

Class of Instrument AA99

Equity instruments- Shares and share certificates

Tick Size not used

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
OCTO FINANCES SA (969500378YE4MLGK0898)	35,73%	0,80%	100,00%	0,00%	100,00%
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	26,72%	5,74%	100,00%	0,00%	100,00%
Baader Bank AG (529900JFOPPEDUR61H13)	17,11%	1,04%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	7,93%	0,55%	100,00%	0,00%	100,00%
Robotti Securities, LLC (2549002YOBTNZ00I4L93)	5,57%	4,36%	100,00%	0,00%	100,00%



Class of Instrument AA99

Equity instruments- Shares and share certificates

Tick Size liquidity band A and liquidity band B

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9,36%	61,28%	100,00%	0,00%	100,00%
81%	2,38%	100,00%	0,00%	100,00%
02%	3,09%	100,00%	0,00%	100,00%
14%	0,47%	100,00%	0,00%	100,00%
60%	2,32%	100,00%	0,00%	100,00%
8	1% 2% 4%	1% 2,38% 2% 3,09% 4% 0,47%	1% 2,38% 100,00% 2% 3,09% 100,00% 4% 0,47% 100,00%	1%     2,38%     100,00%     0,00%       2%     3,09%     100,00%     0,00%       4%     0,47%     100,00%     0,00%



Class of Instrument

**AA99** 

Equity instruments- Shares and share certificates

liquidity band C and liquidity band D Tick Size

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	68,49%	66,61%	100,00%	0,00%	100,00%
Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346)	8,29%	14,06%	100,00%	0,00%	100,00%
ABG Sundal Collier Norge (2138005DRCU66B8BNY04)	7,64%	3,09%	100,00%	0,00%	100,00%
Liquidnet EU Limited (2138005N5TO2UJR67I36)	4,41%	2,00%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	4,36%	7,55%	100,00%	0,00%	100,00%



Class of Instrument AA99

Equity instruments- Shares and share certificates

Tick Size liquidity band E and liquidity band F

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	74,47%	78,41%	100,00%	0,00%	100,00%
Baader Bank AG (529900JFOPPEDUR61H13)	10,60%	3,38%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	6,49%	7,24%	100,00%	0,00%	100,00%
Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346)	2,90%	4,73%	100,00%	0,00%	100,00%
Jefferies GmbH (5493004I3LZM39BWHQ75)	1,86%	0,47%	100,00%	0,00%	100,00%



Class of Instrument **AB99** Equity instruments- Shares and share certificates Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year Y Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class Morgan Stanley Europe SE (54930056FHWP7GIWYY08) 100,00% 100,00% 100,00% 100,00% 0.00%



Class of Instrument **AB99** 

Equity instruments- Shares and share certificates

Tick Size

liquidity band A and liquidity band B

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	85,48%	91,77%	100,00%	0,00%	100,00%
Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346)	7,64%	7,21%	100,00%	0,00%	100,00%
Robotti Securities, LLC (2549002YOBTNZ00I4L93)	5,19%	1,01%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	1,68%	0,02%	100,00%	0,00%	100,00%



Class of Instrument AB99

Equity instruments- Shares and share certificates

Tick Size liquidity band C and liquidity band D

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	80,71%	83,28%	100,00%	0,00%	100,00%
Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346)	19,29%	16,72%	100,00%	0,00%	100,00%



Class of Instrument

**AB99** 

Equity instruments- Shares and share certificates liquidity band E and liquidity band F Tick Size Information on whether an average of < 1 trade per business day was executed in the previous year Y Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class

Morgan Stanley Europe SE (54930056FHWP7GIWYY08) 100,00% 100,00% 100,00% 0,00% 100,00%



Class of Instrument AC99

Exchange traded products (ETPs)Exc

Tick Size not used

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
Flow Traders B V (549300CLJI9XDH12XV51)	41,28%	45,00%	100,00%	0,00%	100,00%
Jane Street Financial Ltd. (549300ZHEHX8M31RP142)	23,76%	26,80%	100,00%	0,00%	100,00%
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	18,30%	14,60%	100,00%	0,00%	100,00%
Optiver V.O.F. (7245009KRYSAYB2QCC29)	15,47%	12,39%	100,00%	0,00%	100,00%
Jefferies GmbH (5493004I3LZM39BWHQ75)	0,47%	0,37%	100,00%	0,00%	100,00%



Class of Instrument AC99

Exchange traded products (ETPs)Exc

Tick Size

liquidity band A and liquidity band B

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
Flow Traders B V (549300CLJI9XDH12XV51)	52,05%	24,13%	100,00%	0,00%	100,00%
Jane Street Financial Ltd. (549300ZHEHX8M31RP142)	47,95%	75,87%	100,00%	0,00%	100,00%



Class of Instrument AD99

other instruments

liquidity band A and liquidity band B Tick Size

Information on whether an average of < 1 trade per business day w  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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	90,86%	90,14%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	9,14%	9,86%	100,00%	0,00%	100,00%



Class of Instrument

AE99

other instruments

Tick Size

not used

Information on whether an average of < 1 trade per business day w  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
J P Morgan SE FFM (549300ZK53CNGEEI6A29)	99,84%	97,12%	100,00%	0,00%	100,00%
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	0,16%	2,88%	100,00%	0,00%	100,00%



Class of Instrument AE99

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other instruments

Tick Size liquidity band A and liquidity band B

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	83,76%	100,00%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	16,24%	0,00%	100,00%	0,00%	100,00%



Class of Instrument AE99

other instruments

Tick Size liquidity band C and liquidity band D

Information on whether an average of < 1 trade per business day was executed 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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Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0,00%

100,00%



Class of Instrument

BA10

Debt instruments

Tick Size

not used

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
Barclays Bank PLC Ireland (2G5BKIC2CB69PRJH1W31)	13,98%	13,60%	100,00%	0,00%	100,00%
Deutsche Bk Ffm (7LTWFZYICNSX8D621K86)	13,27%	11,96%	100,00%	0,00%	100,00%
Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04)	9,78%	9,80%	100,00%	0,00%	100,00%
NatWest Markets N.V. (X3CZP3CK64YBHON1LE12)	8,02%	6,98%	100,00%	0,00%	100,00%
Soc Gen Paris (O2RNE8IBXP4R0TD8PU41)	6,63%	7,05%	100,00%	0,00%	100,00%



Class of Instrument

BA11

Debt instruments

Tick Size

not used

Information on whether an average of < 1 trade per business day was executed in the previous year Y

Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class J P Morgan SE FFM (549300ZK53CNGEEI6A29) 44,75% 44,89% 100,00% 0,00% 100,00% Deutsche Bk Ffm (7LTWFZYICNSX8D621K86) 16,51% 13.86% 100,00% 0.00% 100,00% Goldman Sachs Bk Europe SE (8IBZUGJ7JPLH368JE346) 100,00% 7.15% 5.68% 100,00% 0.00% Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) 6.89% 5.14% 100,00% 0.00% 100.00% BayernLB Mue (VDYMYTQGZZ6DU0912C88) 4,09% 3,13% 100,00% 0.00% 100,00%



Class of Instrument

BA12

Debt instruments

Tick Size

not used

Information on whether an average of < 1 trade per business day was executed in the previous year Y

Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class BofA Securities Europe SA (549300FH0WJAPEHTIQ77) 52,01% 48,41% 100,00% 0,00% 100,00% BNP Paribas Paris (R0MUWSFPU8MPRO8K5P83) 46,96% 48,41% 100,00% 0.00% 100,00% 100,00% UniCredit Bank AG Mün (2ZCNRR8UK83OBTEK2170) 100,00% 0.66% 1.94% 0.00% Intesa Sanpaolo SpA Maild (2W8N8UU78PMDQKZENC08) 0.37% 1.25% 100,00% 0.00% 100.00%



Class of Instrument

BA13

Debt instruments

Tick Size

not used

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
Banco Santander S A (5493006QMFDDMYWIAM13)	13,60%	13,86%	100,00%	0,00%	100,00%
Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04)	12,76%	12,80%	100,00%	0,00%	100,00%
J P Morgan SE FFM (549300ZK53CNGEEI6A29)	9,62%	9,25%	100,00%	0,00%	100,00%
Commerzbank AG Ffm (851WYGNLUQLFZBSYGB56)	8,32%	8,00%	100,00%	0,00%	100,00%
DZ Bank AG (529900HNOAA1KXQJUQ27)	8,00%	8,63%	100,00%	0,00%	100,00%



Class of Instrument

BA14

Debt instruments

Tick Size

not used

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
BNP Paribas Paris (R0MUWSFPU8MPRO8K5P83)	7,86%	8,20%	100,00%	0,00%	100,00%
HSBC Trinkaus Dssd GmbH (JUNT405OW8OY5GN4DX16)	7,83%	7,56%	100,00%	0,00%	100,00%
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	7,57%	7,49%	100,00%	0,00%	100,00%
BofA Securities Europe SA (549300FH0WJAPEHTIQ77)	7,46%	7,43%	100,00%	0,00%	100,00%
Deutsche Bk Ffm (7LTWFZYICNSX8D621K86)	7,06%	7,27%	100,00%	0,00%	100,00%



Class of Instrument

BA15

Debt instruments

Tick Size

not used

Information on whether an average of < 1 trade per business day was executed in the previous year Y

Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class HSBC Trinkaus Dssd GmbH (JUNT405OW8OY5GN4DX16) 21,43% 19,70% 100,00% 0,00% 100,00% Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) 13.25% 12,98% 100,00% 0.00% 100.00% J P Morgan SE FFM (549300ZK53CNGEEI6A29) 9.04% 100.00% 12,98% 100,00% 0.00% Toronto Dominion Bk Ldn (PT3QB789TSUIDF371261) 5.78% 4.34% 100,00% 0.00% 100.00% BNP Paribas Paris (R0MUWSFPU8MPRO8K5P83) 4,84% 4,73% 100,00% 0.00% 100,00%



Class of Instrument BD10 other derivatives Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year Y Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class J P Morgan SE FFM (549300ZK53CNGEEI6A29) 0.00% 100,00% 100,00% 100,00% 100,00%



Class of Instrument	BD21					
	Equity derivatives					
Tick Size	not used					
Information on whether	an average of < 1 trade per business day wa	s executed in the previous	s year N			
1 *	enues 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
J P Morgan SE FFM (549	9300ZK53CNGEEI6A29)	100,00%	100,00%	100,00%	0,00%	100,00%



Class of Instrument BD24 Currency derivatives Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year N Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class J P Morgan SE FFM (549300ZK53CNGEEI6A29) 0.00% 100,00% 100,00% 100,00% 100,00%



Class of Instrument	BD99					
	other derivatives					
Tick Size	not used					
Information on whether	an average of < 1 trade per business day wa	s executed in the previous	s year N			
Top five execution v	enues 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
J P Morgan SE FFM (54	19300ZK53CNGEEI6A29)	100,00%	100,00%	100,00%	0,00%	100,00%



Class of Instrument BE21 securitized derivatives Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year N Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class Morgan Stanley Europe SE (54930056FHWP7GIWYY08) 0.00% 100,00% 100,00% 100,00% 100,00%



Class of Instrument **BE99** securitized derivatives Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year Y Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class Flow Traders B V (549300CLJI9XDH12XV51) 0.00% 100,00% 100,00% 100,00% 100,00%



Class of Instrument BF99

Exchange traded products (ETPs)

Tick Size not used

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
Flow Traders B V (549300CLJI9XDH12XV51)	52,72%	40,00%	100,00%	0,00%	100,00%
Optiver V.O.F. (7245009KRYSAYB2QCC29)	47,28%	60,00%	100,00%	0,00%	100,00%



Class of Instrument C999 no specific classification Tick Size not used Information on whether an average of < 1 trade per business day was executed in the previous year Y Top five execution venues ranked in terms of trading volumes Proportion of volume Proportion of orders Percentage of Percentage of Percentage of (descending order) traded as a percentage executed as percentage passive orders aggressive orders directed orders of total in that class of total in that class Morgan Stanley Europe SE (54930056FHWP7GIWYY08) 0.00% 100,00% 100,00% 100,00% 100,00%



Class of Instrument C

C999

no specific classification

Tick Size liquidity band A and liquidity band B

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
Morgan Stanley Europe SE (54930056FHWP7GIWYY08)	84,11%	73,24%	100,00%	0,00%	100,00%
UBS Europe SE (5299007QVIQ7IO64NX37)	15,89%	26,76%	100,00%	0,00%	100,00%



Class of Instrument	C999					
	no specific classification					
Tick Size	liquidity band C and liquidity band D					
Information on whether	an average of < 1 trade per business day wa	s executed in the previous	s year Y			
1 *	enues 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
Morgan Stanley Europe S	SE (54930056FHWP7GIWYY08)	100,00%	100,00%	100,00%	0,00%	100,00%



Class of Instrument (

CA99

Debt instruments

Tick Size

not used

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
Deutsche Bk Ffm (7LTWFZYICNSX8D621K86)	22,08%	11,73%	100,00%	0,00%	100,00%
Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04)	18,14%	10,77%	100,00%	0,00%	100,00%
J P Morgan SE FFM (549300ZK53CNGEEI6A29)	10,14%	7,19%	100,00%	0,00%	100,00%
Credit Agricole Corp & Inv (1VUV7VQFKUOQSJ21A208)	8,97%	6,36%	100,00%	0,00%	100,00%
DZ Bank AG (529900HNOAA1KXQJUQ27)	7,53%	5,39%	100,00%	0,00%	100,00%