J.P. MORGAN EMEA EXCHANGE TRADED DERIVATIVES (ETD): EXECUTION POLICY

APPENDIX 3

Contents

Introduction	3
Scope	3
Execution and Venue Selection	4
Execution Factors	4
Order Handling	4
Execution Monitoring and Review	5
Receipt and Transmission of Orders	5
Selection of Affiliates	6
Selection of Third Party Brokers	6
Annex A – Glossary of Terms	7
Annex B – List of Execution Venues, Third Party Liquidity Promarket Makers and J.P. Morgan Affiliates	

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Introduction

This document sets out the approach to Best Execution when handling transactions in Exchange Traded Derivatives (ETD). It is an Appendix to the J.P. Morgan Execution Policy (the **Overarching Execution Policy**), which is available here.

All definitions used herein shall have the meaning given in the Overarching Execution Policy, unless expressly indicated otherwise.

Further Information

In producing the Overarching Execution Policy and this Appendix, we have provided information we believe to be appropriate to facilitate your making an informed decision regarding our execution practices. For clients or prospective clients who would like to understand in further detail the way in which we will usually handle a range of typical orders, please contact your usual J.P. Morgan sales representative.

Scope

In-scope:

As outlined in the Overarching Execution Policy, Best Execution applies where a client places legitimate reliance on J.P. Morgan. The Four Fold Test will be applied with respect to your ETD orders to determine whether there is reliance.

Best Execution applies where J.P Morgan provides agency services in the capacity of executing ETD transactions with clients. Broadly speaking this can be defined in two distinct categories of client orders;

- I. Worked Orders: Orders will be executed in line with any Specific Instructions (see below) received from a client. Worked Orders will typically be executed by J.P. Morgan via the use of electronic execution mechanisms (e.g. algorithmic trading strategies) designed to fulfil Best Execution obligations.
- II. Direct Electronic Access: Constituting electronic access, allowing the client to execute directly on Exchange via J.P. Morgan's infrastructure.

Limited Scope or Applicability:

There are circumstances in which Best Execution is considered not to be applicable or will have limited scope to the execution of orders in the context of ETD. These include;

- I. RFQ Transactions: Where you as the client request a quote (RFQ) from J.P. Morgan as set out in the Overarching Execution Policy, J.P. Morgan will consider the RFQ in the context of the Four Fold Test to determine whether you are placing legitimate reliance on J.P. Morgan. Where the Four Fold Test indicates that you are not legitimately relying on J.P. Morgan, then Best Execution will not apply.
- II. Specific Instructions: Where you as the client give J.P. Morgan a specific instruction, such as specifying the use of an Algorithm or the placement time of an order, to the extent that we accept and follow your instructions, we will have satisfied any Best Execution requirements with respect to that aspect of your order. The remaining elements of the order not covered by your specific instructions will remain subject to Best Execution requirements.
- III. Pre-negotiated Orders: In certain situations, some regulated markets permit the execution of ETD transactions outside of the Central Limit Order Book, subject to market specific parameters being met such as minimum transaction size thresholds and timely reporting requirements. In the context of ETDs, examples of such situations include the organisation of Block Trades, Cross Trades, Basis Trades or Exchange For Physical trades (submitting matching business accordingly, as applicable).
 - J.P. Morgan, upon a receipt of a counterparty request for a price for such a transaction,

will typically execute on an RFQ basis and apply the Four Fold Test as described above for RFQ Transactions. Generally, it would not be expected that clients would place legitimate reliance on J.P. Morgan in the context of ETD Pre-negotiated Transactions. J.P. Morgan has observed the general practice of counterparties electing and being able to obtain multiple quotes from other market participants if so desired (i.e. an ability to "shop around"). This observation could indicate a higher level of transparency in this market.

Execution and Venue Selection

ETDs are typically transacted only on the Execution Venue of their listing and therefore your orders in the instrument will determine the Execution Venue. The application of Best Execution is therefore limited to liquidity available on the relevant Execution Venue for the instrument.

Please refer to Appendix 1 of the Overarching Execution Policy and Annex B (below) for a list of Execution Venues.

Execution Factors

J.P. Morgan considers the following factors when executing your ETD order:

- Price
- Speed
- Likelihood of Execution
- Size

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Costs

Depending on the order type and the instructions that you as the client provide to J.P Morgan, certain factors may be deemed to be more important than others factors as outlined below.

Key Execution Factors

Price: This refers to the resulting price of the transaction excluding J.P. Morgan's execution charges.

Speed: We define speed as the rate at which your order is progressed. Where you as the client express instructions to use a defined rate, J.P. Morgan will follow your instruction. Where your instructions do not specify speed, J.P. Morgan will progress your order at a rate which we believe represents a balance between creating market impact and executing your order in a timely fashion so as to reduce execution risk.

Likelihood of Execution and Size: We interpret this as the likelihood that we are able to entirely fill your order, or at least a substantial part of it. These factors are most relevant when access to liquidity in relevant instruments is constrained in some way.

Costs: These relate to commissions (e.g. as defined in your Client Agreement or Give Up Agreement) and standardised market fees (e.g. those charged by the relevant Exchange). You are charged according to the commission schedule (in the case of the Client Agreement) or rate card (in the case of the Give Up Agreement).

Order Handling

Once we have accepted your order, we will consider the above execution factors in the context of the instructions that you have provided. J.P. Morgan will comply with applicable regulatory obligations when developing and employing each aspect of its execution arrangements.

Orders may also be subject to either all or some of the factors outlined below:

- I. Type of order
- II. On-screen (exchange) liquidity of the instrument

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- III. The client specific instruction on the order
- IV. Size of the order
- V. General prevailing conditions in the market at the time of the order

Subject to your specific instructions, our execution strategy may work your order immediately or over a period of time to achieve Best Execution. An example of such instance could be a large order in size and/or an illiquid contract, in which case speed would be deprioritised in order to be more passive within the market and to ensure there is not an unacceptable cost or price impact to you as the client.

The execution strategy employed will take into account any information that you provide us with, together with our knowledge of the relevant instrument and the market in which you are seeking to execute. With respect to our electronic trading services, the execution strategy will usually be formed automatically unless the circumstances of your order or the relevant instrument are unusual in some way.

Execution Monitoring and Review

J.P. Morgan monitors Best Execution on a regular basis through post-trade controls. The purpose of the monitoring is to identify execution situations which are potentially subject to Best Execution and to monitor the correct application of internal decision processes by J.P. Morgan Sales. Further, in case Best Execution is applicable, J.P. Morgan monitors whether the respective executions fulfil respective requirements.

The results of the Best Execution monitoring are reviewed by the control-related functions within J.P Morgan on an ongoing basis and are discussed by J.P. Morgan management and control functions within a committee that has been established for the purpose of governing Best Execution. This committee will review the results of execution monitoring on a regular basis or at such other appropriate time interval determined by J.P. Morgan management in order to evaluate the effectiveness of the firm's execution arrangements.

Where appropriate any corrective action that may be required will be taken by J.P. Morgan management.

Receipt and Transmission of Orders

The arrangements described in this policy apply when one of the J.P. Morgan entities (as defined in the Overarching Execution Policy) handles the execution of your order.

Using affiliated entities and third party entities such as carry brokers (for access to certain regulated markets) allows J.P. Morgan to provide market access where it otherwise may not be able to execute or, where we believe it addresses certain aspects of your order in your best interests.

You should be aware of the potential difference in approach to execution standards when using affiliated entities and third party entities. J.P. Morgan retains its obligations regarding Best Execution; however the execution of the transaction may be carried out by an entity which is not subject to the Best Execution requirements under MiFID or the FCA Rules.

Should you require any further information on the entities which may carry out execution of your orders in specific markets, please contact your usual J.P Morgan contact.

Where J.P. Morgan engages either an affiliate or a third party broker for order execution, we will:

- I. Carry out due diligence on that entity and will take appropriate steps to ensure that the entity provides an appropriate standard of execution in the relevant market(s); and
- II. Monitor and review executions with the entity or broker to satisfy ourselves that they are providing appropriate standards of execution.

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Selection of Affiliates

J.P. Morgan manages its business globally. Based on the market in which the order is to be executed, J.P. Morgan will engage an entity that has the relevant local market knowledge and execution capabilities to act in your best interests.

These execution capabilities may include:

- · Membership of local exchanges;
- Experienced trading personnel with local product knowledge; and
- Relationships with reputable local execution brokers where JPM does not hold an exchange membership.

As benefits of using J.P. Morgan entities we consider:

- · Certainty of market access;
- Local market knowledge and execution expertise;
- · Consistency of order handling and Best Execution practices;
- Governance and oversight of processes and the transparency thereof; and
- Integrated front to back technology and infrastructure for the effective management of your orders on a global basis, 24 hours a day.

In markets where the relevant J.P. Morgan entity does not have an exchange membership, or, in order to manage certain characteristics of your order, the entity itself will engage a J.P. Morgan approved third party broker for execution.

Handling of orders by J.P. Morgan affiliates is monitored for Best Execution purposes in accordance with our execution monitoring measures as described above.

Please refer to Annex B where we list the J.P. Morgan affiliates that we use.

Selection of Third Party Brokers

J.P. Morgan uses a number of third party brokers for order execution. All J.P. Morgan approved brokers are required to undergo the J.P. Morgan on-boarding process and comply with the J.P. Morgan terms of business.

J.P Morgan will select an appropriate third party broker with the necessary market access and expertise to execute the order based upon the characteristics of the order.

The reasons to engage a third party broker may include:

- The inability of the relevant J.P. Morgan entity to access the market directly or via a J.P. Morgan affiliate
- To trade certain types of order (e.g., a floor traded security); and
- The requirement for additional execution resources to manage unexpected volumes and maintain Best Execution

As benefits of using a third party broker we consider:

- Using a third party broker enables the J.P. Morgan entity to access markets to or execute certain characteristics of an order that it would otherwise be unable to do
- The business is required to have appropriate third party brokers to ensure appropriate contingency planning and risk mitigation; and
- Handling of orders by third parties is monitored for Best Execution purposes in accordance with our execution monitoring policy as described above.

Please refer to Annex B where we list the affiliates and third party brokers that we use.

Annex A – Glossary of Terms

Best Execution	The obligation to obtain, when executing orders, the best possible result for our clients taking into account the relevant execution factors.
Execution Venues	Execution venues include regulated markets, Multilateral Trading Facilities, Organised Trading Facilities (not applicable to equity instruments), Systematic Internalisers, Market Makers and Liquidity Providers.
FCA Rules	The Financial Conduct Authority's Conduct of Business sourcebook.
Fill Rate	For aggressive / marketable orders: the average ratio of the volume executed on our orders over the liquidity available at the time of sending the order according to the prevailing market data.
Financial Instruments	As defined by MiFID II in Annex I Section C.
MiFID	The Markets in Financial Instruments Directive.
MiFIR	Markets in Financial Instruments Regulation.
MiFID II	Collective name for MiFID/MiFIR.
Systematic Internaliser	An investment firm which, on an organised, frequent, systematic and substantial basis, deals on own account when executing client orders outside a regulated market or MTF.
Best Execution Governance Committee	A committee within J.P. Morgan that meets quarterly to review our execution arrangements and performance. The committee comprises front-office and compliance staff.
Exchange	In the context of ETD, this is an Exchange venue where ETD products are traded on the central order book.
Market Data	Information that is published in real-time by a market that informs participants as to the contents of the order book (pre-trade data) and the executions which have taken place (post-trade data).
Market Impact	Movement of the price of a product that may follow orders or transactions in that product.
Multi-Lateral Trading Facility ('MTF')	European regulatory term to describe a non-exchange financial trading venue. These are alternatives to the traditional exchanges where a market is made in ETD products, typically using electronic systems.
Working Order (order related)	A process whereby, rather than submit your order in its entirety to one or more execution venues, we release parts of the order gradually over an appropriate period of time.
Trading Venue	A term comprising venues which are regulated under MiFID II as either regulated markets or Multilateral Trading Facilities.

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Annex B – List of Execution Venues, Third Party Liquidity Providers, Market Makers and J.P. Morgan Affiliates

Trading Venues:

These are venues which are classed as such under MiFID II or classed equivalently in countries outside of the EEA. In the majority of cases we access these venues under our own membership. In some cases we access Trading Venues through a third party.

A list of such venues can be found in Appendix 1 of the Overarching Execution Policy.

Use of third party Liquidity Providers, including brokers and other market makers:

In addition to accessing the Execution Venues listed in Appendix 1 of the Overarching Execution Policy, we may also use other investment firms to provide access to liquidity, particularly where we do not have direct access to certain Execution Venues.

Ambrosino Brothers LLP

Atlantic Trading Asia PTY LTD

BMO Nesbitt Burns Inc

Chicago Capital Markets

CTC LONDON LIMITED

DRW INVESTMENTS (UK) LIMITED

DRW Europe Derivatives BV

Erste Group Bank SA (Erste Securities Polska SA)

GMG BROKERS

Grasshopper PTE

HAP trading

HSBC Bank Plc (Pantelakis Securities SA)

IS Yatirim Menkul Degerler A.S.

KGI

Lakeshore

Lloyd's Bank

MAKO FIXED INCOME PARTNERSHIP LLP

Mako Global Derivatives Partnership LLP

MAKO DERIVATIVES AMSTERDAM B.V.

MAVEN DERIVATIVES LTD

Maven Europe LTD

Minmetals & Jingyi Futures Co., Ltd

MMX trading

OPTIVER VOF

OTCex SA

Philip Futures Pte Ltd

PNT Financial LLC

R.J. O'Brien Limited

Sagora

SEQUOIA CAPITAL LLP

Sgd LLC (Stack)

Sucden Financial
The Tfaz Group LLC

Tower Trading Group Limited

Walleye

Please also find below a list of J.P. Morgan affiliates with which client orders are placed:

- J.P. Morgan SE
- J.P. Morgan Broking (Hong Kong) Limited
- J.P. Morgan Securities Australia Limited
- J.P. Morgan Securities (Far East) Limited Seoul Branch
- J.P. Morgan Securities Canada Inc.
- J.P. Morgan Securities LLC
- J.P. Morgan Securities Singapore Private Limited
- JP Morgan Futures Co Ltd
- JP Morgan India Private Ltd
- JP Morgan Securities (Taiwan) Ltd
- JP Morgan Securities (Thailand) Ltd
- JP Morgan Securities SA (Pty) Ltd
- JP Morgan Securities Plc
- JPMorgan Chase Bank, N.A. London Branch
- JPMorgan Securities (Malaysia) Sdn. Bhd.
- JPMorgan Securities Japan Co., Ltd.