Virtu Financial Ireland Limited

Order Execution Policy for Professional Clients

Dated January 2020

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1 Purpose of this Order Execution Policy

1.1 Introduction

This policy provides information on the order execution policy for Virtu Financial Ireland Limited (herein referred to as "Virtu", "our", "we" or or such other like terms) (the "Order Execution Policy"). Defined terms in this Order Execution Policy will have the same meaning as the definitions provided within our Terms of Business for Professional Clients and Eligible Counterparties ("Terms of Business").

As an Investment Firm, we are required to take all sufficient steps to obtain, when executing orders, the best possible result for our clients taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order.

The relative importance of execution factors will depend on the characteristics of the client, their order, the Financial Instrument and execution venue or market. Common and important characteristics of the orders, Financial Instruments and markets are described in more detail below.

Aside from the explicit best execution rules explained in this Order Execution Policy, we have an overriding duty to act honestly, fairly and professionally in accordance with the best interests of our clients.

This Order Execution Policy is publicly available on the Virtu corporate website in the Regulatory Disclosures Section[1].

1.2 Scope of the Order Execution Policy

This Order Execution Policy applies to us as a duly authorised Investment Firm regulated by the Central Bank of Ireland pursuant to Regulation (EU) No 600/2014 and Directive 2014/65/EU on Markets in Financial Instruments and such other regulatory technical standards and requirements as implemented from time to time ("MiFID II").

The purpose of this Order Execution Policy is to provide appropriate information on our Order Execution Policy in the context of transactions undertaken with or for clients in relation to those financial instruments. The products that are within scope of best execution rules are Financial Instruments as defined under MiFID II. This includes securities, such as shares, bonds, units in funds and structured products, as well as financial contracts, such as options, forwards, futures and swaps, whether publically listed or not.

Please note that, whether or not this Order Execution Policy applies to the relevant Financial Instrument, we are committed to acting honestly, fairly and professionally in accordance with the best interests of our clients in relation to all the business we conduct.

The rules on the application of best execution depend on whether the client is classified as a retail, professional or eligible counterparty client. In accordance with our Terms of Business, we will classify you as either a Professional Client or an Eligible Counterparty and will benefit from the regulatory protections afforded to the relevant category under MiFID II.

1.2.1 Retail Clients

We do not deal directly with retail clients and will only provide services to clients classified as either Professional Clients or Eligible Counterparties.

1.2.2 Professional Clients

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[1] https://www.virtu.com/regulatory-disclosures/

This Order Execution Policy applies to professional clients as defined by MiFID II. Clients should have received a formal notification from us informing them of their client categorisation.

When dealing with professional clients, we owe best execution obligations in all circumstances where we have agency or contractual obligations with the client and when dealing on own account, when circumstances demonstrate that the client is legitimately relying on us in relation to the execution of the transaction.

This Order Execution Policy applies to all Professional clients to whom we provide sales coverage and investment and/or ancillary services, without making a distinction on whether the client is resident in the EEA, and regardless of where the transaction is executed.

1.2.3   Eligible Counterparties

This Order Execution Policy does not apply to Eligible Counterparties. Accordingly, transactions executed with Eligible Counterparties will be governed in accordance with MiFID II unless we agree otherwise. In all circumstances we will act honestly, fairly and professionally and communicate in a way which is fair, clear and not misleading, taking into account the nature of the eligible counterparty and of its business.

1.3   Executing orders on behalf of clients

When we act as agent or on a matched principal basis, we will be acting on the client's behalf and as such best execution obligations may apply. We may act as agent for the client either explicitly or implicitly, such as in scenarios where we receive an order from the client which we then work in the market on a matched principal basis or in a pure agency capacity.

When we execute orders on behalf of clients, we deploy procedures and arrangements which provide for the prompt, fair and expeditious execution of the client orders, relative to other client orders or the our own trading interests. Where we receive comparable client orders, the handling and execution of the client orders will be prioritized in accordance with the time of their reception by us.

The following is an indicative list of the methodologies and methods in which we may facilitate client order handling:

1.3.1   Smart Order Router orders

Smart Order Router ("SOR") orders: clients sending orders to our SOR.

1.3.2   Algorithmic trading strategy orders

Algorithmic trading strategy orders: clients may access our suite of algorithmic trading strategies ("algos"), which are developed and maintained by us.

1.3.3   Receipt and Transmission of Orders

Receipt and Transmission of Orders ("RTO") orders: client orders received for non-member markets are transmitted to a local broker in that market for execution.

1.3.4   High Touch trading desks orders

High touch trading desk orders ("Desk orders"): clients may send Desk orders to our trading desks and those desks may use their market knowledge, expertise and discretion as appropriate, within the constraints of the client instruction.

1.3.5   Direct Electronic Access orders

Direct Electronic Access ("DEA") orders: we may permit clients to utilize our infrastructure including systems, connectivity and exchange membership whereby the client can pass orders on directly to a trading venue. Where the client uses such an arrangement and is able determine the exact fraction of a second of order entry and the lifetime of the orders on the venue, then such orders may constitute DEA orders.

1.4   Dealing on own account or acting as principal

We may deal as principal with the client, for example where the client has accepted a quote provided by us. In those circumstances, whether we owe the client best execution will depend on whether the client is legitimately relying on us to protect their interests in relation to the pricing and other elements of a transaction. The considerations to be taken into account when assessing whether or not a client legitimately relies on us are as follows:

- Whether we or the client initiates transactions – where the client initiates the transaction, this suggests that it is less likely that the client will be placing reliance on us. We may communicate trade ideas, relevant market opportunities or indicative prices to the client as part of our general relationship and we do not consider that this means that we will be deemed to have initiated the transaction;

- Shop around – where the market practice suggests that the client takes responsibility for the pricing and other elements of the transaction and the market practice is to obtain quotes from various sources, it is less likely that the client will be placing reliance on us;

- Relative levels of transparency within a market – if we have ready access to prices in the market in which we operate, whereas the client does not, it is more likely that the client will be placing reliance on us, whereas if our access to pricing transparency is broadly equivalent, it is less likely that the client will be placing reliance on us; and

- Information provided by us and the terms of our agreements with the client – where our arrangements and agreements with the client (such as our Terms of Business and this Order Execution Policy) state that we will not provide best execution, it is less likely that the client will be placing reliance on us.

The above four points being the "Fourfold Test".

2   Providing Best Execution

2.1   Execution Factors

In order to achieve the best possible result for you, we will give consideration to a range of execution factors when determining the best outcome for you. Some of the below factors are considered to be more important than others; however, there are situations where the relative importance of these factors may change in accordance with instructions that you provide or broader market conditions (the "Execution Factors"):

- Price: this is the price a Financial Instrument is executed at;

- Transaction cost, market impacts and risks relevant to the execution: this includes implicit costs such as the possible market impact, explicit external costs e.g. exchange or clearing fees and explicit internal costs which represents our own remuneration through commission or spread;

- Speed of execution: time it takes to execute a client transaction;

- Likelihood of execution and settlement: the likelihood that we will be able to complete a client transaction;

- Size and nature of the order: this is the size of the transaction executed for a client accounting for how this affects the price of execution;

- Nature of the market for the Financial Instrument : this is how the particular characteristics of a client transaction can affect how best execution is received; and

- Any other consideration deemed relevant to the execution of an order.

In order to determine the relative importance of the Execution Factors, we will take into account the characteristics of:

- The client, including the categorisation of the client as professional;

- The client order;

- The Financial Instruments that are the subject of the client order; and/or

- The execution venues to which the client order can be directed.

Generally, we will regard price as the most significant factor in the execution of a client's order. However, there may be circumstances where the primary Execution Factors may vary and price is no longer the dominant execution factor; for example, for transactions in illiquid securities, likelihood of execution and market impact become more important.

During the trading process when applying consideration to each execution factor, we will use its experience and expertise to achieve the best balance across the full range of Execution Factors, this includes where they may conflict with each other. Overall this may mean that we may not always achieve the best price for every client transaction, but the best result that can be reasonably expected given the information available during the execution process. However, it should be noted that when undertaking a transaction any specific execution factors specified by you will always be paramount in ensuring best execution is provided.

In determining the "price" of a Financial Instrument , we will take into account a number of considerations including market parameters including the price at which a Financial Instrument may be trading on, taking into account liquidity on that execution venue, valuation models, the risks incurred by us from

entering into transactions, the capital requirements for us resulting from those transactions and the cost of hedging our risks etc.

Client orders may be divided into multiple child orders. Such orders may use one or more of the following trading approaches:

- "Passive' order/execution (i.e. earning the spread) where available liquidity, order timing and other constraints allow. In choosing venues on which to place such orders, likelihood of execution will be a key consideration and may be informed by both historical and intraday metrics.

- 'Midpoint' order/execution opportunities across various types of execution venue – both 'lit' and 'dark'. Price and likelihood of execution are considered key factors. When interacting with these venues we will take into account both information leakage and adverse selection concerns, seeking to mitigate these through the use of techniques such as various order types and stock- and venue-specific minimum execution size. The specific way in which these techniques are used may be informed by post-trade analysis. Where our SOR or algo orders access a number of dark pools in sequence the assessment of venue mechanism, expected performance and likelihood of execution may result in orders being sent to POSIT MTF prior to seeking execution in other venues.

- 'Aggressive' order/execution (i.e. crossing the spread). Some examples of techniques used in this approach include interaction with 'lit' markets or electronic liquidity provider systematic internalisers ("SIs"). Where we send orders in response to quotes, in addition to the concerns of information leakage and adverse selection listed above in 'Midpoint', likelihood of execution will be a key consideration.

- 'Auction' order/execution either scheduled or unscheduled auctions on primary exchanges or periodic auctions on various MTFs. Interaction with auctions on primary exchanges will typically be driven by the strategy chosen and the trading approach will resemble Passive executions (described above). Interaction with periodic auctions will resemble Midpoint executions (described above) with the addition of targeting indicative volume at attractive price levels.

- 'Conditional' order types are used across our algo strategies in order to seek liquidity from multiple venues while resting liquidity at other venues. Such order types can lead to execution opportunities which resemble Midpoint execution (described above).

2.2   Examples of application of the execution factors

We provide here examples of how we may apply the Execution Factors under certain conditions for illustrative purposes. These examples do not represent how the Execution Factors will always be considered.

- When we are acting as principal in a liquid exchange traded fund and best execution applies, price will be the primarily considered Execution Factor, followed by transaction costs and risks relevant to the execution, size and nature of the order and its likely market impact. Other considerations may need to be taken into account, in this case, clearing and settlement costs and charges.

- When we are acting as principal in a liquid equity and best execution applies, price will be the primarily considered Execution Factor, followed by size of order, then speed of execution.

2.3   Exceptions to the general application

On any given order, circumstances may indicate that any particular Execution Factor may be a greater or lesser influence on achieving best execution.

For example, when transacting a large order, confidentiality may be more important; when trading an illiquid product, certainty of execution may be more important. Please consult the product specific Annex A for a better understanding of how and when best execution will be achieved.

3 Scenario analysis

This section provides analysis as to whether or not best execution applies in certain scenarios.

3.1 Acting as Agent or as Matched Principal

3.1.1 Where we have discretion over the execution of orders on behalf of clients

When acting as agent or as matched principal with discretion over how to execute a client order, best execution obligations will apply. We will apply the Execution Factors to each order over which we exercise discretion.

Where we receive specific instructions from a client in relation to any aspect of a transaction (for example, where the client instructs us to execute the order on a particular venue, at a particular time or at a particular price), we must execute the transaction in accordance with such instructions and, by doing so, will satisfy our obligation to provide best execution in relation to that aspect of the order. These elements do not release us from our obligation to provide best execution in relation to those aspects of the order where the client has not provided specific instructions, such as the venue of execution or the timing of the execution, where we retain some discretion over those aspects.

We set out below some examples of "order types" and how we deal with them:

3.1.1.1 Smart Order Routing

Where accessing markets electronically, our routing decisions, including those processed within our algorithms, are made by our smart order router ("Virtu SOR") logic. Orders which are routed through the Virtu SOR are managed by our algorithms, are considered agency trades and best execution will be provided accordingly. The primary objective of the Virtu SOR is to achieve the best possible outcome for our clients. Our interactions with execution venues are guided by objectively observed and calculated parameters. The execution decision as to which order books, price levels or participation sizes to target will be taken based upon both the explicit instructions accompanying the relevant order from the client, and the SOR's programmed parameters. The Virtu SOR may break the client orders into multiple "child orders" and send them to one or many execution venues, either in parallel or in sequence. Best execution obligations will be applicable on the child orders as well as on the overall original client order.

3.1.1.2 "Target Benchmark" orders

A client may send us an order to execute at a price benchmark determined by a reference price in the market. Such benchmarks may include "Volume Weighted Average Price" which we consider the weighted average price published by the market over the period of the life of the order via a generally accepted price source. To execute benchmarked-order, we may use a number of orders and child orders, both aggressive and passive in order to obtain execution in line with the benchmark over a specified or implied period. The target is to achieve an overall outcome for the order where the overall volume weighted average execution price meets the target benchmark whilst taking into account the Execution Factors. We do not guarantee execution at the Target Benchmark price.

3.1.1.3 Limit orders

Where a client submits a limit order, we will always respect any limit price instructed on the client order. The volume at which this occurs will depend on the liquidity of the particular Financial Instrument on the trading venues on which the order is submitted. The client should specify the time in force ("TIF") of any order sent to us. Typical TIF instructions include Immediate or Cancel ("IOC"), Good for Day ("GFD") or Good till Cancelled ("GTC"). In the event that a client wishes to utilize GTCs, we reserve the right to reject such orders unless agreed in advance. In the absence of a TIF parameter, we will use our discretion to apply a TIF reasonable for the order that has been sent, or reject the order back to the client if a

reasonable TIF cannot be determined. In the event that we receive a client order that is not due for immediate execution, this will not restrict our ability to receive and process other client orders and/or undertake investment services in an agency capacity, as a market-maker or principal dealer.

3.1.1.4 "Price Level" order

Where a client submits a "price level" or a "limit price" order, the client's order will only be filled when we reasonably perceive that the particular level has been attained. Where the order is submitted to the market, the client's order will only fill when the price is attained. In such circumstances the order will fill with the available quantity either fully or partially.

3.1.1.5 "At Market" or "At Best" order

Where a client submits an order and does not specify a price level, limit price or price determination mechanism or a specific time of execution we shall, unless agreed otherwise, handle that order as an "at market" or "at best" order. This means that the client order will be filled as soon as reasonably practicable after the order is accepted at the prevailing market price and in accordance with best execution obligations.

3.1.1.6 "Stop" order

Where a client submits a "stop" order, the client must specify the price level at which the order is to be triggered and the time for which the order will remain valid. The "stop" order will be triggered when market conditions permit execution When the "stop" order is triggered, and the order becomes an "at market" order, we do not, unless we otherwise agree, guarantee that the order will be filled at the "stop" level however we will place the stop order in the market that we determine in our discretion are appropriate to assist in managing our risk and/or to enable us to fill the "stop" order.

3.1.1.7 Internalisation

In order driven markets such as Cash Equities, unless you instruct us otherwise, we may choose to "internalise" your order by executing the order or part of the order from our own principal book. We will treat our principal book as an execution venue and as with other execution venues, it is subject to this Order Execution Policy. We will internalise transactions only where, applying the same factors we apply to other execution venues, and where we have concluded that the internalisation of the order provides you with best execution. In the case of transactions subject to the systematic internalisation rules of the MiFID II, we will apply these rules when operating as a systematic internaliser.

3.1.1.8 Non-standard order characteristics

Where a client order has non-standard characteristics such as being a large or outsized order, in an illiquid security etc. we may use our discretion for such client orders. This may involve us transmitting one or more child orders and submitting them to electronic venues, or to third parties, in order to reduce the overall market price impact of the client order. We may apply discretion as to the timing of the client orders, the venues to which the orders are submitted, the type of the child orders, the size of the child orders and the price of the child orders whilst considering other Execution Factors including the costs of execution and clearing & settlement fees.

3.1.1.9 Sequential processing of client orders

Where we receive multiple orders within a short period of time from one or more clients, we will generally handle the orders in the order in which they were received. However, we may aggregate some or all of the orders if we believe such action to be appropriate; this may result in each specific order not being filled (in full or in part).

3.1.2 Orders executed according to specific instructions

Where a client provides specific instructions to us in relation to a transaction we will execute the transaction in accordance with that instruction. In such instances we have no discretion over how an order is executed and by following the specific instruction is satisfying our obligation to provide best execution in relation to the order. This means that if a client provides a specific instructions in relation to any aspect of a transaction, for example the client instructs us to execute the order on a particular venue, at a particular time or at a particular price, we must execute the transaction in accordance with that instruction and, by doing so, will satisfy our obligation to provide best execution in relation to that aspect of the order.

3.1.3 Direct Electronic Access

We may provide Direct Electronic Access ("DEA") services to clients. Our DEA services enable clients to transmit orders electronically to our trading systems for automatic onward transmission under our trading member ID to a specified trading platform. Where client orders have been transmitted by DEA, they will be executed in line with clients' specific instructions to the extent possible. Where a client gives us a specific instruction as to the execution of an order, we will execute the order in accordance with those specific instructions. Where the client's instruction relates to only part of the order, and/or where the client is executed via our SOR, we will continue to apply our Order Execution Policy to those aspects of the order not covered by the specific instructions. We reserve the right however to intervene in the routing and execution of DEA orders where the original parameters could result in adverse market impact.

Such client specific instructions may prevent us from taking steps that we otherwise would take, as designed and implemented in our execution policy, to obtain the best possible result for the execution of those orders in respect of the elements covered by the client's instructions.

3.2 Dealing on own account (acting as principal)

We may deal as principal with clients. The determination as to whether we owe the client best execution depends on whether we are dealing on own account when executing client orders or the client is reasonably relying on us as determined by the Fourfold Test.

Where we are willing to deal on own account, we may choose to provide quotes in Financial Instrument s by providing prices at which we are prepared to deal with the client in accordance with MiFID II. Prices quoted by us may be different to those available on a Trading Venue; it will be up to the client to determine whether they wish to accept such price. Quotes provided are firm quotes and are exercisable until such time as the quote is updated or cancelled. If the client accepts a quote once the original quote has lapsed or been cancelled (i.e. when the quote has technically expired), we have the right to accept the trade on the basis that the client wishes to trade at that level, but we also may reject it on the basis that the quote has expired.

3.2.1 Request For Quote

In the event that we receive a request for quote from a client ("RFQ") and we act as principal, we are executing the transaction as the client's counterparty and not on the client's behalf. In this scenario, best execution will not apply as we are of the view that legitimate reliance will ordinarily not be established under the Fourfold Test. Such RFQs that we provide in a principal capacity represent pure risk prices for the transaction and form the price basis of the transaction, as opposed to an indicative price that we might be able to achieve in the market in an agency transaction.

Where we respond to an RFQ for an executable two-way price, ordinarily legitimate reliance will not be present using the Fourfold Test given the opportunity for clients to shop around in these markets and best execution will not be owed.

In circumstances where an RFQ is submitted to us in which the price is determined by a reference price that will be known after the RFQ has been accepted by us, the risk price provided by us is contingent on that reference price. We owe best execution only where we are responsible for, and have discretion over, the price at which that market reference price is to be determined. Typically, legitimate reliance will not be present using the Fourfold Test given the opportunity for clients to shop around in these markets.

Where we accept a market-on-close ("MOC") order (i.e. to transact a certain volume at the closing price or equivalent price set at a predetermined time by reference to published criteria, then, unless we agreed otherwise on order receipt, we shall attempt to fill the order at the relevant published price (subject to any applicable mark-up or mark-down as agreed between the client and us). Where we are guaranteeing that the order will be filled at the relevant close price and filling the order in a principal capacity and we execute the order from our own book, we consider that a specific instruction and comparable to principal trading, thus we will not have discretion in this case and best execution obligations are not deemed applicable.

3.2.2   Executing a client order as principal

In certain circumstances we may execute orders on behalf of clients when acting as principal. In such situations we may owe a duty of best execution under the Fourfold Test where the client places legitimate reliance upon us to find the best result for them. For example, circumstances where we have discretion over aspects of 'at best' or 'market' orders even when we are acting as principal.

3.3   Special situations

Volatile markets or exceptional market conditions may materially impact client orders and you should be aware of order handling and execution risks associated with such environments. For example:

- orders may be executed at a substantially different price from the quoted best bid or offer, or the last reported trade price at the time of order entry, or an order may be only partially executed or may be executed in several shapes at different prices;

- Opening prices may differ significantly from the previous day's close;

- Trading Venue technology constraints may require automated trading systems to be switched off and/or electronic order routing to be suspended in favour of manual execution;

- Automated pre-trade risk controls may throttle order submission or block orders from being perpetuated to the order book.

3.4   Publication of limit orders

Where a client limit order is not immediately executed under prevailing market conditions, we will, unless the client expressly instructs otherwise, take measures to facilitate the earliest possible execution of that order by making public immediately that client limit order typically by transmitting the client limit order to a trading venue.

4   Execution venue & counterparty selection policy

We execute orders in Financial Instruments, we may use one or more of the following execution venues to enable us to obtain the best possible result on a consistent basis when executing an order on the client's behalf:

- Regulated Markets;

- Other exchanges that are not Regulated Markets;

- Multilateral Trading Facilities ("MTFs");

- Internal sources of liquidity (matching client orders);

- Systematic Internalisers ("SI") including Virtu Financial Ireland Limited's Systematic Internaliser ("VFSI");

- our trading desks' principal positions (our own positions or where acting as a liquidity provider by house filling an execution); and

- Third party brokers who may interact with us in a principal or agency capacity, including investment firms, market makers & liquidity providers, retail service providers ("RSPs"), DEA or other direct electronic access providers, or equivalent non-EU entities performing similar functions.

Please see Annex C of the Order Execution Policy for a non-exhaustive schedule of execution venues and brokers. This list may be updated periodically and we reserve the right to add and remove execution venues and brokers at its own discretion.

The factors affecting choice of execution venue are price, the requirement for speed of execution, market liquidity, the size and nature of the order and whether the client has consented to its orders being executed outside of a Trading Venue. If the client has provided prior express consent, their orders may be executed on its behalf outside a regulated market or MTF. We will not unfairly discriminate between execution venues or types (i.e. Brokers) but will make a decision on an execution venue based on a consideration of the Execution Factors.

Our 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.

We may execute orders internally when after consideration of the Execution Factors it is determined that it is expected to provide the best result for the client. Such internalization will be provided subject to the terms with this Order Execution Policy and other considerations including potential conflicts of interest.

We will ordinarily utilize its own execution venue memberships and connectivity to place orders. In certain markets we may utilize a third party brokers to access a trading venue or to obtain liquidity.

Third party brokers may also include affiliated Virtu Financial entities. Whenever a connected party is used to execute a client's order, we will ensure that any conflicts of interest are managed appropriately to provide the best result for the client.

5   Acceptance, Governance and Monitoring

5.1   Governance

We have implemented a governance framework and control process under the aegis of the Best Execution Committee through which we monitor the effectiveness of our order execution arrangements (including this Order Execution Policy), to identify and, where appropriate, correct any deficiencies.

Through this governance framework and controls process, we assess whether the execution venues, arrangements and brokers included in this Order Execution Policy provide the best possible result for you or whether we need to make changes to our execution arrangements. We review our order execution arrangements and Order Execution Policy at least annually or whenever a material change occurs that affects our ability to obtain the best result for the execution of your orders on a consistent basis.

5.2   Acceptance

This Order Execution Policy is publicly available on the Virtu corporate website in the Regulatory Disclosures Section[2] and is distributed as part of the client on-boarding process. When you agree to the Terms of Business you are also deemed to have understood and agreed to this Order Execution Policy. We will notify you of any material changes to our Best Execution Policy by posting an updated version of our Order Execution Policy at the below website address.

5.3   Execution Disclosures

Article 27 of MiFID II and the accompanying Regulatory Technical Standards requires us to publish annually its top 5 execution venues and top 5 brokers by class of instrument. This information includes a summary of analysis and conclusions drawn from the monitoring of the quality of executions, along with an explanation of any changes to the list of execution venues in the previous year. This report is publicly available on the Virtu corporate website in the Regulatory Disclosures Section at the below website address.

5.4   Client enquiries

Upon request, we will review client order executions and demonstrate that the order has been executed in accordance with this Order Execution Policy.

5.5   Communications

Queries about this this Order Execution Policy should be directed to a client's Relationship Manager or our Compliance Department at +353 (0) 1 246 6900 | e-mail: compliance-eu@virtu.com.

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[2] https://www.virtu.com/regulatory-disclosures/

6 Annex A: Overview of how we provide best execution - capacity

We provide in this Annex an overview of when and how we will provide best execution in relation to transactions executed in different capacities.

Please note that, within the asset classes, there may be particular transactions which will not be subject to the general rule and we highlight these where possible. In limited circumstances, there may also be specific facts in relation to a particular order which may alter the general position outlined.

6.1   Agency

This schedule covers activities undertaken when we are acting as agent or in matched principal capacity across all products.

Acting as Agent	Scenario Applicable	Best Execution deemed applicable	Notes
Execution of orders with discretion (incl. DEA and where orders are routed via our SOR)	Yes	Yes Applies to all types of order detailed in section 9 above.	For large or illiquid orders, speed and likelihood of execution along with likely market impact will be more important. For block trades: price, likelihood of execution; likelihood of settlement will be more important.
Execution of orders with specific instructions and no discretion (Incl. DEA)	Yes	No Unless some discretion remains on part of the order	None

6.1.1   Common exceptions to the general position

When requested by the client or otherwise, certain orders may require the involvement of a third party broker to execute the order, especially when the order is large in size. In those circumstances, minimising market impact will play a larger role as an Execution Factor.

Where a client order is received and we have discretion over execution, but there is only one possible execution venue for that Financial Instrument (either because it is the only venue for that Financial Instrument, or because the client specified the a specific currency for that Financial Instrument), this order will be considered analogous to a specific instruction order in that by executing on that venue, we will satisfy our best execution obligations in relation to that aspect of the order. This will not prevent other aspects of the order, for example speed of execution, being subject to best execution.

When we receive VWAP orders, these will generally be undertaken by executing a mix of passive and aggressive orders through a trading schedule which is designed to achieve VWAP overall. We will not guarantee that the best price is achieved for the overall order, as, while we will endeavour to provide VWAP to the client, that is not in our control over the course of the trading day. However, we will apply best execution principles to both the passive and aggressive orders; for passive orders, Execution Factors other than price may be weighted as more significant, in particular likelihood of execution.

6.2   Dealing on own account or Acting as Principal

This schedule covers activities undertaken when we are dealing on own account or acting as principal.

Acting as on Own Account or Acting as Principal	Scenario Applicable	Best Execution deemed applicable	Notes
Request for Quote			
Where firm price is offered	Yes	No Unless the client legitimately relies on us	This is the primary transaction scenario for shares, share-like instruments and ETFs.
Where the final price is dependent on our quality of execution	Yes	Yes	Transactions where the price is at least partially determined by execution of our hedge e.g. price vs. reference.
Executable (two way) price	Yes	No Unless the client legitimately relies on us	None

6.2.1   Common exceptions to the general position

There may be circumstances in which other execution factors may take priority over price. For example, likelihood of execution may be more important to achieving best execution in relation to a large order.

7 Annex B: Overview of how we provide best execution - instruments

We provide in this Annex an overview of when and how we will provide best execution in relation to transactions executed for different asset classes.

7.1 Cash Equities

7.1.1 Introduction

This asset class-specific annex provides further details with regards to the application of best execution in relation to cash equity instruments, which include; common stock, rights, warrants, preference shares, American depositary receipts ("ADRs") and global depositary receipts ("GDRs") (herein collectively referred to as "Cash Equities"). This annex forms part of the overarching Order Execution Policy.

7.1.2 Application of Best Execution for In-Scope Products

Cash Equities may be executed via a number of desks and channels: High-Touch ("HT"), Low-Touch ("LT"), DEA, Virtu Financial Ireland Limited SI ("VFSI") and the Prop Trading desk ("PT").

The origins of orders placed with each desk can be either manual or electronic. Manual or voice execution orders are client instructions to trade that typically originate from phone calls or instant messaging. Electronic orders are transmissions of client instructions to trade typically via the messaging protocol FIX or some other such electronic protocol.

We owe a duty of best execution when executing client orders on your behalf. We consider ourselves to be in receipt of an order where an execution instruction is given to us that gives rise to contractual or agency obligations to you. Specifically, this will be the case where you commit to a trade that is not immediately executable, leaving discretion with us as to the manner of execution and exact terms of the resulting transaction; and the execution can be booked to your account, without the need to re-confirm the price, size or any other factor(s) with you; or where we execute an order as agent or riskless principal on your behalf. Examples of these include market orders, resting orders, limit orders, market on open/close and fill or kill orders.

For the majority of Cash Equity executions, except in certain circumstances, the obligation to provide best execution will ordinarily apply, particularly when executing via HT, LT and PT desks.

Best execution obligations are unlikely to apply where you have asked us for a quote, as we generally take the view that in the context of the Fourfold Test there is no legitimate reliance being placed on us to meet the relevant best execution requirements. Furthermore, where you provide us with a specific instruction, such as the time an order should be placed or specifying the use of an algo, to the extent that we follow such instructions, we have satisfied any best execution requirements with respect to that aspect of the order.

7.1.3 Prioritisation of Execution Factors

When executing transactions where best execution applies, we will take into account the execution factors listed in section 6 of the Order Execution Policy.

Whilst we have provided these in order of relative priority below, a variety of criteria will be taken into account in assessing the prioritisation of execution factors. Criteria for consideration includes the characteristics of each individual order such as client preferences, market conditions, when the order is received and the size of order. It is important to note that in certain circumstances, for example high volatility or an illiquid market, likelihood of execution may become the primary execution factor.

Our Cash Equity business lines, HT, LT and PT assess each client order based on their accompanying instructions. Client specific instructions determine how each order is split into components and also

dictate how these are executed. Consequently, the prioritisation of execution factors varies on a per-order basis.

Outside of any specific instructions provided by the client, the most important execution factor when handling orders will be the price of the relevant Financial Instrument. Subject to any specific instruction, the following provides an example of the execution factors prioritisation that may be applied:

- 1. Price

- 2. Likelihood of Execution

- 3. Size

- 4. Costs

- 5. Speed

- 6. Other Considerations

Once an order has been received it is split for execution in accordance with any accompanying specific instructions. As part of assessing how to split a client order, this may be done manually, via an algorithm or by a combination of the two. This process will follow a differing priority of execution factors to meet the desired overall objective on a per order basis. Client specific instructions permitting, market impact is taken into consideration.

Orders received directly to LT contain electronic instructions to utilise a host of custom tactics that pertain to different agency algorithmic strategies. Each algorithm utilises specific logic to split and execute orders according to the selected algorithm. Combined with the details of each order, the prioritisation of execution factors will vary on a per order basis. Further information on the offering of client agency algorithms is available from your relationship manager.

Unless explicitly instructed otherwise in a specific instruction, all Cash Equities businesses benefit from smart order routing logic. The smart order router has a single order routing profile within which clients may choose to customise certain features. Combined with the details of each order component being executed, the prioritisation of execution factors will vary on a per order basis. The SOR has several order routing components. Please contact your relationship manager for a full explanation of these components and the core real-time routing factors they employ.

As above, there may be scenarios where the priority of execution factors will vary. For example when client orders are posting liquidity, likelihood of execution may become a more important factor. Similarly, when clients select to execute using a dark venues only strategy, other considerations becomes the primary factor.

7.1.4 Order/Quote Handling

Specific instructions for Cash Equities orders may be received in a number of ways including phone, instant messaging and electronically via FIX messaging etc. The specific instructions determine how each order is split into components and also drive how these are executed.

In order to meet the obligation to take all necessary steps to obtain on a consistent basis the best possible result for the execution of client orders, the Cash Equities trading desks may use one or more of the execution venues listed in Annex C of the Order Execution Policy.

We employ proprietary Virtu SORs that seek the best prices and liquidity across a wide range of venues. The primary goal of a SOR is quality and certainty of execution. In general, the decision to post-or-not to a venue is driven by the individual algorithm that is being chosen, and what its goals are.

Unless directed otherwise, we may also choose to internalise a client order by executing from our own principal book.

DEA orders received by us may be passed through the SOR unless a specific venue is instructed and may not be considered as DEA orders pursuant to MiFID II definitions. In circumstances when we do not take an active role in determining your execution parameters, we will seek to transact that order in accordance with the client's instructions.

7.1.5   Execution Venues

The execution venues that are used by us, either as a member, via an affiliate or through other third party brokers for transacting Cash Equities are detailed in Annex C.

7.2   Exchange Traded Funds

7.2.1   Introduction

This asset class specific annex provides further details with regards to the application of best execution in relation to Exchange Traded Funds ("ETFs") and Financial Instruments constructed, traded, cleared and settled in a manner similar to ETFs including Exchange Traded Commodities, Exchange Traded Products and Exchange Traded Notes (collectively referred to herein as "ETFs"). This annex forms part of the overarching Order Execution Policy.

7.2.2   Application of Best Execution for In-Scope Products

We owe a duty of best execution when executing client orders on your behalf. We consider ourselves to be in receipt of an order where an execution instruction is given to us that gives rise to contractual obligations to you. Specifically, this will be the case where you commit to a trade that is not immediately executable, leaving discretion with us as to the manner of execution and exact terms of the resulting transaction; and the execution can be booked to your account, without the need to re-confirm the price, size or any other factor(s) with you; or where we execute an order as riskless principal on your behalf. Examples of these would include market orders and limit orders.

ETFs can be traded on a 'riskless principal' or on an 'at risk' basis. When an ETF is traded as a riskless principal, it means the price we receive from the execution venue is the price the client receives, plus commissions and fees. In these cases, best execution will apply. When an ETF is traded 'at risk' it means that a price is agreed between us and you as a client before the trade is executed, either in absolute or relative terms and the trade is undertaken on a principal basis.

Best execution obligations are unlikely to apply where you have asked us for a quote (RFQ), as we generally take the view that in the context of the Fourfold Test there is no legitimate reliance being placed on us to meet the relevant best execution requirements. Furthermore, where you provide us with a specific instruction, such as the time an order should be placed or specifying the use of an algo, to the extent that we follow such instructions, we have satisfied any best execution requirements with respect to that aspect of the order.

7.2.3   Prioritisation of Execution Factors

When executing those transactions where best execution applies, we will take the following execution factors into account:

- price;

- costs;

- speed;

- likelihood of execution and settlement;

- size; and

- nature or any other consideration relevant to the execution of a transaction.

Whilst we have provided these in order of relative priority in the sections below, a range of criteria will be taken into account in assessing the prioritisation of execution factors, including appropriate consideration on a transaction by transaction basis. Criteria for consideration include the characteristics of each individual transaction such as client preferences, market conditions, when the transaction is received, and the size of the trade. Generally, the most important execution factor for our clients will be the price the relevant Financial Instrument is executed at. However, as set out below, in more illiquid markets, the primary execution factors may vary, such as likelihood of execution becoming more significant.

As a general indication, the execution factors are likely to be considered as follows, although these will be assessed on a case by case basis and subject to any specific instructions:

For ETFs in liquid markets, we may prioritise execution factors as follows:

- 1. Price

- 2. Size

- 3. Speed

- 4. Costs

- 5. Likelihood of Execution

- 6. Other Considerations

For ETFs in illiquid markets, for both quote driven and order driven activity, we may prioritise execution factors as follows:

- 1. Likelihood of Execution

- 2. Price

- 3. Costs

- 4. Size

- 5. Speed

- 6. Other Considerations

For other scenarios we may prioritise execution factors as follows:

- 1. Other Considerations

- 2. Size

- 3. Speed

- 4. Price

- 5. Likelihood of Execution

- 6. Costs

7.2.4 Order/Quote handling

Client orders may be placed with us in various ways. Orders placed manually (phone orders or instant messaging) or electronically (e.g. Bloomberg RFQ) will be dealt with via the trading desk who will consider the above factors in handling your order in addition to any specific instructions provided.

When filling a 'riskless principal' order in a specific listing of an ETF, then as part of our obligation of best execution, we will potentially trade

- On-exchange, in that specific listing of that ETF;

- On-exchange, in an alternative listing of that same ETF;

- Off-exchange ("OTC"), in that specific listing of that ETF;

- OTC, in an alternative listing of that same ETF;

- In other ETFs, in futures, or baskets of stocks if such is deemed to be the most appropriate option; or

- In the primary market (i.e. creations or redemptions and transacting with ETF issuers).

7.2.5 Execution Venues

Where we do not support the client's desired execution destination, in order to provide market access to such liquidity we may choose to direct the client order to an affiliate or a third party broker for execution. The execution venues that are used by us, either as a member, via an affiliate or through other third party brokers for transacting Cash Equities are detailed in Annex C.

8   Annex C: Schedule of execution venues and third party brokers

When we act as principal or agent to your orders, we will take all reasonable steps to consider the execution venues upon which we place reliance to consistently and sufficiently achieve the best possible result for the execution of your orders. These include a number of regulated markets, multilateral trading facilities, market makers (including retail service providers) executing brokers and other liquidity providers. We may access other markets in which it does not have direct memberships via third party arrangements.

The below comprises a non-exhaustive list of venues which we may consider and which may be updated from time to time:

8.1   Venue List

In respect to handling client orders in Cash Equities we may use the following Trading Venues, Multilateral Trading Facilities or organized trading venues where we hold direct membership:

Regulated Markets (RM) / Non-EU national exchanges	Venue Type	MIC
Borsa Italiana	Regulated Market	XMIL
Deutsche Borse – Xetra	Regulated Market	XETR
Euronext Amsterdam	Regulated Market	XAMS
Euronext Brussels	Regulated Market	XBRU
Euronext Lisbon	Regulated Market	XLIS
Euronext Paris	Regulated Market	XPAR
Euronext Dublin	Regulated Market	XDUB
London Stock Exchange	Regulated Market	XLON
Nasdaq OMX Copenhagen	Regulated Market	XCSE
Nasdaq OMX Helsinki	Regulated Market	XHEL
Nasdaq OMX Stockholm	Regulated Market	XSTO
Oslo Bors	Regulated Market	XOSL
SIX Swiss Exchange - Blue Chips	Non-EU venue	XVTX
SIX Swiss Exchange	Non-EU venue	XSWX
Wiener Borse AG	Regulated Market	WBAH

MTFs & Alternate Markets	Type	MIC
Aquis	MTF	AQXE
Cboe Europe BXE	MTF	BATE

Cboe Europe CXE	MTF	CHIX
Equiduct	MTF	XEQT
Turquoise	MTF	TRQX
Cboe Europe BXE Dark	MTF Dark	BATD
Cboe Europe CXE Dark	MTF Dark	CHID
Instinet Blockmatch	MTF Dark	BLOX
Liquidnet	MTF Dark	LIQU
Nordic@Mid	MTF Dark	*MIC varies by country*
Oslo North Sea	MTF Dark	XOSD
POSIT MTF	MTF Dark	XPOS
SIGMA X MTF	MTF Dark	SGMX
SwissAtMid	Non-EU venue Dark	XSWM
Turquoise Dark	MTF Dark	TRQM
UBS MTF	MTF Dark	XUBS
Cboe LIS	MTF Conditional	LISX
Liquidnet Conditional	MTF Conditional	LIQU
POSIT Alert	MTF Conditional	XPOS
Turquoise BDS	MTF Conditional	TRQM
Cboe Periodic Auction	MTF Frequent Batch Auction	BATP
Nasdaq AOD	MTF Frequent Batch Auction	*MIC varies by country*
POSIT Auction	MTF Frequent Batch Auction	XPAC
SIGMA X MTF Auction	MTF Frequent Batch Auction	SGMY
Turquoise Lit Auctions	MTF Frequent Batch Auction	TRQA

8.2   Broker List

In respect to handling client orders in Cash Equities we may use the following executing brokers, RSPs, market makers, liquidity providers or systematic internalisers:

ABN Amro Bank	Banca Akros SpA
Baader Bank AG	Bank of New York Mellon

Bank Vontobel AG

Barclays Bank Plc

BCS Prime Brokerage Limited

BGC Brokers LP

BMO Capital Markets Limited

BOC International

Cantor Fitzgerald Europe

Citadel Connect Systematic Internaliser (MIC: CCEU)

Citgroup Global Markets Inc

Citibank NA

Credit Suisse Securities (Europe) Limited

Danske Bank A/S

Deutsche Bank

Equita SIM S.p.A.

FinnCap Ltd

Flow Traders B.V.

GFI Securities LLC

Goldman Sachs International

Goodbody Stockbrokers

Hudson River Systematic Internaliser (MIC: HRSI & HREU)

ICAP Securities Limited

Instinet Europe Limited

INTL FCStone Securities Inc

Jane Street Financial Ltd.

Jane Street Systematic Internaliser (MIC: JSSI)

Jefferies International Ltd

JP Morgan Securities Plc

Liquidnet

Maxim Group LLC

Meitav Dash Investments Ltd

Morgan Stanley & Co International plc

Morgan Stanley Securities Limited

National Securities S.A.

Nordea Bank ABP

NPLUS1 SINGER CAPITAL MARKETS LIMITED

Numis Securities Limited

Peel Hunt LLP

Raiffeisen Centrobank AG

Shore Capital Stockbrokers LTD

SSW Trading Systematic Internaliser (MIC: SSWM)

Tower Research Capital SI (MIC: TRSI)

Tullett Prebon (Europe) Limited

Virtu Americas LLC

Virtu Financial BD LLC

Virtu Financial Capital Markets LLC

Virtu Financial Ireland Limited

Virtu Financial Ireland Limited Systematic Internaliser (MIC: VFSI)

Winterflood Securities Ltd