netting occurs across counterparties. And within a netting set, SA-CCR only allows limited netting between derivatives positions, in that it prevents netting across asset classes and within the main asset classes (FX pairs, interest rates curves), and includes only limited netting within other asset classes (equities, commodities, credit). These are inappropriate for liquidity purposes.

In addition, the AVA approach applied to margined portfolios, while delivering lower results than the 20% GDL approach, does not represent a sufficient improvement in risk-sensitivity, stability or calibration, and seems inappropriate as a future funding risk measure. Furthermore, the approach could be highly volatile as it is based on the NPV of individual portfolios, which can vary significantly (see Annex 1).

Annex 1 – The volatile nature of the AVA approach

Example:

- Day 1: a firm has a \$1bn notional long interest rate swap with a third party, where the net present value (NPV) is +\$1m and the PFE is \$2m.
- Day 2: as a result of a sharp rate movement, the NPV has swung to -\$1m, while the PFE has remained \$2m.
- As the trade moves from a positive NPV to a negative NPV, the PFE gets categorized in the liability category as compared to earlier being included in the asset category, leading to volatility in the metric as NPVs can jump from negative to positive on a daily basis.