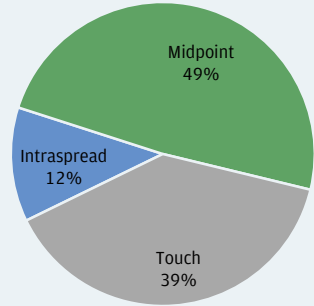


Features and Benefits

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

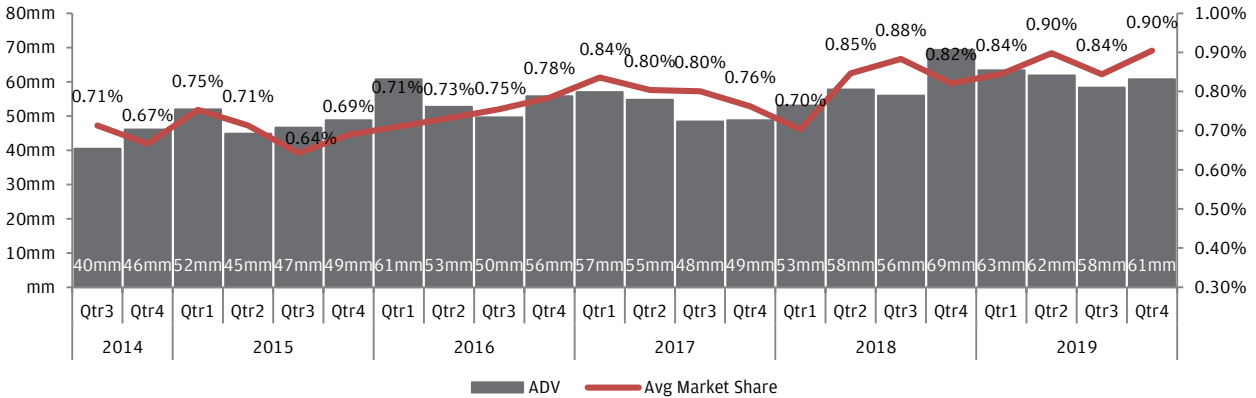
November 2019 JPM-X Statistics	
Average Daily Volume (single counted)	62.6 mm
Average Trade Size	172 shares
# of Symbols traded	6,559 unique symbols
% of Volume >= 5k shares	11.8% of Volume (7.4mm ADV)
Average Block Size (>= 5k shares)	11,179 shares

Volume by Exec Price

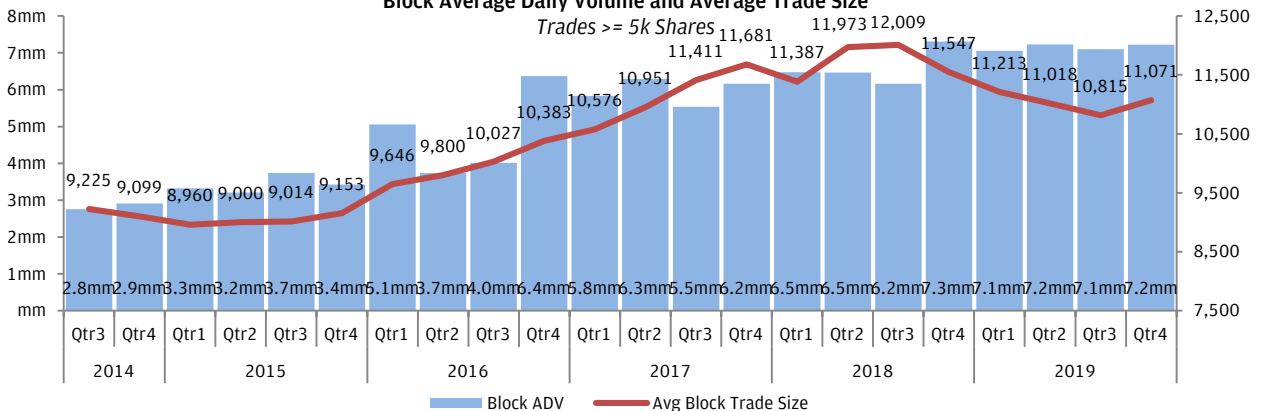


November 2019

Average Daily Volume and Market Share



Block Average Daily Volume and Average Trade Size

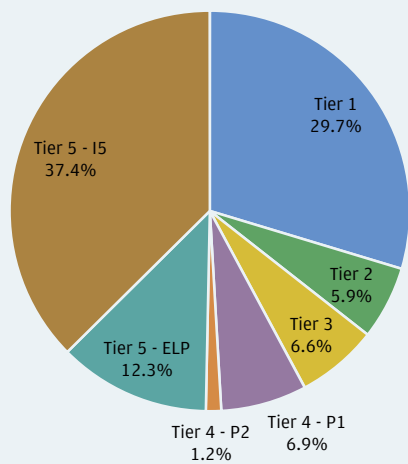


Order Flow Tiers

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.

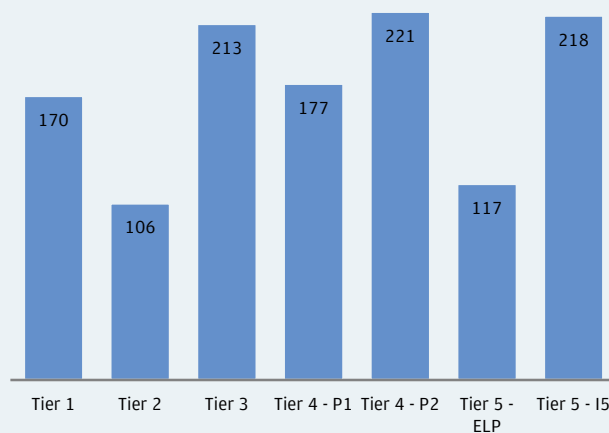
- **Tier 1 (Order Flow Type I-1):** Institutional investor client flow and JPMS affiliates' flow accessing JPM-X via algorithms/SOR
- **Tier 2 (Order Flow Type I-2):** Institutional investor client flow with direct access to JPM-X
- **Tier 3 (Order Flow Type I-3):** U.S. registered broker-dealer client 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



November 2019

Average Trade Size (By Tier)



November 2019

Sources: JPMorgan Tick and Trade Data, BATS Market Volume Summary http://www.batstrading.com/market_summary

Please also see:

JPM-X FAQs: <https://www.jpmorgan.com/directdoc/jpmxfaq.pdf>

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