

PJM General Session

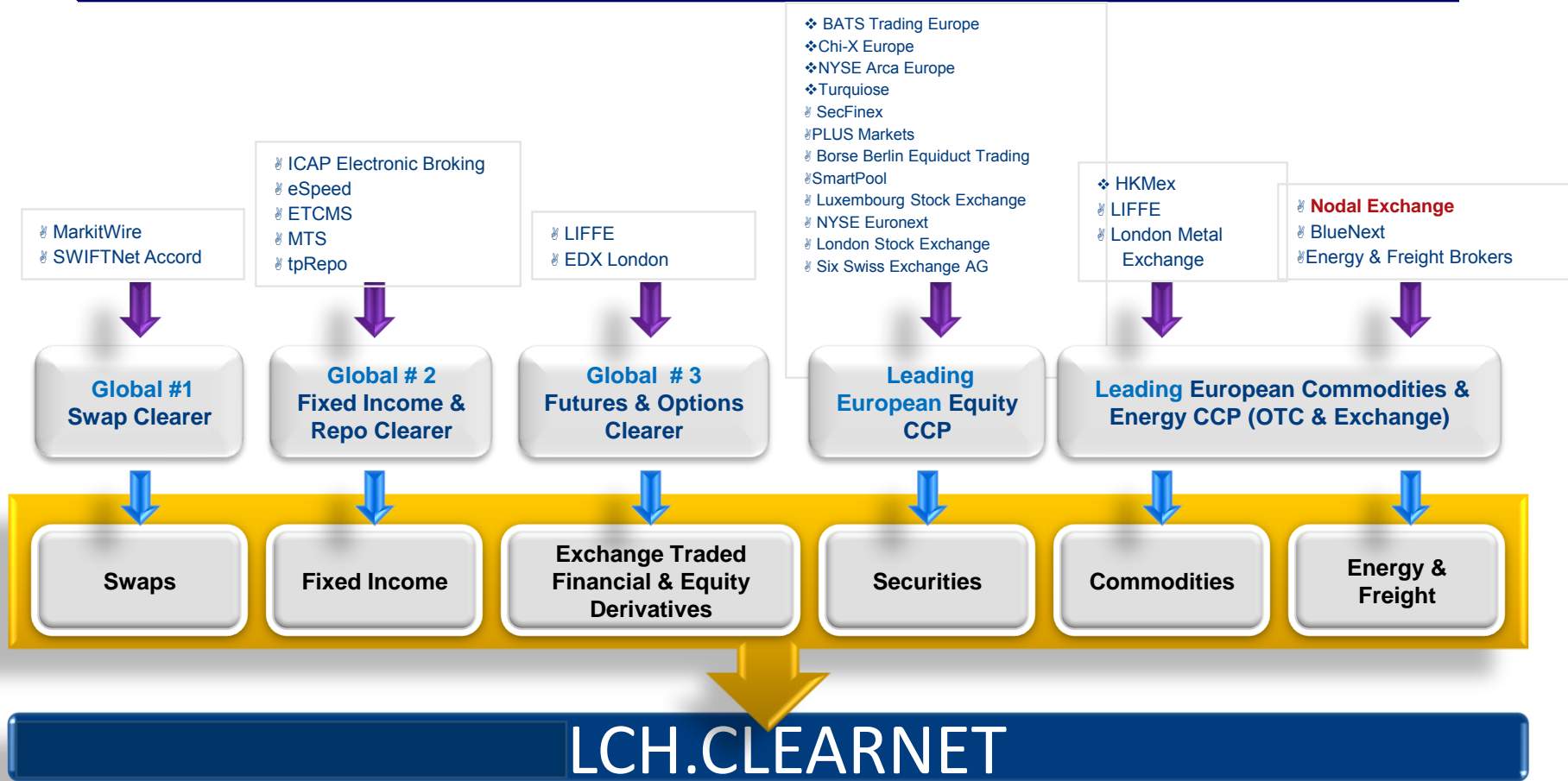
Credit Risk Management Practices by RTO/ISOs

Wilmington, Delaware
November 30th, 2010

Nodal Exchange Overview

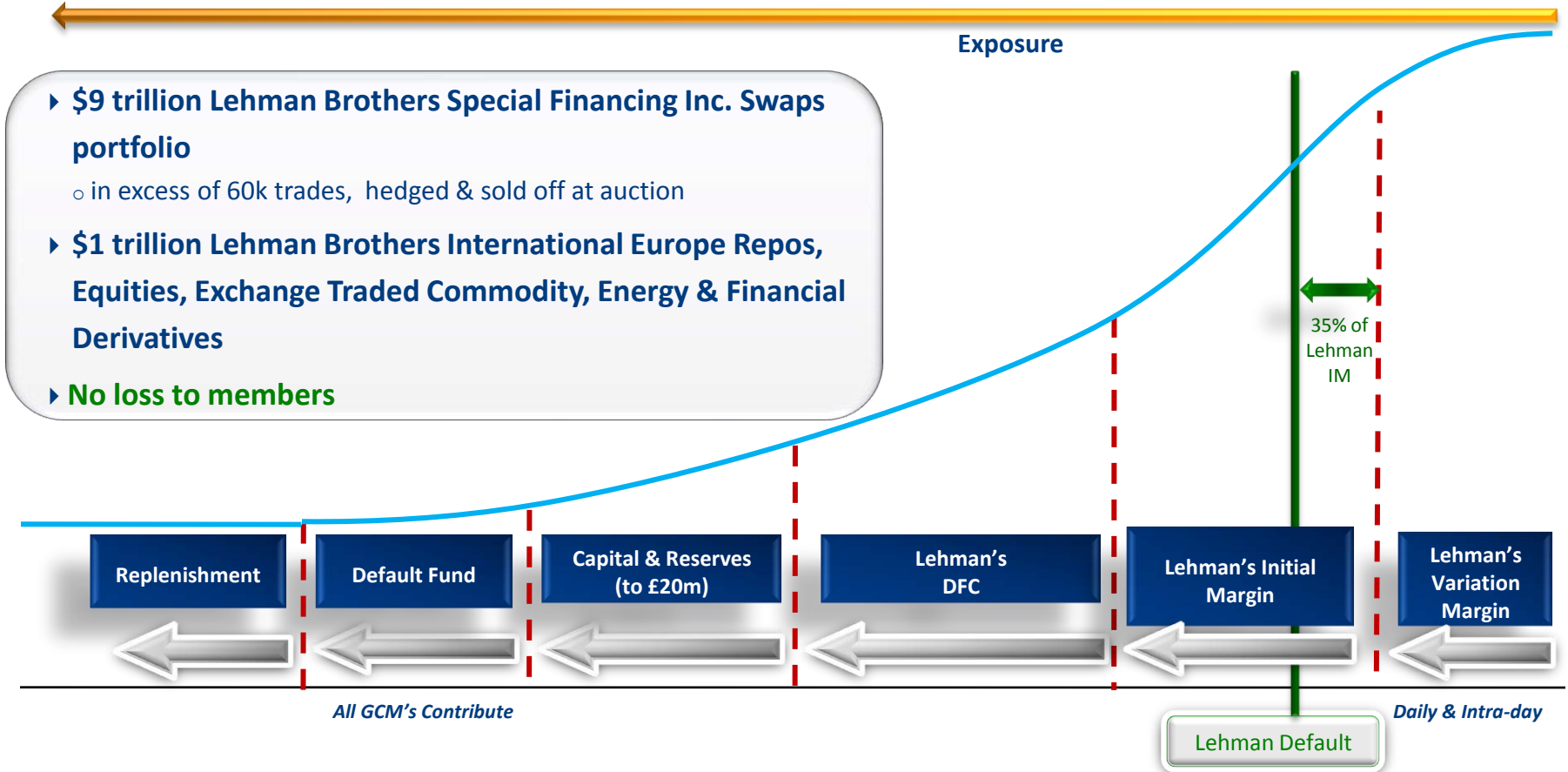
- **Cash-settled electric power and natural gas futures exchange**
- **Launched April 8th, 2009**
 - Over 50 signed Participants, 10 clearing members, 8 brokerages
 - Quarter over quarter growth every quarter since launch
- **Providing ability to trade power on >1,800 hubs, zones, and nodes across six organized markets: ISO-NE, NYISO, PJM, MISO, ERCOT and CAISO**
- **Natural gas contract for Henry Hub available over-the counter (OTC) permitting cross margining of power and gas**
- **Two platforms:**
 - Daily auction
 - OTC negotiated transactions (e.g., broker) submission for clearing
- **Central counterparty cleared market for all transactions through LCH.Clearnet**
 - Only cleared market for over 1,750 locations
 - Margin based on positions, not auction orders
 - Value-at-Risk (VaR) based margining methodology providing substantial efficiencies for portfolios relative to SPAN margining

LCH.Clearnet: Largest independent regulated clearing house in the world, clearing the broadest range of OTC & exchange cash and derivative products, *including US Nodal Power Futures*



Over 1.6 billion trades processed annually

Financial Security: LCH.Clearnet Ltd – a Proven Default Management Process



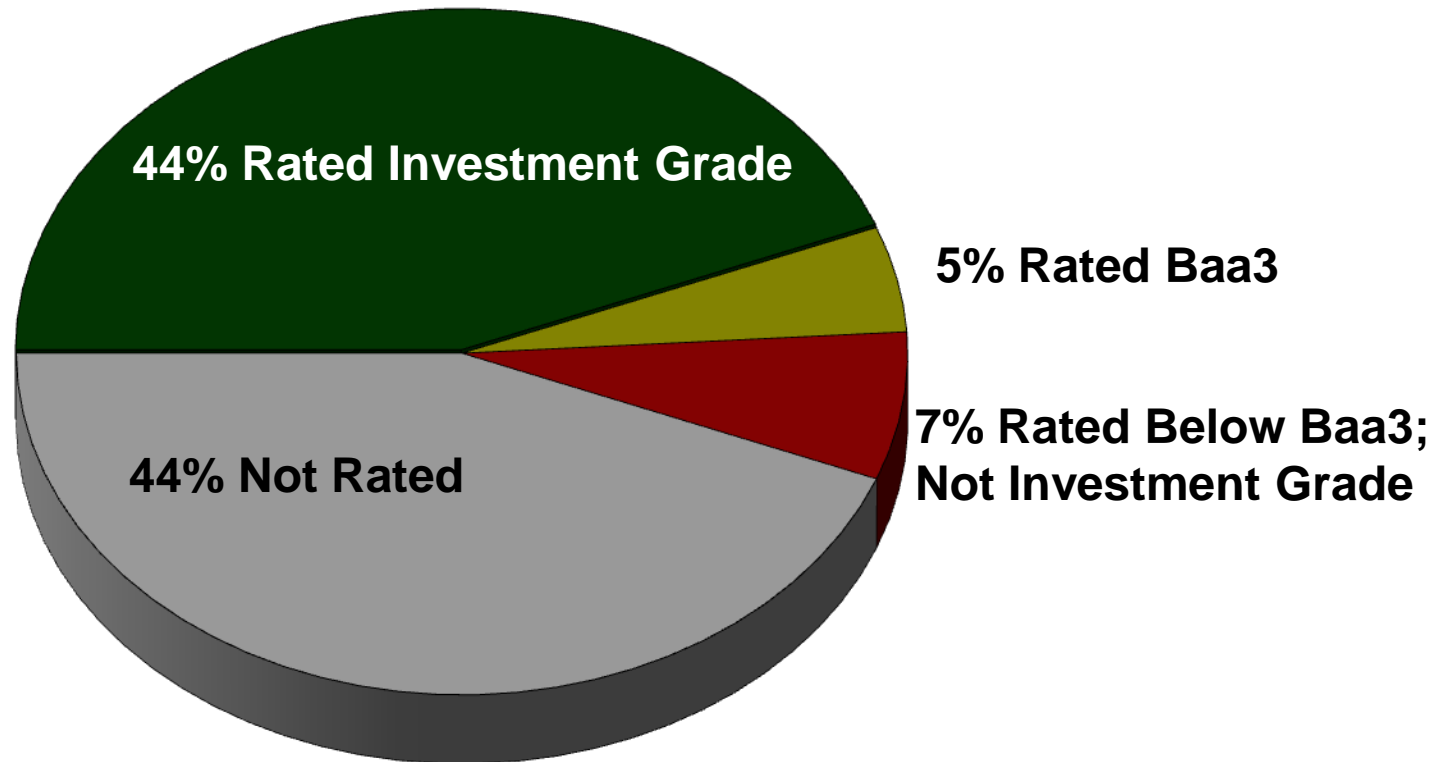
*"Lehman's failure cost its trading partners in the OTC CDS market hundreds of millions of dollars, whilst its trades backed by clearing houses were unwound without incident" **Moody's Investors Service***

Clearing reduces systemic risk (defaulter pays), but also benefits participants

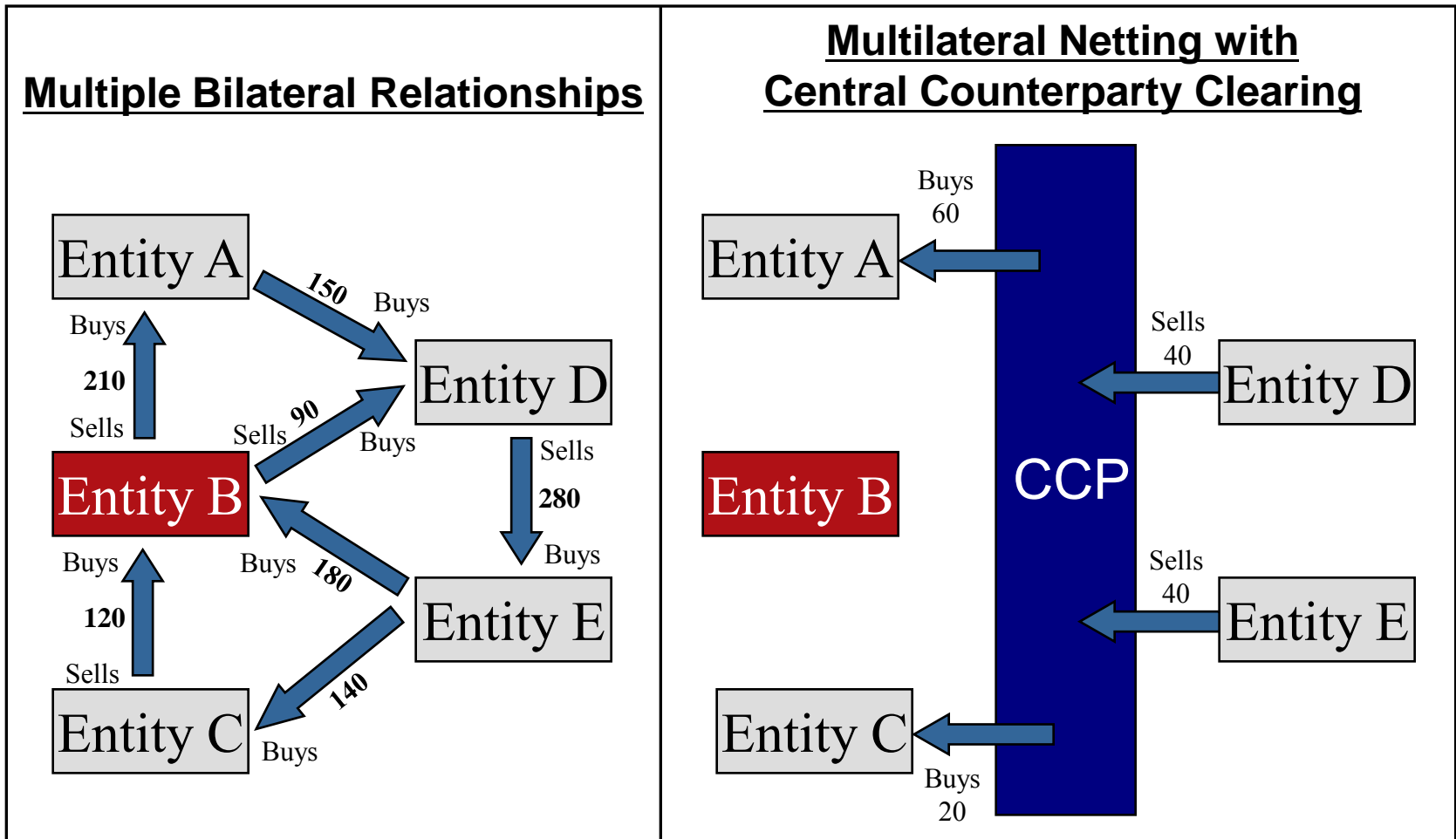
- Access to a wider range of market participants resulting in greater liquidity and better pricing; less than half of the top 50 FTR traders are rated investment grade
- Very limited default risk and no need to monitor counterparty risk
- Total transaction cost, including default risk, is often lower than bilateral transactions that are not cleared
 - CCRO paper “Market Clearing in the Energy Industry” Feb 2006 estimated default risk for non-cleared trades at 84 basis points
 - Under new regulation, non-cleared OTC trades may have collateral requirements set by CFTC for certain entities (e.g., Major Swap Participants)
- Clearing allows netting of positions across the portfolio, lowering margin

Cleared markets provides access to more counterparties

Top 50 FTR Participants
(Representing 95% of Volume)



Clearing allows participants to efficiently net across positions, reducing exposure and required collateral



1,170 in positions netted to 160: an 86% reduction

What about FTRs?

- An FTR is a financial instrument that entitles the holder to receive compensation for certain congestion-related transmission charges that arise when the grid is congested and differences in locational prices result from the redispatch of generators out of merit order to relieve that congestion
- FTR auctions provide a way for the RTO/ISO to pre-sell the congestion they will collect on the network via financial instruments that give participants the right to collect congestion revenues along a particular path
- **FTR auction markets exist for two purposes:**
 - **Congestion revenue distribution and**
 - **Providing RTO/ISO market participants the ability to hedge congestion**

Potential scenario for central counterparty clearing of FTRs

FTR auctions continue as usual:



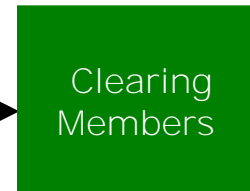
ISOs with
FTR
Auctions
(FERC
Oversight)

ISO holds all credit risks which are shared with all participants

Participants have option to clear:



Nodal Exchange with Central Counterparty Clearing by LCH.Clearnet (CFTC Oversight)



Optional novation of FTR positions to LCH.Clearnet; Nodal Exchange manages pricing and post-auction trading

Transferring of FTRs to Nodal Exchange would permit netting of FTR and Nodal Exchange positions and margin benefits from offsetting positions (including inter-ISO)

Creating optional central counterparty clearing of FTRs has multiple benefits

- Reduces systemic risk and creates an avenue to central counterparty clear FTR positions consistent with DFA
- ISO members protected from credit losses on cleared FTR positions
- Enables netting and cross-margining of FTR positions with cleared exchange positions
- Enables cross margining with natural gas and across ISOs (inter-ISO)
- Can be implemented with optional clearing (e.g., for “end users” doing hedging), but available to participants
- FERC continues to oversee FTR auctions providing revenue distribution and hedging on a very granular basis
- CFTC oversees central counterparty clearing process
- ISOs do not need to become a Derivatives Clearing Organization (DCO) or to invest in other capabilities that could be a distraction from managing the grid

What needs to happen to make voluntary 3rd party clearing a reality?

- ISOs/RTOs must be able to be the counterparty to the cleared transaction
- ISOs/RTOs cooperation with third party clearing entities, such as Nodal Exchange and LCH.Clearnet (multiple clearing alternatives possible), in providing the offering
 - Establish procedures for third party clearing
 - Member support
- Clarification of any required regulatory elements (e.g., FERC Tariff changes)
- Participants choose to clear FTRs

Thank you!!!

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