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| Legal Entity | J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Equities – Shares & Depositary Receipts  Exchange traded products (Exchange traded funds, exchange traded notes and exchange traded commodities)  Other instruments |
| Summary of Analysis | |
| Execution Venue Performance:  J.P. Morgan Securities plc monitored a number of performance factors in relation to the venues listed within Appendix 1 of the J.P. Morgan Execution Policy. 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 99% of displayed liquidity in the relevant markets.  Non Displayed, Periodic Auction and other Execution Venues: In 2018, we added a number of Systematic Internalisers to increase client liquidity access (see list below).  **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 2018 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 0.55 – 1.09 basis points.  Non Displayed, Periodic Auction and other Execution Venues:  Third Party Venues: Periodic auctions and Systematic Internalisers became a more significant source of liquidity in this category over the course of 2018. Venues within this category have typically provided material price improvement over that available on other classes of venue. Periodic auctions, order books operating under the reference-price or large-in-scale waivers and Systematic Internalisers operated by full service brokers offered the greatest price improvement at execution time.  J.P. Morgan Venues: Our own Systematic Internaliser was our largest venue of execution by value in 2018. Estimated effective spread costs associated with transactions during the course of executing client orders were 2.69 basis points. These compared favourably with the estimated spread costs of over 6.50 basis point associated with bid/offer navigation on external trading venues.  **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 2018 data, U.K.-based displayed venues exhibited median round-trip times ranging from 0.67 – 1.35 milliseconds. Round-trip times exhibited by venues based in continental datacentres ranged from 0.95 – 25.47 milliseconds.  **Fill rates:** weighted average *fill rates*[[1]](#footnote-1) obtained across lit venues for immediate or cancelled (IOC) orders were 98.99% when sending orders to individual venues and 97.77% 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 primary goal will usually[[2]](#footnote-2) be to achieve the best price, followed by 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 Securities plc 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 2018 we added the following venues to the list of significant venues cited within our execution policy. These venues were added to improve our ability to find liquidity in non-displayed venues.   * Tower Research ELP SI * Jane Street ELP SI * Virtu ELP SI * Credit Suisse SI * Morgan Stanley SI * J.P.Morgan SI |
| 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 |

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| Legal Entity | J.P. Morgan Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Currency Derivatives: Swaps, forwards, and other currency derivatives |
| Summary of Analysis | |
| For the year of 2018 for eCommerce Orders, J.P. Morgan Securities plc collated quoted bid/offer spreads over a rolling time frame, and analysed this in comparison to completed leave transactions to identify outliers. For all in scope transactions, J.P. Morgan Securities plc was able to demonstrate that Best Execution was provided. Clients direct their orders to J.P. Morgan 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 J.P. Morgan’s Execution Policy 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 Securities plc is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | J.P. Morgan Securities plc is the sole execution venue. |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan Securities plc 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 J.P. Morgan’s Execution Policy, a range of market data sources are utilised by J.P. Morgan’s e-Commerce 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 Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Securitized Derivatives: Other securitized derivatives |
| Summary of Analysis | |
| The products that have been subject to Best Execution under Securitized Derivatives are products falling under the Relevant Structured Products section of Appendix 5 to the J.P. Morgan Execution Policy. Due to the nature of J.P. Morgan Securities plc’s business it owed Best Execution in limited circumstances for Securitized Derivatives.  J.P. Morgan Securities plc has implemented procedures in order to, on a regular basis, monitor the application of Best Execution to Securitized Derivatives through post-trade controls performed independently by control-related functions. This monitoring will identify execution situations which are potentially subject to Best Execution and will also monitor the correct application of the decision making process. J.P. Morgan Securities plc verified by means of monitoring measures that its execution arrangements worked well throughout the different stages of the execution process. | |
| Relative importance given to execution factors & other considerations | The importance given in situations in which J.P. Morgan Securities plc owes Best Execution is set out under the Relevant Structured Products section of Appendix 5 to the J.P. Morgan Execution Policy. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan Securities plc is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | J.P. Morgan Securities plc is the sole execution venue. |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan Securities plc only deals with Professional clients for the purposes of Best Execution. |
| Use of data/tools relating to the quality of execution | J.P. Morgan Securities plc assessed the fairness of pricing of transactions subject to Best Execution by reviewing relevant pricing considerations and available market data in respect of the time of 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 Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Commodities derivatives and emission allowances derivatives: Other commodities derivatives and emission allowances derivatives |
| Summary of Analysis | |
| For the year of 2018 for eCommerce Orders, J.P. Morgan Securities plc collated quoted bid/offer spreads over a rolling time frame, and analysed this in comparison to completed leave transactions to identify outliers. For all in scope transactions, J.P. Morgan Securities plc was able to demonstrate that Best Execution was provided. Clients direct their orders to J.P. Morgan Securities plc 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 J.P. Morgan’s Execution Policy 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 commodity contract of the transaction is illiquid, or if the limit price provided is not marketable. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan Securities plc is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | J.P. Morgan Securities plc is the sole execution venue. |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan Securities plc 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 J.P. Morgan’s Execution Policy, a range of market data sources are utilised by J.P. Morgan’s e-Commerce 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 Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Futures and Options admitted to trading on a trading venue including interest rate derivatives, credit derivatives, currency 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 falling Appendix 3 to the [J.P. Morgan Execution Policy.](https://www.jpmorgan.com/global/disclosures/mifidii)  J.P. Morgan monitored Best Execution in Futures and Options admitted to a trading venue on a regular basis, through post-trade controls. The results of the monitoring were reviewed by J.P. Morgan management and control functions. J.P. Morgan regularly reviews the post trade controls to ensure that these continue to be relevant and where possible enhanced to ensure Best Execution continue to be met. Best Execution monitoring results were in line with J.P. Morgan expectations. | |
| Relative importance given to execution factors & other considerations | The importance given in situations in which J.P.Morgan Securities plc owes Best Execution is set out in Appendix 3 of the [J.P. Morgan Execution Policy.](https://www.jpmorgan.com/global/disclosures/mifidii) |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan Securities plc is a fully owned subsidiary of JPMorgan Chase & Co.  J.P. Morgan Financial Investments Limited has a stake (of 2.4%) in Turquoise Global Holdings Limited which owns the trading venue Turquoise. |
| Specific execution venue arrangements | Regarding payments made or received, discounts, rebates or non-monetary benefits received:  J.P. Morgan Securities plc does not have any specific arrangements with any trading venues other than standard publicly available terms. Where J.P. Morgan Securities plc 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 | There were no changes to execution venues in 2018. |
| Client distinctions | J.P. Morgan Securities plc does not differentiate between different classes of clients for the purposes of Best Execution. |
| Use of data/tools relating to the quality of execution | J.P. Morgan Securities plc used internal data sources to assess 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 Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Credit Derivatives: Other Credit Derivatives |
| Summary of Analysis | |
| The Credit Derivatives products that have been subject to Best Execution are products falling under the Relevant Structured Products section of Appendix 5 to the J.P. Morgan Execution Policy. Due to the nature of J.P. Morgan Securities plc’s business, it owed Best Execution in limited circumstances for Credit Derivatives.    J.P. Morgan Securities plc has implemented procedures in order to, on a regular basis, monitor the application of Best Execution to Credit Derivatives through post-trade controls. This monitoring will identify execution situations which are potentially subject to Best Execution and will also monitor the correct application of the decision making process. In the year 2018, the review found that that the obligation of Best Execution was met and that the correct decision making process was followed. | |
| Relative importance given to execution factors & other considerations | The importance given in situations in which J.P. Morgan Securities plc owes Best Execution is set out under the Relevant Structured Products section of Appendix 5 to the J.P. Morgan Execution Policy. |
| Execution venue close links / conflicts of interest / common ownerships | J.P. Morgan Securities plc is a fully owned subsidiary of JPMorgan Chase & Co. |
| Specific execution venue arrangements | J.P. Morgan Securities plc is the sole execution venue. |
| Changes to execution venues | Not Applicable |
| Client distinctions | J.P. Morgan Securities plc only deals with Professional clients for the purposes of Best Execution. |
| Use of data/tools relating to the quality of execution | J.P. Morgan Securities plc assessed the fairness of pricing of transactions subject to Best Execution by reviewing relevant pricing considerations and available market data in respect of the time of 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 Securities plc (K6Q0W1PS1L1O4IQL9C32) |
| Class of Instrument | Debt instruments: Bonds |
| Summary of Analysis | |
| **FICC Execution Desk**  J.P. Morgan Securities plc – FICC Execution Desk is able to demonstrate that Best Execution was provided for all in-scope transactions in 2018. In-scope executions were monitored by J.P. Morgan Securities plc on a regular basis, through post-trade controls performed by the FICC Execution Desk. Monitoring results were discussed by J.P. Morgan management and control functions within a committee that has been established for the purpose of governing Best Execution. The FICC Execution Desk trades in a Matched Principal capacity and offers a contractual service designed to provide Best Execution to its clients in accordance with Appendix 7 of the J.P. Morgan Execution Policy (J.P. Morgan FICC Execution Desk: Execution Policy). Within this Summary of Analysis, a table has been provided demonstrating the top five counterparties selected by the FICC Execution Desk when executing trades on a non-anonymous request-for-quote (RFQ) system of a Trading Venue.   |  |  |  | | --- | --- | --- | | **Top 5 Trading Venue Counterparties in terms of Trading Venue Trading Volumes** | | | | Top five counterparties ranked in terms of Trading Venue trading volumes (descending order) | Proportion of Trading Venue trading volume traded as a percentage of the total in that class | Disclosure of close links, conflicts of interest, common ownerships | | J.P. Morgan Securities plc | 47% | J.P. Morgan Securities plc is a fully owned subsidiary of JPMorgan Chase & Co. | | Deutsche Bank Aktiengesellschaft | 11% |  | | MIZUHO INTERNATIONAL PLC | 6% |  | | Societe Generale SA | 6% |  | | Norddeutsche Landesbank -Girozentrale- | 3% |  | | |
| Relative importance given to execution factors & other considerations | **FICC Execution Desk**  As per Appendix 7 of J.P. Morgan’s Execution Policy, price is the most important factor. After price, the size and 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 | Tradeweb Europe Limited is a wholly owned subsidiary of Tradeweb Markets LLC. An affiliate of JPMorgan Chase Bank, N.A. holds a direct interest in Tradeweb Markets LLC. |
| Specific execution venue arrangements | **FICC Execution Desk**  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 2018, JP Morgan’s FICC Execution Desk added the following venues to the list of significant venues cited within our execution policy:  MTF’s: Tradeweb; Bloomberg; Bondvision; MarketAxess  OTF’s: BGC; Tradition; ICAP |
| Client distinctions | The FICC Execution Desk owes Best Execution to all of its clients. The FICC Execution Desk does not have Retail Clients. |
| Use of data/tools relating to the quality of execution | The FICC Execution Desk monitors Best Execution through post-trade performance metrics. The purpose is to monitor the correct application of internal decision processes by the FICC Execution business. The monitoring also determines whether the respective executions fulfil Best Execution requirements |
| 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)