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| Legal Entity | J.P. Morgan AG (549300ZK53CNGEEI6A29) |
| Class of Instrument | Currency derivatives: Swaps, forwards, and other currency derivatives |
| Summary of Analysis | |
| For the year of 2020 in respect of eCommerce Orders, J.P. Morgan AG collated quoted bid/offer spreads over a rolling timeframe. These were compared to completed leave transactions (on a post-trade basis) to identify outliers. The results of this Best Execution analysis were reviewed by J.P. Morgan management and control functions and were in line with J.P. Morgan AG expectations**.** Clients direct their orders to J.P. Morgan AG to execute as principal and we therefore treat all orders as directed as we are the sole execution venue. | |
| Relative importance given to execution factors & other considerations | As per Appendix 5 of the [J.P. Morgan Execution Policy](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-main-execution-policy-dec-2020.pdf) price is the most important factor. After price, the likelihood of execution and the ability to fill a client’s order in its entirety – or at least a substantial part of it – are the most important factors. This latter factor increases in importance in situations where access to liquidity in the relevant instrument is constrained in some way – for example, if the currencies of the transaction are illiquid, or if the limit price provided is not marketable. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan AG is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | J.P. Morgan AG is the sole execution venue. |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan AG only deals with Professional clients for the purposes of Best Execution. |
| Use of data/tools relating to the quality of execution | As per Appendix 5 of the [J.P. Morgan Execution Policy,](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-main-execution-policy-dec-2020.pdf) a range of market data sources are utilised by J.P. Morgan’s eCommerce business in the formation of principal risk prices. Both readily available market data and J.P. Morgan internal transaction data are used to assess the quality of execution for in-scope orders. Thresholds comparing execution pricing with such data are set by J.P. Morgan to monitor execution quality. The results of Best Execution monitoring are reviewed by 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 |
| Use of consolidated tape provider output or other algorithms to assess execution performances | Not Applicable |

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| Legal Entity | J.P. Morgan AG (549300ZK53CNGEEI6A29) |
| Class of Instrument | Futures and options admitted to trading on a trading venue (Interest rates derivatives, equity derivatives, commodities derivatives and emission allowances derivatives) |
| Summary of Analysis | |
| The Futures and Options admitted to trading on a trading venue that have been subject to Best Execution are products described in the Appendix 3 of the  [J.P. Morgan Execution Policy](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-main-execution-policy-dec-2020.pdf).   J.P. Morgan AG monitored Best Execution in Futures and Options admitted to a trading venue on a regular basis, through post trade controls. The results of this analysis were reviewed by J.P. Morgan management and control functions.  J.P. Morgan AG regularly reviews the post trade controls to ensure that these continue to be relevant and where possible enhanced to ensure Best Execution obligations are met. Best Execution monitoring results were in line with J.P. Morgan AG expectations**.** | |
| Relative importance given to execution factors & other considerations | As per [Appendix 3](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-foexecution-pre-neg-order-best-execution-policy-final-december2020-app-3.pdf) of the J.P. Morgan Execution Policy, J.P. Morgan AG considers a number of factors when executing client Futures and Options orders (e.g. price, speed, likelihood of execution, size and costs). Depending on the order type and the instructions that a client provides to J.P Morgan, certain factors may be deemed to be more important than others.  The execution strategy employed will take into account all the information provided to us by the client, together with our knowledge of the relevant instrument and the market in which the client is seeking to execute. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan AG is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | Regarding payments made or received, discounts, rebates or non-monetary benefits received:  J.P. Morgan AG does not have any specific arrangements with any trading venues other than standard publicly available terms. Where J.P. Morgan AG contracts with execution venues, it may negotiate specific commercial terms bilaterally with those venues but those terms will not include being compensated directly or in-directly for business given to those venues. |
| Changes to execution venues | Not Applicable |
| Client distinctions | Our arrangements do not differ by client categorisation. |
| Use of data/tools relating to the quality of execution | As per Appendix 3 of the [J.P. Morgan Execution Policy](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-main-execution-policy-dec-2020.pdf) J.P. Morgan AG monitors the effectiveness of its execution arrangements and assesses on a regular basis whether the execution venues it has selected provide for the best possible result for orders it executes on behalf of its clients. Both readily available market data and J.P. Morgan internal transaction data are used to assess the quality of execution for in-scope orders. Thresholds comparing execution factors with such data are set by J.P. Morgan to monitor execution quality. The results of Best Execution monitoring are reviewed by 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. |
| Use of consolidated tape provider output or other algorithms to assess execution performances | Not Applicable |

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| Legal Entity | J.P. Morgan AG (549300ZK53CNGEEI6A29) |
| Class of Instrument | Other instruments |
| Summary of Analysis | |
| Within our fund order routing services product offering, currently an execution will arise on client instructions to subscribe for, or redeem, units in certain funds. In the year 2020, our review found the obligation of Best Execution was met in each case. The application was monitored by J.P. Morgan AG on a regular basis, through post-trade controls performed by the business which were monitored at the relevant Securities Services Control forum. This monitoring identified execution situations which are potentially subject to Best Execution and also monitored the correct application of the decision-making process. | |
| Relative importance given to execution factors & other considerations | Please refer to [J.P. Morgan EMEA Securities Services: Execution Policy](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/new-appendix-4-emea-securities-services-execution-policy-dec-2020.pdf).. In this policy, page 7 details the considerations for the key execution factors and page 11 details the factors affecting the business’s choice of execution venues. |
| Execution venue close links / conflicts of interest / common ownerships | Please note that some of the investment vehicles we make available may include investment funds of our affiliates. |
| Specific execution venue arrangements | Not Applicable |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan AG only deals with Professional clients for purposes of Best Execution. |
| Use of data/tools relating to the quality of execution | The quality of the execution is monitored through J.P. Morgan AG’s automated systems which manage and reconcile executions of orders against execution factors relevant to a particular line of business as further outlined in [J.P. Morgan EMEA Securities Services: Execution Policy](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/new-appendix-4-emea-securities-services-execution-policy-dec-2020.pdf). Any exceptions or errors identified are managed by a dedicated team within a reasonable time. On a periodic basis, Best Execution metrics are compiled and consolidated for a particular line of business for review at the relevant business control forum. |
| Use of consolidated tape provider output or other algorithms to assess execution performances | Not Applicable |

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| Legal Entity | J.P. Morgan AG (549300ZK53CNGEEI6A29) |
| Class of Instrument | Equities – Shares & Depositary Receipts  Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)  Other instruments (as traded by the CIB Cash Equities line of business) |
| Summary of Analysis | |
| Execution Venue Performance:  In 2020, J.P. Morgan AG primarily accessed execution venues for securities which maintained their primary listing on an EEA-domiciled exchange. In 2020 J.P. Morgan AG also connected to a number of execution venues, domiciled in the EEA, to provide continuity to clients trading in these securities after the Brexit transition period ended. The individual venues added are summarised on the following pages.  J.P. Morgan AG monitored a number of performance factors in relation to the venues listed within Appendix 1 of the [J.P. Morgan Execution Policy,](https://www.jpmorgan.com/content/dam/jpm/global/disclosures/us/20201230-main-execution-policy-dec-2020.pdf) The factors reviewed together with the key observations made are as follows:  **Access to Liquidity**  Conventional Displayed Trading Venues: In line with our execution policy, we maintained access to the primary market for securities in which we act as the executing broker. Additionally, we maintained access to the following significant pan-European multilateral trading facilities (MTFs): CBOE, Turquoise, and Aquis. In combination, these venues provide access to over 95% of displayed liquidity in the relevant markets.  Non Displayed, Periodic Auction and other Execution Venues: In 2020, we added a number of additional venues to enhance our liquidity access. The individual venues added are summarised on the following pages.  **Pricing Analysis and Performance**  Conventional Displayed Trading Venues:  We maintain measures of *price improvement* that indicate the extent to which a trade performed on a given venue provides a better price than that available on the primary market at the time of trading. These metrics indicated that material price improvement was obtained as a result of transactions performed on CBOE, Turquoise and Aquis. The metrics observed over 2020 indicate both that the venues themselves provide price improvement opportunities and that our routing practices are successfully identifying those opportunities. Average price improvement observed across CBOE, Turquoise and Aquis venues ranged from **1.06** – **1.71** basis points (bps).  Systematic Internalisers:  Electronic Liquidity Providers (ELPs): In 2020, we observed price improvement (measured as a percentage of the spread) of **8.43%**. We also observed smaller adverse movements in the market (market impact) following executions conducted with ELPs compared to executions on conventional displayed trading venues.  J.P. Morgan Venues: Our own Systematic Internaliser was our largest venue of execution by value in 2020. We observed an average price improvement of **3.3** bps / **48.0%** of spread over the course of 2020.  **Latency and Fill Rates (**Applicable to Conventional Displayed Trading Venues Only) **|** This relates to the ability of our systems to reliably access displayed liquidity. This performance factor reflects that of our own systems as well as those of the venue itself and its physical location.  **Market access latencies:** were largely driven by the location of a trading venue’s datacentre: Based on December 2020 data, U.K.-based displayed venues exhibited median round-trip times ranging from **0.50** – **1.60** milliseconds. In addition, round-trip times exhibited by venues based in continental datacentres ranged from **9.51** – **24.23** milliseconds.  **Fill rates:** weighted average *fill rates*[[1]](#footnote-1) obtained across lit venues for immediate or cancelled (IOC) orders were **95.0**% when sending orders to individual venues and **91.0**% when sending orders to multiple venues within a single routing decision. From these data, we conclude that we are able to reliably capture the liquidity displayed to us by these trading venues. | |

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| Relative importance given to execution factors & other considerations | Execution factors affecting short term venue selection: Where we are choosing between multiple *execution venues* together with our own capacity as a Systematic Internaliser, we will adhere to the following principles according to the type of order that we are trying to execute:   * *marketable* *orders*: our objective is to achieve the best price[[2]](#footnote-2) whilst minimizing the chance of adverse price movements around the time of execution and maximizing the speed and likelihood of execution. We may take into account the cost of execution provided that it is not to the detriment of the other factors. * *non-marketable orders* on *displayed execution* venues: we consider that the price of the execution is set and our choice of venue will be determined by maximizing both the speed and likelihood of execution only. * orders across a range of *non-displayed,* or *periodic-auction* venues: our priority will be to maximize the speed and likelihood of execution whilst also minimizing the chance that there are adverse price movements around the time of execution. The goal of minimizing adverse price movements may result in preferencing *internalisation*.   Please refer to our [execution policy](https://www.jpmorgan.com/directdoc/mifidii-appendix2-cash-equities-policy.pdf) for further information on factors affecting our choice of execution venues. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan Financial Investments Limited has a stake (of 2.4%) in Turquoise Global Holdings Limited which owns the trading venue *Turquoise*. J.P. Morgan AG is a fully owned subsidiary of JPMorgan Chase & Co. (J.P. Morgan) |
| Specific execution venue arrangements | Regarding payments made or received, discounts, rebates or non-monetary benefits received:  J.P. Morgan does not have any specific arrangements with any trading venues other than standard publicly available terms. Where J.P. Morgan contracts with execution venues, it may negotiate specific commercial terms bilaterally with those venues but those terms will not include being compensated directly or in-directly for business given to those venues. |
| Changes to execution venues | In 2020 we added several venues to the list of significant venues cited within our execution policy. In particular, the following venues were also added to further improve access to liquidity:   * J.P.Morgan Securities PLC (addition of *Close Cross* service) * Jump Trading B.V.   We also added access to the EEA operations of some relevant existing venues in preparation for the departure of the United Kingdom from the European Union. As part of these Brexit preparations, we added access to the following venues:   * Cboe DXE (Lit, Dark, Periodic Auction, Closing Cross) * Liquidnet EU * Turquoise NL (Lit, Dark, Periodic, Block Discovery) |
| Client distinctions | We do not operate differing execution arrangements by client categorisation. |
| Use of data/tools relating to the quality of execution | We have used group-level transaction cost analysis technology in our analysis. |
| Use of consolidated tape provider output or other algorithms to assess execution performances | Not Applicable |

1. Measured as the average percentage of liquidity obtained versus that displayed at the time that the routing decision was made. [↑](#footnote-ref-1)
2. We may make an exception to this if we have reason to believe that, in selecting the best price for an individual portion of the order that, course of action may result in a less beneficial price for the whole order. [↑](#footnote-ref-2)