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| 26 September 2022 |

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| Reply form for the Consultation Paper on market outages |
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| Date: 26 September 2022 |

Responding to this paper

The European Securities and Markets Authority (ESMA) invites responses to the specific questions listed in the Consultation Paper on market outages 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\_OUTA\_0> - 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\_CP\_OUTA\_NAMEOFCOMPANY\_NAMEOFDOCUMENT.

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

ESMA\_CP\_OUTA\_ESMA\_REPLYFORM or

ESMA\_CP\_OUTA\_ANNEX1

***Deadline***

Responses must reach us by 16 December 2022.

All contributions should be submitted online at [www.esma.europa.eu](http://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](http://www.esma.europa.eu) under the headings ‘Legal notice’ and ‘Data protection’.

# General information about respondent

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| Name of the company / organisation | Deutsche Börse Group |
| Activity | Regulated markets/Exchanges/Trading Systems |
| Are you representing an association? |  |
| Country/Region | Germany |

# Introduction

Please make your introductory comments below, if any:

<ESMA\_COMMENT\_CP\_OUTA\_1>

As an international exchange organisation and innovative market infrastructure provider, Deutsche Börse Group (DBG) ensures capital markets that are transparent, reliable, and stable. With its wide range of products, services and technologies, the Group organises safe and efficient markets for sustainable economies.

The derivatives and cash market exchanges of DBG, Eurex and FWB utilize stable and resilient systems and aim to minimize disruption and uncertainty for their market participants. This is also reflected by the high average availability rates of 99.97% for Eurex and 99.98% for FWB over the last 20 years. We continuously improve our technology and procedures with the goal to offer a robust infrastructure and, if necessary, the best incident handling possible. The exchanges continuously strive for a highly resilient T7 Trading System and continuously work on improving business continuity measures strive towards a 100% availability. In the rare case a technical incident does occur, we have established clear standards and continuously review and improve our incident communication and handling to minimize the impact and swiftly resolve the issue. By publicly communicating, we aim to increase clarity and predictability for our market participants regarding the operational procedures that are in place.

Based on recommendations by market participants, DBG published in October 2021 an emergency playbook on how we are managing market outages for our trading system T7. The playbook is an important tool which guarantees transparency and predictability of our procedures in case of incidents which have received general approval by our market participants. Our incident handling and communication is streamlined, efficient, and timely. Nevertheless, we are always improving our policies and procedures. We are therefore continuously in close dialogue with our trading members as well as other European exchanges.

With regard to the questionnaire, we would like to emphasize the following points:

* We would caution against additional guidance to the MiFID II/MiFIR framework. There is no legal basis in the MiFID II/MiFIR framework, nor the information and communication procedures in case of an IT incident are addressed within DORA. We believe the exchanges’ playbooks would help aligning market communication across both legislative files.
* We do not think that a template for communication notices is necessary. Most European venues already have set up their playbooks on incident handlings, based on common standards.
* Trading venues should provide clarity on the status of the orders as soon as possible. Indeed, in case of an outage trading venues have a clear incentive to get their trading systems back up running as quickly as possible. However, it might not be possible within a one hour timeframe.
* The conditions under which a trading venue should reopen depend on the trading system. For trading venues with a continuous order book model, the market should reopen with standardised pre-trading and auction phases, guaranteeing the integrity of the orders and a fair and orderly trading.
* If the closing auction is affected, the market participants will be informed via the dedicated communication channels about the issue and subsequently about the progress. Finally, the schedule for processing the closing auction will be published and will include the pre-trading phase followed by the auction phase. Both will amount to at least 30 minutes.
* In case the closing auction cannot take place for the trading session, the last traded price on the primary market should be considered as the official closing price. For other financial instruments like derivatives contracts the final settlement price may be determined by the trading venue at its reasonable discretion.
* We agree not to mandate trading venues to have an alternative trading venue capable of running the closing auction for them. Forcing market participants by regulation to connect to a back-up venue raises questions around choice of trading and competition.
* We agree that trading venues should have a cut off time to inform market participants on whether or not holding a closing auction. Market participants should receive all relevant information in a timely manner for them to take adequate measures.
* From our perspective, there is no implicit link between trading a derivative and the availability of its underlying. Market participants would retain the choice of trading the derivative instruments whether or not the underlying instruments are impacted by an outage. On Eurex, trading would continue, independently from the availability of the underlying.

<ESMA\_COMMENT\_CP\_OUTA \_1>

1. : Do you agree with the main communication principles identified above?

<ESMA\_QUESTION\_OUTA\_1>

DBG agrees with the communication principles that are suggested by ESMA as outlined on pages 10 and 11, points 30 to 39. Accurate and prompt information to the exchange members but also to all market participants is paramount on all aspects listed by ESMA in the Consultation Paper – notice of disruption, regular status updates, anticipated time of resumption –; market participants shall also have a clear indication on what to expect in terms of orders’ status, depending on the nature of the outage. Following recommendations by market participants, in October 2021 DBG published a playbook listing all those aspects and detailing how DBG is managing market outages for its trading system T7 used for both the cash market Xetra and the derivatives market Eurex (please see FWB webpage: <https://www.xetra.com/resource/blob/2800138/554d287b6756ef5e60856c6e491e15ea/data/Emergency-Playbook-Incident-Handling.pdf>; please see Eurex webpage: <https://www.eurex.com/resource/blob/2799268/554d287b6756ef5e60856c6e491e15ea/data/Emergency-Playbook-Incident-Handling.pdf>). The Emergency Playbook details the process in case of incidents/outages through a streamlined and efficient communication process including but not limited to our trading members over multiple channels, like our website. The playbook is an important tool which guarantees transparency and predictability of our procedures which have received general approval by DBG’s market participants. DBG incident handling and communication is considered streamlined, efficient, and timely. Nevertheless, DBG is always looking at ways to improve its policies and procedures. We are therefore continuously in close dialogue with our trading members as well as other European exchanges.

Following the development and publication of the DBG emergency playbook, DBG as part of the Federation of European Securities Exchanges (FESE) has developed the industry standards for communication principles in case of an outage; in January 2022, FESE published a framework for an industry-wide standard protocol on outages in equity as well as currently finalising the protocol for non-equity markets. The protocol for equity markets consists of a list of ten principles covering communication in case of an outage but also the procedure if a closing auction cannot be conducted and the closing price cannot be provided (please see FESE webpage: <https://www.fese.eu/app/uploads/2022/01/Trading-Venue-Outages-A-Framework-for-Industry-wide-Standard-Protocols-in-Equity-Markets.pdf>). This initiative was designed to ensure market participants’ confidence in the underlying procedures that are to be followed in the event of a market outage on those venues.

The aforementioned initiatives support and would even go beyond the requirements in Articles 47 and 48 of MiFID II for effective systems and procedures to ensure trading venues systems’ resilience and orderly trading, also under stressed market conditions. We would caution at this stage against additional guidance to the MiFID II/MiFIR framework to adapt the current notification and communication procedures. Firstly, there is no legal basis in the MiFID II/MiFIR framework for doing so. Secondly, information and communication procedures in case of an IT incident are addressed within Article 13 of the European Commission proposal for a regulation on digital operational resilience for the financial sector (DORA). We find it beneficial that DORA introduces a consistent and streamlined approach for the financial sector towards IT incident classification, notification towards authorities, and communication to customers and the public with a view to increase the efficiency of current communication procedures and the resilience of the overall ecosystem. We believe it is paramount any measures in MIFID II are assessed against the new DORA standards once applicable and consistency is ensured. In particular, Art. 13 DORA does not mandate further specification via Level 2 and/or 3 to determine what and how shall be communicated in case of an IT incident. For that specific aspect we believe the exchanges’ playbooks would help aligning market communication across both legislative files.

Finally, as per Art. 23 MiFIR on the share trading obligation, trading in shares admitted to trading on a regulated market or traded on a trading venue shall take place on a regulated market, MTF or systematic internaliser (or a third country trading venue assessed as equivalent); systematic internalisers being execution venues considered equivalent to regulated markets and MTFs from that perspective, DBG also suggests that communication principles in case of an outage should be extended to the systematic internalisers so that their clients are informed equally about any disruptions and receive regular status update.

<ESMA\_QUESTION\_OUTA\_1>

1. : To promote harmonisation, should the guidance include a template on what trading venues’ communication notices should include?

<ESMA\_QUESTION\_OUTA\_2>

DBG does not think that a template is necessary, partly because most European venues already have set up their playbooks on incident handlings, based on common standards (see for FESE members: <https://www.fese.eu/blog/exchange-playbooks-on-outage-protocols-in-equity-markets/>).

Further, DBG reckons that trading venues need to keep a certain degree of discretion in addressing incidents based on best practice and in line with the existing European as well as national regulatory and legal requirements.

Moreover, as pointed out in our response to Q1 we would like to highlight that information and communication procedures in case of an IT incident are already addressed within Article 13 of DORA. We find it beneficial that DORA introduces a consistent and streamlined approach. We believe it is paramount that any measures in MIFID II are assessed against the new DORA standards once applicable and consistency is ensured. In particular, Art. 13 DORA does not mandate further specification via Level 2 and/or 3 on communication in case of an IT incident. For that specific aspect we believe the exchanges’ playbooks as an industry initiative would help to achieve the objectives addressed in both legislative files.

<ESMA\_QUESTION\_OUTA\_2>

1. : Do you agree that trading venues should have a maximum of one-hour to provide clarity on the status of the orders during an outage? If not, what would be an appropriate timeframe in your view and why?

<ESMA\_QUESTION\_OUTA\_3>

DBG suggests that trading venues should provide clarity on the status of the orders as soon as possible instead of within a one-hour window. Indeed, in case of an outage trading venues have a clear incentive to get their trading systems back up running as quickly as possible and to allow market participants to resume their activities on their platform; they would consequently provide clarity on the status of the orders as soon as possible, which however might not be possible within one hour timeframe. We would also underline that the status of orders can be derived from the nature of the incident, meaning that as soon as the nature of the incident has been identified, market participants have general rules available to them to deduct the status of their orders (for details please see FWB and Eurex T7 system the latest version of the Incident Handling Guide: <https://www.xetra.com/resource/blob/3210030/1291a3881fac5e279d8801c7163cdd41/data/T7_Release_11.0_-_Incident_Handling_Guide_v.5.3.pdf>).

<ESMA\_QUESTION\_OUTA\_3>

1. : Do you think the possibility to require trading venues to offer an order book purge should be considered in the guidance? If yes, should ESMA provide further guidance on when the integrity of the orders has been largely compromised?

<ESMA\_QUESTION\_OUTA\_4>

DBG sees advantages in offering an order book purge to market participants, especially in cases where the integrity of orders has been compromised to a large degree. However, order book systems differ and the determination of what constitutes “integrity of the orders” should be entrusted to each venue. For DBG, the expected status of orders does depend on the type of incident and the different scenarios are detailed together in the Incident Handling Guide publicly available on our website (see response to Q3). We would caution against a systematic order book purge in case of an incident and because it is an extreme measure, would leave to it trading venues’ discretion on the relevance for application of this measure to specific cases in order to guarantee the integrity of the market and ensure trust of market participants in our systems.

<ESMA\_QUESTION\_OUTA\_4>

1. : What is your view with regards to the conditions under which a trading venue should reopen trading?

<ESMA\_QUESTION\_OUTA\_5>

The conditions under which a trading venue should reopen vary at the technical level depending on the trading system and an adequate re-opening shall only be possible if fair and orderly trading and other regulatory responsibilities are ensured. DBG believes that for trading venues operating a continuous order book model, the market should re-open with standardised pre-trading and auction phases, guaranteeing the integrity of the orders (option b proposed by ESMA). The auction phase allows for market participants to submit/modify or delete orders and optimise the price discovery process by concentrating all trading interests in an organized fashion.

<ESMA\_QUESTION\_OUTA\_5>

1. : What is your view in relation to the closing auction being affected and the procedures that trading venues should have in place to minimise disruption?

<ESMA\_QUESTION\_OUTA\_6>

Xetra, the reference market for German shares, has been running successfully closing auctions since its electronic trading system was launched in 1997. We do appreciate that the transaction price for our closing auction is considered as a reference for market participants and want to ensure in the future that a closing price can be determined according to the primary rule and therefore with a closing auction. The dependencies on downstream systems allow for our equity market a latest determination up to 22:00 CET for the relevant trading session. Mindful of the restrictions our market participants are subject to, DBG commits to complete the closing auction as soon as possible in case it cannot run at the usual time. But in case the standard environment does not recover early enough, our disaster recovery environment will be used and started in time to allow for the closing auction to be processed.

In both cases, the market participants will be informed via the dedicated communication channels about the issue and subsequently via regular information channels about the progress. Finally, the schedule for processing the closing auction will be published and will include time for checking and maintaining orders within the pre-trading phase followed by the auction phase. Both will amount to at least 30 minutes.

<ESMA\_QUESTION\_OUTA\_6>

1. : Do you agree not to mandate trading venues to have an alternative trading venue capable of running the closing auction for them? If not, please explain.

<ESMA\_QUESTION\_OUTA\_7>

Yes, DBG agrees not to mandate trading venues to have an alternative trading venue capable of running the closing auction for them. We concur with ESMA to consult on further guidance on trading venues’ communication towards the market but to abstain from concrete suggestions for changes to Level 1 or Level 2. To our understanding, mandating trading venues to have alternative trading venues capable of running closing auctions in case of an outage would indeed go beyond the scope of supervisory guidance as regards market communication and represent a significant change to market structure; this aspect should remain outside the perimeter of ESMA’s final guidance towards NCAs. Indeed, there are currently alternatives to the closing auction taking place on the primary market, running in parallel on other trading venues or other execution venues like systematic internalisers. Market participants retain the choice to trade on any venue they wish and appointing an alternative trading venue in case of an outage is an anti-competitive measure ignoring that in the case of an outage on any venue, investors are able to trade on other venues, provided they have confidence they will meet sufficient liquidity and efficient price discovery process. Where market participants can choose where to execute their orders at any time of the day, mandating designated alternative venues in case of an outage on the primary would force the order flow towards a trading venue which does not appear in line with the choice of trading ability for market participants.

Forcing market participants by regulation to connect to a back-up venue in order to be able to continue trading raises other concerns. First, as noticed by ESMA, market participants and in particular smaller ones may not have access to the relevant alternative venue and will be burdened with additional costs to connect to the back-up venue. Second the appointment of an alternative venue also means that investors see their flow automatically redirected to another platform; market participants might want to send their flow to another trading platform or not to trade during the outage. Any kind of regulatory intervention that forces them to trade contradicts with fundamental market principles why buyer and seller meet.

We believe that a better understanding of the different types of flows during closing auctions on different platforms would bring value to the regulators and in general to market participants. Where the most visible flows would be those sent to primary exchanges, thanks to the level of transparency on indicative price, volume, order imbalance and potentially the full order book, less information is available for other venues or on the flows executed on broker-dealer platforms referencing the closing auction price on the primary and executing orders after close.

We would finally underline that a cost-benefit analysis might reveal the excessive costs of setting up an alternative venue for the sole purpose of conducting the closing auction compared to the extremely low probability of occurrence of an outage during the closing auction. Again, in the case of Xetra, closing auctions were successfully conducted for all our listed instruments since 1997.

<ESMA\_QUESTION\_OUTA\_7>

1. : Do you agree that trading venues should have a cut off time (30 minutes before the normal schedule) to inform market participants on whether or not they intend to hold a closing auction?

<ESMA\_QUESTION\_OUTA\_8>

Yes, DBG agrees that trading venues should have a cut off time. DBG does understand how disruptive an outage around and during the closing auction would be and want to give market participants all relevant information in a timely manner for them to take adequate measures.

<ESMA\_QUESTION\_OUTA\_8>

1. : Do you agree that the use of the last traded price is an appropriate solution in those cases that a trading venue cannot run the closing auction? If not, what alternative would you propose?

<ESMA\_QUESTION\_OUTA\_9>

Yes, DBG agrees in case the closing auction cannot take place for the trading session, the last traded price on the primary market should be considered as the official closing price. This recommendation was printed both in our playbook and in the FESE framework in case of trading venues’ outages. We would however underline that the closing auction price considered as the official closing price is more a market practice than an official rule dictated by trading venues. The acceptance of this last traded price as the official closing price will be validated if all market participants agree to indeed use this price.

Some contracts can choose to use different prices like derivatives contracts for example having their own waterfall process on how to define the daily settlement price. On Eurex derivatives market the waterfall process has been aligned with the market and relevant settlement price sources differ per asset class; they can consist of trades or bid-offer prices on Eurex, index values, prices from other venues or theoretical pricing models. For specific, more exotic products, a special market disruption event procedure is in place to determine the daily settlement price.

In case of non-availability of the price, Eurex may determine the final settlement price at its reasonable discretion. As a first fallback, the model is designed to use prices from the reference market, if re-opening of the reference market is possible within the system availability time. As a second fallback, in case the primary reference market is unavailable, prices from alternative marketplaces could be used to define the final settlement price for equity and equity index products on the last trading day. In absence of alternative markets, the final settlement price may be defined via another method (e.g., using the last available price, the back month futures or implied index levels).

<ESMA\_QUESTION\_OUTA\_9>

1. : Is the lack of a reference price an issue in an outage context? If so, please provide details.

<ESMA\_QUESTION\_OUTA\_10>

The concept of reference price is defined in Article 4 MiFIR and can be sourced from the most relevant market in terms of liquidity meaning the trading venue with the highest turnover for the past year – excluding volumes traded under pre-trade transparency waivers. The most relevant market in terms of liquidity or reference market is not a title granted to primary markets. The latter are reference market for the relevant instrument if lit volumes are the highest in the EU meaning that they are bringing significant interests together and provide an efficient price discovery process. Under MiFID II/MiFIR, not only primary markets but also other lit venues like MTFs become reference markets because they indeed support the price formation, and not the other way around: a trading venue defined as the reference market provides an ad hoc price called the reference price.

As a consequence, it does not appear appropriate to appoint an alternative venue as a source of reference price during an outage on the reference – again not necessarily primary – market. Not only it would distort the concept of reference price, but it would also render false calculations for determination of the reference market the following year by artificially increasing volumes on alternative venues and create technical problems with ESMA FITRS calculations.

In view of this, ensuring a strong operational framework to prevent outages and minimise their impact and establishing the last traded price as a backup are appropriate solutions in the context of price referencing.

<ESMA\_QUESTION\_OUTA\_10>

1. : Do you agree with the proposed approach for non-equity instruments? Do you agree that provisions on par. 37-39 can be exempted for those trading venues that do not provide CLOB?

<ESMA\_QUESTION\_OUTA\_11>

DBG agrees with the proposed approach and acknowledges that swift incident communication is of high importance. As already outlined in our response to Q1, DBG has established a standardized and reliable process of communication in case of IT incidents and published the Emergency playbook that covers both cash and derivatives market exchanges FWB and Eurex (please see FWB webpage: <https://www.xetra.com/resource/blob/2800138/554d287b6756ef5e60856c6e491e15ea/data/Emergency-Playbook-Incident-Handling.pdf>; please see Eurex webpage: <https://www.eurex.com/resource/blob/2799268/554d287b6756ef5e60856c6e491e15ea/data/Emergency-Playbook-Incident-Handling.pdf>).

DBG also agrees with ESMA proposal that provisions in par 37-39 should not be applicable to trading venues that do not provide CLOB.

<ESMA\_QUESTION\_OUTA\_11>

1. : Is there any particular issue relating to trading of non-equity instruments that should be taken into account in the case of an outage? Where possible please differentiate between bonds and derivatives.

<ESMA\_QUESTION\_OUTA\_12>

Eurex and FWB, both part of DBG, use the same trading system, i.e., T7, which is based on state-of-the-art technology, a robust and resilient architecture, which is continuously improved among others from lessons learned.

Eurex derivatives market handling of the rare outage events aims to minimize disruption and to provide the market with the highest degree of certainty. As stated above, Eurex together with FWB share the playbook that provides concise overview on the handling of technical incidents. Any particularities for derivatives are reflected in the playbook as well as in Q9 above, e.g., determination of settlement prices.

<ESMA\_QUESTION\_OUTA\_12>

<ESMA\_QUESTION\_OUTA\_0>

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<ESMA\_QUESTION\_OUTA\_0>

1. : Is there a direct link/connection between an outage on an equity primary market and those derivatives that have these instruments as underlyings?

<ESMA\_QUESTION\_OUTA\_13>

There is no implicit link between trading a derivative and the availability of its underlying. Market participants would retain the choice of trading the derivative instruments whether or not the underlying instruments are impacted by an outage. On Eurex derivatives market, trading on derivative instruments would continue if technically possible, independently from the availability of the underlying.

In general, we believe that market structure in Europe is more prone to “local” effects, i.e., impacting particular order book and market place, rather than “global”, where all the potentially related products become unavailable across different exchanges. Otherwise, the “local” event in the underlying market might artificially become a more “global” event and trading on many markets will be halted simultaneously due to contagion Likewise, we do not support the coordination of trading halts between a derivative market and a cash market, and therefore, we would not support the coordination of trading phases between a derivative product and its underlying.

<ESMA\_QUESTION\_OUTA\_13>

1. : In your view is there any further element ESMA should consider in the proposed guidance?

<ESMA\_QUESTION\_OUTA\_14>

As referenced in our answer to Q1 DBG would like to highlight that information and communication procedures in case of an IT incident are addressed within Article 13 of the European Commission on a Regulation on Digital Operational Resilience (DORA). We welcome that DORA aims at introducing a consistent and streamlined approach for the financial sector towards IT incident classification, notification towards authorities, and communication to customers and the public with a view to increase the efficiency of current communication procedures and the resilience of the overall ecosystem. This also includes the establishment of information and coordination procedures between relevant authorities on national and EU level. However, Art. 13 DORA does not mandate further specification via Level 2 and/or 3 on communication in case of an IT incident. For that specific aspect we believe the exchanges’ playbooks as an industry initiative would help to achieve the objectives addressed in both legislative files.

Trading venues already comply with Articles 47 and 48 of MiFID II requiring effective systems and procedure to ensure their systems’ resilience and orderly trading, also under stressed market conditions. These provisions will have to be assessed against the new DORA standards once applicable. Hence, we do not think that any additional guidance to the MiFID II/MiFIR framework are necessary to adapt the current notification and communication procedures and besides there is no legal basis in the MiFID II/MiFIR framework.

<ESMA\_QUESTION\_OUTA\_14>