

Polygon Global Partners LLP MiFID II RTS 28 Top Five Execution Venue Reporting

Art. 27 (6) of Directive 2014/65/EU on markets in financial instruments (MiFID II) requires investment firms who execute client orders to summarise and make public on an annual basis, for each class of financial instruments the top five execution venues in terms of trading volumes where they executed client orders in the preceding year and information on the quality of execution obtained.

Polygon Global Partners LLP (Firm) is authorised and regulated by the UK Financial Conduct Authority (FCA) to undertake advisory and discretionary management services on behalf of its clients. The Firm is producing the below information for the period 1 January 2018 to 31 December 2018 pursuant to MiFID II and the FCA Conduct of Business Sourcebook (COBS) 11 Annex 1 EU Regulatory Technical Standard 28 (RTS 28).

The Firm, in undertaking its review, has assessed the quality of execution it has received and identified the top five execution venues¹ (in terms of volumes of transactions executed) for the classes of Financial Instruments set forth in Annex I of COBS 11. Where the Firm did not trade at all in a class of Financial Instruments during the period, no data for that class is set forth below.

Although the Firm is not required to obtain the best possible result for clients on every occasion, it must be able to verify on an on-going basis that its execution arrangements are sufficient through the stages of the order execution process, including assessments of the relevant Execution Factors and Execution Criteria.

General Notes

- 1. During the period, the Firm did not specify instructions requesting either passive or aggressive orders. The Firm does not instruct orders in a binary "passive" or "aggressive" manner for any instrument class. Additionally, the Firm did not trade on any trading venues as a direct member of or direct participant in such venues in circumstances where the Firm interacted with an order book maintained by the trading venue. Therefore, it considers this classification as irrelevant. Additionally, there were no orders in which a specific execution venue was specified by a client prior to the execution of that order. Therefore the "directed orders" classification was also irrelevant during 2018.
- 2. The Firm has excluded the following from these calculations:
 - movement of securities between custodians. These do not reflect changes in the Firm's holdings or economic positions;
 - tri-party loan/"repo" agreements. Certain of the Firm's securities financing transactions (SFTs) are tri-party. In these instances the Firm cannot identify the underlying collateral and has no active role in the trade other than determining the amount the Firm deposits in an escrow account and high level parameters for the collateral; and
 - general corporate actions. These include general corporate actions to which the Firm is subject as a security holder. They are generally mandatory or at the discretion of the issuer and applicable to all relevant position holders.

¹ Execution venue means broker, trading venue, systematic internaliser, market maker, liquidity provider and/or third country entity providing a similar function.



Class of Instrument	(a)(i) Equities - Share	s and Depositary Recei	pts - Tick size liquidity	bands 5 and 6 (from 20	00 trades per day) ²
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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 (BFM8T61CT2L1QCEMIK50)	14.75%	5.26%	0%	0%	0%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	14.25%	25.73%	0%	0%	0%
Credit Suisse Securities (Europe) Limited (DL6FFRRLF74S01HE2M14)	12.07%	2.92%	0%	0%	0%
THE SEAPORT GROUP EUROPE LLP (2138003MLD2U3GEMHS70)	9.06%	7.02%	0%	0%	0%
JONESTRADING INTERNATIONAL LIMITED (213800DIYIKDWRCFOC55)	8.12%	8.77%	0%	0%	0%

Class of Instrument	(a)(i) Equities - Shares and Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)		
Summary	The Firm generally conducted its equity trading via "indirect" execution. Where the Firm places an order with a		
	broker for execution, it is not responsible for controlling	ng or influencing the arrangements made by the broker	
	relating to the execution of that order (e.g., the Firm does	not control the broker's choice of Execution Venues).	
		mart order routing tools using a limit order which enable	
	the Firm to have access to a range of venues. This allow		
	price and likelihood of execution while minimizing poter	tial conflicts of interest.	
	Summary of analysis	Conclusion	
Execution factors	For this class of instrument, the Firm generally looks at	Consideration of these factors is demonstrated by the	
	price and transaction cost (especially in the cases of	spread of trades across the top venues listed and the top	
	greater transparency and/or liquidity). Other factors that	venues' aggregate concentration as compared to the total	
	may be considered include likelihood of execution, relevant volume.		
	speed of execution and other factors such as the specific		
	expertise or history of liquidity (especially in the case of		
	less transparency and/or liquidity).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	

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 $^{^2}$ Tick size liquidity bands are as of 11 April 2019.



Class of Instrument	(a)(i) Equities - Shares and Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)		
	Conflicts of interest Conflicts of interest		
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.	
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance	
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of	
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts	
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.	
		Payments and testing were reviewed by the Firm's	
	The Firm did not have in place any other arrangements	Trading Supervision Management and Compliance	
	for payment, discounts, rebates or other non-monetary	Committee (TMSCC).	
	benefits (other than those which may be classified as		
	"minor non-monetary benefits") with any of the entities		
	listed in this disclosure form.	THE TRACEOUS AND A SECOND SECO	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of	
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing	execution venues was appropriate during the period.	
Policy	diligencing and review.		
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.	
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that	
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained	
execution	received. These monitoring reports are received by the	from the execution venues listed above are consistent	
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the	
	Timi on a quarterry basis and reviewed by the Twisee.	most importance for this instrument class.	
	RTS 27 data became available for the first time during	most importance for any instrument class.	
	2018. However, the raw data published by venues and		
	relevant investment firms is in a format that is difficult		
	to use/assess and the Firm is not aware of any products		
	that are currently available that facilitate a comparative		
	analysis of the performance of the relevant brokers and		
	venues enable using the RTS 27 data. Consequently, the		
	Firm has not used the RTS 27 data this year in carrying		
	out analysis of the quality of execution. The Firm will		
	keep this approach under review, particularly if		



Class of Instrument	(a)(i) Equities - Shares and Depositary Receipts - Tick size	ze liquidity bands 5 and 6 (from 2000 trades per day)
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(a)(ii) Equities - Share day) ³	es and Depositary Rece	ipts - Tick size liquidity	bands 3 and 4 (from 80) to 1999 trades per
Notification if <1 average trade per business day in 2018	N				
Top five execution venues ranked in terms of trading volume (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 (BFM8T61CT2L1QCEMIK50)	24.87%	24.64%	0%	0%	0%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	14.54%	24.64%	0%	0%	0%
Citigroup Global Markets Limited (XKZZ2JZF41MRHTR1V493)	7.76%	1.08%	0%	0%	0%
NUMIS SECURITIES LIMITED (213800P3F4RT97WDSX47)	5.73%	7.55%	0%	0%	0%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	4.90%	1.26%	0%	0%	0%

Class of Instrument	(a)(ii) Equities - Shares and Depositary Receipts - Tick s day)	ize liquidity bands 3 and 4 (from 80 to 1999 trades per
Summary		irect" execution. Where the Firm places an order with a
	broker for execution, it is not responsible for controlling relating to the execution of that order (e.g., the Firm does	ng or influencing the arrangements made by the broker
	relating to the execution of that order (e.g., the Firm does	s not control the broker's choice of Execution Venues).
		mart order routing tools using a limit order which enable
		vs the Firm to maximize execution factors such as speed,
	price and likelihood of execution while minimizing poter	
	Summary of analysis	Conclusion
Execution factors	For this class of instrument, the Firm generally looks at	•
	price and transaction cost (especially in the cases of	spread of trades across the top venues listed and the top
	greater transparency and/or liquidity). Other factors that	venues' aggregate concentration as compared to the total
	may be considered include likelihood of execution,	relevant volume.
	speed of execution and other factors such as the specific	
	expertise or history of liquidity (especially in the case of	
	less transparency and/or liquidity).	
	Close links	Close links

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 $^{^3}$ Tick size liquidity bands are as of 11 April 2019.



Class of Instrument	(a)(ii) Equities - Shares and Depositary Receipts - Tick s day)	ize liquidity bands 3 and 4 (from 80 to 1999 trades per
Close links, conflicts of interest and common	The Firm has no close links to report.	Not applicable.
ownership with respect to execution venues	Conflicts of interest	Conflicts of interest
• •	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	



Class of Instrument	(a)(ii) Equities - Shares and Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
	keep this approach under review, particularly if appropriately priced products become available which enable market participants to make better use of the data. The Firm did not use output from consolidated tape providers to monitor execution quality in relation to 2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(a)(iii) Equities - Shar	es and Depositary Rece	eipts - Tick size liquidity	y band 1 and 2 (from 0	to 79 trades per day) ⁴
Notification if <1 average trade per business day in 2018	N				
Top five execution venues ranked in terms of trading volume (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
RBC Europe Limited (TXDSU46SXBWIGJ8G8E98)	18.98%	15.35%	0%	0%	0%
Desjardins Securities Inc. (549300ZG5E3QCXPEEF56)	9.95%	7.73%	0%	0%	0%
SMBC Nikko Capital Markets Limited (G7WFA3G3MT5YHH8CHG81)	7.92%	14.01%	0%	0%	0%
Scotiabank Europe PLC (5G6NVP4WADOI32VUUB17)	6.89%	11.04%	0%	0%	0%
NORTHERN TRUST SECURITIES LLP (549300EF8AZLRG0UC208)	5.37%	1.40%	0%	0%	0%

Class of Instrument	(a)(iii) Equities - Shares and Depositary Receipts - Tick size liquidity band 1 and 2 (from 0 to 79 trades per day)		
Summary	The Firm generally conducted its equity trading via "indirect" execution. Where the Firm places an order with a		
	broker for execution, it is not responsible for controlling	ng or influencing the arrangements made by the broker	
	relating to the execution of that order (e.g., the Firm does	not control the broker's choice of Execution Venues).	
		mart order routing tools using a limit order which enable	
	the Firm to have access to a range of venues. This allow		
	price and likelihood of execution while minimizing poter	ntial conflicts of interest.	
	Summary of analysis	Conclusion	
Execution factors	For this class of instrument, the Firm generally looks at	Consideration of these factors is demonstrated by the	
	price and transaction cost (especially in the cases of	spread of trades across the top venues listed and the top	
	greater transparency and/or liquidity). Other factors that	venues' aggregate concentration as compared to the total	
	may be considered include likelihood of execution,	relevant volume.	
	speed of execution and other factors such as the specific		
	expertise or history of liquidity (especially in the case of		
	less transparency and/or liquidity).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	

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⁴ Tick size liquidity bands are as of 11 April 2019.



Class of Instrument	(a)(iii) Equities - Shares and Depositary Receipts - Tick s	size liquidity band 1 and 2 (from 0 to 79 trades per day)
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	During the period, in addition to payments made in respect of execution of transaction, the Firm had MiFID II research agreements and corporate access agreements in place with certain execution venues listed in this	The Firm operated within its regulatory obligations in respect of these specific arrangements. The Firm conducted testing against its Compliance
received	report. The Firm also received business gifts and entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary	Manual, including its Order Execution Policy, Code of Ethics, Conflicts Mitigation Policy and Policy on Research and Use of Research Payment Accounts during the period and had no material findings. Payments and testing were reviewed by the Firm's TMSCC.
	benefits (other than those which may be classified as "minor non-monetary benefits") with any of the entities listed in this disclosure form.	
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	Changes to the list of execution venues in the Firm's Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing diligencing and review.	The TMSCC's oversight of changes to the list of execution venues was appropriate during the period.
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of execution	The Firm utilised a Transaction Cost Analysis monitoring system to track and review execution quality received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC. RTS 27 data became available for the first time during 2018. However, the raw data published by venues and relevant investment firms is in a format that is difficult to use/assess and the Firm is not aware of any products that are currently available that facilitate a comparative analysis of the performance of the relevant brokers and venues enable using the RTS 27 data. Consequently, the Firm has not used the RTS 27 data this year in carrying out analysis of the quality of execution. The Firm will keep this approach under review, particularly if appropriately priced products become available which	From its monitoring activities, the Firm is satisfied that the results (in terms of quality of execution) obtained from the execution venues listed above are consistent with the execution factors to which the Firm ascribes the most importance for this instrument class.



Class of Instrument	(a)(iii) Equities - Shares and Depositary Receipts - Tick size liquidity band 1 and 2 (from 0 to 79 trades per day)		
	The Firm did not use output from consolidated tape		
	providers to monitor execution quality in relation to		
	2018 trading because no consolidated tape providers		
	were in operation in the EEA during 2018.		



Class of Instrument	(a) Equities - Shares and Depositary Receipts ⁵				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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
TD Securities Inc. (5493006RJSLS5DA4PD75)	20.63%	1.33%	0%	0%	0%
NORTHERN TRUST SECURITIES LLP (549300EF8AZLRG0UC208)	20.03%	14.67%	0%	0%	0%
Morgan Stanley & Co. International PLC (4PQUHN3JPFGFNF3BB653)	12.71%	14.67%	0%	0%	0%
Jefferies International Limited (S5THZMDUJCTQZBTRVI98)	9.22%	21.33%	0%	0%	0%
KCG EUROPE LIMITED (549300346EFUPFCXJT79)	5.65%	2.67%	0%	0%	0%

Class of Instrument	(a) Equities - Shares and Depositary Receipts		
Summary	The Firm generally conducted its equity trading via "indirect" execution. Where the Firm places an order with a		
		ng or influencing the arrangements made by the broker	
	relating to the execution of that order (e.g., the Firm does	not control the broker's choice of Execution Venues).	
		mart order routing tools using a limit order which enable	
	the Firm to have access to a range of venues. This allow		
	price and likelihood of execution while minimizing poter	tial conflicts of interest.	
	Summary of analysis	Conclusion	
Execution factors	For this class of instrument, the Firm generally looks at	Consideration of these factors is demonstrated by the	
	price and transaction cost (especially in the cases of	spread of trades across the top venues listed and the top	
	greater transparency and/or liquidity). Other factors that	venues' aggregate concentration as compared to the total	
	may be considered include likelihood of execution,	relevant volume.	
	speed of execution and other factors such as the specific		
	expertise or history of liquidity (especially in the case of		
	less transparency and/or liquidity).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	

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 $^{^{5}}$ This category covers instruments without a tick size liquidity band as of 11 April 2019.



Class of Instrument	(a) Equities - Shares and Depositary Receipts	
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	execution venues was appropriate during the period.
Toney	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	enable market participants to make better use of the data.	



Class of Instrument	(a) Equities - Shares and Depositary Receipts		
	The Firm did not use output from consolidated tape		
	providers to monitor execution quality in relation to		
	2018 trading because no consolidated tape providers		
	were in operation in the EEA during 2018.		



Class of Instrument	(b)(i) Debt Instrument	(b)(i) Debt Instruments - Bonds ⁶			
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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 PLC (K6Q0W1PS1L1O4IQL9C32)	12.33%	14.08%	0%	0%	0%
Goldman Sachs International (W22LROWP2IHZNBB6K528)	11.24%	8.80%	0%	0%	0%
Credit Suisse Securities (Europe) Limited (DL6FFRRLF74S01HE2M14)	9.34%	7.39%	0%	0%	0%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83)	8.95%	5.99%	0%	0%	0%
Citigroup Global Markets Limited (XKZZ2JZF41MRHTR1V493)	6.82%	5.63%	0%	0%	0%

Class of Instrument	(b)(i) Debt Instruments - Bonds	
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited
	execution, speed of execution and other factors such as	liquidity, is demonstrated by the spread of trades across
	the specific expertise or history of liquidity, given the	the top venues listed and the top venues' aggregate
	generally illiquid nature of the securities traded. Price	concentration as compared to the total relevant volume.
	and transaction cost may become more relevant factors	
	in cases of greater transparency and/or liquidity.	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of

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⁶ The price of the bonds with accrual has been used in the calculation above.



Class of Instrument	(h)(i) Dobt Instruments Ponds	
Class of instrument	(b)(i) Debt Instruments - Bonds	Edding Conflict Miller Con Deller and D.P.
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	encounter versus was appropriate during the periods
Tolley	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
Checuton	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
	Thin on a quarterly basis and reviewed by the Twisee.	most importance for this instrument class.
	RTS 27 data became available for the first time during	most importance for this historical class.
	2018. However, the raw data published by venues and	
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	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(b)(ii) Debt Instruments - Money Markets				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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)	38.26%	41.67%	0%	0%	0%
Deutsche Bank Aktiengesellschaft (7LTWFZYICNSX8D621K86)	32.65%	16.67%	0%	0%	0%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	12.81%	8.33%	0%	0%	0%
MIZUHO INTERNATIONAL PLC (213800HZ54TG54H2KV03)	9.78%	16.67%	0%	0%	0%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	3.26%	8.33%	0%	0%	0%

Class of Instrument	(b)(ii) Debt Instruments - Money Markets			
	Summary of analysis	Conclusion		
Execution factors	The Firm generally looks at price, transaction cost	Consideration of these factors, including limited		
	(especially in the cases of greater transparency and/or	liquidity and the Firm's limited trading in this class of		
	liquidity). Other factors that may be considered include	instrument, is demonstrated by the spread of trades on		
	likelihood of execution, speed of execution and other	the venue listed and the top venues' aggregate		
	factors such as the specific expertise or history of	concentration as compared to the total relevant volume.		
	liquidity (especially in the case of less transparency			
	and/or liquidity).			
Close links, conflicts of interest and common	Close links	Close links		
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.		
	Conflicts of interest	Conflicts of interest		
	The Firm has no conflicts of interest to report.	Not applicable.		
	Common ownerships	Common ownerships		
	The Firm has no common ownership to report.	Not applicable.		
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in		
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.		
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements			
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance		
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of		
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on		



Class of Instrument	(b)(ii) Debt Instruments - Money Markets	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	1
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(d)(ii) Credit Derivatives - Other Credit Derivatives				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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
Merrill Lynch, Pierce, Fenner & Smith Incorporated (8NAV47T0Y26Q87Y0QP81)	23.26%	17.24%	0%	0%	0%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	18.90%	27.59%	0%	0%	0%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	15.37%	17.24%	0%	0%	0%
Credit Suisse Securities (Europe) Limited (DL6FFRRLF74S01HE2M14)	14.82%	13.79%	0%	0%	0%
BNP PARIBAS (R0MUWSFPU8MPRO8K5P83)	14.79%	10.34%	0%	0%	0%

Class of Instrument	(d)(ii) Credit Derivatives - Other Credit Derivatives			
	Summary of analysis	Conclusion		
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited		
	execution, speed of execution and other factors such as	liquidity, is demonstrated by the spread of trades across		
	the specific expertise or history of liquidity, given the	the top venues listed and the top venues' aggregate		
	generally illiquid nature of the securities traded. Price	concentration as compared to the total relevant volume.		
	and transaction cost may become more relevant factors			
	in cases of greater transparency and/or liquidity.			
	Additionally the Firm may also consider other implicit			
	transaction or administrative costs, such as whether the			
	required infrastructure is in place or would require			
	implementation (i.e., relevant agreements such as an			
	ISDA Master Agreement, credit limits, willingness of a			
	counterparty to accept the risk on its balance sheet).			
Close links, conflicts of interest and common	Close links	Close links		
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.		
	Conflicts of interest	Conflicts of interest		
	The Firm has no conflicts of interest to report.	Not applicable.		
	Common ownerships	Common ownerships		
	The Firm has no common ownership to report.	Not applicable.		



Specific arrangements with execution venues regarding payments made or received. It research agreements and corporate access agreements in place with certain execution venues listed in this report. The Firm abor received using the period. Firm hose which may be classified as "minor non-monetary benefits road and the period of the certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be classified as "minor non-monetary benefits") with any of the entities listed in this disclosure form. Changes to the list of execution venues in the Firm's Other Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing differentiation across client categories Use of data / tools relating to quality of execution Road to the firm as a difficult to use/assess and the Firm is not aware of any products that are currently available that facilitate a comparative analysis of the perionance of the relevant brokers and venues canable using the RTS 27 data to large of the quality of execution. The Firm is not aware of any products that are currently available that facilitate a comparative analysis of the quality of execution. The Firm will keep this approach rowled which enable market participants to make better use of the data. The Firm did not use output from consocilidated the data. The Firm did not use output from consocilidated by the consocial consocial to the categories and reviewed by the TMSCC. The Firm shade of the first time during the period of the first time during the period. The Firm is not aware of any products that are currently available that facilitate a comparative analysis of the performance of the relevant brokers and consocial to the data. The Firm did not use output from consocial data periods.	Class of Instrument	(d)(ii) Credit Derivatives - Other Credit Derivatives		
regarding payments made or received, discounts, rebates or non-monetary benefits received ### RFTS 27 data became available for the first time during 2018. However, the raw data published by venues and relevant investment firms is an quarterly basis and reviewed by the Firm serviced by the received. These monitoring reports are received by the results (in the results (in the results (in the received by the Firm service) by containing system to track and review execution quality received. These monitoring reports are received by the Firm is not aware of any products that are currently available that facilitate a comparative analysis of the performance of the relevant brokers and venues enable using the RTS 27 data. Consequently, the Firm will keep this approach under review, particularly if appropriately priced products become available which enable market participants to make better use of the data. The Firm did not so counts of the service were the consideration and the string will keep this approach under review, particularly if appropriately priced products become available which enable market participants to make better use of the data. The Firm did not so counts or the service was calcust the price of the se specific arrangements. The Firm bid for the train caccust on venues listed in this freport. The Firm bid for the retain excess greeneds and the string against its Compliance Manual, including its Order Execution Policy, Octo of Ethics, Conflicts Mitigation Policy, and Policy on Caphical Policy of Ethics, Conflicts Mitigation Policy and Policy on Caphical Policy of the Secret of Use of Research Payment Accounts and testing to Price and all policy of the firm's Time of Caphical Payments and testing were reviewed by the TMSCC. The Firm's client name testing to execution Policy during 2018 were monitored by the TMSCC. The Firm's client name that is difficult to use/assess and the Firm's to take a published by venues and relevant investment firms is an incomparative and the policy of execution. The Firm			The Firm operated within its regulatory obligations in	
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in place with certain execution venues listed in this report. The Firm also received business gifts and entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be leastified as "minor non-monetary benefits (other than those which may be leastified as "minor non-monetary benefits (other than those which may be leastified as "minor non-monetary benefits") with any of the entities listed in this disclosure form. Factors leading to a change in the list of execution venues is tet Firm's order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing differentiation across client categories Use of data/tools relating to quality of execution The Firm till deal of the Firm's clients are professional. All of the Firm's clients are professional. The Firm till and the Port Execution Policy during 2018 were monitored by the TMSCC. All of the Firm's clients are professional. The Firm till and the Port Execution Policy of Research and Use of Research Payment Accounts during the period and had no material lindings. Payments and testing were reviewed by the Firm's TMSCC. The TMSCC's oversight of changes to the list of execution venues in the Firm's curtous was appropriate during the period. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (when the Firm's TMSCC. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (when the Firm's TMSCC. The Firm did not have in place any other arrangements for payment, discounts, rebates or which may be the entities listed above are consistent would be the firm time in an other arrangement of the print and the print a	discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
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The Firm did not use output from consolidated tape				
providers to monitor execution quality in relation to				



Class of Instrument	(d)(ii) Credit Derivatives - Other Credit Derivatives		
	2018 trading because no consolidated tape providers		
	were in operation in the EEA during 2018.		



Class of Instrument	(e)(ii) Currency Deriv	(e)(ii) Currency Derivatives – Options and Futures admitted on a trading venue			
Notification if <1 average trade per business day in 2018	Y	Y			
Top five execution venues ranked in terms of trading volume (descending order)	Proportion of volume traded as a percentage of percentage of total in that class Proportion of volume traded as a percentage of passive orders total in that class Percentage of passive orders aggressive orders directed orders				
UBS AG (BFM8T61CT2L1QCEMIK50)	NaN	50.00%	0%	0%	0%
Société Générale SA (O2RNE8IBXP4R0TD8PU41)	NaN	33.33%	0%	0%	0%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	NaN	16.67%	0%	0%	0%

Class of Instrument	(e)(ii) Currency Derivatives – Options and Futures admit	ted on a trading venue		
	Summary of analysis	Conclusion		
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited		
	execution, speed of execution and other factors such as	liquidity, is demonstrated by the spread of trades across		
	the specific expertise or history of liquidity, given the	the top venues listed and the top venues' aggregate		
	generally illiquid nature of the securities traded. Price	concentration as compared to the total relevant volume.		
	and transaction cost may become more relevant factors			
	in cases of greater transparency and/or liquidity.			
	Additionally the Firm may also consider other implicit			
	transaction or administrative costs, such as whether the			
	required infrastructure is in place or would require			
	implementation (<i>i.e.</i> , relevant agreements such as credit			
	limits, willingness of a counterparty to accept the risk on			
	its balance sheet).	Clara Palar		
Close links, conflicts of interest and common	Close links The Firm has no close links to monet	Close links		
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.		
	Conflicts of interest	Conflicts of interest		
	The Firm has no conflicts of interest to report. Not applicable.			
	Common ownerships	Common ownerships		
C *0° 4 *41 4*	The Firm has no common ownership to report. Not applicable.			
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in		
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.		
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements			
received	in place with certain execution venues listed in this The Firm conducted testing against			
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of		
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on		



Class of Instrument	(e)(ii) Currency Derivatives – Options and Futures admitted on a trading venue			
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts		
	also appear in the RTS 28 disclosure below.	during the period and had no material findings. Payments and testing were reviewed by the Firm's		
	The Firm did not have in place any other arrangements	TMSCC.		
	for payment, discounts, rebates or other non-monetary	Tivibee.		
	benefits (other than those which may be classified as			
	"minor non-monetary benefits") with any of the entities			
	listed in this disclosure form.			
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of		
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.		
Policy	the TMSCC, including on boarding and ongoing			
	diligencing and review.			
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.		
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that		
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained		
	received. These monitoring reports are received by the	from the execution venues listed above are consistent		
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the		
	DEC 27 1 4 1 111 6 4 6 4 6 4 6	most importance for this instrument class.		
	RTS 27 data became available for the first time during			
	2018. However, the raw data published by venues and			
	relevant investment firms is in a format that is difficult to use/assess and the Firm is not aware of any products			
	that are currently available that facilitate a comparative			
	analysis of the performance of the relevant brokers and			
	venues enable using the RTS 27 data. Consequently, the			
	Firm has not used the RTS 27 data this year in carrying			
	out analysis of the quality of execution. The Firm will			
	keep this approach under review, particularly if			
	appropriately priced products become available which			
	enable market participants to make better use of the data.			
	The Firm did not use output from consolidated tape			
	providers to monitor execution quality in relation to			
	2018 trading because no consolidated tape providers			
	were in operation in the EEA during 2018.			



Class of Instrument	(f) Structured finance	(f) Structured finance instruments			
Notification if <1 average trade per business day in 2018	Y	Y			
Top five execution venues ranked in terms of trading volume (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 CAPITAL INC. (AC28XWWI3WIBK2824319)	100.00%	100.00%	0%	0%	0%

Class of Instrument	(f) Structured finance instruments	
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited
	execution, speed of execution and other factors such as	liquidity, is demonstrated by the spread of trades across
	the specific expertise or history of liquidity, given the	the top venues listed and the top venues' aggregate
	generally illiquid nature of the securities traded. Price	concentration as compared to the total relevant volume.
	and transaction cost may become more relevant factors	
	in cases of greater transparency and/or liquidity.	
	Additionally the Firm may also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
		TMSCC.



Class of Instrument	(f) Structured finance instruments	
CHIDD OF THE UNITED	The Firm did not have in place any other arrangements	
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	encounter venues was appropriate during the period.
Toney	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(g)(i) Equity Derivativ	(g)(i) Equity Derivatives - Options and Futures Admitted to Trading on a Trading Venue ⁷				
Notification if <1 average trade per business day in 2018	N	N				
Top five execution venues ranked in terms of trading volume (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	
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	31.97%	32.85%	0%	0%	0%	
Goldman Sachs International (W22LROWP2IHZNBB6K528)	23.76%	22.67%	0%	0%	0%	
UBS AG (BFM8T61CT2L1QCEMIK50)	23.08%	22.38%	0%	0%	0%	
Société Générale SA (O2RNE8IBXP4R0TD8PU41)	21.08%	21.22%	0%	0%	0%	
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	0.07%	0.58%	0%	0%	0%	

Class of Instrument	(g)(i) Equity Derivatives - Options and Futures Admitted	to Trading on a Trading Venue	
	Summary of analysis	Conclusion	
Execution factors	The Firm generally looks at price and transaction cost	Consideration of these factors is demonstrated by the	
	(especially in the cases of greater transparency and/or	spread of trades across the top venues listed and the top	
	liquidity). Other factors that may be considered include	venues' aggregate concentration as compared to the total	
	likelihood of execution, speed of execution and other	relevant volume.	
	factors such as the specific expertise or history of		
	liquidity (especially in the case of less transparency		
	and/or liquidity).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report. Not applicable.		
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.	
	II research agreements and corporate access agreements		

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⁷ The Firm has calculated the notional value of options without a delta adjustment. Listed options and listed futures with the same type of underlying security are classified as the same class of financial instrument and over-the-counter options, swaps and forwards with the same underlying security are classified as the same class of financial instrument. As such, the Firm has elected to use notional value as the measure for all options.



Class of Instrument	(g)(i) Equity Derivatives - Options and Futures Admitted	to Trading on a Trading Venue		
discounts, rebates or non-monetary benefits	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance		
received	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of		
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on		
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts		
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.		
		Payments and testing were reviewed by the Firm's		
	The Firm did not have in place any other arrangements	TMSCC.		
	for payment, discounts, rebates or other non-monetary			
	benefits (other than those which may be classified as			
	"minor non-monetary benefits") with any of the entities			
	listed in this disclosure form.			
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of		
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.		
Policy	the TMSCC, including on boarding and ongoing			
	diligencing and review.			
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.		
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that		
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained		
	received. These monitoring reports are received by the	from the execution venues listed above are consistent		
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the		
		most importance for this instrument class.		
	RTS 27 data became available for the first time during			
	2018. However, the raw data published by venues and			
	relevant investment firms is in a format that is difficult			
	to use/assess and the Firm is not aware of any products			
	that are currently available that facilitate a comparative			
	analysis of the performance of the relevant brokers and			
	venues enable using the RTS 27 data. Consequently, the			
	Firm has not used the RTS 27 data this year in carrying			
	out analysis of the quality of execution. The Firm will			
	keep this approach under review, particularly if			
	appropriately priced products become available which enable market participants to make better use of the data.			
	The Firm did not use output from consolidated tape			
	providers to monitor execution quality in relation to			
	2018 trading because no consolidated tape providers			
	were in operation in the EEA during 2018.			
	were in operation in the EEA during 2018.			



Class of Instrument	(g)(ii) Equity Derivatives - Swaps and Other Equity Derivatives ⁸				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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
Société Générale SA (O2RNE8IBXP4R0TD8PU41)	36.93%	35.05%	0%	0%	0%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	31.06%	14.43%	0%	0%	0%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	21.30%	17.53%	0%	0%	0%
UBS AG (BFM8T61CT2L1QCEMIK50)	10.43%	41.24%	0%	0%	0%
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	0.28%	1.03%	0%	0%	0%

Class of Instrument		
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at price and transaction cost	Consideration of these factors, including limited
	(especially in the cases of greater transparency and/or	liquidity, is demonstrated by the spread of trades across
	liquidity). Other factors that may be considered include	the top venues listed and the top venues' aggregate
	likelihood of execution, speed of execution and other	concentration as compared to the total relevant volume.
	factors such as the specific expertise or history of	
	liquidity (especially in the case of less transparency	
	and/or liquidity). Additionally the Firm may also	
	consider other implicit transaction or administrative	
	costs, such as whether the required infrastructure is in	
	place or would require implementation (i.e., relevant	

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⁸ Transactions that are included within the equity derivatives (swaps and other equity derivatives) instrument class are often effected in connection with the Firm seeking "indicative pricing" from a v. If the indicative pricing is acceptable to the Firm, the broker then enters into a cash equity transaction with the relevant swap counterparty and a corresponding swap arises between the swap counterparty and the underlying fund or funds on whose behalf the Firm is acting. Although the pricing of the cash equities transaction influences the pricing of the related swap, the Firm has not included the indicative pricing activity conducted with brokers in the analysis of its top five execution venues above (or in the equities instrument class) because the Firm does not execute (or transmit or place orders that give rise to) such cash equities transactions. Instead, the Firm has, for the purposes of the equity derivatives instrument class, counted only the swap transactions to which the relevant funds are party (and has treated its involvement in effecting those transactions as a form of execution, with the consequence that it has categorised the relevant swap counterparties as execution venues rather than brokers). Additionally, each of these swaps allocated to a single counterparty is counted as a separate order. The calculation for this report takes into account two types of equity derivative trades - contracts for difference and variance and volatility swaps. The comparative size of these two notional value of the different types of swaps may have affected the calculation of our "top five".



Class of Instrument			
	agreements such as an ISDA Master Agreement, credit		
	limits, willingness of a counterparty to accept the risk on its balance sheet).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.	
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance	
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of	
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts	
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.	
		Payments and testing were reviewed by the Firm's	
	The Firm did not have in place any other arrangements	TMSCC.	
	for payment, discounts, rebates or other non-monetary		
	benefits (other than those which may be classified as		
	"minor non-monetary benefits") with any of the entities		
	listed in this disclosure form.		
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of	
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing	execution venues was appropriate during the period.	
Policy			
Differentiation across client categories	diligencing and review. All of the Firm's clients are professional.	Not applicable.	
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that	
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained	
execution	received. These monitoring reports are received by the	from the execution venues listed above are consistent	
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the	
	Thin on a quartery basis and reviewed by the Twisee.	most importance for this instrument class.	
	RTS 27 data became available for the first time during	most importance for this instrument class.	
	2018. However, the raw data published by venues and		
	relevant investment firms is in a format that is difficult		
	to use/assess and the Firm is not aware of any products		
	that are currently available that facilitate a comparative		
	analysis of the performance of the relevant brokers and		



Class of Instrument		
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(h)(i) Securitized Der	(h)(i) Securitized Derivatives - Warrants and Certificate Derivatives			
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (descending order)	Proportion of volume traded as a percentage of in that class Proportion of volume traded as a percentage of total in that class Percentage of passive orders aggressive orders directed orders				
KEPLER CHEUVREUX (9695005EOZG9X8IRJD84)	69.11%	75.00%	0%	0%	0%
Cantor Fitzgerald Europe (549300KM6VUHPKQLQX53)	30.89%	25.00%	0%	0%	0%

Class of Instrument	(h)(i) Securitized Derivatives - Warrants and Certificate	Derivatives
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited
	execution, speed of execution and other factors such as	liquidity, is demonstrated by the spread of trades across
	the specific expertise or history of liquidity, given the	the top venues listed and the top venues' aggregate
	generally illiquid nature of the securities traded. Price	concentration as compared to the total relevant volume.
	and transaction cost may become more relevant factors	
	in cases of greater transparency and/or liquidity.	
	Additionally the Firm may also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and Manual, including its Order Execution F	
	entertainment during the period. Further, the Firm notes Ethics, Conflicts Mitigation Policy	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.



Class of Instrument	(h)(i) Securitized Derivatives - Warrants and Certificate Derivatives		
		Payments and testing were reviewed by the Firm's	
	The Firm did not have in place any other arrangements	TMSCC.	
	for payment, discounts, rebates or other non-monetary		
	benefits (other than those which may be classified as		
	"minor non-monetary benefits") with any of the entities		
	listed in this disclosure form.		
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of	
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.	
Policy	the TMSCC, including on boarding and ongoing		
	diligencing and review.		
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.	
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that	
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained	
	received. These monitoring reports are received by the	from the execution venues listed above are consistent	
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the	
		most importance for this instrument class.	
	RTS 27 data became available for the first time during		
	2018. However, the raw data published by venues and		
	relevant investment firms is in a format that is difficult		
	to use/assess and the Firm is not aware of any products		
	that are currently available that facilitate a comparative		
	analysis of the performance of the relevant brokers and		
	venues enable using the RTS 27 data. Consequently, the		
	Firm has not used the RTS 27 data this year in carrying		
	out analysis of the quality of execution. The Firm will		
	keep this approach under review, particularly if		
	appropriately priced products become available which		
	enable market participants to make better use of the data.		
	The Firm did not use output from consolidated tape		
	providers to monitor execution quality in relation to		
	2018 trading because no consolidated tape providers		
	were in operation in the EEA during 2018.		



Class of Instrument	(h)(ii) Securitized Derivatives - Other Securitized Derivatives				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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
SMBC Nikko Capital Markets Limited (G7WFA3G3MT5YHH8CHG81)	77.85%	3.33%	0%	0%	0%
OLIVETREE FINANCIAL LIMITED (213800WJG33TNCFVZK61)	22.04%	66.67%	0%	0%	0%
Credit Suisse Securities (Europe) Limited (DL6FFRRLF74S01HE2M14)	0.11%	16.67%	0%	0%	0%
UBS AG (BFM8T61CT2L1QCEMIK50)	0.00%	6.67%	0%	0%	0%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	0.00%	6.67%	0%	0%	0%

Class of Instrument	(h)(ii) Securitized Derivatives - Other Securitized Derivatives			
	Summary of analysis	Conclusion		
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited		
	execution, speed of execution and other factors such as	liquidity and the Firm's limited trading in this class of		
	the specific expertise or history of liquidity, given the instrument, is demonstrated by the spread of			
	generally illiquid nature of the securities traded. Price across the venue listed and the top venues' agg			
	and transaction cost may become more relevant factors	concentration as compared to the total relevant volume.		
	in cases of greater transparency and/or liquidity.			
	Additionally the Firm may also consider other implicit			
	transaction or administrative costs, such as whether the			
	required infrastructure is in place or would require			
	implementation (i.e., relevant agreements such as an			
	ISDA Master Agreement, credit limits, willingness of a			
	counterparty to accept the risk on its balance sheet).			
Close links, conflicts of interest and common	Close links Close links			
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.		
	Conflicts of interest	Conflicts of interest		
	The Firm has no conflicts of interest to report.	Not applicable.		
	Common ownerships	Common ownerships		
	The Firm has no common ownership to report.	Not applicable.		



Class of Instrument	(h)(ii) Securitized Derivatives - Other Securitized Deriva	tives
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the from the execution venues listed above	
	Firm on a quarterly basis and reviewed by the TMSCC. with the execution factors to which the Fin	
	DEC 27 1 4 1 2111 C 41 C 44 C	most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	



Class of Instrument	(h)(ii) Securitized Derivatives - Other Securitized Derivatives	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(i)(i) Commodities Derivatives - Options and Futures Admitted to Trading on a Trading Venue ⁹				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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 PLC (K6Q0W1PS1L1O4IQL9C32)	NaN	100.00%	0%	0%	0%

Class of Instrument	(i)(i) Commodities Derivatives - Options and Futures Admitted to Trading on a Trading Venue		
	Summary of analysis	Conclusion	
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors, including limited	
	execution, speed of execution and other factors such as	liquidity and the Firm's limited trading in this class of	
	the specific expertise or history of liquidity, given the	instrument, is demonstrated by the spread of trades	
	generally illiquid nature of the securities traded. Price across the venue listed and the top venues'		
	and transaction cost may become more relevant factors	concentration as compared to the total relevant volume.	
	in cases of greater transparency and/or liquidity.		
	Additionally the Firm may also consider other implicit		
	transaction or administrative costs, such as whether the required infrastructure is in place or would require		
	implementation (i.e., relevant agreements such as an		
	ISDA Master Agreement, credit limits, willingness of a		
	counterparty to accept the risk on its balance sheet).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report. Not applicable.		
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID respect of these specific arrangements.		
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
received	in place with certain execution venues listed in this The Firm conducted testing against its C		
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of	
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on	

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⁹ The Firm has calculated the notional value of options without a delta adjustment. Listed options and listed futures with the same type of underlying security are classified as the same class of financial instrument and over-the-counter options, swaps and forwards with the same underlying security are classified as the same class of financial instrument. As such the Firm has elected to use notional value as the measure for all options.



Class of Instrument	(i)(i) Commodities Derivatives - Options and Futures Admitted to Trading on a Trading Venue	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
	DEC 27 1 4 1 111 C 4 C 4 C	most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(j) Contracts for Difference				
Notification if <1 average trade per business day in 2018	N				
Top five execution venues ranked in terms of trading volume (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 (R0MUWSFPU8MPRO8K5P83)	19.99%	10.12%	0%	0%	0%
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	16.71%	20.46%	0%	0%	0%
UBS AG (BFM8T61CT2L1QCEMIK50)	13.13%	22.39%	0%	0%	0%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	11.95%	8.56%	0%	0%	0%
Société Générale SA (O2RNE8IBXP4R0TD8PU41)	11.56%	10.11%	0%	0%	0%

Class of Instrument	(j) Contracts for Difference		
	Summary of analysis	Conclusion	
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the	
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top	
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total	
	generally illiquid nature of the securities traded. Price	relevant volume.	
	and transaction cost may become more relevant factors		
	in cases of greater transparency and/or liquidity.		
	Additionally the Firm may also consider other implicit		
	transaction or administrative costs, such as whether the		
	required infrastructure is in place or would require		
	implementation (i.e., relevant agreements such as an		
	ISDA Master Agreement, credit limits, willingness of a		
	counterparty to accept the risk on its balance sheet).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	



Class of Instrument	(j) Contracts for Difference	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	The state of the s
received	in place with certain execution venues listed in this report. The Firm also received business gifts and entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be classified as	The Firm conducted testing against its Compliance Manual, including its Order Execution Policy, Code of Ethics, Conflicts Mitigation Policy and Policy on Research and Use of Research Payment Accounts during the period and had no material findings. Payments and testing were reviewed by the Firm's TMSCC.
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	The TMCCClere with the College of th
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
TV-00 4, 4, 1, 1, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	diligencing and review.	NT-AP11-
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC.	the results (in terms of quality of execution) obtained from the execution venues listed above are consistent with the execution factors to which the Firm ascribes the most importance for this instrument class.
	RTS 27 data became available for the first time during	most importance for any instrainent class.
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if	
	appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	



Class of Instrument	(j) Contracts for Difference	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	(k) Exchange Traded Products (Exchange Traded Funds, Exchange Traded Notes and Exchange Traded Commodities)				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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 Securities (Europe) Limited (DL6FFRRLF74S01HE2M14)	34.58%	12.87%	0%	0%	0%
Scotiabank Europe PLC (5G6NVP4WADOI32VUUB17)	15.25%	11.76%	0%	0%	0%
RBC Europe Limited (TXDSU46SXBWIGJ8G8E98)	9.18%	17.65%	0%	0%	0%
BMO Capital Markets Limited (L64HM9LHPDOS1B9HJC68)	6.96%	11.76%	0%	0%	0%
Desjardins Securities Inc. (549300ZG5E3QCXPEEF56)	5.87%	13.97%	0%	0%	0%

Class of Instrument	(k) Exchange Traded Products (Exchange Traded Funds, Exchange Traded Notes and Exchange Traded Commodities)		
	Summary of analysis	Conclusion	
Execution factors	The Firm generally looks at price and transaction cost (especially in the cases of greater transparency and/or liquidity). Other factors that may be considered include likelihood of execution, speed of execution and other factors such as the specific expertise or history of liquidity (especially in the case of less transparency and/or liquidity).	Consideration of these factors is demonstrated by the spread of trades across the top venues listed and the top venues' aggregate concentration as compared to the total relevant volume.	
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.	
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
received	in place with certain execution venues listed in this		



	(k) Exchange Traded Products (Exchange Traded Funds,	Exchange Traded Notes and Exchange Traded
Class of Instrument	Commodities)	Exchange Traded Potes and Exchange Traded
	report. The Firm also received business gifts and entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be classified as "minor non-monetary benefits") with any of the entities listed in this disclosure form.	The Firm conducted testing against its Compliance Manual, including its Order Execution Policy, Code of Ethics, Conflicts Mitigation Policy and Policy on Research and Use of Research Payment Accounts during the period and had no material findings. Payments and testing were reviewed by the Firm's TMSCC.
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	Changes to the list of execution venues in the Firm's Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing diligencing and review.	The TMSCC's oversight of changes to the list of execution venues was appropriate during the period.
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of execution	The Firm utilised a Transaction Cost Analysis monitoring system to track and review execution quality received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC. RTS 27 data became available for the first time during 2018. However, the raw data published by venues and relevant investment firms is in a format that is difficult to use/assess and the Firm is not aware of any products that are currently available that facilitate a comparative analysis of the performance of the relevant brokers and venues enable using the RTS 27 data. Consequently, the Firm has not used the RTS 27 data this year in carrying out analysis of the quality of execution. The Firm will keep this approach under review, particularly if appropriately priced products become available which enable market participants to make better use of the data. The Firm did not use output from consolidated tape providers to monitor execution quality in relation to 2018 trading because no consolidated tape providers were in operation in the EEA during 2018.	From its monitoring activities, the Firm is satisfied that the results (in terms of quality of execution) obtained from the execution venues listed above are consistent with the execution factors to which the Firm ascribes the most importance for this instrument class.



Class of Instrument	(m) Other Instruments ¹⁰				
Notification if <1 average trade per business day in 2018	Y				
Top five execution venues ranked in terms of trading volume (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 (BFM8T61CT2L1QCEMIK50)	100.00%	100.00%	0%	0%	0%

Class of Instrument	(m) Other Instruments		
	Summary of analysis	Conclusion	
Execution factors	The Firm generally looks at price and transaction cost	Consideration of these factors is demonstrated by the	
	(especially in the cases of greater transparency and/or	spread of trades across the top venues listed and the top	
	liquidity). Other factors that may be considered include	venues' aggregate concentration as compared to the total	
	likelihood of execution, speed of execution and other	relevant volume.	
	factors such as the specific expertise or history of		
	liquidity (especially in the case of less transparency		
	and/or liquidity).		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest	Conflicts of interest	
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	
	The Firm has no common ownership to report.	Not applicable.	
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in	
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.	
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements		
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance	
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of	
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on	
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts	
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.	
		Payments and testing were reviewed by the Firm's	
	The Firm did not have in place any other arrangements	TMSCC.	
	for payment, discounts, rebates or other non-monetary		
	benefits (other than those which may be classified as		

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 $^{^{\}rm 10}$ "Other" includes Asset Swapped Convertible Option Transactions.



Class of Instrument	(m) Other Instruments	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms is in a format that is difficult	
	to use/assess and the Firm is not aware of any products	
	that are currently available that facilitate a comparative	
	analysis of the performance of the relevant brokers and	
	venues enable using the RTS 27 data. Consequently, the	
	Firm has not used the RTS 27 data this year in carrying	
	out analysis of the quality of execution. The Firm will	
	keep this approach under review, particularly if appropriately priced products become available which	
	enable market participants to make better use of the data.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	Securities Financing Transactions (a)(i) Equities - Shares and Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day) ¹¹		
Notification if <1 average trade per business day in 2018	Y		
Top five execution venues ranked in terms of trading volume (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	
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	29.21%	10.81%	
UBS AG (BFM8T61CT2L1QCEMIK50)	22.25%	37.84%	
The Bank of Nova Scotia (L3I9ZG2KFGXZ61BMYR72)	19.57%	16.22%	
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	13.22%	13.51%	
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	11.29%	2.70%	

Class of Instrument	Securities Financing Transactions		
Class of Histrument	(a)(i) Equities - Shares and Depositary Receipts - Tick si	ze liquidity bands 5 and 6 (from 2000 trades per day)	
	Summary of analysis Conclusion		
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the	
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top	
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total	
	generally illiquid nature of the securities traded.	relevant volume.	
	Secondly, the Firm will also consider other implicit		
	transaction or administrative costs, such as whether the		
	required infrastructure is in place or would require		
	implementation (i.e., relevant agreements such as an		
	ISDA Master Agreement, credit limits, willingness of a		
	counterparty to accept the risk on its balance sheet).		
	Price and transaction cost may become more relevant		
	factors in cases of greater transparency and/or liquidity.		
Close links, conflicts of interest and common	Close links	Close links	
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.	
	Conflicts of interest Conflicts of interest		
	The Firm has no conflicts of interest to report.	Not applicable.	
	Common ownerships	Common ownerships	

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¹¹ Tick size liquidity bands are as of 11 April 2019.



	Securities Financing Transactions	
Class of Instrument	(a)(i) Equities - Shares and Depositary Receipts - Tick size liquidity bands 5 and 6 (from 2000 trades per day)	
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits received	II research agreements and corporate access agreements in place with certain execution venues listed in this	The Firm conducted testing assinct its Compliance
received	report. The Firm also received business gifts and	The Firm conducted testing against its Compliance Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
	T. T	Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms does not differentiate	
	securities financing transactions and the Firm is not sure	
	that the data that has been published includes data	
	relating to such transactions. Therefore, the Firm has not used any RTS 27 data in relation to securities	
	financing transactions.	
	The state of the s	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	Securities Financing Transactions (a)(ii) Equities - Shares and Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day) ¹²	
Notification if <1 average trade per business day in 2018	Y	
Top five execution venues ranked in terms of trading volume (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
BMO Nesbitt Burns Inc (M3LKFDNSJGJ7TMLH6Z15)	36.82%	0.93%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	29.27%	50.00%
The Bank of Nova Scotia (L3I9ZG2KFGXZ61BMYR72)	24.39%	28.70%
UBS AG (BFM8T61CT2L1QCEMIK50)	4.73%	10.19%
Deutsche Bank Aktiengesellschaft (7LTWFZYICNSX8D621K86)	3.92%	7.41%

Class of Instrument	Securities Financing Transactions (a)(ii) Equities - Shares and Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of execution, speed of execution and other factors such as the specific expertise or history of liquidity, given the generally illiquid nature of the securities traded. Secondly, the Firm will also consider other implicit transaction or administrative costs, such as whether the required infrastructure is in place or would require implementation (<i>i.e.</i> , relevant agreements such as an ISDA Master Agreement, credit limits, willingness of a counterparty to accept the risk on its balance sheet). Price and transaction cost may become more relevant factors in cases of greater transparency and/or liquidity.	Consideration of these factors is demonstrated by the spread of trades across the top venues listed and the top venues' aggregate concentration as compared to the total relevant volume.
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.

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 $^{^{\}rm 12}$ Tick size liquidity bands are as of 11 April 2019.



Class of Instrument	Securities Financing Transactions (a)(ii) Equities - Shares and Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
	Conflicts of interest The Firm has no conflicts of interest to report.	Conflicts of interest Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may	Ethics, Conflicts Mitigation Policy and Policy on Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
	also appear in the K15 20 disclosure below.	Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
7.00	diligencing and review.	N
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained from the execution venues listed above are consistent
	received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
	Firm on a quarterry basis and reviewed by the Twiscc.	most importance for this instrument class.
	RTS 27 data became available for the first time during	most importance for this instrument class.
	2018. However, the raw data published by venues and	
	relevant investment firms does not differentiate	
	securities financing transactions and the Firm is not sure	
	that the data that has been published includes data	
	relating to such transactions. Therefore, the Firm has	
	not used any RTS 27 data in relation to securities	
	financing transactions.	



Class of Instrument	Securities Financing Transactions (a)(ii) Equities - Shares and Depositary Receipts - Tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
	The Firm did not use output from consolidated tape providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers were in operation in the EEA during 2018.	



Class of Instrument	Securities Financing Transactions (a)(iii) Equities - Shares and Depositary Receipts - Ticks	size liquidity band 1 and 2 (from 0 to 79 trades per day) ¹³
Notification if <1 average trade per business day in 2018	N	
Top five execution venues ranked in terms of trading volume (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
The Bank of Nova Scotia (L3I9ZG2KFGXZ61BMYR72)	31.06%	44.96%
BMO Nesbitt Burns Inc (M3LKFDNSJGJ7TMLH6Z15)	29.95%	5.81%
UBS AG (BFM8T61CT2L1QCEMIK50)	19.62%	20.83%
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	11.82%	17.93%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	3.98%	6.10%

Class of Instrument	Securities Financing Transactions	
Class of Histrument	(a)(iii) Equities - Shares and Depositary Receipts - Tick s	size liquidity band 1 and 2 (from 0 to 79 trades per day)
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total
	generally illiquid nature of the securities traded.	relevant volume.
	Secondly, the Firm will also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
	Price and transaction cost may become more relevant	
	factors in cases of greater transparency and/or liquidity.	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships

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¹³ Tick size liquidity bands are as of 11 April 2019.



Class of Instrument	Securities Financing Transactions (a)(iii) Equities - Shares and Depositary Receipts - Tick size liquidity band 1 and 2 (from 0 to 79 trades per day)	
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	During the period, in addition to payments made in respect of execution of transaction, the Firm had MiFID II research agreements and corporate access agreements in place with certain execution venues listed in this report. The Firm also received business gifts and entertainment during the period. Further, the Firm notes that certain of its prime brokers, or their affiliates, may also appear in the RTS 28 disclosure below. The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be classified as "minor non-monetary benefits") with any of the entities	The Firm operated within its regulatory obligations in respect of these specific arrangements. The Firm conducted testing against its Compliance Manual, including its Order Execution Policy, Code of Ethics, Conflicts Mitigation Policy and Policy on Research and Use of Research Payment Accounts during the period and had no material findings. Payments and testing were reviewed by the Firm's TMSCC.
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	listed in this disclosure form. Changes to the list of execution venues in the Firm's Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing diligencing and review.	The TMSCC's oversight of changes to the list of execution venues was appropriate during the period.
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of execution	The Firm utilised a Transaction Cost Analysis monitoring system to track and review execution quality received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC. RTS 27 data became available for the first time during 2018. However, the raw data published by venues and relevant investment firms does not differentiate securities financing transactions and the Firm is not sure that the data that has been published includes data relating to such transactions. Therefore, the Firm has not used any RTS 27 data in relation to securities financing transactions.	From its monitoring activities, the Firm is satisfied that the results (in terms of quality of execution) obtained from the execution venues listed above are consistent with the execution factors to which the Firm ascribes the most importance for this instrument class.
	The Firm did not use output from consolidated tape providers to monitor execution quality in relation to 2018 trading because no consolidated tape providers were in operation in the EEA during 2018.	



Class of Instrument	Securities Financing Transactions (a) Equities - Shares and Depositary Receipts 14	
Notification if <1 average trade per business day in 2018	Y	
Top five execution venues ranked in terms of	Proportion of volume traded as a percentage of	Proportion of orders executed as a percentage of
trading volume (descending order)	total in that class	total in that class

Class of Instrument		
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total
	generally illiquid nature of the securities traded.	relevant volume.
	Secondly, the Firm will also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
	Price and transaction cost may become more relevant	
	factors in cases of greater transparency and/or liquidity.	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.

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¹⁴ This category covers instruments without a tick size liquidity band as of 11 April 2019.



Class of Instrument		
	The Firm did not have in place any other arrangements for payment, discounts, rebates or other non-monetary benefits (other than those which may be classified as "minor non-monetary benefits") with any of the entities listed in this disclosure form.	Payments and testing were reviewed by the Firm's TMSCC.
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	Changes to the list of execution venues in the Firm's Order Execution Policy during 2018 were monitored by the TMSCC, including on boarding and ongoing diligencing and review.	The TMSCC's oversight of changes to the list of execution venues was appropriate during the period.
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of execution	The Firm utilised a Transaction Cost Analysis monitoring system to track and review execution quality received. These monitoring reports are received by the Firm on a quarterly basis and reviewed by the TMSCC. RTS 27 data became available for the first time during 2018. However, the raw data published by venues and relevant investment firms does not differentiate securities financing transactions and the Firm is not sure that the data that has been published includes data relating to such transactions. Therefore, the Firm has not used any RTS 27 data in relation to securities financing transactions. The Firm did not use output from consolidated tape providers to monitor execution quality in relation to 2018 trading because no consolidated tape providers were in operation in the EEA during 2018.	From its monitoring activities, the Firm is satisfied that the results (in terms of quality of execution) obtained from the execution venues listed above are consistent with the execution factors to which the Firm ascribes the most importance for this instrument class.



Class of Instrument	Securities Financing Transactions (b)(i) Debt Instruments - Bonds	
Notification if <1 average trade per business day in 2018	Y	
Top five execution venues ranked in terms of trading volume (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
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	53.59%	43.55%
The Bank of Nova Scotia (L3I9ZG2KFGXZ61BMYR72)	18.94%	24.19%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	13.89%	20.97%
Deutsche Bank Aktiengesellschaft (7LTWFZYICNSX8D621K86)	13.58%	11.29%

Class of Instrument	Securities Financing Transactions	
Class of Instrument	(b)(i) Debt Instruments - Bonds	
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total
	generally illiquid nature of the securities traded.	relevant volume.
	Secondly, the Firm will also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
	Price and transaction cost may become more relevant	
	factors in cases of greater transparency and/or liquidity.	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	



Class of Instrument	Securities Financing Transactions	
Class of Histi unicit	(b)(i) Debt Instruments - Bonds	
	report. The Firm also received business gifts and	The Firm conducted testing against its Compliance
	entertainment during the period. Further, the Firm notes	Manual, including its Order Execution Policy, Code of
	that certain of its prime brokers, or their affiliates, may	Ethics, Conflicts Mitigation Policy and Policy on
	also appear in the RTS 28 disclosure below.	Research and Use of Research Payment Accounts during the period and had no material findings.
	The Firm did not have in place any other arrangements	Payments and testing were reviewed by the Firm's
	for payment, discounts, rebates or other non-monetary	TMSCC.
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms does not differentiate	
	securities financing transactions and the Firm is not sure	
	that the data that has been published includes data	
	relating to such transactions. Therefore, the Firm has	
	not used any RTS 27 data in relation to securities	
	financing transactions.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	



Class of Instrument	Securities Financing Transactions (k) Exchange Traded Products (Exchange Traded Funds, Exchange Traded Notes and Exchange Traded Commodities)	
Notification if <1 average trade per business day in 2018	Y	
Top five execution venues ranked in terms of trading volume (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
The Bank of Nova Scotia (L3I9ZG2KFGXZ61BMYR72)	57.67%	59.81%
Merrill Lynch International (GGDZP1UYGU9STUHRDP48)	28.64%	6.54%
Credit Suisse AG (ANGGYXNX0JLX3X63JN86)	12.95%	28.97%
J.P. Morgan Securities PLC (K6Q0W1PS1L1O4IQL9C32)	0.74%	4.67%

Class of Instrument	Securities Financing Transactions (k) Exchange Traded Products (Exchange Traded Funds, Exchange Traded Notes and Exchange Traded	
	Commodities)	
	Summary of analysis	Conclusion
Execution factors	The Firm generally looks at liquidity, likelihood of	Consideration of these factors is demonstrated by the
	execution, speed of execution and other factors such as	spread of trades across the top venues listed and the top
	the specific expertise or history of liquidity, given the	venues' aggregate concentration as compared to the total
	generally illiquid nature of the securities traded.	relevant volume.
	Secondly, the Firm will also consider other implicit	
	transaction or administrative costs, such as whether the	
	required infrastructure is in place or would require	
	implementation (i.e., relevant agreements such as an	
	ISDA Master Agreement, credit limits, willingness of a	
	counterparty to accept the risk on its balance sheet).	
	Price and transaction cost may become more relevant	
	factors in cases of greater transparency and/or liquidity.	
Close links, conflicts of interest and common	Close links	Close links
ownership with respect to execution venues	The Firm has no close links to report.	Not applicable.
	Conflicts of interest	Conflicts of interest
	The Firm has no conflicts of interest to report.	Not applicable.
	Common ownerships	Common ownerships
	The Firm has no common ownership to report.	Not applicable.
Specific arrangements with execution venues	During the period, in addition to payments made in	The Firm operated within its regulatory obligations in
regarding payments made or received,	respect of execution of transaction, the Firm had MiFID	respect of these specific arrangements.



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	Securities Financing Transactions	
Class of Instrument	(k) Exchange Traded Products (Exchange Traded Funds, Exchange Traded Notes and Exchange Traded	
	Commodities)	
discounts, rebates or non-monetary benefits	II research agreements and corporate access agreements	
received	in place with certain execution venues listed in this	The Firm conducted testing against its Compliance
	report. The Firm also received business gifts and	Manual, including its Order Execution Policy, Code of
	entertainment during the period. Further, the Firm notes	Ethics, Conflicts Mitigation Policy and Policy on
	that certain of its prime brokers, or their affiliates, may	Research and Use of Research Payment Accounts
	also appear in the RTS 28 disclosure below.	during the period and had no material findings.
		Payments and testing were reviewed by the Firm's
	The Firm did not have in place any other arrangements	TMSCC.
	for payment, discounts, rebates or other non-monetary	
	benefits (other than those which may be classified as	
	"minor non-monetary benefits") with any of the entities	
	listed in this disclosure form.	
Factors leading to a change in the list of	Changes to the list of execution venues in the Firm's	The TMSCC's oversight of changes to the list of
execution venues listed in the Order Execution	Order Execution Policy during 2018 were monitored by	execution venues was appropriate during the period.
Policy	the TMSCC, including on boarding and ongoing	
	diligencing and review.	
Differentiation across client categories	All of the Firm's clients are professional.	Not applicable.
Use of data / tools relating to quality of	The Firm utilised a Transaction Cost Analysis	From its monitoring activities, the Firm is satisfied that
execution	monitoring system to track and review execution quality	the results (in terms of quality of execution) obtained
	received. These monitoring reports are received by the	from the execution venues listed above are consistent
	Firm on a quarterly basis and reviewed by the TMSCC.	with the execution factors to which the Firm ascribes the
		most importance for this instrument class.
	RTS 27 data became available for the first time during	
	2018. However, the raw data published by venues and	
	relevant investment firms does not differentiate	
	securities financing transactions and the Firm is not sure	
	that the data that has been published includes data	
	relating to such transactions. Therefore, the Firm has	
	not used any RTS 27 data in relation to securities	
	financing transactions.	
	The Firm did not use output from consolidated tape	
	providers to monitor execution quality in relation to	
	2018 trading because no consolidated tape providers	
	were in operation in the EEA during 2018.	