India Derivatives Market Manipulation

Policy Discussion Paper: Addressing Market Manipulation in Indian Derivative Markets through Segmented Order Matching

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Date: July 9, 2025

Executive Summary

India's equity derivatives market, the world's largest by trading volume, has witnessed exponential growth, driven by retail participation, institutional investors, and proprietary traders leveraging high-frequency trading (HFT) and algorithmic strategies. The recent Jane Street episode, where the U.S.-based firm was barred by the Securities and Exchange Board of India (SEBI) for alleged market manipulation, underscores systemic vulnerabilities in the current market structure. This paper proposes a novel solution: segmenting the order-matching process into three distinct platforms for Retail, Institutional, and Proprietary (Prop)/HFT/Algo traders, while maintaining unified price discovery. Inspired by India's segmented IPO order book and the success of homegrown innovations like UPI, this approach aims to enhance market fairness, protect retail investors, and curb manipulative practices without stifling innovation. Supported by 2025 market data and global precedents, the paper evaluates the proposal's feasibility, anticipates stakeholder concerns, and outlines a framework for public debate.

1. Introduction: The Jane Street Episode and Market Context

In July 2025, SEBI issued an interim order barring Jane Street Group from India's securities market, alleging manipulation of the Bank Nifty and Nifty 50 indices through coordinated derivative trades. The firm reportedly earned ₹36,671 crore in profits, primarily from index options, between January 2023 and March 2025, while incurring deliberate losses in cash and futures markets to influence index levels. SEBI's 105-page order highlighted strategies like "extended marking the close" and aggressive intraday trades that misled retail investors, who faced ₹1.05 lakh crore in derivative trading losses in FY25.

India's derivative market dominates global volumes, accounting for nearly 60% of the 7.3 billion equity derivative trades worldwide in April 2025, per the Futures Industry Association (FIA). The National Stock Exchange (NSE) alone saw 36.8 billion equity index options traded in Q2 2024, doubling year-on-year. Retail investors, comprising 41% of derivative volumes in 2024 (up from 2% in 2018), are particularly vulnerable, with 91% incurring losses in FY25.

The coexistence of Retail, Institutional (domestic AMCs, banks, insurance companies, FIs, and FPIs), and Prop/HFT/Algo traders (domestic and global funds) on a single platform creates an uneven playing field. HFT firms exploit

inefficiencies using superior technology, akin to “racer cars” outpacing “bullock carts” and “passenger vehicles” on the same road, leading to market distortions and retail losses. This paper proposes segmenting order matching to address these disparities, using the Jane Street case as a catalyst for reform.

2. Current Market Structure and Challenges

2.1 Market Volumes and Participant Dynamics

- **Derivatives vs. Equity Markets**: In Q2 2024, NSE and BSE recorded ₹103.17 lakh crore in notional turnover for Bank Nifty options on expiry days, 353 times the cash market turnover (₹29,225 crore) and 98 times combined cash and futures turnover.

Participant Breakdown:

- **Retail**: 41% of derivative volumes, 1.6 million unique traders in options vs. 4,675 in cash markets. Losses totaled ₹1.8 trillion from FY22–FY24, with ₹61,000 crore in FY24 alone.
- **Institutional**: Includes AMCs, banks, and FPIs. FPIs earned ₹28,000 crore in profits in FY24, leveraging algorithmic strategies.
- **Prop/HFT/Algo**: Firms like Jane Street, Citadel Securities, and Optiver contributed nearly 50% of options volumes. Proprietary traders earned ₹33,000 crore in FY24, with Jane Street alone generating ₹35,602 crore from index options (January 2023–March 2025).
- **Trading Mechanisms**: HFT/Algo traders use AI-driven strategies for rapid execution, exploiting latency advantages. Retail and institutional traders often rely on manual or slower systems, creating inefficiencies that HFT firms target.

2.2 Manipulation Vulnerabilities

The Jane Street case exposed how HFT firms manipulate indices:

- **Strategy**: Aggressive buying of index constituents in cash/futures markets to inflate indices (e.g., Bank Nifty) early in the day, followed by short positions in options and later selling to depress prices, profiting from retail losses.
- **Impact**: Retail traders, chasing volatility, faced artificial price swings, with 91% losing money. SEBI noted violations of Prohibition of Fraudulent and Unfair Trade Practices (PFUTP) regulations.
- **Systemic Issue**: The unified order book allows HFT firms to exploit less sophisticated participants, creating “liquidity holes” and artificial volatility.

2.3 Regulatory Efforts

SEBI has introduced measures to curb excesses:

- Higher contract sizes and position limits (November 2024).
- Delta-based limits on index options (July 2025).
- Enhanced audit requirements for algorithmic trading (May 2025). Despite these, retail losses persist, and HFT firms continue to dominate, necessitating structural reform.

3. Proposed Solution: Segmented Order Matching

3.1 Concept

This proposal advocates for three separate order-matching platforms for Retail, Institutional, and Prop/HFT/Algo traders, while retaining unified price discovery across segments. Each segment's orders would match only within its own pool, preventing cross-segment exploitation. Key features:

- **Retail Segment**: For individual traders, ensuring protection from HFT-driven volatility.
- **Institutional Segment**: For AMCs, banks, FPIs, etc., allowing strategic trades without HFT interference.
- **Prop/HFT/Algo Segment**: For proprietary firms, matching high-speed orders against similar entities.
- **Unified Price Discovery**: All segments contribute to a single price feed, ensuring transparency and consistency.
- **Registration**: Participants register in one segment based on their trading profile, with SEBI overseeing compliance.

3.2 Inspiration: Indian IPO Order Book

India's IPO market segments applications into Retail, High Net-Worth Individuals (HNIs), and Qualified Institutional Buyers (QIBs), ensuring equitable allocation and protecting smaller investors from institutional dominance. In 2024, retail applications in IPOs like Waaree Energies accounted for 35% of subscriptions, demonstrating robust participation under segmented rules. This model proves that segmentation can foster fairness without compromising market efficiency, serving as a precedent for derivatives.

3.3 Global Precedents

- **U.S. Dark Pools**: Institutional investors use private venues to match large orders, avoiding HFT front-running. In 2024, dark pools handled 15% of U.S. equity volume, showing viability of segmented matching. However, they lack unified price discovery, unlike the proposed model.
- **Japan's Tokyo Stock Exchange**: Offers a separate "ToSTNeT" platform for block trades, isolating large orders from retail flow. In 2023, ToSTNeT processed 10% of TSE volume, balancing liquidity and fairness.
- **European MiFID II**: Segregates HFT firms under stricter reporting requirements, though not separate platforms. In 2024, HFT accounted for 40% of European equity trades, prompting calls for further segmentation.

While no market fully mirrors India's derivative volume (60% of global trades), these examples validate differentiated treatment of participants.

4. Pros and Cons of Segmented Order Matching

4.1 Benefits

- **Fairness**: Prevents HFT firms from exploiting retail/institutional inefficiencies, leveling the playing field.
- **Retail Protection**: Reduces artificial volatility, potentially lowering the 91% loss rate among retail traders.
- **Market Integrity**: Deters manipulative strategies like those in the Jane Street case by isolating HFT impact.
- **Liquidity Preservation**: Unified price discovery ensures all segments benefit from collective volume, unlike fragmented dark pools.
- **Innovation Support**: HFT firms can compete within their segment, fostering technological advancement without harming others.

4.2 Challenges

- **Liquidity Fragmentation**: Segmenting order books may reduce depth in each pool, potentially widening spreads. However, unified price discovery mitigates this risk.
- **Implementation Complexity**: Requires significant infrastructure upgrades at NSE/BSE and SEBI oversight for segment classification.
- **Resistance from HFT Firms**: Prop traders, contributing 50% of volumes, may oppose restrictions on their market access.
- **Price Discovery Impact**: If one segment (e.g., HFT) dominates volume, its absence from other pools could skew pricing. Historical data suggests retail (41%) and institutional (9%) volumes are substantial enough to balance this.

- **Global Benchmark Concerns**: Critics may argue no major market fully segments derivatives this way, though India's unique volume justifies a tailored approach, as with UPI.

4.3 Mitigation Strategies

- **Pilot Phase**: Test segmentation on a single index (e.g., Bank Nifty) to assess liquidity and pricing impacts.
- **Dynamic Classification**: Allow traders to switch segments annually, subject to SEBI approval, to accommodate evolving strategies.
- **Transparency**: Publish segment-wise volume data to build trust and monitor imbalances.
- **Circuit Breakers**: Implement segment-specific volatility controls to manage extreme price swings during expiry days.

5. Data Support and Impact Assessment

5.1 Market Volume Data (2025 YTD)

- **Source**: SEBI, NSE, BSE, FIA (tagged in glossary).
- **Derivatives**: ₹103.17 lakh crore notional turnover in Bank Nifty options on expiry days (January–May 2025), down 29% year-on-year due to SEBI curbs.
- **Equity/Cash**: ₹29,225 crore daily turnover for Bank Nifty constituents, 0.28% of options volume.
- **Participant Shares**:
  Retail: 41% of derivative volumes, ₹1.05 lakh crore losses in FY25.
  Institutional: 9% of volumes, ₹28,000 crore profits in FY24.
  Prop/HFT: 50% of volumes, ₹33,000 crore profits in FY24, with Jane Street's ₹35,602 crore from options.

5.2 Projected Impact

- **Retail Losses**: Segmentation could reduce the 91% loss rate by limiting HFT-induced volatility. A 10% reduction in losses could save retail traders ₹10,500 crore annually.
- **Volumes**: Post-Jane Street ban, derivative volumes may drop 10–15% as HFT firms scale back. Segmentation may initially reduce volumes further but stabilize as retail confidence grows.
- **Liquidity**: Unified price discovery ensures minimal disruption, with retail and institutional volumes (50% combined) sustaining depth.
- **Manipulation**: Isolating HFT orders could prevent 80% of expiry-day manipulations, based on SEBI's findings of Jane Street's 15/18 expiry-day interventions.

6. Debate on (possible) Stakeholder Queries (FAQs)

Anticipated Questions and Responses

- **SEBI/Regulators**: *Will segmentation harm market liquidity?*
  - **Response**: Unified price discovery preserves liquidity, and retail/institutional volumes (50%) ensure depth. A pilot phase can validate this.
- **HFT Firms**: *Does this unfairly restrict our operations?*
  - **Response**: HFT firms can innovate within their segment, competing fairly without exploiting weaker participants. Global precedents like MiFID II support such restrictions.
- **Retail Investors**: *How will this protect us?*
  - **Response**: Segmentation reduces HFT-driven volatility, potentially lowering the 91% loss rate, as seen in IPO protections.
- **Brokers/Exchanges**: *Will volumes and revenues decline?*
  - **Response**: Initial volume dips may occur, but increased retail participation (due to fairness) could offset this, as seen post-UPI adoption.
- **Policy Makers**: *Is this globally precedented?*
  - **Response**: India's derivative volume is unique, justifying a tailored solution like UPI. Partial precedents exist in U.S. dark pools and Japan's ToSTNeT.

7. Recommendations

- **Implement Segmented Order Matching**:
  - Launch a pilot for Bank Nifty options in Q1 2026, with separate platforms for Retail, Institutional, and Prop/HFT/Algo traders.
  - Maintain unified price discovery to ensure liquidity and transparency.
- **Strengthen Regulatory Oversight**:
  - Mandate real-time segment classification audits by SEBI.
  - Introduce segment-specific circuit breakers to manage expiry-day volatility.
- **Enhance Investor Education**:
  - Partner with NSE/BSE to educate retail traders on derivative risks, reducing speculative trading.
  - Highlight segmentation benefits via public campaigns.
- **Monitor Global Practices**:
  - Study U.S. dark pool outcomes and Japan's ToSTNeT for iterative improvements.
  - Engage with FIA to align segmentation with global standards without compromising India's uniqueness.
- **Data Transparency**:
  - Publish monthly segment-wise volume and loss/profit data to build trust and inform policy.

8. Conclusion

The Jane Street episode exposes the fragility of India's derivative market, where HFT firms exploit retail and institutional inefficiencies, undermining fairness. Segmenting order matching into Retail, Institutional, and Prop/HFT/Algo platforms, while preserving unified price discovery, offers a bold yet practical solution. Drawing from India's IPO model and global precedents, this approach can protect retail investors, deter manipulation, and sustain innovation. India's unparalleled derivative volume, like its UPI success, justifies a homegrown benchmark. This paper calls for a public debate to refine and implement this reform, urging SEBI, the Finance Ministry, and market participants to prioritize market integrity and investor trust.

Glossary and Data Sources

- **Bank Nifty**: Index of 12 Indian banking stocks, heavily traded in derivatives.
- **Nifty 50**: Benchmark index of 50 Indian stocks.
- **Notional Turnover**: Total value of derivative contracts traded.
- **HFT**: High-frequency trading using low-latency algorithms.
- **PFUTP**: SEBI's Prohibition of Fraudulent and Unfair Trade Practices regulations.
- **Data Sources**:
- SEBI: Retail loss data, participant profits (www.sebi.gov.in).
- NSE/BSE: Volume data (www.nseindia.com, www.bseindia.com).
- FIA: Global derivative volume (www.fia.org).
- Reuters, Bloomberg, Financial Express: Jane Street case details.