



NORTHERN
TRUST

NORTHERN TRUST EMEA ORDER EXECUTION POLICY

For Professional Clients of the following Northern Trust entities:

- Northern Trust Global Services SE, and its branches
- Northern Trust Securities LLP, and its branches
- The Northern Trust Company, London branch
- Northern Trust Investor Services Limited

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1. INTRODUCTION

This document and the attached Appendices sets out the approach taken by Northern Trust (herein 'NT', We, the Bank) including our branches and affiliates within the EEA and the UK in providing best execution as required by MiFID II (in the EU/EEA and Luxembourg as well as the applicable UK Laws). The NT legal entities that are subject to the "Best Execution" obligation as described in this Policy are:

- Northern Trust Global Services SE, and its branches,
- Northern Trust Securities LLP, and its branches; and
- The Northern Trust Company, London Branch
- Northern Trust Investor Services Limited

Please note this Policy does not apply to the services provided by Northern Trust Asset Management ('NTAM') through Northern Trust Global Investments Limited or any of its affiliates. You should refer to the relevant NTAM Order Execution Policy for details of the order execution arrangements for these services.

The best execution obligation requires NT to take all sufficient steps to obtain the best possible result when executing orders or transmitting orders for execution on behalf of its clients ("you" or "client(s)") taking into account the Execution Factors, which includes price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to the execution of the order.

This Policy also provides information on the different execution venues upon which NT executes its client orders and describes the various execution factors and how these are assessed when our traders execute and manage client orders.

The General Order Execution Policy is subject to any Specific Order Execution Policies that applies, and in case of conflict, the Specific Order Execution Policies prevails. The Specific Order Execution Policies are set out in the Appendices to this Policy and cover:

- Institutional Brokerage;
- Global Foreign Exchange;
- Securities Lending
- Transition Management;
- Fund Order Processing; and
- Money Market Fund Investment Service & Client Driven Money Market Fund Investment Service
- Northern Trust Liquidity Solutions Portal Schedule

This Policy in its entirety will be published and updated annually on the Northern Trust Capital Markets page on the Northern Trust website (www.northerntrust.com). Where a client makes reasonable and proportionate requests for information about our policies or arrangements and how they are reviewed, we shall, where appropriate, make reasonable endeavours to answer clearly and within a reasonable time.

2. POLICY SCOPE

This Policy applies to orders in Financial Instruments which are executed or transmitted for clients classified by NT as Professional Clients and elective Professional Clients (within the meaning of EU/EEA, Luxembourg and UK regulations). Clients will have received a formal notification from us informing them of their client categorization. This Policy does not apply to Eligible Counterparties; accordingly, we will not owe best execution in transactions entered into with Eligible Counterparties. NT does not deal with Retail clients therefore this Policy does not apply for Retail clients.

Financial Instruments within the scope of EU/EEA, Luxembourg and UK regulations include but are not limited to:

- Transferable securities (such as shares and bonds);
- Money market instruments;
- Units in collective investment undertakings;
- Options, futures, swaps, forward rate agreements and any other derivative contracts relating to securities, currencies, interest rates or yields, emission allowances or other derivatives instruments, financial indices or financial measures which may be settled physically or in cash;

The EU/EEA, Luxembourg and UK definitions of Financial Instruments do not include spot foreign exchange (FX) and therefore, we generally do not have any obligations regarding best execution in respect of spot FX. However, in line with our commitment to maintain regulatory standards, even where best execution rules do not apply, we undertake to treat you fairly and to manage any conflicts of interest which may arise.

The application of this policy to particular types of Financial Instruments is described further in the Appendices.

3. EXECUTION FACTORS

When executing an order, NT will take into account the following factors when under an obligation to deliver the best possible results for a particular client (the "Execution Factors"):

- the execution price without any costs charged to you, or our own fees and commissions;
- speed and/or likelihood of execution and settlement;
- size and nature of the order;
- the impact on market prices of displaying and/or executing an order or part of an order;
- the availability of price improvement (the opportunity for an order to be executed at a better price than what is currently quoted publicly);
- the nature of the specific Financial Instrument including whether it is executed on a Regulated Market, MTF, OTF or over the counter ("OTC"); and
- Any other consideration relevant to the efficient execution of the order.

The relative importance of Execution Factors will depend upon several variables including the following:

- The characteristics of the client including classification (Professional) and experience;
- The characteristics of the order, including any strategies or specific instructions given by the client, the size of the order and the likely market impact;
- The characteristics of the Financial Instrument including liquidity, trading patterns, transparency associated with the particular Financial Instrument; and
- The characteristics of the execution venue, market or counterparty to which the client order may be directed.

Certain other factors unrelated to the market associated with the Financial Instrument may impact this policy and the prioritisation of the Execution Factors as detailed in our Specific Order Execution Policies. In determining the relative importance of these factors, NT will use its own commercial experience and judgment taking into account the main Execution Factors as illustrated above, as well as the possible execution venues to which that order can be directed.

Generally, price may be regarded as one of the most significant factors in order to achieve best execution for clients. However, in determining the "price" of a Financial Instrument, NT may take into account a number of other considerations including;

- market parameters (i.e. the price at which a Financial Instrument may be trading on a regulated market, MTF or OTF, taking into account liquidity on that execution/trading venue),
- valuation models,
- the risks incurred by NT from entering into transactions,
- the capital requirements for us resulting from those transactions and the cost of hedging NT's risks.

Nevertheless, NT's front office staff will take all sufficient steps and use their experience and commercial judgement to evaluate the available market information in order to achieve the optimal balance across a range of potentially conflicting Execution Factors.

This does not mean achieving or guaranteeing the best price for every client order, but the best possible result that can reasonably be expected given the environment and execution factors available to our front office staff at the time.

NT must also act in accordance with the best interests of its clients when passing client orders to other entities for execution. Aside from the explicit best execution rules explained in this Policy, we have an overriding duty to act honestly, fairly and professionally.

4. HOW WE DETERMINE WHEN BEST EXECUTION IS OWED

A. Legitimate Reliance

This Order Execution Policy will only apply to you if we have classified you as a “Professional Client” (as noted in Section 2 above) and when we are required under the relevant regulatory provisions to ensure that we provide the best possible result when executing your orders. Where you rely on NT to protect your interests in relation to the pricing or other aspects of the execution of the order (“legitimate reliance”). Typically, we will be required to do so where:

- You have placed an order which the Bank has agreed to execute as your agent i.e. in your own name and for your account
- We agree to pass on (i.e. transmit) an order at our discretion to another broker or dealer (“third party”) for execution on your behalf.

B. Four fold test - Reliance

This obligation for “Best Execution” will only apply to you if we have determined that you have placed legitimate reliance on us to protect your interests. NT will consider whether the client is placing legitimate reliance on it by reference to the “Four Fold Test” as published by the European Commission, along with the relevant UK and European guidance.

The Four Fold Test includes the following:

- Which party initiates the transaction
- Market practice and the existence of a convention to “shop around”
- The relative levels of price transparency within a market
- The information provided by NT and any agreement reached between the parties

The category and characteristics of a client are important factors both in the assessment of whether the client is relying on NT to deliver best execution and in providing best execution.

Where NT is under an obligation to provide best execution it will take all sufficient steps to do so in accordance with both this Policy and with relevant rules and regulations. This does not mean that NT assumes or accepts any fiduciary, contractual or other duty to provide best execution except in accordance with those rules and regulations. Clients remain responsible for their own investment decisions and NT will not be responsible for any market or trading loss suffered as a result of those client decisions.

For these purposes, “all sufficient steps” means that NT will satisfy itself that it has processes and procedures in place that lead to the delivery of the best result on a consistent basis when it owes best execution to clients, and will take all sufficient steps to follow those processes and procedures based on the resources available to it.

C. Execution of Orders acting on Specific Client instructions

Where NT receives specific instructions from a client including in relation to a particular aspect of a transaction (e.g. where you instruct us to execute the order on a particular venue, at a particular time or at a particular price), NT must execute the transaction (or aspect of the transaction as appropriate) accordingly and, by doing so, will have satisfied any obligation to provide best execution in relation to that aspect of the order only. This is also the case where NT transmits an order to another entity for execution following a specific instruction from the client. Where a client provides a specific instruction this may prevent NT from taking steps that it has designed and implemented in this policy to obtain the best possible result for the execution of those orders in respect of the elements covered by those instructions.

D. Volatile Markets and Extreme Situations

When there are circumstances beyond our control the execution of your order may be negatively impacted, in these circumstances we will attempt to notify clients whose orders are affected. However, an order 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; and opening prices may differ significantly from the previous day's close.

In extreme volume and volatility situations, exchange system constraints may require automated trading systems to be switched off and/or electronic order routing to be suspended in favour of manual execution. If NT receives an order that in our view is likely to be inappropriate for the market conditions, we reserve the right not to execute the order or to adjust the instructions appropriately, and the order may then become subject to best execution obligations. However, it should be noted that such events could lead to further execution delays and increased market volatility.

5. CLIENT ORDER HANDLING, AGGREGATION AND ALLOCATION PROCESS

A. General application

Our order handling and allocation process is set out in this section and will apply when we exercise our discretion in how we execute orders in Financial Instruments on your behalf or transmit to other entities for execution.

When carrying out client orders, we will ensure that orders executed on behalf of clients are promptly and accurately recorded. Otherwise comparable orders will be carried out sequentially and promptly unless the characteristics of the order or prevailing market conditions make this impracticable or the client's instructions or interests require otherwise.

B. Client accounts

Where we are responsible for overseeing or arranging the settlement of an executed order we will take reasonable steps to ensure that any Financial Instruments or client funds received in settlement of that executed order are promptly and correctly delivered to the account of the relevant client.

C. Reception and Transmission of Orders

There will be instances when NT passes an order to another broker or third party for execution. Typically this may occur when NT is not a member of the domestic exchange, but may also occur in order to access alternative liquidity sources, which can include capital backed liquidity. In these circumstances, NT remains under an obligation to monitor the broker's performance and obtain the best possible result for our client.

D. Acting as an Agent or Matched Principal

NT may be contracted to act as a client's agent and/or as a matched principal broker. In such circumstances where NT is acting on the client's behalf and the best execution obligation applies because NT has discretion over how to execute the transaction, NT will execute the transaction for the client having regard for the terms of the order in determining the Execution Factors that need to be taken into account for the purpose of providing the client with best execution.

E. Aggregation and Allocation of Client Orders

NT may, from time-to-time, receive orders in the same Financial Instrument from more than one client which have comparable characteristics and instructions (e.g. same direction, similar price instructions, and similar participation instructions); NT's traders will ordinarily seek to combine such client orders into a single block order (the 'aggregated order') and route that order to market for execution instead of the individual client orders.

a) Aggregation of Client Orders with those of other clients

NT will only aggregate a client's order with those of other clients where it is likely that the aggregation of those orders and transactions will work overall to the advantage of each of the clients whose order is to be aggregated. This means that we will only aggregate orders when they can be executed promptly, fairly and expeditiously and in a manner that is most likely to obtain the best possible result for each and every one of the clients involved in the aggregated order.

In the event that NT determines that the aggregation of a client's order with those of other clients has the potential to disadvantage a client in some way, NT will disclose this to the client as soon as reasonable practicable.

b) Aggregation of client orders with NT's own orders

Except where specified in specific appendix to this policy NT does not deal on own account unless handling a trading error arising from a client order; NT will never aggregate such own account orders with client orders even if comparable in nature.

c) Order Allocation

Where NT executes an aggregated order we will allocate the resulting transactions to the underlying client orders in accordance with the NT Order Allocation Policy.

This internal policy requires the fair and prompt allocation of transactions from the aggregated order to the underlying client orders and generally permits the allocation of transactions to underlying client orders based on either (a) volume-based methods which include pro-rata or equal-splits; or, (b) order timing methods which include First-In, First-Out (FIFO).

Regardless of which standard allocation method is used, the policy requires that the method is determined at the point of deciding to create an aggregated order and recorded in the aggregated order record. Most importantly, the policy requires that the specific characteristics and instructions of the underlying client orders and the best interests of the clients involved are considered when making this determination.

Finally, in exceptional circumstances, the policy permits the use of other methods of allocation, which may be based upon other volume, price, or order timing methods, or a combination thereof, provided that (i) the standard methods of allocation are not appropriate, (ii) the clients involved have been informed and consent to the proposed method, and (iii) senior management and compliance approval has been obtained.

d) Cross Trades

In limited circumstances a cross trade can arise where it is identified that a sale order for one client and a purchase order for another client is placed. Crossing should only arise where prior agreement has been obtained from the clients as part of our onboarding procedures. As a result it can be advantageous to both clients for the dealers to cross in order to achieve the overriding objective of best execution. Cross trades can meet the objective of best execution because there is no market impact and they incur minimal administrative fees or commissions. In order to address the conflict of interest there must be documented evidence to show that both sides of the trade are in the best interests of the clients. The price achieved must support the case that the clients involved were treated fairly, in most circumstances this is likely to be the market mid-point for the security. We will only execute not using the mid-point price where we are instructed by the client and obtain agreement from the other client for this to occur. Evidence of this non mid-point price agreement is retained as part of our normal trading procedures.

6. EXECUTION VENUES

A. Venue Selection

NT will select the execution venues, with and through whom we execute client orders, which enables us to obtain on a consistent basis the best possible result for our clients. In order to meet NT's obligations, we will utilise our expertise and judgment to seek prices from available counterparties (including connected parties) which we consider will best serve your interest.

We will typically execute orders through any the following venues as appropriate for each Financial Instrument:

- (a) Regulated markets, multilateral trading facilities (MTFs) and organised trading facilities (OTFs).
- (b) NT and its affiliates
- (c) Systematic Internalisers (SIs)
- (d) Market makers and other liquidity providers
- (e) Non-EEA and Non-UK entities performing a similar function to any of the above

In certain circumstances, it may be appropriate to have a single execution venue. It may also be appropriate for Northern Trust to execute trades on an over-the-counter basis (i.e. outside of a trading venue) even though the trade will not have the benefit of the rules of such venues (e.g. buy-in rights); however we typically execute these on a matched principal basis to protect your best interests.

We may use the services of a connected party or a third party broker or dealer to assist in the execution of a client order which may be outside of the UK and/or EU/EEA. Using an affiliated or third party broker does not remove Northern Trust's best execution obligations and we will satisfy ourselves through the application of appropriate due diligence that the other entity has execution arrangements in place that enable NT to obtain on a consistent basis the best possible result for the execution of its clients' orders.

B. Broker and Counterparty Selection

Our policy is to take all sufficient steps to determine that when transmitting or placing an order with another entity to execute, it has arrangements that will enable NT to comply with the overarching best execution obligation. NT has relationships worldwide with a large number of brokerage firms and counterparties. A central list of approved brokers with whom orders can be placed is maintained. Brokerage firms are placed on this approved list subject to an authorisation and ongoing monitoring process, which includes, but is not limited to, the brokers creditworthiness and financial stability, a review of the performance of execution services provided by the broker, and the brokers ability to trade effectively on our clients behalf. A formal evaluation of our main brokers services are conducted regularly by our trading team. We also meet with each of our brokers on a regular basis to discuss any specific service issues which our traders have encountered during the period.

We do not enter into any "Payment for Order Flow" arrangements.

C. Execution of client orders outside of trading venues

This Policy provides for the possibility that orders may be executed outside of a Trading Venue (i.e. "over-the-counter" or "OTC"). For Financial Instruments admitted to trading on a Trading Venue, NT will not execute outside a Trading Venue unless it has obtained prior consent of the client. NT requests such consents as part of the client on-boarding process.

Giving prior consent does not preclude clients from requesting different execution arrangements at the time of placing an order or revoking such consent during the course of the relationship. Any revocation on a permanent basis must be submitted in writing addressed to the relevant NT entity providing the investment services in question; this can be done through your relationship manager or sales contact.

Where NT executes a client order on an over-the-counter ('OTC') basis, depending on the class of instrument to which the order relates, we will typically check the fairness of the price proposed to the client by gathering a range of quotes, or referencing other market data from sources ordinarily used in the estimation of the pricing of such instruments, and, where possible, by comparing with similar or comparable instruments.

Further, where an instrument is subject to a trading obligation which generally requires the execution of transactions on an organised trading venue (e.g. the MiFID II share trading obligation), NT will ensure that it only executes client orders outside of a trading venue, where permissible, in a manner consistent with the requirements of that obligation.

D. Publication of unexecuted client limit orders

NT is required to make immediately public any unexecuted quantity of a limit order placed with us unless you instruct us otherwise. As part of the client on-boarding process prior express consent in relation to the publication of limit orders will be requested.

Giving prior consent does not preclude clients from requesting different execution arrangements at the time of placing an order or revoking such consent during the course of the relationship. Any revocation on a permanent basis must be submitted in writing to NT's Global Head of Capital Markets & Treasury Compliance.

E. Top five execution venues and order transmission destinations reporting

NT makes available reports on the top five execution venues and order transmission destinations on an annual basis via the Northern Trust website as follows:

- **The Northern Trust Company, London branch and Northern Trust Global Services SE:**
<https://www.northerntrust.com/asset-servicing/europe/services/capital-markets-solutions>
- **Northern Trust Securities LLP:**
<https://www.northerntrust.com/asset-servicing/europe/services/capital-markets-solutions/institutional-brokerage-services>

7. PROCEDURAL ARRANGEMENTS

A. Client consent

All clients must consent to this Policy in order for us to provide execution services to them, such consent will typically be provided when you agree or consent to the relevant NT terms of business (during the on-boarding process) or similar client agreement applicable to the execution service in question. From time to time we will review and update the Policy or summary thereof on the NT website, such publication shall constitute notification to you of our updated Policy.

This Policy replaces any prior Order Execution Policy in its entirety with effect from the date of publication on our website, or as the case may be delivery to the client. The Policy is made available on the Northern Trust website at the following location:

- <https://www.northerntrust.com/documents/legal/mifid/nt-order-execution-policy.pdf>

B. Policy review and approval

This Policy will be subject to at least an annual review to ensure that (i) it remains consistent with the execution arrangements deployed by the various NT businesses, and (ii) consistent with the relevant regulatory requirements applicable to best execution. All changes must be reviewed by NT's Global Capital Markets Risk Council, and reviewed and approved by each NT legal entity's management body.

C. Ongoing monitoring and review of our Order execution arrangements

NT will on an on-going basis, monitor the effectiveness of its execution arrangements and Policy in order to identify and, where necessary, correct any deficiencies. NT will assess on a regular basis whether the Venues and third party brokers and affiliates included in this Policy provide the best possible result for the client or whether the Bank needs to make changes to its execution arrangements.

Our order execution arrangements are subject to a comprehensive set of monitoring, review and governance procedures which are designed to allow NT to test and challenge the effectiveness of its execution arrangements and how consistently well it performs in obtaining the best possible result for the execution of client orders including;

- Ongoing performance monitoring and transaction cost analysis
- Ongoing and periodic venue and broker reviews
- Regular reporting to NT senior management and governance bodies
- Ongoing compliance oversight, monitoring and challenge

Where you wish to query the execution of one or more of your orders you may ask NT to demonstrate that it has executed your order in compliance with this Policy.

APPENDIX 1: INSTITUTIONAL BROKERAGE SCHEDULE

This appendix provides information on how, where and when best execution is delivered by Northern Trust's Institutional Brokerage business when handling or executing transactions with Professional Clients, as required by MiFID II and the applicable EU/EEA, Luxembourg and UK regulations. The obligation of best execution applies where the NT entity providing the service, acting in its capacity as a broker, accepts an order to buy or sell a Financial Instrument from a client and acts as an agent or matched principal, on behalf of the client in the execution of that order, either directly on the relevant markets or indirectly via another broker.

This appendix should be read in conjunction with the Northern Trust General Order Execution Policy. All defined terms which have not been defined in this appendix shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

a) Relevant NT legal entities

Northern Trust Capital Market's brokerage services are provided by the following NT legal entities depending on your jurisdiction, and the specific order handling and arrangements in place for the execution of your orders will be relevant as follows:

- **Clients in the UK and the rest of EMEA including certain Asian jurisdictions:**

Northern Trust Securities LLP ('NTS LLP') always acts in an agency or agency-like capacity when arranging or executing orders on behalf of clients, and it will therefore always follow any instructions that the client provides at the time of placing an order when transmitting, or executing, that order or series of orders to, or with, the third-party and affiliated brokers that NTS LLP relies upon to execute transactions in the market. NTS LLP will then apply the principles of this Policy to determine any other strategies, conditions or instructions that are likely to be beneficial to achieving the best possible result for that order, or series of orders.

In the majority of markets NTS LLP is able to transmit and execute client orders in its own name without disclosing the identity of the underlying client or clients to the executing broker. In such cases NTS LLP acts as a 'matched principal' for the purposes of settlement, and it will therefore be the settlement counterparty to the client, and the executing broker. In certain markets however, NTS LLP is either unable to settle trades via its usual settlement agent, or the market requires the disclosure of the identity of the investor at the time of placing an order with an executing broker due to local requirements; NTS LLP must therefore "step-out" of the execution and settlement, so that the executing broker becomes the counterparty to the client instead of NTS LLP. In these markets NTS LLP acts solely as 'agent' by arranging the transaction on behalf of the client. They are identified in Part A of this Appendix 1 with a "+" after the execution venue name.

In all cases, and subject to client instructions regarding the choice of executing broker, NTS LLP will select one or more third party and affiliated brokers to execute the client order, and NTS LLP's traders will either actively manage or monitor and oversight the execution of the client's order in accordance with the principles described in this Policy. All such brokers will have been determined as being capable of assisting NTS LLP in achieving the best possible result on a consistent basis for the execution its client's orders, and any instructions and conditions imposed by NTS LLP will have been determined to be likely to achieve the best possible result for that order.

- **Clients in EU and EEA:**

Northern Trust Global Services SE ('NTGS SE') acts as your agent and will transmit the orders that you may from time-to-time give it to its UK investment firm affiliate, Northern Trust Securities LLP, who will then apply this Policy and its own execution arrangements to bring about all necessary transactions on your behalf. NTGS SE does not settle transactions in own name, and the identity of the client is transmitted to NTS LLP who will ensure settlement of any resulting transactions as described in this Policy.

NTGS SE has selected NTS LLP as its sole broker on the basis of the level of technical integration with NTGS SE's order management systems, the breadth and depth of the pre-existing market access that it offers to its clients and the wider Northern Trust group, and the extensive experience it has in supporting the trading and execution needs of institutional investors, in particular on an outsourced basis.

b) Demonstrating execution of orders in accordance with this Policy

NTS LLP and NTGS SE are both required to be able to demonstrate to you, as its client, that they have executed your orders in accordance with this Policy. As part of our ongoing monitoring arrangements we produce transaction cost analysis (TCA) reports that test the execution of client orders using a range of industry standard execution performance metrics, such as the measurement of the average execution price for orders using implementation shortfall against Arrival, VWAP and Close; and, the analysis of the distribution and performance of the brokers and venues used to execute the order. Client-specific reports presenting these findings in relation to your orders can be made available upon request. For further details please contact your sales contact or relationship manager.

B. Specific arrangements applicable to equities and equity-like instruments

a) Cash trades

When executing orders in cash equities, the General Order Execution Policy will apply.

b) Program trades

When executing a program trade in equities, NTS LLP and NTGS SE will endeavour to provide the best overall result in relation to the aggregate program or portfolio rather than in relation to individual transactions within the program or portfolio.

c) Order handling and transmission

NTS LLP and NTGS SE support clients who wish to direct them as to the executing broker they would prefer their order to be executed by, we refer to these orders as “directed orders”. It is the client’s responsibility to inform NTS LLP and NTGS SE at the point of providing an order that they have a specific requirement for the executing broker. NTS LLP will then transmit the client’s order to that broker for execution, and as applicable, settlement, in the normal manner but clients should be aware that this direction severely limits the ability of NTS LLP to seek or take steps to ensure the best possible result for the order and we are entirely reliant on the arrangements of the executing broker selected by the client and do not accept responsibility for the outcome achieved by that broker.

Additionally, in certain markets NTS LLP is required to “step-out” or transmit the client order for execution and/or settlement purposes in a full, and in disclosed manner to a local broker who will then execute the trade in market and become the client’s counterparty. Such markets are typically referred to as “ID Markets” and require certain verification and registration procedures to be followed that can only be performed by members of the local exchange and clearing house.

All ‘would at limit’ orders are only accepted on a best efforts basis. The fragmented nature of global market trading venues means the NT cannot guarantee ‘would limit’ orders will be fully executed if a stock does trade through a client’s ‘would limit’.

d) Share Trading Obligations

UK and EU regulations both impose a general obligation on investment firms, such as NTS LLP and NTGS SE, to ensure that the trades they undertake take place on organised trading venues, unless there is a legitimate reason not to, as provided for by the relevant UK and EU regulations..

The vast majority of client orders handled by NTS LLP and NTGS SE will be executed via by NTS LLP’s traders using its network of executing brokers on one or more organised trading venues, which comprise UK and EU/EEA regulated markets, MTFs and systemic internalisers, and equivalent third country trading venues. In doing so we will apply the following principles:

- Orders for clients of NTS LLP in the UK, the rest of EMEA and certain Asian jurisdictions will ordinarily be executed in accordance with the FCA’s approach to the share trading obligation¹. This means that in the absence of a specific instruction from the client in respect of the execution venue(s) that NTS LLP should use, NTS LLP will select those executing brokers, trading strategies and execution venues that it believes are most capable of providing the best possible result for the client’s order.

Where a client wishes to specify the use of particular venues, or specific types of venue (e.g. EU/EEA only), NTS LLP requires a specific instruction from the client, either by means of a relevant FIX tag for FIX orders, a clear written instruction for email and instant message orders, or a clear verbal instruction for telephone orders. In the absence of such a specific instruction we will apply the general principles described above.

- Orders for clients of NTGS SE in the EU and EEA will always be executed in a manner consistent with the EU share trading obligation laid down in Article 23 of MiFIR, as clarified by ESMA in its final position on the EU share trading obligation². This means that NTGS SE will provide NTS LLP with an explicit instruction to only execute it’s client orders in relevant EU/EEA shares on EU/EEA regulated markets, MTFs and systematic internalisers, or a suitable third-country equivalent where available, and therefore NTS LLP will instruct its executing brokers to do the same when placing orders or parts of orders with them for execution in the market.

e) Post-trade transparency for shares

As the vast majority of client orders handled by NTS LLP and NTGS SE are executed on one or more organised trading venues it follows that the vast majority of trades are reported by the trading venue in question. NTS LLP and NTGS SE will typically report this venue to clients when confirming fills and clients can verify the trade report using the normal methods for the trading venue in question.

Where NTS LLP executes an “agency cross”, it will where possible and subject to the EU share trading obligation not preventing it, seek to leverage its “off-book” membership of the London Stock Exchange and report the trades in eligible instructions as “off-book, on-exchange” trade reports and thereby bring the trade under the rules of the exchange. This includes eligible EU/EEA shares for clients in the UK, rest of EMEA and certain Asian jurisdictions that contract directly with NTS LLP.

Where an instrument is not eligible for reporting to the London Stock Exchange and is not subject to a specific instruction on the use of venues due to the EU share trading obligation, NTS LLP will report the trade via its UK, or if applicable, EU, Approved Reporting Arrangement (‘APA’) as an off-exchange ‘over-the-counter’ transaction where NTS LLP is the seller and therefore has the obligation to report. Such transactions will comply with the general requirements of the UK and EU share trading obligations in respect of requirements to ad-hoc, non-systematic and infrequent.

C. Specific arrangements applicable to debt instruments

a) Credit and Rate Instruments

¹ See: <https://www.fca.org.uk/news/press-releases/fca-sets-out-its-approach-share-trading-obligation>

² See: https://www.esma.europa.eu/sites/default/files/library/esma70-155-7782_statement_brexit_share_trading_obligation_q42020.pdf

When executing fixed income transactions, NTS LLP will be acting in a matched principal or agency capacity, on behalf of clients.

In the majority of trades, the executing counterparty will be acting in a principal capacity and will provide NTS LLP with a competing price, spread or yield quotation. In this scenario the executing counterparty would be the execution venue and, in their principal capacity, would not owe NTS LLP a general duty of best execution, unless agreed contractually, and therefore NTS LLP's trader will take appropriate steps in accordance with this Policy and our execution arrangements to ensure that the transaction is effected on terms most favourable to the client.

b) Convertibles

When executing a "working delta" trade, NTS LLP considers that best execution is owed in respect of working delta trades where the price of the convertible bond is derived from the delta hedge. The duty of best execution will be measured and monitored by reference to the execution of the delta hedge.

Best execution will also be owed where NTS LLP has agreed to source bonds for the client. This applies to a small proportion of convertibles business, particularly relating to illiquid convertibles, where NTS LLP agrees to source liquidity for clients from third parties. Clients will often provide us with a limit price in relation to the bonds. These are generally considered to be firm orders, for which you are relying upon NTS LLP in relation to the execution.

c) Execution venue and counterparty selection process

NTS LLP will execute on trading platforms and venues, such as MTFs, OTFs or Systematic Internalisers (SIs), seeking, where available, multiple competing quotations. The size, liquidity and complexity of the individual FI instrument will dictate the trading platform, venue and strategy selected. NTS uses a number of trading platforms (e.g. Bloomberg MTF, Tradeweb and/or MarketAxess), to request quotations from competing liquidity providers, although this list may change as market structures develop.

MTFs such as Liquidnet, Bloomberg MTF and MarketAxess open trading platforms are also used to bring together multiple third party buying and selling interests to enable NTS to electronically execute orders. Alternatively, the trading desk will request competing quotes by telephone or Instant Bloomberg.

During the selection process, the trader will assess a number of Execution Factors including, but not limited to, indicative market prices, spreads or yield size of trade, market liquidity, indications from brokers' inventory and market makers' execution hit and miss ratios in the relevant sector or instrument. Additionally, individual trading platform protocols may dictate the number of requests for quotes (RFQs) available by trade type, e.g. Government rate trades are typically restricted to between four or five, whereas Credit trades are typically up to six in Euro/GBP Credit and up to 25 in US Credit.

D. Specific arrangements applicable to derivative instruments

d) Reception and transmission services

When handling client orders in supported classes of derivatives NTS LLP and NTGS SE will act as agent on behalf of the client by receiving and transmitting orders received from the client to a specific executing broker with whom the client has a pre-existing and independent credit and counterparty relationship, and which has been selected by the client to become its counterparty to any resulting transaction, either explicitly or by on the basis of specific instructions from the client.

NTS LLP supports the following methods of arranging transactions in derivative instruments with the client's chosen counterparty:

- Upon receipt of an order in a supported derivative contract, NTS LLP will arrange the transaction by seeking quotes (i.e. "request-for-quote" or "RFQ") on behalf of the client from one or more of the client's existing panel of executing brokers. NTS LLP requires an explicit instruction as to the constituents of the panel which clients can provide on a per-order or general basis. Once quotes have been obtained from the panel, NTS LLP will then either relay the quotes to the client so that they can select the counterparty to which the order should be transmitted, or NTS LLP can apply the client's express instructions as to which counterparty to select, which can be based on any factor or combination of factors, such as an instruction to transmit to the order to a specific counterparty if they provide a quote, or to transmit the order to the counterparty that provides the best quote.
- As an alternative, NTS LLP can be asked to seek pricing information from one or more members of the client's panel of executing brokers without the client having to specify which executing broker(s) to seek quotes from. Upon receipt of quotes from the selected brokers, NTS LLP can, at the client's discretion, either relay the details of the prices quoted by the selected executing brokers to the client so that they can select their preferred counterparty, to which NTS LLP can then transmit the client's order for execution; or NTS LLP can apply the client's specific instructions and select the counterparty to which the client's order should be transmitted for execution by reference to the detailed parameters provided by the client. Such parameters must include the price or price tolerance for selecting a quote, absolute quantity tolerances, and a general expression on preferred counterparties.

Client's should be aware that NTS LLP will not exercise discretion when selecting the counterparty to which the client's order should be transmitted and in the event of any uncertainty or ambiguity as to the client's initial instructions we will always seek further instructions from the client in order to ensure that we are acting in the client's best interests at all times.

e) Order Execution Services

NTS LLP does not currently support the execution of orders on behalf of clients in derivative instruments which result in NTS LLP becoming a counterparty to a transaction in a derivative contract.

E. Specific arrangements applicable to Listed derivative instruments.

a) Reception and transmission services

When handling client orders in listed derivatives NTS LLP will act in an agency capacity on behalf of the client by receiving and transmitting orders received from the client to a specific executing broker with whom the client has a pre-existing and independent credit and counterparty relationship, and which has been selected by the client to become its counterparty to any resulting transaction, either explicitly or by on the basis of specific instructions from the client.

NTS LLP will place reliance on that executing broker to execute the order and bring the trade on-exchange in accordance with venue rules. Further NTS LLP is not involved in the clearing or settlement of the resulting transaction on the clients behalf and will instruct the executing broker to give up the trade to the clients clearing counterparty.

NTS LLP's assessment of whether a client places legitimate reliance on it is determined in accordance with the Four Fold Test. Although it has been concluded that best execution does not typically apply in the circumstances outlined, there may be limited circumstances in which, following the application of the Four Fold Test, it cannot be clearly established whether or not a client is placing reliance on NTS LLP. In such circumstances, NTS LLP will consider if, on balance, the client is likely to be placing legitimate reliance on it and, if it determines that it is, NT will provide best execution when executing the order.

It is important to be aware that even in the circumstances described above where the best execution obligation does not apply, NTS LLP is still required to treat clients fairly and to manage any conflicts of interest that may arise.

Client's should be aware that NTS LLP will not exercise discretion when selecting the counterparty to which the client's order should be transmitted and in the event of any uncertainty or ambiguity as to the client's initial instructions we will always seek further instructions from the client in order to ensure that we are acting in the client's best interests at all times.

b) Order Execution Services

NTS LLP does not currently support the execution of orders on behalf of clients in listed derivative instruments which result in NTS LLP becoming a counterparty to a transaction in a derivative contract.

APPENDIX 1 - PART A: EXECUTION VENUES FOR EQUITY AND EQUITY-LIKE INSTRUMENTS

The execution venues listed below are not exhaustive and are subject to change. These lists were accurate as of 31 December 2023. Clients should refer to their sales contact or relationship manager for details of venues which NTS LLP and NTGS SE can access.

EEA/EU & UK MIFID EXECUTION VENUES			
	LIT ORDER BOOKS AND PERIODIC AUCTION VENUES	DARK ORDER BOOKS AND LARGE IN SCALE VENUES	SYSTEMATIC INTERNALISERS AND OTHER VENUES
Regulated Markets	<ul style="list-style-type: none"> • Aquis Stock Exchange + • Cboe Europe Equities Regulated Market + • Euronext – Euronext London + • London Stock Exchange +SIX • Swiss Exchange (ROIE) (Switzerland) + • Athens Exchange (Greece) + • Bolsa de Madrid (Spain) + • Borsa Italiana (Italy) + • Börse Berlin - Equiduct (Germany) + • Bourse de Luxembourg (Luxembourg) + • Bucharest Stock Exchange (Romania) + • Budapest Stock Exchange (Hungary) + • Bulgarian Stock Exchange-Sofia (Bulgaria) ++ • Cboe Europe Regulated Market (Netherlands) + • Euronext Amsterdam (Netherlands) + • Euronext Brussels (Belgium) + • Euronext Dublin (Ireland) ++ • Euronext Lisbon (Portugal) + • Euronext Paris (France) + • Frankfurt Stock Exchange (Germany) + • Frankfurt Stock Exchange - Xetra (Germany) + • Ljubljana Stock Exchange (Slovenia) + • NASDAQ Copenhagen (Denmark) + • NASDAQ Helsinki (Finland) + • NASDAQ Riga (Latvia) + • NASDAQ Stockholm (Sweden) + • NASDAQ Tallinn (Estonia) + • NASDAQ Vilnius (Lithuania) + • Oslo Børs (Norway) + • Prague Stock Exchange (Czech Republic) + • Warsaw Stock Exchange (Poland) + • Wiener Börse (Austria) + • Zagreb Stock Exchange (Croatia) ++ 	<ul style="list-style-type: none"> • London Stock Exchange • SIX SwissAtMid (Switzerland) + • NASDAQ Copenhagen – Nordic@Mid (Denmark) + • NASDAQ Helsinki – Nordic@Mid (Finland) + • NASDAQ Stockholm – Nordic@Mid (Sweden) + • Oslo Børs – North Sea Dark Pool (Norway) + 	
Multi-Lateral trading facilities	<ul style="list-style-type: none"> • Aquis MTF + • Cboe Europe Equities MTF + • BXE Lit order books • CXE Lit order books • BXE Periodic Auctions • Instinet Blockmatch – RFQ • Virtu ITG POSIT - Periodic Auction (Ireland) + • London Stock Exchange + • AIM MTF • Non-AIM MTF • Sigma X MTF - Auction book + • Turquoise + • Lit order book • Lit Auctions • Aquis Exchange Europe (France) + • Cboe Europe MTF (Netherlands) + • DXE Lit order books • DXE Periodic Auctions • Euronext Paris - Growth (France) + • Virtu ITG POSIT - Periodic Auction (Ireland) + • NASDAQ First North (Denmark, Finland, Latvia, Norway, Sweden) + • NASDAQ Nordic - Auction on Demand (Denmark, Finland, Sweden) + 	<ul style="list-style-type: none"> • Cboe Europe Equities MTF + • BXE Dark order books • CXE Dark order books • CXE Large in Scale • Euronext Block MTF + • Instinet BlockMatch - Dark + • Virtu ITG POSIT - Dark (Ireland) + • Liquidnet Europe MTF + • UBS MTF – Dark order book + • Sigma X MTF - Reference price waiver book + • Turquoise + • Large in Scale • Plato • Cboe Europe MTF (Netherlands) + • DXE Dark order books • DXE Large in Scale • Euronext Blocki MTF (Belgium) + • ITG POSIT - Dark (Ireland) + • Liquidnet EU Equities MTF (Ireland) + • NASDAQ First North – Nordic@Mid (Denmark, Finland, Latvia, Norway, Sweden) + 	<ul style="list-style-type: none"> • Bloomberg MTF • Tradeweb MTF • Bloomberg Trading Facility (Netherlands) • Tradeweb EU MTF (Netherlands)
Systematic Internalisers			<ul style="list-style-type: none"> • Credit Suisse Securities (Europe) Ltd • Exane SA, London branch • Goldman Sachs International • HSBC Bank plc • Jane Street Financial Ltd • J.P. Morgan Securities plc • Macquarie Capital (Europe) Limited • Morgan Stanley & Co. Int. plcCredit Suisse Securities Sociedad de Valores SA (Spain) • Exane SA (France) • Goldman Sachs Europe SE (Germany) • HSBC France (France) • J.P. Morgan AG (Germany) • Macquarie Bank Europe DAC (Ireland) • Morgan Stanley Europe SE (Germany)
	EMEA TRADING VENUES	ASIA TRADING VENUES	
Stock Exchanges	<ul style="list-style-type: none"> • Abu Dhabi Securities Exchange (UAE) ++ • Amman Stock Exchange (Jordan) ++ • Bahrain Bourse (Bahrain) ++ • Beirut Stock Exchange (Lebanon) ++ • Borsa Istanbul (Turkey) + • Botswana Stock Exchange ++ • BRVM - Bourse Régionale des Valeurs Mobilières (Benin, Burkina Faso, Guinea Bissau, Côte d'Ivoire, Mali, Niger, Senegal, Togo) ++ • Boursa Kuwait (Kuwait) ++ • Bourse de Tunis (Tunisia) ++ • Casablanca Stock Exchange (Morocco) + • Dar es Salaam Stock Exchange (Tanzania) ++ • Dubai Financial Market (UAE) ++ • Egyptian Exchange (Egypt) ++ • Ghana Stock Exchange (Ghana) ++ • Johannesburg Stock Exchange (South Africa) + • Lusaka Stock Exchange (Zambia) ++ • Malawi Stock Exchange (Malawi) ++ • Moscow Exchange (Russia) ++ • Muscat Securities Market (Oman) ++ • Nairobi Securities Exchange (Kenya) ++ • Namibian Stock Exchange (Namibia) ++ • NASDAQ Dubai (UAE) ++ • Nigerian Stock Exchange (Nigeria) ++ • Palestine Exchange ++ • Qatar Exchange (Qatar) ++ • Rwanda Stock Exchange (Rwanda) ++ • SIX Swiss Exchange (Switzerland) + • SIX SwissAtMid (Switzerland) + 	<ul style="list-style-type: none"> • ASX (Australia) + • ASX - Centre Point (Australia) + • Bursa Malaysia (Malaysia) + • Colombo Stock Exchange (Sri Lanka) ++ • Dhaka Stock Exchange (Bangladesh) ++ • Ho Chi Minh Stock Exchange (Viet Nam) ++ • Indonesia Stock Exchange ++ • Korea Exchange (South Korea) ++ • Nagoya Stock Exchange (Japan) + • National Stock Exchange of India ++ • NZX (New Zealand) + • Pakistan Stock Exchange ++ • Philippine Stock Exchange + • Shanghai Stock Exchange (China) ++ • Shanghai-Hong Kong Stock Connect (China/Hong Kong) ++ • Shenzhen Stock Exchange (China) ++ • Singapore Exchange + • Stock Exchange of Hong Kong + • Stock Exchange of Thailand + • Taipei Exchange (Taiwan) ++ • Taiwan Stock Exchange (Taiwan) ++ • Tokyo Stock Exchange (Japan) + 	

	<ul style="list-style-type: none"> • Stock Exchange of Mauritius (Mauritius) ++ • Saudi Stock Exchange (Tadawul) (Saudi Arabia) ++ • Tel-Aviv Stock Exchange (Israel) + • Uganda Securities Exchange (Uganda) ++ • Zimbabwe Stock Exchange (Zimbabwe) ++ 	
Alternate Trading Systems		<ul style="list-style-type: none"> • Chi-X Australia+ • Chi-X Japan+ • Goldman Sachs - Sigma X Hong Kong+ • Goldman Sachs - Sigma X Japan+ • ITG Hong Kong – POSIT+ • Macquarie Capital Securities - Crossing System (MAQJ) (Japan) + • Macquarie Securities - Crossing System (MAQX) (Australia) + • SBI Japannext – Japannext PTS (Japan) +

NON-MIFID EXECUTION VENUES – AMERICAS MARKET			
	US LIT TRADING VENUES	US DARK TRADING VENUES	OTHER TRADING VENUES Canadian and Central / South America
Stock Exchange	<ul style="list-style-type: none"> • Cboe BYX U.S. Equities Exchange ** • Cboe BZX U.S. Exchange ** • Cboe EDGA Exchange ** • Cboe EDGX Exchange ** • Chicago Stock Exchange ** • NASDAQ Stock Market ** • NASDAQ BX ** • NASDAQ PSX ** • New York Stock Exchange ** • NYSE American ** • NYSE Arca ** • NYSE National ** 	<ul style="list-style-type: none"> • Cboe BYX U.S. Equities Exchange Dark ** • Cboe BZX U.S. Equities Exchange Dark ** • Cboe EDGA Exchange Dark ** • Cboe EDGX Exchange Dark ** • NASDAQ - NSDQ Dark ** • NASDAQ BX Dark ** • NYSE Dark ** • NYSE Arca Dark ** 	<ul style="list-style-type: none"> • Aequis Neo Exchange ** • Canadian Securities Exchange ** • NASDAQ Canada - CX2 ** • NASDAQ Canada - CXC ** • NASDAQ Canada - CXD ** • Toronto Stock Exchange ** • TSX Alpha Exchange ** • TSX Venture Exchange ** • BM&F BOVESPA (Brazil) ++ • Bolsa de Valores de Caracas (Venezuela) ** • Bolsa de Valores de Columbia ++ • Bolsa de Valores de Lima (Peru) ++ • Bolsa Mexicana de Valores (Mexico) ++ • Santiago Exchange (Chile) ++
Alternate Trading Systems	<ul style="list-style-type: none"> • Global OTC ATS** • OTC Link ATS** 	<ul style="list-style-type: none"> • Aqua Securities ATS ** • Bank of America Merrill Lynch Instinct X ATS ** • Barclays LX ATS ** • BIDS ATS ** • CitiBloc ATS ** • CitiCross ATS ** • CODA Markets ATS ** • Credit Suisse Securities - CrossFinder ATS ** • Deutsche Bank - SuperX ATS ** • Fidelity Capital Markets - CrossStream ATS ** • Goldman Sachs - Sigma X2 ATS ** • Instinet - Blockcross ATS ** • Instinet - CBX US ATS ** • IEX ATS ** • ITG POSIT ATS ** • JPM-X ATS ** • Level ATS ** • Liquidnet ATS ** • Morgan Stanley - MS Pool ATS ** • UBS ATS ** • Virtu MatchIt ATS ** 	<ul style="list-style-type: none"> • Lynx ATS ** • Instinet Canada Cross - CBX + • Instinet Canada Cross - VWAPX + • MATCHNow ** • Omega ATS ** • Pure Trading **

APPENDIX 1 - PART B: DEBT INSTRUMENTS

The execution venues listed below are not exhaustive and are subject to change. These lists were accurate as of 21 November 2022. Clients should refer to their sales contact or relationship manager for details of venues which NTS LLP can access.

	Trading Venues
Regulated Markets	<ul style="list-style-type: none"> • London Stock Exchange
Multilateral Trading Facilities	<ul style="list-style-type: none"> • Bloomberg Multilateral Trading Facility • Liquidnet Fixed Income MTF • MarketAxess Europe MTF • Tradeweb Europe MTF • Bloomberg Trading Facility (Netherlands) • Liquidnet EU Fixed Income MTF (Ireland) • MarketAxess N: MTF (Netherlands) • Tradeweb EU MTF (Netherlands)
Systematic Internalisers, Market Makers and Other Liquidity Providers	<ul style="list-style-type: none"> • Barclays Capital • BBVA • Bank of America Merrill Lynch • Citigroup Global Markets** • Commerzbank • Jeffries International • Deutsche Bank** • J.P. Morgan Securities • Goldman Sachs International • Lloyds Bank • Mizuho International** • Morgan Stanley & Co. International • MUFG Securities • RBC Capital Markets** • Société Générale • TD Securities • UBS** • UniCredit Bank

APPENDIX 2: GLOBAL FOREIGN EXCHANGE SCHEDULE

This appendix provides information on how, where and when best execution is delivered by Northern Trust's Foreign Exchange business when handling or executing transactions with Professional Clients, as required by MIFID II and the applicable EU/EEA, Luxembourg and UK regulations.

This appendix should be read in conjunction with the Northern Trust General Order Execution Policy. All defined terms which have not been defined in this appendix shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

Northern Trust Capital Market's foreign exchange services are provided by the following NT legal entities, depending on your jurisdiction, and the specific order handling and arrangements in place for the execution of your orders will be relevant as follows:

- **Clients in the UK, EU/EEA and rest of EMEA:**

For clients in the UK and rest of EMEA the Northern Trust Company, London branch ('TNTC LB') and for clients in EEA/EU Northern Trust Global Services SE ('NTGS SE') deals as a principal in foreign exchange derivatives and do not act as an agent or similar on behalf of clients. For clients, whether we owe a duty of best execution will depend on whether they are legitimately relying on us as determined by the four fold test as described in section 4 of our General Order Execution policy.

There are however, some scenarios where best execution obligations are unlikely to be due e.g. where we may deal on own account or operate as principal as follows;

- Request for Quote (RFQ) – firm price rather than indicative
- Two Way Quote / Price
- Guaranteed fill on a close or fixing order
- Internalisation
- Call-backs
- Reference Price Transactions

This list of scenarios should not be regarded as an exclusive list and rather should be used as a guide to facilitate a greater understanding of when "best execution" is unlikely to apply.

a) Scope of GFX transactions subject to the Policy

The scope of best execution is limited to dealings in Financial Instruments as defined by MIFID II. Spot FX is not a Financial Instrument and so will not be covered by the best execution rules. We consider that best execution may apply to transactions in FX derivatives save where we understand that you are not placing reliance on us. (i.e. while spot FX are not Financial Instruments, FX Derivatives do meet the definition of a Financial Instrument and are therefore potentially subject to best execution obligations). FX Derivatives include FX Forwards, FX Swaps, Non deliverable forwards (NDF) and Non deliverable swaps (NDS)

b) FX conversion relating to transactions in other Financial Instruments

We will generally execute a currency conversion related to a securities transaction for a custody client unless and until the client specifies otherwise. We will treat the cost of the FX conversion as being part of the overall cost of the securities transaction. An FX conversion is generally considered spot and no separate obligation of best execution is owed on the FX conversion.

c) Sales Commissions and Mark-Ups

We will provide you with clear pricing. Given the nature of the services and our capacity as principal (and therefore counterparty) in the resulting transactions, we do not expect best execution rules to apply to the majority of transactions we enter into with you. Normally, and subject to Applicable Law, we will quote an "all in price", which is a price that includes any spread or margin above the price at which we may be able to deal in the market (and therefore our anticipated profit). We may take into account a number of factors when determining an all-in price, including the risk that we will assume under the transaction, operational and funding costs, the level of service provided to you, factors specific to you or the order itself and any pre-agreed fees/spread. It is your responsibility in these circumstances to determine whether or not to accept any quoted all in price. No dealing commission or brokerage fee will be charged in addition to the all-in price.

Any sales margin charged by NT is to be determined by taking into consideration a variety of factors, including:

- the service level provided;
- the credit risk that NT will take on when transacting with the client;
- the cost of capital NT incurs as a result of the transaction;
- volumes transacted by the client;
- costs by client sector and type, including costs both directly incurred and indirect cost allocation;
- whether the transaction may need to be novated into a clearing transaction at a later date under regulatory rules (e.g. EMIR, Dodd Frank);
- competitiveness of the marketplace; and
- any other factor relevant to the transaction.
- service specific arrangements

d) Last Look

Our use of Last Look has been documented in accordance with the Global Foreign Exchange Council: FX Global Code and Execution Principles Working Group Report on Last Look. This document is called “Global Foreign Exchange Last Look Practices” and is available on the Northern Trust Capital Markets webpage.

B. Service-specific arrangements

a) Custody

These are FX-related services provided to certain clients for whom NT acts as custodian pursuant to the terms of our agreement with the client. FX orders within Custody services are typically filled at a benchmark price.

b) Currency Management

Our Currency Management service provides portfolio overlay, share class hedging, look-through hedging and un-hedged share class conversion services to clients. These services are subject to a separate legal agreement which sets out the terms and conditions of the service. Clients enter into a standing transaction request, which is subject to strictly defined terms including, where applicable, which benchmark may be used in relation to Currency Management trades. A transparent fee structure for the Currency Management service is agreed in advance with each client using the service. Clients can receive currency hedge reports based on their data and frequency preferences. In this instance, NT is following specific and defined steps and specific instructions from the client; therefore no obligation for best execution exists.

Nevertheless, as mentioned previously, when NT executes transactions under a Currency Management agreement it is acting as principal and may retain any profit derived therefrom in addition to the fee specified for the Currency Management service in the Currency Management agreement. Any additional fees in respect of the Currency Management transactions are agreed between the parties in the Currency Management agreement.

c) Algo

NT's FX Algo Suite is designed to offer an efficient, transparent operational process to facilitate speedy communication and trade execution through NT's automated algorithmic trading platform, with execution based on clients' predefined parameters. Therefore, Algorithmic orders (Algo Orders) are client orders for the sale or purchase of currencies using a NT algorithm. Clients may place Algo Orders in furtherance of one or more strategies. In the case of Algo Orders, the scope for application of the overarching principle of 'best execution' is reduced to the extent that the client instructs or enters specific parameters for execution (such as the timing or size of child orders).

Trades will be entered into with NT as principal, but pricing will be determined using a liquidity panel curated by NT. A pre-agreed fee or spread will be applied to the price achieved by the liquidity panel and will be payable to NT. In addition, NT may participate on the liquidity panel and if so, NT may retain any profit derived therefrom in addition to the fee specified for the Algo service. The strategies currently deployed in the NT Algo suite of products, include, but are not limited to:

- TWAP
- Iceberg
- COIL
- PEG
- TWAP R
- Composite Trap

C. Execution Venues

When executing trades in a principal capacity NT itself is the Execution Venue used for executing orders in FX for clients and therefore is the Execution Venue on which it places significant reliance in meeting its obligation to take all sufficient steps to achieve the best possible result for clients on a consistent basis. NT considers that by internalizing all orders it is able to obtain best execution for clients on a consistent basis. NT reasonably expects that, by selecting this Execution Venue, it will be able to obtain results for clients that are at least as good as the results that it could reasonably expect from using alternative Execution Venues.

APPENDIX 3: SECURITIES FINANCE SCHEDULE

This appendix provides information on how, where and when best execution is delivered by Northern Trusts Securities Lending business when handling or executing transactions executed on your behalf in lending your securities, as required by MiFID II and the applicable EU/EEA, Luxembourg and UK regulations.

This appendix should be read in conjunction with the Northern Trust General Order Execution Policy. All defined terms which have not been defined in this appendix shall have the meaning given in the General Order Execution Policy.

A. Order Handling and execution arrangements

a) Relevant NT legal entities

Northern Trust Capital Market's Securities Lending services are provided by the following NT legal entities, depending on your jurisdiction, and the specific order handling and arrangements in place for the execution of your orders will be relevant as follows:

- **Clients in the UK, EU/EEA and rest of EMEA:**

For clients in the UK and rest of EMEA the Northern Trust Company, London branch ('TNTC LB') and for clients in EEA/EU Northern Trust Global Services SE ('NTGS SE') and its branches act as agent when executing securities lending transactions on behalf of their respective clients.

b) Authorisation and lending parameters

You have entered into a Securities Lending Authorisation Agreement (SLAA) with us, in which you have authorised us to enter into transactions with approved counterparties on your behalf and have set out the parameters under which you have instructed us to do so. These parameters shape the structure of your lending program and are a significant factor in determining the performance we are able to achieve on your behalf.

c) Demand factors

Securities Lending is largely a demand driven market with lenders reacting to requests from Borrowers to initiate a transaction. In order to attract demand, Northern Trust actively publishes certain available inventory to borrowers on an undisclosed basis (i.e. no client names are disclosed).

Borrower demand is driven by a number of factors such as hedge fund activity, corporate events such as mergers and acquisitions, trade settlement performance and a number of other market events that present opportunity to the borrower or their underlying clients. Additionally, Borrowers are constrained by a number of complex regulatory factors including balance sheet capacity and various leverage and liquidity ratios, which influence how much exposure they are able to take to Securities Lending activity and to particular counterparties. All these factors drive borrower demand and whether or not they look to borrow securities from NT clients.

d) Order Execution factors

Where a borrower shows demand for a particular security (or basket of securities), there are a significant number of factors that influence whether a loan is possible (or maintainable), and the rate of return we are able to achieve on any given transaction. These include:

- 1) Client lending parameters - acceptable borrowers, borrower limits
- 2) Collateral criteria - both non-cash and cash collateral reinvestment guidelines
- 3) Value of loan
- 4) Term of the transaction
- 5) Manufactured dividend rate
- 6) Jurisdiction and netting of borrower
- 7) Jurisdiction and netting status of client lender
- 8) Credit risk criteria and limits (determined by Lender, borrower, or agent lender)
- 9) Transaction charges
- 10) Portfolio stability (recall of lenders sales)
- 11) Client minimum spread requirements

The factors listed above will largely determine whether or not loans are feasible and some will influence the rate a borrower is willing to pay to borrow the securities. We will not enter into any loan that would breach either lender imposed restrictions or our own risk parameters.

Where loans are agreed against non-cash collateral the borrower will pay a fee, whereas for loans against cash we will agree a rebate rate payable to them in relation to cash collateral they provide. Both the fee and rebate rates agreed are set taking into account some of the criteria listed above, such as collateral criteria or value of loan. As a result it is possible that two loans of the same security agreed simultaneously could justifiably be agreed at different fee/ rebate rates.

e) Cash Collateral Reinvestment Execution

Please note that Cash Collateral Reinvestment execution is provided to Securities Lending clients by Northern Trust Asset Management ('NTAM') through Northern Trust Global Investments Limited, or one of its affiliates. You should refer to the relevant NTAM Order Execution Policy for details of order execution arrangements for cash collateral reinvestment execution activities.

f) Fair Allocation System

The Northern Trust lending program works on the basis that trading teams should not make arbitrary decisions on whom to allocate loans to at point of trade. We maintain an automated loan allocation process to impartially determine which lending client's assets will be loaned in response to a borrower request when there are multiple lenders eligible to participate.

The allocation system takes into consideration factors such as security availability, unrealized opportunities, and existing loan allocations. Northern Trust implemented this allocation system in an effort to provide an objective methodology that requires minimal, if any, discretionary involvement in the allocation of lending opportunities, which is intended to support the fair and impartial allocation of lending opportunities among our clients.

On occasions it is necessary for trading teams to override the automatic allocation process to allow a loan to be transacted. This occurs only in a very limited number of circumstances and overrides are monitored and reviewed regularly to ensure appropriate action has been taken.

For certain types of lending arrangements (such as exclusives) the loan allocation system is not relevant to the execution of loans. These arrangements are explained in more detail in the Securities Lending "Confidence through transparency" document available on Passport or upon request.

B. Execution Venues

Trades in the securities lending market are primarily agreed bilaterally between parties, and not traded or executed on a recognized exchange. For securities lending we will execute transactions in one of the following ways:

- **Equilend:** A joint venture of various securities lending agents and securities borrowers. The purpose of Equilend is to provide a common electronic "platform" for the negotiation and processing of securities lending and borrowing transactions. Northern Trust is a dedicated user of Equilend, which is a regulated multilateral trading facility (MTF), and as a result a large percentage of your transactions will be matched on this platform.
- **OTC:** Orders will be negotiated via telephone or electronic system and placed with a counterparty with whom we have entered into an agreement for processing orders on an agency basis.

This policy appendix will be updated whenever a material change occurs and will be made available to you thereafter. Should you have any questions on this policy, please contact your Securities Lending Relationship Manager.

APPENDIX 4: TRANSITION MANAGEMENT SCHEDULE

This Appendix provides information on how, where and when best execution is delivered by Northern Trust's Transition Management business when handling or executing transactions with Professional Clients, as required by MiFID II and the applicable EU/EEA, Luxembourg and UK regulations. The obligation of best execution applies where the NT entity providing the service, acting in its capacity as agent, transmits an order to buy or sell a Financial Instrument from a client to a broker.

This appendix should be read in conjunction with the Northern Trust General Order Execution Policy. All defined terms which have not been defined in this appendix shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

a) Relevant NT legal entities

Northern Trust Capital Market's Transition Management services are provided by the following NT legal entities, depending on your jurisdiction, and the specific order handling and arrangements in place for the execution of your orders will be relevant as follows:

- **Clients in the UK and the rest of EMEA**

The Northern Trust Company, London branch ('TNTC LB'), Northern Trust Global Services SE ('NTGS SE'), or Northern Trust Investor Services Limited ('NTISL') acts as your agent when receiving and transmitting orders on behalf of its clients. Typically for equity and debt instruments, TNTC LB / NTISL and the TM team will stage and transmit client orders to its broker-dealer affiliates, Northern Trust Securities LLP ('NTS LLP') and Northern Trust Securities, Inc. ('NTSI') for execution in the market. For other asset classes, such as equity and FX derivatives, TNTC LB/ NTISL may also transmit orders to a third-party executing broker selected by the client.

Please refer to the schedule in Appendix 1: Institutional Brokerage above for further details in respect of how NTS LLP executes client orders.

- **Clients in the EU/EEA:**

Northern Trust Global Services SE ('NTGS SE') acts as your agent when receiving and transmitting orders on behalf of its clients. Typically NTGS SE and the TM team will stage and transmit client orders to its broker-dealer affiliates, Northern Trust Securities LLP ('NTS LLP') and Northern Trust Securities, Inc. ('NTSI') for execution in the market. For other asset classes, such as equity and FX derivatives, NTGS SE may also transmit orders to a third-party executing broker selected by the client.

Please refer to the schedule in Appendix 1: Institutional Brokerage for further details in respect of how NTS LLP executes client orders.

b) General execution arrangements for all NT clients

In most circumstances NTGS SE and TNTC LB and NTISL act in an agency capacity on behalf of their clients and will therefore be required to provide Best Execution when:

- Carrying out portfolio trades by arranging how these trades are executed, including timing and strategy.
- Appointed to assist with a particular project which includes trade execution and you are no longer shopping around for quotes; and when you could benefit from costs savings that can be achieved in comparison to the costs that are estimated for you.

Orders transmitted to NTS LLP and NTSI for execution are monitored by the transition management desk in real time around the clock with all the NT trade desks which have our orders. Once the trade is sent, the NTS LLP and NTSI trading desks use their own execution arrangements, which are global and allow for pass the book order management regardless of trade desk location, to execute TM client orders.

B. Execution Venues

TM relies upon its trading affiliates and third-parties designated by the client for the execution of client orders.

Please refer to the schedule in Appendix 1: Institutional Brokerage for further details in respect of how NTS LLP executes client orders and their execution venues.

APPENDIX 5: FUND ORDER PROCESSING SCHEDULE

This Specific Order Execution Schedule is part of the NT Order Execution Policy to which it is annexed, and it should be read together with the General Order Execution Policy. If there is any inconsistency between the General Order Execution Policy and this Specific Order Execution Schedule with respect to the businesses covered, the more specific requirements set forth in this Specific Order Execution Schedule apply. Any defined terms used but not defined herein shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

a) Relevant NT legal entities

The Northern Trust Company, London branch ('TNTC') and Northern Trust Global Services SE ('NTGS SE') and its branches act in an agency capacity when receiving and transmitting orders for the Fund Order Processing service.

b) Order handling

This appendix sets out our approach to order handling when processing transactions in respect of the following services:

- Fund Order Connect ("FOC")
- Fund of Hedge Funds ("FoHF")
- Smart Allocation ("SA")

The services require us to transmit orders on your behalf to a specific party, for example the manager, administrator, transfer agent or general partner of the fund. While we are not ultimately responsible for executing your orders, we will take all sufficient steps necessary when handling your orders to obtain the best possible result for you, consistent with our obligations under the CSSF requirements and FCA's COBS rules and Principles. Our obligations concerning receipt and transmission of orders are further set out in the General Order Execution Policy.

For the avoidance of doubt, where we process your transactions in accordance with your instructions, we will consider our obligations to you to have been appropriately discharged.

B. Execution Factors

We do not have any discretion when processing your instructions; however, in order to ensure we act in your best interests we will consider the following criteria where applicable:

- **Price** – this concerns the resulting price of a transaction. As noted in section 3 of the General Policy, this is typically considered the most important criteria. However we do not have any discretion over transaction price regarding the services above; for the avoidance of doubt, the price is determined independently by the fund manager and stipulated in the contract note provided to you. The price is calculated in accordance with the rules within the fund prospectus (also referred to as the "valuation point").
- **Speed** – we define this as the rate at which your order can be processed, namely the time between receiving your order and transmitting it to the relevant party. We do not have any discretion regarding when your instructions will be transmitted; instead, we will adhere to pre-agreed deadlines which determine when an order can be processed for the next valuation point.
- **Likelihood of execution / settlement** – subject to your successful on-boarding and the destination fund remaining fully open to subscriptions for purchase or redemption, all orders will be transmitted in accordance with your instructions, so that the likelihood of execution and settlement is not a relevant factor for this product.
- **Costs** – any transaction costs including any fees charged, are notified to you. Such notification is communicated before transactions are executed – typically at the outset of our relationship.
- **Other factors** – there will commonly only be one method of purchasing or redeeming units, for example via the manager, administrator, transfer agent or general partner of the fund, and this limits the applicability of the other factors. For example, order size is not relevant provided no subscription or redemption caps are in place.

APPENDIX 6: MONEY MARKET FUND INVESTMENT SERVICE & CLIENT DRIVEN MONEY MARKET FUND INVESTING SCHEDULE

This Specific Order Execution Schedule is part of the NT Order Execution Policy to which it is annexed, and it should be read together with the General Order Execution Policy. If there is any inconsistency between the General Order Execution Policy and this Specific Order Execution Schedule with respect to the businesses covered, the more specific requirements set forth in this Specific Order Execution Schedule apply. Any defined terms used but not defined herein shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

a) Relevant NT legal entities

The Northern Trust Company, London branch ('TNTC') and Northern Trust Global Services SE ("NTGS SE") and its branches act in an agency capacity when processing money market fund orders.

b) Order handling

This appendix sets out NT's approach to order handling when processing transactions in respect of the following services:

- Client Driven Money Market Fund Investing ("CDMMFI")
- Money Market Fund Investment Service ("MMFIS")

The provision of these services requires NT to execute orders to subscribe or redeem units in a money market fund (MMF) by sending an order to the Fund or the Transfer Agent of the Fund. NT will execute client orders in accordance with this policy and our obligations under the CSSF requirements and FCA's COBS Rules and Principles.

NT will receive client instructions for executing orders for the subscription or redemption of units via the Money Market Fund Investment Service addendum or Client Driven MMF Investing Agreement. The agreements provide instructions on every aspect of the transaction. Therefore, NT has no discretion over how orders are executed. The execution of all transactions, in strict adherence with the instructions, will constitute NT's discharge of our best execution obligations. This is in accordance with the provisions set out in the General Policy.

B. Execution Factors

NT will not exercise any discretion in the execution of client orders, undertaken pursuant to the addendum/agreement. The Best Execution factors will be undertaken in accordance with the following, where applicable:

- **Price** – due to the nature of the instruments, being units in a fund, there is typically only one daily valuation point. Therefore, price is not a relevant factor for these transactions.
- **Speed** – All subscription or redemption orders are processed automatically at the same time each day, shortly before the respective currency dealing deadline of the destination MMF. Therefore, speed is not a relevant execution factor in terms of the timing of orders placed. NT will always try to execute client orders in a timely fashion.
- **Likelihood of execution and settlement** – Subject to a successful onboarding and approval considerations, and on the basis that the target MMF is fully open / not closed to subscriptions or in a situation where a redemption gate has been imposed, the subscription and redemption orders, which NT places on behalf of clients, will be executed and settle. Therefore, the likelihood of execution and settlement failure is not a relevant execution factor for this product.
- **Costs** – NT will take into account costs associated with execution (including costs to NT). These may include but are not limited to transaction fees and service operating fees.
- **Size** – The size of orders is determined by the automated daily investable balance, which is calculated in accordance with the client-agreed terms set out within the client addendum/ agreement. Therefore, the size of the order is not a relevant execution factor for this product.
- **Nature or any other consideration relevant to the execution of an order** – The nature of the order is always either a full subscription or redemption instruction for the full amount specified in accordance with the terms set out within the client agreement. Therefore, the nature of the order is not a relevant execution factor for this product.

APPENDIX 7: NORTHERN TRUST LIQUIDITY SOLUTIONS PORTAL SCHEDULE

This Specific Order Execution Schedule is part of the NT Order Execution Policy to which it is annexed, and it should be read together with the General Order Execution Policy. If there is any inconsistency between the General Order Execution Policy and this Specific Order Execution Schedule with respect to the businesses covered, the more specific requirements set forth in this Specific Order Execution Schedule apply. Any defined terms used but not defined herein shall have the meaning given in the General Order Execution Policy.

A. General order handling and execution arrangements

a) Relevant NT legal entities

The Northern Trust Company, London branch ('TNTC') and Northern Trust Global Services SE ('NTGS SE') provide the investment service of receiving and transmitting orders to subscribe or redeem units in funds, received from their clients through the Northern Trust Liquidity Solutions Portal.

b) Order handling

This appendix sets out NT's approach to order handling when processing transactions in respect of the following services:

- Northern Trust Liquidity Solutions Portal ('NTLSP')

The provision of these services requires NT to receive client orders to subscribe or redeem units in supported funds through the Northern Trust Liquidity Solutions Portal, and then to transmit the client order in full to the relevant Fund or Transfer Agent of the Fund, who will then execute the order in accordance with the subscription and redemption rules and procedures of the fund.

The Northern Trust Liquidity Solutions Portal allows clients to provide instructions on every aspect of the desired fund transaction, which will be executed by the relevant Fund Transfer Agent; NT therefore has no discretion over how orders are executed. The execution of all transactions, in strict adherence with the instructions, will constitute NT's discharge of our best execution obligations. This is in accordance with the provisions set out in the General Policy and our obligations concerning receipt and transmission of orders under the CSSF requirements and FCA's COBS Rules and Principles.

B. Execution Factors

NT will not have any discretion when processing your instructions; however, in order to ensure we act in your best interests we will consider the following criteria where applicable:

- **Price** – This concerns the resulting price of a transaction. We do not have any discretion over transaction price regarding the services above; as the price is determined independently by the fund manager. The price is calculated in accordance with the rules within the fund prospectus (also referred to as the "valuation point"). Due to the nature of the instruments, being units in a fund, there is typically only one daily valuation point. Therefore, price is not a relevant factor for these transactions.
- **Speed** – We define this as the rate at which your order can be processed, namely the time between receiving your order and transmitting it to the relevant party. We will adhere to disclosed portal deadlines which determine when an order can be processed for the next valuation point. NT will always try to transmit client orders in a timely fashion.
- **Likelihood of execution / settlement** – Subject to your successful on-boarding and the destination fund remaining fully open to subscriptions for purchase or redemption, and not closed to subscriptions or in a situation where a redemption gate has been imposed, all orders will be transmitted in accordance with your instructions. Therefore, the likelihood of execution and settlement is not a relevant factor for this product.
- **Costs** – any transaction costs including any fees charged are notified to you. Such notification is communicated before transactions are executed – typically at the outset of our relationship.
- **Other factors** – There will commonly only be one method of purchasing or redeeming units, for example via the transfer agent of the fund, and this limits the applicability of the other factors. For example, order size is not relevant provided no subscription or redemption caps are in place.

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