

# Agenda

- Overview
- Risk Management
- Trade Flows and Migration

# Offering Flexible Clearing Services through CME ClearPort

- A set of flexible clearing services open to OTC market participants to substantially mitigate counterparty credit risk and provide capital efficiencies across a wide range of asset classes

- Mitigate bilateral credit risk
- Allocate your capital more efficiently
- Extend safety and security to the way you've always managed your risk

- Extends our \$7B in financial safeguards and our more than a century of default-free experience to the OTC market

- Our solution for CDS is one example of these flexible OTC clearing services

## CME ClearPort OTC Clearing Services

- Crude oil
- Natural gas
- Power/electricity
- Ethanol
- Agricultural swaps
- Other petroleum products

\$7B financial safeguards level updated as of 12/31/2008.

# Open Clearing CDS Solution Overview

## *CME Clearing and CMDX*

- **EFFICIENCIES:** streamlined processing, centralized market information and reduced operational risk:
  - Real-time trade processing, throughout the day, every day
  - Trade confirmations as close as possible to trade execution
  - Daily portfolio compression
  - Risk management for full trade lifecycle
  - Straight-through-processing and industry standard protocols
  
- **SECURITY:** time-tested customer segregation regime approach
  
- **PRODUCT OFFERING:** standardized contracts consistent with ISDA OTC templates, determinations and auction process
  
- **FLEXIBILITY:** daily migrations of legacy contracts – for those held in DTCC TIW or an existing paper trade
  
- **RISK MANAGEMENT:** transparent and replicable multi-factor portfolio margining model

# Open Clearing CDS Solution Overview

## *Collaboration with Regulatory Authorities and Industry Organizations*

- Special exemption from SEC for CDS through CME Clearing and CMDX platform
- Completed regulatory risk management reviews with Federal Reserve Bank of New York, SEC and CFTC
- CME Group Risk Committee approved inclusion of cleared CDS in combined guaranty fund
- Executed agreements with Markit to license its industry-leading credit default swap indices and Markit RED (“Reference Entity Database”) identifiers
- Finalizing licensing agreements with ISDA
- Actively engaged with the FSA regulatory review of CME Clearing’s offering
- Seeking a CFTC 4d order that permits customer funds used to margin, secure or guarantee CDS to be held in Section 4d segregated customer accounts

# Overview - Day 1 Product Offering

*Covering Up to 75% of the Volume in the Corporate CDS Market*

## Most Comprehensive Day 1 Product Offering

- CDX IG, HVOL, HY and XO Indices
  - 3, 5, 7 and 10 year tenors
  - Current and Previous 3 off-the-run series
- iTraxx Europe, HVOL and XO
  - 3, 5, 7 and 10 year tenors
  - Current and Previous 3 off-the-run series
- iTraxx Financial Senior and Financial Subordinate
  - 5 and 10 year tenors
  - Current and Previous 3 off-the-run series
- Single name constituents of CDX and iTraxx indices (over 500 ref. entities)
  - Standardized fixed coupons of 100 bps and 500 bps so that the risk profiles of the cleared contract match those of existing OTC contracts
  - Quarterly maturities up to 10 years
- Forthcoming product offerings (e.g. sovereigns, tranches, additional indexes, additional single names) will:
  - Be based on recommendations of CMDX Product Advisory Board
  - Maintain prudent risk management requirements

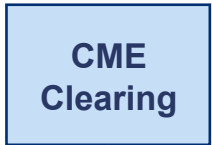
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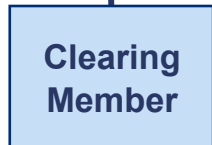
# Risk Management – Default Provisions

**CME Clearing will facilitate an orderly liquidation and protect its clearing members in the event of a clearing member default**

## Pre-Default Position



- Transparent daily margining
- Multilateral position netting
- Financial safeguards
- Required disclosure of position related information

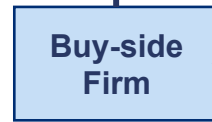
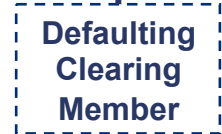
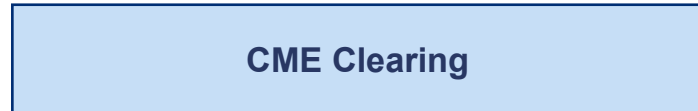


- Access to CME Clearing
- Collects margin, processes mark to market from clients in accordance with CME Clearing policies & other regulatory requirements
- Customer margin held in segregated account



- Collateral protected through segregated accounts
- Positions protected under clearing member default
- Margins calculated on net portfolio basis

## Event of a Clearing Member Default



### Defaulting members positions

- Market access restricted
- Collateral captured
- Portfolios smoothly liquidated, in part due to liquidity on the trading facility

### Customer protection

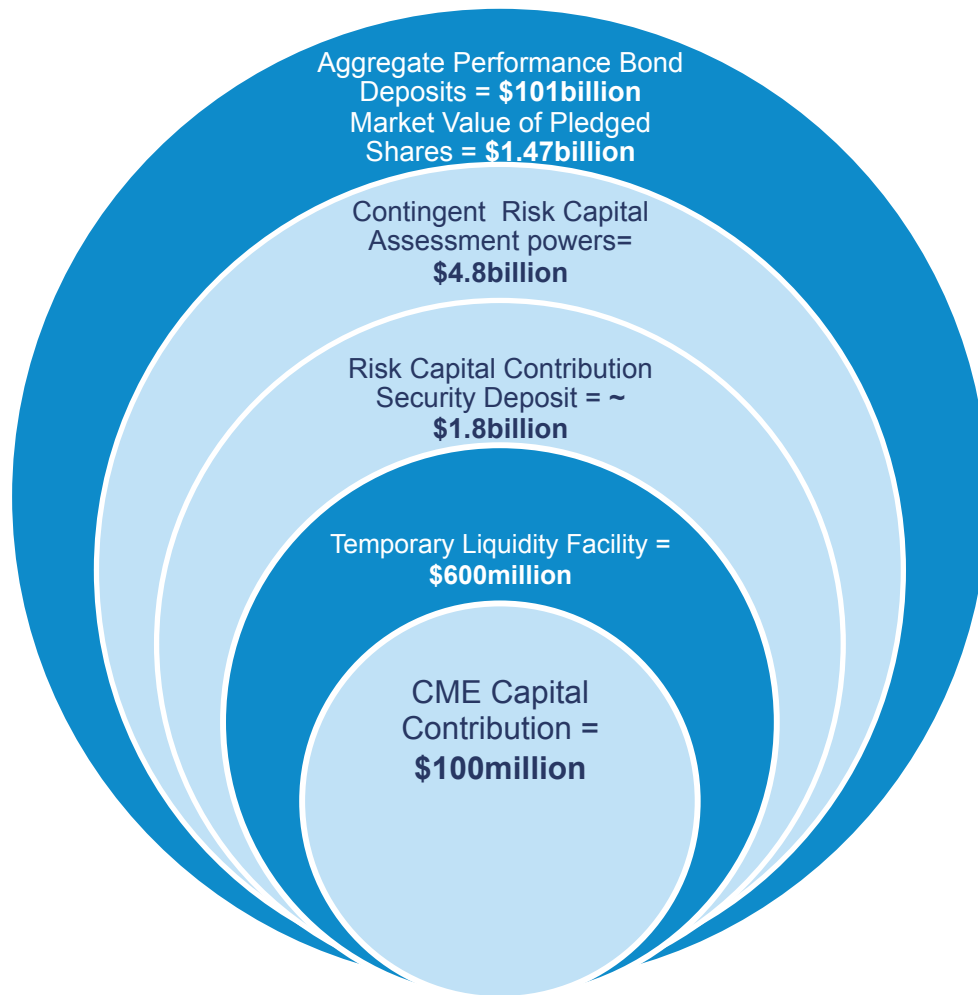
- Collateral held in segregated account
- Positions maintained and moved to a new clearing member

For more information on Financial Safeguards, please visit <http://www.cmegroup.com/clearing/files/financialsafeguards.pdf>

# Risk Management – Financial Safeguards

## CME Group's Aggregate Financial Resources are Over \$100B Including \$~7B Guaranty Fund

- Full support of CME Group's financial safeguards will be extended to CDS products
- Financial safeguards are designed to anticipate potential market exposures and ensure sufficient resources are available to cover future obligations
- Adequacy of financial safeguards package is reviewed monthly by the Risk Committee
- Financial safeguards are set based on ability to cover at least the largest potential net debtor, accounting for collateral damage
- Wide variety of accepted security deposit collateral, including:
  - Cash (USD)
  - US Treasuries
  - CME-approved money market mutual funds



**Total Guaranty Fund: ~\$7B**

**Total Collateral: >\$100B**

**CME Group**  
A CME/Chicago Board of Trade/NYMEX Company

Note: Financial Safeguards funding reported as of December 31, 2008

# Risk Management Overview

## *Innovative Multi-Factor Margin Methodology*

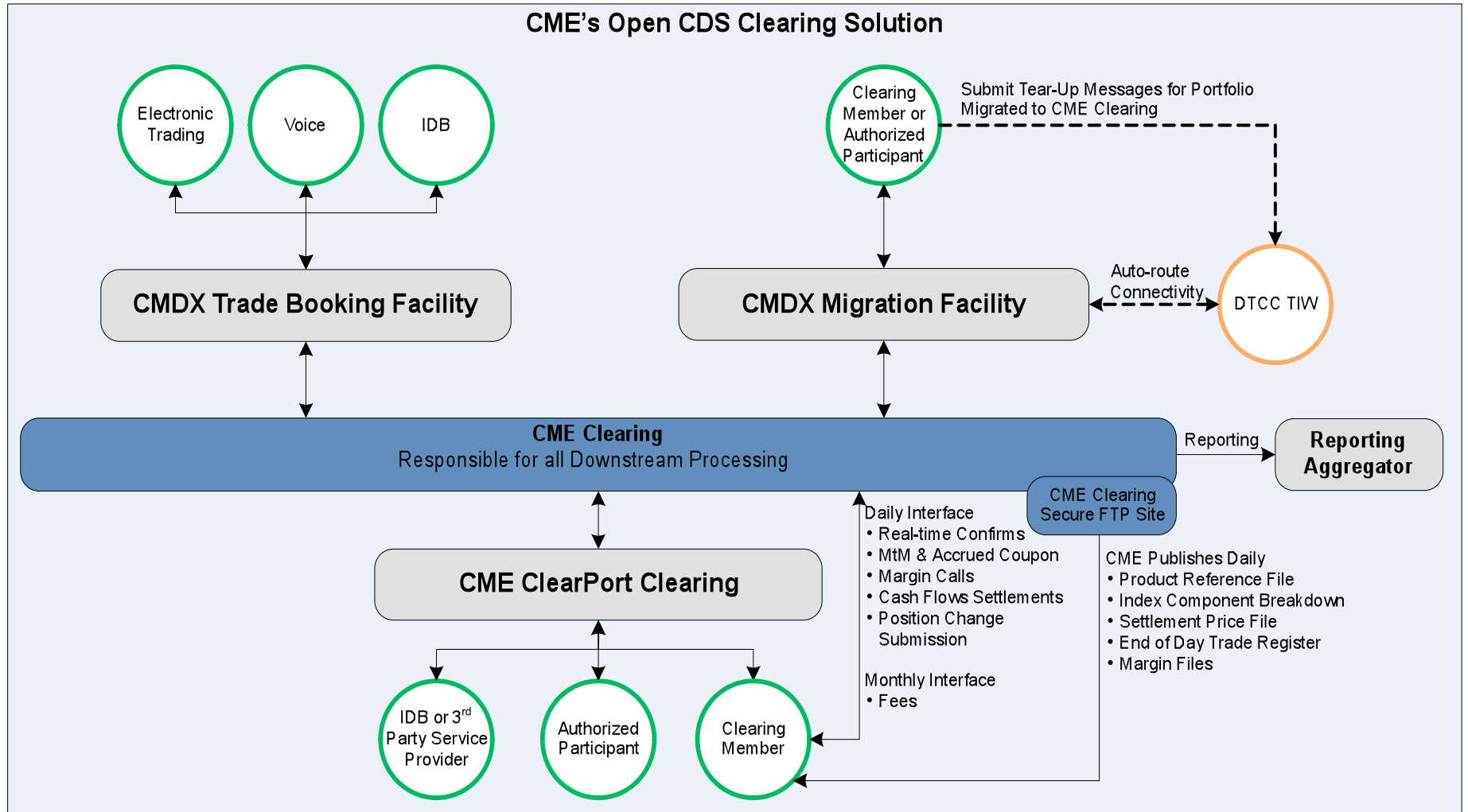
- CME Clearing's multi-factor portfolio margining model is designed to efficiently and transparently assess the risk of CDS portfolios
  - Macro-economic credit risks: systematic, curve, and spread convergence/divergence risk
  - Sector-level risk
  - Idiosyncratic risk
  - Liquidity risk
  - Basis risk
  
- Total portfolio margin:
  - Sum of the margins required to cover individual shocks to each of the seven risk factors (and subject to a minimum total portfolio margin requirement)
  - Completely replicable by participants
  
- Margin regime has been thoroughly tested on portfolios of different sizes/compositions
  - Results are robust, providing coverage even in the most volatile periods of 2008
  - Validated on real life portfolio tests (including toxic ones) for both dealers and buy-side participants

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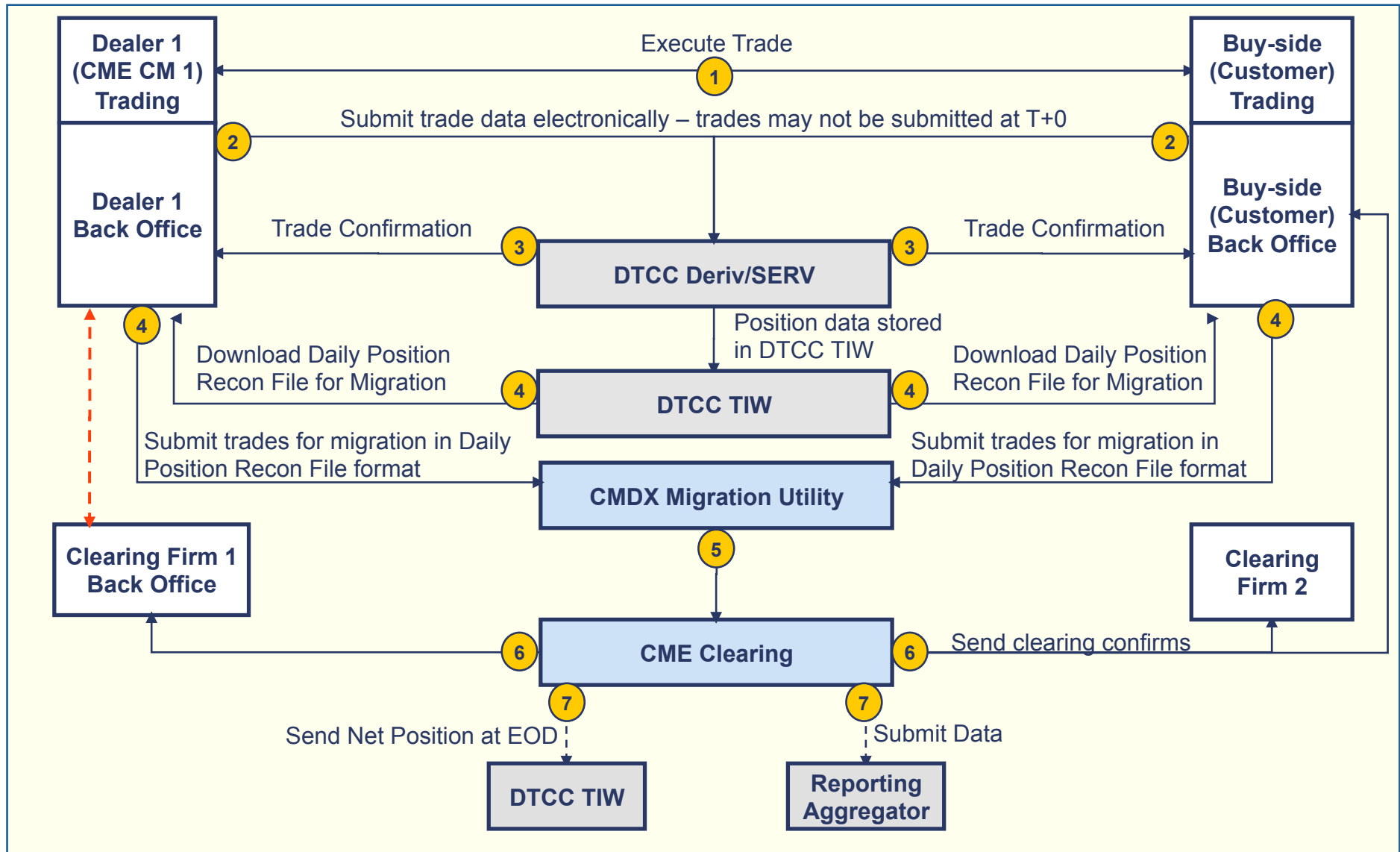
# CME Clearing's Open Clearing CDS Architecture

## Industry Framework for Managing CDS



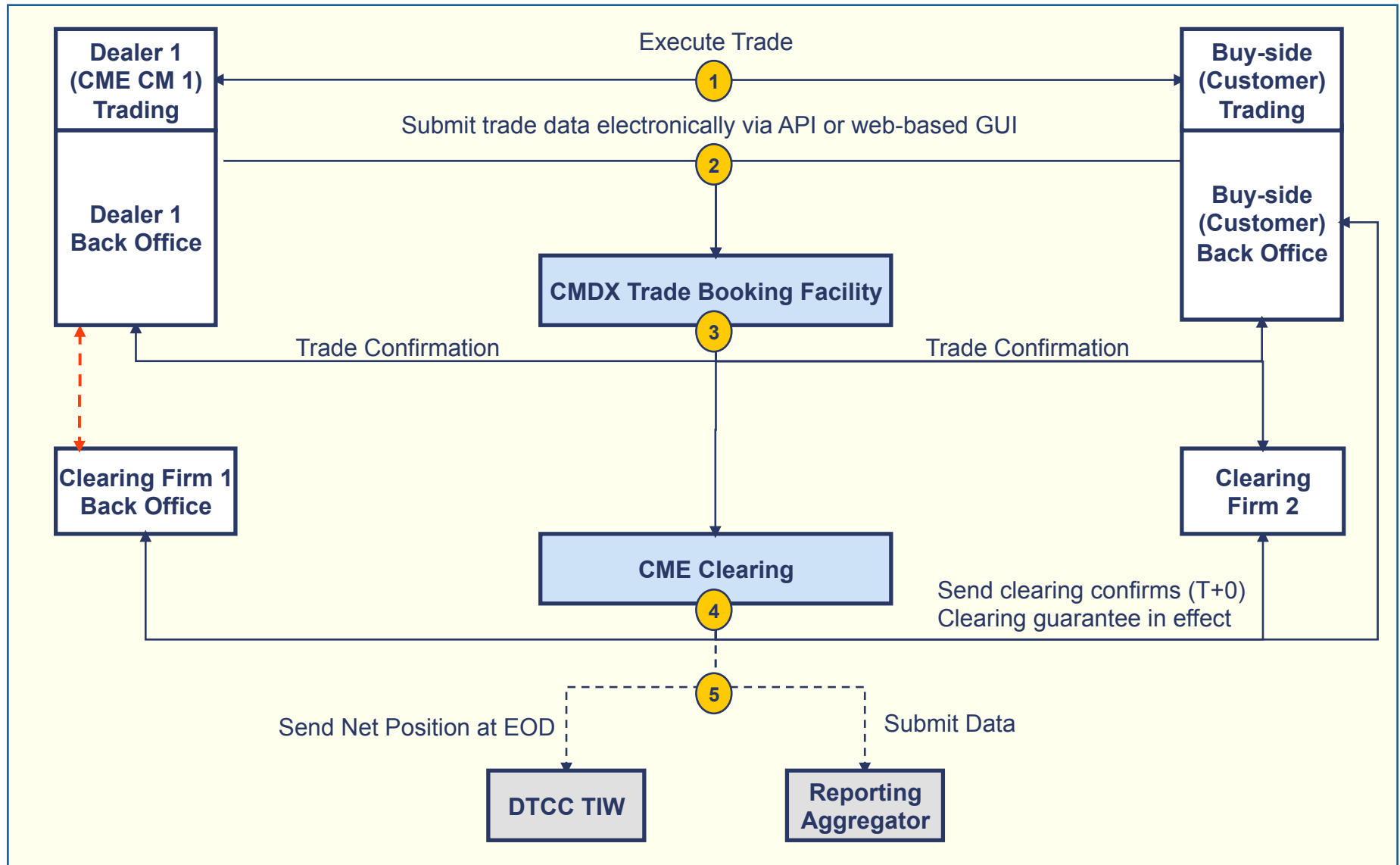
# Trade Processing

## Capture Trades Post DTCC TIW Confirmation



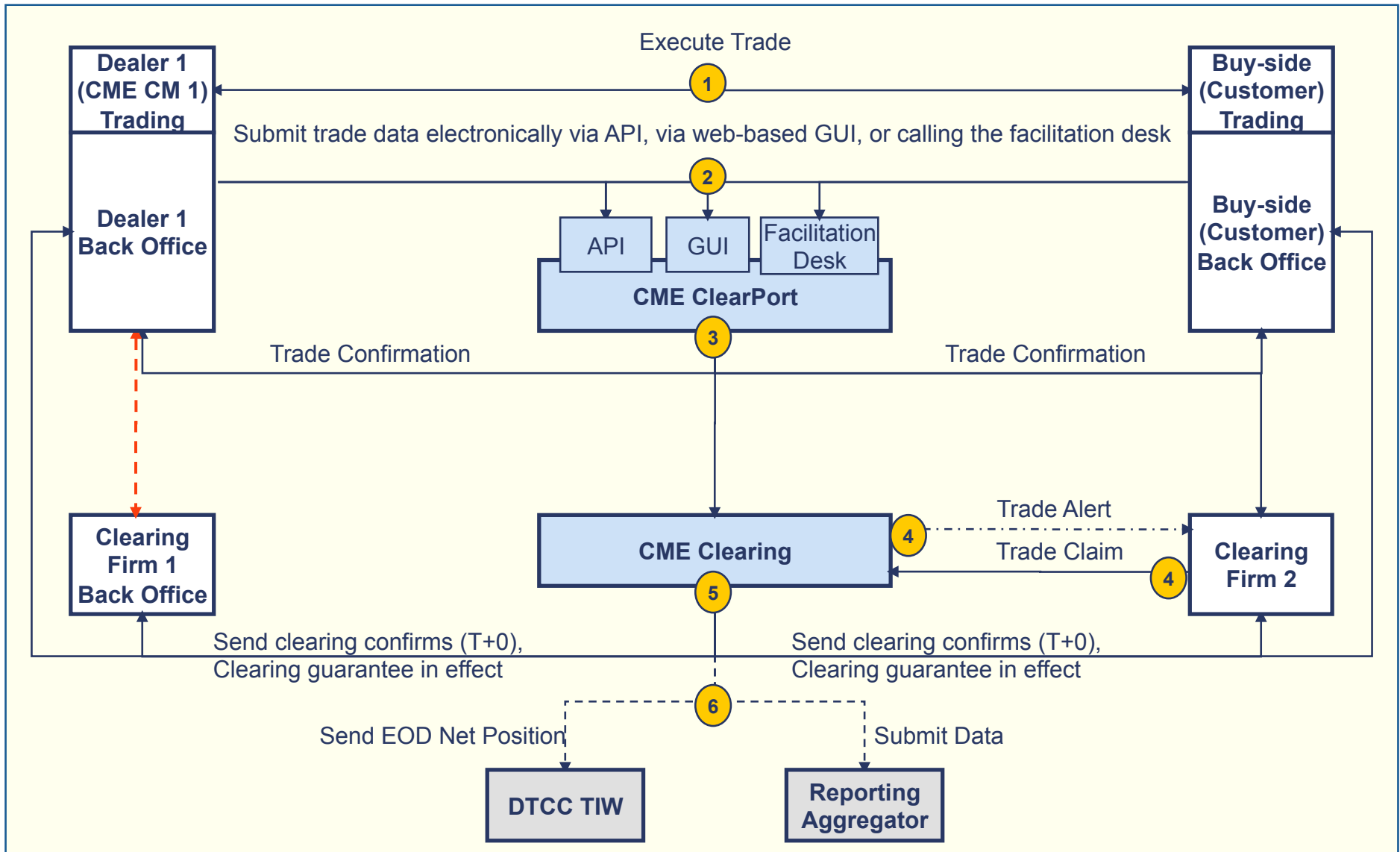
# Trade Processing

## Capture Trades Directly through CMDX Trade Booking Facility



# Trade Processing

## Capture Trades through CME ClearPort



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# Open Credit Default Swaps Clearing Solution

*Security. Neutrality. Transparency.*

Kim Taylor, CME Clearing

FIA OpTech

April 7, 2009

# Day 1 Product Offering

## Overview of Contract Comparison

|   | Bilateral Contracts Today  | Bilateral Contracts after April 2009*  | CME Cleared Contracts   |
|---|--|--|---|
| Credit event determination                              | <ul style="list-style-type: none"> <li>• Either counterparty can submit credit event notice</li> <li>• Notices handled on bilateral basis</li> </ul>   | <ul style="list-style-type: none"> <li>• ISDA will hardwire credit event determinations</li> </ul>   | <ul style="list-style-type: none"> <li>• Will adhere to ISDA determinations</li> </ul>                        |
| Cash settlement for non-Restructuring credit events     | <ul style="list-style-type: none"> <li>• Settlement process is bilateral</li> <li>• Market participants typically adhere to ISDA auction protocol and settle based on auction final price</li> </ul> | <ul style="list-style-type: none"> <li>• Cash settlement hardwired based on ISDA auction</li> </ul>  | <ul style="list-style-type: none"> <li>• Will adhere to ISDA cash settlement processes</li> </ul>             |
| Physical settlement for non-restructuring credit events | <ul style="list-style-type: none"> <li>• Settlement process is bilateral</li> <li>• Market participants typically adhere to ISDA auction protocol and settle based on auction final price</li> </ul> | <ul style="list-style-type: none"> <li>• ISDA auction protocol hardwired into contracts</li> <li>• Participants will have right to take part in the auction</li> </ul> | <ul style="list-style-type: none"> <li>• Physical settlement is an option through the ISDA auction</li> </ul> |

\* Expected date for ISDA amendment incorporating the ISDA Credit Derivatives Determination Committee

# Day 1 Product Offering cont'd

## Overview of Contract Comparison

|                                | Bilateral Contracts Today  | Bilateral Contracts after April 2009*  | CME Cleared Contracts  |
|--------------------------------|--|--|--|
| Succession event determination | <ul style="list-style-type: none"> <li>Determined bilaterally; however counterparties generally adhere to advise of ISDA and market</li> </ul> | <ul style="list-style-type: none"> <li>ISDA will hardwire Succession event determinations</li> </ul> | <ul style="list-style-type: none"> <li>Will adhere to ISDA determinations</li> </ul> |
| Calculation agent              | <ul style="list-style-type: none"> <li>Bilaterally agreed upon</li> </ul>  | <ul style="list-style-type: none"> <li>Bilaterally agreed upon</li> </ul>                            | <ul style="list-style-type: none"> <li>CME Clearing</li> </ul>                       |

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# Risk Management – Requirements

CME Clearing's CDS solution is open to all qualifying market participants

## ***Clearing Member Participation Requirements***

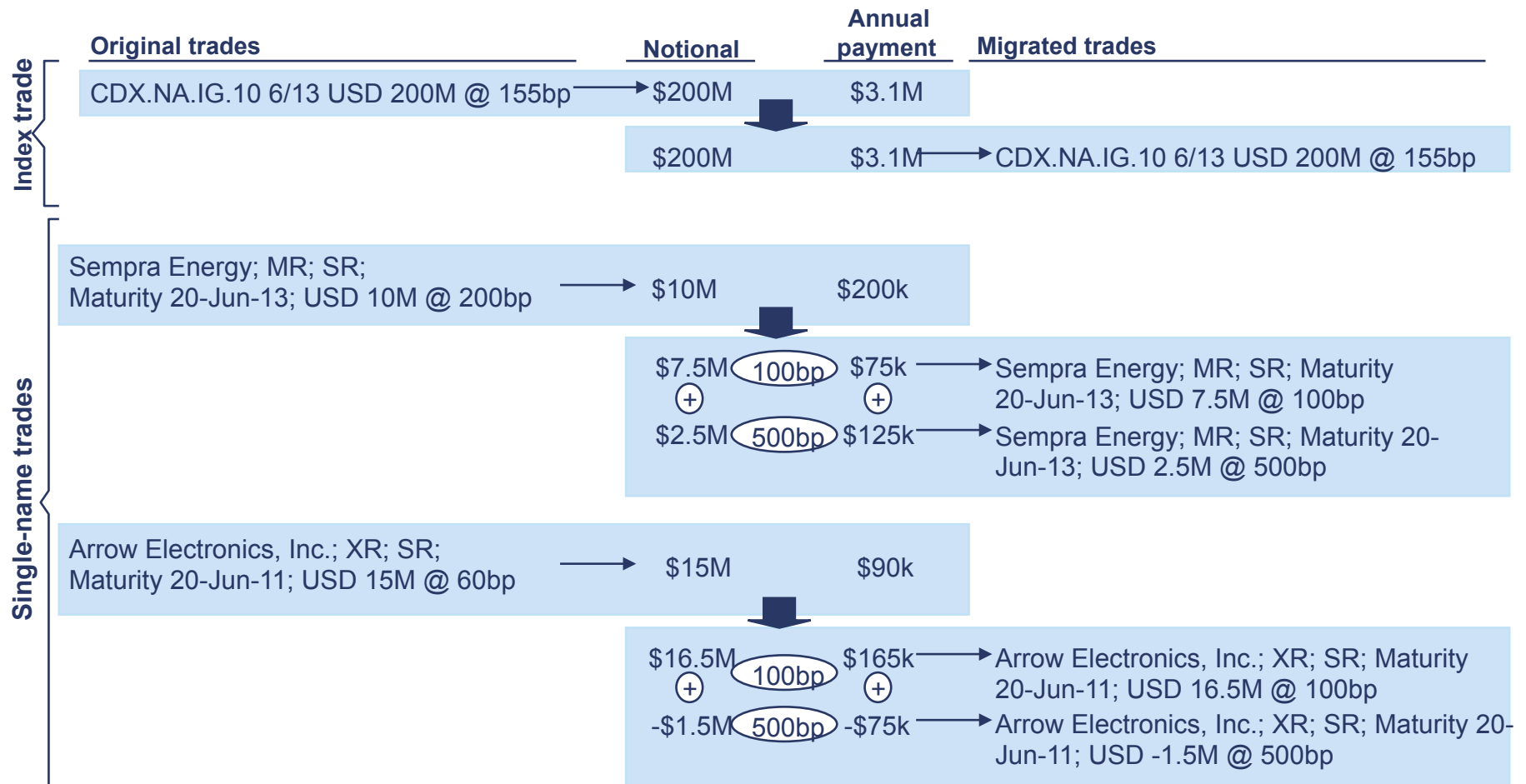
- Clearing member directly faces CME Clearing in each transaction
- Minimum Adjusted Net Capital (ANC) of \$300M
- One time minimum membership requirement deposit of \$5M
- Security deposit requirement of \$5M plus *additional* amount  $\geq$  \$2M to reflect CDS book of business
- Verification of existing business, financial, and operational capabilities to support CDS market activity as well as CDS clearing member requirements

## ***Non-Clearing Member Participation Requirements***

- Non-clearing members directly face CME Clearing in each transaction through their clearing member
- Minimum tier one capital/ANC of \$300M
- Minimum membership requirement deposit of \$5M
- Additional security deposit  $\leq$  \$7M
- Verification of existing business and operational capabilities to meet CDS clearing member requirements
- Transactions, collateral recorded at the customer account level
  - Held in customer segregated performance bond account at the clearing member firm as well as CME Clearing

# Trade Processing

## Migration Examples For Index and Single Name Contracts



# Trade Processing

## Three Sources for Intraday and End-of-Day Settlement Prices

### **Executed Prices**

- Captured for all trades cleared with us on a particular day, regardless of where trade was executed

### **Quoted Prices**

- **Founding Member Quotes.** Dealer and buy-side CMDX Founding Members required to submit price levels for full term structures for all indices and single-name reference entities
- **Dealer Quotes.** CMA aggregates price levels submitted by dealers to 30 to 40 buy-side consortium firms
  - About ~100,000 anonymous aggregations throughout day
- **Price Auction Quotes.** For small selected group of highly illiquid credits, dealer and buy-side CMDX Founding Members may be required to participate in interactive price auction protocol on regular basis

### **Position Marks**

- Aggregated marks from dealer's books and records are obtained through third party data providers

# Post Trade Servicing

## Event Management

### Overview

- Adhere to ISDA credit event and succession event determinations
- Cash settled at the final price from relevant ISDA auction
- Provide contract holders with option to access relevant ISDA auction for physical settlement in a manner consistent with today's OTC market
- If ISDA does not conduct auction, the CME Determinations Board will make its best effort to allow for both cash and physical settlement

### Credit Events

- Will publish clearing advisory notice outlining our credit event processing
- Open positions will be collapsed into single "delivery contract," and any net coupon obligations through the date of the credit event will be paid/collected
- New version of index will be created with Markit
- Positions held in index contract(s) containing affected names will be transferred to new version of the index
- Trading in post credit event contract will be allowed during the period following the declaration of a credit event up to the day of the auction

### Succession Events

- Will modify RED code, legal name in contract definition for a simple rename of reference entity
- Will transfer positions in original entity into positions in each of the two successor entities on 50-50 notional basis for 50-50 split of a reference entity