



**LUXEMBOURG**  
STOCK EXCHANGE

# LUXEMBOURG STOCK EXCHANGE MARKETS TRADING MANUAL

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## 1 TRADING CYCLE

### 1.1 CLASSIFICATION OF SECURITIES INTO TRADING GROUPS AND TRADING CATEGORIES

By default, Securities are traded on the Central Trading System continuously. However, some Securities are traded by uncrossing when they hold liquidity and/or settlement characteristics that are incompatible with continuous trading or for which no Liquidity Provider Entity is involved.

The operating hours of the Central Trading System and the times of the different phases of the Trading Day are published by Luxembourg Stock Exchange in the Appendix attached to this Trading Manual (the Appendix to the Trading Manual). If technical incidents cause the normal session timetable to be changed, the Luxembourg Stock Exchange immediately informs Members by disseminating a message through the Central Trading System giving the new trading session timetable.

The Securities are divided into trading groups based on different trading procedures. The composition of these groups, determined on the basis of factors such as the particular characteristics and liquidity of the Securities, is detailed in the Appendix to the Trading Manual. Securities within the same group are subject to the same timetable and collar parameters. The Luxembourg Stock Exchange announces the admission of a Financial Instrument to trading groups by means of a Notice.

Securities are divided into two trading categories referred to as: continuous or uncrossing. The classification of trading groups between continuous and uncrossing categories is detailed in the Appendix to the Trading Manual.

By default, all Members have access to all trading groups, except for the trading groups created under the Professional Segments. For these groups, Members have to request authorization by email to [dms@bourse.lu](mailto:dms@bourse.lu).

### 1.2 TRADING PHASES FOR SECURITIES WHICH ARE TRADED CONTINUOUSLY

For each trading group, trading phases available and the relevant trading hours are mentioned in the Appendix to the Trading Manual.

The trading hours on any Trading Day shall be announced by a Notice if any change occurs.

#### 1.2.1 Order accumulation period (Pre-opening phase)

During the order accumulation period, orders entered by Members and transmitted to the Central Trading System are automatically recorded in the Central Order Book without giving rise to trades. The Central Order Book the theoretical opening price, and the components of the potentially executable volume at that price, which are calculated each time that a new order is entered into the Central Order Book, are continuously disseminated.

#### 1.2.1 Opening uncrossing

At the opening, the Central Trading System seeks to match orders for each Security (the "opening uncrossing"). At the beginning of the price determination phase for a Security the Central Order Book is frozen momentarily (orders may not be entered into the Central Trading System, and orders already entered may not be cancelled or modified) while the matching algorithm is running.

The opening price is the last theoretical opening price calculated before matching. If a match occurs within the price collars authorised by Luxembourg Stock Exchange, an opening price is displayed and the Members, whose orders are, in part or in full, executed, are informed by a message confirming each execution that has occurred and giving all relevant trade information.

If no matching can be done at the opening, the price of the first trade occurring in the main trading session is designated as the opening price.

### **1.2.3 Main trading session**

Once the opening uncrossing is completed, trading takes place continuously until the pre-closing phase.

Once the price determination phase for each Security is completed, continuous trading in that Security begins and orders can be entered, maintained, modified and cancelled. All unexecuted orders of the opening uncrossing are forwarded to the main trading session.

Once the opening uncrossing is completed, the execution of orders during the main trading session is effected according to the execution priority principle as defined in Article 4401/1 of the Rules and Regulations. Each new order is immediately checked to see if it can be executed against orders on the other side of the Central Order Book; the limits of the orders sitting in the book determine the price.

### **1.2.4 Order accumulation period (Pre-closing phase)**

The pre-closing phase starts after the main trading session phase. Orders entered by Members and transmitted to the Central Trading System are automatically recorded in the Central Order Book without giving rise to trades.

### **1.2.5 Closing uncrossing**

The processes of the closing uncrossing are the same as described for the opening uncrossing.

The closing price for Securities that are traded continuously shall be the price defined by the closing uncrossing. If no price is issued at the closing uncrossing, the closing price shall be the last traded price during the main trading session.

In the absence of Transaction during a Trading Day, the closing price will be replaced with the last indicative price of the Trading Day, or by default, with the last known closing price. This price can still be adjusted due to a corporate event.

### **1.2.6 Trading-at-last phase**

During the trading-at-last phase, orders can be entered and matched at the closing price and only at that price. For Securities traded continuously, the trading-at-last phase will be available after the closing uncrossing.

## **1.3 TRADING PHASES FOR SECURITIES TRADED BY UNCROSSING**

For each trading group, trading phases available and the relevant trading hours are mentioned in the Appendix to the Trading Manual.

The trading hours on any Trading Day shall be announced by a Notice if any change occurs.

### **1.3.1 Order accumulation period (Call phase)**

During the Central Trading System operating hours, except during uncrossing, orders entered by Members and transmitted to the Central Trading System are automatically recorded in the Central Order Book without giving rise to trades.

### **1.3.2 Uncrossing**

At least three times a day, at times specified in the Appendix to the Trading Manual for each trading group, the Central Trading System seeks to match orders for each Security in the group.

If a match occurs within the price collars authorized by Luxembourg Stock Exchange, a price is quoted. During this matching period, orders may not be entered into the Central Trading System, and orders already entered may not be cancelled or modified. After the price determination phase is concluded, the Members whose orders have been partially or fully executed are informed by a message confirming each execution that has occurred and giving all relevant trade information.

The closing price for Securities traded by uncrossing shall be the price of the last uncrossing. In the event of no quotation at the last uncrossing, the price of the previous uncrossing shall be the closing price for the day.

In the absence of Transaction during a Trading Day, the closing price will be replaced with the last indicative price of the Trading Day, or by default, with the last known closing price. This price can still be adjusted due to a corporate event.

### **1.3.3 Trading-at-last phase**

During the trading-at-last phase, orders can be entered and matched at the closing price and only at that price. For Securities traded by uncrossing the trading-at-last phase may be available.

## **2 ORDERS**

### **2.1 ORDER TYPES**

#### **2.1.1 Pure market orders**

Pure market orders are entered in the Central Trading System with no price stipulation.

Pure market orders can be placed during the order accumulation periods and during the main trading session. They can be used for Securities traded continuously and for Securities traded by uncrossing.

A pure market order to buy or to sell a stated amount of a Security that is to be executed at the best price(s) obtainable when the order reaches the Central Order Book.

Pure market orders have priority over all other orders.

#### **2.1.2 Limit orders**

A limit order stipulates a maximum purchase price or minimum selling price.

A limit order can be placed during the order accumulation period and during the main trading session.

A limit order entered during the trading session is executed either fully or partially, as market conditions permit. Failing this, it is logged in the Central Order Book in descending buy-price order or ascending sell-price order (the price-priority principle) and joins the queue of orders having the same price (the time-priority principle).

### 2.1.3 Market-to-limit orders

Market-to-limit orders are entered in the Central Trading System with no price stipulation.

A market-to-limit order is an order to buy or to sell a stated amount of a financial instrument that is to be executed at the best price obtainable when the order reaches the Central Order Book. A market-to-limit order is converted into a limit order at the best sell price (for buy orders) or best buy price (for sell orders).

Execution of this type of orders depends on when they are sent (call phase or main session). Refer to execution parameters (paragraph 2.2.9) for more details.

### 2.1.4 Stop-orders

A stop order is an instruction to buy or sell a quantity of Securities at the prevailing market price once the Security has reached a "stop price" specified by the Client to the Member. The trigger price for a buy order must be higher than the last traded price. A sell order's trigger price must be below the last traded price. A buying stop order is triggered when the last traded price or the uncrossing price is equal or higher than the given stop limits. A selling stop order is triggered when this last price is equal or lower than the stop limit. A pure stop- market order that has been triggered will be executed at the next prices in the book like a market order.

Stop-orders can be placed during the order accumulation periods and during the main trading session. They can be used for Securities traded continuously and for Securities traded by uncrossing.

During the order accumulation periods, triggerable stop-orders are not used in calculating the theoretical opening price. They are taken into account in a second phase that aims at generating additional executions at the opening price on the basis of post-opening balances.

During the main trading session, a "stop-pure market" order that has been triggered behaves like a pure market order. A "stop limit order" becomes a limit order once triggered.

### 2.1.5 Stop limit orders

A stop limit order has the same characteristics as the stop order as described above. The difference from a pure stop order is that a stop-limit order will be executed within a price range as set out when sending the order. Once triggered, it will be executed as a limit order.

### 2.1.6 Primary pegged orders

A primary pegged order is a limit order to buy or sell a stated amount of a Security at a displayed price set to primarily track the Best Bid or Best Offer (BBO) or possibly with an offset of the Central Order Book.

Primary peg consists of tracking the price of orders in the same direction either at the BBO or with a certain level of offset to be applied on the BBO, but always remaining at best at the BBO and otherwise outside the spread if an offset is to be applied. In other words, a primary pegged order can never be aggressive. For the avoidance of doubt, a negative offset can be applied for the bid (i.e. Best Bid minus a certain value) and a positive offset can be applied for the offer (i.e. Best Offer plus a certain value).

The associated price of each primary pegged order that is updated will be assigned a new entry time with priority in accordance with the Rules and Regulations. Every update of a primary peg order will be considered as a cancelled order, and will be considered as part of the Order/ Trade ratio.

In case of empty Central Order Book the Primary peg order is automatically rejected.

A Primary peg order can have a limit price which, if reached, will cause the pegging to temporarily stop as long as the benchmark is higher for a buy order or lower for a sell order than this price and become an order limited at its limit price. The pegging of the order to the bid or ask will resume if the bid/ask, with offset effect where appropriate, becomes lower/higher than the limit price.

A Primary peg order can be placed during the main trading session.

## 2.2 ORDER VALIDITY AND EXECUTION PARAMETERS

### 2.2.1 Day Validity

An order with a day validity remains valid until the end of the trading day during which it was entered. It is withdrawn automatically at the post-session marking the end of the day. No cancellation notice is disseminated.

#### Admissibility

The day validity is accepted in all trading phases and is compliant with all order types, whatever their additional execution criterion.

### 2.2.2 Good Till Date validity (GTD)

A Good Till Date order remains valid until close of business on the validity date that is specified when the order is entered. The expiration date specified when submitting a GTD order cannot be greater than the trading date plus one year minus one day or earlier than the current trading day. When the closing date is reached, the order is automatically withdrawn at the post-session marking the end of the day. No cancellation notice is disseminated.

#### Examples

- If an order is entered on 20 January 2014, the maximum validity will be 19 January 2015;
- If an order is entered on 20 January 2014 with a validity date of 20 January 2015, the order will be automatically rejected.

#### Admissibility

The GTD validity is accepted in all trading phases and is compliant with all the order types, whatever their additional execution criterion.

### 2.2.3 Good Till Cancelled validity (GTC)

#### Definition

A Good Till Cancelled order remains active until the broker decides to cancel it or the order is fully executed. If a GTC order is not cancelled or fully executed during one year, it is automatically cancelled at the corresponding post-session and a cancellation notice is sent to inform the owner of the order's cancellation. There is no impact whether the year is a leap year or not.

#### Examples

If an order is entered on 20 January 2014, unless cancelled, the order will be valid until the end of the trading day on 20 January 2015.

Orders entered on 29 February, during a leap year: if an order is entered on 29 February 2012, unless cancelled, the order will be valid until 29 February 2013. As this date does not exist, the order will be eliminated at the post-session on 1 March 2013.

#### Admissibility

The GTC validity is accepted in all trading phases and is compliant with all order types, whatever their additional execution criterion.



## 2.2.4 Good Till Time validity (GTT)

### Definition

A Good Till Time order remains active until the expiration time specified by the broker at order entry. The expiration time applies to the current trading day. An order specified Good Till 10:00:00 am, is automatically cancelled **within one second of the specified time, at the latest at 10:00:01 am**. A cancellation notice is sent when time has passed and the order is cancelled.

### Admissibility

The GTT validity is accepted in all trading phases and is compliant with all order types, whatever their additional execution criterion.

## 2.2.5 Immediate Or Cancel validity (IOC)

An order combined with the Immediate Or Cancel validity is immediately executed for the maximum possible quantity on the opposite side (in compliance with the collars) and the remaining quantity, if any, will be automatically cancelled by the system. An IOC order that cannot be executed upon entry is rejected with an error message indicating that there are no shares available in the market.

### Admissibility

The IOC validity is accepted in Continuous Trading phase and in Trading At Last phase. It is rejected in Call phase.

### Features

Immediate Or Cancel validity is not compliant with:

- The disclosed quantity attribute (iceberg);
- Stop orders;
- Pegged orders.

### Processing in Continuous Trading Phase

An order combined with the IOC validity may be:

- Executed at once for the maximum possible quantity on the opposite side. The remaining quantity is then cancelled by the system and an execution report and information message produced containing the reason for the rejection;
- Partially executed at once and then eliminated for the remaining quantity when it hits a collar;
- Not executed at all and then rejected with an execution report and information message giving the reason for the rejection produced.

## 2.2.6 Fill Or Kill validity (FOK)

An order combined with the Fill Or Kill validity is immediately executed if the entire quantity can be filled against the Central Order Book. If conditions do not permit a complete fill, the entire order is rejected and an execution report produced informing its owner that no shares are available for a FOK order.

### Admissibility

The Fill Or Kill validity is accepted in Continuous Trading phase and in Trading At Last phase. It is rejected in Call phase.

### Features

Fill Or Kill validity is not compliant with:

- The attributes "disclosed (iceberg) and minimum quantities";
- Stop orders;
- Pegged orders.

### Processing in Continuous Trading Phase

An order combined with the Fill Or Kill validity may be:

- Executed at once for its entire quantity on the opposite side;
- Rejected because there is insufficient quantity on the opposite side to fill it. It will be rejected and an execution report produced informing the owner that no shares are available for this order;
- Rejected because the quantity available on the opposite side does not allow an execution inside the collars. It will then be rejected and an execution report produced informing the owner that no shares are available for this order.

## 2.2.7 Valid for uncrossing (VFU)

An order combined with the Valid For Uncrossing validity is processed during uncrossing only. It can be entered throughout the trading day and participate in the next scheduled uncrossing, whether that be an opening or closing class uncrossing, or any instrument uncrossing. Once the uncrossing is completed, any unfilled remaining quantity of the VFU orders is immediately cancelled.

### Admissibility

The Valid For Uncrossing validity is accepted in all the trading phases.

### Features

The Valid For Uncrossing validity is not compliant with:

- The minimum quantity attribute;
- Stop orders;
- Pegged orders;
- Cross orders.

### Processing in Call Phase

A VFU order entered in Call phase is disseminated at once as it participates in the Indicative Matching Price determination. At the uncrossing, the VFU order can be:

- Totally executed at the Indicative Matching Price;
- Partially executed at the Indicative Matching Price and, at the end of the uncrossing, the remaining quantity is automatically cancelled with a cancellation notice;
- Not executable at all at the Indicative Matching Price: the order is automatically cancelled at the end of the uncrossing, with a cancellation notice;
- Not executable at all because there is no Indicative Matching Price: the order is automatically cancelled as soon as the instrument opens;

- Kept in the order book following a trading halt caused by an Indicative Matching Price outside the collars. It will then participate in the next instrument uncrossing.

If there are VFU orders remaining in the order book for any reason at the end of the trading day, all of them will be automatically cancelled in post-session.

#### Processing in the Continuous Trading Phase

A VFU order entered in Continuous Trading phase will be stored in the order book but kept hidden. It is displayed, according to its timestamp of order entry, as soon as the instrument or the class returns in Call phase and follows the rules described above.

### 2.2.8 Valid For Closing Uncrossing (VFCU)

An order combined with the Valid For Closing Uncrossing validity is processed during the closing uncrossing only. It can be entered throughout the trading day but takes part in the closing uncrossing only. Once the closing uncrossing is completed, any unfilled remaining quantity of the VFCU orders is immediately cancelled.

#### Admissibility

The Valid For Closing Uncrossing validity is accepted in all the trading phases.

#### Features

Valid For Closing Uncrossing is not compliant with:

- The minimum quantity attribute;
- Stop orders;
- Peg orders;
- Cross orders.

#### Processing in Call Phase

A VFCU order entered in Core Call phase (first Call phase of the trading day) is stored in the order book but is kept hidden. As long as the class is in a different state to the closing Call phase, VFC orders are hidden. They will be displayed as soon as the class enters the Closing Call phase and then be able to take part in the Indicative Matching Price determination and in the closing uncrossing. In the same way, a VFC order entered in Closing Call phase is immediately disseminated and takes part in the Indicative Matching Price determination and in the closing uncrossing.

At the closing uncrossing, the VFCU order can be:

- Totally executed at the Indicative Matching Price;
- Partially executed at the Indicative Matching Price and, at the end of the uncrossing, the remaining quantity is automatically cancelled with a cancellation notice;
- Not executable at all at the Indicative Matching Price: the order is automatically cancelled at the end of the uncrossing, with a cancellation notice;
- Not executable at all because there is no Indicative Matching Price: the order is automatically cancelled as soon as the instrument opens;
- Kept in the order book following a trading halt caused by an Indicative Matching Price outside the collars. It will then participate in the next instrument uncrossing;
- If there are VFCU orders remaining in the order book for any reason at the end of the trading day, all of them will be automatically cancelled in post-session.

### Processing in the Continuous Trading Phase

A VFCU order entered in Continuous Trading phase will be stored in the order book but kept hidden. It is displayed as soon as the instrument or the class returns to the Closing Call phase and follows the rules described above.

## 2.2.9 Execution parameters

### 2.2.9.1 Minimum-quantity order (in continuous trading only)

The minimum-size requirement is valid only at the time the order is entered. If the specified minimum quantity is filled immediately, the unexecuted part of the order remains on the market. If the minimum quantity is not immediately executed, the entire order is cancelled.

### 2.2.9.2 Execution parameters for Pure Market orders

During uncrossings market orders have priority over orders limited at the uncrossing price.

#### Pure Market orders

If a pure market order cannot be matched, it also remains in the Central Order Book until executed or cancelled either by the Member or on reaching the specified expiry date. An unexecuted part of a pure market order remains a pure market order.

For Securities traded by uncrossing: if pure market orders within the Central Order Book are not fully or partially executed during an uncrossing the remaining part will participate in the next uncrossing.

#### Market to limit:

##### a. During uncrossing:

During the order accumulation periods, Market to limit orders are entered into the Central Trading System with the indication "at opening price" (the existence of a matching order with a limit price is not required). The system will automatically attribute a limit price equal to the theoretical opening price at the time of entry. This limit price will constantly be revised to keep it equal to the theoretical price until trading commences. The unexecuted part will remain in the Central Order Book at the uncrossing price. For Securities which are traded by uncrossing, a Market-to-limit order not executed at all during an uncrossing remains in the Central Order Book for the next uncrossing as a Market-to-limit order.

##### b. During main trading session

During the main trading session, a market-to-limit order is converted into a limit order at the best bid price (for sell orders) or best ask price (for buy orders). Consequently, the existence of a matching order is essential. Failing this, the order is rejected.

## 2.3 TRANSPARENCY PARAMETERS

### 2.3.1 Iceberg orders

The disclosed quantity of an iceberg order means the quantity of Securities the Member wishes to be apparent to the market. It is the maximum quantity of Securities that will be visible to the market at any given time. The disclosed quantity can be either set by the Member or be randomized by the Central Trading System.

An iceberg order can be placed during order accumulation periods and during the main trading session.

On entry the Member must specify a total volume and a peak volume (the disclosed quantity) which must be greater than a minimum size (ten times the trading unit). The Member also has the choice to have a randomized peak volume, meaning the system will automatically generate a new peak volume.

The total value of the iceberg order must be larger than EUR 10.000, otherwise the order will be automatically converted into a transparent limit order.

The initial peak is introduced into the central order book with the original timestamp of the iceberg order according to price/time priority. When an iceberg order is executed for its disclosed quantity (the "peak"), that quantity is renewed automatically and the order is positioned behind orders at the same limit. For the execution of one entering opposite-side order, the displayed quantities of all orders at the same price first are executed on time priority and secondly the remaining iceberg orders are executed for their total amount according time priority. However, where the Member is participating in the Internal Matching Facility and the order is in respect of an Eligible Financial Instrument, the quantity will not lose its time priority after execution of the disclosed quantity provided that the iceberg order is executed pursuant to the Internal Matching Facility. The modification of the total quantity does not affect the order priority.

An iceberg order cannot be stipulated in an "at opening price" order (i.e. a market-to-limit order entered during order accumulation periods).

## 2.4 ORDER TYPES AND EXECUTION CONDITIONS AVAILABLE

	Day	Good Till Date	Good Till Cancel	Good Till Time	IOC*	Fill or Kill (*)(**)	Valid for Uncrossing (**)	Valid for Closing Uncrossing (**)
<b>Order types</b>								
Pure Market order(*)(**)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Limit order	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market to limit order (*)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stop limit order (*)(**)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stop orders (*)(**)	Yes	Yes	Yes	Yes	No	No	No	No
Pegged order (*)(**)	Yes	Yes	Yes	Yes	No	No	No	No

\* Not eligible for iceberg execution

\*\* Not eligible for minimum quantity execution

## 2.5 PRICE OF THE ORDER

If a price is needed, it is expressed in currency or in percentages (generally for bonds).

## 2.6 ORDER SIZE

The volume of the order is a number of Securities or an amount expressed in currency. All volumes are tradable but for some specific instruments, the Luxembourg Stock Exchange can decide to implement a trading lot size.

## 2.7 ORDER MODIFICATION OR CANCELLATION

During the order accumulation periods and the main trading session, the Member who entered it may change any order that has not been cancelled or executed in full.

An order modification leads to a new time priority if either the limit is changed or the modification has a negative impact on the priority of the execution of other orders in the Central Order Book (e.g. the increase of the volume of an existing order). The current time priority is maintained if the volume of an existing order is decreased.

### Corporate events

A corporate event is any action by an Issuer, or by another party related to the Issuer, affecting an investor's entitlement to investments or benefits related to those investments.

The consequences of a corporate event may be the cancellation of the orders remaining in the Central Order Book and/or the adjustment of the reference price. The reference price shall be either:

- the last traded price (generally the previous day's closing price);
- or the last indicative price.

## 2.8 CLEARING INFORMATION

Pre-clearing information may be specified on an optional basis with the order:

- Allocated Member code;
- Account number;
- Posting indicator (opening or closing the position);
- Clearing operation mode (automatic give up or systematic posting);
- And other information like the Member's internal order number or Client identification.

## 2.9 ORDER PROCESSING

### 2.9.1 Scope

The provisions of this section apply to all orders, regardless of whether they are Client orders or principal orders, for Securities admitted to trading on the Luxembourg Stock Exchange markets including electronic orders, i.e. orders routed or transmitted electronically without human intervention by Members, as well as orders processed manually.

If the Member does not hold the Client account, the clearing agreement between the Member and the Clearing Member must set forth the responsibilities of each party in implementing the filtering process.

### 2.9.2 Order identification

All orders entered into the Central Trading System must specify the information set forth under Rule 4201/1 of the Rules and Regulations, as the case may be.

For electronic orders the audit-trail must include the electronic address of the order deliverer or those elements that authenticate the order in case of an Internet transmission.

### 2.9.3 Filtering orders

Order filtering control – which can be realised in co-ordination with a clearing member or a custodian if this is necessary - must include at least one warning/confirmation function based on the level of risk accepted by Member. This function must make it possible to identify:

Orders that have not been adequately margined. Depending on the type of settlement concerned, this will mean that:

- The initial margin required has not been provided, or
- The Client's account has insufficient cash reserves or a lack of the Securities that are the object of the Transaction.

Orders that exceed a maximum level of accumulated commitments (unsettled positions), for a given account or Client, set according to the credit standing of the said Client or a risk ceiling established internally by the Member.

The process of the risk control must be applied separately for every Security. In this respect, it must be possible for the Member to ensure that the consolidation of several individual orders for the same Security, transmitted on behalf of the same Client, does not result in a breach of the relevant risk threshold.

The Member is responsible for the validation of prices and volumes of each order. Certain types of orders (see below) must be systematically validated or, failing this, rejected before being presented to the market:

- Orders that are clearly disproportionate in comparison to the liquidity of the Security, evaluated on the basis of the market's normal absorption capacity for the Security;
- Orders with a price which differs significantly from prevailing market prices or which is obviously likely to trigger an excessive price swing or a collar).

### 2.9.4 Order validation

When an order is entered into the Central Trading System, it must comply with the following thresholds. Failing this, the order will be rejected with no confirmation possibility. The order validation process will be based on the parameters as shown below for bonds and equities.

#### a. Common control

For all types of financial instruments: if the order quantity\* is greater than or equal to 50 million, the order will be rejected.

\*i.e. 50 million in nominal amount for bonds traded FMT. 50 million in number of securities for other instruments

## b. Instrument-specific control

### Bonds

For instruments treated as bonds, if the order quantity is greater than or equal to the "Quantity Threshold" set for the trading group the instrument belongs to, the order will be rejected.

### Equities or equity-like

The value of orders is expressed in the following format:

Quantity of securities that is to be traded × price for which a single unit is to be bought or sold. For instruments not treated as bonds, if the order value is greater than or equal to the "Amount Threshold" set for the trading group the instrument belongs to, the order will be rejected.

"Quantity Threshold" and "Amount Threshold" parameters are published in the Appendix to the Trading Manual.

## 3 TRADING

All orders entered into the Central Trading System are acknowledged and assigned a sequential order number per Security. For each trade, Members receive an execution message showing the quantity traded and the execution price. In the event of partial execution, the unexecuted part of the order is shown in the execution message. In the event of cancellation of trades or orders by the Luxembourg Stock Exchange, the Member will receive a notice.

### Execution priority principle

Orders in the Central Order Book shall be executed according to the execution priority principle as defined in Article 4401/1 of the Rules.

### 3.1 DETERMINATION OF PRICES AND ALLOCATION OF SECURITIES DURING AN UNCROSSING

The uncrossing price is the price with the maximum executable volume. Additionally the reference price is taken into account when establishing the uncrossing price.

#### 3.1.1 Maximum Execution Principle

The uncrossing price is determined on the basis of the Central Order Book position at the end of the pre-opening phase. The uncrossing price is the price with the highest executable volume for each limit.

#### 3.1.2 Minimum Surplus

Should the aforementioned process result in more than one limit with the highest executable order volume, the lowest surplus for each limit is taken into account as a further criterion. The uncrossing price is the price with the highest executable volume and the lowest surplus.

#### 3.1.3 Reference Price

Should the aforementioned process result in more than one limit with the highest executable order volume, the reference price is included as additional criterion. The uncrossing price will be the one closest to the reference price.



The reference price - as a general rule - is the last traded price in the Central Order Book. If this price is not available (e.g. after a long period of suspension, a merger/ reconstruction of the Issuer or new issue trading for the first time), a reference price will be determined by the Luxembourg Stock Exchange. The Luxembourg Stock Exchange can also set the reference price in function of other relevant information like a takeover bid price, the price on another market, the price of a related Security etc.

Market Orders only: If only market orders are executable against one another, they are matched at the reference price.

No Price: An uncrossing price cannot be determined if orders are not executable against one another. In this case, the best bid/ask limit (if available) is displayed.

At set times, as specified for each trading group in the Appendix to the Trading Manual, the Central Trading System automatically matches the orders present.

Market orders, buy orders with a limit above the traded price and sell orders with a limit below the traded price are filled in their entirety, including the hidden-size quantity if any (price priority).

In case of an imbalance between supply and demand, orders with a limit equal to the opening price are filled on a first-come/first-served basis (time priority).

### 3.2 DETERMINATION OF PRICES OF SECURITIES DURING THE MAIN TRADING SESSION

Each new incoming order (except a stop order) is immediately checked for execution against orders on the other side of the Central Order Book.

Orders can be executed in full, in one or more steps, partially or not at all. Thus, each new incoming order may generate none, one or several trades. Orders in the Central Order Book will be executed according to the execution priority principle.

Orders or parts thereof that have not been executed are sorted in the Central Order Book according to price/time priority.

Price determination in continuous trading is carried out according to the following rules in addition to the execution priority principle:

#### Rule 1:

If an incoming market order or limit order meets an order book in which there are only limit orders on the other side, the highest bid limit or lowest ask limit, respectively, in the Central Order Book determines the price for the executable volume of the market order. The next limit order determines the price of any remaining volume, and so on until no volume remains.

#### Rule 2:

If an incoming market order meets an order book in which there are only market orders on the other side, this market order is executed at the reference price (as far as possible with regard to the quantity).

#### Rule 3:

- If an incoming market order meets an order book in which there are market orders and limit orders on the other side, or
- if an incoming limit order meets an order book in which there are only market orders on the other side, or
- if an incoming limit order meets an order book in which there are market orders and limit orders on the other side,

then the incoming order is executed against the market orders in accordance with the execution priority principle with respect to non-executed bid market orders at the reference price or higher (at the highest limit of the executable orders) or at the reference price or lower (at the lowest limit of the executable orders) with respect to non-executed ask market orders.

Pure Market orders that have not been executed in the Central Order Book must be executed immediately with the next Transaction (if possible). In this case, the following principles must be taken into consideration for continuous trading:

**Principle 1:**

Pure Market orders are given the reference price as a “virtual” price. On this basis, the execution is carried out at the reference price provided that this does not violate the execution priority principle.

**Principle 2:**

If orders cannot be executed at the reference price, they are executed in accordance with the price/time priority by means of price determination above or below the reference price (non-executed bid market orders or ask market orders). A limit within the Central Order Book or a limit of an incoming order determines the price.

### **3.3 TRANSACTIONS CANCELLATIONS**

As a rule, Luxembourg Stock Exchange does not cancel Transactions, except in the exceptional circumstances, as defined in Rule 4403/3 of the Rules and Regulations.

#### **3.3.1 Notification to Members**

The Luxembourg Stock Exchange disseminates text messages informing Members of cancellations. All cancelled trades are notified to the Members with a special mark.

### **3.4 SECURITY STATUS**

#### **3.4.1 Suspended status**

In case of a trading halt in accordance with Rule 4403/2 of the Rules and Regulations, resumption of trading is preceded by publication of a Notice by the Luxembourg Stock Exchange if the suspension extends beyond the Trading Day.

During the period of suspension, in general, orders entered by Members and transmitted to the Central Trading System are recorded in the Central Order Book but do not give rise to trades. In certain circumstances order entry may be prohibited.

#### **3.4.2 Reserved status**

A Security is said to be “reserved”:

When normal trading pursuant to section 3:

- has led to the breach of a reservation thresholds; and, as a consequence of this breach,
- an order accumulation period has been triggered.

After several collars triggering, Luxembourg Stock Exchange stop the trading pursuant Rule 1604 of the Rules.

More details are available in section 4.

### 3.4.3 Entry-prohibited status

The Luxembourg Stock Exchange may temporarily prohibit the entry of orders concerning a given Security in two cases: if the Security is suspended or if the trading parameters are to be modified.

### 3.4.4 Information concerning the status of Securities

When changes occur in the status of a Security (e.g. suspension, reservation), an information message is disseminated via the Central Trading System.

## 4. TRADING: REFERENCE PRICE, COLLARS AND RESERVATIONS

As a rule, prices move freely according to market supply and demand.

However, the Luxembourg Stock Exchange will temporarily reserve trading in a Security or reject an order if the buy or sell orders recorded in the Central Trading System would inevitably result in a price beyond a certain threshold referred to as either a collar.

### 4.1 REFERENCE PRICE

#### 4.1.1 The reference price and price range

The price range is defined around the reference price. The price of a Security can develop within the price range around the reference price. The price range defines the maximum deviation (symmetrically positive and negative) from the reference price.

All price ranges, which are defined per trading group, can be found in the Appendix to the Trading Manual. Price ranges may differ between the uncrossing and the continuous phases, as set-out in the Appendix to the Trading Manual.

The Luxembourg Stock Exchange applies a specific policy for low-priced shares ("penny stocks") defined for this purpose as Securities whose market price is lower than the values set out in the Appendix to the Trading Manual. To take account of their particular situation, dynamic ranges are established in the Appendix to the Trading Manual.

The reference price can follow two methods, depending on the Security type and its prevailing price formation mode:

- The reference price is determined directly from the prices generated by the Central Order Book; or
- The reference price may result from any external reference price source, the object of which is to give an indication of the theoretical value of the Security.

#### 4.1.2 Determination of the reference price

The reference price is primarily generated by the Central Order Book.

#### Determination of the reference price during the opening uncrossing and continuous trading phase

- Before markets open: The last traded price (generally the previous day's closing price) adjusted if necessary for events such as corporate actions; or
- The last indicative price disseminated, or
- Any other price set by the Luxembourg Stock Exchange

At the opening uncrossing:

- The opening price becomes the new reference price; or
- If the Security opens without trades (no matching orders), the reference price remains unchanged. The first price traded or the first indicative will become the new reference price. In the event where the first execution involves several trades, the reference price will be defined by the price of the last trade of this first execution.
- If the Security is automatically reserved (no trades occur because potential trades were outside the threshold collars the Luxembourg Stock Exchange will modify the reference price and the uncrossing process is resumed until it is possible to quote an opening price

#### During the continuous trading phase

- The dynamic reference price is re-adjusted during continuous trading after an incoming order has been matched (as far as possible) against orders in the Central Order Book. When an incoming order is matched by more than one order on the Central Order Book, the dynamic reference price is only updated with the last trade generated in this way.
- The dynamic reference price could also be adjusted during the continuous trading by an indicative price.

## 4.2 COLLARS AND RESERVATIONS

### 4.2.1 During uncrossings

For every type of uncrossing, the Luxembourg Stock Exchange shall initiate a reservation period if the theoretical opening price would breach the collars. The volatility interruption is automatic during an uncrossing.

For Securities traded by uncrossing:

If outstanding buy and sell orders are likely to result in trades that would breach the collars, the Luxembourg Stock Exchange will initiate a reservation period on the Financial Instruments until the next uncrossing. Members may enter orders for a reserved Financial Instrument. Such orders become eligible for execution at the next uncrossing.

The Luxembourg Stock Exchange may in certain market conditions modify the length of the reservation period and may accept fluctuation ranges broader than those stipulated in the Appendix to the Trading Manual.

### 4.2.2 During continuous trading

An aggressing order can match available orders in the order book and can get partially executed before causing a collar breach. At the moment of the collar breach the system automatically reserves the security and in the Central Order Book, for the partially executed aggressing order creating the collar breach, the quantity of the order is changed and only the unexecuted quantity will remain.

If a partially executed order matches another that causes a collar breach, the system automatically reserves the security and in the Central Order Book, for the order creating the collar breach, the quantity of the order is changed and only the unexecuted quantity will remain.

This implies that all-or-none orders will not trigger a reservation if it is bound to breach a collar: The all-or-none order in question will remain in the Central Order Book and will only be executed in full when it won't cause a collar breach.

When a security reserves due to a collar breach the Luxembourg Stock Exchange disseminates this information to Members through market data. The time at which the trading will resume and the new price range if modified will equally be communicated to the markets by the Luxembourg Stock Exchange through market data.

During the reservation period, members can enter, modify or cancel orders without matching. The re-opening of the security is done by uncrossing.

The Luxembourg Stock exchange may in certain market conditions modify the length of the reservation period and may accept fluctuation ranges broader than those stipulated in the Appendix to the Trading Manual.

### 4.3 INDICATIVE PRICE

The Luxembourg Stock Exchange can decide to assign an indicative price to a Security during and/or at the end of the session to reflect the trend on the market. For a Security to be eligible for the assignment of an indicative price, the following condition must be met:

- the Security is authorised for entry and is either authorised for trading or on upside/ downside reserved status.

The Luxembourg Stock Exchange may decide to provide a price indication on the basis of a benchmark curve as described below.

· A benchmark curve is made of traded prices or the arithmetic average (or in some cases the arithmetic average weighted of the highest volume) of the traded prices provided by investment firms and other market operators.

The Luxembourg Stock Exchange can also set other indicative price based on other available information.

### 4.4 VALUATION PRICE

#### 4.4.1 Principle

Twice a day at the end of opening and closing uncrossing phase, or at the end of the opening uncrossing phase, the Luxembourg Stock Exchange could carry out a valuation process when all four of the following conditions are met:

- 1) There is no trade during the uncrossing phase;
- 2) At least one order provided by any Liquidity Provider Entity is present on the buy side of the Central Order Book;
- 3) At least one order provided by any Liquidity Provider Entity is present on the sell side of the Central Order Book; and
- 4) The valuation price is within the collars.

The valuation price is generated by sending a valuation instruction for one trading lot. No Member shall be involved as counterparty.

The valuation price is equal to the mid-point of the best bid and offer limits of the Central Order Book.

#### 4.4.2 Legal regime

Like any last traded price arising from Transactions carried out in the Central Order Book, the valuation price is used by the Luxembourg Stock Exchange as a reference price for setting the trading thresholds on the next Trading Day

#### **4.5 SPECIAL PROVISIONS FOR FIRST TRADING DAY OF A NEW SECURITY**

During the first day of trading of a new Security, the Luxembourg Stock Exchange shall apply the following provision:

If trading conditions warrant, and provided the market is duly informed in advance, the Luxembourg Stock Exchange may modify the length of the reservation period and may accept broader fluctuation ranges if the protection of the fair and orderly market and the position of the investors on the market requires to do so.

### **5 SETTLEMENT OF TRANSACTIONS**

#### **5.1 PROVISIONS RELATING TO ISSUERS REGARDING SETTLEMENT ARRANGEMENTS**

The delivery and settlement instructions of executed trades shall be carried out through a Settlement System, in accordance with the arrangements foreseen in the Rules and Regulations at the occasion of the decision of the admission to trading of the respective securities.

Any changes that the Securities Issuer intends to make on the use of one or several different Settlement Systems compared to the ones officially designated at the occasion of the admission to trading decision needs a prior authorisation by the Luxembourg Stock Exchange.

#### **5.2 SETTLEMENT OF TRADES INELIGIBLE FOR PROCESSING BY A CENTRAL COUNTERPARTY IN A SETTLEMENT SYSTEM**

After the partial or total completion of a trade on a Securities Market of the Luxembourg Stock Exchange, the Members involved shall confirm the data. The confirmation shall take place at the latest by the end of the Trading Day in question.

The delivery of the sold Securities shall be made against payment of the bid price. For fixed-income Securities, accrued interest shall be credited to the seller Member, excepting in the case of Securities traded under different terms allowed by the Luxembourg Stock Exchange.

Settlement instructions for trades shall comply with the regulations applicable to the Settlement System:

- In the case where the buyer Member and the seller Member are members of the same Settlement System and they bilaterally settle a trade through said Settlement System, the regulations of the Settlement System shall apply;
- In the case where the buyer Member and the seller Member are members of two separate Settlement Systems and they bilaterally settle a trade via an inter-system link organised by these two Settlement Systems, the regulations governing the inter-system link shall apply to this settlement.

The buyer Member and the seller Member shall meet the requirements related to the settlement process and the date of settlement provided for in Rule 5301 and onwards of the Rules and Regulations.

## 6 DISSEMINATION OF MARKET DATA

Market data are disseminated throughout the Central Trading System.

### 6.1 MARKET BY ORDERS

The market by orders shows all buy orders (listed from highest to lowest) and sell orders (listed low to high). For each order, the Central Trading System reports the disclosed quantity and the displayed price entered. During the order accumulation periods, the theoretical price is disseminated as soon as it can be calculated.

### 6.2 MARKET BY LIMITS

The market by limit's information is disseminated through the feed for the full depth of the order book. For each limit, the system reports the number of orders and aggregated volume displayed in the Central Order Book at that price. During the order accumulation periods, the theoretical price is disseminated as soon as it can be calculated. For buy orders with prices higher than the theoretical price and for sell order with prices lower than the theoretical price, the price limit displayed is the theoretical price.

### 6.3 TRADES

For each trade, the following information is disseminated immediately to Members:

- quantity;
- price;
- time of the Trade;
- Trade identification number.

### 6.4 TRADING DAY PRICE SUMMARY

In addition, the Luxembourg Stock Exchange specifically disseminates:

- An opening price, if any. In continuous trading mode, the opening price is the opening uncrossing price or, if no match was possible during such uncrossing, the first trade of the continuous session;
- A closing price. The closing price is the last known price. It may still be adjusted further to events that occurred in the meantime, notably due to a corporate event.

Luxembourg Stock Exchange

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