Call for Evidence Periodic Auctions for Equity Instruments

Introduction

As an operator of a pan European equity MTF, Aquis would like to thank ESMA for the opportunity to comment on this call for evidence – Periodic Auctions for Equity Instruments.

Aquis currently offers a periodic auction on its MTF and agrees with many of the academic studies including Budish, Crampton & Shim 2015 (Budish 2015) that batch auctions do provide an alternative functionality that can benefit the execution of certain orders. We also believe that the inclusion of Periodic Auctions is appropriate in RTS1, however adjustments may improve the functionality and transparency of such systems.

In particular, although midpoint pegging and the use of external reference prices are mentioned in ESMA's analysis and questions, we would like to emphasise in this introduction that the use of any external pegging and more specifically mid-tick or price referencing to trigger any matching mechanism are in our opinion totally incompatible with a true auction process. We would refer ESMA to other batch auction studies (see attached appendix) which all concur with Budish 2015 that the only way a batch auction price can be determined is by entering a limit or at market order that enables price formation. The use of an external reference price to determine an auction price is not mentioned by any of these recognised academics. We believe that if external reference prices are permitted to trigger matching mechanisms with very short periods of pre trade transparency, such transactions should not be categorised as periodic auctions and should therefore be subjected to the Double Volume Cap (DVC) calculation.

Additionally, in our view the 'minimum quantity' order functionality that is specific to certain batch auctions is not compatible with any conventional or academically recognised batch auction functionality. Minimum quantity functionality can be very useful to in Dark Pools to reduce signalling, however it is mathematically impossible to integrate minimum quantity within an auction algorithm designed to optimise a price that should be determined by volume and price.

Q1 Do you agree with the two main differences identified to distinguish conventional periodic auctions from frequent batch auctions? If not, please explain why.

Aquis agrees with the two differences to distinguish conventional auctions from frequent batch auctions.

Q2 Do you agree with the observation of a rising market share for equity trading on frequent batch auctions?

We agree with the observation that the market share on batch auctions is rising and correlated with stocks subject to the DVC. We accept ESMA's analysis that this growth has flattened since the lifting of DVCs in certain securities.

Q3 What are in your view the main factors driving this development?

The introduction of DVCs has been the main driver of the development of frequent batch auctions.

We do recognise that lower toxicity/market impact on certain batch auction venues can be beneficial for certain types of client orders.

Q4 Do you agree with the four characteristics identified by ESMA? Please explain.

We would agree that limited pre-trade transparency, short auction duration, price determination within the best bid & offer and self-matching are specificities of frequent batch auctions in Europe.

Q5 Do you consider that other characteristics of frequent batch auctions may explain their success and/or raise questions in terms of compatibility with the MiFID II transparency provisions? Please explain.

We believe that the following other characteristics of frequent batch orders contribute to their success:

- The use of external reference or midpoint reference prices to determine the auction price;

- The ability to execute mid-tick on batch auctions and not on conventional auctions;

- The use of minimal executable quantity.

Explanation has been detailed in our introduction above.

Q6 What is your view on the level of pre-trade transparency applied by systems that initiate auctions upon the receipt of a first order? In particular, should pre-trade transparency already be applied as of the start of an auction, irrespectively of whether there is a potential match or not? Please explain.

Systems that initiate auctions upon the receipt of a first order can be only be effective with a pre-determined start time for each batch auction phase. Such functionality would also align with conventional auction functionality where pre trade transparency is applied from a pre-determined start time so the first order is displayed as soon as it is received.

In the case of random batch auctions, we feel the start of any auction should be triggered once there is a match upon which there should be immediate pre trade transparency throughout the auction period.

Q7 What is your view on the level of pre-trade transparency applied by systems that initiate auctions upon the identification of a possible match? In particular, do you consider that systems locking in prices at the beginning and/or allowing the submission of orders pegged to the midpoint meet the pre-trade transparency requirements? Please explain.

We believe that ESMA should require the level of pre trade transparency to be sufficient to allow multiple members to participate and ensure multi-laterality. This includes systems locking in prices at the beginning of the auction.

Concerning the submission of orders pegged to midpoint, these are not price forming and consequently cannot be categorised as auction order types. The fundamental mathematics behind any auction algorithm must be to optimise the maximum amount of volume at a given price and any

batch auction mechanism that does not include price/volume characteristics that can vary the outcome is incompatible with the periodic auction definition under RTS1.

Q8 Would you see benefit in frequent batch auction systems providing information on market/order imbalance? Please explain.

Yes. Pre trade transparency on market/order imbalance would encourage wider participation and improved liquidity in any batch auction system.

Q9 Do you consider the auction length of frequent batch auctions as appropriate? In particular, how does the short auction length contribute to fair and orderly trading? Please explain.

The auction length of batch auctions should be sufficient to allow multi-laterality. Shorter auction periods have a greater probability of aligning to the CLOB. Longer intraday auctions increase the time to allow for increased participants but are more likely to diverge from best execution criteria or result in cancelled auctions if the auction execution prices is outside of the prevailing EBBO/PBBO, so consequently longer intraday auction periods could attract lower participation. Sufficient pre trade transparency nevertheless remains the most important consideration.

Q10 Would you see benefits in having a longer auction duration? Do you consider that the auction duration should take into account the liquidity and/or type of instruments traded (e.g. a longer auction duration for less liquid instruments)? Please explain.

As per our response to Q9, the auction time should sufficient to allow multi-laterality but not too long to allow for frequent divergence from the EBBO/PBBO. If the auction time is too long then it is easier to drift away from the prevailing EBBO/PBBO and the benefit of using the auction is diminished.

We would again refer ESMA to Budish, Crampton & Shim: 'Frontiers of Market Design Implementation details for frequent batch auctions'

"The batch interval should be long enough so trading algorithms have adequate time between receipt of time t auction outcomes and the close of time t +1 auction to make time t +1 order submission decisions".

If ESMA were to establish a minimum period then it may be appropriate to consider a minimum of 135ms based on the Budish, Crampton & Shim research (global round trip information travel time based on the speed of light), but we recognise that the technology in its current evolution may require a longer time period.

Also the research we have reviewed is based upon US market structure. We would suggest that independent academic analysis specifically based on European market structure may provide a more evidence-based conclusion.

Q11 In your experience, how often do frequent batch auctions result in a match, and how many transactions are executed per frequent batch auction on average?

This depends on the type of batch auction.

We estimate that those auctions triggered once there is a match will have close to a 100% success rate as we see little evidence of orders being cancelled during the auction period once matched.

Concerning the number of transactions, in a majority of cases on Aquis Exchange there are two transactions per batch auction.

Q12 Do you consider frequent batch auction systems as non-price forming systems? Please explain. Should a characteristic of any trading system be that it is always price forming in order to operate without a waiver? Please explain.

We consider frequent batch systems which import external reference prices to be non-price forming systems.

As stated in our introduction and previous answers, the only way a batch auction can be price-forming is with a limit or at market order that enables price formation. Please see answer to Q7.

In the spirit of MiFID II a trading system should be always be price forming in order to operate without a waiver. Any batch auctions that allow price referencing, midpoint pegging or minimum quantity order types are non-price forming. Price formation i.e. limit prices or 'at market' orders must be integrated into a trading system for it to be allowed to operate without waivers.

Q13 Do you consider that these functionalities resemble reference price systems (in particular when matching transaction at mid-point)? Please explain.

Yes. Systems matching at mid-point and in particularly those matching at mid-tick do resemble reference price systems and as such should be under wavier. See response to Q7.

Q14 How do frequent batch auctions ensure multilaterality and interactions of trading interests in the price formation process (e.g. diversity of participating members, average number of participants, distribution of orders involved per transaction)?

Subject to technical conformity all members of Aquis Exchange MTF are permitted to trade on the Aquis periodic auction. No additional membership criteria is required which ensures multi-laterality. We do accept that a longer period of pre trade transparency in a batch auction system would probably increase multi-laterality but would refer to our response to Q9 as best execution obligations must be considered alongside increased risk of auction cancellations if the execution price is invalid.

Q15 Do you consider that the possibility of pegged orders might weaken the price determination logic? If yes, which measures would you recommend?

Yes. Pegged orders are not compatible with price determination logic. Pegged orders should not be permitted in periodic auctions.

Q16 How frequently are mechanisms used to prevent an auction uncross at a price outside the EBBO or PBBO (e.g. patterns and occurrences)?

We believe that mechanisms to prevent intraday auction uncross outside the EBBO/PBBO are used in all periodic auction mechanisms. This ensures a certain protection for best execution and is in our opinion the only example of where an exterior reference price should be used throughout the auction process.

Q17 What are your views on self-matching functionalities, and in particular member preferencing, in the context of frequent batch auction systems taking into account their short auction length? Do self-matching functionalities, and in particular member preferencing, coupled with other features of frequent batch auctions (short duration, locked-in prices) contribute to fair and orderly trading?

There has been much debate on self-matching functionality/member preferencing in the context of frequent batch systems. Providing that all orders entered into batch auctions are price forming with specific limits, we believe member preferencing functionality is much less of an issue for fair and orderly trading than the pre trade transparency, reference price pegging, and minimum quantity points already raised.

Q18 Do you consider that self-matching functionalities, and in particular member preferencing, on frequent batch auction systems may be used to formalise privately negotiated transactions?

Early statistical evidence does not suggest that member preferencing is the dominant driver of batch auction systems and we do not see that they are being used extensively to formalise privately negotiated transactions.

Q19 In your opinion, is the feature of member preferencing indispensable for the success observed in frequent batch auction systems since the application of MiFID II?

No.

Q20 How do you determine on which execution venues to conclude transactions. Please explain.

N/A.

Q21 Which execution venues attracted the most trading volume following the suspension of dark trading venues under the DVC and why? Please substantiate your answer by quantitative data where available.

We have not provided an answer as we believe ESMA have a more complete data set than we do to determine this.

Q22 Should trading under frequent batch auctions become subject to stricter requirements in the future, to which type of execution venues do you expect the current trading volume under frequent batch auctions to migrate to?

If stricter requirements are applied it is possible that order flow would migrate to lit continuous limit order books.

Appendix 1

Academic References

- Budish/Crampton/Shim 2015: The high frequency trading arms race: Frequent batch auctions as a market design response.
- Fricke/Gerig 2018: Too fast or too slow? Determining the optimal speed of financial markets.
- Twu/Wang 2018: Call auction frequency and market quality: Evidence from the Taiwan Stock Exchange.
- Wah/Hurd/Wellman 2016: Frequent call markets vs continuous double auctions for fast & slow traders.
- Du/Zhu 2014: Welfare and optimal trading frequency in dynamic double auctions.
- Haas/Zoican 2016: Discrete or continuous trading? HFT competition and liquidity on batch auction markets.