



# Vanguard Asset Management

Jan 01, 2018 to Dec 31, 2018

Investment Service – Portfolio Management/Reception and Transmission Professional Clients

Class of instrument	Equities - Shares and Depository Receipts
Tick size liquidity bands 1&2 (from 0 to 79 trades per day   Notifications if < 1 average trade per business day in the previous year	N

Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Instinet Europe Limited	32.00%	18.20%	2.40%	2.90%	2.91%
Citigroup Global Markets Inc	19.30%	15.50%	61.00%	15.80%	15.78%
Exane SA	17.10%	30.50%	5.60%	20.20%	20.24%
Goldman Sachs International	11.10%	12.30%	1.10%	1.50%	1.46%
Merrill Lynch International LLC	7.20%	7.10%	2.60%	18.90%	18.86%

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