

## ON PRICE TRANSPARENCY OF OTC DERIVATIVES

by

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Much has been said and written since Autumn 2008 about OTC derivatives being the principal culprit in the 2008-2009 colossal financial crisis. This current conventional wisdom is the motivation behind the legislative endeavors to regulate these markets. One of the operating premises of these proposals is that a lack of price transparency was one of the fundamental causes of the crisis. A Tape is now being discussed as one means of providing transparency to this market. The argument is that publishing prices and positions on a Tape gives market participants information and transparency on executable prices. A host of questions-- such as how real time the Tape is, what type of prices will be published (e.g. bid, offer, last price), will positions be published, at what level of disaggregation, prices of what type of products in each asset class, etc--, remain to be analyzed and answered by regulators prior to specific decisions being reached. Dealers' trade data are now being analyzed by regulators to determine an optimal design for such a Tape.

Price transparency is important. However, in order to ensure liquidity and smooth risk transfer in these markets regulators need to ensure position anonymity and to distinguish between fungible commoditized and non-fungible non-commoditized OTC derivatives. Regulators also need to identify the ultimate objective of price transparency, such as the information price publication aims to impart and the regulators' intended use of published prices. Furthermore, they need to clarify the link between a financial crisis resulting from excessive leverage, deficiencies in mortgage/ratings standards as well as lack of sufficient capital and pricing transparency in the OTC derivatives market. Regardless, we focus here on the issue of price transparency in these markets.

Within each OTC derivatives asset class, a subset of products is fungible and commoditized. Not all of these products, however, are necessarily liquid nor is the market in all of them deep. But there is already pre-trade price transparency in these products for market participants through the nexus of dealers, interdealer brokers, and third party information systems. Bids and offers are posted for these fungible products by the dealers and interdealer brokers-- "how real time" depends on the market depth of each product and asset class.

Four notes of caution are warranted with respect to these prices. First, interdealer brokers post prices anonymously while dealers' customers with direct access to dealer pages see dealer-specific indicative posted prices. Second, all posted bids and offers are always indicative. The OTC derivatives market does not execute on posted prices, even if these postings are real time. Indicative and executable prices change continuously. Market participants merely derive information on indicative market levels from posted prices. Execution is always in a live, real-time voice or electronic environment. Third, posted prices reflect collateral-based valuations with dealer counterparty credit risk. Non-dealer counterparty credit risk is priced into the transaction at execution. Fourth, transaction size impacts execution price and "market"

transaction size differs across products and is generally a function of market depth and liquidity in the particular product.

One can certainly construct a Tape where prices of the fungible commoditized products are published intra-day post-trade on an aggregate trade-weighted basis so as to preserve anonymity. The question, however, remains as to why such a Tape would be of interest. OTC products are not for retail consumption. Institutional and corporate consumers already have some form of access to prices of the fungible commoditized products via direct access to dealer-posted prices or via third party information systems such as Bloomberg or Reuters. However, it is unclear what new information a Tape will give market participants. A post-trade Tape will not give information on [future] executable prices. As already discussed, any post-trade price is, by definition, stale as OTC derivatives prices change continuously. Market participants need access to indicative prices *prior* to trading/execution and they already have access to this information.

An additional issue that will muddy the waters with a post-trade Tape publication is that dealers' post-trade prices reflect counterparty credit risk and transaction size. Any post-trade Tape price without accompanying publication of dealer position and counterparty will actually distort information since counterparty credit risk and executed transaction size are not homogeneous. If, on the other hand, dealer position and counterparty information accompany published prices then market depth and liquidity will decline sharply, perhaps even to zero. To preserve dealer and counterparty anonymity, post-trade aggregate trade-weighted prices of the fungible commoditized products can be published but, as just discussed, this runs the risk of distorting information to market participants because of heterogeneity in counterparty credit risk and transaction size. This distorted price information can lead to declines in market depth and liquidity of the fungible commoditized products.

On the other hand, regulators might be aiming at price transparency vis the non-fungible, non-commoditized OTC derivatives products. Non-fungible products in the OTC derivatives market play a significant role in risk and position management. However, the information value to be derived from price transparency of non-fungible product prices is not obvious. Pre-trade prices of non-fungible OTC derivatives are not posted by dealers or by the interdealer brokers. They are priced and executed by dealers upon request on a one-off basis. These products are non-replicable. They are typically created as solutions to hedging or managing specific one-off risks or positions. Non-fungible products are structured to manage tailored exposures. Transaction sizes can vary significantly depending on the size and nature of the exposure.

Abstracting from counterparty credit risk, pricing of these non-fungible, non-commoditized products is driven by model analytics on the one hand and cost of dealer hedging on the other hand. In some cases, the risk of these products remains partially or even fully with the dealer because of incomplete markets, thereby necessitating the executed price of the transaction to reflect these unhedgeable risks. Post-trade price publication of these non-fungible products would not reveal any useful information to the market as the market at large will not be executing these one-off tailored structures. Note that since these products are one-offs, they cannot be aggregated. At a disaggregated level, significant information distortion will be created if these prices are published without information on the structure's terms, size and counterparty. On the other hand, if this information is published, market participants will not



execute leading to increased risk in the financial system given that these products are executed to manage specific exposures and hedge risks.

Any Tape designed by regulators should, therefore, preclude the non-fungible non-commoditized OTC derivatives. Regulators ought to be cognizant of the level of pre-trade transparency that already exists for the fungible commoditized products. Construction of a post-trade Tape for the fungible commoditized products should ensure that price information to the market is not distorted due the multifaceted and interrelated issues of analytics, market depth, liquidity, credit risk and position that enter into the pricing equation. In-depth analysis of the microstructure of these markets would be a good starting point for determining the optimal form of transparency, ensuring liquidity and smooth risk transfer in the OTC derivatives markets.

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