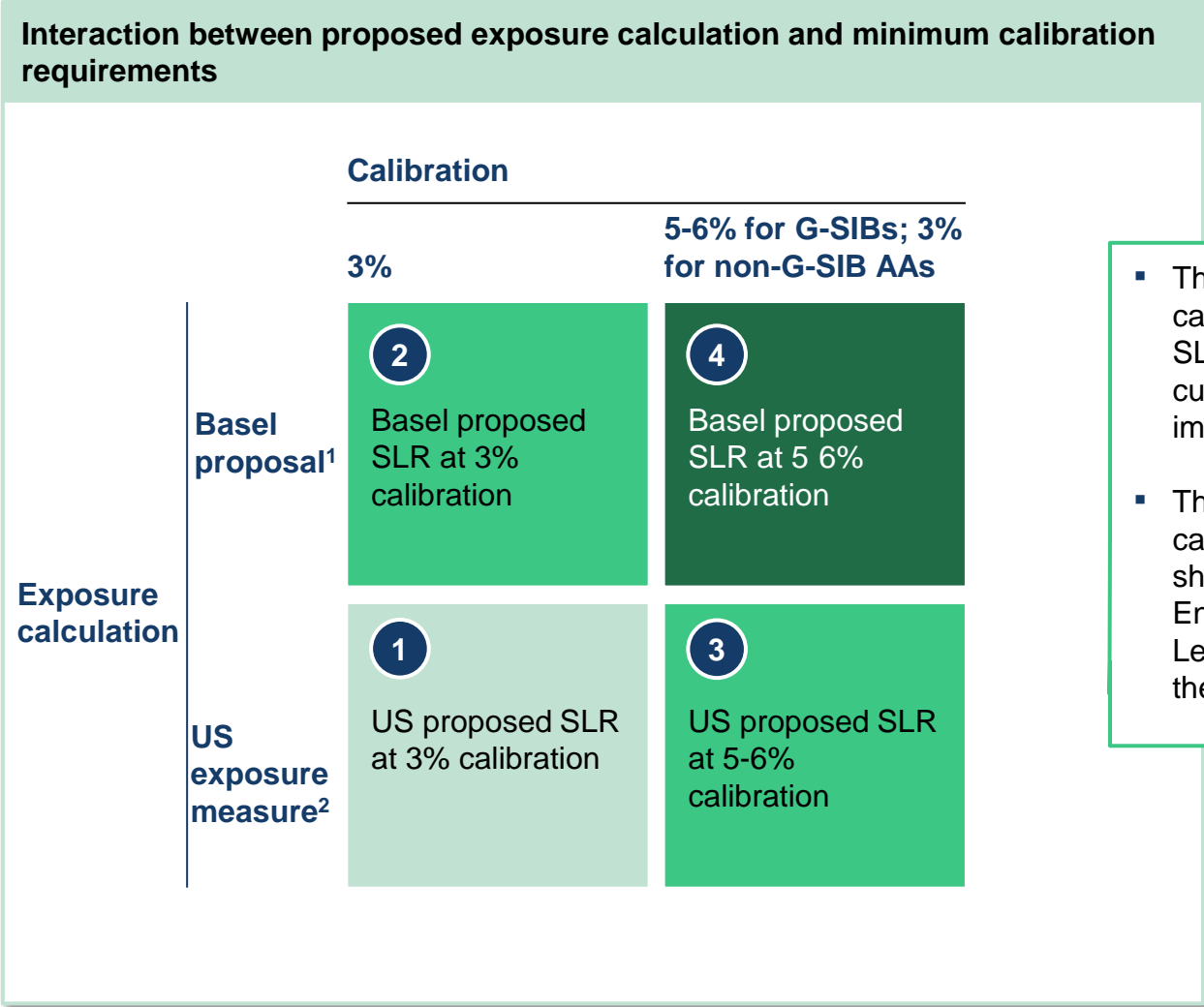


Given the proposed changes to the SLR exposure calculation and the minimum calibration requirements, there are 4 scenarios to examine



- The Basel proposed SLR at 3% calibration and the US proposed SLR at 5-6% calibration are both currently under consideration for implementation
- The Basel proposed SLR at 5-6% calibration is a possible outcome should the US update its current Enhanced Supplementary Leverage Ratio proposal to include the Basel exposure calculation

1 As described in the Consultative Document “Revised Basel III Leverage Ratio Framework and Disclosure Requirements”, available at <http://www.bis.org/publ/bcbs251.htm>

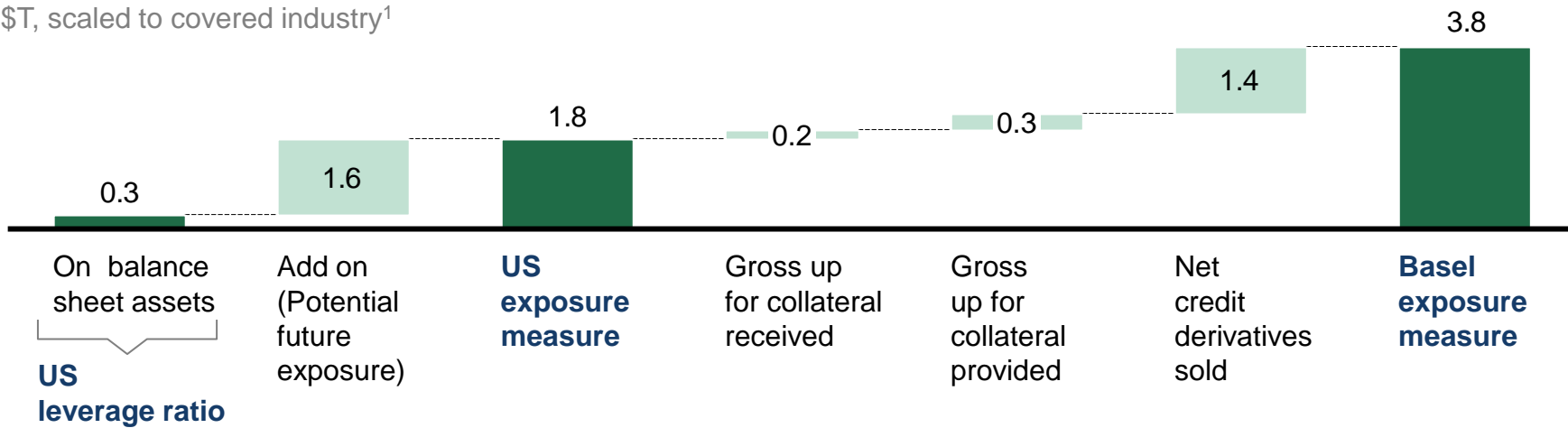
2 As defined in the US Basel III Final Rule Section 2, definition of “Total Leverage Exposure”, page 552, available at <http://www.federalreserve.gov/bcreg20130702a.pdf>

- **Distance to compliance**
 - Sensitivity analysis
 - Product economics

Buildup of derivative and SFT treatment across exposure measures

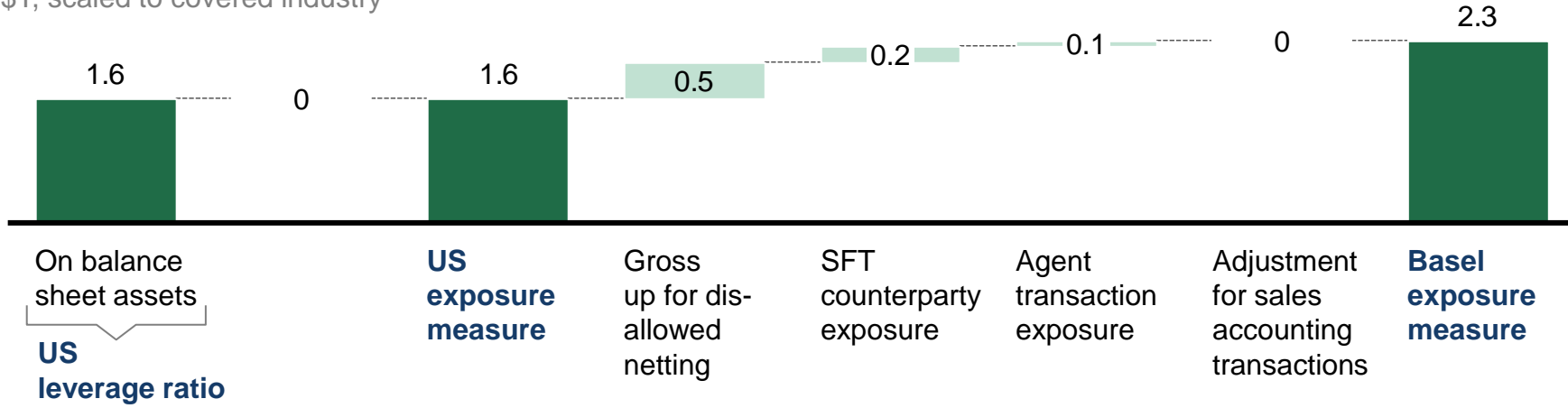
Derivative treatment across exposure measures

\$T, scaled to covered industry¹



SFT treatment across exposure measures

\$T, scaled to covered industry¹

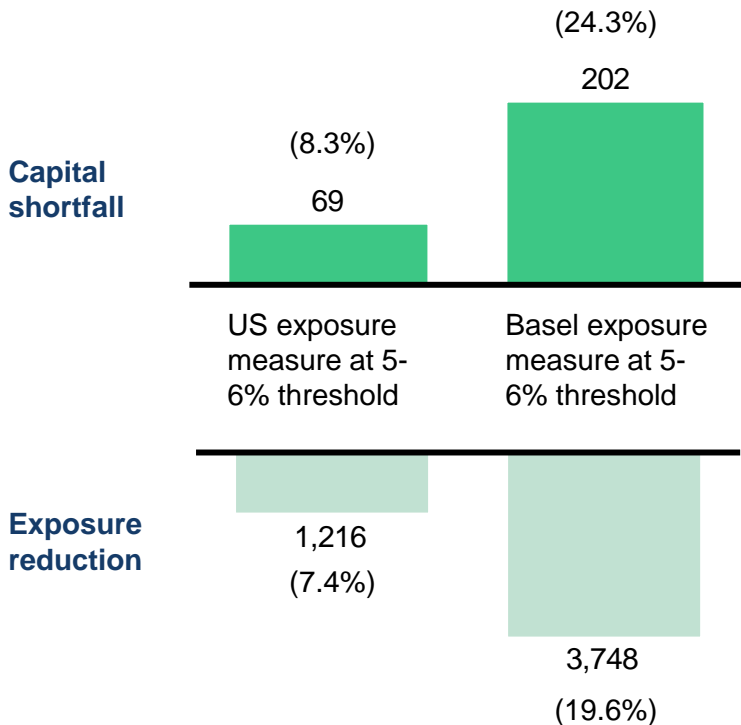


¹ As estimated by all US domiciled Advanced Approach BHCs
 Note: Numbers may not add due to rounding to nearest \$0.1T

US BHCs may need to raise \$202B¹ Tier 1 capital or reduce \$3.7T of exposures if the US adopts the Basel proposed exposure measure in combination with a 5-6% minimum SLR for G-SIBs

Should the US adopt the Basel proposed exposure measure in combination with the 5-6% calibration, banks would need to increase capital by 24%...

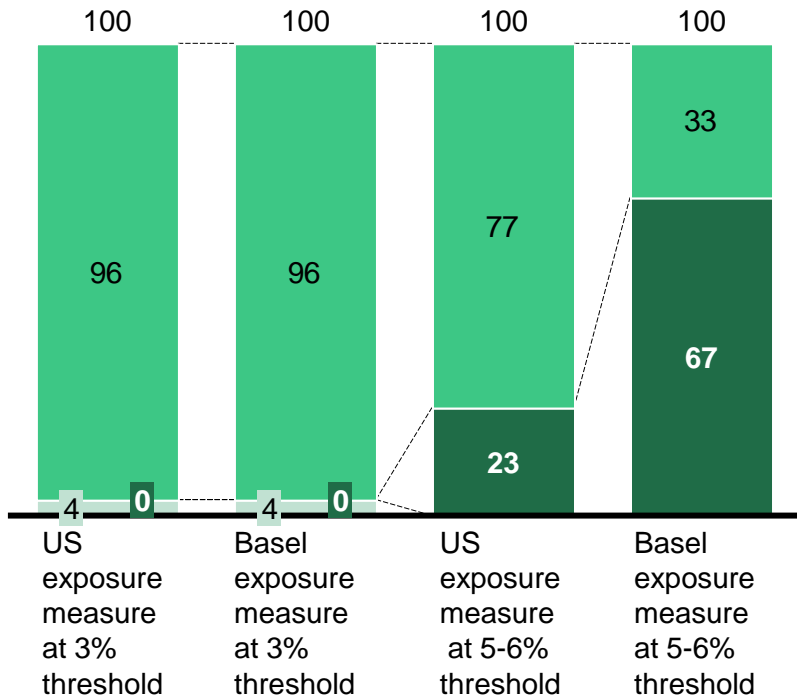
Total gap to compliance for reporting banks
 (Percent of current, scaled to covered industry²)
 \$B, scaled to covered industry²



... and the SLR would become the binding constraint³ for 67% of US G-SIB assets or ~40% of US banking and security assets⁴

Binding constraint for G-SIBs
 Percent of bank assets

- Tier 1/ RWA⁵
- SLR
- US Leverage Ratio



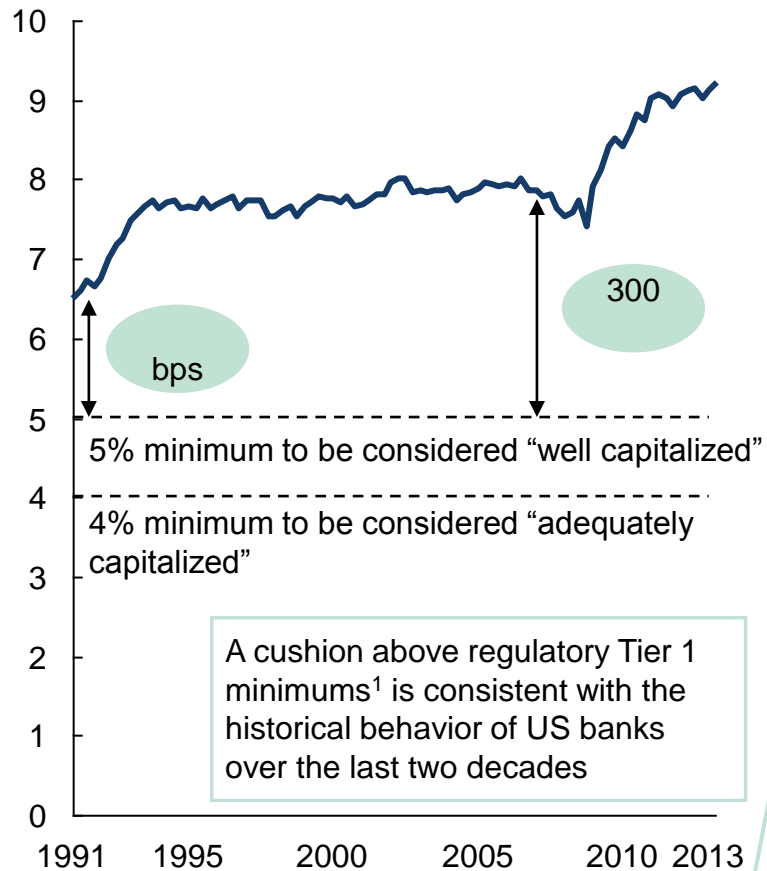
1 If U.S. advanced approaches banks first raised additional Tier 1 capital necessary to comply with the Basel III Framework's risk-based capital rules on a fully phased-in basis (including the capital conservation buffer and G-SIB surcharges where applicable), banks still need to raise an additional \$185 billion of Tier 1 capital to be in compliance with the 5-6% minimum combined with the Basel exposure measure
 2 As estimated by all US domiciled Advanced Approach BHCs
 3 The SLR is binding on a bank if that bank has an SLR shortfall after meeting minimum Tier 1 to RWA ratios including capital conservation buffer and G-SIB surcharges
 4 Calculated as the sum of Private Depository Institution (\$15.24T) assets plus Broker-Dealer assets (\$2.05T), as of 1Q 2013
 5 Basel III RWA that is the binding constraint for each institution

Holding an additional capital buffer of 50-200 bps could increase the Tier 1 capital shortfall to \$273-\$501B

Banks have historically held buffers above the minimum required US leverage ratio...

Historical average US Leverage ratio

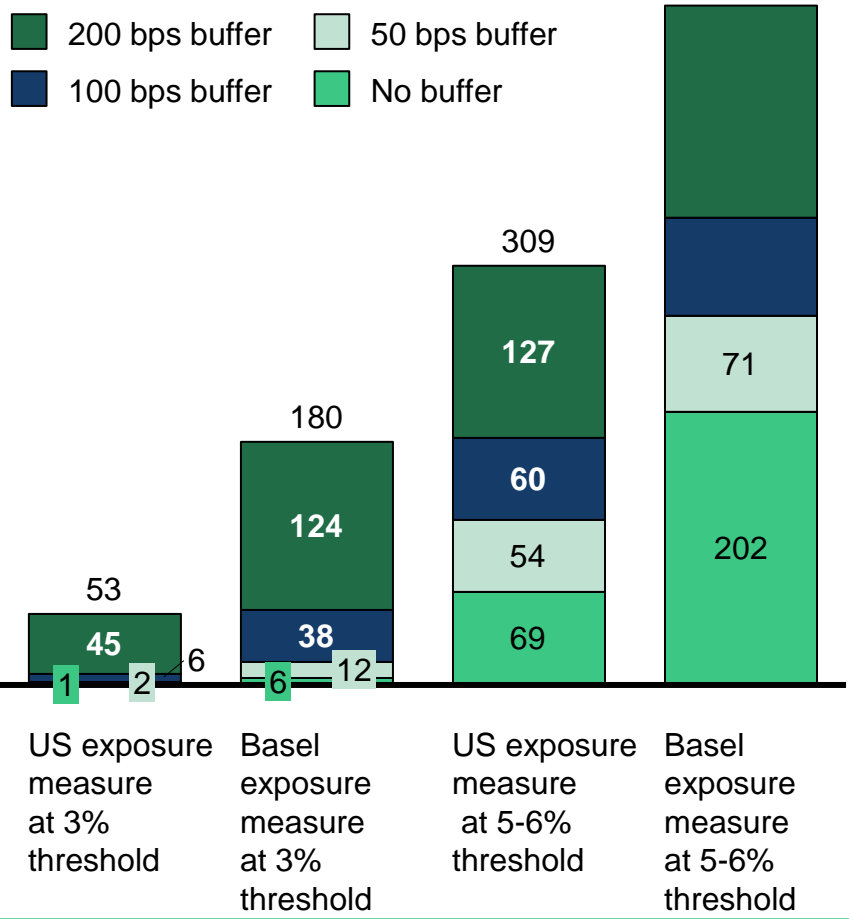
Percent (1991-2013q2)



...and could hold a capital buffer above the Supplementary Leverage Ratio

Capital shortfall

\$B, scaled to covered industry²



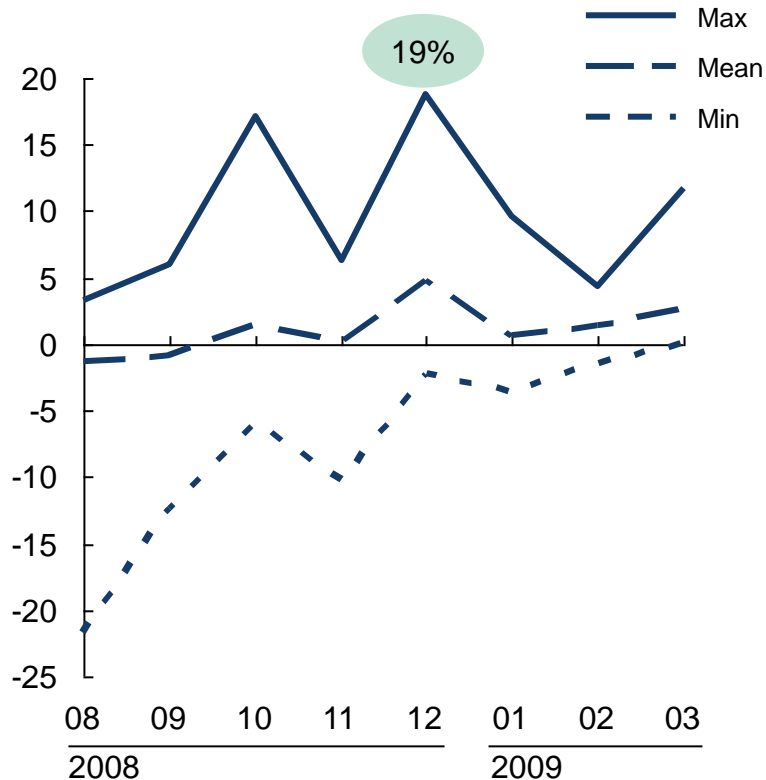
1 Analysis on risk-based capital ratios Tier 1 to RWA over the same time period indicates that banks on average also maintained buffers from 200-350 bps above Tier 1 risk-based minimum requirements for "well capitalized"

2 As estimated by all US domiciled Advanced Approach BHCs

Fluctuations in deposit levels will help to inform the size of the Tier 1 capital buffer banks choose to hold

Flight to quality during the recession, increased individual bank monthly deposits by as much as 19%

Monthly change in deposit growth and run-off
Percent



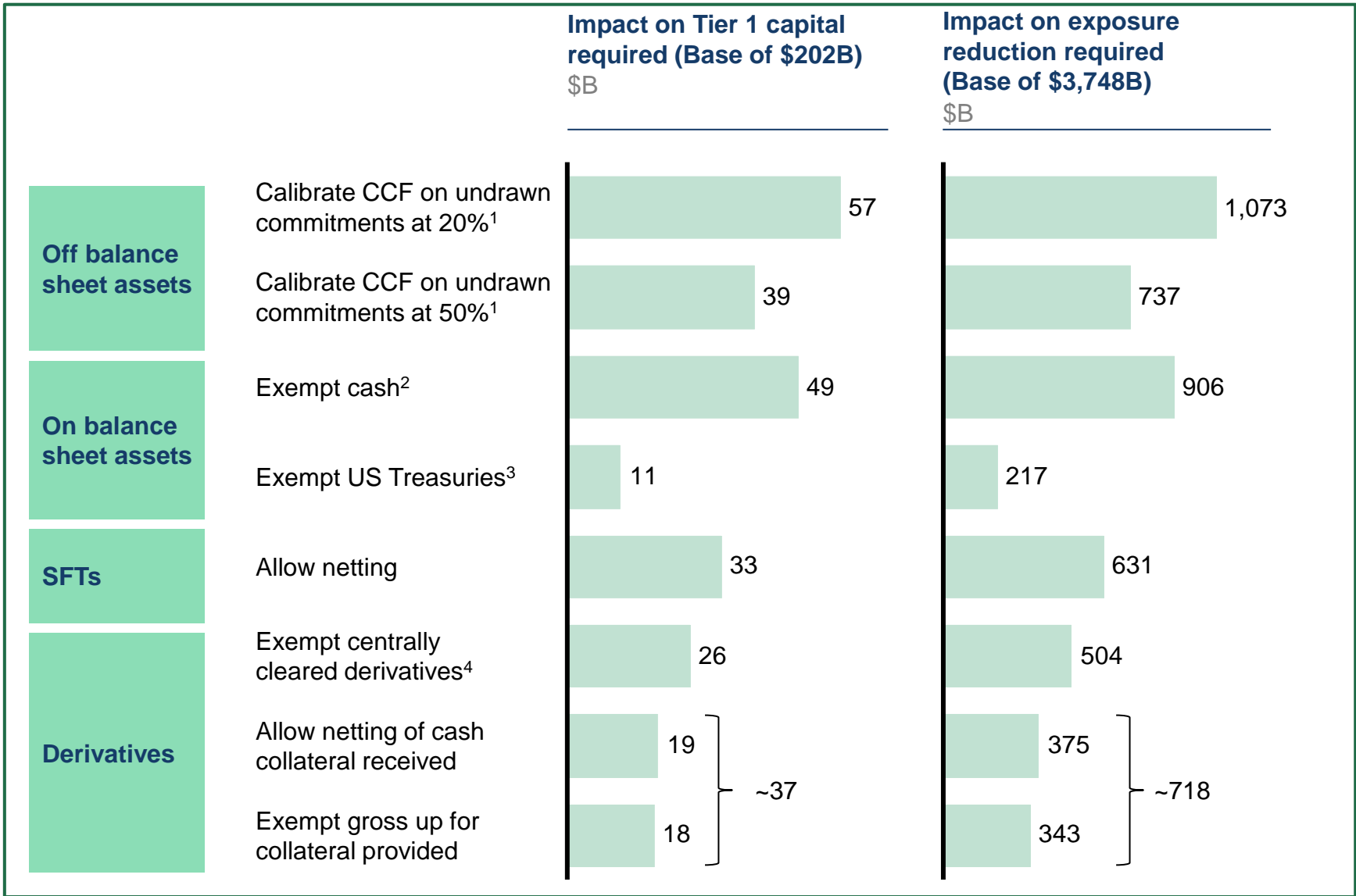
- **A 19% increase in deposits would require 95 bps of additional Tier 1 Capital** for banks to meet the SLR at the 5% calibration
- Banks will likely **consider past fluctuations in both deposit and asset levels when determining appropriate SLR capital buffer**
- **Changes to Tier 1 capital definition**, like the removal of the AOCI filter, **further increase the potential need for and size of the voluntary buffer**

Source: US Banking Industry Liquidity Update, TCH report December 2012 (<http://www.theclearinghouse.org/index.html?f=074638>) and Assessing the Liquidity Coverage Ratio, TCH report November 2011, (<http://theclearinghouse.org/index.html?f=074617>)

Contents

- Distance to compliance
- **Sensitivity analysis**
- Product economics

Sensitivity analysis – impact of potential changes to exposure measure



1 Under the Basel proposed SLR, undrawn commitments are treated with a CCFs of 100%

2 Cash held at central bank and vault cash

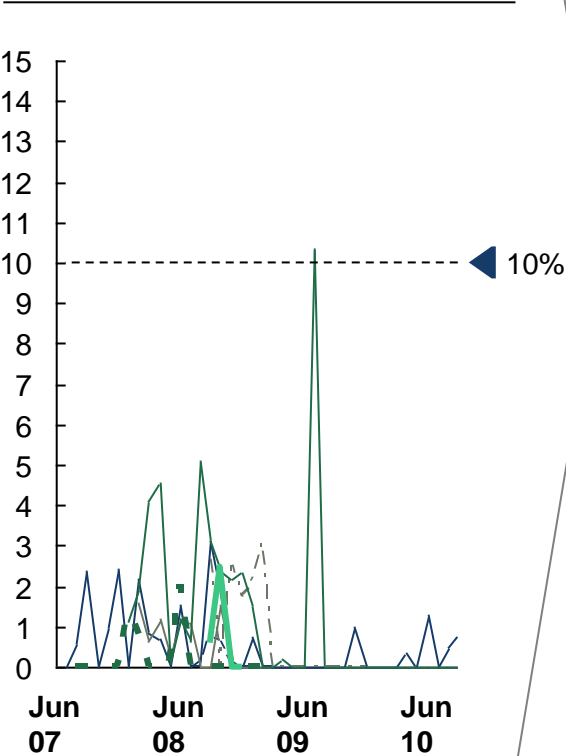
3 As included in High Quality Liquid Assets (defined under the LCR)

4 Treatment of centrally cleared derivatives for leverage ratio purposes is still evolving; this study assumes no difference in leverage ratio treatment between centrally cleared and OTC

CCFs are 10x higher under the SLR than the maximum quarterly draw as seen in TCH-collected crisis experience

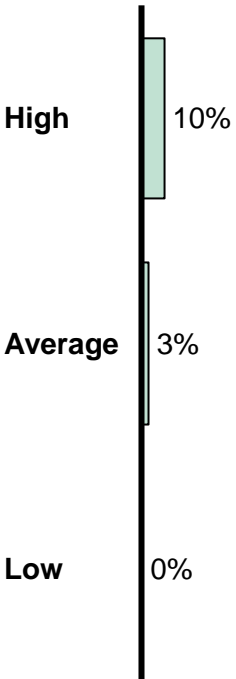
In the crisis, the maximum monthly draw down of credit lines was ~10%

Historical drawdown of credit lines at non-financial corporates¹
Percent



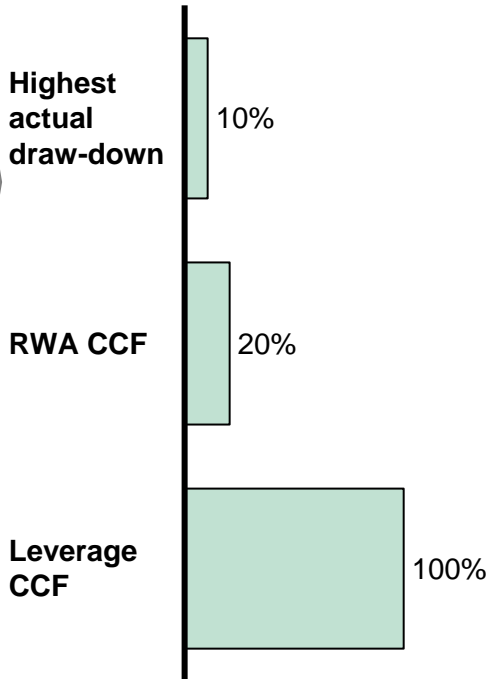
Over cumulative 3-month periods, the maximum draw down was also 10%...

Cumulative 3-month drawdown of credit lines at non-financial corporates
Percent



...which is 90% lower than the 100% potential draw-down implied under the leverage ratio

Implied potential draw-down of undrawn credit lines
Percent



¹ Based on 57% of industry undrawn line credit in an industry with \$816B in capacity
Source: TCH, *Assessing the Liquidity Coverage Ratio*, November 2011 available at <http://theclearinghouse.org/index.html?f=074617>

Contents

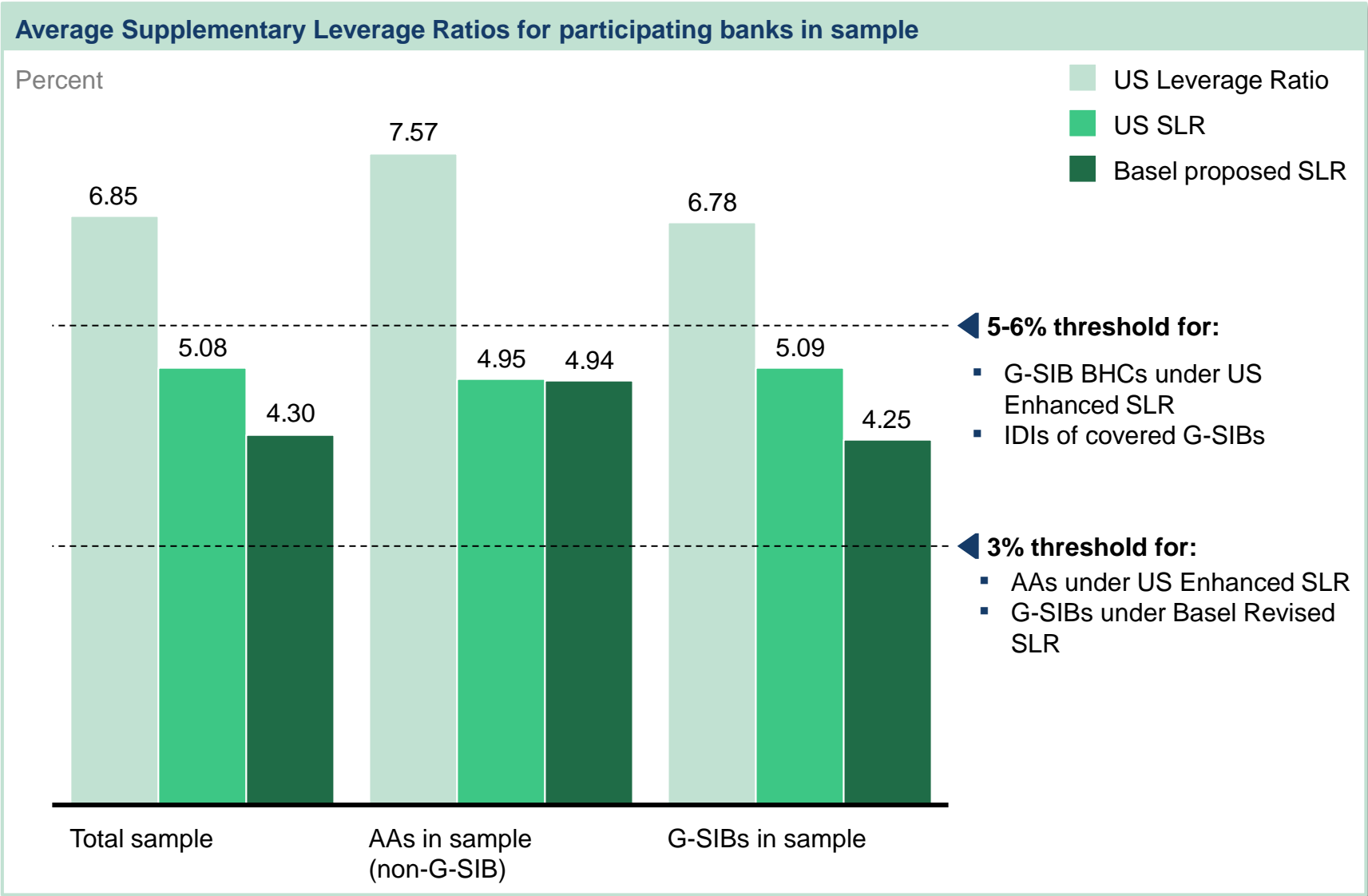
- Distance to compliance
- Sensitivity analysis
- **Product economics**

Based on inputs from member banks, we analyzed a set of products that might be impacted by the SLR

Category	Product
On balance sheet items	<ul style="list-style-type: none">▪ Cash▪ Treasuries▪ Corporate bonds▪ Corporate loans▪ Mortgages <hr/>
Off balance sheet items	<ul style="list-style-type: none">▪ Credit cards▪ Short-term unfunded revolvers▪ Short-term, self-liquidating trade finance <hr/>
SFTs	<ul style="list-style-type: none">▪ Reverse repos on treasuries▪ Reverse repos on Agency MBS▪ Reverse repos on corporate bonds <hr/>
Derivatives	<ul style="list-style-type: none">▪ Cleared vanilla interest rate swaps▪ OTC interest rate swaps▪ CDS on Corporate bonds

Appendix

For our sample, the Basel proposed SLR has a more significant effect on G-SIBs than on non-G-SIB Advanced Approach (AA) banks



1 As estimated by all US domiciled Advanced Approach BHCs

Intercompany lending potentially inflates minimum capital required to meet the SLR

A BHC with a \$200B inter-company loan will be required to hold more capital than a BHC without inter-company loans

	<u>BHC</u>	<u>IDI 1</u>	<u>IDI 2</u>	<u>Non-IDI</u>
Regulatory SLR minimum	5.00%	6.00%	6.00%	n/a

Bank A

Current Tier 1 capital level	70	30	30	10
Current exposure level	1,600	700	900	200
Current SLR	4.38%	4.29%	3.33%	n/a
Gap to compliance	0.63%	1.71%	2.67%	n/a
Implied add. capital needed	10	12	24	n/a
Total add. capital needed	36			

Bank A (without inter-company loans)

Current Tier 1 capital level	70	30	30	10
Current exposure level	1,600	500	900	200
Current SLR	4.38%	6.00%	3.33%	n/a
Gap to compliance	0.63%	0.00%	2.67%	n/a
Implied add. capital needed	10	0	24	n/a
Total add. capital needed	24			

Due to an inter-company loan between IDI 1 and IDI 2, there is \$200B in exposure on IDI 1's balance sheet. At the BHC level, this loan is netted out. However, since IDI's are subject to a 6.00% SLR, IDI 1 must raise \$12B to become compliant

If the inter-company loan is removed, Bank A's IDI 1 exposure is reduced by \$200B, but the BHC exposure remains unchanged

The elimination of the inter-company loans reduces capital needed by \$12B

