



Transaction report 2018

Equities - Shares & Depositary Receipts

Class of Instrument	Liquidity Band A+B					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
Virtu Financial Ireland Limited	549300XG5LFGN1IGYC71	43.4	95.4	25.3	74.7	100.0
1st Capital Management Group GmbH	529900ISPKUVG8HSQD34	24.2	93.6	13.2	86.8	100.0
Linear Investments Ltd.	213800GNOS9QQ31DCK54	11.8	91.8	40.8	59.2	98.7
DBS Vickers Singapore PTE Ltd.	549300O3J3YO6S614573	5.1	86.5	73.0	27.0	97.2
Kim Eng Securities HK Ltd.	254900JOZO98RSYZ3694	4.8	84.1	87.8	12.2	100.0

*Notice: Securities with no Liquidity Band classification are in this category listed

Class of Instrument	Liquidity Band C+D					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
Virtu Financial Ireland Limited	549300XG5LFGN1IGYC71	33.8	92.4	29.7	70.3	100.0
Linear Investments Ltd.	213800GNOS9QQ31DCK54	26.5	94.0	29.7	70.3	99.5
1st Capital Management Group GmbH	529900ISPKUVG8HSQD34	17.1	98.4	15.9	84.1	100.0
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	15.1	88.9	52.4	47.6	96.9
Marcard, Stein und Co AG	529900CK14SGH0EXOB27	3.6	100.0	0.0	100.0	100.0



Equities - Shares & Depositary Receipts

Class of Instrument	Liquidity Band E+F					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	40.1	96.0	67.9	22.5	97.5
Linear Investments Ltd.	213800GNOS9QQ31DCK54	23.2	94.5	68.7	16.7	98.3
Virtu Financial Ireland Limited	549300XG5LFGN1IGYC71	15.1	98.1	48.1	11.0	97.8
Marcard, Stein und Co AG	529900CK14SGH0EXOB27	6.5	100.0	93.3	0.0	100.0
Goldman Sachs International	W22LROWP2IHZNBB6K528	6.0	100.0	100.0	0.0	100.0

Debt Instruments / Bonds

Class of Instrument	Debt instruments <397 days to maturity					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
Citigroup Global Markets Ltd.	XKZZ2JZF41MRHTR1V493	32.0	100.0	0.0	100.0	100.0
J.P. Morgan Securities PLC	K6Q0W1PS1L1O4IQL9C32	22.6	100.0	0.0	100.0	100.0
Goldman Sachs International	W22LROWP2IHZNBB6K528	15.2	100.0	8.3	91.7	100.0
Norddeutsche Landesbank Girozentrale	DSNHHQ2B9X5N6OUJ1236	12.2	100.0	33.3	66.7	100.0
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	7.1	90.0	55.0	45.0	85.0



Debt Instruments / Bonds

Class of Instrument	Debt instruments > 397 days to maturity					
Notification if < 1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
Kommunalkreditbank Austria AG	549300IEVCBWWV97WC81	15.5	50.0	100.0	0.0	100.0
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	13.3	81.5	78.2	21.8	89.6
DZ Bank AG	529900HNOAA1KXQJUQ27	12.6	100.0	37.1	62.9	100.0
Carl Kliem S.A.	5493009FOGEUTR4HFR55	9.3	100.0	75.0	25.0	100.0
1st Capital Management Group GmbH	529900ISPKUVG8HSQD34	9.1	82.9	85.9	14.1	97.0

Interest Rate Derivates

Class of Instrument	Interest rate derivates / Futures and options					
Notification if < 1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	94.8	100.0	5.1	94.9	100.0
J.P. Morgan Securities PLC	K6Q0W1PS1L1O4IQL9C32	5.2	97.7	4.7	95.3	100.0



Credit Derivates

Class of Instrument	Credit Derivates					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-

Currency Derivates

Class of Instrument	Currency Derivates / Futures and Options					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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 Securities PLC	K6Q0W1PS1L1O4IQL9C32	57.4	100.0	0.0	100.0	100.0
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	42.6	100.0	0.0	100.0	100.0



Currency Derivates

Class of Instrument	Currency Derivates / Swaps, Forwards and other Derivates					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	97.9	100.0	0.0	100.0	100.0
Unicredit Bank AG	2ZCNRR8UK83OBTEK2170	1.1	100.0	0.0	100.0	0.0
Commerzbank AG	851WYGNLUQLFZBSYGB56	1.0	100.0	0.0	100.0	0.0

Credit Derivates and Equity Derivates

Class of Instrument	Structured Finance Instruments					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-



Credit derivatives and Equity Derivates

Class of Instrument	Equity Derivates / Futures and Options					
Notification if <1 average trade per business day in the previous year	Nein					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	81.3	100.0	39.8	60.2	100.0
J.P. Morgan Securities PLC	K6Q0W1PS1L1O4IQL9C32	18.7	91.6	23.5	76.5	100.0

Securitised Derivates

Class of Instrument	Securitised Derivates					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-



Securitised Derivates

Class of Instrument	Warrants and Certificates					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	22.8	93.8	43.7	56.3	65.6
Commerzbank AG	851WYGXLUQLFZBSYGB56	13.3	100.0	26.7	73.3	97.6
Unicredit Bank AG	2ZCNRR8UK83OBTEK2170	8.6	100.0	44.1	55.9	100.0
Citigroup Global Markets Europe AG	6TJCK1B7E7UTXP528Y04	8.3	100.0	50.0	50.0	96.9
Bank J.Vontobel & Co AG	529900G69W5VR3DDPW23	6.8	98.6	31.1	68.9	95.9

Commodity Derivates

Class of Instrument	Commodity derivatives / Futures and Options					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-



Commodity Derivates

Kategorie des Finanzinstruments	Commodity Derivates / Others					
Angabe, ob im Vorjahr im Durchschnitt <1 Handelsgeschäft pro Geschäftstag ausgeführt wurde	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-

Contracted for differences and Exchange Traded Products (Funds, ETF)

Class of Instrument	Contract for Differences					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-



Contracted for differences and Exchange Traded Products (Funds, ETF)

Class of Instrument	Exchange traded products (Funds and ETF)					
Notification if <1 average trade per business day in the previous year						
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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	41.5	99.5	0.5	99.5	98.5
Commerzbank AG	851WYGXLUQLFZBSYGB56	40.6	98.9	1.6	98.4	99.7
Unicredit Bank AG	2ZCNRR8UK83OBTEK2170	7.6	100.0	0.0	100.0	100.0
BNP Paribas	529900JFOPPEDUR61H13	4.3	100.0	0.0	100.0	100.0
M.M.Warburg & CO (AG & Co.)	MZI1VDH2BQLFZGLQDO60	2.5	93.3	30.6	69.4	83.7

Emission Certificates

Class of Instrument	Emission Certificates					
Notification if <1 average trade per business day in the previous year	N/A					
Top five execution venues ranked in terms of trading volumes (descending order)	LEI	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
-	-	-	-	-	-	-