# Financial Risk Mitigation Principles and Framing Questions for the FRM Senior Task Force

April 2019

# 1 Objective

The objective of this document is to ensure an alignment of expectations between the members of the Financial Risk Mitigation Senior Task Force (FRMSTF) and the PJM team (consisting of staff and external advisors) tasked with development of proposals. This document is organized as follows:

- **Overriding question:** Discussion of financial risk in the context of risk mitigation and risk management intended to create a common reference language to organize the thoughts probed by the framing questions.
- **Principles:** Statement of a small number of high-level principles, which constitute the premises under which the work of the FRMSTF is being conducted.
- **Framing Questions:** Questions on high-level policy matters, the answers to which will help to frame the range of solution options.

To the extent that there is a mis-alignment of expectations, it is aimed to flag and resolve promptly.

# 2 Overriding Question

The FRMSTF will tackle the issue of financial risk as it relates to the Financial Transmission Right market. The Report of the Independent Consultants on the GreenHat Default did not offer guidance on the appropriate level of risk the PJM market should assume through the offering of FTR products. Rather, it focused on the current construct and offered recommendations to manage the risk posed by those products. Therefore, it is important for PJM and its stakeholders at this time to take a step back and consider the FTR market more broadly to ensure an appropriate amount of risk is taken on and managed effectively.

A thought framework to guide discussion of financial risk is to consider the two broad inter-related concepts of "risk mitigation" and "risk management." In this context, risk mitigation is taking steps to reduce adverse effects or to achieve a systematic reduction in financial risk exposure. We examine the amount of risk this market is taking on, and consider whether that is an appropriate or acceptable amount of risk. Once that is determined, then we inquire as to how the acceptable amount of risk taken on may be managed. Risk management is the identification, evaluation, assessment and elimination of risks.

In determining the appropriate level of risk the PJM market may take on with the FTR products, it is important to consider both the costs and the benefits. On the benefits side we must consider the value of the product to the market participants. What is the purpose for each product, and is each product achieving its purpose? Analysis of the current construct will be important to this discussion. Do we understand the risks associated with each product? Do the costs outweigh the benefits? The cost of managing the risk should be included in the cost evaluation.

The flowchart below highlights areas for discussion with the members on each of these topics. Underlying these overriding questions, are the framing questions which will influence the final recommendation. The topics have been color-coded to tie-back to the framing questions below.


# 3 Principles

## 3.1 Premise – Fundamental Change is Required

Following the Tower Research default an expert report was commissioned concerning potential improvements to the way PJM manages credit risk. A number of findings and recommendations were made; however, only a small subset were adopted by the stakeholder committee and progressed.

The Report of Independent Consultants on the GreenHat Default (Report) Finding 2 concludes that, PJM "did not go far enough to emphasize these critical policy advances to its stakeholders or its Board." In other words, given the critical importance of strong credit management to the integrity of the market, PJM staff should not have taken 'no' for an answer.

As such, this effort is formed with a clear mandate for fundamental change that materially mitigates credit risk in PJM-operated financial markets. If the solution that emerges from this process contains only modest changes to the status quo, it will be deemed insufficient and invite Board and/or regulatory action.

## 3.2 Premise – Starting Point is the Independent Expert Report

The FRMSTF is charged with addressing policy matters with implications for the rules contained within the Tariff and Operating Agreement. In addressing these, the findings and recommendations within the Report will serve as the high-level starting point for defining detailed solutions.

# 4 Framing Questions

These questions address high-level policy matters that, directly or indirectly, impact financial risk and how it is managed. A number are derived from the findings and recommendations of the Independent Expert Report, while others relate to more general changes to practice and product that could limit risk magnitude and/or probability.

## 4.1 Market Participation

The Report identifies deficiencies in the member admission process (Section 2) and recommends a number of changes (Section C):

Q1. What criteria should be evaluated in determining whether a member application should be rejected?

Q2. How much discretion should PJM have in the rejection of an applicant, or termination of an existing member, because of unsatisfactory results in its background check, or that of its principals?

Q3. The Report suggests an internal appeal mechanism (C3.1). What is the right body for appeals to be made to?

Q4. What sort of test could PJM employ – beyond just confirming their existence – to form a meaningful assessment of participant risk management processes?

Q5. Should stricter criteria be applied for participation in FTR and other financial markets, as compared to cash/spot market participation?

Q6. What is a reasonable minimum level of capitalization in order to participate in financial markets?

Q7. For those unable to participate directly (e.g., due to capitalization requirements) in PJM-operated financial markets, should an intermediary structure be established?

Q8. Should there be formal training and certification requirements for individual traders to transact in the PJM's financial markets, akin to those applicable in most futures markets?

## 4.2 Financial Product Range

One way to reduce the overall size of the risk pool, and thus any potential default, would be to reduce the range of product that can be traded, in terms of both tenor and locational basis. This must be traded off against the utility provided to participants by such products. PJM wishes to understand the general opinions of FRMSTF concerning:

Q9. Should PJM continue to offer FTR auctions?

Q10. Should PJM continue to offer long-term FTRs auctions?

Q11. Should FTR options continue to be offered?

Q12. Should all current locations be available for financial trading? If not, which locations should trading be limited to?

Q13. Should individual nodes require bona fide physical activity in order to be traded?

## 4.3 FTR Auction Execution

Increasing auction frequency reduces the size of the 'worst inter-auction move' that could conceivably occur between position last being marked-to-auction (or initiated) and when it could be liquidated. This allows initial margin to also be reduced, alleviating the cashflow impact of strict credit controls. Report Recommendation F1 recommends that PJM "Include Long Term FTRs in monthly or at least bi-monthly auctions."

Q14. What is an appropriate auction frequency for different FTR tenors and expiries?

Report Recommendation F2 recommends PJM "explore new approaches to make more frequent long-term auctions both more efficient to run and as liquid as possible." Auction performance improvements could be addressed in part through curtailment of the product suite, addressed in Questions 10-12 above.

Technological advances have also been raised, yet PJM's own investigations with vendors – conducted several times over the years – have not revealed any order-of-magnitude breakthroughs suitable for deployment as 'industrial strength' software.

## 4.4 Structural

Changes to key risk management structures could also result in meaningful reduction/isolation of risk:

Q15. Should PJM outsource the credit risk management of FTRs, and potentially other financial products, to an external clearing house. i.e., a CFTC-regulated, Derivatives Clearing Organization (DCO)?

Q16. If external clearing is utilized, should it be mandatory or voluntary?

Q17. If not outsourced, should financial markets form a separate risk pool to other trading activity? i.e., with defaults socialized only amongst the participants in those markets, rather than amongst the membership as a whole.

## 4.5 Credit Risk Assessment, Collateralization and Risk Limits

Report Recommendation A4.1 suggests defining "a default as any participant that is unable to meet a monthly variation margin call within two business days."

Q18. Is two (2) days the right amount, or should it be less?

Report Recommendation B2.3 suggests "rules that give PJM discretion to deal with unanticipated market emergency events." In futures markets such discretion is common, and allows, amongst other things, Imposition of 'super-margin' in response to critical events.

Q19. Under what circumstances should PJM have authority to exercise similar discretion?

Report Recommendation D2 recommends the establishment of position limits for FTRs, based upon both financial capacity (this is essentially a trading limit) and product tenor (to ensure no party accumulates too large a position, both for financial exposure and market manipulation reasons).

Q20. What factors should determine the size of position limits?

Q21. What criteria should be required for exemption from position limits?

A number of markets globally choose to impose concentration limits, related not to the financial strength of the entity, but the existential threat that the failure of a large participant could have on market financial integrity.

Q22. Should PJM introduce a concentration limit, and what should its threshold be?

PJM's FTR markets are already nominally 'fully collateralized' (within the constraints of their risk models). However, a participant who fails goes broke all-at-once, in every market. To the extent that cash market and financial market funds are comingled in settlement, being under-collateralized in one means being effectively under-collateralized in all.

Q23. Should full collateralization also be applied to cash markets (DAM, RTM, etc.)?

## 4.6 Stakeholder Governance

Report Recommendation B1.2 concludes that: "Financial market member committees: voting attendees must be qualified member personnel, such as credit professionals, traders, or finance professionals, as appropriate for the committee duties."

Q24. Is it appropriate to establish explicit skillset requirements for stakeholder process participation?

a. If so, which stakeholder groups/committees?

b. If so, what should the requirements be?

Report Recommendation B1.3 concludes that "The number of committees involved in rule setting for financial markets should be strictly minimized to streamline decision making and assure clear accountability."

Q25. Is an existing committee appropriate for the purpose, and if so, which?

Q26. If not, what should the new committee look like, and which existing committees should it supplant, in order to avoid creating more, committees?

**Other**

Q27. Are there any additional questions stakeholders believe should be addressed in this discussion?