Meeting Between Staffs of the Federal Reserve Board, the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC), and Citigroup, Inc.
September 28, 2016

Participants: Peter Clifford, Kevin Littler, Rena Miller, Lesley Chao, Dafina Stewart, Adam Cohen, Brian Chernoff, and Josh Strazanac (Federal Reserve Board)

Henry Barkhausen, James Weinberger, Ang Middleton, Daniel Perez, Rosalie Bair, Matt Keogh, and Thomas Fursa (OCC)

Greg Feder, Suzanne Dawley, Eric Schatten, Andrew Williams, and Nana Ofori-Ansah (FDIC)

Thomas Reynolds, Gonzalo Martin, and Carlos Mendez (Citigroup)

Summary: Staffs of the Federal Reserve Board, FDIC, and OCC met with representatives of Citigroup to discuss the notice of proposed rulemaking to establish the Net Stable Funding Ratio in the United States. Specifically, Citigroup representatives discussed the treatment of variation margin and potential valuation changes in a firm's derivatives portfolio under the proposed rule.

Attachment

Citi's View on the U.S. Proposed NSFR

September 28, 2016

Overview

Citi supports the objective of the NSFR. However, certain elements of the U.S. proposal could be enhanced to better reflect the underlying structural liquidity risk of banks

The Net Stable Funding Requirement has clear benefits, as it:

- Establishes a standardized framework across the industry,
- Appropriately identifies structural liquidity risk, in most cases, and
- Provides the necessary complement to the short-term Liquidity Coverage Ratio ("LCR")

However, certain elements of the current proposal could be enhanced to:

- Better reflect the structural liquidity risk requirements by minimizing potential distortions
- Lessen deviation from established global standards

Focus of today's the discuss will focus on Citi's key concerns around the treatment of derivatives, including:

- The lack of liquidity value assigned to Variation Margin ("VM") received in the form of securities, most notably Level1 HQLA
- The 20% derivative add-on approach will cause distortions as it asymmetrically targets payables only and it fails to differentiate the underlying funding risks between a secured and an unsecured derivative transaction

We would also like to re-emphasize some of the other key concerns which were previously raised, including:

- *Stress Scenario Construct* - The underlying scenario is not clearly defined in the rule making it difficult to recognize its place on the continuum of stress scenarios. Many factors are more severe in NSFR vs. LCR, which implies certain idiosyncratic elements which is not consistent with the industry's understanding of the spirit of the metric
- *Treatment of Deposits* - Lack of recognition of foreign insurance programs & partially insured domestic deposits; Deposit runoff is more severe than the firm-specific crisis scenario of LCR (i.e. operational deposits runoff 50% vs. 25% in LCR)
- *Liquidity Value of Securities* - Under the proposal the valuation of high quality liquid assets is inconsistent with, and more conservative than, the values assumed in the shorter more extreme LCR scenario
- *Interdependent Assets and Liabilities* - While Citi acknowledges the complexity of the underlying issues, we continue to believe that there are market activities which are managed to and within the spirit of the rule

Liquidity Risk in Derivatives

Derivatives can either be assets or liabilities over the life of the trade depending on market volatility, therefore, liquidity risk varies as the portfolios change

Primary Drivers of Liquidity Risk

Derivatives with non-standard terms which are hedged by a market transactions executed under standard terms

- The discrepancy in margin requirements between the client-side and hedge-side creates liquidity risk; only transactions with identical margining requirements are liquidity neutral when MTM changes

Standard Terms: Mark-to-Market ("MTM") of secured derivatives is collateralized with liquid collateral which is available to be rehypothicated by the recipient

- Allows firms to leverage the collateral received to fund any offsetting margin payables

Non Standard Terms: MTM is either uncollateralized or collateralized with illiquid assets

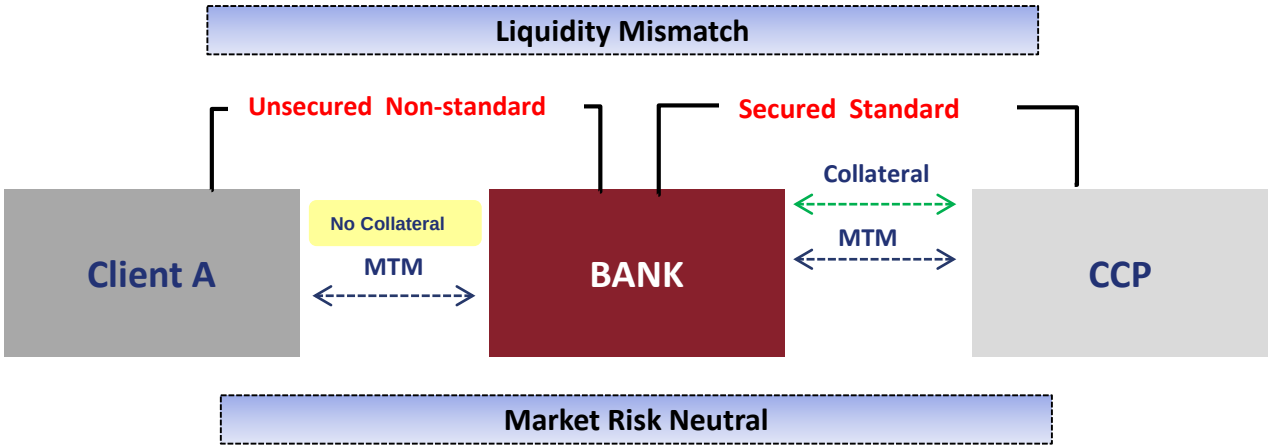
- Receipt of illiquid collateral limits re-hypothecation options and generally results in an incremental funding need
- One-Way or Segregated VM also limits re-hypothecation options and results in an incremental funding need
- Other non-standard terms, such as asymmetric thresholds or irregular margining requirements, can also create incremental funding requirements

- **Unsecured receivables create GAAP assets, and require incremental funding to cover margin payables, when hedged with secured transactions**
- **Unsecured payables create GAAP liabilities, and provide incremental funding when hedged with secured transactions.**

Risk from Derivatives Volatility

Non-standard terms require Banks to raise unsecured debt to fund collateral needs

Illustrative Diagram:



- Due to various regulatory restrictions (such as Volker), Banks operate and fund derivatives under a framework of a market *hedged* derivative portfolio
  - This is consistent with market practices for pricing derivatives
  - Unsecured derivatives attract "Funding Valuation Adjustments" (FVA) to factor cost of funds expenses or benefits
- Variation margin risk due to changes in MTM is created due to mismatch between funded and unfunded positions
  - Unfunded derivatives include all unsecured transactions, as well as secured positions which are collateralized with non-standard (illiquid) collateral or liquid but segregated collateral (no rehyp rights)
- Banks maintain unsecured funding buffers to absorb volatility in Derivatives MTM

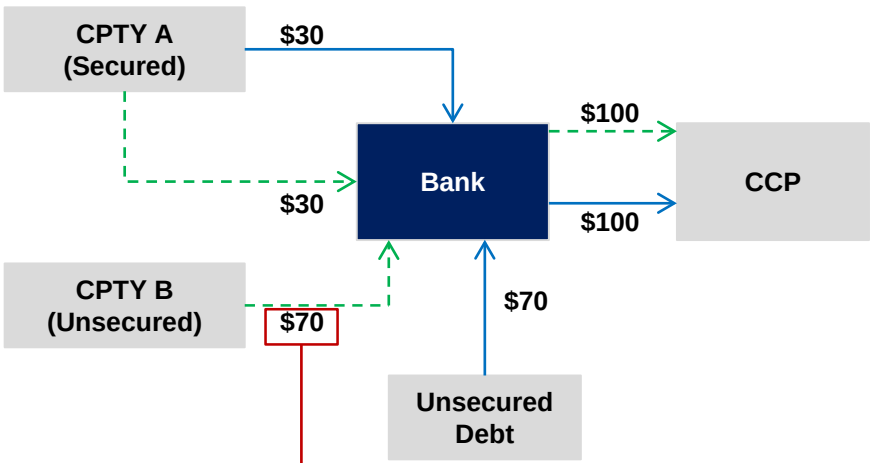
Illustrative Example – Secured vs. Unsecured Derivatives

GAAP balance sheet and liquidity risk are created by non-standard terms and unsecured

Assumptions in Example:

- Bank trades with two clients, counterparty A is secured and counterparty B is unsecured
- Bank hedges market risk with CCP
- Example focuses on MTM / VM risk so IM is not considered for simplicity
- Markets move and clients' trades become in the money for the bank (asset) while CCP hedges become out of the money (liability)

P&L Cash Flow Diagram



Reference:
- P&L
- Cash Flows

GAAP Balance Sheet

Assets		**$**
- *MTM CPY A*	*30*	
- *MTM CPY B*	*70*	
- *Cash VM Posted to CCP*	*100*	
- *Netting Fin 39*	*(130)*	
Net Derivative Assets		70
Total Assets		**70**

Liabilities		**$**
- *MTM CCP*	*100*	
- *Cash VM Received*	*30*	
- *Netting Fin 39*	*(130)*	
Net Derivative Liabilities		0
Unsecured Debt		70
Total Liabilities		**70**

Funding requirement of $70 is driven by unsecured derivatives

Potential Derivative Enhancements: VM Received - HQLA Securities

Proposal does not recognize the liquidity value of Variation Margin received in the form of securities, even High Quality Liquid Assets

- **U.S. proposed calculation / definitions are determined by multiple steps:**
  1. NSFR Derivative Assets = MTM Derivative Assets after eligible counterparty netting *less* Daily Cash VM received
  2. NSFR Derivative Liabilities = MTM Derivative Liabilities after eligible counterparty netting *less* VM posted (Cash and Non-Cash)
  3. Net Derivative Assets/Liabilities = NSFR Derivative Assets *less* NSFR Derivative Liabilities (as calculated in steps 1 and 2)
  4. Required Stable Funding (RSF) = 100%* Max (Net NSFR Derivative Assets, 0)

- **Considerations of the U.S. proposal**

  - The U.S. proposal includes an inconsistent treatment of margin received and margin posted, regardless of quality of collateral (i.e. HQLA)

Collateral (Received/Posted)	Derivative Assets (Received)	Derivative Liabilities (Posted)
Daily Non-Segregated Cash (allowed in SLR)	√	√
Non-Daily and Non-Segregated Cash (not allowed in SLR)	X	√
Level 1 Non-Segregated Securities	X	√
Other Non-Segregated Securities	X	√

Asymmetric treatment of margin received & margin posted will distort the true risk profile of a portfolio

Potential Derivative Enhancements: VM Received - HQLA Securities (Continued)

Proposed approach creates a distorted view of the Required Stable Funding when compared to the true funding value of VM received

		Illustrative Example ($Bn)	Funding Value	U.S. NSFR
		Derivative MTM Assets after Counterparty Netting	**100**	**100**
VM Collateral Received	Minus:	Daily Non-Segregated Cash Collateral	45	45
	Minus:	Level 1 Non-Segregated Securities	12	-
	Minus:	Other Non-Daily and Non-Segregated Cash	3	-
	Minus:	Other Non-Segregated Securities After Haircuts	1	-
		Net Asset Funding	**39**	**55**

NSFR results in $17B excess funding beyond true funding needs

- Citi proposes the inclusion of VM received in the form of Cash **and** Level 1 securities when calculating the NSFR derivative assets.
  - Consistent treatment of assets, regardless of classification (i.e. VM received vs long trading inventory)
  - Citi concurs that potential changes in the market value of securities needs to be accounted for when determining potential stressed liquidity value. However, the current proposal implies the value of Level 1 securities, including US Treasuries will decline to zero value in the NSFR scenario.
  - Eliminates inconsistency with treatment under the new margin requirements for non-centrally cleared derivatives (MRNCCD), which allows credit for securities received (after haircut)

Note: Scenario analysis of Level 1 securities VM received in Appendix II on pages 15 - 17

Potential Derivative Enhancements: 20% Derivative Add-on

The proposed approach has some benefits, but it is asymmetric and it fails to differentiate between secured and unsecured transactions

❑ U.S. proposed calculation / definition

20% x Derivative MTM Liabilities after eligible counterparty netting (as if no variation margin had been exchanged and no settlement payments had been made)

❑ Considerations of the U.S. proposal

The table below highlights the benefits and drawbacks of the current add-on proposal, as compared to two alternative add-on proposals

	U.S. NSFR	Alternative Proposals		
	20% @ Gross Liabilities	20% @ average of unsecured derivative assets and liabilities	Historical Look-Back Approach	Comments
Standardization	√	√	√	Alternative proposals maintain the benefits of the existing methodology in the U.S. NSFR, but solve key issues that exist in the current approach.
Simplicity for Implementation	√	√	√	
Symmetrical Calculation of Assets and Liabilities	X	√	√	
Better Alignment of Incentives with Market Pricing	X	√	√	
Proactive Portfolio Management	X	√	X	
Consistency with LCR	X	X	√	

Note: Analysis of 20% add-on alternative proposals in Appendix III on pages 18 - 19

Potential Derivative Enhancements: 20% Derivative Add-on (Continued)

Two potential alternatives which maintain the desired simplicity but provide enhanced results better reflecting the underlying risk profile

❑ Historical Look-Back Approach (HBLA)

HBLA = Maximum (net unsecured derivative liability) - Minimum (net unsecured derivative asset)

- The above calculation can be performed over a specified look-back period (i.e. 24 months)
- Is risk-based, relatively simple, grounded in observable data, and largely consistent with the LCR look-back
- Will appropriately require stable funding only for unsecured positions - which creates volatility on the balance sheet
- However, as with all look-back approaches, may restrict the ability to proactively manage the firm's funding profile

❑ 20% of Average of Unsecured Derivative Assets and Liabilities

Potential Valuation Change = 20% x Average (Unsecured Derivative Assets, Unsecured Derivative Liabilities)

- Retains the basic structure of the Basel framework with limited modifications and properly reflects the treatment of secured transactions
- Although not forward-looking, or risk-sensitive, would eliminate distortions created by the asymmetric treatment

Note: Analysis of 20% add-on alternative proposals in Appendix III on pages 18 - 19

Recommended Next Steps

- Conduct additional Quantitative Impact Study (QIS)
- Request further public comment from banks and market participants
- Consider discussions with banks for the following additional topics:
  - Severity of the NSFR Stress Scenario
  - Treatment of Deposits under the targeted scenario
  - Aligning the Liquidity Value of Securities
  - Treatment of certain Interdependent Assets and Liabilities

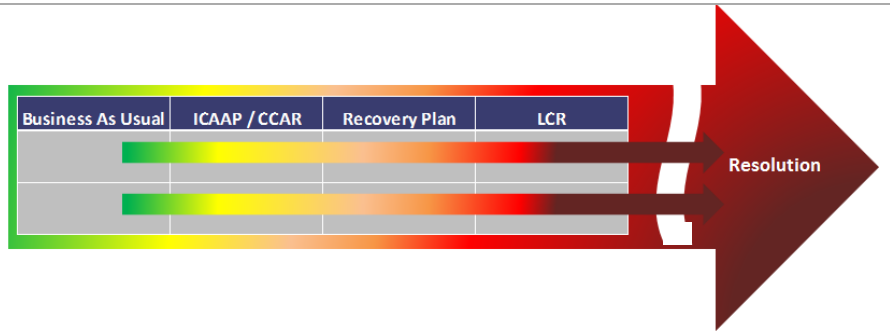
Note: Details of the additional topics above in Appendix I on pages 11 - 14

Appendix

- Appendix I: Details of Other Key Elements
- Appendix II: Scenario Analysis of VM received in the Form of Level 1 Securities
- Appendix II: Analysis of Alternatives of the 20% Add-on Charge

Appendix I - Construct of NSFR Scenario

The Proposal does not adequately define the underlying scenario which makes it difficult for firms to understand where the scenario fits on the continuum of stress scenarios



- Neither the Proposal, nor the BCBS standards, provide sufficient clarity on the market and/or firm-specific conditions under which the NSFR was calibrated
- Based on the severity of certain factors, the implied scenario seems to be more severe than the LCR scenario which is a firm-specific crisis scenario; If so, this would challenge the presumed 'going-concern' scenario of NSFR
  - For instance, a 50% loss of wholesale operational deposits suggests an idiosyncratic event which would compel clients to sever their customary working relationships; On the asset side, the assumed reduction of certain loan portfolios by 50% would likely result in long standing franchise implications
- While Citi does not advocate that all assumptions should be identical or less severe than LCR, its expectations is that both metrics, when considered together, should lead to reasonable comparisons and conclusions in light of their differing scenario definitions
- Internally, Citi maintains a 12 month liquidity stress test to ensure entities maintain a sufficient level of structural liquidity to withstand highly stressed market conditions
  - On Citi's internal continuum of stress scenario, this internal scenario more closely aligns to a Recovery Scenario. Whereas NSFR appears to more closely align to a Resolution Scenario

Appendix I - NSFR Treatment of Deposits

The U.S. proposed NSFR does not recognize international deposit insurance programs, also does not recognize partially insured domestic deposits

- Deposit insurance programs clearly influence the behavior of clients, retail clients in particular, both domestically and internationally
  - The security of deposit insurance, whether domestic or international provides a level of protection to depositors which clearly warrants some differentiation in liquidity value
  - Outside of an idiosyncratic stress event, depositors are likely to limit the amount of funds they transfer to other institutions to the portion of their balance which is not insured and they are unlikely to transfer the insured portion unless there are firm specific concerns
- **Deposit runoff assumed to be more severe than LCR which is a firm-specific crisis scenario**
- Stable Domestic retail balances under the Proposal are assigned a higher runoff factor than LCR (5% vs 3%)
  - Citi does not believe that the duration of a market event, particularly a less-severe, non-firm specific event, would influence the level of runoff in retail depositors
- Wholesale operational deposits are assigned a notably higher runoff rate under NSFR (50%) as compared to LCR (25%)
  - For wholesale clients, Citi does acknowledge that a longer duration will provide clients an increased opportunity to transfer activity to alternate providers; however, given the efficiencies/synergies of the existing relationship these level imply that Citi's financial position is significantly worse than alternative providers

Appendix I - NSFR Securities Valuation

Under the U.S. proposal, the valuation of High Quality Liquid Assets is more conservative than the shorter duration, more extreme LCR scenario

- Proposal assumes a reduced liquidity value for Level 1 assets, including unencumbered US Treasury positions
  - Level 1 assets, which are assumed to be fully liquidated in the 30-day stress, will require 10% stable funding under the existing Proposal
  - With a significantly longer liquidation period, the ability of a firm to liquidate high quality securities held in its HQLA pool without pricing pressures increases dramatically
- Furthermore, the longer duration and presumably less severe market conditions would likely increase counterparty demand for higher quality securities which do not qualify as HQLA securities
- As such, Citi requests consideration for aligning Level 1 HQLA haircuts with the LCR, as well as consideration of the duration of the scenario when determining valuation

Appendix I - Interdependent Assets and Liabilities

While Citi acknowledges the underlying issues being addressed by the condition, we continue to believe that there are banking activities which meet the spirit of the rule but not letter

- Several activities, including the TRS and Short-Sale examples cited in the Proposal, consist of a linked asset and liability which are naturally generated due to fundamental risk management and balance-sheet management practices; While these positions are linked, they do not necessarily meet the conditions set forth

- As such, Citi anticipates future discussions with the relevant industry groups to examine potential reforms to market convention to ascertain the modifications necessary to eliminate/narrow the gaps and therefore eligibility

BCBS Interdependent Conditions:

(1) the interdependence of the asset and liability must be established on the basis of contractual arrangements
(2) the liability cannot fall due while the asset remains on the balance sheet
(3) the principal payment flows from the asset cannot be used for purposes other than repaying the liability
(4) the liability cannot be used to fund other assets
(5) the individual interdependent asset and liability must be clearly identifiable
(6) the maturity and principal amount of both the interdependent liability and asset must be the same
(7) the bank must be acting solely as a pass-through unit to channel the funding received from the liability into the corresponding interdependent asset, and
(8) the counterparties for each pair of interdependent liabilities and assets must not be the same

Appendix II - Scenario Analysis of VM Received in the Form of Level 1 Securities

Below two scenarios illustrates the NSFR impact when a firm receives VM in the form of daily cash only, and posts VM in a form of daily cash or UST security. Results show that the impact are similar under both scenarios

Scenario 1 – Receive & Post Daily Variation Margin in Cash

- MtM gain of $50 with Counterparty A. As a result, Citi receives $50 in daily cash VM
- MtM Loss of $50 with Counterparty B. As a result, Citi posts $50 in daily cash VM
- Net P&L and Shareholders' equity is flat
- The Bank also holds unencumbered US Treasuries $100

	GAAP Balance Sheet	GAAP $		NSFR Gross NSFR $	NSFR RSF / ASF %	NSFR RSF / ASF $
Receive & post daily VM in Cash	**ASSETS**					
	Cash		100	100	0%	-
	Long Treasuries (unencumbered)		100	100	5%	5
	Long Treasuries (encumbered)		-	-	100%	-
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	*50*				
	Cash collateral netting (FIN 39)	*(100)*				
	Net Derivative assets		-			
	Net NSFR Derivative Assets			-	100%	-
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**200**			**15**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	*50*				
	Cash collateral netting (FIN 39)	*(100)*				
	Net Derivative Liability		-			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**200**			**15**
				NSFR (excess / (deficit) $		**-**
				NSFR ratio %		**100%**

Scenario 2 – Receive Daily Variation Margin in Cash & Post UST security

- MtM gain of $50 with Counterparty A. As a result, Citi receives $50 in daily cash VM
- MtM Loss of $50 with Counterparty B. As a result, Citi posts $50 in U.S. Treasury Security VM
- Net P&L and Shareholders' equity is flat
- The Bank also holds US Treasuries unencumbered $50, and encumbered $50 used for VM posting

	GAAP Balance Sheet	GAAP $		NSFR Gross NSFR $	NSFR RSF / ASF %	NSFR RSF / ASF $
Receive daily VM in Cash & post UST security	**ASSETS**					
	Cash		150	150	0%	-
	Long Treasuries (unencumbered)		50	50	5%	2.5
	Long Treasuries (encumbered)		50	50	5%	2.5
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	*-*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative assets		-			
	Net NSFR Derivative Assets			-	100%	-
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**250**			**15**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	*50*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative Liability		50			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**250**			**15**
				NSFR (excess / (deficit) $		**-**
				NSFR ratio %		**100%**

= Example covered in meeting

Appendix II - Scenario Analysis of VM Received in the Form of Level 1 Securities (Cont.)

- Below scenario illustrates different NSFR impact when a firm receives VM in the form of UST security and posts VM in the form of daily cash.
- The U.S. Treasury security received from Counterparty A should be allowed to net against the derivative MTM receivable, as it's no different than a reverse repo asset or a firm long asset when they are used as sources of collateral posted to, or netted against derivative payables.

Scenario 3 – Receive UST security & Post Daily Cash

- MtM gain of $50 with Counterparty A. As a result, Citi receives $50 in U.S. Treasury Security VM
- MtM Loss of $50 with Counterparty B. As a result, Citi posts $50 in daily cash VM
- Net P&L and Shareholders' equity is flat
- The Bank also holds US Treasuries unencumbered $100

	GAAP Balance Sheet	GAAP $		NSFR Gross NSFR $	NSFR RSF / ASF %	NSFR RSF / ASF $
Receive UST security & post daily VM in Cash	**ASSETS**					
	Cash		50	50	0%	-
	Long Treasuries (unencumbered)		100	100	5%	5
	Long Treasuries (encumbered)		-	-		-
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	*50*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative assets		50			
	Net NSFR Derivative Assets			50	100%	50
	Treasuries received as collateral					
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**200**			**65**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	*-*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative Liability		-			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**200**			**15**
				NSFR (excess / (deficit) $		**(50)**
				NSFR ratio %		**23%**

Citi Recommended Alternative

Citi proposes to recognize the value of security variation margin received after applying appropriate haircuts to cover the market risk of securities

	GAAP Balance Sheet	GAAP $		NSFR Gross NSFR $	NSFR RSF / ASF %	NSFR RSF / ASF $
Receive UST security & post daily VM in Cash	**ASSETS**					
	Cash		50	50	0%	-
	Long Treasuries (unencumbered)		100	100	5%	5
	Long Treasuries (encumbered)		-	-		-
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	*50*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative assets		50			
	NSFR Derivative Assets (pre-securities netting)			50	100%	50
	Treasuries received as collateral			50	100%	(50)
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**200**			**15**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	*-*				
	Cash collateral netting (FIN 39)	*(50)*				
	Net Derivative Liability		-			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**200**			**15**
				NSFR (excess / (deficit) $		**-**
				NSFR ratio %		**100%**

Appendix II - Scenario Analysis of VM Received in the Form of Level 1 Securities (Cont.)

- Below scenario illustrates different NSFR impact when a firm receives and posts VM in the form of UST security
- The U.S. Treasury security received from Counterparty A should be allowed to net against the derivative MTM receivable, as it's no different than a reverse repo asset or a firm long asset when they are used as sources of collateral posted to, or netted against derivative payables

Scenario 4 – Receive UST security & Post UST security

- MtM gain of $50 with Counterparty A. As a result, Citi receives $50 in U.S. Treasury Security VM
- MtM Loss of $50 with Counterparty B. As a result, Citi posts $50 in U.S. Treasury Security VM
- Net P&L and Shareholders' equity is flat
- The Bank also holds US Treasuries unencumbered $50, and encumbered $50 used for VM posting

Citi Recommended Alternative

Citi proposes to recognize the value of security variation margin received after applying appropriate haircuts to cover the market risk of securities

	GAAP Balance Sheet	GAAP $		NSFR		
				Gross NSFR $	RSF / ASF %	RSF / ASF $
Receive & post UST security	**ASSETS**					
	Cash		100	100	0%	-
	Long Treasuries (unencumbered)		100	100	5%	5
	Long Treasuries (encumbered)		-	-	5%	-
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	-				
	Cash collateral netting (FIN 39)	-				
	Net Derivative assets		50			
	Net NSFR Derivative Assets			50	100%	50
	Treasuries received as collateral					
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**250**			**65**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	-				
	Cash collateral netting (FIN 39)	-				
	Net Derivative Liability		50			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**250**			**15**
				NSFR (excess / (deficit) $		**(50)**
				NSFR ratio %		**23%**

	GAAP Balance Sheet	GAAP $		NSFR		
				Gross NSFR $	RSF / ASF %	RSF / ASF $
Receive & post UST security	**ASSETS**					
	Cash		100	100	0%	-
	Long Treasuries (unencumbered)		100	100	5%	5
	Long Treasuries (encumbered)		-	-	5%	-
	Derivative MtM receivable from CP-A	*50*				
	Cash collateral posted to CP-B	-				
	Cash collateral netting (FIN 39)	-				
	Net Derivative assets		50			
	NSFR Derivative Assets (pre-securities netting)			50	100%	50
	Treasuries received as collateral			50	100%	(50)
	20% of Gross Derivative Liabilities			50	20%	10
	Total GAAP Assets / RSF		**250**			**15**
	LIABILITIES					
	Derivative MtM payable to CP-B	*50*				
	Cash collateral received from CP-A	-				
	Cash collateral netting (FIN 39)	-				
	Net Derivative Liability		50			
	Unsecured short term funding		185	185	0%	-
	Shareholders Equity		15	15	100%	15
	Total GAAP Equities & Liabilities / ASF		**250**			**15**
				NSFR (excess / (deficit) $		**-**
				NSFR ratio %		**100%**

= Example covered in meeting

Appendix III – Derivative 20% Add-on Alternative Proposals

Maximum (quarterly unsecured asset amounts minus unsecured liability amounts) – Minimum (quarterly unsecured asset amounts minus unsecured liability amounts) over the past 24 months

U.S. NSFR Proposal

	20% of Derivative MTM Liabilities After Eligible Counterparty Netting									U.S. NSFR
($BN)	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	Add-On Charge
Bank A	15.9	18.6	21.6	24.0	18.7	19.4	17.6	20.4	20.7	20.7
Bank B	10.2	11.8	14.2	14.8	11.8	11.4	10.6	11.9	11.6	11.6
Bank C	15.2	17.2	19.4	21.6	18.0	18.3	16.9	17.3	18.7	18.7
Bank D	14.5	16.9	19.8	21.6	17.8	18.9	17.3	20.4	20.2	20.2
Bank E	14.2	15.2	15.5	18.7	14.2	14.6	13.2	14.4	15.5	15.5
Bank F	1.8	2.5	3.7	3.7	2.9	3.1	2.8	3.0	3.1	3.1
Total	**71.9**	**82.2**	**94.3**	**104.3**	**83.5**	**85.7**	**78.4**	**87.4**	**89.7**	**89.7**

Alternative Proposal

	Unsecured Derivative Assets Minus Unsecured Derivative Liabilities									Alternative Max Change Over 24 Months (Max - Min)
($BN)	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16	Add-On Charge
Bank A	2.2	(1.2)	0.7	(5.3)	(2.1)	(1.1)	(1.3)	0.2	8.4	13.7
Bank B	11.6	13.5	7.9	7.7	8.4	11.5	6.9	10.9	20.7	13.8
Bank C	9.3	4.9	5.8	9.1	7.4	9.3	11.5	11.2	7.7	6.6
Bank D	7.6	2.3	0.3	4.6	2.8	7.4	7.1	6.5	11.7	11.5
Bank E	(3.5)	(4.0)	(3.8)	(8.4)	(5.4)	(2.5)	(0.9)	2.4	0.8	10.9
Bank F	8.4	2.4	3.9	3.3	3.7	4.5	3.7	4.9	5.5	6.0
Total	**35.6**	**17.9**	**14.7**	**11.0**	**14.8**	**29.2**	**27.1**	**36.1**	**54.9**	**62.4**

Grey (maximum of the net unsecured derivative position in 24 months)

Minus

Red (minimum of the net unsecured derivative position in 24 months)

Note: U.S. GAAP derivative assets and liabilities sourced from public 10Q/K filing are used as a proxy in the analysis

Appendix III – Derivative 20% Add-on Alternative Proposals (Continued)

20% Multiplier Based on Average of Unsecured Derivative Assets and Liabilities

- This alternative retains the basis structure of the Basel framework with limited technical modifications
- This alternative, although not forward-looking or risk-sensitive, would solve the asymmetry issue created by the U.S. NSFR by applying only to derivatives liabilities.

U.S. NSFR Proposal

($BN)	20% of Derivative MTM Liabilities After Eligible Counterparty Netting								
	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16
Bank A	15.9	18.6	21.6	24.0	18.7	19.4	17.6	20.4	20.7
Bank B	10.2	11.8	14.2	14.8	11.8	11.4	10.6	11.9	11.6
Bank C	15.2	17.2	19.4	21.6	18.0	18.3	16.9	17.3	18.7
Bank D	14.5	16.9	19.8	21.6	17.8	18.9	17.3	20.4	20.2
Bank E	14.2	15.2	15.5	18.7	14.2	14.6	13.2	14.4	15.5
Bank F	1.8	2.5	3.7	3.7	2.9	3.1	2.8	3.0	3.1
Total	**71.9**	**82.2**	**94.3**	**104.3**	**83.5**	**85.7**	**78.4**	**87.4**	**89.7**

Alternative Proposal

($BN)	20% of Average Balances of Unsecured Derivative Assets and Unsecured Derivative Liabilities								
	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16
Bank A	10.3	12.2	14.0	15.3	12.7	12.7	11.7	13.0	14.1
Bank B	11.3	13.1	15.0	15.5	12.6	12.6	11.2	13.0	13.6
Bank C	8.7	9.3	10.0	11.4	9.5	10.1	8.9	9.3	10.3
Bank D	10.0	11.1	12.6	12.9	10.6	11.0	10.1	11.5	11.4
Bank E	6.7	7.4	7.7	8.6	7.1	6.9	5.8	6.9	7.5
Bank F	2.6	2.8	4.1	4.0	3.3	3.5	3.2	3.5	3.6
Total	**49.6**	**55.9**	**63.4**	**67.8**	**55.8**	**56.8**	**50.8**	**57.2**	**60.6**

U.S. NSFR vs. Alternative

($BN)	2Q14	3Q14	4Q14	1Q15	2Q15	3Q15	4Q15	1Q16	2Q16
Bank A	5.6	6.5	7.5	8.7	6.0	6.7	5.9	7.4	6.6
Bank B	(1.2)	(1.4)	(0.8)	(0.8)	(0.8)	(1.2)	(0.7)	(1.1)	(2.1)
Bank C	6.6	7.9	9.4	10.3	8.5	8.2	8.0	8.0	8.4
Bank D	4.5	5.8	7.2	8.6	7.2	8.0	7.3	8.9	8.8
Bank E	7.5	7.8	7.8	10.1	7.1	7.7	7.3	7.5	8.0
Bank F	(0.8)	(0.2)	(0.4)	(0.3)	(0.4)	(0.5)	(0.4)	(0.5)	(0.6)
Total	**22.2**	**26.3**	**30.8**	**36.6**	**27.7**	**28.9**	**27.5**	**30.2**	**29.1**

Note: U.S. GAAP derivative assets and liabilities sourced from public 10Q/K filing are used as a proxy in the analysis