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Do UK Retail Investors Get a Good Deal Trading Off-book? 20 May 2010

About the UK Retail Market

Most trading done by UK retail investors is conducted 'off-book'. Deals are done using an RFQ style auction where 5-20 different RSPs (Retail Service Providers) provide competing quotes in response to a request to deal. Following this auction, which takes a second or two, the best price is shown to the retail investor. The investor then gets 15-30 seconds to decide if she wants to deal or not. There is no obligation on the investor to deal and if the price is unappealing she can simply ask for a fresh set of quotes.

There are a couple of advantages to the UK retail investor with this arrangement. Firstly, the price they get quoted is a firm offer to deal, valid for the next 15-30 seconds irrespective of what is happening on the markets. Secondly, it is usual for RSPs to offer **prices at least as good as** the prices on the main market (LSE, in case of UK stocks) at the time of the quote. This system of off-book trading aimed at the retail market has been in place for a number of years in the UK.

However, given recent changes in equity trading in Europe, specifically new Best Execution obligations from MiFID, the fragmentation of prices and liquidity from primary exchanges to MTFs and the entrance of new liquidity providers (for example GetCo, Citadel, Knight), it is useful to see how prices being obtained in off-book RSP auctions compare with the best prices available on-book. Are UK investors still getting a good deal?

We have conducted a study benchmarking some 140,000 retail trades against on-book prices on both the LSE and the new MTFs. This short article presents some of our key findings. For full details of the methodology used and more in-depth analysis of the results we have obtained see the corresponding LiquidMetrix White Paper ‘Retail Off-book Trading in the UK’ that is published alongside this article.

Data Analysed / Benchmarking Methodology

The data set used consists of all trades reported to PLUS over a 1-week period in April 2010. We have included around 140,000 trades with a total value traded of just under £1BN. The majority of these trades are 'retail', most being the result of RSP auctions.

We analysed the PLUS trades by taking each trade in turn and then benchmarking it against full depth reconstructed order books for LSE, CHI-X, Turquoise, BATS and Nasdaq OMX Europe at the time of the trade. We use four different methods to obtain benchmark prices as shown below:

	Description	Benchmark
LSE Matched Price	Price obtained by matching a single aggressive order against the LSE order book (volume weighted price)	**VBBO (LSE)**
LSE/MTF Consolidated Matched Price	Price obtained by splitting the order up and matching it against liquidity from all Venues with the best prices (volume weighted price similar to the one used by Equiduct)	**EVBBO**
LSE/MTF Touch Price	Price of the best bid (or offer) on any venue. This is a commonly used benchmark but takes no account of the size of the trade being benchmarked.	**EBBO**
LSE/MTF Best Venue Matched Price	Price obtained by a sending a single Aggressive Order against the single venue with the best matched (volume weighted) price.	**SVBBO**

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Key Findings

The results of benchmarking the 140,000 PLUS trades are summarised below. The % Better / Equal / Worse columns show the number of trades that are better, equal to or worse than the benchmark prices. Price 'Improvement in BPS' shows the amount, averaged over all trades, that the prices achieved by retail investors are better than each benchmark. The 'Average Spread' column records the average on-book spread at the time of each trade to give a context to the price improvements.

Benchmark	% Better	% Equal	% Worse	Improvement in BPS	Average Spread	Spread Capture
VBBO (LSE)	86.81%	6.63%	6.56%	14.01	66.26	21.14%
EVBBO	79.25%	7.31%	13.43%	11.77	61.42	19.17%
EBBO	74.29%	9.73%	15.97%	3.99	46.84	8.52%
SVBBO	80.86%	6.96%	12.18%	13.71	65.28	21.00%

- Using any of the above benchmarks shows that **off-book trading on RSP networks provides better prices than on-book aggressive trading, the majority of the time.**

- **Around 87% of off-book RSP retail trades are conducted at prices better than those on just the LSE** at the time of each trade. 6% are at exactly the same price and 6% of trades are conducted at prices worse than the LSE. So the vast majority of off-book trades are at prices equal to or better than the LSE.

- Quantifying the price improvements in terms of basis points (0.01%), **the prices achieved off book are on average 14 BPS better** than a corresponding aggressive on-book trade sent to the LSE would have been.

- If we compare the PLUS reported prices to combined LSE / MTF prices (EVBBO) rather than just LSE, then the number of outliers (prices worse than benchmark) rises from 6% to 13%.

- Also, taking the MTFs into account lowers the price improvement from 14 BPS to 12 BPS. In other words, EVBBO prices are 2 BPS better than VBBO (LSE only) prices.

- The average on-book spread for trades we have analysed is 66 BPS. So, a 14 BPS price improvement means that retail investors are getting a price improvement worth about 20% of the bid/offer spread when they trade off-book.

- If we use the best consolidated touch price (EBBO) as our benchmark, then the **price improvement drops markedly from 12 BPS to just 4 BPS**. Indeed for larger trades (>£25,000) an impression is given that prices achieved off-book are **worse than on-book** (this is covered in detail in the White Paper). This is a key failing of using touch prices as they represent unrealistic prices for even modest size trades.

- The SVBBO measure shows a similar number of outliers as EVBBO but the price improvement (13.71) is not that different to LSE only (14.01). This implies that the main impact of additional MTF liquidity is not to improve absolute prices, but rather to provide more liquidity at best prices.

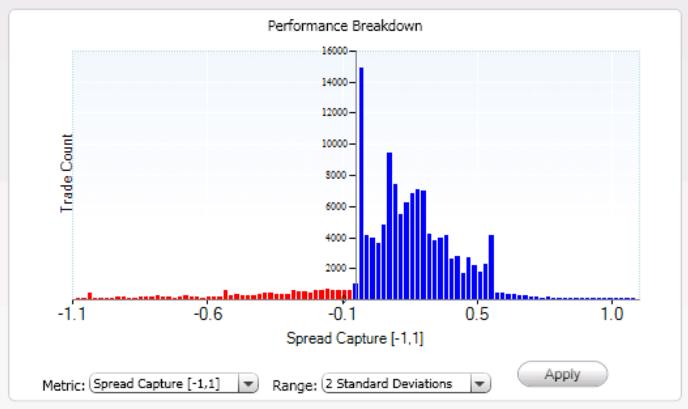
Implications for UK Retail Investors

What would be the implication to UK retail investors if brokers or exchanges offered as an alternative to the current RSP arrangement some deal based on matching the 'best on-book price in Europe'?

- A broker or exchange offering to simply 'match the best European matched price (EVBBO)' would be offering a UK investor a considerably **worse** deal than is currently achieved via off-book RSP networks.
- To make the deal attractive, the broker would need to offer a price that is 20% inside the bid/offer spread (the White Paper shows this varies somewhat depending on the type of stock traded, for FTSE-100 stocks a smaller price improvement would be required).
- A broker offering to match the best single price from any venue in Europe (SVBBO) is not offering nearly as good a deal as one offering to match the best price on consolidated liquidity (EVBBO). However, in practical terms SVBBO is a probably more achievable and realistic measure than EVBBO.
- A broker offering to match Touch Prices (EBBO) would be offering a good deal for larger trades (>£25K) but not so good for smaller trades where again the retail investor should expect a price improvement.
- A broker offering to match anywhere near mid-point (50% spread capture) would be offering a very good deal.

Drilling Down...

The results we have shown are high level averages taken over many different stocks, as such they only paint a 'broad brush' picture. The full LiquidMetrix White Paper goes into more detail. For example, here is a Spread Capture chart that gives an overview of how price improvements vary trade by trade (versus EVBBO):



A spread capture of greater than 0 (shown in blue) indicates that the retail investor achieved a price better than the on-book benchmark price. A value of 0.5 means the deal was done at market mid-point. A negative value (shown in red) means the price was worse than the on-book benchmark price. We can see from the histogram the majority of trades lie between 0 and 0.5. This means the retail investor is given prices between 0 and 50% inside the spread (better than the market). The peak occurs at about 25%.