



Trading on SIX Swiss Exchange

Preparatory Examination Documentation for Traders

Module Trading

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1. Introduction

SIX Swiss Exchange AG's (SIX Swiss Exchange) trader training and testing programmes set high standards in respect of quality and customer orientation. They ensure that traders possess the requisite knowledge for trading in securities, thereby ensuring a smooth trading process. These programmes are primarily available to traders of participants and reporting members. The SIX Swiss Exchange Member Education Team coordinates and oversees the training and examination programmes. Traders benefit from the real-world professional knowledge of experts from other departments of the Exchange. The training programme is designed for all SIX Swiss Exchange traders, with or without a SIX Swiss Exchange-recognised licence, who wish to obtain this professional qualification. Classes are held on SIX Swiss Exchange premises (Zurich and London). On request they can also be held at the customer's premises outside Switzerland. Comprehensive preparatory materials and an online sample test are available so that participants can prepare for the examination through self-study.

The web-based testing application enables traders to sit for the modular trader examination at the premises of SIX Swiss Exchange participants. The test can be taken at any time, and participants can choose to hold examinations for individuals or groups. Once the examination is finished, the trader can immediately view and print out the result. Reporting members' traders sit the examination at the SIX Swiss Exchange premises.

A trader's licence will lapse if the trader remains unregistered for two years. Traders renewing their registration are required to pass the trader examination for licensed traders.

1.1. Types of Trader Examination

The examinations and preparatory training courses are designed for specific target groups and have a modular structure. There are two different examinations:

- The examination for unlicensed traders without a recognised trading licence ("Trading" and "Rules and Regulations" modules)
- The examination for licensed traders with a recognised trading license (the "Trading" module)

Recognised licences:

Licence/Certificate	Regulator/Exchange
Certificate in Securities	Securities & Investment Institute London Stock Exchange
Börsenhändlerprüfung Eurex	Eurex
Börsenhändlerprüfung Xetra	Deutsche Börse AG, Wiener Börse AG
SAXess authorisation course	NASDAQ OMX Nordic Market Stockholm Kopenhagen Toronto
General Securities Registered Representative Examination (Test Series 7)	FINRA (Financial Industry Regulation Authority) U.S. Securities and Exchange Commission
HKATS Operations, Trading Procedures & Rules Examination	The Stock Exchange of Hong Kong
Canadian Securities Course	Canada, Services and Investment (CSI Global Education Inc.)
JSDA's Examination for Class-1 Sales Representatives	JSDA – Japan Securities Dealers Association Tokyo Stock Exchange
International Fixed Income and Derivatives Certificate (IFID)	International Capital Market Association (ICMA)
INET	NASDAQ OMX Nordic Market Stockholm Kopenhagen Toronto
CLICK	NASDAQ OMX Nordic Market Stockholm Kopenhagen Toronto
DSI (Senior) Securities trader license	DSI (Dutch Securities Institute)
FCA Exam	FCA

1.1.1. Examination for Non-Licensed Traders ("Trading" and "Rules and Regulations" Modules – Manual Parts 1 and 2)

The trading examination for non-licensed traders comprises 100 questions and must be completed within two hours. It consists of questions on the structure and legal basis of stock exchange trading as well as questions on the "Trading" module. Candidates who successfully pass the trader examination are entitled to trade on SIX Swiss Exchange.

Please note:

Traders who do not hold a licence recognised by SIX Swiss Exchange are required to learn the material in the Manuals Part 1 and 2 – the "Trading" and "Rules and Regulations" modules.

1.1.2. Examination for Licensed Traders ("Trading" Module – Manual Part 1)

The examination for licensed traders comprises 50 questions and must be completed within one hour.

It consists of questions on the "Trading Module" and covers the specific features of SIX Swiss Exchange and the Swiss financial sector.

Please note:

Traders who hold a license recognised by SIX Swiss Exchange are only required to learn the material in Manual Part 1 – "Trading" module.

1.2. Structure of the Trader Examination

The trader examination is an electronic examination. A computer program uses a random number generator to select a certain number of questions from a pool; questions are selected individually for each candidate. Candidates may decide at registration whether to take the test in German or English. Candidates register for the examination through the SIX Swiss Exchange website:

1.2.1. Question Types and Evaluation

The examination comprises two different types of questions:

- Multiple-response questions with up to five possible answers
- True / False questions

In multiple-response questions, one or more answers may be right. In order to answer the question fully and correctly, all correct answers must be selected.

All questions are weighted equally. If a question has multiple correct answers, the number of right answers given is restated as a percentage of the number of possible right answers. Wrongly answered questions result in point deduction of that question.

1.2.2. Aids during the Examination

a) Examination for licensed traders

The following documents are available in electronic form during the test:

- Reporting Rules
- 2018/02 FINMA Circular "Duty to report securities transactions"

b) Examination for non-licensed traders

The following documents are available in electronic form during the test:

- Financial Market Infrastructure Act, FMIA
- Ordinance on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading (Financial Market Infrastructure Ordinance, FMIO)
- Federal Act on Financial Institutions (Financial Institutions Act, FinIA)
- Ordinance on Financial Institutions (Financial Institutions Ordinance, FinIO)
- FINMA Financial Market Infrastructure Ordinance, FMIO-FINMA
- SIX Swiss Exchange AG Rules of Organisation, RO
- SIX Swiss Exchange AG Rules for the Appeals Board, RAB
- 2018/02 FINMA Circular "Duty to report securities transactions"
- Reporting Rules

1.3. Tips on preparing for the Exam

Sample exams containing the relevant examination questions are available on the following website: <https://www.six-group.com/de/products-services/the-swiss-stock-exchange/education.html>. Since these questions are taken from the actual question pool, no answers are displayed. For licensed traders, only the questions covered by Part 1 ("Trading") of the Manual are relevant.

The sample exam has the following objectives:

- Reviewing what the candidate has learned
- Simulating the actual exam situation (timing, type of questions, working with the tool)

We recommend that you research your answers in the sample exam. You can assess the accuracy of your answers on the basis of your percentage score. Questions with answers and explanations can also be found in this Manual.

Further information on the examination and preparatory training courses is available at:

Member Education website:

<https://www.six-group.com/de/products-services/the-swiss-stock-exchange/education.html>

2. SIX

SIX operates Switzerland's financial market infrastructure and offers comprehensive services on a global scale within the company's four business units: Securities & Exchanges, Banking Services, Financial Information, Innovation & Digital.

As an infrastructure provider with international operations, SIX forms the backbone of the Swiss financial centre and sets global standards with first-class infrastructure services for the financial sector.

SIX stands for high efficiency and innovative power across the entire value chain. The company offers quality services at highly competitive rates to national and international financial market participants. It provides an open architecture through which participants can access trading, clearing and settlement and maintains a worldwide network of partners, with whom it collaborates closely.

SIX is jointly owned by around 130 domestic and foreign shareholders, who are also users of the infrastructure.

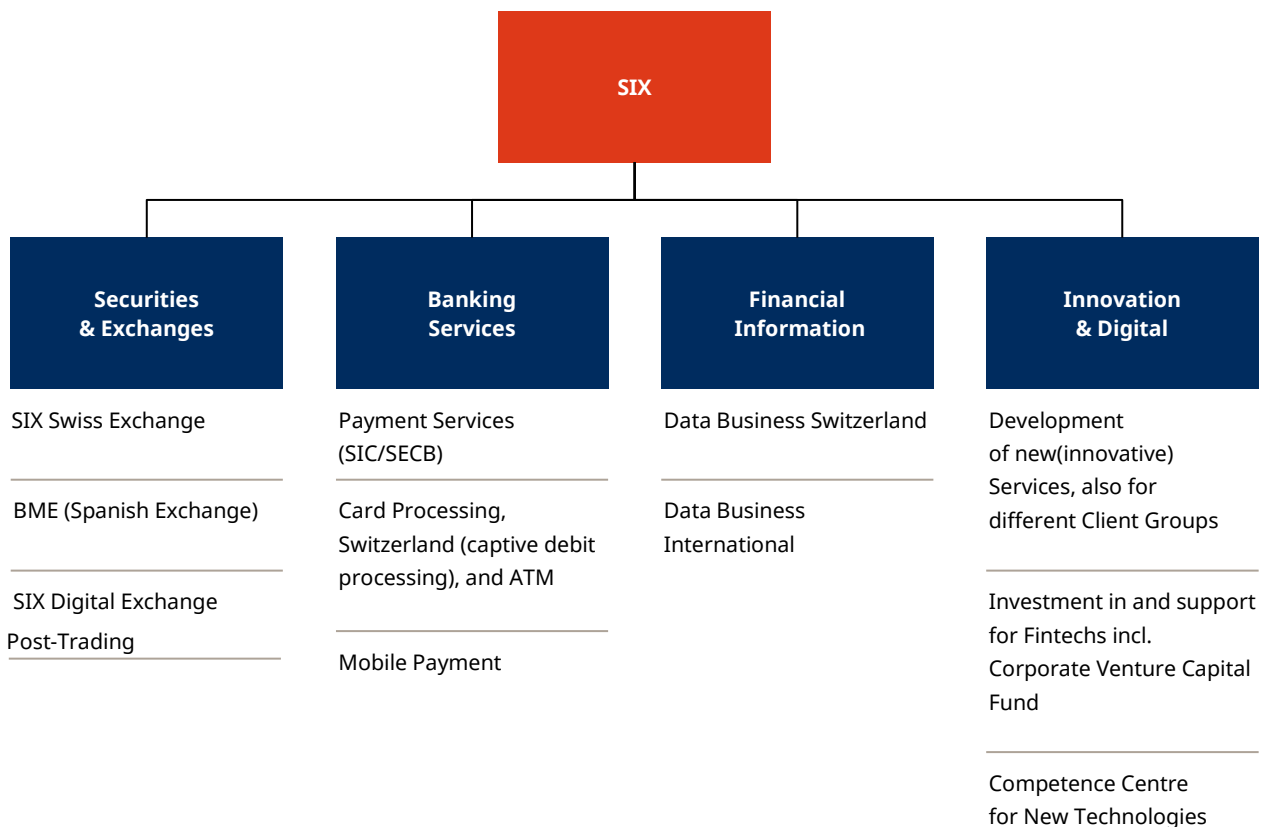


Figure: The four Business Units of SIX

2.1. Aspiration and Success Factors

Strengthening the financial centre	SIX is fully committed to the Swiss financial centre and its domestic and foreign participants. The company strengthens the Swiss financial centre's positioning in a competitive environment by concentrating the financial market infrastructure under one roof.
Innovative power, efficiency and international competitive excellence	SIX strives for high efficiency and innovative power across the entire value chain of the financial market infrastructure. As a provider of quality services and price leader it creates added value for its national and international clients.
Users as owners	The company is owned by its domestic and foreign users. This broad-based ownership structure, with long-term stability secured by a shareholder agreement, underpins the company's commitment to its clients and key players in the Swiss financial sector.
Open architecture	Through its open architecture, the company allows participants to access trading, clearing and settlement. It maintains a worldwide network of partners, with whom it collaborates closely.
The entire value chain	SIX covers the entire value chain of the financial market infrastructure – from securities trading and settlement via financial information through to payment transfers.
Employee potential	SIX operates in 23 countries, offering its approximately 2,000 employees extensive opportunities for career development.

2.2. Business Areas and Structure of SIX

SIX business areas			
Securities & Exchanges	Banking Services	Financial Information	Innovation & Digital
<ul style="list-style-type: none"> • Shares • Warrants and Structured Products • Bonds • Funds and ETFs/ETPs • Market data and indices • Clearing • Settlement • Custody • Repos 	<ul style="list-style-type: none"> • Interbank payments (SIC and euroSIC) • Card services • POS services • Direct Debit/Paynet • Acceptance and processing of card-based payments • E-commerce solutions 	<ul style="list-style-type: none"> • Stock market data • Index data • Reference data • Valuation prices • Administrative information on securities • Official monitoring agency 	<ul style="list-style-type: none"> • Development of new (innovative) services, also for different client groups

Sample question:

SIX operates in the following business areas:

Answer:

- Securities trading
- Securities services
- Financial information

Answer: a), b), c)

Reasons: Following the merger of three infrastructure providers, these business areas are offered under the SIX brand.

3. SIX Swiss Exchange

3.1. Introduction

The stock exchange is an organised market for goods and products (including securities) where supply is matched with demand. It offers a marketplace where enterprises can find suppliers of capital and where investors can take part in the development of enterprises.

Exchanges can be classified according to the nature of the products traded:

- Securities exchanges (for example financial market products, equities, derivatives, debt instruments, funds)
- Foreign exchange markets (currencies)
- Commodities exchanges (material goods such as raw materials, agricultural products or foodstuffs)
- Futures and options exchanges

SIX Swiss Exchange was established in 1993 as a securities exchange under the name "Schweizer Börse/Bourse suisse/Borsa svizzera/Swiss exchange".

It introduced electronic exchange operations in 1995–96. But its roots go back further: it was created from the Association of Swiss Stock Exchanges as successor organisation to the earlier trading pits in Basel, Geneva and Zurich.

3.2. SIX Swiss Exchange AG

SIX Swiss Exchange is a central link in the value chain of the Swiss financial market. It organises, operates and regulates important elements of the capital market infrastructure.

The services provided by SIX Swiss Exchange cover the following areas: spot market, information products, operation of automated trading platforms and (through SIX Exchange Regulation AG (SIX Exchange Regulation) the admission of securities for trading on the exchange.

Although firmly embedded within the Swiss financial centre, it systematically pursues an international strategy. SIX Swiss Exchange also provides first-class stock exchange services in collaboration with partners across the globe.

SIX fulfils another important function by establishing regulatory parameters for issuing and trading in securities as well as monitoring and ensuring compliance with these parameters. As a privately-owned public limited company, SIX Swiss Exchange represents the interests of the Swiss financial centre and ensures a balance of interests among all market participants. For example, the Surveillance & Enforcement unit of SIX Exchange Regulation, monitors trading to ensure compliance with legal requirements and trading regulations (incl. implementing provisions). Surveillance & Enforcement will report any suspected breaches of the law or other irregularities to the Swiss Financial Market Supervisory Authority (FINMA) and, if necessary, the appropriate law enforcement authorities (see Manual Part 2 – "Rules and Regulations" module).

SIX Swiss Exchange is subject to Swiss law. The Federal Act on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading (Financial Market Infrastructure Act, FMIA) sets out the concept of self-regulation. SIX Swiss Exchange itself is supervised by FINMA.

The new regulatory provisions of FMIA result in significant adjustments with regard to financial market infrastructure. As a result of these requirements, SIX reapplied for the corresponding trading licenses.

Sample question:

SIX Swiss Exchange AG is

Answer:

- a) an Aktiengesellschaft (public limited company)
- b) an association
- c) an agency of the Swiss federal government
- d) a self-regulatory organisation

Answer: a), d)

Reasons: SIX Swiss Exchange AG is a public limited company; thus it is neither an association nor a federal agency. It is self-regulated and is supervised by the federal agency FINMA.

4. Trading Participants

4.1. Overview of Market Participants

The investment decisions of the total population of investors determine what happens on the securities exchanges. Private investors are considered indirect market participants, as trading is ultimately performed through the financial companies who are direct participants on the Exchange.

SIX Swiss Exchange participants/securities firms are required to obtain a licence from the Swiss Financial Market Supervisory Authority (FINMA) and must comply with the rules, directives and guidelines of SIX Swiss Exchange.

4.1.1. Securities Firms

A securities firm (formerly known as securities dealer) within the meaning of the Federal Act on Financial Institutions (Art. 41 FinIA) is an entity that, on a commercial basis:

- trades in securities in its own name for the account of clients;
- trades in securities for its own account on a short-term basis, operates primarily on the financial market and:
 - could thereby jeopardise the proper functioning of the financial market, or
 - is a member of a trading venue; or
- trades in securities for its own account on a short-term basis and publicly quotes prices for individual securities upon request or on an ongoing basis (market maker).

4.1.2. Market Maker and Liquidity Provider

4.1.2.1. Market Maker

Market makers are banks or securities firms who have a contractual obligation under a market maker agreement to provide binding quotes (bid and/or offer prices) for certain securities during the trading day, to offer a minimum bid and ask volume and not to exceed a maximum bid/ask spread. These requirements vary according to the underlying and apply on a monthly basis during 90% of the official trading hours of SIX Swiss Exchange. Failure to comply with the market maker agreement constitutes a violation of the Trading Rules. Often the issuer of a structured product is also its market maker, but without any contractual obligation to quote bid and/or ask prices.

4.1.2.2. Liquidity Provider

Liquidity providers are participants who place buy and sell orders by means of orders and quotes in accordance with agreed liquidity requirements. They agree to provide liquidity in the market in certain securities.

The Exchange may offer a market maker or a liquidity provider that fulfils its obligations faultlessly better terms than those that apply to other participants.

4.1.3. Traders

Traders are employees of securities firms who engage in transactions in the name and under the responsibility of a participant for its own or a client's account.

4.1.3.1. Registration of Traders

Directive 1: Admission of Participants para. 3.2. Registration authorises a person to act as a trader on a participant's behalf. Applications for registration must be submitted in writing, and any changes must be reported to the Exchange without delay. Traders carry out trading activities on SIX Swiss Exchange under the responsibility of the participant.

A trader must fulfil the registration requirements according to Clause 4.3.2 Trading Rules, i.e. he must

- be of good repute;
- possess sufficient specialist knowledge, in particular the product and market knowledge required for trading on the Exchange;
- be familiar with the trading, clearing and settlement modalities of the Exchange;
- acknowledge the rules and regulations of the Exchange; and

be subject to the participant's direct right of instruction. Evidence of sufficient specialist knowledge is deemed supplied if the trader has passed the trader examination of the Exchange; Should the trader re-register at a later date, the evidence that was previously supplied will be recognised if no more than two years has elapsed since the previous registration was surrendered. Once this period has elapsed, the trader must supply evidence of his specialist knowledge by passing the examination for licensed traders.

If the trader can provide evidence of training or an examination recognised by the Exchange, a simplified trader examination may be administered. The Exchange publishes a list of recognised training programs and examinations on its website.

All registered traders must attend a web-based refresher course in the event of major system adaptations or regulatory amendments, but every two years at the latest. If the refresher course is not attended by the set deadline, the Exchange may suspend the trader.

4.2. Participant Admission Requirements

The Exchange shall admit an applicant as a participant and conclude a participation agreement with it, providing it meets the following admission requirements:

4.2.1. Authorisation as Securities Firm or Remote Participant

The applicant must hold a licence from the Swiss Financial Market Supervisory Authority (FINMA) as a securities firm pursuant to the Federal Act on Financial Institutions (FinIA) or a remote participant authorisation from FINMA, as laid down in the FMIA.

4.2.2. Participation in a Clearing and Settlement Organisation

The applicant must be a participant in a clearing organisation that is recognised by the Exchange, or must have access to such via a general clearing member. The Exchange may grant exceptions to applicants wishing to trade exclusively in securities that are not cleared via a central counterparty.

The applicant must be a participant in a settlement organisation recognised by the Exchange, or must have access to such via a custodian

4.2.3. Collateral Deposit

The Exchange may require participants to pay a collateral deposit, which is used to secure outstanding financial obligations to the Exchange and, secondarily, to cover outstanding obligations to other participants.

4.2.4. General Information on Exchange System Access

The applicant must satisfy the technical and operational requirements in order to be connected to the exchange system.

The requirement for all types of connectivity to the SWXess trading platform (the "exchange system") of the Exchange is that the provisions of the Exchange's rules and regulations are complied with and the exchange system is not negatively affected or damaged by the participant connecting to it.

The participant or application service provider (ASP) must ensure that its business is entitled to connect to the exchange system and carry out the planned activities in accordance with the applicable laws and regulations. The foregoing also applies when the participant is not connected to the exchange system directly but via the technical services of an ASP instead.

**Trading
Rules:
Section 4**

4.3. Participants' Rights and Obligations

Admission entitles the participant to take part in Exchange trading for its own account and that of third parties.

**Trading
Rules:
Section 4.1**

4.3.1. Continued Compliance with Admission Requirements

The participant must comply with the admission requirements laid down in the Trading Rules for as long as it remains a participant.

**Trading
Rules:
Section 4.2**

4.3.2. Compliance with Statutory and Regulatory Provisions

The participant undertakes to comply with and enforce internally:

- a) the code of conduct for securities trading, as laid down in the Federal Act on Financial Institutions (FinIA), FMIA, the relevant FINMA circulars, and the corresponding professional standards;
- b) those domestic and foreign exchange-related laws that apply to it, the corresponding implementing provisions, the rulings of the relevant supervisory authority; and
- c) the Trading Rules, the Directives and any rulings issued by Exchange bodies and/or Regulatory Bodies.

**Trading
Rules:
Section 4.7**

4.3.3. Use of the Exchange System

The Trading Rules provides that participants must refrain from misusing the exchange system. In particular, manipulating the exchange system and its interfaces is prohibited. The improper use or passing on of exchange software or data received from the exchange system is also prohibited.

4.3.4. Record-Keeping Duties

All relevant matters for regulatory purposes (all entries in the securities journal, telephone calls, electronic correspondence, etc.) must be documented.

Further details and additional rules can be found in the Swiss Bankers Association Guidelines (see Manual Part 2 – "Rules and Regulations" module).

**Trading
Rules:
Section 4.6**

4.3.5. Duty to provide Information

The participant undertakes to inform the Exchange and/or SIX Exchange Regulation immediately if:

- it has violated the Trading Rules or is unable to comply with it;
- there is a technical problem connecting to the exchange system;
- it is no longer able to meet (equivalent) technical and operational requirements to those of securities firms;
- the relevant supervisory authority has instigated proceedings against it, its traders, its reporting agents or a person (as described in clause 4.3.1 para. 1 lit. d Trading Rules) above, or has issued a ruling, if these proceedings or rulings are relevant to the admission requirements or registration; or
- access to the clearing or settlement organisation has been or is very likely to be suspended or terminated

Furthermore, while obliged to uphold statutory confidentiality requirements, the participant must provide access to documents and all such information as is required to maintain an orderly market

and to enforce the provisions of the Trading Rules. Where statutory confidentiality requirements apply, the Exchange and/or the Regulatory Bodies may require information in anonymous form.

4.4. Organisational Obligations of Securities Firms

4.4.1. Confidential Price-Sensitive Information

The handling of confidential, price-sensitive information is to be organised and monitored such that improper market conduct may be determined and detriment to clients prevented.

4.4.2. Chinese Walls/Areas of Confidentiality

Measures to restrict internal information flows:

Departments pursuing different objectives must be separated in such a way as to prevent exchange of information in order to prevent conflicts of interest.

Areas of confidentiality must be created through spatial, staffing, functional, organisational and technical IT measures enabling information to be isolated and controlled.

Compliance must be monitored by an authority appointed for this purpose (e.g. a compliance function).

4.5. Supervisory Rules for Market Conduct in Securities Trading (Art. 142ff FMIA)

The participant and its traders are required to observe the applicable market conduct rules, in particular those set forth in FINMA Circular "Market Conduct Rules" (FINMA-RS 08/2013, see also section 4.1.5 of the "Rules and Regulations" module), to uphold the integrity of the market at all times and to refrain from unfair trading practices.

4.5.1. Permitted Securities Transactions

Permitted securities transactions and modes of conduct:

- Market making for the purpose of ensuring liquidity in a security on both buy and sell sides and, where appropriate, reducing the bid/ask spread.
- Issuing parallel buy and sell orders in the same financial instrument or different financial instruments (for example on different trading venues) for the purpose of arbitrage.
- Offering liquidity (liquidity providers, for example algorithmic trading), provided the order book entries and trades do not give out misleading signals for other market participants
- Nostro-nostro in-house crosses where equal and opposite trades are matched in the stock exchange system independently of one another and without any previous agreement.
- Not deleting prices that have already been provided when trading is suspended in connection with buybacks under Article 123 FMIO and price stabilizations under Article 126 FMIO

There is a presumption that there is no breach of Article 142ff FMIA where there is evidence that the securities transactions have an economic basis and are consistent with genuine bid and ask behaviour. For example, use of a Volume-Weighted-Average-Price (VWAP) algorithm to repurchase securities during a buyback.

4.5.2. Market Manipulation

Securities transactions must have an economic basis and be consistent with genuine bid and ask behaviour.

More specifically, the following forms of conduct constitute examples of market manipulation:

- Disseminating false or misleading information on circumstances of material importance to the valuation of a security (e.g. a company's earnings, orders or product pipeline or a general supply shortage).
- Disseminating false or misleading information, rumors or messages that are capable of influencing securities prices in order to exploit the resulting price movement.
- Entering low-volume purchase orders with successively higher prices in order to simulate increased demand amid rising prices (painting the tape).
- Simultaneously buying and selling the same securities for the account of one and the same beneficial owner in order to give out false or misleading signals regarding the supply of, demand for or market price of securities (wash trades).
- Entering equal but opposite buy and sell orders in the same security by prior mutual agreement in order to distort liquidity or prices (matched orders or daisy chains coordinated among a number of parties).
- Constricting the market by building up large positions (cornering) or depositing securities with third parties (parking) in order to distort securities prices (creating a squeeze).
- Buying or selling securities shortly before the exchange closes in order to influence closing prices (marking the close).
- Buying or selling securities in order to move prices (ramping) or keep them at a specific level (e.g. capping, pegging), unless this is done to stabilize prices following a public placement of securities in accordance with FMIA Article 143 and FMIO Art. 126.
- Influencing commodity prices in order to give out false or misleading signals regarding the supply of or demand for securities.
- Creating an overhang of buy or sell orders by entering large orders in the order book that are capable of influencing prices in order to influence the valuation of a security.
- Placing orders in the trading system in order to create an illusion of supply or demand and then deleting them prior to execution (spoofing, layering).

4.5.3. Overview Market Manipulation

Not permitted Conduct	Creating the Illusion of Volume	Manipulating Price	Can be done alone	Done in Groups of Traders
Painting the Tape	✓	✓	✓	
Wash Trades		✓	✓	
Daisy Chains/ Matched Orders	✓	✓		✓
Creating a Squeeze		✓	✓	✓
Marking the Close		✓	✓	
Ramping		✓	✓	
Capping/Pegging		✓	✓	
Spoofing/Layering	✓		✓	

4.6. Swiss Bankers Association Guidelines

All securities firms must observe certain rules of conduct when engaging in securities trading. These rules are set forth in the Federal Acts & Ordinances and described in detail in the Guidelines of the Swiss Bankers Association.

Securities firms have the following duties in relation to their clients:

- a duty of disclosure; they must, in particular, inform clients of the risks associated with certain types of transactions
- a duty of diligence; in particular to ensure the best possible execution (best execution) of client orders and the ability to retrace all the steps taken in the execution of client orders
- a duty of loyalty; securities dealers must ensure that in the event of any potential conflict of interests, clients' interests are not adversely affected
- clients must be treated fairly and equally
- securities orders must be executed or scheduled for execution in the chronological order of entry, irrespective of whether such orders are executed for client accounts, the dealer's own account or an employee's account
- Prohibition of front-running and parallel running: Front and parallel running refers to the practice of taking advantage of price movements before or concurrently with client orders to be executed. The trader uses prior or parallel transactions to take advantage of price movements directly triggered by the client's order.
- Prohibition of price fraud: Price fraud is not permitted. The term refers to the practice of charging the client a higher price than was actually achieved.

In discharging these duties, the client's business expertise and professional knowledge must be taken into account.

Further details and additional rules can be found in the Swiss Bankers Association Guidelines, namely in the "Code of Conduct for Securities Dealers", and the "Rules and Regulations" module.

Additional information: [Swiss Bankers Association - Guidelines](#)

Sample question:

What trading practices are prohibited?

Answers:

- a) Front running
- b) Price fraud
- c) Market Making

Answer: a), b)

Reasons: Front running and price fraud are manipulative practices.

5. Technical Connectivity

5.1. Connectivity Technology

Technical connectivity to SIX Swiss Exchange is provided by the SIX Swiss Exchange Common Access Portal (SCAP) or Co-Location Service.

SCAP - individual and effective connectivity options

SCAP provides an interface with optimum scalability and high data transmission capacity. The connection can be individually tailored to the participant's requirements,. For example, participants wishing to increase market activity can easily increase their bandwidth at any time.

SCAP provides access to both trading environments (member test and production) and all exchange services.

Co-Location - For the fastest possible action and data collection

Co-location access to SWXess bypasses the SCAP access network and instead offers a direct Layer 2 connection to the On Book Matcher via a 200 m equidistant fibre optic cable. Participants can install their technical equipment in the Equinix data center in Zurich next to the SWXess trading engine. This enables minimum latency and maximum data throughput

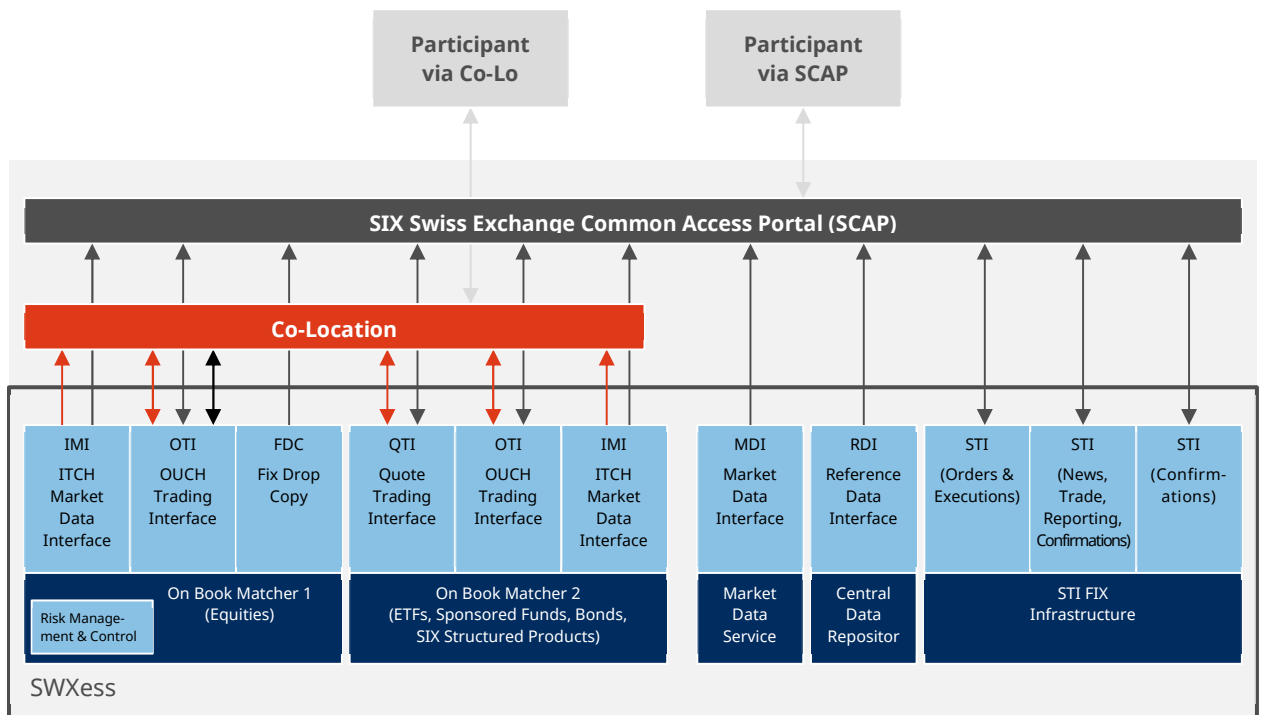


Figure: SWXess

5.2. Types of Connectivity for Trading Participants

Participants can choose from one of the following types of connectivity.

Direct connectivity

Technical connectivity of the participant with the exchange system is accomplished via a direct connection

Connection via an Application Service Provider (ASP)

The participant's technical link-up to the exchange system using ASP connectivity takes place via the connection of an ASP. The participant conducts its transactions via the infrastructure provided by the ASP.

5.3. Interfaces

Several interfaces are available to the participant for connection to trading. The participant selects the most suitable interface and acknowledges that not all interfaces have the same functionality.

Trading Interfaces

- Standard Trading Interface (STI)
- OUCH Trading Interface (OTI)
- Quote Trading Interface (QTI)

Market / Reference Data Interfaces

- ITCH Market Data Interface (IMI)
- SIX MDDX Multi-Dimensional Data fluX™ Interface (SIX MDDX)
- Reference Data Interface (RDI)

Reporting Interfaces

- Standard Trading Interface (STI)
- Transaction Reporting Interface (TFI & RTS22)
- Reporting Graphical User Interface

Further Interfaces

- Trade Reconciliation Report (TRR) – With this status participants can reconcile their trades and trade statuses with that of SIX Swiss Exchange.
- Order Reconciliation Report (ORR) – With this interface participants can reconcile their order statuses with that of SIX Swiss Exchange.
- Transaction Reconciliation Report (TXR) - This Report allows Participants to reconcile their Transaction Reports in a more convenient fashion. The file available via this new TXR interface contains all Transaction Reports which have been created by or submitted on-behalf of a Legal Entity on a given Business Day, irrespective of how the reports have been submitted to SIX

5.3.1. Standard Trading Interfaces (with added Benefits)

Trading interfaces with added benefits enhance the basic On-Book Matcher functions, providing high latency and reduced order throughput. These interfaces are only available via SCAP.

5.3.2. Standard Trading Interface (STI)

The Standard Trading Interface (STI) enables participants to access all trading services and reporting functions. The Standard Trading Interface (STI) provides basic trading and reporting functions. Trade reports, trade corrections and delivery reports can only be processed within the exchange system through this interface. The online Reporting Tool is available as an alternative.

5.3.2.1. STI - Order Types

Order types supported for on-exchange, on-order-book trading:

- Normal order (limit or market)
- Iceberg order

In addition orders for SwissAtMid can be entered through STI.

Orders entered via the STI are persisted (not deleted) in the event of an exceptional situation at SIX Swiss Exchange.

5.3.2.2. Other STI Functions

Other functions supported in addition to STI Orders and Executions:

- STI Trade Reporting
 - One-sided trade report
 - Two-sided trade report
 - Delivery Report
 - Cancellation-Request
- Correction STI Bilateral Trading
 - For off exchange trading on the bilateral platform for structured OTC products
- STI News
 - For obtaining trading-related messages
- STI Confirmations
 - For obtaining confirmation messages

5.4. Direct Trading Interfaces

Direct trading interfaces are used to achieve high performance and ultra-low latency. They allow direct access to the SIX Swiss Exchange On-Book Matcher. Direct trading interfaces are supported by the co-location service, but are also available via SCAP.

5.4.1. OUCH Trading Interface (OTI)

This interface provides the most rapid order input (lowest latency only in conjunction with co-location) and order maintenance. OTI provides direct, high-speed direct access for activities that

require high-frequency trading. Furthermore, participants receive status changes and trade confirmations for orders entered via this interface.

5.4.1.1. **OTI - Order Types**

OUCH Trading Interface (OTI) supports the following types of order for on-exchange, on-order-book trading:

- Normal order (limit or market)
- Iceberg order

In the event of an exceptional situation at SIX Swiss Exchange orders previously entered via the OTI interface will be deleted

5.4.2. **Quote Trading Interface (QTI)**

Quote Trading Interface (QTI) is the direct interface for market makers. It defines the business message protocol for quote management, allowing market makers to enter, replace and cancel quotes as well as receive status changes and executions (trades) for their quotes.

In the event of an exceptional situation at SIX Swiss Exchange orders previously entered via the QTI interface will be deleted.

5.5. **Market Data Interfaces**

5.5.1. **ITCH Market Data Interface (IMI)**

The ITCH Market Data Interface (IMI) enables the participants, ASPs and market data recipients to obtain real-time market information. This market data service was designed specifically for high performance and low latency.

The following information is transmitted:

- Price tick size
- System event messages
- Order book-relevant information (order book depth, best bid/ask price)
- reference data and trading parameters for securities
- Status of trading periods, order book situations and extraordinary situations
- Reference prices

5.5.2. **SIX MDDX Multi-Dimensional Data fluX™ Interface (SIX MDDX)**

- The SIX MDDX Multi-Dimensional Data fluX™ Interface (SIX MDDX) enables the participants, ASP and market data recipients to obtain real-time market information of the SWXess Trading Platform
- SIX Swiss Exchange index data
- Reference data from CONNEXOR and other sources
- Bespoke data sets based on Regulatory Technical Standard (RTS) requirements, using the SoupBinTCP point-to-point network protocol
- Third-party content

5.6. Reference Data Interface (RDI)

The Reference Data Interface (RDI) permits access to reference data, providing trading-specific information on instruments traded, trading participants and trading parameters.

Participants can download these files from the password-protected Member Section of the SIX Swiss Exchange website. They are also available through the SIX Swiss Exchange Central Access Portal (SCAP).

Details of the content of various RDI CSV files are provided below:

File name	Contents
Traded Instrument	The CSV file "Traded Instruments" presents all core data relating to the listed products.
Cash Flow Event	The "Cash Flow Event" file provides core data on cash flow events (dividend, coupon, interest rate and redemption specifications).
Trading Session	The "Trading Session" file provides core data on trading periods and trading times for each security.
Price Step	This file provides specifications on price steps for each security.
Market Data Channel	The "Market Data Channel" file contains participant master data for the compilation of individual order books (pre-trade market data) and reports on completed trades (post-trade data).
Traded Instrument Channel	Provides the connection between the traded instrument and the market data channel.
Calendar Info	Lists calendar days when trading is not available at a given stock exchange.
Party	The "Party" file contains the IDs and roles of market participants.
Derivatives	The "Derivative" upload file presents all master data on listed derivatives such as strike price and the associated currency code, exercise type, contract size, delivery type code, instrument type (put/call) etc.
Reporting Eligible Securities	The Reporting Eligible Security object has an entry for every instrument on the SWXess platform where trade reporting is either mandatory or eligible.
Trading Segment	The Trading Segment object has been introduced to classify the market on the SWXess platform. The market is grouped into several instrument relevant categories as Blue Chip Shares, Mid-/Small-Cap Shares, Exchange Traded Funds, Bonds etc.

Sample question:

What entry options are available to you during continuous trading through the OUCH Trading Interface (OTI)?

Answers:

- a) Entry of orders
- b) Entry of quotes

Answer: a)

Reasons: Quotes may only be entered through QTI.

5.7. Trader ID

The Exchange assigns each trader a personal, trader ID on registration. The exchange system records all system entries together with this identification number. In the event of a violation of the law or Exchange regulations, the Exchange may suspend or revoke a registration.

The trader ID is personal to the trader and may not be transferred. It may only be given to other registered traders to allow for representation during absences. The participant is required to ensure the traceability of these substitutions by maintaining an internal logbook documenting such arrangements in detail.

5.8. Direct Market Access for Clients**5.8.1. Clients with Direct Market Access (Direct Electronic Access)**

As a general rule, only participants have direct electronic access to the SIX Swiss Exchange SWXess trading platform. Pursuant to section 4.3.3 of the Trading Rules, SIX Swiss Exchange may grant direct electronic access (DEA) to the exchange system. DEA allows authorised clients of participants to transfer orders to the participant's internal electronic trading system, where orders will be routed automatically to the order book of the Exchange. Any client order transferred to the SIX Swiss Exchange trading platform by the intermediary, internal trading system of the participant will be subject to a time lag.

5.8.2. Clients with Sponsored Access

The Sponsored Access (SA) service is intended for latency-sensitive clients of sponsoring participants, where such clients are not themselves participants of SIX Swiss Exchange. Sponsoring participants provide direct access via the OUCH Trading Interface to the SIX Swiss Exchange trading system for their clients (sponsored users), without the orders being routed through the sponsoring participant's internal trading systems. A level of risk management is implemented for orders passing between the sponsored user and the SIX Swiss Exchange trading platform by means of a risk management tool provided by the Exchange. Risk parameters are configured by sponsoring participants, since sponsored users place orders in the order book of the Exchange in the name of sponsoring participants, under the sponsoring participant's member ID. The main advantage of SA is that it allows sponsored users to achieve very low latency.

5.8.2.1. Functional Setup

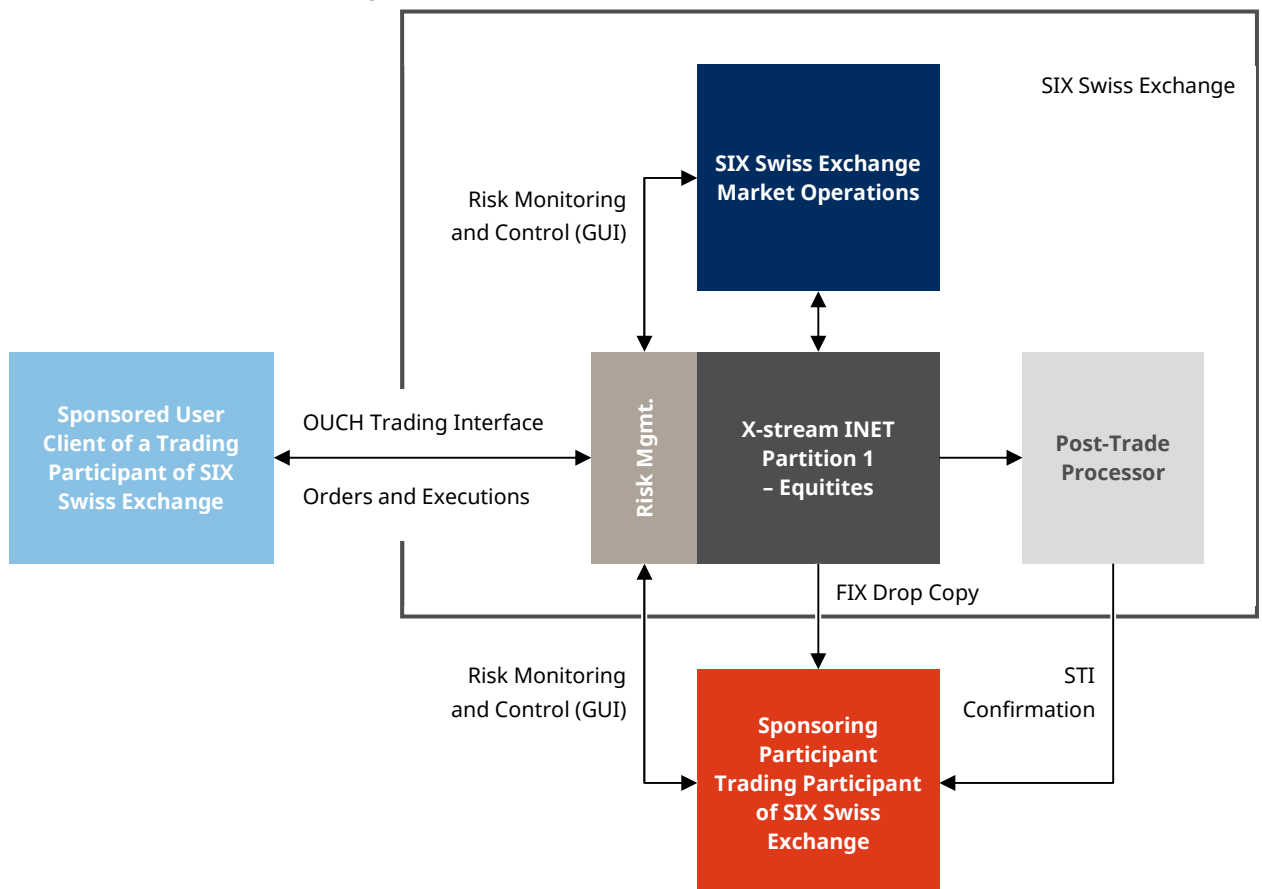


Figure: Functional Setup

Sponsored users can submit limit orders (market orders are not supported) directly to the Exchange via the OUCH Trading Interface (OTI). All orders submitted by sponsored users will pass pre-trade and at-trade risk checks configured by their sponsoring participant. Any orders submitted by sponsored users that exceed the risk limits defined by the sponsoring participant will automatically be rejected by the SIX Swiss Exchange risk management platform. Sponsoring participants receive a drop copy of all orders and executions of their sponsored users, which can be fed into their internal risk and settlement systems.

Sponsoring participants manage risk and monitor the order flow of their latency-sensitive sponsored users via a risk management interface provided by SIX Swiss Exchange. Sponsoring participants can also manage risk by

- activating the "kill switch" which deletes all outstanding orders of sponsored users and restricts new order entries; or
- defining a "restricted stock list" of instruments that the sponsored user is not allowed to trade in.

Sponsoring participants are responsible for clearing and settling trades based on orders submitted to SIX Swiss Exchange by sponsored users.

5.8.2.2. **Legal Structure**

A relationship only exists between SIX Swiss Exchange and the sponsoring participant.

The sponsoring participant maintains a broker-customer relationship with the sponsored user.

From a legal perspective, sponsoring participants are responsible for monitoring and managing orders submitted by sponsored users, subject to the rules, directives and guidelines of SIX Swiss Exchange and the sponsoring participant's risk management policies. The sponsoring participant remains liable to the Exchange for any acts and omissions, which are committed by, for or on behalf of its sponsored users under the sponsoring participant's member ID, to the same extent as if they were the acts and omissions of the sponsoring participant.

SIX Swiss Exchange assigns an individual Party ID to all sponsored users. This ensures that orders submitted by sponsored users can be identified as originating from those users and distinguished from the orders of sponsoring participants.

In order to ensure that trading functions fairly and efficiently, rules governing Sponsored Access have been incorporated into the Trading Rules and Directives, including rules on:

- Liability for the acts and omissions of sponsored users
- Conditions for granting Sponsored Access and termination of Sponsored Access
- Risk management checks
- Special rights of intervention for the Exchange

6. The Business Day

SIX Swiss Exchange specifies and publishes business days in the trading calendar. Business days are subject to change in special situations.

The business day comprises the trading day and the clearing day and consists of the following business periods:

- Pre-Opening
- Opening
- Continuous Trading
- With or without Closing Auction (End of Trading/Closing Auction)
- Trading-At-Last
- Post-Trading

The business day extends from 6.00 am to 10.00 pm (CET), the clearing day from 8.00 am to 6.15 pm. The trading day begins at opening and ends at close of trading. Trading hours are defined for each trading segment. Settlement may be carried out throughout the business day.



A global overview of the business day is provided on the next page:

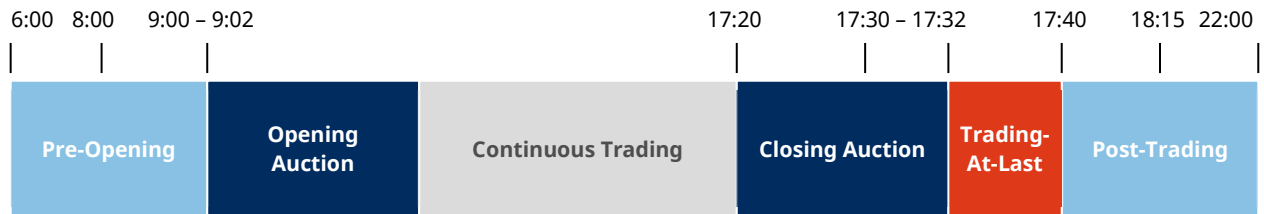
Business Day Overview

	Time (CET)	Description	Segments	Trading Period	
<div style="display: flex; flex-direction: column; align-items: center; justify-content: center;"> <div style="width: 100%; height: 100%; background-color: #cccccc; margin-bottom: 5px;"></div> <div style="width: 100%; height: 100%; background-color: #cccccc; margin-bottom: 5px;"></div> <div style="width: 100%; height: 100%; background-color: #cccccc;"></div> </div>	06:00	Start of Business Day		Pre-Opening	
	08:00	Start of Clearing Day			
	08:30	Opening	Bonds - CHF Swiss Confederation Bonds - CHF Swiss Pfandbriefe Bonds - Non CHF		Opening
	09:00	Opening	Blue Chip Shares Mid-/Small-Cap Shares Secondary Listing Shares Sponsored Foreign Shares Separate Trading Lines Investment Funds	Exchange Traded Funds (ETF) Exchange Traded Funds (ETF) on Bonds of the Swiss Confederation Exchange Traded Structured Funds (ETSF) Exchange Traded Products (ETP)	
	09:00	Start of Trading	SIX Swiss Exchange at Midpoint (SwissAtMid)		
	09:15	Opening	Sponsored Funds Structured Products Rights and Options		
	09:30	Opening	Bonds - CHF		
					Continuous Trading
	17:00	End of Trading	Bonds - CHF Swiss Confederation Bonds - CHF Swiss Pfandbriefe Bonds - Non CHF Bonds - CHF Exchange Traded Funds (ETF) on Bonds of the Swiss Confederation		End of Trading
	17:15	End of Trading	Structured Products Rights and Options		
	17:20	End of Trading	SIX Swiss Exchange at Midpoint (SwissAtMid)		
	17:20	Start of Closing Auction	Blue Chip Shares Mid-/Small-Cap Shares Secondary Listing Shares	Sponsored Foreign Shares Separate Trading Lines Investment Funds	
	17:30	Start of Closing Auction	Sponsored Funds	Exchange Traded Funds (ETF) Exchange Traded Products (ETP)	
	17:30	Run Auction and Close	Blue Chip Shares Mid-/Small-Cap Shares Secondary Listing Shares	Sponsored Foreign Shares Separate Trading Lines Investment Funds	
	17:30	Start of Trading-At-Last	Blue Chip Shares Mid-/Small-Cap Shares		
	17:30	End of Trading	Exchange Traded Structured Funds (ETSF)		
	17:35	Run Auction and Close	Sponsored Funds	Exchange Traded Funds (ETF) Exchange Traded Products (ETP)	
	17:40	End of Trading-At-Last	Blue Chip Shares Mid-/Small-Cap Shares		
	18:15		End of Clearing Day		Post-Trading
	22:00		End of Business Day		

Source: <https://www.six-group.com/en/products-services/the-swiss-stock-exchange/trading/trading-provisions/regulation.html#trading-guides>

7. The Trading Process in Different Exchange Periods

Each business day is divided into five exchange periods. The times of the exchange periods vary according to the trading segment.



7.1. Pre-Opening

Pre-opening extends from the start of the business day at 6.00 am CET until the opening time for a particular trading segment.

- Participants can enter new orders and quotes in the order book or withdraw existing orders.
- The Exchange calculates the theoretical opening price (TOP) for the auction process and publishes this on an ongoing basis.
- No transaction and therefore no pricing takes place.

Off-order-book trades can be reported to the Exchange during pre-opening (until the end of the business day).

7.2. Opening

The Exchange opens continuous trading with an auction at the trading times specified in the table above (Business Day Overview).

- The opening period determines the opening price and executes the orders in accordance with the matching rules.
- The opening price at the start of trading (or when trading resumes after a suspension) is determined in accordance with the highest executable volume principle.
- The price thus determined leads to the maximum executable trading volume.
- If only market orders are executed, the reference price becomes the opening price.
- If limit orders on one side of the order book are also executed, the price of the last-executed limit order becomes the opening price.
- If limit orders are executed on both sides of the order book, the side with the larger order volume determines the price.
- In the event that the order size on both sides is equal, the arithmetical mean of the prices of the two last-executed orders becomes the opening price. If necessary, the mean is rounded up to the nearest price step.
- If a limit order with a price better than the arithmetical mean remains on the order book, that price becomes the opening price.

The individual securities in the various segments open at a random time interval of two minutes. The random time is meant to make it difficult to manipulate prices. Orders entered before opening of a given issue are factored into the opening price.

**Directive 3:
Trading,
Section 8****7.3. Continuous Trading**

Continuous trading extends from opening to close of trading for the given trading segment and commences after opening of the order book (unless a delayed opening or non-opening occurs).

During continuous trading, new orders and quotes are executed on an ongoing basis in accordance with the matching rules against orders and quotes already in the order book. All orders remain in the order book until they are executed/withdrawn or expire.

Incoming orders and quotes are executed in one or more parts at equal or different prices in accordance with the price-time priority principle.

If trading in the underlying issue is stopped, the Exchange will also stop trading in the corresponding instruments (derivatives, separate trading lines, etc.) – "underlying not trading".

7.4. Closing

Closing takes place at the specified times (in the table above Business Day Overview). After continuous trading the On-Book Matcher switches to closing.

There are two different kinds of closing:

7.4.1. Close of Trading without Closing Auction

In the event of close of trade without auction, trading shall close at the end of the continuous trading period.

The closing price and reference price shall correspond to the price last established in continuous trading. If there is no trade during the day, there shall be no new closing price and the existing reference price shall remain unchanged.

The Exchange may adjust the reference price in certain cases.

7.4.2. Close of Trading with Closing Auction

Immediately before close of trade, an auction is conducted in accordance with the principle of highest executable volume. If there is a trade in the auction, this price shall be the closing price and the new reference price. If there is no trade in the auction, the last trade of the day shall be the closing price. If there is no trade during the day, there shall be no new closing price and the existing reference price shall remain unchanged.

The Exchange may adjust the reference price in certain cases.

Non-opening may occur during the Closing Auction (Market Order Overhang).

Delays cannot occur at the close of trading after a closing auction. The transaction takes place, no matter how large the difference between the reference price and the closing price is.

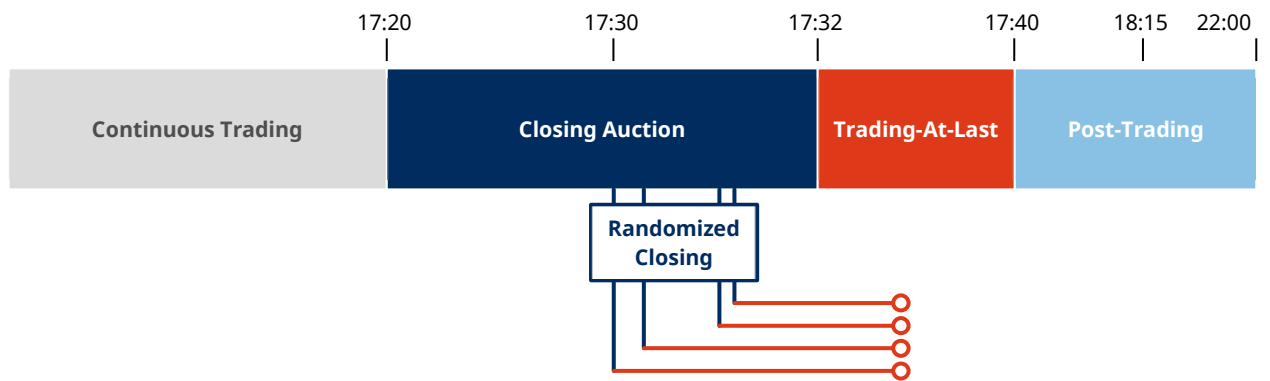
The end of the closing auction, and thus the closing of the book, occurs at a random time (2-minute random time).

7.5. Trading-At-Last (TAL)

**Directive 3:
Trading**

After the Closing Auction (valid for on book trading in the Central Limit Order Book) the Trading-At-Last (TAL) period offers the possibility to match additional volume in Swiss equities (Blue Chip Shares and Mid-/Small-Cap Shares) at the Closing Price. During the TAL period, orders are continuously matched and trades are published immediately.

There is no pre-trade transparency during this period; consolidated pre-trade updates are published at the end of the TAL period.



Participants can choose whether or not their open orders are transferred from the closing auction to the TAL period. This option is configurable at a Participant (Party ID) level and by default the configuration is set to “yes” for all participants (that its orders will be transferred to TAL by default).

Note that SIX may cancel, shorten or extend the duration of the Trading-At-Last period during the trading day in extraordinary situations. In such an event SIX would inform the participants duly in advance by means of a News Message.

Event	Trading Interruption	Randomized Timer
Start Closing Auction	17:20 CET	No
End Closing Auction	17:30 CET	Yes 2 Minutes
Start TAL	Immediately after End Closing Auction	No
End TAL	17:40 CET	No

Important:

Even though a participant has disabled the functions for his orders to be transferred to the TAL trading period, new orders of these participants entered during TAL which are better than the Closing Price will execute during TAL.

7.6. Post-Trading

Directive 3: Trading

After the close of trading, the Exchange deletes all non-executed orders whose validity ends on the date of the current trading day (validity: "good for day" or "dated"). Quotes expire at the end of the business day (validity: "valid for the day").

Participants can enter new orders and quotes in the order book or withdraw existing orders. Orders with a validity date of the current business day are not accepted. Likewise, orders via OTI cannot be entered in post-closing trading.

The Exchange calculates the following day's theoretical opening price (TOP) in the auction procedure and publishes this on an ongoing basis.

No transaction and therefore no pricing takes place.

8. Exchange Trading

8.1. Market Models

The market model defines the trading process. It determines how orders and quotes are carried out and how each exchange trading period is structured. It also determines which matching rules apply. The On-Book Matcher (OBM) supports the following market models:

- Central Limit Order Book (CLOB)
- Quote-Driven-Market (QDM)
- Price Validation Market for Structured Products (PVM) (based on QDM)
- Quote on Demand (QOD)
- Mid-Point Order Book (MPOB) – SwissAtMid
- Swiss EBBO Book (EBBO)

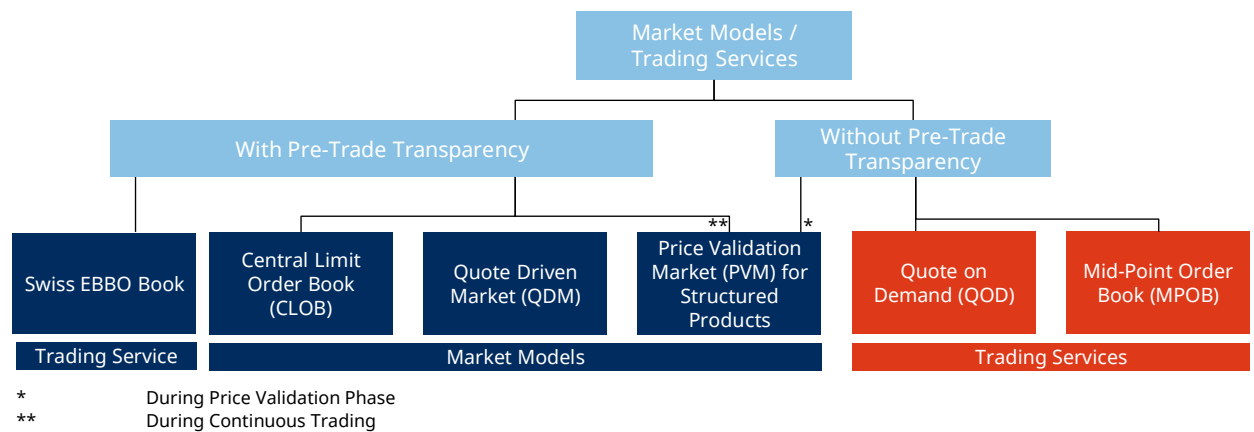


Figure: SWXess Trading Platform

The **Central Limit Order Book** market model treats orders and quotes (only for CHF bonds) in the same way.

In the **Quote-Driven-Market**, orders from participants and quotes from admitted market makers and liquidity providers are treated differently in accordance with quote-based pricing.

The **Price Validation Market (PVM) for Structured Products** does not execute orders and quotes immediately but interrupts trading for a pre-defined period in which the Market Maker/Liquidity Provider as well as the clients can validate their price of the order or quote. During the Price Validation Phase there will be no pre-trade transparency in the affected order book.

The **Quote on Demand (QOD)** represents an on-exchange non-displayed trading service for trading Exchange Traded Funds (ETFs) and Exchange Traded Products (ETPs). A Call Phase is triggered for each submitted Quote Request during Continuous Trading. At the start of the Call Phase, all registered Liquidity Providers will be invited to submit Buy and Sell Quotes with the quantity defined by the participant on the Quote Request. (Details see Chapter 2)

The **Mid-Point Order Book Market (MPOB / SwissAtMid)** combines a non-displayed order book and order types which will allow execution of Swiss equities (Blue Chip Shares and Mid-/Small-Cap Shares) at the Mid-Point Price of the Central Limit Order Book (CLOB).

Swiss EBBO is a service for on-exchange, hybrid trading in Swiss equity securities in which the aim is to achieve trades at the European Best Bid and Offer (EBBO) price on a best effort basis.

The table below shows which trading segments are included in which market model, the possible order book statuses and which pricing principle applies:

Overview of Market Models				
	Central Limit Order Book CLOB	Quote-Driven-Market QDM	Price Validation Market (PVM) for Structured Products	Quote on Demand QOD
Trading Segments	Blue Chip Shares Mid-/Small-Cap Shares Secondary Listing Shares Separate Trading Lines Investment Funds Rights and Options Bonds (CHF)	Exchange Traded Funds (ETFs) Exchange Traded Structured Funds (ETSFs) Exchange Traded Products (ETPs) Sponsored Funds Bonds (non CHF) Sponsored Foreign Shares	Structured Products	Exchange Traded Funds (ETF) Exchange Traded Products (ETP)
Trading Period	Pre-Opening Opening Continuous Trading Close of Trading with* or without Closing Auction (*Blue Chip Shares, Mid-/Small-Cap Shares, Secondary Listing Shares, Separate Trading Lines, Investment Funds) Trading-At-Last (TAL)** Post-Trading **Blue Chip Shares and Mid-/Small-Cap Shares	Pre-Opening Opening Continuous Trading Close of Trading with* or without Closing Auction (*ETF, ETP, Sponsored Funds, Sponsored Foreign Shares) Post-Trading	Continuous Trading	Continuous Trading
Matching Rules	CLOB Matching Rules	Quote Domination Matching Rules	Price Validation Matching Rules (based on QDM)	Quote on Demand Matching Rules
Trading Interface	<u>Stocks</u> STI-Orders OTI-Orders	<u>Bonds</u> STI-Orders OTI-Orders QTI-Orders	STI-Orders OTI-Orders QTI-Orders	<u>Quote Request</u> STI Quote on Demand User Interface (UI) <u>Quote_QTI</u>

Overview of Market Models		
	Mid-Point Order Book (MPOB) SwissAtMid	Swiss EBBO Book EBBO
Trading Segments	Blue Chip Shares Mid-/Small-Cap Shares Investment Funds	Blue Chip Shares Mid-/Small-Cap Shares
Trading Period	Primary Condition MPOB Continuous Trading MPOB Post-Trading	Continuous Trading
Matching Rules	Mid-Point Order Book (MPOB) Matching Rules	Swiss EBBO Matching Rules
Trading Interface	STI-Orders OTI-Orders	<u>EBBO Normal Order</u> STI <u>EBBO Liquidity Provider Order</u> OTI

**Directive
3: Trading,
Section 5**

8.2. Order Placement: Orders and Quotes

Each trade begins with an order or a quote.

Orders/Quotes may be entered in or deleted from the order book during set periods. All incoming orders are assigned a time stamp and identification number. Amended orders lose their original time priority and are given a new time stamp.

- Orders/Quotes that have been entered through the Standard Trading Interface (STI) will retain the same identification number.
- For orders/quotes, transmitted through OUCH Trading Interface (OTI) or Quote Trading Interface (QTI), which have been successfully modified (price and/or volume), the original order/quote will be deleted and a new order/quote with a new identification number will be created. The price-time priority of the original order will be lost as a result. If any modification of a order/quotes fails, the original order/quote will still be deleted.

8.3. Order

An order is a binding offer to buy or sell a certain quantity of one security at an unlimited or limited price.

In the market models Central Limit Order Book and Quote-Driven-Market the orders contained in the order book are binding. In the market model Price Validation Market the orders contained in the order book are not binding.

8.3.1. Order Entry Attributes

Orders must be entered with all required attributes. Otherwise they will be rejected by the exchange system.

The table below shows which entry attributes are essential for successful entry and which are optional:

Attribute	Entry through STI	Entry through OTI
Direction/Side	Mandatory Buy or Sell	
Security	Mandatory	
Order Volume	Mandatory CLOB – with pre-trade transparency Number of securities or nominal value for percent-listed instruments. In the case of Iceberg orders, the visible quantity in the order book must also be defined. MPOB – without pre-trade transparency <ul style="list-style-type: none"> • Number of securities, without statement of the minimum execution quantity; or • Number of securities, with statement of the minimum execution quantity; 	
Price Type	Mandatory Unlimited (at market) or limited	

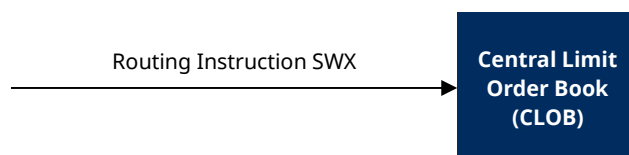
Price	Normal Orders: limited or at market Iceberg Orders: Limited only Order with routing instruction SWMB: limited The price must conform to the price steps defined for each security.	
Validity	Optional If the validity period is not defined, the order will expire after close of trading.	
Algorithmic Trading	Mandatory The participant must report the operation of algorithmic trading to the Exchange and must flag orders generated by such algorithmic trading. It must use a separate identification for each algorithm and must also indicate the traders who initiated these orders.	
Trading Capacity	Mandatory Client transactions (R) Trades as principal (P)	Mandatory Client transactions (R) Trades as principal (P) This will either be set as the default value based on the master data, or the attribute can be entered on the order
Participant ID	Mandatory	
Trader ID	Mandatory	
Routing Instructions (STI only)	Mandatory	
Internal Participant References	Optional	

8.3.2. Routing Instructions

Routing instructions can be used to determine in which market model the order is to be traded. Following are examples of routing instructions using the Standard-Trading-Interface (STI):

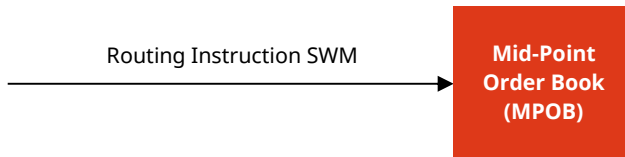
Routing Instruction SWX – Central Limit Order Book

«SWX» for entry in the Central Limit Order Book (CLOB). The “SWX” routing instruction is supported for Normal orders with or without a price limit; or



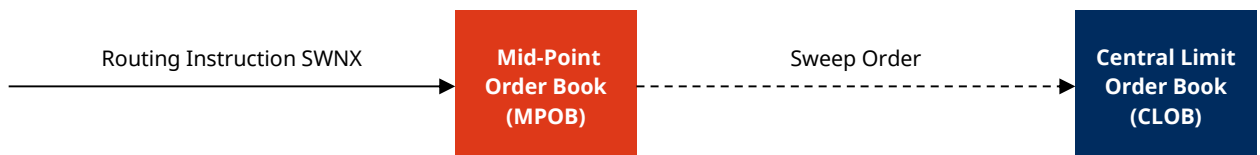
Routing Instruction SWM – SwissAtMid

«SWM» for entry in the order book without pre-trade transparency for SwissAtMid. This is supported for Normal orders with or without a price limit; or



Routing Instruction SWMX – Sweep from SwissAtMid into CLOB

«SWMX» for entry in the order book without pre-trade transparency for SwissAtMid and subsequent forwarding of the remaining quantity to the Central Limit Order Book (CLOB). The Routing Instruction «SWMX» is supported for Normal orders with or without a price limit. If the order book without pre-trade transparency is not activated for a given trading segment, orders with Routing Instruction «SWMX» are forwarded directly to the Central Limit Order Book (CLOB) or to the Quote-Driven-Market order book. If an order with Routing Instruction «SWMX» is entered while the order book is not in the continuous trading period, it will be forwarded directly to the Central Limit Order Book (CLOB) or to the Quote-Driven-Market (QDM) order book. Existing orders with the Routing Instruction "SWMX" are directly forwarded to the Central Limit Order Book (CLOB) in the closing auction and during the Trading-At-Last period. Orders with Routing Instruction «SWMX» follow the execution provisions of the order book in question in continuous trading; or

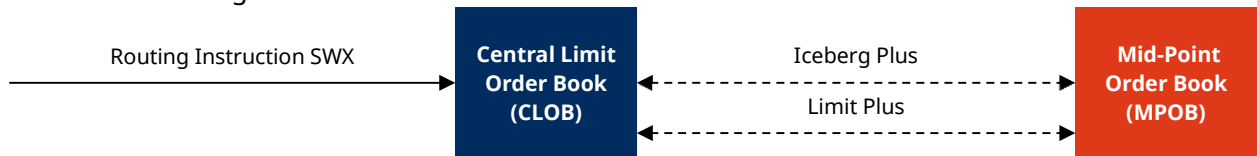


Routing Instruction SWMB – simultaneous entry in SwissAtMid and CLOB

"SWMB" for the entry into the Central Limit Order Book (CLOB) and simultaneous entry into the order book without pre-trade transparency from SwissAtMid; if the quantity of the order with Routing Instruction "SWMB" instruction in the Central Limit Order Book or the order book without pre-trade transparency for SwissAtMid is executed, the total quantity of the order in the order book in question will be reduced by the quantity that has been executed, until the total order quantity has been executed or deleted, or has expired.

The Routing Instruction "SWMB" is supported for Normal orders and Iceberg orders with a price limit. The stated price limit applies to executions on SwissAtMid, and as a maximum limit for the Central Limit Order Book (CLOB). For executions in the Central Limit Order Book (CLOB), the Exchange adjusts the price limit for orders with Routing Instruction "SWMB" dynamically to the best bid or ask price. If the Central Limit Order Book (CLOB) does not contain a bid or ask price, the order is suspended in both order books and is thus neither executable nor visible in the order book. Suspended orders are reactivated as soon as a corresponding bid or ask price is available in the Central Limit Order Book (CLOB). These orders are thus executable, have a new time stamp and are visible in the order book. If the order book without pre-trade transparency is not activated for a given trading segment, orders with Routing Instruction "SWMB" will be rejected. If the Central Limit Order Book (CLOB) is not in the trading period "Continuous Trading" or if there is a trade suspension, the order with Routing Instruction "SWMB" is suspended in both order books and as such is neither executable nor visible in the order book. Once the Central Limit Order Book (CLOB) is again in continuous trading, suspended orders are reactivated, have a new time stamp and are visible in the order book. Existing orders with Routing Instruction "SWMB" are deleted in the closing auction. Orders with routing instruction "SWMB" are rejected during the Trading-At-Last period. The Exchange may limit the number of orders with Routing Instruction "SWMB" that are permitted in each order book. Orders

with Routing Instruction "SWMB" follow the execution provisions of the order book in question in continuous trading.



Remark:

The chapter "Alternative Trading" describes in detail the features of SwissAtMid and the Plus-Orders.

8.3.3. Order Types

The Exchange supports the order types Normal order and Iceberg order.

8.3.3.1. Normal Order

A Normal order may be entered at any time during the trading day and is visible in the order book. Nonexecuted parts of the order remain in the order book until they have been executed or deleted, or have expired. Other validities and routing instructions remain reserved.

8.3.3.2. Iceberg Order

An iceberg order is used to buy and sell securities traded on SIX Swiss Exchange as part of large orders. This order type enhances the liquidity in the order book, while the participant also benefits from the fact that the price of the trade is not negatively impacted by the large volume.

Any iceberg order entered has a total quantity and a displayed quantity that is shown on the order book. The order book only shows the displayed quantity (the tip of the iceberg) and only this is visible to the market. Once the displayed quantity is executed, the order book is topped up with another portion in the specified display size until the entire order quantity is filled, expires or is deleted by the participant. Each new tranche of quantity displayed for an iceberg order is given a new time stamp and a new identification number. Any remaining quantity for the iceberg order may be deleted at any time during the business day. If no value is defined for the displayed portion, the order will be treated as a "normal order".

In auctions Iceberg orders are considered with its total volume. After the auction in continuous trading, Iceberg orders are again only shown with the visible quantity of the order (peak) in the order book.

During both continuous trading and in an auction the hidden quantity of an Iceberg order may be executable, if on the opposite side of the order book more liquidity is available than the visible quantity of the Iceberg order. As a consequence after execution of the visible quantity and any other potential orders with a higher price-time priority, the entire hidden quantity of the Iceberg order becomes executable. This means that even if the hidden quantity of the Iceberg order becomes executable it will remain hidden from the order book.

For regular Iceberg orders and Iceberg Plus orders (explained later in this module), it will be possible to define the randomization of the specified visible quantity (top-up size) for every tranche of the total quantity. This functionality is optional and can be configured on a Participant level.

Participants can request SIX Swiss Exchange to randomize the top-up visible quantity of Iceberg orders within a system wide defined range of 10%.

Example: Participant enters an Iceberg order with Visible Quantity 100 and has the functionality for top-up randomization enabled on the respective Party ID. In this case SIX Swiss Exchange would randomly define the visible quantity for every tranche of the total quantity of the Iceberg order between 90 and 110. The randomisation of the Iceberg top-up is not applicable for the visible size when the Iceberg order is firstly entered.

The Exchange may reject Iceberg orders which fall short of the predetermined minimum requirements for an order without pre-trade transparency; in particular if the total value of the Iceberg order falls below the Minimum Order Value set for Iceberg orders.

Control	Description
Minimum Iceberg Order Value	Order is automatically rejected by the system if the value of the order is smaller than the minimum iceberg order value. Minimum Iceberg Order Value = Order Quantity x Order Price

The Minimum Order Value in Swiss francs for Iceberg orders shall be determined by the Exchange per trading segment. (please see Trading Guide [Link](#)).

Iceberg orders always require a price limit; at market orders are not possible.

Iceberg orders can be entered in the order book through the STI and OTI interfaces at any stage of trading. All order validities and both the CLOB and QDM market models are supported. The Exchange publishes the trading segments that permit this type of order.

Iceberg Orders supported for ...	
Interface	Enabled interfaces for Iceberg orders: <ul style="list-style-type: none"> Standard Trading Interface (STI) OUCH Trading Interface (OTI)
Market Model	Currently enabled Market Model for Iceberg orders: <ul style="list-style-type: none"> Central Limit Order Book (CLOB) Quote-Driven-Market (QDM)
OBM Partition	Currently enabled OBM Partition for Iceberg orders: <ul style="list-style-type: none"> OBM – Partition 1 “Equities” OBM – Partition 2 “Non-Equities”
Trading Segments	Currently enabled Trading Segments for Iceberg orders: <ul style="list-style-type: none"> Blue Chip Shares (26) Mid-/Small-Cap Shares (591) Secondary Listing Shares (592)

- Investment Funds (594)
- Bonds – CHF (590)
- Bonds – CHF – MD (615)
- Bonds – CHF Swiss Confederation (589)
- Bonds – CHF Swiss Pfandbriefe (617)
- ETF (584)
- ETF on bonds of the Swiss Confederation (585)
- ETP (588)
- Sponsored Foreign Shares (613)
- Sponsored Funds (612)

Iceberg orders on Trading Segments of OBM (On Book Matcher) partition 2 will be offered via Standard Trading Interface (STI) as well as over the OUCH Trading Interface (OTI). Iceberg orders are not supported for Quotes submitted over the Quote Trading Interface (QTI) by Market Makers or Liquidity Providers.

Please Note

Please note as that the entire quantity (hidden and visible quantity) of an Iceberg order is executable during an Auction; as a consequence participants can no longer calculate the Theoretical Opening Price (TOP) themselves. SIX Swiss Exchange will calculate the TOP correctly and distribute it over the interfaces.

8.3.4. Price Limit

8.3.4.1. Order without Price Limit (Unlimited Order)

An unlimited order (market order) is executed at the current best price in the order book. If it is not possible to trade all securities at this price, the remaining volume will be executed at the next-best price. This will continue until the order has been executed. For illiquid securities, there may be no buy or sell orders for a certain period of time, in which case market orders will remain in the order book until they can be executed.

8.3.4.2. Order with Price Limit (Limit Order)

With a limit order, the participant specifies a target price or "limit" along with the volume. This limit represents the price at which the participant is prepared to purchase or sell the designated quantity.

Overview by order type and the "SWMB" routing instruction

Normal Order	Limited or unlimited
Iceberg Order	Limited
Order with routing instruction "SWMB"	Limited

8.3.5. Order Validities

An order can be placed with the following validities:

- Immediate-or-cancel (IOC or Accept): shall be executed immediately, in full or inasmuch as is possible. Non-executed parts of the order shall be deleted without entry in the order book;
- Fill-or-kill (FOK): shall be executed immediately and in full or not at all. If an immediate, full execution is not possible, the order shall be deleted without entry in the order book;
- At-the-opening: may be entered only during pre-opening and remains valid up to and including opening. Non-executed parts of the order shall be deleted after opening;
- At-the-close: may be entered during pre-opening, continuous trading and Trading-At-Last (TAL) and remains valid up to and including the closing auction or the Trading-At-Last period. Non-executed parts of the order will be deleted after the closing auction or the Trading-At-Last period; other instructions from the participant remain reserved. orders with at-the-close validity are not visible in the order book until the start of the closing auction;
- Good-for-day: valid until the close of trading on the current trading day; other instructions from the participant remain reserved.
- Good-till-date: valid until the close of trading on a certain trading day; other instructions from the participant remain reserved. The maximum term of validity shall be one year;
 - The maximum period of validity is one year for orders entered through the STI interface.
 - Orders entered through the OTI interface expire at the end of the trading day.

Overview order validities

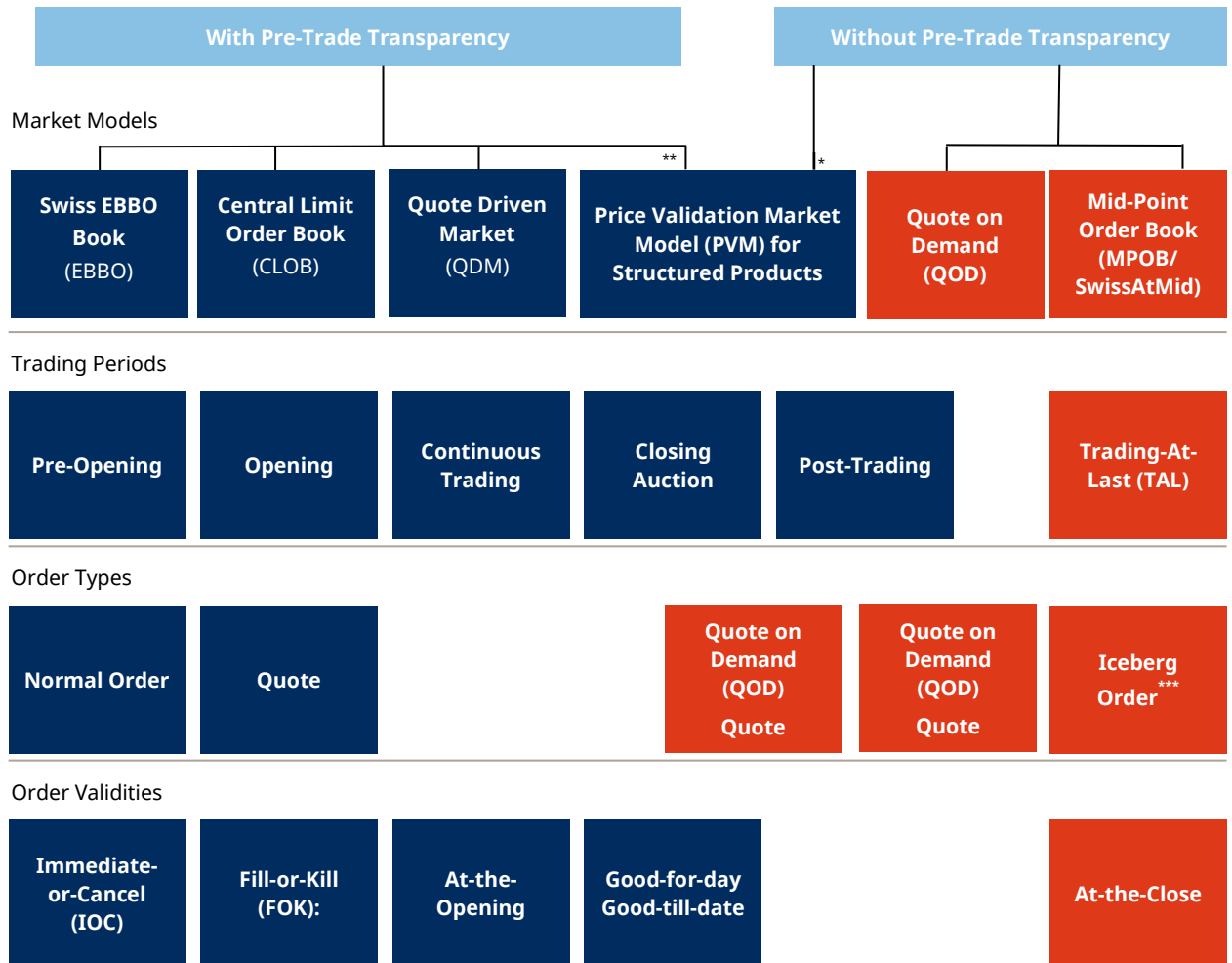
Order Book Attributes (Routing Instructions)				
On Book Matcher – Partition	OBM Partition 1 – Order Driven Market			
Market Model and Matching Rules	Central Limit Order book (CLOB)			
Pre-Trade Transparency	Yes			
Trading Segments	Blue Chip Shares Mid-/Small-Cap Shares Secondary Listing Shares Investments Funds	Rights and Options Separate Trading Lines		
Order Type	Normal	Iceberg	Normal	
Price Limit	Market or Limit	Limit	Market or Limit	
Standard Trading Interface (STI)	Good-for-Day (pre-opening, continuous trading, closing auction)	×	×	×
	Immediate or Cancel (continuous trading)	×		×
	Fill or Kill (continuous trading)	×		×
	At the Opening (pre-opening)	×	×	×
	At the Close (pre-opening, continuous trading, closing auction)	×	×	× (NOT Rights & Options)
	Good-till-Date ((pre-opening, continuous trading, closing auction), post trading)	×	×	×

OUCH Trading Interface (OTI)	Good-for-Day (pre-opening, continuous trading, closing auction)	x	x	x
	Immediate or Cancel (continuous trading)	x		x
	Fill or Kill (continuous trading)	x		x
	At the Opening (pre-opening)	x	x	x
	At the Close (pre-opening, continuous trading, closing auction)	x	x	x (NOT Rights & Options)
	Good-till-Date (pre-opening, continuous trading, closing auction), post trading)			
QTI	Good-for-Business-Day (pre-opening, continuous trading, closing auction, post trading)			

Overview of additional segments and interfaces [Link](#).

8.3.6. Exceptions to Pre-Trade Transparency

In addition to the Price Validation Market for Structured Products (PVM) and the Mid-Point Order Book (MPOB / SwissAtMid) market, the following exceptions to pre-trade transparency also exist:



* During Price Validation Phase

** During Continuous Trading

*** The Exchange may reject an Iceberg order which falls short of the predetermined minimum requirements for an order without pre-trade transparency

Orders during the Trading-At-Last period which are executed by reference price systems of the Exchange are exempted from pre-trade transparency regulations in accordance with Art. 27 para. 4 let. a FMIO.

Iceberg Orders and orders with at-the-close validity which are executed using an order management facility of the Exchange are exempted from pre-trade transparency regulations according to Art. 27 para. 4 let. c FMIO.

The Exchange may reject an Iceberg order which falls short of the predetermined minimum requirements for an order without pre-trade transparency; in particular if the total value of the Iceberg order falls below the Minimum Order Value set for Iceberg orders.

Orders in SwissAtMid that are executed with the reference price systems of the exchange are excluded from pre-trade transparency pursuant to Art. 27 para. 4 let. a FMIO.

All Quote Requests and Quotes which are executed using an order management facility of the Exchange are exempted from pre-trade transparency regulations in accordance with Art. 27 para. 4 let. c FMIO.

8.3.7. Special Features of Orders via OTI

Entering, modifying and deleting orders during post-trading are **not** supported.

While quotes do not expire until the end of the business day, OTI orders are deleted by the On-Book Matcher immediately after close of trading.

Moreover, the user may specify whether or not to delete the order if the user logs off or the connection is broken due to technical difficulties.

8.3.8. Order Flagging

8.3.8.1. Client Transaction or Own Transaction

Under the "Trading capacity" attribute, orders are categorised on entry as:

- Client transaction (R – Riskless Principal)
- Own transaction (P - Principal)

Riskless principal orders are orders placed by a trader on behalf of a client. Principal orders are used for trading on a market participant's own account. When entering an order through the STI interface, traders have to set this attribute on their own initiative. For orders entered through the OTI interface, this aspect is already defined by default as part of the trader's registration. However, traders are also able to overwrite the designation on the order.

Orders and quotes with incomplete or incorrect mandatory entries (attributes) will be rejected by the On-Book Matcher (OBM).

8.3.8.2. Algorithmic Trading

The participant must report the operation of algorithmic trading to the Exchange and must flag orders generated by such algorithmic trading. It must use a separate identification for each algorithm and must also indicate the traders who initiated these orders.

The participant must record the orders entered by algorithmic trading, and must store the orders including order cancellations

The participant must possess effective arrangements and risk controls for algorithmic trading, to ensure that its systems:

- a. are robust and equipped with sufficient capacity to deal with peak volumes of orders and announcements;
- b. are subject to appropriate trading thresholds and upper trading limits;
- c. do not cause or contribute to any disruptions on the Exchange;
- d. are effective for preventing violations of Articles 142 and 143 FMIA; and
- e. are subject to appropriate tests of algorithms and control mechanisms, including the precautions to:
 1. limit the proportion of unexecuted trading orders relative to the number of transactions
 2. that can be entered into the system by a participant;
 3. slow down the flow of orders if there is a risk of the capacity of the system being reached;

4. and
5. limit and enforce the minimum tick size that may be executed on the Exchange.

In algorithmic trading, the Exchange may make provision for higher fees for:

- a. the placement of orders that are later cancelled;
- b. participants placing a high proportion of cancelled orders;
- c. participants with:
 1. an infrastructure intended to minimise delays in order transfer;
 2. a system that can decide on order initiation, generation, routing or execution; and
 3. a high intraday number of price offers, orders or cancellations.

Details are laid down in the "List of Charges under the Trading Rules".

Sample question:

A trader enters a normal order via OTI during continuous trading. When does the order expire if it was not executed?

Answers:

- a) At the end of the trading day
- b) At the end of the business day
- c) One year after entry if not withdrawn sooner

Answer: a)

Reasons: Since this is a normal order and not an IOC or FOK order, it does not expire immediately, but at the end of the trading day.

8.4. Quotes

A quote specifies the simultaneous entry of one or more limited buy and/or sell orders in a single instruction. Quotes remain in the order book until they are executed, overwritten or deleted.

In the market model Quote-Driven-Market the quotes contained in the order book are binding. In the market model Price Validation Market the quotes contained in the order book are not binding.

Quotes can only be entered by market makers or liquidity providers. Quotes can be entered as either bilateral (buy and sell) or unilateral (buy or sell only).

Quotes can only be submitted via the QTI interface.

Step quoting is possible in the ETF, ETSF, ETP, Sponsored Funds and Sponsored Foreign Shares segments. A dedicated market maker in these segments can enter up to five quotes (bilateral or unilateral) into the order book. For derivatives and bonds, only one quote per market maker/liquidity provider is permitted. If more than one market maker/liquidity provider conducts market making for a security, then all the market makers/liquidity providers may enter quotes concurrently. When a user logs off from the system (disconnect), his quotes will be deleted. Quotes can only be entered "valid for the day", which means that all quotes are automatically removed from the order book at the end of the business day. Users are authorised to enter and withdraw quotes. The "mass entry" as well as the "mass withdraw" functions are also available.

8.4.1.1. Entry Attributes for Quotes

The table below shows the available attributes when entering quotes. It also shows which attributes are essential for entry. If the required attributes are not specified when the quote is entered, the quote will be rejected by the On-Book Matcher.

Attribute	Entry through QTI
Direction/Side	Mandatory Buy and/or sell
Security	Mandatory
Order Volume	Mandatory
Price Type	Mandatory Price limit must be provided
Price	Mandatory The price must conform to the price steps in effect for the security
Algorithmic Trading	Mandatory The participant must report the operation of algorithmic trading to the Exchange and must flag orders generated by such algorithmic trading. It must use a separate identification for each algorithm and must also indicate the traders who initiated these orders.
Trading Capacity	Mandatory* Trades as principal
Participant ID	Mandatory
Trader ID	Mandatory*
Internal Participant References	Optional

* This will either be set as a default value based on the master data, or can be entered on the quote

8.5. Expiry Options and Entry Times for Orders and Quotes

The table below shows the various expiry options and entry times for the different order valities and quotes:

Trading Period Overview

Valid as of 22 June 2020

		Pre-Opening	Opening	Continuous Trading	End of Trading			Post Trading		
					Without Closing Auction	With Closing Auction	Trading-At-Last			
Duration		06:00 CET until Opening	not applicable	Opening until End of Trading	not applicable	10 minutes	10 minutes	End of Trading until 22:00 CET		
Random Time		not applicable	2 minutes	not applicable	None	2 minutes at Run Auction and Close	None	not applicable		
Order Entry	STI Orders	Good-for-Day	Yes	No	Yes	No	Yes	Yes	No	
		Immediate or Cancel	No	No	Yes	No	No	Yes	No	
		Fill or Kill	No	No	Yes	No	No	Yes	No	
		At the Opening	Yes	No	No	No	No	No	No	
		At the Close	Yes	No	Yes	No	Yes	Yes	No	
		Good-till-Date	Yes	No	Yes	No	Yes	Yes	Yes	
	OTI Orders	Day	Yes	No	Yes	No	Yes	Yes	No	
		Immediate or Cancel	No	No	Yes	No	No	Yes	No	
		Fill or Kill	No	No	Yes	No	No	Yes	No	
		At the Opening	Yes	No	No	No	No	No	No	
		At the Close	Yes	No	Yes	No	Yes	Yes	No	
		QTI Quotes	Yes	No	Yes	No	Yes	No	Yes	
	Order Deletion & Expiry	STI Orders	Good-for-Day	Yes	No	Yes	No	Yes	Yes	No
			Immediate or Cancel	No	No	Deletion if no execution	No	No	Deletion if no execution	No
Fill or Kill			No	No	Deletion if no execution	No	No	Deletion if no execution	No	
At the Opening			Yes	Expiry if not executed in Opening	No	No	No	No	No	
At the Close			Yes	No	Yes	No	Yes	Yes	No	
Good-till-Date			Yes	No	Yes	No	Yes	Yes	Yes	
OTI Orders		Good-for-Day	Yes	No	Yes	No	Yes	Yes	No	
		Immediate or Cancel	No	No	Deletion if no execution	No	No	Deletion if no execution	No	
		Fill or Kill	No	No	Deletion if no execution	No	No	Deletion if no execution	No	
		At the Opening	Yes	Expiry if not executed in Opening	No	No	No	No	No	
		At the Close	Yes	No	Yes	No	Yes	Yes	No	
		QTI Quotes	Yes	No	Yes	No	Yes	Not applicable	Yes Quotes are deleted at End of Business Day	

8.6. Self-Match Prevention

"Self-Match Prevention" (SMP) is a service for on-Exchange, on-order-book trading. The function prevents on-order-book execution of orders and quotes of the same participant (based on Party ID) that are labelled as own (Principal) transactions. "Self-Match Prevention" will be implemented in accordance with the "cancel oldest" principle. This means that in an executable situation no trade takes place between principal orders/quotes of the same participant; instead, the older of the two executable orders/quotes is deleted from the order book.

The SMP service is also offered for trading without pre-trade transparency in SwissAtMid (MPOB). In contrast to the CLOB SMP functionality, where the older of the two executable orders/quotes is deleted from the book, in SwissAtMid the older of the two orders is not deleted, but the orders in the MPOB are not executed against each other and remain in the order book until the next matching cycle.

Self-Match Prevention is only supported in continuous trading. In auctions (opening or closing auction) or during trading interruptions (stop trading, delay opening, suspension), orders of the same Party ID are executed against each other despite SMP.

The SMP functionality for the Central Limit Order Book (CLOB) is also applicable to orders in Trading-At-Last (TAL).

This section gives an overview of the SMP functionality:

Self-Match Prevention supported for ...

Trading Interface(s)

Currently enabled interfaces for SMP:

- Standard Trading Interface (STI)
- OUCH Trading Interface (OTI)
- Quote Trading Interface (QTI)

Market Model

Currently enabled market model for SMP:

- Central Limit Order Book (CLOB)
- Quote-Driven-Market (QDM)
- Mid-Point Order Book (MPOB)
- Trading-At-Last (TAL)

OBM Partition

Currently enabled Partition for SMP:

- OBM – Partition 1 "Equities"
- OBM – Partition 2 "Non-Equities"

Trading Segments

Currently enabled trading segments for SMP:

- Blue Chip Shares (26)
- Mid-/Small-Cap Shares (591)
- ETF (584)
- ETF on bonds of the Swiss Confederation (585)
- ETP (588)
- Sponsored Funds (612)
- Sponsored Foreign Shares (613)

Order Types	Currently enabled orders for SMP: <ul style="list-style-type: none"> • Normal Orders • Iceberg Orders • Quotes • Limit Plus Orders • Iceberg Plus Orders
-------------	---

"Self-Match Prevention" is an **optional** service and free of cost that can be configured on request and used by all participants.

8.7. Capacity Allocation

The capacity allocation process defines the number of quotes and orders for individual participants. QPS (quotes per second) is used to measure quotes, OTPS (OUCH Transactions per second) to measure OTI orders and FOPS (FIX orders per second) to measure STI orders. This allows SIX Swiss Exchange to maintain constant system performance and protect participants against heavy transaction loads from other participants.

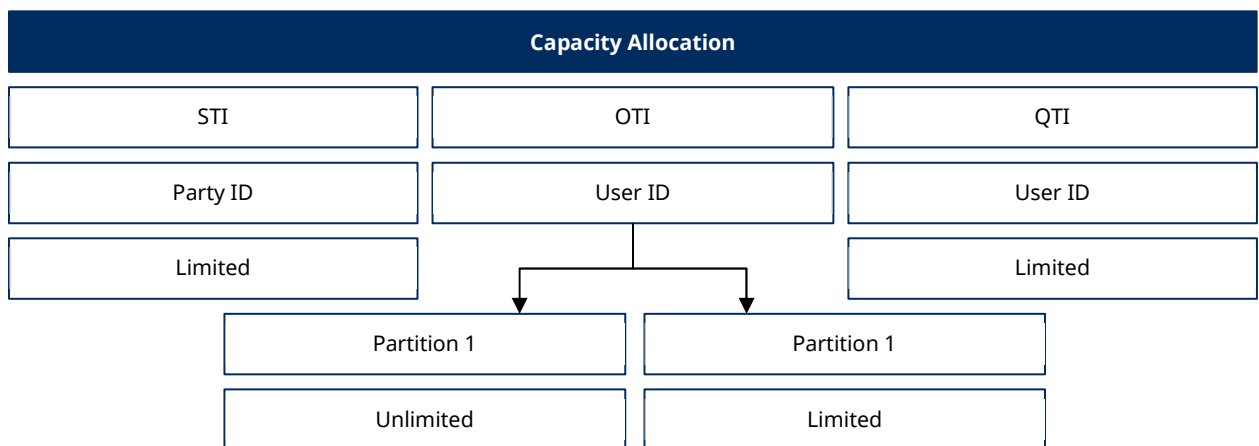


Figure: Capacity Allocation

9. Tick Sizes

Prices cannot set arbitrarily and follow a prescribed sequence of price steps. Each securities issue is assigned to a specific category for this purpose. When this reaches a new price category, the relevant price step takes effect.

If a limit order is entered that does not correspond to the applicable tick size regime, it is rejected by the On-Book Matcher.

Tick sizes only apply to on-order-book and in the non-displayed order book.

Blue Chip Shares; Mid-/Small-Cap Shares; Secondary Listing Shares*, Sponsored Foreign Shares with primary market of the security in the EU						
MIFIDII Tick Size Table						
Price Step Group Code	LA	LB	LC	LD	LE	LF
Price ranges	0 ≤ Average daily number of transactions < 10	10 ≤ Average daily number of transactions < 80	80 ≤ Average daily number of transactions < 600	600 ≤ Average daily number of transactions < 2000	2000 ≤ Average daily number of transactions < 9000	9000 ≤ Average daily number of transactions
0 ≤ price < 0.1	0.0005	0.0002	0.0001	0.0001	0.0001	0.0001
0.1 ≤ price < 0.2	0.0010	0.0005	0.0002	0.0001	0.0001	0.0001
0.2 ≤ price < 0.5	0.0020	0.0010	0.0005	0.0002	0.0001	0.0001
0.5 ≤ price < 1	0.0050	0.0020	0.0010	0.0005	0.0002	0.0001
1 ≤ price < 2	0.0100	0.0050	0.0020	0.0010	0.0005	0.0002
2 ≤ price < 5	0.0200	0.0100	0.0050	0.0020	0.0010	0.0005
5 ≤ price < 10	0.0500	0.0200	0.0100	0.0050	0.0020	0.0010
10 ≤ price < 20	0.1000	0.0500	0.0200	0.0100	0.0050	0.0020
20 ≤ price < 50	0.2000	0.1000	0.0500	0.0200	0.0100	0.0050
50 ≤ price < 100	0.5000	0.2000	0.1000	0.0500	0.0200	0.0100
100 ≤ price < 200	1.0000	0.5000	0.2000	0.1000	0.0500	0.0200
200 ≤ price < 500	2.0000	1.0000	0.5000	0.2000	0.1000	0.0500
500 ≤ price < 1000	5.0000	2.0000	1.0000	0.5000	0.2000	0.1000
1000 ≤ price < 2000	10.0000	5.0000	2.0000	1.0000	0.5000	0.2000
2000 ≤ price < 5000	20.0000	10.0000	5.0000	2.0000	1.0000	0.5000
5000 ≤ price < 10000	50.0000	20.0000	10.0000	5.0000	2.0000	1.0000
10000 ≤ price < 20000	100.0000	50.0000	20.0000	10.0000	5.0000	2.0000
20000 ≤ price < 50000	200.0000	100.0000	50.0000	20.0000	10.0000	5.0000
50000 ≤ price	500.0000	200.0000	100.0000	50.0000	20.0000	10.0000

* Secondary Listing Shares: If the primary market of the security is **outside** the EU the Liquidity Band LA "0 ≤ Average daily number of transactions < 10" will be allocated.

Source: https://www.six-group.com/exchanges/download/participants/regulation/trading_guides/price_steps.pdf

10. Order Book

The exchange system maintains an order book for each security traded and each trading currency, which is divided into a bid and ask side. Each valid order and/or quote is entered into the order book sorted by price and, if there are multiple orders/quotes at the same price, by order received. The oldest orders/quotes with the best prices, i.e. the lowest ask or highest bid price, always take priority; "at the market" is always considered the best offer. The best bid and ask prices are collectively known as the inside market.

Order books may take different forms:

The SIX Swiss Exchange On-Book Matcher (OBM) sorts and presents the supply and demand situation based on the limits in the order book. All registered traders have access to the order book.

An excerpt from the cumulative order book during continuous trading is shown below:

Letzter Preis / Volumen		CHF 11.48 / 3'000	Datum / Zeit		06.12.2011 / 17:11:46
Differenz Vortag / Absolut		0.70% / +0.08			
Kum. Volumen	Geld Volumen	Preis	Brief Volumen	Kum. Volumen	
		11.58	37'190 (13)	529'938 (194)	
		11.57	10'926 (6)	492'748 (181)	
		11.56	21'161 (10)	481'822 (175)	
		11.55	87'423 (29)	460'661 (165)	
		11.54	70'998 (21)	373'238 (136)	
		11.53	28'044 (14)	302'240 (115)	
		11.52	59'817 (18)	274'196 (101)	
		11.51	45'389 (27)	214'379 (83)	
		11.50	75'978 (24)	168'990 (56)	
		11.49	93'012 (32)	93'012 (32)	
8'515 (6)	8'515 (6)	11.48			
50'348 (17)	41'833 (11)	11.47			
93'565 (30)	43'217 (13)	11.46			
143'378 (46)	49'813 (16)	11.45			
158'145 (53)	14'767 (7)	11.44			
192'481 (62)	34'336 (9)	11.43			
242'941 (70)	50'460 (8)	11.42			
278'683 (73)	35'742 (3)	11.41			
353'618 (79)	74'935 (6)	11.40			
362'848 (81)	9'230 (2)	11.39			
Kum. Volumen	Geld Volumen	Preis	Brief Volumen	Kum. Volumen	

Figure: Cumulative Order Book during Continuous Trading

The values in brackets in the "Bid volume/Ask volume" column show the number of buy or sell orders. The numbers in brackets in the two "Cum. volume" columns represent the cumulative number of buy and sell orders respectively.

The following order book excerpts are used to illustrate the matching rules:

Examples in the table with the blue background (double entry order book): The limits on the buy and sell side are each sorted by price-time priority – Neighbor View.

Purchase				Sale			
Time	Order Size	Bid Size	Bid	Ask	Ask Size	Order Size	Time
10:20:32	100	250	42	43	100	100	10:18:36
10:21:10	150						
9:48:56	200	200	41	44	400	200	10:20:34
						200	10:15:22
10:25:55	100	100	40	45	300	300	10:21:12

Examples in the table with the grey background (single entry order book): Limits are sorted from top to bottom in the Price column – Tower View.

Time	Order Size	Bid Size	Price	Ask Size	Order Size	Time
			45	300	300	10:21:12
			44	400	200	10:20:34
			43	100	100	10:18:36
10:20:32	100	250	42			
10:21:10	150					
9:48:56	200	200	41			
10:25:55	100	100	40			

Depending on the trading segment, SIX Swiss Exchange offers market participants different order book depths. Through IMI, access to unlimited order book depth is available for both partitions.

Product	Order book depth for participants
Swiss Blue Chip Shares	30
Mid-/Small-Cap Shares	10
Secondary Listing Shares	10
Separate Trading Lines	10
Rights and Options	10
Investment Funds	10
Sponsored Foreign Shares	5
Exchange Traded Products und Sponsored Funds	5
Bonds	5
Structured Products/Warrants	1 (inside market price/best bid and ask price)

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10.1. Price-Time Priority

- As a rule, the price-time priority principle applies. This means that the order and quote with the better price (highest price limit for buy side, lowest price limit for sell side) is executed first. Unlimited orders enjoy top priority when consolidating orders and quotes. For orders and quotes with the same price, the order or quote received first shall also be executed first. Unlimited orders and quotes have the highest priority for matching.
- For orders and quotes with the same price, the order or quote received first is also executed first.

The principle of time priority applies to the Trading-At-Last period. This means that if multiple orders are received whose price limit is equal to or greater than the closing price (equal or greater price limit for the buy side, equal or lower price limit for the sell side), the order received first will be executed first.

11. Interruption of Trading

To ensure an orderly market, the following interruptions of trading apply:
(see [Trading Guides \(Product Guide\) Link](#))

11.1. Delayed Opening

If the stop trading range is exceeded during opening under the CLOB market model, or if the order book contains no quotes under the QDM (Quote-Driven-Market) market model, the Exchange will extend the auction period for a single specified period.

Delayed opening can only occur during the opening auction, but not after the closing auction. The length of delay varies from trading segment to trading segment. Under the CLOB market model, there is a fixed period of delay. Under QDM, there is a maximum delay which ends as soon as the missing quote is received.

11.2. Stop Trading

In particular, the Exchange may suspend trading if:

11.2.1. Stop Trading in the Central Limit Order Book

In the Central Limit Order Book the next price compared to the reference price is outside a range (Stop Trading Range) determined by the Exchange (Stop Trading or Delayed Opening);

11.2.2. Avalanche Stop Trading

In the Central Limit Order Book the next price compared to a transaction is within a certain time period (Avalanche Time), outside a range (Stop Trading Range) determined by the Exchange (Avalanche Stop Trading);

11.2.3. Stop Trading – No Quote

In the Quote-Driven-Market model, there is no quote on the opposite side of the order book at the time of a possible execution. Trading shall not be suspended if a limited order with the same price remains in the order book on the same side (buy/sell) of the order book as the quote executed last, provided that the limited order was already in the order book at the time of the execution of the quote;

The Stop Trading Range and the Stop Trading Duration, as well as the Avalanche Time connected with the Avalanche Stop Trading shall be determined by the Exchange per trading segment. The Exchange shall publish exceptions for individual securities and trading days in a suitable manner.

The participant may enter new orders and quotes during a trade suspension or delete existing ones.

After expiry of a trade suspension, the book shall be reopened with an auction.

Market control interventions remain reserved in accordance with the "Market Control" Directive.

11.3. Non-Opening

The Exchange does not open trading under the CLOB and QDM market models until all **market** orders in the auction process have been executed (non-opening). In these circumstances it is also not possible to calculate a theoretical opening price (TOP).

Non-opening status ends once a new order or order cancellation changes the order book, thus eliminating the market order overhang.

11.4. Underlying Condition

Under the CLOB market model, opening is not implemented as long as continuous trading in the underlying issue is suspended.

Sample question:

After stop trading on the Central Limit Order Book

Answers:

- a) the issue in question will no longer open if stop trading occurs after 4.30 pm
- b) non-opening may occur under certain circumstances
- c) trading will resume in accordance with the principle of highest executable volume
- d) the price fluctuation that triggered the stop trading must be eliminated

Answer: b), c)

Reasons: At the end of the interruption, trading will resume with an auction in accordance with the principle of highest executable volume. In the event of a market order overhang, the status will switch to non-opening.

11.5. Overview of Trading Interruptions

Equity Market					
	Delayed Opening	Stop Trading	Avalanche Stop Trading	Non-Opening	Underlying Condition
Blue Chip Shares	5-minute interruption, if deviation is 1.50% or greater	5-minute interruption, if deviation is 1.50% or greater	Avalanche time 10 seconds Duration and deviation same as for stop trading	Yes	No
Mid-/Small-Cap Shares	15-minute interruption, if deviation is 2% or greater SMIM securities 5-minute interruption, if deviation is 2% or greater	15-minute interruption, if deviation is 2% or greater SMIM securities 5-minute interruption, if deviation is 2% or greater	Avalanche time 10 seconds Duration and deviation same as for stop trading	Yes	No
Secondary Listing Shares	5-minute interruption, if deviation is 2% or greater	5-minute interruption, if deviation is 2% or greater	Avalanche time 10 seconds Duration and deviation same as for stop trading	Yes	No
Separate Trading Lines Rights	No	No	No	Yes	Interruption if underlying instrument is not being traded
Sponsored Foreign Shares	5-minute interruption, if there are executable orders with no quotes in the order book	5-minute interruption, if there are executable orders with no quotes in the order book	No	Yes	No

12. Extraordinary Situations

12.1.1. Suspension

SIX Swiss Exchange may temporarily suspend trading in a security if extraordinary circumstances so warrant. SIX Swiss Exchange will determine the duration of any suspension on a case-by-case basis, and this should generally be kept as short as possible.

When assessing whether to impose a suspension, and the duration of the suspension, the interest in maintaining open, transparent markets and continuous pricing must be weighed against the interest in ensuring uniform access to information on price-sensitive facts for all investors.

The introducing participant or the issuer may submit a request for suspension to the Exchange. The Exchange may also decide to suspend trading in a security. If possible, requests should be submitted not less than 90 minutes before trading opens. By way of exception, trading may be suspended during continuous trading. SIX Swiss Exchange will consult with the introducing participant or with the issuer where possible.

12.1.2. Emergency Deletions

In the event of the failure of a participant's access system, the participant may request emergency deletions of orders and/or quotes. Any orders that are not entered via OTI will remain effective if the participant loses its connection. The participant must contact Market Control with regard to any emergency deletions. A request for emergency deletions should be made by telephone. The SIX Swiss Exchange Market Control team performs emergency deletions. However, it may also decline requests for emergency deletions in exceptional circumstances. Participants must confirm any emergency deletion by e-mail. Emergency deletions cannot be carried out during opening and at close of trading. Market Control may perform emergency deletions at various levels:

At participant or trader level:

- All orders and quotes
- All orders and quotes for a particular security
- All orders and quotes for a particular segment
- All orders and quotes for products with a specific underlying instrument

At security level:

- Individual STI orders*
- Individual order groups* (for batch entries of OTI orders or quotes)

At OTI / QTI user level:

- All quotes (forced logoff of a market maker)
- All orders via OTI

*Emergency deletions for individual orders or individual order groups may be refused.

13. Pre-Trade Controls

According to Art. 30 FMIA and Art. 30 para. 2 d FMIO, the trading venue must have effective systems, procedures and precautions in place to reject orders that exceed the specified quantity and price thresholds or are clearly incorrect. (see Trading Guide / Product Guide [Link](#))

Control	Description
Price Collar	<p>The order is automatically rejected by the system if the price of the order exceeds the upper price limit.</p> <p>The upper Price Collar = Reference Price x Price Collar Factor</p> <p>The system automatically rejects the order if the price of the order exceeds the lower price limit.</p> <p>The lower Price Collar = Reference Price/Price Collar Factor</p>
Maximum Order Value	<p>The system automatically rejects the order if the value of the order exceeds the maximum order value.</p> <p>Maximum Order Value = Order Quantity x Order Price</p>
Maximum Order Volume	<p>The system automatically rejects the order if the quantity of the order exceeds the maximum order volume.</p> <p>Maximum Order Volume = Maximum Order Value/Reference Price</p>

14. Matching Rules

The following rules are used at SIX Swiss Exchange for the purpose of executing orders:

Matching Rules for Auctions

These apply to all situations other than continuous trading, such as opening, re-opening after interruption of trading and the closing auction.

Matching Rules for Continuous Trading

These apply to active securities during continuous trading when the order book status is normal.

Which matching rule applies will depend on:

- the market model
- the trading period (e.g. pre-opening, continuous trading, close of trading)
- the order book status (e.g. non-opening, delayed opening, stop trading, delayed opening with non-opening, stop trading with non-opening)
- the status of the securities (e.g. active, underlying condition, suspended)

14.1. Reference Price

Under normal circumstances the reference price is the most recently paid price. This becomes the comparison price for various calculations and serves as the basis for price determination.

14.1.1. Reference Price Adjustment

The Exchange may adjust the reference price in the following cases, in particular:

14.1.1.1. Adjustments after the Close of Trading

If there is no trade on the Exchange in the order book during trading hours, despite an open order book. The reference price shall be adjusted as follows after the close of trading:

1. for trading segments of the equity market: For the reference price adjustment the Exchange will consider the bid and ask price at the close of trading.
2. for all other trading segments: For the reference price adjustment the Exchange will consider the bid and ask price in the last hour before the close of trading.

In both cases: If the previous reference price is lower than the best bid price, the reference price shall be the best bid price. If the previous reference price is higher than the best ask price, the reference price shall be the best ask price. If, at the close of trading, there is no bid price and no ask price in the order book, the reference price shall not be adjusted.

14.1.1.2. The Trade that led to the Reference Price was cancelled by the Exchange.

If the trade which resulted in the reference price has been cancelled by the Exchange. The reference price shall be adjusted as follows after the close of trading:

If a valid on-exchange, off-order-book trade has taken place during trading hours, the reference price shall be the last on-exchange price listed in the order book. If there has been no valid on-exchange, off-order-book trade during trading hours, the reference price shall be determined pursuant to the "Adjustments after the close of trading" see above.

14.1.1.3. Capital Events (Dividend Payment, Split, Spin-Off, etc.)

If dividends on a security are paid out in the trading currency. On the Ex-date, the Exchange shall adjust the reference price by the amount of the dividend prior to the opening of trading.

14.1.1.4. Price Step Adjustment

The Exchange adjusts the reference price prior to the opening of trading if the reference price does not correspond to the new valid price steps.

14.2. Simplified Overview of Matching Rules

In this chapter we are discussing the following market models with pre-trade transparency:

- Central Limit Order Book (CLOB)
- Quote-Driven-Market (QDM)
- Price Validation Market (PVM) for Structured Products (based on QDM)

In these market models there are two types of execution provisions:

- Execution provisions for auctions (principle of highest executable volume)
- Execution provisions for continuous trading

This gives rise to four scenarios in which the execution provisions must be applied. These scenarios may involve different order types. The most common situations are shown in the chart below:

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* : = and ≠ refers to volume		* : = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop Trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop Trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

Explanatory Notes:

- Market vs. Market = \rightarrow RP: market orders are matched against market orders at the reference price. Non-opening will occur if it is not possible to assign all market orders.
- Market vs. Limit \rightarrow Limit : If market orders are matched with limit orders, they will be matched at the limit of the limit orders
- Limit vs. limit $\neq \rightarrow$ where there are different limits with different volumes, the higher volume will be used for the order limit at opening.
- Limit vs. Limit = $\rightarrow \emptyset$: where there are different limits with identical volumes, the opening price will be the arithmetical mean (only applies to interruption of trading).
- Limit vs. Limit \rightarrow 1. Limit: any limit that reaches the order book during continuous trading will be matched at the price of the limit that is already in the book.
- Quote vs. Quote \rightarrow as for limit : any quote that reaches the order book during continuous trading will be matched at the price of the quote that is already in the book
- Quote vs. Limit \rightarrow Quote: quote domination applies.
- Quote vs. Limit \rightarrow Limit, if $>$ and older : if a quote reaches the order book during continuous trading and meets a limit, the price will only equal the limit if the volume for the limit is higher. Otherwise the quote domination applies.

Once the price has been determined, it is always essential to check whether a "better" limit than the price established remains in the order book. If this is the case, this limit must be used for matching purposes.

Please note:

These simplified rules are not intended to cover all possible scenarios and contingencies.

14.3. Auction and Highest Executable Volume

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14.3.1. Principle of Highest Executable Volume

According to the principle of highest executable volume, the largest possible quantity executable is executed at a single specified price.

Example: Principle of Highest Executable Volume

The order book is in an auction.

Cumulative volume	Bid Size	Price	Ask Size	Cumulative volume
100	100	Market		
		47.00	400	1,700
		46.00	300	1,300
500	400	45.00	200	1,000
820	320	44.00	100	800
1,320	500	43.00	500	700
1,720	400	42.00		
		Market	200	200

Result:

In the opening 800 shares will be executed at a price of CHF 44.00.

Explanation:

At a price of CHF 45.00, only 500 can be executed (cumulative volume bid size).

At a price of CHF 43.00, only 700 can be executed (cumulative volume ask size).

14.3.2. Auction Matching Rules

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* ; = and ≠ refers to volume		* ; = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop Trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop Trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven-Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

Explanatory Notes - Auctions CLOB and QDM:

- Market vs. Market = → RP: market orders are matched against market orders at the reference price. Non-opening will occur if it is not possible to assign all market orders.
- Market vs. Limit → Limit : If market orders are matched with limit orders, they will be matched at the limit of the limit orders
- Limit vs. limit ≠ → where there are different limits with different volumes, the higher volume will be used for the order limit at opening.
- Limit vs. Limit = → ∅: where there are different limits with identical volumes, the opening price will be the arithmetical mean.

CLOB: If the percentage deviation from the theoretical opening price to the last reference price is greater than the permitted range, the opening is followed by a delayed opening. The Delayed Opening can only happen once a day after the opening.

If trading is interrupted during continuous trading due to too large a price deviation, stop trading occurs.

At the close of trading with closing auction, the price deviation from the closing price to the last reference price before the start of the closing auction is not checked. Irrespective of the price deviation, execution takes place.

If not all market orders can be executed within the highest execution principle, the result is a non-opening.

QDM: The Exchange shall interrupt trading (Stop Trading No Quote) if two orders can be combined to a trade and there is no quote on the opposite side of the order book at the time of possible execution. If one of the orders that would lead to an execution is deleted, the order book switches to continuous trading.

If no execution is possible during the auction, the order book switches directly to continuous trading.

The Exchange shall open trading during the trading interruption as soon as a quote has been entered but no later than at the expiry of the trading interruption.

All limit and market orders and quotes in the order book, and in some cases the reference price, are used to determine the opening price after trading is interrupted. Orders and quotes are treated equally during any interruption of trading.

The following rules apply:

- a) Orders must be considered in accordance with the price-time priority principle.
- b) Unlimited orders must be executed with unlimited or limit orders on the opposite side. If it is not possible to execute all market orders, no orders are executed and the order book remains closed (**non-opening**). Valid orders remain in the order book.
- c) Orders must be executed until one side of the book is empty or the best bid price remaining in the order book is lower than the best ask price.
- d) If two market orders for the same quantity are executed last, the auction price is equal to the reference price. If the reference price is lower (higher) than the best remaining buy (sell) order on the book, this remaining order determines the auction price – see example 6.
- e) If one unlimited and one limit order are executed last, the price of the auction will correspond to the remaining limit.
- f) If limit orders of different quantities are executed at two price levels last, the price of the auction will correspond to the price level of the bigger order quantity.
- g) If two orders for the same quantity limited at two price steps were executed last, the price is the arithmetical mean of the two price steps, rounded up to the next valid price step. If the arithmetical mean is lower (higher) than the best remaining buy (sell) order on the book, this remaining order determines the auction price.

The following examples are derived from these rules, which are set forth in Directive 3: Trading, Section 7:

1. Example: Market Orders with same volume

Execution of unlimited orders/market orders of the same volume against each other at the reference price.

Reference price: CHF 45.00

Bid Size	Bid	Ask	Ask Size
500	M	M	500

Bid Size	Price	Ask Size
500	Market	500

In this order book situation the price is equal to the reference price.

→ Price: CHF 45.00

2. Example: Market Orders with limits remaining in the book

The limits remaining on the order book determine the price for execution of market orders of the same volume if

Example A: Reference price < remaining buy limit → price = remaining buy limit

Reference price: CHF 45.00

Bid Size	Bid	Ask	Ask Size
500	M	M	500
200	46.00		

Bid Size	Price	Ask Size
500	Market	500
200	46.00	

Since the reference price is lower than the remaining buy limit, the buy limit determines the price.

→ Price: CHF 46.00

Example B: Reference price > remaining sell limit → price = remaining sell limit

Reference price: CHF 45.00

Bid Size	Bid	Ask	Ask Size
500	M	M	500
		44.00	100

Bid Size	Price	Ask Size
500	Market	500
	44.00	100

Since the reference price is higher than the remaining sell limit, the sell limit determines the price.

→ Price: CHF 44.00

This leads to the following simplification:

If a reference price and limit must be used to determine the price

- the higher of the two determines the price if a buy order remains in the order book
- the lower of the two determines the price, if a sell order remains on the order book.

3. Example: Matching at the best remaining limit

If the market and limit order meet, matching is always at the best remaining limit.

Example A:

Bid Size	Bid	Ask	Ask Size
500	M	43.00	100
		44.00	400
		45.00	100

Bid Size	Price	Ask Size
500	Market	
	45.00	100
	44.00	400
	43.00	100

In this order book situation the price is equal to the best remaining sell limit.

→ Price: CHF 44.00

Example B:

Bid Size	Bid	Ask	Ask Size
500	Market	44.00	500

Bid Size	Price	Ask Size
500	Market	
	44.00	500

In this order book situation the price is equal to the sell limit, since there are no better sell limits remaining.

→ Price: CHF 44.00

Please note:

The term "remaining" could be misconstrued, since the limit that it refers to is still included in the execution, or used as an alternative execution result to be compared with the reference price. This is how Directive 3 is officially worded.

What is meant is that this is the last opportunity to match the bid and ask side.

In Example 4.1, for example, the limit of 44.00 is matched with the market order, i.e. it does not "remain" after matching during opening after interruption of trading. However, this would be the last limit order available for matching with the buy side.

4. Example : Limit Orders with different limits and volumes

If limit orders with **different limits and volumes** are matched, the price is determined by the limit with the higher order volume.

Example A: Buy Order volume > Sell Order volume

Bid Size	Bid	Ask	Ask Size
700	45.00	44.00	100

Bid Size	Price	Ask Size
700	45.00	
	44.00	100

The price is equal to the limit with the highest order volume.

→ Price: CHF 45.00, volume executed: 100

Example B: Sell Order volume > Buy Order volume

Bid Size	Bid	Ask	Ask Size
300	45.00	44.00	700

Bid Size	Price	Ask Size
300	45.00	
	44.00	700

The price is equal to the limit with the highest order volume.

→ Price: CHF 44.00, volume executed: 300

5. Example : Limit Orders with different limits and same volumes

If limit orders with different limits and the same volume are matched, the price is determined from the arithmetical mean of the limits (rounded up to the nearest valid price step).

Bid Size	Bid	Ask	Ask Size
700	45.00	44.00	700

Bid Size	Price	Ask Size
700	45.00	
	44.00	700

Example with no Price Stepping:

The price is equal to the arithmetical mean.

→ Price: CHF 44.50

Example with Price Stepping of CHF 1.00:

The price is equal to the arithmetical mean (rounded value).

→ Price: CHF 45.00

6. Example : Limit Orders with different limits and same volumes and additional Limit Order

If the best remaining buy limit (sell limit) on the order book is higher (lower) than the arithmetical mean, the price is determined by the latter.

Example A: Buy limit > arithmetical mean

Bid Size	Bid	Ask	Ask Size
700	45.00	44.00	700
100	44.75		

Bid Size	Price	Ask Size
700	45.00	
100	44.75	
	44.00	700

The price is equal to the remaining buy limit, since it is higher than the arithmetical mean (44.50).

→ Price: CHF 44.75

Example B: Sell limit < arithmetical mean

Bid Size	Bid	Ask	Ask Size
700	45.00	44.00	700
		44.40	100

Bid Size	Price	Ask Size
700	45.00	
	44.40	100
	44.00	700

The price is equal to the remaining sell limit, since it is lower than the arithmetical mean (44.50).

→ Price: CHF 44.40

7. Example

The order book is in an auction. No orders can be executed.

Reference price: CHF 60.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	50.00	53.00	120	Order
Order	200	49.00	56.00	100	Order
Order	100	48.00			
Order	500	46.00			

Type	Bid Size	Price	Ask Size	Type
		56.00	100	Order
		53.00	120	Order
Order	100	50.00		
Order	200	49.00		
Order	100	48.00		
Order	500	46.00		

Result:

The theoretical opening price cannot be determined. The order book switches

- with **CLOB and QDM** to trading status without executing any orders

8. Example

The order book is in an auction.

No limit order remains on the order book that is better than the arithmetical mean of the last two limit orders executed against one another.

Price steps (tick size): CHF 1.00

Reference price: CHF 41.00

Arithmetical mean: CHF 39.50
(rounded up to CHF 40.00)

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	40.00	39.00	100	Order
Order	200	39.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	40.00		
Order	200	39.00	100	Order

Result:

The theoretical opening price is CHF 40.00.

- With **CLOB** 100 units are executed at opening at a price of CHF 40.00 (rounded arithmetical mean).
- With **QDM**, the book will move, without quotes in the order book, into "Delayed Opening no Quote". All things being equal, the book will pass into the "trading" status with 100 units executed at a price of CHF 40.00 (rounded arithmetical mean).

14.4. Continuous Trading

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* ; = and ≠ refers to volume		* ; = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop Trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop Trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven-Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

Explanatory Notes for CLOB and QDM:

- Market vs. Market → RP: market orders are matched against market orders at the reference price.
- Market vs. Limit → Limit : If market orders are matched with limit orders, they will be matched at the limit of the limit orders
- Limit vs. Limit → 1. Limit: any limit that reaches the order book during continuous trading will be matched at the price of the limit that is already in the book.

With QDM the following Notes have to be added:

- Quote vs. Quote → as for limit : any quote that reaches the order book during continuous trading will be matched at the price of the quote that is already in the book
- Quote vs. Limit → Quote: quote domination applies.
- Quote vs. Limit → Limit, if > and older : if a quote reaches the order book during continuous trading and meets a limit, the price will only equal the limit if the volume for the limit is higher. Otherwise the quote domination applies.

In continuous trading, transactions are triggered by an incoming order or quote which is executed with the orders or quotes on the opposite side of the order book to the extent the quantity and limit allow it. In contrast to interruptions of trading, the price for each transaction is determined individually.

The following rules apply:

- a. Incoming orders are checked for feasibility and immediately executed, applying the price-time priority principle, against orders or quotes on the opposite side of the order book in one or more steps at one or more prices.
- b. If an order is not executed or only partially executed, it is placed in the order book with any limit and a time stamp, subject to other order validities.
- c. If an incoming unlimited order is executed against an unlimited order on the opposite side of the order book, the trade is executed at the reference price. If the reference price is lower (higher) than the best buy order (sell order) remaining on the book, this will determine the price of execution.
- d. If an incoming unlimited order is executed against a limit order on the opposite side of the order book, the price will be equal to the limit.
- e. If an incoming limit order is executed against a market order on the opposite side of the order book, the price is equal to the limit. If the executed limit is lower (higher) than the best buy order (sell order) remaining on the opposite side of the order book, this will determine the price of execution.
- f. If an incoming limit order is executed against a limit order on the opposite side of the order book, the trade will be executed at the common limit price. If the limit of the buy order is higher than the limit of the sell order, the limit which is more beneficial from the standpoint of the incoming order is used.

The above rules are derived from Directive 3: Trading, Section 8

14.4.1. Continuous Trading under the CLOB Market Model

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* : = and ≠ refers to volume		* : = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

Explanatory Notes Continuous Trading CLOB:

- Market vs. Market = →RP: market orders are matched against market orders at the reference price. Non-opening will occur if it is not possible to assign all market orders.
- Market vs. Limit → Limit : If market orders are matched with limit orders, they will be matched at the limit of the limit orders
- Limit vs. Limit → 1. Limit: any limit that reaches the order book during continuous trading will be matched at the price of the limit that is already in the book.

Incoming orders are executed at the price of the existing limit orders. If an order cannot be executed or can be executed only in part, the rest will remain on the order book, subject to any validity specifications to the contrary.

Directive 3: Trading, Section 10

The Exchange may stop trading if:

- the next price is outside a range (the stop trading range) defined by the Exchange in comparison with the reference price (stop trading)

The following examples illustrate the matching rules and the above table of rules. Incoming orders are marked with an arrow:

The rules from Directive 3: Trading, Section 8 yield the following table of rules for continuous trading in the CLOB Market Model:

Incoming Order	Orders in Order Book		
	Unlimited Orders (Market Orders)	Limit Orders	Market and Limit Orders
Market Sell Orders	Reference Price	Highest Buy Limit in Book	Reference Price or Highest Buy Limit (max.)
Market Buy Orders	Reference Price	Lowest Sell Limit in Book	Reference Price or Lowest Sell Limit (min.)
Limit Sell Orders	Incoming Sell Limit	Highest Buy Limit in Book	Incoming Limit or Limit in Book (max.)
Limit Buy Orders	Incoming Buy Limit	Lowest Sell Limit in Book	Incoming Limit or Limit in Book (min.)

The following rule applies: the price is determined by the order that is already in the book.

1. Example: Market Order meets Market Order

Reference price: CHF 45.00

Bid Size	Bid	Ask	Ask Size
→ 500	M	M	500

Bid Size	Price	Ask Size
→ 500	Market	500

→ 500 units executed at reference price

2. Example: Limit Order meets Market Order

Bid Size	Bid	Ask	Ask Size
→ 500	44.00	M	500

Incoming buy limit determines the price:

→ 500 units executed at CHF 44.00

Bid Size	Bid	Ask	Ask Size
500	M	46.00	500 ←

Incoming sell limit determines the price:

→ 500 units executed at CHF 46.00

Bid Size	Price	Ask Size
	Market	500
→ 500	44.00	

Bid Size	Price	Ask Size
500	Market	
	46.00	500 ←

3. Example: Market Order meets Limit Order

Bid Size	Bid	Ask	Ask Size
→ 500	M	44.00	500
		45.00	300

Lowest sell limit in the order book determines the price:

→ 500 units executed at CHF 44.00

Bid Size	Bid	Ask	Ask Size
500	43.00	M	500 ←
200	42.00		

Highest buy limit in the order book determines the price:

→ 500 units executed at CHF 43.0

Bid Size	Price	Ask Size
→ 500	Market	
	45.00	300
	44.00	500

Bid Size	Price	Ask Size
	Market	500 ←
500	43.00	
200	42.00	

4. Example: Limit Order meets Limit Order

Bid Size	Bid	Ask	Ask Size
→ 500	45.00	44.00	500
200	43.00	45.00	200

Bid Size	Price	Ask Size
→ 500	45,00	200
	44,00	500
200	43,00	

Lowest sell limit determines the price:

→ 500 units executed at CHF 44.00

Bid Size	Bid	Ask	Ask Size
500	45.00	44.00	500 ←
400	44.00	46.00	300

Bid Size	Price	Ask Size
	46.00	300
500	45.00	
400	44.00	500 ←

Highest buy limit in the order book determines the price:

→ 500 units executed at CHF 45.00

The first order to reach the book determines the price in this case.

5. Example: Market Order meets Market and Limit Order

Reference price: CHF 43.00

Bid Size	Bid	Ask	Ask Size
→ 500	M	M	500
		44.00	200

Bid Size	Price	Ask Size
→ 500	Market	500
	44.00	200

Price is determined by reference price or sell limit in order book (whichever is lower):

→ 500 units executed at CHF 43.00

Reference price: CHF 43.00

Bid Size	Bid	Ask	Ask Size
500	M	M	500 ←
400	44.00		

Bid Size	Price	Ask Size
500	Market	500 ←
400	44.00	

Price is determined by reference price or buy limit in order book (whichever is higher):

→ 500 units executed at CHF 44.00

6. Example: Limit Order meets Market and Limit Order

Bid Size	Bid	Ask	Ask Size
→ 500	44.00	M	500
		43,00	200

Bid Size	Price	Ask Size
	Market	500
→ 500	44.00	
	43.00	200

Price is determined by incoming limit or sell limit in order book (whichever is lower):

→ 500 units executed at CHF 43.00

Bid Size	Bid	Ask	Ask Size
500	M	45.00	500 ←
400	44.00		

Bid Size	Price	Ask Size
500	Market	
	45.00	500 ←
400	44.00	

Price is determined by incoming limit or buy limit in order book (whichever is higher):

→ 500 units executed at CHF 45.00

14.4.2. Continuous Trading under the Quote-Driven-Market (QDM) Model

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* : = and ≠ refers to volume		* : = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of at market orders: non opening.	Difference relative to RP too large: Stop trading	No quote: Delayed opening An overhang of at market orders: non opening	No quote on the opposite side of the incoming order: Stop trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

Explanatory Notes Continuous Trading in QDM:

- Market vs. Market = →RP: market orders are matched against market orders at the reference price. Non-opening will occur if it is not possible to assign all market orders.
- Market vs. Limit → Limit : If market orders are matched with limit orders, they will be matched at the limit of the limit orders
- Limit vs. Limit → 1. Limit: any limit that reaches the order book during continuous trading will be matched at the price of the limit that is already in the book.
- Quote vs. Quote → as for limit : any quote that reaches the order book during continuous trading will be matched at the price of the quote that is already in the book
- Quote vs. Limit → Quote: quote domination applies.
- Quote vs. Limit → Limit, if > and older : if a quote reaches the order book during continuous trading and meets a limit, the price will only equal the limit if the volume for the limit is higher. Otherwise the quote domination applies.

**Directive 3:
Trading,
Section 10**

Quote-based pricing rules are applied under the QDM market model.

Quote-based pricing: incoming quotes are executed at the quote price, or if there is a surplus on the order side at the best remaining limit price (highest bid or lowest sell limit).

The Exchange may stop trading if there is no quote on the opposite side of the order book at the time of a potential trade.

It is important to note whether or not the incoming quote volume exceeds the volume on the order book.

This produces the following rules:

- Incoming quote (quote volume < bid/ask volume) is executed exclusively against quotes in the order book at the best quote (highest buy or lowest sell quote).
- Limit or market orders are executed against order books containing only limit orders and quotes, or only quotes, in line with the matching rules for continuous trading.
- When limit or market orders encounter an order book containing no quotes, trading is interrupted (**stop trading**).

The table below presents a summary of the rules for execution of orders and quotes in continuous trading under the QDM market model. The best limit/quote always refers to the highest buy limit/quote or the lowest sell limit/quote in the order book.

Incoming Orders/Quotes	Orders/Quotes on opposite Side of Order Book		
	Limit Orders only	Limit Orders and Quotes	Quotes
Quote Volume \geq best Bid/Ask Volume	Incoming Quote	Best Quote in order book	Best Quote in order book
Quote Volume < best Bid/Ask Volume			
Buy Quote	Lowest remaining Sell Limit	Lowest Sell Quote or, where applicable, lowest remaining Sell Limit	Lowest Sell Quote in order book
Sell Quote	Highest remaining Buy Limit	Highest Buy Quote or, where applicable, highest remaining Buy Limit	Highest Buy Quote in order book
Limit Orders Market Orders	Stop Trading	Best Limit/Quote in order book	Best Limit/Quote in order book

1. Example: Execution of an incoming Quote at Quote price.

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	500	75.00	74.00	500	Quote ←
Order	400	73.00			

Type	Bid Size	Price	Ask Size	Type
Order	500	75.00		
		74.00	500	Quote ←
Order	400	73.00		

→ 500 units executed at CHF 74.00 (quote price)

2. Example: Execution at best Quote in the book

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	200	75.00	71.00	500	Quote ←
Order	300	74.00			
Quote	200	73.00			

Type	Bid Size	Price	Ask Size	Type
Order	200	75.00		
Order	300	74.00		
Quote	200	73.00		
		71.00	500	Quote ←

Execution of an incoming quote at best quote in order book when quote volume \geq bid/ask volume and book contains orders and quotes.

- "Quote vs. Quote ==> 1.st Quote" : Any quote that reaches the order book during continuous trading will be matched at the price of the quote that is already in the book

See also Trading Rules :

- Incoming quote is executed exclusively against quotes in the order book at the best quote.
- Incoming sell quote : execution at highest buy quote in order book. ==> if higher limit orders, these will be executed at the lower limit quote in the book.

→ Limit orders executed at 200 and 300 units respectively at price of best quote in order book at CHF 73.00

3. Example: Execution of an incoming Quote at best Quote in order book when book only contains Quotes.

Type	Bid Size	Bid	Ask	Ask Size	Type
Quote	500	75.00	74.00	500	Quote ←
Quote	300	74.00			
Quote	200	73.00			

Type	Bid Size	Price	Ask Size	Type
Quote	500	75.00		
Quote	300	74.00	500	Quote ←
Quote	200	73.00		

→ 500 units executed at price of best quote in order book at CHF 75.00

4. Example: Incoming Quotes and influence of volume

Execution of an incoming quote in order book at best remaining limit when quote volume < bid/ask volume and book contains only limit orders.

Example A: Incoming Quote, buy 500 units, limit CHF 73.00

Type	Bid Size	Bid	Ask	Ask Size	Type
→ Quote	500	73.00	71.00	400	Order
Order	300	70.00	72.00	300	Order

Type	Bid Size	Price	Ask Size	Type
→ Quote	500	73.00		
		72.00	300	Order
		71.00	400	Order
Order	300	70.00		

→ Two executions at best remaining limit in order book:
400 units and 100 units both at CHF 72.00

See **Directive 3 – Trading:**

An incoming quote shall be executed with an existing order at the quote price (and not at the order price) if the quote quantity is greater than or equal to the order quantity (Quote Domination).

If a better limit remains on the opposite side than the incoming quote price, this limit shall determine the price of the transaction.

Example B: Incoming Quote, sell 400 units, limit: CHF 74.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	500	75.00	74.00	400	Quote ←
Order	300	73.00			

Type	Bid Size	Price	Ask Size	Type
Order	500	75.00		
		74.00	400	Quote ←
Order	300	73.00		

→ 400 units executed at price of best limit in order book, CHF 75.00

See Directive 3 – Trading:

An incoming quote shall be executed with an existing order at the quote price (and not at the order price) if the quote quantity is greater than or equal to the order quantity (Quote Domination). Here the order quantity of the order in the book is bigger, so the execution will be done at the order limit price of CHF 75.00

5. Example: Incoming Quotes with existing Quotes in the book

- Quote vs. Quote → as for limit : any quote that reaches the order book during continuous trading will be matched at the price of the quote that is already in the book
- Execution of an incoming quote in order book at best quote or at best remaining limit when quote volume < bid/ask volume and book contains limit orders and quotes.

Example A: Incoming Quote, buy 550 units, limit CHF 75.00: CHF 75.00

Type	Bid Size	Bid	Ask	Ask Size	Type
→ Quote	550	75.00	71.00	200	Order
			72.00	200	Order
			73.00	100	Quote
			74.00	100	Order

Type	Bid Size	Price	Ask Size	Type
→ Quote	550	75.00		
		74.00	100	Order
		73.00	100	Quote
		72.00	200	Order
		71.00	200	Order

- Two executions of 200 units each at price of quote in order book at CHF 73.00
- One execution of 100 units at price of quote in order book at CHF 73.00
- One execution of 50 units at the price of the remaining limit in order book at CHF 74.00 (due to higher remaining volume of the order)

Example B: Incoming Quote, sell 400 units, limit: CHF 71.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	200	75.00	71.00	400	→ Quote
Order	200	74.00			
Quote	100	73.00			

Type	Bid Size	Price	Ask Size	Type
Order	200	75.00		
Order	200	74.00		
Quote	100	73.00		
		71.00	400	→ Quote

- 200 units each executed at price of quote in order book at CHF 73.00

6. Example: Incoming Quote

The order book is in continuous trading. Quote-based pricing; the order book contains no limits better than the quote price.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	51.00	50.00	200	Quote ←
Order	200	49.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	51.00		
		50.00	200	Quote ←
Order	200	49.00		

Result:

100 units are executed at opening at a price of CHF 50.00.

Quote-based pricing: The price of the trade is determined by the sell quote price since the order book contains no better remaining price limits than the quote price.

7. Example: Incoming Quote

The order book is in continuous trading. Quote-based pricing; the order book contains no limits better than the quote price.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	46.00	44.00	300	Quote ←
Order	100 100	45.00			
Order	100	44.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	46.00		
Order	100 100	45.00		
Order	100	44.00	300	Quote ←

Result:

300 units are executed at a price of CHF 44.00.

Quote-based pricing: The price of the trade is determined by the sell quote price since the order book contains no better remaining price limits than the quote price.

8. Example: Incoming Quote

The order book is in continuous trading.

Quote-based pricing; the remaining buy limit is better than the quote price arriving on the order book.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	46.00	44.00	150	Quote ←
Order	100 100	45.00			
Order	100	44.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	46.00		
Order	100 100	45.00		
Order	100	44.00	150	Quote ←

Result:

Executed:

100 units at a price of CHF 45.00

50 units at a price of CHF 45.00

The remaining 150 units remaining on the order book at CHF 45.00 determine the price of the trades.

9. Example: Incoming Quote

The order book is in continuous trading. Quote-based pricing with quotes and orders on the side opposite the incoming quote.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	45.00	39.00	200	Quote ←
Order	100	44.00			
Quote	100	43.00			
Order	100	42.00			
Quote	100	41.00			
Order	100	40.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	45.00		
Order	100	44.00		
Quote	100	43.00		
Order	100	42.00		
Quote	100	41.00		
Order	100	40.00		
		39.00	200	Quote ←

Result:

Executed:


100 units at limit CHF 45.00 executed at a price of CHF 43.00

100 units at limit CHF 44.00 executed at a price of CHF 43.00

The executed price of CHF 43.00 corresponds to the price of the quotes remaining on the order book.

14.5. Price Validation Market (PVM) for Structured Products

The Price Validation Market (PVM) for on book trading in Structured Products does not execute orders and quotes immediately but interrupts trading for a pre-defined period in which the Market Maker/Liquidity Provider as well as the clients can validate their price of the order or quote. During the Price Validation Phase there is no pre-trade transparency in the affected order book. After the Price Validation Phase the executing orders and quotes are be matched according to the Auction Matching Rules and the Principle of Highest Executable Volume.

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* : = and ≠ refers to volume		* : = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop trading**
	Explain it - Video 	Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

14.5.1. Orders and Quotes

Orders and Quotes in the new Price Validation Market for Structured Products are not binding. Participants may modify or delete their order as well as Market Makers/Liquidity Providers may update or delete their quote(s) during the Price Validation Phase.

14.5.2. Market Model and Matching Rules

The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.

In the new Price Validation Market, in the opening as well as during continuous trading, the matching rules for Auctions and the Principle of Highest Executable Volume are applicable according to

Directive 3Trading / Clause 7, independently of whether orders are executed against each other or orders are executed against quotes.

The table below illustrates the handling:

Matching Situation	Trading Interruption	Duration of interruption	Matching Rules
Order vs. Order	Stop Trading no Quote	30 seconds	Auction and Principle of Highest Executable Volume
Order vs. Quote	Price Validation Phase	1 second	Auction and Principle of Highest Executable Volume

14.5.3. Price Validation Interruption

14.5.3.1. Triggering Price Validation Phase

The Price Validation Phase is triggered during continuous trading when

- an **incoming order** is matching against a **resting quote**; or
- a **resting order is amended** and is matching a **resting quote**; or
- an **incoming quote** is matching against a **resting order**; or
- a **resting quote is amended** and is matching a **resting order**.

14.5.3.2. Behaviour during Price Validation Phase

The duration of the Price Validation Phase is configured to 1 second.

During the Price Validation Phase there is no pre-trade transparency in the affected order book. SIX does neither publish the theoretical opening price (Indicative Price Message) nor order book updates (new/amended/deleted orders and quotes). During the Price Validation Phase, participants may amend/delete their resting order(s) and enter new orders. Market Makers/Liquidity Providers may amend/delete their quote(s) and enter new quotes.

14.5.3.3. Resolution of Price Validation Phase

The Price Validation Phase is resolved if

- the quote involved in triggering the Price Validation Phase is **updated** by the Market Maker/Liquidity Provider
- the quote involved in triggering the Price Validation Phase is **deleted** by the Market Maker/Liquidity Provider or rejected by SIX due to flow control (i.e. If a Market Maker/Liquidity Provider exceeds his configured dedicated and/or shared capacity or the entire pool of shared capacity is exceeded, the participant will receive the Reply Code "F"= Flow Control Active)
- the order involved in triggering the Price Validation Phase is **updated** by the participant and there is no longer an executable situation
- the order involved in triggering the Price Validation Phase is **deleted** by the participant and there is no longer an executable situation
- **the duration of the Price Validation Phase has expired** (this means the order or quote involved in triggering the Price Validation Phase isn't updated neither deleted during the Price validation duration).

If at the end of a Price Validation Phase there are matching orders on both sides of the order book but no quote, a "Stop Trading no Quote" is triggered before matching of the orders.

If during a Price Validation Phase market orders which cannot execute are entered, the order book will change into the Book Condition "Stop Trading with Non-Opening". If at the end of a Price Validation Phase there are market orders which cannot execute, the order book will change into the Book Condition "Non-Opening".

The Price Validation Phase will be resolved by an auction using the Principle of Highest Executable Volume. At the end of the Price Validation Phase the order book is published.

14.5.3.4. Pre-Trade Transparency

At the start of the Price Validation Phase the order books of the securities will lose their pre-trade transparency status. At the end of a Price Validation Phase consolidated pre-trade updates are published.

14.5.4. Matching Examples

The matching scenarios below provide some examples of how the Price Validation Market behaves. Please note that the following conditions apply for all matching scenarios:

- The order marked in **red** is the entering order/quote
- The order marked in ~~red and strikethrough~~ is the order/quote being deleted
- The order ID provides an indication in which sequence the orders have entered the book(s)

Further conditions are described in the respective scenario.

Scenario 1

Scenario 1 Entering Order triggers Price Validation Interruption and Quote is updated with trade

Conditions Trading Period = Continuous Trading
Stop Trading no Quote = 30 Seconds

QDM in Continuous Trading	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						1.05	10,000	-	O1	Normal Good Till Date SWX	9 9000 P
					1.04	100,000	-	Q1	Quote Good for Day SWX	5 5000 P	
	5 5000 P	Quote Good for Day SWX	Q1	-	100,000	1.02	1,000	-	O10	Normal Good Till Date SWX	4 4000 R
	7 7000 R	Normal Good for Day SWX	O2	-	1,000	1.01					
	8 8000 R	Normal Good Till Date SWX	O3	-	5,000	1.00					

Result Price Validation Interruption is triggered

QDM in Price Validation	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						1.05	10,000	-	O1	Normal Good Till Date SWX	9 9000 P
					1.04	100,000	-	Q1	Quote Good for Day SWX	5 5000 P	

5 5000 P	Quote Good for Day SWX	Q1	-	100,000	1.02	1,000	-	O10	Normal Good Till Date SWX	4 4000 R
7 7000 R	Normal Good for Day SWX	O2		1,000	1.01					
8 8000 R	Norma Good Till Date SWX	O3	-	5,000	1.00					

Results

During Price Validation the quotes are updated at the same price.
Qty 1000 of O10 executes against Q1 at price 1.02 immediately when Q1 is updated.
Price Validation Interruption is resolved and Continuous Trading resumes.

Comment

O10 which is triggering the Price Validation Interruption is not published in the market data nor is the order book during the Price Validation interruption.

Scenario 2

Scenario 2 Entering Order triggers Price Validation Interruption and Quote is updated with trade

Conditions Trading Period = Continuous Trading
 Stop Trading no Quote = 30 Seconds

QDM in Continuous Trading	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						1.06	10,000	-	O1	Normal Good Till Date SWX	9 9000 P
					1.04	100,000	-	Q1	Quote Good for Day SWX	5 5000 P	
	5 5000 P	Quote Good for Day SWX	Q1	-	100,000	1.02	1,000	-	O10	Normal Good Till Date SWX	4 4000 R
	7 7000 R	Normal Good for Day SWX	O2	-	1,000	1.01					
	8 8000 R	Normal Good Till Date SWX	O3	-	5,000	1.00					

Result Price Validation Interruption is triggered

QDM in Price Validation	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						1.06	10,000	-	O1	Normal Good Till Date SWX	9 9000 P
					1.05	100,000	-	Q1	Quote Good for Day SWX	5 5000 P	

5 5000 P	Quote	-	100,000	1.03	
	Good for Day SWX Q1				
				1.02	1,000 - O10 Normal Good Till Date SWX 4 4000 R
7 7000 R	Normal	-	1,000	1.01	
	Good for Day SWX O2				
8 8000 R	Normal	-	5,000	1.00	
	Good til Date SWX O3				

Results During Price Validation the quotes are updated to a better price.
Qty 1000 of O10 executes against Q1 at price 1.03 immediately when Q1 is updated.
Price Validation Interruption is resolved and Continuous Trading resumes.

Comment O10 which is triggering the Price Validation Interruption is not published in the market data nor is the order book during the Price Validation interruption.

Scenario 3

Scenario 3 Entering Order triggers Price Validation Interruption and Quote is updated with no trade

Conditions Trading Period = Continuous Trading
Stop Trading no Quote = 30 Seconds

QDM in Continuous Trading	Bid					Price	Ask				
	Entity	Type	ID	Hidden	Visible		Visible	Hidden	ID	Type	Entity
	Party	Validity		Qty	Qty		Qty	Qty		Validity	Party
	Capacity	Routing								Routing	Capacity
						1.06	10,000	-	O1	Normal	9
										Good Till	9000
										Date	P
										SWX	
						1.04	100,000	-	Q1	Quote	5
										Good for	5000
										Day	P
										SWX	
	5	Quote		-	100,000	1.02	1,000	-	O10	Normal	4
	5000	Good for	Q1							Good Till	4000
	P	Day								Date	R
		SWX								SWX	
	7	Normal		-	1,000	1.01					
	7000	Good for	O2								
	R	Day									
		SWX									
	8	Normal		-	5,000	1.00					
	8000	Good Till	O3								
	R	Date									
		SWX									

Result Price Validation Interruption is triggered

QDM in Price Validation	Bid					Price	Ask				
	Entity	Type	ID	Hidden	Visible		Visible	Hidden	ID	Type	Entity
	Party	Validity		Qty	Qty		Qty	Qty		Validity	Party
	Capacity	Routing								Routing	Capacity
						1.06	10,000	-	O1	Normal	9
										Good Till	9000
										Date	P
										SWX	
						1.03	100,000	-	Q1	Quote	5
										Good for	5000
										Day	P
										SWX	

					1,02	1,000	-	O10	Normal Good Till Date SWX	4 4000 R
7 7000 R	Normal Good for Day SWX	O2	-	1,000	1.01					
5 5000 P	Quote Good for Day SWX	Q1	-	100,000	1.01					
8 8000 R	Normal Good Till Date SWX	O3	-	5,000	1.00					

Results

During Price Validation the quotes are updated to a worse price.
No trade can occur during Price Validation Interruption.
Price Validation Interruption is resolved due to quote update
and Continuous Trading resumes.

Comment

O10 which is triggering the Price Validation Interruption is not published
in the market data nor is the order book during the Price Validation interruption.
O10 is published in the market data after Price Validation Interruption.

Please note:

Further matching examples can be found in the SWXess Maintenance Release 8.2 (SMR 8.2) ([link](#)).

14.6. Matching Rules Examples for Iceberg Orders

In general, the matching rules that apply to iceberg orders are the same as for normal orders. As a basic principle, the displayed quantity of an iceberg order is executed before any further hidden quantity can be executed. Once the displayed quantity has been executed, the next new tranche of the iceberg order is displayed in the order book in the specified display size (top-up) with a new time stamp. This tranche is now visible in the order book and becomes executable. If other orders are placed in the order book at the same price level, these orders will have a higher time priority than the new tranche of the iceberg order.

During both continuous trading and in an auction the hidden quantity of an iceberg order may be executed if, on the opposite side of the order book, more liquidity is available than the displayed quantity of the iceberg order. Once the displayed quantity and any other potential orders with a higher price-time priority have been executed, the entire hidden quantity of the iceberg order thus becomes executable. This means that even if the hidden quantity of the iceberg order becomes executable it will remain hidden from the order book. It is important to note that the total quantity (both hidden and displayed quantity) of an iceberg order is executable during an auction. As a result, participants can no longer calculate the theoretical opening price (TOP).

14.6.1. Iceberg Orders under Auctions

1. Example

Full execution of Iceberg Order in Auction

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model				Market	500	-	Normal
Auction trading period							
Reference price 88	Iceberg	1,000	100	87			
	Normal	-	200	86	700	-	Normal
Result	Executions of quantity 1'200 @ price 86						
Order book after execution							
	Normal	-	100	86			
Note	The total quantity of the iceberg order is executed in the auction.						

2. Example

Partial execution of Iceberg Order in Auction

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model				Market	500	-	Normal
Auction trading period	Normal	-	200	87			
Reference price 88	Iceberg	1,000	100	86	100	-	Normal
Result	Executions of quantity 600 @ price 86						
Order book after execution	Iceberg	600	100	86			
Note	A portion of the iceberg order is executed during the auction						

3. Example

Partial execution of Iceberg Order in Auction with no time priority for hidden quantity

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model				Market	1,200	-	Normal
Auction trading period	Iceberg	1,000	100	87			
Reference price 88	Normal	-	200	87			
Result	Execution of quantity 100 @ price 87 (iceberg order) Execution of quantity 200 @ price 87 (normal order) Execution of quantity 900 @ price 87 (iceberg order)						
Order book after execution	Iceberg	-	100	87			
Note	The displayed quantity of the iceberg order and the normal order are executed before the hidden quantity of the iceberg is executed						

14.6.2. Iceberg Orders under Continuous Trading

The following scenarios show some examples of how Iceberg orders are executed in continuous trading. **Note** that in the following examples, aggressor orders are marked in italics.

SIX Swiss Exchange distinguishes between poster and aggressor orders. While poster orders provide liquidity to the order book, aggressor orders systematically withdraw liquidity from it. Aggressor orders can be executed without a price limit (best) or with a price limit (limited) against poster orders already in the order book. Resulting trades are therefore charged with a higher ad valorem fee for aggressor orders.

1. Example

Normal order, execution against displayed volume of an Iceberg Order

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model				Market	100	-	Normal ←
Trading period (cont. trading)							
Reference price 88	Iceberg	1,000	100	87			
Result	Execution of quantity 100 @ price 87						
Order book after execution							
	Iceberg	900	100	87			
Note	New tranche of displayed quantity 100 receives new time stamp						

2. Example

Normal order, execution against displayed volume of an Iceberg Order and partial volume of another order

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model				Market	200	-	Normal
Trading period (cont. trading)							
Reference price 88	Iceberg	1,000	100	87			
	Normal	-	200	87			
Result	Execution of quantity 100 @ price 87 (iceberg order) Execution of quantity 100 @ price 87 (normal order)						
Order book after execution							
	Normal	-	100	87			
	Iceberg	900	100	87			
Note	New tranche (100) of total quantity receives a new time stamp and can only be executed after the normal order with the higher time priority has been executed.						

3. Example

Normal order, execution against displayed and hidden quantity of an Iceberg Order

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model Trading period (cont. trading) Reference price 88	Iceberg	1,000	100	87	500	-	Normal ←
	Normal	-	200	86			
Result	Execution of quantity 100 @ price 87 (iceberg order) Execution of quantity 400 @ price 87 (iceberg order)						
Order book after execution	Iceberg	500	100	87			
	Normal	-	200	86			
Note	Iceberg order is best bid order and can therefore execute more than the displayed quantity.						

4. Example

Displayed and hidden quantity of Iceberg Order are executed against Normal Order

	Bid Type	Bid Hidden Quantity	Bid Displayed Quantity	Price	Ask Displayed Quantity	Ask Hidden Quantity	Ask Type
CLOB market model Trading period (cont. trading) Reference price 88	→Iceberg	1,000	100	87	500	-	Normal
	Normal	-	200	86			
Result	Execution of quantity 500 @ price 87 (iceberg order)						
Order book after execution	Iceberg	500	100	87			
	Normal	-	200	86			
Note	Iceberg order is best bid order and can therefore execute more than the displayed portion.						

14.7. Matching Rules - Stop Trading Examples

Overview of Matching Rules			
Central Limit Order Book (CLOB)		Quote-Driven-Market (QDM)	
Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading	Auction/Interruption of Trading (Principle of Highest Executable Volume)	Continuous Trading
Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market → RP Market vs. Limit → Limit Limit vs. Limit → 1. Limit	Market vs. Market =* → RP Market vs. Limit → Limit Limit vs. Limit ≠* → > Limit Limit vs. Limit =* → ∅	Market vs. Market** → RP Market vs. Limit** → Limit Limit vs. Limit** → 1. Limit Quote vs. Quote → 1. Quote Quote vs. Limit → Quote Quote vs. Limit → Limit, if > and older
* : = and ≠ refers to volume		* : = and ≠ refers to volume	
Difference relative to RP in the Opening Auction too large: Delayed opening An overhang of market orders: non opening.	Difference relative to RP too large: Stop Trading	No quote: Delayed opening An overhang of market orders: non opening	No quote on the opposite side of the incoming order: Stop Trading**
		Price Validation Market for Structured Products (based on QDM) The Price Validation Market (PVM) model generally corresponds to the existing Quote-Driven Market (QDM) model, with the difference that quotes and orders are not binding and there is a Price Validation Phase before orders are executed against quotes.	

14.7.1. Non-Opening

1. Non-Opening

The order book is in an auction.

The order book remains closed if it is not possible to fully execute all Market Orders.

Reference price: CHF 45.00

Bid Size	Bid	Ask	Ask Size
500	M	M	700
100	45.00		

Bid Size	Price	Ask Size
500	Market	700
100	45.00	

Example of Non-Opening: The unlimited Sell Order cannot be completely executed.

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	42.00	M	500	Order
Quote	300	41.00	43.00	300	Order

Type	Bid Size	Price	Ask Size	Type
		Market	500	Order
		43.00	300	Order
Order	100	42.00		
Quote	300	41.00		

→ Non-opening, TOP is 0 since the volume of the sell market order exceeds the volume of the available buy limits.

14.7.2. Delayed Opening under the CLOB Market Model

1. Example of Delayed Opening: TOP differs from Reference Price by more than the Stop Trading Range

Reference price: CHF 74.00

Stop trading range: 5%

Bid Size	Bid	Ask	Ask Size
500	M	78.00	500
400	76.00	79.00	300

Bid Size	Price	Ask Size
500	Market	
	79.00	300
	78.00	500
400	76.00	

→ Delayed opening because the TOP of CHF 78.00 differs from the reference price by more than 5%.

NOTE: Under the **QDM** market model, the Exchange extends the auction period once, if two orders can be matched for a trade, but there is no quote in the order book at the time. The Exchange will reopen trading during any interruption as soon as a quote has been entered, but no later than end of the suspension period.

2. Example of Delayed Opening: The book only contains Orders.

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	500	75.00	74.00	500	Order
Order	400	74.00	76.00	300	Order

Type	Bid Size	Price	Ask Size	Type
		76.00	300	Order
Order	500	75.00		
Order	400	74.00	500	Order

→ Delayed opening because there are no quotes in the order book. The TOP is CHF 74.50 (arithmetical mean).

3. Example

The order book is in an auction. The theoretical opening price (TOP) leads to a delayed opening.

Stop trading range: 5%

Reference price: CHF 50.00

Arithmetical mean: CHF 53.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	56.00	50.00	100	Order

Type	Bid Size	Price	Ask Size	Type
Order	100	56.00		
		50.00	100	Order

Result:

The theoretical opening price is CHF 53.00.

The opening is delayed because the TOP differs from the reference price (CHF 50.00) by more than the stop trading range (5%).

4. Example

The order book is in an auction.

The theoretical opening price (TOP) leads to a delayed opening.

Stop trading range: 5%

Reference price: CHF 48.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	56.00	50.00	100	Order
Order	100	54.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	56.00		
Order	100	54.00		
		50.00	100	Order

Result:

The theoretical opening price is CHF 54.00 (since a remaining buy order would be better than the arithmetical mean of the last two limit orders executed against each other). The opening is delayed because the TOP differs from the reference price by more than the stop trading range.

14.7.3. Delayed Opening under the QDM Market Model

1. Example: Delayed Opening

The order book is in an auction. The orders could be executed, but the order book contains no quotes.

Reference price: CHF 41.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	200	40.00	39.00	100	Order
Order	200	39.00			

Type	Bid Size	Price	Ask Size	Type
Order	200	40.00		
Order	200	39.00	100	Order

Result:

The theoretical opening price is CHF 40.00. The opening is delayed because there are no quotes in the order book.

After a period of delayed opening (for example 5 minute for ETFs), the book will open (all things being equal, i.e. no additional order or quote has been entered during the delayed opening period) with an execution of 100 @ CHF 40.00

2. Example: Delayed Opening

The order book is in an auction. The order book contains no quotes and the remaining buy limit is better than the arithmetical mean.

Price steps (tick size): CHF 0.25

Reference price: CHF 44.00

Arithmetical mean: CHF 39.50

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	40.00	39.00	100	Order
Order	200	39.75			

Type	Bid Size	Price	Ask Size	Type
Order	100	40.00		
Order	200	39.75		
		39.00	100	Order

Result:

The theoretical opening price is CHF 39.75.

The opening is delayed because there are no quotes in the order book.

At the end of the delayed opening period, the market opens, all things being equal, with an execution of 100 at CHF 39.75

3. Example: Delayed Opening

The order book is in an auction. The order book contains no quotes and the remaining sell limit is better than the arithmetical mean.

Price steps (Tick size): CHF 0.25

Reference price: CHF 44.00

Arithmetical mean: CHF 39.50

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	40.00	39.00	100	Order
			39.25	200	Order

Type	Bid Size	Price	Ask Size	Type
Order	100	40.00		
		39.25	200	Order
		39.00	100	Order

Result:

The theoretical opening price is CHF 39.25. The opening is delayed because there are no quotes in the order book.

At the end of the delayed opening period, the market opens, all things being equal, with an execution of 100 at CHF 39.25

14.7.4. Stop Trading under the CLOB Market Model

1. Example: A Market Order meets the following situation on the order book:

Reference price: CHF 45.00

Stop trading range: 5%

Bid Size	Bid	Ask	Ask Size
		M	650 ←
500	44.00	45.00	500
100	43.00	45.50	250
100	42.00	46.00	100

Bid Size	Price	Ask Size
	Market	650 ←
	46.00	100
	45.50	250
	45.00	500
500	44.00	
100	43.00	
100	42.00	

→ 500 units executed at CHF 44.00

→ 100 units executed at CHF 43.00

→ Stop trading, TOP is CHF 42.00

the next price is outside a range defined by the Exchange (the stop trading range) in comparison with a trade taking place within a certain time period (avalanche time) (avalanche stop trading).

2. Example: Stop Trading Range

The order book is in continuous trading. The difference between the achieved price and the reference price exceeds the stop trading range.

Stop trading range: 5%

Reference price: CHF 50.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	56.00	50.00	100	Order ←

Type	Bid Size	Price	Ask Size	Type
Order	100	56.00		
		50.00	100	Order ←

The result:

The order book status switches to "Stop Trading".

3. Example: Stop Trading Range

The order book is in continuous trading. The difference between the achieved price and the reference price exceeds the stop trading range.

Stop trading range: 5%

Reference price: CHF 50.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	51.00	47.00	1,000	Order ←
Order	100	49.00			
Order	100	47.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	51.00		
Order	100	49.00		
Order	100	47.00	1,000	Order ←

The result:

Executed:

100 units at a price of CHF 51.00

100 units at a price of CHF 49.00

Then the order book status switches to "stop trading".

14.7.5. Stop Trading under the QDM Market Model

1. Example: Limit Order encounters order book with no Quote on opposite side.

Type	Bid Size	Bid	Ask	Ask Size	Type
			72.00	450	Order ←
Order	200	72.00	74.00	500	Quote
Order	200	71.00	75.00	100	Limit

Type	Bid Size	Price	Ask Size	Type
		75.00	100	Order
		74.00	500	Quote
Order	200	72.00	450	Order ←
Order	200	71.00		

→ No quote: stop trading, since there is no quote in the order book on the buy side.

At the end of the stop trading period, 200 units, all things being equal, will be executed at CHF 72.00.

2. Example: Incoming Order, no Quotes in book

The order book is in continuous trading. The incoming order could be executed if there were quotes on the opposite side.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Order	100	50.00	49.00	200	Order ←
Order	100	49.00			
Order	100	48.00			

Type	Bid Size	Price	Ask Size	Type
Order	100	50.00		
Order	100	49.00	200	Order ←
Order	100	48.00		

Result:

No trades are executed. The sell order at CHF 49.00 causes the order book to switch from "trading" to "stop trading" status because it contains no quotes. The TOP is CHF 49.00.

At the end of the stop trading period, 200 units, all things being equal, will be executed at CHF 49.00.

3. Example: Incoming Order

The order book is in continuous trading. The incoming order is executed against the existing quote on the order book.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
Quote	100	50.00	49.00	200	Order ←
Order	100	49.00			
Order	100	48.00			

Type	Bid Size	Price	Ask Size	Type
Quote	100	50.00		
Order	100	49.00	200	Order ←
Order	100	48.00		

Result:

Executed:

100 units at a price of CHF 50.00.

Then the order book status switches to "stop trading" because there are no further quotes on the order book. The TOP is CHF 49.00.

At the end of the stop trading period, 100 units, all things being equal, will be executed at CHF 49.00.

4. Example: Incoming Order, no Quotes

The order book is in continuous trading.

The incoming unlimited (market) order could be executed in part, although there is no quote on the opposite side.

Reference price: CHF 44.00

Type	Bid Size	Bid	Ask	Ask Size	Type
→ Order	1,000	M	51.00	200	Order
Order	200	50.00			

Type	Bid Size	Price	Ask Size	Type
→ Order	1,000	Market		
		51.00	200	Order
Order	200	50.00		

Result:

The order book status switches to "stop trading".

Non-opening (due to a market order overhang).

5. Example: Limit Order encounters order book with no Quote on opposite side.

Trading is not interrupted if a limited order remains in the order book at the same price on the same side (purchase/sale) as the last executed quote, provided that the limited order was already in the order book at the time of execution of the quote.

Type	Bid Size	Bid	Ask	Ask Size	Type
		75.00		450	Order ←
Order	200	75.00	76.00	500	Quote
Order	200	74.00	77.00	100	Limit

Type	Bid Size	Price	Ask Size	Type
		77.00	100	Order
		76.00	500	Quote
Order	200	75.00	450	Order ←
Order	200	74.00		

→ No execution since there is no quote in the order book on the buy side

6. Example: Limit Order encounters order book with no Quote on opposite side.

As in example 5, trading is not interrupted if a limited order remains in the order book at the same price on the same side (purchase/sale) as the last executed quote, provided that the limited order was already in the order book at the time of execution of the quote.

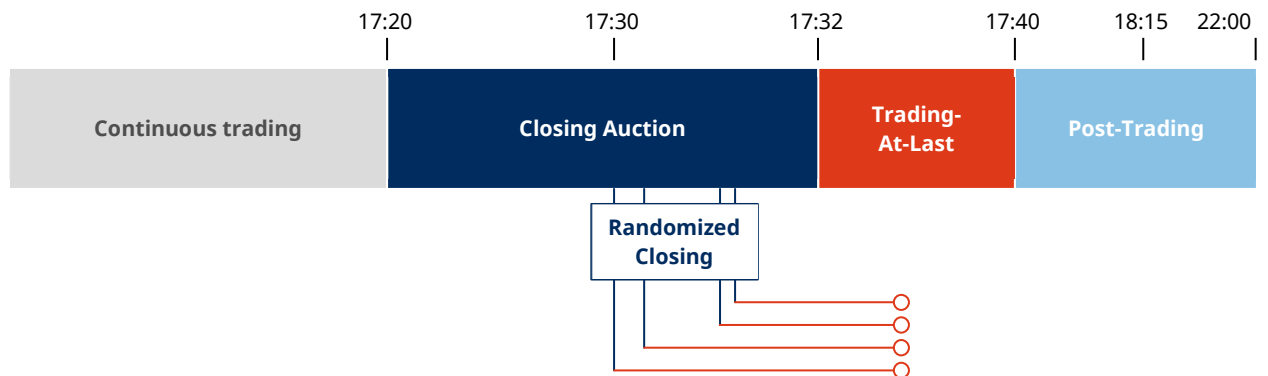
Type	Bid Size	Bid	Ask	Ask Size	Type
Order	200	75.00	72.00	450	Order ←
Quote	200	74.00			
Order	100	74.00			

Type	Bid Size	Price	Ask Size	Type
Order	200	75.00		
Quote	200	74.00		
Order	100	74.00		
		72.00	450	Order ←

- One execution of 200 units at CHF 75.00
- One execution of 200 units at CHF 74.00
- One execution of 50 units at CHF 74.00

14.8. Trading-At-Last (TAL)

The trading period Trading-At-Last is only applicable to the market model Central Limit Order Book (CLOB) and as a general principle the matching rules of the CLOB are applicable to trades in TAL.



Trading-At-Last is available for

Trading Segment(s)	<ul style="list-style-type: none"> • Blue Chip Shares (26) • Mid-/Small-Cap Shares (591)
Order Types	<ul style="list-style-type: none"> • Normal Orders • Iceberg Orders

Matching during the TAL period is based on the time priority. The price is irrelevant for matching because all executions take place at the Closing Price of the security determined during the Closing Auction. This means that incoming orders at the Closing Price or better (higher bid price or lower ask price) are executed against resting orders at the Closing Price. No additional order/trade quantity rules or restrictions for matching apply in the TAL period.

14.8.1. Pre-Trade Transparency

All TAL orders are executed by reference price systems of the Exchange and are therefore exempted from pre-trade transparency regulations according to Art. 27 para. 4 let.a FMIO.

At the start of the Trading-At-Last trading period the order books of the securities which have TAL enabled will lose their pre-trade transparency. At the end of the TAL period consolidated pre-trade updates are published.

14.8.2. Examples

The matching scenarios below provide some examples for the TAL trading period. Please note that the following conditions apply for all matching scenarios:

- The order marked in **red** is the entering order
- The order marked in **red and strikethrough** is the order being deleted
- The order ID provides an indication in which sequence the orders have entered the book(s)
- The trading segment for all scenarios is "Blue Chip Shares"
- Party 1000 and 7000 have TAL Order Transfer = Disabled
- Party 5000 has SMP for CLOB = Enabled

Scenario 1

Scenario 1 Closing Price during Closing Auction and new order which executes during TAL

CLOB during Closing Auction	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						Market	50	-	O7	Normal Good Till Date SWX	3 3000 R
					104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R	
					103.00	100	-	O2	Normal At-the- Close SWX	6 6000 R	
	5 5000 P	Normal Good for Day SWX	O1	-	100	102.00					
	7 7000 R	Iceberg Good for Day SWX	O3	90	10	101.00					
	8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Result

50 Shares of O7 are executed against O1 at price CHF 102.00.
The Closing Price relevant for TAL is CHF 102.00
O3 is disabled for TAL and thus expired after Closing Auction.
O6 is disabled for TAL but not expired

CLOB during TAL	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R

					103.00	100	-	O2	Normal At-the- Close SWX	6 6000 R
5 5000 P	Normal Good for Day SWX	O1	-	50	102.00	100	-	O8	Normal Good for Day SWX	2 2000 R
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Results 50 Shares of O8 are executed against O1 at price CHF 102.00. O1 is fully matched.

CLOB in Post-Trading	Bid					Price	Ask				
	Entity	Type	ID	Hidden	Visible		Visible	Hidden	ID	Type	Entity
	Party	Validity		Qty	Qty		Qty	Qty		Validity	Party
	Capacity	Routing							Routing	Capacity	
						104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00						

Results O2 as well as remaining quantity of O8 are expired at the end of TAL.
O6 is reactivated at the end of TAL.

Comment Orders which are good for day and disabled for TAL expire after the Closing Auction
At-the-Close orders are also valid for TAL.
The order book is not visible during TAL.

Scenario 2

Scenario 2 Closing Price during Closing Auction and new Sweep order during TAL

CLOB during Closing Auction	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						Market	50	-	O7	Normal Good Till Date SWX	3 3000 R
					104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R	
					103.00	100	-	O2	Normal At-the-Close SWX	6 6000 R	
	5 5000 P	Normal Good for Day SWX	O1	-	100	102.00					
	7 7000 R	Iceberg Good for Day SWX	O3	90	10	101.00					
	8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Result

50 Shares of O7 are executed against O1 at price CHF 102.00.
 The Closing Price relevant for TAL is CHF 102.00
 O3 is disabled for TAL and thus expired after Closing Auction.
 O6 is disabled for TAL but not expired

CLOB during TAL	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R

					103.00	100	-	O2	Normal At-the- Close SWX	6 6000 R
5 5000 P	Normal Good for Day SWX	O1	-	50	102.00					
					101.00	100		O8	Normal Good for Day SWMX	2 2000 R
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Results 50 Shares of O8 are executed against O1 at price CHF 102.00. O1 is fully matched.

CLOB in Post-Trading	Bid					Price	Ask				
	Entity	Type	ID	Hidden	Visible		Visible	Hidden	ID	Type	Entity
	Party	Validity		Qty	Qty		Qty	Qty		Validity	Party
	Capacity	Routing								Routing	Capacity
					104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R	
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00						

Results O2 as well as remaining quantity of O8 are expired at the end of TAL. O6 is reactivated at the end of TAL.

Comment Sweep Orders are immediately forwarded to CLOB during TAL. During TAL orders at the Closing Price or better are considered for matching. The order book is not visible during TAL.

Scenario 3

Scenario 3 Closing Price during Closing Auction and new Sweep order during TAL

CLOB during Closing Auction	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						Market	50	-	O7	Normal Good Till Date SWX	3 3000 R
					104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R	
					103.00	100	-	O2	Normal At-the-Close SWX	6 6000 R	
	5 5000 P	Normal Good for Day SWX	O1	-	100	102.00					
	7 7000 R	Iceberg Good for Day SWX	O3	90	10	101.00					
	8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Result

50 Shares of O7 are executed against O1 at price CHF 102.00.
 The Closing Price relevant for TAL is CHF 102.00
 O3 is disabled for TAL and thus expired after Closing Auction.
 O6 is disabled for TAL but not expired

CLOB during TAL	Bid					Price	Ask				
	Entity Party Capacity	Type Validity Routing	ID	Hidden Qty	Visible Qty		Visible Qty	Hidden Qty	ID	Type Validity Routing	Entity Party Capacity
						104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R

					103.00	100	-	O2	Normal At-the- Close SWX	6 6000 R
5 5000 P	Normal Good for Day SWX	O1	-	50	102.00					
					101.00	100		O8	Normal Fill-Or- Kill SWX	2 2000 R
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00					

Results O8 cannot be fully matched and is therefore deleted without execution.

CLOB in Post-Trading	Bid					Price	Ask				
	Entity	Type	ID	Hidden	Visible		Visible	Hidden	ID	Type	Entity
	Party	Validity		Qty	Qty		Qty	Qty		Validity	Party
	Capacity	Routing								Routing	Capacity
						104.00	200	-	O6	Normal Good Till Date SWX	1 1000 R
8 8000 R	Normal Good Till Date SWX	O4	-	50	100.00						

Results O1 as well as O2 are expired at the end of TAL.
O6 is reactivated at the end of TAL.

Comment Fill-Or-Kill orders must be fully matched during TAL otherwise they expire.
The order book is not visible during TAL.

15. Alternative Trading

The following chapter describes the following trading services:

- SwissAtMid (Mid-Point Order Book (MPOB) and Plus Orders)
- Quote on Demand (QOD)
- Swiss EBBO Book

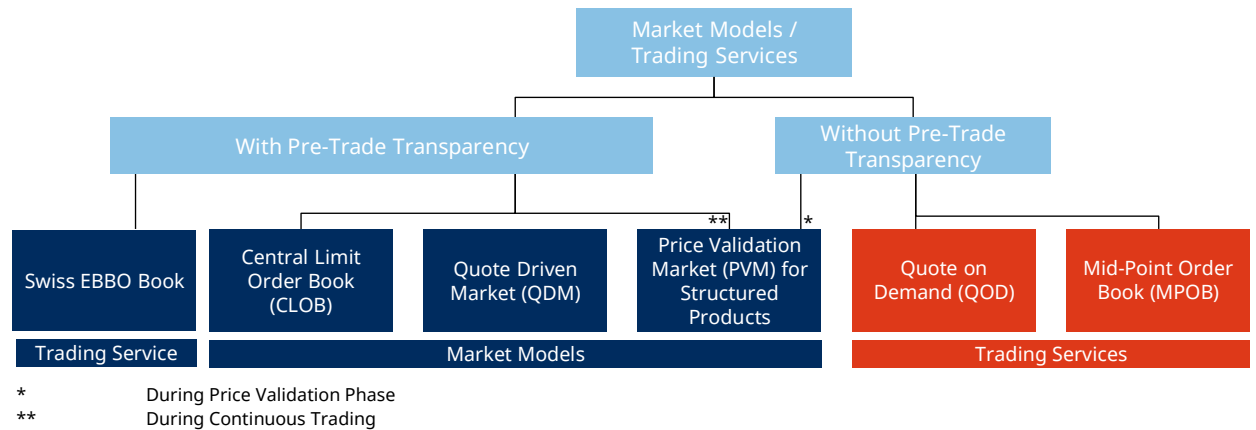


Figure: Overview Market Models

15.1. SIX Swiss Exchange at Mid-Point (SwissAtMid)

SwissAtMid is a service for the trade without pre-trade transparency with executions at Mid-Point Price. The two trading segments blue chip and Mid-/Small-Cap Shares can be traded in SwissAtMid. This service is available to all participants of SIX Swiss Exchange.

Mid-Point Order Book Matching supported for ...	
Trading Interfaces	<ul style="list-style-type: none"> • Standard Trading Interface (STI) • OUCH Trading Interface (OTI)
Market Data Interfaces	<ul style="list-style-type: none"> • SIX MDDX Multi-Dimensional Data fluX TM Interface (SIX MDDX) • ITCH Market Data Interface (IMI)
Trading Segments	<ul style="list-style-type: none"> • Blue Chip Shares • Mid-/Small-Cap Shares • Investment Funds
Trading Period	<ul style="list-style-type: none"> • Continuous Trading
Order Types	<ul style="list-style-type: none"> • Normal Order • Iceberg Order
Routing Instruction	<ul style="list-style-type: none"> • Mid-Point Order Book only (SWM) • Sweep Mid-Point Order Book to the Central Limit Order Book (SWMX)
Price Type	<ul style="list-style-type: none"> • Market • Limit
Order Validity	<ul style="list-style-type: none"> • Day • Immediate or Cancel (IoC) • Fill or Kill (FoK) • Good till Date (STI only)

15.1.1. Trading Day and Hours

The trading days and hours of SwissAtMid comply with the trading hours of the Central Limit Order Book

of the respective Trading Segment or security. Orders in SwissAtMid can only be executed when the CLOB of the respective security is in the trading status «Continuous Trading».

Book	Trading Periods				
CLOB	Pre-opening	Opening	Continuous Trading	End of Trading (Closing Auction)	Post-Trading
SwissAtMid (MPOB)	Primary Condition	Primary Condition	Continuous Trading	MPOB Post Trading	MPOB Post Trading
	No executions	No executions	Executions	No executions	No executions

15.1.2. Trade Suspension

Trading in SwissAtMid shall be interrupted if and for as long as

- no Mid-Point Price for the relevant security can be calculated on the Primary Reference Market; or
- the relevant security is not in the trading period "Continuous Trading" on the Primary Reference Market (i.e. Pre-opening, Opening, Closing Auction or Post-trading); or
- trading in the relevant security on the Primary Reference Market is interrupted (i.e. Delayed Opening, Stop Trading or Non-Opening), or is suspended from trading; or
- the price of the next execution in SwissAtMid at the Mid-Point Price compared to the Reference price on the Primary Reference Market is outside a range determined by the Exchange (Stop Trading). The bandwidth (Stop Trading Range) of the interruption in trading in SwissAtMid is determined by the trading segment on the Primary Reference Market of the relevant security, and is laid down in the corresponding annex to the "Trading Parameters" Guideline.

The participant may enter new orders during a trade suspension or delete existing ones.

15.1.3. Quantity-Time Priority

"In-limit" orders in the SwissAtMid order book are considered for execution. "In-limit" orders are defined as those for which the limited price corresponds at least to the Mid-Point Price of the respective security on the Primary Reference Market, or is higher (the price limit for buy orders is equal to or higher than the Mid-Point Price or the price limit for sell orders is equal to or lower than the Mid-Point Price). Unlimited orders are always deemed to be "in limit".

The quantity-time priority principle means that "in-limit" orders with the greater quantity shall be executed first. For orders with the same quantity, the order received first shall also be executed first.

15.1.4. Mid-Point Price Execution

Orders shall be executed against each other at the Mid-Point Price, which means the mid-point between

the highest displayed bid price and the lowest displayed ask price on the Primary Reference Market at the time of the execution of a trade.

Example:

MPOB						CLOB					
Mid-Point Price = 14.50											
Time	Bid Size	Bid	Ask	Ask Size	Time	Time	Bide Size	Bid	Ask	Ask Size	Time
10:50:32	1,000	15.00	14.00	1,000	10:49:1	10:49:45	500	14.00	15.00	600	10:49:50
SWM					SWM						
Result:		Trade 1,000 @ 14.50									

Routing Instruction SWM - SwissAtMid

An incoming order shall be checked for feasibility and shall be executed in accordance with the quantity time priority with orders on the opposite side of the SwissAtMid order book in one or more steps. The following rules shall apply here:

- If the incoming order is equal to or larger than the sum of the executable orders on the opposite side of the order book, these orders will be executed in full. Any remaining order quantity from the incoming order will be placed in the SwissAtMid order book.
- If the incoming order is smaller than the sum of the executable orders on the opposite side of the order book, these orders will be executed up to their respective maximum quantities. Any remaining order quantity from the incoming order which cannot be executed against executable orders from the opposite side of the order book will be executed according to time priority.

The Exchange may provide Self-Match Prevention for trading in SwissAtMid. At the request of the participant, opposite buy and sell orders under their own participant identification (Member ID) which are flagged as own transactions will not be executed via the SwissAtMid order book. Opposite buy and sell orders shall remain in the SwissAtMid order book.

15.1.5. Minimum Execution Quantity (MEQ)

The minimum executable quantity must be fulfilled for each transaction of an order (example: 300 for each transaction). A single order on the other side of the order book must be equal to or greater than the MEQ for an execution to occur.

When the remaining size of an order falls below the MEQ, then the MEQ corresponds to the remaining order size (example: last trade 100).

MPOB Mid-Point Price = 14.50						
#	Time Order Type	Bid Size (MEQ)	Price	Ask Size (MEQ)	Time Order Type	#
1	10:50:32	1,100	15.00			
→	SWM	(300)				
			14.50	300	10:49:15 SWM	3
			14.15	400	10:49:20 SWM	4
				(300)	10:49:10 SWM	5
				300	10:48:20 SWM	6
2	10:49:20 SWM	100	13.00			
Results:		Trade 400 (#1, #4) @ 14.50				
		Trade 300 (#1, #5) @ 14.50				
		Trade (#1, #3) @ 14.50				
		Trade (#1, #6) @ 14.50				

Remark:

The Minimum Execution Quantity (MEQ) is supported for resting (SWM) and sweep orders (SWMX). In case of Sweep orders, the Minimum Execution Quantity will be ignored in the Central Limit Order Book (CLOB).

15.1.6. Tick Steps

The following price steps apply in SwissAtMid:

- Blue Chip Shares 0.0001
- Mid-/Small-Cap Shares 0.0001

The corresponding Mid-Point Price in SwissAtMid is always rounded up to four decimal places.


Example

MPOB						CLOB					
Mid-Point Price = 0.4996											
Time Routing Instruction	Bid Size	Bid	Ask	Ask Size	Time Routing Instruction	Time	Bid Size	Bid	Ask	Ask Size	Time
10:50:32 SWM	1,000	0.4996	Market	1,000	10:49:15 SWM	10:49:45	500	0.4995	0.4996	600	10:49:50
Result:		Trade 1,000 @ 0.4996									

15.2. SwissAtMid Sweep - Routing Instruction SWMX

The system first checks, if there is an execution in the Mid-Point Order Book (MPOB) is possible or not. Sweep orders which cannot be executed fully or partially in the MPOB will be transferred to the Central Limit Order Book (CLOB) with the same time stamp.

Example:

MPOB						CLOB					
Mid-Point Preis = 14.50											
Time Order Type	Bid Size	Bid	Ask	Ask Size	Time Order Type	Time	Bid Size	Bid	Ask	Ask Size	Time
10:48:32 SWM	1,000	15.00			10:48:32 SWM	10:48:32	1,000	15:00	15.00	600	10:49:50
											
						10:49:45	500	14.00			
Result:		Trade 600 @ 15.00									

Check for further information [Directive 5: Alternative Trading](#)

15.3. Limit Plus and Iceberg Plus Orders

Plus orders with the "SWMB" routing instruction allow simultaneous placement in the central limit order book (CLOB) and in the SwissAtMid (MPOB) order book without pre-trade transparency. Participants can define a minimum execution quantity and control how they interact with liquidity in SwissAtMid. The Minimum Execution Quantity is only taken into account in the SwissAtMid market model, i.e. in the Central Limit Order Book (CLOB) executions below the Minimum Execution Quantity can take place.

Limit Plus Orders

The Limit Plus order (Normal order type with Routing Instruction «SWMB») allows participants to place their orders into both books simultaneously, so that the orders are fully visible in the Central Limit Order Book (CLOB), but also fully available for execution in SwissAtMid. Utilizing Minimum Quantity to ensure quality executions in SwissAtMid, participants can control their interaction with the non-displayed liquidity.

Iceberg Plus Orders

The Iceberg Plus order (Iceberg order type with Routing Instruction «SWMB») is an enhanced version of today's Iceberg order, namely that the Iceberg Plus order is represented in both books simultaneously. While the visible quantity of the Iceberg Plus order is shown in the Central Limit Order Book (CLOB), the full order size will be available for execution in SwissAtMid.

	Limit Plus	Iceberg Plus
<p>Quantity</p>	<ul style="list-style-type: none"> CLOB Total quantity is displayed and executable MPOB No pre-trade transparency but total quantity is executable 	<ul style="list-style-type: none"> CLOB Only visible size is displayed and executable MPOB No pre-trade transparency but total quantity is executable <p>Note that for Iceberg Plus orders the Minimum Order Value of CHF 10'000 applies.</p>
<p>Secondary Quantity</p> <p>Constraints and usage of Secondary Quantity depends on the Validity and the Routing Instruction.¹</p>	<p>Optional attribute and defines the Minimum Execution Quantity applicable for SwissAtMid and ignored for CLOB.</p>	<p>Mandatory attribute and defines the Minimum Execution Quantity applicable for SwissAtMid and at the same time the Visible Quantity for the CLOB.</p> <p>Note that for Iceberg Plus orders the Visible Quantity for the CLOB can be randomized within a system wide configured range.</p>
<p>Price</p> <p>Order price may differ between CLOB and MPOB</p> <p>Generally the price must be on a valid price step for the respective security in the CLOB.</p> <p>If Limit Plus or Iceberg Plus is entered with a global limit which is not a valid price step in the CLOB, the price may be rounded to a valid price step whilst staying within the global limit.</p>	<ul style="list-style-type: none"> CLOB Dynamic adjustment of the order price to the best bid or ask in the CLOB whilst observing the Global Limit MPOB Global Limit 	<ul style="list-style-type: none"> CLOB Dynamic adjustment of the order price to the best bid or ask in the CLOB whilst observing the Global Limit MPOB Global Limit

15.3.1. Partial Execution

If a partial quantity of the order is executed in CLOB or MPOB, the total quantity of the order in the respective order book is reduced by the quantity executed until the total quantity has been executed, deleted or expired.

Example Limit Plus order
 Buy order 500 shares
 Limite 101 (Global Limit)

Execution of the first partial quantity

MPOB Mid-Point Price = 100.5						
#	Time Order Type	Bid Size	Price	Ask Size	Time Order Type	#
1	13.16 SWMB	500	101			
			100	300	13.11 SWM	2

Result: Trade 300 (#1, #2) @ 100.5

CLOB						
#	Time Routing Instruction	Bid Size (Global Limit)	Price	Ask Size (Global Limit)	Time Routing Instruction	#
			101	500	13.12 SWX	5
3	13.15 SWX	600	100			
4	13.16 SWMB	500 (101)				

Result: No Trade

After the first partial execution of 300 shares, the volume in both market models will be reduced by 300.

MPOB Mid-Point Price = 100.5						
#	Time Routing Instruction	Bid Size (MEQ)	Price	Ask Size (MEQ)	Time Order Type	#
1	SWMB	200	101			

Result: No Trade

CLOB						
#	Time Routing Instruction	Bid Size (Global Limit)	Price	Ask Size (Global Limit)	Time Routing Instruction	#
			101	500	SWX	5
3	13.15 SWX	600	100			
4	13.16 SWMB	200 (101)				

Result: No Trade

Reduction of 300 in both market models

15.3.2. Dynamic Price Adjustment in CLOB

Limit Plus and Iceberg Plus support the functionality that SIX Swiss Exchange dynamically adjusts the order price relevant for execution in the Central Limit Order Book (CLOB) according to the Best Bid Offer (BBO) in the Central Limit Order Book whilst always ensuring that the global limit of the order as defined by the Participant is never breached.

The price/time priority in the Central Limit Order Book is lost in the event that the price of a Limit Plus and Iceberg Plus order is dynamically adjusted to the BBO of the CLOB. That means all resting orders with Routing Instruction «SWX» with price equal to BBO, entered before the dynamically adjusted Limit Plus and Iceberg Plus orders, will be executed first.

Orders with Routing Instruction «SWMB» are deleted from the CLOB and MPOB order books if no BBO is available in the CLOB on the respective side, for dynamic adjustment of the order price. That means, when the last limit order in the CLOB - on either side - is removed from the CLOB, the orders with Routing Instruction «SWMB» on that respective side are cancelled with reason 'T' – Timeout. Session/day order got expired. If a Limit Plus and Iceberg Plus is entered and on the respective side of the CLOB no resting order is available, the order with Routing Instruction «SWMB» is rejected (with reason 'Y' - invalid order type rejected).

Before				After			
Price	Global Limit	ID	Routing	Price	Global Limit	ID	Routing
100	-	6	SWX	101	-	14	SWX
	101	3	SWMB	101	15 (3)	SWMB	
	102	5	SWMB	102	16 (5)	SWMB	
	100	11	SWMB	101	17 (13)	SWMB	
	-	12	SWX	-	6	SWX	
	101	13	SWMB	100	11	SWMB	
98	-	1	SWX	98	-	1	SWX
	-	4	SWX		-	4	SWX
	-	7	SWX		-	7	SWX
97	-	2	SWX	97	-	2	SWX
	-	8	SWX			8	SWX
Comment	The order ID 14 enters the CLOB and becomes the new BBO. Because the BBO isn't better as the global prices of the sitting Plus orders ID 3,5 and 13, these orders are adjusted and get a new order number, i.e. 15 (3), 16 (5) and 17 (13), respectively. The price of the resting order ID 11 is not adjusted to new BBO because the BBO is better than order ID 11 global limit price of 100 (the global limit of the Limit Plus and Iceberg Plus orders as defined by the Participant is never breached).						

Before				After			
Price	Global Limit	ID	Routing	Price	Global Limit	ID	Routing
101	-	14	SWX				
	101	15(3)	SWMB				
	102	16(5)	SWMB				
	101	17(13)	SWMB				
100	-	6	SWX	100	-	6	SWX
	100	11	SWMB		100	11	SWMB
	-	12	SWX		-	12	SWX
98	-	1	SWX	98	-	1	SWX
	-	4	SWX		-	4	SWX
	-	7	SWX		-	7	SWX
97	-	2	SWX	97	-	2	SWX
	-	8	SWX		-	8	SWX

Comment

After deleting the order ID 14 (the current BBO) there is a new BBO (order ID 6). The resting orders with Routing Instruction "SWMB" (order ID 15, 16, 17) are adjusted and get a new order number (18(15/3), 19 (16/5) and 20 (17/13), respectively. The resting orders with Routing Instruction "SWMB" (ID 11) is not adjusted because the BBO isn't better as this orders Global Limit. If the BBO in the CLOB is better than the Global Limit, the Limit Plus and Iceberg Plus orders are displayed in the CLOB at their global limit and are not dynamically adjusted.

15.3.3. Non-Trading Phase - Inactivation/Reactivation of Plus Orders

If the order book state changes from Continuous Trading into a non-trading status (Stop Trading, Delay Opening, Non-Opening, Suspension, Closing Auction, Break), Limit Plus and Iceberg Plus orders will become inactive in non-trading phases and will automatically be reactivated when the order book resumes Continuous Trading again.

15.3.4. Order Entry, Expiry and Deletion

The following overview describes the Limit Plus and Iceberg Plus order handling in the various trading states, periods and interruptions

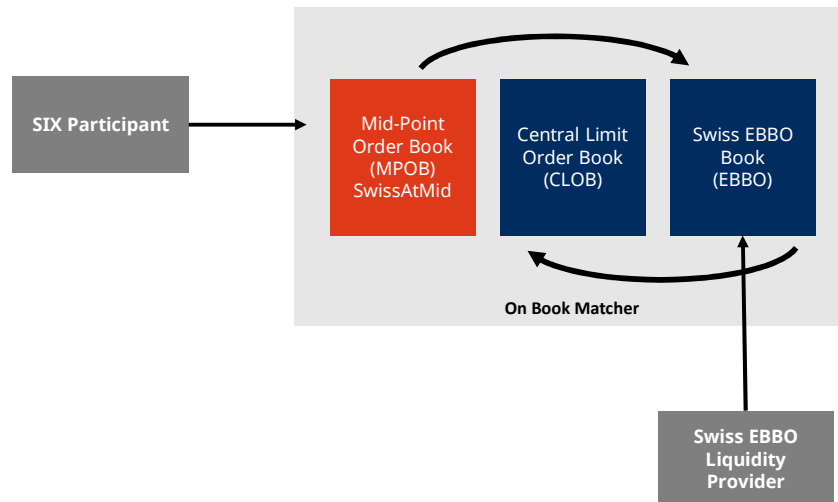
Type	CLOB State	MPOB State	Handling of orders with Routing instruction "SWMB"
Trading Periods	Pre-Opening	Primary Condition	New order entry with Routing Instruction "SWMB" accepted and order becomes inactive until the state changes to Continuous Trading. Reactivation of order is depending on conditions. No open orders with Routing Instruction "SWMB" in the books from previous trading day because only validity "Good for Day" is supported.
	Opening		
	Continuous Trading	Continuous Trading	Order entry and maintenance of Routing Instruction "SWMB" possible. Former inactive Plus orders are reactivated and integrated into order book if conditions are met. If maximum number of orders with Routing Instruction "SWMB" is reached, new order entry rejected with reason "R" (order is not allowed at this time).
	End of Trading (with or without Closing Auction)	Post-Trading	New order entry with Routing Instruction "SWMB" rejected with reason "R" (order is not allowed at this time). Open orders with Routing Instruction "SWMB" are expired with reason "T" (Timeout. Session/day order got expired).
	Post-Trading	Post-Trading	New order entry with Routing Instruction "SWMB" rejected with reason "R" (order is not allowed at this time). No open orders with Routing Instruction "SWMB" in the books from trading day because only validity "Good for Day" is supported.
Trading States	Suspension	Primary Condition	New order entry with Routing Instruction "SWMB" accepted and order becomes inactive until the state changes to Continuous Trading. Reactivation of order is depending on conditions. Open orders with Routing Instruction "SWMB" become inactive and are reactivated when state changes to Continuous Trading.
	Underlying Condition	Primary Condition	
	Break	Primary Condition	

	Active	MPOB Suspension	Order entry and maintenance of Routing Instruction "SWMB" possible. Executions possible only in CLOB.
Trading Interruptions	Stop Trading (Regular and Avalanche)	Primary Condition	New order entry with Routing Instruction "SWMB" accepted and order becomes inactive until the state changes to Continuous Trading.
	Delay Opening	Primary Condition	Reactivation of order is depending on conditions.
	Non-Opening	Primary Condition	Open orders with Routing Instruction "SWMB" become inactive and are reactivated when state changes to Continuous Trading.
	Active	MPOB Stop Trading	Order entry and maintenance of Routing Instruction "SWMB" possible. Executions possible only in CLOB.

In the event of an intraday recovery, orders are persisted (deleted). STI Plus orders become inactive (no silent deletion of such Plus orders anymore). The processing of OTI Plus orders does not change, they will be deleted.

15.4. Swiss EBBO

Swiss EBBO is a service offered in addition to the Central Limit Order Book (CLOB) and the trading service without pre-trade transparency Mid-Point Order Book (MPOB) - SwissAtMid. Swiss EBBO offers pricing at the European Best Bid and Offer (EBBO) price on a best effort basis in equities (Blue Chip Shares and Mid-/Small-Cap Shares) listed on the SIX Swiss Exchange AG. The EBBO execution process attempts in one or more iterations to capture as much liquidity as possible in the various order books until the order is executed. If the EBBO order cannot be fully executed, the remaining quantity rests as a passive order in the Central Limit Order Book (CLOB).



15.4.1. Tradeable Securities

Securities of the following trading segments may be traded in Swiss EBBO:

- a) Blue Chip Shares
- b) Mid-/Small-Cap Shares

15.4.2. Liquidity Providers

The liquidity providers admitted by the Exchange provide prices on a best effort basis in the Swiss EBBO order book at the European Best Bid and Offer (EBBO) price.

The Exchange has appointed an independent service provider to determine the European Best Bid and Offer (EBBO) price and compares the prices provided by liquidity providers against the calculated EBBO. The Exchange publishes a list of the trading venues which the independent service provider takes into account when determining the European Best Bid and Offer (EBBO) price.

15.4.3. Hybrid Order Book

The Exchange maintains one or more hybrid order books for each security. These order books shall classify and manage all orders received from liquidity providers according to price, quantity and the time at which they are received. Orders from participants are not entered in the hybrid order book.

The orders contained in the hybrid order book are binding.

The order prices and volumes contained in the hybrid order book are published.

15.4.4. Order Definition

An order is a binding offer to buy or sell a certain quantity of a security at an unlimited or limited price.

Orders with the Routing Instruction "SEB" may be entered in or deleted from the hybrid order book or during set periods. All incoming orders shall be assigned a time stamp and an identification number

15.4.5. Order Types

The Exchange supports the order type Normal order for hybrid trading.

A Normal order may be entered by a participant at any time during the trading day. Non-executed parts of the order with Routing Instruction "SEB" in Swiss EBBO are moved to the Central Limit Order Book (CLOB) until they have been executed or deleted, or have expired. Other validities and routing instructions remain reserved.

A Normal order may be entered by a liquidity provider in the hybrid order book of Swiss EBBO at any time during the trading day. Non-executed parts of the order remain in the order book until they have been executed or deleted, or have expired. Other validities and routing instructions remain reserved.

15.4.6. Market Model

Orders with Routing Instruction "SEB" from participants are executed at the best price offered on the opposite side. The aim is to execute orders with routing instruction "SEB" from participants at the European Best Bid and Offer price (EBBO) on a best effort basis. Swiss EBBO corresponds to the prices provided by the liquidity provider and may differ from the European Best Bid and Offer (EBBO) price. There is no guarantee of execution at the European Best Bid and Offer (EBBO) price.

In the event of the execution of participants orders with Routing Instruction "SEB" at SIX Swiss Exchange AG not being done at the European Best Bid and Offer (EBBO) price, then these trades are not deemed to be irregular on-exchange trades and will therefore not be cancelled by the Exchange.

15.4.7. Price-Quantity-Time Priority

The price-quantity-time priority principle means that the order from a liquidity provider with the better price (highest price limit for buy orders, lowest price limit for sell orders) shall be executed first. Unlimited orders enjoy top priority when consolidating orders. For orders with the same price, the order with the larger quantity shall be executed first. For orders with the same price and quantity, the order received first shall also be executed first.

If an order of a liquidity provider defining the full execution quantity cannot be executed against the full quantity of an order in Swiss EBBO, this order loses its priority.

15.4.8. Trades of orders from participants with Routing Instruction "SEB"

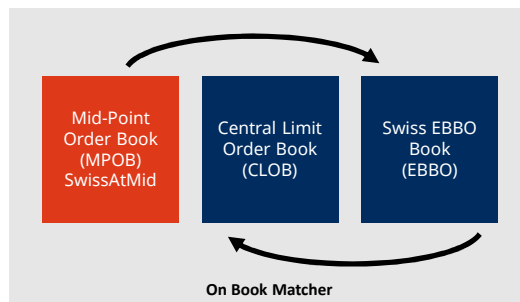
Trades are triggered by an incoming order from a participant with Routing Instruction "SEB" which is executed with the orders on the opposite side of the following order books provided quantity and price allow it:

- a) Central Limit Order Book (CLOB) and
- b) order book without pre-trade transparency (MPOB) – SwissAtMid and

- c) hybrid order book Swiss EBBO.

The following rules shall apply:

- a) in the case of an incoming order from a participant with Routing Instruction "SEB", the Exchange determines which order book offers the best price on the opposite side and routes the order to the corresponding order book. If two or all the order books offer the same best price, the following priority applies for the first matching cycle:
- order book without pre-trade transparency (MPOB) - SwissAtMid;
 - Central Limit Order Book (CLOB)
 - hybrid order book Swiss EBBO.



- b) the incoming order from a participant with Routing Instruction "SEB" is executed immediately taking account of the corresponding priority and the execution provisions of the corresponding order book with orders of the opposite side in SwissAtMid, CLOB and Swiss EBBO in one or more steps;
- c) if an order with Routing Instruction "SEB" from a participant is only partially executed in the first matching cycle, the Exchange determines the next best price on the opposite side while taking account of the price limit of the order, whereby from the second matching cycle on only the Central Limit Order Book (CLOB) and the hybrid order book Swiss EBBO are taken into account;
- d) the partially executed order from a participant with Routing Instruction "SEB" is further executed in one or more steps, taking account of the corresponding priority and the execution provisions of the corresponding order book with orders of the opposite side in CLOB and in Swiss EBBO;
- e) the execution of the order from a participant with Routing Instruction "SEB" continues in accordance with c) and d) above in additional matching cycles until no more executions are possible in consideration of the participant's price limit. Subsequently the remaining portion of the order with Routing Instruction "SEB" from a participant is routed to the Central Limit Order Book. Other order validities remain reserved;
- f) if the quantity of the order from a participant with Routing Instruction "SEB" is greater than the quantity of the order from a liquidity provider, and the liquidity provider has defined full execution quantity on his order, execution shall not take place in the hybrid order book Swiss EBBO;
- g) if there are no orders from liquidity providers in the hybrid order book Swiss EBBO, the incoming order from a participant with Routing Instruction "SEB" is routed to the Central Limit Order Book (CLOB) or the order book without pre-trade transparency SwissAtMid.

For executions of orders from a participant with Routing Instruction "SEB" in the Central Limit Order Book (CLOB), the execution provisions of continuous trading apply in accordance with the Directive "Trading". For executions of orders from a participant with Routing Instruction "SEB" in the order book without pre-trade transparency SwissAtMid, the execution provisions apply in accordance with Directive "Alternative Trading".

Opposite orders from liquidity providers may never be executed in the hybrid order book Swiss EBBO.

The Exchange does not support Self-Match Prevention for trading in Swiss EBBO

Example 1: Buy 'EBBO Order' 700 shares at 82.58

MPOB (SwissAtMid) :

Price	Ask Volume	Cum. Volume
82.60	-	50
82.58	-	50
82.56	-	50
82.54	50 (1)	50

CLOB [Spread 82.52 to 82.56]:

Price	Ask Volume	Cum. Volume
82.60	1'000	1'800
82.58	600 (4)	800
82.56	200 (2,i)	200
82.54		

Swiss EBBO Book:

Price	Ask Volume	Cum. Volume
82.60	2'000	3'300
82.58	1'000	1'300
82.56	300 (3)	300
82.54		

Result :

- 1) Trade 50 shares in SwissAtMid at 82.54
- 2) Trade 200 shares in CLOB at 82.56
- 3) Trade 300 shares in EBBO at 82.56
- 4) Trade 150 shares in CLOB at 82.58

Average price with routing: 82.56286

Average price without routing: 82.57429

Comment:

- i) If EBBO and CLOB offer the same price, liquidity in the CLOB is preferred.
- ii) If EBBO and SwissAtMid offer the same price, liquidity in SwissAtMid is preferred.

Example 2: Buy 'EBBO Order' 700 shares at 82.58

MPOB (SwissAtMid):

Price	Ask Volume	Cum. Volume
82.60	-	50
82.58	-	50
82.56	-	50
82.54	50 (1)	50

CLOB [Spread 82.52 to 82.56]:

Price	Ask Volume	Cum. Volume
82.60	1'000	1'800
82.58	600 (5)	800
82.56	200 (3,i)	200
82.54		

Swiss EBBO Book:

Price	Ask Volume	Cum. Volume
82.60	2'000	3'400
82.58	1'000	1'400
82.56	300 (4)	400
82.54	100 (2)	100

Result:

- 1) Trade 50 shares in SwissAtMid at 82.54
- 2) Trade 100 shares in EBBO at 82.54
- 3) Trade 200 shares in CLOB at 82.56
- 4) Trade 300 shares in EBBO at 82.56
- 5) Trade 50 shares in CLOB at 82.58

Average price with routing: 82.55714

Average price without routing: 82.57429

Comment:

- i) If EBBO and CLOB offer the same price, liquidity in the CLOB is preferred.
- ii) If EBBO and SwissAtMid offer the same price, liquidity in SwissAtMid is preferred.

15.5. Quote on Demand (QOD)

In addition to the Quote Driven Market (QDM) market model, the Swiss Stock Exchange offers - for the trading of Exchange Traded Funds (ETFs) and Exchange Traded Products (ETPs) - the trading service without pre-trade transparency Quote on Demand (QOD).

How the Quote on Demand service works

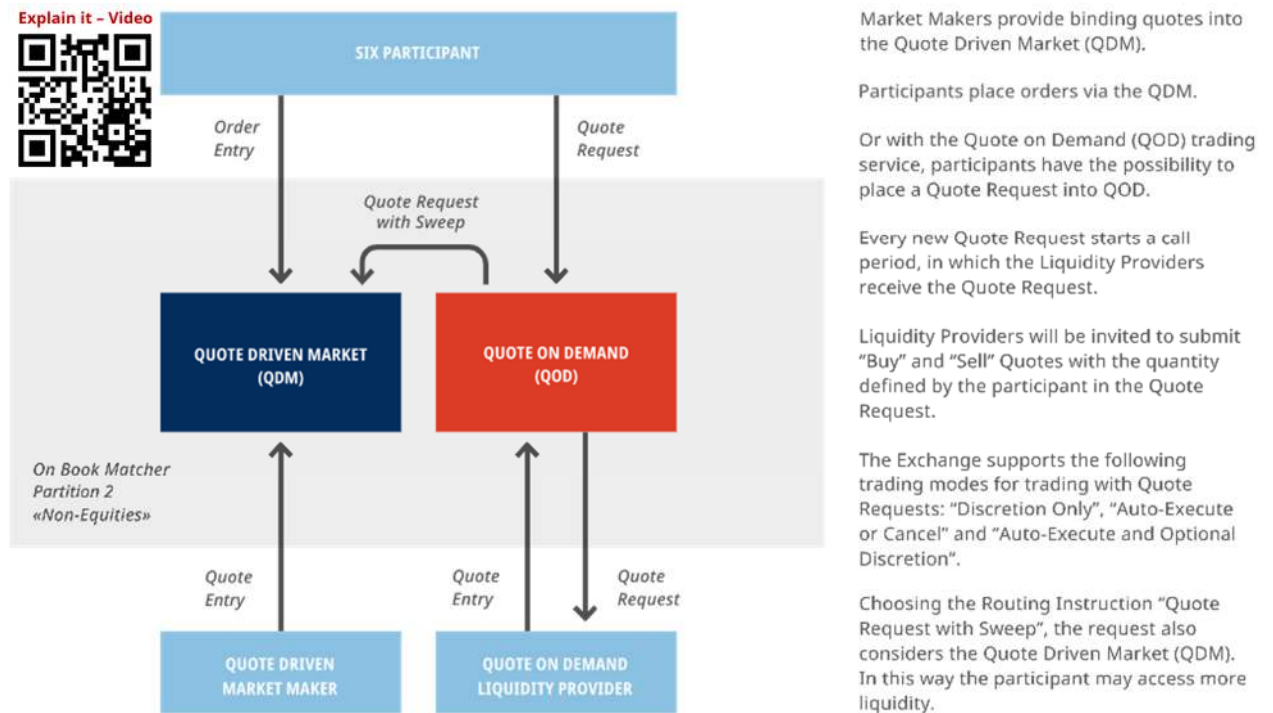


Figure: Quote on Demand

The Quote on Demand trading service starts a call period for every entered Quote Request and Liquidity Providers can respond with Quotes.

15.5.1. Quote Request and Quotes

As a general rule, the Quote Requests entered by the participants are not binding for the duration of the Call Phase. On the other hand Quotes entered by the Liquidity Providers are binding for the duration of the Call Phase.

Quote Requests

Quote Requests can be entered by all trading participants of SIX Swiss Exchange AG via the Standard Trading Interface (STI) or the QOD User Interface (QOD UI) at any time during the trading day. Every Quote Request starts an individual Call Phase. Quote Requests must be fully executed in the QDM and/or QOD unless they are deleted or have expired.

Quotes

Quotes can be entered by Liquidity Providers of Quote on Demand via the Quote Trading Interface (QTI) during the Call Phase. Quotes are simultaneously limited buy and sell orders in a single instruction. Quotes remain in the Call Phase until executed, amended, deleted or expired. Only one pair of buy and sell orders is allowed per Call Phase and per Liquidity Provider.

Explain it - Video

QOD User Interface (QOD UI)

SIX provides a web-based Quote on Demand User Interface (QOD UI) to participants interested in using the new Quote on Demand trading service. The QOD UI supports all functionalities required for submitting, maintaining and deleting Quote Requests as well as trading in the non-displayed trading service Quote on Demand. The QOD UI will not support functionalities for Quotes from Liquidity Providers. The QOD trading service can be accessed via STI, QOD UI or in a hybrid mode where Quote Requests are initiated via STI and responses can be managed in the QOD UI. The QOD User Interface manual can be found in the member section.

15.5.2. QOD Trading Modes

The participant can choose to execute his Quote Request in different Trading Modes:

- Discretion Only
- Auto-Execute or Cancel
- Auto-Execute and Optional Discretion

The Trading Mode of a Quote Request **cannot be modified** when the Call Phase is running.

Discretion Only

Description

This Trading Mode does not support auto-execution. Participants **have full control and discretion** if and when an execution takes place.



If multiple Quotes are in-limit and the participant chooses to trade, the execution will take place against the in-limit Quote with the best price-time priority. Discretionary selection of a Quote to be executed against is not supported.

Condition for Matching

- The entire volume of Quote Request can be executed
- The participant confirms the execution of their Quote Request



Duration

5 minutes



Minimum Number of Responders

Not applicable



Auto Execute or Cancel

Description

This Trading Mode is fully automated and will lead to the execution of the Quote Request if the conditions for matching are met.



If no trade can be executed the Quote Request is automatically deleted after the Call Phase.

Condition for Matching

- The entire volume of the Quote Request can be executed
- The minimum number of responding liquidity providers is met
- At least one Quote is in-limit



Duration

950 milliseconds plus a maximum of 50 milliseconds "Random Matching Time"







Minimum Number of Responders

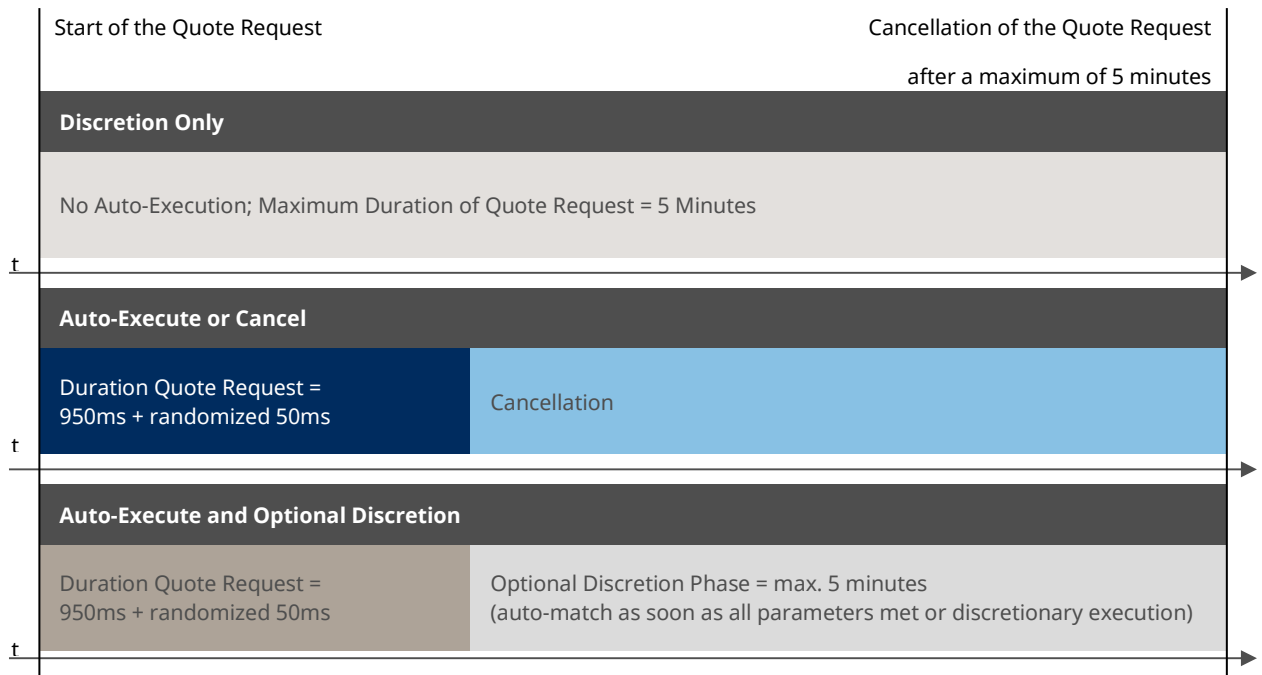
Default value is set to 3 by SIX. Minimum Number of Responding Liquidity Providers can be overwritten by the participant for each Quote Request.



Auto Execute and Optional Discretion

Description 	<p>This trading mode is a mix of the “Discretion Only” and “Auto Execute or Cancel” modes.</p> <p>In the initial Auto-Execute phase an automated execution of the Quote Request is attempted. If no trade is made during the Auto-Execute phase, the Call Phase is extended by an Optional Discretion Phase.</p> <p>If and as soon as the conditions for matching are met during the Optional Discretion Phase, the Quote Request is immediately executed without further intervention of the participant.</p>
Condition for Matching 	<p>During the entire Call Phase:</p> <ul style="list-style-type: none"> • At least one of the Quotes is in-limit • The minimum number of responding liquidity providers is met <p>During the Optional Discretion part of the Call Phase:</p> <ul style="list-style-type: none"> • The participant submitting the Quote Request chooses to trade
Duration 	<p>950 milliseconds plus a maximum of 50 milliseconds “Random Matching Time”. If no trade can be executed the duration is extended by an additional 5 minutes.</p>
Minimum Number of Responders 	<p>Default value is set to 3 by SIX. Minimum Number of Responding Liquidity Providers can be overwritten by the participant for each Quote Request.</p>

15.5.3. Overview Duration



15.5.4. Market Model of the trading service Quote on Demand (QOD) and Matching Rules

In the Quote on Demand trading service, a Call Phase is triggered for each submitted Quote Request during Continuous Trading. At the start of the Call Phase, all registered Liquidity Providers will be invited to submit Quotes with the quantity defined by the participant in the Quote Request. Depending on the Trading Mode and the Routing Instruction defined in the Quote Request, SIX will execute the Quote Request against in-limit Quotes from Liquidity Providers according to the price-full quantity-time priority principle in Quote on Demand (QOD) and/or the Quote Driven Market (QDM) of the corresponding security at SIX.

Each Quote Request will be assigned a unique Auction ID. Multiple simultaneous Call Phases per security and participant are supported. The number of concurrent Call Phases is not limited per security or participant.

- **Quote Driven Market (QDM)** with pre-trade transparency and price-time priority
- **Quote on Demand (QOD)** without pre-trade transparency and price-full quantity-time priority

15.5.5. Sweep / Non Sweep Quote Requests

Routing Instruction QODS – Quote Request with Sweep:

At the time of execution, a Quote Request with Sweep **will look at the consolidated** order book (QDM and QOD).



A Quote Request with Sweep is executed in full quantity against

- the best in-limit Quote with the highest price/time priority in Quote on Demand and/or
- orders and quotes which are equal or better than the best in-limit Quote at the time of execution in the Quote Driven Market.

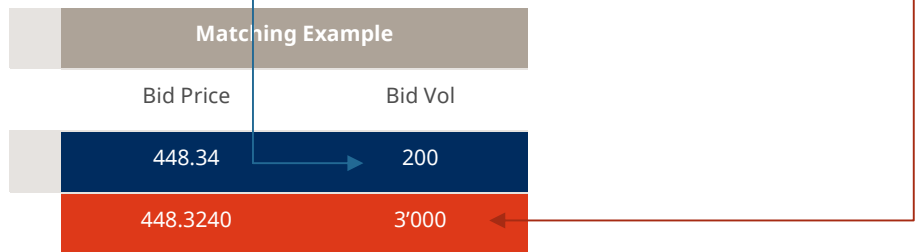
For executions of Quote Requests in the Quote Driven Market the execution provisions of continuous trading apply in accordance with Directive 3: "Trading" / Clause 8.

If the best in-limit price offered is equal in the Quote Driven Market and in Quote on Demand then the book with the better time priority is considered first.

Example

Quote Request with Routing Instruction "Sweep"	
Side	Sell
Quantity	3'000
Limit Price	448.25

QDM		QOD	
Bid Price	Bid Vol	Bid Price	Bid Vol
448.34	200	448.3240	3'000
448.32	500	448.3120	3'000
448.31	700	448.3110	3'000
448.30	1'000	448.3095	3'000
448.28	2'000	448.3092	3'000



Execution Price for Quote Request with Routing Instruction "Sweep"
200@448.34
2'800@448.324
448.3251 (200@448.34 + 2'800@448.324)

Reporting Instruction QODN – Quote Request non Sweep:

At the time of execution Quote Requests non Sweep will only look at Quotes in the Quote on Demand (QOD) order book (without pre-trade transparency).



A Quote Request non Sweep is executed in full quantity against the best in-limit Quote with the highest price-time priority in Quote on Demand.

Example

Quote Request with Routing Instruction "Non Sweep"	
Side	Sell
Quantity	3'000
Limit Price	448.25

QDM		QOD	
Bid Price	Bid Vol	Bid Price	Bid Vol
448.34	200	448.3240	3'000
448.32	500	448.3120	3'000
448.31	700	448.3110	3'000
448.30	1'000	448.3095	3'000
448.28	2'000	448.3092	3'000

Matching Example	
Bid Price	Bid Vol
448.3240	3'000

Execution Price for Quote Request with Routing Instruction "Non Sweep"

448.3240 (3'000@448.324)

15.5.6. Termination of the Call Phase

A Call Phase will be terminated if

- the Quote Request is deleted by the participant
- the Quote Request is executed
- the Call Phase has expired

15.5.7. Trading Day and Hours

Trading days are governed by the trading days of the Exchange and are stated in the Exchange trading calendar. Trading hours are governed by the trading hours of the Primary Reference Market. The Primary Reference Market is defined as the primary exchange on which the collective investment schemes are listed or admitted to trading on a regulated market. Trading is available during the trading period "Continuous Trading" on the Primary Reference Market relating to the securities in question.

15.5.8. Quote Deviation Limit

The Exchange can reject Quote Requests in the Quote on Demand order book (QOD) and thus not start a Call Phase if the price limit of the incoming Quote Request reaches or exceeds the predetermined price deviation of the security compared to the current price in the Quote Driven Market (QDM).

15.5.9. Pre-Trade Transparency

All Quote Requests and Quotes which are executed using an order management facility of the Exchange are exempted from pre-trade transparency regulations according to Art. 27 para. 4 let. c FMIO. The Quote Requests and Quotes are not published via the SWXess public market information channels during the Call Phase.

Liquidity Providers do not see the Quotes submitted by other Liquidity Providers during the Call Phase.

SIX will disclose the following information about Quote Requests to the Liquidity Providers invited to the Call Phase:

- Unique identification of the security: ISIN, trading currency and trading venue
- Size of the Quote Request
- Specification whether the Quote Request is with Sweep or non Sweep
- Identification of the participant submitting the Quote Request

**Directive
4: Market
Control****16. Market Control**

The Market Control unit of the Exchange actively monitors trading in real-time to ensure that trading is conducted fairly and properly.

The Exchange can interrupt trading, delete orders from the order book and invalidate and cancel trades or require the participants to reverse them.

The Exchange may carry out such trading interventions as it deems necessary, in particular

- a. delay the opening of trading in a security;
- b. restrict or suspend continuous trading in a security;
- c. instruct the participants involved to adjust or delete orders;
- d. reject orders or delete them in the name of the participants involved;
- e. declare trades null and void and cancel them according to Clause 6;
- f. adjust trading parameters at short notice; or
- g. suspend trading in a given security or on the market as a whole.

Further information is set out in [Directive 4 "Market Control"](#).

Sample question:

SIX Swiss Exchange Market Control is the body responsible for calculating and making decisions regarding mistrades.

Answer:

- a) True
- b) False

Answer: a)

Reasons: Market Control has decision-making authority with regard to mistrades.

**Directive
4: Market
Control****16.1. Mistrades**

Market Control may declare an on-exchange, on-order-book trade to be invalid or refuse to accept a report for an off-order-book trade as a "trade on the Exchange" if:

- the price for the trade deviates considerably from the market price, or
- orderly and fair market conditions are not ensured

Any investigation undertaken in relation to mistrades will be initiated either by SIX Swiss Exchange itself or at the request of one of the participants involved. Trades at market prices resulting from wrongful order submissions will not be declared invalid.

Market Control will generally make a decision on the invalidity of a trade within 30 minutes of its execution, with the exception of:

- a) bonds: up to 30 minutes after close of trading;
- b) derivative financial instruments: up to 30 minutes after close of trading, if at least one of the participants involved has designated the order as a client transaction

Deadlines and Special Rules:

Product	Capacity	Deadline
Shares	Client transaction and own transaction	Claims must be lodged no later than 30 minutes after matching.
Derivative Products (Structured Products)	At least one party designates its order as a <u>client transaction</u>	Claims must be lodged the same day, up to 30 minutes after close of trading.
	Neither party designates its order as a client transaction (<u>own transactions</u>)	Claims must be lodged no later than 30 minutes after matching.
Bonds	Client transaction and own transaction	Claims must be lodged the same day, up to 30 minutes after close of trading.
All other Securities (including Funds and ETFs)	Client transaction and own transaction	Claims must be lodged no later than 30 minutes after matching.

Where the above deadlines have not been met, any late claims will generally be refused. SIX Swiss Exchange may extend the deadline for lodging a claim in exceptional and duly substantiated cases.

In exceptional circumstances, Market Control may extend these deadlines, subject to prior notice via Newsboard.

Please note:

The Market Control unit of SIX Swiss Exchange actively monitors trading. Thus a mistrade need not necessarily be reported by a market participant for a transaction to be declared a mistrade by Market Control.

17. Reporting and Publication Requirement

Further information :

FMIA
Art. 31

FMIA
Art. 34

FMIA
Art. 39

FMIO
Art. 37

FinIA
Art. 15

FinIO
Art. 31

FMIO-
FINMA
Art. 2-5

FINMA
Circular
2018/2

Reporting

17.1. Reporting Duty

Definition of "those subject to the duty to report"

Participants admitted to an exchange and other Swiss and international securities firms are hereinafter referred to as "those subject to the duty to report".

Those subject to the duty to report must submit the reports required for transparency in securities trading pursuant to Article 39 of the Federal Financial Market Infrastructure Act (FMIA), Article 37 of the Financial Market Infrastructure Ordinance (FMIO), Article 51 of the Financial Institutions Act (FinIA), Article 75 of the Financial Institutions Ordinance (FinIO), Articles 2-5 of the FINMA Financial Market Infrastructure Ordinance (FMIO-FINMA) and the FINMA Circular 2018/2 "Duty to report securities transactions".

The FINMA Circular 2018/2 explains the duty to report under Article 39 FMIA and Article 37 of the Financial Market Infrastructure Ordinance, Article 51 FinIA and Article 75 FinIO as well as Articles 2-5 of the FINMA Financial Market Infrastructure Ordinance. The FINMA Circular 2018/2 contains in particular explanations on the essential terms, the principles of the reporting obligation, reportable financial transactions, exceptions to the reporting obligation and the determination of the beneficial owner. Comments providing further detail on FINMA Circular 2018/2 and other legal foundations are made in Annex A to the Reporting Office Rules.

Further regulations relevant to the fulfillment of the reporting obligation can be found in the:

- Reporting Office Rules of the SIX Swiss Exchange AG, **applying to all FINMA regulated securities firms and participants of a trading venue**, and
- SIX Swiss Exchange Trading Rules (including Directive 3: Trading), **applying to all SIX Swiss Exchange Participants**.

The SIX Swiss Exchange reporting office ("Reporting Office") receives reports, processes them, and charges fees for doing so.

Please note:

Securities firms who are not participants of the Exchange are designated "reporting members" for reporting purposes.

17.2. Definitions

Term	Definition
Closing	The combination of a buy and sell order in the same security (creating a legal obligation).
Transmission of order	Transaction flow from order generation to execution.
Delivery Report	Function for transferring commissions and settlement instructions in connection with a direct order.
Legal transaction	A transaction in securities or a transmission of order.
Trade report	Report of a transaction outside the order book that is published to ensure post-trade transparency.
Transaction Report	<ul style="list-style-type: none"> • In addition to trading on a Swiss Six Exchange or to the Trade Report, those subject to the duty to report must submit a Transaction Report to the Reporting Office • Transmitted transaction with no impact on pricing • Trades in reportable securities at a FINMA-recognised foreign stock exchange or MTF (Multilateral Trading Facility) • Trades involving Eurex contracts not traded through Eurex
One-sided trade report	Trade Report from a party subject to the duty to report relating to a transaction with a party not subject to the duty to report
Two-sided trade report	Trade Report from a party subject to the duty to report relating to a transaction with another a party subject to the duty to report
Remote Member	Foreign exchange participants in a Swiss Six Exchange

17.3. Reportable Transactions

A distinction should be drawn between securities and derivatives:

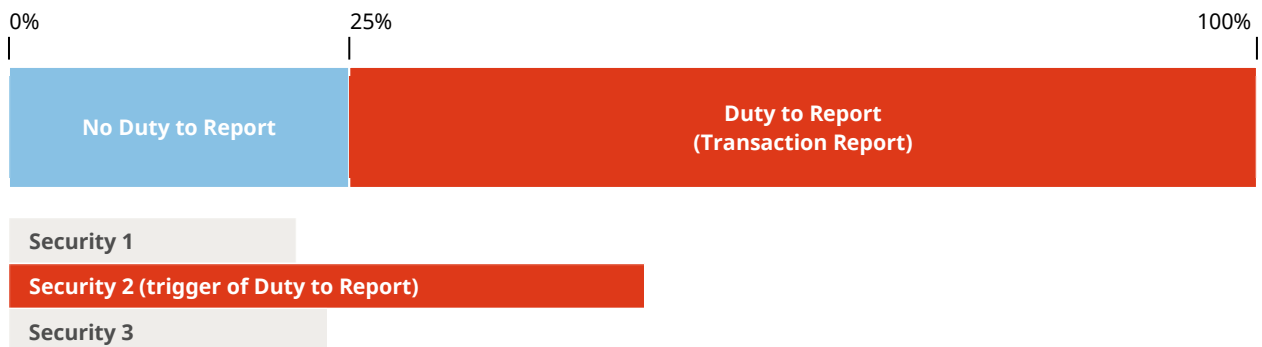
Definition Securities

Securities under Article 2 let. b FMIA in conjunction with Article 2 para. 1 FMIO that are admitted to trading on a trading venue in Switzerland. This definition also includes standardised derivatives suitable for mass trading such as exchange-traded derivatives (ETDs), warrants and structured products, including exchange-traded products (ETPs, a cover-all term for collateralised exchange-traded commodities (ETCs) and exchange-traded notes (ETNs)).

Definition Derivatives

Derivatives under Article 2 let. c FMIA in conjunction with Article 2 para. 2 FMIO that are not securities as defined in the FINMA Circular 2018/2 Margin no. 9.

The duty to report covers all those subject to the duty to report in securities as defined above (Margin no. 9 of the FINMA Circular 2018/2 "Duty to report securities transactions") as well as all transactions in derivatives where at least one reportable underlying has a weighting of more than 25% and is a security as defined in Margin no. 9. If this 25% threshold is exceeded by the sum of several reportable underlyings but not by one single reportable underlying, the duty to report does not apply.



Where changes to the composition of the underlyings through discretionary decisions during the term of a derivative are excluded (passive management), the status at the time the derivative was created (i.e. whether or not the threshold was exceeded) applies to all transactions in that derivative.

Those subjects to the duty to report are additionally entitled to report transactions in derivatives that are not subject to any duty to report under FINMA Circular 2018/2.

Transactions must be reported in Swiss francs, irrespective of whether the price is quoted in Swiss francs or a foreign currency. Prices must be converted into Swiss francs at a recognised reference exchange rate or the exchange rate prevailing on a liquid currency trading platform at the time of the transaction.

The duty to report covers both the subject to the duty to report own-account transactions and their transactions for clients (see Art. 37 para. 3 FMIO and Art. 75 para. 3 FinIO). Definitions of own-account and client trading can be found in FINMA Circular 2008/5 "Securities dealers".

17.4. Order Forwarding and Internal Orders

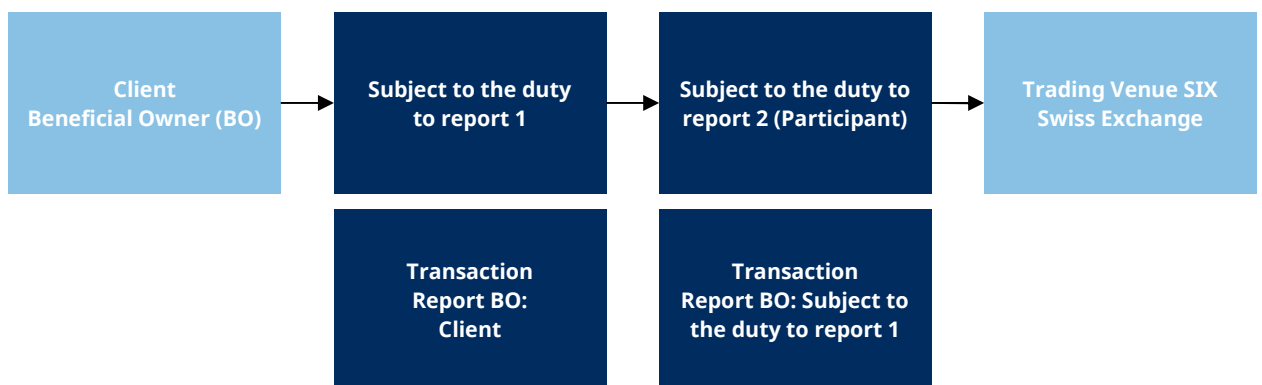
17.4.1. Order Forwarding

Each individual transaction by a subject to the duty to report in the transaction chain, from order generation to forwarding and execution (e.g. client → subject to the duty to report 1 → subject to the duty to report 2 → trading venue / execution outside trading venue) must be reported. Where orders are forwarded, the first subject to the duty to report with which a client holds an account or custody account must report the required information on the beneficial owner (or submit a full report in the European Union format).

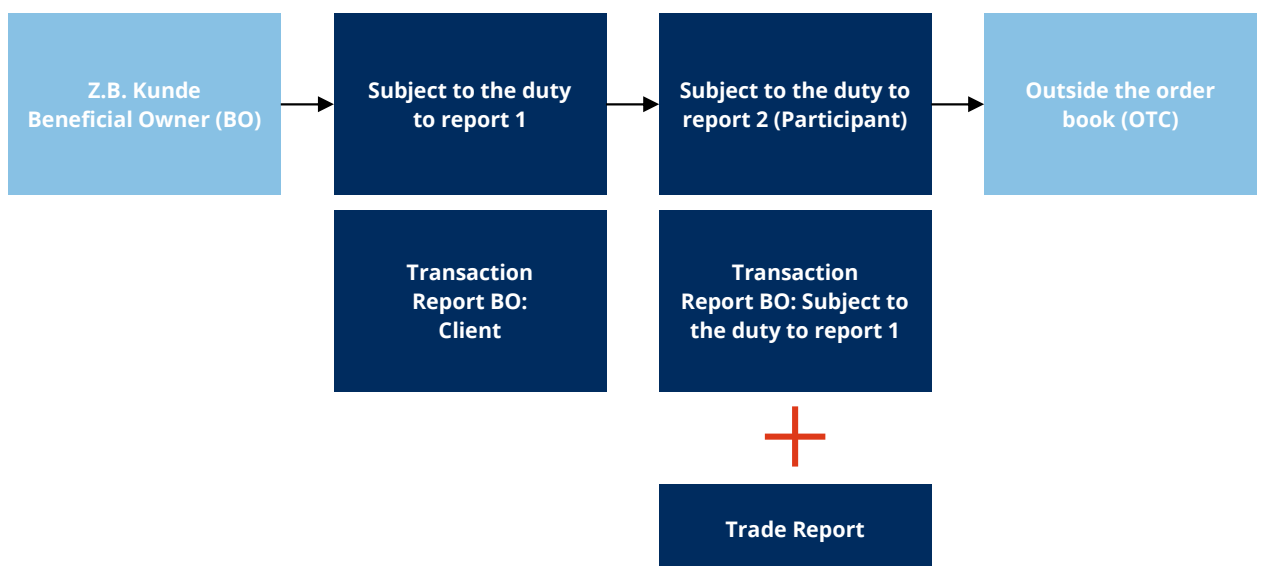
The further subjects to the duty to report in a transaction chain report the subject to the duty to report that forwarded the order in place of the beneficial owner. Where orders are forwarded, each subject to the duty to report in the transaction chain must additionally report the unique transaction identification code (trade ID) provided by the trading venue. If there is more than one trade ID due to partial execution, all trade IDs must be reported. The subjects to the duty to report are also entitled to entrust a single subject to the duty to report or a suitable third party with the task of submitting an individual report or a full report on the entire transaction chain (Art. 37 para. 5 FMIO).

Example: Order Forwarding

On Exchange – On Order Book



On Exchange – Off Order Book/Off Exchange



17.4.2. Internal Orders

Client orders executed internally must also be reported. Collective orders must be reported both when executed via a trading venue and when definitively allocated to clients. A direct placement to the client without booking to the nostro account requires only one report. The report on internal client allocations must be submitted before the close of trading on the following trading day at the latest. If a single report is submitted in consolidated form for several partial executions, this report may show the average price.

Sample question:

Transactions along the transaction chain...

Answer:

- a) must be reported by each party subject to the duty to report along the transaction chain
- b) must be reported only by the last party subject to the duty to report along the transaction chain
- c) are an exception and do not need to be reported

Answer: a)

Explanation: Each individual transaction by a party subject to the duty to report along the transaction chain, from the generation of the transaction through forwarding to execution (e.g. customer → participant party subject to the duty to report 1 → participant party subject to the duty to report 2 → exchange / execution outside of exchange) must be reported.

17.5. Exemptions from the Duty to Report

17.5.1. Derivation of Swiss and Foreign Securities

Swiss securities

Securities issued by a company with its registered office in Switzerland or listed in Switzerland.

Foreign securities

Securities issued by a company with its registered office outside Switzerland and not listed in Switzerland.

Primary listing

If a company is not yet listed on any other exchange when it applies for a listing on a Swiss exchange, its only option is a primary listing.

Secondary listing

Listing of securities in a country other than the one where the company first had its shares listed.

The following possibilities therefore exist:

Issuing company with registered office in Switzerland	Primary listing in Switzerland	Secondary listing on a trading venue in Switzerland	Classification
Yes	No	No	Swiss securities
Yes	No	Yes	Swiss securities
Yes	Yes	Yes	Swiss securities
No	Yes	No	Swiss securities
No	No	Yes	Foreign securities
No	No	No	Foreign securities

Transactions in securities and in derivatives with securities as their underlyings that are executed outside Switzerland do not have to be reported, subject to the conditions outlined below.

17.5.2. Transactions executed outside Switzerland in Swiss Securities and their Derivatives

Those subject to the duty to report under Article 34 para. 2 let. c FMIA (foreign parties subject to the duty to report) and foreign branches of Swiss securities firms are NOT required to report transactions executed outside Switzerland in Swiss securities and in derivatives with Swiss securities as their underlyings, provided that they fulfil the duty to report in the country in question and that the conditions specified in Article 37 para. 4 let. a FMIO or Article 75 para. 4 let. a FinIO are met.

Where there is no agreement to exchange information under Article 37 para. 4 let. a FMIO or Article 75 para. 4 let. a FinIO, foreign parties subject to the duty to report may also report transactions executed outside the trading venue and outside Switzerland in Swiss securities and in derivatives

with Swiss securities as their underlyings to a foreign disclosure office recognized by the trading venue.

Background knowledge: Article 37 para. 4 let. a FMIO or Article 75 para. 4 let. a FinIA:

- 4 The following transactions executed abroad do not have to be reported:
- a) transactions in securities admitted to trading on a trading venue in Switzerland and in derivatives with such securities as their underlying instruments, provided the information in question is regularly communicated to the trading venue on the basis of an agreement in accordance with Article 32 paragraph 3 FMIA or within the framework of **an exchange of information between FINMA and the competent foreign supervisory authority** if:
 1. they were executed by the branch of a Swiss securities firms or by a
 2. the branch or the foreign participant is authorised to trade by the relevant foreign supervisory authority and is obliged to submit a report in the corresponding state or in its state of domicile;

17.5.3. Transactions executed outside Switzerland in Foreign Securities and their Derivatives

Those subjects to the duty to report and foreign branches of Swiss securities firms are exempt from the duty to report transactions in foreign securities and in derivatives with foreign securities as their underlyings in Switzerland if such transactions are executed via a recognised foreign trading venue or a recognised foreign organised trading facility (OTF) (see Art. 37 para. 4 let. b FMIO and Art. 75 para. 4 let. b FinIO).

Transactions executed between a foreign party subject to the duty to report and a foreign counterparty outside a trading venue and outside Switzerland in foreign securities and in derivatives with foreign securities as their underlyings are additionally not covered by the duty to report in Switzerland. Foreign parties subject to the duty to report may also report other transactions executed outside a trading venue and outside Switzerland in foreign securities and in derivatives with foreign securities as their underlyings to a foreign disclosure office recognized by the trading venue.

**Reporting
Office
Rules**

17.6. Further Information on Exemptions from the Duty to Report

Trades in securities which are admitted to SIX Swiss Exchange in the "Bonds – Non-CHF" trading segment (international bonds) are exempted from the duty to report.

Remote members are also exempted from the duty to report (clarifying information in respect of FINMA Circular 2018/2, margin number 25, first sentence):

- In the case of trades in non-Swiss securities and their derivatives outside of Switzerland between two remote members of a Swiss trading venue
 - outside of a trading venue; or
 - at a trading venue not recognised by FINMA; or
 - via an organised trading facility/systematic internaliser;

- In the case of trades in non-Swiss securities and their derivatives outside of Switzerland between a remote member of a Swiss trading venue and a Swiss counterparty (the Swiss counterparty remains subject to the duty to report)
 - at a trading venue not recognised by FINMA; or
 - via an organised trading facility/systematic internaliser.

17.7. Foreign Participants of a Swiss Exchange

The reporting obligations listed above are generally also applicable to foreign participants (remote members) on a Swiss stock exchange authorized under Article 40 of the Federal Financial Market Infrastructure Act (FMIA). Remote members, as an additional option for reporting to the SIX Swiss Exchange Reporting Office, may:

Submit to a foreign Approved Publication Arrangement (APA) recognized by SIX Swiss Exchange any Trade Reports relating to transactions abroad in securities which are admitted for trading on a Swiss exchange.

Please note:

In the event of any uncertainties regarding the reporting obligation, the trader or reporting agent should contact their responsible Compliance department.

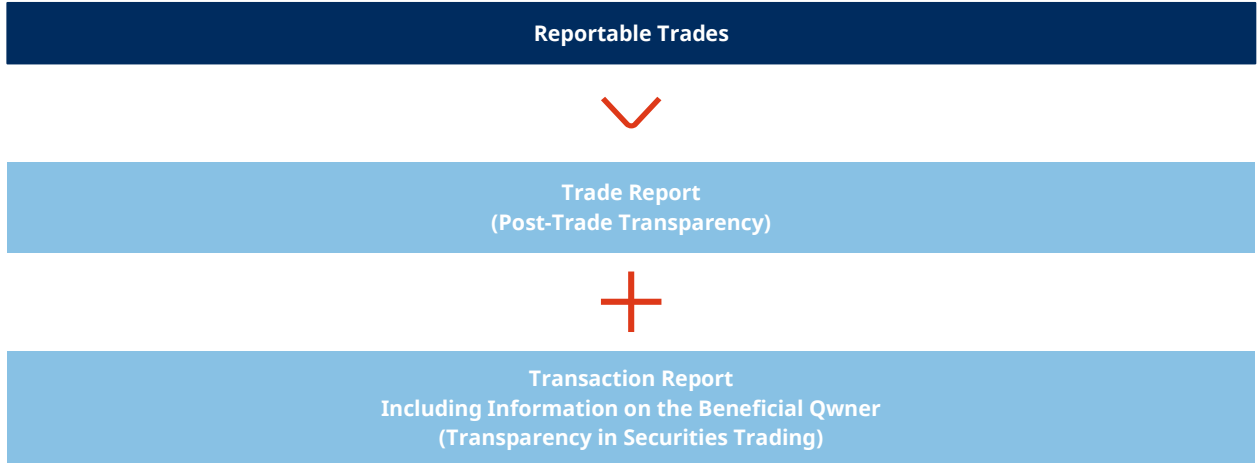
17.8. Overview of the Main Scenarios

The Annex of FINMA Circular 2018/2 "Duty to report securities transactions" contains an overview of the main scenarios. Please make yourself familiar with these.

[Link https://www.finma.ch/en/~media/finma/dokumente/dokumentencenter/myfinma/rundschreiben/finma-rs-2018-02.pdf?la=de](https://www.finma.ch/en/~media/finma/dokumente/dokumentencenter/myfinma/rundschreiben/finma-rs-2018-02.pdf?la=de)

17.9. Acceptance of Messages

The following section contains information on the **Trade Report and Transaction Report**. Trade Reports ensure post-trade transparency. Transaction Reports provide transparency in securities trading, also for investigating bodies.



17.9.1. Trade Report

Participants admitted to SIX Swiss Exchange must submit Trade Reports as follows:

- On-exchange, off-order-book trades in accordance with the SIX Swiss Exchange Trading Rules (only for exchange participants), or
- Trades outside of SIX Swiss Exchange ("off-exchange trades") in accordance with the Reporting Office Rules (all subjects to the duty to report).

Reportable off-exchange trades on SIX Swiss Exchange in securities admitted to trading at a Swiss trading venue must be reported to the Reporting Office using a Trade Report. The following two paragraphs remain reserved.

Trade Reports are not required to be submitted to the Reporting Office for reportable trades in securities admitted to trading at a Swiss trading venue at foreign trading venues or foreign organised trading facility (OTF) if the trade has already been reported to the competent foreign authority in the form of a Trade Report and published by that authority.

Foreign branches of Swiss securities firms may fulfil their obligation to submit Trade Reports for trades executed abroad via a foreign reporting office recognised by SIX Swiss Exchange.

Information from the Trade Report will be published to fulfil SIX Swiss Exchange post-trade transparency requirements.

17.9.2. Transaction Report

For reportable trades in Swiss securities admitted for trading at a Swiss trading venue, a Transaction Report must be submitted to the Reporting Office. Furthermore, this shall also apply to trades in foreign securities admitted for trading at a Swiss trading venue,

- provided the trade is conducted at a Swiss trading venue or
- outside a foreign trading venue recognised by FINMA.²

Preceding paragraph also applies to reportable trades in securities derived from securities admitted for trading at a Swiss trading venue.

Every Transmission of Orders for securities admitted to trading at a Swiss trading venue or for securities derived from securities admitted for trading at a Swiss trading venue which ultimately results in a trade must be reported as a Transaction Report to the Reporting Office by every party in the transaction chain which is subject to the duty to report.

The Transaction Report serves to fulfil regulatory requirements and is not published.

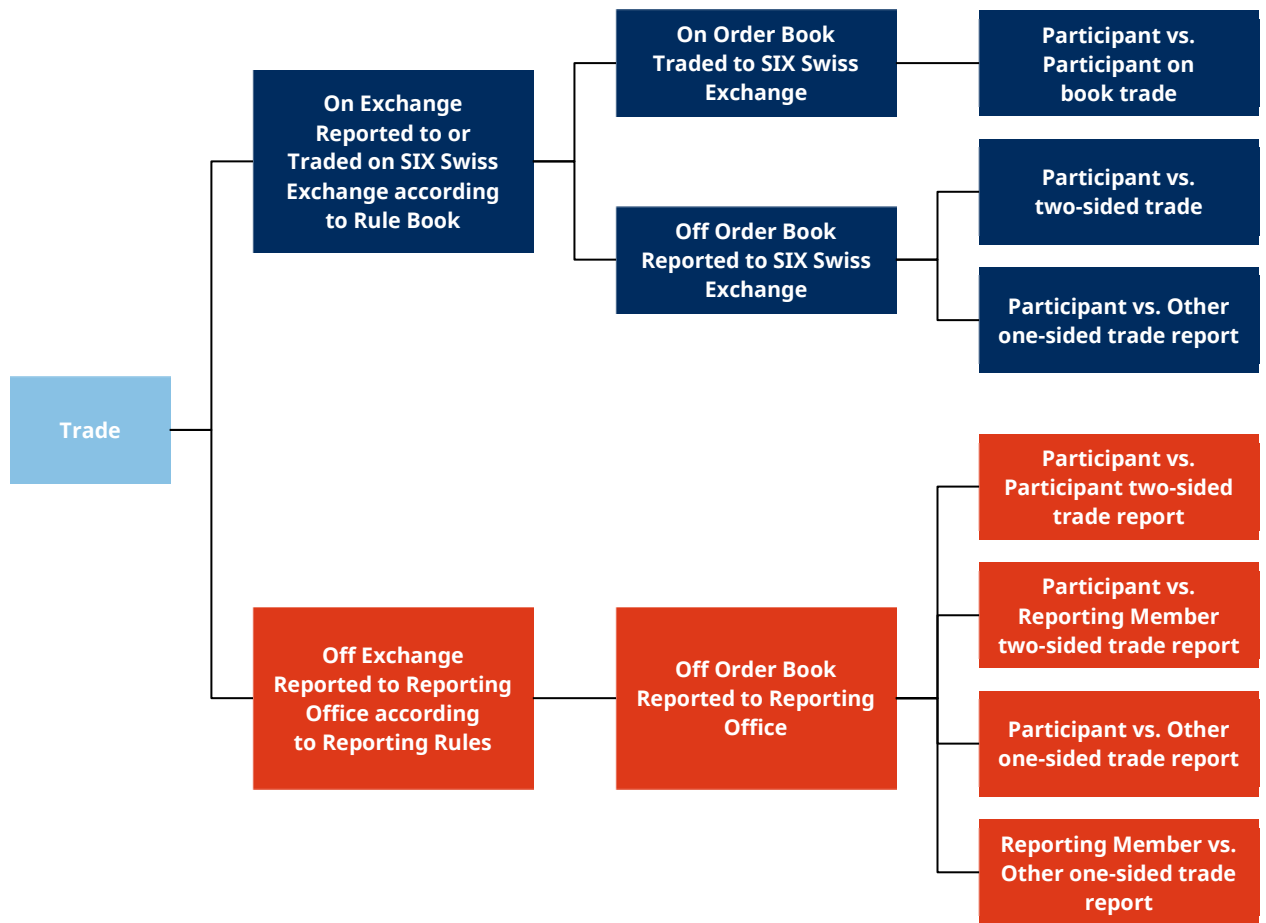
Please note:

A list of the foreign exchanges and MTFs recognised by FINMA is available on the FINMA website. <http://www.finma.ch>

Background information:

Securities transactions can be categorized as follows, depending on how the transaction is effected:

- a) **On-exchange, on-order-book trading:**
Trades which are conducted on-exchange, on-order-book are subject to the Trading Rules. Such trades meet the requirements of post-trading transparency, but must still be reported as Transaction Reports for the purpose of securities trading transparency.
- b) **On-exchange, dark-book trading:**
Trades which are conducted on-exchange, dark-book (SwissAtMid) are subject to the Trading Rules. Such trades meet the requirements of post-trading transparency, but must still be reported as Transaction Reports for the purpose of securities trading transparency.
- c) **On-exchange, off-order-book trading:**
If both parties to a trade are off-order-book exchange participants, then pursuant to the Trading Rules they can report on-exchange, off-order-book.
- d) **Off-exchange trading:**
The Reporting Office Rules apply to trades which participants explicitly do not report to the exchange. If one party is a reporting member, both parties can report the trade only off-exchange.



Trade Report will be published to fulfil SIX Swiss Exchange post-trade transparency requirements.

17.9.3. One- or Two-Sided Trade Reports

One-Sided Trade Report

Those subject to the duty to report report trades with those not subject to the duty to report in the form of a one-sided Trade Report. Settlement instructions may not be issued to SIX.

Two-Sided Trade Report

Exchange participants must report any off-order-book trades entered into with other exchange participants or reporting members in the form of a two-sided trade report.

One of the two parties must submit its side of the trade within the prescribed reporting period. The party will receive an immediate acknowledgment of the report from the system (status "pending"). The counterparty involved in the transaction will also be informed of the report (trade message status "alleged").

The counterparty has two options for confirming the trade report within the prescribed reporting period:

- a) "Enter and Accept": the trade report submitted is accepted by the counterparty.
- b) "Enter and Match": The counterparty sends its side of the trade. The system checks whether the two reports match; if so, it acknowledges the trade with a message to both parties ("Trade Capture Report").

Two-sided trade reports must be confirmed before the end of the following business day (T+1). If confirmation is not submitted within the deadline, the unconfirmed Trade Report will remain in effect and the trade is considered as reported for the entered participant ("fire & forget").

The party submitting the report can use the "Delete" function to delete any two-sided trade reports that remain unconfirmed before confirmation is received from the counterparty. Unconfirmed two-sided trade reports may be deleted no later than the end of the business day after they were entered (T+1).

Instructions for settlement in respect of two-sided Trade Reports between two participants which are identified as on-exchange may be automatically instructed by SIX Swiss Exchange. Trades involving CCP-eligible securities may also be settled during the business day via a central counterparty.

The decision as to whether a one-sided Trade Report or a two-sided Trade Report needs to be submitted depends on whether the counterparty holds a licence as a securities firm from FINMA (SIX Swiss Exchange publishes a list in the "Party identification and abbreviation (memberlist.csv)" file using the RDI interface and in the Member Section). If this is the case, both parties are obliged to report the trade in the form of a two-sided trade report. Otherwise, the securities dealer must report the trade in the form of a one-sided trade report.

Party	Counterparty	Functionality	Reporting Flag (TrdSubType)
Exchange Participant	Exchange Participant	Two-Sided Trade Report	On Exchange or Off Exchange
	Reporting Member	Two-Sided Trade Report	Off Exchange
	Non Securities Firm	One-Sided Trade Report	Off Exchange
Reporting Member	Exchange Participant	Two-Sided Trade Report	Off Exchange
	Reporting Member	Two-Sided Trade Report	Off Exchange
	Non Securities Firm	One-Sided Trade Report	Off Exchange

17.10. Format of the Message

17.10.1. Trade Report

There are two ways to submit trade reports to the central Reporting Office:

- a) Standard Trading Interface STI (available only to exchange participants)
- b) Web-based reporting tool in the Member Section (available to all registered traders)

Please note:

The Reporting Office and exchange publish separate specifications, which lay down binding, generally accepted standards for the interfaces.

17.10.2. Transaction Report

The Reporting Office accepts full Transaction Reports which comply with the Swiss format, as described in FINMA Circular 2018/2 (margin numbers 27-30), and governed by the technical specifications.

The Reporting Office accepts full Transaction Reports in the European Union format as specified in the technical implementing standards (Regulatory Technical Standards (RTS 22)) for Art. 26 of Regulation (EU) No. 600/2014 of the European Parliament and of the Council of 15 May 2015 on markets in financial instruments and amending Regulation (EU) No. 648/2012 (MiFIR).

Transaction Reports can be transmitted as a collective file via the Transaction File Interface (TFI or RTS22). These can be uploaded in the Member Section or sent via a batch process.

Please note:

The technical specifications are available in the Member Section.

Sample question:

Trade Reports...

Answer:

- a) must be submitted only by exchange participants
- b) contain details on the beneficial owner
- c) must be submitted by all parties subject to the duty to report, subject to certain exceptions

Answer: c)

Explanation: Subject to certain exceptions, all parties subject to the duty to report must submit a reportable Trade Report. The beneficial owner should be reported together with the Transaction Report.

17.11. Content of the Message

17.11.1. Content

Both Trade Reports and Transaction Reports must contain the following information as a minimum:

- a) Identification of the party subject to the duty to report;
- b) Transaction type (buy or sell);
- c) Precise identification of the securities in question (in the sense of Art. 2 let. b in conjunction with let. c FMIA) (attributes such as the ISIN or CFI);
- d) Execution volume (nominal value for bonds, nominal value or number of units for other securities);
- e) Execution price or price obtained on the market excluding commission and fees (incl. statement of currency);
- f) Time of execution or time of order fulfilment in the case of Transmissions of Orders (date and time);
- g) Value date (corresponding to the date on which the securities are transferred and paid for following the trade, which is generally two trading days, i.e. T+2);
- h) Information on whether the trade was a proprietary transaction (trading in own name and for own account) or a client transaction (transaction in own name but for the account of the client);
- i) Designation of the counterparty or, in the case of Transmissions of Orders: designation of the party to whom the order was transmitted;
- j) Designation of the trading venue where the securities or derivative were traded, or the notification that the transaction was executed outside a trading venue;
- k) Trade Type: designation which further specifies the report (Annex A)

The Transaction Report shall additionally contain the following details::

- a) Information permitting the beneficial owner to be identified, or in the case of Transmission of Orders: the designation of the party who transmitted the order; (Clause 2.6.2);
- b) Trade ID.

The format of the Transaction Report must comply in full with either the Swiss format, as defined in FINMA Circular 2018/2, or with RTS 22. An indication of the transaction identification code (Trade ID) forms part of a complete report in accordance with the Swiss format or RTS 22.

17.11.2. Information on the Beneficial Owner

For the purposes of the duty to report, establishing the identity of the beneficial owner is carried out in accordance with the Anti-Money Laundering Act. By way of exception to this principle, however, operating legal entities, foundations and collective investment schemes are also to be reported as beneficial owners. In the case of trusts, the trustee must be reported.

Natural persons are reported using their nationality and date of birth together with an internal identification number of the party subject to the duty to report created by the subject to the duty to report in the following order:

1. Nationality format: two-letter country code according to ISO 3166-1 alpha-2;
2. Date of birth format: YYYYMMDD;
3. The subjects to the duty to report internal identification number. This can be the master number assigned to the business relationship, even if the subject to the duty to report has several business relationships with the same natural person and has assigned a different master number to each one.

Information about the beneficial owner

Beneficial Owner	Data Values for Beneficial Owner			Example	
Single (multiple) natural person(s)	PRSN	Country Code ² of the Nationality	Date of Birth	Bank internal identifier	PRSN-CH-19870219-123abc(^PRSN-CH-19891223-789xyz)
Single (multiple) juridical person(s)	LEI, BIC, MEMB, CRN or UID	Country Code of Place of Incorporation ³	Dataset corresponding to the BOTC		UID-CH-CHE-106.787.008(^UID-CH-CHE-106.842.854)

A juridical person shall be reported using the standardized international identification system for financial market participants, the Legal Entity Identifier (LEI). Where no LEI is available, the Business Identifier Code (BIC), the Commercial Register Number (CRN), the UID or the SIX Swiss Exchange AG PartyID/Reporting PartyID (MEMB) may be reported.

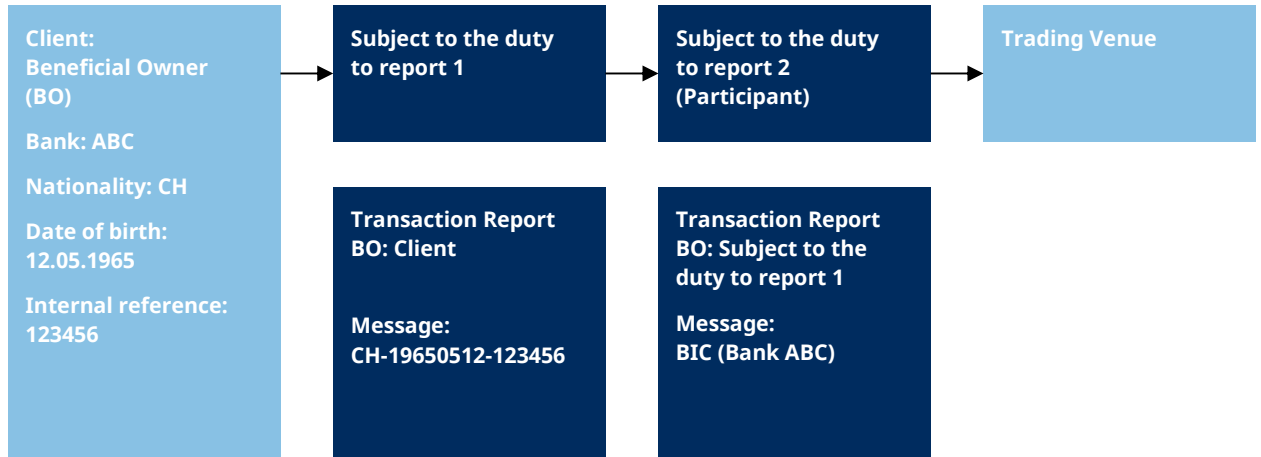
Background information:

If the party subject to the duty to report has recorded more than one nationality for a particular person, it uses the country code that comes first in the alphabetical list according to ISO 3166-1 alpha-2.

If the beneficial owner is an operating legal entity, foundation or collective investment scheme, it is normally reported using the standardised international identification system for financial market participants, the Legal Entity Identifier (LEI). Where no LEI is available, the Business Identifier Code (BIC) according to ISO 9362:2014 or the Commercial Register number preceded by the country code (see Margin no. 28, FINMA Circular 2018/2 Duty to report securities transactions) may be reported..

Alternatively, a disclosure office may accept a full report in the European Union format as specified in the regulatory and technical implementing standards (RTS 22) for Article 26 of Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012 (MiFIR). Natural persons are identified in such reports either as set out in Margin no. 28 above or by means of CONCAT in accordance with Article 6 para. 4 RTS 22. The disclosure office may only allow such alternative reports under MiFIR if it is able to assess these equally for the purpose of supervising trading under Article 31 para. 1 FMIA.

Example:



17.12. Reporting Deadlines

Reporting Office Rules

17.12.1. Trade Report Deadlines

During trading hours, **Trade Reports** must be submitted to the Reporting Office within the following deadlines after the trade has been effected:

Trades	Latest deadline during trading hours
Equities, rights and options as well as separate trading lines	1 minutes after the trade
Investment funds, Exchange Traded Funds (ETF), Exchange Traded Structured Funds (ETSF), Exchange Traded Products (ETP), Sponsored Funds and structures products	3 minutes after the trade
Bonds	15 minutes after the trade

Trade Reports for trades outside of SIX Swiss Exchange trading hours must be submitted before the start of trading on the trading day following the trade at the latest.

VWAP (Volume Weighted Average Price) trades must be reported to the Reporting Office with the actual VWAP achieved and "Special Price" Trade Type no later than 30 minutes after the close of trading if the trade is an off-order-book fixed price transaction.

Reporting Rules Appendix B

17.12.2. Delayed Publication

Off-order-book trades in equities and bonds may be published with a delay.

Under certain conditions those subject to the duty to report may apply for deferred publication by marking the report accordingly.

Derivative 3

The provisions on delayed publication otherwise apply to the rules in the Appendix “Delayed publication”.

17.12.3. Transaction Report Deadlines

Transaction Reports must be submitted by the close of trading on the next trading day at the latest.

17.13. Correction, Deletion, Cancellation of Reports and Countertrades

17.13.1. Correction

Trade Reports

The party subject to the duty to report may correct the information on whether the trade was a nostro (Principal) or a client transaction (Riskless Principal) in a Trade Report. A Trade Report may only be corrected once. The correction must be made at the latest by 10.00 pm (CET) on the trading day following the submission of the report.

Corrections can be reported via the Standard Trading Interface (STI) or via the Reporting GUI.

A trade can be corrected only once.

If the trade is settled by a central counterparty, the correction must be made on the same clearing day. In the case of trades with no central counterparty, the correction must be made by no later than the following trading day.

The stock exchange no longer instructs corrections to stock exchange trades for clearing and settlement.

Transaction Reports

To correct a Transaction Report, the Transaction Report must be deleted and the corrected Transaction Report must be resubmitted to the Reporting Office by the party subject to the duty to report. The correction must be made at the latest by 10.00 pm (CET) on the fifth trading day following the submission of the report to be corrected.

17.13.2. Cancellation

Trade Reports

Trade Reports may be cancelled upon application by the parties involved in the Trade Report.

Trade Reports may be cancelled upon application by the parties involved in the Trade Report. In the case of incorrect Trade Reports (i.e. those which do not comply with Clause 2.4 in the Reporting Office Rules and in the Trading Rules Clause 16), those subject to the duty to report are obliged to request cancellation of the Trade Report.

The cancellation must be made by the following trading day (T+1) at the latest.

Central counterparty clearing (CCP) trades can be cancelled only on the trading day (T).

Transaction Reports

Incorrect **Transaction Reports** must be cancelled by those subject to the duty to report themselves.

Should the Reporting Office cancel a report upon application from those subject to the duty to report, this cancellation will be published.

17.13.3. Countertrade

A party subject to the duty to report may make a countertrade. When reporting the counter-trade, the ID of the original trade must be given, and the report must be marked with the "Special Price" Trade Type.

17.14. Registration and Reporting Tools

Those subject to the duty to report must be registered with the Reporting Office before they are able to submit reports. They will receive a registration number. Participants of SIX Swiss Exchange are deemed registered. Those subject to the duty to report must report any transactions required to be reported using the tools and technologies provided by the Reporting Office.

17.15. Settlement of Trade Reports

The trade report provides participants with the following three clearing and settlement options for the purpose of settling trades with other participants.

a. Automatic

The trade report is settled automatically in accordance with the clearing and settlement instructions on the exchange system (clearing via central counterparty (CCP) and settlement at the Central Securities Depository (CSD)).

Please note:

Trade reports may be submitted until 10.00 pm. The clearing day (processing via CCP) ends at 6.15 pm, so automatic settlement after 6.15 pm is not possible. If the "automatic" option is selected after 6.15 pm, the exchange system will initiate the next available settlement option "bilateral".

b. Bilateral (No CCP)

The trade report should not or cannot be processed by the CCP. The trade report is therefore automatically instructed by the CSD without the involvement of the CCP.

- The trade report is entered other than on the clearing day.
- Commission contained in the Delivery Report
- The security is not CCP-eligible
- Other than T+2

c. Manually

Clearing and settlement is initiated by the two participants involved in the Trade Report by manually entering instructions.

17.16. Publication Requirement (not relevant for the Trader Exam)

Directive 6: Market Information

17.16.1. Market Transparency

The need for transparency is served through publication of market information by SIX Exfeed Ltd, a subsidiary of SIX Swiss Exchange. The latest market price with the volume and time, the best bid and ask price with volume and market depth, the cumulative daily transaction volume on the stock exchange both on and off the order book, the status of the order book, trading times and any interventions by the Exchange are disseminated to external information providers (SIX Financial Information, Thomson Reuters, Bloomberg, etc.) via the Market Data Interfaces ((IMI = ITCH Market Data Interface (low latency) und SIX MDDX Multi-Dimensional Data fluX™ Interface (SIX MDDX)) of the exchange system, and separately through Swiss Market Feed (SMF). In addition to this trading data, registered traders and reporting agents also have access to the central order book as well as ongoing, real-time price and volume information regarding on-exchange, off-order-book trading (subject to the right to delay publication).

Further information is set out in [Directive 6: Market Information](#).

17.16.1.1. Use of Market Information transmitted on the SWXess Trading Platform

Market information (market and securities reference data) can be accessed and used by interested departments and individuals within the exchange participant. Information may be passed on within the organisation subject to a fee. Market information can be forwarded to branch offices. Market information may only be forwarded from the technical interface of the SWXess trading platform.

Market information may be disclosed to third parties in accordance with the SIX Exfeed Ltd Data Distribution Agreement as applicable from time to time. The exchange participant must ensure that the third party gives a contractual undertaking not to distribute any data received. Any agreements to the contrary between the exchange participant and SIX Exfeed Ltd take precedence over this rule.

If exchange participants avail themselves of the additional option to allow market information to be used within their organisation by parties other than registered traders, or of the option to disclose market information to external third parties, SIX Swiss Exchange or its affiliate SIX Exfeed Ltd will charge market data fees (exchange fees). Such fees apply to the provision of data and the use of the SWXess trading platform interfaces in accordance with the Trading Rules and applicable Directives.

Further
informatio
n:
- FMIA
- FinIO
- FMIO
- FMIO

17.16.2. Transparency created by the Publication Requirement

SIX Swiss Exchange has a statutory obligation to publish all information necessary for the transparency of securities trading. This publication obligation applies to price information and the volume of securities traded on exchange. The publication requirement is set out in detail in FMIA Article 39 ff, FinIO Art. 51 and FMIO Art 2 ff.

17.16.3. Published Data

- The last exchange price with volumes and time (continuous transmission)
- The best bid and ask prices with volumes (cumulative, continuous)
- The trading period and any intervention by the Exchange (e.g. suspension of trading in a security)
- The order book status (trading, pre-opening, stop trading, suspended, break, between auctions)
- Market depth

17.16.4. Method of Publication

There are no specific statutory provisions regarding the time and manner of publication. The participants of SIX Swiss Exchange receive information in real time through the trading system or through additional electronic feeds with the help of SIX Exfeed Ltd:

- Swiss Market Feed (SMF)
- Quote Market Feed (QMF)
- ITCH Market Data Interface (IMI)
- SIX MDDX Multi-Dimensional Data fluX™ (SIX MDDX)

Information vendors such as SIX Financial Information, Thomson Reuters and Bloomberg make this information available to the public based on these feeds.

17.17. Reporting GUI und Transaction Report in the Swiss Format (TFI)

For instructions on how to use the Reporting GUI, see the Help function.

Transaction Report in Swiss format (TFI) pursuant to FINMA Circular 2018/2 (Margin No. 27-30) and as stipulated in the technical specifications.

Sample question:

Is it necessary to report trades in equities as a Transaction Report within one minute?

Answer:

- a) false
- b) true

Answer: a)

Explanation: Trades in equities must be reported as a Trade Report within one minute and as a Transaction Report by no later than the close of trading on the following trading day.

18. Trade Types & Flags of SIX Swiss Exchange

Trade flags may be used on SIX Swiss to indicate specific order attributes and trade types for trade reports. These can be applied either automatically or manually.

18.1. Trade Type Flags

- a) **"Special Price"** specifies a report, the price of which differs from the market price at the time of entry (VWAP, portfolio trade, countertrade, Trade Report following an emergency situation, etc.).
- b) **"Deferred Publication"** specifies a report which is to be published by the Reporting Office after a certain delay.
- c) **"Off-Exchange"** specifies a report of a trade which is not subject to the provisions of the Trading Rules of SIX Swiss Exchange.
- d) **"Both Parties"** specifies a one-sided Trade Report which is submitted to the Reporting Office in the name of both of the parties involved in the trade.

18.2. Trade Type for identifying Special Pricing Methods

"Special Price" is set manually for trade reports where the price differs from the market price at the time of entry. In particular, this must be used in the following cases:

- **VWAP** trade executions
- **Portfolio Trades:** a portfolio trade is defined as the buying or selling of a basket of at least ten different securities with a total value of at least CHF 1 million that is concluded as a single transaction between an exchange participant and a client.
- **Aggregated Orders:** an aggregated order is a trade in a security comprising several individual client orders. An aggregated order may consist either of buy or sell orders (no netting).
- Countertrade
- **Trade Reports** following emergency situations

18.3. Trade Flags identifying other Properties

- **"InternalCross"** automatically indicates a trade for one and the same beneficial owner.
- **"Removed Liquidity"** indicates the transaction side that triggered the transaction in the order book.
- **"Added Liquidity"** indicates the transaction side that supplied liquidity to the order book.
- **"Auction"** indicates that a transaction was effected during an auction.
- **"Do not Publish"** indicates that a trade in an international bond will be published monthly on a cumulative basis, separated into market segments.

*The "Trading Guides" of SIX Swiss Exchange provide a complete list of all trade types and flags.

19. Clearing and Settlement

19.1. The Swiss Value Chain

The Swiss Value Chain is the grouping of electronic systems of SIX Swiss (trading), SIX x-clear Ltd (clearing), SIX Securities Services (settlement) and the Swiss National Bank (funds transfer). This provides very high processing speeds and high levels of efficiency.

The exchange transaction type applies only to transactions in securities traded on SIX Swiss Exchange. These transactions are transferrable and payable two bank business days after execution (T+2), i.e. delivery and payment of an exchange transaction are based on applicable standard practices.

Clearing for issues listed on SIX Swiss Exchange is available between 8.00 am and 6.15 pm CET. Consequently, clearing before 8.00 am and after 6.15 pm cannot be carried out through a central counterparty.

Cancellations carried out after the close of the clearing day can no longer be cleared through a central counterparty, but must be settled bilaterally between the parties involved. However, the trader is free to undertake settlement automatically or manually.

Settlement for issues listed on SIX Swiss Exchange is available between 6.00 am and 10.00 pm CET.

19.1.1. Trade

The tasks and functions performed by each financial market infrastructure component and the interactions between them can be illustrated using a practical example of an equity transaction, which has been executed, cleared and settled using the Swiss Value Chain. In our example we posit that Bank K wishes to purchase 1,000 registered shares of a Swiss blue chip, while

Trader V wishes to sell 1,000 units of the same stock. Each party indicates its interest by entering a buy or sell order in the electronic trading platform of SIX Swiss Exchange, where the shares are listed and can be traded. SIX Swiss Exchange collects the buy and sell orders of its exchange participants and executes these in accordance with its matching rules.

19.1.2. Clearing

Let us assume that matching takes place on Monday, 21 January 20xx in a CCP-eligible product (not all products qualify, [Link](#)). The moment the buy and sell orders are matched, the central counterparty (CCP), SIX x-clear Ltd, automatically steps between the two trading parties and becomes the seller to Bank K and the buyer from Trader V. This results in the following two contracts:

1. Trader V undertakes to deliver the 1,000 registered shares to SIX x-clear Ltd on the settlement date (Wednesday, 23 January 20xx); SIX x-clear Ltd undertakes in return to remit the amount of the transaction to Securities Trader V on the same date.
2. SIX x-clear Ltd undertakes to deliver 1,000 registered shares of the Swiss Blue Chip to Bank K on the settlement date (Wednesday, 23 January 20xx); Bank K in turn undertakes to remit the full amount to SIX x-clear Ltd on the same date.

As central counterparty, SIX x-clear Ltd guarantees the fulfilment of its obligations. As part of its risk management practices, SIX x-clear Ltd requires collateral in the form of margins and contributions to a default fund – a type of insurance pool – which can be used to cover any losses as needed. The margins and default fund contributions required of exchange participants will depend on the amount and volatility of their risk positions and on their credit rating.

19.1.3. Settlement/Payment

On the settlement date, 23 January 20xx), the above obligations are settled over the interface between the SIC payment system and SECOM securities settlement system of SIX Securities Services as follows:

1. SECOM checks whether Trader V has sufficient registered shares of the issue in question on its SIX Securities Services custody account; if so it blocks 1,000 units. Next SECOM sends instructions to SIC to settle the cash side of the transaction. Provided that SIX x-clear Ltd has sufficient funds with the SNB, the amount is transferred via SIC in favour of Trader V. SIC then confirms the successful settlement of the cash side to SECOM, whereupon the blocked 1,000 registered shares are transferred directly from Trader V's custody account to the SIX x-clear Ltd custody account.
2. SECOM checks whether SIX x-clear Ltd has sufficient registered shares in its SIX Securities Services custody account; if this is the case, it will block 1,000 units. At the same time, SECOM sends instructions to SIC to settle the cash side of the transaction. Provided that Bank K has sufficient funds with the SNB, the full amount is transferred via SIC in favour of SIX x-clear Ltd. SIC then confirms the successful settlement of the cash side to SECOM, whereupon the blocked 1,000 registered shares are transferred directly from the SIX x-clear Ltd custody account to Bank K's custody account.

19.1.4. Buy-In

In the exceptional case that the seller cannot deliver all of the shares sold on the settlement date, 23. January 20xx, a buy-in operation must be undertaken.

For CCP-eligible instruments settled through the SIX x-clear Ltd clearinghouse, buy-in is triggered 4 days after the settlement date (i.e. trade date +6 days).

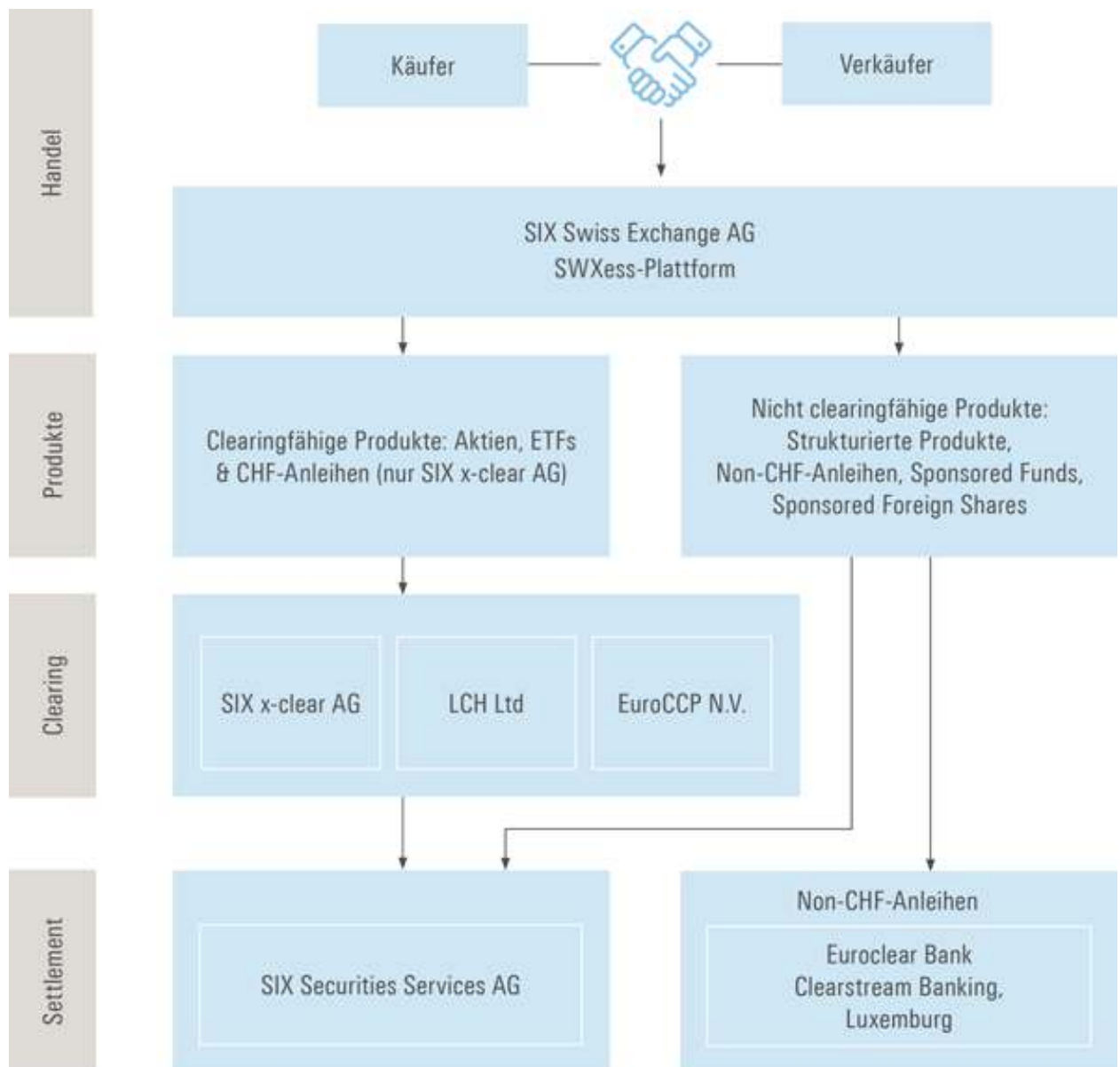


Figure: Swiss Value Chain

Source: https://www.six-group.com/exchanges/participants/clearing/clearing_settlement/infrastructure_de.html

20. Contact

20.1. SIX Swiss Exchange Member Education



Member Education
Helpdesk
T +41 58 399 30 99
education@six-group.com

20.2. Specific Helpdesks

Member Services provides support throughout the entire process of connecting to the exchange and offers guidance to trading participants and clearing and reporting members with regard to clearing and settlement and trader administration.



Member Services
Helpdesk
T +41 58 399 2473
member.services@six-group.com



Exchange Operations
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Technical Product Support (TPS) has offices in Zurich, Geneva and London to support you with all your **technical queries** - in various languages and on site at your office if required.

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21. Sources

[Trading Rules](#)

[Listing Rules](#)

[Reporting Office Rules](#)

[Directives](#)

22. Glossary

Term	Explanation
ASP	Application Service Provider
BTR	Bilateral Trading Platform
CLOB	Central Limit Order Book
DP	Delayed Publication
DM	Deferred Publication
ETFs	Exchange Traded Funds
ETPs	Exchange Traded Products
ETSFs	Exchange Traded Structured Funds
FINMA	Swiss Financial Market Supervisory Authority
FIX	Financial Information Exchange Protocol
FinIA	Federal Act on Financial Institutions
FinIO	Financial Institutions Ordinance
FMIA	Federal Act Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading
FMIO	Federal Ordinance on Financial Market Infrastructures and Market Conduct in Securities and Derivatives Trading
FTPS	FIX Transactions (Orders) per Second (interface: STI)
GUI	Graphical User Interface
IBL	Internet Based Listing
IMI	ITCH Market Data Interface
IOC order	Immediate-Or-Cancel Order
LR	Listing Rules
LO	Limit Order
QDM	Quote-Driven-Market
MMT	Market Model Typology
MO	Market Order
MPOB	Mid-Point Order Book
MR	Mistrade Reversal
OBM	On-Book Matcher
OTI	OUCH Trading Interface (OTI)
OPS	Orders per Second
OTPS	OUCH transactions (orders) per second (interface: OTI)
PBBO	Primary Best Bid Offer

PVM	Price Validation Market
PTP	Post-Trade Processor
QS	Quote System
QU	Quote
QPS	Quotes per Second (QTI interface)
QTI	Quote Trading Interface
RDI	Reference Data Interface
RT	Reported Trade
SA	Sponsored Access
SCAP	SIX Swiss Exchange Common Access Portal
SMF	Swiss Market Feed
SMIM	SMI Mid-Cap Segment
SMR	SWXess Maintenance Release
SSX	SIX Swiss Exchange
StGB	Swiss Penal Code
STI	Standard Trading Interface
SVE	Surveillance & Enforcement
SWX	Former Name of SIX Swiss Exchange
SWXess	SIX Swiss Exchange Trading Platform
TAL	Trading-At-Last
TC	Trade Confirmation
TDM	Trade Data Monitor
TOP	Theoretical Opening Price
TR	Trade Reversal
TRI	Transaction Report Interface
TRR	Trade Report
TTR	Trade and Transaction Reporting
VWAP	Volume Weighted Average Price
X-stream INET	NASDAQ OMX Trading Technology