Erroneous orders

This document contains the new section on Erroneous orders of the <u>REMIT Best Practice Report</u>, providing an overview of the best practices for preventing erroneous orders. The document is published as a stand-alone section for the period while the group is working on the overall revised version of the report. The publisher of this document is the Nord Pool Group ("Nord Pool"), and it has been prepared in collaboration with the participants in the <u>REMIT Discussion Group</u>, a REMIT expert group facilitated by Nord Pool. Please note that the participants that contributed to the new section on Erroneous orders may vary from the participants listed as contributors to the REMIT Best Practice report.

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3.4 ERRONEOUS ORDERS

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3.4.1 Background

Erroneous orders are a risk for market participants trading in the wholesale energy market. Errors can have a significant impact on the market and can in certain cases qualify as inside information and/or constitute market manipulation.

Section 3.4 outlines a best practice approach for preventing and mitigating risks of erroneous orders, as well as for handling them should they occur. While the term "erroneous order" is used throughout the chapter, the suggested measures can be relevant for preventing other undesired situations related to bidding, as deemed relevant by market participants.

There is no "one-size-fits-all" when it comes to compliance measures, market participants should thus evaluate which measures are appropriate in the context of their business.

The recommendations in this section build upon earlier sections of the report, particularly section 3.1 on Inside Information and section 3.2 on Market Manipulation and should be reviewed in that context. The section also builds on guidance from regulatory authorities.¹

3.4.2 Considerations around market manipulation and ACER's description of erroneous orders as market manipulation

Market manipulation is prohibited under REMIT Article 5. An erroneous order can qualify as market manipulation if it satisfies the definition of market manipulation as outlined in REMIT Article 2. This is because the erroneous order can send false or misleading signals as to the supply, demand, or price of wholesale energy product(s), or the prices can have been secured at artificial levels². At the same time, not all erroneous orders are market manipulation.

Autoriteit Consument & Markt (ACM). "Prevent, report, and follow up on erroneous orders."

https://www.acm.nl/en/prevent-report-and-follow-erroneous-orders#prevent-and-detect-mistakes

Commission de Régulation de l'Énergie (CRE). "Deliberation of Commission de Regulation de l'Énergie of April 14, 2022, relating to communication on the publication on of information relating to operational errors in the wholesale energy markets." https://www.cre.fr/fileadmin/Documents/Deliberations/import/220414 2022-

113 Communication erreurs operationnelles.pdf

Reguleringsmyndigheten for Energi (RME). "Erroneous orders in the day-ahead market may involve a breach of the prohibition on market manipulation."

https://www.nve.no/reguleringsmyndigheten/bransje/markedsovervakning/veiledning-til-aktoerer-markedsadferd-og-transparens/feilordre-i-doegnmarkedet-kan-innebaere-brudd-paa-forbudet-mot-markedsmanipulasjon/

¹ Autoriteit Consument & Markt (ACM). "Dealing with erroneous orders." https://www.acm.nl/en/about-acm/remit-obligations/dealing-erroneous-orders

² Notably, according to ACER, the definition does not require intent for the behavior to be considered market manipulation. This is reflected in ACER Guidance Chapter 6.2, which notes that erroneous trading activity can be manipulative.

The ACER Guidance describes erroneous orders in the context of market manipulation as follows:

Erroneous orders as market manipulation

Unintentionally placing orders or entering into transactions that send false or misleading signals regarding supply, demand, or price of a wholesale energy product.

Text box 26 ACER description of erroneous orders as market manipulation

ACER describes erroneous orders that satisfy the definition of market manipulation under REMIT Article 2. However, not all erroneous orders are manipulative. Consequently, ACER's description only applies to a subset of all erroneous orders. This relationship is illustrated in the figure below.

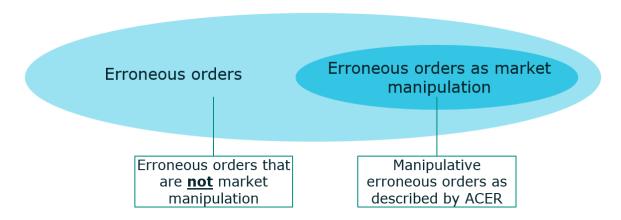


Figure 1: The figure illustrates the relationship between erroneous orders and the subset of manipulative erroneous orders as described by ACER.

When the term "erroneous orders" is used in Section 3.4, it is reflecting all erroneous orders, including both those that may or may not be manipulative. The considerations and measures proposed in the following sections can also be relevant for other bidding-related incidents.

Market participants may use the measures proposed in this section to prevent erroneous orders and other bidding-related incidents to mitigate the risks related to those at their own discretion.

3.4.3 Publication of information about erroneous orders

If an erroneous order has occurred, it may be relevant to publish information about it through a UMM.

Publishing information on erroneous orders can serve at least two purposes within the REMIT framework:

- Firstly, if the erroneous order qualifies as inside information (see Section 3.4.4 for details) publication is required under **REMIT Article 4**. Such publication must be effective and timely, as described in section 3.1 on Inside Information of this report. This might also limit potential market impact of the error³.
- Secondly, if the erroneous order constitutes inside information, publishing information on the error allows the market participant to trade based on the disclosed information without breaching the prohibition of insider trading in **REMIT Article 3**. This might include trading to correct an erroneous position.

3.4.4 Considerations on erroneous orders and inside information

Inside information means information of a precise nature which, if it were made public, would be likely to significantly affect the prices of wholesale energy products. Further, information regarding the market participant's own plans and strategies for trading shall not be considered inside information. Based on this definition, information about an erroneous order in wholesale energy markets can qualify as inside information.

It is important to assess whether erroneous orders constitute inside information, as not all such orders meet the criteria. Important factors to consider may, for instance, include the size of the order, the price of the order, the market fundamentals, and to what extent and in which way and timeframe the erroneous order leads to trading that was not intended. Market participants may use internal thresholds for assessing whether erroneous orders shall be treated as inside information, as outlined in Section 3.4.5.

Following are two examples of erroneous orders. The first example illustrates a situation where information about the error is <u>more</u> likely to constitute inside information than in the second example.

Example

Situation: A market participant entered an order in the day-ahead market, offering 500 MW more for sale than intended in the relevant MTU at a price of €30/MWh. The market price cleared at €40/MWh in the relevant MTU, and the market participant became aware of the error only after the auction results were

³ In addition, in some countries such publication may also be relevant in determining the sanction. See example in Finland: https://www.finlex.fi/fi/lainsaadanto/2013/590#L4P20

published. The market participant's willingness to trade was at prices higher than the realized market price.

Considerations: The order resulted in 500 MW erroneously traded volume in the relevant MTU. The market participant deems that the auction price might have been impacted, which in turn could potentially result in that information about the error can have a significant price impact on markets where trading opportunities are still open (such as the intraday and financial market).

The second example illustrates a situation where the erroneous order is <u>less</u> likely to constitute inside information.

Example

Situation: A market participant entered an order in the day-ahead market, offering 500 MW more for sale than intended at a price of €250/MWh. The market price cleared at €50/MWh, and the market participant became aware of the error only after the auction results were published.

Considerations: The order did not lead to any erroneously traded volumes in the relevant MTU, thus it is not likely that it had a significant impact on the realized market price and, therefore, on any other markets where trading opportunities are still open. Therefore, information about the order is not likely to constitute inside information.

When assessing whether an erroneous order is inside information the price impact of the erroneous order shall be considered in relation to subsequent markets and products that are still available for trading. That may include intraday, balancing markets, or financial products.

Notably, the erroneous orders illustrated in the examples above could be subject to different considerations regarding whether they constitute inside information, depending on e.g., the market conditions.

Erroneous orders are often detected after the order is placed to the market. The longer the delay in detection, the less likely the erroneous order is to constitute inside information. This is because the potential impact of publishing information about the error on the price of related wholesale energy products diminishes once those products can no longer be traded. E.g., erroneous orders in the day-ahead market detected after a year are typically only relevant for a few financial products.

Regardless of whether the information constitutes inside information, the erroneous order may still qualify as market manipulation.

3.4.5 Threshold for disclosing information about an erroneous order

When an erroneous order occurs, the market participant should assess if information about the order constitutes inside information, as explained in the previous section. This involves assessing whether, under the case specific circumstances, the information about the erroneous order is likely to significantly affect the prices of wholesale energy products if made public.

Such assessments can be complex, as erroneous orders may arise at any time, be identified in different parts of the organization, and require careful handling by those possessing potential inside information. If deemed inside information, it must be disclosed in a timely manner, as detailed in section 3.1, which creates time pressure.

ACER Guidance Chapter 3.3 recommends best practice compliance rules including a framework for assessing whether information qualifies as inside information by using appropriately tested thresholds:

The best practices for internal compliance rules may include:

a framework for the assessment of whether the facts at hand can be qualified as inside information. This may include, for example, measures on how to identify inside information, appropriately tested thresholds⁴⁵, etc.

Text box 27 ACER Guidance's best practices for internal compliance rules

In a footnote, ACER Guidance states that appropriately tested thresholds may include qualitative and quantitative analysis to evaluate the likelihood of a significant price impact.

For example, qualitative and quantitative (econometrical) analysis to test the likelihood of a significant price effect.

Text box 28 ACER Guidance footnote 45

Thus, market participants may implement appropriately tested thresholds as a convenient practical measure for treating information about an erroneous order as inside information. The level of the threshold should take into account the specific nature of information regarding erroneous orders as compared to information on unavailability⁴.

While thresholds can help streamlining handling of information on erroneous orders, exceeding the threshold does not automatically qualify the information as inside information. Furthermore, the potential price impact of an erroneous order may

⁴ In 2022, Nord Pool published a <u>report</u> suggesting 100 MW as an appropriately tested threshold for inside information in the Nordic and Baltic wholesale electricity market. However, the market participant may assess if the threshold suggested in the report is relevant also for erroneous orders.

differ from that of an unavailability of the same scale, meaning that different considerations may apply in each case.

3.4.6 How to publish information about erroneous orders

If an erroneous order constitutes inside information, the market participant must publish information about the erroneous order to comply with disclosure requirements set out in REMIT Article 4, and to avoid the risk of insider trading, which is prohibited under REMIT Article 3. The inside information shall be published on a certified inside information platform (IIP), such as the Nord Pool REMIT UMM platform.

When publishing the information on an IIP, it is considered best practice to use the "Remarks-field" (or similar) to inform the market of

- the realized volumes that were erroneously offered and if they were sold or bought,
- which market the order was placed on,
- and affected timeframes.

To ensure timely and effective publication, it is best practice to establish a procedure for handling erroneous orders and create a template for publishing information about erroneous trades. See Section 3.4.13 for processes for handling erroneous orders, and Section 3.4.7 for UMM template examples to publish information on Nord Pool's platform. When using other platforms, procedures should be tailored for these.

REMIT Recital 12 states that "information regarding a market participant's own plans and strategies for trading should not be considered as inside information". Thus, market participants are not required to publish details on how erroneous orders are handled. Nor are they required to publish details about the order beyond the information on what was erroneously traded. This is important to avoid potential collusion between market participants.

3.4.7 Publishing information about erroneous orders on an IIP

When publishing a UMM for an erroneous order via the Nord Pool IIP, one should use the message type "Other Market Information". Similar message types are available on other IIPs. It is recommended to prepare a template for the UMM text that includes the necessary details about the erroneous order, which can be filled in the Remarks field. The template should be easily accessible to relevant personnel, allowing them to quickly retrieve and use it when needed. Below are two examples of UMM templates.

The first UMM template is to be used when it is possible to simplify the information, while keeping it sufficiently precise, e.g., when the volume range of the erroneous order is close to its average:

UMM TEMPLATE EXAMPLE: GENERAL

"Incorrect bids for delivery date [insert date] were submitted to the [insert market] in [insert bidding zone]. These incorrect bids led to a volume of [insert average volume of error] MW on average between MTU [insert first MTU affected] and [insert last MTU affected] [insert time zone] with a minimum of [insert minimum volume of error] MW and a maximum of [insert maximum volume of error] MW [being/not being] [sold/bought]."

UMM TEMPLATE EXAMPLE: SEVERAL SINGLE MTU ERRORS

"Incorrect bids for delivery date [insert date] were submitted to the [insert market] in [insert bidding zone]. These incorrect bids led to a volume of [insert volume of error] MW in MTU [insert MTU affected] [insert time zone], [insert volume of error] MW in MTU [insert MTU affected], and [insert volume of error] MW in MTU [insert MTU affected] [being/not being][sold/bought] compared to what was intended."

3.4.8 Informing Regulatory Authorities

Publishing information about erroneous orders makes it publicly available, including to NRAs, so that further notification is generally not needed.

However, market participants classified as PPAETs under REMIT Article 15 are required to notify the relevant NRA if they reasonably suspect that the erroneous order constitutes a breach of REMIT Articles 3, 4 or 5. This is done by submitting a Suspicious Transaction and Order Report (STOR).

3.4.9 Informing the exchange

Publication of information about erroneous orders on an IIP makes the information publicly available. Notifying the exchange of the error in addition, should not be necessary. However, some exchanges might have specific provisions requiring this information to be communicated to them directly.⁵

3.4.10 Risk areas relevant to erroneous orders

Section 2.1.4 on compliance risks emphasizes the need for market participants to conduct a risk assessment to establish an effective compliance regime with the right measures.

The following section highlights potential risk areas that may be relevant to consider when evaluating the risk of erroneous orders. Please note that the list is not exhaustive, and other factors specific to the organization of the market participant may also play a role.

System errors

The availability of critical systems in the trading process can affect a market participant's risk of erroneous orders. E.g., internal IT issues may cause system downtime, disrupting the trading process and preventing the submission of correct bids before gate closure of, e.g., the day-ahead market. Similarly, an external network error could disrupt a market participant's connectivity to the exchange's trading platform. Such a system error could prevent access to the trading platform, either directly or through an API solution, thus hindering the market participant's ability to submit correct bids.

Example

A market participant is in the process of submitting both curve and block orders to the day-ahead market. However, due to a system error, only the block orders are successfully submitted. As a result, the market participant offers only a portion of their intended volume, effectively selling less to the day-ahead market than planned.

Third party errors

Market participants' risk of erroneous orders can be affected by factors attributable to third parties. E.g., market participants may rely on input in the trading process from e.g., a forecasts provider, or from clients. If the input is delayed or erroneous,

⁵ Nord Pool does not have such provisions.

it could lead to the market participant placing orders that are based on the wrong assumptions.

It is recommended to introduce measures for controlling, to the extent possible, that the orders placed by market participants are correct.

Process errors

The risk of erroneous orders may be negatively influenced by process issues in the trading process. E.g., inadequate workflow controls may cause deviations in the trading process from the defined procedures, potentially leading to missed steps.

Another example involves manual processing of data, e.g., in copying data from one tool into another, like forecasts into the planning and trading tools. This introduces vulnerability to copy paste errors, potentially leading to erroneous orders being submitted to the market. Automating such steps can reduce the risk of such errors occurring.

Human errors

Human errors, such as manual data entry mistakes, are a common cause of erroneous orders. Traders may, e.g., accidentally enter the wrong price or volume for an order, mix up the values for price and volume, confuse the purchase and sales data, or enter volume and price data from the wrong day. These erroneous orders, though likely unintentional, can distort the market outcome, and may qualify as inside information and/or market manipulation.

Example

Due to a stressful situation a trader makes a mistake and places a sell order to the day-ahead market with a volume of 300 MW instead of the intended volume of 200 MW.

Human errors often arise from process errors, as insufficient processes can increase the likelihood of mistakes. The following section outlines approaches to reduce the risk of erroneous orders and enhance the robustness of the market participants' processes.

3.4.11 Approaches to prevent and mitigate the risks of erroneous orders

To reduce the risk of erroneous orders, it is recommended to implement appropriate preventive and mitigating measures.

There is no "one-size-fits-all" in terms of compliance measures, and market participants should evaluate which measures are most appropriate and effective for

their specific business context. E.g., a market participant trading larger volumes in the day-ahead market may require different measures than one trading smaller volumes in continuous markets.

The following sections provide practical measures that market participants may consider implementing to reduce the risks of erroneous orders. However, it is important to note that while these measures can mitigate the risks, they cannot eliminate them entirely.

Some of the measures recommended below may also contribute to fulfilling requirements set out under REMIT Article 5a on algorithmic trading.

Limiting manual steps in the trading process

Manual steps in the trading process carry a risk of errors, which can lead to erroneous orders. Automating these steps can reduce the risk of human mistakes but may introduce new risks, such as system and process errors. To address this, market participants should carefully consider automation, in order to limit manual steps in the trading process.

An example of automation is to automate solutions for flowing source data into internal planning and bidding tools as this could reduce the likelihood of data corruption during the transferring process and wrong data selection such as e.g., importing data from the wrong day. It is important to note that automation does not eliminate the risk entirely, and market participants are recommended to implement control measures and periodically review the automated solutions.

For market participants trading on behalf of clients, it could be relevant to consider automating the process for importing external data such as client nominations.

Automation of manual steps can be combined with other mitigating measures. These measures could include alert functions in internal bidding and trading tools, along with testing of tools and source data, as outlined below. Such strategies can help market participants balance the different risks associated with manual and automated processes.

Pre-trade limits

By implementing a pre-trade limit tool, market participants can set minimum and maximum limits for offered volumes and prices. The tool could be set to flag orders that exceed these limits and to require manual confirmation before allowing the trader to proceed. If relevant, the tool could be designed to set different limits for different production units, bidding areas etc.

Market participants should assess all flagged orders and confirm that they are correct before gate closure time as both offering excessive or too little volume, or incorrect prices should be avoided.

Example

Situation: A trader mistypes the bid volume for a production unit with an installed production capacity of 20 MW and offers 200 MW instead of the 20 MW for the unit.

Considerations: If the pre-trade limit in the example is set to the level of the maximum installed capacity of the production unit (20 MW), the order would be flagged in the pre-trade limit tool and should be corrected by the market participant before the gate closure time of the auction.

Testing and monitoring of tools and source data

Tools and source data that market participants rely on during the trading process may be subject to errors, which can increase the risk of erroneous orders. E.g., tools may contain software bugs or other vulnerabilities, while source data could be incorrectly formatted or become corrupted during transfer or processing.

To mitigate these risks, market participants are advised to appropriately test the tools in a testing environment before deployment. This can help to identify potential software bugs and other errors or vulnerabilities, so that they can be corrected.

Similarly, market participants are advised to implement measures to validate source data before use, e.g., by checking for issues such as incompleteness, inaccuracies, or formatting problems in the data. The purpose is to ensure that the data is accurate, consistent, and properly formatted before it is applied to the trading process.

After deployment, source data should be continuously monitored, both in terms of format and consistency, to reduce the risk of errors.

Alert functions in internal bidding and trading tools

Alert functions can be integrated into internal bidding and trading systems to identify and notify market participants of potential errors. E.g., an alert can be designed to notify when there is a mismatch between the source data, such as a production unit's available capacity, and related abnormal data entered into the bidding and trading tools. When implementing such alerts, it is important to ensure that inside information is not used for trading, i.e., availability data must not include data on outages that have not yet been publicly disclosed. Another example of an alert is one that highlights discrepancies between real-time production and the production plan with a certain threshold.

Example

Situation: Real-time production of a market participant falls below the planned production by 102 MW.

Considerations: If the market participant has defined a 100 MW threshold for the deviation between real-time and planned production, the alert should notify the traders, who in turn can make sure to not overcommit by placing orders they cannot fulfill. However, it is important that market participants assess if information provided by such alerts constitutes inside information, and if so, follow internal procedures for handling inside information.

Preventing erroneous orders by algorithms

To mitigate the risk of erroneous orders in algorithmic trading, it is recommended that market participants implement a robust governance model as described in section 3.3 on Algorithmic trading solutions and comply with the requirements in REMIT Article 5a. This could involve appropriate controls, such as limits on order volume, price, frequency, and real-time monitoring to detect potential malfunctions in the algorithmic trading solution.

Back-up solution

Market participants may experience an IT system outage, reducing the support from technical tools in the bidding process. In such cases, they have to rely more heavily on manual solutions, as well as the training and competence of their personnel.

To mitigate this risk, it is recommended that market participants establish routines for submitting and updating safety bids⁶ to the relevant auction in advance. Submitting bids in advance provides a safety net, reducing potential market impact resulting from system failures.

It is also recommended that market participants that submit bids through an API solution ensure that relevant personnel are familiar with how to log in and navigate in any trading user interface used for backup, should issues arise with submitting bids through the API.

To achieve this, it is recommended to arrange regular training on backup solutions for relevant personnel.

⁶ Safety bid refers to an approximate bid entered well before the auction's gate closure, and which is updated closer to gate closure.

Reasonability check tool

Some power exchanges have implemented reasonability checks in the exchanges' day-ahead auction system. One example is the Nord Pool reasonability check, which is an on-best effort service where submitted curve orders are compared with previous trading days. A substantial deviation based on the reference day price will flag the submitted curve order.

Typically, market participants trading with a power exchange have access to the platform's trading user interface. When an order is flagged in a reasonability check, it may be highlighted and accessible to the market participant through the trading user interface. Market participants are advised to keep reasonability check tools enabled in the trading user interface, and to review all flagged orders. Any incorrect orders should be adjusted before gate closure.

Reasonability check tools may be built into the market participant's internal planning and bidding tools. In such cases, it is recommended to ensure that the tool highlights flagged data clearly, such as through color coded matrices, to capture the trader's attention.

Market participants should provide appropriate training to traders and relevant personnel who handle reasonability check results, to ensure that they are able to accurately interpret and respond to the results.

Checklist for essential steps in the trading process

There may be many essential steps to a market participant's trading process. To ensure a thorough, controlled and error minimized process, market participants are advised to design and implement relevant checklists covering all relevant steps of their processes. An example could be to implement a checklist that includes all operative steps in the process of bid submission to the market. Such a checklist could for instance include elements such as bid preparation, bid creation, internal review (e.g., the four-eyes principle), bid submission, post-submission validation, and ongoing monitoring and adjustments.

Four-eyes principle in bidding

The four-eye principle entails review and validation by a second, independent, and competent person. This can help minimize these mistakes and reduce the risk of erroneous orders.

It is therefore recommended to implement this principle in bidding routines, such as reviewing the final bids to the market, to reduce the risk of errors. This is especially relevant for the markets where reviewing bids can be effectively incorporated in the bidding process, such as the day-ahead and intraday auctions (IDAs).

Technical unavailability and active UMMs

As a part of the bidding process, it may be relevant for market participants to make a comparison of technical unavailability in the internal outage system and lists of UMMs. The purpose is to ensure that the information from the UMMs is included in the bids to the market.

It may also be relevant to establish routines to keep an overview of active UMMs that are considered relevant by the market participant, to ensure that the intended information is taken into account when placing bids to the market. E.g., if a UMM that the market participant deems relevant expires and the trading desk is unaware of it, traders may overlook this information when planning and placing bids. This oversight could lead to offers being placed without considering the available information.

Relevant personnel accessible

Having relevant personnel available pre- and post-trade can be important to reduce the likelihood of erroneous orders and mitigate their potential impact. For instance, it is recommended that relevant personnel (e.g., the responsible trader or trading team) are reachable if the exchange's trading desk spots abnormal orders placed to the day-ahead auction during reasonability checks. The exchange's trading desk may call the market participant to validate the order or advise the market participant to correct it before gate closure. If the relevant personnel are unavailable, the auction may run with the abnormal order.

Some market participants have different teams responsible for orders across different portfolios. It is recommended to ensure that the correct contact information is available to the exchange, so that the correct team is contacted if an abnormality is spotted. Having the right contact details available, especially close to gate closure, helps reduce the stress for both the exchange's trading desk and the relevant personnel at the market participant.

Erroneous orders may be identified at any time of day. When it is identified, it may need to be discussed with other relevant personnel, such as a lead trader, responsible manager, or a compliance officer. Therefore, it is recommended to establish a suitable routine for the traders to be able to access relevant personnel, based on the needs, requirements, and general trading operation of the market participant.

Trainings

As outlined in section 3.2.1, the key measure to prevent market manipulation is to ensure that employees are aware of behaviors that could be manipulative. Therefore, all market participants should provide mandatory training for traders and other relevant personnel involved in the trading process. This training should cover specific scenarios related to market manipulation, such as scenarios related to erroneous orders.

3.4.12 Incident investigation for erroneous orders

Once an erroneous order is identified, it is recommended to initiate a standard incident handling process to address it. The process could include an investigation with the following steps:

- Assessing the facts of the situation, documented in a course of events document
- Legal assessment
- Root cause analysis
- Identification of mitigating actions
- Internal reporting
- Potentially sending a STOR

After investigating the incident, it is recommended to document it in an incident report, which for example can be shared with senior management on an ad-hoc or regular basis. Based on the report, the management may consider additional measures to enhance operational robustness and prevent similar errors.

The above process is a general recommendation and should be adapted to the market participants' processes, procedures and business. Furthermore, the list is not exhaustive, and other relevant steps may also be considered.

3.4.13 Process for handling erroneous orders in auction and continuous markets

Market participants are recommended to establish clear processes for handling erroneous orders. The processes may vary depending on the products being traded, e.g., the approach to auction markets like the day-ahead and intraday auctions may differ from the approach used in continuous markets like the intraday market. Furthermore, there is no "one-size-fits-all," so market participants should tailor the approach to the context of their business.

Below are two examples of processes for handling erroneous orders. The first is for auction markets, while the second is for continuous markets.

PROCESS FOR HANDLING ERRONEOUS ORDERS IN AUCTION MARKETS

- 1. Erroneous order is identified
- 2. If the order is identified before Gate Closure Time, correct the order⁷
- 3. Activate trade stop⁸, if relevant
- 4. Assess if information about the erroneous order shall be treated as inside information under REMIT
- 5. If not, deactivate trade stop and resume trading
- 6. If the error requires publication, publish a UMM to the Inside Information Platform
- Assess if erroneous order constitutes potential market manipulation (caseby-case assessment). Include the compliance and/or legal department if necessary or required
- 8. Inform the compliance and/or legal department about the error, if not already done
- 9. Perform incident investigation
- 10. Potentially notify the NRA through a STOR

ACM's regulatory guidance⁷ states that an erroneous order should be canceled promptly to minimize its potential consequences. This is particularly relevant for continuous markets, when the order has not been executed, or only partially executed. Based on this regulatory guidance, it is recommended that such an erroneous order is cancelled or corrected immediately when detected.

⁷ On its website, the Dutch NRA (ACM) states that if you place an erroneous order, "you must limit the consequences of the erroneous order as much as possible. You must cancel the order as quickly as possible [...] in order to eliminate a possibly false or misleading signal to the market."

⁸ See section 3.1.3 for more information on trade stop.

PROCESS FOR HANDLING ERRONEOUS ORDERS IN CONTINUOUS MARKETS

- 1. Erroneous order is identified
- 2. If the order is not yet (fully) executed, cancel order⁷
- 3. Activate trade stop⁸, if relevant
- 4. Assess if information about the order shall be treated as inside information under REMIT
- 5. If not, deactivate trade stop and resume trading
- 6. If the error requires publication, publish a UMM to the Inside Information Platform and resume trading
- 7. Assess if erroneous order constitutes potential market manipulation (case-by-case assessment). Include the compliance and/or legal department if necessary or required
- 8. Inform the compliance and/or legal department about the error, if not already done
- 9. Perform incident investigation
- 10. Potentially notify the NRA through a STOR