

Auction safeguards and extension period in opening and closing auction

Q&A

About this document

This Q&A is intended to provide answers to the most common questions regarding the process designed to extend opening or closing auction for members and relevant stakeholders of Nasdaq Nordic and Nasdaq Baltic exchanges.

This Q&A is not intended to be used as a technical specification for the development of any software application.

1. What are the auction safeguards used for?

Auction safeguards are to limit unexpected impact to opening or closing prices due to erroneous or extraordinary order entries during opening and closing auctions. The auction safeguards will trigger an extension period to the opening and closing auction in a single order book, if the proposed auction price of that order book deviates too much in percentage from a reference price at the time of the uncross.

2. Will the auction safeguards prevent trading?

No, the safeguards in auctions will add time to the auction and provide a validation layer for the price determination, which will ultimately take place at the end of the extension period.

3. Which instruments and markets are applying the functionality?

The functionality is implemented to those shares and ETFs/ fund units on following exchanges, including respective First North markets, that also have volatility guards during continuous trading:

Market	Opening call	Closing call
Nasdaq Stockholm	Yes	Yes
Nasdaq Helsinki	Yes	No
Nasdaq Copenhagen	Yes	No
Nasdaq Iceland	Yes	Yes
Nasdaq Tallinn	Yes	Yes
Nasdaq Riga	Yes	Yes
Nasdaq Vilnius	Yes	Yes

Note that within the exchanges, there are segments that do not have opening and/or closing auction and hence no extension will be triggered. For more details, please see answer to question 7 below.

4. What is the length of the extension period?

Three (3) minutes.

5. Extension is triggered if the auction price would deviate too much from the reference price.

What is used as a reference price?

The last sale price is used as a reference price. In the opening auction, the last sale price is normally the closing price (adjusted if corporate actions) from the previous day.

6. How are the auction safeguard percentages set and how are they disseminated?

The dynamic volatility guards used in continuous trading are the basis for the percentages used as safeguards in the opening and closing auctions:

- in the opening auction the auction safeguard's value is in percentages two (2) times the value of the dynamic volatility guard and
- in the closing auction the auction safeguard's value is in percentages the same as the value of the dynamic volatility guards.

Dynamic volatility guards are set on order book level according to liquidity bands and disseminated as reference data via the Genium Consolidated Feed and Nordic Workstation. Note that there is no separate reference data for auction safeguards.

7. What are the auction safeguard percentages?

The following percentages are applied under normal market conditions:

Market	Liquidity band	Opening auction	Closing auction
Nasdaq Copenhagen ¹ , Helsinki ¹ and Stockholm	OMXS30/OMXH25/OMXC20 shares	+/-6%	+/-3%
	Other shares ² and ETFs ³	+/-10%	+/-5%
	First North and liquidity group C shares	+/-20%	+/-10%
	Penny shares	+/-50/80/100/200%	+/-25/40/50/100%
Nasdaq Tallinn, Vilnius and Riga	Shares and fund units	+/-20%	+/-10%
Nasdaq Iceland	OMX18 and selected shares	+/-6%	+/-3%
	Other shares and ETFs	+/-10/20%	+/-5/10%

¹ Nasdaq Copenhagen and Helsinki only in opening auction.

² Not applicable to Norwegian shares segments on Nasdaq Stockholm and First North Stockholm since there is no opening or closing auction on these segments.

³ Only applicable to opening auction on ETF segments on Nasdaq Stockholm as there is no closing auction on these segments.

Updates widening the auction safeguards before the opening call or intraday may occur in rare situations when there is a natural and for the market well known movement in the instrument.

8. What are the situations when the auction safeguards could be widened?

The situations when auction safeguards in opening and closing auction could be widened follows the routine applied for the dynamic volatility thresholds: In order to avoid unnecessary trading halts in the index shares (OMXS30/ OMXC20/ OMXH25/ OMXI8), Nasdaq Nordic will on best effort basis apply in certain situations a special routine on selected shares to increase the dynamic volatility

thresholds to 5% – and hence the auction safeguards to 10% in the opening call and 5% in the closing call. This routine will be used when the issuer has a planned company announcement of a quarterly or yearly result that will be published during the continuous trading session. The widened thresholds for the respective share will be used throughout such trading day and normal thresholds will be used on following trading day. Select ETFs tied to index shares follow also this routine.

Note that possible intraday updates of the volatility thresholds will not be made available via the public data feeds.

9. What happens if an auction extension is triggered in the opening auction?

If the extension is triggered in some order book, continuous trading in that order book starts three minutes later than normal scheduled time: e.g. in Stockholm at 9:03 CET. Other order books open at normal scheduled time, e.g. 9:00 CET in Stockholm.

Note that the extension in the opening auction affect the time when the continuous trading starts in the order book in question, but it does not affect the time continuous trading ends in that order book.

10. What happens if an auction extension is triggered in the closing auction?

If the extension is triggered in some order book, the auction in that order book ends approximately three minutes later than normally: e.g. in Stockholm approximately 17:33 CET. In other order books, the closing auction ends at normal time, approximately 17:30 CET.

11. What happens if the proposed auctions price is still not within the limits in the end of the extension?

Extension will end automatically and there will be no prolonging of the extension, even if the auction price would fall outside the auction safeguard limits.

12. When are the closing prices available if there's an extension in the closing auction?

Official closing prices are available after closing auction in all order books in a single market segment has ended. If auction is extended in one or more order books in a market segment, the closing prices for all order books in that market segment are available 3 minutes later than normally. E.g. in Stockholm this means at approximately 17:33 CET. This is because the closing prices are published when the trading state of the market segment in question changes to post trade session.

13. Does the triggered extension in closing auction have impact to the post trade session ending time, ie. the market closing time?

No, post trade session will end and markets will close at the scheduled time regardless of whether there has been an extension in closing auction or not. E.g. in Stockholm markets close at 18:00 CET.

14. Are the auction extensions applied to the scheduled intraday auctions or volatility auctions?

No, the auction extensions do not apply to the scheduled intraday auctions or volatility auctions.

15. Are the auction safeguards applied on the closing auctions on half trading days? (Stockholm only)

Yes. If the extension is triggered in some order book on half trading day, the closing call in that order book ends approximately three minutes later than normally: e.g. in Stockholm approximately 13:03 CET.

16. How does the auction extension in an instrument as an underlying instrument impact the derivatives trading?

Trading in derivatives starts and ends on the scheduled time even if there is an extension in the opening or closing auction in the underlying instrument.

17. How does the auction extension in an instrument as an index constituent impact the index calculation?

The most recent last sale price for an instrument is used for index calculation. In case of an extension in the opening auction in an instrument, the last sale price of the instrument in question (normally the closing price from previous trading day) is used until the opening price of that instrument is available.

The extension in the closing auction will cause an index to stay open until the trading state of the market segment in question changes to post trade session. The index will then close and use the closing price in the end of day calculation.

18. Does this new functionality have any impact to the protocols used for trading in INET Nordic or surrounding systems?

A new field "Extension" is added to the end of the Net Order Imbalance Indicator (NOII) message in Nordic Equity TotalView-ITCH to indicate if the auction in a single order book has been extended or not.

Member applications that are not yet supporting this new field at the time it's introduced by Nasdaq should be able to ignore the new field and that the message has expanded in length.

19. Where can I find more technical information on protocol changes?

An updated TotalView-ITCH protocol specification 2.01.1 is available at Nasdaq Technical Information website under [Future INET Nordic Protocol Specifications](#)

For more info on protocol considerations, please visit document *The Auction Extensions - Protocol Considerations* at Nasdaq Technical Information website under [INET Nordic – Functional Enhancements](#).

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