



European Securities and  
Markets Authority

# Consultation Paper

## Market Outages



## Responding to this paper

ESMA invites comments on all matters in this paper and in particular on the specific questions summarised in Annex 1. Comments 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.

ESMA will consider all comments received 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 close of the consultation, unless you request otherwise. Please clearly and prominently indicate in your submission any part you do not wish to be publicly disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure. 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 not to disclose the response 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 heading [Legal Notice](#).

### Who should read this paper?

All interested stakeholders are invited to respond to this consultation paper. In particular, responses are sought from trading venues and investment firms.

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## Acronyms and definitions used

CLOB	Central limit order book
DORA	Digital Operational Resilience Act
EU	European Union
ESMA	European Securities and Markets Authority
MiFID II	Markets in Financial Instruments Directive (recast) - Directive 2014/65 of the European Parliament and of the Council
MiFIR	Markets in Financial Instruments Regulation – Regulation 600/2014 of the European Parliament and of the Council
MTF	Multilateral Trading Facility
NCA	National Competent Authority
OTF	Organised Trading Facility
RTS 7	Commission Delegated Regulation (EU) 2017/584 of 14 July 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying organisational requirements of trading venues

# 1 Executive Summary

## Reasons for publication

As part of its review reports on Directive 2014/65/EU<sup>1</sup> (MiFID II), ESMA published on 28 September 2021 a report on algorithmic trading. The report included a number of recommendations, including a commitment to provide guidance on how trading venues should communicate with market participants in case of an outage.

This consultation paper (CP) aims at gathering stakeholders' feedback on ESMA's proposed guidance. ESMA endeavours to publish the final report in Q1 2023.

## Contents

This CP sets out ESMA's expectations on how National Competent Authorities (NCA) should ensure that trading venues have appropriate communication protocols in place ensuring the communication to members and participants and the public during an outage.

In addition, the CP includes ESMA's guidance on how NCAs should ensure that trading venues have arrangements in place to avoid that an outage affects the closing auction, and, where an outage prevents the trading venue from running the closing auction, to ensure that the market is provided with an official closing price. It also seeks feedback from stakeholder on measures that a trading venue should have in place to ensure that it has the ability to run its closing auction and on whether the lack of a reference price raises any concern in an outage context.

Finally, the CP covers outages on non-equity markets.

## Next Steps

ESMA will consider the feedback it receives to this consultation and expects to publish a final report by Q1 2023.

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<sup>1</sup> Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (OJ L 173, 12.6.2014, p. 349)

## 2 Introduction

1. On 28 September 2021 ESMA published its MiFID II review report on algorithmic trading<sup>2</sup>. While the report concluded that the MiFID II algorithmic trading regime overall delivered on its objectives, it nevertheless made some recommendations which aimed at both simplifying the regime and making it more efficient.
2. The report included recommendations to the European Commission on targeted Level 1 amendments as well as identified issues to be followed up by ESMA via amendments to technical standards or additional guidance. As part of these recommendations, ESMA committed to publish further guidance on how trading venues should communicate with market participants in case of an outage.
3. The 2021 review report also considered that trading venues should do their utmost to ensure continuity of trading during normal trading hours and, more importantly, ensure to the extent possible that an outage does not affect the closing auction. Nevertheless, should the outage prevent the trading venue from running the closing auction, ESMA also proposes guidance on how trading venues should act in these circumstances to ensure the market is provided with an official closing price.
4. The guidance applies to equity and non-equity trading, however some specifics for non-equity instruments are provided in Section 5.
5. This consultation aims at collecting stakeholders' feedback on ESMA's proposed guidance.
6. Based on the responses received to this consultation, ESMA will prepare the final report. Respondents to the consultation are encouraged to provide relevant information, including quantitative data, to support their arguments or proposals. ESMA will endeavour to submit its final report in Q1 2023. ESMA intends to publish its guidance in form of an opinion addressed to NCAs.

## 3 Legal Framework

7. The MiFID II framework includes requirements for regulated markets relating to systems resilience, circuit breakers and electronic trading which are set out in Article 48 of MiFID II. The same requirements apply to MTFs and OTFs by virtue of Article 18(5) of MiFID II.
8. In particular Article 48(1) requires trading venues to ensure their systems are resilient, have sufficient capacity and are able to ensure orderly trading under conditions of market

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<sup>2</sup> [https://www.esma.europa.eu/sites/default/files/library/esma70-156-4572\\_mifid\\_ii\\_final\\_report\\_on\\_algorithmic\\_trading.pdf](https://www.esma.europa.eu/sites/default/files/library/esma70-156-4572_mifid_ii_final_report_on_algorithmic_trading.pdf)

stress. Furthermore, these systems need to be fully tested and subject to business continuity arrangements.

9. Commission Delegated Regulation 2017/584 (RTS 7)<sup>3</sup> further specifies the requirements to ensure trading venues' systems are resilient and have adequate capacity. The requirements embedded in RTS 7 should also be taken into account when assessing trading venues' procedures to deal with market outages, in particular in terms of business continuity arrangements. Trading venues should notably have in place business continuity arrangements and plans which should be reviewed periodically (Articles 15, 16 and 17 of RTS 7). The guidance set out below is without prejudice to such requirements.
10. The purpose of this guidance is not to propose any legislative amendments. Any potential change to the timeframe set out in Article 15(2) of RTS 7 to reopen trading would be subject to a further ESMA consultation, taking also into account potential further legislative developments concerning the Digital Operational Resilience Act (DORA)<sup>4</sup>.
11. Articles 31 and 54 of MiFID II require trading venues to maintain effective arrangements and procedures for the monitoring of their members and participants' compliance with their rules. The monitoring should be able to identify, among other things, system disruptions in relation to a financial instrument.
12. Article 54(2) of MiFID II sets out the requirement for regulated markets to immediately inform their NCA of "significant infringements of [their] rules or disorderly trading conditions or conduct that may indicate behaviour that is prohibited under Regulation (EU) No 596/2014 or system disruptions in relation to a financial instrument". Pursuant to the same provision, the NCA contacted shall in turn communicate to ESMA and to the other NCAs the information received by the market operator.
13. Article 31(2) sets out identical obligations for investment firms operating an MTF or an OTF and the NCAs receiving the relevant information.
14. Article 81 of Commission Delegated Regulation (EU) 2017/565<sup>5</sup> further clarifies the circumstances in which a trading venue is bound by the requirement to immediately inform its NCA of system disruptions in relation to a financial instrument. The list of such circumstances is detailed in Annex III Section A of the same Commission Delegated Regulation.

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<sup>3</sup> Commission Delegated Regulation (EU) 2017/584 of 14 July 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying organisational requirements of trading venues

<sup>4</sup> Proposal for a Regulation of the European Parliament and of the Council on digital operational resilience for the financial sector and amending Regulations (EC) No 1060/2009, (EU) No 648/2012, (EU) No 600/2014 and (EU) No 909/2014

<sup>5</sup> Commission Delegated Regulation (EU) 2017/565 of 25 April 2016 supplementing Directive 2014/65/EU of the European Parliament and of the Council as regards organisational requirements and operating conditions for investment firms and defined terms for the purposes of that Directive

15. Furthermore, Article 81(2) of Commission Delegated Regulation (EU) 2017/565 narrows the requirement to provide information only to such cases where “*significant events which have the potential to jeopardise the role and function of trading venues as part of the financial market infrastructure*” take place.
16. Whilst MiFID II includes provisions on how trading venues should communicate system disruptions to their NCAs, the framework does not set out any conditions or requirements as to how trading venues should communicate to their members and participants<sup>6</sup> (and the public) in case of an outage resulting in very divergent approaches of trading venues and, at least at times, insufficient information being disclosed to members and participants, and the public. ESMA hence deems it necessary to provide guidance on which steps trading venues should take to improve the communication in the event of an outage that affects their market.

## 4 Proposed Guidance on Market Outages

### 4.1 Communication Protocols

17. The volatility experienced in the past few years has not led to significant disruptions on European Union (EU) with recent market outages events being linked trading venues’ own systems rather than these periods of high volatility. Although trading venues have become increasingly resilient in the past few years, outages can still occur and have a detrimental effect on the well-functioning of markets.
18. It is hence important that trading venues and NCAs continue their efforts to prevent market outages, including with respect to testing and business continuity plans. Nevertheless, despite such efforts, outages are likely to continue occurring. It is therefore appropriate to provide guidance on how outages should be managed. Notably, appropriate communication of an outage that occurs in the primary market can limit the detrimental effects on other trading venues.
19. The ESMA report on algorithmic trading noted that an outage in the primary market impacts the trading activity on other trading venues. In fact, data show that when the primary market is down, trading on alternative lit venues also drops in the same proportion as that on the primary market, even though these alternative venues could be used to ensure continuity of trading. ESMA identified that miscommunication between trading venues and market participants contributed decisively to this as it creates uncertainty about order status on the primary market and at which time trading will be resumed.
20. Similarly, miscommunication is equally perceived to be an issue on MTFs and OTFs, as the consequent uncertainty impedes MTF and OTF members and participants to carry

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<sup>6</sup> In the context of this guidance the term “members and participants” also include “clients” for the purposes of OTFs.

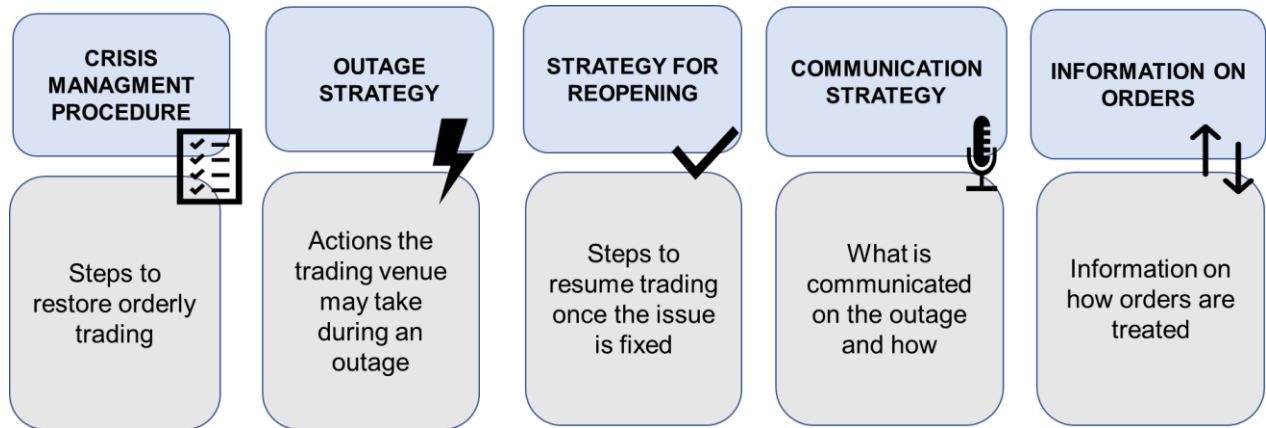


out their activity. Therefore, the ESMA guidance will focus on providing NCAs with a clear outline of how trading venues should communicate during an outage.

### **The outage plan**

21. NCAs should ensure that trading venues have in place a clear outage plan to be deployed in case of an outage.
22. The outage plan should always be deployed during an outage, regardless of the outage gravity. It should ensure that appropriate and proportionate actions are deployed by the trading venue, according to the reality of the disruption at hand.
23. The outage plan should set out all the steps that will be undertaken to restore an orderly trading in case of an outage ('crisis management procedure'). The crisis management procedure should indicate for each step when it needs to be performed and the person/function within the trading venue responsible for it.
24. The outage plan should describe all the actions that the trading venue may take during an outage, as well as any alternative arrangement foreseen for such circumstance ('the outage strategy').
25. The outage plan should also clearly describe the trading venues' strategy for reopening, detailing the steps the trading venue will undertake for the resumption of trading once the issue causing the outage has been fixed.
26. In addition, the outage plan should identify how information on outages is communicated (for example via the trading venue website) and what information is to be included in the communication. It should also set out clear procedures on how to treat incoming and existing orders, including defined procedures on trade / order cancellations.
27. The outage plan and any following amendments should be made available to members and participants of the trading venue. In exceptional circumstances, the trading venue may need to change its outage plan at the time of a disruption in order to better address the current outage. In this case, trading venues should also communicate immediately to all market participants. The outage plan, and any amendments, should always be made available to the respective NCAs, and the public via the trading venues' public website.
28. NCAs should ensure that trading venues regularly and at least every two years review, test and update the outage plan, to ensure those are always up-to-date and adapted to all possible circumstances.
29. Finally, ESMA sees it as a good practice to include at least the principles on which the outage plan is based or a summary of it in the trading venues' rulebook. In any case, NCAs should require trading venues to ensure consistency between the outage plan and the content of the trading venues' rulebook.

**FIGURE 1: CONTENT OF THE OUTAGE PLAN**



**Communication during an outage event**

30. NCAs should ensure that trading venues provide all market participants (i.e. not only its members and participants but also the general public) with a notice of disruption as soon as possible.
31. This notice of disruption should occur via any means which enables the trading venue to communicate simultaneously to market participants. In any case, the notice of disruption should also be published on the trading venue’s public website and include a dedicated contact line or person at the affected trading venue allowing market participants to ask questions and share information relating to the on-going outage.
32. NCA should ensure that, following the initial notice of disruption, trading venues provide regular status updates on the outage to all market participants at a fixed time interval (for example every 30 minutes). The frequency of the updates should be specified in the trading venues’ outage plan, and it should permit to follow the development of the situation as closely as possible to real time. The update should be provided even if there are no changes to the information previously provided and indicate the time of publication.
33. NCAs should require trading venues to communicate in the first available update and, where possible, in the notice of disruption the nature of the outage and also to the extent possible the anticipated time of resumption.
34. The communication from the trading venues should indicate where the whole outage plan can be consulted, highlighting where information on reopening can be found (e.g. by making references to the relevant part of the outage plan). In the exceptional case where any changes had to be made to the outage plan previously published to adapt to the current outage, NCAs should require trading venues to inform market participants accordingly, indicating why a divergence from the outage plan was necessary.

35. In addition, information on the status of submitted orders is crucial to enable market participants to continue trading on alternative venues.
36. Furthermore, where cancellation of orders is still possible (e.g. transactions not already executed), some market participants may find cancellation of orders useful.
37. Therefore, NCAs should require trading venues to:
  - a. indicate which orders were affected making references where possible to the time when orders were submitted.
  - b. Indicate which orders were cancelled / executed and provide clear procedures for validating cancellations, in case validations are needed by participants.
  - c. Indicate whether orders sent during an outage were accepted or rejected in accordance with the procedures defined by the trading venue.
  - d. Where the integrity of the orders has been largely compromised, offer trading participants the removal of all orders from the order book (order book purge).
38. Information on the status of orders should be provided to members and participants as soon as possible and at the latest within one hour from the notice of disruption. Such communication should be provided in a machine-readable format, so that trading systems can automatically include these notifications.
39. Where it is not possible to communicate the status of orders directly from the updates published, NCAs should require trading venues to communicate directly with their members and participants to ensure clarity on each order.

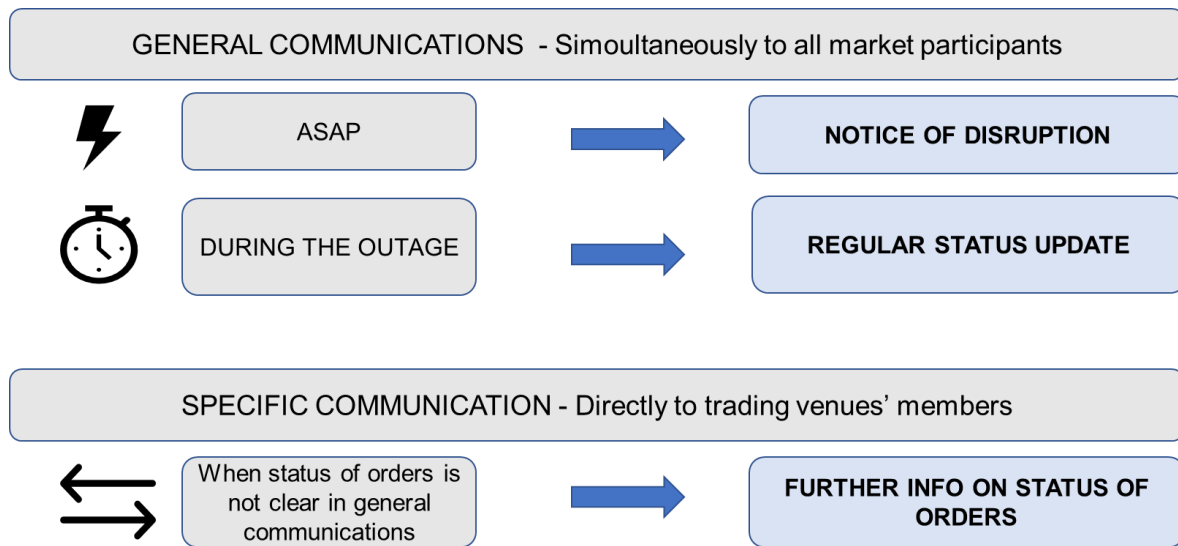
**Q1: Do you agree with the main communication principles identified above?**

**Q2: To promote harmonisation, should the guidance include a template on what trading venues' communication notices should include?**

**Q3: 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?**

**Q4: 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?**

**FIGURE 2: COMMUNICATIONS – TYPES**



**Reopening of trading**

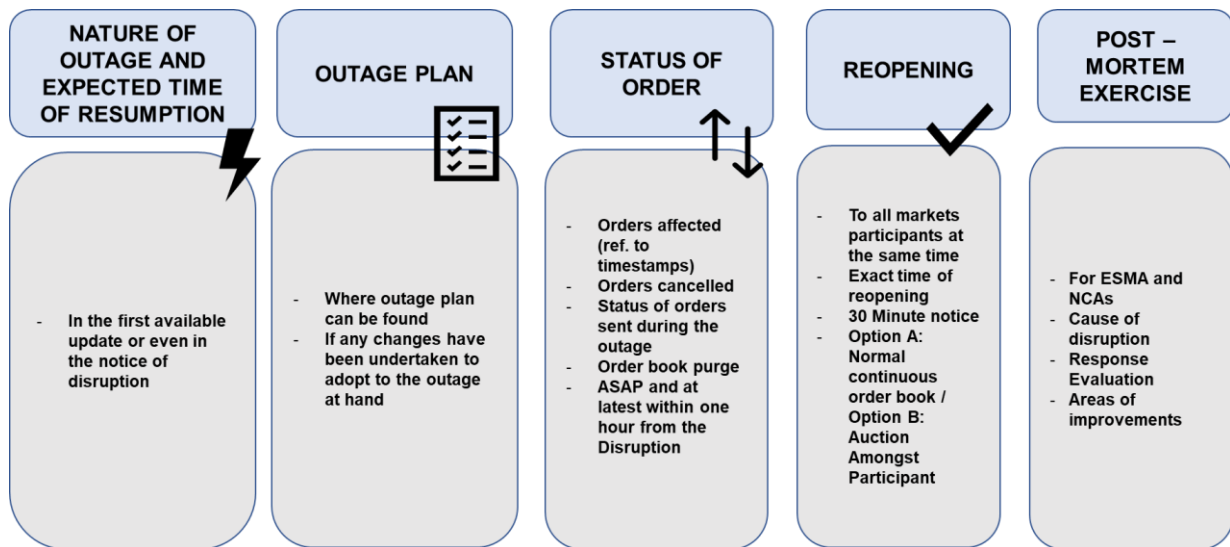
40. In line with the approach taken at the time of an outage event, once information on reopening is available, it should be communicated to all market participants at the same time and without delay. As before, this communication should be sent via any means which enables the trading venue to communicate simultaneously to market participants and published on the trading venue’s public website.
41. The information on reopening of trading should be included in of the outage status update, and should indicate the exact time of reopening, ensuring that a minimum 30-minute notice period is provided.
42. ESMA is considering whether to require trading venues that operate a continuous order book model to include a pre-opening phase prior to the resumption of trading and welcomes stakeholders’ feedback on this subject. In this respect, ESMA notes the following two options:
  - (a) reopen with the normal continuous order book, without a pre-opening phase, as soon as the outage is over and at the time indicated in the communication on reopening; or
  - (b) have an auction amongst participants before resuming the trading via the order book.

**Q5: What is your view with regards to the conditions under which a trading venue should reopen trading?**

43. Finally, once the outage event is resolved, NCAs should ensure that trading venues undertake a post-mortem exercise to understand what caused the disruption, evaluate their response, and identify any potential areas for improvement along with a concrete

timeline for remediation and allocation of ‘ownership’ of the necessary improvements. NCAs should require trading venues to communicate to them the results of this exercise. NCAs should subsequently inform ESMA.

FIGURE 3: COMMUNICATIONS – CONTENT



## 4.2 Closing Auctions

44. Ensuring continuity of trading during normal trading hours is important for the resilience of EU markets, but it is even more important to prevent as much as possible that an outage in the primary market does affect the closing auction of the day. This could otherwise have a detrimental effect on the price formation process and, more importantly, on the closing price of the trading day, which is a key price reference typically used for the valuation of funds, ETFs and benchmarks.
45. Should the primary market not be able to resume operations in time for the closing auction, NCAs should require the trading venue to have clear arrangements in place to ensure the market is provided with a closing price for the day. These arrangements should be clearly specified and communicated to all market participants in the trading venues’ outage plan.
46. Throughout the discussions on this topic, there have been suggestions that ESMA should mandate an alternative venue to retain the obligation to run the closing auction. As already outlined in the final report on algorithmic trading, ESMA sees a number of issues with such initiative.
47. The first challenge relates to which alternative venue would be required – and would have the necessary technology – to perform the closing auction. In addition, despite most market participants having access to a wide range of trading venues, some might not

have such access, in particular retail brokers and small firms. Furthermore, currently not all instruments traded on EU primary markets are available on alternative venues which may create an unlevel playing field.

48. Taking this into account, while ESMA understands that the use of alternative venues may be, in some circumstances, a possible solution, it did not deem suitable, on its review report on algorithmic trading, to require through ESMA guidance the use of alternative trading venues.
49. Nevertheless, whilst ESMA does not intend to mandate the use of an alternative venue for the operation of the closing auction, it does not preclude a trading venue opting for such solution provided it is clear and transparent to all market participants on its rules and outage policies/procedures' playbook.
50. ESMA considers that in case a closing auction is affected by an outage, other alternatives should also be considered.
51. For instance, in the event that a trading venue cannot run the closing auction at the scheduled time, it can postpone the auction until a later point on the same day. However, such a postponement has to be clearly defined *ex-ante*, i.e. the trading venue should clearly specify in its outage plan in which circumstances this postponement can occur.
52. Where a trading venue cannot run the closing auction in the trading session, the use of the last traded price as the official closing price can also be an appropriate solution.
53. With a view of providing clarity to the market, NCAs should require trading venues to inform market participants whether or not they intend to run the closing auction as soon as possible, and in any case at least 30 minutes before the scheduled time.

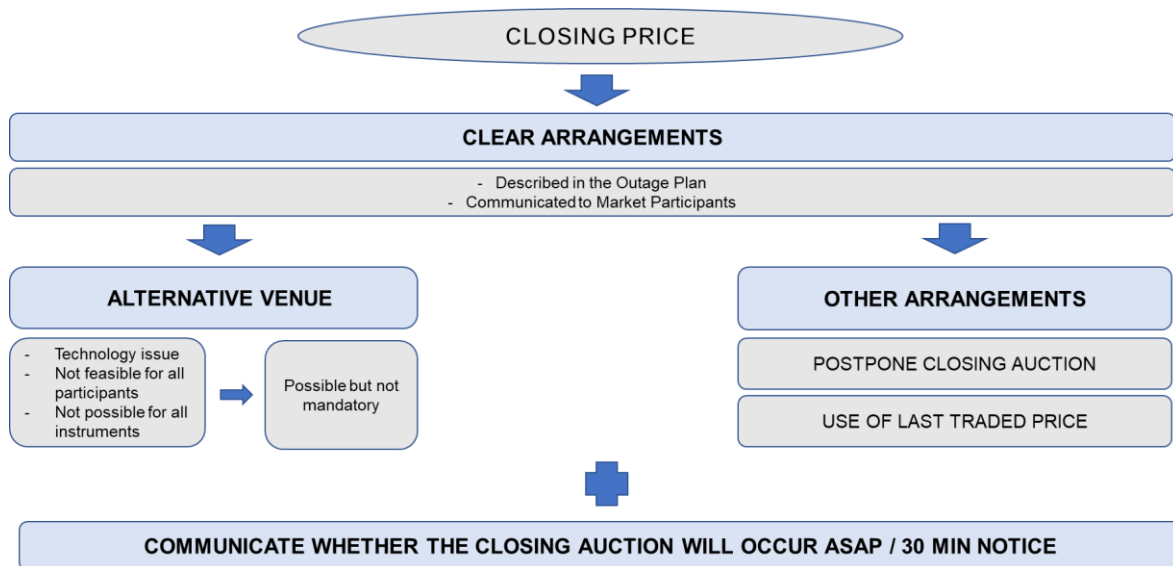
**Q6: What is your view in relation to the closing auction being affected and the procedures that trading venues should have in place to minimise disruption?**

**Q7: 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.**

**Q8: 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?**

**Q9: Do you agree that the use of the last traded price is an appropriate solution where a trading venue cannot run the closing auction? If not, what alternative would you propose?**

**FIGURE 4 – CLOSING AUCTIONS**



### 4.3 Reference Price

54. As noted in the final report on algorithmic trading, a future European consolidated tape (CT) could allow all market participants to have access to reliable trade information and could be used to derive a reference price. ESMA recognises nevertheless that any initiative on the CT would not be applicable in the short term and hence cannot be used as a solution in this context.
55. In the context of the reference price waiver (RPW), ESMA notes that the current MiFIR text does not allow market participants to derive the reference price from a source other than the trading venue where the financial instrument was first admitted to trading or the most relevant market in terms of liquidity. Considering the existing regulatory requirements laid down in MiFIR, ESMA does not intend to provide any guidance. In consequence, trading functionalities operating under a RPW will not be in a position to continue trading instruments for which the reference price is derived from a trading venue subject to an outage.

**Q10: Is the lack of a reference price an issue in an outage context? If so, please provide details.**

## 5 Outages on non-equity trading venues

56. Outages seem to have particular relevance with respect to equity instruments for which the halted trading venue is the primary market. On the contrary, non-equity instruments trading appears less affected by an outage, regardless of the trading venue. Whether an outage occurs on a regulated market, an MTF, or an OTF, regardless of their market

share, trading in the concerned non-equity instruments more naturally moves to alternative platforms and hence it seems to have less of an impact than those that occur on equity markets.

57. Although an outage may not be a major cause of concern for non-equity instruments, ESMA believes the guidance on communication of outages described in the previous sections should be extended to all types of trading venues (including those which usually focus on non-equity instruments). Nevertheless, for the reasons mentioned in the previous paragraph, some kind of wholesale non-equity trading venues (e.g. bond trading venues) could be discharged from some of the obligations. Specifically, the obligation to publish order information as of par. 37-39 seems less important for those trading venues that do not use central limit order books (CLOB) and may create an unnecessary burden. Thus, ESMA does not propose to include this obligation for trading venues that do not offer a CLOB.
58. In this regard, ESMA notes that improved communication during outages occurring on trading venues would enable market participants to more promptly take the necessary arrangements to continue their trading, without suffering from any interruption regardless of the instruments traded.
59. In addition, equal expectations on outages communication from all types of trading venues would ultimately contribute to the creation of a level playing field among the different platforms.

**Q11: 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?**

**Q12: 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.**

**Q13: Is there a direct link/connection between an outage on an equity primary market and those derivatives that have these instruments as underlyings?**

**Q14: In your view is there any further element ESMA should consider in the proposed guidance?**



## **6 Annex**

### **Summary of questions**

**Q1: Do you agree with the main communication principles identified above?**

**Q2: To promote harmonisation, should the guidance include a template on what trading venues' communication notices should include?**

**Q3: 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?**

**Q4: 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?**

**Q5: What is your view with regards to the conditions under which a trading venue should reopen trading?**

**Q6: 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?**

**Q7: 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.**

**Q8: 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?**

**Q9: 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?**

**Q10: Is the lack of a reference price an issue in an outage context? If so, please provide details.**

**Q11: 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?**

**Q12: 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.**

**Q13: Is there a direct link/connection between an outage on an equity primary market and those derivatives that have these instruments as underlyings?**

**Q14: In your view is there any further element ESMA should consider in the proposed guidance?**