



# SuperX ATS Quarterly Statistics

SuperX is Deutsche Bank's Alternative Trading System (ATS) in the US. The SuperX ATS is a non-displayed order book for listed equities that can be accessed by clients directly, or using one of Deutsche Bank's equity trading platforms.

Q2 2020 April May

## SUMMARY STATISTICS

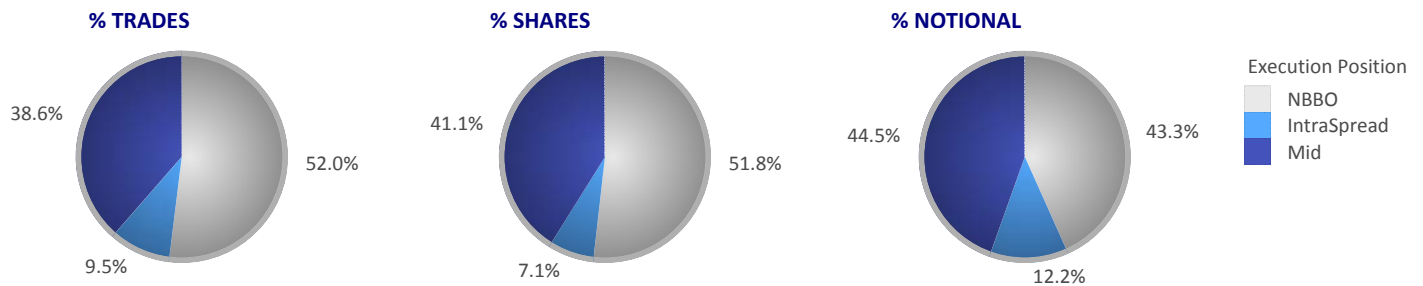
ADV - Shares (MM) *	22.4
ADV - Notional (MM) *	895.1
# Symbols traded	8,083

\* These figures are single counted.

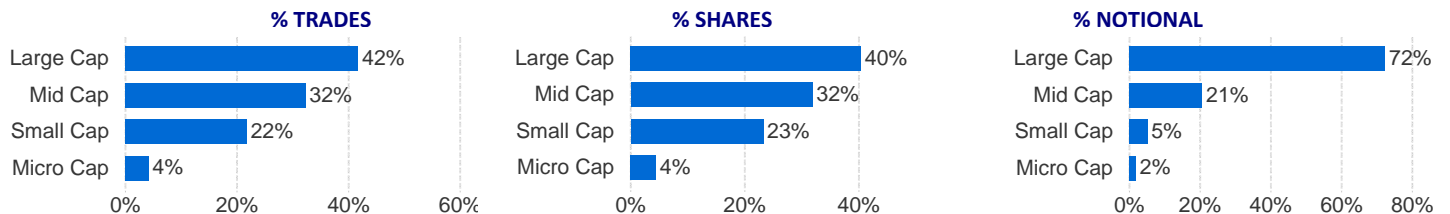
## TRADE SIZE STATISTICS

Avg Trade Size (shares)	170
% trades >= 10k shares	1.60%
% trades >= \$200k	1.50%

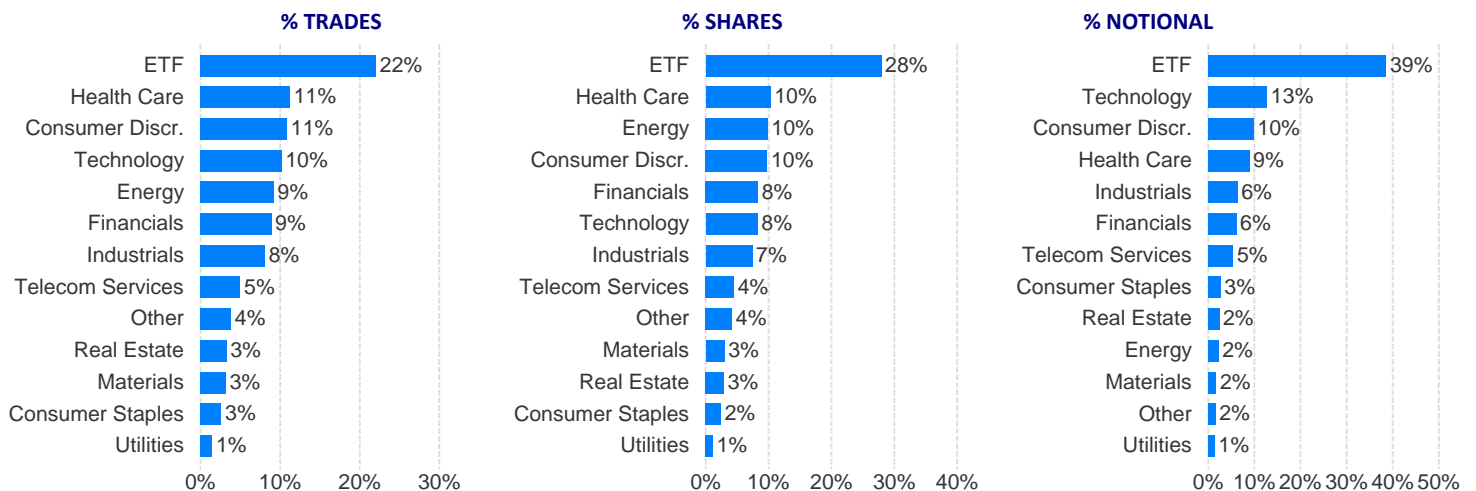
## TRADE PRICE SUMMARY



## MARKET CAP SUMMARY



## SECTOR SUMMARY





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## COUNTERPARTY TYPE SUMMARY

CounterParty Type	% Filled Shares	Average Fill Size	Spread (bps)	Spread Savings (bps)	Spread Savings (%)	Midpoint Slippage (bps)	T+20ms (bps)	T+30s (bps)	T+60min (bps)
LP Institutional	53.9%	169	10.70	6.05	56.6%	0.82	-0.02	-0.53	-0.87
LP Market Maker	40.5%	175	7.12	2.86	40.0%	-1.42	0.00	0.78	1.20
DB Agency	4.3%	141	12.16	4.60	38.3%	0.60	0.56	0.95	1.13
LP Exchange	1.1%	187	5.98	4.64	77.5%	1.43	-0.92	-1.33	0.37
DB Principal	0.2%	193	15.08	13.54	89.6%	6.05	-0.77	-1.74	9.19
<b>Total</b>	<b>100.0%</b>	<b>170</b>	<b>9.39</b>	<b>4.81</b>	<b>50.0%</b>	<b>-0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

CounterParty Type	% Filled Shares	Average Fill Size	Spread (bps)	Spread Savings (bps)	Spread Savings (%)	Midpoint Slippage (bps)	T+20ms (bps)	T+30s (bps)	T+60min (bps)
LP IOC	34.3%	170	9.09	4.58	50.5%	-0.29	-0.31	0.04	-0.50
<b>Total</b>	<b>34.3%</b>	<b>170</b>	<b>9.09</b>	<b>4.58</b>	<b>50.5%</b>	<b>-0.29</b>	<b>-0.31</b>	<b>0.04</b>	<b>-0.50</b>

## GLOSSARY

*DB:* Order flow sent from DB's Algorithms, Smart Order Router, SuperX Plus (Dark Pool Aggregator) and Direct Market Access platform to SuperX ATS.

- DB Agency: Agency client flow
- DB Principal: Deutsche Bank Securities, Inc. acting as principal

*Liquidity Partners:* Broker-Dealer clients with direct access to SuperX ATS.

- LP Exchanges: Liquidity Partners that send order flow routed out from an exchange
- LP Market Maker: Liquidity Partners that are proprietary trading firms. Some or all of their order flow may be considered "Market Making"
- LP Institutional: Liquidity Partners that are not LP Exchanges or LP Market Makers

*LP IOC:* This group is comprised of Liquidity Partners that, in our judgment, send a high proportion of IOC orders, or similar orders. Liquidity Partners classified in LP IOC are also members of either LP Institutional, LP Exchanges or LP Market Maker.

*% Filled Shares:* percentage of shares executed against a counterparty type.

*Average Fill Size:* the arithmetic average of fill size across all executions.

*Spread (bps):* the average difference in ask and bid prices expressed in basis points.

*Spread Savings (bps):* the notionally-weighted difference between fill price and the far touch price at fill time expressed in basis points.

*Spread Savings (%):* the notionally-weighted difference between fill price and the far touch price as a percentage of the bid-ask spread.

*Midpoint Slippage (bps):* the notionally-weighted difference between fill price and the midpoint price of the stock expressed in basis points.

*T+X (bps):* the notionally-weighted difference between the midpoint price at fill +X time units and the midpoint price at fill time expressed in basis points.

The above numbers are side-adjusted.

Positive mark outs reflect that prices moved in your favor. e.g. When buying, prices increased after the trade.

Negative mark outs reflect that prices moved against you. e.g. When buying, prices decreased after the trade.



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Q2 2020 June

## SUMMARY STATISTICS

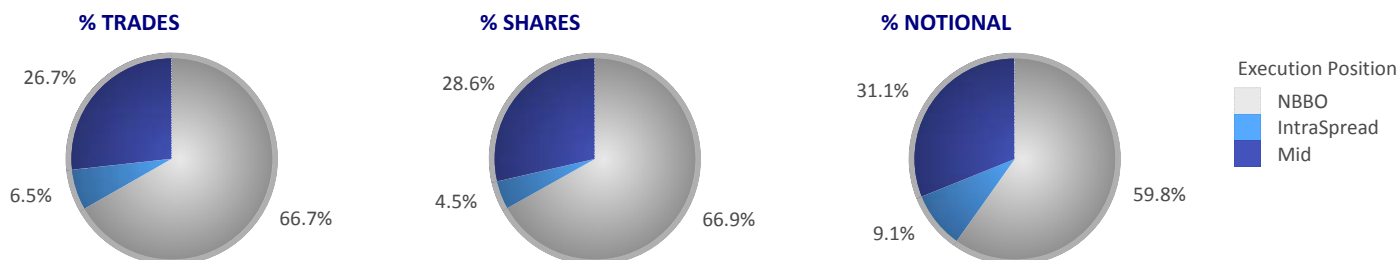
ADV - Shares (MM) *	36.9
ADV - Notional (MM) *	1,388.5
# Symbols traded	8,104

\* These figures are single counted.

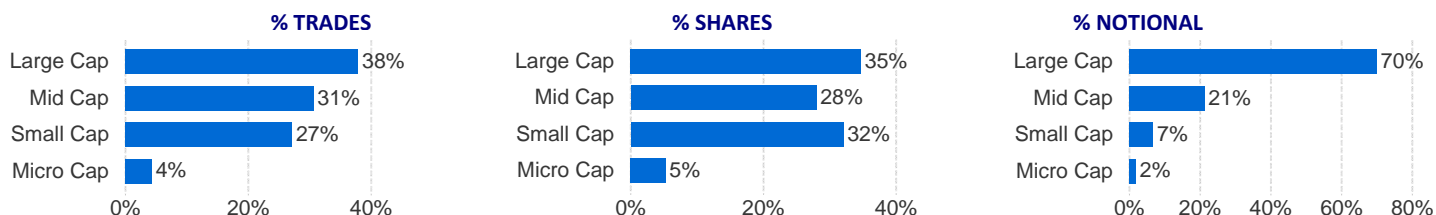
## TRADE SIZE STATISTICS

Avg Trade Size (shares)	175
% trades >= 10k shares	1.20%
% trades >= \$200k	1.40%

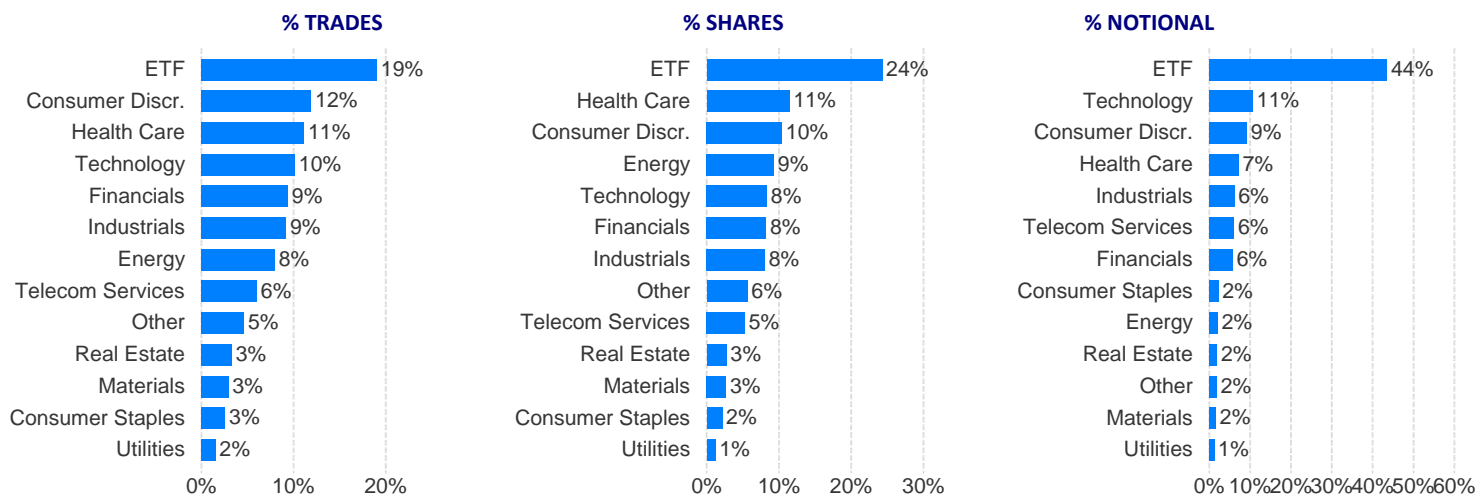
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Q2 2020 June

## COUNTERPARTY TYPE SUMMARY

CounterParty Type	% Filled Shares	Average Fill Size	Spread (bps)	Spread Savings (bps)	Spread Savings (%)	Midpoint Slippage (bps)	T+20ms (bps)	T+30s (bps)	T+60min (bps)
1 Principal	0.1%	233	30.35	26.07	84.5%	10.90	-2.57	-4.57	11.67
2 Agency	1.1%	166	7.12	5.65	79.0%	2.22	-0.22	-0.45	1.36
3 Direct Low	55.9%	180	8.55	4.60	53.7%	0.70	-0.46	-0.36	-1.19
4 Direct Medium	23.9%	184	7.98	2.51	31.5%	-1.67	1.34	1.15	3.44
5 Direct High	19.0%	151	5.81	3.28	56.7%	-0.48	-0.36	0.05	-0.29
<b>Total</b>	<b>100.0%</b>	<b>175</b>	<b>7.89</b>	<b>3.94</b>	<b>50.0%</b>	<b>0.00</b>	<b>-0.07</b>	<b>0.03</b>	<b>-0.02</b>

## GLOSSARY

- 1 Principal: DBSI acting as principal
- 2 Agency: Agency client order flow sent from DBSI's Algorithms or Smart Order Routers, where the router or the Algorithm logic elects to route to SuperX
- 3 Direct Low: Agency client orders directly routed to SuperX that are determined by DBSI to have a low average price reversion
- 4 Direct Medium: Agency client orders directly routed to SuperX that are determined by DBSI to have a medium average price reversion
- 5 Direct High: Agency client orders directly routed to SuperX that are determined by DBSI to have a high average price reversion

*% Filled Shares: percentage of shares executed against a counterparty type.*

*Average Fill Size: the arithmetic average of fill size across all executions.*

*Spread (bps): the average difference in ask and bid prices expressed in basis points.*

*Spread Savings (bps): the notionally-weighted difference between fill price and the far touch price at fill time expressed in basis points.*

*Spread Savings (%): the notionally-weighted difference between fill price and the far touch price as a percentage of the bid-ask spread.*

*Midpoint Slippage (bps): the notionally-weighted difference between fill price and the midpoint price of the stock expressed in basis points.*

*T+X (bps): the notionally-weighted difference between the midpoint price at fill +X time units and the midpoint price at fill time expressed in basis points.*

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