

The background of the page is a dark teal color with a complex, abstract geometric pattern. The pattern consists of various shades of teal and dark green, forming a stylized silhouette of a bull's head facing right. The bull's head is composed of several sharp, angular shapes, giving it a modern, geometric appearance. The overall effect is a textured, layered look that suggests strength and stability.

**Rules for the Technical Installations
of the Trading Systems**

1. General rules for access to the exchange EDP system

- (1) The Rules for the Technical Installations govern access to the EDP system of the **exchange operating company** and apply to all trading members. The Rules define, in particular, the technical conditions required for taking part in trading.
- (2) After being admitted as an exchange member and having been granted the authorization to participate in trading, the trading member is given access to the EDP system of the stock exchange. To access the exchange EDP, trading members must submit an application to the exchange operating company. Trading members are permitted to participate in electronic trading in one or several markets. The exchange operating company grants the trading member technical access to the relevant market provided the trading member meets the legal and technical requirements for accessing the EDP system of the respective market.
- (3) The legal requirements for the technical access to the exchange EDP system are met if the trading member has entered into the relevant contract on the use of the exchange EDP system, in a valid version, for the term of the admission to trading. Irrespective of this, the trading member must meet the legal requirements for membership in the Vienna Stock Exchange and for participation in trading in the respective market.
- (4) The technical conditions are met if the trading member admitted fulfils the technical requirements for connecting to the EDP system of the exchange and the conditions for the use pursuant to these Technical Rules.
- (5) The exchange operating company shall have the right to inspect a trading member's compliance with these Rules for Technical Installations and with the technical requirements, guidelines and instructions of the exchange operating company at any time. The exchange operating company shall have the right inspect all systems and connections used by the trading member irrespective of the location(s) of the trading members for compliance with the requirements for the connection and operation of the systems and their proper use.

2. Technical access to the exchange EDP system

- (1) The exchange operating company assigns every trading member at least one customer identification code (**Customer ID**) for accessing the exchange EDP system that is permitted to be used exclusively by the respective trading member.
- (2) The exchange operating company may assign several customer identification codes to trading members, if the trading member clears the trades executed in the electronic trading system through several clearing members or clearing agents. In this case, the exchange operating company assigns a customer ID for each clearing member or clearing agent charged with the clearing of trades.
- (3) Based on the respective customer ID, trading members must generate personal user IDs and passwords for exchange traders and further persons using the exchange EDP system (**Technical Assistance Staff**). Personal user IDs and passwords are permitted to be used exclusively by the persons to whom they have been assigned. Passwords must be kept secret from unauthorized third parties.

- (4) The use of the stock exchange IT for taking part in exchange trading, in particular, the entering and cancelling of orders is permitted only for exchange traders admitted to the exchange. Trading members must now be in a position at all times to cancel part or all of their orders entered, but not yet executed (kill function). The exchange operating company may, in a case of emergency, upon written request and with the approval of the exchange operating company, make it possible for a trading member to authorize specific exchange traders to delete all open orders with immediate effect (orders and quotes) in accordance with the dual control principle and to block the entry of new orders (orders and quotes) of the trading member.
- (5) Trading members are under the obligation to immediately inform the exchange operating company in writing of allocations and changes to personal user IDs for accessing the exchange EDP system.

3. Member trading system

- (1) An exchange member must connect with at least one member trading system to the EDP system of the exchange. A member trading system comprises all hardware and software components of a trading member, in particular, the local networks, interfaces and backend entry devices through which a trading member is connected to the exchange EDP system from one location to take part in trading and to enable orderly exchange trading. The operation and the regular maintenance of the participant trading system is the responsibility of the trading member. The trading member is responsible for ensuring that the participant trading system always complies with applicable regulatory requirements.
- (2) The trading member must ensure orderly operation of its member trading system so as to guarantee that it will not disrupt exchange trading processes or functionalities.
- (3) The exchange operating company may define which hardware and combinations of operating systems are permitted for the installation of the member trading system. The trading member must notify the exchange operating company of the combination(s) selected before it is granted access to the exchange EDP system. Any ex post changes must be notified to the exchange operating company.
- (4) The exchange operating company may assign node numbers and network areas and/or network addresses to member trading systems. In this case, the trading members are under the obligation to communicate exclusively with the exchange EDP system via the assigned node numbers, network areas and/or network addresses.
- (5) As a minimum, the software defined by the exchange operating company (**Exchange Software**) must be installed on the member trading system. The trading member is not permitted to pass the exchange software on to third parties. The further details are defined by the exchange operating company.
- (6) A trading member must ensure that the member trading system and its access to the exchange EDP system, its trading algorithms pursuant to item 10 of these Technical Rules, and its trading strategies have been sufficiently tested at the time of introduction and when extensive changes to the exchange EDP system are carried so as to ensure that the basic functions of the member trading system, its trading algorithms and trading strategies comply with the respective applicable laws and the terms and conditions of the exchange operating company. In this context, the following things are checked:
 1. The capacity of the member trading system or the trading algorithms used to interact as planned with the matching logic of the exchange EDP system and to properly process the transmission of incoming and outgoing trade data;

2. The basic functions such as the transmission, changes or cancellations to orders or indications of interest, the downloading of statistical data and market data as well as the entire transmission of incoming and outgoing trade data;
3. The connectivity including cancellation in the event of an interrupted connection (cancel-on-disconnect), the loss or throttling of market data feeds and restoration including starts during the trading day, and the treatment of suspended instruments or market data not updated; and
4. Whether or not the trading algorithms or trading strategies used or to be used contribute to disorderly trading conditions or cause these.
5. In cases in which automated order entry is done through an order routing system pursuant to item 8 or by direct electronic access pursuant to item 9, the aforementioned checks must also cover their operation in accordance with sub items 1 to 4.

Trading members must furnish proof to the exchange operating company on the execution of the tests described in items 1 to 5 and must inform the exchange operating company of the results.

4. Connection lines

- (1) The connection of the member trading system is done through one or more leased line(s) or via Internet connection(s) or a combination thereof. The exchange operating company defines at which access point(s) the connection to the exchange EDP system is to be set up.

- a) Leased line:

The procurement, installation and operation of the leased line shall be done by the exchange operating company or a third party it charges with the task. The exchange operating company shall ensure that all of the leased lines are set up with bandwidths. The details, especially the possible bandwidths and the routes shall be defined by the exchange operating company. A requirement for a connection via a leased line is that the connection routes and types supported by the exchange EDP system must be available at the trading member and it must be possible to set up and operate the lines under the usual conditions and for reasonable costs, while at the same time ensuring that the security standards and quality defined by the exchange operating company are met. The exchange operating company may define that a trading member be permitted to connect to the exchange EDP system only with a minimum and/or maximum number of leased lines if this is required for system capacity reasons or for other reasons.

- b) Secure Internet connection:

The connection of a trading member to the Internet is the sole responsibility of the trading member. This includes the physical setup of a connection to the Internet such as the selection of an Internet service provider as well as the setup of general security functions such as firewalls, etc.

The connection of a trading member to the EDP systems of the stock exchange via the Internet is the shared responsibility of the exchange operating company and the trading member. This includes the entire physical connection of the trading member's systems to the stock exchange's EDP systems as well as all security measures that must be taken to ensure orderly trading.

Within its failsafe and secure connection to the Internet, the exchange operating company ensures a sufficient bandwidth and informs the trading member of the parameters for a secure Internet connection to the stock exchange's EDP system. The trading member must ensure that all parameters such as the bandwidth to the Internet, system addresses, the security certificates

used, etc. comply with these requirements. The exchange operating company will monitor compliance with the parameters as well as with the strict security requirements with the same due care as for other types of connections.

5. Locations

- (1) A **location** designates the entirety of all business premises of a trading member within a building complex under the address given by the trading member from where an application is submitted to the exchange operating company for the technical connection of the member trading system (technical location) and/or for trading access of a trading member for an exchange trader (trading location). The exchange operating company may reject the connection from the location of the trading member if the applicability and compliance with the General Terms and Conditions of the Exchange Operating Company pursuant to § 23 Stock Exchange Act 2018 cannot be guaranteed and it is not possible for the exchange operating company or a third party it may charge with the task to conduct an inspection. Business premises at which the member trading systems are installed that serve merely as backup systems or for taking part in technical simulations are not considered locations in the meaning of these Rules.
- (2) A trading member system must be installed at a location of the trading member and connected to the exchange EDP system. Participation of a trading member in exchange trading must consist at least of one technical location and of one trading location. Additionally, participation of a trading member in exchange trading is possible from several technical locations as well as from several trading locations.
- (3) If a trading member connects to the exchange EDP system via a leased line, the trading member may connect – in departure from paragraphs 1 and 2 and item 4 – individual hardware components of its member trading system via a line from one technical location to the exchange EDP system and further hardware components of its member trading system via another line from a further technical location (**split location**). A requirement for this is that both locations communicate via the same network area pursuant to item 3 para 4 with the exchange EDP system and it is ensured that in the event of failure of one line, orderly exchange trading will continue to be possible. The split location must be notified to the exchange operating company which must give its consent.
- (4) The exchange operating company may approve the installation, the connection and the operation of parts of the member trading system on the business premises of a third party charged by a trading member with the operation of its trading system provided the applicability and compliance with the General Terms and Conditions of Business pursuant to § 23 Stock Exchange Act 2018 is guaranteed, in particular, with respect to third parties charged with the operation of its trading system (e.g. computing center). By entering into the corresponding agreements with third parties, the trading member shall ensure that the exchange operating company has the right to inspect the business premises of any such third party at any time to ascertain compliance with the requirements for the connection and operation of a member trading system.
- (5) The exchange operating company may revoke approval pursuant to paragraphs 3 and 4 if orderly exchange trading or system security is at risk due to the connection or the operation of parts of the member trading system.

6. Backend entry devices, access and interfaces

- (1) A backend entry device is an EDP system of the trading member that is used to enter orders into the exchange EDP system. Backend entry devices may be installed at the technical locations and the trading locations pursuant to item 5, para 1 and 3 of the trading member and from there connected to the EDP system of the exchange. Item 5, para 4 does not apply.
- (2) To maintain access to the EDP system of the exchange, a trading member must have at least one available backend entry device via a non-programmable connection or an interface to the EDP system of the exchange. Further details are defined by the exchange operating company.
- (3) The exchange operating company may permit the connection of several terminals upon written request of a trading member. The exchange operating company may limit the number of member trading systems requested by a trading member if this is necessary for reasons relating to system performance or for other material reasons.
- (4) The exchange operating company may stipulate that trading members connect to the exchange EDP system only via certain interfaces and must also meet further minimum requirements, especially regarding the programming of the interfaces.

7. Trading member software

- (1) In addition to the exchange software, trading members may install their own software (**Member Software**) on their member trading systems. The exchange operating company may define that trading members must register the software with the exchange operating company and must assign at least one electronic ID (**Identifier**) as specified by the exchange operating company. The Identifier must always be transmitted when the Member Software communicates with the exchange EDP system.
- (2) If the trading member's software causes disruptions to the EDP system of the exchange, the exchange operating company may cancel the use of the Member Software with immediate effect. The Member Software must be sufficiently tested prior to use. Further details are defined by the exchange operating company.

8. Order routing system

- (1) An order routing system is a Member Software application that makes it possible for the entries sent by the various users of the Member Software, in particular, order entry and order cancellation, to be transmitted directly with the user ID of one exchange trader to the exchange EDP system.
- (2) A trading member shall be authorized to connect to an order routing system via an interface upon written request and authorization by the exchange operating company provided the following conditions are met:
 1. The orders sent via the order routing system must be checked by an electronic filter installed at the trading member prior to transmission to the exchange EDP system; this electronic filter checks the orders according to the parameters defined by the trading member and release them for forwarding;

2. The filter must be assigned to an admitted exchange trader on a continual basis who shall be responsible for the definition of the parameters, the control and the monitoring of the filter. The trading member must inform the exchange operating company of the user ID of the exchange trader under which the orders will be sent to the exchange EDP system and notify the name in writing;
 3. The trading member must ensure that all users are given an opportunity to acknowledge and accept the applicable General Terms and Conditions of Business of the Exchange Operating Company pursuant to § 23, Stock Exchange Act 2018. The possibility of acknowledging and accepting the Business Terms by the user may be set up by indicating the Internet address at which the aforementioned Business Terms can be read and accepted by the user.
 4. Furthermore, the trading member must point out to the users of the order routing system made available by the trading member that compliance and adherence to the General Terms and Conditions of Business of the Exchange Operating Company pursuant to § 23, Stock Exchange Act 2018, is mandatory as well as compliance with other capital market regulations such as licensing obligations (e.g. pursuant to the Austrian Banking Act and the Austrian Securities Supervision Act 2018, both as amended) as well as based on the Stock Exchange Act 2018, as amended, and other statutory requirements, in particular, the provisions of European law. In the case of legal entities that are users of the order routing system operated by the trading member, the trading member shall impose the obligation on the user to ensure that any natural person trading and using the order routing system on its behalf is given the possibility of acknowledging and accepting the General Terms and Conditions of Business of the Exchange Operating Company pursuant to § 23 Stock Exchange Act 2018. Furthermore, the trading member shall also to point out that adherence and compliance with said Business Terms is mandatory pursuant to paras 3 and 4 as well as compliance with any other applicable capital market regulations such as those regarding licensing obligations (e.g. Banking Act and Securities Supervision Act 2018) as well as based on the Stock Exchange Act 2018, as amended, and other statutory requirements, in particular, European law provisions.
 5. In the case of additional installations of automated order entry systems linked to an order routing system on the EDP system of the exchange, the trading member must, on its own initiative, immediately submit a request to the exchange operating company in writing to approve this intention. Trading members must ensure that the users of the order routing system they operate include, if applicable, an ID in the meaning of item 10 para 4 of these provisions.
 6. Upon request the trading member will provide information to the exchange operating company on its users of the order routing system it operates
- (3) The trading member must take the appropriate measures when operating an order routing system to monitor incoming order flows for any irregularities. If necessary, the trading member shall immediately dissolve any unauthorized combination of systems, expel the user from the order routing system, and report the incident to the exchange operating company.
 - (4) As regards the use of the order routing systems, the trading member shall be responsible for ensuring that users only use the option of order routing for the intended purpose, in a system-compliant manner, and in accordance with the provisions of the Stock Exchange Act.

- (5) The forwarding of data and information to third parties that is received in the exchange EDP system via an order routing system requires the consent of the exchange operating company. The consent of the exchange operating company vis-à-vis a trading member operating the respective order routing system shall be deemed given if the trading member has entered into a data vending contract for the price data received from the exchange EDP system.

9. Direct market access

- (1) Direct market access is a type of direct electronic access in the meaning of Article 4 (1) No. 41 MiFID II: “direct electronic access” means an arrangement where a trading member of a trading venue permits another person to use its trading code so as to permit the person to electronically transmit orders for financial instruments directly to the trading venue. Direct market access includes arrangements which involve the use of the infrastructure of the trading member or any connecting system of the trading member by said person to transmit orders. The exchange operating company permits direct access under the following conditions. The exchange operating company does not permit arrangements where such an infrastructure is not used by this person (sponsored access).
- (2) The exchange operating company permits trading members to provide direct market access if they are licensed as a credit institution or as an investment firm in the meaning of Article 48 (7) MiFID II.
- (3) A trading member is authorized, upon written request and with the consent of the exchange operating company, to grant direct access to a third party (DMA Customer) provided the following conditions are met when submitting the application and for the entire duration of direct market access:
1. The trading member has guidelines and procedures in place for its activities as a provider of direct market access. The trading member imposes the obligation on the DMA Customer to comply with these guidelines and procedures by entering into a corresponding contract. This contract must also impose the obligation on the DMA Customer to comply with all applicable legal requirements as well as with the Terms and Conditions of Business of the Exchange Operating Company, all as amended.
 2. The trading member must inform the exchange operating company in writing of the name of the exchange trader and the user code used to transmit the orders of the DMA Customer to the exchange EDP system.
 3. The trading member regularly reviews the qualification of the DMA Customer before it is granted direct market access and also during the period of direct market access – at least once a year – and checks if the trading member meets the requirements and applicable conditions for making direct market access available. The trading member must comply, in particular, with the requirements of Delegated Regulation (EU) 2017/589 of the European Commission, in particular, Article 22 of this Regulation as well as Article 2 (1) lit d ii) of Directive 2014/65/EU and the corresponding provisions enacted in national law.
 4. The trading member must be in a position to suspend or permanently terminate direct market access made available to the DMA Customer at any time. The trading member must define the corresponding conditions in its guidelines and procedures for its activities as a provider of direct market access in the event market access is suspended or terminated. This deemed given when the DMA Customer fails to comply with applicable legal provisions, the terms and conditions of the exchange operating company or the provisions defined in the contract with the trading member.

5. The trading member monitors incoming order flows under direct market access. In this context, special attention is paid to checking if the trading member observes the defined thresholds and to ensure that no conditions are created that could cause market disruptions. If required by law, the trading member must monitor trading by the DMA Customer in real time.
 6. The trading member assigns unique identification codes to its DMA Customers to be able to correctly allocate at any time the orders entered.
 7. The trading member ensures that orders and trades of a DMA Customer are marked in such a manner to be able to differentiate these from other orders and trades. The marking of orders of DMA customers must be done in a manner defined by the exchange operating company for order entry into the exchange IT system.
 8. The trading member must be in a position to automatically block or cancel orders of the DMA Customer and to interrupt the order flows of DMA Customers under the conditions stated in Article 21 (1) lit b), c) and d) of Delegated Regulation (EU) 2017/589 of the European Commission.
 9. The trading member must have an adequate risk management in place in order to guarantee proper trading when making direct market access available. Risk management must include processes to adequately assess, steer and mitigate the risk of market disruptions and the potential risks to trading members. In this context, the trading member must also inspect the internal control systems of its DMA customers.
 10. The trading member keeps records of the monitoring and control measures taken, of the orders entered by DMA Customers and of the regular inspections of DMA Customers. The trading member shall make its records available to the exchange operating company upon request.
- (4) The trading member is always responsible for the trades and orders of a DMA Customer and also for compliance by the DMA Customer with all applicable provisions during the use direct market access.
 - (5) The trading member provides information on its DMA Customers to the exchange operating company upon request.
 - (6) The trading member informs the exchange operating company when it discontinues its activity as a provider of direct market access.
 - (7) In the case of an additional installation or of the installation of automated order routing systems linked to the direct market access to the exchange EDP system, the trading member must, on its own initiative, immediately submit a request to the exchange operating company in writing to approve such installation. The trading member must ensure that the DMA Customers provide identification, if applicable, in the meaning of item 10 para 2 sub para 4 of these Rules.

10. Automated order entry system or algorithmic trading

- (1) "Algorithmic trading" is trading in a financial instrument in which a computer algorithm automatically determines the order parameters. Order parameters are decisions regarding whether an order should be triggered, the timing, the price or quantity of an order, and how an order is to be processed after being entered: with restricted human intervention or even none at all. This term does not apply to

systems used to forward orders to the exchange EDP system, to process orders without any specific order parameters, to confirm orders or for the post-trade processing of executed orders. An automated order entry system is the member software of a trading member for executing algorithmic trading.

- (2) The trading member shall have the right to connect automated order entry systems to the interface upon written request and with the approval of the exchange operating company, provided that the trading member guarantees at all times
1. that these are installed at the locations of the trading member or of a third party it has charged pursuant to item 5 para 4;
 2. the parameters have been defined by a qualified exchange trader admitted to trading on behalf of the trading member;
 3. the system is controlled during exchange trading hours by said trader, and
 4. the orders or quotes generated through algorithmic trading are marked when they are entered, modified and deleted in accordance with applicable law in the exchange EDP system and the trading algorithms used in each case are clearly identified. This shall also apply in the event that a trading member directly trades through the exchange EDP system or transmits orders to the exchange EDP system through another trading member via order routing. The designation of the orders or quotes generated and the identification of the respective trading algorithm used must be done via the input options available in the exchange EDP system. The identification of the trading algorithm used in each case must be verifiable, unique and consistent. The requirement to designate and identify the respective trading algorithms does not apply to quotes entered to determine a reference price without turnover, and
 5. where individual orders or quotes are generated by algorithms and have the same designation with respect to both the investment decision in the meaning of Article 8 of Delegated Regulation (EU) 2017/590 as well as to the execution of trades in the meaning of Article 9 of Delegated Regulation (EU) 2017/590, these must additionally be identified by the execution attribute self-match prevention (SMP) and the same SMP identification in continuous trading. § 13 (5) Xetra Trading Rules apply accordingly.
- (3) Upon request of the exchange operating company, the trading member must describe the software in more detail regarding type and function. Further details are defined by the exchange operating company. The exchange operating company may refuse the connection of an automated order entry system if such connection poses a threat to orderly exchange trading or to system security.
- (4) Trading participants must, at all times, monitor in real time all algorithmic trading executed under its user ID for signs of disorderly market conditions in accordance with respective applicable laws.
- (5) Trading participants are under the obligation to inform the exchange operating company in advance of any changes planned to their automated order entry systems or to their trading algorithms.

11. Revocation of connection permissions

- (1) The exchange operating company may restrict or revoke a connection of systems pursuant to items 8, 9 or 10 (order routing systems, direct market access or automated order entry systems) in the following cases

1. The conditions for permission granted were not given, especially if permission was granted based on incorrect or incomplete information supplied by the trading member; or
 2. The conditions for granting permission are no longer given at a later time; or
 3. A trading member or a user of the system operated by the trading member repeatedly and continuously breaches the Terms and Conditions of Business of the Exchange Operating Company, in particular, the relevant provisions of items 8, 9 or 10 of these Rules; or
 4. Orderly exchange trading can no longer be guaranteed due to the operation or the use of the concerned system or it is feared that it is impossible to guarantee orderly exchange trading.
- (2) In the case of extraordinary market situations, the exchange operating company has the possibility of restricting or revoking the connection permissions for systems pursuant to items 8, 9 or 10 (order routing systems, direct market access or automated order entry systems) for all users, and to take the appropriate technical measures to enforce its decision.

12. Multi-member frontend system

- (1) Several trading members may connect their frontend entry devices via a common interface to the exchange EDP system (**multi-member frontend system**).
- (2) The trading members are under the obligation to notify the exchange operating company in writing if they are connecting to the exchange EDP system via a multi-member frontend system. The exchange operating company defines in detail the further conditions for connecting a multi-member frontend system.

13. Staff

- (1) The trading members are under the obligation to make qualified personnel available in sufficient numbers at all times during exchange trading hours to ensure orderly exchange trading and to guarantee that they can be reached by telephone. This applies only as long as the orders of trading members are in the exchange EDP system or are entered into said system.
- (2) Moreover, a contact person must be notified to the exchange operating company that can be reached in the case of technical disruptions or proof must be furnished of a service agreement with a third party.

14. Obligation to maintain the system's technical capacities

- (1) To secure orderly exchange trading, the exchange operating company may define a maximum number of entries into the stock exchange EDP system per second for every trading member. In the event the maximum limit is exceeded, the exchange EDP system will reject every additional entry for the trading member in the relevant second.
- (2) The exchange operating company may measure the loads generated by the individual member trading systems on the exchange EDP system and, if necessary, limit the loads through technical measures or

exclude the concerned trading member from the use of the exchange EDP system if this is necessary to ensure system security or for any other material reasons.

- (3) The exchange operating company defines measurement figures for the maximum order transaction ratio. The measurement figures are based on the transaction behavior of the trading members and reviewed yearly, and updated and published if applicable. Trading participants are under the obligation to observe the defined order-to-trade ratios. The exchange operating company is entitled to collect fees for the use of the system that exceeds the maximum order-to-transaction ratio.

15. Prohibition of abuse of the system

The trading members are permitted to use the exchange EDP system only for trading purposes and for the clearing of trades in the markets operated by the exchange operating company. Any other use shall require a prior written agreement between the trading member and the exchange operating company.

16. Technical problems

- (1) In the case of technical problems, the exchange operating company may block or restrict access to the exchange EDP system for one, several or all trading members irrespective of whether the technical problem is at the exchange operating company or at one, several or all trading members.
- (2) Trading members are under the obligation to inform themselves of the technical requirements and/or of any changes through the info channels made available by the exchange operating company. The exchange operating company will inform trading member without delay, insofar as possible, of any technical problems. In the event of technical problems with the exchange EDP system, trading members are under the obligation to permit the exchange operating company or a third party it charges with the task of accessing the locations at which the member trading systems are installed for the purpose of repairing the disruption.
- (3) In the event technical access is blocked for all trading members, no further entries can be made into the exchange EDP system (**halt status**). Following a halt status, trading is continued in accordance with the general rules. The exchange operating company will immediately inform the trading member regarding the time sequence of the trading phases.
- (4) The exchange operating company may, in the event of failure of a member trading system or of a partial failure of the exchange EDP system, upon the request of the trading member, make entries on its behalf into the exchange EDP system (**trading-on-behalf**).
- (5) The **heartbeat** functionality is an application that may be made available upon request, and, provided the trading member enters binding quotes for the shares defined by the exchange operating company, permits trading members to continuously monitor the connection between a functionality of a trading member (quote machine) and the exchange EDP system based on a fixed interval signal.
- (6) If the signal is not received within a binding, pre-defined period, all binding quotes of the predefined user group of the trading member are automatically deleted. The deletion is done also if the internal system failover mechanism restores a connection. During trading phases in which the trading model does not permit the cancellation of orders, orders are cancelled in the next trading phase. In the event of technical problems or disruptions to the EDP system of the exchange, especially if the capacity of

the heartbeat functionality is exceeded, the exchange operating company may interrupt the provision of this functionality for individual trading members or for all trading members. In this case, there is no automatic deletion of the binding orders of the user affected by the interruption.

- (7) The trading members must immediately notify the exchange operating company by telephone if entering or receiving data is not possible at all or only in part due to a disruption of operations or due to force majeure. In such case, the exchange operating company may, upon request of said trading member, enter the data into the exchange EDP system for electronic trading.
- (8) The trading member or the affected exchange trader must immediately notify the exchange operating company of any failure in the telecommunications or any another disruption that prevents telephone contact.

17. Contingency planning

- (1) Every trading member is responsible for taking the appropriate measures for contingency planning and action in its area of responsibility. These measures are defined, monitored and regularly reviewed in accordance with legal requirements, and serve, above all, to ensure that disorderly trading conditions are avoided.
- (2) A trading member has the option of setting up backup locations, furnishing these and connecting them to the EDP system of the exchange. These connections are inactive as a rule and are only activated in the case of emergency.
- (3) The setting up and operation of a backup location is subject to the provisions of items 2 to 5. The one-time and recurring costs in this context are borne by the trading member.
- (4) To guarantee uninterrupted access to the exchange EDP system in the case of emergency, a trading member may set up a separate network for the backup locations.

18. Synchronization of the clocks used

Trading members must ensure that the systems used for electronic trading comply with applicable legal provisions applicable to system time with respect to synchronization and preciseness, and that the systems have the relevant process for verifiability to coordinated universal time (UTC) and are regularly checked.

19. Obligation to provide information to the exchange operating company

The trading member is under the obligation to provide the exchange operating company with information regarding any questions on the market access of the trading member to the exchange EDP system operated by the exchange operating company and to grant access to the documentation at all times.

20. Glossary

Algorithmic trading	Algorithmic trading is trading in financial instruments in which a computer algorithm automatically determines the order parameters. Order parameters are, in particular, decisions on whether an order should be triggered, on the timing, the price or quantity of an order, or how an order is to be processed after being entered: with restricted human intervention or even none at all. The definition does not apply to systems that forward orders to the exchange's EDP system, process orders without any specific order parameters, confirm orders or to the post-trade processing of orders executed.
Automated order entry system	The software of a trading member for executing algorithmic trading.
Exchange trader	Exchange traders admitted to trading by the exchange operating company pursuant to § 35 Stock Exchange Act 2018.
Exchange EDP system	The exchange EDP system comprises all of the operable trading systems installed and the entirety of all hardware elements linked at single network nodes as well as all components required for connecting the network nodes (transmission lines to the telecommunications installations, etc.) that create the technical backbone for executing trading in the individual markets. Changes to the exchange EDP system may be made at the sole discretion of the exchange operating company.
Exchange operating company	Wiener Börse AG as the Vienna Stock Exchange in its function as a securities exchange and as a general commodity exchange and as the exchange operating company.
Direct Market Access	Direct market access is a type of direct electronic access in the meaning of Article 4 (1) No. 41 MiFID II: 'Direct electronic access' means an arrangement where a trading member of a trading venue permits a person to use its trading code so that the person can electronically transmit orders for a financial instrument directly to the trading venue. Direct market access includes arrangements on the use of the infrastructure of the trading member or of any connecting system of the trading member by said person to transmit orders.
DMA Customer	A person who under an arrangement with a trading member can use the user code of the trading member to transmit orders to the exchange EDP system of the exchange operating company and is thus granted direct market access – but not sponsored access – by the trading member.
Backend entry device	A backend entry device is an EDP system of a trading member that enables the entry of orders into the EDP system of the exchange. Backend entry devices must be installed at the locations defined in item 5, para 2 of the trading member and connected to the exchange EDP system from these locations.
Trading access	Trading access refers to the possibility of a trading member to access the exchange EDP system to enable it to engage in trading. Trading access to one or several markets is only permitted for trading members.

Location	A location refers to the entirety of all business premises of a trading member within a building complex at the address given by the trading member in its request sent to the exchange operating company for a technical connection of the member trading system (technical location) and/or for which a request for trading access has been submitted for an exchange trader (trading location) by a trading member.
Multi-member frontend system	A multi-member frontend system refers to a connection through which several trading members connect their backend entry devices to the exchange EDP system via a common interface.
User	Users are customers and contractual partners of a trading member to whom the trading member has given the right to use its trading access via an order routing system.
Order routing system	An order routing system is a member software application that makes it possible to send the entries of the different users of the member software, especially orders and order cancellations, directly to the exchange EDP system with the user ID of an exchange trader. The differentiation to direct market access must be made pursuant to Article 20 of Delegated Regulation (EU) 2017/565.
System access	System access refers to the access possibility of a trading member to the exchange EDP system which gives the trading member only technical access to the EDP system of the exchange, but does not include permission to engage in trading activities. System access is open to all trading members.
Technical user	A technical user is a person that needs access to the exchange EDP system for technical or administrative reasons. Unlike exchange traders, technical users do not have the option of trading.
Member trading system	A member trading system comprises all hardware and software components of a trading member, in particular, the local networks, interfaces and backend entry devices with which a trading member connects from a location to the exchange EDP system for the purpose of exchange trading and which makes orderly exchange trading possible.

Note on legislation mentioned in the Rules:

Banking Act (*Bankwesengesetz, BWG*)

Securities Supervision Act (*Wertpapieraufsichtsgesetz, WAG*)

Stock Exchange Act (*Börsegesetz*)

Promulgated by Official Notice of the exchange operating company, Wiener Börse AG, No. 926 of 28 June 2012 (these Rules enter into force on 6 July 2012) and amended by Official Notices No. 60 of 16 January 2014 (amendment effective as of 20 January 2014), No. 1144 of 13 July 2015 (amendment effective as of 15 July 2015), No. 1143 of 27 July 2017 (amendment effective as of 31 July 2017), No. 2044 of 21 December 2017 (amendment effective as of 3 January 2018) and No. 2317 of 14 November 2019 (amendment effective as of 18 November 2019), No 1498 of 24 June 2021 (amendment effective as of 28 June 2021) and No 1236 of 9 May 2023 (amendment effective as of 22 May 2023).