



# Alternative Investment Analyst Review

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*Kathryn M. Kaminski, CAIA*





# The Next Wave of Futurization

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## 1. Introduction

The world of derivatives as we know it is in a state of flux. Prior to the credit crisis, the derivatives game was played on two very different fields: over-the-counter (OTC) derivatives were traded via dealer networks and exchange-traded derivatives (ETD) were traded via centralized clearing houses. Although in theory the nature of derivatives contracts should be roughly the same, in application, the rules as well as the mechanism by which these contracts change hands, varied substantially. The financial crisis that unfolded in 2008 led to a sharp review of the way derivatives contracts are traded and collateralized. In an attempt to level the playing field and create a more cohesive approach to regulating derivatives markets, legislation such as the Dodd-Frank Act in the U.S. and EMIR in Europe spearhead the re-structuring and reorganization of the way that the derivatives game will be played.

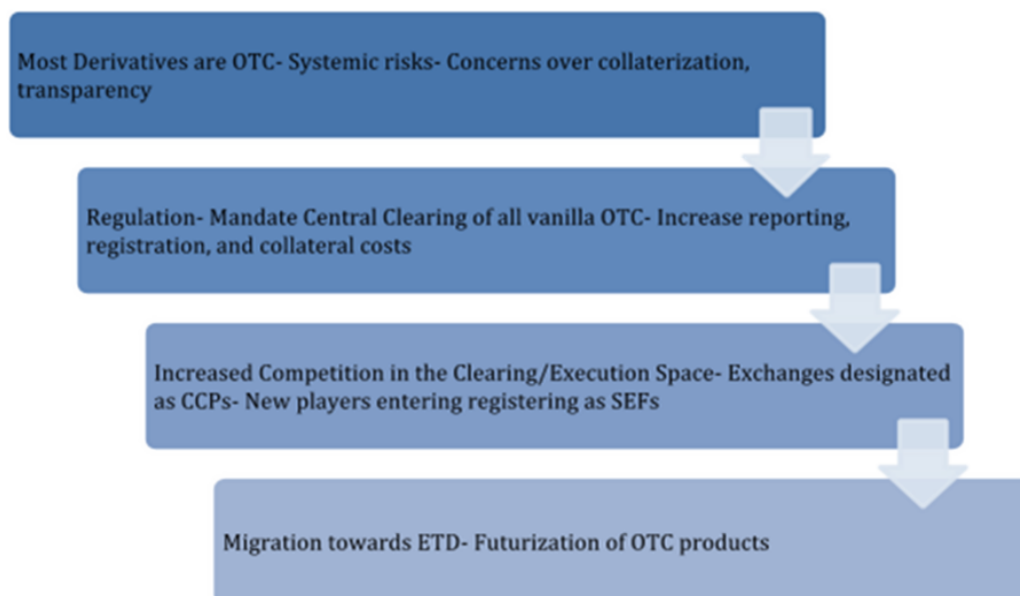
## 2. Setting the Stage for Futurization

The derivatives industry is a USD 700 trillion (notional) business. Historically, exchange-traded derivatives have made up a small fraction of the total notional value (roughly 10%). Most OTC derivatives contracts are held by a few of the largest banks. A closer look at these banks, or at least the top tier banks by size, shows that only a very small percentage (around 4%) is held in exchange-traded derivatives. The dominance of OTC contracts has been attributed to the previously lower costs in trading off-exchange and the potential

difficulties in dealing with block trades on exchanges. OTC interest rate swaps dominate derivatives positions of the top banks in both total notional value and in banking trading revenues (USD 17 trillion in 2012).

New regulation aims to tighten control regarding reporting, registration, and mandatory central clearing of many, especially vanilla OTC contracts. Central clearing of most derivatives contracts will be done through central counterparties (CCPs) allowing for aggregation of information for reporting, multi-lateral position netting, and cross validation. The share of derivatives that are not centrally cleared will fall and regulatory costs in the form of increased reporting, operating, and collateral are set to impact all users of OTC derivatives products.

New players are also entering the swaps markets by registering as swap execution facilities (SEFs), creating competition for swap dealers. Transaction costs, operational efficiency and collateral management should reduce the differences between OTC and exchange-traded derivatives. Despite this move, there are still plenty of adjustments to be made and room for growth. For example, in 2012, 60% of all derivatives in the U.S. were swaps. There is a migration towards exchange-traded products but this is happening gradually. For example, today futures and forwards contracts which are mostly exchange-traded have climbed to 19% of total notional value in derivatives from 11% in 2006.

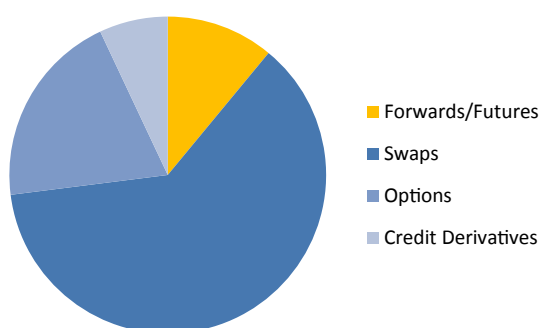


**Exhibit 1** Evolution of Derivatives Markets

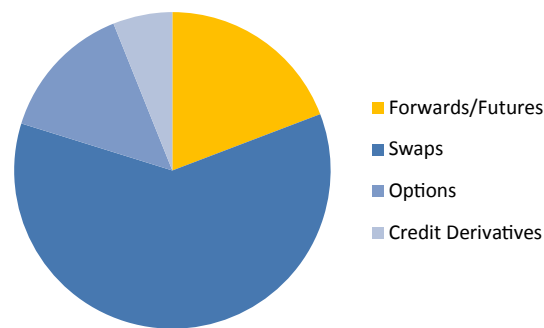


**Exhibit 2** Composition of Derivatives Markets (Notional Value)

## Notional Value Q4 2006



## Notional Value Q4 2012

**3. What is Futurization?**

Futurization is the migration of traditional dealer-based bilateral contracts into similar standardized futures-style contracts which are centrally cleared and exchange-traded. This idea is by no means novel. In fact, this is exactly why futures contracts were first developed; to mimic bilateral OTC forward contracts. The futures market structure is meant to address counterparty risks, lack of transparency, and lack of transferability (non-fungible structure) of bilateral OTC contracts. An aggregated exchange-traded structure allows for collateral reductions, multilateral position netting, and risk mitigation across pools of counterparties. The new wave of futurization of swaps and other OTC derivatives is intended to address some of the same issues. By

mandating centralized clearing, OTC derivatives are already moving a step closer to futures contracts. As regulatory demands begin to stretch the limits of OTC contracts, they are creating further incentives for futurization which may allow users to circumvent some of these issues.

**4. The New Wave of Futurization: Swap Futures**

Swap futures (or futurized swaps) are new, exchange-traded variants of swap contracts which are meant to mimic swaps. To use an analogy, futures are to forwards as swap futures are to swaps. To appease users of swaps, these new futures contracts are an attempt to keep some of the customizable features of swaps while maintaining some of the advantages of a centralized

**Exhibit 3** Characteristics of Futures, Forwards, Swap Futures, and Swaps

	Futures	Forwards	Swap Futures	Swaps
Trade Via	Exchange Traded	OTC **(U.S.: exceptions, EU: exception for physical delivery)	Exchange-traded with Exceptions	OTC *(U.S.: SEFs, EU: MTFs and OTFs)
Clearing	Cleared	Depends	Centrally Cleared with Exceptions	Most cleared** with Exceptions
Delivery	Rare, ~2%	Most Delivery	May Depend, Contract Dependent	Most delivery
Transparency	Standardized	Customized	Standardized with some Flexibility	Customized, More Standardized*
Collateralization	Daily Margin Required for Collateral	Depends	1-2 Days Margin Required for Collateral	5 Days Required for Collateral (may vary as well)
Counterparty Risks	Low	Moderate (varied)	Low	Low*, Moderate (for bi-lateral, uncleared contracts)

\*This characteristic will be in effect post regulation implementation of Title VII of the Dodd-Frank Act and EMIR.

\*\*There are some exceptions for forward rate agreements and FX. Physical delivery and some customized swaps may also be exempted.

exchange. Exchanges will allow for more flexibility on delivery options. Exchanges will also allow for more flexibility on block trades (something that was debated at the recent CFTC discussion panel in February 2013). Exceptions and modifications will make swap futures fit somewhere in the gray zone between traditional swaps and traditional futures contracts. The key advantages of swap futures include transparency, lower collateral requirements, possibly reduced registration requirements, and ease of trade when highly liquid. The key disadvantages may include lack of customization, delivery limitations, concerns for block trades, and the potential for liquidity issues. A simplified comparison of contracts is presented in Exhibit 3.

### 5. Core Issues of Contention: The Pros and Cons

There are some concerns about the applicability of futurization to a market that is focused on customization. General concerns are related to regulatory arbitrage, systemic risk, and potential issues with lack of customization and usability. Opponents concerned with regulatory arbitrage cite the asymmetries in fees and collateral across similar contracts. Their concerns are that markets driven by regulatory arbitrage may have unclear consequences. Cross-border issues and differences in regulation across the globe may complicate the issues further. Systemic risk is another key issue. In a post Dodd-Frank and European Market Infrastructure Regulation (EMIR) world, with mandatory clearing and contract migration onto exchanges, large central counterparties (CCPs) are designated as systemically important entities that are too big to fail. Critics of this structure are wary of vertically integrated clearing and execution. In addition, new users of futures also have concerns about potential basis risk and liquidity issues with new products that may not be adequately customizable. Issues related to block trading, flexibility, and increased delivery options are of high priority.

Proponents of futurization cite the long and successful history of futures markets, the benefits of more migration to futures, and the potential for cost reduction and flexibility in new futures products. Futures markets have a long-standing relationship with regulation. They were designed with a keen focus on transparency, transferability, reduction of counterparty risk, optimized collateral costs, and risk mitigation. Yet it is important to emphasize that futures gain much of their success in numbers. Illiquid futures contracts are

not as popular and have added liquidity risks especially with contracts that are marked to market so frequently. Proponents of futurization suggest that increased volumes in futures markets may help diversify product offerings. For example, one positive sign has been the relatively eventless 18 trillion dollar migration from energy swaps into futures in the fall of 2012. Increased volumes may help make room for new contracts which can better mimic longer dated swap contracts. Consistent with anecdotal comments from energy traders who switched to futures, cost reduction, lower collateral requirements, efficiency, and flexibility are the commonly cited advantages for using futures. Lastly, similar to how futurization of forwards created futures, proponents of futurization can argue that the current wave of futurization in OTC derivatives is simply a natural development of modern financial markets. Consistent with futurization of the past, this wave will help level the playing field and increase flexibility.

### 6. Concluding Remarks

The derivatives industry is a USD 700 trillion (notional) business. Regulatory forces and demographics in this industry are migrating contracts from dealer networks onto exchanges, spawning a new wave of futurization. The push towards transparency and transferability has already begun. Yesterday's challenges may be addressed, but the perils and challenges that lie ahead in derivatives markets remain unclear. Despite many opposing views, it does remain evident that the future of derivatives markets is futurization.

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### Author Bio



**Kathryn Kaminski, PhD** is a visiting professor of industrial engineering and management at KTH, affiliated faculty at the Stockholm School of Economics and previously a Senior Lecturer at MIT Sloan School of Management. Her research focuses on asset pricing, portfolio management, quantitative

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