Financial Risk Mitigation Senior Task Force Phase II – Liquidation Discussion

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Phase II - Default Management Process Considerations

Previously defined scope:

- Liquidation Period
- Liquidation Test
- Liquidation Price
- Market Liquidity
    - Concentration
    - Open Interest
    - Position Size
- Masking positions
- Third party clearing

Phase II (Expansion)

- Minimum Capital Requirements
- Variation Margining
  - Leverage Mark to Auction
  - Consider in conjunction with all components
- Default Protection beyond Initial Margining
  - Insurance protections
    - Costs
    - Benefits

Liquidation Discussion

Liquidation (Pre-Waiver)

- PJM had the ability to liquidate a defaulted portfolio
  - Settle all current planning period positions prior to the next monthly FTR auction;
  - Offering all current planning period positions within the defaulting portfolio in the next available monthly balance of planning period FTR auction "at an offer price designed to maximize the likelihood of liquidation of those positions;"
  - Offering any FTR positions that do not settle until the next or subsequent planning periods into the next available FTR auction where such positions would be expected to clear, and in that auction, offering the entire FTR portfolio of the defaulting Member at an offer price designed to maximize the likelihood of liquidation of those positions;
  - where, based on the auction's preliminary solution, any of the closed-out FTR positions would set the market price, offering for sale only one-half of each FTR position and re-executing the auction, and then offering the FTR positions that were not liquidated in the next auction, and if there is no next auction, allowing the FTRs to go to settlement;
  - and treating the liquidation of the defaulting Member's FTR portfolio "pursuant to the foregoing procedures" as the "final liquidated settlement amount" that is included in calculating a Default Allocation Assessment.

Resulting consequences

The defaulted positions were negatively valued, meaning that auction participants would theoretically only bid to be paid to take the positions.

FTR liquidation provisions of the Operating Agreement lead to unreasonable results for PJM Members by dramatically increasing, in multiples, the cost to the PJM membership of the present, ongoing default

In all, the defaulted August FTR portfolio was liquidated at approximately four times the settlement value.

Stakeholders ultimately voted that they preferred to accept the risk to the Members posed by the unknown and variable future settlement charges and credits rather than accept the risk to the Members posed by the unknown but anecdotally extreme liquidation risk premium charged in the liquidation process.

Historical Framing Question pre- Waiver

What if the requirements had been to maximize the revenue generated during the liquidation of the defaulted portfolio, rather than setting an offer price designed to maximize the liquidation of the defaulted portfolio position?

Framing Question to Maximize Revenue Generated for Defaulted Portfolio

Does setting a floor as an offer price (designed to minimize the length of time for the liquidation of the defaulted portfolio) incentivize market participants to bid on the positions based on “market price”?

Framing Question to Managing a Defaulted Portfolio

What if PJM had not been required to offer **all** positions in the next auction “where they would be expected to clear,” but used discretion into what they would offer by “splitting” or offering smaller subsets of the defaulted portfolio prior to the auction?

Framing Question to Minimizing Losses of Defaulted Portfolio

What if the rules were clear that the auction process determines the size of the losses, if any, the surviving FTR market participants will need to bear and it was not socialized across all PJM Members?

What if we had a default waterall or some other type of credit insurance to minimize losses?

What we know…

- Liquidation period of risk (time to liquidate a portfolio) directly affects margin levels.
- Liquidation horizon should depend on the size of the position relative to the market depth.
- Fixing a liquidation horizon may not take into account the characteristics of the entire defaulted portfolio nor the size of the position
- BCBS-IOSCO, 2015; CFTC, 2016) recommend the use of a 10-day horizon for non-cleared derivatives.

Is a 10 day horizon realistic for liquidating a defaulted portfolio of FTRs?

Why should size of the defaulted position be considered?

Example:

If the size of the position is of the order of magnitude of a typical auction or less than ~10% of volume, it may be feasible to unwind in one auction. On the other hand, if a market participant has accumulated a very large position, give or take ~5 times the average auction trading volume, it may not be practical to unwind it in 10 days.

The determinant of the liquidation horizon is not the ‘market liquidity’ viewed in isolation, but the size of the position relative to the market depth.

Example:

If a market participant defaults and their positions are heavily concentrated where there are very few other market participants, there is an elevated risk where an auction might not achieve the expected results or have any bidders at all.

Additional margin should be considered to cover this scenario.

Masking of Participants & the Floor Price

- Bidding participants knew the positions of the defaulted portfolio and the floor price being offered.
- Knowledge of the positions and corresponding prices can influence bidding strategies and could potentially skew market clearing prices
- Bidding strategies should be based on the actual risk of taking on the position

Masking of participants should be considered as integral to this process, however depending on the size of the defaulted position, we should determine what is the threshold and timing disclose the defaulted position to allow for Market Participants to hedge any allocated losses.

Threshold Considerations

- Portfolio Valuation Liquidation Testing
  - Run simulations of the auction clearing with portfolios offered for liquidation
  - Evaluate cost and ease of liquidating
- Volumetric Liquidation Testing
  - Overall market share
  - Concentration and diversity of portfolio
  - Revenue dependency on constraints and corresponding outages and system conditions

PJM should establish liquidation thresholds

Additional Protections beyond IM

- Default Waterfall
  - Draw down on the defaulted participants collateral (e.g. IM, contributions to default fund/pool)
  - Line of Credit
  - Contributions of non-defaulting participants default fund
  - Recovery tool (e.g. default insurance)

The intended purpose of IM is to cover the potential cost of closing out a position, not to cover all risks. PJM should consider the costs/benefits with providing additional credit/default protections in place.

- Key Objectives
  - Ensure timely completion of settlement, even in extreme but plausible market conditions;
  - Minimize losses for non-defaulting participants;
  - Limit significant price disruptions to the market;
  - Manage and close out the defaulting participant’s positions and liquidating any applicable collateral in a **prudent and orderly manner**.

2018 Liquidation Concepts – FTR Liquidation Process

- Four concepts were discussed:
  - Status quo (Do not liquidate - Take positions to settlement)
  - Auction off defaulted portfolio (Planned or special auctions)
  - Novation (Members allocated defaulted positions)
  - Termination (Cancelling the defaulted positions)

Next Steps

Provide matrix with components (July meeting)

Provide back testing results (July meeting)

Questions?

Appendix: 2018 Liquidation Concepts – FTR Liquidation Process

Concept	Main challenge discussed
Auctions	Flexibility
Novation	Divisibility
Termination	Underfunding