

The Future of Portfolio Margining

An overview of portfolio based margining arrangements today and the benefits they can continue to deliver as OTC derivatives market reforms progress

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Abstract

Following the global credit crisis, policy makers have been given a unique opportunity to develop a market structure for over the counter (**OTC**) derivatives that is distinct from past precedent. Inherent in this reform is a mandate to develop the new market structure in a way that satisfies the dual goals of transparency and risk mitigation embodied in the Dodd-Frank Wall Street Reform and Consumer Protection Act (**Dodd-Frank**) and the European Market Infrastructure Regulation (**EMIR**). As such, this task is staggering in its complexity. It is therefore prudent for policy makers to look to the best elements of existing markets when developing the new structure for OTC derivatives. The use of portfolio margining arrangements, such as those employed in securities and futures markets today, is one crucial element that must be adopted as part of any new market structure. In this paper, we hope to offer policy makers guidance as to the potential applications of these arrangements as they develop a new market structure for OTC derivatives.

This paper examines the use of portfolio margining arrangements as a means of encouraging mandatory clearing and mitigating potential unintended adverse effects of higher capital and margin requirements for uncleared swaps pursuant to Dodd-Frank, EMIR, and other legislation adopted pursuant to the September 2009 commitment of G20 nations to improve transparency and mitigate risk in derivatives markets.

At its essence, any portfolio margining regime is comprised of two key elements: (i) risk offsets, whereby the risk of positions held by a single investor is aggregated across product types and amongst various affiliated financial counterparties, and (ii) netting, which provides these same affiliated counterparties with an enforceable security interest in that investor's portfolio.

Margin requirements for financial instruments are set by a relevant exchange or regulator in the case of exchange traded products, and by a dealer in OTC markets. For customers trading in multiple types of assets and holding a portfolio of assets with a single dealer and its affiliates, some of these positions may naturally offset, or hedge, other positions within the same portfolio, so that the net risk of the portfolio is significantly less than the risk of each position taken separately. In these cases, the independent calculation of initial margin on each position results in an initial margin requirement in excess of what is needed to address the market risk relating to the aggregate portfolio, and unnecessarily locks up capital. A solution to this problem is portfolio margining, where the relevant dealer and its affiliates calculate initial margin requirements for each customer based on the actual net risk of a customer's portfolio as a whole.

Additionally, enforceable master netting arrangements, such as those more fully described in Part II.F of this paper, are of critical importance to those regulated entities that provide portfolio margining to their customers, as well as for the regulators that ensure these entities are in compliance with their prudential requirements.

Although the focus of this paper is the use of portfolio margining between cleared and non-cleared swap portfolios, many of the same issues apply equally to different forms of portfolio

margin arrangements, such as those which include futures, margin and securities lending, repo, options, or other financial instruments. However, they are not specifically addressed herein in the interest of focusing on cleared and uncleared swaps.

This is a working paper is being produced jointly by a group of investment management professionals in an effort to describe current market practice and to encourage dialogue between the regulatory and investment management community on this important topic. We intend to further develop and refine the analysis contained herein, and welcome any questions and feedback.

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I. Portfolio Margining and the Advent of Central Clearing

In 2009, the Group of Twenty Finance Ministers and Central Bank Governors (**G20**) met to discuss responses to the global financial crisis that unfolded in 2007 and came to fruition in 2008. A crucial part of this response was a plan to move standardized OTC derivatives negotiated and traded on a bilateral basis to a market where these same trades would be centrally cleared by the end of 2012. The reasoning behind this policy was twofold – first, bilateral agreements contain inherent counterparty risk, exposing parties to losses such as those incurred by counterparties of Lehman Brothers when it failed in September 2008; second, parties to bilateral agreements are required to provide differing levels of information to regulators depending on their regulatory oversight regime. When taken as a whole this reporting was deemed insufficient for regulators to develop a clear picture of the overall market at any time. As a response to these concerns, the use of a central counterparty interposed between the two original parties was an ideal solution. The central counterparty would monitor the risks that each entity brought to the system and militate against these risks through the use of margin and guarantee funds, while at the same time providing valuable information to regulators about positions held by all market participants.

Following the 2009 G20 summit, new regulations were proposed in the United States, the European Union and elsewhere across the globe to implement the clearing of OTC derivatives. In response, banks, clearinghouses, custodians, data and service providers, and swap market customers began to prepare for OTC clearing.¹ However, as markets continue to transform the G20 plan into a new market structure, certain practical considerations have come to light. Market participants have been trying to anticipate how to effectively manage large portfolios of derivatives in light of cross-border regulatory requirements, new margin and capital rules, and the potential bifurcation of swaps into cleared and uncleared buckets. While Dodd-Frank and EMIR do much to address the dual principles of increasing transparency and reducing systemic risk, market practitioners are currently focused on the transition period from OTC to clearing, asking themselves how to continue to manage their assets in a prudent and responsible way as the financial markets reorganize themselves to conform with the new laws.

If large parts of the OTC derivatives markets are to be smoothly transferred to central clearing, market participants need realistic and tangible economic incentives to continue to participate in these markets. We see a risk today that these incentives will either be insufficient or even negative, potentially resulting in damage to liquidity or a migration to non-standardized products. While corporate and certain other “end-user” entities will be exempted from regulatory requirements to centrally clear some of their trades, the majority of financial institutions will be subject to mandatory clearing with respect to much of their swap activity. This means that thousands of asset managers, hedge funds, and banks must ready themselves for a major change in the way they do business.

¹ See “OTC Derivatives Market Reforms: Fourth Progress Report on Implementation” 31 October 2012, Financial Stability Board, available at http://www.financialstabilityboard.org/publications/r_121031a.pdf

For example, a small minority of OTC derivatives market participants have not had to post or fund initial margin in connection with their bilateral swap trading. Swap dealers previously had wide latitude to offer their customers alternative margin arrangements, or to simply not require initial margin based on credit ratings or other measures of implied creditworthiness. With the advent of statutory and regulatory margin requirements for both cleared and uncleared swaps, this is no longer the case. Furthermore, there may be a scramble to obtain collateral for posting given the limits being imposed on the types of collateral that qualify as eligible (e.g., U.S. dollars and treasuries only, rather than corporate bonds or other financial instruments as eligible collateral). Therefore, we believe that it is necessary and appropriate for market participants to consider how to make central clearing as efficient and effective as possible. An integral part of this equation is the relationship between cleared and uncleared swap portfolios and the ability to utilize portfolio margining in determining the amount of margin required for clearing.² This relationship is the central focus of this paper.

² For purposes of this paper, we use the term “swap” to refer to all OTC derivatives. Therefore, this term should be read to include “security-based swaps” and “mixed swaps” in addition to those swaps which will be regulated by the CFTC in the United States.

II. Portfolio Margining Arrangements Today

A. What is Portfolio Margining?

Initial margin provides protection to a party where its counterparty's positions are closed out at a loss and the counterparty fails to cover the loss. There are a number of approaches to calculating the required amount of initial margin, but, generally speaking, there are two starting points for determining the appropriate level of margin. Initial margin can be calculated--

1. On a trade by trade or gross basis, where the amount of required initial margin is determined independently for each position in a counterparty's portfolio. Under this approach, the total initial margin that must be provided by the counterparty is equal to the sum of the amount of initial margin required for each individual position.
2. On a portfolio or net basis where the amount of required initial margin is based on the risk posed by a counterparty's portfolio across all positions. Under this approach, each individual position held by the counterparty is not considered in isolation from all other positions.

There are many ways to describe what is meant by portfolio margining. The Securities Exchange Commission (**SEC**), in its rule on customer margin rules relating to security futures, describes portfolio margining as follows:

Portfolio margining establishes margin levels by assessing the market risk of a "portfolio" of positions in securities or commodities. Under a portfolio margining system, the amount of required margin is determined by analyzing the risk of each component position in a customer account (e.g., a class of options, with the same expiration date) and by recognizing any risk offsets in an overall portfolio of positions (e.g., across options and futures on the same underlying instrument).³

When we refer to portfolio margining, we are primarily talking about establishing risk offsets across an aggregate portfolio of positions. Additionally, portfolio margining includes the concept of netting, where the party receiving the benefit of risk offsets grants a security interest in its portfolio to the various legal entities who are its counterparties. The combination of these two elements creates a portfolio margining regime.

³ Exchange Act Release No. 34-46292 (July 31, 2002), 78 S.E.C. Docket 384, 2002 WL 1769439 (July 31, 2002).

B. How Does Portfolio Margining Work?

Portfolio margining allows a clearinghouse or dealer (depending on the type of product) to call for initial margin commensurate with the actual net risk of a customer's portfolio. Initial margin requirements calculated on the basis of net risk are generally lower than the amounts that would be required where positions are considered in isolation of one another. This reflects the fact that many times, positions in a customer's portfolio offset or hedge against the risk of other positions in the portfolio. For example, holding a long futures position on a 10-year treasury is often a hedge against the fixed rate payments due under a 10-year interest rate swap. As interest rates change, the value of each position will move in opposite directions. Portfolio margining reflects such offsetting risks and thus allows customers to use collateral more efficiently, and in totality, for collateral to be more efficiently utilized across the market.

Dealers also benefit from portfolio margining because measuring the risk of pairs or groups of positions which are correlated based on reference asset (e.g. options on the S&P 500 and S&P futures) or historical data provides a better methodology for evaluating the risk associated with a customer's default than would be the case were the risk associated with each customer's positions analyzed in isolation. For this reason, many swap dealers currently offer portfolio margining arrangements to their customers and confer margin optimization benefits to those customers. This allows the dealer to maintain sufficient collateralization at all times in the event of customer default utilizing the most accurate risk methodologies. Furthermore, dealers are provided access to a large pool of customer collateral through additional liens granted in collateral held by their affiliates, which can be utilized in the event of a customer insolvency without having to first return it to the customer's estate.

Portfolio margining arrangements typically recognize offsets among products within the same asset class (i.e. interest rates, credit, commodities, equities, etc.) but not across multiple asset classes. However, within an asset class, different types of cash and synthetic products can and do qualify. For example, in the interest rates asset class, certain bonds, Treasury futures, interest rate swaps, and repos may all be subject to the same portfolio margining framework.

C. Examples of Portfolio Margining

Portfolio margining arrangements exist today in a number of contexts:

- Amongst cleared derivatives
- Amongst uncleared derivatives and other products (e.g., cash bonds, repo, futures)
- Amongst cleared derivatives, uncleared derivatives, and other products

As discussed below, portfolio margining has existed for decades. For example, The Options Clearing Corporation (**OCC**) has used portfolio margining to calculate margin levels since 1989. Regulation T of the Board of Governors of the Federal Reserve System (**Reg T**), which governs

the amount of margin that must be maintained by customers at a broker-dealer (**BD**) in connection with open securities positions, was amended in 1998 to allow BDs to use exchange-approved portfolio margining programs to calculate initial and variation margin.⁴ Additionally, in 2006, the New York Stock Exchange (**NYSE**) and the Chicago Board of Options Exchange (**CBOE**) amended certain exchange rules to allow margin requirements to be calculated on a portfolio basis, and for a wide variety of products, including security futures and listed options.⁵

D. Markets Which Currently Utilize Portfolio Margining

Reg T generally establishes initial margin requirements for securities-related credit transactions. Reg T governs the amount of margin a BD must collect from a customer in connection with purchases and sales (including short sales) of securities. Reg T does not, however, determine the amount of margin that must be maintained by a customer after the initial purchase or short sale of a security.

Reg T allows securities self regulatory organizations, such as securities exchanges, to establish their own rules governing the amount of margin that must be held by BDs in connection with customer open positions.⁶ Additionally, in 1998, the Federal Reserve Board (**Fed**) opened the way for portfolio margining by amending Reg T to exclude from its scope any financial relations between a customer and a BD that comply with a portfolio margining regime approved by the SEC.⁷ The 1998 amendment allows BDs to compute initial and variation margin requirements pursuant to exchange-approved portfolio margining programs.

1. Cleared Futures and Options (SPAN)

For the past 24 years, commodity exchanges in the United States, Europe, and Asia have been calculating margin requirements on a portfolio basis using the Standard Portfolio Analysis of Risk (**SPAN**) margin system developed by the Chicago Mercantile Exchange (**CME**). The introduction of SPAN completely changed the world of futures and options risk management by allowing margin requirements for futures and options on futures to be calculated on the basis of overall portfolio risk.

⁴ 17 C.F.R. Section 1.20.

⁵ See footnote 10 below.

⁶ 12 C.F.R. Section 220.1(b)(2).

⁷ See C.F.R. Section 220.1(b)(3)(i). The Fed also encouraged the development of portfolio margining when it delegated authority to set margin requirements for security futures to the SEC and the CFTC. Letter from the Fed to James E. Newsome, Acting Chairman, CFTC, and Laura S. Unger, Acting Chairman, SEC, dated March 6, 2001. See also SEC Rule 400(c)(2)(i) (exempting from the security futures margin requirements financial relations between a customer and a security futures intermediary that comply with an appropriate portfolio margining system); CFTC Rule 41.42(c)(2) (comparable exemption).

SPAN calculates the likely loss in a portfolio of derivatives positions using a set of portfolio parameters, and sets this value as the initial margin payable by the firm holding the portfolio.⁸ For example, the CME determined that there is a high correlation in the price fluctuations of the S&P 500 and the NASDAQ 100 futures contracts. If a customer holds offsetting positions in the two contracts, that customer will have less market risk on a net basis than if it held either position by itself. Consequently, under SPAN, the customer's net initial margin requirement will be less than would have been otherwise required due to the reduction in overall market risk.

SPAN is used today by 50 exchanges and clearinghouses.⁹ Each exchange or clearinghouse sets its own risk parameters using SPAN. Therefore, identical futures contracts traded on more than one exchange may have different SPAN-calculated margin requirements depending on the risk parameters set by the particular exchange. However, each SPAN model generally uses options pricing models and value-at-risk (**VaR**) models to determine how positions will perform under different scenarios in order to assess for changes to a portfolio's price and volatility. SPAN then allows projected gains and losses for each position in a portfolio to be netted under each scenario in order to determine a portfolio-wide net gain or loss. The scenario representing the greatest potential loss is then used to determine the customer's required initial margin level.

2. OCC Multiple Clearing Venue Model

Building on the work of the CME, the OCC introduced portfolio margining in 1989, recognizing offsetting hedged positions maintained by firms at multiple clearinghouses through the use of joint clearing accounts for the members of those clearinghouses. In the event of a default, the clearinghouses' arrangement provides for the treatment of all assets and obligations associated with the joint account as well as the other clearing accounts of the defaulting member. Trades subject to cross product margining arrangements are executed on the applicable exchange for which the participating clearing organization clear trades and are then transferred to a joint account via a clearing member trade or give-up agreement. At the end of each trading day, the applicable clearinghouse transmits closing positions and settlement activity to OCC, which in turn calculates a single margin level to support the covered positions and then produces and distributes position, margin and settlement reports to clearing members. Following the 1998 Reg T amendments, OCC adopted SPAN for its portfolio margining model.

⁸ "Review of Standard Portfolio Analysis of Risk ("SPAN") Margin System as Implemented by the Chicago Mercantile Exchange, Board of Trade Clearing Corporation and the Chicago Board of Trade", CFTC Division of Trading and Markets, April 2001 (available at: http://www.cftc.gov/files/tm/tmspan_margining043001.pdf).

⁹ "SPAN Overview – CME Group", <http://www.cmegroup.com/clearing/risk-management/span-overview.html> (last visited October 23, 2012).

3. NYSE Portfolio Margining

NYSE Rule 431, adopted in accordance with Reg T, establishes margin requirements for NYSE member firms. Rule 431 establishes initial margin requirements equal to the greater of the amount required pursuant to Reg T, Rules 400 through 406 of the Securities Exchange Act of 1934 (**Exchange Act**) or Rules 41.42 through 41.48 of the Commodity Exchange Act (**CEA**) or, if higher, the amount required by NYSE rules. Rule 431 also imposes maintenance margin requirements when the value of the positions in a customer's account falls below a specified level. Rule 431 prescribes specific margin requirements for customers based on the type of securities held in their accounts. Generally, Rule 431 requires that margin be calculated using fixed percentages, on a position-by-position basis. This approach does not fully recognize hedges or other risk offsets between different positions that may reduce the overall risk of a portfolio. In addition, the fixed margin percentages established for each position do not take into account the fact that the prices of different security positions, such as options, related to the same underlying instrument do not necessarily change equally (in percentage terms) in relation to a change in the price of the underlying instrument.

In 2002, the NYSE sought approval from the SEC to modify Rule 431 and launch a pilot portfolio margining program. In 2006, the SEC approved parallel rule amendments by the NYSE and the Chicago Board of Options Exchange (**CBOE**) expanding their respective pilot programs permitting margin requirements to be calculated on a portfolio basis.¹⁰

As amended, Rule 431 permits a BD to calculate customer margin requirements for eligible products including equity securities, listed options, unlisted derivatives (that is, any equity-based or equity index-based unlisted option, forward contract, or security-based swap that can be valued by a theoretical pricing model approved by the SEC) and securities futures products by grouping those products in an account that are based on the same index or issuer into a single portfolio so that offsets between positions within that portfolio can be recognized.¹¹

A theoretical pricing model is used to measure the potential gains and losses to each position in the portfolio under multiple pricing scenarios. Subject to a "per contract minimum" requirement, the margin required for each portfolio is determined by

¹⁰ SEC Release No. 34-54918 (Dec. 12, 2006), 71 Fed. Reg. 75790 (Dec. 18, 2006); SEC Release No. 34-54919 (Dec. 12, 2006), 71 Fed. Reg. 75781 (Dec. 18, 2006). See also NYSE Information Memo 06-86 (Dec. 21, 2006) ("IM 06-86"); CBOE Regulatory Circular RG06-128 (Dec. 15, 2006).

¹¹ NYSE Rule 431(g) also provides: "In addition, a member organization, provided that it is a Futures Commission Merchant ('FCM') and is either a clearing member of a futures clearing organization or has an affiliate that is a clearing member of a futures clearing organization, is permitted under this section (g) to combine an eligible participant's related instruments as defined in section (g)(2)(E), with listed index options, options on exchange traded funds ('ETF'), index warrants and underlying instruments and compute a margin requirement for such combined products on a portfolio margin basis."

reference to the greatest theoretical loss incurred by the portfolio in aggregate after “shocking” the portfolio for upward and downward price movements within a defined range above and below the current market price (e.g., +/- 10%) of the instrument or, in the case of a derivative, its underlier.

In the release approving the initial pilot programs, the SEC noted that the use of the methodology employed by BDs to calculate net capital haircuts for certain options and related positions for purposes of SEC Rule 15c3-1 “may better align a customer’s total margin requirement with the actual risk associated with the customer’s positions taken as a whole,” and “may alleviate excessive margin calls, improve cash flows and liquidity, and reduce volatility.”¹²

E. Portfolio Margining and Cleared Derivatives

1. NYPC “One Pot” Margining

New York Portfolio Clearing LLC (**NYPC**) is a joint venture between The Depository Trust & Clearing Corporation (**DTCC**) and NYSE Euronext. NYPC allows for “one pot” margining for eligible futures positions cleared by NYPC against treasury and agency securities and repo positions cleared by DTCC’s Fixed Income Clearing Corporation (**FICC**). As discussed above, Rule 431 allows member firms to aggregate eligible products including equities, equity swaps and stock index futures, into a single account for determining required margin. However, broad-based stock index futures such as the S&P 500 Stock Index are subject to Commodity Futures Trading Commission (**CFTC**) rather than SEC jurisdiction. Historically, the CFTC has taken the position that customer futures margin must be held in a customer segregated account with an FCM in accordance with CFTC Rule 1.20. As a result, a customer that trades equity products and related stock index futures has been forced to maintain two accounts with its BD that is also registered as an FCM — one for equity positions subject to Reg T and a second for futures positions subject to the CEA. This is a “two pot” structure that limits the ability to apply portfolio margining across certain product classes.

Similarly, two-pot margin arrangements are the norm between separate cash and derivative clearinghouses. This is because, typically, each clearinghouse nets positions internally and only residual risk can then be offset between clearinghouses. In order to offer a one-pot structure, NYPC and FICC developed a single risk methodology to cover both cash and futures positions and then sought and obtained regulatory approval from both the CFTC and SEC to offer in one account portfolio margining across both those cash and futures positions. NYPC uses historical value at risk (**hVaR**) applied to both to

¹² SEC Release No. 34-54918 (Dec. 12, 2006), 71 Fed. Reg. 75790 (Dec. 18, 2006).

cash and derivatives positions to manage risk exposure, making one-pot margining possible.

Products cleared by NYPC include 2, 5 and 10 year Treasury note and bond futures and Eurodollar futures traded on NYSE Liffe U.S. FICC clears U.S. Treasury and agency securities and repo positions. One-pot margining is available for the proprietary accounts of common members of NYPC and FICC.¹³

2. ICE/OCC Cross-Margining Arrangement

ICE Clear U.S. (ICE) and OCC entered into a cross-margining agreement that was approved by the CFTC in 2008 in order to offer cross-margining arrangements to proprietary, non-customer, and market professional accounts on equity index products traded in different markets.¹⁴ To take advantage of cross-product margining, an eligible account must enter into a cross-margin account and security agreement. The agreement establishes cross-margined proprietary accounts at both ICE and OCC. For purposes of calculating margin, the accounts are combined and treated as a single account. Each of ICE and OCC have a lien and security interest on the accounts and have established procedures with the CFTC for dealing with distribution of customer property held under this arrangement in the event of a clearing member bankruptcy that would prevent non-cross-margin customers from receiving less than cross-margin customers.

3. ICE Clear Credit Customer Portfolio Margining

ICE Clear Credit currently clears certain index credit default swaps (CDS) that constitute “swaps” regulated by the CFTC for both house positions and customer-related positions. ICE Clear Credit also currently clears certain single-name CDS that constitute “security-based swaps” regulated by the SEC for its clearing members, but does not currently clear single-name CDS for customers.

Based on ICE’s portfolio decomposition model, ICE offers portfolio margining benefits between CDS indices and the single-name CDS that are the components of such indices. Presently, these portfolio margining arrangements are only offered to the house

¹³ On May 15, 2012, the SEC approved FICC proposal to modify certain rules of the Government Securities Division in order to expand FICC's existing one-pot cross-margining program with NYPC to include eligible positions held by GSD netting members and NYPC clearing members for certain "market professionals." The CFTC subsequently approved the FICC proposal on August 3, 2012.

¹⁴ “ICE Futures U.S. and Russell Stock Index Contracts: Cross Margining Reference Guide” available at https://www.theice.com/publicdocs/clear_us/Cross_Margining_Reference_Guide.pdf (last visited August 22, 2012).

accounts of ICE's clearing members. However, ICE is in the process of applying for CFTC and SEC approval to make them available to customers as well.¹⁵

4. LCH "One Pot" Model

In April 2012, LCH.Clearnet Limited (**LCH.Clearnet**) entered into two significant agreements to facilitate the inclusion of cleared OTC interest rate swaps into the "one-pot" model espoused by NYPC and FICC. LCH.Clearnet, through an agreement with NYPC, DTCC and NYSE Euronext, and its proposed acquisition of the International Derivatives Clearing Group, LLC (**IDCG**), intends to combine NYSE Liffe U.S.-traded interest rate futures contracts cleared by NYPC, fixed income cash and repo trades cleared by FICC, and interest rate swaps cleared by LCH.Clearnet's SwapClear service (into IDCG's U.S. registered DCO) into a single portfolio for purposes of margin netting and offsetting.¹⁶ The resulting netting and recognized offsetting risk within a multi-product single asset class portfolio would allow margin requirements to be calculated on the net combined portfolio.

5. CME Portfolio Margining

In November 2012, CME began offering portfolio margining of CME listed Eurodollar and Treasury futures and CME-cleared OTC interest rate swap products for customer accounts following its receipt of regulatory approval.¹⁷ This type of portfolio margining creates substantial cost savings for market participants, with CME estimating that this type of interest rate swap portfolio margining may result in up to 85% reductions in

¹⁵ On October 4, 2011, ICE Clear Credit formally filed separate but related petitions with the CFTC and SEC to offer portfolio margined customer accounts. In order to ensure that customers receive the same benefits afforded to its clearing members, ICE Clear Credit has requested that the CFTC and SEC issue exemptive orders, in accordance with Section 713(a) of Dodd-Frank, exempting ICE Clear Credit and its participants from Section 15(c)(3) of the Exchange Act and Rule 15c3-3 thereunder, in order to allow a dual-registered BD/FCM to (i) hold customer positions in CDS that include both index CDS regulated by the CFTC as swaps, and single-name CDS that are regulated by the SEC as security-based swaps, in a customer commingled omnibus account at ICE Clear Credit subject to Section 4d(f) of the CEA and the commodity broker provisions of the U.S. Bankruptcy Code; (ii) calculate margin for the commingled account pursuant to a portfolio margining program approved by the CFTC and SEC; and (iii) provide similar relief for BD/FCMs that maintain clearing accounts for their customers at ICE Clear Credit.

¹⁶ "LCH.Clearnet in discussions to expand U.S. footprint with acquisition of IDCG", LCH.Clearnet press release dated April 24, 2012 available at http://www.lchclearnet.com/images/2012-04-24%20lch.clearnet%20in%20discussions%20to%20expand%20u.s.%20footprint%20with%20acquisition%20of%20idcg_tcm6-61284.pdf.

¹⁷ "CME Group Extends Portfolio Margining for OTC Interest Rate Swaps and Futures to Customer Accounts" CME press release dated October 16, 2012 available at <http://cmegroup.mediaroom.com/2012-10-16-CME-Group-Extends-Portfolio-Margining-for-OTC-Interest-Rate-Swaps-and-Futures-to-Customer-Accounts?page=article>.

initial margin requirements depending on the asset composition of the particular account.¹⁸

6. CME/ERIS Exchange

In April 2012, CME and Eris Exchange, a U.S. futures exchange, announced the implementation of initial margin offsets with CME Eurodollar and Treasury futures.¹⁹ Because Eris interest rate swap futures are held in the same guaranty fund with other CME futures, end-users can benefit from reduced initial margin levels when holding portfolios which include Eris contracts and correlated CME futures positions. This cross-affiliate margining only reduces the amount of initial margin potentially required of a customer, and does not reduce the amount of variation margin that each of the FCM and dealer must collect on their respective transactions with the customer. However, for portfolios with significant offsetting positions, Eris has estimated that reductions to required initial margin levels can be as high as 95%.²⁰

Under the Eris-CME arrangement, margin levels are computed by CME using a proprietary model based on hVaR to determine initial margin levels for Eris interest rate swap futures as well as for cleared OTC interest rate swaps. The margin levels assume that positions could be liquidated over a 5-day period. Based on historical rates, the model calculates a forecasted volatility for each tenor using an exponentially weighted moving average methodology which applies heavier weights to the most recent six months of data to reflect current market conditions. The model also uses a volatility floor to ensure that the forecasted volatility remains above a certain threshold in order to protect against generating net margin requirements that would be too low to guard against sudden volatility spikes.

Using the forecasted volatilities, the model then calculates expected returns and losses for each asset over a 5-day period. The required margin level equals the maximum possible loss using a 99.7% confidence interval from the generated profit and loss distribution. CME arrived at a 99.7% confidence interval based on back testing performed on more than 10,000 portfolios. That confidence interval was determined to be the number which led to a 99% aggregate coverage across those portfolios.

¹⁸ “Introducing Portfolio Margining of Interest Rate Swaps vs. Futures”, CME press release dated May 7, 2012 available at <http://www.cmegroup.com/trading/otc/files/cme-irs-portfolio-margining-sell-sheet.pdf>.

¹⁹ SEC Release No. 34-66931 (May 7, 2012), 77 Fed. Reg. 27827 (May 11, 2012).

²⁰ “Portfolio Margining through CME Clearing” at <http://www.erisfutures.com/marginoffsets> (last visited August 22, 2012). Portfolio margining examples are also provided at: <http://www.erisfutures.com/sample-portfolios> (last visited August 22, 2012).

F. Portfolio Margining Under Master Netting Agreements

1. Introduction to Master Netting Agreements

Market participants are currently able to use portfolio margining with respect to cleared futures, options cleared through futures commission merchants (**FCMs**) and uncleared OTC derivatives positions entered into with affiliated swap dealers through the use of master netting agreements. Under such arrangements, a dealer and its affiliated FCM will assess total exposure to the customer as well as assess the value of liens on affiliate held customer collateral (described below) and the potential for excess collateral and liquidation value to be held within the affiliate group, in order to determine the necessary collateral required across all entities for protection in the event of a customer default. The total amount of margin assessed from the customer is equal to the sum of the minimum margin required to be held by the FCM for the customer's cleared positions, plus any additional margin necessary to cover any added net exposure arising from the customer's uncleared positions.

Where master netting arrangements are used, a customer grants junior rights to the dealer on the customer's cleared positions account with the dealer's FCM affiliate (*i.e.*, on the positions and on the collateral posted to secure its cleared positions). The customer also grants junior rights to the FCM on its positions carried by and collateral posted to the dealer. The dealer and FCM further have cross-default rights under such master netting arrangements in the event that the customer defaults on its obligations to either the FCM or the dealer. Following such default, regardless of whether the default was with respect to positions at the dealer or the FCM, the FCM can liquidate the customer's cleared positions account at the FCM, and the dealer can terminate its uncleared positions. After liquidating those cleared positions, the FCM may use the customer's collateral posted to the FCM to satisfy any remaining customer obligations to the FCM. The dealer can concurrently use any customer collateral separately posted to the dealer to satisfy any shortfalls resulting from the termination by the dealer of uncleared positions. In the event that either the FCM or the dealer has a shortfall, the dealer may apply excess collateral held at the FCM, or the FCM may apply excess collateral held at the dealer to satisfy such shortfall after the customer's obligations to each have been fully met individually.

In light of the security and netting arrangements described above, an affiliated group of financial entities are able to offer the customer relief in respect to the amount of margin required, in the event that the sum of the margin calculated on a standalone basis for the dealer and FCM exceeds the net margin required to protect the affiliate group as a whole. Accordingly, in the event of a customer default, the affiliate group is adequately collateralized, but at the same time the customer is spared posting a gross amount of collateral to the bank's FCM and dealer affiliates, calculated for each entity, on a standalone basis, without the benefit of portfolio offsets. This reduction in collected initial margin is possible because, in the event of a customer default, and subject to the

FCM and dealer's priority in their respective collateral, each of the FCM and the dealer may access excess customer collateral held by the other without first having to return the excess to the defaulted customer's estate as they would in a purely bilateral relationship.

2. Master Netting and Margin Offsets

When portfolio margining between cleared and uncleared swaps, swap dealers apply models across the total portfolio to establish sufficient initial margin levels, under stressed scenarios, to protect the dealer in the event of customer default. As in the clearinghouse examples above, the swap dealer may safely reduce the net required initial margin for a customer's portfolio of uncleared swaps based on the correlation and offsets between these positions and the cleared swaps.

Initial margin, or independent amount in the case of uncleared swaps, can be any amount that the parties agree upon, but typically is expressed as a fixed currency amount, a percentage of the notional principal amount of a position, or a computation of VaR. Initial margin can be determined at a portfolio level for all transactions (or subsets of transactions according to asset class) between two parties, or can be calculated uniquely for each individual transaction. The commercial reason behind requiring independent amounts for uncleared swaps is the desire of a swap dealer to create a "cushion" of additional collateral to protect against certain risks. In the case of cleared swaps, initial margin is typically an additional amount of collateral that must be posted to the clearing house separate from the daily exchange of variation margin that reflect changes in the market value of the contracts.

The use of independent amounts for uncleared bilateral trades originated in the earliest days of the collateralized OTC derivatives market, which date back to the late 1980s. The obligation to deliver an independent amount has typically been a one-way obligation requiring an end user to post additional collateral to a swap dealer, primarily as a cushion to guard against the residual credit risk that may exist even under a collateralized trading agreement. Such residual credit risk may arise in four principal ways:

- When mark-to-market fluctuations occur there may be a delay before an additional margin amount can be computed, called and settled
- When a counterparty defaults, no additional collateral movements will occur but credit exposure may continue to increase until the non-defaulting party closes out the relevant positions
- Collateral agreements typically contain structural features designed to ensure that effort and cost are not wasted in moving *de minimis* amounts of collateral between the parties

- Collateral transfers for uncleared bilateral trades are typically based on the mid-market values of the underlying derivative contracts, whereas a party's loss upon default of the other party may be realized at either the bid or offer side of the market. Thus, some disparity between collateral and exposure can occur and this may be significant where spreads for a product are particularly wide.

It is worth noting that both parties to uncleared trades are subject to these residual credit risks; however, typically, only the swap dealer is protected against these risks through the delivery of initial margin, while the end user remains subject to these risks on an unsecured basis (in addition to the risk of non recovery of the initial collateral that was delivered to the dealer). This market practice developed based on the role dealers play in derivatives trades and their relative credit standing.

As OTC derivatives migrate to mandatory clearing, the role of independent amounts is assumed by the clearinghouse's mandated initial margin amount. In respect of any cleared contract, the clearinghouse will require a certain amount of initial margin which reflects the historical volatility and liquidity of the cleared position. Since these initial margin requirements are mandated by clearinghouse rule, there is no ability for customers to post amounts that are less than the clearinghouse minimums. Therefore, the key consideration is whether a model that takes into account a customer's cleared and uncleared positions, and accordingly generates a level of initial margin for uncleared positions that more accurately reflects net risk in the combined portfolio, and the additional liens in, as well as the probability of excess collateral and liquidation value of positions with the affiliates, is appropriate and warranted. The margin savings could be significant.

Assume, for example, a customer has a portfolio of cleared interest rate swaps and a correlated portfolio of uncleared swaptions where the margin for the cleared portfolio is \$150 million and, if calculated separately, the required margin for the swaption portfolio is \$200 million. Without portfolio margining, a customer would have an aggregate margin requirement of \$350 million. However, on a net basis, the margin required for the combined portfolios might only be, for example, \$180 million after taking into account the risk offsets that arise when the cleared and uncleared positions are taken as a whole. Initial margin transferred to the clearinghouse for the cleared portfolio would still be \$150 million but the additional initial margin required by the dealer for the uncleared swaption portfolio would only be \$30 million. Even if the dealer reasonably requests initial margin above this minimum, the total amount of the customer's margin requirements will likely be lower on a portfolio basis, resulting in increased liquidity and capital that is available for other uses.

3. Description of a Typical Portfolio Margining Relationship

The following is a stylized example of a portfolio margining relationship that is meant to provide a representative example as to the way an asset manager does business with its

dealer counterparts today. While this is necessarily oversimplified, we feel that it generally reflects the structure that many parties utilize currently to obtain margin efficiency.

In our example, a multi-strategy asset manager (**Asset Manager**) has a set of trading agreements in place with a bank (**Bank**) and its affiliated BD, FCM, and its securities lending affiliate:

- Pursuant to an ISDA Master Agreement with the Bank, the Asset Manager can trade OTC derivatives.
- Pursuant to a Global Master Repurchase Agreement with the Bank, the Asset Manager can finance bonds and conduct repo transactions.
- Pursuant to a Securities Lending Agreement with the Bank's securities lending affiliate, the Asset Manager can borrow or lend securities.
- Pursuant to a Customer Agreement with the BD, the Asset Manager can buy or sell securities.
- Pursuant to a Futures and Options Agreement with the FCM, the Asset Manager can trade futures.

All of the foregoing agreements (**Trading Agreements**) are, in turn, subject to and intended to operate in conjunction with a master netting agreement that governs on an overall basis the trading relationships between the Asset Manager and the Bank. As a result, generally the Bank is not required to look at its exposure to the Asset Manager on an agreement-by-agreement or position-by-position basis for either regulatory or internal risk management purposes. Instead, pursuant to the master netting agreement, the Bank is able to calculate the Asset Manager's exposure for its entire portfolio with the Bank across all of the Bank's affiliates, and with positions held through the Bank at clearinghouses and depositories. Pursuant to the master netting agreement, which contains appropriate security and collateral arrangements, the Bank is able to enforce its rights against all of the Asset Manager's assets held at the Bank or its affiliates through the Asset Manager's grant of a security interest in the following:

- All of the Asset Manager's rights and interests (now or in the future) in the securities and collateral held in the Asset manager's securities account with the BD.
- All of the Asset Manager's rights and interests (now or in the future) in the positions and collateral held in the Asset manager's customer account with the FCM.
- All of the Asset Manager's rights and interests (now or in the future) in and over any other assets of whatsoever kind held or controlled by Bank or its affiliates.

- All of the Asset Manager's rights and interests (now or in the future) (directly or indirectly held) to securities (or other products) held with the Bank or through the Bank in a depository, clearing system or similar entity.

This approach is often referred to as either global or master netting, where "netting" refers to both the calculation of exposure on an ongoing basis and the ability to terminate the agreements and enforce rights in collateral on a global basis following a customer default. As noted, the master netting agreement effectively sits on top of all of the other agreements between the Asset Manager, on the one hand, and the Bank and its affiliates, on the other hand, and links each underlying Trading Agreement together. By virtue of this contractual arrangement, the Asset Manager's positions under and margin delivered pursuant to each Trading Agreement support the Asset Manager's obligations under all of its Trading Agreements (subject to priorities as to which affiliate may be "first in line" to foreclose on posted collateral).

Each Trading Agreement sets forth applicable margin requirements for the covered trading activity. Through the master netting agreement, these individual margin requirements are then aggregated to form a single margin regime applicable to the Asset Manager on a portfolio basis. The master netting agreement sets forth the mechanics and methodologies that the Bank will use in calculating both the total gross and net risk exposure it has with the Asset Manager across all Trading Agreements. The existence of the master netting arrangement allows the Bank to calculate and apply a net risk number to all of the positions held by the Asset Manager in order to allow the Asset Manager to satisfy its margin requirements to the Bank on a net basis, to the extent permitted by the Bank in accordance with its risk management policies and regulatory requirements. The specific portfolio margining regime employed by the Bank is designed to insure that the Bank is adequately protected in the case of market movements, while providing flexibility, margin efficiency and certainty to the Asset Manager by allowing for portfolio risk offsets for positions that are reasonably correlated, which hedge exposure, or which otherwise reduce the overall risk in the Asset Manager's aggregate portfolio.

On each business day, the Bank will calculate the Asset Manager's "equity" in its accounts with the Bank and its affiliates (i.e., the sum of pledged collateral and value of net in-the-money positions) across its entire global portfolio and then calculate how much margin is needed to support the Asset Manager's portfolio using the portfolio margining regime. Through the various tests applied to the portfolio, the Bank will model potential variations in the Asset Manager's positions over a specified period such as ten days to a close to 100% confidence level. The Bank is then able to call for additional collateral or release excess collateral to the Asset Manager, as the case may be, on a daily basis. Failure by the Asset Manager to meet margin calls in a timely manner and in accordance with the contractual terms between the parties can result in an immediate termination and acceleration of all relevant Trading Agreements between the parties.

This relationship is beneficial to the Asset Manager in a number of ways. It is operationally efficient in that the Asset Manager will receive one single margin call from the Bank, on behalf of the Bank and its affiliates, rather than multiple individual calls in respect of its various Trading Agreements. It is capital efficient as it reduces the aggregate amount of collateral required by the Asset Manager and allows both parties to reduce the risk in a portfolio to a single number and to monitor that risk dynamically, giving effect to changing market conditions.

III. Policy Rationale for Encouraging Portfolio Margining

A fully functioning derivatives market requires portfolio margining across both a broad set of products and legal structures. Reduction of systemic risk is a fundamental goal of the G20 reforms and portfolio hedging is a critical component in risk reduction. Portfolio hedging cannot, in turn, be effective unless portfolio margining is permitted. Fundamentally, the rationale for offsetting exposures through appropriate risk reduction strategies does not change whether between asset classes of swaps, between swaps and other products or between cleared and uncleared swaps. The same rationale applies for offsetting exposure across legal entities. The improved risk profile that results from portfolio hedging should be reflected in lower initial margin obligations. In other words, portfolio margining will encourage parties to use portfolio-based hedging strategies which will increase market stability and reduce systemic risk. Without portfolio margining, derivatives markets are less liquid and more capital is stranded on the sidelines.

A. Reduces costs and promotes liquidity

As the examples set forth in Part II demonstrate, portfolio margining has been historically accepted under various regulatory regimes and for different types of financial products.²¹ Additionally, efforts are currently underway to create portfolio margining regimes between cleared OTC derivatives and futures, repo, and cash markets. Portfolio margining can effectively be applied in the post-Dodd-Frank OTC swap regulatory regime through continued use of a master netting agreements or similar arrangements that facilitate portfolio margining across cleared and uncleared positions. Portfolio margining enables market participants to avoid posting redundant collateral while ensuring that the FCM and its dealer affiliate both have access to sufficient collateral in the event of a customer default. A system of portfolio margining eliminates excess collateral without foregoing necessary protections and avoids a reduction in market liquidity resulting from the additional collateral that would be required in a bifurcated and segregated cleared and uncleared regime.

B. Incentivizes risk reduction through hedging

Hedges often involve the use of multiple correlated products and different legal entities within an affiliated group of financial entities.²² Such hedges also bridge cleared and

²¹ FINRA permits portfolio margining for certain products pursuant to NASD Rule 2520(g) and NYSE Rule 431(g). OCC, CME Group and LCH.Clearnet also permit portfolio margining for certain products.

²² See ISDA/SIFMA joint letter to the CFTC, Margin Requirement for Uncleared Swaps for Swap Dealers and Major Swap Participants (July 11, 2011). "The reality of the market place is that many products and their hedges cross traditional product silo definitions (e.g., convertible bonds), often involve multiple swap dealer legal vehicles, and bridge cleared and OTC transactions and markets (e.g., swaps vs. swaptions, foreign exchange ("FX") and precious metals trading through futures, exchange traded funds and OTC). Commodity swaps are also routinely hedged with commodities and equity swaps/options are hedged with listed futures/options. Markets will

uncleared markets. For example, cleared interest rate products can serve as an important risk reduction tool for correlated uncleared interest rate swaps. Uncleared swap positions can be an important risk reducing hedge for cleared swaps. Portfolio margining encourages and facilitates legitimate hedging activities.

The derivatives market will have greater overall risk than presently exists if Dodd-Frank is interpreted as preventing legitimate risk reducing activities. Restricting the use of effective hedging strategies by limiting portfolio margining would be an unintended consequence of Dodd-Frank. As long as portfolio margining regimes promote appropriate levels of initial margin and are implemented under legally enforceable master netting arrangements, there should not be a regulatory barrier to most portfolio margining.

C. Allows capital to be deployed efficiently

Portfolio margining practices minimize otherwise unnecessary increased costs of trading. Without the margin offsets available under portfolio margining, these increased costs of trading are passed on to swaps end-users and thereby reduce liquidity and competitiveness in the markets as well as raise the costs of bona fide hedging in the swaps market. Furthermore, a system of portfolio margining allows capital to be invested more effectively (i.e., not tied up as redundant collateral securing swaps positions) with no compromise of dealer or systemic safety. More effective investment of capital yields more profitable returns for the investing public without increasing the risk associated with entering into uncleared swaps.

D. Facilitates the transition to central clearing

Portfolio margining of OTC derivatives would ease the market transition to the mandatory clearing requirements of Dodd-Frank. During the transition to mandatory clearing, not all liquid swaps will be cleared. If a DCO does not currently offer a specific swap contract to be cleared, the DCO must submit that swap contract to the CFTC for permission to clear that swap contract. It follows that market participants will not be able to clear all swaps ultimately subject to clearing immediately after the effective date of the mandatory clearing requirement. Market participants will necessarily hold uncleared swaps positions (with some of these positions held at dealers affiliated with the FCMs that hold their cleared swaps accounts). Without the ability to portfolio

(continued...)

continue to evolve to include new product types and new structures. Regulations should include the flexibility to recognize legitimate hedges, and require appropriately scaled initial margin. In particular, as swaps migrate to central clearing, we will continue to see the need for cleared products to hedge more complex transactions that will remain in the OTC marketplace, and such portfolio margining should be recognized to the extent legally enforceable.”

margin between these positions, a market participant will be forced to post redundant collateral for its cleared positions and its uncleared positions. With respect to those remaining swaps that cannot be cleared, portfolio margining should be available to encourage market participants to use cleared positions to offset the risk of its remaining uncleared positions.

There are various examples of swaps contracts that will not be required to be cleared and/or will not be available to be cleared in any case. For example, single-name CDS are regulated by the SEC and index CDS are regulated by the CFTC. It appears that the CFTC will require index CDS to be cleared before the SEC requires single-name CDS to be cleared. Sovereign CDS generally are not currently offered for clearing, as well as other forms of CDS such as tranches and options. Without portfolio margining between cleared and uncleared swaps, market participants who hold positions in cleared and uncleared CDS will be required to post redundant margin to secure their uncleared portfolio of CDS, especially as the full universe of CDS are not offered for clearing notwithstanding the fact that some of the uncleared positions may otherwise offset some of the cleared ones. Similarly, there are a variety of rates swaps that are not presently clearable and for which there is no clear timeline for these products to become eligible for clearing. These rates products include swaptions, caps, floors, cross-currency swaps and inflation swaps.

Consistent with a primary objective of Dodd-Frank, portfolio margining will incentivize market participants to use cleared swaps. If the market risk with respect to a particular uncleared position can be offset by either a cleared swap contract or uncleared swap contract, without the benefits of portfolio margining across cleared and uncleared swaps, the market participant would have an incentive to use an uncleared position to hedge this risk due to its inability to realize margin efficiencies if it enters into a cleared position. If a market participant has a large portfolio of uncleared swaps, that market participant would be incentivized to take advantage of portfolio margining across its uncleared swaps and, therefore, would choose to use other uncleared swap contracts (to the extent it could lawfully do so) to hedge this specific risk. If portfolio margining across cleared and uncleared swaps is available, market participants will likely have an incentive where possible to use cleared swaps to hedge the risk in the uncleared portfolio. Such hedging strategies can only occur if portfolio margining is permitted in order to recognize the risk reduction that has occurred within the overall portfolio.

E. Solves scarcity of eligible collateral issue

Pursuant to Section 39.13(g)(10) of CFTC Regulations a DCO “shall limit the assets it accepts as initial margin to those that have minimal credit, market, and liquidity risks” but shall not accept letters of credit as initial margin for swaps. Under Proposed Rules § __.6(a), a dealer would only be permitted to collect as initial margin for uncleared

swaps, cash and certain debt obligations guaranteed by the Federal government or certain Federal agencies.²³ Hence, both the Proposed Rules and the CFTC Regulations would place limits on what can constitute initial margin for swaps. Due to the limited universe of acceptable collateral, after the effective date for the mandatory clearing requirement, there will be a scarcity of acceptable collateral to be used as initial margin for both cleared and uncleared swaps. The high demand from market participants for acceptable collateral will increase the cost of purchasing acceptable collateral and these increased costs would be passed on to all market participants, including end-users. By contrast, portfolio margining decreases the demand for acceptable collateral thereby reducing the cost of acceptable collateral and decreasing the cost of swaps trading for all market participants.

²³ 76 Fed. Reg. 27566 (May 11, 2011), Margin and Capital Requirements for Covered Swap Entities, available at <http://www.fdic.gov/regulations/laws/federal/2011/11proposedAD79.pdf>.

IV. Certain Policy Considerations

The following is a list of considerations which impact the potential viability of portfolio margining:

A. Advent of Central Clearing

The advent of mandatory clearing will bifurcate portfolios that today benefit from portfolio margining into separate cleared and uncleared segments. These segments will then be subject to separate, independent margining regimes. Cleared OTC derivatives will be independently margined based on the margining rules of DCOs, while the uncleared derivatives will be subject to the dealer's separate margin requirements for uncleared portfolios. Further, under proposed rules with respect to the margin requirements for uncleared swaps, such swaps would be subject to margin requirements that could be greater than the level of margin required for comparable cleared swaps.

B. Existing Regulatory Framework

Swap market participants are currently able to enter into master netting agreements in respect of their portfolio of financial instruments held at an FCM and its affiliated dealer entities in the U.S. construct, and in similar constructs internationally. Such agreements may cover swaps, futures, cash instruments such as stocks and bonds, and other financing arrangements related to these portfolios such as securities lending and repurchase agreements. These master netting agreements allow the parties to calculate exposure on a net basis at the portfolio level. This type of master netting arrangement is widely recognized throughout legislation and regulations which apply to financial entities, including, most recently, the joint rulemaking by the CFTC and SEC further defining swap dealer and major swap participant, more often referred to as the Entity Definitions.²⁴ In the Entity Definitions, the impact of netting arrangements is included in the calculation of current exposure for purposes of determining whether an entity is a major swap participant. In subsection (iii), "Relevance of netting agreements", the rule states that: "Calculation of net current exposure may take into account offsetting positions entered into with that particular counterparty involving swaps (in any swap category) as well as security-based swaps and securities financing transactions (consisting of securities lending and borrowing, securities margin lending and repurchase and reverse repurchase agreements), and other financial instruments that are subject to netting offsets for purposes of applicable bankruptcy law, to the extent these are consistent with the offsets permitted by the master netting agreements."²⁵ In

²⁴ Further Definition of "Swap Dealer," "Security-Based Swap Dealer," "Major Swap Participant," "Major Security-Based Swap Participant" and "Eligible Contract Participant", 77 Fed. Reg. 30596 (May 23, 2012).

²⁵ Id. at 20748.

this way, both the CFTC and SEC have expressly acknowledged that an entity's actual risk is not its gross exposure, but its net exposure after taking into account hedges or offsets on a portfolio basis.

In order to ensure that each party is adequately collateralized with respect to this risk, the customer will grant a lien or other security interest over its futures account at the FCM to the affiliated dealer, and a lien over its transactions and collateral with the dealer to the FCM. In the event of a customer default, both liens are subordinate to the interests of the relevant clearinghouses, but, subject to each entity's priority in its own collateral, are senior to the claims of other creditors of the customer. Having been granted a valid, enforceable security interest in all assets of the customer, the FCM and the dealer can evaluate the risk of each customer across all positions in that customer's portfolio and give credit to the customer for the probability that there will be amounts in excess of what would be required to satisfy the obligations of the customer. In this regard, the use of portfolio margining is the best and most efficient way for a group of financial entities to analyze and monitor the risk of their customers on an aggregate basis, while at the same time having the beneficial effect of lowering the initial margin requirement of that customer in respect of its various financing arrangements with an FCM and its affiliated dealer.

A question being raised today is whether the reforms contemplated by Dodd-Frank or under the G20 commitments would prohibit this type of arrangement from continuing. A thorough examination of the available regulatory and legislative guidance, as well as the policy goals which led to the adoption and promulgation of these rules and legislation such as promoting safety and transparency in derivatives markets indicates that prohibiting portfolio margining is neither required nor desirable under the reforms announced to date. Linking of portfolios through portfolio margining arrangements provides all parties with the best and most detailed information about the net risk posed by any single entity, and is therefore fully consistent with the overall aims of the global reform efforts.

C. Dodd-Frank

Permitting portfolio margining encourages customers to maintain balanced portfolios, because customers are rewarded for entering into transactions that offset one another as a result of the reduced aggregate margin requirement that arises when the aggregate portfolio is hedged. Encouraging each customer to maintain a balanced or hedged portfolio, taking into account both cleared and uncleared positions, itself reduces systemic risk.

Pursuant to Section 4d(a) of the CEA, the CFTC has previously issued rules permitting FCMs to adopt non-customer cross margining programs.²⁶ Dodd-Frank also allows for the comingling and portfolio margining of cleared swaps and security-based swaps. Dodd-Frank amended the Exchange Act and the CEA to permit, consistent with prior CFTC regulations, BD/FCMs to hold securities that are part of a portfolio margining regime in a futures account. Futures contracts can now also be held in securities accounts.²⁷ Such changes are an indication of Congressional intent that favors portfolio margining as consistent with the principles of Dodd-Frank.

When Congress passed Dodd-Frank, it authorized the CFTC to make available the benefits of portfolio margining. In response to this Congressional mandate, the CFTC has incorporated the concept of portfolio margining as one of its core principles for DCOs, stating in new Section 39.13(h) that “[a] derivatives clearing organization may allow reductions in initial margin requirements for related positions if the price risks with respect to such positions are significantly and reliably correlated.”²⁸ In this way, the notable benefits of portfolio margining, such as capital efficiency, operational efficiency, risk management efficiency, and greater uniformity of treatment for related products are beginning to be integrated into the new framework of Dodd-Frank as in the examples cited above.

D. CFTC Regulations

It is also critical to note that Dodd-Frank does not alter the rules governing segregation of customer property in futures accounts. Consequently, the adoption of Dodd-Frank and its related regulations promulgated in respect thereof has not affected the validity of a dealer affiliate of an FCM holding a lien on a customer’s futures account held at an affiliated FCM (or vice versa).²⁹ If the customer defaults with respect to positions at

²⁶ See Section 2.4.4 above; see also, CFTC Order, In the Matter of ICE Clear U.S., Inc. Non-Proprietary Cross-Margining Agreement with the Options Clearing Corporation (February 28, 2008).

²⁷ Dodd-Frank Section 713(a) (amending Section 15(c)(3) of the Securities Exchange Act of 1934 and Section 4d of the Commodities Exchange Act). “Notwithstanding any provision of sections 2(a)(1)(C)(i) or 4d(a)2) of the Commodity Exchange Act and the rules and regulations promulgated thereunder, and pursuant to an exemption granted by the Commission under section 36 of this title or pursuant to a rule or regulation, cash and securities may be held by a broker-dealer registered pursuant to section (b)(1) and also registered as a futures commission merchant pursuant to section 4f(a)(1) of the Commodity Exchange Act, in a portfolio margining account as a futures account subject to section 4d of the Commodity Exchange Act and the rules and regulations promulgated thereunder, pursuant to a portfolio margining program approved by the Commodity Futures Trading Commission ...”

²⁸ 76 Fed. Reg. 69334 (Nov 8, 2011), Derivatives Clearing Organization General Provisions and Core Principles, available at <http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-27536a.pdf>.

²⁹ Margin and Capital Requirements for Covered Swap Entities (Apr. 12, 2011), available at <http://fdic.gov/news/board/Apr11no4.pdf> (the “Proposed Rules”). A “covered swap entity” includes any swap

either the dealer or the FCM, the FCM will liquidate the customer's cleared positions account at the FCM, and the dealer will terminate the uncleared positions which it holds. After taking into account any proceeds from liquidated or terminated positions, the FCM will use the customer's collateral posted to the FCM to satisfy any remaining customer obligations to the FCM. The dealer will use the customer's collateral posted to the dealer to satisfy any remaining customer obligations to the dealer. In the event that either the FCM or the dealer has a shortfall, such entity may apply excess collateral held at the other, after the customer's obligations to the other are first met.

While the focus of this paper is largely on the rules for margin on uncleared swap positions, it is just as important for market participants to establish that the rules governing margin for cleared swap positions will similarly permit the type of arrangement contemplated by portfolio margining. A portfolio margining regime is consistent with the "legally segregated, operationally commingled" model (LSOC) set forth in the recently adopted Part 22 of the CFTC Regulations.³⁰ In its release adopting LSOC³¹, the CFTC appeared to call into question the ability of customers to utilize cross-margining arrangements in the context of cleared and uncleared swap portfolios. As the adopting release notes, "the CFTC confirms that Rule 22.2(d) permits (i) FCMs to take a security interest in a Cleared Swaps Customer's FCM customer account in support of other positions held by such customer at the FCM, and (ii) other entities (including affiliates of FCMs) to take a security interest in a Cleared Swaps Customer's FCM customer account in support of financing the Cleared Swaps Customer's margin obligations."³² Given that a swap dealer affiliate of the FCM could establish a valid security interest in the FCM customer account of a cleared swaps customer in respect of its margin obligations, market participants concluded that such security interest could validly be used to secure that same customer's uncleared swap positions.

As the CFTC itself has noted, "there can be benefits to commingling customer positions in futures, options on futures, and cleared swaps, primarily in the area of greater capital efficiency due to margin reductions for correlated positions. The CFTC views this form of portfolio margining as a positive step toward financial innovation within a framework

(continued...)

dealer, major swap participant, security-based swap dealer or major security-based swap participant that is regulated by the Federal Reserve Board, the FDIC, the FHFA, FCA, or OCC (the "Prudential Regulators").

³⁰ 77 Fed. Reg. 6336 (Feb 7, 2012), Protection of Cleared Swaps Customer Contracts and Collateral; Conforming Amendments to the Commodity Broker Bankruptcy Provisions, available at <http://cftc.gov/ucm/groups/public/@Irfederalregister/documents/file/2012-1033a.pdf>.

³¹ Id.

³² Id.

of responsible oversight, and it believes that the public can benefit from such innovation.”³³

In response to a request for clarification on this point, CFTC staff have issued a letter which confirmed that the Cleared Swaps Customer’s ability to grant security interests in, rights of setoff against or other rights in its own property to secure any of its obligations (not just financing of margin obligations) is not restricted so long as the security interest granted by the Cleared Swaps Customer is in what it owns, after the exercise by the DCO and the FCM of their rights, and subject to any other limitations on the Cleared Swaps Customer’s ownership interest arising from its relationship with the DCO and the FCM.³⁴ Based on this guidance, we are able to conclude that portfolio margining is permissible under LSOC.

E. Basel III Capital Rules

In addition to the reforms being contemplated in respect of margin requirements, a related and equally important concern is that the changes to regulatory capital requirements in respect of cleared and uncleared derivatives will prevent a regulated banking entity from entering into portfolio margining with its customers. Said another way, introducing limitations on the banking entity’s ability to recognize portfolio margining for purposes of calculating regulatory capital requirements would strongly discourage such arrangements even if they were permissible under the applicable margin requirements.

As firms migrate to the new Basel III standards, it is of critical importance that portfolio margining arrangements be recognized as “qualifying master netting agreements” and that collateral pledged in respect of these arrangements be treated as “financial collateral”. Currently, most large banking organizations capture certain portfolio margining benefits by adjusting the risk weight applied to their exposure through a downward adjustment to the “exposure at default” calculation. In order to be able to make this adjustment, the banks are permitted to recognize the credit risk mitigation benefits of “financial collateral” that is marked-to-market on a daily basis and subject to a daily margin maintenance requirement. The benefit of financial collateral, after applying haircuts to the collateral value to reflect market price volatility, and any maturity and currency mismatches, results in a direct reduction in the bank’s “exposure at default”. In essence, the bank adjusts its calculation of the risk posed by a customer default based on the amount of eligible “financial collateral” it holds at any time.

³³ Id.

³⁴ CFTC Letter No. 12-28, Interpretation, October 17, 2012, available at: <http://www.cftc.gov/ucm/groups/public/@lrllettergeneral/documents/letter/12-28.pdf>

In June 2012, the U.S. federal banking agencies formally proposed for comment a series of revisions to the U.S. regulatory capital regime to align with Basel III. The proposal on “Regulatory Capital Rules: Advanced Approaches Risk-based Capital Rule; Market Risk Capital Rule” (**Advanced Approaches NPR**) regulators outline the criteria for recognizing the netting benefits of “qualifying master netting agreements.”³⁵ Under the Advanced Approaches NPR, the exposure attributable to a set of derivatives transactions that are subject to a single master agreement can be treated together as a “netting set” if the governing agreement is a “qualifying master netting agreement.” For each netting set, the relevant amount is calculated by taking the future exposure and multiplying by a fraction equal to the ratio of the net current exposure to the gross current exposure. The use of this fraction as a factor ensures that in most cases the parties will obtain a significant margin benefit by using a qualifying master netting agreement.

This express recognition of a “qualifying master netting agreement” is important for portfolio margining in general. From the perspective of the banking regulators, a “qualifying master netting agreement” must clearly state that the agreement will, upon an event of default, reliably permit a party to terminate, apply close-out netting, and promptly liquidate or set-off collateral, with the assurance that a party’s own default will not disqualify it from receiving a full termination payment. In this respect, a typical cross product margining agreement would seem to satisfy the material elements of a qualifying master netting agreement. However, in finalizing the Advanced Approaches NPR, it is equally important to have certainty that once a portfolio margining agreement is recognized as a qualifying master netting agreement, any financial collateral pledged will be recognized to further mitigate exposure at default for Basel III purposes, regardless of whether it is associated with cleared or uncleared trades.

F. Basel-IOSCO Working Group on Margin Requirements

The Basel Committee on Banking Supervision (**BCBS**) and the International Organization of Securities Commissions (**IOSCO**) published a consultative paper on margin requirements for non-centrally-cleared derivatives on July 6, 2012 (**BCBS-IOSCO Margin Paper**).³⁶ This paper reflects the input of more than thirty different global regulators (including the CFTC, SEC and Fed) and is meant to address a commitment made in 2011 by the G20 to add margin requirements on non-centrally-cleared derivatives to the global derivatives markets reform agenda.

³⁵ 77 Fed. Reg. 52978 (August 30, 2012) “Regulatory Capital Rules: Advanced Approaches Risk-based Capital Rule; Market Risk Capital Rule” available at: <http://www.gpo.gov/fdsys/pkg/FR-2012-08-30/pdf/2012-16761.pdf>.

³⁶ “Margin requirements for non-centrally-cleared derivatives”, Basel Committee on Banking Supervision, July 2012, available at: <http://www.bis.org/publ/bcbs226.htm>.

In the BCBS-IOSCO Margin Paper, the global regulators identify a set of high-level principles on margining practices and treatment of collateral, and propose margin requirements for non-centrally-cleared derivatives. The BCBS-IOSCO Margin Paper states that the “potential benefits of margin requirements must be weighed against the liquidity impact that would result from derivative counterparties’ need to provide liquid, high-quality collateral to meet those requirements, including potential changes to market functioning as result of an increasing demand for such collateral in the aggregate. Financial institutions may need to obtain and deploy additional liquidity resources to meet margin requirements that exceed current practices. Moreover, the liquidity impact of margin requirements cannot be considered in isolation.”³⁷ BCBS and IOSCO intend to undertake a quantitative impact study to gauge the impact of margin proposals and assess the amount of margin that will be required for uncleared swaps. As noted in the press release accompanying the BCBS-IOSCO Margin Paper, the aim of this group of regulators is to prevent regulatory arbitrage by developing international consistency with regard to margin requirements and their implementation.

In respect of the calculation of initial margin, the BCBS-IOSCO Margin Paper states that initial margin may be calculated by reference to either (i) a quantitative portfolio margin model which must be approved by the relevant supervisory authority, or (ii) a standardized margin schedule.³⁸ Further, quantitative initial margin models can account for risk on a portfolio basis for all derivatives that are subject to a single netting agreement.

³⁷ BCBS-IOSCO Margin Paper at 3.

³⁸ BCBS-IOSCO Margin Paper at 17.

V. Conclusion

As we approach the advent of mandatory clearing pursuant to the G-20 commitments, it is critical that all market participants consider how to best facilitate the transition from bilateral OTC swap markets to the bifurcated world made up of swaps subject to the clearing mandate and those which remain purely bilateral in nature. Margin and capital rules that provide certainty around the issue of portfolio margining will not only encourage the use of offsetting positions, but will encourage parties to clear entire portfolios whenever possible, not just the parts subject to mandate. Furthermore, regulatory clarity will encourage voluntary clearing by parties at the earliest possible date because they will be economically incentivized to submit as many trades for clearing as possible, even ahead of a requirement to do so. Therefore, every effort should be made to ensure that portfolio margining remains an integral part of the newly emerging OTC derivatives market structure.