Pershing Trading Services 2019 RTS 28 Publication

Information Classification: Public

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Overview

Pershing Trading Services (PTS) executes orders in an agency capacity on behalf of Professional Clients. A description of our activities and monitoring of our execution quality, are included in this document.

As per MiFID II RTS 28 Article 3 (3), the four statements that are common to every asset type that we traded in 2019 are as follows:

- PTS does not have any ownership or holdings in any of the counterparties or venues that we traded with during 2019. We have links with *BNY Mellon Capital Markets EMEA Limited, and BNY Mellon LLC for fixed income execution. We also trade US equities with Pershing LLC and BNY Mellon Capital Markets LLC. Execution quality with all these counterparties is analysed on an arms-length basis as per other venues and counterparties we trade with.

- We do not have any specific arrangements with any execution venues regarding payments made or received, discounts, rebates, or non-monetary benefits received.

- All of our direct clients are categorised as Professional Clients. We therefore did not require different or augmented approaches in the way we executed orders between ‘different client types’.

- PTS does not classify any of its direct client firms as ‘retail clients’. Therefore any analysis explanations around criteria weighing for orders from these clients is not applicable.

* *(as of 2020 now called BNY Mellon London Branch Fixed Income)*

Global Equities

Pershing Trading Services (PTS) provides agency execution services in global equities across the UK, EMEA, U.S., and APAC. We are fully permissioned to ‘execute’ orders. We did not receive and transmit any orders to other brokers to work on PTS’ behalf in 2019.

Equity Order Types

For order-driven equities, and to satisfy the ‘Trading Obligation’ as per article 23 in MiFIR, we executed client orders across all leading primary exchanges, multi-lateral trading facilities (MTFs) and with a selection of Systematic Internalisers (SI). We also on occasion traded off exchange on a bilateral basis, but these were ‘infrequent’ and ‘ad-hoc’ in relation to the total size of our business for the year. Our ‘top five’ venues for equities can be found in the links to .csv files in this RTS 28 report. There are three tables covering equities, showing which venues we traded upon the most, categorised by liquidity levels and tick size bandings. The most liquid are shown in ‘tick size 5&6”, followed by ‘tick size 3&4”, with “tick size 1&2” being the most illiquid stocks.

Electronic Equities

The largest part of our business in 2019 was institutional electronic equity trading, with European equities being our largest market by geography, namely UK, German and French equities amongst the prominent markets, although in total we executed orders across thirty countries.

In terms of order types, the majority of client flow was serviced via FIX connectivity, for both 'care' and 'low touch' execution services. From here, we utilised smart order routers (SOR), to access a mixture of both dark and lit liquidity across primary exchanges, SIs, and MTFs. We also used a variety of algorithmic suites for both single stock algorithms and programme/list trades.

Client-instructed order flow had the biggest influence on our passive versus aggressive statistics. Where client orders were passive in nature, and therefore usually 'limit' orders, the SORs we used placed orders resident on venues where likelihood of execution was the highest. This may involve placing the order on one venue, or splitting it across venues. Passive order placement logic was driven by historic data, profiling exchanges and MTFs by looking at turnover velocity versus queue length. Whilst it may appear attractive to place a passive order on a venue with a shorter queue, that venue may have a lower participation and turnover rate, hence negatively affecting order fill rates. In the majority of cases, orders were placed on the most liquid venues, with the highest turnover rate.

When client orders were aggressive in nature, the smart order routers applied sequential venue sweeps whereby mid-point matches in dark order books and periodic auctions were swept first therefore gaining valuable spread, then immediately thereafter crossing the spread and taking liquidity at touch prices. For these orders, whereby we crossed the spread, on many occasions, we matched or improved on primary exchanges and MTF lit books, by trading with SIs. On other occasions where liquidity was lighter, and depending on the historical liquidity profile of the stock in question, some orders took liquidity more aggressively spraying multiple venues simultaneously to ensure all visible liquidity was captured therefore limiting the risks of cross venue intermediation activity from predatory firms.

The levels of urgency in algorithmic trading was also a contributory factor in our passive/aggressive statistics, especially for dark liquidity and block seeking algorithms with a high level of urgency. Naturally, algorithms of a passive nature had an influence too.

Request for Quote

Some equities do not operate an electronic order book, and therefore do not have competing venues whereby we could use smart order routers or algorithmic trading tools. In particular, this is prevalent in the more esoteric UK smaller companies market segment. For orders in these stocks, we used 'Request for Quote' (RFQ) trading systems, to interact electronically with UK market makers. Orders in these types of securities were in retail sizes. Whilst this reflects a minority part of our business, to provide for more granular assessment, the main counterparties we dealt with by using RFQ, for execution in smaller companies are shown below. This is for UK equities only.

- Winterflood Securities Limited 30.99%
- Peel Hunt LLP 23.03%
- Numis 8.77%
- Investec Bank PLC 5.76%
- Jefferies International Limited 4.62%

We did not exercise any bias over these market makers. The table order reflects which firms provided the most favourable liquidity in reflection of our order execution policy taking into account price, speed, and likelihood of execution and settlement. Furthermore, it is often the case that some market makers are specialists in certain stocks or market segments, which is also contributory to the table order. All executions were executed under the rules of the London Stock Exchange.

Equity Execution Venues: Summary of Analysis and Conclusions Drawn

- In assessing our execution venues, we prioritised "price" as the most important factor. This is owing to the fact that the vast majority of our flow across most geographies was executed in highly liquid order driven markets. For these venues, there were no issues with likelihood of execution as book depth across all venues was fairly rich and easily accessible. Furthermore, likelihood of settlement presented no issue as most markets cleared through central counterparties. For stocks at the less liquid end of the scale, whereby order book activity was not preferable as a mode of venue, we interacted with off-exchange and principal liquidity. For these orders, the likelihood of execution and settlement took a slightly higher rating in our decision making process, although price was always paramount.

- There were no significant changes to our list of execution venues in 2019. This means we maintained the list of proven venues that provided healthy liquidity throughout the year. In addition to our standing list of regular venues, which gives us extensive liquidity coverage, we also added some more principal liquidity brokers, in the form of new SIs and new market makers. In addition to this, and in line with market-wide trends, we interacted with most of the new periodic auction venues that came to the market during 2019, following their introduction in the latter part of 2018. Our overall liquidity dispersion was reflective of the market-wide share statistics covering exchanges, MTFs, and both lit and dark liquidity books.

- PTS used LiquidMetrix as the main tool for analysing equities execution performance. We analysed 100% of all our trading activity in 2019, covering both 'care' and low-touch execution services. We analysed algorithmic performance across all types of algorithm spanning from VWAP to implementation shortfall and dark liquidity seeking. We monitored SOR performance for hit rates, and we also monitored individual venue performance for toxicity levels and adverse election, in particular on dark venues. We took all sufficient steps to secure quality execution, and participated in all types of venue, showing no bias. We were satisfied with the performance of our systems and our people. Furthermore, we consulted data across multi-venue RTS 27 publications, and found no issues with the variety of statistics that we examined. There were no key venues which we were missing from our routers when comparing destinations. We did find that Aquis Exchange had some appealing statistics for equity trading, and we traded there more often in 2019, especially for aggressing, and hence now appearing in our 'top five' venues for 2019.

- In 2019, we did not see the introduction of a consolidated tape as per the suggestions made by ESMA in the MIFID II text. However, we already invest in full level 2 data across thirty three markets, paying for both 'display' and 'non display' data. Hence, this provides our traders and our technology with a whole of market view across global equities.

Exchange Traded Funds

Pershing Trading Services (PTS) executed orders in an agency capacity in Exchange Traded Funds (ETFs) across the UK, EMEA, US and APAC. We interacted with multiple venue types, including exchanges, MTFs, and principal liquidity from Systematic Internalisers (SIs) and ETF market makers.

ETF Order Types

Similar to equities, the largest part of our ETF business was executed in mature order-driven markets across UK and European markets using SORs, which interacted with both dark and lit order books. In-bound electronic order flow from our clients was both passive and aggressive in nature. We also used single stock algorithms, both rules and participation based. Many ETF algor ithms executed client orders with a skew towards closing auctions as per trading at the NAV.

We also executed a significant amount of large-in-scale orders, whereby clients preferred immediate execution in a block, as opposed to working the order over any defined period. For these larger orders, we extensively used dark liquidity seeking algorithms that sourced liquidity within LIS venues. Similarly, and depending on the country and order size, we would voice trade the order with our select panel of specialist ETF market makers in Europe. We also executed orders using Bloomberg MTF (BMTF) being one of the central hubs in Europe for ETF liquidity, hence reflecting the drive to 'venue based' trading that commenced in 2018, and continued to increase in 2019.

Our main top five venues for 2019 are detailed in the .csv file on the main RTS 28 page, and show the bulk of our ETF business, with significant activity traded electronically on the London Stock Exchange, and Deutsche Borse.

We also traded on some RFQ venues. The main counterparties we interacted across two RFQ systems we used are as follows:

Bloomberg MTF (large-in-scale UK and EU orders)

- Jane Street Financial 29.92%
- Flow Traders 29.46%
- Commerzbank AG 15.84%
- Susquehanna International 7.31%
- Morgan Stanley 4.27%

Iress RSP system (retail sized UK ETFs)

- Winterflood Securities Limited 27.35%
- Stifel Nicolaus Limited 23.46%
- Flow Traders 21.32%
- Peel Hunt LLP 18.86%
- Investec Bank Limited 5.42%

For both of these RFQ venues, we did not prioritise any counterparties. All prices were received and traded upon by way of multi-broker quote requests.

ETF Execution Venues: Summary of Analysis and Conclusions Drawn

a) Through assessing venue performance for ETF executions, price was the most important factor. This was the case for both electronic order flow and bilateral liquidity. ETFs were mostly liquid in nature allowing for many venue choices, in which we were able to execute client orders in deep pools of liquidity. Whilst central counterparty markets presented no issues, we focussed our choice of principal liquidity providers on the ones that not only had the best prices but also with proven and efficient settlement performance.

b) In 2019, we maintained our list of venues where we accessed liquidity and we added more brokers to our list of ETF market makers. All new market makers underwent trial periods where performance was closely monitored using TCA tools, before acceptance onto our broker list.

c) We used LiquidMetrix as our main system to monitor ETFs execution performance across all venues. The analytical tool set employed was very similar to that of how we monitored our equity trading, as mentioned earlier in this RTS 28 disclosure. We did however add an increased focus to bilateral executions across our panel of European ETF market makers based on order sizes and markets, to aid future selection strategy. As with our analysis for equity trading, we also consulted multiple RTS 27 reports to ensure that the venues we are trading on, were sufficient in providing us with repeatable and positive outcomes.

d) In 2019 we did not see the introduction of a consolidated tape as per the suggestions made by ESMA in the MIFID II text. However, we already invest in full level 2 data cross thirty three markets, paying for both 'display' and 'non display' data. Hence, this provides our traders and our technology with a whole of market view across global ETFs.

Fixed Income

Pershing Trading Services (PTS) executed orders on an agency basis for our clients across both rates and credit markets on a global basis in 2019. All trades were booked as agent on a gross price basis. We did not mark up any bond prices, neither did we 'transmit' orders or 'place' orders with any bond brokers to work on our behalf.

Fixed Income Order Types

PTS executed orders in fixed income across all G7 countries. Most common geographies were US and Europe. We also executed a significant amount in Asian bonds. PTS considered different venue types in executing different orders. These ranged from bilateral liquidity where we traded 'XOFF' (off exchange), and also 'on venue' liquidity. For some brokers, we traded with them via both methods; on venue, and also off exchange.

BMTF was our largest execution venue in 2019, accounting for just over half of traded volumes. The remaining business we traded on an XOFF basis with our wide ranging panel of fixed income brokers. Although we traded with many throughout the year, most of our activity was with RIA Capital Markets, Guy Butler, Bridport, and Oppenheimer; all of whom were in our 'top five' venues which can be found in the links on the RTS 28 home page, showing machine readable .csv files. Other counterparties we traded with were UBS, JP Morgan Securities, BNP Paribas, Mizuho International, and BNY Mellon Capital Markets EMEA Limited.

Being that BMTF was our largest venue, and it is RFQ based, in the interest of transparency, please find the main underlying counterparties we interacted with on BMTF.

Bloomberg BMTF

- RIA Capital Markets 15.18%
- Jane Street Financial Limited 13.45%
- Oppenheimer & Co inc 12.62%
- BNY Mellon Capital Markets LLC 10.37%
- Guy Butler Limited 9.91%

There was no bias of choice with these brokers. The majority of trades were resultant from multi-broker requests for quotes. We did not show preference of any broker in our technologies either.

Fixed Income Execution: Summary of Analysis and Conclusions Drawn

a) Price was the most important factor in our execution process across the vast majority of our fixed income executions. This was most certainly the case for highly liquid government paper, and for retail sized orders, where liquidity was healthy with effective spreads. For longer dated paper and bond issues of a more esoteric nature, or illiquid, it was often the occasion that 'likelihood of execution' took an elevated weighting. Although we witnessed a significant move in the bond market towards electronic trading in 2019, (as clearly shown in our top five .csv 2019 versus 2018) in which we too followed that trend by participating in new modes and venues of execution, it was still often the case that we employed voice trading protocols. Symptomatic of the bond market, and certainly for large in scale orders for illiquid paper, there were times where it was deemed inadvisable to RFQ an order, even though there was enough on screen indication. This was purely on the basis that sometimes the trade-off between 'liquidity capture' versus 'informational leakage' (with inferior or no returning quotes) were not in the best interests of the client. For these order types, PTS traders were selective about whom to approach for principal liquidity at the right price, therefore limiting signaling risk which is elevated when using RFQ.

b) For RFQ trading, we maintained our connectivity with a comprehensive list of gilt-edged market makers, matched principal brokers, and 'other liquidity providers'. We also built new relationships with fixed income brokers as part of our ongoing enhancements to extend our reach into new types of liquidity and specialist brokers that match the profile of where and how our clients want to trade.

c) In 2019, we kept our relationship with Bloomberg BTCA for all our fixed income execution analysis. Whilst we are constantly evaluating the vendor space for competing products, we are satisfied with the output and tools available to us in the BTCA suite of services. Execution performance was analysed in the main by referencing CBBT and BVAL prices–at least where price was the dominant factor. Furthermore, we were able to dynamically view order types by geography, across short and long term durations, and by credit ratings ranging from AAA to CCC-. New tools were used to help contextualise execution performance including (but not limited to) order ignition momentum, order difficulty, and spreads relative to arrival versus execution price. Further we grouped our brokers by performance metrics across differing trade sizes, which provided meaningful data to help drive future selection process for the instances where we sought bilateral liquidity.

   We consulted RTS 27 data from all major venues. However, unlike equites and ETFs, due to the bond market behaviours, i.e. liquidity is concentrated across a select few venues, it remains challenging to find useful data sets in RTS 27 tables from fringe venues that would effectively assist in driving venue selection processes. Our current list of both 'on venue' and off exchange liquidity channels enabled us to take both correct and sufficient steps in obtaining the best possible result for our clients, on the right venues, matching the nature and profile of their individual order flow.

d) In 2019 we did not see the introduction of a consolidated tape as per the suggestions made by ESMA in the MIFID II text. PTS however has invested in multiple feeds from different Approved Publication Arrangements (APA), so from a post trade perspective we have good visibility of execution prices for bonds deemed as "liquid" and "illiquid" as per the current ESMA classifications.