

# Open Credit Default Swaps Clearing Solution OMG Presentation

*Security, Neutrality, and Transparency*

March 2009

# Agenda

- Overview
- Product Offering
- Risk Management
- Architecture
  - Trade Processing
  - Post Trade Servicing

# Overview

## *CME Clearing and CMDX Align to Industry Commitments by Delivering a Strategic Vision Forward*

- The industry policymakers and regulators are focused on:
  - Infrastructure improvements
  - Resiliency enhancements for OTC derivative markets
  
- The Presidents Working Group on Financial Markets (PWG) wants the industry to support OTC derivatives.
  
- Industry policy groups, such as Counterparty Risk Management Policy Group III (CRMPG III) have also issued recommendations reinforcing some of the proposals set out by the PWG. In its March Policy Statement on Financial Market Developments, the PWG made several recommendations, including:
  - The development of “a longer-term plan for an integrated operational infrastructure supporting OTC derivatives”

Together, these recommendations form the core of the longer term plan that the OMG has been working toward in the last year.

# Overview

## *CME Clearing and CMDX Align to Industry Commitments by Delivering a Strategic Vision Forward*

	<u>Definition/Criteria</u>	<u>CME Clearing/CMDX</u>
Central Counterparty Clearing	<ul style="list-style-type: none"><li>• Global use of central counterparty processing and clearing to significantly reduce counterparty credit risk and outstanding net notional positions</li></ul>	✓ <b>Operationally ready</b>
Portfolio Compression	<ul style="list-style-type: none"><li>• Continued elimination of economically redundant trades through trade compression</li></ul>	✓ <b>Operationally ready</b>
Electronic Processing	<ul style="list-style-type: none"><li>• Electronic processing of eligible trades to enhance T+0 confirmation issuance and execution</li></ul>	✓ <b>Operationally ready</b>
Elimination of Material Confirmation Backlogs	<ul style="list-style-type: none"><li>• Elimination of material confirmation backlogs</li></ul>	✓ <b>Operationally ready</b>
Life Cycle Event Processing	<ul style="list-style-type: none"><li>• Streamlined trade life cycle management to process events (e.g. Credit Events, Succession Events) between upstream trading and confirmation platforms and downstream settlement and clearing systems</li></ul>	✓ <b>Operationally ready</b>
Risk Mitigation Through Affirmation	<ul style="list-style-type: none"><li>• Risk mitigation for paper trades</li></ul>	✓ <b>Operationally ready</b>
Central Cash Flow Settlement	<ul style="list-style-type: none"><li>• Central settlement for eligible transactions to reduce manual payment processing and reconciliation</li></ul>	✓ <b>Operationally ready</b>

# Overview

## *CME Clearing and CMDX Open Clearing CDS Solution*

- Streamlines processing, centralizes market information and reduces operational risk by:
  - Processing trades real-time, throughout the day, every day
  - Confirming trade events as close as possible to the point of trade execution
  - Daily compression of portfolios
  - Managing the full trade lifecycle
  - Using straight-through-processing and industry standard protocols
- Approach to legal and regulatory treatment of CDS products follows a well-established construct, taking into account the interests of all market participants, and including a time tested customer segregation regime
- Standardized contract terms that are consistent with ISDA OTC templates, adhere to the determinations made by ISDA, and ensure submission to the ISDA auction process
- Daily migrations of legacy contracts whether held in the DTCC TIW or an existing paper trade
- Transparent and replicable multi-factor portfolio margining model

# Overview

## *Collaboration with Regulatory Authorities and Industry Organizations*

- Received a special exemption from the U.S. Securities and Exchange Commission (“SEC”) for CDS through CME Clearing and the CMDX platform
- Completed regulatory risk management reviews with the Federal Reserve Bank of New York, the Securities and Exchange Commission, and the Commodity Futures Trading Commission (“CFTC”)
- CME Risk Committee, CME Clearing’s governance body comprised primarily of clearing member representatives, approved the inclusion of cleared CDS in the combined guaranty fund.
- Executed agreements with Markit to license Markit’s industry-leading credit default swap indices and its 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 Credit Default Swaps (“CDSs”) to be held in Section 4d segregated customer accounts

# 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 the CDX and iTraxx indices (over 500 reference 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 the CMDX Product Advisory Board

# 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 settles based on auction final price</li> </ul>	<ul style="list-style-type: none"> <li>• Cash settlement will be 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 settles based on auction final price</li> </ul>	<ul style="list-style-type: none"> <li>• ISDA auction protocol will be 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>
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>

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

# Day 1 Product Offering

## Detailed Contract Comparison

Index

Single Names

### Bilateral Contracts Today

### Bilateral Contracts after April 2009\*

### CME Cleared Contracts

	Bilateral Contracts Today	Bilateral Contracts after April 2009*	CME Cleared Contracts
Settlement under restructuring credit event	<ul style="list-style-type: none"> <li>Bilaterally agreed upon</li> <li>However ISDA may choose to issue protocol for restructuring credit events and bilateral counterparties would have right but not obligation to adhere</li> </ul>		<ul style="list-style-type: none"> <li>Will adhere to ISDA settlement process if available</li> <li>Otherwise, CME Determination Board will issue settlement process</li> </ul>
Deliverables under restructuring credit event	<ul style="list-style-type: none"> <li>Acceptable deliverables depend on whether the credit event notice is issued by the buyer or seller of protection</li> <li>If buyer of protection issues notice, they may be subject to certain deliverable restrictions</li> <li>If seller of protection issues notice, no deliverable restrictions</li> </ul>		<ul style="list-style-type: none"> <li>If ISDA determines deliverable obligations for a restructuring credit event, CME will adhere to those determinations</li> <li>If ISDA does not, then the deliverable obligations will be determined by the CME Determinations Board</li> </ul>
Restructuring as a credit event	<ul style="list-style-type: none"> <li>Accept modified restructuring as a credit event</li> </ul>	<ul style="list-style-type: none"> <li>The default for NA single names is no restructuring</li> <li>However, bilateral counterparties can choose to include restructuring</li> </ul>	<ul style="list-style-type: none"> <li>Will accept both restructuring types, subject to participant demand and availability of pricing</li> </ul>
Effective date	<ul style="list-style-type: none"> <li>As agreed to by the bilateral counterparties</li> <li>This is commonly the trade date or the day after the trade date</li> </ul>	<ul style="list-style-type: none"> <li>The effective date will be 60 calendar days prior to the current date, on a rolling forward basis</li> </ul>	
Coupon accruals	<ul style="list-style-type: none"> <li>Accrual starts from the day after the trade date</li> </ul>	<ul style="list-style-type: none"> <li>Accrual starts from last quarterly payment date</li> </ul>	
Coupons	<ul style="list-style-type: none"> <li>Current market does not use fixed coupons</li> </ul>	<ul style="list-style-type: none"> <li>Contracts will be based on 100 bps and 500 bps coupons</li> </ul>	

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

# Risk Management Overview

## *Participant Requirements*

### **CME Clearing's CDS Solution is Open to All 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***

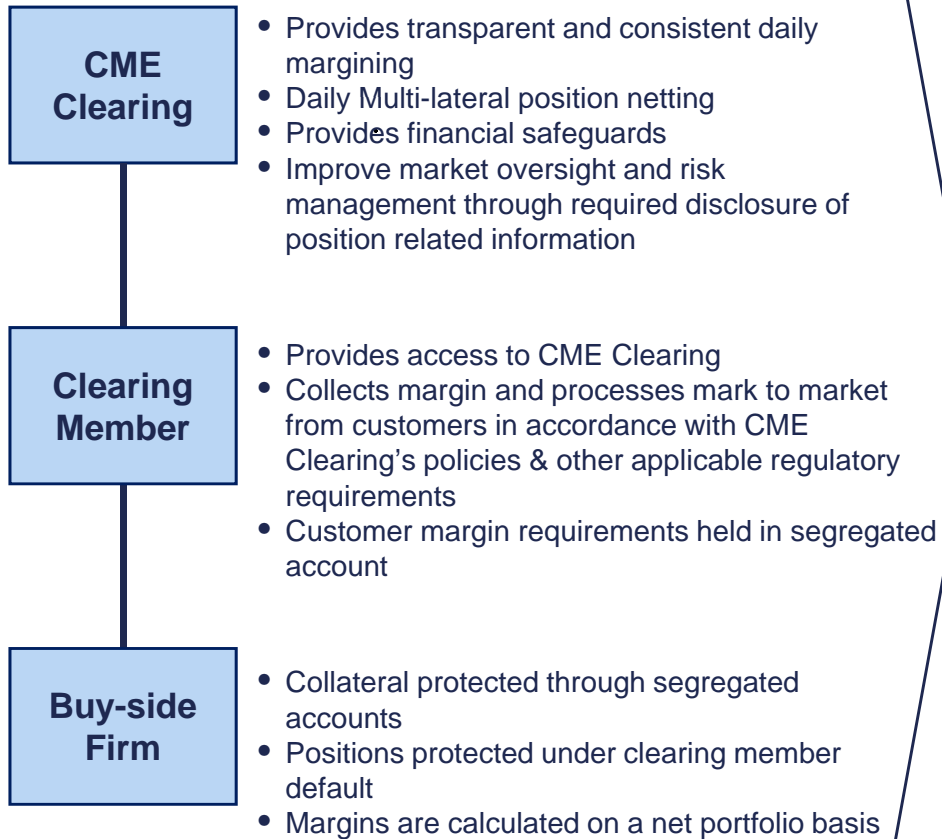
- Non Clearing Members directly face CME Clearing in each transaction through their relationship with a Clearing Member
- Transactions and Collateral are recorded at the customer account level, and held in a customer segregated performance bond account at the Clearing Member firm as well as CME Clearing

# Risk Management Overview

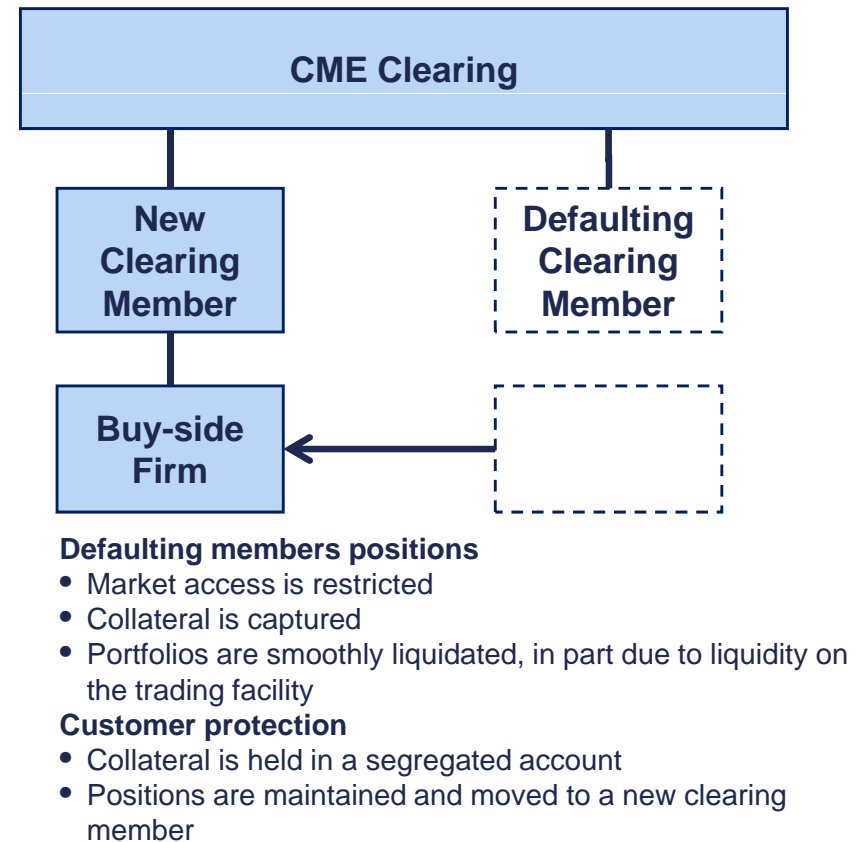
## Default Management

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

### Pre-Default Position



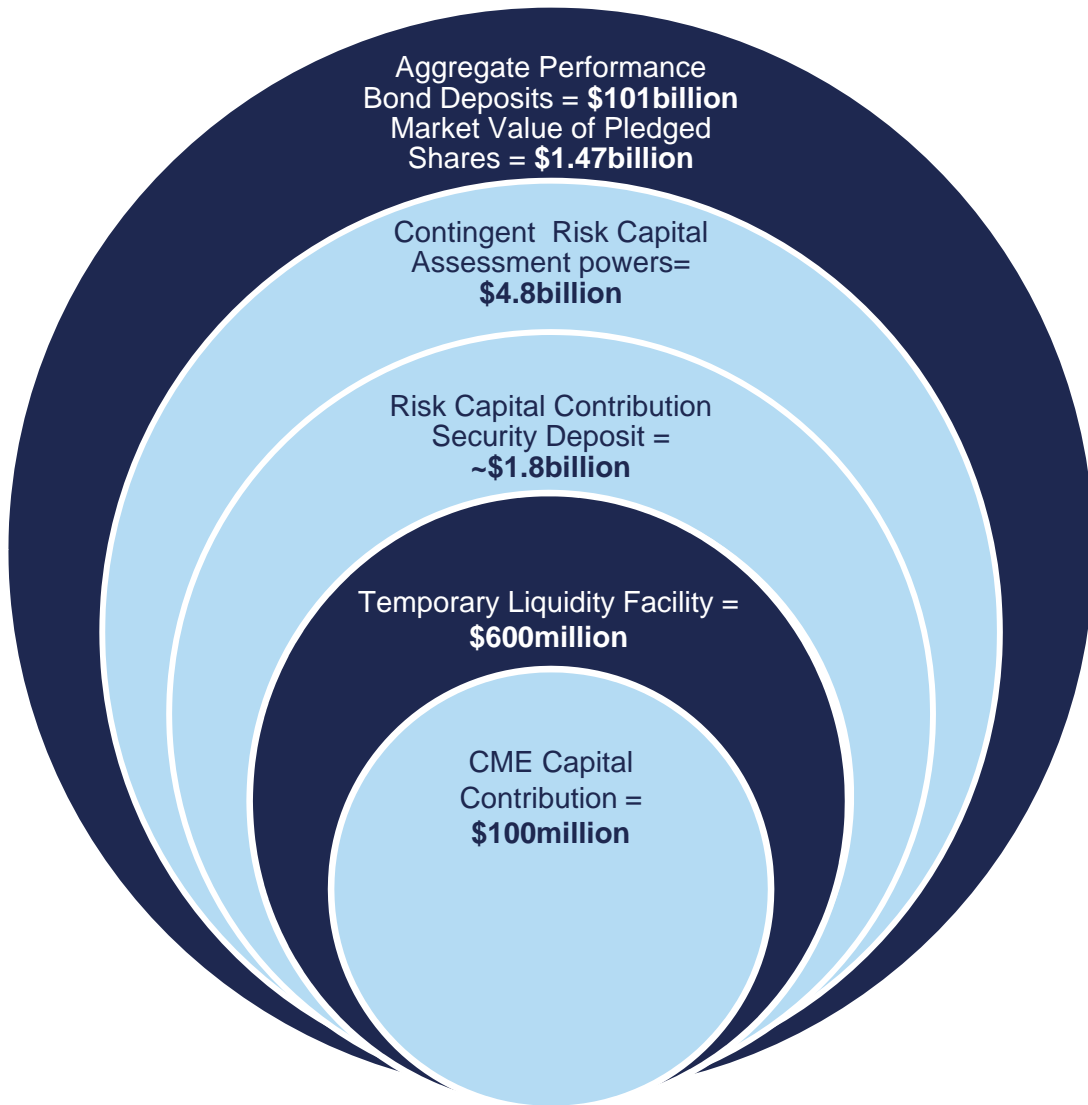
### Event of a Clearing Member Default



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

# Risk Management Overview

## Financial Safeguards Package



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

- Full Support of CME Group's Financial Safeguards Package is Being 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

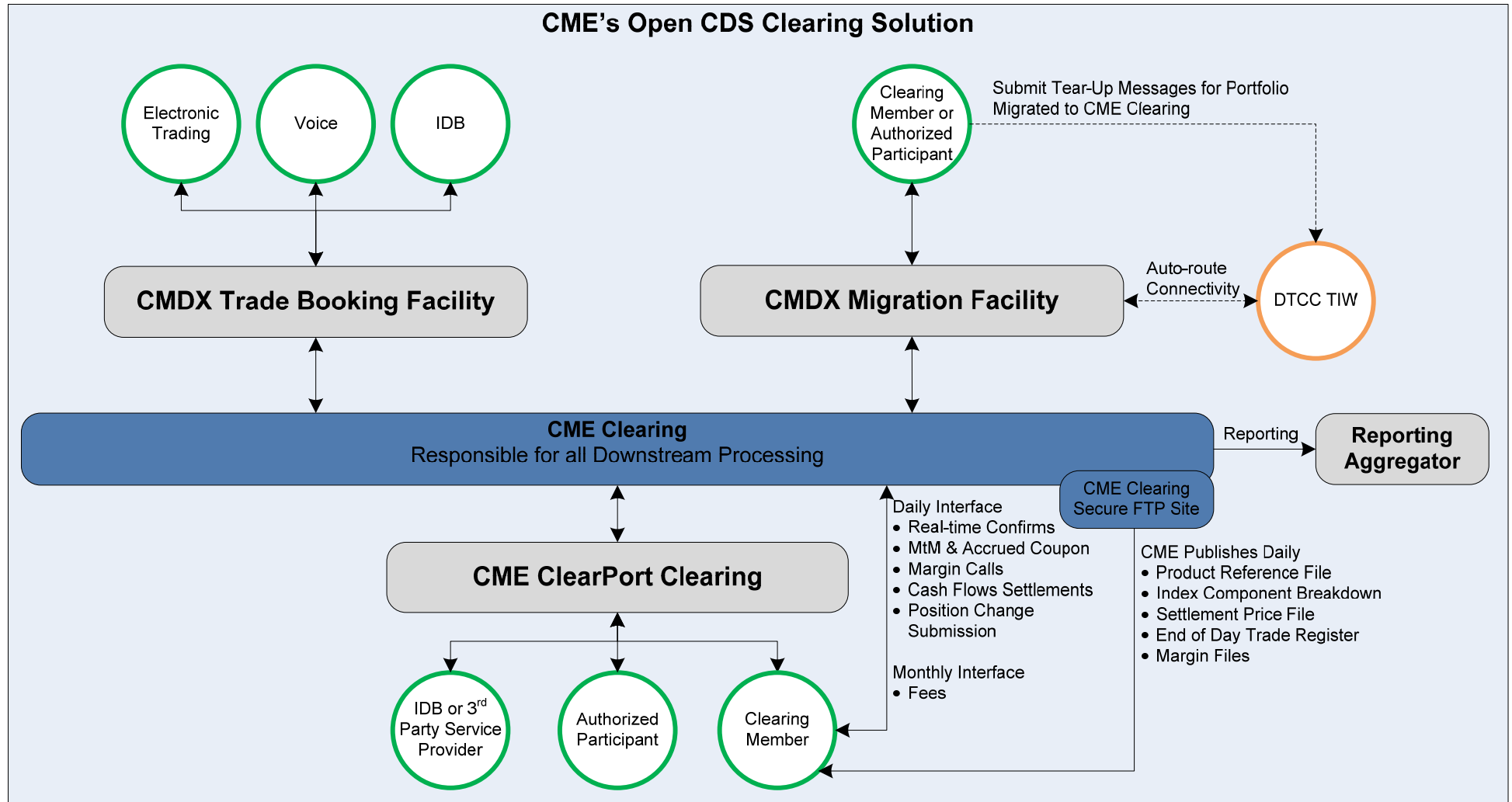
# Risk Management Overview

## *Innovative Multi-Factor Margin Methodology*

- CME Clearing will utilize a multi-factor risk model to gauge forward looking risk coverage for price, liquidity, and “jump to default” risk
- CME Clearing’s multi-factor portfolio margining model is designed to efficiently and transparently assess the risk of CDS portfolios
- For the margining of the CDS instruments, the Performance Bond will address seven risk factors
  - Macro-economic credit risks: systematic, curve, and spread convergence/divergence risk
  - Sector-level risk
  - Idiosyncratic risk
  - Liquidity risk
  - Basis risk
- The total portfolio margin equals the sum of the margins required to cover individual shocks to each of the seven risk factors (and is subject to a minimum total portfolio margin requirement), and is completely replicable by participants
- The margin regime has been thoroughly back tested on portfolios of different sizes and compositions; the results are robust, providing coverage even in the most volatile periods of 2008
- More than fifty real life portfolios have been processed through hypothetical margin scenarios for both dealers and buy-side participants

# CME Clearing's Open Clearing CDS Architecture

## Industry Framework for Managing CDS

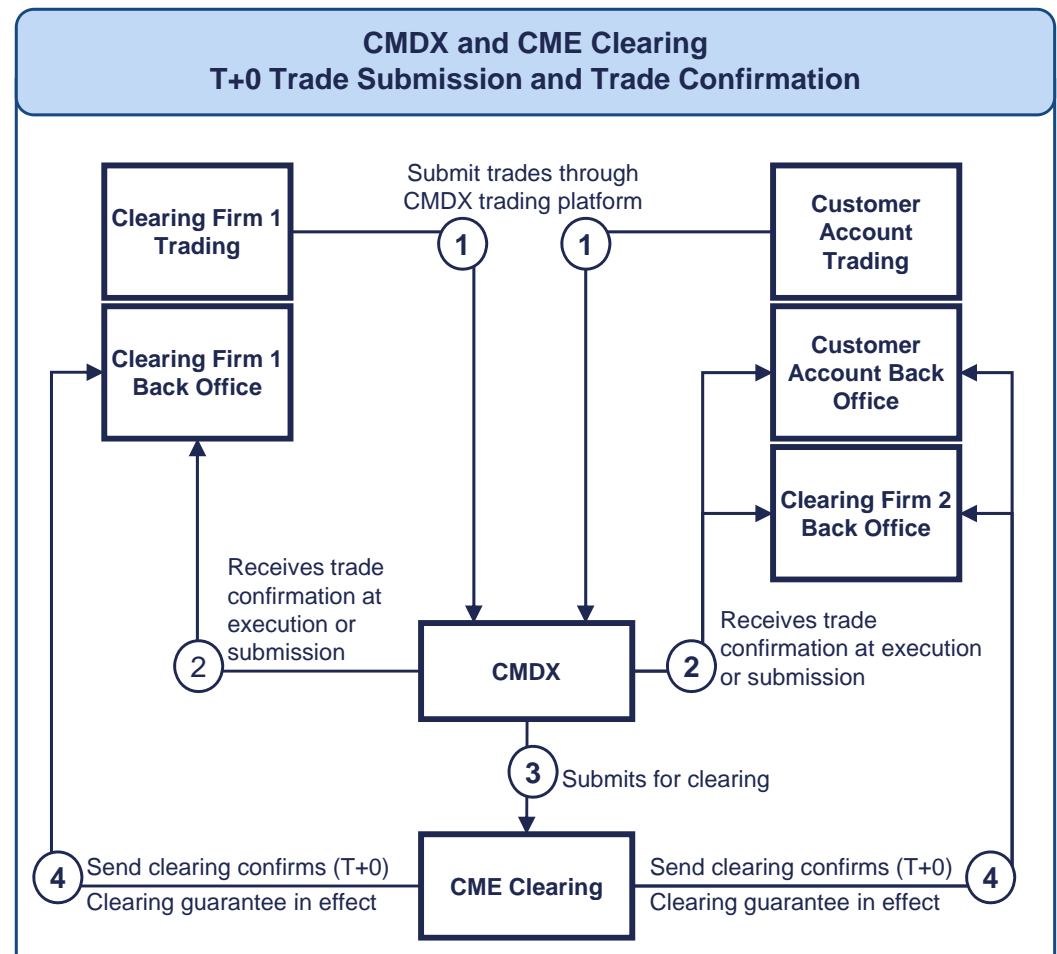


# Trade Processing

## Trade Capture and Confirmation

### Immediate and Efficient Processing of Trades

- Participants may negotiate, execute, and book trades over multiple venues, and submit these trades to CME Clearing
- Trades are processed real-time, there is never any “batching”
- Matched trades are confirmed at the time of execution or submission
  - Electronic Trade Submission through CMDX RFQ or API connectivity
  - Manual Trade Submission through the Trade Booking Facility or Front End Clearing (“FEC”)
- Trade Submission through CMDX includes Pre-Clearing Credit checks based on limits established by the Clearing Member for the Trading Party

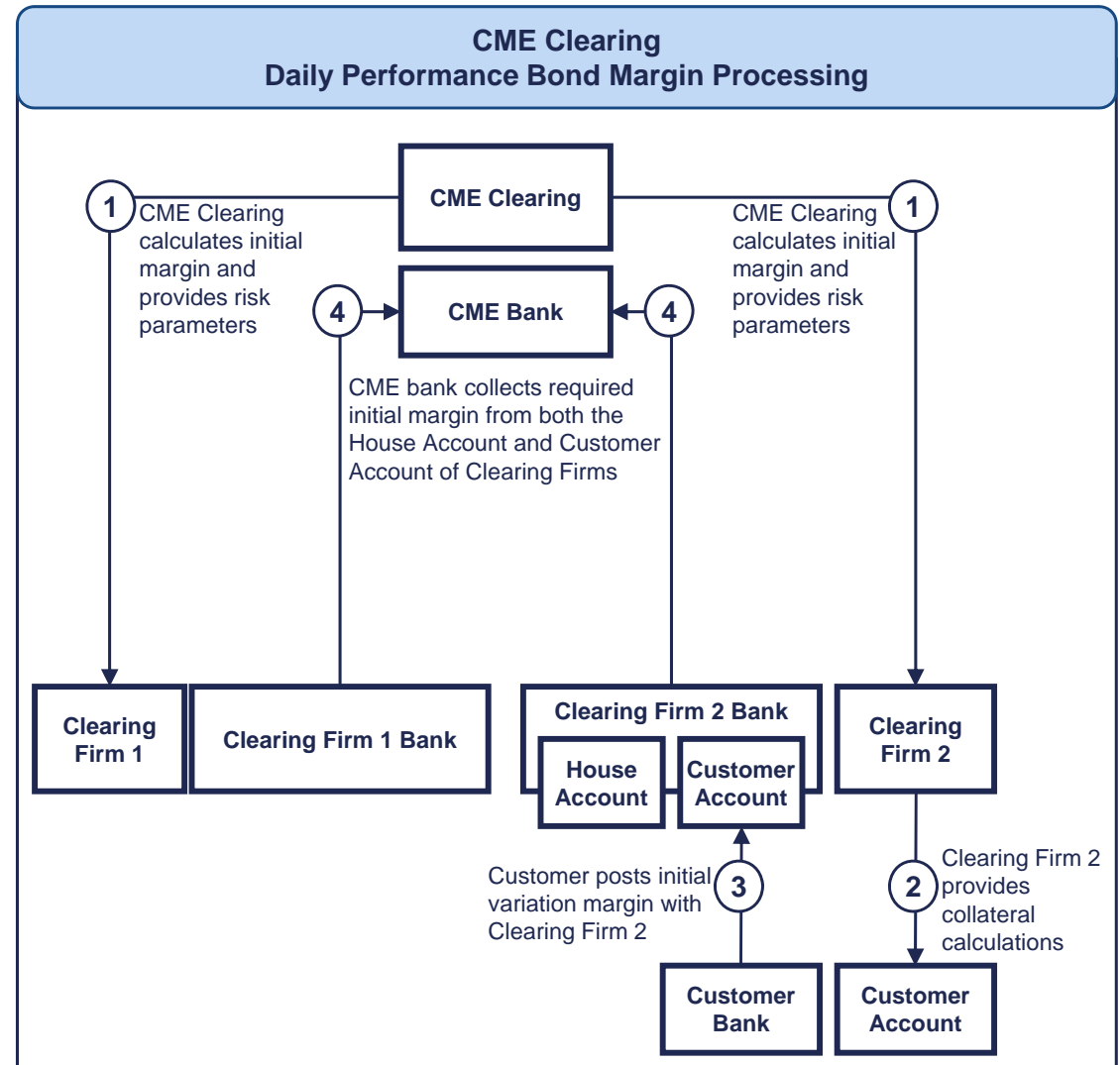


# Trade Processing

## Settlement of Initial Margin

### Robust Risk Management Regimes

- Transparent and replicable margin methodology
- Applies a uniform margining methodology across all clearing firms
- CME Clearing has the capability to pull and post initial margin on a twice-daily basis
- Initial margin may be posted as cash or other eligible securities with CME Clearing
- Settlement is separate from the mark-to-market and net coupon accrual cash flow payment

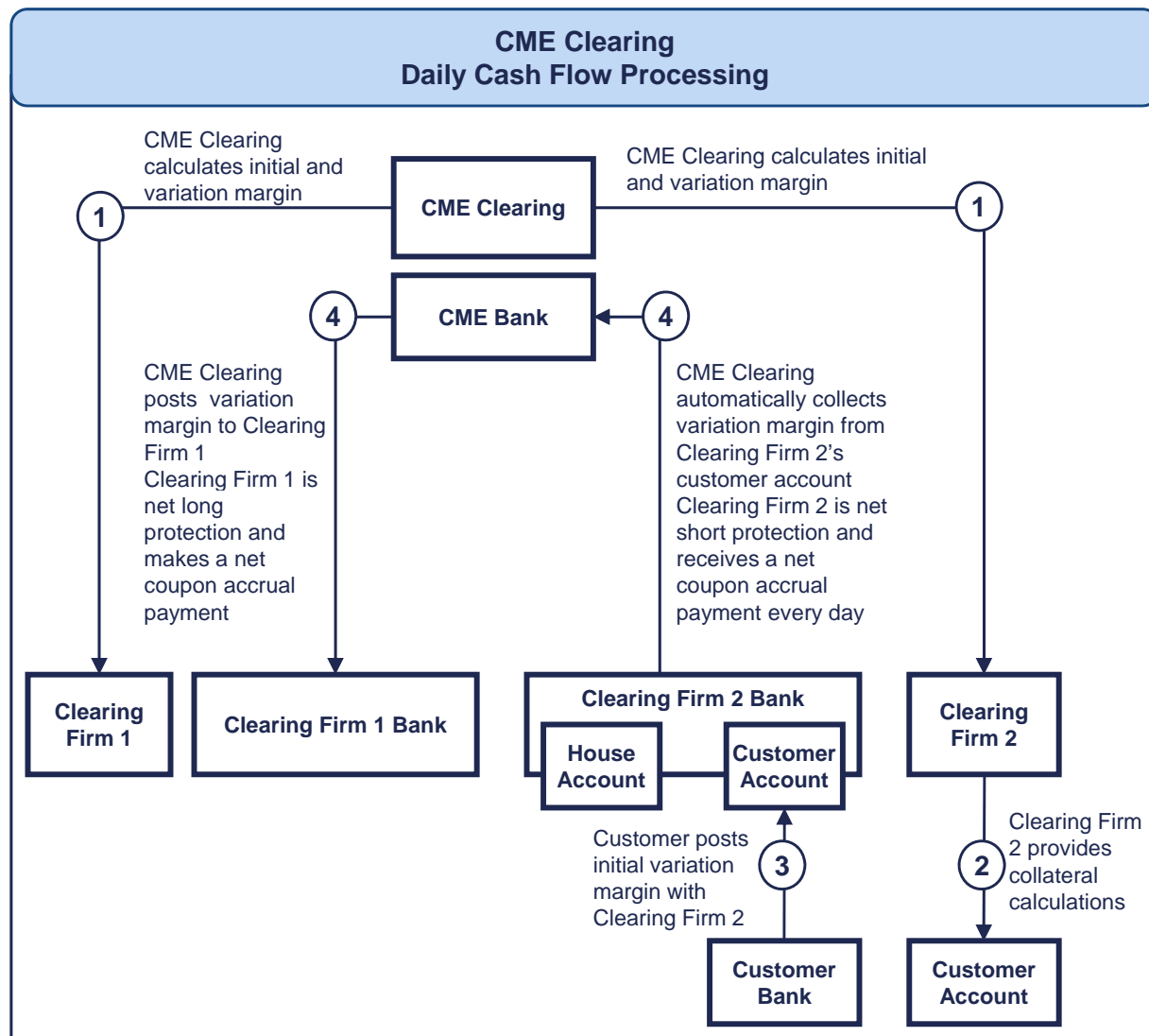


# Trade Processing

## Settlement of Variation Margin, Accrued Coupon, and Upfront Payments

### Centralized Settlement of Cash Flows

- Cash flow settlements through CME Clearing eliminate settlement breaks where payments are not made to the right party on the due date
- Cash flows for variation margin, net coupon accrual, and upfront payments are netted as a single payment and automatically settled with clearing firm banks
- CME Clearing supports both intraday and end of day settlement cycles
- Cash settlement is done with a single counterparty, reducing the need to manage events across multiple counterparties

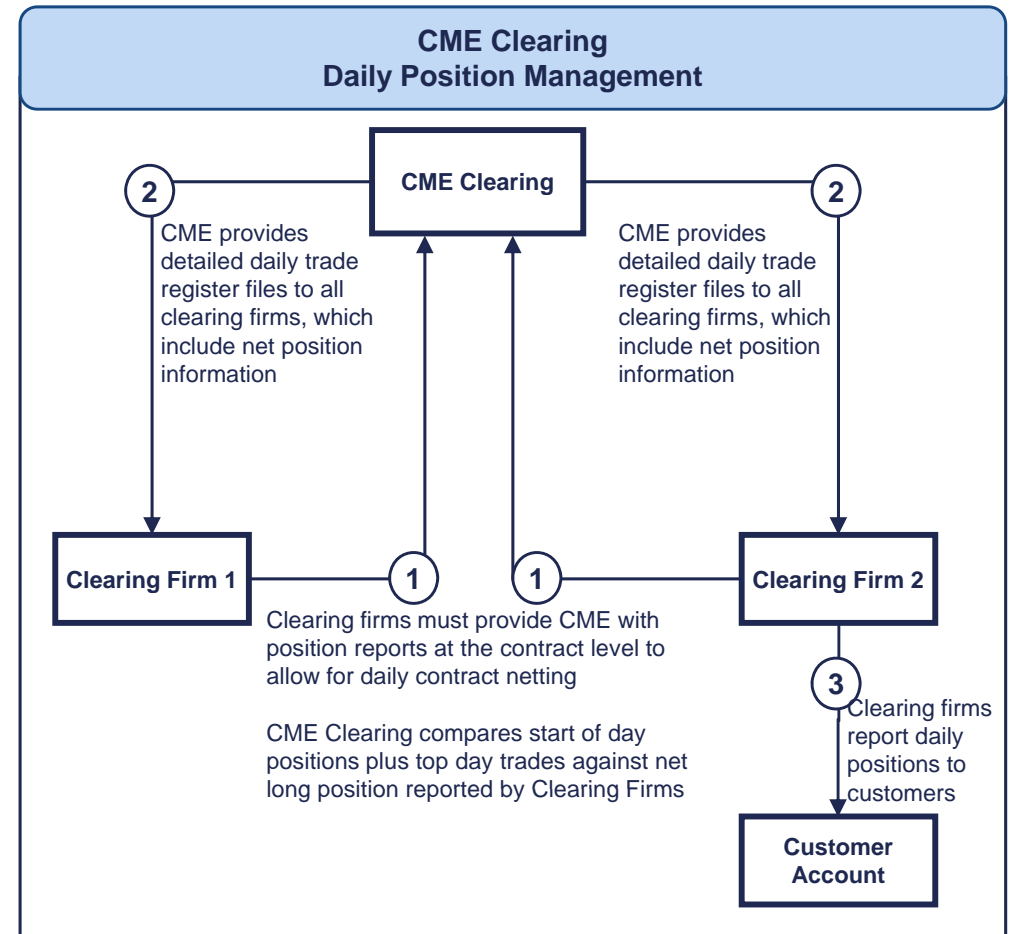


# Trade Processing

## Portfolio Compression

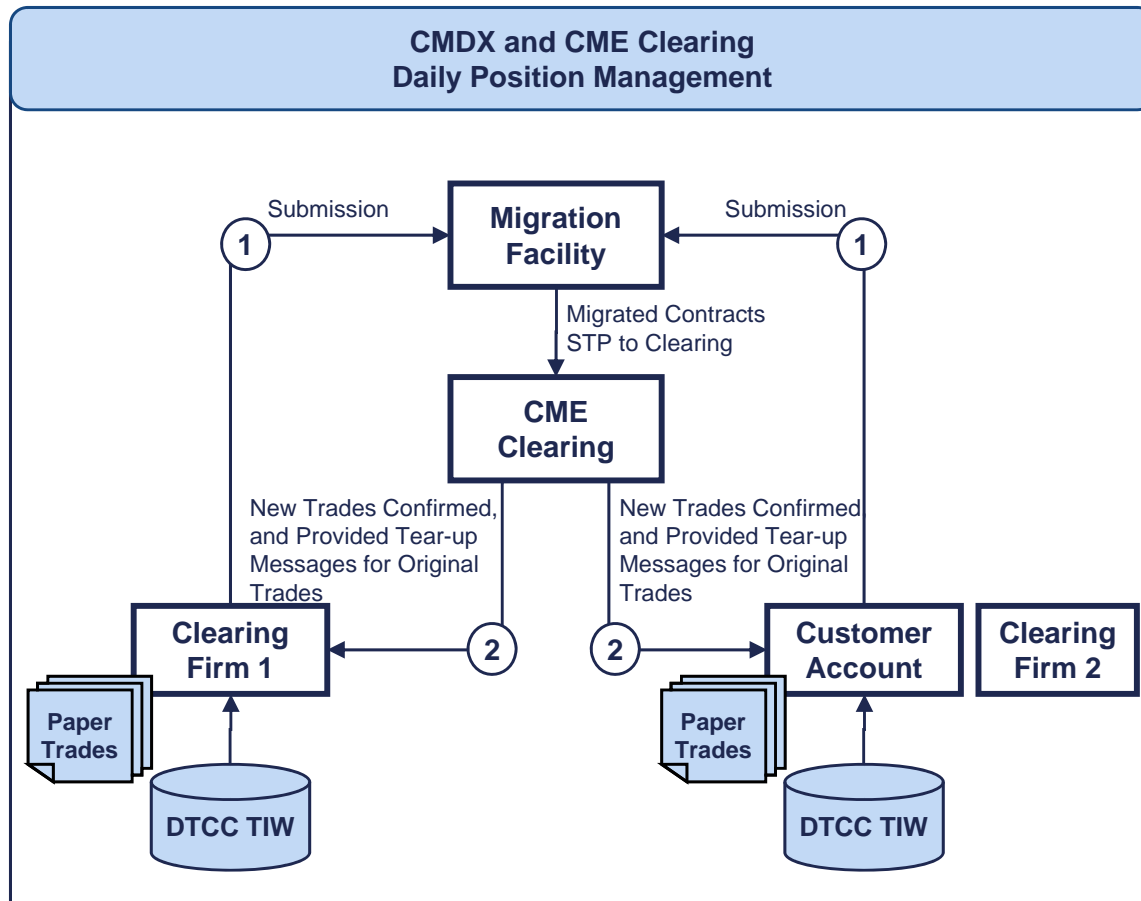
**CME Clearing performs a daily compression process which determines the true position quantities for each participant based on clearing firm specification (“position change specification”, or PCS)**

- Improved Manageability of Participant’s Book of CDS Trades
- Net Positions are reported at the Firm Level, Account Level and Contract Level
- At the Contract Level, the positions are grouped by Product, Maturity and Coupon
- Contracts are netted irrespective of counterparty for all participants
- At any moment in time, for any contract in which a position is held, CME Clearing knows the:
  - ✓ Start-of-day long and short position quantities
  - ✓ Cleared buy and sell trades today, broken out by trade type
  - ✓ Aggregate trade and position money amounts
  - ✓ Overall long and short position quantities



# Trade Processing

## Migration of Legacy Contracts

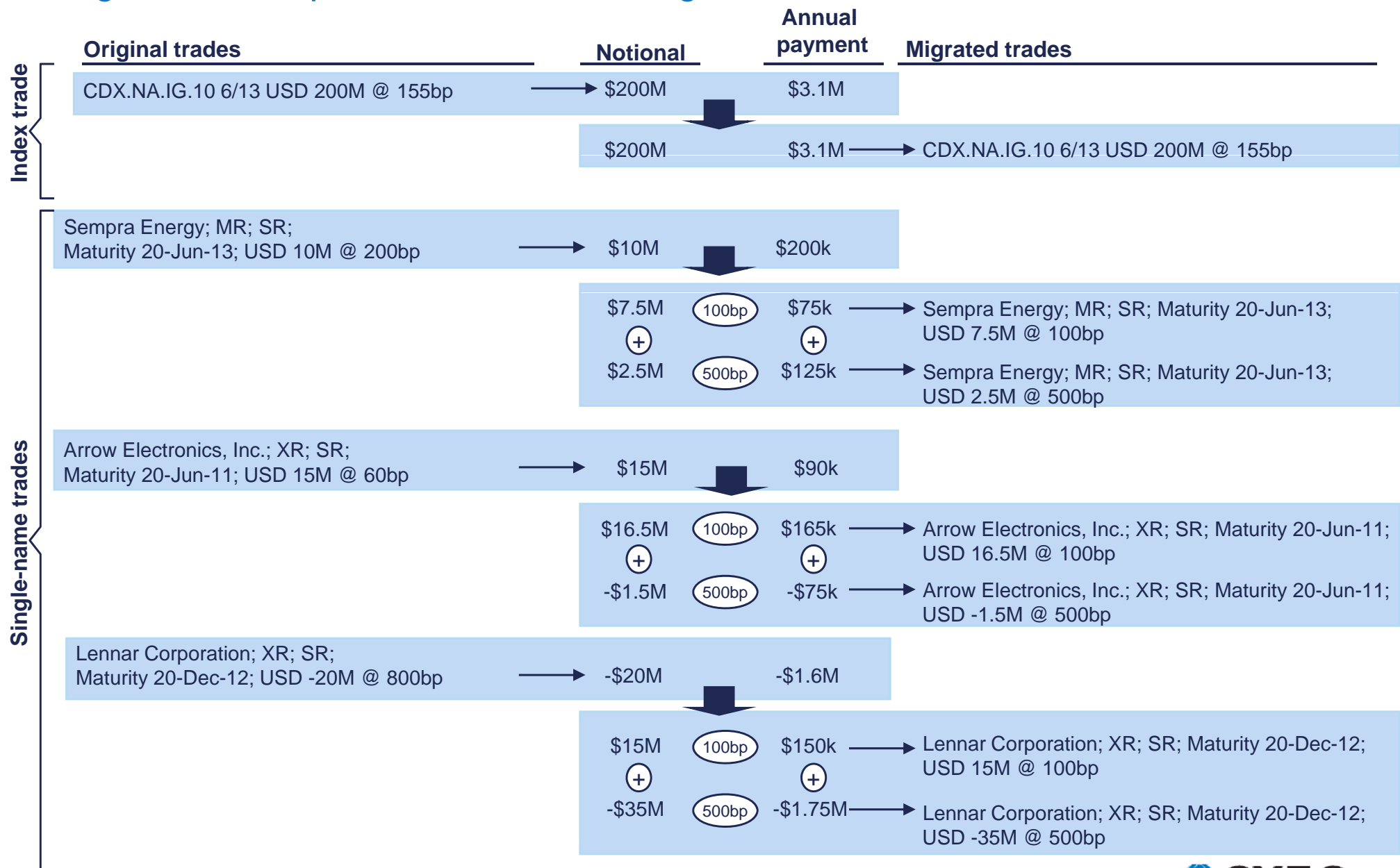


### Migration

- Migrated contracts and future trades are naturally and continuously netted
- More flexibility for trading in and out of existing positions
- Leverages the financial safeguards of the CME for current OTC positions
- Bilateral contracts migrated to standardized contracts facing the CCP
- No economic negotiation
- Facilitated migration cycles will be carried out periodically and automated with the support of leading technology
- Provides preview of new portfolio and net position
- Offers migration of all contracts eligible for CME Clearing (~75% of existing OTC volume)

# Trade Processing

## Migration Examples For Index and Single Name Contracts



# Trade Processing

## *Intraday and End-of-Day Settlement Prices*

CME Clearing will use three pricing data sources to determine price levels for CDS products

### ***Executed Prices***

- Executed prices are captured for all trades cleared with CME Clearing on a particular day, regardless of where the trade was executed.

### ***Quoted Prices***

- **Founding Member Quotes.** Dealer and Buy-Side Founding Members in CMDX are required to submit Price Levels for the full term structures for all indices and single-name reference entities by seniority, restructuring type, and currency eligible for clearing and where such Founding Member has a position.
- **Dealer Quotes.** CMA aggregates Price Levels submitted by dealers to 30 to 40 buy-side consortium firms. CMA receives ~100,000 anonymous aggregations of Price Levels throughout the day for Day 1 contracts eligible for clearing.
- **Price Auction Quotes.** For a small selected group of highly illiquid Credits, Dealer and Buy-Side Founding Members in CMDX may be required to participate in an interactive price auction protocol organized on regular basis. Front offices submit Price Levels for Required Tenors for the selected group of highly illiquid Credits.

### ***Position Marks***

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

# Post Trade Servicing

## *Event Management*

### **Overview**

- The CME Cleared CDS contracts will adhere to credit event and succession event determinations made by ISDA
- CME cleared contracts are cash settled at the Final Price from the relevant ISDA auction
- CME cleared contracts also provide contract holders the option to access the relevant ISDA auction for physical settlement in a manner consistent with today's OTC market
- If ISDA does not conduct an auction, the CME Determinations Board will make its best effort to allow for both cash and physical settlement

### **Processing Credit Events**

- CME Clearing will publish a clearing advisory notice to all clearing participants outlining CME Clearing's credit event processing
- All open positions held by a clearing participant will be collapsed into a single "delivery contract," and any net coupon obligations through the date of the credit event will be paid or collected
- New version of the index will be created in accordance with Markit
- Positions held in the index contract(s) containing affected names will be transferred to the new version of the index as part of the credit event processing done by CME Clearing
- Trading in the post credit event contract will be allowed during the period following the declaration of a credit event up to the day of the auction

### **Processing Succession Events**

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