

Millennium Capital Partners LLP Best Execution Report 2020

Millennium Capital Partners LLP (the “**Firm**”) is an investment firm authorised and regulated by the Financial Conduct Authority. The Firm is part of the wider Millennium Management group, a global, multi-strategy investment firm that provides discretionary investment management services.

The Firm is obliged to publish on its website certain information on its use of execution venues and executing brokers in the preceding year, as required by Commission Delegated Regulation 2017/576 (“**RTS 28**”) and Commission Delegated Regulation 2017/565 (the “**MiFID Org Regulation**”) of Directive 2014/65/EU (“**MiFID II**”). The Firm is also obliged to publish a summary of the analysis and conclusions it draws from its detailed monitoring of the quality of execution obtained on these execution venues and brokers in the previous year. This summary should include:

- a) An explanation of the relative importance the Firm gives to the execution factors of price, costs, speed, likelihood of execution or any other consideration including qualitative factors when assessing the quality of execution;
- b) A description of any close links, conflicts of interests, and common ownerships with respect to any execution venues used to execute orders;
- c) A description of any specific arrangements with any execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received;
- d) An explanation of the factors that led to a change in the list of execution venues listed in the Firm’s execution policy, where applicable;
- 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;
- f) An explanation of whether 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;
- g) An explanation of how the Firm used any data or tools relating to the quality of execution, including any data published under Delegated Regulation (EU) 2017/575; and
- h) Where applicable, an explanation of how the Firm has used output of a consolidated tape provider established under Article 65 of Directive 2014/65/EU.

The Firm does not act on behalf of retail clients nor does it use the output of consolidated tape providers. As a result, points (e), (f) and (h) above are not applicable to the Firm’s investment business during the period under review¹ and this information has not been included in this report.

RTS 28 and the MiFID Org Regulation require the Firm to set out its analysis per class of financial instruments. The applicable classes of financial instrument are set out in Annex I to RTS 28. As the Firm does not execute orders in certain of the financial instruments specified in Annex I, this report does not provide information on the execution of all the instruments listed therein. The instruments not covered in this report (as set out in Annex I to RTS 28) are as follows:

- Credit derivatives that are futures/options admitted to trading on a trading venue;
- Structured finance instruments;
- Contracts for difference; and

¹ The period under review is 1 January 2020 to 31 December 2020 (the “**reporting period**”).

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- Emission allowances.

As required by MiFID II, the Firm has reported separately on client orders which the Firm has itself executed on venues (“**direct execution**”), and on client orders which the Firm has transmitted to other brokers for execution (“**indirect execution**”), and has marked the reports accordingly.

In this report, each execution venue or broker is ranked by trading volume for asset classes traded by the Firm.

In addition, this report sets out a summary of the Firm’s analysis and conclusions from its monitoring of the quality of execution obtained on execution venues and brokers where it executed or passed client orders. This analysis is set out on an instrument category basis.

Please note that this document is not marketing or promotional material and has been prepared and published to ensure compliance with MiFID II disclosure requirements. The Firm does not otherwise guarantee the correctness or completeness of the information in this report and shall not be responsible for or have any liability whatsoever for any loss or damage caused by errors, inaccuracies or omissions in connection with use or reliance on this information.

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Class of Instrument	Equities - Shares & Depository Receipts - Tick size liquidity bands 5 and 6 - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	79.02%	89.47%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT ASIA LIMITED 549300PT1F3CP6WB2C66	20.77%	10.52%	N/A	N/A	0%
MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	0.20%	0.00%	N/A	N/A	0%
UBS AG BFM8T61CT2L1QCCEMIK50	0.01%	0.00%	N/A	N/A	0%
Class of Instrument	Equities - Shares & Depository Receipts - Tick size liquidity bands 3 and 4 - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	96.91%	96.91%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT ASIA LIMITED 549300PT1F3CP6WB2C66	3.09%	3.09%	N/A	N/A	0%
Class of Instrument	Equities - Shares & Depository Receipts - Tick size liquidity bands 1 and 2 - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	89.31%	95.24%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT ASIA LIMITED 549300PT1F3CP6WB2C66	10.46%	4.76%	N/A	N/A	0%
MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPF6FNF3BB653	0.23%	0.00%	N/A	N/A	0%
Class of Instrument	Equities - Shares & Depository Receipts - outside of tick sizes - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	68.94%	83.31%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT ASIA LIMITED 549300PT1F3CP6WB2C66	31.06%	16.69%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, transaction costs and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that were approved by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which are execution venues for this class of instrument) belongs regularly monitors and evaluates the quality of execution. Where quantitative analysis of execution quality is appropriate, ongoing monitoring is performed through controls undertaken by the Firm's Execution Services department (via, inter alia, transaction analysis).				

Class of Instrument	Debt instruments - Bonds - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
BNP PARIBAS ROMUWSFPU8MPRO8K5P83	7.36%	3.74%	N/A	N/A	0%
NATWEST MARKETS PLC RR3QWICWWIPCS8A4S074	6.04%	2.21%	N/A	N/A	0%
GOLDMAN SACHS INTERNATIONAL W22LROWP2IHZNBB6K528	5.72%	3.36%	N/A	N/A	0%
BARCLAYS BANK PLC G5GSEF7VJPSI7OUK5573	5.64%	3.06%	N/A	N/A	0%
FENICS SOFTWARE INC. 549300FLZ5WMZ7ZQC356	5.49%	45.35%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, speed of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Debt instruments - Bonds - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	100.00%	100.00%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, speed of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Debt instruments - Money markets instruments - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
BARCLAYS BANK PLC G5GSEF7VJPSI7OUK5573	26.24%	19.79%	N/A	N/A	0%
J.P. MORGAN SECURITIES LLC ZBUT11V806EZRTWT807	10.43%	3.13%	N/A	N/A	0%
GOLDMAN SACHS INTERNATIONAL W22LROWP2IHZNBB6K528	8.24%	6.25%	N/A	N/A	0%
CREDIT AGRICOLE SA 969500TJ5KRTCJQWXH05	6.98%	5.21%	N/A	N/A	0%
CITIBANK, NATIONAL ASSOCIATION E570DZWZ7FF32TWEFA76	5.40%	3.13%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, speed of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. The list of execution venues used by the Firm for the execution of orders during the reporting period was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Debt instruments - Money markets instruments - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	100%	100%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, speed of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Interest rates derivatives - Futures and options admitted to trading on a trading venue - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
J.P. MORGAN SECURITIES LLC ZBUT11V806EZRVTWT807	35.33%	37.42%	N/A	N/A	0.03%
BARCLAYS CAPITAL INC. AC28XWWI3WIBK2824319	23.82%	18.00%	N/A	N/A	0.01%
BOFA SECURITIES, INC. 549300HN4UKV1E2R3U73	11.46%	30.66%	N/A	N/A	57.37%
GOLDMAN SACHS & CO. LLC FOR8UP27PHTHYVLBNG30	5.29%	6.03%	N/A	N/A	0.00%
SG AMERICAS SECURITIES, LLC 549300F35UEOBOM1WJ55	4.99%	0.62%	N/A	N/A	0.00%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors. With the exception of the Firm's common ownership with its affiliates, the Firm does not have close links or common ownerships with the executing brokers it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an executing broker. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. The list of execution venues used by the Firm for the execution of orders during the reporting period was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of executing brokers.				

The main venues commonly selected by the Firm via DEA arrangements include ICE Futures Europe, Chicago Mercantile Exchange, Inc., Board of Trade of the City of Chicago, Inc. and EUREX Frankfurt AG. The Firm does not have close links or special arrangements with any such venues.

Class of Instrument	Interest rates derivatives - Swaps, forwards, and other interest rates derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
GOLDMAN SACHS INTERNATIONAL W22LROWP2IHZNBB6K528	19.25%	11.62%	N/A	N/A	0%
NATWEST MARKETS PLC RR3QWICWWIPCS8A4S074	12.40%	3.55%	N/A	N/A	0%
J.P. MORGAN SECURITIES LLC ZBUT11V806EZRVTWT807	9.32%	5.76%	N/A	N/A	0%
JB DRAX HONORE (UK) LIMITED 549300WYFIFDMB6POR04	7.23%	1.06%	N/A	N/A	0%
CITIBANK, NATIONAL ASSOCIATION E57ODZWZ7FF32TWEFA76	5.69%	5.94%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Interest rates derivatives - Swaps, forwards, and other interest rates derivatives - indirect execution				
Notification if <1 average trade per business day in the previous year	Y				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	52.12%	52.89%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT (SINGAPORE) PTE. LTD. 549300AXO1FZJHHY8I21	47.88%	47.11%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Credit derivatives - Other credit derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
CREDIT SUISSE INTERNATIONAL E58DKGMJYYYJLN8C3868	15.38%	13.19%	N/A	N/A	0%
BARCLAYS BANK PLC G5GSEF7VJPSI7OUK5573	13.53%	10.85%	N/A	N/A	0%
DEUTSCHE BANK AKTIENGESELLSCHAFT 7LTWFZYICNSX8D621K86	11.98%	9.73%	N/A	N/A	0%
BNP PARIBAS ROMUWSFPU8MPRO8K5P83	11.79%	10.35%	N/A	N/A	0%
CITIBANK, NATIONAL ASSOCIATION E570DZWZ7FF32TWEFA76	10.45%	12.23%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution and costs/commissions and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Credit derivatives - Other credit derivatives - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK10RK3JOMOF7R6K47	58.82%	83.33%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT (SINGAPORE) PTE. LTD. 549300AXO1FZJHHY8I21	41.18%	16.67%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, costs/commissions and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Currency derivatives - Futures and options admitted to trading on a trading venue - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
BNP PARIBAS ROMUWSFPU8MPRO8K5P83	15.35%	4.85%	N/A	N/A	0%
STANDARD CHARTERED BANK RILFO74KP1CM8P6PCT96	11.49%	1.43%	N/A	N/A	0%
HSBC BANK PLC MP6ISZYBZEU3UXPFY54	10.05%	3.52%	N/A	N/A	0%
DEUTSCHE BANK AKTIENGESELLSCHAFT 7LTWFZYICNSX8D621K86	7.95%	2.27%	N/A	N/A	0%
J.P. MORGAN SECURITIES PLC K6QOW1PS1L1O4IQL9C32	6.66%	3.76%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors. With the exception of the Firm's common ownership with its affiliates, the Firm does not have close links or common ownerships with the executing brokers it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an executing broker. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of executing brokers.				

The main venues commonly selected by the Firm via DEA arrangements include Chicago Mercantile Exchange, Inc. and BM&F Bovespa SA. The Firm does not have close links or special arrangements with any such venues.

Class of Instrument	Currency derivatives - Swaps, forwards, and other currency derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
DEUTSCHE BANK AKTIENGESELLSCHAFT 7LTWFZYICNSX8D621K86	10.69%	4.50%	N/A	N/A	0%
BNP PARIBAS ROMUWSFPU8MPRO8K5P83	10.35%	4.30%	N/A	N/A	0%
CITIBANK, NATIONAL ASSOCIATION E57ODZWZ7FF32TWEFA76	10.05%	28.98%	N/A	N/A	0%
STANDARD CHARTERED BANK RILFO74KP1CM8P6PCT96	8.32%	2.35%	N/A	N/A	0%
J.P. MORGAN SECURITIES LLC ZBUT11V806EZRVWT807	6.33%	2.14%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links, common ownerships or conflicts of interest with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Currency derivatives - Swaps, forwards, and other currency derivatives - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM CAPITAL MANAGEMENT (SINGAPORE) PTE. LTD. 549300AXO1FZJHHY8I21	63.68%	37.67%	N/A	N/A	0%
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	36.32%	62.33%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, speed of execution, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Equity Derivatives - Options and Futures admitted to trading on a trading venue - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
BOFA SECURITIES, INC. 549300HN4UKV1E2R3U73	40.03%	78.66%	N/A	N/A	99.89%
MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFN3BB653	15.43%	5.60%	N/A	N/A	93.96%
J.P. MORGAN SECURITIES LLC ZBUT11V806EZRVTWT807	14.63%	4.54%	N/A	N/A	97.23%
BARCLAYS CAPITAL INC. AC28XWWI3WIBK2824319	7.36%	3.94%	N/A	N/A	99%
CITIGROUP GLOBAL MARKETS INC. MBNUM2BPBDO7JBLYG310	7.27%	2.31%	N/A	N/A	99%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, transaction costs and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors. With the exception of the Firm's common ownership with its affiliates, the Firm does not have close links or common ownerships with the executing brokers it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an executing broker. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of executing brokers.				

The main venues commonly selected by the Firm via DEA arrangements include ICE Futures Europe, Euronext Paris SA, EUREX Frankfurt AG, NASDAQ OMX and Chicago Mercantile Exchange, Inc.. The Firm does not have close links or special arrangements with any such venues.

Class of Instrument	Equity Derivatives - Swaps and other equity derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFN3BB653	21.71%	16.33%	N/A	N/A	0%
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 7H6GLXDRUGQF57RNE97	18.18%	30.00%	N/A	N/A	0%
GOLDMAN SACHS INTERNATIONAL W22LROWP2IHZNB6K528	13.18%	7.97%	N/A	N/A	0%
UBS AG BFM8T61CT2L1QCCEMIK50	11.71%	11.66%	N/A	N/A	0%
BARCLAYS BANK PLC G5GSEF7VJP5I7OUK5573	11.26%	5.00%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, transaction costs and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	In addition to regular monitoring of execution quality, the Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Securitized Derivatives - Warrants and Certificate Derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
UBS AG BFM8T61CT2L1QCCEMIK50	100.00%	100.00%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, speed of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity				
Use of data/tools relating to quality of execution	In addition to regular monitoring of execution quality, the Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Securitized Derivatives - Warrants and Certificate Derivatives - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	100.00%	100.00%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, transaction costs and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category, or from any other execution venue. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	During the reporting period, the list of execution venues used by the Firm for the execution of orders was changed in order to expand access to liquidity				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution.				

Class of Instrument	Commodities derivatives - Options and Futures admitted to trading on a trading venue - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
GOLDMAN SACHS & CO. LLC FOR8UP27PHTHYVLBNG30	40.06%	32.98%	N/A	N/A	28.77%
OTC EUROPE LLP 213800IV5LCFAZYX1E20	14.92%	0.89%	N/A	N/A	0%
PVM FUTURES, INC. 5493001VIV2FFX8HYY23	11.30%	1.37%	N/A	N/A	0%
BNP PARIBAS R0MUWSFPU8MPRO8K5P83	5.20%	26.63%	N/A	N/A	0%
SOCIETE GENERALE O2RNE8IBXP4R0TD8PU41	4.90%	8.91%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, likelihood of execution, size/depth of liquidity and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors. With the exception of the Firm's common ownership with its affiliates, the Firm does not have close links or common ownerships with the executing brokers it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an executing broker. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	The Firm maintains relationships with a number of execution venues in order to facilitate compliance with its best execution obligations. The Firm regularly reviews the approved execution venues and may make changes based on its assessment of execution venues' specialization in particular instruments, markets or regions, their ability to source inventory or market flow, or for their ability to obtain favourable pricing or low overall transaction costs at a given order size. There were minor changes, in the ordinary course of business, to the list of execution venues used by the firm for this class of instruments.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of executing brokers.				

The main venues commonly selected by the Firm via DEA arrangements include ICE Futures Europe, Chicago Mercantile Exchange, Inc., New York Mercantile Exchange, Inc., and London Metals Exchange, Inc. The Firm does not have close links or special arrangements with any such venues.

Class of Instrument	Commodities derivatives - Other commodities derivatives - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MACQUARIE BANK LIMITED 4ZHCH14KYZG2WVRT8631	41.23%	41.76%	N/A	N/A	0%
MORGAN STANLEY & CO. INTERNATIONAL PLC 4PQUHN3JPFQFN3BB653	35.23%	3.66%	N/A	N/A	0%
CITIGROUP GLOBAL MARKETS LIMITED XKZZ2JZF41MRHTR1V493	23.46%	54.52%	N/A	N/A	0%
GOLDMAN SACHS INTERNATIONAL W22LROWP2IHZNB6K528	0.09%	0.06%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: nature of trade, price, likelihood of execution and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

Class of Instrument	Exchange traded products - indirect execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
MILLENNIUM INTERNATIONAL MANAGEMENT LP Q0HK1ORK3JOMOF7R6K47	99.76%	99.88%	N/A	N/A	0%
MILLENNIUM CAPITAL MANAGEMENT ASIA LIMITED 549300PT1F3CP6WB2C66	0.24%	0.12%	N/A	N/A	0%
Execution Factors	The Firm may utilise its affiliates for order execution, such as in relation to specific regions or relating to specific strategies where an affiliate possesses familiarity in relation to the relevant instrument and relevant trading venues. During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: price, transaction costs and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm may pass orders to its affiliates to execute on a trading venue. Where it does so, the Firm and the affiliates executing transactions in this category belong to the same management group and are commonly owned. The Firm does not have any monetary incentive to use its affiliates, and orders are passed to affiliates in order to obtain the best result with regard to the relevant orders and execution factors.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from its affiliates for executing instruments in this category, or from any other execution venue. To the extent the Firm receives research or market data from any executing broker it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The management group to which the Firm (and the affiliates which may be acting as executing brokers for this class of instrument) belongs regularly monitors and evaluates the quality of execution. Where quantitative analysis of execution quality is appropriate, ongoing monitoring is performed through controls undertaken by the Firm's Execution Services department (via, inter alia, Transaction Analysis).				

Class of Instrument	Securities Financing Transactions - direct execution				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
NOMURA INTERNATIONAL PLC DGQCSV2PHVF7I2743539	20.16%	17.07%	N/A	N/A	0%
MERRILL LYNCH INTERNATIONAL GGDZP1UYGU9STUHRDP48	14.78%	14.74%	N/A	N/A	0%
BNP PARIBAS R0MUWSFPU8MPRO8K5P83	10.56%	10.75%	N/A	N/A	0%
BARCLAYS BANK PLC G5GSEF7VJPSI7OUK5573	10.07%	14.69%	N/A	N/A	0%
JPMORGAN CHASE BANK, NATIONAL ASSOCIATION 7H6GLXDRUGQFUS7RNE97	8.08%	10.57%	N/A	N/A	0%
Execution Factors	During the reporting period, the Firm considered the following factors to be the most important execution factors when assessing the quality of execution in this category: balance sheet/counterparty risk, price, size and depth of liquidity and any other factors that were deemed appropriate to consider under the relevant circumstances.				
Close links, conflicts of interest and common ownership with respect to execution venues	The Firm does not have close links or common ownerships with the execution venues it uses to execute orders.				
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm does not have any specific arrangements under which the Firm receives or makes any payment, or receives any discounts or rebates from an execution venue. To the extent the Firm receives research or market data from any execution venue it does so in compliance with MiFID II inducement rules.				
Factors leading to a change in the list of execution venues listed	There was no change in the list of executing brokers that can be used by the Firm for the execution of orders for this class of financial instrument in the reporting period.				
Use of data/tools relating to quality of execution	The Firm conducts a regular broker vote to consider the execution and operational quality of the execution venues.				

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