Presentation to the CFTC Technology Advisory Committee (TAC)

Dodd-Frank Derivatives Regulation Interconnectivity

March 1, 2011
Trade interconnectivity overview

Interconnectivity is a consistent business or operational process with integrated technology support

- Entities involved in trade interconnectivity are:
  - Central Counterparty Clearing houses (CCPs)
  - Swap Data Repositories (SDRs)
  - Swap Execution Facilities (SEFs)
  - Affirmation platforms
  - Client investment platforms
  - Executing Broker/Dealer platforms
  - Futures Clearing Merchant (FCM)/Clearing Member platforms

Interconnectivity of many independent entities requires standardized (open) messaging protocols so information can flow efficiently and the connectivity is cost effective for all entities involved

Interconnectivity requirements and concerns need evaluation using 3 dimensions:

- Implementation time
- Cost
- Structural impediments (impacting liquidity)

*For the purposes of this presentation, Client is defined to include, without limitation, mutual funds, pension plans, separate accounts, collective investment trusts & hedge funds.
Trade interconnectivity workflow

Focus areas for today’s discussion

- **Real time reporting**
  - SDR connectivity by required reporting entities – **time**
  - Number of entities required to report kept to a minimum for **cost efficiency** and **data integrity**

- **Block level execution**
  - SEF connectivity by all market participants – **time and cost**
  - Multiple SEF connectivity by market participants to tap market liquidity - may fragment liquidity initially
  - Universal/trade identifiers received or created by multiple SEFs in a standardized method – **cost and structural impediment**

- **Affirmation/ Allocation**
  - Affirmation platforms connectivity by market participants for block level affirmation and fund level allocation of trades – **cost (tolls)**
  - Affirmation platforms must have connectivity to Clients and executing brokers to affirm trades - **structural impediment**
  - Affirmation platforms need competition as currently only two viable options exist and act as gateways to the CCPs – **cost (tolls)**

- **CCP / post-trade reporting**
  - CCPs must have standardization across affirmation platforms and require affirmation platforms to support all asset classes – **time**
  - Affirmation platforms should be required to connect to multiple CCPs so Clients can use the affirmation platform of their choice – **time**
  - CCP connectivity to SDRs to provide post-trade reporting – **time**
  - CCP connectivity to make end of day pricing and curve data public and accessible to all market participants directly on a timely basis – **structural impediment and cost (tolls)**

- **Clearing / Settlement**
  - Connectivity enhancements by FCNs to accommodate new OTC derivative account class and connect to new CCPs – **time**
  - FCM connectivity to Clients participating in cleared derivatives to provide electronic margin / risk reporting - **time**

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## BlackRock investment process

### Trade Execution

<table>
<thead>
<tr>
<th>Trade Idea</th>
<th>Trade order &amp; execution</th>
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<tbody>
<tr>
<td>• Approximately 150 Investment strategies exist across 3,000 fixed Income funds</td>
<td>• Trade execution is initiated at a block level</td>
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<tr>
<td></td>
<td>• Block size consists of the amount required to maintain the investment strategy on a size appropriate basis across the funds linked to that strategy</td>
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### Post Trade

<table>
<thead>
<tr>
<th>Revised allocation</th>
<th>Clearing</th>
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<tbody>
<tr>
<td>• Based on executed amount (not always 100% of ask), allocation to funds is optimized</td>
<td>• Trades are assigned and cleared at the legal entity (Fund) level</td>
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<td></td>
<td>• Clearing houses plan to offer the ability to net positions for “like items” at the fund level on a daily basis</td>
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<tr>
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<td>• Allows for lower maintenance costs</td>
</tr>
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<td>• Allows for more efficient reporting and payment processing</td>
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</tbody>
</table>

### Maintenance

<table>
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<th>Risk compression</th>
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<td>• Offsetting risk positions collapsed at a fund level to:</td>
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### Operational maintenance

<table>
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<th>Operations performed at a strategy level to allow for:</th>
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<tr>
<td>• Consistency among funds with similar investment strategies</td>
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<td>• Economies of scale benefit in performing this function across funds</td>
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### Risk compression

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### Open Items:

- How will risk neutral trades such as tear-ups, compression trades be executed for cleared derivatives?
- Do all cleared trades require execution or processing through a SEF?
Client on-boarding to support interconnectivity

Bilateral OTC Model

- An execution agreement must be in place with each EB and Client
- A clearing agreement must be in place with each selected FCM and Client
- A User Agreement may need to be in place with each CCP and Client for access to CCP clearing system
- Investment management agreements may need to be updated to meet the legal and regulatory requirements under the Dodd-Frank Act

A minimum of 15 Client on-boarding documents will need to be executed

Cleared model

- Clients have access to deep and liquid markets through the ability to execute with multiple executing brokers that are providers of liquidity
- Clients are able to select an FCM independent of the executing broker with whom the trade was done to keep operational efficiencies in post trade processing and maintenance of trades
- There is consistency in process flows between CCPs, middleware providers and the technology is open architecture to allow for market participants to connect to them via their own technologies
- Documentation is in place to allow for trade flows to take place among the different entities

**Number of connections required per Client**

- EB 1
- EB 2
- EB 3
- EB 4
- EB 5
- EB 6
- EB 7
- EB 8

- CCP
- CCP
- CCP

- Client Fund 1
- Account 2
- Client Fund n

- Custodian 1 with multiple EB accounts
- Custodian 2 with multiple EB accounts
- Custodian n with multiple EB accounts

**Clients**

- Executing Broker is the swap counterparty
- Executing Broker is not the swap counterparty
- CCP is the swap counterparty for cleared swaps

**Fund level Position reporting and collateral management**

- Supports operational efficiency for Clients
- Provides liquidity
- Reduces counterparty risk for Clients
A market structure designed for all market participants is key for market efficiency

- A phased approach based on type of market participant will fracture the design of an efficient market structure
- Market structure design “for clients without clients” will hinder adoption
- CDS and IRS products should be done concurrently

### Timeline Key:
- Rule drafting
- Design and Implementation period
- Dealer adoption
- Client adoption

### Definitions
- April 15: Swaps, Swap Dealer, MSP, End User, SDR, SEF defined

### Reporting
- Apr: SDR definition
- Apr: SEF definition

### Trade Reporting
- (Market reporting at block level)
- Apr: SDR definition

### Risk Reporting
- (EOD and time of trade risk reporting)
- May: CCP governance
- June: DCO Core principles

### Clearing
- Segregation and bankruptcy timeline
- Capital and margin for non-banks & Portfolio margining
- June: SEF definition
- June: SEF governance
- Voice trading for all trade types

### Affirmation
- Affirmation platform

### Trade Execution
- SEF
- Voice trading for block-size only
- SEF

### Documentation
- June: Clearing Addendums and Give Up Agreements and User Agreements
- Oct: SEF documents

### Implementation Categories

<table>
<thead>
<tr>
<th>Category</th>
<th>Trade reporting</th>
<th>Trade execution</th>
<th>Affirmation/Middleware</th>
<th>Clearing</th>
<th>Risk Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade workflow diagram</td>
<td>Real time reporting</td>
<td>Block level execution</td>
<td>Dealer (Executing Broker)</td>
<td>CCP / post-trade reporting</td>
<td>SDR</td>
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<td>Dealer’s FCM</td>
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<td>Funds &amp; Clients’ Clearing Member/FCM</td>
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<td>FCM</td>
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**A market structure designed for all market participants is key for market efficiency**

- A phased approach based on type of market participant will fracture the design of an efficient market structure
- Market structure design “for clients without clients” will hinder adoption
- CDS and IRS products should be done concurrently
Questions to be resolved for efficient implementation

1. How will execution of trade collapses such as offsetting trades (tear-ups) or line item collapses used to reduce operation risk take place for cleared products?

2. How best to address the documentation needs to onboard market participants including buy-side clients into the cleared environment for derivatives? Would an industry task force be able to timely agree on a neutral standard set of documentation?

3. Given the amount of work we collectively now know needs to get done, is there enough implementation time to clear trades as of July 2011? Any guidance from the Commission will help prioritize work load.

4. Will a block trade on a clearable product that is not executed on a SEF, be allowed to use a SEF to only process clearing the trade? This would allow the block trade to use the same process for clearing as the non-block trades that was executed on a SEF and help with operational consistency?