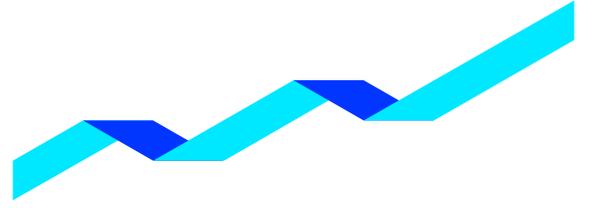


**Deutsche  
Börse**



**Xetra<sup>®</sup>**

**Market Model Release 3 Stock Trading**

---

## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>4</b>
<b>2</b>	<b>Fundamental Principles of the Market Model</b>	<b>5</b>
<b>3</b>	<b>Products and Segmentation</b>	<b>7</b>
<b>4</b>	<b>Market Participants</b>	<b>8</b>
<b>5</b>	<b>Provision of additional Liquidity through Betreuer</b>	<b>9</b>
<b>5.1</b>	<b>Betreuer Tasks and Duties</b>	<b>9</b>
<b>5.2</b>	<b>Assessment of Performance and Privileges</b>	<b>10</b>
<b>6</b>	<b>Order Types</b>	<b>11</b>
<b>6.1</b>	<b>Basic Types</b>	<b>11</b>
<b>6.2</b>	<b>Execution Conditions for Continuous Trading</b>	<b>11</b>
<b>6.3</b>	<b>Validity Constraints</b>	<b>12</b>
<b>6.4</b>	<b>Trading Restrictions</b>	<b>12</b>
<b>6.5</b>	<b>Stop Orders</b>	<b>12</b>
<b>6.6</b>	<b>Handling of Orders in Case of Events affecting Prices</b>	<b>13</b>
<b>7</b>	<b>Trading Phases</b>	<b>14</b>
<b>7.1</b>	<b>Pre-trading Phase</b>	<b>15</b>
<b>7.2</b>	<b>Main trading Phase</b>	<b>15</b>
<b>7.3</b>	<b>Post-trading Phase</b>	<b>15</b>
<b>8</b>	<b>Trading Forms</b>	<b>16</b>
<b>8.1</b>	<b>Auction</b>	<b>16</b>
<b>8.2</b>	<b>Continuous Trading</b>	<b>16</b>
<b>8.3</b>	<b>OTC Trade Entry</b>	<b>16</b>
<b>9</b>	<b>Trading Models</b>	<b>17</b>
<b>9.1</b>	<b>Continuous Trading in Connection with Auctions</b>	<b>17</b>
9.1.1	Opening Auction	18
9.1.2	Continuous Trading	19
9.1.3	Intraday Auctions	20
9.1.4	Closing Auction	22
<b>9.2</b>	<b>Several Auctions or single Auction</b>	<b>22</b>
<b>10</b>	<b>Safeguards in Auctions and Continuous Trading</b>	<b>23</b>
<b>10.1</b>	<b>Volatility Interruption during Auctions</b>	<b>24</b>
<b>10.2</b>	<b>Volatility Interruption during Continuous Trading</b>	<b>25</b>
<b>10.3</b>	<b>Market Order Interruption in Auction</b>	<b>25</b>
<b>11</b>	<b>Illustration of Price Determination Processes</b>	<b>27</b>
<b>11.1</b>	<b>Auctions</b>	<b>27</b>
11.1.1	Basic Matching Rules	27

---

11.1.2 Matching Examples	29
<b>11.2 Continuous Trading</b>	<b>33</b>
11.2.1 Basic Matching Rules	33
11.2.2 Matching Examples	36

---

1

**Introduction**

The electronic trading system Xetra® is developed and implemented on a step-by-step basis (in several releases) in order to derive for all members an early benefit from the operation of Xetra®. After the Xetra® Front End was made available in Release 1 by Deutsche Börse AG on June 10, 1997, the Xetra® Back End was introduced in Release 2 on November 28, 1997. The market model for equity wholesale trading was also implemented on this occasion. Members have been provided with an extended front end functionality with Release 2.1 on March 30, 1998. With the introduction of Xetra® Release 3 on October 12, 1998 the market model for exchange trading will be completely implemented. For on-exchange stock trading this implies the following new features and functional enhancements:

- increased number of tradable instruments including adjustments of access and controlling functionalities,
- support of all order sizes and thereby introduction of retail trading,
- support of retail trading by way of connecting order routing systems,
- provision of additional liquidity through Betreuer,
- introduction of intraday auctions for instruments traded continuously,
- extension of auctions by order book balancing phase,
- increased execution probability for market orders due to market order interruption,
- support of the Euro within multi currency facility,
- introduction of stop orders.

Furthermore, it will be possible with Release 3 to enter OTC trades in Xetra® and thereby to make use of the advantages of the integrated settlement process.

---

2

## **Fundamental Principles of the Market Model**

The exchange market model defines the mechanism of matching orders to trades in the exchange trading system. It describes price determination, prioritization of exchange orders as well as the type and scope of information made available to market participants during trading session. The market model serves as a basis for legal requirements in the "Stock Exchange Rules" (Börsenordnung) and the "Terms and Conditions for Transactions at the Frankfurter Wertpapierbörse" which serve to regulate electronic trading at the Frankfurter Wertpapierbörse. The remarks on electronic trading within the Rules and Regulations contain further conditions, which are not reproduced here but which still have to be taken into account during trading.

The market model represents the current status of discussion in the respective available version. The model is implemented in its final and binding version by the amendments to the regulations which will be made on the implementation of Xetra® Release 3.

The exchange market model for stock trading Xetra® Release 3 is order driven. Market and limit orders are available for all trading participants. In addition, certain market participants can operate by entering quotes.

The following fundamental principles for trading in Release 3 were determined during the market model discussion:

1. An instrument can be traded continuously or only in auctions.
  2. Continuous trading starts with an opening auction, can be interrupted by one or several intraday auction(s) and ends with a closing auction.
  3. Orders are executed according to price/time priority.
  4. Trading is anonymous, i.e. market participants cannot distinguish on the trading screen which market participant entered the order.
  5. All order sizes can be traded in Xetra i.e. round lots as well as odd lots are supported. One round lot corresponds to the minimum lot size or a multiple thereof. Odd lot orders consist of an odd lot part (smaller than the instrument specific round lot size) and possibly of further round lot parts.
  6. There is never more than one on-exchange price per security at a time.
  7. Market orders are supported during continuous trading and in auctions. Market orders are visible for all participants in the open order book during continuous trading.
  8. Stop orders are supported.
  9. During the auction's call phase, the order book remains partially closed. The indicative auction price or the best bid and /or ask limit is displayed.
-

10. Basically, the last determined price of a security in an auction or during continuous trading serves as reference price.
  11. The following aspects must be taken into consideration in order to ensure price continuity:
    - Trading will be interrupted if the potential price lies outside a pre-defined price range around the reference price.
    - Market orders are executed at the reference price if there are only market orders executable in the order book.
    - Price determination is geared towards the reference price if non-executed market orders are in the order book in continuous trading which are matched against incoming limit orders.
  12. The execution probability of market orders in the auction is increased by the introduction of market order interruptions.
  13. The order is valid for a maximum of one year from the date of entry.
  14. Trade confirmations are dispatched immediately after the respective trade including information on the counterparty.
  15. Trading times for the main trading session are between 08:25 and ca. 17:00 CET .
  16. The accounting cut-off is carried out daily subsequent to the post-trading phase.
-

3

**Products and Segmentation**

With the introduction of Xetra® Release 3, the number of tradable instruments in Xetra® is increased. It is technically possible to trade all stocks listed at Frankfurt Stock Exchange (approx. 1600 stocks). The document on hand exclusively describes electronic stock trading. A documentation concerning warrant trading will be made available separately.

In order to make possible an efficient sequence of trading phases in a variety of equities in Xetra®, a segmentation into different groups is carried out. Possible criteria for segmentation are a.o. liquidity, index participation, and country of origin ( Germany or other countries). The trading segments valid in Xetra® are not dependent on the existing legally stipulated admission segments (market segments) at Frankfurt Stock Exchange.

A trading segment consists of a specific number of instruments for which trading is organized in the same way. Certain parameters of the Xetra® market model concerning trading model, order book transparency, trading times etc. can be configured for one trading segment. A combination of parameters is selected for each trading segment which stipulates the trading process in the respective segment.

Trading segments & Trading forms



Diagram 1: Trading segments and trading forms

The final decision which instruments on Xetra® will when be tradable and which segmentation will be made, will be taken in accordance with the market. The participants will be separately informed about the characteristics of the trading segments and the trading times concerned.

4

## Market Participants

A trading participant in Xetra® must either meet the requirements for participating in exchange trading according to the rules and regulations of Frankfurt Stock Exchange or be admitted to trading at another German stock exchange. It must also be guaranteed that transactions in Xetra® are settled properly by the trading participant or a Xetra® settlement participant has been commissioned to settle the trades of the trading participant. The users of the system can be divided into several categories:

- **Traders**  
Traders are individuals admitted for exchange trading. A trader can act as agent trader (account A), as proprietary trader (account P) or as liquidity provider ("Betreuer", account B). Orders will be flagged accordingly.
  - **Trading assistants**  
Trading assistants are individuals who support a trader admitted for exchange trading. He/she is assigned to one trader only who, in turn, is responsible with regard to the exchange for the entries of his/her trading assistant.
  - **Other users**  
Administrators are users which are not admitted or authorized for trading (they assign and maintain authorization rights for the member's personnel). This category also includes personnel in settlement, operation, supervision and information users.
-

## 5 Provision of additional Liquidity through Betreuers

It is the task of Betreuers to bridge temporary imbalances between supply and demand in less liquid instruments. There can be one or more Betreuer(s) for one instrument. In general, any market participant can act as Betreuer.

Xetra® Release 3 enables the participants who are registered in the system as Betreuers to enter quotes. A quote is the simultaneous entry of a limited buy and sell order in Xetra®. Quotes entered into the system are good-for-day. Only one quote per instrument can be placed in the order book per member's individual trader group.

### 5.1 Betreuer Tasks and Duties

A Xetra® member can enter an electronic request (quote request) to all Betreuers registered in the respective instrument to provide a quote. The market member can indicate whether he is interested in buying or selling and how many instruments he wishes to buy or sell. The market is informed that there is a quote request in the respective instrument. As a rule, each Betreuer must respond to a request within a fixed period of time by placing a quote. During one month, Betreuers must respond to a certain rate of all requests (response rate) which is fixed by the exchange.

Additionally, Betreuers are obliged to take part in auctions and volatility interruptions by entering a quote in the order book shortly after the start of the call phase. They have to maintain the quote until price determination took place. During this time, they can modify both quote limits and volumes.

Depending on the instrument's liquidity, Deutsche Börse AG makes demands on the minimum quantity, the maximum bid/ask spread, the maximum response time, the latest point in time of entry in auctions, respectively and the minimum of time the order remains in the order book. These requirements must be met so that the quote can be included in the Betreuer's performance measurement.

Both sides of the quote are entered in the order book as limit orders in accordance with the price/time priority.

The performance measurement is interrupted during special market situations (e.g. fast market). Betreuers are still able to place quotes. However, these quotes will not be included in his performance measurement.

---

## 5.2

### Assessment of Performance and Privileges

During the performance measurement it is checked whether all quotes meet the quality requirements concerning:

- Minimum quantity,
- Maximum bid/ask spread,
- Maximum response time to quote requests, latest point in time of entry in auctions, respectively,
- Minimum of time the order remains in the order book.

These criteria are the basis for measuring both the response rate for quote requests and the percentage of auctions in which a Betreuer takes part. These are used to assess the performance of the respective Betreuer. In case the respective Betreuer does not fulfill the minimum requirements, the exchange can annul the Betreuer status.

It is proposed to certify the results of the performance periodically. The Betreuer can publish his performance in the instruments he is registered in as Betreuer to improve his reputation.

The Betreuer is granted certain privileges for complying with his obligation of placing quotes on request and meeting the quality standards. Exchange fees for trades done as a Betreuer will be remitted in full at the end of a period due to his performance in one instrument. This will be the case for a time span of two years after the introduction of Release 3 in October 1998.

A further privilege refers to the information given in a quote request. Only the corresponding Betreuer of an instrument knows the identity of the market participant making the request and the optional information (the interested side - bid or ask - and the requested volume).

Finally, Betreuers are granted a privilege in the order book balancing phase after auction price determination. For a limited period of time he has preferential access to the surplus of non-executed orders offered at the auction price. This access must be limited to a maximum volume for each Betreuer due to competitive aspects. Only after this exclusive Betreuer phase all other market participants will have the possibility to accept orders from the surplus.

---

## 6 Order Types

All order sizes can be traded in Xetra®, i.e. both round lots and odd lots are supported. A round lot is composed of round lot parts or multiples thereof; odd lots are composed of odd lot parts (smaller than the instrument specific round lot size) and possibly further round lot parts.

If an order consists of a round lot and an odd lot part, the assigned order size of the current trading form is taken into account for the price determination. Both order parts have the same order number. By means of a partial execution, the round lot part respectively the odd lot part of an order could change.

An order modification leads to a new time priority if either the limit is changed or the order modification has a negative impact on the priority of the execution of other orders in the order book (e.g. increase of the volume of an existing order). However, if the volume of an existing order should be decreased, the current valid time priority will remain. If a new time priority is appointed, the order will receive a new order number.

### 6.1 Basic Types

Two order types are admitted for price determination during continuous trading and in auctions:

- *Market orders* are unlimited bid/ask orders. They are to be executed at the next price determined.
- *Limit orders* are bid/ask orders which are to be executed at their specified limit or better.

Order types can be specified further through additional execution conditions, validity constraints and trading restrictions.

### 6.2 Execution Conditions for Continuous Trading

Market and limit orders in continuous trading can be defined by the following execution conditions:

- An *immediate-or-cancel order (IOC Order)* is an order which is executed immediately and fully or as fully as possible. Non-executed parts of an IOC order are deleted without entry in the order book.
  - A *fill-or-kill order (FOK Order)* is an order which is executed immediately and fully or not at all. If immediate and full execution is not possible, the order is deleted without entry in the order book.
-

### 6.3 Validity Constraints

The validity of orders can be determined by means of further constraints. To this effect, the market model offers the following variations.

- *Good-for-day:* Order only valid for the current exchange trading day.
- *Good-till-date:* Order only valid until a specified date (up to a maximum of one year from the date of entry).
- *Good-till-cancelled:* Order only valid until it is either executed or deleted by the originator or the system on reaching its maximum validity of one year.

### 6.4 Trading Restrictions

By the following restrictions, it is possible to generally assign orders to all auctions or to one specific auction:

- *Opening auction only:* Order only valid in opening auctions.
- *Closing auction only:* Order only valid in closing auctions.
- *Auction only:* Order only valid in auctions.
- *Accept surplus order:* The order can only be entered during the order book balancing phase of an auction. The participants have the possibility to execute by this order type the remaining surplus, i.e. those orders which were unlimited or limited to the auction price but could not be executed, at a later point in time. This special order type has the execution conditions immediate-or-cancel or fill-or-kill.

### 6.5 Stop Orders

In order to support trading strategies, two stop order types can be used, the execution of which will be possible after reaching a price limit (stop limit):

- *Stop market order:* When the stop limit is reached (exceeded or fallen below), the stop order is automatically placed in the order book as market order.
- *Stop limit order:* When the stop limit is reached (exceeded or fallen below), the stop order is automatically placed in the order book as a limit order.

Each modification of a stop order leads to the appointment of a new time stamp.

---

## 6.6

### **Handling of Orders in Case of Events affecting Prices**

The exchange can suspend trading in the event of extraordinary events affecting prices (e.g. company news). Orders existing in the system are deleted.

In case of German domestic stocks, the orders in the order book are deleted in the event of ordinary events affecting prices (e.g. capital adjustments). A dividend payment causes a limit adjustment for orders in the order book.

For international stocks, all existing orders are deleted in the event of ordinary events affecting prices (e.g. capital adjustments) as well as in case of dividend payments.

---

7

**Trading Phases**

Trading takes place all day and begins with the pre-trading phase followed by the main trading phase and the post-trading phase. The system is not available for trading between the post-trading and pre-trading phase.

The pre-trading phase and the post-trading phase are the same for all instruments whereas the course of the main trading phase may vary from equity to equity. According to their segmentation, individual securities are traded in different trading models.

**Flow of trading**

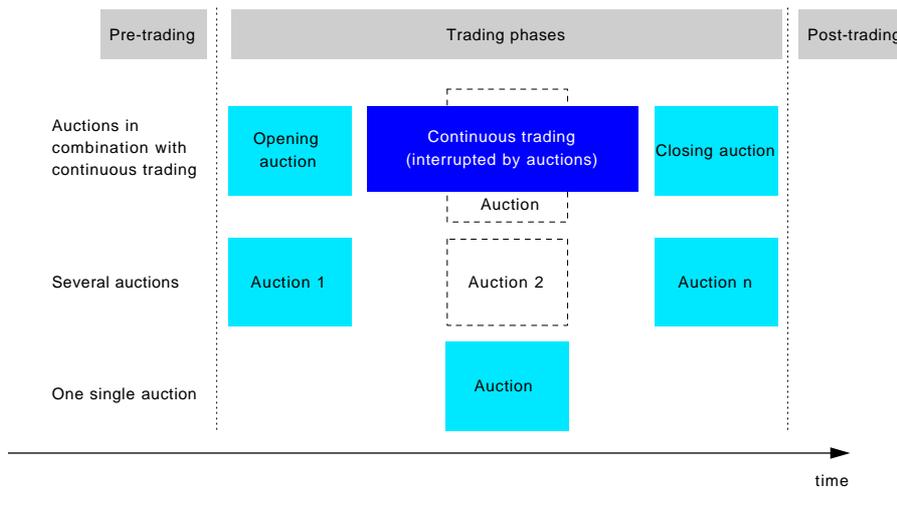


Diagram 2: Flow of trading

### **7.1 Pre-trading Phase**

The pre-trading phase initiates the main trading phase. Market participants can enter orders and quotes for preparing the actual trading day and modify or delete their existing orders and quotes. The exchange confirms the member's order entry by order confirmation. Market participants do not receive an overview of the market's order book situation as the order book is closed during this phase. The last price fixed for this instrument on the previous day is displayed (if available).

### **7.2 Main trading Phase**

Depending on the trading model and trading segment, orders of any size or round lots only can be traded in the main trading phase. The main trading phase varies according to the respective trading segments. Depending on the way, one trading segment is defined, stocks of this segment will only be traded in one trading model (i.e. auction), or the sequence of trading phases is characterized by a combination of auctions and continuous trading.

### **7.3 Post-trading Phase**

After the main trading phase, new orders can be entered and existing orders can be modified or deleted in the post-trading phase. New order entries are taken into consideration in the respective trading form on the following trading day depending on possible execution restrictions and validity constraints. It is also possible to process trades in the post-trading phase.

---

## **8 Trading Forms**

Generally, the market model includes the trading forms auction and continuous trading for on-exchange trading. Additionally, Xetra® provides for the entry of OTC trades.

### **8.1 Auction**

In auctions all order sizes (round lot and odd lot orders) are tradable. By the consideration of all existing market and limit orders of one instrument, a concentration of liquidity is ensued. Price determination in auctions is effected according to the principal of most executable volume. At the same time, price/time priority is valid so that the maximum of one order, which is limited to the auction price or unlimited can partially be executed. For stock trading, the order book remains partially closed during the auction's call phase. As information about the market situation, participants obtain the indicative price or the best bid/ask limit. If Betreuers exist for certain instruments, he/she will enter quotes during the auction's call phase (see also chapter 5 *Provision of additional Liquidity through Betreuers*). Market participants are informed via an auction plan about the time the individual instrument is called.

### **8.2 Continuous Trading**

In general, only round lots are allowed during continuous trading. Each new market or limit order is immediately checked if it is executable against orders on the other side of the order book. The execution of orders during continuous trading is effected according to price/time priority. In this trading form, the order book is open. Limits and accumulated order volumes per limit are displayed.

### **8.3 OTC Trade Entry**

During the whole trading day (pre-trading, main-trading and post-trading phase), all participants have the possibility to enter OTC trades in Xetra®. In principle, entry is possible for all instruments which are part of the exchange trading in Xetra® Release 3. For the use of this function, a trader's admission is not necessary.

Entered OTC trades must be confirmed by the counterparty. Subsequently, both counterparties receive a trading confirmation generated by the system. Unconfirmed trades are automatically deleted by the system at the end of the trading day. Xetra® transmits the confirmed OTC trades to the settlement systems for the evening processing.

It is possible to specify both the value date and the type of settlement for OTC trades.

---

## 9 Trading Models

Xetra® Release 3 supports the following trading models:

- Continuous trading in connection with an opening auction, none, one or several intraday auctions and a closing auction.
- One or more auctions per day at pre-defined points in time.

### 9.1 Continuous Trading in Connection with Auctions

Trading starts with an opening auction. At the end of the opening auction, continuous trading is started. Continuous trading can be interrupted by one or several intraday auction(s). At the end of continuous trading, the closing auction is initiated.

Market participants are informed via an auction plan about the time the individual instrument is called.

#### Change of trading forms

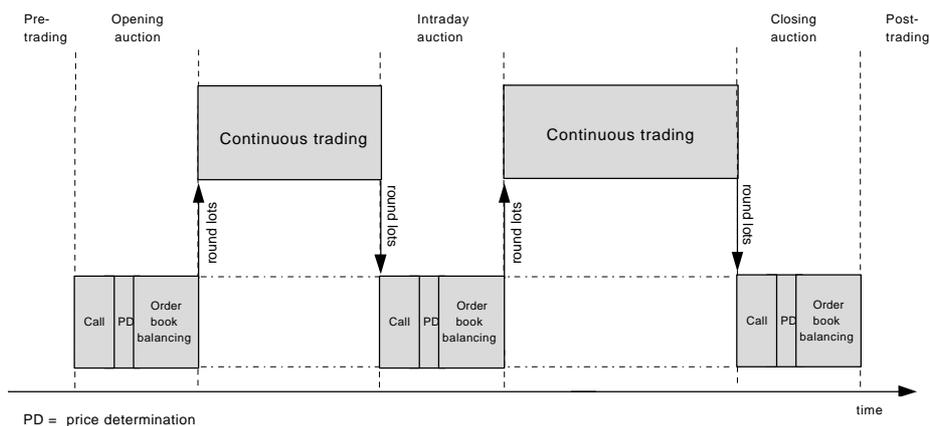


Diagram 3: Change of trading forms

9.1.1

**Opening Auction**

An opening auction, comprising a call phase, price determination phase and order book balancing phase, is carried out prior to continuous trading. All orders (round lots and odd lots) still valid from the previous day or which have already been entered on the current trading day, participate in this auction unless their execution is restricted to the closing auction. All quotes entered in the order book are also taking part in the opening auction. All executable orders are matched in the opening auction, thus avoiding a "crossed order book" (i.e. no price overlapping of bid/ask orders) and initiating continuous trading.

The opening auction begins with a call phase (see diagram 4). Market participants are able to enter orders and quotes in this phase as well as modify and delete their own existing orders and quotes.

Information on the current order situation is provided continually during the call phase in which the order book remains partially closed. The indicative auction price is displayed when orders are executable. This is the price which would be realized if the price determination was concluded at this time. The best bid/ask limit is displayed if an indicative price cannot be determined.

The duration of the call phase can be varied depending on the instrument's liquidity in one trading segment. The call phase has a random end after a minimum period in order to avoid price manipulation.

**Flow of opening auction**

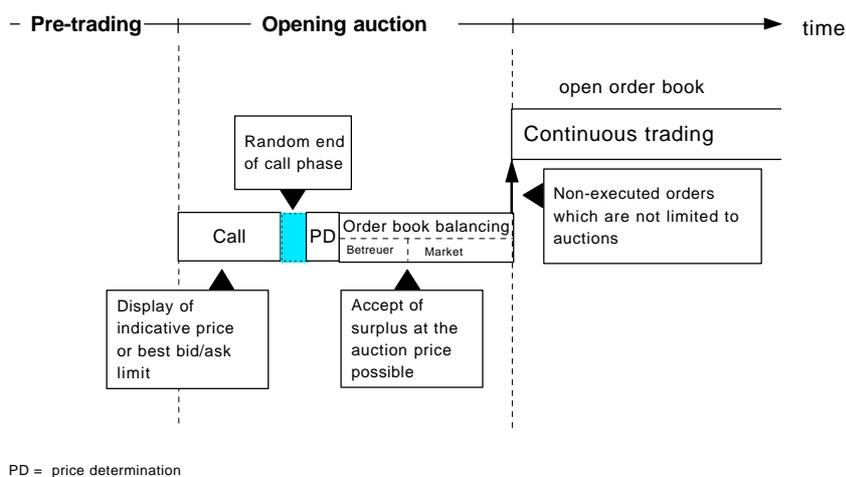


Diagram 4: Flow of opening auction

The call phase is followed by the price determination phase. Price determination only takes a few seconds. The auction price is determined according to the principle of most executable volume on the basis of the order book situation at the end of the call phase. The auction price is the price with the highest order volume and the lowest surplus for each limit in the order book. If the order book situation is not clear, i.e. if there is more than one limit with the same executable volume, further criteria are taken into consideration for the determination of the auction price (chapter 11).

The auction price cannot be determined if no orders are executable. In this case, the best bid/ask limit is released.

The time priority ensures that the maximum of one order limited or unlimited to the auction price is partially executed. Immediately after the auction price has been determined, both counterparties are informed by way of execution confirmation about the order price, its volume and time of execution. The execution confirmation is followed by a trade confirmation providing participants with the complete settlement and transaction data. Trades of the current trading day can be modified so that participants afterwards receive an updated trade confirmation.

Executable orders, which cannot be executed in the price determination phase, will be made available to the market for a limited period of time (order book balancing phase).

The order book balancing phase only takes place if there is a surplus. The surplus contains all order sizes. Orders are executed at the determined auction price in the order book balancing phase. Orders of the respective instrument can neither be changed nor deleted during order book balancing.

Market participants can accept the surplus either partially or fully by entering accept surplus orders. Accept surplus orders are executed at the auction price in accordance with time priority. The order book balancing phase is divided into two stages. The first stage only allows those market participants to access the surplus which are registered as *Betreuer* in this particular instrument. The surplus is made available to the rest of the market only after this period has elapsed.

Only accept surplus orders can be entered during the order book balancing phase. The system will reject any other orders as well as quotes and quote requests.

If the surplus has not been balanced at the end of the order book balancing phase, all market orders and limit orders, which were not or only partially executed, are forwarded to the next possible trading form according to their trading restrictions. This also applies if no auction price can be determined.

Analogous to the procedure after auction price determination, counterparties receive both an execution confirmation and trade confirmation during the order book balancing phase.

### **9.1.2 Continuous Trading**

Continuous trading is started after the termination of the opening auction. During continuous trading the order book is open, thus displaying the limits and the accumulated order volumes of each limit. A new limit order or market order and each new quote is immediately checked for execution against orders on the other side of the order book.

---

These orders will be executed according to price/time priority. Orders can either be executed fully, partially or not at all, thus generating none at all, one or more trades. Orders, which were not or only partially executed, are entered into the order book and sorted according to price/time priority.

Sorting orders by price/time priority ensures that buy orders with a higher limit take precedence over orders with lower limits. Vice versa, sell orders with a lower limit take precedence over orders with a higher limit. The second criterion 'time' applies in the event of orders sharing the same limit, i.e. orders which were entered earlier take priority. Market orders enjoy priority over limit orders in the order book. Between market orders, time priority also applies. Rules for price determination during continuous trading are described in detail in chapter 11 (*Illustration of Price Determination Processes*).

Analogous to the procedure for the opening auction, the counterparties receive both an execution confirmation and a trade confirmation after orders have been matched.

### 9.1.3 Intraday Auctions

The start of the intraday auction interrupts continuous trading. Like opening auctions, intraday auctions consist of three phases: call phase, price determination and order book balancing phase. All orders and quotes of one instrument (i.e. odd lots and round lots) are automatically concentrated in one order book. This is valid for those orders and quotes which were taken over from continuous trading as well as for those which were entered in the order book for auctions only.

The order book is partially closed during the call phase. The market participants are given information on the indicative price (if available) and the best bid/ask limit. The auction price cannot be determined if orders are not executable during price determination. Instead, the best bid/ask limit is published in this case.

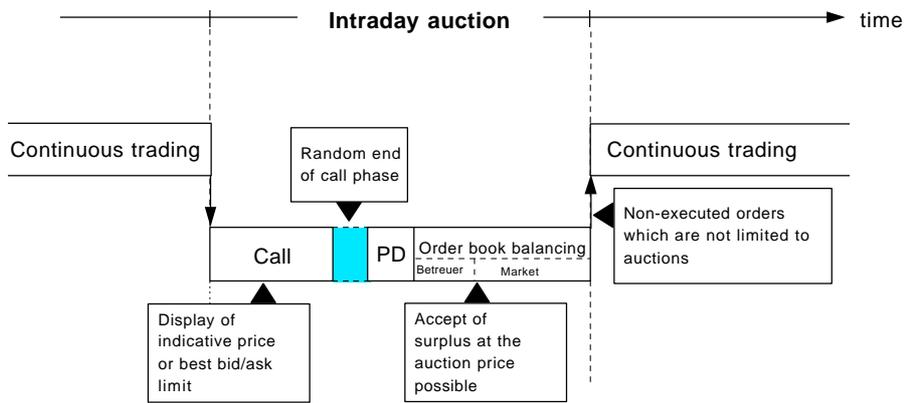
As it is the case with opening auctions, the order book balancing phase is only initiated if there is a surplus of orders. Again there are two stages. The first stage only allows Betreuers access to the surplus and the second stage gives all other market participants the chance to accept the surplus. In the order book balancing phase, orders are executed at the auction price.

If the surplus has not been fully balanced at the end of the order book balancing phase, all market orders and limit orders, which were not or only partially executed, are forwarded into the next possible trading form according to their respective order sizes and trading restrictions. This is also the case if no auction price can be determined.

Continuous trading is restarted at the end of the auction.

---

### Intraday auction with partially closed order book



PD = price determination

Diagram 5: Intraday auction with partially closed order book

**9.1.4 Closing Auction**

After the end of continuous trading the closing auction is initiated, which is also divided into call phase, price determination and order book balancing phase. The main feature of the closing auction is a partially closed order book (see diagram 6).

**Flow of closing auction**

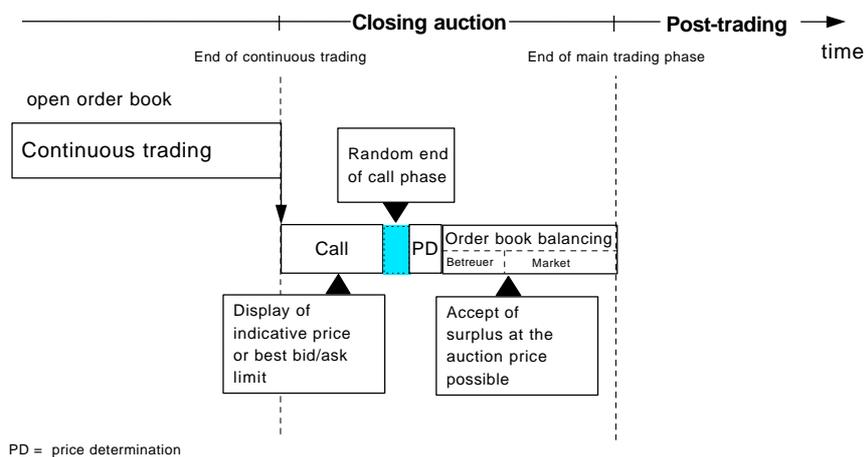


Diagram 6: Flow of closing auction

In the closing auction, all order sizes (odd lots and round lots) are automatically matched in one order book. This applies to orders and quotes adopted from continuous trading as well as to orders which are only entered in the order book for the closing auction. The auction price cannot be determined if no orders are executable. In this case, the best bid/ask limit is released. Non-executed or only partially executed market and limit orders are transferred to the next trading day according to their validity.

**9.2 Several Auctions or single Auction**

If an instrument is limited to auctions, this/these auction(s) also consist of three phases, i.e. call phase, price determination and order book balancing phase. In contrast to the procedure for the opening auction or intraday auction during continuous trading, orders which have not been executed remain in the order book until the next auction. Continuous trading does not take place. An auction plan informs market participants about the time the individual instruments are called.

The auction price cannot be determined if no orders are executable. In this case, the best bid/ask limit is released and the existing orders are transferred to the next auction according to their validity.

10 Safeguards in Auctions and Continuous Trading

Xetra® contains safeguards to increase price continuity and improve the probability of execution of market orders. The main safeguards are volatility interruptions in auctions and continuous trading as well as market order interruptions in auctions (not in auctions initiated by volatility interruptions). As far as Betreuers exist for an instrument, they will enter quotes in volatility interruptions (see also chapter 5: *Provision of additional Liquidity through Betreuers*).

Volatility interruptions can be initiated in two ways:

- The indicative price lies outside the "dynamic" price range around the reference price (see diagram 7). The reference price (reference price 1) for the dynamic price range refers to the last traded price of an instrument determined in an auction or during continuous trading. The reference price is re-adjusted during continuous trading only after an incoming order has been matched (as far as possible) against orders in the order book.
- The indicative price lies outside the "static" price range which has been defined additionally. This wider static price range defines the maximum percentage deviation of an additional reference price (reference price 2) which generally corresponds to the last price determined in an auction on the current trading day. If this price is not available, the last traded price determined on one of the previous trading days is taken as reference price. Reference price 2 is only re-adjusted during the trading day after auction price determination so that the position of the static price range remains largely unchanged during trading.

Dynamic and static price range

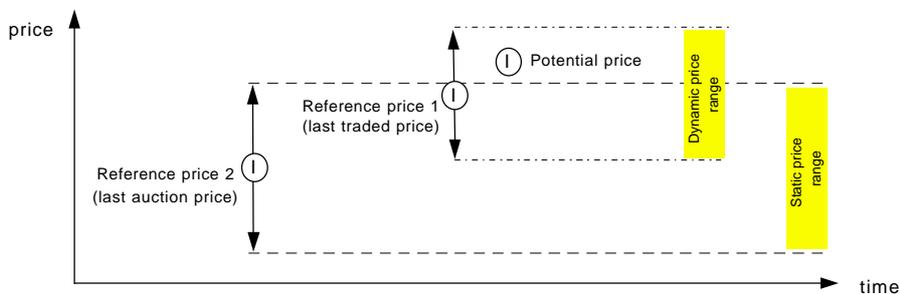


Diagram 7: Dynamic and static price range

Each of these safeguards can only occur once per price determination. This means that there is only one volatility interruption and one market order interruption per auction. If the indicative auction price continues to lie outside of one of the price ranges at the end of the volatility interruption, price determination is carried out nonetheless. The same applies to market order interruptions if market orders cannot be executed fully or only partially.

10.1

**Volatility Interruption during Auctions**

A volatility interruption is initiated if the indicative auction price lies outside the dynamic and/or static price range at the end of the call phase (see diagram 8). The price range is stipulated individually for each instrument and defines the maximum percentage deviation (symmetrically positive and negative) of the reference price in an instrument. The reference price corresponds to the last traded price and dynamically changes the price range with every price determination. Volatility interruptions in an auction are indicated to the market participants.

A volatility interruption initiates a limited extension of the call phase, allowing market participants to enter new orders and quotes as well as to modify or delete orders and quotes in the order book. The call phase is terminated randomly as soon as the extension has expired. If possibly a surplus as not been balanced until the end of the order book balancing phase, all non-executed or partially executed market and limit orders are transferred to the next possible trading form according to their order sizes and trading restrictions.

Volatility interruption during auctions

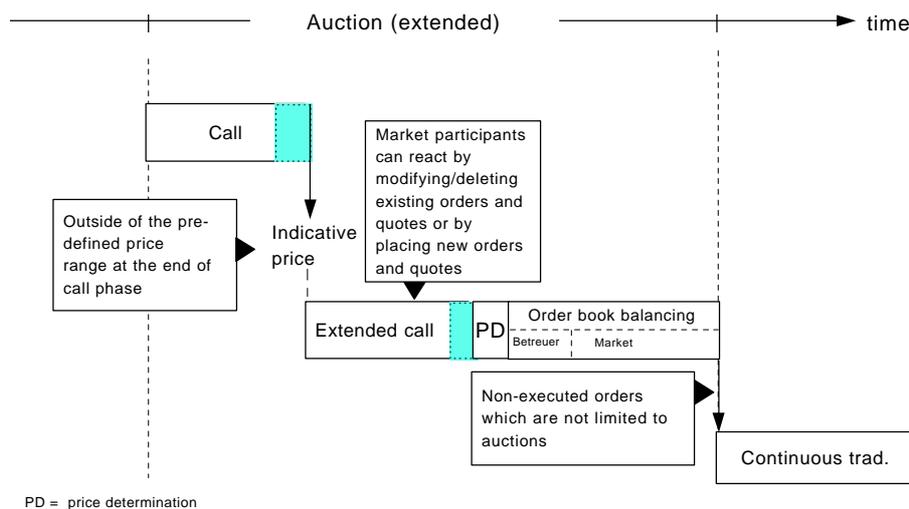


Diagram 8: Volatility interruption during auctions

## 10.2 Volatility Interruption during Continuous Trading

To ensure price continuity, continuous trading is interrupted by a volatility interruption whenever the potential execution price of an order lies outside the dynamic and/or static price range around a reference price. Incoming orders are executed until the next potential execution price leaves the price corridor (exception: fill-or-kill orders). Market participants are made aware of this market situation.

A volatility interruption brings about a change of trading form: continuous trading is interrupted and an auction is initiated. The auction is restricted to orders designated for continuous trading. It consists of a call phase and price determination phase. After a minimum duration, the call phase ends randomly. Continuous trading is taken up again after price determination or, if price determination was not possible, at the end of the auction (see diagram 9).

### Volatility interruption during continuous trading

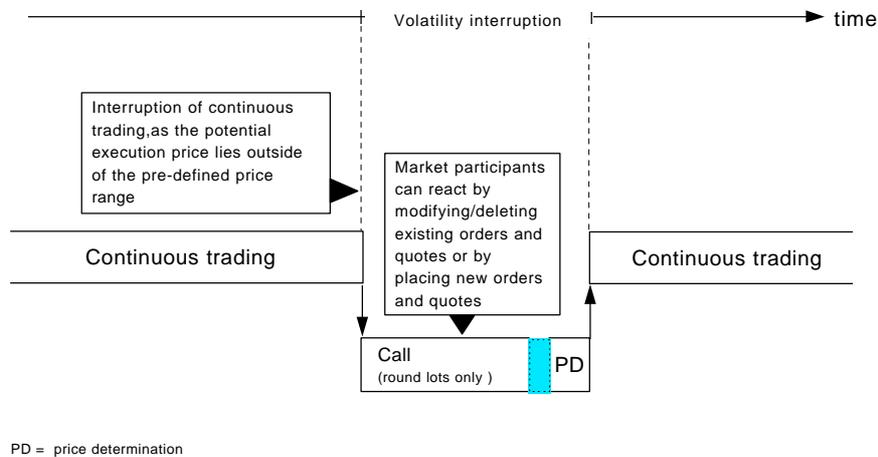


Diagram 9: Volatility interruption during continuous trading

## 10.3 Market Order Interruption in Auction

If market orders within the order book are not or only partially executable (market order surplus) at the end of the call phase, it will be extended for a limited time in order to increase the execution probability of market orders in auctions. The market is informed about the market order interruption. Market participants will be able to enter new orders and quotes or change and delete existing orders in the order book. The call phase is terminated as soon as all present market orders could be executed or the extension has expired. The extension of the call phase is also terminated randomly. If the surplus is not balanced until the end of the order book balancing phase, all non-executed or only partially executed market and limit orders are transferred to the next possible trading form according to their order sizes and trading restrictions (see diagram 10).

## Market order interruption

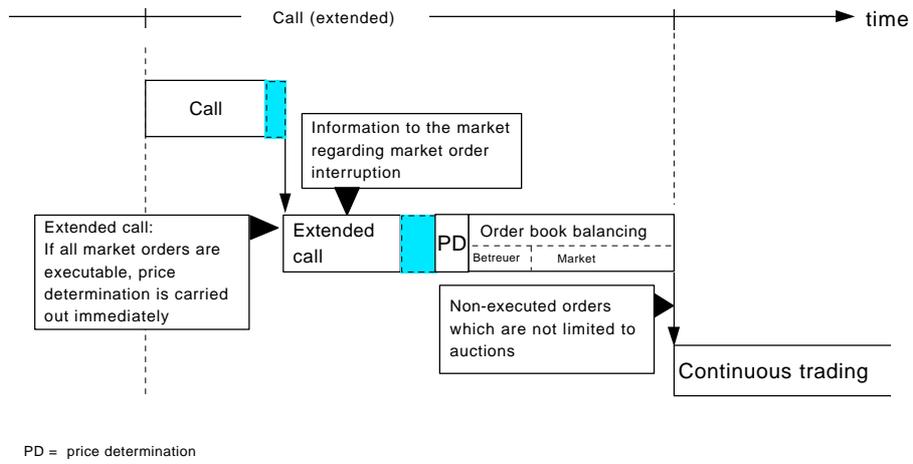


Diagram 10: Market order interruption

## 11 Illustration of Price Determination Processes

### 11.1 Auctions

#### 11.1.1 Basic Matching Rules

The auction price is determined on the basis of the order book situation stipulated at the end of the call phase. The auction price is the price with the highest executable order volume and the lowest surplus for each limit in the order book (see example 1).

Should this process determine more than one limit with the highest executable order volume and the lowest surplus for the determination of the auction price, the surplus is referred to for further price determination:

- The auction price is stipulated according to the highest limit if the surplus for all limits is on the buy side (surplus of demand) (see example 2).
- The auction price is stipulated according to the lowest limit if the surplus for all limits is on the sell side (surplus of offerings) (see example 3).

If the inclusion of the surplus does not lead to a clear auction price, the reference price is included as additional criterion. This may be the case

- if there is a surplus of offerings for one part of the limits and a surplus of demand for another part (see example 4),
- if there is no surplus for all limits (see example 5).

In the first case, the lowest limit with a surplus of offerings or the highest limit with a surplus of demand is chosen for the further price determination.

In both cases, the reference price is included for stipulating the auction price:

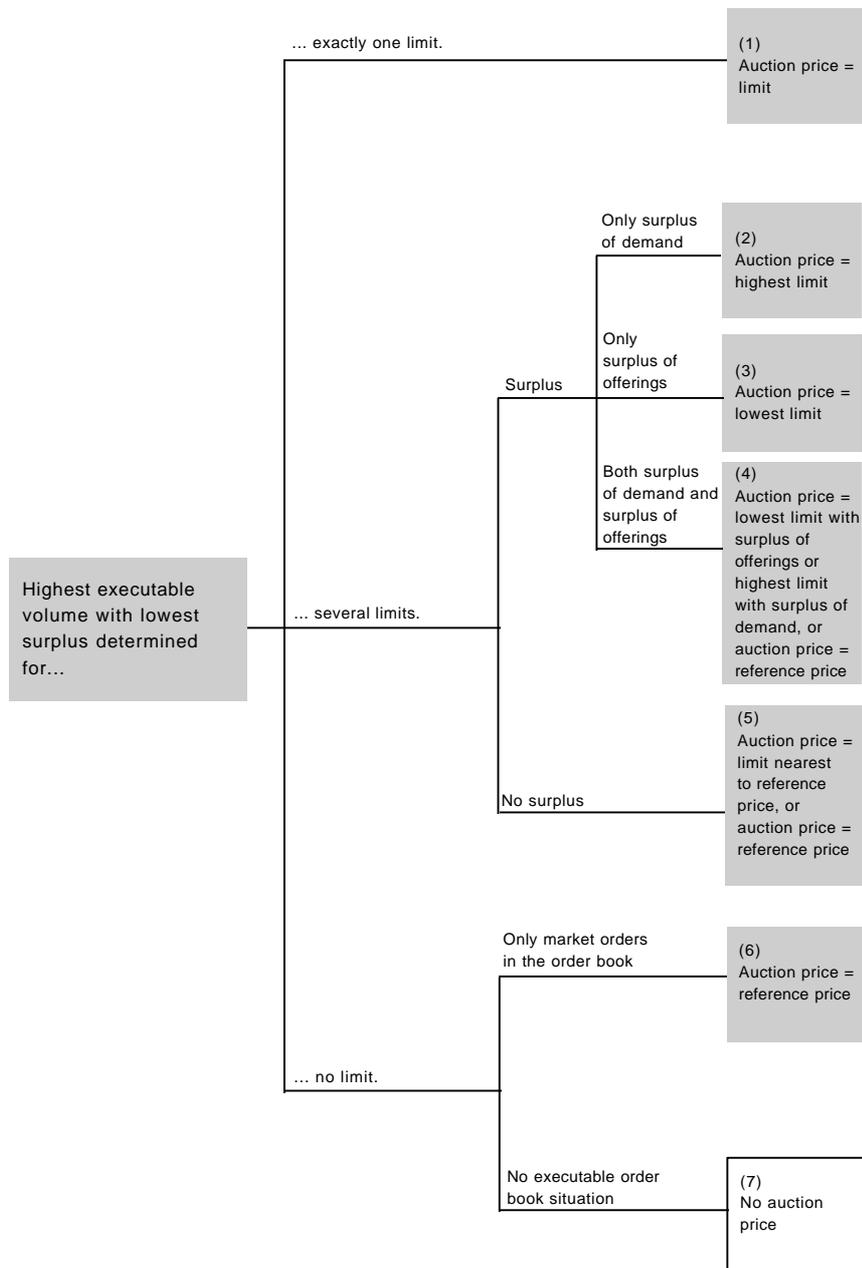
- If the reference price is higher than or equal to the highest limit, the auction price is determined according to this limit.
- If the reference price is lower than or equal to the lowest limit, the auction price is determined according to this limit.
- If the reference price lies between the highest and lowest limit, the auction price equals the reference price.

If only market orders are executable against one another, they are matched at the reference price (see example 6).

An auction price cannot be determined if orders are not executable against one another. In this case, the best bid/ask limit (if available) is issued (see example 7).

---

The following diagram gives an outline of how price determination rules affect possible order book constellations in an auction. The number in brackets refers to the corresponding example for this rule.



11.1.2

**Matching Examples**

The following examples are meant to clarify the basic matching rules in auctions by carrying out the price determination using exemplary order book constellations.

*Example 1: There is exactly one limit at which the highest order volume can be executed and which has the lowest surplus.*

Bid	Quantity	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Ask	
							Quantity	Limit
Limit	200	200		202	500	700		
Limit	200	400		201	300	700		
Limit	300	700		200		700	100	Limit
		700	100	198		600	200	Limit
		700	300	197		400	400	Limit

Corresponding to this limit, the auction price is fixed at DM 200.

*Example 2: There are several possible limits and there is a surplus of demand.*

Bid	Quantity	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Ask	
							Quantity	Limit
Limit	400	400		202	100	500		
Limit	200	600	100	201		500		
		600	100	199		500	300	Limit
		600	400	198		200	200	Limit

Corresponding to the highest limit, the auction price is fixed at DM 201.

*Example 3: There are several possible limits and there is a surplus of offerings.*

Bid	Quantity	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Quantity	Ask
Limit	300	300		202	300	600		
Limit	200	500		201	100	600		
		500		199	100	600	400	Limit
		500	300	198		200	200	Limit

Corresponding to the lowest limit, the auction price is fixed at DM 199.

*Example 4: There are several possible limits and there is both a surplus of demand and offerings.*

Bid	Quantity	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Quantity	Ask
Market	100	100		Market	100	200		
		100		202	100	200		Limit
Limit	100	200	100	199		100		
		200	100	Market		100	100	Market

The auction price either equals the reference price or is fixed according to the limit nearest to the reference price:

- a) If the reference price is DM 200, the auction price will be DM 200.
- b) If the reference price is DM 203, the auction price will be DM 202.
- c) If the reference price is DM 199, the auction price will be DM 199.

*Example 5: There are several possible limits and no surplus on hand.*

Bid	Volume	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Volume	Ask
Limit	300	300		202	200	500		
Limit	200	500		201		500		
		500		199		500	300	Limit
		500	300	198		200	200	Limit

The auction price either equals the reference price or is fixed according to the limit nearest to the reference price:

- a) If the reference price is DM 205, the auction price will be DM 201.
- b) If the reference price is DM 200, the auction price will be DM 200.
- c) If the reference price is DM 197, the auction price will be DM 199.

*Example 6: Only market orders are executable in the order book.*

Bid	Quantity	Acc. Quantity	Surplus	Limit	Surplus	Acc. Quantity	Quantity	Ask
Market	900	900	100	Market		800		
		900	100	Market		800	800	Market

The auction price equals the reference price.

*Example 7: There is no eligible limit as there are only orders in the order book which are not executable.*

Bid				Limit	Surplus	Ask		
Quantity	Acc. Quantity	Surplus	Surplus			Acc. Quantity	Quantity	Ask
Limit	80	80	80	201	80	80	80	Limit
Limit	80	80	80	200				

It is not possible to determine an auction price. In this case, the highest bid limit (DM 200) and the lowest ask limit (DM 201) are published.

*Additional example: Partial execution of an order within the opening auction*

Bid				Limit	Surplus	Ask		
Quantity	Acc. Quantity	Surplus	Surplus			Acc. Quantity	Quantity	Ask
Limit 9:00	300	600	200	200	400	400	Limit	
Limit 9:01	300							

When two limited orders are available on the bid side at auction price, time priority decides which of both orders is to be executed partially. In this case, the order with the time stamp 9:00 is executed fully and the order with the time stamp 9:01 partially (100 shares) at an auction price of DM 200. The surplus of 200 shares resulting from the partial execution is adopted into continuous trading provided that it is not limited to auctions only.

## 11.2 Continuous Trading

### 11.2.1 Basic Matching Rules

Each new incoming market or limit order is immediately checked for execution against orders on the other side of the order book which will be executed according to price/time priority. Orders can be executed fully in one or more steps, partially or not at all. Thus, each new incoming order may generate none at all, one or several trades.

Orders or non-executed parts thereof are entered in the order book and sorted according to price/time priority.

Price determination in continuous trading is carried out in addition to price/time priority according to the following rules:

*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 order book determines the price (see example 2,3,13,14).

*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) (see example 1).

*Rule 3:*

- If an incoming market order meets an order book in which there are market orders and limit orders on the other side (see example 4,5,6,7), or
- if an incoming limit order meets an order book in which there are only market orders on the other side (see example 9,10,11,12), or
- if an incoming limit order meets an order book in which there are market orders and limit orders on the other side (see example 16,17,18,19,20,21),

then the incoming order is executed against the market orders in accordance with price/time priority 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.

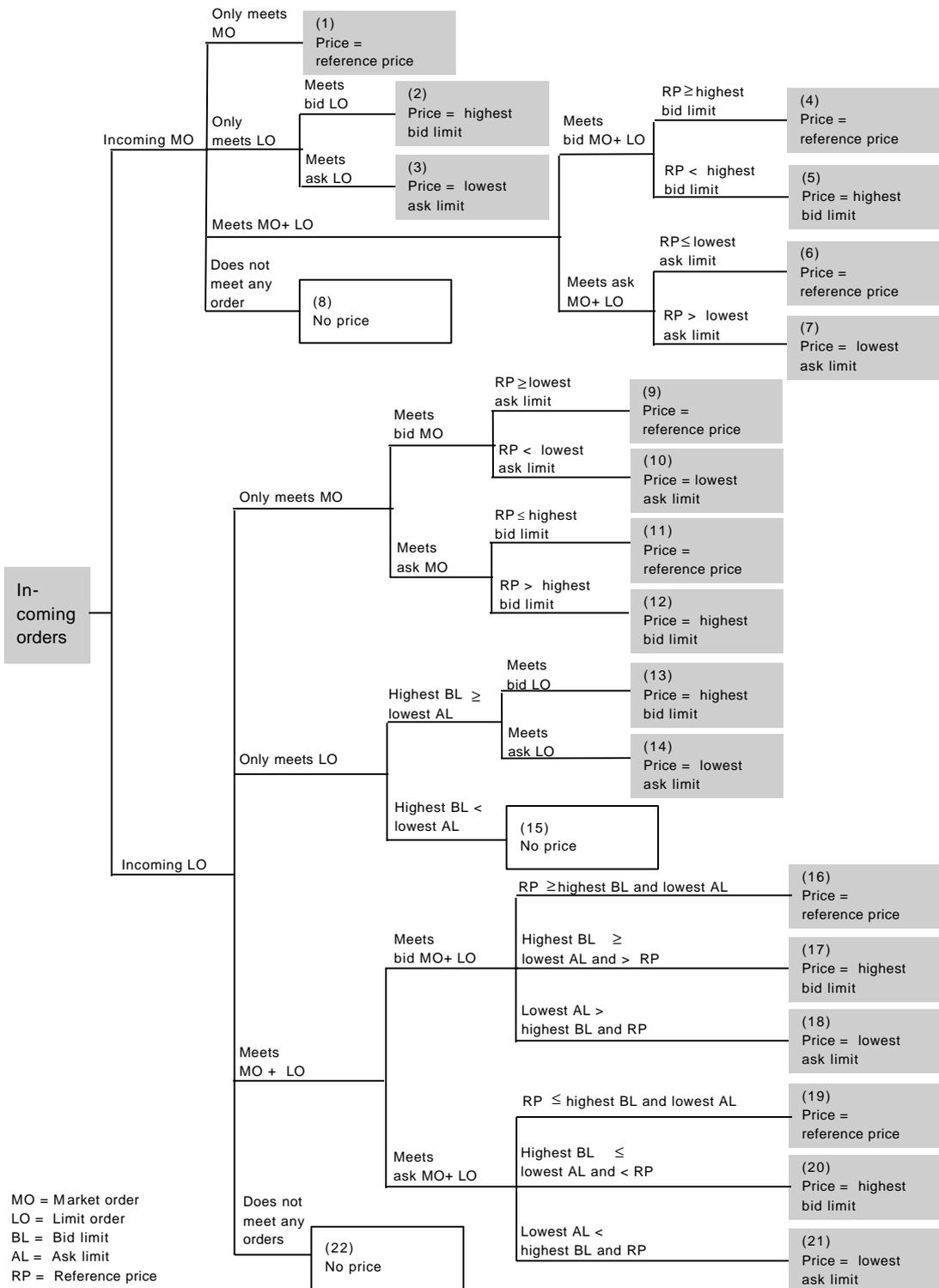
Market orders which have not been executed in the order book must be executed immediately with the next transaction (if possible). In this case, the following principles must be taken into consideration for continuous trading:

---

Principle 1: Market orders are given the reference price as a "virtual" price. On this basis, execution is carried out at the reference price provided that this does not violate price/time priority.

Principle 2: If orders cannot be executed at the reference price, they are executed in accordance with price/time priority by means of price determination above or below the reference price (non-executed bid market orders or ask market orders) i.e. the price is determined by a limit within the order book or a limit of an incoming order.

The following diagram gives an outline of how price determination rules affect possible order book constellations in continuous trading. The head number refers to the corresponding example for this rule.



11.2.2

**Matching Examples**

The following examples are meant to clarify the basic matching rules for continuous trading by carrying out the price determination using exemplary order book constellations.

*Example 1: A market order meets an order book in which there are market orders only on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Incoming order:  
Ask market order,  
quantity 6000 shares

The reference price is DM 200.

Both market orders are executed at the reference price of DM 200 (see principle 1, page 34).

*Example 2: A market order meets an order book in which there are limit orders only on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	200			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	200			

Incoming order:  
Ask market order,  
quantity 6000 shares

Both orders are executed at the highest bid limit of DM 200.

Example 3: A market order meets an order book in which there are limit orders only on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			200	6000	9:01

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			200	6000	9:01

Incoming order:  
Bid market order,  
quantity 6000 shares

Both orders are executed at the lowest ask limit of DM 200.

Example 4: A market order meets an order book in which there are market orders and limit orders on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	195			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	195			

Incoming order:  
Ask market order,  
quantity 6000 shares

The reference price is DM 200. It is higher than or equal to the highest bid limit.

The incoming ask market order is executed against the bid market order in the order book at the reference price of DM 200 (see principle 1, page 34).

*Example 5: A market order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	202			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	<del>6000</del>	Market			
9:02	1000	202			

Incoming order:  
Ask market order,  
quantity 6000 shares

The reference price is DM 200. It is lower than the highest bid limit.

The incoming ask market order is executed against the bid market order in the order book at the highest bid limit of DM 202 (see principle 2, page 34).

*Example 6: A market order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	<del>6000</del>	9:01
			202	1000	9:02

Incoming order:  
Bid market order,  
quantity 6000 shares

The reference price is DM 200. It is lower than or equal to the lowest ask limit.

The incoming bid market order is executed against the ask market order in the order book at the reference price of DM 200 (see principle 1, page 34).

*Example 7: A market order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

Incoming order:  
Bid market order,  
quantity 6000 shares

The reference price is DM 203. It is higher than the lowest ask limit.

The incoming bid market order is executed against the ask market order in the order book at the lowest ask limit of DM 202 (see principle 2, page 34).

*Example 8: A market order meets an order book in which there are no orders.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
10:01	6000	Market			

Incoming order:  
Bid market order,  
quantitv 6000 shares

The incoming bid market order is entered in the order book. A price is not determined and no orders are executed.

Example 9: A limit order meets an order book in which there are market orders only on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Incoming order:  
Ask order, limit DM 195,  
quantity 6000 shares

The reference price is DM 200. It is higher than or equal to the lowest ask limit.  
Both orders are executed at the reference price of DM 200 (see principle 1, page 34).

Example 10: A limit order meets an order book in which there are market orders only on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			

Incoming order:  
Ask order, limit DM 203,  
quantity 6000 shares

The reference price is DM 200. It is lower than the lowest ask limit.  
Both orders are executed at the lowest ask limit of DM 203 (see principle 2, page 34).

*Example 11: A limit order meets an order book in which there are market orders only on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01

Incoming order:  
Bid order, limit DM 203,  
quantity 6000 shares

The reference price is DM 200. It is lower than or equal to the highest bid limit.  
Both orders are executed at the reference price of DM 200 (see principle 1, page 34).

*Example 12: A limit order meets an order book in which there are only market orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01

Incoming order:  
Bid order, limit DM 199,  
quantity 6000 shares

The reference price is DM 200. It is higher than the highest bid limit.  
Both orders are executed at the highest bid limit of DM 199 (see principle 2, page 34).

Example 13: A limit order meets an order book in which there are limit orders only on the other side of the order book.

Bid			Ask		
Time	Volume	Limit	Limit	Volume	Time
9:33	6000	199			

Bid			Ask		
Time	Volume	Limit	Limit	Volume	Time
9:33	<del>6000</del>	199			

Incoming order:  
Ask order, limit DM 198,  
quantity 6000 shares

The highest bid limit is higher than or equal to the lowest ask limit.  
Both orders are executed at the highest bid limit of DM 199.

Example 14: A limit order meets an order book in which there are limit orders only on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			199	6000	9:33

Incoming order:  
Bid order, limit DM 200,  
quantity 6000 shares

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			199	<del>6000</del>	9:33

The highest bid limit is higher than or equal to the lowest ask limit.  
Both orders are executed at the lowest ask limit of DM 199.

Example 15: A limit order meets an order book in which there are limit orders only on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:33	6000	199			
9:33	6000	199	200	6000	10:01

Incoming order:  
Ask order, limit DM 200,  
quantity 6000 shares

The highest bid limit is lower than the lowest ask limit.

The incoming ask order is entered in the order book. A price is not determined and no orders are executed.

Example 16: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	196			
9:01	6000	Market			
9:02	1000	196			

Incoming order:  
Ask order, limit DM 195,  
quantity 6000 shares

The reference price is DM 200. It is higher than or equal to the highest bid limit and higher than or equal to the lowest ask limit.

The incoming ask order is executed against the bid market order in the order book at the reference price of DM 200 (see principle 1, page 34).

*Example 17: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	202			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	<del>6000</del>	Market			
9:02	1000	202			

Incoming order:  
Ask order, limit DM 199,  
quantity 6000 shares

The reference price is DM 200. The highest bid limit is higher than or equal to the lowest ask limit and higher than the reference price.

The incoming ask order is executed against the bid market order in the order book at the highest bid limit of DM 202 (see principle 2, page 34).

*Example 18: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	202			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	<del>6000</del>	Market			
9:02	1000	202			

Incoming order:  
Ask order, limit DM 203,  
quantity 6000 shares

The reference price is DM 200. The lowest ask limit is higher than the highest bid limit and the reference price.

The incoming ask order is executed against the bid market order in the order book at the lowest ask limit of DM 203 (see principle 2, page 34).

*Example 19: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

<b>Bid</b>			<b>Ask</b>		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

<b>Bid</b>			<b>Ask</b>		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

Incoming order:  
Bid order, limit DM 203,  
quantity 6000 shares

The reference price is DM 200. It is lower than or equal to the highest bid limit and lower than or equal to the lowest ask limit.  
The incoming bid order is executed against the ask market order in the order book at the reference price of DM 200 (see principle 1, page 34).

*Example 20: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

<b>Bid</b>			<b>Ask</b>		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

<b>Bid</b>			<b>Ask</b>		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			202	1000	9:02

Incoming order:  
Bid order, limit DM 200,  
quantity 6000 shares

The reference price is DM 201. The highest bid limit is lower than or equal to the lowest ask limit and lower than the reference price.  
The incoming bid order is executed against the ask market order in the order book at the highest bid limit of DM 200 (see principle 2, page 34).

Example 21: A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			199	1000	9:02

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
			Market	6000	9:01
			199	1000	9:02

Incoming order:  
Bid order, limit DM 203,  
quantity 6000 shares

The reference price is DM 200. The lowest ask limit is lower than the highest bid limit and the reference price. The incoming bid order is executed against the ask market order in the order book at the lowest ask limit of DM 199 (see principle 2, page 34).

Example 22: A limit order meets an order book in which there are no orders.

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
10:01	6000	200			

Incoming order:  
Bid order, limit DM 200,  
quantity 6000 shares

The incoming bid order is entered in the order book. A price is not determined and no orders are executed.

Further examples:

*Partial execution of a market order. A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	6000	Market			
9:02	1000	202			

Bid			Ask		
Time	Quantity	Limit	Limit	Quantity	Time
9:01	5000	Market			
9:02	1000	202			


 Incoming order:  
 Ask order, limit DM 203,  
 quantity 1000 shares

The reference price is DM 200. The lowest ask limit is higher than the highest bid limit and the reference price. The incoming ask order can only be partially executed against the bid market order in the order book, which is carried out at the lowest ask limit of DM 203 (see principle 2, page 34).

*Initiation of a volatility interruption. A limit order meets an order book in which there are market orders and limit orders on the other side of the order book.*

Bid			Ask		
Time	Volume	Limit	Limit	Volume	Time
9:01	6000	Market			
9:02	1000	202			

Bid			Ask		
Time	Volume	Limit	Limit	Volume	Time
9:01	6000	Market	220	1000	10:01
9:02	1000	202			


 Incoming order:  
 Ask order, limit DM 220,  
 quantity 1000 shares

The reference price is DM 200 and the price range is +/- 2% of the last determined price. The limit of the incoming ask order lies outside the pre-defined price range and an execution is not carried out. The ask order is entered in the order book and continuous trading is interrupted by an auction.