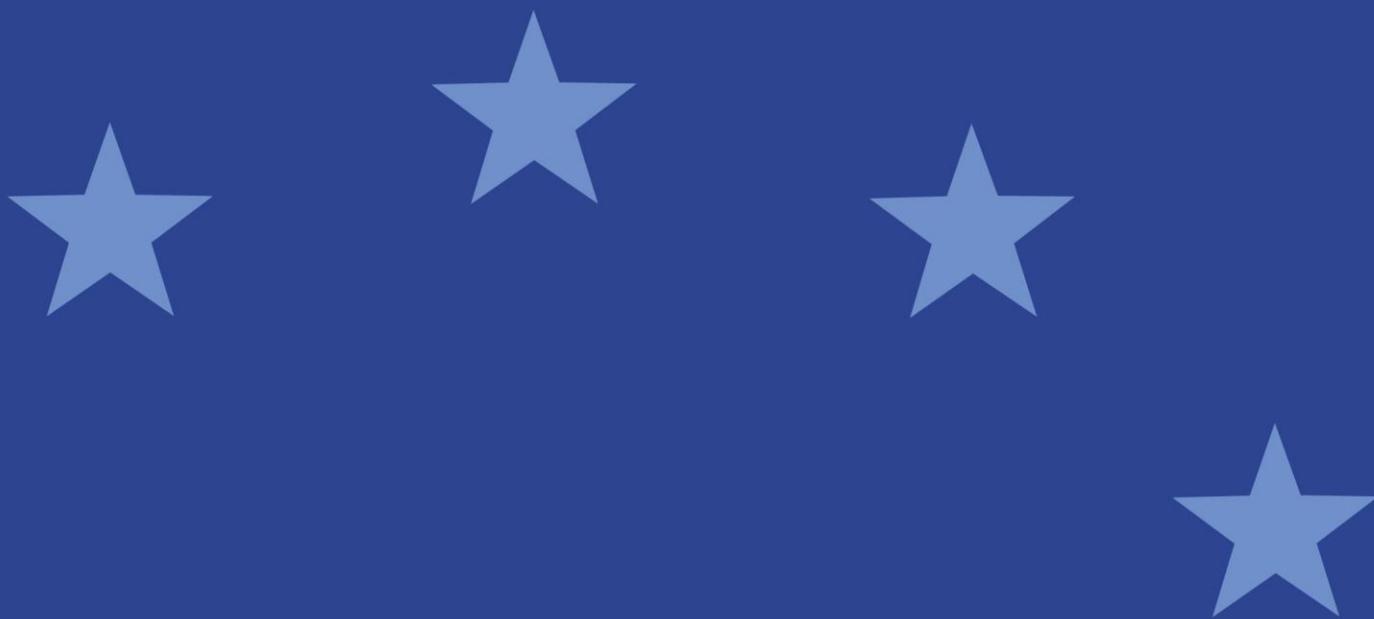


Reply form for the call for evidence - Periodic auctions for equity instruments



Responding to this paper

The European Securities and Markets Authority (ESMA) invites responses to the specific questions listed in the Call for evidence on periodic auctions on equity instruments published on the ESMA website.

Instructions

Please note that, in order to facilitate the analysis of the large number of responses expected, you are requested to use this file to send your response to ESMA so as to allow us to process it properly. Therefore, ESMA will only be able to consider responses which follow the instructions described below:

- use this form and send your responses in Word format (pdf documents will not be considered except for annexes);
- do not remove the tags of type <ESMA_QUESTION_CFE_PA_1> - i.e. the response to one question has to be framed by the 2 tags corresponding to the question; and
- if you do not have a response to a question, do not delete it and leave the text “TYPE YOUR TEXT HERE” between the tags.

Responses are most helpful:

- if they respond to the question stated;
- indicate the specific question to which the comment relates;
- contain a clear rationale; and
- describe any alternatives ESMA should consider.

Naming protocol

In order to facilitate the handling of stakeholders responses please save your document using the following format:

ESMA_CFE_PA_NAMEOFCOMPANY_NAMEOFDOCUMENT.

e.g. if the respondent were ESMA, the name of the reply form would be:

ESMA_CFE_PA_ESMA_REPLYFORM or

ESMA_CFE_PA_ESMA_ANNEX1

Deadline

Responses must reach us by **11 January 2019**.

All contributions should be submitted online at www.esma.europa.eu under the heading ‘Your input - Consultations’.



Publication of responses

All contributions received will be published following the end of the consultation period, unless otherwise requested. **Please clearly indicate by ticking the appropriate checkbox in the website submission form if you do not wish your contribution to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure.** Note also that a confidential response may be requested from us in accordance with ESMA's rules on access to documents. We may consult you if we receive such a request. Any decision we make is reviewable by ESMA's Board of Appeal and the European Ombudsman.

Data protection

Information on data protection can be found at www.esma.europa.eu under the headings 'Legal notice' and 'Data protection'.



General information about respondent

| | |
|--------------------------------------|---|
| Name of the company / organisation | Deutsche Börse AG |
| Activity | Regulated markets/Exchanges/Trading Systems |
| Are you representing an association? | <input type="checkbox"/> |
| Country/Region | Germany |

Introduction

Please make your introductory comments below, if any:

<ESMA_COMMENT_CFE_PA_1>

[Deutsche Börse Group welcomes the call for evidence on periodic auctions for equity instruments and appreciates ESMA's concern around so-called frequent batch auctions and their increasing market share in light of the suspension of trading under the double volume cap (DVC). With our comments and proposals, we hope to shed some light on the topic, and contribute to a better understanding of periodic auctions for equity markets.

Frankfurter Wertpapierbörse (FWB[®]) includes Xetra[®] and Börse Frankfurt where equity and non-equity instruments are traded. As of end November 2018, 738 shares were traded on Xetra and 10,671 on Börse Frankfurt. Auctions were implemented more than twenty years ago on Xetra and are part of the Continuous Trading with Auctions trading model on equities, together with continuous trading in a central order book. We offer opening, intraday and closing auctions for all equity instruments. Those auctions concentrate on average 30% of the overall trading on the platform for Xetra stocks.

In this context, Deutsche Börse Group receives positively the call for evidence from ESMA since it aims at better understanding the functioning of frequent batch auctions (FBAs), which are distinct from traditional auctions, albeit being both classified under "periodic auctions" under MiFID II. We very much welcome the fact that ESMA distinguishes between the "new trading models" and the traditional auctions, labelled "conventional periodic auctions" in the document. We however would like to insist on the fact that any potential change in the regulation shall be done in consideration of the long existing and efficient trading models in place and their positive contribution to price formation and liquidity aggregation.

We appreciate ESMA's approach to establish four distinct criteria to identify and describe different features of FBAs; to our understanding, the criteria are well-suited to make compliance with MiFID II policy objectives observable and comparable across those venues in scope; for that purpose we strongly recommend to consider them cumulatively, not in isolation. Such an approach would consider the common denominator of the criteria which are rather of a transient than a digital nature; this allows to come to a more balanced assessment and also helps to delineate FBAs more clearly from conventional periodic auctions:

- As regards the application of **pre-trade transparency**, we are of the view that the indicative price and volume can only be published once a counter order has been submitted; hence pre-trade transparency would not need to be applied already at the start of an auction, as long as there is no potential match. Thereby, it should be taken into account, that the time period during which the information is available has anyway limited relevance given that for most venues the price will either be midpoint or within the best bid and offer. Some FBAs allow only for auction price within or at the primary bid and offer (PBBO) and do start the auction with a locked price, resulting in a pure volume auction with a limited if not nil contribution to the price determination.
- **Short auction duration:** Whilst it would be difficult to quantify the necessary minimum duration of an auction, there certainly is a duration which is too limited to allow for the auction's objectives to be met in terms of multilateral interaction and thus price formation. The combination of a very short auction duration, the low level of pre-trade transparency as well as the very low contribution to price determination reduces the opportunities to participate and raise questions as regards the multilateral nature of these systems.

- **Price determination:** The fact that prices on FBAs are referenced to the primary market (midpoint or best bid and offer - BBO) and the auction algorithm bounded by the BBO, effectively replicates trading systems subject to the reference price waiver. Where some FBAs allow for auction prices within or at the primary best bid and offer (PBBO) and do start the auction with a locked price, this results in a pure volume auction with a limited if not nil contribution to the price formation.
- **Self-matching features:** We are of the view that FBAs with self-matching functionalities and member preferencing can be used for pre-arranged trading, hereby circumventing the pre arranged trade ban on the relevant instrument. All the more, FBAs which change the allocation priority from for all orders submitted with broker priority allow for the matching of pre-arranged trades. The likelihood of pre-arranged trades also increases with extremely short duration and referenced price, in particular locked auction price at midpoint.

Deutsche Börse Group would like to recall that the aim of MiFID II/MiFIR was to make financial markets in the European Union (EU) more robust and transparent by restricting dark trading and pushing trading back to lit order books. As transparency forms the very basis of any informed investment decision, which is still the most 'natural' and intuitive way to protect investors, eventually, trading in open order books with deep pools of liquidity will be required to ensure the quality of price formation and provide reliable reference prices. Moreover, Competent Authorities (CAs) need the full picture of market activity to deliver on their mandate of ensuring the stability of markets and promoting investor protection.

To that end, MiFID II introduced the trading obligation for shares and strengthened the best execution requirements. Broker Crossing Networks (BCNs) are now prohibited and systematic internalisers (SIs) were included in the list of execution venues, next to regulated markets and MTFs. New trading models also emerged, like periodic auctions, with volumes picking up after the Double Volume Cap was enforced. Those new MTFs together with additional SIs for equities mean increased competition, which is deemed beneficial to investors as it brings (execution) costs down.

However, competition cannot be an objective per se but rather a tool to achieve higher-ranking policy objectives. In a fragmented market structure, buy side already warned that it is increasingly burdensome to source liquidity and to figure out who they trade with; this is at odds with the overall MiFID II goals to 'democratize' the investment process. Dispersing trading across a large variety of venues and execution modes – with only some of them being transparent - will come at the cost of deterioration of price formation. While we clearly acknowledge investors' interest in reducing price impact of their orders and therefore seeking venues with limited/absent pre-trade transparency requirements, the proliferation of order flow across execution venues raises concerns around liquidity aggregation and the quality, reliability and efficiency of price determination.

In that context, currently, primary markets are ensuring the price formation through their transparent processes. However, it is questionable how much the flow sent to alternative venues, e.g. systematic internalisers, periodic auctions, is actually addressable liquidity and not actually withdrawn from the price forming flow (through broker preferencing, ultra short time length call phases...), deteriorating per se the price formation process and increasing investor costs in fine. It is as well questionable if the grounds for the migration of flow to those alternative venues is not the result of potential regulatory arbitrage, like the circumvention of DVCs mentioned by ESMA in the case of frequent batch auctions.]

<ESMA_COMMENT_CFE_PA_1>



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

<ESMA_QUESTION_CFE_PA_1>

[As indicated by ESMA in the call for evidence, periodic auction systems are under MiFID II all included under a single type of trading system, characterised in RTS 1 which does not allow to make the distinction between the “traditional” auctions and the frequent periodic auctions (FBAs). Deutsche Börse Group does hence very much welcome that ESMA reckons the necessary distinction between ‘conventional periodic auctions’ and ‘frequent batch auctions’.

Deutsche Börse Group agrees with the two main distinguishing features of frequent batch auctions as identified by ESMA i.e. their limited duration and that they are triggered, not scheduled by the exchange. However, should these two features be used to identify frequent batch auctions, it is important that they are considered cumulatively, meaning a frequent batch auction is an auction that has a very limited duration and is triggered.

Deutsche Börse Group would like to provide below a detailed overview of key characteristics of the two types of auctions. The descriptions highlight the fact that FBAs and conventional periodic auctions fulfil different needs for market participants.

Conventional periodic auctions

As noted by ESMA, numerous trading venues operate auctions which are widely used to orderly open and close trading sessions; many venues also organise intra-day auctions. On Xetra, the "continuous trading with auctions" service combines the trading models "Auction" and "Continuous Trading" along the day.¹ The trading session typically begins with an opening auction. This way, liquidity is concentrated and, taking as many orders as possible into account, the opening price determined. Opening auctions are intended to set the first price for the trading day, taking into account the previous trading day, trading activity in other time zones and overnight new information. On conclusion of the opening auction, continuous trading begins with all executable orders executed immediately at market prices.

Continuous trading is then interrupted with the intraday auction - conducted as a rule around midday – which enables liquidity to be concentrated in the middle of the trading day. Continuous trading resumes again and ends with the closing auction where the day’s closing price is determined. Closing auctions are a rally point where liquidity accumulates and a diversity of trading participants interact, thereby ensuring the closing price is as representative as possible of ongoing trading interests. Closing prices frequently serve as the basis for evaluating portfolios, which is why the closing price is calculated based on the market with the help of liquidity concentrated in an auction.

Opening and closing auctions benefit the market by concentrating liquidity and reducing costs, and improving the price formation process. These auctions have a fixed schedule defined by trading venues and processes are transparent as the theoretical auction price is continuously published. Academic literature did show that opening auctions increase liquidity and mitigate volatility at the open (cf. Comerton-Forde (1999)²). The closing auction on the primary market represents a significant share of trading and remains a centralised, large-scale liquidity concentration event that enables institutional investors to open or close sizeable positions, without undue complexity. Liquidity provision is the typical motivation for organizing a call auction at the end of the trading day and closing auctions contribute to risk-mitigating inventory management of market participants. Closing auctions have become focal coordination venues for liquidity seekers (Admati and Pfleiderer (1988), Spiegel and Subrahmaniam (1995)³) and lower execution cost and sharpen price determination (see Pagano and Schwartz (2003) on the then-Paris

¹ Which makes Xetra a hybrid trading system as per RTS 1 Annex 1 (“Any other type of trading system, including a hybrid system falling into two or more of types of trading systems.”) See T7 Release 7.0 Market Model for the Trading Venue Xetra® http://www.xetra.com/blob/3542474/d9325dc31345ae6a281e9fba00abb26b/data/T7_R.7.0_Market_Model.pdf.

² Comerton-Forde C., 1999, *Do trading rules impact on market efficiency? A comparison of opening procedures on the Australian and Jakarta Stock Exchanges*, Pacific-Basin Finance Journal, 1999, vol. 7, issue 5, 495-521.

³ Admati A., and P. Pfleiderer, 1991, *Sunshine trading and financial market equilibrium*, Review of Financial Studies, Vol. 4, pp. 443-481; Spiegel M. and A. Subrahmanyam, 1995, *On intraday risk premia*, Journal of Finance, Vol. Issue1, pp. 319-339.

Bourse and Comerton-Forde et al. (2007) on the Singapore Stock Exchange⁴). Studies also find that the introduction of call auctions significantly reduced day-end returns' skewness and kurtosis, suggesting less manipulation.

In today's highly fragmented markets, the opening and closing auctions allow investors to receive the benefit of centralised liquidity, which is critical to price determination and the stability and transparency of capital markets. The centralisation of liquidity twice a day is what makes opening and closing auctions worthwhile and valuable for investors. Auctions concentrate different interests and a large range of order sizes are executed including large sizes. For instance, closing auctions for DAX instruments concentrate roughly a third of the total daily volume on Xetra and the average trade size is above 220K.⁵

Many exchanges also organise intra-day auctions, e.g. for shares which are not liquid enough for continuous trading and require liquidity to be concentrated to allow trading interests to interact. Traditional auctions therefore provide essential liquidity to the market and contribute to efficient price formation.⁶

Conventional periodic auctions as described above are trading phases, which means that at scheduled times, the continuous trading phase is interrupted to switch to the auctions trading phase. But both trading phases take place in the same order book. It should be noted that the tick size regime applies to all quotes and orders on trading venues, whether these are placed in an auction system or not.

Frequent batch auctions

Due to their specificity, and contrary to conventional periodic auctions, frequent batch auctions can only operate separately from the continuous order book. Frequent batch auctions could be scheduled by the exchange but are usually triggered in different ways, potential crossing orders being the most common. Other triggers can be order submission, or client request.

In terms of transparency, FBAs only disseminate information when opposing orders are present and during a limited unknown time span usually measured in milliseconds, while conventional periodic auctions typically last several minutes.

As highlighted by ESMA, frequent batch auctions have been criticised for their short duration as it has been questioned whether their set-up allows for multilateral interaction and price formation. Whilst it would be difficult to quantify the necessary minimum duration of an auction, there certainly is a duration, which is too limited to allow for the auction's objectives to be met in terms of multilateral interaction and thus price formation.

Frequent batch auctions have a very short call phase and mostly reference the price of the most relevant market in terms of liquidity. Both criteria raise questions regarding the level of price formation taking place on these platforms. However, some FBAs provide limited price formation restricted by price bands. These auctions allow limit orders, some due to a requirement from the NCAs and some voluntarily, and if the limit order has a bigger volume than the pegged order the limit order wins. This means that there is an element that breaks the pre-arrangement for a certain price. In contrast, other venues running periodic auctions change the allocation priority from 'Price x Volume x Time' to 'Broker x Price x Volume x Time' for all orders submitted with broker priority. This type of broker preferencing allows for the matching of pre-arranged trades. Under MiFID II/MiFIR rules, pre-arranged transactions are normally hosted under the negotiated trade waiver, which is subject to the double volume cap on dark equity trading.

Periodic auctions are in theory price forming when limit orders are used and an equilibrium price is determined for the maximised volume, within a price corridor generally based on best bid and best offers on other trading venues. However, the price band limitations of periodic auctions results in similar execution as referenced price transactions that are subject to the double volume cap.

Deutsche Börse Group understands some venues running frequent batch auctions have a majority of clients using orders pegged at the midpoint and, consequently see many midpoint executions. Any

⁴ Pagano M. S. and R.A. Schwartz, 2003, *A closing call's impact on market quality at Euronext Paris*, Journal of Financial Economics, Vol. 68, pp. 439 – 484; Comerton-Forde C. and T.J. Putniņš, 2011, *Measuring closing price manipulation*, Journal of Financial Intermediation, vol. 20, pp. 135-158

⁵ Market share of closing auctions and average trade size between July and December 2018 for DAX instruments on Xetra.

⁶ After a volatility interruption, trading normally also starts in auction mode.

pegged order at midpoint means that some orders are entered in between tick sizes, which we believe was not foreseen by MiFID II/MiFIR for trading venues' lit order books.]

<ESMA_QUESTION_CFE_PA_1>

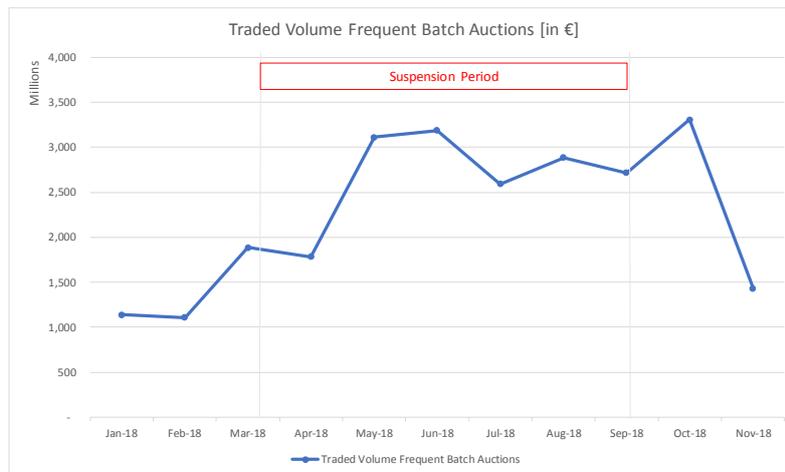
Q2. Do you agree with the observation of a rising market share for equity trading on frequent batch auctions?

<ESMA_QUESTION_CFE_PA_2>

[Deutsche Börse Group does not have a frequent batch auctions platform and hence can only report on volumes traded on other platforms. The graph below shows that, in line with ESMA's results, the market share of frequent batch auctions in the DAX, MDAX and SDAX indices almost tripled between January and October 2018. Hence, we do agree with the observation of a rising market share for equity trading on frequent batch auctions.

More specifically, on 12th March 2018, ESMA announced the first set of instruments to be banned from trading on dark venues because the volumes traded under certain waivers had breached the double volume cap threshold. A total of 44 shares part of the DAX, MDAX and SDAX were suspended for six months on dark venues. We observe that volumes traded on the frequent batch auctions increased by 75% between April and May 2018.

Figure 1: Development of trading on frequent batch auctions for constituents of DAX, MDAX and SDAX indices since January 2018



Note: Traded volume on frequent batch auctions for DAX, MDAX and SDAX instruments. Frequent batch auctions include Aquis auction on demand, Cboe Periodic Auctions, ITG POSIT Auction, Nasdaq Auction on Demand, Turquoise Lit Auctions, Instinet Blockmatch Auction MTF and UBS MTF Auction. Source: big xyt, own calculations.

In order to isolate the “DVC effect”, we did differentiate between instruments banned from dark venues and other instruments. As shown on Figure 2, the effect is more pronounced for the ISINs that were suspended under the DVC from 12 March to 12 September 2018.

Figure 2: Development of trading on frequent batch auctions and on venues under MiFID II waivers for constituents of DAX, MDAX and SDAX indices since January 2018 – suspended instruments vs non suspended instruments



Note: Venues under waivers include trading on venues under the negotiated trade, the reference price and the large in scale waivers. Series were corrected for the triple witching day effect. **Source:** big xyt, own calculations.

Figure 2 shows that trading on frequent batch auctions increases from 1.15% to 4.3% between February and May 2018 for instruments banned from dark venues.⁷ At the same time, for all other instruments still traded on dark venues, the market share of frequent batch auctions increased more modestly from 0.52% to 1.41% on the same period. Those results are confirmed by the analysis conducted by Rosenblatt Securities who observed a “seesaw effect” with an immediate shift back to dark pools in September once the ban was lifted. In banned stocks, dark pools traded 2.16% of the volume in August 2018, reverting to 5.13% in the month after the caps were lifted. In the same time, periodic auctions on banned stocks dropped from 2.16% to 1.17%.⁸

<ESMA_QUESTION_CFE_PA_2>

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

<ESMA_QUESTION_CFE_PA_3>

[As per Figure 1 and Figure 2 above, Deutsche Börse Group observes that the market share of frequent batch auctions dropped after the ban on dark venues trading was lifted for the first set of suspended ISINs. Indeed the market share of frequent batch auctions for the sample of suspended instruments dropped from 4.21 in August 2018 to 2.25% at the end of September; At the same time, the market share of dark venues increased back to the pre-suspension levels.

Although the latter observation shows that the market share lost by dark venues did not transfer fully to frequent batch auctions – see response to Q21 -, the increase in frequent batch auctions volumes and their subsequent drop would tend to demonstrate that FBAs are used as a substitute to under waivers subject to the DVC venues. The volumes counting against the DVC are those traded under the reference price waiver and the negotiated trade waiver. Given the characteristics of FBAs, it makes sense that market participants see in FBAs characteristics comparable to the venues under waivers and hence use the former similarly, without their FBAs volumes counting against the waivers.

In the light of those results, it could hence be argued that the main factors driving the growth of FBAs are intrinsically linked to the characteristics of under waivers subject to the DVC venues they are able to

⁷ Venues under waivers include a selection of venues that operate under a pre trade transparency waivers, i.e. negotiated trade waiver, reference price waiver and large in scale waiver.

⁸ Rosenblatt Securities Inc., *MiFID II dark caps: no light at the end of the tunnel*, Trading Talk Market Structure Analysis, 19 November 2018.

replicate. This point is further developed in our answer to Q13. We do believe that in particular the fact that prices on FBAs are referenced to the primary market (midpoint or best bid and offer - BBO) and the auction algorithm bounded by the BBO, in that aspect replicating reference price waiver, are the central factor explaining the success of FBAs.]

<ESMA_QUESTION_CFE_PA_3>

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

<ESMA_QUESTION_CFE_PA_4>

[Deutsche Boerse Group agrees with the four characteristics provided by ESMA. We are of the view that frequent batch auctions shall be analysed in comparison with other trading systems like continuous trading but mainly in comparison with the other types of periodic auctions also included in the “Periodic auction trading system” or the “Any other trading system” category as defined by RTS 1, Annex 1, Table 1. As pointed out by ESMA, it is necessary to distinguish between conventional periodic auctions and frequent batch auctions where differences cover at least the four characteristics identified by ESMA:

| | Conventional Periodic Auctions | Frequent Batch Auctions |
|--|--|--|
| What levels of transparency are provided? | Requirements regulated by RTS 1. Indicative matching price and indicative matching volume are published during the call phase. Some European exchanges willingly publish the full order book and/or the market imbalance. Subject to full post-trade transparency. | Requirements regulated by RTS 1. Indicative matching price and indicative matching volume are published during the call phase. Limited pre-trade transparency provided during a very short time-frame measured in milliseconds. No market imbalance is published. Subject to full post-trade transparency. |
| How long is the auction? | Several minutes. | A limited unknown time span usually measured in milliseconds. |
| Is price formation taking place? | Yes, traditional auctions centralize liquidity to provide price determination at the start and end of trading. | Reduced price formation where the orders are pegged at midpoint or where there is price band limitations. |
| What criteria can be used for matching priority? | Price x Volume x Time, in some cases also member priority albeit not all venues allow member priority. | Different models apply combining broker, price, volume and time dimensions. Broker x Volume x Time x Time priority model can be used for pre-arranged trading. |

While not at the core of this call for evidence, it should also be noted that frequent batch auctions have been advocated as a response to high frequency trading when compared to continuous trading or the CLOB (Central Limit Order Book).⁹ According to Budish et al. (2015) “Discrete time makes tiny speed advantages orders of magnitude less valuable, and the auction transforms competition on speed into competition on price”.¹⁰ The authors however reckon that the theoretical model is extremely stylized and does not include order size or asymmetry of information. It also remains open if FBAs as currently set (self

⁹ This is the stance chose by the FCA in their analysis on periodic auctions. The analysis however fails to grasp the specificity of FBA since it opposes continuous trading and periodic auctions, concluding that periodic auctions “reduce the importance of speed and latency”, which is true from both conventional periodic auctions and FBAs. (see <https://www.fca.org.uk/publications/research/periodic-auctions>).

¹⁰ Cf. Budish E. et al., 2015, *The high-frequency trading arms race: frequent batch auctions as a market design response*, Quarterly Journal of Economics, Vol.130, Issue 4, pp. 1547-1621.

matching, trigger mechanism, duration...) have indeed beneficial effects on execution quality by diminishing importance of speed and latency. This argument shall be balanced against other key aspects of FBAs as regards liquidity aggregation and price formation which may not be left neglected.

As a conclusion, one may concede that competition among venues may unfold along different interests, preferences and motivations, which makes comparing outcomes a highly complex process. However, it remains essential that competition takes place on the prerequisite of a level playing field with equivalent being regulated equivalently.]

<ESMA_QUESTION_CFE_PA_4>

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.

<ESMA_QUESTION_CFE_PA_5>

[In accordance with our response to Q4, Deutsche Boerse Group would like to add more characteristics to FBAs compared to conventional periodic auctions:

| | Conventional Periodic Auctions | Frequent Batch Auctions |
|--|---|--|
| What order types are allowed? | Limit orders, market orders, stop orders, iceberg orders. | Limit orders, market orders, PBBO pegged limit orders, midpoint pegged orders. |
| Do orders need to fulfil minimal size requirements? | No. | Certain venues apply minimum sizes. |
| Does the auction system operate in accordance with the tick size regime? | Yes. | Potentially no for orders pegged at midpoint. No, for executions – some periodic auctions venues authorise sub-ticks for midpoint matching (within price band limitations). |

]

<ESMA_QUESTION_CFE_PA_5>

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.

<ESMA_QUESTION_CFE_PA_6>

[As recalled by ESMA, Table 1 of Annex 1 of RTS 1 requires that periodic auction trading systems must make public “the price at which the auction trading system would best satisfy its trading algorithm in respect of shares, depository receipts, ETFs, certificates and other similar financial instruments traded on the trading system and the volume that would potentially be executable at that price by participants in that system”. Deutsche Börse Group is of the opinion that the indicative price and volume can only be published once a counter order is submitted, the trading algo triggered, such as the volume qualifies as “executable”. The time period during which the information is available has anyway limited relevance given that for most venues the price will either be midpoint or within the best bid and offer. We would hence not



recommend pre-trade transparency to be already applied at the start of an auction, as long as there is no potential match.]

<ESMA_QUESTION_CFE_PA_6>

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.

<ESMA_QUESTION_CFE_PA_7>

[ESMA mentions that for “systems that collect orders and only initiate an auction once there is a matching opportunity” then “no pre trade transparency information is disclosed on orders collected pending a potential match and hence the initiation of the auction”. ESMA adds that “this practice is similar to conventional periodic auctions where it is current practice to allow for the submission of orders ahead of the start of the auction without those orders being subject to pre-trade transparency”. We would specify that, at least in the case of Xetra T7, Market Model Equities, when the call phase is indeed triggered, at fixed time, then pre trade transparency is effective, whether the order book is crossed or not: If an indicative price cannot be determined, the best bid/ask limit is displayed. In case of an uncrossed order book, the accumulated volumes at the best bid and best ask are displayed in addition to the best bid and ask limits. In case of a crossed order book the executable volume for the indicative auction price, the side of the surplus and the volume of the surplus are displayed. FBAs do not allow for this level of pre trade transparency since the latter only start when the order book is crossed.

However, Deutsche Börse Group understands that FBAs that initiate auctions upon the identification of a possible match do provide real-time information on the indicative price and volume from the beginning of the auction. As mentioned by ESMA, the value of information provided is however limited since some FBAs allow only for auction price within or at the primary best bid and offer (PBBO) and do start the auction with a locked price, resulting in a pure volume auction with a limited if not nil contribution to the price formation.]

<ESMA_QUESTION_CFE_PA_7>

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

<ESMA_QUESTION_CFE_PA_8>

[Deutsche Börse Group does provide the market imbalance during its opening, intraday and closing auction, named conventional periodic auctions by ESMA. We do consider market imbalance, like the side of the surplus and the volume of the surplus to be useful and relevant information for market participants as it reflects the direction of the market. This information would as well provide an indication on pre arranged trading.]

<ESMA_QUESTION_CFE_PA_8>

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.

<ESMA_QUESTION_CFE_PA_9>

[Deutsche Börse Group currently offers only conventional periodic auctions with a duration of at least two min for the call phase followed by the price determination.¹¹ We do understand that all periodic auctions fulfil specific functions be it the ability to concentrate liquidity at one point in time and keeping latency sensitive market participants away. However, frequent batch auctions have been criticised for their short duration as regulators have questioned whether their set-up allows for multilateral interaction and price formation. Whilst it would be difficult to quantify the necessary minimum duration of an auction, there certainly is a duration which is too limited to allow for the auction's objectives to be met in terms of multilateral interaction and thus price formation. We do, in this situation, understand that FBAs sometimes resemble more volume auctions with a set price given the very short auction duration (25ms to 150ms as recalled by ESMA) and question both the multilaterality of the systems and the process of price determination.]

<ESMA_QUESTION_CFE_PA_9>

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.

<ESMA_QUESTION_CFE_PA_10>

[Deutsche Börse Group proposes conventional periodic auctions only which last at least two minutes. Each one however is strategically scheduled for a specific purpose that justifies its length. The opening auction aims at producing an efficient price, incorporating all the information produced overnight; the intraday auction allows for concentrating liquidity at the time where market liquidity is lower (lunch time) and the closing auction concentrates liquidity to allow for closing positions. It is however understood that FBAs would also aim at concentrating liquidity and at the same time attracting less latency and price sensitive market participants. As per our response to Q9, the combination of very short auction duration, the reduced pre trade transparency reducing potentially de facto the opportunities to participate and the very limited or nil price formation taking place limit the multilaterality of those systems. A longer auction duration would allow more participants to interact in the auction and provide enough time for actual price formation, notwithstanding the removal of pegged orders. FBAs wouldn't require importing prices from primary markets, lit venues and propose a real process of price determination.

Deutsche Börse Group does not believe that the auction duration should take into account the liquidity and/or the type of instruments traded since it would add complexity and benefits are not obvious. For the case of less liquid instruments, one could argue that a significantly longer auction duration might not be beneficial to illiquid stocks where liquidity is so scarce that the price determination might deteriorate with a long duration and large price fluctuations.]

<ESMA_QUESTION_CFE_PA_10>

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?

<ESMA_QUESTION_CFE_PA_11>

[Deutsche Boerse AG cannot answer this question.]

<ESMA_QUESTION_CFE_PA_11>

¹¹ The durations are of 10 minutes for the opening auction, 5 minutes for the closing auction and 2 minutes for the intraday auction. See <http://www.xetra.com/blob/1193382/551dd38dea9746ebf7cb3d5b3d57fb18/data/trading-parameters-xetra.pdf>.

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.

<ESMA_QUESTION_CFE_PA_12>

[As ESMA noted, FBAs “systems require that the auction price is set at, or within, the best bid and offer price”. This would mean in the case of liquid instruments, an auction price at or within one to two ticks only (as for DAX instruments for instance). Moreover, those restricted auction prices might be locked at the beginning of the auction. In that sense, auction prices are imported from the primary markets and FBAs operate explicit price referencing whereby the process of price formation takes place on primary markets. Where it can be argued that a limited price formation takes place in systems allowing limit orders and where the price can fluctuate between the best ask and the best bid, other systems with orders pegged at midpoint and matching at midpoint do not.

Deutsche Börse Group would also like to point out in that context that pegging orders to the primary best bid and offer, or binding the auction price to the primary best bid and offer is giving a competitive advantage to FBA systems, whereby primary markets do bear to costs of price formation.]

<ESMA_QUESTION_CFE_PA_12>

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

<ESMA_QUESTION_CFE_PA_13>

[Following our response to Q12, under MiFID II/MiFIR rules, pre-arranged transactions and transactions executed at mid-point on trading venues are normally hosted under the negotiated trade or reference price waivers, which are both subject to the double volume cap on dark equity trading. FBAs are in theory allowing for limited price formation when limit orders are used and an equilibrium price is determined for the maximised volume, within a price corridor generally based on best bid and best offers on other trading venues. However, the price band limitations of FBAs still result in similar execution as referenced price transactions that are subject to the double volume cap (one to two ticks only for liquid instruments). Price band limitations of FBAs do not require to be aligned on the bid and ask determined on the primary market. Similarly to circuit breaker mechanisms, the auction price could fluctuate within a corridor whose thresholds are indexed to a reference price which could be the transaction price from the previous auction.

Moreover, Deutsche Börse Group understands that some venues running FBAs have a majority of clients using orders pegged at the midpoint and, consequently see a lot of midpoint executions. Any order pegged at midpoint means that some orders are entered in between tick sizes, which we believe was not foreseen by MiFID II/MiFIR for trading venues’ lit order books. In that sense, FBAs would behave similarly to reference price systems (See ESMA Q&A on market structures topics, page 14: “the minimum tick size regime would not apply to transactions executed in systems that match orders on the basis of a reference price as per Article 4(1)(a) of MiFIR, or to negotiated transactions as per Article 4(1)(b) of MiFIR”).]

<ESMA_QUESTION_CFE_PA_13>

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)?

<ESMA_QUESTION_CFE_PA_14>

[Deutsche Börse Group considers that ensuring multilaterality in FBAs is only possible if the auction duration allows for market participants to submit orders and interact. A sufficient pool of market participants brings different trading interests, which participate in the price formation process if the auction

is based on limit orders and the auction algorithm on the maximisation of the executable volume. Moreover, price formation process can only take place for systems where the auction is triggered once the order book is crossed with orders on both sides of the book, which also allows for pre trade transparency via the publication of the indicative price and the executable volume.]

<ESMA_QUESTION_CFE_PA_14>

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

<ESMA_QUESTION_CFE_PA_15>

[As per our response to Q12, Deutsche Börse Group considers that price referencing on primary market harms the process of price determination by importing prices set on other venues and preventing the FBA flow to interact with the market participants on the primary market/continuous limit order books. It shall as well be noted that we do not see any obstacle for those trades not to take place in the continuous lit order book. Indeed, the FCA notices that “It is possible that a lower level of pre-trade transparency is more attractive to market participants who are concerned about market impact and previously traded in the dark but have been forced to change their trading patterns by the DVC.” However, according to Rosenblatt Securities, currently the average trade size is €5,788 on FBAs. In comparison, the average trade size is almost €5,000 on EU lit venues (above €11,000 on Xetra).¹² The market impact, information leakage and order size do not appear to be the motivation to trade on FBAs.

Moreover, it shall be noted that pegged orders especially at midpoint might not be MiFID compliant when the best bid and offer on the primary market is equal to an odd number of ticks. We would like in that sense recall the clarification by ESMA in their Q&A on market structure, stating that “as the aim of the minimum tick size regime is to ensure the orderly functioning of the market, its application extends to all orders submitted to trading venues.” One way to overcome this limitation is to submit the flows on FBAs to the reference price waiver flows, which would allow for limits on subticks.¹³

Alternatively, pegged orders could be banned from FBAs, and only limit orders admitted, which would, together with multilaterality, allow for price formation on those platforms.]

<ESMA_QUESTION_CFE_PA_15>

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

<ESMA_QUESTION_CFE_PA_16>

[Deutsche Boerse AG cannot answer this question.]

<ESMA_QUESTION_CFE_PA_16>

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?

¹² See Rosenblatt Securities, *European Securities Volume: November 2018*, Trading talks Market structure analysis, 7 December 2018.

¹³ “However, the minimum tick size regime would not apply to transactions executed in systems that match orders on the basis of a reference price as per Article 4(1)(a) of MiFIR, or to negotiated transactions as per Article 4(1)(b) of MiFIR.” Page 14, Questions and Answers on MiFID II and MiFIR market structures Topics, November 2018, ESMA70-872942901-38



<ESMA_QUESTION_CFE_PA_17>

[Deutsche Börse Group considers that FBAs with self matching functionalities, member preferencing, can be used for pre-arranged trading, in particular Broker x Price x Volume x Time priority models, hereby circumventing the pre arranged trade ban on the relevant instrument. All the more, FBAs which change the allocation priority from 'Price x Volume x Time' to 'Broker x Price x Volume x Time' for all orders submitted with broker priority allow for the matching of pre-arranged trades. The likelihood of pre arranged trades also increases with extremely short duration and referenced price, in particular locked auction price at midpoint.

Under MiFID II/MiFIR rules, pre-arranged transactions are normally hosted under the negotiated trade or reference price waivers, which are both subject to the double volume cap on dark equity trading.

Deutsche Börse Group therefore urges ESMA to analyse the flows executed under broker preferencing in FBAs. For instance, the analysis of open interest/surplus following each auction would bring some insight on the level of pre arranged trading. The lack of surplus could be an indication of pre arranged trades.]

<ESMA_QUESTION_CFE_PA_17>

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?

<ESMA_QUESTION_CFE_PA_18>

[Deutsche Börse Group considers that the combination of different characteristics like short auction duration and auction price locked at midpoint cast some doubt on the matter, as per our response to Q17.]

<ESMA_QUESTION_CFE_PA_18>

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?

<ESMA_QUESTION_CFE_PA_19>

[Deutsche Börse Group does not have access to trade information of FBAs. Hence we would strongly advise ESMA to carefully assess the matter and analyse data provided by FBAs.]

<ESMA_QUESTION_CFE_PA_19>

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

<ESMA_QUESTION_CFE_PA_20>

[Deutsche Börse Group cannot answer this question.]

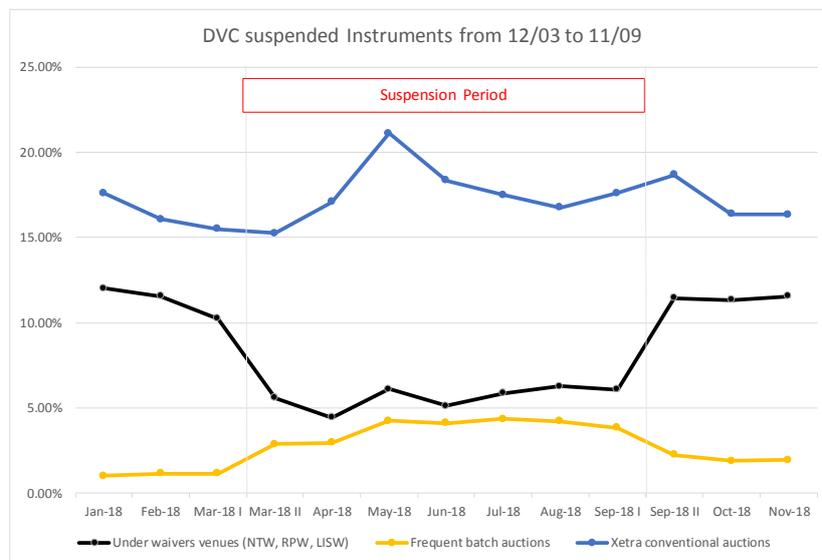
<ESMA_QUESTION_CFE_PA_20>

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.

<ESMA_QUESTION_CFE_PA_21>

[Deutsche Börse Group observed, as per our response to Q1, that for German instruments suspended in March 2018, the market share of venues under waivers (be it negotiated trade, reference price and large in scale waivers) dropped mechanically after the suspension. The volumes accounting for 5.65ppt did mainly migrate to FBAs with an increase of 2.7ppt of their market share. With systematic internalisers excluded from our landscape, conventional periodic auctions also saw a moderated increase in their market share as shown in Figure 3. With data corrected by the triple witching day effect, opening, intraday and closing auctions volumes increased by 1.27ppt. Traded volumes also increased by 1.68ppt for suspended instruments, still to a lesser extent than FBAs.

Figure 3: Development of trading on frequent batch auctions for instruments suspended under the DVC and constituents of DAX, MDAX and SDAX indices since January 2018



Note: Conventional periodic auctions includes opening, intraday and closing auctions on Xetra®. Series were corrected for the triple witching day effect. Source: big xyt, own calculations.

] <ESMA_QUESTION_CFE_PA_21>

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?

<ESMA_QUESTION_CFE_PA_22>

[Deutsche Börse Group would consider that, should trading under frequent batch auctions become subject to stricter requirements in the future, current trading volume would not necessarily migrate to other types of execution venues. Indeed, if the requirements were to affect execution at midpoint, volumes would most likely migrate to systematic internalisers for transaction above the standard market size, where systematic internalisers are not subject to the tick size regime.

If however, the regulation was not to either impact pegged orders nor include the FBAs volume in the DVC calculations, then trading volumes would most likely remain on FBAs.

<ESMA_QUESTION_CFE_PA_22>