

Top Brokers and Venues

Full Year 2017

Redburn Top Brokers and Venues

This document details the top brokers and venues by volume for flow executed through Redburn (Europe) Limited as detailed under ESMA requirements. The data contained within is based on all executions taking place between 1 January 2017 and 31 December 2017.

Summary of execution quality monitoring

All orders are executed in-line with Redburn's order execution policy which is available from our public website redburn.com. A range of factors are considered when selecting a venue to trade on, the venues used will be subject to the agreement with the client and objectives of the order being worked. The primary factors considered are available price, volume and probability of execution. Cost of execution is only considered when all other factors are equal.

Redburn has no close links, conflicts of interest, or common ownerships with any execution venues.

Payments received from or paid to venues are subject to standard venue pricing policies as published by the individual venues. A list of Redburn's exchange memberships is available on request.

The list of venues accessed changes over time depending on relative market share and availability of liquidity. During the period covered, no venues have been added or removed to Redburn's list of trading venues due to any other factors.

The same execution arrangements are available to all clients. Any difference in execution style or venue access is purely driven by client preference.

Redburn does not trade on-behalf of retail clients. Execution of all orders is based on available price and liquidity as outlined in our order execution policy.

Reburn does not make use of a consolidated tape provider.

Redburn gathers data on execution quality through our own trading activity and through feeds provided by the individual trading venues. This data is monitored to determine the effectiveness of trading strategies and guide decisions on how orders will be executed.

Top Venues

Shares & Depositary Receipts

Tick size liquidity bands 5 and 6 (from 2,000 trades per day)

Average below one trade per business day: N

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
BATS EUROPE - CXE ORDER BOOKS	40.40/	10.70/	57 50/	40.50/	0.00/
CHIX	12.4%	19.7%	57.5%	42.5%	0.0%
LONDON STOCK EXCHANGE	11.9%	40.50/	00.50/	50.00/	0.00/
XLON		10.5%	32.5%	59.2%	0.0%
UBS MTF		10.40/	04.00/	0.40/	0.00/
XUBS	10.0%	10.4%	91.9%	8.1%	0.0%
BATS EUROPE - CXE DARK ORDER	0.00/		00.40/		0.00/
CHID	6.9%	7.1%	93.1%	6.9%	0.0%
TURQUOISE DARK		5.00/			0.00/
TRQM	6.4%	5.3%	90.9%	4.5%	0.0%

Shares & Depositary Receipts

Tick size liquidity bands 3 and 4 (from 80 to 1,999 trades per day)

Average below one trade per business day: N

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
UBS MTF	40.70/	44.00/	07.00/	40.00/	0.00/
XUBS	12.7%	14.0%	87.2%	12.8%	0.0%
BATS EUROPE - CXE DARK ORDER	0.20/	7.00/	07.00/	40.40/	0.00/
CHID	8.3%	7.9%	87.9%	12.1%	0.0%
TURQUOISE DARK	9.00/	6.40/	02.00/	0.50/	0.00/
TRQM	8.0%	6.4%	83.9%	8.5%	0.0%
LONDON STOCK EXCHANGE	7.40/	44.20/	20.20/	FO 70/	0.00/
XLON	7.4%	11.3%	38.3%	52.7%	0.0%
BATS EUROPE - CXE ORDER BOOKS	C 40/	40.00/	F0 00/	40.00/	0.00/
CHIX	6.4%	12.0%	58.0%	42.0%	0.0%

Shares & Depositary Receipts

Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
SIX SWISS EXCHANGE - BLUE CHIPS	44.40/	4.70/	24.00/	00.20/	0.00/
XVTX	14.1%	4.7%	31.0%	66.3%	0.0%
BATS EUROPE - CXE ORDER BOOKS	0.40/	40.00/	74 40/	00.00/	0.00/
CHIX	8.1%	10.8%	71.4%	28.6%	0.0%
BLOCKMATCH		F 40/	00.40/	70.00/	0.00/
BLOX	7.6%	5.1%	20.1%	79.9%	0.0%
SIX SWISS EXCHANGE	6.7%	40.00/	0.70/	00.00/	0.00/
XSWX		10.9%	9.7%	89.8%	0.0%
POSIT	6.00/	2.20/	400.00/	No Data	0.00/
XPOS	6.2%	3.3%	100.0%	No Data	0.0%

Top Venues

Exchange Traded Products

Average below one trade per business day: N

Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
44.20/	0.00/	40.70/	50.00/	0.00/
41.3%	6.9%	40.7%	50.8%	0.0%
20.70/	FC 40/	22.00/	00.40/	0.00/
26.7%	56.4%	33.0%	00.4%	0.0%
0.00/	44.20/	60.00/	00.00/	0.00
9.6%	11.3%	68.0%	32.0%	0.0%
7.40/	4.00/	No Boto	400.00/	0.00/
7.1%	1.0%	No Data	100.0%	0.0%
0.70/	40.70/	0.70/	05.20/	0.00/
6.7%	10.7%	9.7%	85.3%	0.0%
	•	volume traded orders executed 41.3% 6.9% 26.7% 56.4% 9.6% 11.3% 7.1% 1.0%	volume traded orders executed passive orders 41.3% 6.9% 46.7% 26.7% 56.4% 33.6% 9.6% 11.3% 68.0% 7.1% 1.0% No Data	volume traded orders executed passive orders aggressive orders 41.3% 6.9% 46.7% 50.8% 26.7% 56.4% 33.6% 66.4% 9.6% 11.3% 68.0% 32.0% 7.1% 1.0% No Data 100.0%

Other Instruments

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
LONDON STOCK EXCHANGE	20.00/	22.20/	20.40/	02.40/	0.00/
XLON	20.2%	22.3%	30.1%	63.1%	0.0%
UBS MTF	0.50/	0.00/	04.00/	40.40/	0.00/
XUBS	8.5%	9.6%	81.6%	18.4%	0.0%
BATS EUROPE - CXE ORDER BOOKS	0.40/	40.00/	55.40/	44.00/	0.00/
CHIX	8.4%	16.8%	55.1%	44.9%	0.0%
BATS EUROPE - CXE DARK ORDER	0.20/	0.20/	00.40/	44.00/	0.00/
CHID	6.3%	6.3%	88.1%	11.9%	0.0%
TURQUOISE DARK		4.00/	05.00/	44.007	0.00/
TRQM	6.2%	4.6%	85.2%	11.2%	0.0%

Top Brokers

Shares & Depositary Receipts

Tick size liquidity bands 5 and 6 (from 2,000 trades per day)

Average below one trade per business day: N

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
Instinet Europe Ltd	04.00/	40.50/	57.70 <i>/</i>	05.00/	0.00/
213800MXAKR2LA1VBM44	21.9%	16.5%	57.7%	35.2%	0.0%
JP Morgan Securities Plc	40.20/	22.00/	20.40/	72.00/	0.00/
K6Q0W1PS1L1O4IQL9C32	19.3%	22.9%	26.1%	73.8%	0.0%
UBS AG	40.00/		0.4.00/	45 40/	0.00/
BFM8T61CT2L1QCEMIK50	19.0%	23.7%	84.6%	15.4%	0.0%
Morgan Stanley International Plc	44.00/	0.00/	04.00/	7.40/	0.00/
4PQUHN3JPFGFNF3BB653	11.0%	9.9%	91.2%	7.4%	0.0%
Credit Suisse Securities Eur Ltd	7.70/	0.50/	25 50/	C4 F0/	0.007
DL6FFRRLF74S01HE2M14	7.7%	9.5%	35.5%	64.5%	0.0%

Shares & Depositary Receipts

Tick size liquidity bands 3 and 4 (from 80 to 1,999 trades per day)

Average below one trade per business day: N

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
UBS AG	24.59/	40.00/	70.00/	00.40/	0.00/
BFM8T61CT2L1QCEMIK50	24.5%	40.0%	73.6%	26.4%	0.0%
Instinet Europe Ltd	40.40/	40.00/	40.00/	07.00/	0.00/
213800MXAKR2LA1VBM44	16.4%	12.6%	48.6%	37.3%	0.0%
JP Morgan Securities Plc	45.00/	40.40/	0.4.00/	05.00/	0.00/
K6Q0W1PS1L1O4IQL9C32	15.0%	16.4%	34.3%	65.6%	0.0%
Morgan Stanley International Plc	42.00/	0.40/	00.40/	45.00/	0.00/
4PQUHN3JPFGFNF3BB653	13.8%	8.4%	82.4%	15.9%	0.0%
Credit Suisse Securities Eur Ltd	0.50/	0.00/	20.00/	24.40/	0.00/
DL6FFRRLF74S01HE2M14	9.5%	9.6%	38.6%	61.4%	0.0%

Shares & Depositary Receipts

Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
Instinet Europe Ltd	29.2%	22.40/	F0 20/	20.40/	0.00/
213800MXAKR2LA1VBM44	29.2%	23.1%	52.3%	38.1%	0.0%
JP Morgan Securities Plc	40.00/	40.00/	25 40/	C4 C0/	0.00/
K6Q0W1PS1L1O4IQL9C32	18.8%	16.0%	35.4%	64.6%	0.0%
UBS AG	40.70/		47.50/	50.5%	0.00/
BFM8T61CT2L1QCEMIK50	13.7%	33.3%	47.5%	52.5%	0.0%
Credit Suisse Securities Eur Ltd	0.00/	0.00/	40.00/	04.00/	0.00/
DL6FFRRLF74S01HE2M14	9.0%	6.8%	16.0%	84.0%	0.0%
Investment Technology Group Ltd	0.407	4.40/		No Data	
213800EEC95PRUCEUP63	8.4%	4.4%	100.0%	No Data	0.0%

Top Brokers

Exchange Traded Products

Average below one trade per business day: N

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
JP Morgan Securities Plc	00.00/	0.70/	05.50/	74.50/	0.00/
K6Q0W1PS1L1O4IQL9C32	36.3%	9.7%	25.5%	74.5%	0.0%
Instinet Europe Ltd	25.00/	24.60/	F0 20/	20.5%	0.00/
213800MXAKR2LA1VBM44	35.8%	24.6%	58.2%	38.5%	0.0%
Societe Generale	47.00/	FC C0/	40.50/	00.5%	0.004
O2RNE8IBXP4R0TD8PU41	17.6%	56.6%	16.5%	83.5%	0.0%
Credit Suisse Securities Eur Ltd	0.50/	0.00/	00.40/	74.00/	0.00/
DL6FFRRLF74S01HE2M14	9.5%	8.6%	28.1%	71.9%	0.0%
Tavira Securities Ltd	0.00/	0.40/	40.00/	CO 00/	0.00/
213800KDMRJLS2KX8Z18	0.6%	0.4%	40.0%	60.0%	0.0%

Other Instruments

Identifier	Proportion of volume traded	Proportion of orders executed	Percent of passive orders	Percent of aggressive orders	Percent of directed orders
UBS AG	00.00/	00.00/	00.50/	00.50/	0.00/
BFM8T61CT2L1QCEMIK50	22.0%	29.0%	66.5%	33.5%	0.0%
JP Morgan Securities Plc	40.00/	00.00/	00.70/	77.00/	0.00/
K6Q0W1PS1L1O4IQL9C32	19.9%	29.6%	22.7%	77.2%	0.0%
Instinet Europe Ltd	10.50/	10.00/	55.40/	00.40/	0.00
213800MXAKR2LA1VBM44	18.5%	16.2%	55.1%	38.1%	0.0%
Morgan Stanley International Plc	44.00/	7.50	00.00/	45.007	
4PQUHN3JPFGFNF3BB653	11.0%	7.5%	83.8%	15.9%	0.0%
Societe Generale	7.40/	4.70/			
O2RNE8IBXP4R0TD8PU41	7.4%	4.7%	93.3%	3.6%	0.0%



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