

**RTS 28 - TOP FIVE EXECUTION VENUES  
ANNUAL REPORT 2021  
TRADING YEAR 2020**

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## INTRODUCTION

In accordance with Markets and Financial Instruments Directive and Regulation (MIFID II/MIFIR), BNPP PARIBAS Dealing Services (“Dealing Services”), as investment firm, is required to publish an annual report regarding the quality of execution top 5 venues in term of trading volumes for all executed clients orders per class of financial instruments.

This report is presenting the top 5 venue reports per class of instrument for the trading year 2020 as required and described in the Regulatory Technical Standard RTS 28 of MIFIR (Delegated regulation C(2016) 3337 final) and in the COMMISSION DELEGATED REGULATION (EU) 2017/576.

## CONTENT OF THE REPORT

### OVERVIEW OF THE QUANTITATIVE REPORTS

RTS 28 requires to report per class of instruments the top 5 venues and display the following data:

- venue name and identifier;
- volume of client orders executed on that execution venue expressed as a percentage of total executed volume;
- number of client orders executed on that execution venue expressed as a percentage of total executed orders;
- percentage of the executed orders that were passive and aggressive orders;
- percentage of orders that were directed orders;
- Confirmation of whether it has executed an average of less than one trade per business day in the previous year in that class of financial instruments.

Dealing Services provides both the services of execution and reception-transmission of orders depending on the type of instrument and /or the type of order and/or the parameters of the order. One report must be produced per instrument and per type of investments services provided by Dealing Services.

The following table shows all classes of instruments handled by Dealing Services in 2020 and the type of services provided by Dealing Services (execution and/or transmission):

ESMA Class of financial instruments		Service of execution	Service of transmission
Equities – Shares & Depositary Receipts	Tick Size liquidity band 1 to 2	YES	YES
	Tick Size liquidity band 3 to 4	YES	YES
	Tick Size liquidity band 5 to 6	YES	YES
Debt instruments	Bonds	YES	
	Money market	YES	
Interest rates derivatives	Futures and options admitted to trading on a trading venue	YES	YES
	Swaps, forwards, and other interest rates derivatives	YES	
Credit derivatives	Futures and options admitted to trading on a trading venue		
	Other credit derivatives	YES	
Currency derivatives	Futures and options admitted to trading on a trading venue	YES	YES
	Swaps, forwards, and other currency derivatives	YES	
Structured finance instruments			
Equity derivatives	Options and Futures admitted to trading on a trading venue	YES	YES
	Swaps and other equity derivatives	YES	
Securitized derivatives	Warrants and Certificate Derivatives		YES
	Other securitized derivatives		
Commodity derivatives and emission allowances Derivatives	Options and Futures admitted to trading on a trading venue		YES
	Other commodities derivatives and emission allowances derivatives		
Contract for Difference		YES	YES
Exchange traded products	Exchange traded funds, exchange traded notes and exchange traded commodities	YES	YES
Emission allowances			
Other instruments			
SFT	repo/reverse repo	YES	

N.B 1: If the line is grey, it means that Dealing Services has not traded these instruments in 2020.

Equity instruments must be classified according to their liquidity as determined under the tick size regime as set out in Directive 2014/65/EU of the European Parliament and the Council. There are three liquidity categories known as “bands”. As Dealing Services has traded shares of the three bands either executing or transmitting, six separate Top 5 Venue tables are published in this document.

## SCOPE OF THE REPORT

The report includes

- all transactions executed or transmitted by Dealing Services in 2020
- all transactions delegated to BNP PARIBAS AM UK, BNP PARIBAS AM ASIA and BNPP AM US and that have been executed or transmitted by the local dealing desk of these entities on behalf of Dealing Services orders in 2020

## GENERAL DISCLOSURE ABOUT QUALITATIVE ASSESSMENT

The RTS 28 requires, for each class of instruments, a summary of the analysis and conclusions Dealing Services draw from its detailed monitoring of the quality of execution obtained on the execution venues where it has executed all client orders in 2020.

Some of the requirements apply to all instruments and are commented below. Some will be detailed instruments by instruments.

- (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 assessing the quality of execution;

A major part of Dealing Services trading activity of Dealing Services is directly performed under the European Union regulations; as such, traders have to comply with MiFID requirements, especially those related to best selection and execution. In all local trading desks of BNP PARIBAS Asset Management entities to which Dealing Services can delegate the execution of orders (BNPP AM UK, BNPP AM Asia and BNPP AM US), MiFID requirements will be respected throughout these entities as long as they are not in contradiction with local regulations.

As principles defined by its execution policies to meet MiFID II best execution requirements, executing clients' orders using either trading venues or counterparties and brokers authorised by its clients, BNP Paribas Dealing Services generally takes into account several parameters which can be combined or not and may vary according to the instrument types, as described below :

- ⇒ Price of the instrument
- ⇒ Potential market impact
- ⇒ Market liquidity & conditions
- ⇒ Order size & order type
- ⇒ Likelihood of execution
- ⇒ Speed of execution
- ⇒ Likelihood of settlement
- ⇒ Direct and/or indirect transaction costs
- ⇒ Specific client instructions
- ⇒ Counterparties trading capacities combined with competitive pricing & qualitative coverage as per their overall performances defined by our detailed ranking (cf. point (d) below)
- ⇒ Legal documentation

Transactions are executed with the pre-selected intermediaries that are the best match for these criteria, which are ranked differently depending on the financial instrument and the order type.

- (b) a description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;

Dealing Service is fully owned subsidiary of BNP Paribas Asset Management. Dealing Services may use BNP Paribas group's affiliated brokers/counterparties. According to internal compliance procedures, the in-house brokers will be subject to the same broker selection and evaluation process and rules as any other broker/counterparties, and receives no preferential consideration.

Dealing Services does not have any links or conflict of interest with trading venues.

- (c) a description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;

Dealing Services does not have any specific arrangements with any execution venues regarding payments made or received discounts, rebates or non-monetary benefits. Dealing Services may receive minor material non-monetary benefits from execution venues and these are only accepted after Dealing Services have made consideration in line with its regulatory obligations and with its own internal procedures.

(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;

#### Trading Platforms:

Platforms to be used are selected based on the following criteria:

- ⇒ Traded products
- ⇒ Operational efficiency
- ⇒ Liquidity access

Hereafter is a non-exhaustive list of the main platforms currently used within Dealing Services trading desks:

- ⇒ Liquidnet (Equity and Fixed Income)
- ⇒ ITG POSIT (Equity)
- ⇒ Tradeweb (Equity and Fixed Income)
- ⇒ TSOX (Fixed Income)
- ⇒ MarketAccess (Fixed Income)
- ⇒ FXAll (Forex)
- ⇒ CBOE / LIS (Equity, added in 2018 to have a better access to the available buy side liquidity)

#### Counterparties and brokers:

Dealing Services does not determine the list of Counterparties and Brokers with which it is authorised to work; the clients give the list.

Twice a year, Dealing Services evaluates the quality of the execution services provided by the brokers and the counterparties with whom it has worked. Each intermediary is evaluated and noted according to a set of quantitative and qualitative criteria (electronic offer, market coverage and instruments, proposed prices, liquidity provided, post trade follow-up...). This evaluation is communicated to clients.

The results of this execution vote are used, among other criteria, on a daily basis as part of the best selection of the brokers/counterparties and the best execution processes.

#### Brexit

To answer the Brexit challenges, Dealing Services has switched gradually in 2020 trading with UK market intermediaries to their EUR based entities. This is why several entities of a same corporate group can appear in the top 5 venues reports, displacing other brokers/counterparties that are used on a regular basis on the 6<sup>th</sup> or 7<sup>th</sup> rank.

In that case, so as to provide additional information on the other market intermediaries chosen for execution that are deemed relevant to Dealing Services' order execution practices, the report will list the top 6 or top 7 venues.

For the trading platforms, which have also been migrated to the EUR based entities, executions done on both UK and EUR platforms have been gathered to show the actual part of execution done on platforms.

(e) an explanation of how order execution differs according to client categorisation, where the firm treats categories of clients differently and where it may affect the order execution arrangements;

- ⇒ All Dealing Services' clients are professional clients. All clients' orders are dealt with the same diligence.

(f) an indication that other criteria have been favoured, or not, over the price and the immediate costs of executing orders from retail clients, and an explanation of how these other criteria have been decisive in achieving the best possible result in terms of total cost for the customer.

- ⇒ Dealing Service has no retail client.

(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 Delegated Regulation (EU) 2017/575.

⇒ Will be detailed instrument by instruments.

(h) where applicable, an explanation of how the investment firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

⇒ Dealing Services does not use output of a consolidated tape provider.

(i) where applicable, disclose the identity of the main venues investment firm commonly selects via DEA arrangements and the existence of any close links and specific arrangements with such execution venues.

⇒ Dealing Services does not select venue via DEA arrangements.

# REPORTING BY INSTRUMENTS

## EQUITIES – SHARES & DEPOSITARY RECEIPTS

The traders who determine which execution factors are most important and, therefore the strategy to employ in order to obtain the best possible result assess each order.

With the aim of getting the best execution price, Dealing Services traders takes into account, the execution cost (brokerage costs) agreed between the clients and their brokers.

After the nature of the order, the price (including implicit cost) is usually the execution factor the traders consider to be most important when dealing in equities, although speed is also an important factor when they want to take advantage of a particular price observed in the market, or to avoid an adverse market impact if the order is large in size or the market is volatile.

The execution factors are generally driven by the price and order size, and then the likelihood of execution (market liquidity and conditions), speed of execution and the settlement arrangements.

The vast majority of shares orders handled by Dealing Services are transmitted to brokers and will appear in the transmission reports of the different liquidity bands.

The shares orders that are executed directly by the trading desks corresponds to less liquid shares or larger sizes that may be executed on conditionnel venues that matches interests on an anonymous basis or are bilaterally executed with a broker(s) that has published Indication Of Interest, who has the reverse interests and who offers the best execution conditions.

It is up to the negotiator to use the different modes of execution offered by brokers and counterparties (blocks, trading algorithms, program trading...)

For the three liquidity bands and for execution and transmission services, Dealing Services uses TCA (Transaction Cost Analysis) analysis to monitor its execution performance and control execution quality. For each transaction, execution price is compared to a benchmark price value provided by an independent TCA data provider. Reference benchmarks have been selected by order type to obtain the most effective, fair and coherent benchmarking results. Deviations from benchmarks above pre-determined threshold are all justified by traders.

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

### 1. Execution reports

Liquidity band 5 to 6 corresponds to an average daily number of transactions from 2000 trades per day (as defined under the tick size regime as set out in Directive 2014/65/EU).

#### Tick Size liquidity band 5 and 6

Class of Instrument	1 - Equities - Shares & Depositary Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
LIQUIDNET SYSTEMS (LIQU)	30,74%	29,88%	33,63%	6,71%	0,00%
CBOE Europ Equities (BCXE)	28,83%	31,49%	4,73%	31,42%	0,00%
POSIT MTF (ITGL)	23,59%	22,70%	22,08%	4,25%	0,00%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	3,67%	4,68%	0,00%	0,00%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	2,61%	1,69%	0,00%	0,00%	0,00%

The MTF (Multilateral Trading Platform) "Liquidnet System" is ranked first in the report. This trading platform being a platform that matches interests on an anonymous basis to minimize the possible impact of orders in the market, the only counterparty that Dealing Services is facing is Liquidnet EU limited (entity opened for Brexit purpose).

For this category, compare to last year, Liquidnet and Posit have been used to trade larger blocks that might have an impact in the market. We have access with these two platforms to sell side and buy side liquidity pools. In this category, we have exposed a large range of our flows Large caps and Small & Mid-caps.

This year, Liquinet is still the platform that we use for a large part of our orders included in this category. However, we note that the « CBOE Europ Equities » (BCXE) venue has clearly progressed in ranking second particularly for aggressive orders. POSIT MTF is in third place with, as for Liquinet, a majority of passive orders.

#### Top 5 counterparties on Liquinet

##### Tick Size liquidity band 5 and 6

Class of Instrument	1 - Equities - Shares & Depositary Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
LIQUIDNET SYSTEMS (LIQU)	30,74%	29,88%
LIQUIDNET EU LIMITED (2138005N5TO2UJR67I36 )	100,00%	29,88%

We now only deal with the European entity Liquinet.

#### Top 5 contreperties sur CBOE Europ Equities

##### Tick Size liquidity band 5 and 6

Class of Instrument	1 - Equities - Shares & Depositary Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
CBOE Europ Equities (BCXE)	28,83%	31,49%
HSBC CONTINENTAL EUROPE (FOHUI1NY1AZMJMD8LP67 )	31,39%	11,09%
INSTINET EUROPE LIMITED (213800MXAKR2LA1VBM44 )	23,51%	5,56%
EXANE (969500UP76J52A9OXU27 )	14,64%	4,44%
CREDIT SUISSE SEC SOCIEDAD DE VALOR (959800TMGPWX7NYM4R72 )	13,75%	5,85%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	7,40%	3,19%

The counterparties that are in the TOP 5 of BIDS Trader platform, that gives access to CBOE venue, and which have therefore been the most used are HSBC, Instinet for the majority of the volume, Exane, Credit Suisse and JP Morgan in a lesser extent for this category.

#### Top 5 counterparties on Posit

##### Tick Size liquidity band 5 and 6

Class of Instrument	1 - Equities - Shares & Depositary Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
POSIT MTF (ITGL)	23,59%	22,70%
VIRTU ITG EUROPE LIMITED (213800EEC95PRUCEUP63 )	70,48%	16,77%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	6,68%	0,85%
BARCLAYS BANK IRELAND PLC (2G5BKIC2CB69PRJH1W31 )	5,91%	0,60%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	3,62%	1,21%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	2,62%	0,40%

Regarding the POSIT MTF, The VIRTU ITG EUROPE liquidity pool was the most active, the other four brokers are below 20% of the volumes traded.



Liquidity band 3 to 4 corresponds to an average daily number of transactions from 80 trades to 1999 trades per day (as defined under the tick size regime as set out in Directive 2014/65/EU).

#### Tick Size liquidity band 3 and 4

Class of Instrument	1 - Equities - Shares & Depository Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Volume	Orders	Proportion of	Proportion of	Proportion of
	Traded	Executed	Passive Orders	Agressive Orders	Directed Orders
LIQUIDNET SYSTEMS (LIQU)	36,58%	37,80%	46,05%	0,55%	0,00%
POSIT MTF (ITGL)	17,26%	20,52%	30,89%	14,37%	0,00%
CBOE Europ Equities (BCXE)	12,92%	14,85%	0,95%	51,58%	0,00%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	5,15%	3,73%	0,00%	0,00%	0,00%
BARCLAYS BANK IRELAND PLC (2G5BKIC2CB69PRJH1W31 )	3,82%	0,43%	87,50%	0,00%	0,00%

The MTF (Multilateral Trading Platform) "Liquidnet System" is ranked first in the report. This trading platform being a platform that matches interests on an anonymous basis to minimize the possible impact of orders in the market. The only counterparty that Dealing Services is facing is Liquidnet EU limited (European entity created for Brexit purpose).

In 2020, we have diversified our execution venues, using Liquidnet, POSIT and BARCLAYS for passive strategies for the execution orders with lower liquidity than the previous category CBOE and to a lesser extent POSIT have been used to more aggressive trading strategies.

#### Top 5 counterparties on Liquidnet

#### Tick Size liquidity band 3 and 4

Class of Instrument	1 - Equities - Shares & Depository Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
	LIQUIDNET SYSTEMS (LIQU)	36,58%
LIQUIDNET EU LIMITED (2138005N5TO2UJR67I36 )	100,00%	37,80%

We now only deal with the European entity Liquidnet.

#### Top 5 contreperties sur Posit

#### Tick Size liquidity band 3 and 4

Class of Instrument	1 - Equities - Shares & Depository Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
	POSIT MTF (ITGL)	17,26%
VIRTU ITG EUROPE LIMITED (213800EEC95PRUCEUP63 )	79,70%	15,14%
CREDIT SUISSE SEC SOCIEDAD DE VALOR (959800TMGPWX7NYM4R72 )	4,25%	0,14%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	3,03%	1,08%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	2,82%	0,57%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	2,22%	1,15%

Regarding POSIT MTF, we have dealt more than 17% of orders in this category. VIRTU is the most active venue with nearly 80% of volumes traded, Credit Suisse, JP Morgan, Goldman Sachs and Citigroup for around 13% of the volumes traded on POSIT.

## Top 5 counterparties sur CBOE Europ Equities

## Tick Size liquidity band 3 and 4

Class of Instrument	1 - Equities - Shares & Depositary Receipts	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
CBOE Europ Equities (BCXE)	12,92%	14,85%
EXANE (969500UP76J52A9OXU27 )	22,86%	2,87%
INSTINET EUROPE LIMITED (213800MXAKR2LA1VBM44 )	22,34%	3,52%
HSBC CONTINENTAL EUROPE (F0HUI1NY1AZMJMD8LP67 )	19,18%	3,59%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	11,04%	0,93%
CREDIT SUISSE SEC SOCIEDAD DE VALOR (959800TMGPWX7NYM4R72 )	8,20%	2,80%

CBOE totals less than 13% of orders for this category with the leading group Exane, Instinet, HSBC with around 64% of volumes then JP Morgan and Credit Suisse for just under 20%.

Liquidity band 1 to 2 corresponds to an average daily number of transactions less than 80 trades per day (as defined under the tick size regime as set out in Directive 2014/65/EU).

## Tick Size liquidity band 1 and 2

Class of Instrument	1 - Equities - Shares & Depositary Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
LIQUIDNET SYSTEMS (LIQU)	21,31%	28,10%	32,18%	13,86%	0,00%
SBERBANK CIB (UK) LIMITED (549300BKWHXYEXPV0328 )	17,62%	13,50%	23,94%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	12,18%	8,03%	9,07%	19,65%	0,00%
DAIWA CAPITAL MARKETS DEUTSCH GMBH (549300NEBDPH0ZXIF850 )	10,20%	0,36%	0,00%	0,00%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	6,69%	5,47%	0,00%	13,04%	0,00%

For the last category, Liquidnet is this year the first counterparty with a majority of passive orders as Sberbanks, the second broker of the list used as part of a passive strategy.

JP Morgan is at the third position with a higher proportion of aggressive orders than those executed passively, and finally Goldman Sachs with a majority of aggressive orders.

## Top 5 counterparties sur Liquidnet System :

## Tick Size liquidity band 1 and 2

Class of Instrument	1 - Equities - Shares & Depositary Receipts	
Notification if <1 average trade per business day in the previous Year	Y	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
LIQUIDNET SYSTEMS (LIQU)	21,31%	28,10%
LIQUIDNET EU LIMITED (2138005N5TO2UJR67136 )	100,00%	28,10%

We now only deal with the European entity Liquidnet

## 2. Transmission reports

### Tick Size liquidity band 5 and 6

Class of Instrument	1 - Equities - Shares & Depositary Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
INSTINET EUROPE LIMITED (213800MXAKR2LA1VBM44 )	17,97%	12,19%	22,30%	10,96%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	13,60%	13,49%	34,07%	2,25%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNB6K528 )	8,53%	5,38%	43,78%	17,34%	0,00%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	8,19%	9,12%	15,13%	10,39%	0,00%
BARCLAYS BANK IRELAND PLC (2G5BKIC2CB69PRJH1W31 )	7,14%	5,88%	37,48%	6,99%	0,00%

We can observe that the first five counterparties total more than 50% of the volumes traded with a greater proportion of passive orders than aggressive orders, in particular for Goldman Sachs.

### Tick Size liquidity band 3 and 4

Class of Instrument	1 - Equities - Shares & Depositary Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	13,63%	10,98%	21,44%	26,46%	0,00%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	12,33%	10,95%	21,49%	13,60%	0,00%
MORGAN STANLEY EUROPE SE (54930056FHWP7GIWYY08 )	11,42%	9,66%	36,28%	15,60%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	9,60%	14,31%	28,01%	3,16%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	9,39%	9,71%	36,52%	23,37%	0,00%

Same observation, more than 50% of the volumes dealt by the first five venues. There are four counterparties present from 2019 ranking (JP Morgan, UBS, Morgan Stanley and Citigroup). We can notice the entry of Societe Generale in the fifth position. The proportion of passive orders is always higher than the aggressive orders except for JP Morgan.

### Tick Size liquidity band 1 and 2

Class of Instrument	1 - Equities - Shares & Depositary Receipts				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
CREDIT SUISSE SEC SOCIEDAD DE VALOR (959800TMGPWX7NYM4R72 )	12,94%	12,65%	29,13%	22,10%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNB6K528 )	10,39%	5,07%	25,81%	11,73%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	9,39%	11,22%	28,33%	9,54%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	8,22%	7,41%	24,51%	28,88%	0,00%
INSTINET EUROPE LIMITED (213800MXAKR2LA1VBM44 )	7,67%	12,44%	12,61%	9,26%	0,00%

For the less liquid order category, a predominance of Credit Suisse and Anglo saxon banks with even more passive orders than aggressive orders except for JP Morgan.

## DEBT INSTRUMENTS – BONDS

### 1. Execution report

Class of Instrument	2 - Debt Instruments - Bonds				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
Bloomberg Multilateral Trading Facility (BMTF)	30,09%	31,17%	0,00%	0,00%	0,00%
TRADEWEB (TREU)	11,07%	16,58%	0,00%	0,00%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	7,62%	4,82%	0,00%	0,00%	0,00%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	4,25%	5,47%	0,00%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	4,18%	2,05%	0,00%	0,00%	0,00%

The MTF Bloomberg TSOX is ranked first. This trading venue enables to perform electronic STP (Straight Through Processing) Request For Quotes to a broad range of counterparties that are authorized by the clients. The use of trading platforms minimizes operational errors, enhances the access to liquidity and the execution quality.

Trading is conducted following the RFQ process. Executions on Debt instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

In order to complete orders, liquidity may become the most important factor. This is relevant when the order is a large size for the market or for a security with limited availability. The composition of the top five trading venues changed this year to include Tradeweb Europe in 2020. We use Tradeweb and Bloomberg MTF to trade electronically a broad range of debts such T-bills and bonds in secondary markets.

This year, Tradeweb moved up to the second place and TSOX keeps the first place. These both platforms total for more than 41% of volumes traded. Market Axess has left the top five. JP Morgan and Bank of America are now in this ranking and total more than 8% of the volumes. Our traders have a broad range of eligible Counterparties to trade within this classification of delivery versus payment (DVP) instruments.

As our Counterparties capacity to provide competitive prices (liquidity) changes over time, our traders adapt their Counterparty selection and thus we would expect the composition and order of the top 5 venues to be also dynamic. Our Execution policy provides traders with a framework in terms of selecting an appropriate number of Counterparts given the characteristics of the order and a requirement to document a reason on our audit trail, which justifies executions where less than three quotes have been recorded.

This is particularly relevant in parts of the market where specific bonds have reached a point in their maturity so that they are no longer widely quoted or traded. Our traders have access to a trading tool, which consolidates and sorts Counterparty bond axes in real time. The tool identifies axed Banks or Brokers, which can be incorporated into Counterparty selection for any given trade, providing the trader with the opportunity to negotiate a super execution price.

Less liquid bonds, orders with larger size or other specific orders may have to be traded off venue (telephone or IB Chat) as they require more interaction between the traders and the counterparties. As much as possible, the traders perform an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.

For Bonds, Dealing Services uses two kinds of report to perform controls and monitor its execution performance.

- ⇒ A 'RFQ' report highlighting competing quotes received from counterparties and justifications when execution prices differ from best quotes of if there have been insufficient number of quotes.
- ⇒ A report based on TCA (Transaction Cost Analysis) analysis. For each transaction, execution price is compared to a benchmark price value provided by an independent TCA data provider.

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

Top 5 counterparties on Bloomberg TSOX :

Class of Instrument	2 - Debt Instruments - Bonds	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
Bloomberg Multilateral Trading Facility (BMTF)	30,09%	31,17%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	9,90%	2,05%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	8,85%	2,47%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	8,42%	2,57%
NOMURA INTERNATIONAL PLC (DGQCSV2PHVF7I2743539 )	8,28%	1,32%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	7,79%	2,45%

The proportion of orders dealt this year on the Bloomberg platform is very high with more than 30% of the volumes traded.

The top five counterparties total a little less than 45% of the volume, with a fairly close distribution of volumes.

Three counterparties join the top 5 this year: Citigroup, Bank Of America and JP Morgan. Nomura and BNP remain in the rankings with a significant decline for Nomura.

Top 5 des contrepatries sur Tradeweb :

Class of Instrument	2 - Debt Instruments - Bonds	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
TRADEWEB (TREU)	11,07%	16,58%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	9,31%	1,38%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	9,10%	1,21%
CACIB (1VUV7VQFKUOQSJ21A208 )	8,70%	1,01%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	8,59%	1,20%
NOMURA INTERNATIONAL PLC (DGQCSV2PHVF7I2743539 )	7,85%	0,86%

This year, there is a little increase in volumes in the TRADEWEB platform more than 10% of volumes processed.

As for the previous platform the counterparties have a fairly close distribution of volumes. We note the entry of Bank of America in first place and Societe Generale in fourth place. BNP, CACIB and Nomura remain in the rankings.

**DEBT INSTRUMENTS – MONEY MARKET INSTRUMENTS****1. Execution report**

Class of Instrument	3 - Debt Instruments - Money Market				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
BARCLAYS BANK IRELAND PLC (2G5BKIC2CB69PRJH1W31 )	18,92%	13,01%	0,00%	0,00%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	11,00%	8,33%	0,00%	0,00%	0,00%
BRED BANQUE POPULAIRE (NICH5Q04ADUV9SN3Q390 )	10,95%	14,68%	0,00%	0,00%	0,00%
ING BANK N.V. (3TK20IVIUJ8J3ZU0QE75 )	7,90%	7,57%	0,00%	0,00%	0,00%
CREDIT INDUSTRIEL & COMMERCIAL (N4JDFKKH2FTD8RKFXO39 )	6,72%	7,53%	0,00%	0,00%	0,00%

Similar to last year BNP Paribas, BRED, Barclays and Credit Industriel & Commercial are still on the top five.

Executions on Money Market instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

Main activity is done off venue (telephone, IB Chat), due to the nature of the Money Markets instruments. As much as possible, the traders perform an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.

To perform its controls for Money Market, Dealing Services uses a 'RFQ' report highlighting competing quotes received from counterparties (including justifications when execution prices differ from best quotes or if there have been insufficient number of quotes).

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

## INTEREST RATES DERIVATIVES – FUTURES AND OPTIONS ADMITTED TO TRADING ON A TRADING VENUE

Executions on Interest Rates Listed Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

The majority of Interest Rates Listed Futures and Options are transmitted to brokers for execution.

Execution services done by the traders correspond to the case when the trader has to rollover a position: depending on different factors, the dealer may organize an RFQ process to get the best possible results.

### 1. Execution report

Class of Instrument	4 - Interest rates Derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4O72 )	44,36%	38,54%	0,00%	0,00%	0,00%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	12,90%	11,73%	0,00%	0,00%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	10,30%	18,12%	13,73%	37,76%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	10,21%	9,11%	0,00%	0,00%	0,00%
GFI SECURITIES LIMITED (GUNTJCA81C7IHNBG1392 )	10,04%	9,75%	86,85%	0,00%	0,00%

We are trading for this category with a mix of Banks and Brokers. Compared to last year the majority of the volumes was traded with Brokers instead of Banks. This year, Societe Generale and UBS have replaced Aurel BGC and Deutsche Bank.

### 2. Transmission report

Class of Instrument	4 - Interest rates Derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	23,30%	21,49%	23,87%	41,12%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	20,25%	11,99%	0,00%	0,00%	0,00%
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4O72 )	19,29%	27,24%	10,08%	34,73%	0,00%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	13,12%	13,50%	0,00%	0,00%	0,00%
HPC (969500AMLHB21RACL168 )	9,74%	9,14%	0,00%	0,00%	0,00%

We are trading for this category with a mix of Banks and Brokers. Compared to last year the majority of the volumes was traded with Banks instead of Brokers. This year, UBS and HPC have replaced Aurel BGC and GFI.

## INTEREST RATES DERIVATIVES – SWAPS, FORWARDS AND OTHER INTEREST RATES DERIVATIVES

### 1. Execution report

Class of Instrument	4 - Interest rates Derivatives - OTC				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Volume	Orders	Proportion of	Proportion of	Proportion of
	Traded	Executed	Passive Orders	Agressive Orders	Directed Orders
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	45,46%	34,86%	0,00%	0,00%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	12,20%	17,71%	0,00%	0,00%	0,00%
HSBC CONTINENTAL EUROPE (F0HUI1NY1AZMJMD8LP67 )	12,10%	3,14%	0,00%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	11,82%	21,43%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	8,21%	13,14%	0,00%	0,00%	0,00%

We traded over the counter (OTC) swaps and IRS in this category of financial instrument.

Our traders focus mainly on price, and request RFQ's from different counterparties depending on where they expect liquidity to be available. In order to complete orders, liquidity can be a factor in relation to less liquid swaps or large in size orders.

You will notice a concentration of volumes traded on the five counterparties with a predominance of BNP Paribas followed by Goldman Sachs, HSBC and JP Morgan, which total around 90% of volumes. We find the same counterparties as the previous year with a significant decline from HSBC in favor of Goldman Sachs.

As with other OTC products, our list of authorized OTC derivative Counterparts comprises major banks that have satisfied our criteria to protect clients from settlement risk and includes the execution of ISDA/CSA documentation to support Bilateral trading or Clearing agreements. We have adapted our trading architecture so that we are ready to meet modified US and European regulations which require changes to how we clear, trade, report and record eligible derivative contracts.

Executions on Interest Rates Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

All the trading activity is done off venue (telephone, IB Chat), due to the nature of the instruments. As much as possible, the traders perform an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.



## CREDIT DERIVATIVES – OTHER CREDIT DERIVATIVES

### 1. Execution report

Class of Instrument	5 - Credit derivatives - OTC				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
BNP PARIBAS (ROMUWSFPU8MPRO8K5P83 )	53,74%	42,67%	0,00%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	28,36%	31,24%	0,00%	0,00%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNB6K528 )	9,13%	15,05%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	4,50%	3,62%	0,00%	0,00%	0,00%
MORGAN STANLEY EUROPE SE (54930056FHWP7GIWYY08 )	1,81%	2,29%	0,00%	0,00%	0,00%

Compared to 2019, the top 5 counterparties remain unchanged in 2020. However, we can notice a greater concentration of volumes on this top 5, with a strong increase in BNP Paribas's market share.

Executions on Credit Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

All the trading activity is done off venue (telephone, IbChat), due to the nature of the instruments. As much as possible, the traders perform an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.

## CURRENCY DERIVATIVES – FUTURES AND OPTIONS ADMITTED TO TRADING ON A TRADING VENUE

Executions on Currency Listed Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

The majority of Currency Listed Futures and Options are transmitted to brokers for execution.

Execution services done by the traders correspond to the case when the trader has to rollover a position: depending on different factors, the dealer may organize an RFQ process to get the best possible results.

### 1. Execution report

Class of Instrument	6 - Currency derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	Y				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4072 )	35,88%	6,28%	0,00%	0,00%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	31,78%	31,88%	0,00%	0,00%	0,00%
BNP PARIBAS (ROMUWSFPU8MPRO8K5P83 )	23,54%	53,62%	0,00%	1,65%	0,00%
AUREL BGC (5RJTDGZG4559ESIYLD31 )	7,14%	6,28%	100,00%	0,00%	0,00%
GFI SECURITIES LIMITED (GUNTJCA81C7IHNBI392 )	1,65%	1,93%	100,00%	0,00%	0,00%



The top three counterparties represent more than 91% of the volume traded, Tradition for 35.9% of the volume and 6.3% for the proportion of the orders, followed by Societe Generale with 31.8% of the volumes and 31.9% of the executed orders, and finally BNP Paribas for 23.5% of the volumes and more than 53% of orders executed.

## 2. Transmission report

Class of Instrument	6 - Currency derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	48,00%	57,46%	23,71%	42,90%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	43,01%	35,46%	0,00%	0,00%	0,00%
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	6,16%	5,09%	0,00%	0,00%	0,00%
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4O72 )	2,23%	0,95%	0,00%	0,00%	0,00%
AUREL BGC (5RJTDGZG4559ESIYLD31 )	0,30%	0,26%	33,33%	0,00%	0,00%

For the transmission report, BNP Paribas is still the number one with 48% of the volumes and the more than 57% of the orders, Societe Generale with 43 % of the volumes and 35.5% of the orders. Then, we have UBS with 6.16% of the volumes and 5.9% of the executed orders and Tradition with 2.2% of volumes and 0.95% of the executed orders.

## CURRENCY DERIVATIVES – SWAPS, FORWARDS AND OTHER CURRENCY DERIVATIVES

### 1. Execution report

Class of Instrument	6 - Currency derivatives - OTC				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
FXALL Multilateral Trading Facility (TRAL)	95,66%	98,74%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	1,32%	0,33%	0,00%	0,00%	0,00%
BP2S (549300WCGB70D06XZS54 )	1,21%	0,13%	0,00%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	0,76%	0,06%	0,00%	0,00%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	0,43%	0,02%	0,00%	0,00%	0,00%

We predominantly execute transactions in foreign exchange forwards, swaps, non-deliverable forwards and OTC currency options using an RFQ process. Price is usually the most important factor when we select which counterparty to trade with. For Fixing orders each counterparty has to offer the same price, hence cost is the most important factor.

It is a fiduciary responsibility to protect our Clients from FX settlement risk. Our list of authorized Counterparts comprises major banks that have met specific requirements we have set out in terms of acceptable financial strength, proven market share, and price competitiveness. As a result, our list of Counterparts for these financial instruments is purposefully selective.

In order to complete orders, liquidity can be a factor for less liquid currency pairs or where market conditions are challenging. Having pre-arranged credit lines or limits in place can also be a factor in precluding some client orders from trading at the best price provided by the RFQ process. Where we employ algorithms to achieve the best result, counterparties are chosen given the strategy and suitability of the algorithm.

Executions on Forex instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

In the top five venues, we traded the majority of our orders using the trading venue FX ALL (a Multilateral Trading Platform), which is ranked first in the report.

This trading venue enables to perform electronic STP (Straight Through Processing) . The use of trading platforms minimizes operational errors and enhances the access to liquidity and the execution quality.

When we use electronic trading venues, we are able to ask a greater number of our Counterparties for quotes at the same time and then select the best price. Using this process is a more efficient way to deliver best execution, which explains the high percentage of orders traded using the FX ALL platform.

Less liquid currency pairs, orders with larger size or other specific orders may have to be traded off venue (telephone, IB Chat) as they requires more interaction between the traders and the counterparties. As much as possible, the traders do an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.

As a part of our trading framework, we monitor our trading efficiency by employing continuous trade cost analysis (TCA) and by conducting periodic reviews of Counterparties, which incorporate hit ratio competitiveness studies.

For Currency OTC derivatives, Dealing Services uses two kinds of report to perform controls and monitor its execution performance.

- ⇒ A 'RFQ' report highlighting competing quotes received from counterparties and justifications when execution prices differ from best quotes or if there have been insufficient number of quotes
- ⇒ A report based on TCA (Transaction Cost Analysis) analysis. For each transaction (except for OTC currency Options), execution price is compared to a benchmark price value provided by an independent TCA data provider. Deviations from benchmark are monitored according to pre-determined thresholds.

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

#### Top 5 counterparties on FXALL

Class of Instrument	6 - Currency derivatives - OTC	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
FXALL Multilateral Trading Facility (TRAL)	95,66%	98,74%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	19,09%	22,51%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	16,37%	14,44%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	14,22%	13,39%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	13,69%	13,19%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	10,90%	7,79%

This year, JP Morgan and BOFA have joined the top five execution venues and have replaced UBS and Goldman Sachs

## EQUITY DERIVATIVES – FUTURES AND OPTIONS ADMITTED TO TRADING ON A TRADING VENUE

Executions on Equity Listed Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

The majority of Equity Listed Futures and Options are transmitted to brokers for execution.

Execution services done by the traders correspond to the case when the trader has to rollover a position: depending on different factors, the dealer may organize an RFQ process to get the best possible results.

## 1. Execution report

Class of Instrument	8 - Equity derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume	Proportion of Orders	Proportion of Passive	Proportion of Agressive	Proportion of Directed
	Traded	Executed	Orders	Orders	Orders
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4O72 )	34,74%	30,38%	0,00%	0,00%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	14,51%	22,99%	12,99%	15,53%	0,00%
AUREL BGC (5RJTDGZG4559ESIYLD31 )	12,69%	4,85%	96,56%	0,00%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	6,60%	9,05%	0,00%	0,00%	0,00%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	6,30%	3,90%	0,00%	0,00%	0,00%

We deal for this category with a mix of Banks and Brokers. Tradition is the first in the top five with around 35% of the volumes and 30% of executed orders, followed by BNP Paribas with 14.5% of the volumes and around 23% of the executed orders. Aurel BGC, Societe Generale and BOFA represent around 25% of the volumes and around 18% of the executed orders.

## 2. Transmission report

Class of Instrument	8 - Equity derivatives - Listed				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume	Proportion of Orders	Proportion of Passive	Proportion of Agressive	Proportion of Directed
	Traded	Executed	Orders	Orders	Orders
UBS EUROPE SE (5299007QVIQ7IO64NX37 )	29,50%	36,15%	0,00%	0,00%	0,00%
TRADITION SECURITIES AND FUTURES (969500ULC0Y1IG0A4O72 )	17,05%	12,48%	16,02%	20,98%	0,00%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	13,65%	15,94%	31,11%	17,71%	0,00%
CREDIT SUISSE SEC SOCIEDAD DE VALOR (959800TMGPWX7NYM4R72 )	9,46%	7,92%	0,75%	0,03%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	8,00%	10,16%	0,00%	0,00%	0,00%

For the transmission report in this category, UBS is the first counterparty with 29.5% of the volumes, followed in volumes by Tradition for more than 17%, and respectively BNP Paribas 13.6%, Credit Suisse 9.46% and Societe Generale 8%. On the number of executed orders, UBS more than 36%, then 15.9% for BNP Paribas, Tradition with 12.5%, Societe Generale 10.1% and 7.2% for Credit Suisse.

## EQUITY DERIVATIVES – SWAP AND OTHER EQUITY DERIVATIVES

Executions on Equity Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

All the trading activity is done off venue (telephone, IB Chat), due to the nature of the instruments. As much as possible, the traders perform an RFQ process if it doesn't lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

Without drawing up a comprehensive list, this may occur in the following circumstances:

- ⇒ a need to guarantee maximum confidentiality;
- ⇒ the illiquidity of the financial instrument;
- ⇒ any situation where the request for quotes is contrary to the clients' interests.

## 1. Execution report

Class of Instrument	8 - Equity derivatives - OTC				
Notification if <1 average trade per business day in the previous Year	Y				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83 )	55,38%	37,50%	0,00%	0,00%	0,00%
J.P. MORGAN AG (549300ZK53CNGEEI6A29 )	25,02%	33,33%	0,00%	0,00%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	19,59%	12,50%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	0,01%	16,67%	0,00%	0,00%	0,00%

We traded over the counter (OTC) swaps and Equity Derivatives in this category of financial instrument.

Our traders focus mainly on price, and request RFQ's from different counterparties depending on where they expect liquidity to be available. In order to complete orders, liquidity can be a factor in relation to less liquid swaps or large in size orders.

In the top 5 execution venues, BNP Paribas is the first counterparty with more than 55% of volume and 37.5% of the executed orders, JP Morgan has dealt with 25% of the volumes and 33.3% of the orders. Societe Generale almost 20% of volumes and 12.5% of orders, Citigroup has less 0.1% of volumes but 16.7% of the executed orders.

As with other OTC products, our list of authorized OTC derivative Counterparts comprises major banks that have satisfied our criteria to protect clients from settlement risk and includes the execution of ISDA/CSA documentation to support Bilateral trading or Clearing agreements.

We have adapted our trading architecture so that we are ready to meet modified US and European regulations which require changes to how we clear, trade, report and record eligible derivative contracts.

## SECURITIZED DERIVATIVES

Executions on Securitized Derivatives instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

All Securitized Derivatives are transmitted to brokers for execution.

## 1. Transmission report

Class of Instrument	9 - Securitized derivatives				
Notification if <1 average trade per business day in the previous Year	Y				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	72,50%	29,17%	0,00%	0,00%	0,00%
MERRILL LYNCH INTERNATIONAL (GGDZP1UYGU9STUHRDP48 )	20,81%	50,00%	0,00%	0,00%	0,00%
BOFA SECURITIES EUROPE SA (549300FH0WJAPEHTIQ77 )	5,27%	4,17%	0,00%	0,00%	0,00%
JPMORGAN SECURITIES PLC (K6Q0W1PS1L1O4IQL9C32 )	0,84%	4,17%	7,00%	92,50%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	0,45%	4,17%	0,00%	0,00%	0,00%

This year, we have dealt with Goldman Sachs for 72.5% of the volumes and 29.1% of the executed orders, most of these orders being processed with the issuer of the instrument. Merrill Lynch and BOFA represent 16% of the volume and 54% of the executions. JP Morgan and Societe General have less than 1% of the volume with respectively 4.17% of the executions.

## CONTRACT FOR DIFFERENCE

Executions on CFD instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

Depending on the parameters of the orders (Buy, Sell, Open or Close of position), traders may have to deal with the prime brokers.

### 1. Transmission report

Class of Instrument	11 - Contracts for difference				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume	Proportion of Orders	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
	Traded	Executed	Orders	Orders	Orders
MORGAN STANLEY EUROPE SE (54930056FHWP7GIWYY08 )	53,80%	76,24%	8,60%	3,38%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	33,07%	17,68%	48,39%	5,27%	0,00%
CITIGROUP GLOBAL MARKETS INC. (MBNUM2BPBDO7JBLYG310 )	8,73%	3,49%	44,06%	20,67%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	2,71%	1,54%	57,61%	20,68%	0,00%
MORGAN STANLEY & CO. LLC (9R7GPTSO7KV3UQJZQ078 )	1,58%	0,89%	0,00%	0,00%	0,00%

For this table, we have traded again with prime brokers. Morgan Stanley is the first counterparty with 53% of the volumes and 76% of the executed orders, Citigroup with 41.5% of volumes and 21% of the executed orders across European and American entities.

## EXCHANGE TRADED PRODUCTS

Executions on Exchange Traded Products are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

A part of the ETP, orders are transmitted to brokers. Depending on the parameters of the orders, traders may have to execute and in this case, they perform an RFQ process to get the best possible results. This is the case, in particular, for ETF with the type of order "NAV guaranteed".

To perform its controls for ETF, Dealing Services uses a 'RFQ' report highlighting competing quotes received from counterparties (including justifications when execution prices differ from best quotes or if there have been insufficient number of quotes).

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

### 1. Execution report

Class of Instrument	12 - Exchange traded products				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume	Proportion of Orders	Proportion of Passive Orders	Proportion of Aggressive Orders	Proportion of Directed Orders
	Traded	Executed	Orders	Orders	Orders
TRADEWEB (TREU)	95,34%	98,56%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	1,56%	0,68%	0,00%	0,00%	0,00%
JANE STREET FINANCIAL LIMITED (549300ZHEHX8M31RP142 )	1,54%	0,24%	0,00%	0,00%	0,00%
GOLDMAN SACHS INTERNATIONAL (W22LROWP2IHZNBB6K528 )	0,69%	0,16%	0,00%	0,00%	0,00%
FLOW TRADERS B.V. (549300CLJ19XDH12XV51 )	0,49%	0,21%	0,00%	0,00%	0,00%

Tradeweb is the number one with around 95% of volumes and 98% of executed orders being the main platform for RFQs. The other counterparties provided axes, which helped us to supply efficiently with liquidity.

Top 5 counterparties on Tradeweb

Class of Instrument	12 - Exchange traded products	
Notification if <1 average trade per business day in the previous Year	N	
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion Total Exec
TRADEWEB (TREU)	95,34%	98,56%
JANE STREET FINANCIAL LIMITED (549300ZHEHX8M31RP142 )	29,38%	23,42%
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	17,93%	20,31%
FLOW TRADERS B.V. (549300CLJI9XDH12XV51 )	17,05%	15,36%
OPTIVER V.O.F (7245009KRY SAYB2QCC29 )	11,23%	16,23%
SUSQUEHANNA INTERNATIONAL SEC LTD (635400IAV22ZOU1NFS89 )	5,64%	5,54%

Jane Street with almost 30% of the volumes has increased this year its market share and number of trades, Citigroup has increased its market share in volumes with around 18% and 20% of orders.

The other specialized Market Makers in ETD, Flow Traders, Optiver and Susquehanna represent 34% of the remaining volume and 37% of the executions.

**2. Transmission report**

Class of Instrument	12 - Exchange traded products				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
CITIGROUP GLOBAL MARKETS EUROPE AG (6TJCK1B7E7UTXP528Y04 )	59,80%	77,11%	19,36%	3,33%	0,00%
KEPLER CHEUVREUX (9695005EOZG9X8IRJD84 )	9,23%	12,11%	14,49%	0,17%	0,00%
MERRILL LYNCH JAPAN SEC CO., LTD (I7E80LI4NVVT41W1WB02 )	8,43%	0,96%	0,00%	0,00%	0,00%
UBS SECURITIES JAPAN CO., LTD. (54930090QR873H4M6D72 )	5,25%	1,33%	0,00%	0,00%	0,00%
FLOW TRADERS B.V. (549300CLJI9XDH12XV51 )	4,58%	0,60%	0,00%	0,00%	0,00%

For the transmission report, Citigroup keeps the first rank with 59.8% in terms of volumes and 77% in terms number of executed orders. Kepler is only at around 9% of volumes and 12% of executed orders. There are two newcomers: Merrill Lynch and UBS also well participated in the reception and transmission of orders.

Flow Traders is declining in volume traded but remains in the top five.

# SECURITIES FINANCING TRANSACTIONS (SFT)

## REPO AND REVERSE REPO

### 1. Execution report

Class of Instrument	13 - Repo / Reverse Repo				
Notification if <1 average trade per business day in the previous Year	N				
Top 5 Execution venues ranked in terms of trading volumes (descending order)	Proportion of Volume Traded	Proportion of Orders Executed	Proportion of Passive Orders	Proportion of Agressive Orders	Proportion of Directed Orders
LA BANQUE POSTALE (96950066U5XAAIRCPA78 )	67,16%	23,46%	0,00%	0,00%	0,00%
CACIB (1VUV7VQFKUOQSJ21A208 )	30,75%	28,70%	0,00%	0,00%	0,00%
BNP PARIBAS (ROMUWSFPU8MPRO8K5P83 )	0,89%	36,90%	0,00%	0,00%	0,00%
CITIGROUP GLOBAL MARKETS LIMITED (XKZZ2JZF41MRHTR1V493 )	0,67%	3,64%	0,00%	0,00%	0,00%
SOCIETE GENERALE SA (O2RNE8IBXP4R0TD8PU41 )	0,47%	0,68%	0,00%	0,00%	0,00%

This year on Repo / Reverse Repo, the top three counterparties represent around 98 % of the volumes. La Banque Postale is the first counterparty and has concentrated 67% of the volumes with more than 23% in number of orders, followed by CACIB with more than 30% of volumes and 37 % of number of executed orders and BNP Paribas with less than 1% of volumes but with more than 36% of number of executed orders. JP Morgan has been replaced by the arrival of Citigroup.

Executions on Repo/Reverse repo instruments are generally driven by the price and order size, and then market liquidity and conditions, speed of execution and likelihood of settlement.

All the activity is done off venue (telephone, IB Chat), due to the nature of the instruments. As much as possible, the traders do an RFQ process if it does not lead to information leakage on the market.

In some cases, Dealing Services may not be in a position to organise a request for quotes or may consider that it is inappropriate to do so in the client's interests, which provides a de facto justification that the price criterion has been adhered to.

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- a need to guarantee maximum confidentiality;
- the illiquidity of the financial instrument;
- any situation where the request for quotes is contrary to the clients' interests.

To perform its controls on repo/reverse repo transactions, Dealing Services uses a 'RFQ' report highlighting competing quotes received from counterparties (including justifications when execution prices differ from best quotes of if there have been insufficient number of quotes).

Execution quality is regularly reviewed by Dealing Services desks (first level controls), Compliance teams (second level controls) and with the client's investments strategy teams.

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