Cowen Execution Services Limited: Trading venues and qualitative report for execution obtained for 2018

Equity

Cowen Execution Services Limited ("CESL") is subject to the EU's Markets in Financial Instruments Directive 2014/65/EU ("MiFID II") and related Commission Delegated Regulation. Under these requirements CESL is required to publish its top execution venues and a summary of quality of execution obtained.

As CESL's order routing policy explains, CESL routes all orders to its US affiliate Cowen Execution Services LLC ("CES"), which is registered as a broker-dealer with the U.S. Securities and Exchange Commission and is a member of the Financial Industry Regulatory Authority ("FINRA").

For executions outside of US markets, CESL's Client orders are routed to execution venues via CES's direct relationships with local third-party execution entities. For executions in US markets, CESL routes orders to CES and CES will generally execute such orders directly on US based execution venues.

CESL does not maintain direct relationships with any third-party execution brokers, nor is a member of any regulated markets ("RMs"), Multilateral Trading Facilities ("MTFs") nor any other third-country trading venues. Furthermore, CESL does not operate a Systematic Internaliser ("SI") nor trades in a principal capacity. As a result, CES receives 100% of CESL's order flow for execution.

Via CES's relationships with local third party execution brokers CESL accesses trading venues worldwide and leverages off trading technology and a broad range of solutions to access diverse sources of liquidity in order to deliver consistent, performance-driven results.

CES/CESL believe that routing orders via third party execution brokers enables it to obtain results for its Clients that are at least as good as the results it could reasonably expect to obtain if CESL was a member of execution venues in its own right.

CES/CESL aims to take all sufficient steps in order to obtain the best possible results for its Clients by selecting execution entities, i.e. third party executing brokers, with access to execution venues where CESL considers it can consistently achieve best execution. CESL is of the view that being a member of execution venues would not increase execution quality or keep down commissions and other related costs.

Table 1: Top 5 Venue Analysis for Equities

Class of Instrument

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Notification if < 1 average trade per business day in the previous year	N		
Top five execution venues ranked in terms of trading volumes (descending order)			Percentage of directed orders
Cowen Execution Services LLC	100%	100%	N/A
Table 2: Top 5 Venue Analysis for ETF's			
Class of Instrument	ETF		
Notification if < 1 average trade per business day in the previous year	N		
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of directed orders
Cowen Execution Services LLC	100%	100%	N/A

Within the spirit of the MIFID II's regulatory framework and in the interest of transparency, we are showing the execution venue analysis for CES for its trading in MiFID II related assets. The data set runs for the whole of 2018. As CESL/CES only trades in equity instruments we have only prepared the tables for "Equity" and Exchange Traded Funds" ("ETFs").

In order to provide our summary of quality of execution for 2018 we used a number of tools from our third-party provider for transaction cost analysis ("TCA") and best execution monitoring LiquidMetrix. The data was sourced from the FIX messages we receive from our third party brokers for all MiFID II instruments. We have looked at the venue analysis on a "Fill-by-fill" basis for each order to get as granular as possible.

CESL and CES only deal with "Professional" clients and the execution venue analysis for CES in MiFID II instruments for that class of client is as follows:

Table 3: Top 5 Venue Analysis for Equities (Broker CES)

Class of Instrument Equ

Notification if <1 average trade per

Notification if <1 average trade per business day in the previous year					
Top five execution venues ranked in terms of trading volumes (descending	Proportion of volume traded as a percentage of total in that class	Proportion of orders executed as percentage of total in that class	Percentage of passive orders	Percentage of aggressive orders	Percentage of directed orders
CBOE EUROPE – CXE ORDER BOOKS (CHIX)	19.15%	29.47%	N/A		
LONDON STOCK EXCHANGE (XLON)	12.19%	10.04%	N/A		
XETRA – REGULIERTER MARKT (XETA)	8.07%	2.27%	N/A		
EURONEXT – EURONEXT PARIS (XPAR)	7.26%	3.02%	N/A		
SIX SWISS EXCHANGE (XSWX)	4.68	1.80%	N/A		

Table 4: Top 5 Venue Analysis for ETF's (Broker CES)

CBOE EUROPE – CXE ORDER BOOKS $_{3.56\%}$

(CHIX)

Class of Instrument	ETF			
Notification if <1 average trade per business day in the previous year				
Top five execution venues ranked in terms of trading volumes (descending order)	Proportion of volume traded a a percentage of total in that class	percentage of total in passive orders	Percentage of aggressive orders	Percentage of directed orders
OFF-EXCHANGE TRANSACTIONS – LISTED INSTRUMENTS (XOFF)[1]	28.28%	0.10%		
LONDON STOCK EXCHANGE (XLON)	26.37%	39.55%		
XETRA – REGULIERTER MARKT (XETA	4)17.78%	17.26%		
EURONEXT – EURONEXT PARIS (XPAR)	8.56%	11.70%		

5.68%

The proportion of volume analysis is based on the market value in USD to standardise the data across multiple currencies. It is based on market value as opposed to the number of shares keeping it inline with Best Practice for Best Execution Reporting[2] and the MiFID II Double Volume Cap calculations.

The proportion of orders analysis is based on the number of child orders executions on each venue.

CESL summary of quality of execution obtained for 2018.

As indicated above, CESL is required to publish an annual summary of the analysis and conclusions it draws from its monitoring of the quality of execution obtained on the execution venues and through the brokers used.

In accordance with our Order Execution Policy and MiFID II, Article 27(1), the definition of best execution is the obligation on firms to "take all sufficient steps to obtain the best possible result for their clients, taking into account price, costs, speed, likelihood of execution and settlement, size, nature or any other consideration relevant to execution". This report details the processes, systems and procedures employed by CESL to implement, monitor and evaluate our Order Execution Policy, the relative importance given to the execution factors and explaining any factors that led to changes in the list of execution venues listed in CESL's Order Execution Policy during 2017.

CESL accesses over 100 markets globally through CES and as indicated above orders are routed to execution venues via CES's direct relationships with local third-party execution brokers. CES is charged a set fee per market and does not have any specific arrangements with specific execution venues with regard to payments made or received, discounts, rebates or non-monetary benefits, therefore CES does not have any close links, conflicts or common ownership with any of the venues or third-party brokers used to execute orders which means that the routing logic is un-conflicted by such issues. CES does not charge any additional fees to CESL over and above the fees that CES is charged by local third-party execution brokers.

Under RTS 28, we are required to provide an explanation of how we have used any data or tools relating to the quality of execution, including any data published under RTS 27. However, as not being a direct member of any venue we have used other data and tools relevant to data published by markets to satisfy these requirements.

The local third-party execution brokers used by CES have been reviewed regularly against quantitative and qualitative factors, including performance, venue access, SOR functionality & flexibility, costs and settlement performance. Overall, we have not identified any particular issues of concern that would have required us to replace or seek alternative trading venues for the purpose of achieving best execution.

Price has always been viewed as being of highest relative importance in obtaining the best possible result. However, all key execution factors were considered in light of the execution criteria. The assessment of these considerations determines the appropriate interaction with the relevant third-party execution broker and/or trading venue when clients provided us with discretion.

CESL gave priority to price and speed in order of importance. However, the nature or circumstances of an order may have resulted in the relative importance of the execution factors to be different.

In reviewing executions, CESL routinely considered the time interval (latency) between an order being received by CESL and its execution as well as the time interval (latency) between an order being received by one of the execution entities and its execution.

Cost of execution is generally considered as the total trading costs faced by the client. CESL regularly assessed execution costs as part of its order routing decision process and by assessing price, cost and likelihood of execution.

In executing orders, CESL considered the likelihood of execution in terms of the risk of not being able to execute orders on different venues or the probability that orders may not have been filled within a given time period. Similarly to execution factor of 'price', CESL routinely assessed likelihood of execution by measuring latency comparisons, per broker/per market.

CESL also routinely assessed any failures to execute per broker/per market as part of the order routing decision process.

Settlement was considered in light of the risk of settlement failures or delays in settlement.

For all trading venues, CES implemented a primary, secondary and tertiary broker route to ensure seamless transition during periods of IT outage and to allow for dynamic re-routing of orders when execution quality standards were not met.

CESL used a third-party vendor product for its best-execution surveillance/monitoring and TCA. CESL trading desk used the best-execution monitoring/surveillance solution to conduct, review and follow up individual executions outside set benchmark parameters.

In certain recent instances, the monitoring/surveillance solution found that the price of an execution versus the prevailing market price that reflected the best possible price that could have been obtained by routing a single aggressive order was worse than that which could have been achieved.

Our best execution monitoring/surveillance solution allowed for detailed order book replays, utilising market data from individual executions venues and further enhancing the investigative tools for CESL's trading desk.

From time to time there were recent instances were a particular execution could have achieved marginal improvements on price. However, when reflecting other factors such as settlement risk or cost to the client (due to higher commission rates for trading on that venue) the alternative execution did not reflect best execution for the client.

CESL/CEL check all executions against the prevailing market at the time of trade on a fill by fill basis to verify that we were are achieving best execution at all times. We check daily to see if there are any market executions that we receive from our third-party execution brokers that were traded outside of our "Alert Criteria." This captures all executions will a fill price outside the market spread at the time of trade. We have a small tolerance window of +/- 1000 ms from the time of trade, to account for the minor difference at the microsecond level for time of the trade

execution between brokers. We also look to see if the potential improvement of the fill against the benchmark would have been greater than USD 10 of notional value, which is a more aggressive assumption than most industry participants are using based on the discussions we have had with our TCA Provider. Each alert is investigated and in situations when there were not mitigating factors for a particular execution not meeting our best execution requirement, CES/CESL follows up with the relevant third party brokers regarding the reviewed cases and, as applicable, requested them to address necessary changes accordingly to improve routing logic or any other factors that can improve execution quality going forward.

We are pleased to report that at the end of 2018 we did not have any outstanding best execution reviews into our Third-Party brokers for not obtaining results for our Clients that are at least as good as the results it could reasonably expect to obtain if CESL was a member of execution venues in its own right.

An example of demonstrating that CESL/CES is delivering best execution is by measuring spread capture. A spread capture of 0% would mean that we crossed the far side of the spread for each execution and a negative number would indicate that we achieved a worse than the prevailing market price on average. For FY 2018 we captured 44.66% of the spread on average which was greater than the 35.06% of average spread captured for our 2017 data set. Overall for ETF's, we captured 22.48% of the average spread which was below the 57.94% of the average spread captured in our 2017 data set. In short, this shows that we did not pay more than the best bid/offer at the time of execution and as such delivered price improvements by not, without interaction, routing 100% of orders and crossing the spread and worked to achieve improved prices for client orders.

On a regular basis, CESL reviewed broker performance, focusing on algorithm strategy performance and venue analysis. CESL's also reviewed broker access, and utilisation of execution venues with overlaying venue market share to highlight potential issues of venue conflicts with its third-party brokers.

CESL Best Execution Committee executed its oversight of CESL's overall business activities as it relates to fulfilling its best execution duty, and to evaluate the quality of executions by CESL

Following the completion of our best execution assessment for trading activity during 2018 we are satisfied that we, via CES's third-party broker relationships acted in accordance with the scope our best execution framework as outlined in Order Execution Policy.

During the year we have, through our third party brokers, taken steps to improve our execution quality by adding routing capability to capture the growth prevalence of Aquis (MIC AQEU / AQXE) as an execution venue. Aquis market share in Europe has grown from 1.68% in Q4 2017 to 3.22% in Q4 2018. As such, we considered it relevant to include this venue in the routing logic. We also added LIS venues ITG Posit and Liquidnet to enable our clients to have the deepest liquidity access at all times.

As part of our ongoing third-party broker review process we added, through CES, third party brokers of which one of them has a strong and growth presence in the electronic trading space. This new broker routing facility helps to further strengthen our routing logic and improve our overall offering. It also strengthens the stability of our platform which adds to our ability to meet our best execution obligations. Overall, we are satisfied that our best execution process has provided clients, best possible execution under prevailing circumstances.

In conjunction with CES, CESL is continuing to adapt its best execution process to regulatory and market microstructure changes and will be adding new trading venues adapting routing structures.

The introduction of more-robust analytical systems will result in more detailed and quantitative assessments being made for future trading activity and deeper reviews of execution data with CES and its third-party brokers.

[1] We use various ETF market makers for large ETF trades to meet our best execution obligation with regards to speed of execution. The brokers we use are; Susquehanna International Securities Limited, Jane Street Financial Limited, Flow Traders B.V., Optiver V.O.F.

[2] <u>HTTPS://WWW.FIXTRADING.ORG/PACKAGES/FIX-MIFID-BEST-EXECUTION-IMPLEMENTATION-</u>GUIDELINES/