Market Insight

Margin Replication

A Necessity in the New Derivatives Regime

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Abstract

The year 2013 has seen mandatory central clearing of many major derivatives become reality. In today's new derivatives regime, counterparty credit risk is mitigated through margining, but at the cost of greater liquidity risk. A key new capability, then, is to replicate and analyze margin requirements, thus enabling monitoring of current and potential liquidity demands. This Market Insight is a re-print adapted from two recent Op-Ed articles on "Market Replication" published in *Pensions & Investments* and *Portfolio Institutional.*

Why This Matters

- Mandatory central clearing of derivatives has gone 'live' in many developed markets, imposing numerous operational and legal requirements on derivatives participants.
- Beyond the compliance phase, central clearing will necessitate new risk management techniques, particularly to anticipate the liquidity needed to meet margin requirements.
- In order to analyze future margin requirements, it is indispensable to be able replicate margin calculations, both in actual and hypothetical market scenarios.

IT HAS BEEN MORE THAN THREE YEARS since the G-20 prioritized the mandatory clearing of over-the-counter derivatives. Implementation of clearing mandates has been arduous, but this year has marked a turning point. While the initial focus of derivatives participants will be on basic compliance, the competitive environment will shift quickly to require more sophisticated analysis. Margin replication will prove to be a necessary capability.

The year 2013 has seen the first phases of actual clearing mandates. In the US, the mandate—legislated as part of the Dodd-Frank reforms—has been rolled out in three phases, and as of September 2013 it applies to most derivatives participants, including broker-dealers, asset managers and pension funds. In Japan, clearing mandates are also already in effect. Elsewhere in Asia, as well as in Europe, mandates should apply as of the first half of 2014. In all major markets, the central clearing mandate is no longer an abstraction.

For brokers and investors alike, as the mandates start to apply, the first priority will be simply to "keep the lights on", that is, to enable uninterrupted trading and risk management with derivatives. This places the emphasis on operational and legal aspects: for brokers, establishing a client platform; for investors, on-boarding with at least one clearing broker, with the requisite data feeds, legal documentation, and so on. In the early stages, institutions that can simply comply with the mandates, or assist their clients in doing so, may derive a competitive advantage.

Beyond the early stages, priorities will change, however, as compliance no longer represents a competitive edge, but simply a minimum requirement. It is appropriate at this time to look ahead, and establish a vision for best practices as the market digests the central clearing mandate.

We wrote last year[1] that central clearing represents an exchange of credit risk for liquidity risk. At the heart of this exchange is margin. In order to guarantee minimal credit risk to derivatives counterparties, participants will post margin to cover both past and potential future valuation changes on contracts. During the "keeping the lights on" stage, it is sensible to consider margin as a given—a cost imposed by the central counterparty to enable derivatives trading to continue. But in the future, derivatives participants will differentiate themselves by their understanding of margin, their ability to efficiently execute derivatives strategies, and their provision of these services to clients.

When an investor clears through a broker, the broker is required to collect at least as much margin as the central counterparty (CCP) would impose for the trade. The first question for the investor is a sanity check: does the margin being claimed by the broker tie out with the margin required by the CCP risk model? Is any additional amount consistent with the terms between the investor and the broker? Are there any significant discrepancies that could be the result of an operational error? In the initial stages of clearing implementation, we anticipate most investors to work in a trust mode toward their brokers, but as time goes by, clearing brokers should be ready for more investors to adopt a *trust-but-verify* policy.

[1] See Finger (2012). Over-the-Counter Derivatives Under Central Clearing, MSCI Market Insight, June.

As investors consider a new position, they should assess the margin required for the trade alongside the pricing they are offered. Would a tighter spread from one dealer be adequate compensation for stricter margin requirements? Moreover, we anticipate many investors to eventually establish relationships with more than one clearing broker. As multiple brokers become the norm, the ability to compare not just pricing but margin terms across brokers will become a necessity.

Beyond the terms offered by clearing brokers, the possibility of multiple brokers and multiple CCPs clearing the same products implies a variety of possible portfolio effects. For a new trade, which broker and which CCP can offer the most opportunity for margin offsets or diversification? As a mechanism to avoid systemic risk, the use of multiple brokers and CCPs is attractive, but does this pose an undesirable cost in terms of lost opportunities for portfolio benefits?

The questions become richer as investors consider not just margin requirements at the trade outset, but how these requirements will change over time. It is easy to appreciate that variation margin (to cover realized price changes) fluctuates daily, but it is important to understand that initial margin (to cover potential future changes) moves as well, even when a set of positions is constant. In some historical cases, initial margin on a fixed portfolio varied as much as four-fold.[2] With collateral an increasingly precious resource, investors are advised to consider not just the margin required on a trade at outset, but also the margin required under possible changing market conditions.

To address all of these questions, the key capability for brokers and investors alike is margin replication. Without the ability to calculate margin requirements for themselves, in actual and hypothetical scenarios, derivative market participants will be left behind as the rest of the industry moves beyond simple compliance to these more interesting questions of efficiency.

These are not necessarily the questions of today, but they are no longer the questions of some difficult-to-pinpoint future. Market participants need to wake up to this reality, and enable themselves to compete in the new environment.

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[2] See Finger (2012).

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[1] *As of September 30, 2012, as published by eVestment, Lipper and Bloomberg on January 31, 2013* *Apr 2013*