Capital Efficiency:

Understanding the Benefits of Customer Portfolio Margining

Cboe Risk Management Conference
March 4, 2020

Speakers

John Hiatt

Vice President, Research, Cboe Global Markets

Mauricio Izurieta

Director, Equities Asset Management Services, Bank of America

Lisa Shemie

Associate General Counsel, Cboe Global Markets

Scot Warren

Executive Vice President and Chief Operating Officer, OCC

Footnotes applied here

Agenda

Benefits of Customer Portfolio Margining	• What are the potential benefits of customer portfolio margining (CPM)? • Which market participants could benefit from a CPM program?
The TIMS Methodology	• What is the TIMS Methodology and how does it relate to CPM? • What is OCC proposing as enhancements to the current TIMS model?
Eligible Instruments	• Which instruments could be included within a CPM account? • How is correlation between such instruments determined?
Implementation	• What would be required to implement a CPM program on the part of OCC? On the part of clearing members? • Will clearing members allow their clients to participate in a CPM program?
Legal/Regulatory	• What kind of regulatory relief is required to allow for a broad CPM program? • Which agencies are impacted by a request for proposed regulatory relief, and how?

Cboe Portfolio Margining Proposal

- Cboe Exchange, Inc., and Cboe Futures Exchange, LLC, with support from OCC, is requesting that the CFTC provide exemptive relief to allow Cboe Exchange, CFE, OCC and OCC's clearing members to:
  - Hold customer assets used to margin customer positions consisting of Eligible Instruments in a commingled securities customers' lien account at OCC
  - Permit the application of the SEC bankruptcy regime to the futures (and the assets supporting and accounts holding such futures) held in the commingled securities customers' lien account
  - Provide similar relief for BD/FCMs that maintain clearing accounts for their eligible customers with OCC by allowing them to utilize similar customer securities portfolio margining accounts at the BD/FCM using the enhanced TIMS model

Benefits of Customer Portfolio Margining

- Margin efficiencies to market participants
- Reduced redundancies in clearing members' capital charges
- Operational efficiencies
- Increased liquidity
- Reduction in systemic risks
- Enhanced legal certainty
- Improved risk management

The TIMS Methodology

- The Theoretical Intermarket Margining System (**"TIMS"**) portfolio margining methodology is administered by OCC
- TIMS is used by clearing members for the determination of capital contributions, market-maker and customer portfolio margin
- Limitations of current TIMS
- Proposed enhancements
- Regulatory review

Current TIMS vs. Proposed TIMS

	Current TIMS	Proposed TIMS
Number of scenarios	10	22
Price shocks	Yes	Yes
Volatility shocks	No	Yes
VIX pricing in shocked scenarios based on SPX pricing	No	Yes
Margin offset between SPX and VIX	No	Yes

Goals of Proposed TIMS:

- Implement volatility shock modeling.
  - Current TIMS holds implied volatility constant at each market move step.
  - Proposed TIMS would add additional scenarios for increasing and decreasing implied volatility changes at each market move step.
- Generate theoretical values for volatility products (VIX futures, VIX options, SPX variance futures) from their reference index theoretical levels (consistency between SPX and VIX).
- Create offsets between volatility products and corresponding underlying class groups of their reference indices.
- Support holding related securities and futures products margined together in same account.

Eligible Instruments/Correlation

- The Eligible Instruments are highly related products with a theoretical basis for their correlation
- To a reasonably high degree, there is a negative correlation between VX futures and S&P 500 Index price moves
- VX futures and VIX options are derived from the VIX Index
- The VIX Index is designed to produce a measure of constant, 30-day expected volatility of the S&P 500 stocks and is derived from real-time, mid-quote prices of S&P 500 Index (SPX^{SM}) call and put options
- S&P 500 Index ETFs hold the stocks that make up the S&P 500 Index - each stock in proportion to its representation in the index.
- Security futures based on S&P 500 Index ETFs are based on the price of the underlying ETFs
- SPX options and OTC SPX options are based on the price of the S&P 500 Index and the implied volatility of the S&P 500 Index
- VIX Index ETFs hold VX futures and other related derivatives
- **All of the Eligible Instruments are derived from the same inputs and share a significant common input - the price of the S&P 500 Index and the implied volatility of the S&P 500 stocks**

List of Proposed Eligible Instruments

- Futures on the Cboe Volatility Index (VX futures)
- Security futures on S&P 500 Index ETFs (ETF security futures)
- Security options on the VIX Index (VIX options)
- Security options on the S&P 500 Index (SPX options)
- OTC security options on the S&P 500 Index (OTC SPX options)
- ETFs based on the S&P 500 Index (S&P 500 Index ETFs)
- ETFs based on the VIX Index (VIX Index ETFs)
- Security options on the S&P 500 Index ETFs (S&P 500 Index ETF options)
- Security options on the VIX Index ETFs (VIX Index ETF options)

Implementation

- Once the enhanced TIMS methodology is approved, what is the timeline towards its implementation by OCC?
- Assuming the CFTC approves the proposed portfolio margining program, will clearing members offer CPM to its clients?
- What will be required for clearing members to transition to enhanced TIMS and to implement CPM accounts for its clients?

Required Regulatory Approvals

CFTC - Exemptive Order

- Pursuant to CEA Section 4d(h), CFE will request that the CFTC grant an exemptive order under CEA Section 4(c) that permits BD/FCMs to hold securities and futures positions and associated margin in a portfolio margining account carried as a securities account.

SEC – Past Approval of Cboe Customer Portfolio Margining

- Cboe Rule 12.4 (Portfolio Margin) for customer portfolio margining was approved by the SEC in 2005.

Other Regulatory Action

- FINRA and CFTC approval of the enhanced TIMS margin methodology is required.

Cboe Global Markets
400 South LaSalle Street
Chicago, IL 60605
www.cboe.com