



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XNGS New York - NASDAQ (NAD)	36,99 %	48,52 %	100,00 %	0,00 %	97,65 %
XTKS Tokio (FJT)	22,29 %	13,21 %	100,00 %	0,00 %	25,86 %
XNYS New York (NYSE) (NAY)	21,41 %	15,95 %	100,00 %	0,00 %	75,71 %
XNEC Sydney (AAS)	11,41 %	2,96 %	100,00 %	0,00 %	23,08 %
XHKG Hongkong (FHH)	2,38 %	4,56 %	100,00 %	0,00 %	15,00 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument AA99  
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
XNYS New York (NYSE) (NAY)	59,89 %	49,25 %	100,00 %	0,00 %	80,71 %
XNGS New York - NASDAQ (NAD)	23,29 %	22,10 %	100,00 %	0,00 %	88,13 %
XETR XETRA (EDE)	3,42 %	14,55 %	100,00 %	0,00 %	7,40 %
XHKG Hongkong (FHH)	2,90 %	0,73 %	100,00 %	0,00 %	85,26 %
XTKS Tokio (FJT)	2,88 %	2,52 %	100,00 %	0,00 %	86,59 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument AA99  
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
XETR XETRA (EDE)	51,58 %	77,42 %	100,00 %	0,00 %	12,36 %
XNGS New York - NASDAQ (NAD)	14,15 %	5,37 %	100,00 %	0,00 %	83,76 %
XPAR Paris (EFP)	6,80 %	4,54 %	100,00 %	0,00 %	91,12 %
XSWX Zürich (ESE)	5,94 %	1,76 %	100,00 %	0,00 %	84,50 %
XWBO Wien (EAV)	3,87 %	0,65 %	100,00 %	0,00 %	64,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XETR XETRA (EDE)	27,97 %	62,70 %	100,00 %	0,00 %	16,93 %
XPAR Paris (EFP)	13,86 %	8,43 %	100,00 %	0,00 %	67,32 %
XLON London (EUL)	12,57 %	6,30 %	100,00 %	0,00 %	77,57 %
XSWX Zürich (ESE)	11,16 %	3,44 %	100,00 %	0,00 %	96,51 %
XAMS Amsterdam (ENA)	10,79 %	3,77 %	100,00 %	0,00 %	68,24 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument AB99  
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
XNYS New York (NYSE) (NAY)	76,84 %	25,00 %	100,00 %	0,00 %	100,00 %
PINX New York-PinkSh.-OTC (NUP)	9,85 %	50,00 %	100,00 %	0,00 %	100,00 %
XBER Berlin-Bremen (EDB)	9,80 %	12,50 %	100,00 %	0,00 %	100,00 %
XFRA Frankfurt (EDF)	3,51 %	12,50 %	100,00 %	0,00 %	100,00 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XNYS New York (NYSE) (NAY)	65,76 %	25,27 %	100,00 %	0,00 %	97,87 %
XNGS New York - NASDAQ (NAD)	11,32 %	24,73 %	100,00 %	0,00 %	100,00 %
XNEC Sydney (AAS)	5,67 %	2,15 %	100,00 %	0,00 %	100,00 %
XSTU Stuttgart (EDS)	5,04 %	9,68 %	100,00 %	0,00 %	44,44 %
PINX New York-PinkSh.-OTC (NUP)	4,30 %	23,66 %	100,00 %	0,00 %	100,00 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XLON London (EUL)	50,84 %	10,92 %	100,00 %	0,00 %	88,46 %
XNYS New York (NYSE) (NAY)	32,47 %	44,96 %	100,00 %	0,00 %	95,33 %
XETR XETRA (EDE)	8,70 %	26,47 %	100,00 %	0,00 %	4,76 %
XFRA Frankfurt (EDF)	7,84 %	16,81 %	100,00 %	0,00 %	30,00 %
XSTU Stuttgart (EDS)	0,16 %	0,84 %	100,00 %	0,00 %	100,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument AB99  
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
XETR XETRA (EDE)	39,71 %	40,22 %	100,00 %	0,00 %	2,70 %
XFRA Frankfurt (EDF)	37,16 %	25,00 %	100,00 %	0,00 %	52,17 %
XSTO Stockholm (SSS)	10,03 %	16,30 %	100,00 %	0,00 %	100,00 %
XLON London (EUL)	9,57 %	6,52 %	100,00 %	0,00 %	100,00 %
XPAR Paris (EFP)	1,98 %	10,87 %	100,00 %	0,00 %	100,00 %





M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XETR XETRA (EDE)	74,95 %	86,13 %	100,00 %	0,00 %	17,94 %
XLON London (EUL)	16,71 %	8,59 %	100,00 %	0,00 %	97,53 %
CHIX London - Chi-X Europ (EUI)	4,20 %	1,24 %	100,00 %	0,00 %	97,56 %
XSWX Zürich (ESE)	1,44 %	0,73 %	100,00 %	0,00 %	87,50 %
XPAR Paris (EFP)	0,93 %	0,64 %	100,00 %	0,00 %	76,19 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument AD99  
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
XVTX Zurich - Swiss Blue (ESZ)	70,19 %	60,78 %	100,00 %	0,00 %	83,33 %
XSWX Zürich (ESE)	26,17 %	12,42 %	100,00 %	0,00 %	92,11 %
XSTU Stuttgart (EDS)	1,45 %	5,56 %	100,00 %	0,00 %	58,82 %
XETR XETRA (EDE)	1,29 %	15,03 %	100,00 %	0,00 %	6,52 %
XFRA Frankfurt (EDF)	0,62 %	5,23 %	100,00 %	0,00 %	12,50 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	69,38 %	6,36 %	100,00 %	0,00 %	96,43 %
XSWX Zürich (ESE)	20,69 %	10,68 %	100,00 %	0,00 %	78,72 %
XSTU Stuttgart (EDS)	6,92 %	13,18 %	100,00 %	0,00 %	62,07 %
XFRA Frankfurt (EDF)	1,75 %	3,41 %	100,00 %	0,00 %	33,33 %
XETR XETRA (EDE)	1,11 %	43,86 %	100,00 %	0,00 %	4,15 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	98,61 %	89,26 %	100,00 %	0,00 %	84,56 %
XFRA Frankfurt (EDF)	0,57 %	5,59 %	100,00 %	0,00 %	35,24 %
XSTU Stuttgart (EDS)	0,53 %	4,73 %	100,00 %	0,00 %	58,43 %
XNIM NASD OTC (NAO)	0,18 %	0,11 %	100,00 %	0,00 %	0,00 %
XBER Berlin-Bremen (EDB)	0,08 %	0,16 %	100,00 %	0,00 %	33,33 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	98,22 %	85,15 %	100,00 %	0,00 %	56,98 %
XSTU Stuttgart (EDS)	1,07 %	4,95 %	100,00 %	0,00 %	80,00 %
XDUS Düsseldorf (EDD)	0,43 %	3,96 %	100,00 %	0,00 %	100,00 %
XFRA Frankfurt (EDF)	0,28 %	5,94 %	100,00 %	0,00 %	0,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BA12  
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
BMTF Bloomberg (BLOM)	72,40 %	25,81 %	100,00 %	0,00 %	75,00 %
XFRA Frankfurt (EDF)	18,85 %	60,22 %	100,00 %	0,00 %	0,00 %
XSTU Stuttgart (EDS)	8,23 %	12,90 %	100,00 %	0,00 %	83,33 %
XBER Berlin-Bremen (EDB)	0,53 %	1,08 %	100,00 %	0,00 %	0,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	99,11 %	97,49 %	100,00 %	0,00 %	52,06 %
XFRA Frankfurt (EDF)	0,52 %	0,50 %	100,00 %	0,00 %	0,00 %
XLUX Luxemburg (ELL)	0,19 %	1,01 %	100,00 %	0,00 %	0,00 %
XBER Berlin-Bremen (EDB)	0,18 %	1,01 %	100,00 %	0,00 %	100,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	95,04 %	68,94 %	100,00 %	0,00 %	83,46 %
XSTU Stuttgart (EDS)	2,84 %	19,74 %	100,00 %	0,00 %	84,15 %
XFRA Frankfurt (EDF)	1,79 %	10,25 %	100,00 %	0,00 %	16,87 %
XDUS Düsseldorf (EDD)	0,16 %	0,33 %	100,00 %	0,00 %	93,75 %
XMUN München (EDM)	0,09 %	0,12 %	100,00 %	0,00 %	100,00 %





M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BA15  
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
BMTF Bloomberg (BLOM)	94,00 %	66,84 %	100,00 %	0,00 %	80,42 %
XFRA Frankfurt (EDF)	2,84 %	18,15 %	100,00 %	0,00 %	11,54 %
XSTU Stuttgart (EDS)	2,61 %	13,44 %	100,00 %	0,00 %	88,31 %
XHAN Hannover (EDI)	0,31 %	0,52 %	100,00 %	0,00 %	100,00 %
XBER Berlin-Bremen (EDB)	0,19 %	0,70 %	100,00 %	0,00 %	100,00 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BB99  
Structured financial products

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
BMTF Bloomberg (BLOM)	100,00 %	100,00 %	100,00 %	0,00 %	75,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument      BD21  
Equity derivatives

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
XEUR EUREX (EDT)	95,57 %	92,18 %	100,00 %	0,00 %	4,34 %
XCBO Chicago (CBOE) (NAV)	2,89 %	4,96 %	100,00 %	0,00 %	9,13 %
XEUE Amsterdam D. (ENEXT) (ENH)	1,29 %	2,10 %	100,00 %	0,00 %	1,66 %
IFLO London - ICE Fut. Eu (EUL1)	0,17 %	0,62 %	100,00 %	0,00 %	11,32 %
XPAR Paris Derivate (EFD)	0,03 %	0,08 %	100,00 %	0,00 %	28,57 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument    BD24  
                                  Currency derivatives

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
XCME Chicago (CME) (NAG)	100,00 %	100,00 %	100,00 %	0,00 %	0,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BE21  
securitized derivatives

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
XFRA Frankfurt (EDF)	64,34 %	85,14 %	100,00 %	0,00 %	1,46 %
XSTU Stuttgart (EDS)	35,20 %	14,78 %	100,00 %	0,00 %	69,43 %
BMTF Bloomberg (BLOM)	0,36 %	0,02 %	100,00 %	0,00 %	100,00 %
XQMH Zürich SWX Scoach (ESS)	0,07 %	0,04 %	100,00 %	0,00 %	0,00 %
XNYS New York (NYSE) (NAY)	0,04 %	0,02 %	100,00 %	0,00 %	100,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BE22  
securitized derivatives

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
XFRA Frankfurt (EDF)	82,52 %	88,57 %	100,00 %	0,00 %	0,00 %
XSTU Stuttgart (EDS)	15,89 %	7,14 %	100,00 %	0,00 %	0,00 %
XNYS New York (NYSE) (NAY)	0,93 %	2,86 %	100,00 %	0,00 %	100,00 %
XMUN München (EDM)	0,65 %	1,43 %	100,00 %	0,00 %	0,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BE24  
securitized derivatives

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
XFRA Frankfurt (EDF)	88,97 %	80,36 %	100,00 %	0,00 %	0,00 %
XSTU Stuttgart (EDS)	11,03 %	19,64 %	100,00 %	0,00 %	81,82 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument BE99  
securitized derivatives

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
XFRA Frankfurt (EDF)	93,31 %	90,58 %	100,00 %	0,00 %	0,00 %
XSTU Stuttgart (EDS)	6,61 %	8,70 %	100,00 %	0,00 %	58,33 %
XNYS New York (NYSE) (NAY)	0,08 %	0,72 %	100,00 %	0,00 %	100,00 %





M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
XETR XETRA (EDE)	73,53 %	85,16 %	100,00 %	0,00 %	13,76 %
XSTU Stuttgart (EDS)	26,47 %	14,84 %	100,00 %	0,00 %	36,84 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument      BG99  
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
XETR XETRA (EDE)	99,74 %	94,74 %	100,00 %	0,00 %	0,00 %
XFRA Frankfurt (EDF)	0,26 %	5,26 %	100,00 %	0,00 %	0,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument C999  
no specific classification

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
XHAM Hamburg (EDH)	49,30 %	50,00 %	100,00 %	0,00 %	50,00 %
XNEC Sydney (AAS)	42,81 %	30,00 %	100,00 %	0,00 %	100,00 %
XFRA Frankfurt (EDF)	6,47 %	10,00 %	100,00 %	0,00 %	100,00 %
XSTU Stuttgart (EDS)	1,42 %	10,00 %	100,00 %	0,00 %	100,00 %



## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

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
BMTF Bloomberg (BLOM)	100,00 %	100,00 %	100,00 %	0,00 %	100,00 %



M.M. WARBURG & CO

BANK

## Top 5 venue reporting regarding MIFID II professional clients financial year 2018

Class of Instrument      CB99  
                                    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
XFRA Frankfurt (EDF)	55,04 %	68,75 %	100,00 %	0,00 %	90,91 %
XSTU Stuttgart (EDS)	32,03 %	25,00 %	100,00 %	0,00 %	75,00 %
XHAM Hamburg (EDH)	12,93 %	6,25 %	100,00 %	0,00 %	100,00 %