September 26, 2013

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Steven Friedman and Anna Shender (Bank of America); Subhadeep Basu (Citi); Chris Jackson and Robert Judson (Ernst and Young); Robin Doyle (JP Morgan Chase); Steven Simonte (Morgan Stanley); Stefan Gavell and Glenn Horner (State Street); Jennifer Taylor (Wells Fargo); Sridhar Iyer and Gregg Rozansky (The Clearing House).

Summary: Staff of the Federal Reserve Board (the “Board”), the Federal Reserve Bank of New York, the FDIC, and the OCC met with representatives of The Clearing House and its owner banks and advocacy partners to discuss the Board’s single-counterparty credit limit proposal (“SCCL proposal”) and the Basel Committee’s consultative document regarding a supervisory framework for measuring and controlling large exposures (“LE framework”). As described in the attached presentation, The Clearing House stated that both the SCCL proposal and LE framework would result in a significant number and magnitude of limit excesses, which would cause significant business constraints for derivatives, securities lending, and repo market participants. To mitigate such impacts, The Clearing House recommended reducing the amount of exposure that firms subject to the SCCL proposal or LE framework would be required to recognize to sellers of credit default swaps, revising the methodology for measuring exposures related to securities financing transactions, and providing exemptions for certain exposures to central counterparties. In addition, The Clearing House recommended using supervisory processes to protect against material single counterparty concentrations underlying collective investment units, securitizations, and other similar vehicles, rather than relying on a look-through approach.

Attachment
BCBS LARGE EXPOSURES/DFA s.165(e): BRIEFING ON 2013 EMPIRICAL STUDY, RELATED ANALYSIS AND RECOMMENDATIONS

September 26, 2013
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EXECUTIVE SUMMARY - BACKGROUND

• TCH owner banks and advocacy partners, Goldman Sachs, Morgan Stanley and State Street, support the concept of a single counterparty credit limit and the BCBS’s objective to establish a large exposures framework for international consistency. However, they remain deeply concerned over the potential impact of the proposed BCBS/Federal Reserve frameworks on financial markets and the global economy.

• In commenting on the proposed BCBS Framework, TCH and several other leading trade associations expressed their concern over multiple elements of the framework including (but not limited to):
  – Dramatic overstatement of exposures arising from the purchase of credit protection
  – Dramatic overstatement of exposures arising from securities financing transactions
  – Use of a look-through approach ("LTA") for collective investment undertakings ("CIUs"), securitizations, and similar vehicles that imposes substantial (and in many cases insurmountable) burdens not balanced by corresponding prudential benefits

• The participating banks continue to support all of the recommendations set out in the Industry Comment Letter filed with BCBS (June 28, 2013).
EXECUTIVE SUMMARY - OBJECTIVES OF FURTHER RESEARCH AND STUDY

• In view of the BCBS Large Exposure regime’s wide-ranging potential impact and the need for additional study of its effects, TCH owner banks and advocacy partners undertook to build on:

  – (i) TCH’s 2012 “SCCL Study” with new analysis in 2013 to assess the impacts on the financial sector and financial product end-users of the proposed BCBS framework as well as the Federal Reserve’s proposed s.165(e) SCCL methodology; and

  – (ii) the industry comment letter on the BCBS proposal by making detailed recommendations in key areas to improve the effectiveness of the framework and reinforce its policy objectives.

• Key Study Findings

  – Significant Implications For the Financial Sector

    • Assessed the impact of the proposed frameworks using CEM, NIMM, and IMM for derivatives exposures.

    • Found significant number and magnitude of limit excesses with particular business constraints for derivatives, securities lending and repo market participants.

    • Excesses of Pillar 1 limits under the proposed rules principally due to measurement methodologies (e.g., “risk-shifting” of purchased protection and required use of collateral haircut/comprehensive approach for SFTs) that significantly overstate actual risk relative to the true economic risk of such exposures.

    • Significant excesses would exist independent of use of IMM or NIMM instead of CEM
EXECUTIVE SUMMARY - MARKET IMPACT

- Market/Economic Impacts

• If the large exposures guidelines were implemented as proposed, large BHCs would be forced to substantially reduce their credit intermediation and market making activities in order to reduce their exposure within limits. Market participants could be significantly negatively affected by any resulting lower liquidity in the derivatives and securities lending markets.
  - Limited capacity for firms not subject to large exposures regime to absorb estimated limit excesses.
  - Affected participants in the derivatives markets would include regional and community financial institutions, corporate debt issuers, government sponsored entities, pension funds, and other institutional investors.
  - Affected participants in the securities lending markets would include beneficial owners of securities, such as pension funds, mutual funds, insurance companies and other institutional investors.

• Inclusion of exposures to CCPs and non-US sovereigns in the proposed U.S. framework could unduly restrict the activities of covered companies to centrally clear OTC derivatives transactions. Such limitations would substantially impede and contradict other statutory and regulatory requirements and industry initiatives to move significant portions of current and future OTC derivatives exposures to CCPs.
EXECUTIVE SUMMARY - PRIMARY CONCLUSIONS AND RECOMMENDATIONS

• Risk Shifting/Substitution (Slides 8 to 14):
  – Recommendation that the large exposure framework should cover material single counterparty risks by: including all CDS purchases in the standard counterparty risk exposure measure (IMM, NIMM), and using a more targeted risk shifting for “substantial underlier-provider risk”

• SFT Exposure Measurement (Slides 15 to 20):
  – Recommendation for the development of a credit estimation process for SFTs analogous to the NIMM approach where industry participants would apply the prescribed haircuts, correlations, and associated adjustments to their portfolio positions to determine the SFT credit exposure

• Look-Through Approach (Slides 21 to 25):
  – Recommendation to employ a “Pillar 2 approach” – rather than a Pillar 1 LTA – to ensure that material single counterparty concentrations underlying CIUs, securitizations and similar vehicles do not exist

• CCPs (Slides 26 to 29):
  – Recommendation to implement frequent and strict regulatory monitoring and supervision of CCPs (“option two” of the BCBS framework). When appropriate, establish concentration safeguards that promote G-20 mandated compliance with clearing as well as address regulatory concerns around systemic risk and single counterparty credit limits.
BCBS LARGE EXPOSURES AND DFA s.165(e) SCCL QIS 2013 INDUSTRY STUDY

[SEE CONFIDENTIAL MATERIALS PROVIDED UNDER SEPARATE COVER]
RISK SHIFTING / SUBSTITUTION - BACKGROUND AND DISCUSSION OF RISK

• BCBS proposed framework requires substituting the full notional amount of protection purchased to the protection provider for an underlier (i.e., a single reference entity) where an offset is recognized for capital requirement
  – We have interpreted these requirements as applying to our net position with each provider in each underlier, including both banking and trading positions

• A core problem with the proposal is that it presumes that double-default occurs in all cases

• Universal double default is very unlikely, therefore we believe this approach will have costs that significantly outweigh the benefits
  – Using the large exposure framework to limit exposures on this basis would likely create real market disruption

• This treatment is particularly punitive as the counterparty credit risk in virtually all cases is already captured in the modeled (IMM/NIMM) exposure. As a result, the substitution of CDS generally double counts counterparty credit risk

• In practice, a bank would only incur outsized losses above and beyond the modeled risk if they have a substantial concentration of protection purchased on a single underlier from a protection provider

• As a result, it is inefficient for the framework to shift exposure for all protection purchased

1 See pages 49-67 of “Single Counterparty Credit Limits: The Clearing House Industry Study” (July 2012), which, in view of subsequent regulatory proposals on large exposures, may overstate the extent to which non-U.S. banking organizations could make up for lost derivatives capacity.
RISK SHIFTING / SUBSTITUTION - BACKGROUND AND DISCUSSION OF RISK

• If a bank is buying credit protection from a counterparty on a large number of underliers, the derivative counterparty metric (IMM or NIMM) will capture any “gap risk” that the bank might face upon default of their hedge provider, even if the overall notional size of the portfolio is large
  – Gap risk is potential loss of market value due to market moves that are uncovered by variation margin as a result of a counterparty default
  – Universal variation margin ensures a bank’s exposure is limited to gap risk
  – IMM and NIMM, in their PFE calculations, capture gap risk that would result if a counterparty defaulted and variation margin ceased to be collected while the bank rehedged

• If a bank had purchased substantial amounts of protection on an underlier, an unlikely “surprise default correlation” between provider and underlier could produce outsized gap risk that is not captured in standard counterparty risk models

• Risk shifting only for “substantial underliers” can address this potential risk
RISK SHIFTING / SUBSTITUTION - RECOMMENDATION

• The large exposures framework should cover material single counterparty risks by:
  1. including all CDS purchases in the standard counterparty risk exposure measure (IMM, NIMM) and,
  2. using a more targeted risk shifting for substantial underlier-provider risk

• Substitution should only be necessary for substantial concentrations of protection purchased from a single hedge provider on a single underlier as those concentrations are the ones that could present material risk to the bank in the relatively unlikely event of double default (or a “surprise” correlated jump toward default)

• We propose substitution for the maximum loss associated with an underlier-provider pair, but only if the maximum loss on protection purchased on that underlier from a single hedge provider exceeds 2% of the purchasing bank’s capital

• Maximum loss is defined as the loss that would result in a jump to zero recovery in an underlier from current market levels, less any excess margin (such as initial margin) held
RISK SHIFTING / SUBSTITUTION - SUBSTANTIAL UNDERLIER ALTERNATIVE

Example:
Purchasing bank capital = $40bn
2% of bank capital = $800mm
Max loss on protection purchased on Diversified Industrial from Bank 1 = $900mm
Max loss on protection purchased on Major Airline from Bank 1 = $200mm
Max loss on protection purchased on European Country from Bank 1 = $500mm
Max loss on protection purchased on Diversified Industrial from Bank 2 = $200mm

- Diversified Industrial-Bank1 underlier-provider pair max loss exceeds $800mm so full max loss of the pair is counted as exposure to Bank1 given substantial reliance on Bank 1 for protection

- While protection is also purchased on Diversified Industrial from Bank 2, that max loss is not added to the overall exposure to Bank 2 because the max loss from that underlier-provider pair is not substantial relative to the capital of the purchasing bank

- Likewise, neither the protection on Major Airline nor the protection on European Country purchased from Bank 1 are counted as exposure to Bank 1 as neither underlier-provider pair is substantial when compared to Bank 1 capital

- While the substantial underlier proposal is a viable alternative approach for credit hedges, it also has application to the requirement to relay counterparty risk to the collateral issuer where collateral is received
As the proposed concentration limits are set as a percentage of bank capital, a percentage of bank capital (2%) also serves as a logical threshold for determining materiality of a hedge and the necessity of substituting protection provider exposure for the protection purchased on an underlier.

Underlier-provider pairs with a maximum loss of less than 2% of a bank’s capital are unlikely to pose an existential threat to the bank in the unlikely event of a double-default.

The substantial underlier alternative captures any material wrong-way risk:
- Use of a capital-based threshold to determine when risk-shifting is required ensures that any “wrong-way” risk that exists in underlier-provider pairs is small and unlikely to be material to the bank.
- Using a capital-based threshold will also help ensure that any unforeseen risks pertaining to credit hedging will have modest/minimal impact on the bank.

A lower capital-based threshold could be employed for pairs where a bank is purchasing protection from a SIFI on another SIFI, as those pairs could be considered to have a heightened probability of unexpected, correlated jump-to-default with higher risk of systemic consequences:
- For example, if risk shifting is required for underlier-provider pairs where maximum loss exceeds 2% of bank capital, shifting could also be required for SIFI-SIFI pairs that exceed 1% of bank capital.
RISK SHIFTING / SUBSTITUTION - OTHER CONSIDERATIONS

• What if the bank is buying a lot of protection from a counterparty but not enough on any one underlier to require shifting?
  – By definition, this situation would require the bank to be buying protection on a large number of names, creating a diversified portfolio of credits
  – By including multiple underliers (long and short), the portfolio should tend toward credit neutrality and, at worst, behave much like an index, ensuring the ability of the bank to re-hedge their risk
  – This situation is properly captured by standard counterparty risk models

• What prevents an institution from selling a lot of protection on one name to many banks?
  – If the institution is systemically important, it will be subject to regulation, including the large exposure rules, and outsized aggregate sales of protection on a single underlier would cause them to hit their large exposure limit
  – Standard supervisory reporting for SIFIs would likely reveal any large position that develops from their sales of protection but that falls below their LE limit
  – New, supervisory reporting of margin disputes will ensure the efficacy of variation margin agreements in containing exposure to gap risk, will provide early reporting of gap risk arising from disputes, and will foster appropriate valuation
  – The institution will be subject to market risk capital rules which would require them to hold capital for the risk of the aggregate sold protection

• What is the right metric to use for measuring exposure versus the shifting threshold and for any risk shifting of concentrated positions?
  – The exposure measurement should be “max loss”, not notional, to reflect the use of variation margin and, where applicable, give credit for initial margin collected
SFT EXPOSURE MEASUREMENT

• Proposed SCCL/large exposure rules and the Basel III Standardized Approach apply haircuts to loan and collateral positions independently and with unreasonably conservative assumptions. As noted in the earlier QIS results, there is significant divergence between firms’ own estimates and the supervisory exposure measure.

• TCH believes that the existing supervisory exposure method is risk-insensitive with respect to two critical measurement issues:
  • Ten day holding period
  • Does not recognize benefit of correlation between loan and collateral positions, or between securities for multi-security netting sets

• Proposed haircut-based methods for determining SFT exposure will result in significant business constraints for securities lending and repo market participants:
  • In particular, agent lenders may be limited in their capacity to facilitate the flow of securities between lenders and borrowers, with potential knock-on effects for securities settlement, collateral availability and market liquidity

• TCH believes the supervisory exposure method for SFT should be refined for SCCL/large exposures, risk-based capital and leverage ratio purposes:
  • TCH suggests development of an alternative estimation process for SFT that is analogous to the proposed NIMM approach for derivatives exposures, based on supervisory inputs
SFT EXPOSURE MEASUREMENT

• The industry has presented one possible approach – a “Regulatory Input Method”

• Under the proposed approach the following parameters would need to be specified by regulators:
  – Haircuts (scaled to 5-days)
  – Correlations between positions
  – Adjustments for right way vs. wrong way risk

• These parameters would be based on stressed market conditions, and updated by regulators, as needed

• Industry participants would need to apply the prescribed haircuts, correlations, and associated adjustments to their portfolio positions to determine the SFT exposure
SFT EXPOSURE MEASUREMENT

Summarization of 5 Step approach:

• Compute Worst-Case Index - Index Correlations
• Compute Worst-Case Security - Index Correlations
• Combine Above to Obtain Worst-Case Loan Security – Collateral Security Correlations
• Compute Worst-Case credit exposure estimation
• Incorporate impact of right way / wrong way risk

Benefits

• Promotes consistency in implementation across industry participants, reducing “model risk”
• Regulatory control of data inputs ensures appropriate stress events are reflected, addressing tail risk
• Correlations (in a stressed environment) between asset classes are recognized
• The methodology incorporates recognition of right way and wrong way risk
• Credit estimation process can be calculated in either “Regulatory Input Method” (using regulator provided assumptions and formula) or a “Revised Comprehensive Approach” (using a multi-dimensional “haircut” table)
SFT EXPOSURE MEASUREMENT - POSSIBLE ALTERNATIVE
(“Revised Comprehensive Approach”)

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- Scaled to 5 day closeout period
- 99% most positive / most negative index - index correlations
- 99% most positive / most negative security - index correlations
- Used a Variance-Covariance VaR calculation using the prescribed volatilities under DFA 165(e) and the worst case correlations from above
- Adjusted to account for right way / wrong way risk, resulting in a higher haircut for exposure pairs with lower quality collateral and lower haircut for instances of higher quality collateral
## SFT EXPOSURE MEASUREMENT – REGULATORY PROPOSAL

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- This is the regulatory proposal in matrix form scaled to 5 day closeout period
- It does not incorporate any recognition of right way / wrong way risk
LOOK-THROUGH APPROACH
LOOK-THROUGH APPROACH - INTRODUCTION

• The proposed look-through approach (LTA) in the BCBS framework is unnecessarily complex and would be difficult to apply due to limited data availability/access (utilization of the “unknown client” bucket would frequently become the rule rather than the exception, despite the bank’s best efforts)

• It is at odds with the Committee’s efforts to avoid adding unnecessary complexity in a framework intended to serve as a uniform measure of large exposures, and as a backstop to existing risk-based capital requirements

• Application of a LTA in order to capture concentration risk is not justified as a prudential matter as most, if not all, collective investment undertakings (CIU) and structured finance products do not give rise to material single counterparty concentrations
  – Most CIU and structured product exposures contain very granular pools of assets
  – Many types of exposures, such as 40 Act funds, are already regulated and subject to strict rules on investments and leverage
  – Dodd-Frank provisions, such as the Volcker Rule, will largely prohibit U.S. banks and bank affiliates from investing in unregulated private equity and hedge funds (limited exceptions could potentially be granted for investments in sponsored funds for advisory or fiduciary clients and for risk management purposes)
LOOK-THROUGH APPROACH - RECOMMENDATIONS

- Banks should be permitted to assess concentrations of risk in CIU and structured products using the Pillar 2 framework
- A Pillar 1 look-through approach is not justified as a prudential matter even where possible to apply
  - The vast majority, if not all, CIU and structured products are comprised of granular underlying exposures which do not give rise to material counterparty risk
  - Even less granular structures, such as CMBS and CLOs, have concentration controls that prevent material counterparty risk
    - Asset concentration limits (e.g. CLOs typically limit the permissible concentration of a single exposure to 2.5% or less)
    - Lack of overlap due to diversification across deals
    - Credit enhancement provided by junior tranches
    - Largely corporate names – not the large exposure counterparties of SIFIs

US Securitizations Outstanding, July 2013 ($ in Billions)

Sources: FNMA, FHLMC, GNMA, Federal Reserve, CoreLogic
LOOK-THROUGH APPROACH - PILLAR 2 APPROACH

• Under the proposed approach, banks would monitor and document their exposures to underlying CIU and structured products at the underwriting or investment/acquisition stage, if applicable.

• On a quarterly basis, a full portfolio review of CIU and structured products would be completed and documented to ensure material single counterparty concentrations underlying such transactions do not exist.

• Any material concentrations identified across the banking group’s portfolio of CIU and structured products would be included in the exposure to that particular counterparty.

• National regulators would review this monitoring process and have the ability to require look-through and aggregation of any underlying exposures that are determined to present material counterparty risk.

• Banks would document the following factors in their Pillar 2 assessment:
  – Granularity of exposures and/or lack of overlap with a bank’s lending or trading portfolio:
    • Retail asset backed securities (e.g. credit cards, auto loans, and residential mortgages)
    • Pools of finance receivables
    • Commercial mortgage backed securities
    • Registered mutual funds (e.g., 40 Act funds, EU UCITS, etc.)
    • Other regulated funds
  – Structural factors such as the level of credit enhancement, if applicable
  – Feasibility to perform the LTA based on reasonable best efforts to access the information required to look through to the underlying investment
  – Ability of the banking group to influence investment/underlying portfolio decisions
LOOK-THROUGH APPROACH - ALTERNATIVE IF A PILLAR 2 APPROACH IS NOT ADOPTED

• If a Pillar 2 approach is not adopted, we recommend that the scope of application for any LTA requirement be narrowed to a very limited number of products, i.e., those with the least granularity, to consider material risks

• This would greatly reduce operational burden and focus the assessment on potential areas of concentrations (albeit very limited)

• Specifically
  – Exempt all regulated CIU, such as US mutual funds, EU UCITS, and other similar foreign equivalents
  – Exempt all senior investment grade positions in structured products to recognize the loss absorbing capacity provided by junior tranches
  – Exempt all structures which contain more than 20 underlying exposures
    • The remaining exposures would consist primarily of CLO, CMBS and bespoke structured lending exposures
  – Apply a materiality threshold based on the exposure amount to the CIU or structured product relative to the capital held by the bank entity where the exposure resides
TREATMENT OF CENTRAL COUNTERPARTIES
TREATMENT OF CENTRAL COUNTERPARTIES - BACKGROUND

• The Federal Reserve’s proposed Single Counterparty Credit Limits (‘SCCL’) Rule treats Central Counterparties (‘CCP’) at par with any other counterparty and mandates institutions from having an exposure not exceeding 25% of the bank’s capital (the BCBS large exposures proposal offers two different approaches as described below)
  – Forcing CCPs into the SCCL framework would limit the potential benefits of CCPs, which are themselves designed to mitigate systemic risk associated with the default of a single trading counterparty
  – Proposed limits contradict the G-20 mandate to move OTC derivatives to a cleared environment and potentially impedes the industry’s ability to either comply with regulatory requirements and/or satisfy client requirements

• TCH recognizes the critical role CCPs play as agents of systemic risk mitigation and fostering financial stability. It also recognizes the significant risks and contagion that CCPs can pose to the financial system, particularly in periods of market stress. TCH has been one of the strongest advocates of mitigating such risks through the establishment of a robust CCP framework

• Near term imposition of limits on CCP exposures ignores the special regulatory scrutiny and regime to which CCPs are subject and will impede progress towards the goal of centralized clearing. Regulators have a host of tools to address systemic risk concerns associated with the potential failure of a CCP
  – CPSS-IOSCO Principles for Financial Market Infrastructure (PFMI) and recovery and resolution planning for CCPs
  – Requirements mandated by SEC and CFTC as part of the Dodd-Frank Act (‘DFA’) in the U.S.
  – Strict monitoring and coordinated supervision with different U.S regulatory agencies
SCCL AND TREATMENT OF CENTRAL COUNTERPARTIES

• Financial institutions are very limited in their ability to diversify exposures to CCPs
  – Interest Rate derivatives (IRD) account for about 80% of the $640 Tr. OTC derivatives market. In the U.S. and U.K, which account for a majority of the IRD market, only LCH Clearnet and CME Group clear IRDs
  – The CCP landscape is at best, an oligopolistic structure, with significant barriers to entry. Additionally, a new entrant seeking to establish operations is subject to complex and time consuming home host country authorizations. There are no new CCPs expected to start clearing in the U.S. or U.K in the foreseeable future
  – The choice of CCP for clearing transactions lies with the client and amongst other factors, depends on margin requirements of the CCP

• Using CEM to measure exposures to OTC derivatives, the 2012 TCH SCCL indicated overages with CCPs. The issue will get further exacerbated as larger volumes get migrated to a cleared environment. As of June 2013¹:
  – For G-15 dealers, only 42% ($163Tr.) of the $305 Tr. of notional clearable IRDs were being cleared

• Lack of cross-border harmonization places U.S. institutions at a significant disadvantage compared to peers in Europe and Asia
  – CRD IV exempts CCPs from hard limits
  – BCBS Large Exposure framework considering a) higher than 25% limit b) no limit at all

¹Source: FSB, BIS
TREATMENT OF CENTRAL COUNTERPARTIES - RECOMMENDATIONS

• Exemption of CCPs from SCCL Framework. Address systemic risk by ensuring strict CCP compliance with PFMI, DFA and other regulatory requirements. Implement frequent and strict regulatory monitoring and supervision of CCPs (“option two” of the BCBS Framework)
  – Reporting of QCCP exposures by institutions to the regulators. Regulators closely partner with industry to define frequency and reporting requirements for QCCPs

• When appropriate, establish concentration safeguards that promote G-20 mandated compliance with clearing as well as addresses regulatory concerns around systemic risk and single counterparty credit limits. Specifically, the consideration of the safeguards should be informed by:
  – Methodology used to calculate exposures to CCPs
  – Availability of CCPs and the industry’s ability to achieve diversification of CCP exposures
  – End state volumes for a steady state cleared environment
RISK SHIFTING / SUBSTITUTION – BACKGROUND DATA

Facts on defaults
There is an implicit assumption of double default (simultaneous failure of both the protection provider and the underlier or counterparty) in the proposed substitution approach. Absent wrong-way risk resulting from a strong correlation between the protection provider or collateral issuer and the underlier or counterparty exposure, the likelihood of double default is extremely unlikely. As indicated below, the incidence of even single defaults – just the reference name - is very low.

Moody’s facts on defaults
Moody’s data on defaults shows that between 1994 and 2008 the average volume-weighted corporate default rate for all rated credit was 1.221% (Moody’s Corporate Default and Recovery Rates 1920-2008)

Since the standardization of auctions for credit default swaps in 2005, there have been 110 default trigger events. This is for all CDS trading on corporate or sovereigns globally of any investment quality. As measured by one institution with 1,567 separate entities, this translates to 7.2% cumulative default rate over the 8 year period, slightly below 1% average default rate per year.
RISK SHIFTING / SUBSTITUTION - ALTERNATIVES

• We have considered a number of other alternatives besides the substantial underlier approach but found that it was most effective at capturing perceived risks with minimal inefficiency

• The other approach that was viewed as viable but less effective was “cover n” which would require that the maximum loss on the top n underliers would be shifted to the hedge provider
  – Should it be applied, the consensus view was that n =2 made the most sense given precedent for use in CCP risk management

• A cover n approach has two major drawbacks that make it less effective as compared to a substantial underlier approach
  – If there are substantial concentrations beyond n they would not be shifted to the hedge provider
  – By requiring that the max loss associated with n underliers is always shifted to the hedge provider, the approach always consumes credit capacity, even when the “concentration” of credit risk is not substantial
APPENDIX B: TREATMENT OF CENTRAL COUNTERPARTIES
TREATMENT OF CENTRAL COUNTERPARTIES - CENTRAL COUNTERPARTIES ARE FUNDAMENTALLY DIFFERENT FROM ‘SINGLE’ COUNTERPARTIES

• The primary source of risk in a CCP comes from the possibility of a clearing member (CM) default and inadequate margin and default fund contribution posted by the defaulting member (CM_D) to the CCP. CCPs have robust risk management practices to insulate the CCP and other CMs from such defaults
  – CM_D required to post daily variation margin, initial margin and make guarantee fund contributions
  – If these resources prove inadequate, the CCP relies on a "waterfall" of additional resources: First-loss capital of the CCP; Guarantee fund contributions of non-defaulting members; and After-the-fact assessments (subject to established limits) on non-defaulting members
  – It would require the extremely unlikely event of simultaneous failure of several large CMs for the non-defaulting member to suffer losses beyond its guarantee fund contribution and its share of post-default assessment (if any)

• Additionally, CCPs are currently, or in the near future, be subject to a panoply of requirements to ensure safety and soundness of CCPs
  – PFMI requires CCPs with complex risk profiles to maintain sufficient financial resources to absorb simultaneous defaults by its two largest clearing members in extreme, but plausible, market conditions
  – Adherence to multiple other PFMI requirements (e.g.: governance, segregation and portability, stress testing of margin and default fund requirements)
  – CPSS-IOSCO proposed Recovery and Resolution regime for CCPs
  – CCPs subject to strict regulation and oversight by CFTC and SEC after being designated as Derivatives Clearing Organizations (DCO) under DFA
  – FSOC designated systemically important CCPs subject to heightened risk management (SEC and/or CFTC prescribed), Board oversight and subject to comprehensive supervisory examinations at least annually