

## RTS 28 Quality of Execution Annual Report

**Firm:** *Marshall Wace LLP* (“MW” or the “Firm”)

**Calendar Year Disclosure Period:** *1 January 2018 to 31 December 2018*

**Date:** *April 30, 2019*

MW is an EU-based investment manager registered with the Financial Conduct Authority (“FCA”). MW is authorised by the FCA to conduct three broad categories of business: managing alternative investment funds in its capacity as an Alternative Investment Fund Manager (“AIFM”) under the Alternative Investment Fund Managers Directive (“AIFMD”), acting as the management company of, and investment manager to, EEA-regulated UCITS schemes as part of the Undertakings for Collective Investments in Transferable Securities Directive (“UCITS”), and providing discretionary management services (and related advisory and dealing services) to segregated account and managed account clients. The terms of MW’s FCA permission entitle it to carry on certain investment management activities that are regulated under the re-cast Markets in Financial Instruments Directive and Regulation (together, “MiFID II”). In relation to such investment management activities (known as MiFID II “top-up” services), MW is subject to the FCA rules that implement MiFID II as well as certain directly applicable EU secondary regulation like Regulatory Technical Standard 28 (“RTS 28”). In accordance with RTS 28, MW is providing additional disclosures around the execution venues utilized for each class of financial instrument and quality of execution.

MW provides investment management services to only “professional clients.” Whilst retail investors may invest in funds managed by MW like UCITS funds, MW does not provide investment management services to “retail clients.” In providing investment management services to only “professional clients,” Marshall Wace LLP effects transactions in which it passes or transmits orders to another firm (e.g., broker counterparty) for execution (i.e., “indirect trading”). As MW is an AIFM with “top-up” permissions, MW is required to provide relevant execution data and make statements for only those instrument classes in which it carries out indirect trading. Consequently, classes of instruments in respect of which MW carried out only direct trading during 2018 are not included in this report.

Summary of classes of instruments included in this report, and classes of instruments not included in this report (because the Firm has not executed client orders in that class of instruments or the class of instrument involved only direct trading):

Annex I Classes of instruments included in this report	Annex I Classes of instruments not included in this report
<ul style="list-style-type: none"> <li>• Equities – Shares &amp; Depositary Receipts (a)                             <ul style="list-style-type: none"> <li>○ Tick size liquidity bands 5 and 6 (i)</li> <li>○ Tick size liquidity bands 3 and 4 (ii)</li> <li>○ Tick size liquidity bands 1 and 2 (iii)</li> </ul> </li> <li>• Interest rate derivatives (c)                             <ul style="list-style-type: none"> <li>○ Futures and options admitted to trading on a trading venue (i)</li> </ul> </li> <li>• Equity Derivatives (g)                             <ul style="list-style-type: none"> <li>○ Options and futures admitted to trading on a trading venue (i)</li> </ul> </li> <li>• Commodities derivatives and emission allowances derivatives (i)</li> </ul>	<ul style="list-style-type: none"> <li>• Debt Instruments (b)                             <ul style="list-style-type: none"> <li>○ Bonds (i)</li> <li>○ Money markets instruments (ii)</li> </ul> </li> <li>• Interest rate derivatives (c)                             <ul style="list-style-type: none"> <li>○ Swaps, forwards, and other interest rate derivatives (ii)</li> </ul> </li> <li>• Credit derivatives (d)                             <ul style="list-style-type: none"> <li>○ Futures and options admitted to trading on a trading venue (i)</li> <li>○ Other credit derivatives (ii)</li> </ul> </li> <li>• Currency Derivatives (e)</li> </ul>

<ul style="list-style-type: none"> <li>○ Options and Futures admitted to trading on a trading venue (i)</li> <li>• Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities) (k)</li> <li>• Other instruments (m)</li> </ul>	<ul style="list-style-type: none"> <li>○ Futures and options admitted to trading on a trading venue (i)</li> <li>○ Swaps, forwards, and other currency derivatives (ii)</li> <li>• Structured finance instruments (f)</li> <li>• Equity Derivatives (g) <ul style="list-style-type: none"> <li>○ Swaps and other equity derivatives (ii)</li> </ul> </li> <li>• Securitized Derivatives (h) <ul style="list-style-type: none"> <li>○ Warrants and certificate derivatives (i)</li> <li>○ Other securitized derivatives (ii)</li> </ul> </li> <li>• Commodities derivatives and emission allowances derivatives (i) <ul style="list-style-type: none"> <li>○ Other commodities derivatives and emission allowances derivatives (ii)</li> </ul> </li> <li>• Contracts for difference (j)</li> <li>• Emission allowances (l)</li> </ul>
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Class of Instrument	Annex I(a)(i): Equities - Shares & Depositary Receipts; tick size liquidity bands 5 and 6 (from 2000 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
JP Morgan	92.1%	92.1%	N/A	N/A	0%
Credit Suisse	2.9%	3.7%	N/A	N/A	0%
UBS	2.6%	2.7%	N/A	N/A	0%
Morgan Stanley	1.3%	0.1%	N/A	N/A	0%
BofA Merrill Lynch	0.5%	0.3%	N/A	N/A	0%

Class of instrument	Annex I(a)(i): Equities – Shares & Depositary Receipts; tick size liquidity bands 5 & 6 (from 2000 trades per day)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	Summary of analysis	Conclusion
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the type of the order</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement</li> <li>• the cost of transacting</li> <li>• the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
	<b>Close links</b>	<b>Close links</b>

Close links, conflicts of interest and common ownership with respect to execution venues	The Firm has no close links to report.	N/A
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm has no specific arrangements to report.	N/A
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to	N/A

	the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	<p>The list of top 5 brokers for this class of instrument includes brokers who provide the Firm with direct electronic access ("DEA") to execution venues. These DEA brokers for this class of instrument that are within the top five execution venues are:</p> <ul style="list-style-type: none"> <li>• Morgan Stanley</li> <li>• UBS</li> <li>• J.P. Morgan</li> <li>• Credit Suisse</li> <li>• Bank of America Merrill Lynch</li> </ul>	

Class of Instrument	Annex I(a)(ii): Equities - Shares & Depositary Receipts; tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
JP Morgan	63.6%	2.6%	N/A	N/A	0%
Credit Suisse	14.3%	0.7%	N/A	N/A	0%
UBS	13.1%	0.5%	N/A	N/A	0%
BofA Merrill Lynch	3.7%	90.6%	N/A	N/A	0%
Morgan Stanley	1.9%	5.5%	N/A	N/A	0%

<b>Class of instrument</b>	Annex I(a)(ii): Equities – Shares & Depositary Receipts: tick size liquidity bands 3 & 4 (from 80 to 1999 trades per day)	
<b>Summary</b>	<p>The Firm’s order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis (“TCA”) system. The Firm’s monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the type of the order</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement</li> <li>• the cost of transacting</li> <li>• the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm’s order execution policy.</p>
<b>Close links, conflicts of interest and common ownership with respect to execution venues</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

	<p><b>Conflicts of interest</b> The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b> In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p>The Firm has no specific arrangements to report.</p>	<p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no</p>	<p>N/A</p>

	changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	<p>The list of top 5 brokers for this class of instrument includes brokers who provide the Firm with direct electronic access ("DEA") to execution venues. These DEA brokers for this class of instrument that are within the top five execution venues are:</p> <ul style="list-style-type: none"> <li>• Morgan Stanley</li> <li>• UBS Limited</li> <li>• J.P. Morgan</li> <li>• Credit Suisse</li> <li>• BofA Merrill Lynch</li> </ul>	



Class of Instrument	Annex I(a)(iii): Equities - Shares & Depository Receipts; tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
JP Morgan	52.5%	50.3%	N/A	N/A	0%
Credit Suisse	22.6%	29.0%	N/A	N/A	0%
UBS	18.8%	17.3%	N/A	N/A	0%
Numis	1.5%	0.1%	N/A	N/A	0%
Berenberg	1.2%	0.1%	N/A	N/A	0%

Class of instrument	Annex I(a)(iii): Equities – Shares & Depository Receipts; tick size liquidity bands 1 & 2 (from 0 to 79 trades per day)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	Summary of analysis	Conclusion
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>the characteristics of the Client, including the categorisation of the Client as professional</li> <li>the characteristics of the financial instrument</li> <li>the type of the order</li> <li>the urgency of execution</li> <li>the likelihood of execution</li> <li>the likelihood of settlement</li> <li>the cost of transacting</li> <li>the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

<p><b>ownership with respect to execution venues</b></p>	<p><b>Conflicts of interest</b>  The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b>  In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p>The Firm has no specific arrangements to report.</p>	<p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no</p>	<p>N/A</p>

	changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	<p>The list of top 5 brokers for this class of instrument includes brokers who provide the Firm with direct electronic access ("DEA") to execution venues. These DEA brokers for this class of instrument that are within the top five execution venues are:</p> <ul style="list-style-type: none"> <li>• Morgan Stanley</li> <li>• UBS Limited</li> <li>• J.P. Morgan</li> <li>• Credit Suisse</li> <li>• Bank of America Merrill Lynch</li> </ul>	

Class of Instrument	Annex I (c)(i): Interest rate derivatives; Futures and options admitted to trading on a trading venue				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Credit Suisse	95.1%	92.6%	N/A	N/A	0%
UBS	4.7%	6.7%	N/A	N/A	0%
Morgan Stanley	0.1%	0.7%	N/A	N/A	0%
Deutsche Bank	0.0%	0.0%	N/A	N/A	0%

<b>Class of instrument</b>	Annex I (c)(i): Interest rate derivatives; Futures and Options admitted to trading on a trading venue	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the type of the order</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement</li> <li>• the cost of transacting</li> <li>• the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common ownership with respect to execution venues</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

	<p><b>Conflicts of interest</b> The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b> In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no</p>	<p>N/A</p>

	changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Annex I (g)(i): Equity Derivatives; Options and futures admitted to trading on a trading venue				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Credit Suisse	91.7%	94.6%	N/A	N/A	0%
Morgan Stanley	4.4%	2.7%	N/A	N/A	0%
UBS	3.6%	1.7%	N/A	N/A	0%
Deutsche Bank	0.3%	1.1%	N/A	N/A	0%

Class of instrument	Annex I (g)(i): Equity Derivatives; Options and futures admitted to trading on a trading venue	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	Summary of analysis	Conclusion
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>the characteristics of the Client, including the categorisation of the Client as professional</li> <li>the characteristics of the financial instrument</li> <li>the type of the order</li> <li>the urgency of execution</li> <li>the likelihood of execution</li> <li>the likelihood of settlement</li> <li>the cost of transacting</li> <li>the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common ownership with respect to execution venues</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

	<p><b>Conflicts of interest</b> The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b> In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p>The Firm has no specific arrangements to report.</p>	<p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.</p>	<p>N/A</p>



<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	The list of top 5 brokers for this class of instrument includes brokers who provide the Firm with direct electronic access ("DEA") to execution venues. These DEA brokers for this class of instrument that are within the top five execution venues are: <ul style="list-style-type: none"> <li>• Credit Suisse</li> <li>• UBS</li> </ul>	

Class of Instrument	Annex I (i)(i): Commodities derivatives and emission allowances derivatives; Options and futures admitted to trading on a trading venue				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Credit Suisse	95.6%	88.8%	N/A	N/A	0%
UBS	2.7%	8.5%	N/A	N/A	0%
Deutsche Bank	1.3%	2.3%	N/A	N/A	0%
Morgan Stanley	0.4%	0.3%	N/A	N/A	0%
Citigroup	0.1%	0.2%	N/A	N/A	0%

<b>Class of instrument</b>	Annex I (i)(i): Commodities derivatives and emission allowances; Options and futures admitted to trading on a trading venue	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the type of the order</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement</li> <li>• the cost of transacting</li> <li>• the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common</b>	<b>Close links</b>	<b>Close links</b>

<b>ownership with respect to execution venues</b>	The Firm has no close links to report.	N/A
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b>	The Firm has no specific arrangements to report.	N/A
<b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b>	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no	N/A

	changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Annex I (k): Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)				
Notification if <1 average trade per business day in the previous year	N				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
JP Morgan	87.9%	85.2%	N/A	N/A	0%
Goldman Sachs	5.8%	10.1%	N/A	N/A	0%
Credit Suisse	5.5%	3.2%	N/A	N/A	0%
Morgan Stanley	0.3%	0.0%	N/A	N/A	0%
Deutsche Bank	0.2%	0.0%	N/A	N/A	0%

Class of instrument	Annex I (k): Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	Summary of analysis	Conclusion
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>the characteristics of the Client, including the categorisation of the Client as professional</li> <li>the characteristics of the financial instrument</li> <li>the type of the order</li> <li>the urgency of execution</li> <li>the likelihood of execution</li> <li>the likelihood of settlement</li> <li>the cost of transacting</li> <li>the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

<p><b>ownership with respect to execution venues</b></p>	<p><b>Conflicts of interest</b>  The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b>  In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p>The Firm has no specific arrangements to report.</p>	<p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no</p>	<p>N/A</p>

	changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Annex I (m): Other instruments				
Notification if <1 average trade per business day in the previous year	Y				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
Credit Suisse	45.6%	96.5%	N/A	N/A	0%
UBS	35.7%	2.8%	N/A	N/A	0%
JP Morgan	10.6%	0.3%	N/A	N/A	0%
Morgan Stanley	5.7%	0.1%	N/A	N/A	0%
Winterflood	1.1%	0.3%	N/A	N/A	0%
BofA Merrill Lynch	1.1%	0.0%	N/A	N/A	0%

Class of instrument	Annex I (m): Other Instruments	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	Summary of analysis	Conclusion
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>the characteristics of the Client, including the categorisation of the Client as professional</li> <li>the characteristics of the financial instrument</li> <li>the type of the order</li> <li>the urgency of execution</li> <li>the likelihood of execution</li> <li>the likelihood of settlement</li> <li>the cost of transacting</li> <li>the size or nature of the order</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>



Close links, conflicts of interest and common ownership with respect to execution venues	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm has no specific arrangements to report.	N/A

<b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b>	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	N/A
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Securities Financing Transactions (SFTs) - Annex I (a)(i): Equities - Shares & Depositary Receipts; tick size liquidity bands 5 and 6 (from 2000 trades per day)	
Notification if <1 average trade per business day in the previous year	N	
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class
Morgan Stanley	60.83%	67.69%
BofA Merrill Lynch	16.98%	8.29%
Goldman Sachs	8.13%	8.20%
JP Morgan	5.80%	8.15%
Credit Suisse	5.23%	4.62%

<b>Class of instrument</b>	Securities Financing Transactions (SFTs) - Annex I (a)(i): Equities - Shares & Depositary Receipts; tick size liquidity bands 5 and 6 (from 2000 trades per day)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement or stability of the borrow</li> <li>• the size of the order</li> <li>• the cost of transacting</li> <li>• the operational efficiency and reliability of the counterparty</li> <li>• the credit worthiness of the counterparty</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>

Close links, conflicts of interest and common ownership with respect to execution venues	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm has no specific arrangements to report.	N/A

<b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b>	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	N/A
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Securities Financing Transactions (SFTs) - Annex I (a)(ii): Equities - Shares & Depository Receipts; tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
Notification if <1 average trade per business day in the previous year	N	
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class
Morgan Stanley	53.02%	62.32%
BofA Merrill Lynch	21.89%	15.08%
JP Morgan	12.17%	9.21%
Goldman Sachs	7.83%	7.80%
Credit Suisse	3.51%	3.53%

<b>Class of instrument</b>	Securities Financing Transactions (SFTs) - Annex I (a)(ii): Equities – Shares & Depository Receipts; tick size liquidity bands 3 and 4 (from 80 to 1999 trades per day)	
<b>Summary</b>	<p>The Firm’s order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis (“TCA”) system. The Firm’s monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement or stability of the borrow</li> <li>• the size of the order</li> <li>• the cost of transacting</li> <li>• the operational efficiency and reliability of the counterparty</li> <li>• the credit worthiness of the counterparty</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm’s order execution policy.</p>

Close links, conflicts of interest and common ownership with respect to execution venues	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm has no specific arrangements to report.	N/A

<b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b>	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	N/A
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	



Class of Instrument	Securities Financing Transactions (SFTs) - Annex I a(iii): Equities - Shares & Depositary Receipts; tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)	
Notification if <1 average trade per business day in the previous year	N	
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class
JP Morgan	100%	100%

<b>Class of instrument</b>	Securities Financing Transactions (SFTs) - Annex I (a)(iii): Equities – Shares & Depositary Receipts; tick size liquidity bands 1 and 2 (from 0 to 79 trades per day)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement or stability of the borrow</li> <li>• the size of the order</li> <li>• the cost of transacting</li> <li>• the operational efficiency and reliability of the counterparty</li> <li>• the credit worthiness of the counterparty</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>
<b>Close links, conflicts of interest and common ownership with respect to execution venues</b>	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>

	<p><b>Conflicts of interest</b> The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b> In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
<p><b>Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received</b></p>	<p>The Firm has no specific arrangements to report.</p>	<p>N/A</p>
<p><b>Factors leading to a change in the list of execution venues listed in the Order Execution Policy</b></p>	<p>The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.</p>	<p>N/A</p>

<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	

Class of Instrument	Securities Financing Transactions (SFTs) - Annex I (k): Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)	
Notification if <1 average trade per business day in the previous year	N	
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as a percentage of total in that class
Morgan Stanley	79.90%	80.17%
BofA Merrill Lynch	8.86%	7.44%
Citigroup	7.78%	8.26%
Credit Suisse	3.66%	4.13%

<b>Class of instrument</b>	Securities Financing Transactions (SFTs) - Annex I (k): Exchange traded products (Exchange trade funds, exchange traded notes and exchange traded commodities)	
<b>Summary</b>	<p>The Firm's order execution process represents a structured approach to order decision-making, from order entry to settlement, and a strategy designed to achieve the best possible result for clients. The Firm has policies and procedures designed to analyse the quality of execution obtained and monitor and verify that the best possible results are obtained for clients. When selecting the appropriate execution venue, the Firm takes into account prevailing market conditions and several execution factors, such as the characteristics of the client, such as its categorization, the characteristics of the financial instrument or asset class such as its liquidity, the type of the order, the size of the order, the urgency of execution, the likelihood of execution, the likelihood of settlement, and the cost of transacting. The Firm analyses these and other execution factors in the course of effecting transactions and prioritizes them accordingly to obtain the overall highest quality of execution. The Firm monitors the quality and effectiveness of its order execution arrangements through the use of automated and ad-hoc reporting, as well as a Transaction Cost Analysis ("TCA") system. The Firm's monitoring during the reporting time period confirmed that the execution quality from the Top 5 Venues reflected consistency with and adherence to the relative importance of the execution factors utilized in effecting transactions. The Firm considers that it has satisfied its obligation to achieve the best possible result for its clients on a consistent basis.</p>	
	<b>Summary of analysis</b>	<b>Conclusion</b>
<b>Execution factors</b>	<p>The relative importance of the execution factors was determined by the following execution criteria:</p> <ul style="list-style-type: none"> <li>• the characteristics of the Client, including the categorisation of the Client as professional</li> <li>• the characteristics of the financial instrument</li> <li>• the urgency of execution</li> <li>• the likelihood of execution</li> <li>• the likelihood of settlement or stability of the borrow</li> <li>• the size of the order</li> <li>• the cost of transacting</li> <li>• the operational efficiency and reliability of the counterparty</li> <li>• the credit worthiness of the counterparty</li> </ul>	<p>The relative importance given to the execution factors was in line with the Firm's order execution policy.</p>

Close links, conflicts of interest and common ownership with respect to execution venues	<p><b>Close links</b></p> <p>The Firm has no close links to report.</p>	<p><b>Close links</b></p> <p>N/A</p>
	<p><b>Conflicts of interest</b></p> <p>The Firm may on behalf of its clients during the course of its portfolio management activities, invest in entities who are or whose sub-entities include trading counterparties.</p> <p>The Firm may on behalf of its clients during the course of its execution management activities, route an order to a counterparty for execution, and that counterparty provides or is affiliated with an entity that provides, prime brokerage services, which the Firm may also utilize.</p>	<p><b>Conflicts of interest</b></p> <p>In addition to an investment in a financial services company with a trading counterparty not being an execution factor in choosing execution venues, a separate and distinct Trading and Execution Management function exists which has independent discretion and monitoring of which execution venues are selected in the course of effecting a transaction.</p> <p>The Firm has automated and ad-hoc reporting and monitoring on best execution, analysing execution factors such as price, likelihood of execution, order size, likelihood of settlement, speed of execution, cost of execution, and other important execution factors, designed to identify outliers in execution quality which would include instances where an execution counterparty and related prime broker are utilized in effecting a transaction, and the overall quality of execution does not meet the Firm's expectations. Deviations in execution quality are escalated and monitored for successful resolution.</p> <p>Independent monitoring is also performed by the Firm's Execution &amp; Trade Management Committee and Conflicts of Interest Committee, both formal governance and oversight committees. The potential conflicts of interest are therefore appropriately mitigated.</p>
	<p><b>Common ownerships</b></p> <p>The Firm has no common ownership to report.</p>	<p><b>Common ownerships</b></p> <p>N/A</p>
Specific arrangements with execution venues regarding payments made or received, discounts, rebates or non-monetary benefits received	The Firm has no specific arrangements to report.	N/A
Factors leading to a change in the list of execution venues listed in the Order Execution Policy	The Firm places orders to be executed with approved counterparties (execution venues). The list of approved counterparties is reviewed regularly to ensure that the Firm is able to achieve the highest quality of execution for its clients. A number of factors can be considered for making a change to the approved counterparty list, such as: the counterparty's execution	N/A

	performance, cost, credit worthiness, and responsiveness. There were no changes to the list of execution venues/brokers in the Firm's Order Execution Policy.	
<b>Differentiation across client categories</b>	N/A - all of the Firm's clients are professional clients	N/A
<b>Use of data / tools relating to quality of execution</b>	The Firm uses an in-house Transaction Cost Analysis ("TCA") tool and associated automated and ad-hoc reporting that are designed to assess the quality of execution by analysing implicit and explicit costs that can arise in the course of effecting transactions. The reporting is regularly reviewed by the Trading team and outliers are accordingly escalated to the appropriate team(s) which can include the Portfolio Management teams and Compliance. Furthermore, reporting and escalations are presented to and reviewed by the Firm's Execution & Trade Management Committee, a formal governance and oversight committee that meets at minimum on a quarterly basis. The Execution & Trade Management Committee reviews adherence to the Firm's Best Execution Policy and policies and procedures designed to achieve the highest overall quality of execution for clients. It is attended by senior Investment, Trading, Compliance, Legal, Risk, Technology, and Operations employees.	N/A
<b>Use of consolidated tape provider output</b>	The Firm has not used output from relevant consolidated tape providers to monitor execution quality in relation to 2018 because they had not yet been in operation during this time period. The Firm will evaluate its use in its order execution arrangements when they are available.	N/A
<b>Use of DEA</b>	N/A for this Class of instrument	