

Top 5 Venue Execution Report 2019

Retail Clients

Equities - Shares & Depository Receipts

| Class of Instrument: | Tick size liquidity bands 5 and 6 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 68.16% | 47.52% | 62% | 38% | 0% |
| Xetra | 24.23% | 26.81% | 60% | 40% | 0% |
| Euronext Paris | 6.66% | 24.13% | 58% | 42% | 0% |
| Euronext Brussels | 0.74% | 1.18% | 58% | 42% | 0% |
| Borse Frankfurt | 0.20% | 0.35% | 55% | 45% | 0% |

| Class of Instrument: | Tick size liquidity bands 3 and 4 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 50.47% | 26.76% | 61% | 39% | 0% |
| Xetra | 22.06% | 14.50% | 59% | 41% | 0% |
| Euronext Paris | 17.55% | 50.09% | 68% | 32% | 0% |
| Euronext Brussels | 8.68% | 7.30% | 57% | 43% | 0% |
| Borse Frankfurt | 0.93% | 0.88% | 58% | 42% | 0% |

| Class of Instrument: | Tick size liquidity bands 1 and 2 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 25.27% | 14.22% | 52% | 48% | 0% |
| Xetra | 18.78% | 13.84% | 59% | 41% | 0% |
| Euronext Paris | 33.20% | 57.29% | 62% | 38% | 0% |
| Borse Frankfurt | 16.13% | 10.75% | 58% | 42% | 0% |
| Euronext Brussels | 6.62% | 3.91% | 64% | 36% | 0% |

Debt Instruments

| Class of Instrument: | Debt instruments | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 79.92% | 70.62% | 54% | 46% | 0% |
| Borse Frankfurt | 14.88% | 17.13% | 72% | 28% | 0% |
| Euronext Paris | 2.06% | 7.65% | 74% | 26% | 0% |
| Euronext Lisbon | 1.65% | 3.10% | 44% | 56% | 0% |
| Euronext Brussels | 1.48% | 1.51% | 49% | 51% | 0% |

Interest Rate Derivatives

| Class of Instrument: | Interest rates derivatives | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Credit Rate Derivatives

| Class of Instrument: | Credit rates derivatives | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Currency Derivatives

| Class of Instrument: | Currency derivatives | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Structured Finance Instruments

| Class of Instrument: | Structured finance instruments | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 82.16% | 82.30% | 55% | 45% | 0% |
| Euronext Paris | 15.69% | 15.42% | 55% | 45% | 0% |
| Euronext Brussels | 2.13% | 2.24% | 64% | 36% | 0% |
| Euronext Lisbon | 0.02% | 0.03% | 67% | 33% | 0% |

Equity Derivatives

| Class of Instrument: | Equity Derivatives | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Eurex | 65.58% | 68.01% | 78% | 22% | 0% |
| Euronext NYSE Liffe | 31.69% | 27.23% | 83% | 17% | 0% |
| Nasdaq Derivatives Markets | 1.35% | 3.04% | 75% | 25% | 0% |
| Borsa Italiana Derivatives | 1.38% | 1.73% | 67% | 33% | 0% |

Securitized Derivatives

| Class of Instrument: | Securitized Derivatives | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Borse Frankfurt | 96.00% | 96.71% | 44% | 56% | 0% |
| Euronext Paris | 3.49% | 3.02% | 45% | 55% | 0% |
| Euronext Amsterdam | 0.50% | 0.14% | 50% | 50% | 0% |
| Euronext Lisbon | 0.02% | 0.13% | 76% | 24% | 0% |
| Euronext Brussels | 0.00% | 0.00% | 28% | 72% | 0% |

Commodities Derivatives and Emission Allowances Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Commodities derivatives and emission allowances Derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Contracts for Difference

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Contracts for difference | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Exchange traded products (ETFs, ETNs and ETCs)

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Exchange traded products (ETFs, ETNs and ETCs) | | | | |
| Notification 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 |
| Euronext Amsterdam | 54.58% | 60.76% | 48% | 52% | 0% |
| Xetra | 28.42% | 22.82% | 44% | 56% | 0% |
| Euronext Paris | 16.36% | 15.76% | 47% | 53% | 0% |
| Borse Frankfurt | 0.60% | 0.59% | 42% | 58% | 0% |
| Euronext Lisbon | 0.03% | 0.04% | 39% | 61% | 0% |

Prof Clients

Equities - Shares & Depositary Receipts

| Class of Instrument: | Tick size liquidity bands 5 and 6 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 36.24% | 43.57% | 52% | 48% | 0% |
| Euronext Paris | 33.82% | 27.23% | 35% | 66% | 0% |
| Xetra | 28.46% | 25.12% | 28% | 72% | 0% |
| Euronext Brussels | 1.45% | 3.95% | 19% | 81% | 0% |
| Borse Frankfurt | 0.03% | 0.14% | 50% | 50% | 0% |

| Class of Instrument: | Tick size liquidity bands 3 and 4 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification 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 |
| Euronext Amsterdam | 44.28% | 40.91% | 48% | 52% | 0% |
| Xetra | 26.34% | 29.02% | 19% | 81% | 0% |
| Euronext Paris | 21.67% | 14.51% | 36% | 64% | 0% |
| Euronext Brussels | 7.65% | 14.86% | 28% | 72% | 0% |
| Borse Frankfurt | 0.05% | 0.70% | 25% | 75% | 0% |

| Class of Instrument: | Tick size liquidity bands 1 and 2 | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
| Euronext Amsterdam | 86.76% | 28.00% | 18% | 82% | 0% |
| Borse Frankfurt | 9.34% | 55.00% | 20% | 80% | 0% |
| Euronext Paris | 3.79% | 8.00% | 50% | 50% | 0% |
| Xetra | 0.09% | 8.00% | 13% | 88% | 0% |
| Euronext Brussels | 0.01% | 1.00% | 0% | 100% | 0% |

Debt Instruments

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Debt instruments | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
| Borse Frankfurt | 36.91% | 39.26% | 53% | 47% | 0% |
| Euronext Paris | 30.85% | 22.22% | 50% | 50% | 0% |
| Euronext Amsterdam | 27.24% | 34.81% | 15% | 85% | 0% |
| Euronext Lisbon | 5.00% | 3.70% | 40% | 60% | 0% |

Interest Rate Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Interest rates derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Credit Rate Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Credit rates derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Currency Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Currency derivatives | | | | |
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| 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 |
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Structured Finance Instruments

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Structured finance instruments | | | | |
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| 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 |
| Euronext Amsterdam | 100.00% | 100.00% | 50% | 50% | 0% |

Equity Derivatives

| | | | | | |
|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Equity Derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
| Euronext NYSE Liffe | 100.00% | 0.00% | 100% | 0% | 0% |

Securitized Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Securitized Derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
| Borse Frankfurt | 99.9992% | 99.16% | 86% | 14% | 0% |
| Euronext Amsterdam | 0.0008% | 0.84% | 100% | 0% | 0% |

Commodities Derivatives and Emission Allowances Derivatives

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Commodities derivatives and emission allowances Derivatives | | | | |
| Notification if <1 average trade per business day in the previous year | Y | | | | |
| 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 |
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Contracts for Difference

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Contracts for difference | | | | |
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| 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 |
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Exchange traded products (ETFs, ETNs and ETCs)

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|---|--|--|------------------------------|---------------------------------|-------------------------------|
| Class of Instrument: | Exchange traded products (ETFs, ETNs and ETCs) | | | | |
| Notification 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 |
| Euronext Amsterdam | 28.13% | 33.18% | 24% | 76% | 0% |
| Xetra | 40.16% | 37.05% | 25% | 75% | 0% |
| Euronext Paris | 31.71% | 29.77% | 12% | 88% | 0% |