

## Chapter 16\*

### Regulating OTC Derivatives

#### Overview

Over-the-counter (OTC) derivatives account for a significant portion of overall banking and intermediation activity. On the one hand, they enable end customers (typically corporations, but also financial firms, such as asset managers) to hedge their underlying risk exposures (for example, future commitments of an airline to buy jet fuel, or the risk of exchange rate movements) in a customized manner. On the other hand, they enable banks and financial intermediaries – the providers of hedging services to end-users – to earn profits, as they, in turn, hedge the OTC products they sell, either by diversifying the risk across different end-users or by shedding the risk to other intermediaries via liquid markets for standardized derivatives. It is clear that there is value to the economy from the derivative products, which enable users to hedge and transfer risk by altering the patterns of their cash flows. Interest rate swaps, for example, are among the largest OTC derivative products and have contributed remarkably to the management of interest rate risk on corporate and commercial bank balance sheets. It is not surprising, therefore, that these markets have grown by leaps and bounds in many countries, covering equity, interest rate, foreign exchange, commodity, and credit markets.

The financial crisis of 2007-2009 has, however, highlighted two aspects of the OTC derivatives market that deserve reflection and reform. The first aspect is that while financial innovation – the design of new, customized products – typically occurs in the OTC space, this is also the arena in which banks can tailor their own risk-taking and leverage buildup, since some of these positions are not reflected on their balance sheets. This is especially true because regulatory capital requirements are not suitably adjusted to reflect all aspects of OTC exposures, such as their illiquidity and their counterparty and systemic risks. The lack of such adjustment implies that risk-taking is often more attractive for banks through off-balance sheet, OTC derivatives than on-balance sheet or exchange-traded products: For instance, the “toxic” derivative assets that brought down banks required less regulatory capital relative to the risks incurred.

The second aspect concerns the opacity of exposures in OTC derivatives. Since they have not been exchange-traded or centrally cleared to date for the most part, neither regulators nor market participants have accurate knowledge of the full range of exposures and interconnections. Primary concerns surrounding the failures or near-failures of Bear Stearns, Lehman Brothers and AIG all had to do with uncertainty about how counterparty risks would spread through the web of OTC connections involving credit default swaps, and in the end, they presented a fait accompli to regulators to engage in massive bailouts in two of these three cases.

#### Current Proposals

The House Financial Services Committee has approved a bill to regulate the massive OTC derivatives business. The proposed legislation calls for sweeping changes in the structure of the OTC marketplace and its regulation. Under this bill, most standardized derivatives will be

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required to be traded on a newly defined entity called a Swaps Exchange Facility or an electronic exchange. Once a large swap participant accepts the standardized derivative contract that is offered, the contract will be executed against a central clearinghouse, which will take the offsetting position with another market participant. Both participants will be required to post margin to ensure that the central counterparty is able to meet its commitments to all counterparties. The amount of margin required will be marked-to-market (vary over time) as the position gains or loses money. If the position is in the money, the margin account should have a positive balance that can be withdrawn. If some market participants become insolvent, then their margins would be forfeited, covering losses to the clearinghouse. The data from these transactions will be reported to a registry, and aggregated versions will be made public.

The above description applies only to standardized contracts, and that too, only to dealers and large swap participants. Contracts that do not have an electronic marketplace will be traded bilaterally as they are now. However, in contrast to current practice, there will be mandated margins by the relevant regulators at least for large swap participants and dealers. All such non-cleared contracts will be reported to the registry, which will be visible to the regulators, so that they can see interconnections in the whole market in order to monitor systemic risk. Capital requirements against these non-cleared positions will be set at a higher level than for cleared transactions, reflecting the increased risks to the counter-parties and the whole system.

Finally, the bill also exempts end-users who are not large swap participants from the requirement to post margins or clear standardized products. To close regulatory gaps, the bill clarifies that both SEC (Securities and Exchange Commission) and CFTC (Commodity Futures Trading Commission) are to regulate in the sense that they must jointly approve rules and if they fail, Treasury will do so. This joint body also can designate market participants as major swap participants, if they take large and systemically risky positions. Thus, the excluded end users can be brought under the regulatory umbrella if necessary.

### **Evaluation of Current Proposals**

We believe that many of these proposed changes have the potential to stabilize the derivatives markets and improve their functioning and their regulation. But implementation details are important. As a cautious step-by-step approach to getting the details right, our overall recommendation is to start with applying changes to the credit derivatives market, which was the primary source of OTC market stress in this crisis. Following that, the costs and benefits of the migration from OTC to centralized clearing can be considered and evaluated for other markets such as interest-rate, foreign exchange and commodity derivatives.

Setting aside this issue of which OTC markets should be moved to centralized exchanges or clearing houses, the bill is silent on one central issue concerning OTC markets, namely their opacity. We do recommend that reporting requirements – that all trades be reported to a centralized data repository and be disseminated in some aggregated form (see Point 4b below) – be applied right away to *all* OTC derivatives, and not just credit derivatives. This is to ensure

that regulators have the required information on the interconnectedness of financial institutions in future systemic crises.\*

Equally significantly, there are improvements that should be considered in the next level of discussion, especially because the bill appears to leave sufficient flexibility to allow a healthy financial sector to adapt to this framework through “regulatory arbitrage,” -- that is, by designing slight variants of centrally cleared products so that they can remain OTC purely for the reason of being subject to weaker regulatory requirements.

We summarize our assessment and concerns about the specifics of moving OTC markets to centralized exchange or clearinghouse as follows:

1. By requiring that standardized products – which trade in large volumes and are sufficiently commoditized – trade on exchanges or centralized clearinghouses (existing or newly formed), the bill goes quite some distance in reducing the systemic risk of the OTC derivatives business and reducing the systemic costs of bankruptcy of a major market participant.
2. The transparency associated with exchange-based trading should improve the performance of some of the larger OTC markets in that transaction costs should be reduced and price discovery improved. Furthermore, the end users would, in fact, save the cost of credit insurance taken out against counterparty risk that they currently face in buying customized hedges from dealers. The price of buying credit protection on dealers and other financial counterparties becomes quite expensive during periods of stress, when end users value the quality of their hedges the most. Thus, in contrast to what they often argue, there could in fact be a big saving for the end users in periods of crisis.
3. While the exact setting of collateral requirements is ultimately a practice that each exchange or clearinghouse evolves over time, we highlight one important issue concerning credit derivatives that might be relevant for setting collateral. Different derivatives products would have to be margined based on their specific nature, we stress that risk exposure for credit derivatives is of a different character from that borne by traditional derivative products such as interest rate swaps. Like other swaps, the mark-to-market value of a single name credit default swap fluctuates from day to day as the market's assessment of the underlying entity's credit risk varies. These daily fluctuations are similar to daily price movements for other derivatives and can be handled adequately within a standard margining system. However, upon the occurrence of a credit event, the potential liability of the protection seller to its counterparty suddenly jumps to as much as 100% of the contract's notional principal. In nearly every case, this will greatly exceed the value of the collateral posted to cover daily variation margin flows and leave the protection buyer exposed to significant counterparty risk. Under central clearing, this would ultimately devolve on the clearinghouse. Requiring collateral equal to the full notional principal amount on

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\* International coordination has become extremely important in dealing with today's global capital markets. In particular, it is important for regulators to have information on derivatives risk exposures not just in clearinghouses and exchanges in their own jurisdiction, but also in others.

all of a protection seller's swaps would eliminate the potential counterparty risk, but would be prohibitively expensive. A feasible alternative that would nevertheless eliminate nearly all counterparty risk in the case of a credit event would be to require a protection seller to post margin equal to 100% of its single *largest* exposure to an individual reference entity. This additional margin would guarantee that the protection seller could always cover the potential liability from any credit event that it has sold protection against. Only in the case of simultaneous defaults by multiple entities covered by the same protection seller would there be any residual counterparty risk. This credit-event-based margin requirement would be in addition to posting the margin required to cover daily fluctuations in the values of all of its open positions in the absence of a credit event.\*

4. In addition, some of the exceptions in the bill deserve more careful examination. In particular, the question of which contracts are “standard” enough to be cleared is left to the regulators. A slightly modified nonstandard contract – an OTC “clone” of the cleared product -- can be traded bilaterally and only reported to the repository, which would lead to regulatory arbitrage in many cases. Such bilateral trades tend to be profitable to the dealers and the proposed regulatory structure may encourage financial innovation designed *only* to keep products from central clearing.
  - a. Under the current proposal, regulators will be obliged to set margins and capital requirements on dealers for these new and potentially complex products but may be challenged to keep up with the flood of variations.
  - b. An alternative and much simpler solution to this current proposal that deals well with non-cleared OTC transactions is *transparency*. If all inter-dealer transactions were confirmed bilaterally and required to be posted in a public site, perhaps on a weekly basis, then the risk of a bilateral deal with any counterparty could be more accurately assessed. The reporting can be aggregated for each institution and between institutions by risk type and maturity bucket. It should also include the extent and form of collateralization and the amount of collateral at risk under future changes in counterparty credit quality. Some such reporting is provided even in current quarterly balance sheets of dealers, but it is by and large too coarse to be directly useful in assessing bilateral counterparty risk. With such information, the market would be able to price better the counterparty risk. This would provide a far more powerful disincentive to excessive risk-taking than the threat of regulatory capital requirements. Further, any regulatory capital treatment assumes that such information would be gathered. Hence, the additional cost to our market transparency alternative seems to be small. Third parties would assemble counterparty exposure data and sell credit information to market participants.

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\* In effect, our recommendation amounts to imposing a position limit but one whose size – as it applies to each market participant – is determined by the participant subject to the requirement that its largest position on the clearinghouse be fully collateralized.

Any dealer who did not want his transaction made public would have an incentive to move to a cleared product.

5. End users of OTC derivatives may however be concerned about such additional transparency for two reasons. First, they may be concerned that an increase in overall costs of dealer activities may raise their costs of hedging, and dealer preference for cleared products (which tend to be standardized ones) would reduce their ability to find customized hedges, increasing their “basis” risk. These concerns notwithstanding, we believe that end users will in fact benefit from reduced counterparty risk of dealers. Moreover, in case the dealer activities are efficiently priced by the market for the risks they impose on others, then it is in fact efficient that end users pay a part of this price too. Second, end users may be concerned with transparency of their own positions since their usage of OTC derivatives might in large part be tied to underlying business practices that they might not wish to disclose at high frequency. Also, there are innumerable end users, relative to dealers, which might make information acquisition, reporting and aggregation of all of their exposures somewhat costly. Hence, a pragmatic approach might be to employ “hedge-documentation” (akin to hedge-accounting) for such end users. In particular, to benefit from the hedger exception that margins are not posted on OTC positions, end users must document for each OTC position the underlying risk exposure. Auditing of end users’ hedge-documentation could be performed either by auditing companies or by trade bodies such as the International Swaps and Derivatives Association (ISDA).
6. It is perceived that requiring dealers to post high margins or subjecting them to high capital requirements against centrally cleared or OTC positions might also increase their own costs of hedging underlying economic exposures. For instance, a commercial bank wanting to hedge the credit risk of its loan portfolio may face steep costs in employing credit default swaps for managing such risk. The solution is essentially to treat the hedging activity of such dealers as effectively being of “end user” variety. That is, if a dealer firm has both an underlying banking book and a market-making book, then the two should be required to be segregated into subsidiaries. The banking subsidiary can apply for hedger exception and be subject to hedge-documentation of its positions, with supervision and audit by bank regulators at daily frequency (as with their other risk reports). The market-making or pure dealer subsidiary should however be subject to higher collateral or capital requirement, as proposed by the bill. Failure to satisfy the hedge-documentation standards should lead to removal of the hedger exception for the banking subsidiary for a certain minimum period, say two years. This approach recognizes the economic motive of derivatives trades employed for hedging – subject to ex post verification – and balances economic gains from derivatives against the need for financial stability.
7. It is important for regulators to recognize that once dealers are subject to higher capital requirements and transparency on OTC positions, and end users enjoy a hedger exception, the most likely place for the buildup of excessive risks through OTC markets would be the space of end users. Hence, we agree with the proposal in the bill that certain large participants in OTC derivatives who choose not to be

classified as dealers in order to save on margins and disclosures, but nevertheless maintain one-way or systemically risky positions (as ascertained by audit failures in their hedge-documentation of such positions) should be brought under the same set of regulations as dealers. Their hedger exception should in fact be revoked for a certain amount of time, say two years, following such audit failures. While the proposal in the bill specifically says “large market participants” would be subject to similar rules as dealers, we believe “large” should be evaluated relative to participants’ underlying risk exposures and not in an absolute sense. Clearly, a large corporation will have greater hedging needs and thus require larger OTC positions for its hedging.

8. The centralized counterparty will naturally take some risk. It will prudentially set margins to reduce this risk and it will have capital to back up these risks. In many cases, the centralized counterparty will be a privately owned corporation belonging to dealers and other market participants. While this may ensure it has relatively deep pockets, the risks must be subject to monitoring as for any other systemic risk entity. In the unfortunate case where a centralized counterparty itself becomes bankrupt, there should be little hesitation to rescue it with taxpayer resources. Such systemic risks are indeed exactly what the lender of last resort should be focused upon, since from a moral hazard standpoint, it is far more prudent to rescue a clearinghouse than a private risk-taking institution that blows up on its risky trades and endangers its in-house public utility function (a case in point being Bear Stearns, which was effectively a clearer of a large number of credit default swap contracts). The regulatory apparatus is well-designed to reduce this risk.