

EURONEXT EQUITIES: MARKET QUALITY ANALYSIS



Euronext market quality in times of volatility

December 2021

Euronext, the place to trade when it matters most

2020 was an exceptional year in terms of volatility in Europe, reaching the levels of 2008 (measured by the CAC 40® Volatility Index or VCAC). Over the course of 2020 and 2021, volatility has remained higher than the average of the last five years.

As volatility increases, market quality deteriorates across all venues. However, analysis of this phenomenon is scarce, despite the fact that it is during highly volatile periods that market quality matters most for investors.

In this document, Euronext provides a short market quality analysis in order to tackle this lack of information, while opening the door for further research.

Methodology:

- In this analysis, we select a basket of liquid securities that are listed on the Euronext Markets. The basket is made up of the component securities of the CAC40®, AEX® and BEL20®, the national blue-chip indices for France, the Netherlands and Belgium. By selecting these securities, we exclude the potential impact of illiquid securities. The data covers the period from 1 January 2020 to 9 September 2021.
- The market quality metrics used in the study are provided by BMLL Technologies. Three main metrics are examined: Spread, Liquidity at Touch and Time Presence at the European Best Bid & Offer (EBBO).
- The BMLL market quality metrics are then compared with the average annualised intraday volatility per security using the Garman-Klass volatility formula. Three buckets of volatility are identified, to take into account different market conditions.

Executive summary:

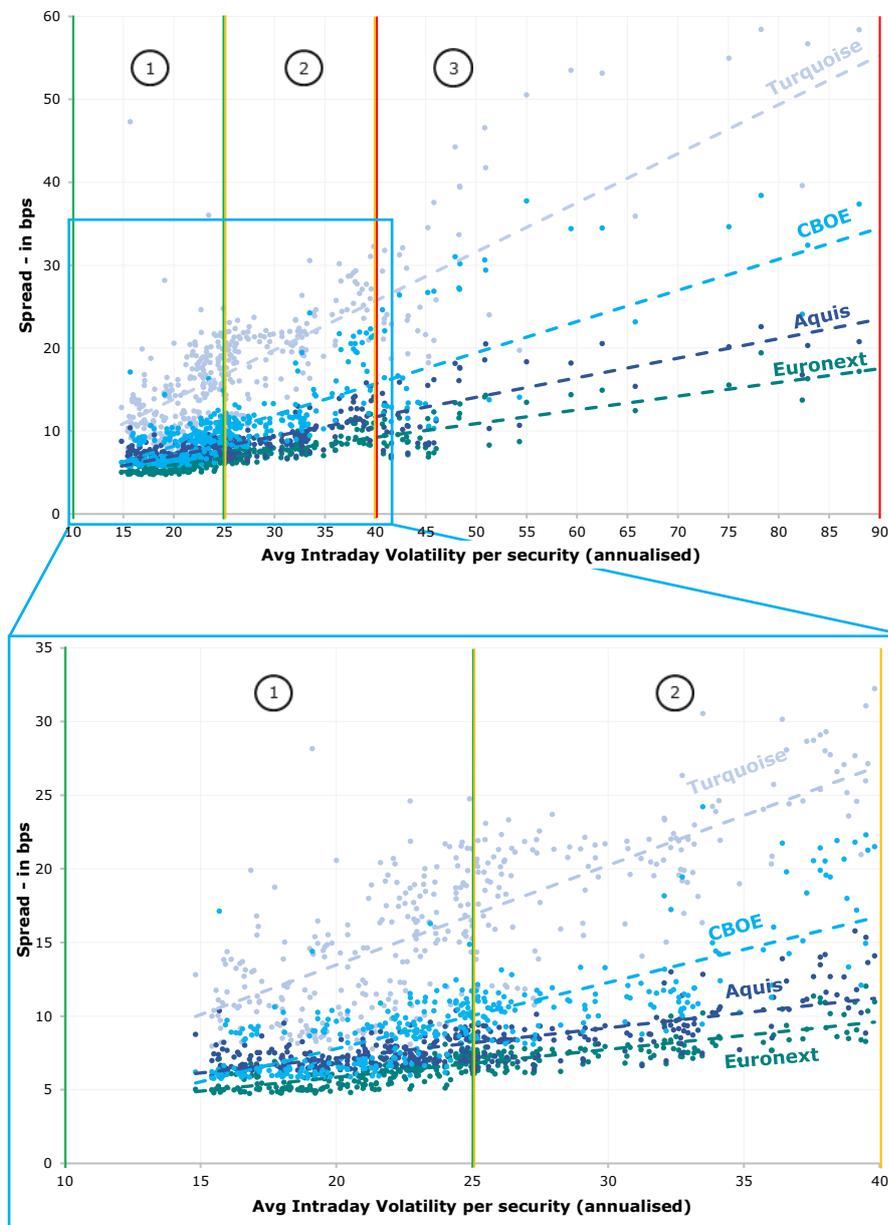
- Setting aside 'black swan' events such as March 2020, Euronext's market quality remains resilient in periods of high levels of volatility compared to its main competitors.
- The deterioration in some metrics is far less on Euronext than on other venues.
- The impact of volatility on EBBO Presence and Setting is less noticeable on Euronext.
- The analysis demonstrates the benefits of Euronext's liquidity programmes and the importance of the requirements in place for clients.

SPREAD – VOLATILITY

The higher the volatility, the higher the spread for each venue, but not to the same proportion. We found that the spread increase is smaller for Euronext compared to multilateral trading facilities (MTFs) - in fact, **the increase on Euronext is 41% smaller than on the best-performing MTF.**

We distinguish three buckets of volatility that highlight the different market conditions:

- 0 to 25: Low to medium
- 25 to 40: Medium to high
- Above 40: very high



	Coef.	Constant	R ²
Euronext	0.17	2.61	87%
CBOE	0.55	-1.44	75%
Turquoise	0.59	0.77	77%
Aquis	0.24	2.28	83%

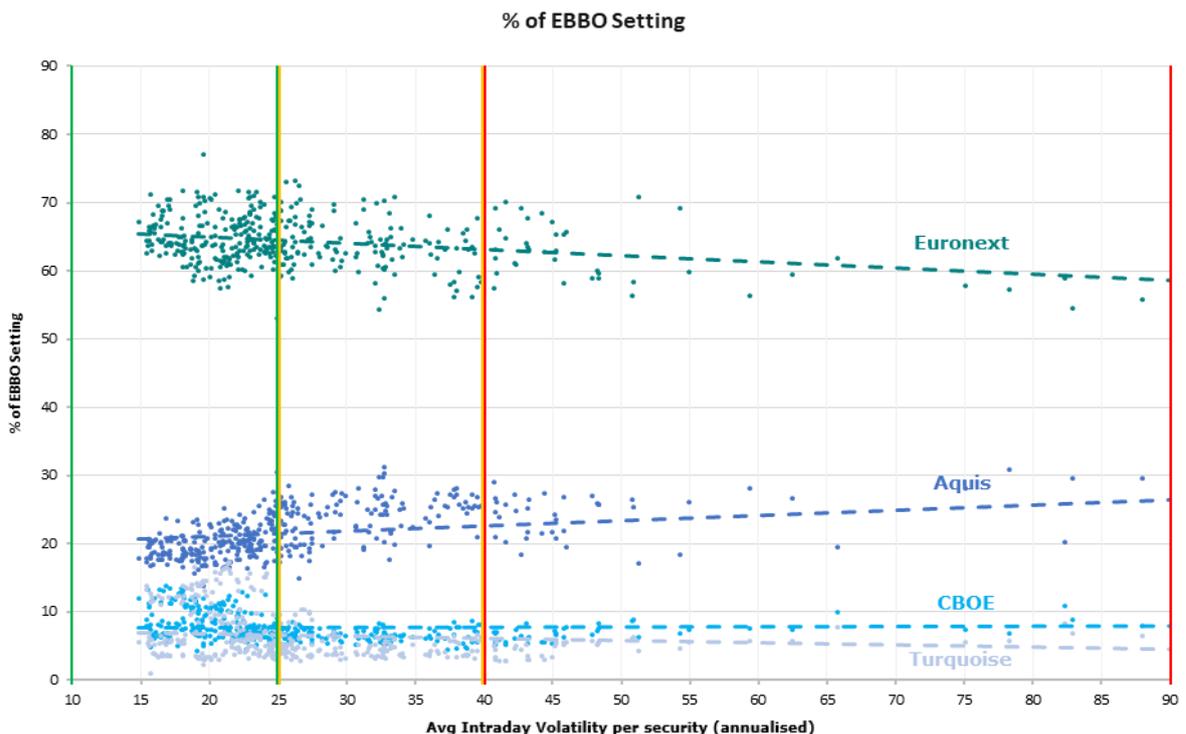
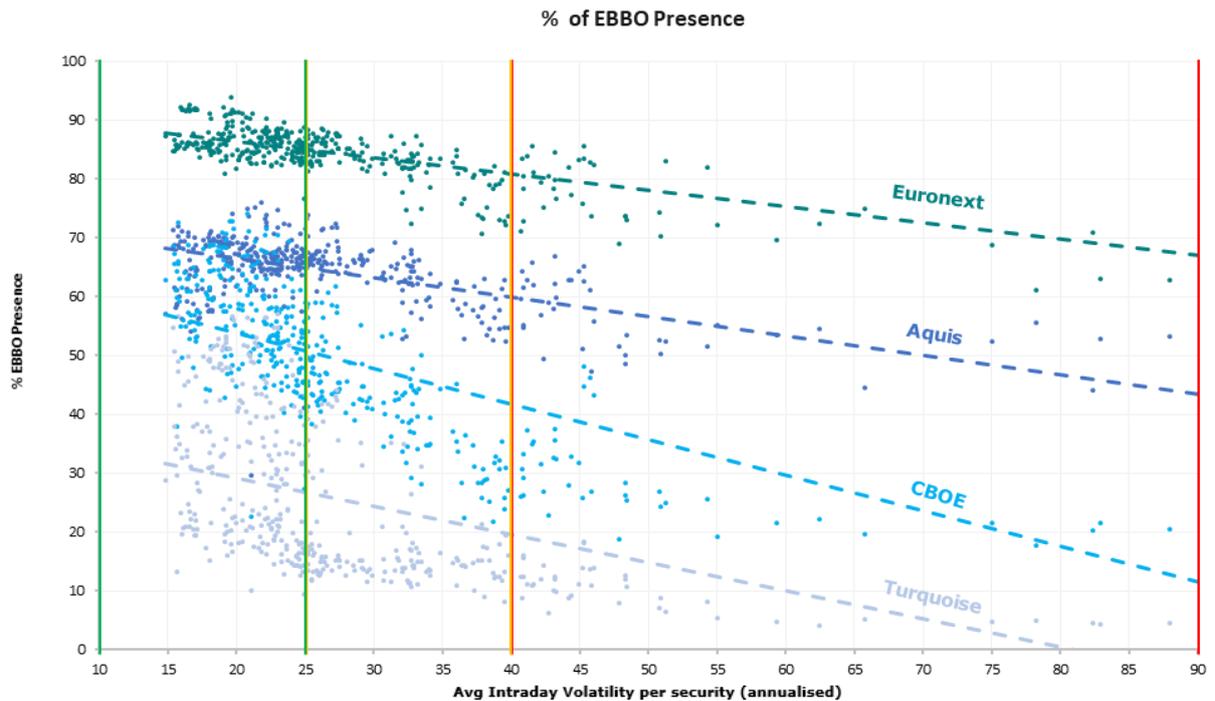
The first two buckets of volatility are designed in a way that reflects the 'normal volatility' of the day-to-day life of the financial markets – excluding 'black swan' events such as March 2020.

Even when the volatility is low, the difference in the spreads offered by venues on liquid securities is significant.

EBBO PRESENCE / SETTING – VOLATILITY

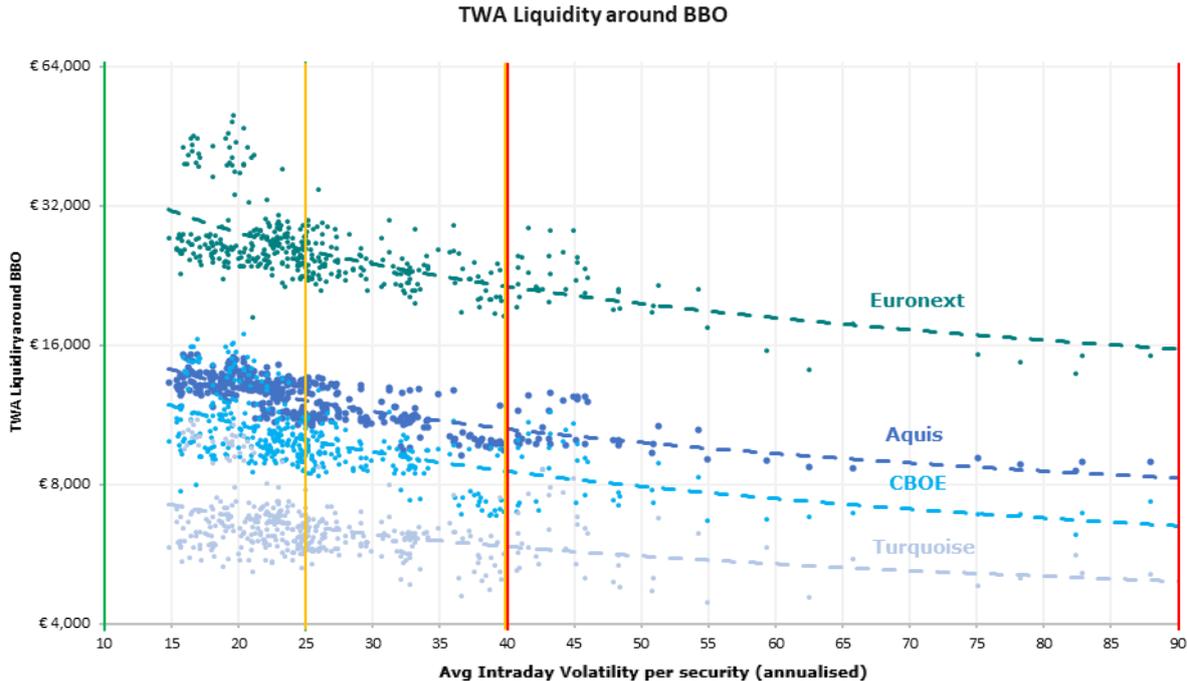
The discrepancy is less noticeable when looking at the EBBO Presence. All venues are on a downward trend. Nonetheless, **the percentage of EBBO Presence for Euronext remains +20% above the best MTF.**

In terms of occurrence of **Setting the EBBO**, Euronext continues to outperform MTFs **even during volatile periods.**



LIQUIDITY AT BBO – VOLATILITY

In the same way as for the percentage of EBBO Setting, the Time Weighted Average Liquidity around Best Bid & Offer decreases for each venue as soon as the volatility increases. Thanks to the efficiency of Euronext’s liquidity programmes, **the liquidity remains high in the Euronext order book even during volatile periods.**



CONCLUSION

For all trading venues, there is a mechanical deterioration of the market quality metrics when volatility increases. However, the sharpness of the deterioration differs from one venue to another.

In market turmoil, when heightened volatility brings uncertainty in the order book, Euronext provides a reliable answer benefiting the end investors. **Thanks to Euronext's sophisticated Liquidity programmes and the relevance of the requirements in place, Euronext offers the best market quality and execution for its listed stocks,** looking at the following key metrics: presence at the Best Bid & Offer, minimum BBO setting size and Spread.

GLOSSARY

Bid-Ask Spread: The difference between the bid and the ask prices of a security.

Time Weighted Average Liquidity around Best Bid & Offer: The time weighted average amount of notional around the BBO.

Time Presence at the European Best Bid & Offer: The percentage of time during the continuous trading period where there is at least one order equal to the bid-ask price and simultaneously at least one order equal to the bid-ask price of the EBBO.

AUTHORS

Tristan Richefeu	Vincent Boquillon
Cash Equity Analyst	Head of Cash Equities
Euronext	Euronext

For more information, please reach out to EquitiesTeam@euronext.com



This publication is for information purposes only and is not a recommendation to engage in investment activities. This publication is provided "as is" without representation or warranty of any kind. Whilst all reasonable care has been taken to ensure the accuracy of the content, Euronext does not guarantee its accuracy or completeness. Euronext will not be held liable for any loss or damages of any nature ensuing from using, trusting or acting on information provided. No information set out or referred to in this publication shall form the basis of any contract. The creation of rights and obligations in respect of financial products that are traded on the exchanges operated by Euronext's subsidiaries shall depend solely on the applicable rules of the market operator. All proprietary rights and interest in or connected with this publication shall vest in Euronext. No part of it may be redistributed or reproduced in any form without the prior written permission of Euronext. Euronext refers to Euronext N.V. and its affiliates. Information regarding trademarks and intellectual property rights of Euronext is located at www.euronext.com/terms-use

© 2021, Euronext N.V. - All rights reserved.