



# Best Execution Quality Reporting 2022

Deutsche Bank (Suisse) S.A.

Disclosure document related to the Commission Delegated Regulation (EU) 2017/576 of 8 June 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards for the annual publication by investment firms of information on the identity of execution venues and on the quality of execution.

# Commentary to accompany the RTS 28 Top 5 Venue Report for DB Suisse

*Reporting Period: 01st Jan 2022 to 31st Dec 2022*

In accordance with EU Commission Delegated Regulation 2017/576 of 8 June 2016 ("Regulatory Technical Standard (RTS) 28") supplementing MiFID (Directive 2014/65/EU), this document provides information on the top 5 venues / brokers (in terms of trading volumes) used by DB Suisse in calendar year 2022, to execute client orders. We also provide below information pertaining to the quality of execution obtained, as asked under Article 3(3) of RTS 28.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0576&from=EN>

As required under Article 3(3) of MiFID RTS 28	Instrument applicability	Commentary (as applicable to DB Suisse)
<p>a) an explanation of the relative importance the firm gave to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when making assessments of the quality of execution;</p>	<p>All</p>	<p>The execution factors and their relative importance are described in our Order Execution Policy. This can found here: <a href="https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html">https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html</a></p>
<p>(b) a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;</p>	<p><i>Equities - Shares and Depositary Receipts</i></p>	<p>There are no close links, conflicts of interests, and common ownerships with respect to any external execution venue / broker used to execute orders. Some orders may be executed using DB AG (group parent entity) as the broker / counterparty, pursuant to application of Best Execution principles. For certain products DB Suisse will offer the opportunity to DB affiliates to match the best price received through the request for quote process for the relevant product, and if so enable DB Suisse to offer the DB affiliate product. Whilst aware of potential conflicts of interest in using affiliates to execute your transactions, DB Suisse will seek to mitigate such conflicts through our monitoring and review programme when deploying this process.</p> <p>Execution is carried out solely against DB AG which is the group parent entity. Controls are in place to ensure that best results are obtained for the client on a consistent basis.</p> <p>All orders are routed to the exchange via either the DB AG (group parent entity) platform or via Bloomberg EMSX. Best Execution monitoring controls are in place to ensure that orders are routed to exchange accurately and promptly.</p>
	<p><i>Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)</i></p>	
	<p><i>Debt Instruments</i></p>	
	<p><i>Structured Finance instruments</i></p>	
	<p><i>Other Instruments</i></p>	
	<p><i>Currency Derivatives - Futures and options admitted to trading on a trading venue</i></p>	
	<p><i>Currency Derivatives - Swaps, forwards and other currency derivatives</i></p>	
	<p><i>Interest Rates Derivatives - Swaps, forwards and other interest rates derivatives</i></p>	
	<p><i>Equity Derivatives - Swaps, forwards and other equity derivatives</i></p>	
	<p><i>Interest Rates Derivatives - Futures and options admitted to trading on a trading venue</i></p>	
<p><i>Commodity Derivatives - Futures and options admitted to trading on a trading venue</i></p>		

As required under Article 3(3) of MiFID RTS 28	Instrument applicability	Commentary (as applicable to DB Suisse)
	<i>Equity Derivatives - Futures and options admitted to trading on a trading venue</i>	
	<i>Securitised Derivatives - Warrants and Certificate Derivatives</i>	Any potential conflict of interest arising from fee payments is mentioned clearly to the client in the term sheet
<i>(c) a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;</i>	<i>All (other than Securitised Derivatives)</i>	There are no specific arrangements with any external execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received.
	<i>Securitised Derivatives</i>	Structuring fees are paid by the issuer via invoice.
<i>(d) an explanation of the factors that led to a change in the list of execution venues listed in the firm's execution policy, if such a change occurred;</i>	All	No change in the list of execution venues occurred during the year.
<i>(e) an explanation of how order execution differs according to client categorization, where the firm treats such category of client differently and where it may affect the order execution arrangements;</i>	All	For Best Execution principles, refer to Section 2.1.1 & 2.1.2 of the Order Execution Policy. This can be found here: <a href="https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html">https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html</a>
<i>(f) an explanation of when other criteria were given precedence over immediate price and cost when executing retail client orders and how these other criteria were instrumental in delivering the best possible result in terms of the total consideration to the client;</i>	All	For Best Execution principles, refer to Section 2.1.1 & 2.1.2 of the Order Execution Policy. This can be found here: <a href="https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html">https://deutschewealth.com/content/deutsche-wealth/en/articles/regulatory_information.html</a>
<i>g) an explanation of how the investment firm has used any data or tools relating to the quality of execution including any data published under 27(10) (a) of Directive 2014/65/EU.</i>	<i>All (other than Securitised Derivatives)</i>	We have used other independent benchmarking tools to assess our execution prices against the average prevailing prices in the market. Such a benchmarking exercise helped us to assess the quality of execution by our brokers / counterparties and enabled us to optimize selection of the same to improve execution results.
	<i>Securitised Derivatives</i>	Benchmarking was not used for structured products. However, quality of execution was ensured by obtaining, on average, pricing from three different counterparties for each trade.
<i>h) an explanation of how the investment firm has used, if applicable, output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU which will allow for the development of enhanced measures of execution quality or any other algorithms used to optimize and assess execution performances.</i>	All	Output of consolidated tape providers as per Article 65 of Directive 2014/65/EU has not been utilized for the 2022 reporting year.



The following tables provide information on the top five execution venues / executing brokers (by proportion of volume traded as a % of total volume) used by DB Suisse in calendar year 2022 for executing orders from clients in various classes of Financial Instruments. A machine-readable version of these tables (CSV format) has also been made available separately.

[https://deutschewealth.com/content/deutschewealth/en/articles/regulatory\\_information.html](https://deutschewealth.com/content/deutschewealth/en/articles/regulatory_information.html)

The terms "Execution Venue" and "Executing Broker" as used in the tables below imply "Execution" and "Transmission" of orders respectively.

## For Retail Clients

Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3X13YWROC2J57	100.00%	100.00%	1.56%	1.66%	0.00%

  

Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	26.63%	20.28%	-	-	0.00%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	20.81%	12.35%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	11.65%	22.10%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	8.89%	8.20%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	7.75%	12.14%	-	-	0.00%

LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	25.52%	7.33%	-	-	0.00%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	19.93%	4.47%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	11.16%	7.99%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	8.52%	2.97%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	7.42%	4.39%	-	-	0.00%
LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3X13YWROC2J57	100.00%	100.00%	5.05%	5.38%	0.00%
LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	20.98%	24.10%	-	-	0.10%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	18.51%	5.53%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	16.43%	14.22%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	10.58%	4.27%	-	-	0.00%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	8.97%	12.75%	-	-	0.00%

LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	20.05%	6.46%	-	-	0.10%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	17.70%	1.48%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	15.71%	3.81%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	10.12%	1.15%	-	-	0.00%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	8.58%	3.42%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Retail					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3XI3YWROC2J57	100.00%	100.00%	0.05%	0.05%	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	33.19%	25.78%	-	-	0.20%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	12.18%	5.13%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	9.62%	14.62%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	8.92%	2.68%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	7.80%	15.30%	-	-	0.00%

LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	33.17%	25.37%	-	-	0.20%
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	12.18%	5.05%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	9.62%	14.39%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	8.92%	2.64%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	7.80%	15.05%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(B) Debt Instruments - Bonds					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Citigroup Global Markets Limited	XKZZ2JZF41MRHTR1V493	6.35%	5.55%	-	-	0.00%
BNP PARIBAS	R0MUWSFPU8MPRO8K5P83	6.27%	4.80%	-	-	0.00%
WELLS FARGO BANK NATIONAL ASSOCIATION	KB1H1DSPRFMYMCFXT09	5.64%	1.10%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	5.52%	4.59%	-	-	0.00%
The Toronto-Dominion Bank	PT3QB789TSUIDF371261	5.28%	6.10%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(B) Debt Instruments - Money Market Instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
WELLS FARGO BANK NATIONAL ASSOCIATION	KB1H1DSPRFMYMCFXT09	16.57%	21.59%	-	-	0.00%
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTFWZYICNSX8D621K86	16.09%	16.48%	-	-	0.00%
Nomura International PLC	DGQCSV2PHVF712743539	9.88%	17.33%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	9.11%	3.69%	-	-	0.00%
Morgan Stanley & Co. International PLC	4PQUHN3JPFQFN3BB653	8.80%	7.39%	-	-	0.00%

LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(C) Interest Rate Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR Y						
Client Type	Retail					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(C) Interest Rate Derivatives - Swaps, forwards and other interest rate derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR Y						
Client Type	Retail					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(D) Currency Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR N						
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE	7LTWFZYICNSX8D621K86	20.95%	24.91%	-	-	0.00%
JPMC	7H6GLXDRUGQFU57RNE97	13.58%	19.92%	-	-	0.00%
SOGN	O2RNE8IBXP4R0TD8PU41	12.89%	4.11%	-	-	0.00%
BNP PARIS	213800WKRTJHSGWS5S26	11.40%	16.87%	-	-	0.00%
UBS	BFM8T61CT2L1QCEMIK50	8.06%	6.98%	-	-	0.00%

LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(D) Currency Derivatives - Swaps, forwards and other currency derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE	7LTFWFZYICNSX8D621K86	27.22%	20.76%	-	-	0.00%
MS	4PQUHN3JPFQFNF3BB653	18.32%	19.60%	-	-	0.00%
JPMC	7H6GLXDRUGQFU57RNE97	9.31%	9.68%	-	-	0.00%
SOGN	O2RNE8IBXP4R0TD8PU41	8.12%	5.56%	-	-	0.00%
UBS	BFM8T61CT2L1QCCEMIK50	7.27%	10.70%	-	-	0.00%
LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(E) Structured Finance Instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTFWFZYICNSX8D621K86	98.83%	97.41%	-	-	0.00%
BRIDPORT & CIE SA	213800VGFKO4K5IJUI20	1.13%	1.94%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	0.04%	0.65%	-	-	0.00%
LEGAL UNIT	529900BXXPMXQTR1V05					
CLASS OF INSTRUMENT	(F) Equity Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTFWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.33%

LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(F) Equity Derivatives - Swaps and other equity derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR Y						
Client Type	Retail					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(G) Securitised Derivatives - Warrants and Certificate Derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR N						
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	18.89%	14.09%	-	-	0.00%
BARCLAYS CAPITAL SECURITIES LIMITED	K9WDOH4D2PYBSLSOB484	13.02%	14.16%	-	-	0.00%
HSBC BANK PLC	MP6I5ZYZBEU3UXPYFY54	10.91%	6.95%	-	-	0.00%
BNP PARIBAS	R0MUWSFPU8MPRO8K5P83	10.55%	9.25%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	6.62%	6.63%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(H) Commodities Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR Y						
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR N						
Client Type	Retail					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3X13YWROC2J57	100.00%	100.00%	25.85%	27.50%	0.00%

LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Jane Street Financial Limited	549300ZHEHX8M31RP142	27.66%	16.70%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	24.24%	53.54%	-	-	0.24%
ABN AMRO CLEARING BANK N.V.	G8ZTNESVNW4NN761W05	22.87%	11.30%	-	-	0.00%
CANACCORD GENUITY LIMITED	ZBU7V5NIMN4ILRFC23	6.56%	2.38%	-	-	2.17%
Sanford C. Bernstein Limited	54930049G8WQ5OOUUSD19	5.59%	0.47%	-	-	100.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Jane Street Financial Limited	549300ZHEHX8M31RP142	22.05%	5.99%	-	-	0.00%
SIX SIS AG	549300A3XI3YWROC2J57	20.27%	64.16%	25.85%	27.50%	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	19.33%	19.19%	-	-	0.00%
ABN AMRO CLEARING BANK N.V.	G8ZTNESVNW4NN761W05	18.24%	4.05%	-	-	0.00%
CANACCORD GENUITY LIMITED	ZBU7V5NIMN4ILRFC23	5.23%	0.85%	-	-	0.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(J) Other instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Retail					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	76.72%	93.44%	-	-	0.00%
UBS AG	BFM8T61CT2L1QCEMIK50	15.03%	3.58%	-	-	0.00%
Citigroup Global Markets Limited	XKZZ2JZF41MRHTR1V493	2.05%	0.28%	-	-	0.00%
BARCLAYS CAPITAL SECURITIES LIMITED	K9WDOH4D2PYBSLSOB484	1.95%	0.55%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	1.37%	0.28%	-	-	0.00%

## For Professional Clients

LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3XI3YWROC2J57	100.00%	100.00%	0.87%	0.92%	0.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	46.97%	13.65%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	16.06%	29.21%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	10.98%	16.83%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	9.75%	3.39%	-	-	0.00%
Steubing AG	39120043LUI1WJS8IX30	5.35%	14.07%	-	-	0.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	44.44%	6.57%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	15.19%	14.05%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	10.39%	8.10%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	9.23%	1.63%	-	-	0.00%
SIX SIS AG	549300A3XI3YWROC2J57	5.37%	51.88%	0.87%	0.92%	0.00%

LEGAL UNIT	529900BXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3XI3YWROC2J57	100.00%	100.00%	2.87%	3.06%	0.00%
LEGAL UNIT	529900BXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	53.48%	16.21%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	16.39%	6.26%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	14.86%	23.72%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	3.71%	1.69%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	3.28%	4.82%	-	-	0.00%
LEGAL UNIT	529900BXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	51.95%	7.53%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	15.92%	2.91%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	14.44%	11.02%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	3.60%	0.78%	-	-	0.00%
INSTINET PACIFIC LIMITED	549300RI6VZUNIR81J81	3.18%	2.24%	-	-	0.00%

LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3XI3YWROC2J57	100.00%	100.00%	0.05%	0.05%	0.00%
LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	44.09%	6.12%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	19.58%	31.56%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	11.22%	14.38%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	7.12%	1.15%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	5.81%	2.69%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(A) Equities - Shares and Depository Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Merrill Lynch, Pierce, Fenner & Smith Incorporated	8NAV47T0Y26Q87Y0QP81	44.06%	5.97%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	19.57%	30.75%	-	-	0.00%
Merrill Lynch International	GGDZP1UYGU9STUHRDP48	11.21%	14.01%	-	-	0.00%
CANTOR FITZGERALD EUROPE	549300KM6VUHPKQLQX53	7.11%	1.12%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	5.80%	2.62%	-	-	0.00%

LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(B) Debt Instruments - Bonds					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
BNP PARIBAS	R0MUWSFPU8MPRO8K5P83	10.04%	5.24%	-	-	0.00%
J.P. Morgan Securities PLC	K6Q0W1PS1L1O4IQL9C32	8.18%	4.35%	-	-	0.00%
WELLS FARGO BANK NATIONAL ASSOCIATION	KB1H1DSPRFMYMCUFXT09	8.11%	1.25%	-	-	0.00%
UBS AG	BFM8T61CT2L1QCEMIK50	6.65%	11.14%	-	-	0.00%
Morgan Stanley & Co. International PLC	4PQUHN3JPF6FNF3BB653	6.61%	6.50%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(B) Debt Instruments - Money Market Instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
RBC Europe Limited	TXDSU46SXBWIGJ8G8E98	20.17%	6.06%	-	-	0.00%
Morgan Stanley & Co. International PLC	4PQUHN3JPF6FNF3BB653	17.24%	9.09%	-	-	0.00%
Goldman Sachs International	W22LROWP2IHZNBB6K528	16.47%	9.09%	-	-	0.00%
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	13.97%	36.36%	-	-	0.00%
MIZUHO INTERNATIONAL PLC	213800HZ54TG54H2KV03	11.57%	3.03%	-	-	0.00%
LEGAL UNIT	529900BXXKPMXQTR1V05					
CLASS OF INSTRUMENT	(C) Interest Rate Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%

LEGAL UNIT	529900BKKPMXQTRE1V05					
CLASS OF INSTRUMENT	(C) Interest Rate Derivatives - Swaps, forwards and other interest rate derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BKKPMXQTRE1V05					
CLASS OF INSTRUMENT	(E) Structured Finance Instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BKKPMXQTRE1V05					
CLASS OF INSTRUMENT	(F) Equity Derivatives - Futures and options admitted to trading on a trading venue					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%

LEGAL UNIT	529900BKKPMXQTR1V05					
CLASS OF INSTRUMENT	(F) Equity Derivatives - Swaps and other equity derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	100.00%	100.00%	-	-	0.00%
LEGAL UNIT	529900BKKPMXQTR1V05					
CLASS OF INSTRUMENT	(G) Securitised Derivatives - Warrants and Certificate Derivatives					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	Y					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	60.08%	20.22%	-	-	0.00%
Steubing AG	39120043LUI1WJS8IX30	8.23%	35.38%	-	-	0.00%
UBS Switzerland AG	549300WOIFUSNYH0FL22	6.66%	6.86%	-	-	0.00%
J.P. Morgan Securities PLC	K6Q0W1PS1L1O4IQL9C32	6.29%	1.08%	-	-	8.33%
Natixis SA	KX1WK48MPD4Y2NCUIZ63	4.47%	0.36%	-	-	0.00%
LEGAL UNIT	529900BKKPMXQTR1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
SIX SIS AG	549300A3XI3YWROC2J57	100.00%	100.00%	8.73%	9.28%	0.00%

LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Jane Street Financial Limited	549300ZHEHX8M31RP142	33.74%	9.76%	-	-	0.00%
ABN AMRO CLEARING BANK N.V.	G8ZTNESVKNW4NN761W05	26.61%	4.82%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	19.53%	62.53%	-	-	0.00%
CANACCORD GENUITY LIMITED	ZBU7V5NIMN4ILRFC23	6.98%	1.66%	-	-	0.00%
Steubing AG	39120043LUI1WJS8IX30	4.65%	17.14%	-	-	0.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(I) Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Jane Street Financial Limited	549300ZHEHX8M31RP142	30.06%	6.71%	-	-	0.00%
ABN AMRO CLEARING BANK N.V.	G8ZTNESVKNW4NN761W05	23.70%	3.31%	-	-	0.00%
VIRTU FINANCIAL IRELAND LIMITED	549300XG5LFGN1IGYC71	17.40%	42.98%	-	-	0.00%
SIX SIS AG	549300A3XI3YWROC2J57	10.93%	31.26%	8.73%	9.28%	0.00%
CANACCORD GENUITY LIMITED	ZBU7V5NIMN4ILRFC23	6.22%	1.14%	-	-	0.00%
LEGAL UNIT	529900BXKPMXQTRE1V05					
CLASS OF INSTRUMENT	(J) Other instruments					
NOTIFICATION IF < 1 AVERAGE TRADE PER BUSINESS DAY IN THE PREVIOUS YEAR	N					
Client Type	Professional					
Execution Venue / Executing Broker (ranked by Volume in descending order)	LEI	Proportion of Volume traded as a % of total	Proportion of Trades executed as a % of total	Percentage of Passive orders	Percentage of Aggressive orders	Percentage of Directed orders
Goldman Sachs International	W22LROWP2IHZNBB6K528	40.61%	0.98%	-	-	0.00%
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTFWZYICNSX8D621K86	22.45%	50.00%	-	-	0.00%
ABN AMRO CLEARING BANK N.V.	G8ZTNESVKNW4NN761W05	10.16%	1.96%	-	-	0.00%
BARCLAYS CAPITAL SECURITIES LIMITED	K9WDOH4D2PYBSLSOB484	7.42%	0.98%	-	-	0.00%
Jane Street Financial Limited	549300ZHEHX8M31RP142	7.18%	0.98%	-	-	0.00%