

## ORDER EXECUTION POLICY

### EQUITIES

#### **Purpose**

This Order Execution Policy (“Policy”) provides information to Clients of Cowen Execution Services Limited (“CESL” or “the Firm”) on when, where and how best execution is delivered by CESL in respect of each class of financial instruments, as relevant, for its Client(s) (as defined by the FCA Rules).

Under Article 27 of the EU Markets in Financial Instruments Directive, 2014/65/EU, (“MIFID II”) Article 67 of Commission Delegated Regulation (EU) 2017/565 (the “MiFID Org Reg”) and the FCA Handbook (specifically COBS 11.2A), CESL is required to establish and implement a Policy to allow CESL to obtain, for their Clients orders, the best possible result in accordance with the prevailing requirements.

This Policy contains the following sections:

- **SCOPE**
- **WHAT IS BEST EXECUTION?**
- **SCOPE OF BEST EXECUTION**
- **THE BEST EXECUTION FACTORS AND BEST EXECUTION CRITERIA**
- **CESL’S APPLICATION OF “ALL SUFFICIENT STEPS”**
- **EXECUTION MODEL AND VENUES**
- **EXECUTION SOLUTIONS**
- **MONITORING AND GOVERNANCE**
- **COMMUNICATION WITH CLIENTS**
- **FEES**
- **CONSENT**
- **UPDATES TO THIS POLICY**

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## SCOPE

This Policy includes, in respect of each class of financial instruments that CESL is authorised to deal in, information on the different venues where the investment firm executes its Client orders and the factors affecting the choice of execution venue. CESL utilizes a number of different execution strategies, execution types and venues in order to deliver best execution for a Client. This Policy is published on the Cowen website and is updated on an annual basis or when a material change occurs. CESL clients may make reasonable and proportionate requests for information about policies and arrangements in respect of order execution. Where the request is deemed reasonable and proportionate CESL will make reasonable endeavours to answer clearly and in a timely manner.

For the purpose of this Policy, the execution venues include Regulated Markets (“RMs”), Multilateral Trading Facilities (“MTFs”), Systematic Internalisers (“SIs”), market makers, interdealer brokers, other liquidity providers, third country MIFID II equivalent venues and other execution venues globally.

CESL’s Policy applies to the provision of services by CESL to its Professional Clients in certain instances when CESL executes orders on a Client’s behalf in relation to transferable securities or Exchange Traded Funds. The transferable securities in scope of this Policy are cash equity instruments (including common stock, rights, preference shares, American Depository Receipts, Global Depository Receipts). If a Client to whom CESL owes a best execution obligation is acting on behalf of their own customers, CESL (unless otherwise agreed in advance) will only owe best execution to the Client with whom they have a direct relationship, and not customers of CESL’s Client.

For avoidance of doubt, CESL does not provide portfolio management services.

This Policy does not apply to eligible counterparties (whether *per se* or elective).

## WHAT IS BEST EXECUTION?

Best Execution is the duty that CESL owes to its Clients to take all sufficient steps to obtain the best possible result when executing, or transmitting orders for execution on their behalf, taking into consideration the “**Execution Factors**” which may include:

- price;
- cost (implicit and explicit);
- speed;
- likelihood of execution and settlement;
- size;
- nature of the order; and
- any other consideration relevant to the execution of the order when executing an order on behalf of a client.

Execution Factors will be considered in light of the execution criteria, assessing their relative weighting in light of a wide range of elements that could influence the outcome of the execution. The assessment of these considerations will determine the appropriate interaction with the market.

## SCOPE OF BEST EXECUTION

CESL will be deemed to owe a client the duty of best execution when the Client legitimately relies on CESL in relation to orders. If it is deemed that the Client is not placing legitimate reliance on CESL then the obligation of best execution is not owed. It will be deemed that there is no legitimate reliance where there is a specific instruction from the Client, either in relation to all or part of an order. It will also be deemed there is also no legitimate reliance

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where the “four-fold test” is not met (see below). Client specific instruction may include instruction in relation to any aspect of the order.

When considering whether a client is placing “legitimate reliance” on CESL, CESL will take account of relevant UK and European guidance and apply the “four-fold test”, published by the European Commission:

- (i) which party has initiated the transaction – where the Client’s initiates a transaction it is less likely that legitimate reliance is being placed on CESL;
- (ii) whether there is a market convention to ‘shop around’ – where the practice suggests that Client’s take responsibility for pricing then it is less likely reliance is being placed on CESL;
- (iii) the relative levels of transparency within a market - if the Client has ready access to prices in the market, then it is less likely reliance is being placed on CESL; and
- (iv) the information provided by CESL and any agreement reached – where the arrangements and agreements with you (including this Policy) do not indicate or suggest a relationship of reliance then a determination of legitimate reliance is less likely.

Where appropriate, after a consideration of all the relevant factors it may be concluded that Clients are in fact placing legitimate reliance on CESL. This determination is regardless of whether CESL acts as agent, or trades with their Clients on a riskless principal basis, or a matched or unmatched principal basis; however in these scenarios it will be apparent where Clients are relying on CESL to protect their interests.

The applicability of the best execution requirements is kept under regular review and will be revised as necessary.

Where a specific instruction is received, best execution obligations do not apply to the part of the order to which the instruction relates; however CESL may still owe its Clients best execution obligations in relation to other aspects of the order.

## **THE BEST EXECUTION FACTORS AND BEST EXECUTION CRITERIA**

Where it is under the obligation to do so, CESL will take all sufficient steps to ensure that best execution is provided in line with this Policy and applicable regulations.

CESL will take into account the Execution Factors detailed below for any order to which best execution requirements apply.

Orders may be subject to all Execution Factors, but the relative importance of each factor is determined by the Execution Criteria which are the:

- characteristics of the Client;
- characteristics of the order (including where the order involves a securities financing transaction);
- financial instrument characteristics; and
- characteristics of the execution venue or market.

At a more granular level, the Execution Criteria as applied to CESL means that the following components of the order are examined in order to determine the application of the Execution Factors which are as follows:

- price and costs;
- order typology (nature of the order);
- speed of execution;

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- the overall objectives of the Client's order;
- the liquidity profile of the instrument(s);
- the size of the order;
- general market environment and prevailing market conditions;
- likelihood of execution and settlement;
- sales trader knowledge of the Clients' order-handling preferences;
- access to trading venues to which the order can be directed;
- whether CESL is taking on any of the risk associated with the Client's order; and
- other Client orders

## EXECUTION FACTORS

CESL will apply the Execution Factors to each order in order to obtain the best possible results for the Client. CESL, as a matter of policy, will give priority to price. Secondary execution factors will differ depending on the nature and circumstance of an order.

The cost of execution will also be considered. The cost of execution is generally considered as the total trading costs faced by the Client and by assessing execution quality in terms of total consideration. CESL is regularly assessing execution costs as part of its order routing decision process and by assessing price, cost and likelihood of execution. It should, however, be noted that CESL's Clients are charged a pre-agreed commission rate such that they are not directly exposed to variation in costs for execution that CESL may incur due to participation on particular venue or other costs that may be 'passed on' by the execution entities.

As with the execution factor of 'price', CESL assesses the likelihood of execution by measuring latency comparisons, per broker/per market. CESL will routinely consider the latency, in particular the time interval between an order being received by CESL and its execution as well as the latency between an order being received by one of the execution entities and its execution.

In executing orders CESL will consider the likelihood of execution in terms of the risk of not being able to execute orders on different venues or the probability that orders may not be filled within a given time period. CESL is also routinely assessing any failures to execute per broker/per market as part of the order routing decision process.

Settlement is considered in light of the risk of settlement failures or delays in settlement and forms part of CESL's routine review of such failures or delays.

Relative importance of each execution factor is determined by the execution criteria and the assessment of these considerations will determine the appropriate interaction with the market.

CESL will take into account the execution factors and execution criteria when CESL is executing orders directly on a Client's behalf and where the Client has made its own execution decision(s).

## **"All sufficient steps"**

MiFID II Directive Article 27(1) defines best execution as the obligation on firms to *"take all sufficient steps to obtain the best possible result for their Clients..."*

CESL cannot guarantee that it will always be able to provide best execution of every order CESL transmits or executes on behalf of its Clients.

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CESL's approach is focused on achieving the best possible overall results on a consistent basis, and not merely best price for an individual order.

In seeking the best possible result for the Client, CESL applies an order handling process that is structured around order initiation, order decision, execution to final settlement.

CESL takes "all sufficient steps" to achieve the best possible results for its Clients by verifying that CESL's execution arrangements work well throughout different stages of the order execution process. This includes execution arrangements to ensure intended outcomes can be successfully achieved on an on-going basis. For instance, this involves front-office accountability and systems and controls with the aim to identify any potential deficiencies. This also includes taking sufficient steps to ensure that third party brokers that CESL uses for onward routing have the necessary arrangements in place to allow CESL to comply with its Order Execution Policy, taking into account the aforementioned execution criteria and execution factors.

CESL takes "all sufficient steps" to achieve the best possible results for its Clients by verifying that CESL's execution arrangements work well throughout different stages of the order execution process

CESL has identified a three-step process for designing and maintaining infrastructure designed to deliver best execution for clients:

- **Design:** The design process is an ongoing process involving the continual updating of arrangements made by CESL to deliver the best possible outcome for its clients. CESL seamlessly combines its own proprietary technology with that of its preferred execution partners to help clients achieve their performance goals through access to all material pools of liquidity in a given market. The electronic trading tools are designed to increase flexibility while addressing cost, timing, performance, transparency, and market structure requirements. The execution model is reviewed and approved by the relevant governance functions and captured in this Policy.
- **Implementation:** The approved execution arrangements are implemented using proprietary technology and execution partnerships, and are then subjected to an ongoing review process. CESL reviews executions provided to Clients through its transaction analysis tools, management oversight, independent Compliance function and Governance structure to ensure that these have been undertaken in accordance with this Policy and reasonably achieved the intended outcome.
- **Updating:** Any issues arising from the ongoing review process and/or monitoring of market structure developments are escalated and incorporated in the design process.

## EXECUTION MODEL AND VENUES

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CESL accesses over 100 markets around the globe. CESL accesses execution venues in one of three ways:

- through its relationships with third party executing brokers;
- through its relationships with other Cowen Inc. entities (together the “Affiliates”);
- as a direct member of an exchange;

**CESL is not registered as a Systematic Internaliser (“SI”) in any security.**

**CESL does not offer Direct Electronic Access (Direct Market Access or Sponsored Access) as defined by MIFID.**

CESL’s execution models/solutions include:

- (i) ‘Low Touch’ - Client Driven Execution / Electronic Trading
- (ii) ‘High Touch’ - Trader Assisted Execution
- (iii) “Give Ups”
- (iv) Request for Quote (“RFQ”)

CESL accesses trading venues worldwide and uses advanced technology and a broad range of solutions to access diverse sources of liquidity in order to deliver consistent, performance-driven results.

For executions in US markets, Canadian markets, South American or Central American markets CESL routes orders to its Affiliate Companies and the Affiliate Companies will generally execute such orders directly on US based execution venues.

For execution outside of US, Canadian, South American or Central American markets, CESL’s Client orders are handled in one of three ways:

- routed through CESL’s relationships with third party executing brokers
- executed with CESL directly, who will then execute on venue, either directly or by utilizing its Affiliates.
- executed with CESL directly, without execution on venue or onward routing

CESL regularly evaluates the execution quality of the various venues on which its Client orders are executed, particularly where the Client has not specifically selected the execution venue or specified other parameters of the order. This process is further described below.

CESL believes that in some instances routing orders via its Affiliates enables it to obtain results for its Clients that are at least as good as the results it could reasonably expect to obtain from using alternative entities for execution.

CESL’s choice of execution venue may be constrained by the fact that there may be only one venue where an order can be executed due to the nature of the Client’s order or requirements.

If the Client has provided prior express consent, its orders may be executed on its behalf outside an RM or MTF. In particular, all clients have expressly consented to CESL executing outside of a Trading Venue. CESL will not unfairly discriminate between execution venues or third-party brokers but will make a decision on execution venue selection based on a consideration of the Execution Factors. When executing outside a trading venue there may be greater counterparty risk. Additional information on this risk can be provided on request.

All Client order routing is subject to pre-trade risk controls and these will always override Client instructions. Any breach of pre-determined risk checks will result in the order being prevented from routing to market and/or rejected back to the Client.

The execution solutions adopted under the above execution model are described below in Section “EXECUTION SOLUTIONS”.

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The execution venues used for the execution and transmission of all orders in respect of the Cash Equities Asset Class are available in Annex 1.

## EXECUTION SOLUTIONS

### Cash Equity Instruments

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CESL accesses an extensive number of brokers and execution venues via its relationships with third party executing brokers and Affiliates, including RMs, MTFs, exchanges, SIs and other execution venues globally.

CESL allows third party brokers to smart order route Client order flow when discretion has been given by Clients. Such routing includes sending to various venues based on third party brokers' internal routing logic.

Through its third-party brokers, CESL also accesses markets electronically by using its proprietary algorithms where the routing decisions are made by CESL's Smart Order Router ("SOR") or a third-party SOR. Routing through a SOR does not constitute Direct Electronic Access.

Using third party brokers allows CESL to access markets it might otherwise not be able to, or to satisfy certain characteristics a Client order. Clients should be aware that a third-party broker may have a differing approach to meet regulatory standards associated with best execution, or may not be subject to MIFID II. CESL performs due diligence when onboarding new brokers to ensure they satisfy the standards required and performs ongoing monitoring to ensure these standards are maintained. These due diligence and monitoring arrangements assist CESL in mitigating any potential or actual conflicts of interest that might arise in the selection of trading venue.

Outside the European Economic Area ("EEA"), CESL's Affiliate Company is a member of all major U.S. equities exchanges and routes to alternative trading systems.

Across all our solutions we have implemented a number of technologies including order management systems, low latency systems, algorithms and SOR logic.

CESL offers the following execution models / solutions:

#### **1. 'Low Touch' - Client Driven Execution / Electronic Trading**

In this execution model an electronic order received from a Client is routed to an execution venue(s) automatically in accordance with the Client instructions and does not require 'manual intervention' by CESL. CESL will act in an agency capacity for all "low touch" trading activities.

Routing via this model Low Touch model provides access to a specific execution venue, or multiple execution venues, SORs and use of algos. The use of CESL's algorithms and SOR, subject to any specific instructions, is generally considered to be within the scope of best execution. However, if a specific client instruction is received in respect of part of an order then CESL will not be required to provide best execution in respect of that particular part of the order.

Clients may opt-out of SOR execution support by providing prior notice to CESL. This may result in a specific client instruction and as such limit our ability to deliver best execution in respect of this aspect of the order.

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## 2. 'High Touch' - Trader Assisted Execution

The High Touch model is available to Clients who require execution expertise from CESL's trading desk to actively seek liquidity.

In addition to trading on behalf of a Client in an agency capacity, this model applies when CESL is executing orders for client facilitation purposes in respect of 'worked orders' acting as principal (using CESL's own account) or on a riskless principal basis or a combination of both. High touch traders may also execute ETFs on behalf of clients, however this will only occur on an agency basis.

Executions occur through the use of the firm's SOR or through algorithmic solutions offered by third party brokers, through matching between clients, direct execution on venue, CESL's own account or a combination of the above.

Subject to any Client instructions, CESL's trading desk will review the order characteristics and determine the level of human intervention that may be suitable for the order concerned. For example, a small order relative to the liquidity available in the market may be routed straight via an algo without further interaction by a CESL trader. Generally a "worked order" is considered to be in scope for the purposes of best execution. This may be in the instance that a client leaves an order with CESL, for CESL to execute; or where CESL accepts an instruction to "work" an order. In either of these scenarios, CESL is considered to be exercising discretion. Where limited discretion is provided by the Client best execution may not apply in respect of that aspect of the order.

As with the Low Touch model the High Touch model provides access to a specific execution venue, or multiple execution venues, Cowen's SOR or third-party smart order routing solutions. As described under the Order Handling section, executions will be exercised in accordance with due consideration of the execution factors and execution criteria.

Where a Client requests that CESL commits its own capital and provide its best price, or where CESL distributes a Block position, CESL considers that the client is not placing reliance on CESL in accordance with the terms set out in this policy, and therefore does not consider this activity in scope for the purposes of best execution.

In the event CESL executes from its own account, such transactions will be deemed as having been done off-order book on-exchange and not OTC. For the purposes of this Policy CESL will consider its principal book as an Execution Venue.

## 3. Give Ups

A give up occurs where a Client executes a trade with a broker (the executing broker) and passes (or gives-up) the trade to another broker (often a Prime Broker).

In this scenario, CESL will only ever act as an executing broker, and therefore will owe a duty of best execution subject to the exclusions outlined in this policy.

## Dealing on a request for quote ("RFQ")

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CESL will not be posting RFQ's to potential clients, however may trade upon receiving an RFQ from a client. Where CESL is given discretion as to how an order is executed, a duty of best execution will be owed to the Client. In circumstances where CESL is not given discretion, CESL's trading desk will not owe a duty of best execution to the Client.

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## Execution Entities

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As noted above, CESL accesses a large number of markets through a number of different relationships.

CESL aims to take all sufficient steps in order to obtain the best possible results for its Clients by selecting an appropriate execution venue, including selecting appropriate execution entities (i.e. third party brokers).

When selecting an execution venue, the following may be considered:

- Prices available;
- Depth of liquidity;
- Relative volatility in the market;
- Speed of execution;
- Cost of execution;
- Creditworthiness of the counterparties on the venue or the central counterparty;
- Quality and cost of clearing and settlement;
- Likelihood of execution;
- Size of the order;
- Nature of the order; and
- Client characteristics and objectives

CESL will consider execution venue selection criteria and their relative weighting on an order by order basis for those orders executed manually, or by order type for any order executed via an algorithm.

The execution venues used for the execution and transmission of all orders in respect of the Cash Equities Asset Class are available in Annex 1.

## ORDER AGGREGATION

The Client agrees that, under applicable rules, CESL is permitted to aggregate the Client's orders with orders from other Clients if such aggregation of orders is unlikely to disadvantage the Client. Nevertheless, the Client understands that such aggregation may result in their being disadvantaged. CESL's policy is to aggregate Client's orders when CESL believes it will result in a favourable execution result for the Client. In either case, including when an order is partially executed, CESL will allocate the fills on a time priority basis for orders that CESL considers to be comparable.

## MONITORING AND GOVERNANCE

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CESL monitors on a regular basis the effectiveness and application of this Policy. Where appropriate CESL will correct any deficiencies identified as part of this monitoring. CESL evaluates trading execution quality obtained on a periodic ex-ante basis and considers alternative methods designed to improve the execution process, taking account of a wide variety of execution factors (as noted above). Generally, the CESL monitoring process will focus on the outcomes that have been achieved for Clients and whether these are consistently giving Clients the best outcome they could have had, depending on the relevant assessment criteria.

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In order to analyse and draw conclusions from detailed monitoring of quality of execution obtained by brokers and on execution venues CESL has identified the below framework relevant to its best execution monitoring.

## Algo monitoring

Orders that are executed algorithmically are subject to monitoring by the algo team which has full visibility of algorithmic orders, on both a real-time and historical basis. As applicable, order executions which fall outside designed tolerances are investigated by CESL or its Affiliates' dedicated 'algo-team'. Orders that deviate from prescribed limits are rejected before they are sent for execution.

## Front office monitoring

CESL monitors execution quality obtained by execution entities and on execution venues on an intra-day basis or on a T+1 basis. Based on order handling reports, this monitoring includes reviewing child execution slippage from applicable benchmarks, latency and other reference points. As applicable, order executions which fall outside designated parameters are investigated and escalated by CESL's trading desk and by CESL's Compliance function.

## Compliance oversight

CESL's Compliance function oversees the monitoring of trading activity that is executed by the front office and acts as the second line of defence in reviewing conclusions reached by the front office. CESL's Compliance function is responsible for overseeing CESL's best execution governance arrangements.

## Best Execution Committee

CESL's Best Execution Committee is responsible for the oversight of CESL's overall business activities as it relates to fulfilling its best-execution duty, and to evaluate regularly and rigorously the quality of executions by CESL.

The Best Execution Committee is also responsible for the oversight and selection of suitable third party executing brokers to be added to CESL's broker list.

The Best Execution Committee is represented by designated senior personnel from CESL and its Affiliate Companies. Inter alia, the Best Execution Committee reviews best execution issues escalated by trading desk personnel and the Compliance function.

The Best Execution Committee reviews order execution quality obtained by execution entities (i.e. third-party executing brokers) through their participation in different venues. The Best Execution Committee also assists in reviewing best execution policies and reviewing best execution measures carried out third party brokers.

The reviews include execution practices whenever a material change occurs that could affect CESL's ability to continue to satisfy its best execution duty. The review is an overall assessment of whether the execution policies and arrangements include all sufficient steps that CESL could be taking to obtain best execution of Clients orders. CESL undertakes tests to determine whether it could consistently obtain improved execution results if it were to:

- include additional or different execution venues or entities;
- assign a different relative importance to the best execution factors, or
- modify any other aspects of its applicable policies and/or arrangements.

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Where requested by a Client, CESL will demonstrate that the execution of a Client's order has been undertaken in accordance with this Policy. However, demonstrating best execution will not necessarily involve a transaction-by-transaction analysis, but may involve an assessment of a series of transactions executed over a period, thus demonstrating that, overall, the best result was achieved in accordance with this Policy.

The Best Execution Committee will review this Policy at least on an annual basis, or when any material change occurs to the business which may impact the ability of CESL to comply with this Policy.

## COMMUNICATION WITH CLIENTS

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If a Client is connected electronically, though FIX for instance, it can elect to receive automated real-time execution updates. If the Client is not connected electronically, the relevant CESL trader may provide manual updates (for example, via Bloomberg IB chat/message or voice).

CESL will disclose on an annual basis, a report detailing the analysis drawn from the monitoring of our execution quality obtained during the previous year. It shall list the top five venues execution venues / brokers on whom we place most reliance. The report is available at : <https://www.cowen.com/about/cowen-execution-services-limited-trading-venues-qualitative-report-execution-obtained-2018/>

Where a Client wishes to query the execution of one or more orders, they may ask CESL to demonstrate its adherence to this policy.

## FEES

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Client fees and commissions are pre-agreed through negotiation between the Client and CESL and are applied on a fair, reasonable and justifiable basis. As such, Clients are not directly exposed to costs for execution that CESL may incur due to participation on a particular venue or other costs that may be 'passed on' by the execution entities.

## CONSENT

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CESL is required to obtain the Client's prior consent to this Policy. The Client's consent to this Policy and all its terms and conditions will be deemed to be given when it places its first Order with CESL after the date of receipt of this Policy. Consent to this Policy will be deemed to be renewed with each Order placed with CESL.

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## UPDATES TO THIS POLICY

CESL will notify you of any material changes to this Policy. CESL's Order Execution Policy is available at:

<https://www.cowen.com/about/customer-notices-policies/>

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## ANNEX 1 EXECUTION VENUES

This list is reviewed and amended periodically. For the most up to date list please contact your Cowen representative.

The venues below may be accessed through Multilateral Trading Facilities (“MTFs”), Systematic Internalisers (“SIs”), market makers, interdealer brokers, other liquidity providers, third country MIFID II equivalent venues or directly.

Venue	MIC
AIM ITALIA - MERCATO ALTERNATIVO DEL CAPITALE	XAIM
AKTIETORGET	XSAT
AQUIS	AQXE
AQUIS EXCHANGE PLC AUCTION ON DEMAND (AOD)	AQXA
ATHENS EXCHANGE S.A. CASH MARKET	XATH
ATHENS STOCK EXCHANGE	ASEX
BANK OF AMERICA - MERRILL LYNCH INSTINCT X - EUROPE	MLXN
BARCLAYS CAPITAL SECURITIES LIMITED - SYSTEMATIC INTERNALISER	BCSI
BATS EUROPE	BCXE
BATS EUROPE - LIS SERVICE	LISX
BATS EUROPE - BXE PERIODIC	BATP
BATS EUROPE - CXE DARK ORDER BOOK	CHID
BATS EUROPE - CXE ORDER BOOKS	CHIX
BATS EUROPE - REGULATED MARKET INTEGRATED BOOK	BART
BATS EUROPE -BXE DARK ORDER BOOK	BATD
BATS EUROPE -BXE ORDER BOOKS	BATE
BELGRADE STOCK EXCHANGE	XBEL
BLOCKMATCH MTF DARK	BLOX
BOERSE BERLIN	XBER
BOERSE BERLIN EQUIDUCT TRADING	XEQT
BOERSE BERLIN EQUIDUCT TRADING - BERLIN SECOND REGULATED MARKET	EQTB
BOERSE BERLIN EQUIDUCT TRADING - OTC	EQTD
BOERSE DUSSELDORF	XDUS
BOERSE FRANKFURT	XFRA
BOERSE HAMBURG	XHAM
BOERSE MUENCHEN	XMUN
BOERSE STUTTGART	XSTU
BOLSA DE MADRID	XMAD

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BORSA ISTANBUL	XIST
BORSA ITALIANA	MTAA
BORSA ITALIANA EQUITY MTF	MTAH
BORSA ITALIANA S.P.A.	XMIL
BUCHAREST STOCK EXCHANGE	XBSE
BUDAPEST STOCK EXCHANGE	XBUD
BULGARIAN STOCK EXCHANGE	XBUL
CBOE EUROPE - BXE OFF-BOOK	BATF
CBOE EUROPE - DXE ORDER BOOKS (NL)	CEUX
CBOE EUROPE - REGULATED MARKET DARK BOOK	BARK
CITADEL CONNECT EUROPE - SYSTEMATIC INTERNALISER	CCEU
CITI MATCH - GB	CGME
CREDIT SUISSE INTERNATIONAL - SYSTEMATIC INTERNALISER	CSEC
DB CLOSE CROSS	DBCX
DEUTSCHE BANK AG EU SYSTEMATIC INTERNALISER	DBES
ELECTRONIC ETF, ETC/ETN AND OPEN-END FUNDS MARKET	ETFP
ERSTE GROUP BANK AG	EGSI
EURONEXT - EURONEXT AMSTERDAM	XAMS
EURONEXT - EURONEXT BRUSSELS	XBRU
EURONEXT - EURONEXT LISBON	XLIS
EURONEXT - EURONEXT LONDON	XLDN
EURONEXT - EURONEXT PARIS	XPAR
EURONEXT BLOCK	XSMP
EURONEXT GROWTH BRUSSELS	ALXB
EURONEXT GROWTH DUBLIN	XESM
EURONEXT GROWTH LISBON	ALXL
EURONEXT GROWTH PARIS	ALXP
EURONEXT PARIS MATIF	XMAT
FIRST NORTH DENMARK	FNDK
FIRST NORTH DENMARK – AUCTION ON DEMAND	MNDK
FIRST NORTH DENMARK - NORDIC@MID	DNDK
FIRST NORTH DENMARK -SME GROWTH MARKET	DSME
FIRST NORTH ESTONIA	FNEE
FIRST NORTH FINLAND	FNFI
FIRST NORTH FINLAND – AUCTION ON DEMAND	MNFI
FIRST NORTH FINLAND - NORDIC@MID	DNFI

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FIRST NORTH FINLAND - SME GROWTH MARKET	FSME
FIRST NORTH LATVIA	FNLV
FIRST NORTH LITHUANIA	FNLT
FIRST NORTH SWEDEN	FNSE
FIRST NORTH SWEDEN – AUCTION ON DEMAND	MNSE
FIRST NORTH SWEDEN - NORDIC@MID	DNSE
FIRST NORTH SWEDEN - NORWAY	ONSE
FIRST NORTH SWEDEN - SME GROWTH MARKET	SSME
GOLDMAN SACHS INTERNATIONAL - SIGMA BCN	GSBX
GOLDMAN SACHS INTERNATIONAL - SYSTEMATIC INTERNALISER	GSSI
GOLDMAN SACHS INTERNATIONAL BANK - SYSTEMATIC INTERNALISER	BISI
HRTEU LIMITED - SYSTEMATIC INTERNALISER	HREU
HUDSON RIVER TRADING - SYSTEMATIC INTERNALISER	HRSI
INSTINCT X	MLCO
IRISH STOCK EXCHANGE - ALL MARKET	XDUB
IRISH STOCK EXCHANGE - MAIN SECURITIES MARKET	XMSM
ITG - POSIT MTF	ITGL
ITG-POSIT	ITGI
JANE STREET FINANCIAL LTD - SYSTEMATIC INTERNALISER	JSSI
JOHANNESBURG	XJSE
JPMORGAN CHASE BANK N.A.	JPCB
JUMP TRADING EUROPE - SYSTEMATIC INTERNALISER	JLEU
LIQUIDNET	LIQF
LIQUIDNET SYSTEMS	LIQU
LJUBLJANA STOCK EXCHANGE	XLJU
LONDON STOCK EXCHANGE	XLON
LONDON STOCK EXCHANGE - MTF	XLOM
LONDON STOCK EXCHANGE AIM	AIMX
MERCADO CONTINUO ESPANOL - CONTINUOUS MARKET)	XMCE
MERKUR MARKET	MERK
MERRILL LYNCH INTERNATIONAL - SYSTEMATIC INTERNALISER	MLSI
MORGAN STANLEY AND CO. INTERNATIONAL PLC - SYSTEMATIC INTERNALISER	MSSI
MOSCOW (MICEX)	MISX
MS POOL	MSPL
NASDAQ BALTIC RIGA	XRIS
NASDAQ BALTIC TALLINN	XTAL

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NASDAQ BALTIC VILNIUS	XLIT
NASDAQ COPENHAGEN A/S – AUCTION ON DEMAND	MCSE
NASDAQ COPENHAGEN A/S - NORDIC@MID	DCSE
NASDAQ HELSINKI LTD – AUCTION ON DEMAND	MHEL
NASDAQ HELSINKI LTD - NORDIC@MID	DHEL
NASDAQ OMX COPENHAGEN	XCSE
NASDAQ OMX HELSINKI	XHEL
NASDAQ OMX STOCKHOLM	XSTO
NASDAQ STOCKHOLM AB – AUCTION ON DEMAND	MSTO
NASDAQ STOCKHOLM AB - NORDIC@MID	DSTO
NORDEA SI	XNOR
NORDIC GROWTH	XNGM
NORDIC MTF	NMTF
NORWEGIAN OTC	NOTC
OFF-EXCHANGE TRANSACTIONS - LISTED INSTRUMENTS	XOFF
OSLO ACCESS	XOAS
OSLO AXESS NORTH SEA - DARK POOL	XOAD
OSLO BORS	XOSL
OSLO BORS - LIT X AUCTIONS	XOSA
OSLO BORS NORTH SEA - DARK POOL	XOSD
OTCBB	XOTC
POSIT AUCTION	XPAC
POSIT AUCTION	XPAC
POSIT DARK	XPOS
POSIT RFQ	XRFQ
PRAGUE STOCK EXCHANGE	XPRA
SIGMA X MTF	SGMX
SIGMA X MTF - AUCTION BOOK	SGMY
SIX SWISS EXCHANGE	XSWX
SIX SWISS EXCHANGE - BLUE CHIPS SEGMENT	XVTX
SIX SWISS EXCHANGE - SIX SWISS EXCHANGE AT MIDPOINT	XSWM
SIX SWISS EXCHANGE – STRUCTURED PRODUCTS	XQMH
SUN TRADING INTERNATIONAL - SYSTEMATIC INTERNALISER	STSI
TEL AVIV STOCK EXCHANGE	XTAE
TOWER RESEARCH CAPITAL EUROPE LTD	TRSI
TRADEGATE EXCHANGE	TGAT

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TRADEGATE EXCHANGE - FREIVERKEHR	XGAT
TURQUOISE	TRQX
TURQUOISE DARK	TRQM
TURQUOISE LIT AUCTIONS	TRQA
TURQUOISE MIDPOINT	TRQM
TURQUOISE PLATO	TRQM
TURQUOISE PLATO BLOCK DISCOVERY	TRQM
TURQUOISE SWAPMATCH	TRQS
UBS MTF	XUBS
UBS MTF - PERIODIC AUCTION	XUMP
VIRTU FINANCIAL IRELAND LIMITED - SYSTEMATIC INTERNALISER	VFSI
WARSAW STOCK EXCHANGE	XWAR
WIENER BOERSE AG	XWBO
WIENER BOERSE AG- DRITTER MARKT (THIRD MARKET)	WBDM
WIENER BOERSE AG AMTLICHER HANDEL (OFFICIAL MARKET)	WBAH
WIENER BORSE	XVIE
WINTERFLOOD SECURITIES LIMITED - ELECTRONIC PLATFORM	WINS
WINTERFLOOD SECURITIES LIMITED - MANUAL TRADING	WINX
WOOD & COMPANY FINANCIAL SERVICES, A.S. - SYSTEMATIC INTERNALISER	WOOD
XETRA - SCALE	XETS
XETRA DEUTSCHE BORSE	XETR
XETRA DEUTSCHE BORSE - FREIVERKEHR	XETB
XETRA DEUTSCHE BORSE REGULIERTER MARKT	XETA
XTX MARKETS	XTXM
ZAGREB STOCK EXCHANGE	XTRZ