

BME Trading Focus #3

Improvements in Market Quality since recent fee adjustments



BME Exchange – Market Structure

Introduction

BME Exchange's launch of the new fee and liquidity provision schemes in July 2023 has had a very positive impact in relevant Best Execution metrics.

This paper aims to measure how the changes in the fee model have contributed to a better market quality and consequently to an improved execution. In particular, it focuses on spreads, EBBO and price impact, with data from the primary market (BME) and the main multilateral trading facilities (MTFs).

The analysis covers data from January 2023 to April 2024.

1 Spread at touch

BME improved its spread at touch 2.0% during the first third of 2024 versus the first half of 2023, being the venue with the lowest spread. This improvement was much higher than its main competitors, who actually had wider spreads:

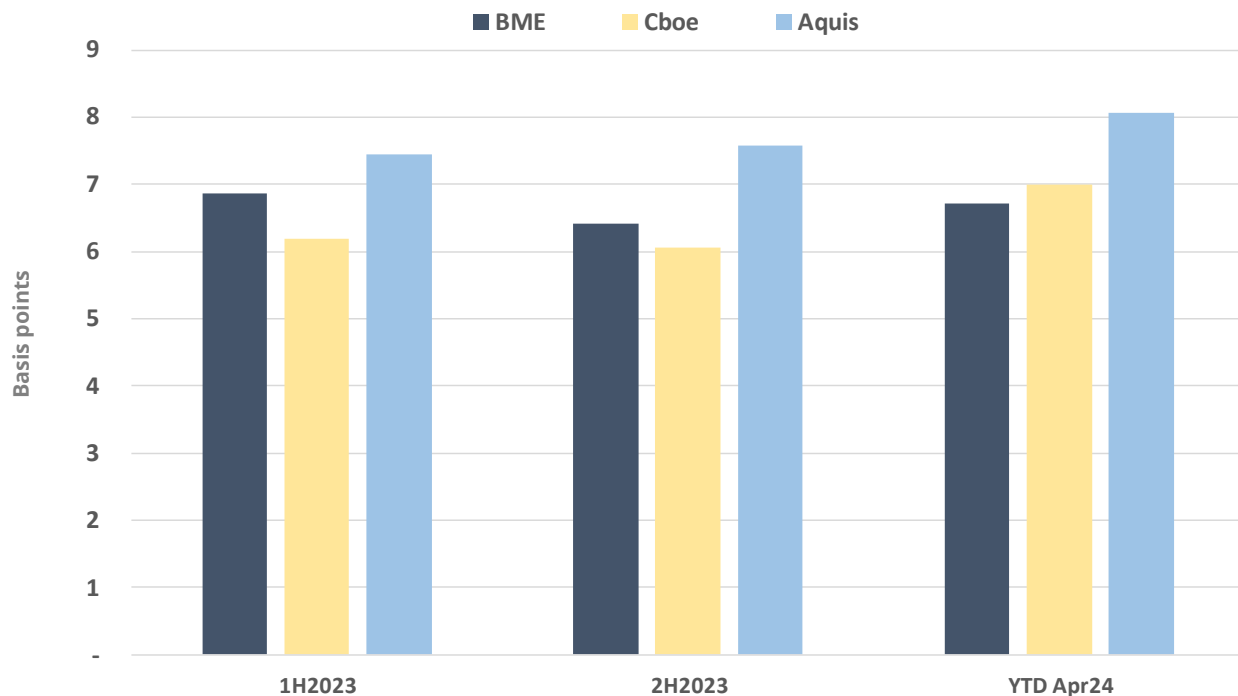
Table 01: IBEX35® spread at touch.

Spread at touch	BME	Cboe	Aquis
First semester 2023	6.86	6.20	7.45
Second semester 2023	6.41	6.06	7.57
YTD April 2024	6.73	7.00	8.08
<i>Variation 2H23 vs 1H23</i>	-6.6%	-2.1%	1.7%
<i>Variation '24 vs 1H23</i>	-2.0%	13.1%	8.5%

Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

The following graph shows the IBEX35® spread at BME and the relevant MTFs during the first and second semester of 2023 and the first third of 2024:

Graph 01: IBEX35® spread evolution



Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

2 Presence at EBBO

European Best Bid and Offer (EBBO) measures the best bid and offer prices at a pan-European level. It consolidates BME, Cboe, Aquis and Turquoise's order books. Since the introduction of the new fees, BME's presence at EBBO, both exclusive (without coinciding with other trading venues) and non-exclusive has improved substantially.

During the first third of 2024, **BME had the best price in IBEX35® stocks 87.5% of the time** (coinciding with other venues) and the **exclusive time was 2.5%**. These figures signify an **improvement of 4.4% and 40.3% relative to the first semester of 2023**, respectively. Table 02 below shows BME's EBBO non-exclusive and exclusive presence and the variation between time periods.

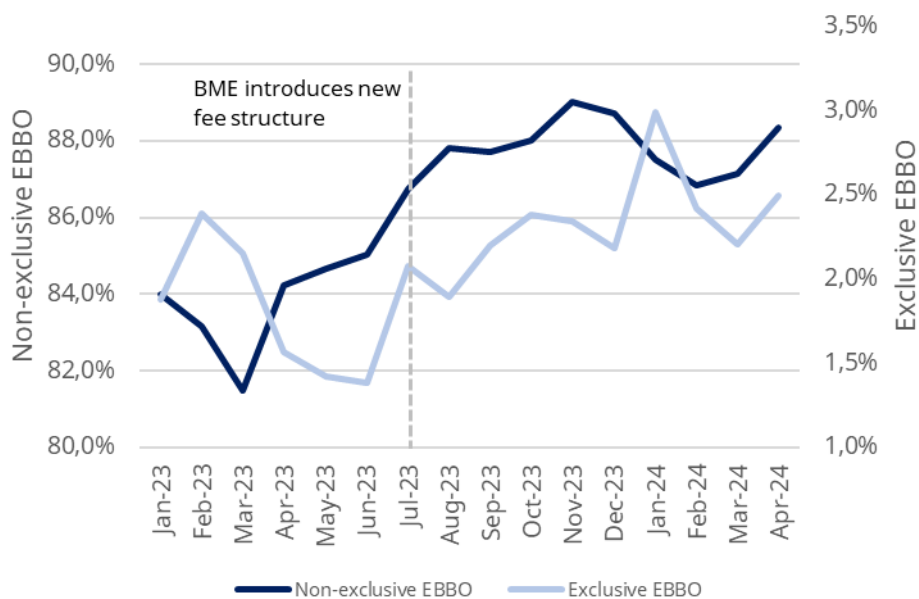
Table 02: BME EBBO Presence.

EBBO presence	Non-exclusive	Exclusive
First semester 2023	83.6%	1.8%
Second semester 2023	88.0%	2.2%
YTD April 2024	87.5%	2.5%
Variation 2H23 vs 1H23	+5.3%	+21.5%
Variation '24 vs 1H23	+4.4%	+40.3%

Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

Additionally, Graph 02 below shows the monthly evolution:

Graph 02: IBEX35® non-exclusive and exclusive EBBO



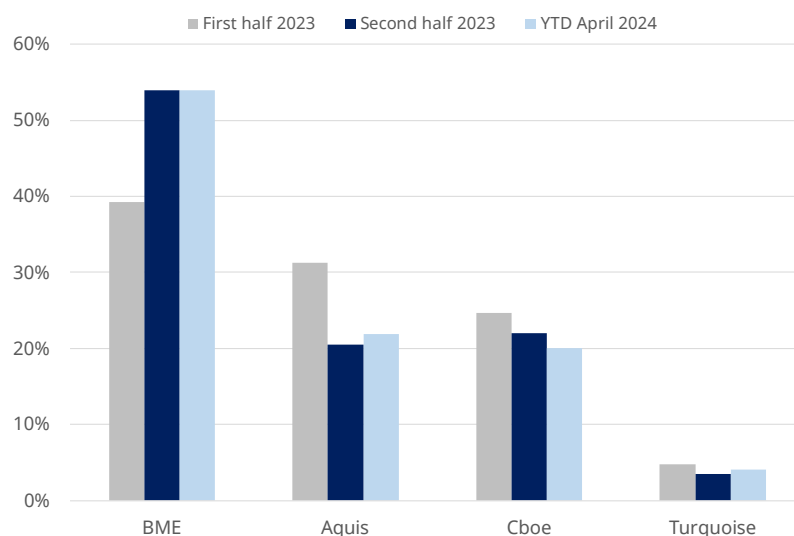
Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

3 In-depth analysis

EBBO setting

EBBO setting represents the number of times that a trading venue's price improves the current EBBO. After the modification of fees in July, the **number of monthly EBBO improvements at BME increased by 28% versus the first half of 2023**, whereas it worsened in the main MTFs. In addition, the distribution of improvements between BME and the main MTFs also changed substantially:

Graph 03: IBEX35® EBBO setting per market.



Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

Despite the greater size of orders in primary markets, the execution quality of those orders that set a new EBBO remains unaffected. **BME maintains high fill probabilities** compared to the two main EBBO setters:

Table 03: One second Fill Probability of orders that improve the EBBO.

Fill Probability	BME	Cboe	Aquis
First semester 2023	22.9%	22.7%	4.5%
Second semester 2023	20.8%	21.5%	4.4%
YTD April 2024	21.0%	21.8%	6.0%

Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

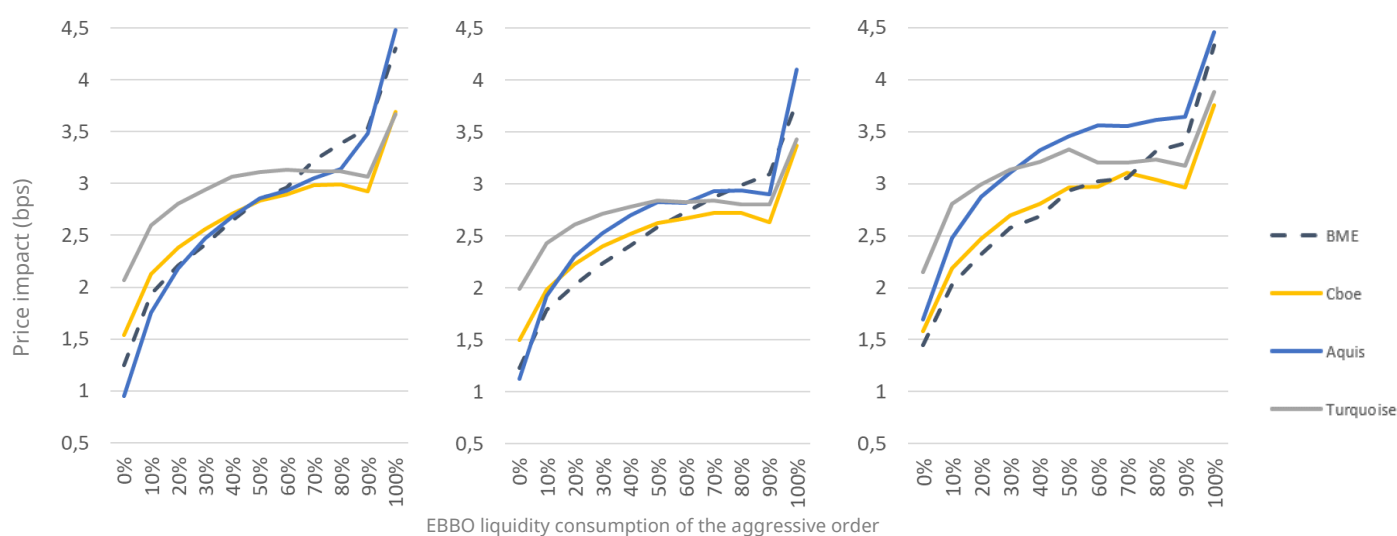
In 2024, **BME has the lowest median resting time until trading¹** (85.5 milliseconds) of the EBBO setter orders compared to MTFs: median resting time at Cboe was 50% higher, whilst at Turquoise and Aquis it was 17 and 35 times larger than at BME, respectively.

¹ Measured as time between the order introduction and its first trade. Orders not traded are not considered.

Price impact

Price impact measures the difference in basis points between the trade price and the EBBO one second after the trade². The trades are sampled in buckets based on the proportion of total EBBO liquidity consumed. The following graphs show that **BME has the lowest price impact on several size buckets and improved substantially relative to the other venues.**

Graph 04, 05 and 06: IBEX35® price impact (1H2023, 2H2023 and YTD Apr 2024, respectively).



Data source: BMLL. Securities: IBEX 35® Equities. | Sample period: January 2023 – April 2024.

Due to the greater book depth of primary markets, scenarios where an MTF trade is able to consume more than 50% of the liquidity at EBBO usually require that the primary market is not present at the EBBO. For this reason, MTFs show *relatively* strong performances for trades with an EBBO consumption above 60%.

As both price impact and fill probability are affected by greater levels of primary markets' book depth, it is worth mentioning that during the first third of 2024, **the size of orders improving EBBO at BME was almost 9,900 EUR, being 21.3%, 81.5% and 184.9% higher than at Cboe, Aquis and Turquoise, respectively.** These differences increase significantly when considering all orders at EBBO.

Therefore, even if the consumption is the same in *relative* terms, the *absolute* size of the trade in the highest buckets is potentially lower in the MTFs than in BME, which could explain the lower impact.

Food for thought.

² Passive buys are compared against the buy side of the EBBO and passive sells are compared against the sell side.

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BME
Plaza de la Lealtad,1
Palacio de la Bolsa
28014 Madrid
www.bolsasymercados.es