Futurization of Swaps

Stanford's Duffie Offers Another Viewpoint on This Emerging Trend

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Editor's Note: Bloomberg Government's Director of Research Robert Litan recently wrote a commentary raising regulatory concerns about the so-called futurization of swaps, citing a trend of derivatives trading that's moving from exchanges regulated under the Dodd-Frank Act to less well-regulated futures markets. Stanford University's Darrell Duffie, Dean Witter Distinguished Professor of Finance, argues that this phenomenon is a natural reaction and should, in fact, be welcomed. Duffie's argument and a comment from Litan follow.

Robert Litan's provocative essay, The Futurization of Swaps, took me by surprise. I'm not surprised that some swaps trading has been morphing into futures trading. Instead, I'm surprised that Litan is so worried about this trend.

Here's Litan's central point:

> "As more of this kind of regulatory arbitrage takes place -- an inevitable outcome unless policy makers slow it down or stop it -- more derivatives trading will move to the less protected and more monopolized world of futures trading, and away from swaps markets which are being regulated."

In my view, a significant amount of so-called futurization is natural and appropriate, and shouldn't be viewed as an end run of Dodd-Frank swaps regulations. This migration doesn't imply excessively weak regulation of futures markets.

FINANCIAL PRODUCT TRADING

In general, financial products with sufficient standardization, trade frequency and volumes are better traded on exchanges than over the counter, or OTC. For these products, exchanges provide all-to-all competition for trades, more efficiently matching ultimate buyers directly to ultimate sellers at more transparent prices. Whenever there is a sufficient amount of investors with an interest to trade about the same time, exchange trading obtains a more efficient allocation of risk, and at a lower execution cost to market participants.

More customized products, however, are more appropriate for over-the-counter markets. OTC trading is also superior for products that are standardized but less frequently traded, such as many single-name credit-default swaps, or CDS.

The fixed costs of setting up and maintaining exchange trading are too high for these thinly traded products. When a seller, for instance, sends an order to an exchange, it may take some time to match the trade with natural buyers. In this situation, an OTC dealer can provide immediacy, quickly absorbing the position into its inventory and laying it off over time to other investors. This provision of liquidity is an important economic function. Dealers can also absorb large, "block-size" orders that would often receive poorer execution on an exchange because of a lack of sufficient exchange-market depth. This is the case even in relatively active equities markets.

In addition, when investors face new risk-management and other investment problems, dealers can often design useful customized derivative-product solutions, and perhaps then incubate the development of an associated OTC market serving other investors that may need the same solution.

This is how interest-rate swaps appeared in the 1980s and credit-default swaps evolved in the 1990s. Exchanges are often not as quick or able to develop new derivatives products, but they are a relatively efficient trading venue once OTC activity achieves a sufficient threshold, such as occurred with currency futures and Eurodollar interest-rate futures, which had, and still have, corresponding OTC forward markets.

This natural division of financial products between the two trading venues is further discussed in my book, Dark Markets. The key questions are where to draw the dividing line between OTC and exchange venues to best achieve market efficiency and stability, and how the dividing line chosen by market participants and financial service providers moves as regulations change.

Obviously, regulations should adjust to new market conditions and be coordinated across the two trading environments to address imbalances and sources of inefficiency and systemic risk as they arise.

In the U.S., swaps and futures markets for a given asset class are usually overseen by the same regulator, either the Commodity Futures Trading Commission or the Securities and Exchange Commission, which should be in a good position to strike an appropriate regulatory balance. (It would be better if the country had only one regulator for its derivatives markets, but that is a long and different story.)

Before Dodd-Frank, OTC swaps markets were under-regulated; they had essentially no regulations. That's not controversial. Futures markets have been at least moderately regulated all along, with rules for margin requirements, price transparency, clearing and registration of futures contracts and futures commission merchants (FCMs), among many other restrictions on investors, FCMs, and exchange-service providers.

Perhaps futures regulations should be tightened, but futurization by itself doesn't imply that futures markets now have too little regulation relative to swap markets. More likely, futurization is due to the end of an era of dramatically under-regulated OTC swap markets

CAUSES OF FUTURIZATION

Consider an OTC derivative product that, before Dodd-Frank, was almost ready for migration to futures markets, but not quite there yet in terms of broad trading interest, frequency of trading demands, volume, standardization, and the incentives of OTC dealers to bring their clients' trading interests to exchanges.

Once Dodd-Frank became law and the regulatory costs imposed on the swaps market went from near zero to significant, a futurization of this product was triggered. That is, an exchange-based substitute for the OTC product will naturally appear and become actively traded on a futures market or an options exchange, or perhaps the product will morph into an exchange-traded fund (ETF) and appear on equities exchanges. This migration doesn't imply that exchange-market regulations are inappropriately weak compared to swaps market rules.

I'm not suggesting that current futures market regulations are wonderful, and I'll return to that point.

In the wake of the financial crisis, as Dodd-Frank was being framed, I had conversations with economists and regulators about whether the incoming swap regulations would be sufficiently strong to encourage the migration of enough swaps trading onto exchanges, given concerns about market efficiency and systemic risk. In June 2009, I told The International Association of Financial Engineers that it was an "embarrassment" of the financial-services industry that investors still had to go through OTC dealers to obtain some high-volume standardized financial products such as index-CDS contracts, which they should have been able to obtain more efficiently on exchanges.

In general, as regulations are added to swaps markets, it is natural and appropriate that a significant amount of OTC contracts will morph into futures contracts and other exchange-traded instruments, or that existing futures contracts will be increasingly used as substitutes for swap contracts. I wouldn't claim that every instance of futurization is a blessing, but I wholeheartedly support the general trend.

A small number of big dealers have had an effective oligopoly in the intermediation of OTC derivatives markets. According to International Swaps and Derivatives Association data for 2010 assembled by David Mengle, 82 percent of the notional outstanding value of OTC derivatives globally was held by the largest 14 dealers.

In the U.S., the top 5 dealers maintain 95.5 percent of the total derivatives positions held by U.S. banks and their affiliates, according to statistics provided by the Office of the Comptroller of the Currency. At least until recently, significant intermediation profits for dealers in OTC derivatives have been made possible in part by the relative opaqueness of OTC markets. Because of this, dealers did not have much incentive to encourage the futurization of swaps.

Now that Dodd-Frank will require pre-trade competition and post-trade price transparency for standardized OTC derivatives, it will be harder to maintain those high profit margins. The writing is on the wall. Compliance costs are also up in OTC markets for dealers and other major market participants. So there is now a much greater incentive, or at least a reduced disincentive, for derivatives trading to migrate to exchanges. If a given dealer doesn't help its clients with this migration, then other dealers will.

Dealers have also been downsizing their balance sheets for risk; for example, primary-dealer corporate bond inventories are down about 75 percent from pre-crisis levels, according to Federal Reserve data. Likewise, dealers are no longer happy to have ever-increasing amounts of OTC derivatives on their balance sheets.

Some of this pressure to reduce balance-sheet growth is due to increases in regulatory capital requirements, and it was in progress before Dodd-Frank's implementation. The exceptional pre-crisis growth in the total notional amount of OTC derivatives outstanding was brought to an abrupt halt in early 2008, according to data from the Bank for International Settlements. For U.S. banks, notional OTC derivatives positions are roughly at or below 2009 levels, according to data from the Office of the Comptroller of the Currency

ARE OTC SWAPS MARKETS SAFER?

As for the systemic risk associated with derivatives, I see no reason to believe that OTC markets are generally safer than futures markets, even after Dodd-Frank is implemented.

For example, it's not yet clear what fraction of standardized OTC derivatives will eventually be cleared, but progress to date and a long list of exemptions seem to indicate that it will not rise much above 60 percent. Futurization promotes clearing because, by law, essentially all exchange-traded derivatives must be cleared. Although clearing isn't a panacea for systemic risk, especially given the uncertainty hovering over the default management plans of central clearing parties, it seems hard to argue effectively that counterparty risk management in the OTC market is generally superior to that for exchange-based futures.

There are gaping regulatory exemptions for clearing in the OTC market. For example, OTC derivatives used for commercial hedging are exempt from clearing in the OTC market but not in futures markets. When a corporation declares bankruptcy, the fact that its derivatives were used for hedging doesn't imply that the corporation will meet its derivatives payment obligations. As a result, the counterparties for these derivatives, which are almost always systemic, can be placed under stress. Smaller financial institutions, foreign governments, multinational entities, and international financial institutions are also exempt from the OTC clearing requirements.

Exchange-traded futures margin requirements apply to all market participants. In contrast, Dodd-Frank has left significant exemptions from margin requirements for OTC derivatives.

As for OTC foreign-exchange derivatives, encompassing about $20 trillion notional value of positions and a substantial amount of counterparty risk, all clearing and margin requirements have been waived by a recent ruling of the U.S. Treasury Department. There is no such exemption for exchange-traded foreign exchange derivatives.

Litan notes that swap margin requirements are higher than those for certain exchange-traded futures that transfer essentially the same risk. Without getting into how high these margins should be, it's appropriate that futures margins would, on average, be at least a bit lower than margins on OTC swaps with equivalent daily volatility.

A failed futures position can typically be liquidated more rapidly than could a swaps position of the same size, given the higher intraday trading volumes of futures exchanges, the greater price transparency of futures markets, and the direct and immediate access to exchanges available to a wide range of investors. Obviously, regulators should watch carefully that futures margins are high enough, and that other futures regulations are appropriately strong. But they don't need to match swaps regulations on every dimension; that would be an apples-to-oranges comparison.

CUSTOMER PROTECTION

Futures regulations should definitely be tightened in some areas. The biggest blemish on the record of U.S. futures markets stems from the recent failures of MF Global and Peregrine. At MF Global's bankruptcy, there was a shortfall of $1.6 billion in customer funds, according to a recent House Republican report.

It's unacceptable that customer funds were not properly protected. Professor Joe Grundfest of Stanford's Law School and I wrote in the Financial Times in 2011 that customer funds should be much more assured of segregation. Foreign futures exchanges like Eurex and Bovespa offer customer fund segregation in secure accounts that are remote from the FCM.

This protects customers from an FCM's willful failure to comply with segregation rules or from a failure of the FCM's segregation methodology. Although the

CFTC's proposed improvements in customer-fund segregation take a step in the right direction, they don't go far enough. As for segregation of customer funds in the OTC swap market, Dodd-Frank doesn't require this and merely stipulates that segregation is an option for customers.

Litan raises some important points concerning other regulatory distinctions between futures and swap markets, including dealer registration requirements, real-time post-trade price reporting, block-trade size exemptions, and other areas in which futures regulations might be improved. He is also concerned about the lack of competition for the provision of exchange and clearing services, referring to the walled garden formed by an exchange and its clearing house. I won't address these concerns here. Obviously, futures market and swaps market regulations should be improved wherever there are concerns about customer protection, financial stability or market efficiency.

The migration of derivatives from an OTC market to an exchange-trading environment is a healthy trend for standardized and actively traded products. Regulations should, of course, be improved as needed in both environments, but it makes no sense to me to regulate with the goal of preventing the migration of swaps trading to exchange-based markets. I disagree with Litan that members of Congress who voted for the Dodd-Frank Act would be disappointed to see this migration.

A COMMENT FROM ROBERT LITAN ON DUFFIE'S COMMENTARY:

We agree on more than what some readers of our essays might conclude. I, too, applaud the movement of OTC swaps onto exchange- and electronic-trading platforms, which are more transparent and have lower trading costs than the opaque, pre-financial crisis swaps markets. This change was a major goal of Dodd-Frank, but regulators still haven't set all rules for swaps execution facilities, or SEFs, on which swaps are traded.

What concerns me -- and what should concern policy makers -- is that as swaps morph into futures, two virtually identical financial products (except in name) will be traded in two different venues -- namely futures markets and SEFs -- that are regulated in two very different ways. It's the classic recipe for regulatory arbitrage, and I question whether this is consistent with congressional intent or in the broader public interest.

Duffie rightly notes that margin requirements for highly liquid products should be lower on futures exchanges, where these positions are readily liquidated. But I don't believe anyone has adequately addressed whether the current difference in margins for what are functionally equivalent products is appropriate.

More broadly, swaps are moving to futures because of other differences in regulation: rules relating to "block trades," which are being used to circumvent futures exchanges to return to the opaque, over-the-counter market; protection of customer funds; common ownership of futures market and clearinghouses, effectively outlawed in swaps markets; and publicly available swaps transactions data as opposed to the claimed ownership of pricing data by futures exchanges. I call for the CFTC to rectify these differences; Duffie acknowledges them but doesn't urge action in his essay.

A CFTC roundtable at month's end is an acknowledgement that regulators are aware of potential problems created by additional swaps-futures regulatory arbitrage. I hope we both can contribute more to the debate over how best to address these differences so that the advantages of pricing transparency and central swaps clearing -- which we support -- can be achieved on any platform where similar financial products are traded and cleared.

A FINAL COMMENT FROM DUFFIE:

I appreciate Robert Litan's thoughtful reaction. He and I apparently agree that futurization can, in some cases, be good. We both support improving over-the-counter and exchange-market regulations wherever they aren't effective or coordinated. We remain somewhat differently aligned on the main causes of the recent trend toward futurization.

ABOUT THE AUTHORS

Darrell Duffie, Dean Witter Distinguished Professor of Finance, teaches at Stanford University's Graduate School of Business. He has written extensively on derivatives and futures markets as well as various financial institutions and practices. He holds a Ph.D. in engineering economic systems from Stanford. He and Robert Litan have long been professional colleagues and usually agree on most matters.

Litan is director of research at Bloomberg Government. The views expressed are his own.

Litan, who joined Bloomberg in August 2012 after serving as vice president for research and policy at the Kauffman Foundation and a senior fellow at the Brookings Institution, had previously been vice president and director of the institution's Economic Studies Prorgram. He is the author or co-author of more than 25 books and 200 articles about government and regulation, including the 2010 paper, "The Derivatives Dealers' Club and Derivatives Markets Reform: A Guide for Policy Makers, Citizens and Other Interested Parties. That paper can be found at: http://www.brookings.edu/~/media/research/files/papers/2010/4/07%20derivatives%20litan/0407_derivatives_litan.pdf

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