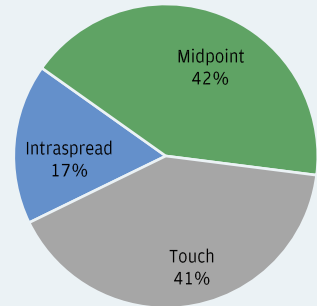


Features and Benefits

- Tier structure to support customizable crossing
- Liquidity, speed, and execution quality
- Conditional order support
- Opportunity for price improvement
- Price/Tier/Time priority matching
- Continuous crossing
- Broad spectrum of J.P. Morgan liquidity

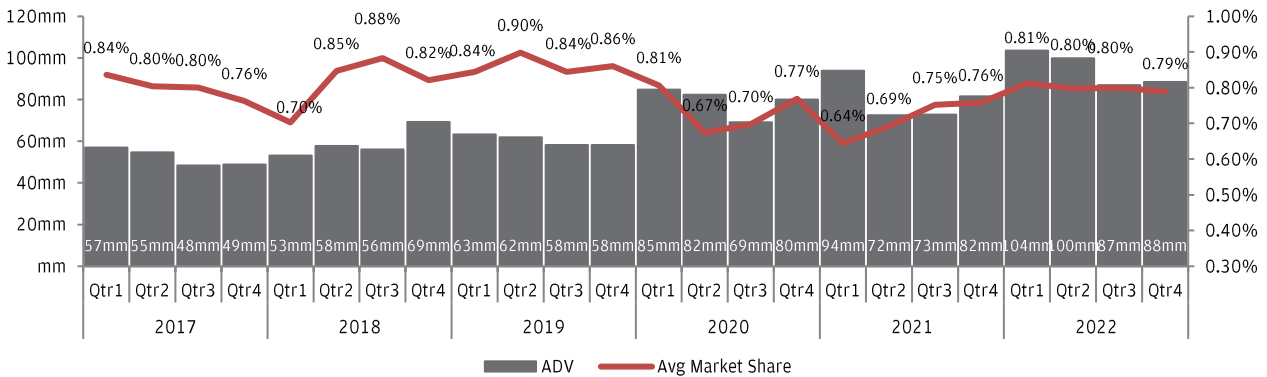
Q4 2022 JPM-X Statistics	
Average Daily Volume (single counted)	88.4 mm shares
Average Trade Size	117 shares
# of Symbols traded	9,039 unique symbols
% of Volume >= 5k shares	6.9% of Volume (6.1mm ADV)
Average Block Size (>= 5k shares)	10,830 shares

Volume by Exec Price

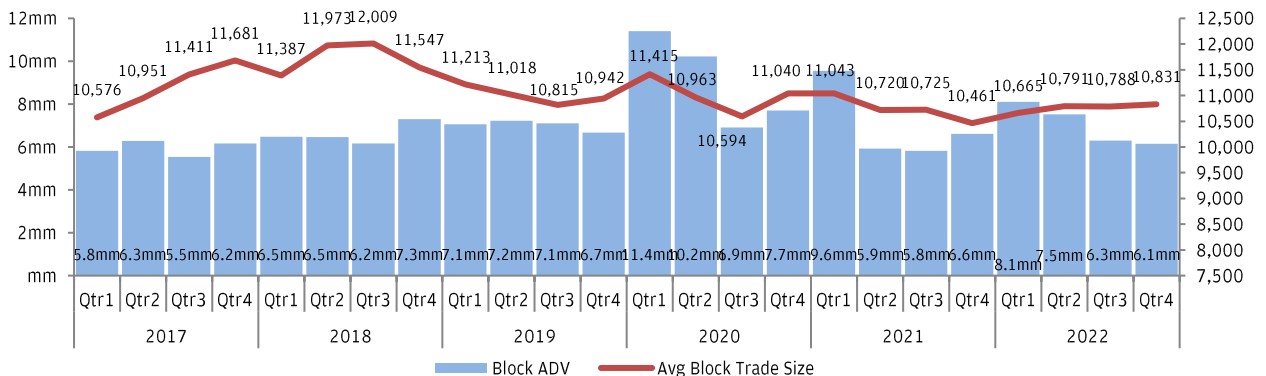


Q4 2022

Average Daily Volume and Market Share



Block Average Daily Volume and Average Trade Size (Trades >= 5k Shares)

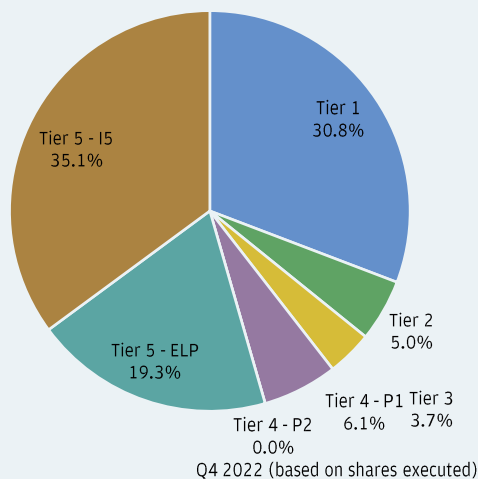


Order Flow Tiers

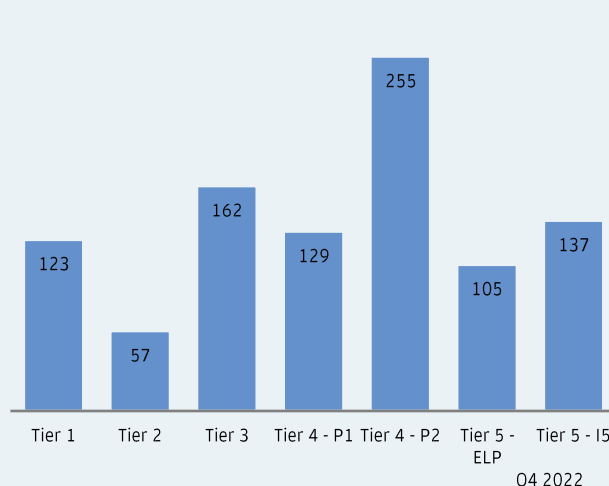
Our differentiated tiering structure allows clients to customize the order flow types with which they interact. Order flow types are used to tier the JPM-X order book.

- **Tier 1 (Order Flow Type I-1):** Institutional investor client flow and JPMS affiliates' flow accessing JPM-X via algorithms/SOR
- **Tier 2 (Order Flow Type I-2):** Institutional investor client flow with direct access to JPM-X
- **Tier 3 (Order Flow Type I-3):** U.S. registered broker-dealer client flow (both agency and principal) accessing JPM-X via algorithms/SOR
- **Tier 4 (Order Flow Type P-1):** Internal (JPMS) principal trading desk flow accessing JPM-X via algorithms/SOR
- **Tier 4 (Order Flow Type P-2):** Internal (JPMS) electronic liquidity provider flow with direct access to JPM-X
- **Tier 5 (Order Flow Type I-4 / ELP):** Flow of external broker-dealers categorized as electronic liquidity providers with direct access to JPM-X
- **Tier 5 (Order Flow Type I-5):** Flow of external broker-dealers not categorized as electronic liquidity providers (both agency and principal) with direct access to JPM-X

Volume by Tier



Average Trade Size (By Tier)



Sources: JPMorgan Tick and Trade Data, BATS Market Volume Summary https://www.cboe.com/us/equities/market_share/

Please also see:

JPM-X FAQs: <https://www.jpmorgan.com/content/dam/jpm/cib/complex/content/markets/aqua/pdf-0.pdf>

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