

Class of Instrument

AA99

Equity instruments- Shar

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) | 91,59% | 47,37% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 3,21% | 5,25% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 2,86% | 42,55% | 100,00% | 0,00% | 100,00% |
| Ichiyoshi Securities Co Ltd (353800A8M3VE49QYFV53) | 1,86% | 4,76% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley & Co. Korea () | 0,48% | 0,08% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument

AA99

Equity instruments- Shar

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) | 64,01% | 65,76% | 100,00% | 0,00% | 100,00% |
| Baader Bank AG (529900JFOPPEDUR61H13) | 11,29% | 0,55% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 11,10% | 19,35% | 100,00% | 0,00% | 100,00% |
| Jefferies International Ltd (S5THZMDUJCTQZBTRVI98) | 10,09% | 0,65% | 100,00% | 0,00% | 100,00% |
| Liquidnet EU Limited (2138005N5TO2UJR67I36) | 1,48% | 0,42% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument AA99

Equity instruments- Shar

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| Jefferies International Ltd (S5THZMDUJCTQZBTRVI98) | 38,34% | 1,05% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 37,61% | 44,25% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 9,64% | 46,54% | 100,00% | 0,00% | 100,00% |
| Baader Bank AG (529900JFOPPEDUR61H13) | 6,40% | 0,17% | 100,00% | 0,00% | 100,00% |
| Liquidnet EU Limited (2138005N5TO2UJR67I36) | 6,20% | 3,25% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument AA99

Equity instruments- Shar

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) | 47,30% | 63,04% | 100,00% | 0,00% | 100,00% |
| Jefferies International Ltd (S5THZMDUJCTQZBTRVI98) | 24,90% | 6,56% | 100,00% | 0,00% | 100,00% |
| Baader Bank AG (529900JFOPPEDUR61H13) | 19,12% | 7,14% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 3,78% | 11,07% | 100,00% | 0,00% | 100,00% |
| Liquidnet EU Limited (2138005N5TO2UJR67I36) | 2,10% | 3,54% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument **AB99**

Equity instruments- Shar

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| J P Morgan SE FFM (549300ZK53CNGEEI6A29) | 99,89% | 99,70% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 0,11% | 0,30% | 100,00% | 0,00% | 100,00% |



Class of Instrument **AB99**

Equity instruments- Shar

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) | 75,00% | 55,63% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 25,00% | 44,37% | 100,00% | 0,00% | 100,00% |



Class of Instrument AB99

Equity instruments- Shar

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 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 | _ <u> </u> | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|------------|------------------------------|---------------------------------|-------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|------------|------------------------------|---------------------------------|-------------------------------|

Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0,00%



Class of Instrument **AB99** Equity instruments- Shar 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 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) 100,00% 100,00% 100,00% 0,00% 100,00%



Class of Instrument AC99

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Exchange traded product

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| Jane Street Financial Ltd. (549300ZHEHX8M31RP142) | 27,50% | 29,30% | 100,00% | 0,00% | 100,00% |
| Flow Traders B V (549300CLJI9XDH12XV51) | 25,22% | 33,43% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 24,95% | 18,38% | 100,00% | 0,00% | 100,00% |
| Optiver V.O.F. (7245009KRYSAYB2QCC29) | 15,53% | 12,88% | 100,00% | 0,00% | 100,00% |
| Donner & Reuschel AG (23ZYQ4KSBEDVYML8NC86) | 6,07% | 5,47% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument AC99

Exchange traded product

liquidity band A and liquidity band B 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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| Optiver V.O.F. (7245009KRYSAYB2QCC29) | 51,35% | 51,36% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 48,65% | 48,64% | 100,00% | 0,00% | 100,00% |



Class of Instrument AD99

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) | 66,01% | 61,67% | 100,00% | 0,00% | 100,00% |
| Liquidnet EU Limited (2138005N5TO2UJR67I36) | 21,20% | 19,50% | 100,00% | 0,00% | 100,00% |
| UBS Europe SE (5299007QVIQ7IO64NX37) | 6,52% | 5,84% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346) | 6,28% | 12,99% | 100,00% | 0,00% | 100,00% |



Class of Instrument AD99

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 | _ <u> </u> | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|------------|------------------------------|---------------------------------|-------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|------------|------------------------------|---------------------------------|-------------------------------|

Goldman Sachs Bank Europe (8IBZUGJ7JPLH368JE346)

100,00%

100,00%

100,00%

0,00%



Class of Instrument

AE99

other 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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| Jefferies International LTD (S5THZMDUJCTQZBTRVI98) | 56,87% | 25,85% | 100,00% | 0,00% | 100,00% |
| Goldman Sachs Bk Europe SE (8IBZUGJ7JPLH368JE346) | 42,93% | 18,09% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 0,20% | 56,06% | 100,00% | 0,00% | 100,00% |



Class of Instrument AE99

other instruments

Tick Size

liquidity band A and liquidity band B

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|----------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|----------------------------------|

Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0.00%



Class of Instrument AE99

other instruments

liquidity band C and liquidity band D 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 (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)

100,00%

100,00%

100,00%

0.00%



Class of Instrument AE99

other instruments

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 (descending order) | Proportion of volume traded as a percentage of total in that class | 1 * | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|-----|------------------------------|---------------------------------|-------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|-----|------------------------------|---------------------------------|-------------------------------|

Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0.00%



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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| HSBC Trinkaus Dssd (JUNT405OW8OY5GN4DX16) | 11,18% | 11,94% | 100,00% | 0,00% | 100,00% |
| NatWest Markets N.V. (X3CZP3CK64YBHON1LE12) | 9,50% | 9,51% | 100,00% | 0,00% | 100,00% |
| BofA Securities Europe SA (549300FH0WJAPEHTIQ77) | 7,30% | 7,54% | 100,00% | 0,00% | 100,00% |
| Barclays Bank PLC Ireland (2G5BKIC2CB69PRJH1W31) | 6,43% | 6,10% | 100,00% | 0,00% | 100,00% |
| Soc Gen Paris (O2RNE8IBXP4R0TD8PU41) | 6,30% | 6,76% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument

BA11

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| Commerzbank AG Ffm (851WYGNLUQLFZBSYGB56) | 13,29% | 5,25% | 100,00% | 0,00% | 100,00% |
| Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) | 11,41% | 4,20% | 100,00% | 0,00% | 100,00% |
| Toronto Dominion Bk Ldn (PT3QB789TSUIDF371261) | 10,54% | 18,10% | 100,00% | 0,00% | 100,00% |
| NatWest Markets N.V. (X3CZP3CK64YBHON1LE12) | 8,55% | 3,13% | 100,00% | 0,00% | 100,00% |
| UniCredit Bank AG Mün (2ZCNRR8UK83OBTEK2170) | 6,73% | 2,46% | 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 UniCredit Bank AG Mün (2ZCNRR8UK83OBTEK2170) 50,98% 56,50% 100,00% 0,00% 100,00% Barclays Bank PLC Ireland (2G5BKIC2CB69PRJH1W31) 40,95% 36,98% 100,00% 0.00% 100,00% Intesa Sanpaolo S.p.A. (2W8N8UU78PMDQKZENC08) 100,00% 4.98% 4,35% 100,00% 0.00% Jefferies International LTD (S5THZMDUJCTQZBTRVI98) 1.63% 1.09% 100,00% 0.00% 100.00% Kepler Cheuvreux S.A. (9695005EOZG9X8IRJD84) 1,46% 1,09% 100,00% 0.00% 100,00%



Class of Instrument

Debt instruments

BA13

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| NORD LB Hann (DSNHHQ2B9X5N6OUJ1236) | 43,06% | 75,78% | 100,00% | 0,00% | 100,00% |
| BNP Paribas Paris (R0MUWSFPU8MPRO8K5P83) | 10,64% | 4,52% | 100,00% | 0,00% | 100,00% |
| Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) | 8,32% | 3,50% | 100,00% | 0,00% | 100,00% |
| Deutsche Bk Ffm (7LTWFZYICNSX8D621K86) | 7,61% | 3,21% | 100,00% | 0,00% | 100,00% |
| Banco Santander S A (5493006QMFDDMYWIAM13) | 5,46% | 2,30% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument

BA14

Debt instruments

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) 5,93% 5,78% 100,00% 0,00% 100,00% HSBC Trinkaus Dssd (JUNT405OW8OY5GN4DX16) 5.84% 5.74% 100,00% 0.00% 100,00% Credit Agricole Corp & Inv (1VUV7VQFKUOQSJ21A208) 100,00% 5.51% 5,58% 100,00% 0.00% Jane Street Financial Ltd. (549300ZHEHX8M31RP142) 5,24% 5.01% 100,00% 0.00% 100.00% Barclays Bank PLC Ireland (2G5BKIC2CB69PRJH1W31) 4,93% 4,94% 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 (JUNT405OW8OY5GN4DX16) 19,13% 22,17% 100,00% 0,00% 100,00% Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) 18.23% 14,70% 100,00% 0.00% 100.00% Toronto Dominion Bk Ldn (PT3QB789TSUIDF371261) 100.00% 6,67% 7,48% 100,00% 0.00% J P Morgan SE FFM (549300ZK53CNGEEI6A29) 5.18% 13.91% 100,00% 0.00% 100.00% DZ Bank AG (529900HNOAA1KXQJUQ27) 4,35% 3,35% 100,00% 0.00% 100,00%



Class of Instrument

BB99

Structured financial prod

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 |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| NatWest Markets N.V. (X3CZP3CK64YBHON1LE12) | 24,61% | 24,39% | 100,00% | 0,00% | 100,00% |
| Citigroup Global Markets EU (6TJCK1B7E7UTXP528Y04) | 23,73% | 24,39% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 19,01% | 19,51% | 100,00% | 0,00% | 100,00% |
| UBS Europe SE (5299007QVIQ7IO64NX37) | 9,47% | 9,76% | 100,00% | 0,00% | 100,00% |
| ING Bk Adam (3TK20IVIUJ8J3ZU0QE75) | 7,13% | 7,32% | 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 wa | as executed in the previous | s year Y | | | |
| Top five execution vo | 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 | 9300ZK53CNGEEI6A29) | 100,00% | 100,00% | 100,00% | 0,00% | 100,00% |



Class of Instrument BD21 Equity 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 | BD24 | | | | | |
|------------------------|-------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| | Currency 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 | | | |
| * | 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) | 9300ZK53CNGEEI6A29) | 100,00% | 100,00% | 100,00% | 0,00% | 100,00% |



| Class of Instrument | BD99 | | | | | |
|------------------------|-------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| | other derivatives | | | | | |
| Tick Size | not used | | | | | |
| Information on whether | an average of < 1 trade per business day wa | as executed in the previous | s year N | | | |
| Top five execution vo | 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 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 | <u> </u> | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|------------------------------|---------------------------------|----------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|----------|------------------------------|---------------------------------|----------------------------------|

Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0,00%



Class of Instrument

BF99

Exchange traded product

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) | 33,27% | 30,99% | 100,00% | 0,00% | 100,00% |
| Morgan Stanley Europe SE (54930056FHWP7GIWYY08) | 28,07% | 28,00% | 100,00% | 0,00% | 100,00% |
| Jane Street Financial Ltd. (549300ZHEHX8M31RP142) | 25,51% | 25,58% | 100,00% | 0,00% | 100,00% |
| Donner & Reuschel AG (23ZYQ4KSBEDVYML8NC86) | 12,29% | 15,03% | 100,00% | 0,00% | 100,00% |
| Optiver V.O.F. (7245009KRYSAYB2QCC29) | 0,85% | 0,40% | 100,00% | 0,00% | 100,00% |
| | | | | | |



Class of Instrument BG99

Exchange traded product

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 (descending order) | Proportion of volume traded as a percentage of total in that class | * . | Percentage of passive orders | Percentage of aggressive orders | Percentage of directed orders |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|-----|------------------------------|---------------------------------|-------------------------------|
|---------------------------------------------------------------------------------|--------------------------------------------------------------------|-----|------------------------------|---------------------------------|-------------------------------|

Morgan Stanley Europe SE (54930056FHWP7GIWYY08)

100,00%

100,00%

100,00%

0,00%



| 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 | | | | | | |
| 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 SE (54930056FHWP7GIWYY08) 100,00% 100,00% 100,00% 0,00% 100,00% | | | | | | |



| Class of Instrument | C999 | | | | | |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------|---------------------------------|-------------------------------|
| | no specific classification | | | | | |
| Tick Size | liquidity band A and liquidity band B | | | | | |
| Information on whether an average of < 1 trade per business day was executed in the previous year Y | | | | | | |
| 1 * | nues 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) 100,00% 100,00% 100,00% 0,00% 100,00% | | | | | | |



Class of Instrument CA

CA99

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 aggressive orders directed orders passive orders of total in that class of total in that class Barclays Bank PLC Ireland (2G5BKIC2CB69PRJH1W31) 17,07% 15,02% 100,00% 0,00% 100,00% Deutsche Bk Ffm (7LTWFZYICNSX8D621K86) 14.05% 14,10% 100,00% 0.00% 100,00% 12,72% 100,00% HSBC Trinkaus Dssd (JUNT405OW8OY5GN4DX16) 10,51% 100,00% 0.00% NatWest Markets N.V. (X3CZP3CK64YBHON1LE12) 12.09% 9,25% 100,00% 0.00% 100.00% Landesbk Hessen-Thüri Ffm (DIZES5CFO5K3I5R58746) 7,13% 7,43% 100,00% 0.00% 100,00%



Class of Instrument **CB99** Other 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 Morgan Stanley Europe SE (54930056FHWP7GIWYY08) 0.00% 100,00% 100,00% 100,00% 100,00%