

MEMORANDUM

TO: File

FROM: Leigh E. Bothe

RE: Meeting with the Securities Industry and Financial Markets Association

DATE: May 16, 2011

On May 13, 2011, Commission staff met with representatives from the Securities Industry and Financial Markets Association (“SIFMA”) to discuss the implementation of Title VII of Dodd-Frank. The Commission staff met with the representatives in person. Other SIFMA members were able to listen in via a conference call, but could not participate in the discussion. The discussion included capital and margin requirements for swaps and security-based swaps under Title VII.

Commission representatives included: Robert Cook, John Ramsay, Greg Berman, Mike Macchiaroli, Randall Roy, Mark Attar, Jim Giles, Michelle Danis, Thiagarajah Maheswaran, Chul Park, and Leigh Bothe from the Division of Trading and Markets, Jennifer Marietta-Westberg from the Division of Risk, Strategy, and Financial Innovation, and John Polise from the Office of Compliance Inspections and Examinations.

John Lawton and Tom Smith represented the Commodity Futures Trading Commission. Grace Vogel represented FINRA. The SIFMA representatives at the meeting were: Bill Tirrell (Bank of America Merrill Lynch), Evan Picoult (Citigroup), Bob Colby (Davis Polk & Wardwell LLP), Mark Holloway and Greg Hopper (Goldman Sachs & Co.), Jim Collins (JPMorgan), Eduardo Canabarro and Anthony Cicia (Morgan Stanley), Ralph Mattone (Nomura Securities International, Inc.), and Kyle Brandon (SIFMA).

[No agenda available for this meeting.]



DISCUSSION MATERIALS

**Meeting With Securities and Exchange Commission,
Friday, May 13, 2011 – Washington, D.C.**

The Securities Industry and Financial Markets Association (SIFMA)
prepared this material for discussion purposes only.

Executive Summary Capital vs. Margin

Capital Requirements:

- The minimum amount of Available Financial Resources (e.g. Tier 1 Capital, tangible common equity) a Financial Institution (FI) needs to avoid insolvency should be based on its Economic Capital – a measure of the unexpected loss the FI may have over a one-year horizon, at a very high confidence level (e.g. 99.95%).
- Economic Capital (EC) needs to capture all of the risks of the FI. For a trading portfolio of derivatives, EC will normally include counterparty credit risk, market risk and operational risk.

Margin requirements (initial and variation)

- Margin protects an FI against losses from one component of counterparty credit risk – i.e. from economic losses caused by the default of a counterparty.

Interaction of Margin and Capital

- Even if all derivative transactions of an FI had legally enforceable margin (initial and variation) agreements, the EC of the FI would not be zero because it would capture:
 - The residual counterparty credit risk - measured on a portfolio basis, across all counterparties, and at the very high confidence level – in the calculation of EC. In general, the higher the initial margin requirements the lower the required capital for counterparty risk.
 - All other forms of risk in the derivative portfolio, such as market risk.

Executive Summary Capital vs. Margin

Margin and Capital Requirements differ in many ways:

Feature	Initial Margin	Capital Requirements based on Economic Capital
Time Horizon	<ul style="list-style-type: none">• 5 to 10 business days	<ul style="list-style-type: none">• One year
Confidence Level	<ul style="list-style-type: none">• CL of initial margin typically varies with credit risk of counterparty	<ul style="list-style-type: none">• Very high confidence level. Regulatory capital is at nominal 99.9%.• Many banks internal calculation are at 99.95% to 99.97%.
Risk Types Captured	<ul style="list-style-type: none">• Counterparty default risk	<ul style="list-style-type: none">• All risk types relative to business.• For derivative trading portfolio this would include counterparty risk (including CVA risk), market risk and op risk.
Complexity of Calculation	<ul style="list-style-type: none">• Simple, for ease of transparency with counterparty	<ul style="list-style-type: none">• Complex calculations to capture all risks, in all their subtle forms, over a one-year horizon at a very high confidence level.

Purpose of Economic Capital

- The two primary risks of a financial institution (FI) are funding liquidity risk and insolvency risk.
 - These risks are related, for example, the market's concerns about the likely insolvency of an FI can cause its funding liquidity to evaporate, however economic capital primarily addresses insolvency.
- To avoid insolvency an FI needs an amount of Available Financial Resources (AFR) that is larger than its potential unexpected losses, measured at some specified confidence level, over a specified time horizon.
- There are three common measures used to assess the capital adequacy of a regulated FI, all of which are required by Basel II:

Measurement of Risk vs. AFR	Type of Model For Risk Measurement	Time horizon
Economic Capital vs. AFR	Internal Model	1 year
Basel RWA vs. Tier 1 Capital	Mix of internal model, internal parameters and regulatory formula	1 year
ICAAP – Internal Capital Adequacy Assessment Process	Internal Model/Stress Test on revenue and potential losses	Multi-years (e.g. 3)

Definition and Use of Economic Capital

Economic Capital (EC) is a common yardstick to measure risk, across all forms of risk and all types of business units of an FI.

- The primary purpose of the measurement of EC is the assessment of the capital adequacy of the firm from the perspective of insolvency risk. This sets the context for how EC is measured.
- Capital adequacy is assessed by comparing an FI's EC against its Available Financial Resources (AFR). FIs have used various measures of AFR, e.g. Tangible Common Equity.

EC is the potential unexpected loss of economic value over a one year horizon measured at a very high confidence level (e.g. 99.95%, 99.97%).

- **Unexpected loss** is the difference between loss at a very high confidence level and the expected loss.
 - The expected loss for market risk is zero.
 - The expected loss for the credit risk of a loan portfolio is greater than zero and should be covered by a Loan Loss Reserve (LLR)
 - The expected loss for operational risk is also greater than zero and should be covered by some combination of reserves and/or pricing.
- **One year horizon** is based on the assumption that an FI cannot continually raise equity and needs a capital buffer to absorb losses over one year and still be solvent.
- **Very high confidence level** reflects the need to have sufficient capital given an FI's target credit rating.
 - For example, if the through-the-cycle probability of default (PD) of an AA rated FI were 3bp, then to be AA rated an FI would have to have sufficient capital to absorb losses and remain solvent at the 99.97% CL.
 - Basel II, II.5 and III nominally measure economic capital at the 99.9%CL and then transform that measurement of risk into risk weighted assets by the formula: $RWA = 12.5 * EC_{\text{Basel at 99.9\%CL}}$

Regulatory Capital vs. Internal Economic Capital

A comparison of the measurement of economic risk and available financial resources over a one-year horizon from a regulatory (Basel) and an internal measurement perspectives

	Measurement of Economic Risk: Potential unexpected loss over one year at a very high confidence level. <i>“How high is the potential flood?”</i>	Measurement of Available Financial Resources (AFR): Capacity to absorb unexpected losses and avoid insolvency. <i>“How high is the dam?”</i>
Basel Measurements	<ul style="list-style-type: none"> • Risk Weighted Assets (RWA) <ul style="list-style-type: none"> – $RWA = 12.5 * Risk\ Cap_{Basel}$ – Risk Cap_{Basel} <ul style="list-style-type: none"> ▪ Basel CL nominally at 99.9% ▪ Capital Horizon of one year 	<ul style="list-style-type: none"> • Tier 1 capital • Tier 1 capital + Tier 2 capital <ul style="list-style-type: none"> – The definition of “Tier 1” and “Tier 2” capital changes materially under Basel III compared to Basel I and Basel II
Internal Measurements	<ul style="list-style-type: none"> • Economic Capital • Advanced banks use more sophisticated measures than Basel’s Pillar 1 prescribes. <ul style="list-style-type: none"> – Usually measured at a higher confidence level than Basel – Takes into account portfolio effects and risk concentration for credit risk and across risk types – Captures all risk types, not just those specified by Pillar 1 	<ul style="list-style-type: none"> • FIs use various measures of AFR. <ul style="list-style-type: none"> – One example of AFR, used at some FIs, is Tangible Common Equity, adjusted to include Mortgage Servicing Rights

Economic Risks of Derivatives Portfolio

EC (and Basel RWA) need to be calculated for three types of risks of a trading portfolio of derivatives:

- 1) EC for market trading risk.
- 2) EC for counterparty credit risk.
 - **Under FAS 157 (fair value accounting)**, counterparty credit risk is treated as a component of market risk. The mark-to-market value of a portfolio of derivatives includes:
 - A “counterparty credit risk free” market value, obtained by discounting all expected future cash flows at LIBOR (or a similar rate, e.g. OIS), independent of the counterparty.
 - A Credit Value Adjustment (**CVA**), a market based estimate of the relative credit risk of trading with the counterparty.
 - **IFRS** does not require the marked-to-market calculation of a CVA, in contrast to FAS 157.
 - In spite of the fact that the requirements of FAS 157 are not implemented under IFRS, the BCBS requires, in **Basel III**, that FIs include the volatility of the CVA in their calculation of total RWA for counterparty credit risk. This is a very material change from the treatment of counterparty credit risk under Basel I and Basel II
 - **Basel I** and **Basel II** treat counterparty credit risk as a type of wholesale credit risk, albeit one with a potentially higher future exposure due to potential changes in market rates. The potential increase in exposure due to changes in market rates is captured by a crude method under Basel I and a more sophisticated method under the Internal Model Method of Basel II.
 - In contrast, under **Basel III**, RWA for counterparty credit risk includes a component for the potential volatility of the CVA in addition to the potential loss due to a downgrade or default by the counterparty.
- 3) EC for operational risk.

Definition and Purpose of Margin

- **Legally enforceable margin agreements** reduce counterparty credit exposure for derivatives and consequently reduce the economic capital for counterparty credit risk required for such transactions.
- For a daily margin agreement with zero threshold:
 - **Variation margin and initial margin** can be calculated for each separate derivative transaction or, under a legally enforceable netting agreement, can be calculated on a net basis for all derivatives under that netting agreement.
 - **Variation margin** is posted daily if the MTM value of a contract (or the net MTM value of a portfolio) is negative from the counterparty's perspective. The purpose of the counterparty posting variation margin is to cover the cost of replacing the derivatives with that counterparty, should the counterparty immediately default - or, more precisely, cover the cost of replacing the transactions with the defaulted counterparty with a replicating portfolio of equivalent market risk.
 - **Initial margin** is posted by the counterparty to cover the potential additional decrease in the market value of the contract (or portfolio of contracts) from the counterparty's perspective over the "margin period of risk" – see next page.
 - **The market value** used to determine the magnitude of the variation margin and used to simulate the amount of required initial margin, is the "counterparty risk-free" market value, i.e. the market value of the derivative (or net value of a derivative portfolio) ignoring the CVA. In other words it is the market value calculated by discounting all future cash flows at LIBOR (or a similar rate, e.g. OIS).

Standards for measuring initial margin

- **Initial margin** is needed to cover the potential increase in exposure to a counterparty over the margin period of risk.
 - **The potential increase in exposure** can be calculated on either a net portfolio basis (when there is a legally enforceable margin agreement) or on an individual contract basis (if there is no legally enforceable margin agreement, or if the counterparty chooses this approach).
 - The margin period of risk is typically between 5 to 10 days and will depend on:
 - The time interval between marking-to-market for margin calls (e.g. one day)
 - A time interval to take into account grace periods, if any, for the counterparty to post margin.
 - A time interval to take into account how long it would take to replace the derivatives with the defaulted counterparty with a replicating portfolio with the same market risk.