Market Model

Nasdaq Nordic,

Nasdaq Baltic and First North Bond Markets

Genium INET Fixed Income

Nasdaq Nordic Market Model FI 5.8

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Definitions

The official definitions are in the Nasdaq Nordic Member Rules (NMR).

Automatic Order Matching	The process in the order book whereby sell and buy orders are matched automatically when price, volume and other specifications for a given order correspond with order(s) previously entered in the order book.
American Auction	The equilibrium price is calculated to be the price where the volume that can be traded is maximized. The prices of the individual trades will however equal the individual bid prices, i.e. a multiple price auction.
BBO	Best Bid Offer of an order book.
Buy Back	An offer made by or on behalf of the issuer of an instrument admitted to trading to buy back all or part of the outstanding amount on conditions specified in the offer.
Call	Auction process to facilitate price formation with two distinct parts: the first part is an order management phase and the second part is a matching process for all eligible orders. The matching process is called an uncross (because it removes all orders with crossing prices).
Call, Opening	The Opening Call is the first call of the day and produces the first auto matched trades of the order book (if there are eligible orders available for matching).
Circuit breaker (CB)	A mechanism to automatically halt or constrain trading in case there is a sudden significant price movement.
Deferred Publication	For trades above certain market and instrument specific thresholds, deferrals of immediate publication will be allowed.
Dutch Auction	The equilibrium price is calculated to be the price where the volume that can be traded (tradable volume) is maximized. The prices of the individual trades will equal the equilibrium price, i.e. single price auctions.
Internal trade	A manual trade between a Member and its client or between the Member's clients.
Issuing	An offer made by or on behalf of the issuer to issue an amount in a new bond or an additional amount in an existing bond (tap issue) on the conditions specified in the particular issue
Large in Scale (LIS)	A threshold provided by ESMA for every instrument which will be used for pre and post trade validations when applicable.
Limit Order	A Limit order stipulates a maximum purchase price or minimum selling price.
Market Order	A market order is an order to sell or buy an instrument at the current market price.
On Exchange Trade	A trade that is automatically matched in the order book in accordance with the Nasdaq Nordic Member Rules or executed outside the order book in accordance

	with the Nasdaq Nordic Member Rules and reported to the exchange as a manual trade.
Price limits	Any order or firm quote will be validated against pre-set limits and will be rejected if above or below these limits.
Post-Trading Session	The period during the Trading Session after the Trading hours, where orders can be cancelled, and in some markets order updates with no trade impact can be conducted.
Reserve Order	In a Reserve order, a certain portion of the total volume of an order is not displayed in the order book (a.k.a. Iceberg order).
Round Lot	The minimum volume for an instrument which is used for certain statistics and calculations.
Size specific to instrument	A threshold provided by ESMA for every instrument which will be used for pre and post trade validations when applicable.
Sold-Out Buy-Back	Session that only allows Lead Managers to submit Buy-orders, other participants are only allowed to submit Sell-orders.
Time of Agreement	The time that states when the trade was agreed. Can be used at registration of manual trades.
Time of Trade Execution	The time at which an automatically matched trade is matched or a manual trade has been entered.
Time of Trade Publication	The time the trade was disseminated, i.e. when the trade was made public. For trades where dissemination is not delayed, this is equal to the Time of Trade Execution.
Trading Hours	Trading Hours for each market segment are found in Chapter 3 and Appendix 1 of this document. Trading Hours start from the Uncross of the opening call and end at the transition to the Terminating session.
Trading Session	The period during an exchange day which includes the Pre-Open session, Trading hours and the Post-Trading session. The Pre-Open session includes the Opening call up to, but not including, the Uncross.
Uncross	A call ends with an Uncross where price determination and share allocation together with order and trade information dissemination take place. Uncross lasts a short time, usually a fraction of a second.
Undisclosed order	A completely hidden buy or sell order that interacts with other visible orders in the order book. The Undisclosed order is always equal to or above pre-trade LIS threshold. Undisclosed orders may only take on order types: Limit order and Market-to-limit order.

1 Introduction

This document describes the functionalities for trading fixed income and related instruments on the regulated markets of Nasdaq Nordic, Nasdaq Baltic and for the First North Bond Markets. Please note that this Market Model does not include Nasdaq's Iceland Fixed income markets. A separate Market Model document covering Icelandic fixed income trading in Genium INET can be found on Nasdaq webpage here. Thus, the document covers functionalities that apply to fixed income trading in Copenhagen, Helsinki, Stockholm, Tallinn, Riga and Vilnius. First North Bond Market is a market operated by Nasdaq Stockholm (First North Sweden), Nasdaq Copenhagen (First North Denmark) or Nasdaq Helsinki (First North Finland).[1] Any reference to "Exchanges", " Nasdaq Nordic", "Nasdaq Stockholm", "Nasdaq Copenhagen" or "Nasdaq Helsinki" in this Market Model shall be deemed to include the First North Bond Markets in Sweden, Denmark or Finland where relevant. The First North Bond Markets in Sweden, Denmark and Finland are not regulated markets, but are licensed as MTFs.

Chapter 2 describes the market structure, instrument types traded and trading methods. Chapter 3 presents an overview of trading sessions. Chapter 4 describes the registration of manual trades and deferred publication. In chapter 5 you find a presentation of order types and order functionality (insertion, amendments and cancellation).

Finally, in the appendices you find descriptions of calls, matches, price concepts, trading schedules etc.

While the document has been prepared on the basis of the best information available, the exchange accepts no liability for decisions taken, or systems work carried out by any party, based on this document. This document does not form part of the contractual documentation between the individual exchange and its customers. The content of this document may also be subject to discussions and in some cases approval from relevant authorities.

While Nasdaq Nordic Member Rules (NMR) and corresponding Rules of the Baltic Exchanges: Nasdaq Tallinn Member Rules, Nasdaq Riga Member Rules and Nasdaq Vilnius Membership and Trading Rules (BMR) are all legally binding documents between members and the respective exchanges, the purpose of this Market Model document is to provide additional guiding information for trading members.

Additional documents referenced in this documentation can be found on the official websites of Nasdaq Nordic and Nasdaq Baltic as well as on the Member Extranet.

[1] For the purpose of this document Nasdaq Nordic refers to, either each individually or all together, Nasdaq Copenhagen A/S, Nasdaq Helsinki Ltd, Nasdaq Iceland hf. and Nasdaq Stockholm AB. Nasdaq Nordic may also include Nasdaq Baltic that respectively refers to Nasdaq Riga AS, Nasdaq Tallinn AS and AB Nasdaq Vilnius.

2 Overview of Nordic and Baltic Fixed Income Markets

2.1 Market structure for Nordic and Baltic fixed income

The markets for Nordic and Baltic fixed income consist of fixed income instruments listed and/or admitted to trading on Nasdaq Copenhagen, Nasdaq Helsinki, Nasdaq Stockholm, Nasdaq Vilnius, Nasdaq Riga and Nasdaq Tallinn. A list of all the Nordic and Baltic fixed income markets and the different trading sessions is available in appendix 1 of this Market Model.

On the Nasdaq Nordic and Baltic exchanges and MTFs it is possible to list and invest in a wide variety of fixed income products. The fixed income business is on a high level divided into these separate services:

- Regulated Market (RM)
- Multilateral Trading Facility (MTF)
- Approved Publication Arrangement (APA) for OTC publication[2]

This Market Model only describes the services in the RM's and MTF's (the Nasdaq First North markets). The APA services are described in a separate guideline.

The exchanges and MTFs offer electronic trading – automatic order matching and quoting – in various markets. In addition, a large part of the fixed income trading is formed through manually negotiated trades which are reported to and published by the exchanges.

The exchanges also conduct issuing and buy back auctions. In addition, Nasdaq Stockholm and Nasdaq Copenhagen provide fixing services for its markets.

Depending on the configuration of the order book (called Instrument Series in Genium INET) trading is performed in percentage, price or yield.

2.1.1 Fixed income instrument types traded

The list below outlines the different types of fixed income cash products currently traded on Nasdaq Nordic and Baltic:

[2] More information on the OTC publication can be found in the APA guidelines.

Type	Sub Type	SE	DK	FI	BA
Bill	Money Market Instrument	X	X	X	X
Certificates	Money Market Instrument	X	X	X	
Bond	Sovereign	X	X	X	X
Bond	Other Public	X	X	X	X
Bond	Covered	X	X	X	
Bond	Convertible	X	X	X	
Bond	Other	X	X	X	
Bond	Corporate	X	X	X	
SDRV	Securitized Derivatives	X	X	X	
SFPs	Structured Finance Products	X	X	X	

In addition, a number of fixing products are defined, that are used for the following fixings in Stockholm:

- STIBOR fixing
- F/X fixing
- Mortgage rates

The Stockholm and Copenhagen markets also offer indicative quoting in fixed income forwards and futures.

2.1.2 Markets

In order to cater for the needs of different market participants and trading facilities, the same instrument can be traded on different markets with different trading characteristics. A list of different markets on each exchange is detailed in Appendix 1.

2.2 Market participants

Market participants on the Nordic and Baltic exchanges are members and issuers.

Each participant takes part in the trading activity with one or several unique participant identification codes. To each participant users are connected. Nasdaq Nordic and Baltic exchanges grant access to participants to trading on certain markets and products.

The individual user must possess authorization to trade as stipulated in NMR section 4.4 or corresponding sections in BMR.

Exchange personnel manage information relating to participants and their users' access. On participant level access to trading certain products or order books is granted. The users of a particular participant can be given the same rights as the participant or may be given individual and limited access rights.

Most member related issues will be handled through the member portal.

Nasdaq has, however, decided that the trading rights are only set on participant level and then fully inherited on user level. This means that users connected to the same participant have the same trading rights and these trading rights determine which products the user have access to trade. Two exceptions do however exist: One exception

is that issuers will have specific users with type 'issuer' who is able to initiate an auction. Another exception is that 'INDB-users' will only have reporting rights, i.e. they do not have the right to do any order management.

Nasdaq then authorizes the participant only and users will not have separate access rights registered in Genium INET. The participant itself has to keep track on who should be granted access to manage orders and trade reports on its behalf in Genium INET.

Issuers like the Danish Mortgage Banks normally only use the issuing auction functionality and the trade reporting functionality in Genium INET, they are not allowed to insert orders in the ordinary electronically traded markets.

2.2.1 Market Making

Market makers and Liquidity Providers that pursue a market making strategy with the trading venue that takes place during half of the trading days over a one month period where they post firm, simultaneous two-way quotes of comparable size and competitive prices and deal on their own account in at least one financial instrument on the exchange for at least 50% of the daily trading hours of continuous trading excluding opening and closing auctions, will need to have a market marker agreement with the exchange.[3] The market maker is responsible for contacting the exchange and manages the agreements through the Member Portal when it fulfills the market maker requirements in order to set-up the written agreement for every ISIN concerned.

2.2.2 Stressed Market Conditions and Exceptional Circumstances

Exceptional Circumstances

Exceptional Circumstances is a condition declared by the Exchange which can be applied for a specific Market Maker, all Market Makers on one or several market segments.

During Exceptional Circumstances, Market Maker's quoting obligations are temporarily disabled.

Exceptional Circumstances will be treated on a case-by-case basis and in the event it is declared, it applies immediately following the publication. Exceptional Circumstances can be set to last for 30 minutes up to end of trading, after which the market will return to normal unless the Exceptional Circumstances period is extended.

In accordance with Article 3 and 4 of the Commission Delegated Regulation (EU) 2017/578 of 13 June 2016 ("RTS 8") supplementing Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 ("MiFID II"), Exceptional Circumstances can be applied according to the below.

All Market Makers on one or several market segments

In the event Exceptional Circumstances are declared, Exceptional Circumstances are publicly declared by the Exchange.

Exceptional circumstances can be applied in case of:

[3] MiFID II, RTS 8: http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0578&from=EN

- a situation of multiple triggering of volatility auctions for the majority of underlying instruments in a market segment
- war, industrial action and similar
- disorderly trading conditions

A specific Market maker

Exceptional Circumstances are not publicly declared by the Exchange in case where they are applied for a specific Market Maker in circumstances where the Market Maker's ability to maintain prudent risk management practices is prevented.

In the event Exceptional circumstances are applied for a specific Market Maker, Market Maker quoting obligations are set to normal immediately after Exceptional Circumstances end.

Where so required to ensure the integrity of the market or where other extreme market situations could be expected, the Exchange may on its own initiative, or upon request by a Member, test whether the prerequisites for applying Exceptional Circumstances are present and following such test decide that Exceptional Circumstances shall apply.

Stressed market conditions (SMC)

SMC is a condition declared by the Exchange which can be applied for one or several shares and share indices.

SMC is never used on fixed income instruments.

2.3 On-behalf functionality

Genium INET provides functionality to support on-behalf operations of orders and trade reports. On-behalf is a transaction performed by one party on behalf of another party. Transactions pertaining to on-behalf operations contain additional information about the owner of the order. For audit purposes, the identity of the participant who sends the on-behalf transaction is kept and logged by the system.

The on-behalf function is available, and configurable, on the following levels:

- Between participants
  - A participant can be granted the right to do on-behalf orders and trade reports for another participant.
- Same participant
  - A trader may be authorized (default) to issue on-behalf transactions for other traders operating under the same participant.

3 Trading Sessions

3.1 Session states:

For all the markets with electronic trading, a description of the different session states can be found in the following chapter, more details are found in Appendix 1.

3.1.1 Pre-trading

During pre-trading, participants can insert, modify or cancel orders. [4]

Pre-trade information is not public, and members are only able to see their own orders.

3.1.2 Trading

Trading in the order book in accordance with NMR and BMR results in on exchange trades. During (continuous) trading, manual trades can be registered with the trade report types specified in chapter 4.

Trading often starts with an opening call, i.e. an uncross, in the transition from pre-trading to (continuous) trading.

During (continuous) trading, each incoming order is immediately checked for execution against orders on the opposite side of the order book[5]. Orders can be executed in full or in part in one or more steps.

Orders in the order book are matched according to the priority rules:
1=price; 2=internal; 3=displayed and 4=time.
Note: The Baltic exchanges use: 1=price and 2=time priority.

Buy or sell orders entered with the same price as a corresponding sell or buy order in the order book will be matched into a trade.

Buy orders entered into the order book with a higher buy price than the sell order with the lowest price (crossing prices), will be matched into one or more trades depending on the volume of the incoming order and the volume and the price of the sell order(s). The match price is determined by the price of the order already residing in the order book (the passive order). The matching process will try to fill as much as possible of the volume of the incoming buy order until the limit of the crossing prices is passed.

If the incoming order is a sell order, it will be matched into one or more trades in a similar way.

For instruments traded on yield, ranking is inverted because the lower the bid price is, the higher the ranking of the bid, and vice versa for the ask prices.

[4] On the STO EIM Superbenchmark market no order management is allowed in Pre-trade.
[5] In auction markets orders are not matched on a continuous basis but registered in the order book. At uncross orders with better prices than the equilibrium price will be matched, whereas orders at the equilibrium price may be matched – according to the allocation principle used on that particular market.

Orders are made public during trading. Order information will be available both as Market-by-Order (MBO) information and as Market-by-Level (MBL) information. MBO information enables participants to see the individual order in an order book. MBL information enables participants to see the accumulated volume and prices for a number of price levels configured by the exchanges. Also, the number of orders at each price level is published. Nasdaq Nordic and Baltic will as a standard publish the top five price levels on each side of the order book.

Trades are usually published trade-by-trade in real-time depending on the configuration of the individual market; but if certain criteria are met publication of trades can be deferred.

3.1.3 Terminating

This session is primarily used to close down the market in an orderly manner and to create end-of-day trading statistics.

During termination, orders can neither be cancelled nor changed, and trade reporting is not allowed. Only cancellation or amendment of trades is possible. By the end of this session closing prices and other trade statistics from that trading day is finalized.

Pre- and post-trade information is publicly available.

3.1.4 Post trading

During post trading, members are allowed to do a limited set of order management, i.e. members may cancel orders and make changes that do not affect the ranking of the order, e.g. volume reductions.

During Post-trading session information is in most markets public and members are then able to see all valid orders. There is no post trade information as trade reporting is not allowed.

3.1.5 Closed

Participants have no access to the markets in the closed session.

3.2 Suspension of trading (Trading halts)

Trading may be suspended by the Nasdaq Nordic or Baltic exchanges either for technical reasons or for regulatory reasons. Suspensions are regulated in NMR and BMR respectively.

Technical suspension means that trading is suspended when the order book(s) becomes inaccessible for technical reasons. In this case a trading halt will be imposed.

Regulatory suspension means that the order book(s) is suspended due to rules and regulations. In this case a trading halt will be imposed too.

The exchange shall provide its members with information on trading halts via suitably accessible information technology. In practice this means that Nasdaq publishes a system message and/or an exchange/IT notice.

3.2.1 Suspension for technical reasons (trading halts)

Technical disruptions are regulated in NMR and BMR. Trading shall be suspended if a technical disturbance causes 75% or more of members (market shares) to lose connection to the markets.

3.2.2 Resuming trading after trading halts

After a trading halt, trading shall be resumed as soon as the circumstances that caused the closing no longer exist and the conditions once again exist to maintain properly functioning exchange operations.

Resumption of trading must **not** take place earlier than 10 minutes after the notice thereof, unless all exchange members have received reasonable notice of an earlier re-opening. During the period prior to re-opening, the exchange trading system will be accessible for order cancellation.

3.2.3 Suspension for regulatory reasons

Where trading in an instrument is to be suspended, the exchange may impose a trading halt (auto match as well as reporting of manual trades will be stopped).

3.2.4 Resuming trading after a suspension

When a suspension ceases, trading is resumed and the restrictions on order entry and trade reporting are lifted.

3.2.5 Lottery bonds, Sweden

Regarding lottery bonds listed on Nasdaq Stockholm, trading is halted five business days prior to the record date unless otherwise stated by the issuer. The record date is the business day prior to the drawing date (unless otherwise stated in the prospectus or other applicable general terms). Trading is resumed on the business day after the drawing date. The trade halt is, therefore, seven business days unless otherwise stated.

3.2.6 Circuit Breaker

A circuit breaker is an automatic mechanism for temporarily constraining trading in case there is a sudden significant price movement. The order book will change trading mode to auction (call) or extending the opening auction (call). The circuit breaker functionality will be active for all electronically traded order books during all trading sessions. A Circuit breaker will be triggered when a possible match deviates too much from the reference price. The reference price is the last closing price.

The circuit breaker will be activated if the calculated match price deviates 5 pct. (Price), 5 “percentage points” (percentage price) or 25 bps (Yield) or more from the reference price.

During continuous trading the length of the auction will be 90 seconds, and during this state order management is allowed and Uncross is carried out according to the same rules as the opening call.

3.3 Notification Codes

Notification codes are used by Nasdaq to indicate the trading status of listed instruments.

There are currently five notification codes for the Fixed Income markets in Genium INET.

OB	On the surveillance list
SL	Other surveillance list reason
SU	Suspension
UD	Under drawing
UL	Unlisted

The notification code UD is used for Lottery Bonds listed on Nasdaq Stockholm. The code indicates that trading is halted since the instrument is under drawing.

4 Registration of Manual Trades, Trade Cancellations and Amendments

4.1 Registration of manual trades

For trading on exchange, members can execute trades in the order book or off-order book. In both cases, the trades must be in compliance with NMR or BMR. Manual trades can only be entered into and published during opening hours (Trading sessions). Outside of opening hours, trades are by definition OTC-trades and must be published via an APA.

Manual Trades are trades that are entered into off order book and in compliance with NMR. Such trades must be reported to the relevant exchange within 5 minutes.

The manually negotiated off-order book trades must meet the pre-trade thresholds for LIS or illiquid criteria, as applicable for the respective market, to be accepted by the exchange. Validations are configured to reject manual trade reports that do not meet the respective thresholds.

Only members are allowed to report manual trades.

One-party trade reporting

Each member reports its own leg of the trade for matching in Genium INET. When both parties have reported their legs, and the required data match, the trade is accepted.

When the first leg is received by the system, a trade report notification message will be sent to the participant specified as the counterparty in the trade report transaction.

Two-party trade reporting

One member reports both legs of a trade. This is always the case for client trades but may also be used for trades between two members.

Unmatched trade report transactions

Members or the Nasdaq exchanges can cancel trade reports that are not yet matched. Unmatched trade reports will be cancelled by the system at the end of the day on which the reports were submitted (when the market enters the post trading session).

4.2 Trade report types

The following trade report types are available for manual trades:

Trade report type	Standard (S)/non-standard (NS)	Definition	OMnet and FIX codes
Standard trade	S	A trade concluded on standard market terms in respect of price, time of the trade, and with standard delivery and settlement schedule	25
Derivatives related trade	NS	Exercise or expiration of options, forwards or futures contracts that imply an exchange of securities or a trade that relates to a derivatives trade and forms an unconditional part of a combination together with a derivative trade.	21
Non-standard settlement	NS	A trade that deviates from the standard settlement and delivery period	22
Portfolio trade	NS	A transaction in more than one security where those securities are grouped and traded as a single lot against a specific reference price.	23
Volume weighted average price trade	NS	A trade that is based on more orders, and a number of sub-trades settled at an average price	26
Exchange granted trade	NS	A trade pursuant to an individual or general authorisation from Nasdaq Nordic or Baltic	27
Repurchase agreement	NS	Agreement between two parties that regulates the lending and return of the same nominal amount of instruments	24

Trade report types are used to specify different characteristics of the trades and set the relevant Market Model Typology (MMT)-flags in the trade ticker. Among the required data that must be reported are:

- **Order Book Identity;**
- **Buy or sell code;**
- **Trade price/yield;**
- **Volume;**
- **Identity of counterpart Member;**
- **Date and Time of the Trade;**
- **Trade Type;**
- **Capacity (client /own account/market maker)**
- **Settlement date;**
- **Deferred publication if applicable.**

The technical details of the trade report transactions are described in the OMnet and FIX API specifications.

4.3 Trade cancellation and amendment

Trades may be cancelled by Nasdaq Nordic or Baltic or by the trading parties themselves. Cancellation and amendment rules are specified in NMR section 6.7, and the corresponding sections in BMR.

Amendments/corrections of trades MUST be handled using the amendment functionality as both the trade cancellation and new trade report must refer to the unique trade ID of the original trade report. It is no longer allowed to cancel the original trade and then report the amended trade as a new trade report.

As a rule, a cancellation request must be received by the relevant exchange within ten (10) minutes after the trade was registered in the trading system in order to avoid misinformation of the market participants.

Cancellations and amendments may be handled via the Rectify Trade (private information about the trade) and Rectify Deal (non-private information about the trade) transactions in OMnet. You may also call or e-mail Trading Operations.

FIX users shall use the Trade Capture Report – Confirmed Trade Cancel (in) message and the Trade Capture Report – Rectify Confirmed Trade (in) message to cancel or amend confirmed trades respectively.

The "external" cancellation and amendment functionality can only be used in case the same participant is on both sides of the trade, i.e. when having used the two-party trade reporting. Amendments are in some cases processed automatically whereas cancellations always require an acceptance from Trading Surveillance before it is carried through.

If different parties are involved in the trade (using one-party trade reporting) both parties need to contact Trading Operations by phone or email who then will take care of the amendment. For cancellations, Trading Surveillance should always be contacted.

Cancellations and amendments received during the trading day will be reflected in the trading statistics (high, low, average etc.) immediately. Cancellations and amendments received on later trading days will not be included and trading statistics will not be corrected based on these cancellations and amendments.

Cancellation of trades in Nordic Auto Match Corporate bond Markets[6]
Nasdaq may cancel a trade if the following conditions are not complied with:

[6] "Nasdaq Nordic reserves the right to decide any matter on its full discretion, in accordance with NMR. Nasdaq Nordic will not be a part of disputes between parties involved in a trade that has been cancelled but will consider the trade as having been compulsory cancelled. Nasdaq Nordic may cancel trades in all cases where it can be established that the trade has been executed as a result of an error according to NMR section 5.7.3. In the event that Nasdaq Nordic cannot get in contact with the Member having initiated the erroneous transaction, Nasdaq Nordic reserves the right to enforce cancellation if needed to maintain a true and fair price picture."

The price of the trade is at or within the original spread (if relevant) prior to the incident of the order book.

If there is no current spread, Nasdaq may cancel the trade if the price deviates more than +/- 5 percentage points from below reference prices and in that order:

1. Last Paid Price of current day
2. Closing Price on the previous trading day
3. Best Bid of current day (if relevant) prior to the incident

If there are no such prices in the auto match markets, the following prices might be used as reference price instead:

4. Spread in the indicative order book current day
5. Best Bid in the indicative order book current day (+/- 5 percentage points)

If there are no indicative prices, Nasdaq may use a 2-5 day old closing price as reference price (if relevant). The deviation allowed will in this case be up to 8 percentage points.

Finally, if none of the above-mentioned reference prices exist, Nasdaq will use the common development of the corporate bond market and/or news about the company in question as a guideline for an evaluation of a feasible market price.

Likewise, Nasdaq may refuse to accept a cancellation request if the price of the trade complies with the above-mentioned rules.

4.4 Deferrals of trade publications

MiFID II allows deferred publication of trades that are large in scale compared to normal market sizes or for instruments where there is not a liquid market. The deferral period depends on Instrument Class and Sub Classes and may vary between markets as the National Competent Authorities (NCAs) have some discretionary power to decide on the deferrals within the framework set by ESMA. Generally, the deferral period could be T+2 days or T+4 weeks where T is the day of trading.

The NCAs may require that aggregated trade information be published during the deferral period. T+2 days deferral could be supplemented with publication of aggregated trade information on day T+1 before 9:00 local time and T+4 weeks deferral supplemented with aggregated trade information for a calendar week published on the following Tuesday before 9:00 local time.

5 Orders

5.1 Required order information

The below fields are required information on all orders or quotes:

- Order Book Identity
- Price or yield
- Volume
- Buy or Sell
- Order Capacity
- Client Identification
- Investment Decision
- Execution Decision
- Where the order is generated by an algorithm, the algorithm deployed by the member
- Whether the Order is submitted as part of Market Making Agreement or any liquidity provision activity

Client ID, Investment decision within firm and Execution within firm will each have one respective PartyRoleQualifier field, which needs to be populated, when mandatory. The Client ID, Investment decision within firm and Execution within firm fields should be populated with a short code. Short codes are created by each member and shall be mapped up with a LongCode via Member Portal GUI, Member Portal Rest API or Member Portal file upload. Short codes will be saved for a minimum of 5 years and upon request from National Competent Authority, Nasdaq will submit a report in a predefined format.

The fields are only mandatory on order entries.

Order capacity is mandatory on all orders and trade reports. It shall be populated with a value that identifies which kind of trade or order it is. The field is also used to validate when, and if, the Client ID, Investment Decision Maker and Execution Decision Maker field are mandatory.

Short codes 0, 1, 2 and 3 are reserved values. More information about the short codes may be found in the Order Record Keeping guidelines.

5.2 Lot types, order types, validity and ranking

The following lot types, attributes and validities are available on the fixed income markets of Nasdaq Nordic and Baltic

Lot types

Two lot types are used:

- Round lots
- Odd lots

These lot types can be matched with each other according to certain rules described in Appendix 3. Some order books only use Round lots.

Order types

1. Limit order

A limit order stipulates a maximum purchase price or minimum selling price. If not fully matched, the remainder of the order is stored in the order book in descending buy-price order or ascending sell-price order and joins the queue of orders having the same price according to time priority. For order books traded in yield, ranking is reversed.

If the price specified by a limit price is not valid according to the allowed tick size, it will be rejected. It will only execute at prices equal to or more generous than its specified limit price.

Stored limit orders are also valid in call auctions.

Limit orders can be matched in part or in its entirety unless an all-or-none condition is attached in which case the order must match in full or not at all.

2. Market order

A market order is an order to sell or buy at the best available price and is therefore entered without a price. During continuous trading the time in force for a market order is always fill-or-kill (the order is matched in full or not at all) or immediate-or-cancel (any remaining quantity will be cancelled). The order is never registered in the order book.

Note that a market order will trade through the order book until the entire quantity is filled. This means that as long as there is an order on the opposite side of the order book there will be a match no matter the price level.

Market orders with the time in force "FOK" cannot be placed during call auctions.

Market orders with the time in force "IOC" can be placed during call auctions and are stored; but if not traded always cancelled after the uncross.

3. Market-to-limit order

Market-to-limit order is an order to sell or buy at the best possible price. If the order is partly matched, the remainder is converted into a limit order priced at match price. In comparison with a normal market order, the market-to-limit order only executes at the best price level and, therefore, does not trade through the order book.

During continuous matching a market-to-limit order is immediately cancelled if no match can be executed, e.g. if no order exists on the opposite side of the book.

Market-to-limit orders entered in a non-matching session state are treated as market orders, they form part of the uncross at equilibrium price, and if any quantity remains after the uncross they will be stored in the order book at the equilibrium price.

4. Linked orders

Linked orders provide the functionality to enter more than one order and to state that you want to buy e.g. either 500 lots of Bond X at price A OR 500 lots of Bond Y at price B, OR a combination thereof. The linked order corresponds to a number of single orders with an exclusive OR-condition on the maximum volume level. When a trade takes place in one of the legs, the volume of the other legs will immediately be reduced proportionally, so there will be no risk of "double trading".

- The maximum number of orders that can be linked is 10.
- All legs in a linked set of orders must contain the same multiple of lot sizes.

See Appendix 3.6 for guiding examples.

5. Indicative quotes
Nasdaq Nordic and Baltic provide dissemination of indicative quotes in certain markets. Indicative quotes are used to display price levels on certain instruments, and they do not provide matching of interest. Genium INET indicative quotes can be inserted either with a price or with a yield depending on the configuration of the order book.

6. Quotes
On some markets you can place two-way quotes.

7. Directed request for Quote
The Directed Quote Request (DQR) function makes it possible for a trader to send a private Quote Request in a specific instrument series directed to responsible market makers, to a specified list of market makers or one single market maker.

The Market Makers respond to a DQR by sending directed orders to the Initiator. These orders will not be public to all market participants.

The Initiator then have the ability to select which market maker responses to execute/accept. Once done, there is a match and the trade is executed according to applicable exchange rules.

Time in force

1. Day order (day)
A day order is valid until the market closes. A day order is active for the trading day, and any non-executed portion will be cancelled at the end of the business day, i.e. when the market enters into post-trading.

2. Good till date (GTD)[7]
A GTD order is valid until a specified date in the future. If the order is not matched during the day, it will be inserted again in the order book the next morning when the system opens. A GTD order will retain its original chronological order based on original entry time into the system.

For markets with an upper limit for the number of days that an order can be valid (e.g. 8 days) the order will automatically be cancelled when it has been in the order book for that number of days, inclusive of the day it was entered.

3. Good till Session (GTS)
A GTS order specifies the session type until which the order shall remain in effect. The GTS order will be cancelled in the transition to a session different from the specified session. If you e.g. enter a GTS order in the pre-trade session and this order is not traded

[7] The good till date (GTD) validity is for technical reasons configured for the auction markets but should NOT be used. Only good till cancel (GTC) should be used in the auction markets. For this reason, we have configured the minimum number of days to 30 for the GTD orders in the auction markets.

in the opening call, it will be cancelled automatically when the market enters into the trading session.

If you enter a GTS order during the Trading session setting the validity session to pre-trade the order will be valid and tradable until end of day, i.e. until the system enters post-trading session, as such orders have a maximum time-in-force of current day.

4. Fill-or-Kill (FOK)
A FOK order is never stored in the order book. If a FOK order is not matched in full on entry, the order is cancelled. FOK orders can only be entered during continuous trading.

5. Immediate or cancel (IOC)[8]
An IOC order is never stored in the order book during continuous matching. If an IOC order is not matched in full or in part on entry, the remaining part of the order is cancelled. IOC orders placed during a call auction will be stored in the order book, whereas any remaining part of the order will be cancelled after uncross.

6. Good till Cancelled (GTC)
Genium INET supports GTC (Good till Cancelled) orders in markets that have no specified limit to the maximum number of days an order is allowed to stay in the book. All Nordic Fixed Income markets with automatic matching have such a limit and thus do not allow GTCs.

Issuing Auction markets however do allow GTC orders (remaining orders are cancelled after the auction is executed) – in fact GTC is the only order type allowed in auction markets[9].

Note that indicative quotes are day "orders", indicative markets in general do not support any time-in-force conditions. The only exceptions is the XSTO Mortgage Rates market that requires indicative quotes to be expressed using orders as the mortgage rates are relatively seldom changed – thus GTCs are allowed.

All-or-None Condition (AoN)
All-or-None orders can be entered if configured for the order book. The AoN condition is an instruction to the match engine to fill the order completely or not at all. In that way it is very similar to the Fill-or-Kill orders with the exception that AoN orders remains in the order book if not matched on entry.

AoN orders may be bypassed in matching of incoming orders if their conditions cannot be fulfilled.

AoN conditions will be configured for all order books on the Danish Cash Bond Trading and Electrobroker markets.

[8] Immediate-or-cancel (IOC is the same as Fill-and-Kill (FAK))

[9] The good till date (GTD) validity is for technical reasons configured for the auction markets but should NOT be used. Only good till cancel (GTC) should be used in the auction markets. For this reason, we have configured the minimum number of days to 30 for the GTD orders in the auction markets.

Reserve Condition

Reserve orders (Iceberg orders)

In a reserve order, a certain portion (open volume) of the total volume of the order is displayed in the order book. Both the displayed and non-displayed portions of the reserve order are available for potential execution against incoming orders.

In addition, when the displayable portion of the order is completely executed within the book, the non-displayable portion of the order is decremented, and a new displayable order is sent to the order book (with new time priority).

Reserve orders are valid and new such orders can be placed during call auctions and during continuous matching. Their total quantity is used for the equilibrium price calculation and the uncrossing. Their total quantity is displayed in market by price information during call auctions. Only the open quantity will be shown during continuous trading.

For fixed income instruments in the Nordic market prioritized internal crossing is used when matching reserve orders a.k.a. iceberg orders. This e.g. implies that a participant will match his/her own order prior to an order of another participant even if the time priority of that order is better.

When reserve orders are matched the presentation of trades is bundled. See matching example in Appendix 3.1.

Minimum Quantity (Volume) Order

Orders can be entered for execution with a minimum quantity. Displayed minimum Acceptable Quantity (MAQ) orders are only accepted during continuous trading with a time-in-force IOC (no other Time in Force will be allowed). Adding Minimum Quantitycondition to an order and setting this to equal the volume gives the equivalent of a Fill-or-Kill (FoK). Minimum quantity cannot be combined with any other order attribute.

MAQ Orders can participate in the auctions with the MAQ requirement temporarily Waived. That is, MAQ Orders can participate in both auctions and the continuous market; however, the "MAQ requirement" will only be enforced during the continuous market.

MAQ is also allowed on Non-displayed orders. Here the Non-displayed order would still need to satisfy the minimum size requirements, but the trader would be able to state that the order should only match if the MAQ criterion is met or exceeded. An order will not execute during continuous trading unless the MAQ criterion is met. Participants would still be able to enter a Non-displayed order without a MAQ if desired. See Appendix 3.7 for more details.

Non-displayed Order (Hidden Order)

Non-displayed limit orders are hidden from other participants than the participant entering it. The order stipulates a maximum purchase price or minimum selling price. If not fully matched, it is logged in the Order Book in descending buy-price order or ascending sell-price order and joins the queue of orders having the same price according to time priority. Visibility ranks ahead of time priority. A displayed order entered later is ranked ahead of an earlier non-displayed order (assuming both orders entered at the same price).

Non-displayed orders have to satisfy minimum size requirements. If the volume is reduced due to a partial execution, the order however remains non-displayed even when smaller than the minimum size requirements.

A hidden order is accepted if the quantity equals to or is higher than the size requirement limit, i.e. the Pre-Trade Large in Scale value.

Non-displayed orders that do not meet the minimum size requirement are automatically rejected.

Order Price limits

In continuous matching, price limits are calculated from a reference price so that incoming bid orders and quotes with prices above the upper price limit, and ask orders and quotes with prices below the lower price limit, are rejected (or reverse for instruments traded in yield). Bid orders lower than the upper limit and ask order above the lower price limit will be accepted by the system.

Reference Price Calculation

The used reference price calculation for order price limits will be selected according to below order:

- Last paid else;
- Mid BBO; if no Best Bid Offer then
- Best Bid or Offer
- If none of above, a Settlement price (last paid) from previous day will be calculated

Order amendments

The priority of a stored order is retained if the volume is reduced, if the time validity is extended, and if the identity of the customer is changed. Other changes such as increase of the quantity or change of the price are equivalent to cancellation of the order and the placing of a new order with a new ranking time stamp.

Ranking of Orders

The rule for ranking of orders is based firstly upon best price and secondly by the longest storage time.

Tick sizes

Tick size is the smallest allowed price change that can be entered into the Trading System and, thereby, is the smallest possible difference between the buy and sell price in an order book.

Kill functionality

Upon request, a member can instruct the Trading venue to manually cancel one or more orders in the Genium INET trading system according to specifications set by the member. All communications done via recorded phone calls or via e-mails. The member needs to provide their MPID/Participant ID, Trader ID and in which instrument orders are to be cancelled. In the case of recurring algorithmic order issues for a member, the Trading venue may choose to suspend the member until the issue is solved.

Cancellation requests are processed during trading opening hours.

Revision History

Date	Revision	Change Description
June 16, 2011	1.9	Initial version for Nasdaq Nordic.
August 22, 2011	2.0	Correction in the spread definition for Danish Bonds.
November 04, 2011	2.1	Added user-type INDB-user.
January 09, 2012	2.2	New opening hours in Swedish Indicative markets.
April 16, 2012	2.3	New calculation method for STIBOR. Price concept change Nasdaq Riga.
June 4, 2012	2.4	New information on internal match of reserve orders and on step 4 for equilibrium price determination.
December 7, 2012	2.5	New information about First North Bond Markets.
March 4, 2013	2.6	New information related to Stibor framework set by Swedish Banker's Association.
June 14, 2013	2.7	Section 3.3 outlining Notification Codes in Genium INET was added. Expansion of the section covering the STIBOR Fixing.
August 12, 2013	2.8	Clarification in Section 2.2 and 4.4 on references to BMR Correction in tick sizes for Riga and Vilnius
January 2, 2014	2.9	Tick size table for Nasdaq Riga changes was added to trade with six digits instead of four digits on the Clean price, Appendix 5.
January 27, 2014	3.0	New information about First North Bond Market Finland.
April 15, 2014	3.1	Corrected errors in the introduction and in session states table in section 3.1
December 15, 2014	3.3	New Structured Products markets and change to STO FN Bond Market Institutional
May 4, 2015	3.4	Changes in suspension of trading
June 8, 2015	3.5	New market Sustainable Bonds and update of pricing method for structured products to also both clean and dirty pricing.
November 9, 2015	3.6	Change from yield to clean price in TSE Bond Auto match.
December 14, 2015	3.7	Changes to reflect the new brand names of Nasdaq companies, removing "OMX".
March 23, 2016	3.8	Corrected times: Post trading (STO FN Bond Market Retail) and half-day closing time (STO Structured Products Units)
July 7, 2016	3.9	New Market TSE Equity Auctions (Nasdaq Tallinn)
August 26, 2016	4.0	Adding two markets, STO FN Bond Market Retail CCY and STO Corporate Certificates.
April 28, 2017	4.1	Adding two markets, STO Structured Products NOK and STO Convertible Bonds.

Date	Revision	Change Description
		Correcting market, HEL Retail Structured Products. Added Price type "Price" in Helsinki and Stockholm price type tables.
May 15, 2017	4.2	Added the market, CPH Standard Settlement Auctions. Added FN Baltic markets.
December 6, 2017	5.0	MiFID II related changes
January 3, 2018	5.1	Additional details regarding deferrals and amendments.
June 11, 2018	5.2	Added reserve orders and Request for Quote. Changes to temporary set up of Deferral regime of Swedish and Finnish products. Added appendix 6 regarding fixings and changes to appendix 5. Added new submarkets (STO FN Sustainable Retail Bonds & STO FN Sustainable Bonds).
June 10, 2019	5.3	Added MAQ and Non-displayed orders. Added new issuing auction functionality. Correction of the Linked-Order description Added cancellation of corporate bond trades
October 1, 2019	5.4	Added self-match prevention
November 18, 2019	5.5	Sold-Out Buy-Back functionality implemented on below submarkets: STO Structured Products STO Structured Products Units STO Structured Products NOK STO Structured Products CCY STO Tailor Made Products STO Sustainable Products STO FN Structured Leveraged Products HEL Retail Structured Products
December 23, 2019	5.6	Amendments in Appendix 3.8. Addition of Issuer approval and examples of circumstances for SOBB initiation.
January 13, 2020	5.7	Added new Danish auction markets – TAP- and Buy Back auction markets and an update on fixings.
March 2, 2020	5.8	SFPs (Structured Finance Products) added in the table in section 2.1.1

Appendix 1 Session States and access etc. to markets

Appendix 1.1 Session States for Nasdaq markets

The Nordic and Baltic Fixed Income markets consists of 6 exchanges

- Nasdaq Copenhagen
- Nasdaq Helsinki
- Nasdaq Riga
- Nasdaq Stockholm
- Nasdaq Tallinn
- Nasdaq Vilnius

In the tables below you find information about session schedules for each individual market. In some markets not all the sessions are relevant, i.e. one or more sessions are not needed, this is marked by 'n/a'. If for example there is no difference in the functionality/transactions that can be used in post-trading and closed sessions, there is no need for a post-trading session and that will be marked putting 'n/a' in the post-trading column.

Nasdaq Copenhagen Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	CPH Cash Bond Trading	07:00	08:30	17:00	17:20	18:00
2	CPH Fixed Income Derivatives	07:00	08:30	17:00	n/a	17:20
3	CPH Auctions	07:00	n/a	16:30	n/a	16:45
4	CPH Standard Settlement Auctions	07:00	n/a	16:30	n/a	16:45
5	CPH TAP Auctions	07:00	n/a	16:30	n/a	16:45
6	CPH Buy Back Auctions	07:00	n/a	16:30	n/a	16:45
7	CPH Electrobroker	n/a	08:30	17:00	17:20	18:00
8	CPH FN Bond Market	07:00	08:30	17:00	17:20	18:00

Nasdaq Helsinki Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	HEL Retail Structured Products	08:30	10:00	18:20	18:30	19:00
2	HEL Structured Products Tailor Made	08:30	10:00	18:20	18:30	19:00
3	HEL Corporate Bonds	n/a	10:00	18:30	18:40	19:00
4	HEL Government Bonds	n/a	10:00	18:30	18:40	19:00
5	HEL Convertibles	n/a	10:00	18:30	18:40	19:00
6	HEL FN Bond Market	08:30	10:00	18:20	18:30	19:00
7	HEL Structured Products Units	08:30	10:00	18:20	18:30	19:00
8	HEL FN Structured Lev Products	08:30	10:00	18:20	18:30	19:00
9	HEL Sustainable Bonds	n/a	10:00	18:30	18:40	19:00

Nasdaq Stockholm Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	STO Commercial Papers	07:15	07:30	16:20	16:30	18:30
2	STO Convertible Bonds	08:00	09:00	16:15	16:25	18:30
3	STO Corporate Bonds	07:15	07:30	16:20	16:30	18:30
4	STO Sustainable Commercial Paper	07:15	07:30	16:20	16:30	18:30
5	STO Credit Certificates	08:00	09:00	16:15	16:25	18:00
6	STO EIM Super Benchmarks	08:00	08:30	17:00	17:02	18:00
7	STO Fixed Income Derivatives	07:15	07:30	16:20	16:30	18:30
8	STO Fixing	n/a	08:30	n/a	n/a	18:00
9	STO FN Bond Market Institutional	08:00	09:00	16:15	16:25	18:00
10	STO FN Bond Market Retail	08:00	09:00	16:15	16:25	18:00
11	STO FN Bond Market Retail CCY	08:00	09:00	16:15	16:25	18:00
12	STO FN Sustainable Bonds	08:00	09:00	16:15	16:25	18:00
13	STO FN Sustainable Retail Bonds	08:00	09:00	16:15	16:25	18:00
14	STO FN Convertibles	08:00	09:00	16:15	16:25	18:30
15	STO FN Structured Lev Products	08:00	09:00	16:15	16:25	18:30
16	STO Government Bonds	07:15	07:30	16:20	16:30	18:30
17	STO Lottery Bonds	08:00	09:00	16:15	16:25	18:30
18	STO Mortgage Bonds	07:15	07:30	16:20	16:30	18:30
19	STO Mortgage Rates	n/a	08:30	n/a	n/a	18:00
20	STO Municipalities	07:15	07:30	16:20	16:30	18:30
21	STO Other Financial Instruments	07:15	07:30	16:20	16:30	18:30
22	STO Retail Bonds	08:00	09:00	16:15	16:25	18:30
23	STO Retail Corporate Bonds	08:00	09:00	16:15	16:25	18:30
24	STO Structured Products	08:00	09:00	16:15	16:25	18:30
25	STO Structured Products CCY	08:00	09:00	16:15	16:25	18:30
26	STO Structured Products NOK	08:00	09:00	16:15	16:25	18:30
27	STO Structured Products Units	08:00	09:00	16:15	16:25	18:30
28	STO Sustainable Bonds	07:15	07:30	16:20	16:30	18:30
29	STO Tailor Made Products	08:00	09:00	16:15	16:25	18:30

Nasdaq Stockholm **Half-day** Market Session

	Market	Post-trading	Closed
1	STO Commercial Papers	12:30	18:30
2	STO Convertible Bonds	12:10	12:30
3	STO Corporate Bonds	12:30	18:30
4	STO Corporate Certificates	12:30	18:30
5	STO Credit Certificates	12:10	12:30
6	STO EIM Super Benchmarks	13:02	17:00
7	STO Fixed Income Derivatives	12:30	18:30
8	STO Fixing	n/a	17:00
9	STO FN Bond Market Institutional	12:30	18:30
10	STO FN Bond Market Retail	12:10	12:30
11	STO FN Bond Market Retail CCY	12:10	12:30
12	STO FN Sustainable Bonds	12:30	18:30
13	STO FN Sustainable Retail Bonds	12:10	12:30
14	STO FN Convertibles	12:10	12:30
15	STO FN Structured Lev Products	12:10	12:30
16	STO Government Bonds	12:30	18:30
17	STO Lottery Bonds	12:10	12:30
18	STO Mortgage Bonds	12:30	18:30
19	STO Mortgage Rates	n/a	12:30
20	STO Municipalities	12:30	18:30
21	STO Other Financial Instruments	12:30	18:30
22	STO Retail Bonds	12:10	12:30
23	STO Retail Corporate Bonds	12:10	12:30
24	STO Structured Products	12:10	12:30
25	STO Structured Products CCY	12:10	12:30
26	STO Structured Products NOK	12:10	12:30
27	STO Structured Products Units	12:10	12:30
28	STO Sustainable Bonds	12:30	18:30
29	STO Tailor Made Products	12:10	12:30

Nasdaq Riga Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	RSE FN Bonds Market	n/a	10:00	16:00	16:05	16:30
2	RSE Bonds Auto match	n/a	10:00	16:00	16:05	16:30
3	RSE FI New Issue	09:00	Per Request	16:00	n/a	16:30
4	RSE FI New Issue Yield	09:00	Per Request	16:00	n/a	16:30
5	RSE Equity IPO	09:00	Per Request	16:00	n/a	16:30

Nasdaq Tallinn Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	TSE FN Bond Market	n/a	10:00	16:00	16:05	16:30
2	TSE Bonds Auto match	n/a	10:00	16:00	16:05	16:30
3	TSE Equity Auctions	09:00	Per Request	16:00	n/a	16:30

Nasdaq Vilnius Market Sessions

	Market	Pre-trading	Trading	Terminating	Post-trading	Closed
1	VSE FN Bond Market	n/a	10:00	16:00	16:05	16:30
2	VSE Bonds Auto match	n/a	10:00	16:00	16:05	16:30
3	VSE FI New Issue Yield	09:00	Per Request	16:00	n/a	16:30
4	VSE FI New Issue Yield Non	09:00	Per Request	16:00	n/a	16:30
5	VSE Equity Public Sales	09:00	Per Request	16:00	n/a	16:30
6	VSE Equity Tender Offer	09:00	Per Request	16:00	n/a	16:30
7	VSE Equity TO Competitive	09:00	Per Request	16:00	n/a	16:30
8	VSE Equity IPO	09:00	Per Request	16:00	n/a	16:30

Appendix 1.2 Access, instruments and order types

Nasdaq Copenhagen Markets

	Market	Instruments traded/quoted	Participants	Order Types
1	CPH Cash Bond Trading	All fixed income instruments admitted for trading on Nasdaq Copenhagen	All fixed income members on Nasdaq Copenhagen	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
2	CPH Fixed Income Derivatives	Danish mortgage bank futures	Fixed income members with separate agreement	Indicative quotes
3	CPH Auctions	Fixed income instruments admitted for trading in auction markets	Fixed income members with B-membership and mortgage credit members	Limit orders
4	CPH Standard Settlement Auctions	Fixed income instruments admitted for trading in auction markets	Fixed income members with B-membership and mortgage credit members	Limit orders
5	CPH TAP Auctions	Fixed income instruments admitted for trading in auction markets	Fixed income members with B-membership and mortgage credit members	Limit orders
6	CPH Buy Back Auctions	Fixed income instruments admitted for trading in auction markets	Fixed income members with B-membership and mortgage credit members	Limit orders
7	CPH Electrobroker	All fixed income instruments included in a market maker agreement	Fixed income members with B-membership	Limit orders
8	CPH FN Bond Market	All fixed income instruments admitted for trading on First North Copenhagen	Fixed income members on Nasdaq Copenhagen	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel

Nasdaq Helsinki Markets

	Market and Instruments traded	Participants	Order Types
1	HEL Retail Structured Products	All members with fixed income market access on Nasdaq Helsinki	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
2	HEL Structured Products Tailor Made	All members with fixed income market access on Nasdaq Helsinki	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
3	HEL Corporate Bonds	All members with fixed income market access on Nasdaq Helsinki	Indicative
4	HEL Government Bonds	All members with fixed income market access on Nasdaq Helsinki	Indicative quotes
5	HEL Convertibles	All members with fixed income market access on Nasdaq Helsinki	Indicative quotes
6	HEL FN Bond Market	All members with fixed income market access on Nasdaq Helsinki	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
7	HEL Structured Products Units	All members with fixed income market access on Nasdaq Helsinki	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
8	HEL FN Structured Lev Products	All members with fixed income market access on Nasdaq Helsinki	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
9	HEL Sustainable bonds	All members with fixed income market access on Nasdaq Helsinki	Indicative

Nasdaq Stockholm Markets

	Market and Instruments traded	Participants	Order Types
1	STO Commercial Papers	All fixed income members Nasdaq Stockholm	Indicative quotes
2	STO Convertible Bonds	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
3	STO Corporate Bonds	All fixed income members Nasdaq Stockholm	Indicative quotes
4	STO Credit Certificates	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
5	STO EIM Super Benchmarks[10]	Primary dealers in Benchmark Government bonds	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
6	STO Fixed Income Derivatives	Market makers	Indicative quotes
7	STO Fixing	Fixing participants	Indicative quotes
8	STO FN Bond Market Institutional	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
9	STO FN Bond Market Retail	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
10	STO FN Bond Market Retail CCY	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
11	STO FN Bond Market Retail CCY	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
12	STO Government Bonds	Market makers	Indicative quotes
13	STO Lottery Bonds	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel

[10] Only primary dealers with a market maker agreement with the Swedish National Debt Office are allowed to participate on this market. The market is set up according to all applicable MiFID transparency rules, which means that the orders are larger than both pre trade LIS and Post trade LIS. This enables the market to remain undisclosed pre trade and auto match trades to be automatically deferred.

14	STO Mortgage Bonds	Market makers	Indicative quotes
15	STO Mortgage Rates	Market makers	Indicative quotes
16	STO Municipalities	Market makers	Indicative quotes
17	STO Other Financial Instruments	Market makers	Indicative quotes
18	STO Retail Bonds	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
19	STO Retail Corporate Bonds	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
20	STO Structured Products	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
21	STO Structured Products CCY	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
22	STO Structured Products NOK	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
23	STO Structured Products Units	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
24	STO Sustainable Bonds	Market makers	Indicative quotes
25	STO Tailor Made Products	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
26	STO Corporate Certificates	Market makers	Indicative quotes
27	STO Structured Lev Products	All fixed income members Nasdaq Stockholm	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel

Nasdaq Riga Markets

	Market	Instruments traded	Participants	Order Types
1	RSE FN Bonds Market	All fixed income instruments admitted for trading on First North Riga	All fixed income members on Nasdaq Riga	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
2	RSE Bonds Auto match	All fixed income instruments admitted for trading on Nasdaq Riga	All fixed income members on Nasdaq Riga	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
3	RSE FI New Issue	Fixed income instruments admitted for trading in auctions markets	All fixed income members on Nasdaq Riga	Limit orders
4	RSE FI New Issue Yield	Fixed income instruments admitted for trading in auctions markets	Primary dealers approved by Treasury of Latvia	Limit orders
5	RSE Equity IPO	Securities admitted for trading in auctions markets	Selected equities members on Nasdaq Riga	Limits orders

Nasdaq Tallinn Markets

	Market	Instruments traded	Participants	Order Types
1	TSE FN Bond Market	All fixed income instruments admitted for trading on First North Tallinn	All fixed income members on Nasdaq Tallinn	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
2	TSE Bonds Auto match	All fixed income instruments admitted for trading on Nasdaq Tallinn	All fixed income members on Nasdaq Tallinn	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
3	TSE Equity Auctions	Securities admitted for trading in auctions markets	Selected equities members on Nasdaq Tallinn	Limit orders

Nasdaq Vilnius Markets

	Market	Instruments traded	Participants	Order Types
1	VSE FN Bond Market	All fixed income instruments admitted for trading on First North Vilnius	All fixed income members on Nasdaq Vilnius	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
2	VSE Bonds Auto match	All fixed income instruments admitted for trading on Nasdaq Vilnius	All fixed income members on Nasdaq Vilnius	Limit order Market order Market to limit order Fill-or-kill Immediate-or-cancel
3	VSE FI New Issue Yield	Fixed income instruments admitted for trading in auctions markets	Primary dealers approved by Ministry of Finance	Limit orders
4	VSE FI New Issue Yield Non	Fixed income instruments admitted for trading in auctions markets	Primary dealers approved by Ministry of Finance	Limit orders
5	VSE Equity Public Sales	Equities admitted for trading in auctions markets	All equities members on Nasdaq Vilnius	Limit orders
6	VSE Equity Tender Offer	Equities admitted for trading in auctions markets	All equities members on Nasdaq Vilnius	Limit orders
7	VSE Equity TO Competitive	Equities admitted for trading in auctions markets	All equities members on Nasdaq Vilnius	Limit orders
8	VSE Equity IPO	Equities admitted for trading in auctions markets	All equities members on Nasdaq Vilnius	Limit orders

Appendix 2 Markets and Trading Functionality – an Overview

Exchange and Market	Opening Call[2]	Auto Matching	Issuing Auction	Reporting Manual Trades	Turnover reporting	Limited Access[1]	Indicative Quotes
Copenhagen							
CPH Cash Bond Trading	X	X		X			
CPH Fixed Income Derivatives				X		X	X
CPH Auctions			D[11]	-		X	
CPH Standard Settlement Auctions			D[11]	-		X	
CPH TAP Auctions			D[11]			X	
CPH Buy Back Auctions			D[11]			X	
CPH Electrobroker		X		-		X	
CPH FN Bond Market	X	X		X			

[11] The Danish issuing auction markets use Directed Issuing Auction Request (marked with a D) – other auction markets make use of regular Issuing Auction Request (marked with an X).

Exchange and Market	Opening Call[2]	Auto Matching	Issuing Auction	Reporting Manual Trades	Limited Access[1]	Indicative Quotes
Stockholm						
STO Commercial Papers				X		X
STO Convertible Bonds	X	X		X		
STO Corporate Bonds				X		X
STO Credit Certificates	X	X		X		
STO EIM Super Benchmarks		X			X	
STO Fixed Income Derivatives						X
STO Fixing						X
STO FN Bond Market Institutional	X	X		X		
STO FN Bond Market Retail	X	X		X		
STO FN Bond Market Retail CCY	X	X		X		
STO FN Sustainable Bonds	X	X		X		
STO FN Sustainable Retail Bonds	X	X		X		
STO FN Structured Lev Products	X	X		X		
STO Government Bonds				X		X
STO Lottery Bonds	X	X		X		
STO Mortgage Bonds				X		X
STO Mortgage Rates						X
STO Municipalities				X		X
STO Other Financial Instruments						
STO Retail Bonds	X	X		X		
STO Retail Corporate Bonds	X	X		X		
STO Structured Products	X	X		X		
STO Structured Products CCY	X	X		X		
STO Structured Products NOK	X	X		X		
STO Structured Products Units	X	X		X		
STO Sustainable Bonds				X		X
STO Tailor Made Products	X	X		X		
STO Corporate Certificates				X		X

Exchange and Market	Opening Call[2]	Auto Matching	Issuing Auction	Reporting Manual Trades	Limited Access[1]	Indicative Quotes
Helsinki						
HEL Retail Structured Products	X	X		X		
HEL Structured Products Tailor Made	X	X		X		
HEL Corporate Bonds				X		
HEL Government Bonds		X		X		
HEL Convertibles				X		X
HEL FN Bond Market						
HEL FN Structured Lev Products	X	X		X		
HEL Structured Products Units	X	X		X		
HEL Sustainable Bonds				X		
Riga						
RSE Bonds				X		X
RSE Bonds Auto match		X		X		
RSE FI New Issue			X			
RSE FI New Issue Yield			X		X	
RSE Equity IPO			X			
Tallinn						
TSE Bonds				X		X
TSE Bonds Auto match		X		X		
TSE Equity Auctions			X			
Vilnius						
VSE Bonds				X		X
VSE Bonds Auto match		X		X		
VSE FI New Issue Yield			X		X	
VSE FI New Issue Yield Non			X		X	

VSE Equity Public Sales			X			
VSE Equity Tender Offer			X			
VSE Equity TO Competitive			X			
VSE Equity IPO			X			

1) Access may be limited to members only, market makers only, or to other kinds of specific groups of participants
2) The opening call will start 15 minutes before the time of Trading – with only Market-by-Level order book information

Appendix 3 Trading Functionality

Appendix 3.1 Auto match (continuous trading)

Auto matching is automatic matching of buy and sell orders in the order book. Incoming orders are matched against the opposite side of the order book.

The ranking in the order book is subject to price and time prioritization while matching prioritization on Nasdaq Nordic is based on price – internal – displayed - time. Nasdaq Nordic and Baltic fixed income markets offer trading based on either percentage, price or yield. For instruments traded in yield the order book ranking is 'inverted price' and time.

Lot type handling

The size of the lot type is the minimum quantity allowed to be traded in a partial execution.

Nasdaq Nordic and Baltic fixed income markets support splitting one order book into two different lot types. The Round lot type is specified as the primary lot size. This is where the majority of the trading takes place and where prices are produced (e.g. the BBO). The other lot size is called odd lot and is used for orders that are smaller or not a multiple of the round lot. Odd lot is therefore used for orders that are a combination of the round lot and odd lot. Some order books do not have Odd lots configured and in those cases the round lot will be the minimum quantity and only multiples of the round lot can be traded.

Below are examples of round lots and odd lots:

Lot Type Name	Lot Size	Min Quantity	Max Quantity
Odd lot	1	1	-
Round lot (Primary)	100	100	-

Order book with Odd lot configured

An order with a quantity of 150 is an odd lot order and entered in the odd lot order book. An order with a quantity of 200 is a round lot order and entered in the round lot order book, and it will only be traded in multiples of the lot size (100). The fixed income markets support integration of orders between different lots by aggregating quantity from the smaller lot type to match orders with a larger lot type.

Price – internal – displayed --time[12] is used as the matching priority for integration across lot types. Then the following rules apply for matching and allocation:

- *Best order on book "teams up" with other orders on the book* - If this best order has a smaller lot size than the aggressive one, it "teams up" with other small orders to fill the aggressive order. This could mean that the other small orders at the same price match before larger orders with a better time priority. This is to avoid bypassing the best order.

[12] NOTE: The Nasdaq Baltic exchanges always use price – time matching priorities.

- *Incoming order "teams up" with orders on the book* - If the best order on the book has a larger lot size than the aggressive one, the incoming order "teams up" with orders in the same side of the order book to try to match the best, larger order. If it is not possible to match it anyway, second best order is considered instead, etc.

Order book with only Round lot configured
The minimum quantity of an order that can be entered is the round lot (100). Only multiples of the round lot can be entered and executed i.e. 200, 300 and so forth. If an order of 150 is entered it will be rejected.

Self-match Prevention

Self-Match Prevention is an optional functionality for the Member. The Self-Match Prevention (SMP) functionality may be used by Participants to avoid unintentional internal trading by preventing certain Orders (within the same MPID) from executing against each other. The aim with the functionality is to facilitate Members' compliance and risk management duties and needs.

The self-match prevention functionality can be activated for a Member or a subset of traders of a Member. If activated on Member/Participant level, then all orders coming from the Member having the same match prevention ID will be prevented from matching with each other. If instead activated on trader level, then only the orders coming from traders having the functionality activated and having the same match prevention ID will be prevented from matching with each other. It is not possible to use the functionality for preventing orders placed with different Participant IDs (MPIDs) from executing against each other

Please note that the Member is in all situations, even when and if the functionality is applied, responsible for all its Trades and Orders, including not violating the Nasdaq Nordic Member Rules as applicable from time to time and/or applicable legislation.

Description of the functionality
Self-match prevention is supported on single orders messages on OMnet or FIX. The functionality is not active for orders placed in combination order books and not for implied orders. The range of valid match prevention ID values to be provided with order messages is 0-255. If no value is specified at entry, then the matching engine will treat the order as having match prevention ID set to '0' (zero). This means that Members that want to prevent all orders from matching with each other only needs to activate the functionality for the relevant Participant code (MPID) without having to actively specifying match prevention ID on incoming orders. Members will be notified of cancelled orders as the result of self-match prevention in firm order book and execution report messages on OMnet and FIX respectively. Full technical details are available in the relevant OMnet and FIX protocol specifications.

The SMP-action is undertaken by the trading system in order to prevent a Self-Match. The action is always to cancel the passive order.

Members can activate the SMP-functionality by contacting Member Services (ms.gi@nasdaq.com)

Matching examples and lot integration

The following examples assume this configuration:

Lot Type Name	Lot Size	Min Quantity	Max Quantity
Odd lot	1	1	-
Round lot	100	100	-
Block lot	1000	1000	-

We have included the block lot in these examples to show the general rule of lot integration – even though we will not introduce block lots in the first version of Genium INET for fixed income on the Nordic and Baltic markets.

Ranking is Price / Time and matching is "One by One".

Buy Side				Sell Side			
Lot Type	**ID/Time**	**Price**	**Qty**	**Lot Type**	**ID/Time**	**Price**	**Qty**
OL	13 / 09:16	105	55	BL	3 / 09:10	105	2000
OL	9 / 09:13	104	55	RL	5 / 09:11	105	400
BL	10 / 09:14	104	1000	BL	8 / 09:13	105	1000
BL	12 / 09:15	104	2000	RL	11 / 09:14	105	800
RL	2 / 09:10	103	200	RL	1 / 09:09	106	200
RL	4 / 09:11	103	800				
RL	6 / 09:12	102	300				

Below some examples of incoming orders, and how they would match. The examples are independent of each other.

Matching between OL and BL is prevented

RL Buy 200 @ 106	- cannot match first order on the sell side (requires 1000, i.e. one block lot) - matches against order 5 (200) @ 105
OL Buy 75 @ 106	- "teams" with order 13, matches 100 against 5 @ 105, rest (30) is stored
BL Sell 1000 @ 103	- bypasses order 13 and 9 (BL does not match OL) - matches against orders 10 @ 104
BL Buy 3000 @ 105	- matches against order 3 (2000) @ 105 - matches order 5 and 11 @ 105
RL Sell 100 @ 104	- matches against order 13 and 9 @ 104
RL Sell 1000 @ 103	- matches against order 13 and 9 (100) @ 103 (as RL determines the price) - matches against order 2 @ 103 (200). This bypasses orders 10 and 12, as these ones require more volume (1000) - matches against order 4 (700) @ 103

The below example explains how the reserve order match works when prioritized internal crossing is allowed.

Two residing reserve orders of the same member –Initial status of the **bid** side of the orderbook:

Time stamp	Order ID	Member	Displayed volume	Volume held in reserve	Price
1	1	A	100,000		100
2	2	B	500,000		100
3	3	C	10,000	120,000	100
4	4	C	20,000	200,000	100
5	5	D	50,000		100

Member C enters an ask order of 105,000@100.
The order is fully matched with member C's own residing bid orders due to internal priority. The first match (of 10,000) is with the displayed quantity of C's reserve order with the higher time priority (3), the second match (of 20,000) is with the displayed quantity of the reserve order with the lower time priority (4). Finally the rest of the quantity (75,000) is matched in one go with the reserve order with order ID 3 as its refreshed quantity has a higher time priority than the refreshed displayed quantity of order 4.

Please note that in the "second round" the refresh of the displayed quantity (i.e., the new "peak" to be matched) is the minimum of the full volume held in reserve and the quantity needed to match the incoming order fully (please see also example 4b). In short, the incoming order is matched in the following sequence:

Buying member	Selling member (order ID)	Quantity
C	C(3)	10,000
C	C(4)	20,000
C	C(3)	75,000

Since the displayed volumes of the reserve orders are fully matched and replenished, their time stamps are updated. Order 3 is refreshed twice and the second refresh happens after the only refresh of order 4. After the above matching, order 3 will, therefore, have a lower time priority than order 4.

Following the matching the status of the bid side of the orderbook is therefore as follows:

Time stamp	Order ID	Member	Displayed volume	Volume held in reserve	Price
1	1	A	100,000		100
2	2	B	500,000		100
5	5	D	50,000		100
7	4	C	20,000	180,000	100
8	3	C	10,000	35,000	100

The above matches are aggregated into two resulting trades as the two matches with reserve order C(3) are consolidated into one trade:

Buying member	Selling member (order ID)	Quantity
C	C(3)	85,000
C	C(4)	20,000

The two trades will get the same time stamp.

Appendix 3.2 Call auction (two-sided auction)

The fixed income markets on Nasdaq Nordic that make use of auto match have an opening auction in the morning of each trading day. Nasdaq Baltic does not use opening auctions.

The opening auction collects orders on both sides of the order book for a period of time and then executes all matching orders at a single price (the equilibrium price) that maximizes the executable quantity and minimizes the surplus. The last part is called uncross because it removes all crossing prices in the order book. The uncross takes place in the transition between pre-trading and (continuous) trading.

The equilibrium price (EP) algorithm has the following price selection rules:

Step 1

The prices used in the selection of EP are all existing prices between the highest and the lowest price where limit orders exist, extended with one tick up from the highest and one tick down from the lowest price. Choose the price or prices that maximize the quantity traded.

Step 2

When more than one such price exists, i.e. there are several candidates as a result from step 1; the surplus quantity shall be minimized.

Step 3

When more than one such price exists, i.e. there are several candidates as a result from step 2, the market pressure shall decide

Step 4

When more than one such price exists, i.e. there are several candidates as a result from step 3, use the price closest to the reference price.

The following reference prices might be used:

- Last price
- closing price
- reference price received from an external source or
- manually entered by the exchange

If no reference price is specified/defined in Genium INET the system will choose the average of the highest and lowest eligible EP prices rounded to the nearest tick.

It is not possible to calculate an EP when:

- No crossing orders exist.
- Only market orders exist in the order book.

Included in the Equilibrium Price Calculation are:

- Limit orders in the primary lot type.
- Market orders in the primary lot type.
- Reserve orders (using their entire specified quantity).

Excluded from the Equilibrium Price Calculation are:

- Orders of alternate lot types (e.g. odd lot orders).
- AON Orders.
- Fill or Kill Order.

The excluded orders are however not deleted but remain in the order book. Right after the uncross and just before entering into (continuous) trading the match engine will match as many of the excluded orders as possible using the equilibrium price. Eligible orders are excluded orders with prices equal to the equilibrium price or better prices.

Appendix 3.3 Issuing auction (one-sided auction)

Nasdaq Nordic and Baltic support issuing and buy-back auctions in instruments that are traded on price or on yield.

Issuing auctions are used by members and issuers to issue new debt (issuing auction) or buy back debt from the market (buy-back auction). It is also used for equity IPOs on the Baltic exchanges. The following allotment models are supported on the fixed income markets:

- FIFO, first in first out, where orders are matched given their price and time priority
- Total (proportional) pro rata allocation where orders are matched according to price and size and allocated volume on a pro rata basis

One sided auctions will be initiated by the issuer submitting an auction request or a directed auction request, stating start, stop, and uncross times for the auction. In the request the issuer also states the settlement date (if not standard settlement), the type of auction (issuing or buy-back). Issuers/initiators using the directed issuing auction request may also specify which participants shall receive the auction request. If the issuer/initiator does not specify any recipients, all the participants connected to the relevant auction market will receive the directed issuing auction request.

The issuer also decides whether the auction is to be uncrossed using the Dutch method or the American method[13]:

- The Dutch method executes all executable orders at a single price (i.e. a single price auction)
- The American method executes all executable orders at their specified price (i.e. a multi-price auction)

The following example shows the Total Pro Rata model:

Buy Side >>					
Tot	**Qty**	**Price**	**Allotment in round1**	**Qty left from round 1**	**Allotment in round 2**
30	30	100.20	5	25	1
50	20	100.20	3	17	1
65	15	100.20	2	13	[14)]
80	15	100.20	2	13	[9)]
95	15	100.20	2	13	[9)]

The total bid volume (qty) is 95 and the issuer submits an order to sell 18.

[13] This is however not stated directly in the auction request but by choosing the order book having Dutch or American allotment. The allotment method is configured on the order book by Nasdaq. Nasdaq Copenhagen has only configured order books with Dutch allotment as the American allotment method is not used today.

[14)] Last 2 allocated at random between these three orders.

The orders are then allocated volume according to their size, giving:

- the largest order is allocated 30/95*18 = 5.684 which is rounded down to 5
- the second largest order is allocated 20/95*18 = 3.789 3
- the remaining bids are allocated 15/95*18 = 2.842 which is rounded down to 2 and the total allotted volume is now 5+3+2+2+2 = 14.
- the remaining 4 lots (18-14) are allocated to one lot each to the two highest ranked orders and
  2 of the remaining 3 orders are then allocated one lot each in a random order.

Non-standard settlement date is supported and is specified by the initiator of the auction. The issuer also states if the auction is open or hidden. For an open auction market information is distributed during the order entering session and information from the uncross is also public. In a hidden auction, no market information is public; only the initiator is able to see the aggregated order book.

For an issuing auction, only the initiator may submit sell orders; all other participants may only submit buy orders and vice versa for a buy-back auction. Depending on the configuration of the order book the initiator can also enter orders on the opposite side of the order book i.e. buy orders in an issuing auction. NOTE: The initiator (issuer) can only submit one sell-order (buy-order if buy-back auction). If the initiator wants to change the price or amount issued (bought back) he/she must change the initial order or delete it and then enter a new order.

Depending on the exchanges' configuration, the auction can move into an IPMO (Issuer Position Modification) phase where only the initiator can update orders and maybe (depends on the configuration of the market) also cancel other participants' orders.

An issuing auction typically consists of the following periods:

1. Auction period: Investors' orders as well as the issuer's order are entered. All orders can be updated or canceled. Details of the auction (prices, orders, and predicted results) can be private to the auction initiator (a hidden auction) or publicly displayed (open auction). An issuer can always see all orders, optionally with identities. This period may be up to 3 months.
2. (Optional) Issuer Position Modification (IPMO) period: Issuer can enter, update or cancel his order. Depending on configuration the issuer may be allowed to cancel other participants' order(s).
3. Order book is uncrossed at a unified Equilibrium Price (Dutch method), or at the investors individual order prices (American method).

Directed issuing auction and flexible IPMO session

From June 2019, it is possible to configure Directed Issuing Auction Request and a more Flexible Uncross. Decisions about the configuration of the Issuing auction markets are done in co-operation with the market participants active in the markets in question.

Directed Issuing Auction

To enable the option to address specific market makers to participate in an auction Nasdaq introduces the possibility to specify exactly which market maker(s) that shall receive the Issuing Auction Request. The Directed Issuing Auction Request transaction gives the issuers a possibility to specify which market markers to participate in the auction. The issuer may address all market markers (participants) having access to the Auction Market by leaving the participant field empty, i.e. it will then work exactly as the (current) Issuing Auction Request.

The (current) Issuing Auction Request transaction - used by the issuers to initiate auctions - will still be active and is the standard configuration of issuing auction markets.

Minimum bid amount
It will also be possible to add information about the minimum bid amount in the Directed Issuing Auction Request. If the issuer fills in a minimum bid amount, the market makers' orders must at least have this amount. Orders with amounts less than the specified minimum bid amount are rejected.

The minimum amount field may be left empty in which case there will be no minimum amount requirement.

Flexible IPMO – Active Initiation of the Uncross (Auction)

This transaction makes the transition from the Auction session (where market makers are inserting their orders) to the Uncross (where the orders match) more flexible. The issuer can start the Uncross (Auction match) at any time during the IPMO session (where only the issuer can manage orders), i.e. when the issuer is ready to run the auction, he/she may initiate the Uncross sending an Initiate Uncross transaction.

The maximum length of the IPMO session is 10 minutes. If the issuer does not start the Uncross before the end of the IPMO session, the Uncross will run automatically at that time.

The Flexible IPMO functionality is only available for markets configured for Directed Issuing Auction Requests.

Current Issuing Auction configuration Nordic and Baltic markets

The table below shows the standard issuing auction configuration on the different markets at Nasdaq Nordic and Baltic

Exchange & Markets	FIFO	Total Pro Rata	IPMO	Price	Yield	Dutch	American	Hidden	Open
Copenhagen									
CPH Auctions		X	X	X	X	X		X	
CPH Standard Settlement Auctions[15]		X	X	X		X		X	
CPH TAP Auctions		X	X	X		X		X	
CPH Buy Back Auctions		X	X	X		X		X	
Riga									
RSE FI New Issue		X	X	X			X	X	
RSE FI New Issue Yield		X	X		X		X	X	
RSE Equity IPO	X	X	X	X		X	X	X	X
Tallinn									
TSE Equity Auctions	X	X	X	X		X	X	X	X
Vilnius									
VSE FI New Issue Yield		X	X	X	X		X	X	
VSE FI New Issue Yield Non		X	X	X	X	X		X	
VSE Equity Public Sales	X	X	X	X		X	X		X
VSE Equity Tender Offer, VSE Equity TO Competitive		X	X	X		X			X
VSE Equity IPO	X	X	X	X		X	X	X	

[15] Issuers/Auction initiators are not allowed to change the standard settlement period when initiating an auction in this market.

Appendix 3.4 Directed Request for Quote (RfQ)

Fixed Income is introducing a new Directed Request for Quote functionality. The Directed Quote Request (DQR) function makes it possible for a trader to send a private Quote Request in a specific instrument series directed to responsible market makers, to a specified list of market makers or one single market maker.
The market makers respond to a DQR by sending directed orders to the Initiator. These orders will not be public to all market participants.
The initiator then has the ability to select which market maker responses to execute against. Once that is done there is a match and the trade is executed and published according to applicable exchange rules.

- The initiator can place a Directed Quote Request (DQR) in a specific instrument to one or several traders or market makers. The lifetime of the DQR is configurable or can even be specified when sending the DQR transaction depending on configuration (the exchange sets a default value which is used unless the initiator sets another value when sending the DQR transaction).
- Initiator are able to delete an active Directed Quote Request
- Target Participant(s) shall respond explicitly within DQR Lifetime
- The response to a DQR (the Private Quote Response) shall be valid for a certain configurable period of time, i.e. until end of Total DQR lifetime (DQR Lifetime+ DQR Accept time).
- The sender of the DQR Response is allowed to cancel the order and send a new response if within the time limit.
- The Private Quote response (PQR) may be validated against Pre-Trade LIS threshold. Transaction will be rejected if below threshold.
- The initiator may accept (match) all or partial quantity for one or several of the DQR responses.
- When a PQR is matched by the initiator a trade will be published (the trade may be deferred if applicable).

When using Trading Workstation it is important to keep in mind that the functionality is based on broadcasts which means that it is necessary to always keep the specific RfQ windows open at all times during a Request for Quote. If windows are closed the broadcasts will be lost.

Appendix 3.5 Trading Price concepts

Nasdaq Copenhagen

	Market	Clean Price	Yield	Dirty Price
1	CPH Cash Bond Trading	X		
2	CPH Fixed Income Derivatives	X		
3	CPH Auctions	X	X	
4	CPH Standard Settlement Auctions	X		
5	CPH TAP Auctions	X		
6	CPH Buy Back Auctions	X		
7	CPH Electrobroker	X		
8	CPH FN Bond Market	X	X	

Nasdaq Helsinki

	Market	Clean Price	Yield	Dirty Price	Price/unit
1	HEL Retail Structured Products	X			
2	HEL Structured Products Tailor Made	X			
3	HEL Corporate Bonds	X			
4	HEL Government Bonds	X			
5	HEL Convertibles	X			
6	HEL FN Bond Market	X			
7	HEL Structured Products Units				X
8	HEL FN Structured Lev Products	X			X
9	HEL Sustainable Bonds	X			

	Market	Clean Price	Yield	Dirty Price	Price/unit
1	STO Commercial Papers		X		
2	STO Convertible Bonds	X			
3	STO Corporate Bonds		X		
4	STO Credit Certificates	X			
5	STO EIM Super Benchmarks		X		
6	STO Fixed Income Derivatives		X		
7	STO Fixing		X		
8	STO FN Bond Market Institutional	X	X		
9	STO FN Bond Market Retail	X	X		
10	STO FN Bond Market Retail CCY	X	X		
11	STO FN Sustainable Bonds	X	X		
12	STO FN Sustainable Retail Bonds	X	X		
13	STO FN Structured Lev Products	X		X	X
14	STO Government Bonds		X		
15	STO Lottery Bonds				X
16	STO Mortgage Bonds		X		
17	STO Mortgage Rates		X		
18	STO Municipalities		X		
19	STO Other Financial Instruments		X		
20	STO Retail Bonds	X	X		
21	STO Retail Corporate Bonds		X		
22	STO Structured Products	X		x	
23	STO Structured Products CCY	X		X	
24	STO Structured Products NOK	X		X	
25	STO Structured Products Units				X
26	STO Sustainable Bonds		X		

27	STO Tailor Made Products	X			
28	STO Corporate Certificates		X		
29	STO FN Structured Lev Products	X			X

Nasdaq Riga

	Market	Clean Price	Yield	Dirty Price
1	RSE FN Bond Market	X		
2	RSE Bonds Auto match	X	X	
3	RSE FI New Issue			X
4	RSE FI New Issue Yield		X	X
5	RSE Equity IPO	-	-	-

Nasdaq Tallinn

	Market	**Clean Price**	**Yield**	**Dirty Price**
1	TSE FN Bond Market	X		
2	TSE Bonds Auto match	X	X	
3	TSE Equity Auctions	-	-	-

Nasdaq Vilnius

	Market	Clean Price	Yield	Dirty Price
1	VSE FN Bond Market	X		
2	VSE Bonds Auto match	X	X	
3	VSE FI New Issue Yield		X	X
4	VSE FI New Issue Yield Non		X	X
5	VSE Equity Public Sales	-	-	-
6	VSE Equity Tender Offer	-	-	-
7	VSE Equity TO Competitive	-	-	-
8	VSE Equity IPO	-	-	-

Appendix 3.6 Linked orders

Linked orders increase the possibility for a trader to fill his order by trading different securities. An example: A trader wishes to buy/sell a 10 year bond but is indifferent with respect to which bond. He submits a linked order that stipulates trading either 100 of bond A or 100 of bond B or a combination of the two.

Note: all legs in a linked set of orders must contain the same multiple of lot sizes.

If one order is executed in full, the other(s) is cancelled. If one order is executed partially, the other(s) is decreased proportionally.

Example: Linked order traded in full

Buy instrument A, Qty 40, limit 11.50

or

Buy instrument B, Qty 40, limit 16.00

Assume lot size is 1 for both legs

Order Book A			
80	$11.40	$11.50	30
50	$11.30	$11.80	100

Order Book B			
40	$15.60	$16.00	110
20	$15.50	$17.00	100

Start matching first leg.

30 of A will be bought at 11.50 (inside the given price).

The second leg must be decreased accordingly by calculating the proportion to regard as executed:

Remaining quantity for second leg is decreased by 40*30/40 = 30, leaving the quantity at 10 (40 – 30).

Order Quantity of instrument B is then changed to 10 in the order book

The second leg will be matched at 16.00, thus executing the linked order in full, although in different securities.

Example: Linked order entered into order book

Linked order:

Buy instrument A, Qty 40, limit 11.50

or

Buy instrument B, Qty 80, limit 15.70

Assume Lot Size = 1 for first leg, and 2 for second leg

Order Book A			
80	$11.40	$11.50	30
50	$11.30	$11.80	100

Order Book B			
40	$15.60	$15.70	6
20	$15.50	$16.00	110
		$17.00	100

Start matching first leg.

30 of A will be bought at 11.50 (inside the given price).

The second leg must be decreased accordingly by calculating the proportion to regard as executed:

Remaining quantity for second leg is decreased by 80*30/40 = 60, leaving the quantity at 20 (80 – 60).

Order Quantity of instrument B is then changed to 20.

It is now possible to match 6 of B.

Remaining quantity = 14

The first leg must be decreased accordingly:

Remaining quantity for first leg is decreased by 10*6/20 = 3, leaving the quantity at 7 (10 – 3).

Order Quantity of instrument A is then changed to 7.

Order books now look like this:

Order Book A			
7	$11.50	$11.80	100
80	$11.40		
50	$11.30		

Order Book B			
14	$15.70	$16.00	110
40	$15.60	$17.00	100
20	$15.50		

For linked orders: If one of the legs cannot be stored in the order book the remainders of the other legs are also cancelled. If for example one of the legs have a Good until Session condition and the order book enters a new session state that leg will be cancelled together with the rest of the legs in the linked order.

Appendix 3.7: MAQ on non-displayed orders

MAQ Definition

The MAQ shall be defined as the actual quantity (volume) that needs to be met. There is no connection or restriction with regards to the value of the minimum size limit and what value can be set as the MAQ.

Trading Sessions and Validity

MAQ orders can participate in the auctions with the MAQ requirement temporarily waived. That is, MAQ orders can participate in both auctions and the continuous market; however, the "MAQ requirement" is only enforced during the continuous market.

Pre-Trading

Non-displayed orders with a MAQ can be entered during the pre-trading phase, prior to the opening auction, but MAQ will not be honored. Only limit Non-displayed orders can be entered during the pre-trading phase.

Continuous Trading

During continuous trading, Non-displayed orders with a MAQ can be entered as:

- Limit orders

Non-scheduled Intraday Auction

A non-scheduled intraday auction after circuit breaker or trading/matching halt, Non-displayed Orders with a MAQ will participate in the auction but the MAQ-condition will not be honored.

Closing Auction

Non-displayed orders with a MAQ will participate in the closing auction but the MAQ-condition will not be honored.

Time Validity

Non-displayed orders with MAQs can be entered with the following time validity:

- GTD (Good till Date)

- Day

- GTC (Good till Cancel)

- GTS (Good till Session)

Trades / Partial match

Aggregation rule

The concept of MAQ means "Minimum Execution Size". That is, there should be no partial execution smaller than the MAQ on the order. For example, say that we have on the book two buy orders for 100 apiece, and we then receive a sell order for 1000 with a MAQ of 150. Even though we could fill the MAQ of 150 by aggregating the shares of the two posted buy orders, we should not execute because it would result in partial executions of less than the MAQ. Another clarifying example, say that there are two buy orders each of 100 posted on the book, and someone comes in with an order to sell for 1000 with a MAQ of 100. The sell order will execute against both buy orders, generating two trades of 100 apiece.

The key here is that we do not support aggregation.

Exception from aggregation rule on IOC orders

There is an exemption for the aggregation rule for MAQs on IOCs. Currently, we do allow MAQ on IOC orders. Moreover, in this case we do allow teaming, that is, we will allow partials for less than the MAQ, as long as the total volume executed surpasses the MAQ. Doing so we allow support for FOK as simply being an IOC + AON (MAQ=Total Quantity). There is an exemption for IOCs from the ban against aggregating volumes in order to preserve legacy behavior and continued support of FOK.

Orders not cancelling after leaves fall below MAQ

In a situation when the leaves quantity/volume drops below the MAQ, the system will automatically adjust the MAQ so that the remaining quantity/volume is executed AON (all-or-none).

For example, say that book contains one buy order of 900, and we then receive a sell order for 1000 with a MAQ of 300. This results in leaves quantity of 100, with a MAQ equal to that volume (AON).

Appendix 3.8: Sold-Out Buy-Back

Sold-Out Buy-Back (SOBB) is a functionality which is optional to use and can be applied on instruments listed on;
STO Structured Products, STO Structured Products Units, STO Structured Products NOK, STO Structured Products CCY, STO Tailor Made Products, STO Sustainable Products, STO FN Structured Leveraged Products and HEL Retail Structured Products.

The lead manager, assigned by the issuer as distributor, can activate SOBB for instruments under certain circumstances, for example when the lead manager might have sold out on its inventory or do not want to sell more quantity.
Before the lead manager decides to utilize the SOBB functionality for specific instruments, the lead manager shall inform the issuer and receive the issuer's approval. The Exchange do not require the approval to be sent to the Exchange.

When a lead manager has decided to request SOBB status for specific instruments it is done by submitting a SOBB-request in Trading Workstation or through the Exchange's OMnet API. The status can be initiated at any time during the trading day with continuous matching and will flush the order book of all current active orders. Once initiated, the SOBB state will persist for the current trading day. If the lead manager requires having a SOBB status exceeding one trading day, the lead manager must reinitiate SOBB status on the following trading day. The length of the SOBB status is configurable by the Exchange.
During the SOBB status, only the Lead Manager may submit buy orders; other participants are only able to send in sell orders. During the SOBB status, any sell order with Time-In-Force other than Immediate-or-cancel (IOC) will be rejected. Any buy orders that are not sent in by the Lead Manager during the SOBB status will be rejected.

Appendix 4 Reporting

Manual trades may be entered during the following sessions:
Trading: On-hour trades
Indicative: On-hour trades

Trade reporting of manual trades is not allowed during pre-trade, terminating and post-trading sessions. During terminating trades may be cancelled.

Manual trades
A Trade in accordance with the waivers as specified in Articles 4 and 9 of Regulation (EU) No 600/2014 of the European Parliament and of the Council and further detailed in Delegated Regulation (EU) 2017/587 and (EU) 2017/583, entered into outside the Order Book and which the Member and the client, prior to execution, agree shall be done in accordance with the Nasdaq Nordic Member Rules.

Pre-trade waivers
For the Swedish and Finnish markets pre-trade waivers have been granted to be applied for illiquid and Large in Scale (LIS). The Danish market has been granted the Large in Scale (LIS) waiver.

Deferred publication for Nasdaq Copenhagen
Manual trades must be reported immediately or not later than 5 minutes from time-of-agreement.

For on-exchange trades, Nasdaq Copenhagen allows waivers from the principle of immediate publication of a reported trade if the trade meets the criteria in table 4.1.

The minimum trade sizes required to qualify for deferred publications are given in table 4.1. The relevant thresholds are the ones expressed in the same currency as the order book in the respective instruments, e.g. for bonds traded in Euro the Euro thresholds apply.

Table 4.1 Deferred publication thresholds and delays on Danish Mortgage Bonds and Other Bonds

Permitted Delay	Mortgage bonds	Corporate bonds and Other bonds
	Minimum qualifying amount (Nominal volume)	
End of trading day	Post-trade LIS / 100 million DKK or equivalent in other trading currencies	Post trade LIS / 20 million DKK or equivalent in other trading currencies

For mortgage (covered) bonds the minimum trade size is the post-trade LIS or 100 mDKK whichever is the highest threshold volume. For corporate and other bonds the minimum trade size is post-trade LIS or 20 mDKK whichever is the highest volume.

Manual trades in **government bonds and other public bonds** shall also be reported to Nasdaq Copenhagen immediately or not later than 5 minutes from time-of-agreement. Publication of trades equal to or larger than Post-trade LIS (SSTI for own account trades) may be deferred until end of T+2 days.

Deferred publication for Nasdaq Stockholm

For manual trade reports the following deferral regimes will apply:

Permitted Delay	Government and Mortgage bond	Corporate bonds and Other bonds
T+2 (incl T+1 aggr of min 5 transactions) (DATF)	N/A	Illiquid, SSTI and LIS
T+4 Weeks (incl T+1 aggr of min 5 transactions) with T+2 volume omission (VOLO)	Illiquid, SSTI and LIS	N/A

Deferred publication for Nasdaq Helsinki

Permitted Delay	Government and Mortgage bond	Corporate bonds and Other bonds
T+4 Weeks with a T+2 volume omission	Illiquid, SSTI and LIS	Illiquid, SSTI and LIS

Appendix 5 Trade statistics and price concepts

In this appendix, you find a brief description of the market information available to members and information vendors.

The information differs among the Nordic fixed income markets and therefore the description is specified per exchange.

Market information & price concepts on the Danish Fixed Income Market

Pre-trade information

Order book information will be available market-by-order (MBO) as well as market-by-level (MBL) for members whereas the information vendors will only have MBL information for the top five price levels. During opening calls, only MBL-information will be available. During continuous trading, the volume in MBL-information will be consistent with the volume shown in the MBO-information.

MBO information means information about each order in the order book and MBL means information about the aggregated volume for each of the price levels published.

Pre-trade information includes member identification on the Danish cash bond trading and the fixed income derivatives markets – note that the derivatives market has indicative quotes and not firm prices. Pre-trade information on the auction and the Electrobroker markets is anonymous.

Also note that only the issuers have access to pre-trade information in the auction markets because Danish issuers use hidden auctions.

The spread defined as the difference between the best bid and the best offer is defined by round lot orders as well as odd lot orders and AoN orders.

Post-trade information

Post trade information is available on each individual trade in the trade ticker message. All post-trade information is without identification of the parties, i.e. anonymous.

Post-trade information is available to both members and information vendors on a trade by trade basis.

Besides the trade ticker message also some trade statistics are published. Below is a description of the trade statistics (price concepts) from the Danish fixed income markets.

Genium INET can disseminate trade statistics like high/low, last paid, average price, aggregated volume on order book level. Nasdaq Copenhagen has decided not to publish such statistics on order book level but instead on instrument level, i.e. the price concepts and volumes will be aggregated for all order books belonging to the same instrument (aka underlying Security) – except for the auction order books[16]. This means that the trade message will not include information about last paid and the average price for Danish fixed income instruments. This information will instead be available in the Genium

[16] However trades in the CPH Standard Settlement Auctions market are included in the volume weighted average price

Consolidated Feed, Instrument Statistics message (on-exchange trades) and Instrument Statistics Extended message (OTC- and SI- standard trades published via Nasdaq APA).

The post-trade statistics for the Danish market is therefore supplied through Genium Consolidated Feed and not directly via Genium INET.

Last price paid

The last price paid is defined as the latest price paid at any time for published transactions executed in the trading system or reported during (continuous) trading as standard trades, which are trades executed using standard market conditions in terms of price, time of the trade and standard delivery and settlement schedule. All standard trades inclusive of OTC- and SI- standard trades published via Nasdaq APA define the last price paid.

All trades average price

The all trades average price is calculated as a volume weighted average price of published trades executed in the cash bond trading market, the standard settlement auctions market, the TAP and Buy Back auction markets or reported to the cash bond trading market as a standard on-exchange trade. The all trades average price is calculated as a volume-weighted average of all such standard transactions reported and published during the opening hours.

Also, standard trades with delayed publication are included in the all trades average price at the time of execution, i.e. before publication takes place. The all trades average price is calculated and published on a continuous basis, but without information about the volume traded. After closing of the market, the final value of the all trades average price is published inclusive of the volume traded.

Nasdaq CPH Consolidated Reference Price

The Nasdaq CPH Consolidated Reference Price is calculated in the same way as the all trades average price but inclusive of the standard OTC- and SI-trades published via Nasdaq APA[17] during opening hours.

High and low prices

High and low prices are calculated based on the trades which update the Nasdaq CPH Consolidated Reference Price and are thus the highest price and the lowest price, respectively, among the trades which have updated the Nasdaq CPH Consolidated Reference Price of the trading day.

Opening price

The opening price is defined as the first price updating the consolidated reference price.

Closing price

Closing price is defined as the "last price paid" at time of closing that updated the Nasdaq CPH Consolidated Reference Price.

[17] Trades with deferred publication reported via INET are currently not included in the real-time calculation of the consolidated reference price but will be included in the End-of-Day calculation.

Indicative closing price

If no "last price paid" exists, an indicative closing price will be calculated as the mid-price of the time weighted best bid and offer prices at close if:

For mortgage bonds, government bonds and corporate and other bonds bids and offers must comply with the following criteria:

- during the three opening hours prior to closing there must be both bid and offer prices for at least 95 pct. of that period
- the order volume must be at least one round lot for both bids and offers
- maximum spread allowed is two points
- both bids and offers must be valid at the closing of the market

For structured bonds the bids and offers must comply with the following criteria:

- during the opening hours there must be both bid and offer prices for at least 85 pct. of that period
- the order volume must be at least five round lots for both bids and offers
- maximum spread allowed is four points
- both bids and offers must be valid at the closing of the market

If an indicative closing price is calculated, that price will be considered the official closing price of that day.

Market information & price concepts on the Finnish Fixed Income Market

This part contains a list and an explanation of price concepts used on the Finnish fixed income market. The information described here is supplied through Genium Consolidated Feed or directly via Genium INET Trading. All the price concepts are defined on order book level unless otherwise stated.

Order book trading

Last price paid

The last price paid is defined as the latest price paid at any time for published transactions executed in the trading system or reported during "continuous trading" as standard trades, which are trades executed using standard market conditions in terms of price, time of the trade and standard delivery and settlement schedule. The last price paid is defined by standard trades in the cash bond trading market.

High and low prices

High and low prices are calculated based on the trades which update the last price paid and are thus the highest price and the lowest price, respectively, among the trades which have updated the last price paid during the trading day.

Opening price

The opening price is defined as the first price paid for a published cash bond trading order book trade or reported as a standard trade.

Closing price

Closing price is defined as the "last price paid" at time of closing.

Market information & price concepts on the Swedish Fixed Income Market

This part contains a list and an explanation of price concepts used on the Swedish fixed income market. The information described here is supplied through Genium Consolidated Feed or directly via Genium INET Trading. All the price concepts are defined on order book level unless otherwise stated.

Order book trading

Last price paid

The last price paid is defined as the latest price paid at any time for published transactions executed in the trading system or reported during "continuous trading" as standard trades, which are trades executed using standard market conditions in terms of price, time of the trade and standard delivery and settlement schedule. The last price paid is defined by standard trades in the cash bond trading market.

High and low prices

High and low prices are calculated based on the trades which update the last price paid and are thus the highest price and the lowest price, respectively, among the trades which have updated the last price paid during the trading day.

Opening price

The opening price is defined as the first price paid for a published cash bond trading order book trade or reported as a standard trade.

Closing price

Closing price is defined as the "last price paid" at time of closing.

Indicative Quotes

Nasdaq Stockholm disseminates indicative prices for a number of instruments. Members that are market makers in these instruments quote indicative bid and ask prices (yields) that is disseminated to the market through the Genium Consolidated Feed or directly via Genium INET Trading Workstation.

Stockholm EIM Super Benchmarks Market

Only market makers having a primary dealer contract with the Swedish National Debt Office have access to this market. It is an auto match market for Interbank trading of Swedish Government bonds. The sizes traded are larger than pre trade LIS values. Pre trade information on individual orders are not publically visible.

Market information & price concepts on the Baltic (Riga, Tallinn, Vilnius) Fixed Income Markets

Pre-trade information

Order book information including member identification is available market-by-order (MBO) as well as market-by-level (MBL) for members and vendors on the Baltic bond trading submarkets.

Pre-trade information on the fixed income issuing auctions is anonymous.
Only the issuers have access to pre-trade information in the issuing auction markets.

Post-trade information

Post trade information is available on each individual trade in the trade ticker message. Post-trade information is without identification of the parties, i.e. anonymous, only for issuing auction trades.

Post-trade information is available to both members and information vendors on a trade by trade basis.

All the price concepts are defined on order book level.

Last price paid

The last price paid is defined as the latest price paid at any time for published transactions executed in the trading system or reported during "continuous trading" as standard trades, which are trades executed using standard market conditions in terms of price, time of the trade and standard delivery and settlement schedule. The last price paid is defined by standard trades in the Baltic bond trading submarkets.

High and low prices

High and low prices are calculated based on the trades which update the last price paid and are thus the highest price and the lowest price, respectively, among the trades which have updated the last price paid during the trading day.

Opening price

The opening price is defined as the first price paid for a published Baltic bond trading order book trade or reported as a standard trade.

Closing price

Closing price is defined as the "last price paid" at time of closing.

Appendix 6 Fixing Concepts on the Swedish market

Nasdaq Nordic Exchanges collect, calculate and disseminate fixings on several instruments.

For the STIBOR and F/X Fixing, participants quote in designated order books. Below is a description of the rules for each fixing product.

STIBOR Fixing:

- Only ask quotes are considered
- Only uses the latest contribution from each participant
- If the number of participating Stibor banks is six or less, all of the reported interest rates shall be included in the calculation.
- If the number of participating Stibor banks is seven or eight, the highest and lowest interest rate for each maturity is removed before the calculation.
- If the number of Stibor banks are nine or more, the two highest and the two lowest interest rates are removed before the calculation.
- 10:25AM–10:45AM Quotation of interest rates, which during this period are not visible for anyone other than the participants reporting the interest rate.
- If less than 6 ask quotes are reported the process will be delayed 5 minutes so all banks can report their interest rates. This delay may occur at the most 10 times.
- 10:45AM–10:55AM All the quoted interest rates are made visible for the participants reporting the interest rates.
- 10:55AM–11:00AM Freeze period and no participant can make changes to their quotes.
- The calculation is performed daily at 11:00 and Stibor and each bank's reported interest rates for each maturity are published.
- The fixing is calculated as the arithmetic mean of the reported interest rates (rounded in accordance with rounding principles) with three decimal places.
- The panelbanks individual contributions are published in conjunction with the fixing.
- In conjunction with its reporting of interest rates for Stibor, the participants reports indicative interest rates for Swedish Commercial Papers for maturities of 1, 2 and 3 months.
- This data is compiled and published at 11:00 together with the Stibor fixing.
- The data on all rates reported will stored and made available on the website for publishing the Stiborfixing

F/X Fixing:

- Only bid quotes are considered
- Only uses the latest contribution from each participant
- If less than 3 participants have contributed no fixing value is calculated
- If 3 or more participants have contributed a fixing value is calculated
- If 5 or more participants have contributed the highest and lowest are removed before calculation

- The fixing is the arithmetic average of the remaining contributions
- The calculation is performed daily at 10:05

Appendix 7 Bilateral Settlement of Fixed Income Cash Securities

All trades in fixed income instruments are settled bilaterally between members. The place of settlement is registered in the trading system and disseminated as market data.