

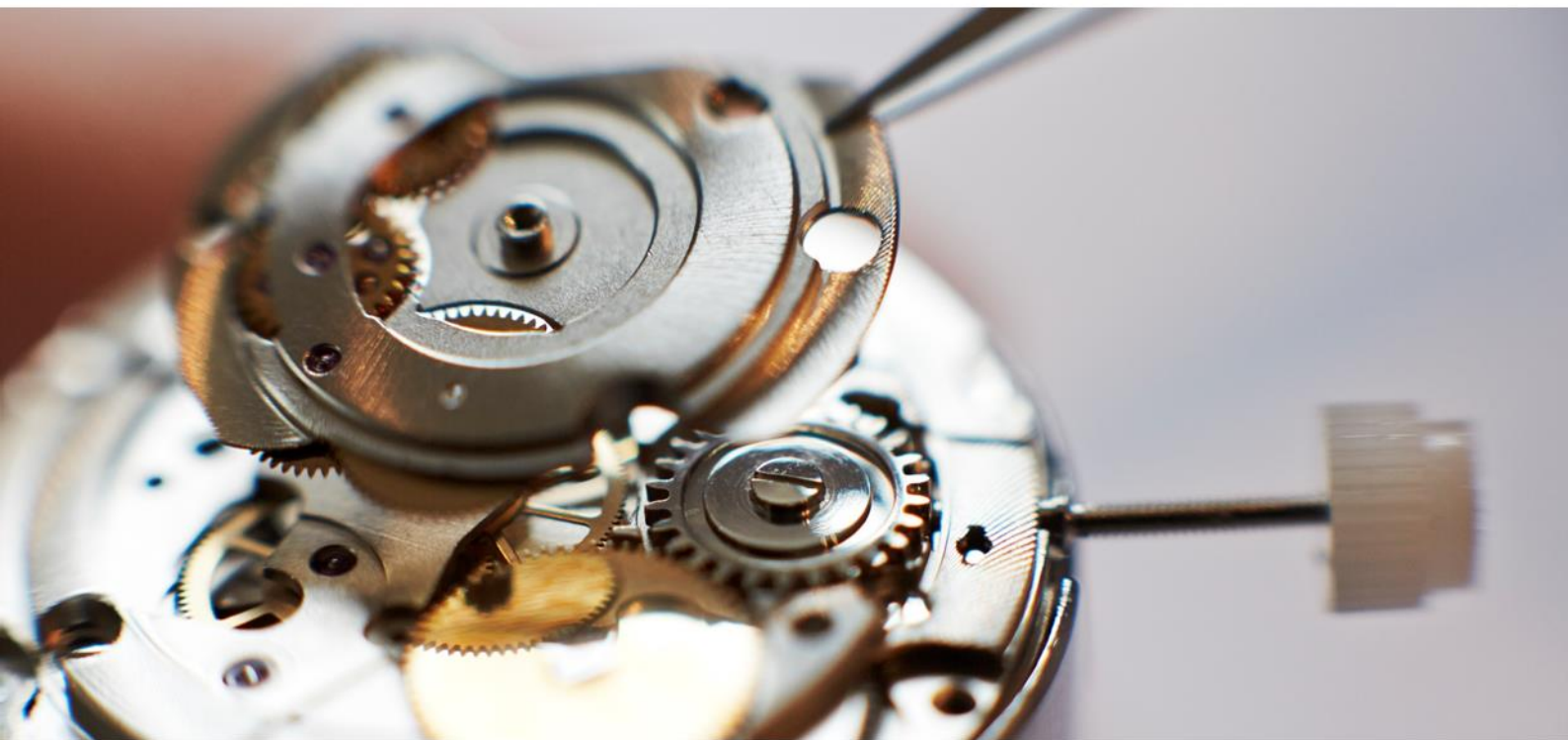


# Service Description SIX x-clear Ltd

**for Members on CLARA**

xcl-n-805

October 2019





# Service Description SIX x-clear Ltd for Members on CLARA

## Table of contents

<b>1.0</b>	<b>Introduction</b>	<b>4</b>
1.1	SIX x-clear Ltd	4
1.2	What is a CCP?	4
1.3	Connected trading platforms and CSDs	5
<b>2.0</b>	<b>Business model</b>	<b>5</b>
2.1	Products life cycle	5
2.2	Participants and their roles in settlement of Norwegian equities	6
2.3	Trading platform	7
2.3.1	Exchange traded instruments	7
2.3.2	Tailor made instruments	7
2.3.3	Securities Lending – bilateral	7
2.4	Trading platform members	8
2.5	Member model	8
2.6	Membership requirements	8
2.7	Account structure in the clearing system	8
2.8	Omnibus and individual client segregation	10
2.8.1	Individual client account segregation for x-clear client	11
<b>3.0</b>	<b>User interfaces</b>	<b>11</b>
3.1	Clearing Administration and Reporting Application	11
3.2	CLARA web and ISO 15022 messages	11
<b>4.0</b>	<b>Trade Processing</b>	<b>12</b>
4.1	Trade capture and management	12
4.1.1	Trade management	12
4.1.2	Allocation	12
4.1.3	Cancel allocation	13
4.1.4	Reverse allocation	13
4.1.5	Give up	13
4.1.6	Option exercise	14
<b>5.0</b>	<b>Settlement</b>	<b>15</b>
5.1	Settlement derivatives and securities lending	15
5.1.1	Option premium	16
5.1.2	Futures daily market cash settlement (M2M)	16
5.1.3	Forward expiration	16
5.1.4	Settlement based on option exercise	16
5.1.5	Settlement DvP derivatives	16
5.1.6	Interest settlement, securities lending	17
5.2	Settlement cash equity	17
5.2.1	Settlement of equity market instruments	17
5.2.2	Non-Standard Settlement	17



## Service Description SIX x-clear Ltd for Members on CLARA

5.2.3	Settlement netting of cash equity clearing transactions	17
5.2.4	Settlement participants cash equity	18
5.2.5	Generating settlement instructions	18
5.2.6	Matching of settlement instructions	19
5.2.7	Settlement	19
5.2.8	Failed delivery	19
<b>6.0</b>	<b>Risk management</b>	<b>20</b>
6.1	Introduction	20
6.2	Margin	20
6.2.1	Calculating the margin requirement	20
6.2.2	Daily margin requirement	21
6.2.3	Communication of margin requirements	21
6.2.4	Extraordinary margin requirements	21
6.3	Default fund	21
6.4	Interoperability and linked margin requirement	22
6.5	Collateral	22
6.5.1	Introduction	22
6.5.2	Eligible collateral	22
6.5.3	Cash collateral	23
6.5.4	Securities collateral	23
6.5.5	Release of collateral	23
6.6	Default	23
<b>7.0</b>	<b>Corporate Actions</b>	<b>23</b>
7.1	Derivatives	23
7.1.1	Forwards	24
7.1.2	Options	24
7.1.3	Stock futures	24
7.2	Cash equity	24
<b>8.0</b>	<b>Fees and penalties</b>	<b>25</b>
8.1	Derivatives	25
8.1.1	Fee	25
8.2	Cash equity	25
8.2.1	Penalties	26
8.2.2	Invoicing	26
<b>9.0</b>	<b>Appendix</b>	<b>26</b>
9.1	Account structure examples	26



## Service Description SIX x-clear Ltd for Members on CLARA

### 1.0 Introduction

#### 1.1 SIX x-clear Ltd

SIX x-clear Ltd operates as a central counterparty for equity market instruments, standardised financial derivatives, tailor-made derivatives and for securities lending products.

SIX x-clear Ltd has extensive experience from providing efficient multilateral clearing services for the securities market and its members. The clearing system of SIX x-clear Ltd is broadly set up in accordance with European market standards, however, also taking local Nordic market practice into consideration, additionally SIX x-clear Ltd focuses on providing services that gives the customer a wide range of choices to comply with the needs for flexibility of each member, as well as to provide easy to use and exhaustive reporting and messaging services based on the principles of straight-through-processing (STP). The clearing system provide for transaction netting, so as to reduce the transaction costs of the member.

SIX x-clear Ltd is a wholly-owned subsidiary of SIX Group. The company has a banking license under Swiss law and is thus regulated and supervised by the Swiss Financial Market Supervisory Authority (FINMA) and the Swiss National Bank (SNB).

#### 1.2 What is a CCP?

A central counterparty (CCP) takes on the role as the buyer versus the seller and the role as seller versus the buyer, hence replacing the original parties to the trading transaction. The counterparty risk is mitigated through daily collateralising of the exposures, using best-practice risk models, and setting high risk management standards. The primary functions of a CCP are therefore to:

- Eliminate the bilateral relationship between the original parties, and in doing so to remove each party's counterparty risk for correct settlement towards the other party from trade until final settlement of contract
- Provision of standardised contract specifications
- Daily Margin calculation and Collateral management
- Performing all settlements during the lifetime of the contract
- Simplify the settlement process, including the establishment of netting arrangements, and thereby reducing the volumes and costs associated with settlement
- Facilitate for post-trade anonymity



## Service Description SIX x-clear Ltd for Members on CLARA

Most European market places require the use of a CCP for the clearing of derivatives and equity market instruments.

### 1.3 Connected trading platforms and CSDs

For an overview of which markets SIX x-clear Ltd accepts trades from and which places of settlement are accepted, please refer to Form 002A, published at [www.six-group.com](http://www.six-group.com) > Exchange Services > Securities Services > Clearing > Member Information > Forms.

### 2.0 Business model

SIX x-clear Ltd manages clearing from trade registration to settlement. From the moment a trade is registered and accepted by SIX x-clear Ltd, SIX x-clear Ltd becomes the counterparty to the original buyer and seller. During the life time of the trade between trading and settlement SIX x-clear Ltd manage or facilitate trade management, position management, risk management, collateral management, delivery management, settlement calculation and participate in the settlement process.

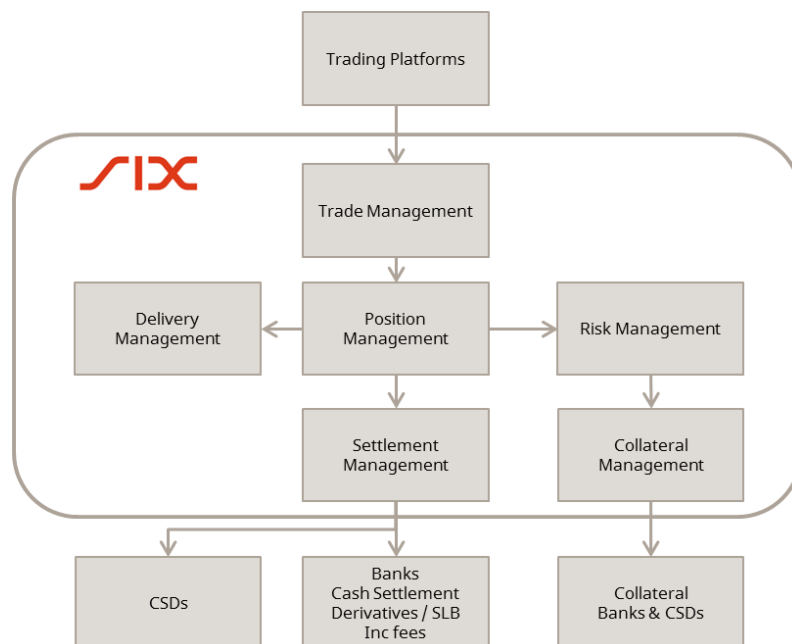


Figure 1 Business model

### 2.1 Products life cycle

The products cleared by SIX x-clear Ltd can be divided into three main groups with different characteristics from a clearing perspective dependent on the events during the contracts life cycle: derivatives, cash equities and securities lending contracts. Standardised derivative contracts have (when they are listed) specified contract terms. The contract terms of Tailor made derivatives are negotiated by the counterparties and reported to SIX x-clear Ltd for approval via Oslo Connect. Cash equity has a normal life



## Service Description SIX x-clear Ltd for Members on CLARA

cycle of two days from trade registration but failed deliveries could prolong this period. Securities lending contracts have a life cycle from loan registration until the borrower returns the loan.

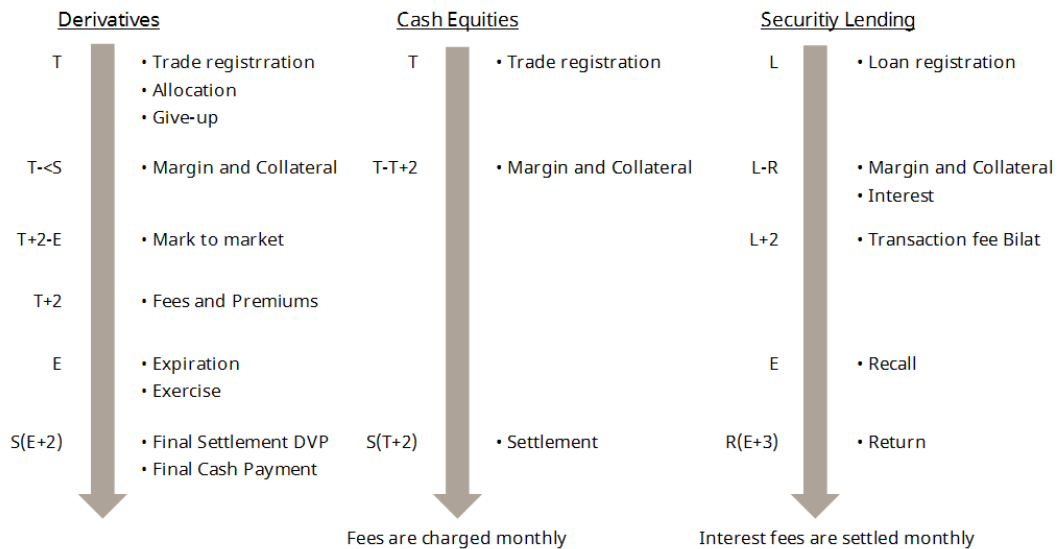


Figure 2 Products life cycle

### 2.2 Participants and their roles in settlement of Norwegian equities

SIX x-clear Ltd admits participants in the capacity of General Clearing Member (GCM) or Individual Clearing Member (ICM). A member of a market place that elects not to become a Member must clear its transactions through a GCM as a Non Clearing Member (NCM). The contractual party to the Non-Clearing Member (NCM) will not be SIX x-clear Ltd, but rather the GCM, which in turn is the contractual party to SIX x-clear Ltd.

Roles	Description
Trading Platforms	An Exchange or MTF, or a technical platform other than a an Exchange or MTF where the Matching of transactions, or if applicable, bilateral transactions takes place and in respect of which x-clear provides Clearing;
Trading Platform Member	A member of a Trading Platform or other Person approved by a Trading Platform who trades on a Trading Platform market; Trading platform member that is not a Member must enter into an agreement with a GCM.
Central counterparty (CCP)	x-clear, a Co-CCP (if any) or other Clearing Organization contracted to act as central counterparty by a trading platform and thereby to be interposed as the counterparty to its members on either or both the "buy" and "sell" legs of a Trading Platform Transaction.
Clearing member	An entity that has entered into a Membership Agreement with SIX x-clear Ltd as a Individual Clearing Member (ICM) or a General Clearing Member (GCM).





## Service Description SIX x-clear Ltd for Members on CLARA

Roles	Description
Settlement Participant	Participant in a CSD system.
CSD	Central Securities Depository (CSD).

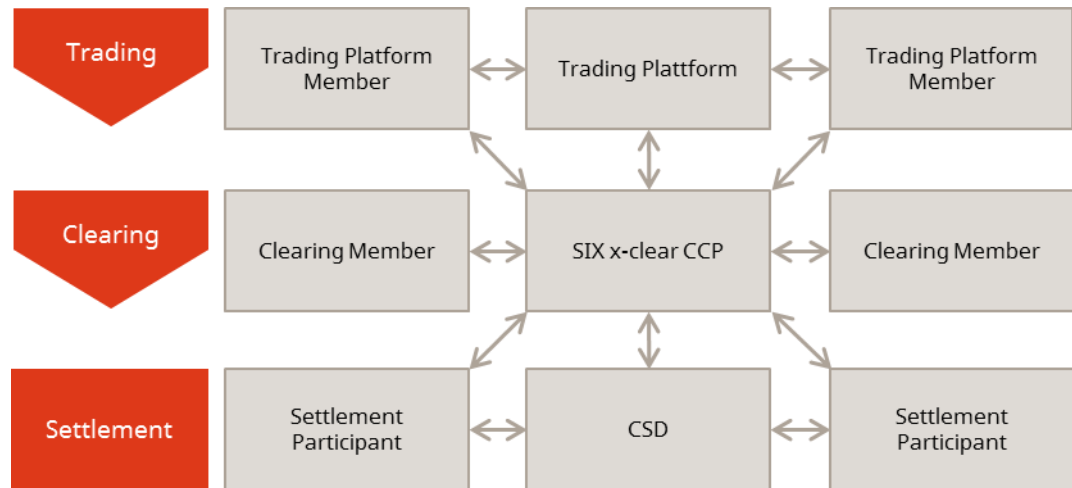


Figure 3 Participants and roles

### 2.3 Trading platform

#### 2.3.1 Exchange traded instruments

SIX x-clear Ltd offers clearing of trades that are matched in the trading systems of connected trading platforms.

The clearing service extends to all equities, equity derivatives, derivatives on indices, equity certificates and exchange traded funds eligible for clearing.

#### 2.3.2 Tailor made instruments

SIX x-clear Ltd offers clearing of Tailor made derivatives trades that are matched in the trading system of Oslo Connect. According to the trading rules of Oslo Connect the trading platform will send the matched trades to SIX x-clear Ltd. Clearing of Tailor made derivatives requires approval from SIX x-clear Ltd.

#### 2.3.3 Securities Lending – bilateral

Participants wishing to participate in the bilateral securities lending segment must set up a VPS account in order to register bilateral loans (see VPS user guides for further information). Bilateral securities lending contracts are submitted to SIX x-clear Ltd. If SIX x-clear Ltd approves the loan it will be registered in the clearing system. SIX x-clear Ltd offers clearing services of bilateral securities lending contracts including interest calculations and handling of delivery and redelivery of the securities.



## Service Description SIX x-clear Ltd for Members on CLARA

### 2.4 Trading platform members

One of the membership requirements of connected trading platforms is that the trading members shall arrange for their trades to be cleared. Clearing arrangement may be established by the trading member in the capacity of also being an Individual Clearing Member (ICM) or by entering into an agreement with a General Clearing Member (GCM). In the latter case the trading member's trades will be cleared through the GCM. In this case, the GCM is responsible to SIX x-clear Ltd for the trades as if they were the GCM's own transactions.

### 2.5 Member model

Institutions that satisfy the membership criteria of SIX x-clear Ltd may choose to be either:

- Individual Clearing Member (ICM) or
- General Clearing Member (GCM)

All members shall enter into a membership agreement with SIX x-clear Ltd.

As an ICM, the member is responsible to SIX x-clear Ltd for clearing of the trades the member has carried out in the trading platform on its own account and/or on account of its customers.

A GCM may in addition take on the responsibility for clearing of trades carried out by trading platform members that are not members. The latter mentioned parties are referred to as Non Clearing Members ("NCM"). There is no legal agreement or relationship between an NCM and SIX x-clear Ltd.

Member type	Trading Member	Member	Description
ICM	Yes	Yes	Clears own business
GCM	Yes or no (not a prerequisite for a GCM)	Yes	Clears own business and/or on behalf of other Trading Members
NCM	Yes	No	Clears through GCM

### 2.6 Membership requirements

Please see General Terms and Conditions of Business SIX x-clear Ltd for membership requirements.

### 2.7 Account structure in the clearing system

Each member is furnished with a standard account structure in the clearing system. The standard account structure comprises five different account types: trading account, clearing account, margin account, collateral account and margin service account, the latter on optional basis.





## Service Description SIX x-clear Ltd for Members on CLARA

Trading accounts are linked to the member ID in the trading systems of the different trading platforms. All transactions, including gross clearing transactions (trades), net clearing transactions (settlement transactions) and clearing positions due to such transactions are registered in the clearing account. The margin requirements due to open clearing positions registered in clearing accounts are netted and then calculated on the associated margin account. A clearing account may be linked only to one margin account. A margin account may however be linked to several clearing accounts. The latter enable netting of clearing positions thereby reducing margin requirements for several clearing accounts. The clearing account structure allows trades to be registered in a designated clearing account and allow allocation of derivatives trades to a sub account.

There are three types of main clearing accounts:

1. Market Maker - for market maker holdings
2. Client - for client holdings
3. House - for member holdings

A main clearing account may be target for trades from one or more trading platforms.

For cash equity trades it is possible to just have one clearing account pr CSD (place of settlement) for all trades resulting in cross-netting between trading platforms quoting the same ISIN. If cross-netting is not desirable for trades from one or more trading platforms, separate clearing accounts can be established.

For derivatives a sub clearing account may be target for allocation of holdings from main clearing accounts within the same account type. All trades should be marked as one of the above account types. Trades will remain in the main clearing accounts if not cancelled or allocated to another clearing account.



## Service Description SIX x-clear Ltd for Members on CLARA

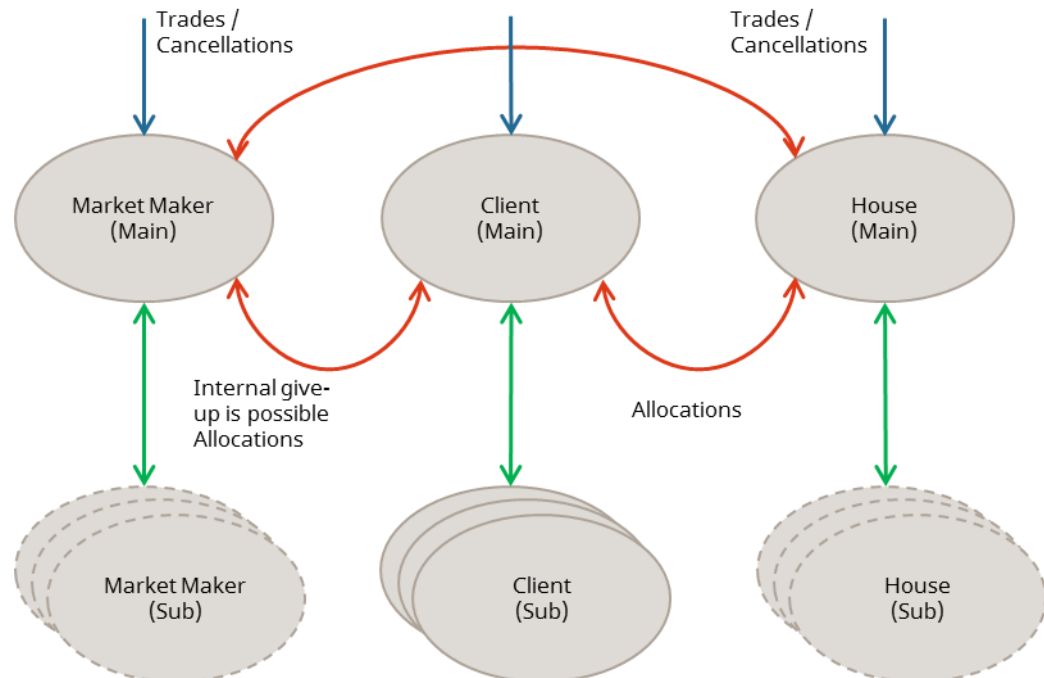


Figure 4 Account types

The collateral accounts mirrors the member's collateral held by collateral banks, VPS or Clearstream to meet margin requirement on the associated margin account. A collateral account may be linked to only one margin account. A margin account may however be linked to several collateral accounts.

The margin service account is an account used merely for information purposes and facilitates margin calculations on clearing accounts specified by the member when the member's general account setup comprises several clearing accounts linked to the same margin account.

Members may define their own account structure subject to the overall possibilities and restrictions imposed by the clearing system and the GTCB. This includes the possibility to elect the number of accounts and arranging links between the accounts in such a way that trading, settlement and margin requirements are netted and reported as appropriate for the member's business model.

### 2.8 Omnibus and individual client segregation

SIX x-clear Ltd will enable NCMs to decide on the degree of protection they require in relation to the risk of default by the member. The NCM accounts shall be insulated from losses on the member accounts and netting between segregated accounts shall be prevented. NCMs will therefore be permitted to choose between the following three categories in the account structure provided by the member:

- a. Omnibus client segregation (OCS): All NCM's of a GCM will be margined together.



## Service Description SIX x-clear Ltd for Members on CLARA

- b. Mini omnibus client account segregation (Mini OCS): Two or more NCM's will be margined together.
- c. Individual client account segregation (ICS): An NCM will be margined by itself and not together with any other NCM'S.

### 2.8.1 **Individual client account segregation for x-clear client**

x-clear Client: The Clearing Administrators positions and collateral are segregated from the positions of its x-clear Clients. In addition, the positions and collateral of the x-clear Client is segregated from other clients. The account structure for the x-clear Client model allows direct holding of individually segregated Clearing and Collateral accounts by the x-clear Client.

SIX x-clear Ltd has established procedures to transfer x-clear Clients to a new member in the event of a default by the member the x-clear Client use ("porting process"). If the CCP does not find another member within a specified time frame willing to accept the x-clear Clients from a defaulting member, the CCP will apply default procedures to these x-clear Clients.

Omnibus clients may, as far as such transfer of assets and positions is not prohibited in accordance with mandatory law, request SIX x-clear Ltd to trigger the procedure to transfer of omnibus clients assets and positions held by the defaulting Member for the account of the omnibus clients to another member designated by all of the omnibus clients.

## 3.0 **User interfaces**

### 3.1 **Clearing Administration and Reporting Application**

SIX x-clear Ltd has developed and operates the Clearing Administration and Reporting Application (CLARA). CLARA can be accessed via standardized interfaces. Members and Non Clearing Members are allowed access according to the license agreement.

### 3.2 **CLARA web and ISO 15022 messages**

CLARA comprises an online web application and a standard interface for ISO 15022 messages.

The application provides all relevant clearing information on real time basis for the purpose of accessing information about and managing clearing transactions such as performing trade allocation, give up and exercise. Information about daily margin requirements, settlement information, default fund contributions and collateral is also provided for in the application. The application includes functionality for downloading the clearing information on various formats supporting members internal procedures for reconciliation and reporting.



## Service Description SIX x-clear Ltd for Members on CLARA

The web application is accessible via website [www.six-group.com](http://www.six-group.com) > Exchange Services > Securities Services. Log on to the web application will require username, password and a token.

This will be provided by SIX x-clear Ltd upon request after signing the license agreement. A system guide for the application is available at the web site [www.six-group.com](http://www.six-group.com) > Exchange Services > Securities Services.

In addition to the web application SIX x-clear Ltd provide general clearing information to its members via standardized messages based on the ISO 15022 format (MT-messages). The service allows members to subscribe to one or several of the messages provided. Separate functional interface specification documents describing the MT messages are available at the website [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing: CLARA External interface for Equities and CLARA External interface for derivatives.

MT-messages will be distributed via dedicated communication channels making use of Message Queuing ("MQ") or via SWIFT. Members communicating via MQ must setup separate local message queues for communication with SIX x-clear Ltd. Members using SWIFT must be registered and approved to communicate within SIX x-clear Ltd Closed User Group ("CUG"). Further information on how to setup communication towards SIX x-clear Ltd will be provided upon request, see the functional interface specifications document at the web site [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing.

### **4.0 Trade Processing**

#### **4.1 Trade capture and management**

All trades that are matched in the trading systems and eligible for clearing will be submitted by the trading platform in real-time to SIX x-clear Ltd's clearing system CLARA. The trading platform will also notify SIX x-clear Ltd of any corrections or cancellations in accordance with its rules.

Bilateral securities lending trades and Tailor made derivatives trades are subject to approval by SIX x-clear Ltd before accepted for clearing and submitted to the clearing system.

##### **4.1.1 Trade management**

Allocations, transfers, give-up, exercise etc. are performed in the clearing system. If allowed by GCM, an NCM can be granted access to CLARA.

##### **4.1.2 Allocation**

If a valid sub clearing account is added to the order in the trading system, the trade will automatically be allocated (via a main clearing account) to this account. In case the sub



## Service Description SIX x-clear Ltd for Members on CLARA

clearing account does not exist or is incorrect, the trade will remain on the main clearing account. Cancellation of trades where allocation info is included will result in an automatic cancellation of the allocation.

Allocations are allowed from main clearing account to account of the same account type as the main clearing account (within a member or NCM). Allocation of a (long/short) position requires that a (long/short) position exists on the main clearing account.

An allocation is based on an available position and can hence be part of a trade, the full trade or across trades. This means that a position (trades) can be allocated to the volume and price decided by the member. The clearing system supports allocation based on one or more trades and calculate average price when multiple trades are allocated. Any price differences between the original trades and the allocation will be a "to be settled" element on the main clearing account.

Trades can be allocated with up to 4 decimals in price but the amount must be rounded to 2 decimals. Trades can be allocated on trade date or any later date. Trade references and internal references can be entered in the allocation message.

A member can through CLARA or an MT message request a list of their trading platform Transactions or holdings on a specified account for the current date. Based on the request the details of holdings and transactions will be provided to the member. This will enable the member to reconcile holdings or transactions appropriately.

Allocations between account types (Market Maker, Client, House) will only be allowed on main clearing account level and as "internal give up", see chapter 4.1.5 *Give up*.

### 4.1.3 **Cancel allocation**

Intraday, an allocation may be cancelled. The short/long side will be closed on the originally receiving account and opened on the original main clearing account. The original allocation and the cancellation is available in the clearing system.

### 4.1.4 **Reverse allocation**

For cancelling an allocation after the allocation date a reverse transaction will be used. The reverse transaction and the reversed allocation will be available in the clearing system

### 4.1.5 **Give up**

A balance check for position (long/short) is only performed when the give up is accepted. This means that it is possible to enter a give-up transaction without having sufficient holdings. As a result, a give up may fail on acceptance if the give up member no longer has the required position.



## Service Description SIX x-clear Ltd for Members on CLARA

A give up will remain in the system as a pending transaction until either accepted by the receiving member, cancelled by the member entering the give up, the instrument is expired or cancelled by the clearing house subject to corporate action.

A pending give up transaction will “reserve” the quantity and prevent any allocation of the holdings. The reserved quantity will still be part of the exercise/assign holdings, and a give up can then later be rejected on acceptance due to insufficient holdings.

Give up is only allowed from/to main clearing accounts of type client. Fee will be calculated and credited on the give up account and new fee calculated and debited on the take up account.

The clearing system supports “internal give up” between account types (Market Maker, Client, House) within a member or NCM. This transaction will have similar functionality as an allocation, but fee calculation will be as for give up i.e. fee is credited on from account and new fee calculated on receiving account.

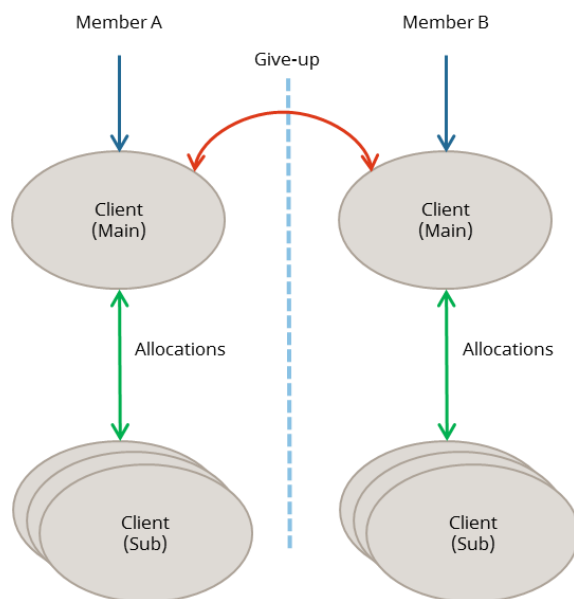


Figure 6 Allocation and give up

### 4.1.6 Option exercise

Exercise request(s) can be entered into the clearing system on relevant instruments. On non-expiration days SIX x-clear Ltd will perform exercise on valid exercise requests. On the expiration day for option contracts SIX x-clear Ltd is performing general exercise of options that are in the money. Members can deny participating in general exercise. The deny instruction is registered in CLARA. The member may request exercise of options that are not automatically exercised. Multiple exercise requests per instrument/account are accumulated. An exercise/deny request may be cancelled by the member. There is no balance check when the exercise request is entered.





# Service Description SIX x-clear Ltd for Members on CLARA

## 5.0 Settlement

### 5.1 Settlement derivatives and securities lending

Cash settlement for derivatives and securities lending includes mark to market, option premium, trading and clearing fees, forward profit/loss, cash settlement on exercised options and interest on securities loan. Calculation is done on clearing account level and is available through the clearing system. The aggregated settlement amount per NCM and x-clear Client is also available in CLARA. All cash transfers will be performed on NOK cash accounts in the collateral and settlement banks used by SIX x-clear Ltd. Norges Bank is the concentration bank for derivatives and securities lending and carries out the clearing between the collateral and settlement banks in accordance with the cash settlement instructions produced by SIX x-clear Ltd, thus achieving settlement in Central Bank money. Thereafter SIX x-clear Ltd will send the necessary cash settlement transactions to the Collateral and Settlement banks (Danske Bank and DNB) for postings on the members, NCM's and x-clear clients' accounts.

Daily mark to market cash settlement for futures (M2M) is settled on the x-clear Client's cash collateral account. Other cash elements, such as interest on securities lending, fees, premium and cash settlements on expiration are settled on the member's cash collateral account only.

Each member is required to post cash to meet their settlement obligations for today and tomorrow using a designated account at the collateral and settlement bank. Failure to meet the requirement shall be deemed to be a material default. Withdrawal of excessive collateral amount will be handled through the collateral release process.

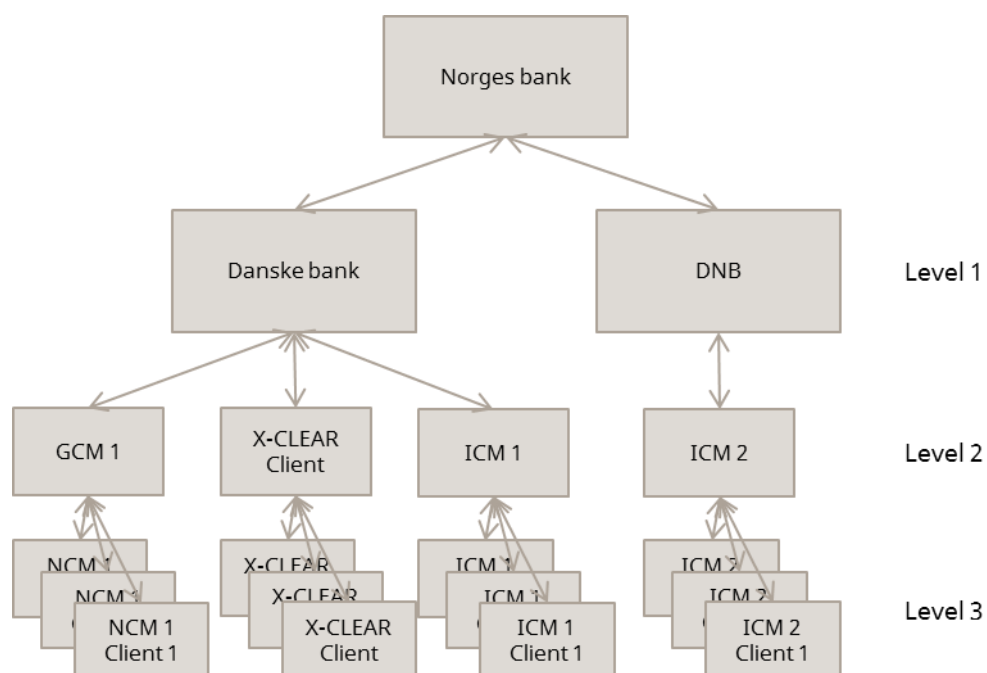


Figure 7 Derivatives Cash settlement model



## Service Description SIX x-clear Ltd for Members on CLARA

- Cash transfers is performed on members and x-clear clients cash account by SIX x-clear Ltd
- SIX x-clear Ltd is providing information via CLARA web or MT messages for bookings to clients (level 3).
- All members and x-clear Clients must have a NOK cash account for settlement

### 5.1.1 **Option premium**

The option buyer shall pay the agreed option premium to SIX x-clear Ltd and SIX x-clear Ltd shall pay this to the option seller. The net option premium amount is calculated each day and cash settled T+2.

### 5.1.2 **Futures daily market cash settlement (M2M)**

Mark-to-market (M2M) is calculated end-of-day using the fixing price calculated by Oslo Børs. The change in value from last calculation including any buy/sell transactions entered today. SIX x-clear Ltd will collect any negative amount from the members and x-clear clients and pay out any positive value. Settlement date will be T+2.

### 5.1.3 **Forward expiration**

Forward clearing positions are reported on net basis. Settlement of both cash and securities are reported on instrument net level. Delivery transactions are created using the underlying fixing price. Any P/L are cash settled on T+2.

### 5.1.4 **Settlement based on option exercise**

At expiration, or in the case of American options at exercise, of physically settled derivatives SIX x-clear Ltd will assign delivery/receive to participants and create settlement transactions. For cash settled derivatives, a cash settlement amount will be calculated. The issuer of a call option shall pay SIX x-clear Ltd any positive difference between the fixing value and the exercise price. SIX x-clear Ltd shall pay the holder of the call option. The issuer of a put option shall pay SIX x-clear Ltd any positive difference between the exercise price and the closing price. SIX x-clear Ltd shall pay the put option holder.

### 5.1.5 **Settlement DvP derivatives**

Net settlement between members or NCMs due to derivative instruments that generates a physical delivery will be settled through delivery versus payment (DvP) in VPS as for equities, ref 5.2 *Settlement cash equity*. The securities settlement transactions will be cleared by SIX x-clear Ltd. The member can decide whether they wish one settlement transaction per strike or if they wish them to be netted per underlying for settlement in VPS. A separate clearing account will be used so that these transactions are not mixed with equities transactions.



## Service Description SIX x-clear Ltd for Members on CLARA

### 5.1.6 **Interest settlement, securities lending**

The borrower shall pay to SIX x-clear Ltd the accumulated loan interest for the borrowing. The interest shall be calculated for each day commenced during the loan period.

SIX x-clear Ltd shall pay interest to the lender. Settled monthly on the first business day of the new month.

### 5.2 **Settlement cash equity**

#### 5.2.1 **Settlement of equity market instruments**

The CSD carries out settlement both in terms of delivery of financial instruments (securities settlement) and payments (cash settlement). Securities settlement is registered on the settlement participant's account with the CSD.

All settlement transactions carried out between SIX x-clear Ltd and its counterparties are settled in the CSD as "delivery versus payment" (DvP) or "receive versus payment" (RvP) transactions.

#### 5.2.2 **Non-Standard Settlement**

Trading participants executing bilateral pre-negotiated trades on-exchange can indicate an alternative settlement currency to the traded one. If the standard CSD of the security does not support the alternative settlement currency, trading participants can request settlement to take place at an ICSD.

The non-standard settlement currencies and/or settlement places for each security and market are subject to the determination of the relevant trading venue. Members will have to refer to the specifications of the trading venue for submitting non-standard settlements.

#### 5.2.3 **Settlement netting of cash equity clearing transactions**

SIX x-clear Ltd aggregate and net all gross clearing transactions registered on a clearing account during a clearing day and creates one net clearing transaction per ISIN, currency and settlement date on the respective clearing account.

If the netting process results in delivery or receipt of both cash and securities, only cash or securities or neither cash nor securities ("strange net"), SIX x-clear Ltd will instead aggregate and net buy and sell gross clearing transactions separately and create two net clearing transactions, one DvP and one RvP transaction ("Cclean net"). In the figure below scenario 1 and 2 are clean net and scenario 3-9 strange net.



## Service Description SIX x-clear Ltd for Members on CLARA

	Stock	Cash
1. Receive stock versus cash payment	+	-
2. Deliver stock versus cash payment	-	+
3. Receive stock without cash payment	+	0
4. Deliver stock without cash payment	-	0
5. Receive stock with cash payment	+	+
6. Deliver stock with cash payment	-	-
7. Receive cash payment but no stock	0	+
8. Deliver cash payment but no stock	0	-
9. No delivery or payment	0	0

Figure 8 Clean and strange nets

### 5.2.4 Settlement participants cash equity

A settlement participant is a party that has entered into an agreement with the CSD to participate in the securities settlement system in order to settle trades carried out on its own account and/or trades carried out by other parties. SIX x-clear Ltd is a direct settlement participant in the CSD or it settles through the omnibus account of SIX x-clear Ltd.

A member may choose to be a settlement participant in the CSD itself, or arrange to have its clearing transactions settled through a third party (settlement agent). The settlement agent must sign and provide a mandate to SIX x-clear Ltd in respect of the settlements it will carry out on behalf of a member, authorising SIX x-clear Ltd to effect cancellations of settlement transactions on its behalf in VPS.

### 5.2.5 Generating settlement instructions

The net clearing transactions created per clearing day, will be submitted by SIX x-clear Ltd to the CSD at the end of each clearing day.

If buy and sell gross clearing transactions are netted separately as a result of a strange net and the netting procedure thus results in two settlement instructions for the same member in the same ISIN on the same settlement day, SIX x-clear Ltd will link these settlement instructions. Linking the instructions means that the delivery of securities required by the sales transaction is conditional upon that the member receives the same securities from the delivery being part of the buying transaction. This is a functionality only offered for settlement in VPS.



## Service Description SIX x-clear Ltd for Members on CLARA

### 5.2.6 **Matching of settlement instructions**

Members of SIX x-clear Ltd have the following three options on how to create and match settlement instructions:

- SIX x-clear Ltd submits matched settlement instructions on behalf of the member on the basis of a registration mandate granted by the member (or the member's settlement agent if applicable). This is a functionality only offered for settlement in VPS; or
- SIX x-clear Ltd may generate settlement instructions on behalf of the member and sends them to the member for further amendments and distribution to VPO.
- The member will, either acting on its own behalf or through a settlement agent, submit its own settlement instructions and thereby match the settlement instructions that SIX x-clear Ltd submits to VPO as its counterparty.

Members that elect to submit settlement instructions themselves must register these instructions within 12:00 CET on the first business day subsequent to the trading day (T+1) in the respective CSDs.

### 5.2.7 **Settlement**

Settlement take place in the different CSDs, normally on the Intended Settlement Date (ISD). Failure to settle within the ISD will be considered a settlement failure.

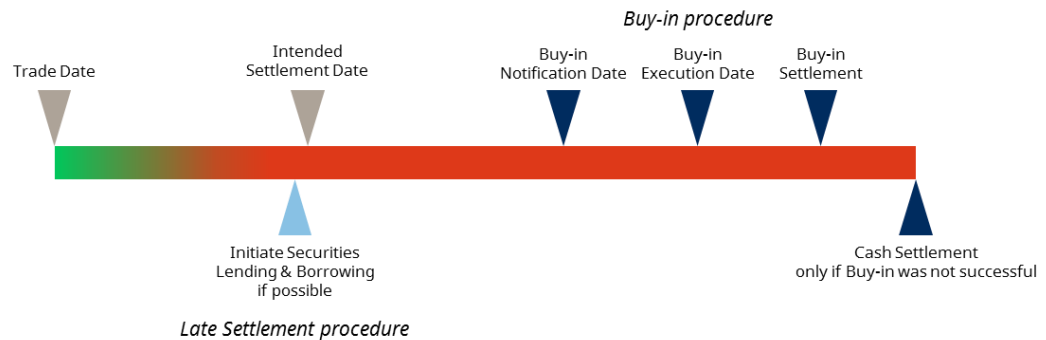
### 5.2.8 **Failed delivery**

Settlement shall at the outset take place as originally agreed with the member. CCP clearing, however, presupposes that the CCP receives the securities from the delivering member in order to perform delivery of the securities to the receiving member. Consequently should the delivering member fail to deliver, the CCP will at the outset fail to deliver towards the receiving member.

If the seller has not delivered the securities on the Intended Settlement Date (ISD), a buy-in process will be started after a certain market-specific period of time (ISD+4). For non-delivery of instruments, x-clear, as the formal counterparty to the buyer, will acquire the missing securities in the market and pass on the costs incurred to the seller that has failed to fulfill the transaction. The aim of performing a buy-in process is to ensure liquidity in the market and to fulfill agreed trades in a reasonable timeframe.



## Service Description SIX x-clear Ltd for Members on CLARA



For more detailed information, please see Rules and Regulations SIX x-clear Ltd Norwegian branch – Late settlement and Buy-in Rules.

### 6.0 Risk management

#### 6.1 Introduction

SIX x-clear Ltd provides robust risk management in order to secure continuity on the cleared market places and in order to perform its obligations towards non-defaulting members in the event of a default. SIX x-clear Ltd has set up a risk model with several layers to mitigate the risk of being a central counterparty. Members and x-clear Clients are required to post collateral to SIX x-clear Ltd for the estimated risk based on the daily activity (margin). Members are requested to contribute to the default fund.

#### 6.2 Margin

##### 6.2.1 Calculating the margin requirement

SIX x-clear Ltd will require its members to transfer or pledge collateral to meet their margin requirement. Margins are calculated to cover current and potential exposures on all cleared (open) positions.

Margin requirements are calculated on the basis of a member's aggregate clearing positions, from both cash equity and derivatives markets, on its margin accounts and applicable collateral value in the form of the equity market instruments approved as collateral from the corresponding collateral accounts.

Margin is calculated using Monte Carlo VaR, with a confidence level of 99 pct., based on margin prices on all underlying instruments and risk parameters defined by SIX x-clear Ltd. The margin takes into consideration all open and unsettled positions.

The margin methodology, including models to determine margin rates, volatilities, correlations, risk free rate(s) is subject to regular reviews. The margin methodology document is available on the website [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing.





## Service Description SIX x-clear Ltd for Members on CLARA

The margin calculations are carried out in accordance with a member's account structure (see 2.7 *Account structure in the clearing system* for details). The member's margin requirement is calculated based on the aggregate values from the margin accounts defined by the member, albeit where positive margins on x-clear Client and NCM margin accounts are treated as zero.

Margin is calculated continuously during a clearing day, and members have access to the information related to the margin calculations as well as collateral values via the clearing system.

### 6.2.2 **Daily margin requirement**

The first margin calculation is performed in the morning (ca. 07:00 CET), and is the margin requirement (if negative), which members must meet by posting collateral to SIX x-clear Ltd. Collateral is posted either by transfer (cash) or pledge (financial instruments) to SIX x-clear Ltd. The deadline for meeting the margin requirement is 11:00 CET. Failure to meet a margin requirement within the deadline set by SIX x-clear Ltd is considered a material default in accordance with the Clearing terms, section 10.1 *Daily Margin call*.

Net settlement transactions are margined on the member's margin account until it is settled in the CSD. M2M settlements, premiums, interest on bilateral loans and cash settlements on expiration are margined on the x-clear Client's account until settlement.

SIX x-clear Ltd requires that all cash payments (to be paid by the member and its x-clear Clients) the existing day and the next clearing day are met in full. SIX x-clear Ltd requires that cash corresponding to the calculated settlement amounts for today and tomorrow are transferred as a minimum.

### 6.2.3 **Communication of margin requirements**

Margin calls will be available on the CLARA web application. Members may also subscribe to MT messages.

### 6.2.4 **Extraordinary margin requirements**

Extraordinary margin requirements are margin requirements issued after the clearing day's regular margin requirement. Upon an extraordinary margin requirement the member will immediately be contacted by SIX x-clear Ltd via telephone and email. Deadlines for extraordinary margin requirements are typically one hour after issuance and failure to meet the requirement is considered a material default in accordance with the Clearing terms, section 10.2 *Extraordinary Margin call*.

## 6.3 **Default fund**

SIX x-clear Ltd operates a common default fund for the cash equities, derivatives and loan segments. However, the default fund is organized in such a way that contributions



## Service Description SIX x-clear Ltd for Members on CLARA

from members that only operate in the cash equities segment will to a high degree be protected in relation to members that have exposure to derivatives and/or loan clearing and vice versa. Contributions to the fund are separated from the collateral provided to meet the daily margin requirement, and contributions can currently be provided in the form of cash deposits or eligible financial instruments.

### 6.4 **Interoperability and linked margin requirement**

SIX x-clear Ltd has a clearing co-operation agreement for the derivatives segment and a clearing link for equities with LCH.Clearnet Ltd. ("LCH").

Member participating in a product segment which is subject to an interoperable link or clearing co-operation is required to post additional margin as part of their daily margin requirement, enabling SIX x-clear Ltd to meet its margin requirement under a link or clearing co-operation agreement.

### 6.5 **Collateral**

#### 6.5.1 **Introduction**

Members shall provide collateral to meet their margin requirement and default fund contribution. Cash collateral shall be transferred to designated collateral accounts owned by SIX x-clear Ltd, or subject to other mechanism for securing collateral acceptable to SIX x-clear Ltd. Collateral in the form of financial instruments shall be pledged to SIX x-clear Ltd.

#### 6.5.2 **Eligible collateral**

SIX x-clear Ltd accepts collateral, in accordance with the list or criteria for eligible instruments published in the clearing system. The following collateral types are accepted as collateral:

- Financial instruments including interest rate instruments and equity market instruments held on a securities collateral account, in accordance with the list of eligible collateral, published on the website [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing.
- Cash held on a cash collateral account. Accepted currencies: NOK, EUR, SEK, DKK, GBP, CHF and USD.

Collateral to satisfy the default fund contribution is limited to interest rate instruments and cash. The collateral value is calculated as the market value for each collateral object, with the deduction of a "haircut". Collateral value of an equity market instrument approved for clearing is included in the margin calculation.



## Service Description SIX x-clear Ltd for Members on CLARA

### 6.5.3 **Cash collateral**

Cash collateral shall be transferred to designated cash accounts in collateral banks in the name of SIX x-clear Ltd by way of transfer of title. The transfer of title model entails that legal title to cash collateral is transferred from the member to SIX x-clear Ltd. SIX x-clear Ltd will in this model become the owner of the cash.

### 6.5.4 **Securities collateral**

Securities collateral should be transferred to a securities account in accepted institutions pledged in favor of SIX x-clear Ltd. SIX x-clear Ltd will accept the following depository and custodian institutions for holding of collateral:

- VPS for financial instruments registered on a VPS account pledged in favor of SIX x-clear Ltd. SIX x-clear Ltd shall have a registered right to dispose of the account.
- Clearstream for financial instruments registered on a Clearstream-account pledged in favor of SIX x-clear Ltd. SIX x-clear Ltd shall have a registered right to dispose of the account.

SIX x-clear Ltd uses DNB Bank ASA and Danske Bank AS as collateral and settlement banks. SIX x-clear Ltd pays an interest on funds transferred from the members.

### 6.5.5 **Release of collateral**

Members shall provide instructions to SIX x-clear Ltd for the release of excess collateral. Such instruction shall be made to SIX x-clear Ltd in a standard form available on the website [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing. Subject to approval from SIX x-clear Ltd, SIX x-clear Ltd will release excessive collateral.

### 6.6 **Default**

Please see General Terms and Conditions of Business for SIX x-clear Ltd.

## 7.0 **Corporate Actions**

### 7.1 **Derivatives**

If there are changes affecting the capital of the company that has issued an underlying instrument, or if an underlying instrument is suspended from trading on Oslo Børs or in other circumstances where a listed derivative listed on Oslo Børs or Tailor made Derivative shall be subject to contract adjustment, the rules on contract adjustments set out in Oslo Børs Rulebook Appendix A.2 shall apply.

Contract adjustments are implemented by SIX x-clear Ltd in accordance with decisions made by Oslo Børs.



## Service Description SIX x-clear Ltd for Members on CLARA

After an adjustment for corporate actions all original positions/trades, are updated with new instrument definition and adjustments to prices and quantities. Updated positions/trades (see below for details) can be retrieved from CLARA.

### 7.1.1 **Forwards**

Clearing positions in the old ISIN will be closed and replaced by open positions in the new ISIN by creating new trades based on original trades. New trades will keep original trade date, get new CCP id but be linked to original trade in the field "related/previous id". The trade price on new trades will be the original price adjusted with the adjustment factor. New contract size will be calculated. Four decimals will be used for all adjusted prices, while cash amounts will be rounded to two decimals.

### 7.1.2 **Options**

Clearing positions in the old ISIN will be closed and replaced by open position in the new ISIN. No new trades will be created. The strike price and contract size will be calculated using the adjustment factor and adjusted to two decimals.

### 7.1.3 **Stock futures**

Clearing positions in the old ISIN will be closed and replaced by open positions in the new ISIN. Opening cash amount for new position will be calculated with the fixing price last inclusive and taking into account the adjustment factor. The cash amount will have two decimals. The contract size will be calculated using the adjustment factor.

### 7.2 **Cash equity**

The members are responsible for the full settlement of all clearing transactions as originally agreed, inclusive of any adjustments or entitlements lost due to a clearing transaction not settled on the originally agreed settlement date and deferred past record date for a corporate event. SIX x-clear Ltd will process such corporate events, pursuant to Section 18.8 *Corporate actions in deferred settlements* of the Clearing Terms.

SIX x-clear Ltd will process elective corporate events (e.g. voluntary offers) and corporate events comprising any option (e.g. distributions with options) taking place after the original settlement date of a settlement transaction and prior to the actual settlement date of the respective transaction, on a best effort basis, pursuant to SIX x-clear Ltd's Procedure for corporate events established in accordance with local market practice.

The procedures carrying the above into effect may include amendment of settlement transactions by cancellation of the original settlement transaction subject to a corporate event and/or registration of a new and/or an additional settlement transaction to ensure that any duties and entitlements is passed over to their rightful recipient.



## Service Description SIX x-clear Ltd for Members on CLARA

SIX x-clear Ltd is also entitled to calculate a compensation settlement between SIX x-clear Ltd and its members if it is not possible to amend the original settlement transaction or if such amendment is not considered adequate to carry out proper final settlement.

Any loss or damages incurred by SIX x-clear Ltd as a result of corporate events in deferred settlements, including payment of any compensation settlement is the liability of the member.

SIX x-clear Ltd will not process corporate events such as voting rights etc. Corporate event entitlement of an intangible nature will be deemed to have no commercial value (and thus not give rise to claim for any compensation settlement by the receiving member).

### **8.0 Fees and penalties**

#### **8.1 Derivatives**

##### **8.1.1 Fee**

Fee on trade transactions is calculated on main clearing accounts only. Exercise/expiration fee is calculated on the account where the exercise/expiration takes place. Fee is calculated and credited on the give up account (and internal give up) and new fee calculated and debited on the take up account.

Trading and clearing fees are calculated daily at the clearing account level and are charged at the member level on T+2. Fees are included in the total cash settlement, see 5.1 *Settlement derivatives and securities lending*. Fees per clearing account are calculated and can be accessed on a daily basis through CLARA. The price list is available on the web site [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing.

#### **8.2 Cash equity**

The fee model consists of an annual membership contribution, a variable clearing fee and a settlement fee. The clearing fees are calculated based on the received gross clearing transactions (trades).

The annual membership contribution has a fixed monthly element per ICM, GCM and NCM.

The clearing fee is a monthly volume-based tariff structure that applies to clearing transactions (on a gross basis, i.e. before any netting). The clearing volumes of different trading relations are bundled with SIX x-clear Ltd provided that they belong to the same legal entity and/or holding company. The SIX x-clear Ltd group volume is applicable where the combined group volume defines the prices on a step-scale. The average price applies to all members of the group.



## Service Description SIX x-clear Ltd for Members on CLARA

The settlement fee is a fixed transaction fee per settlement transaction.

Further information to the fee model, penalties and procedures related to change of fee model can be found on the web site [www.six-group.com](http://www.six-group.com) > Login > Securities Services Private > Clearing.

### 8.2.1 Penalties

The penalty model will apply for all failures to deliver securities (or cash) to SIX x-clear Ltd at the intended settlement date, and is designated in order to be transparent and predictable.

### 8.2.2 Invoicing

SIX x-clear Ltd will invoice all fees on a monthly basis within the first three (3) clearing days after the expiry of the previous calendar month. Payment shall be made within 30 days of the date of the invoice.

## 9.0 Appendix

### 9.1 Account structure examples

This Appendix gives examples of possible account structure set ups in the clearing system. The examples show various possibilities of how to set up the trading, clearing, margin and the related collateral account(s). Please note that in addition to the collateral account shown in these examples, all members must set up collateral accounts related to deposits to the default fund. There will be separate clearing accounts for derivatives, equities, and settlement DvP derivatives.

#### Examples: Account set up for ICM in the clearing system

An ICM can choose to have one trading and clearing account for all its trades per CSD (place of settlement) as shown in the picture below.



An ICM can also choose to separate its own trades and its client's trades. The separation will be based on the information available in the trade feed from the market place.

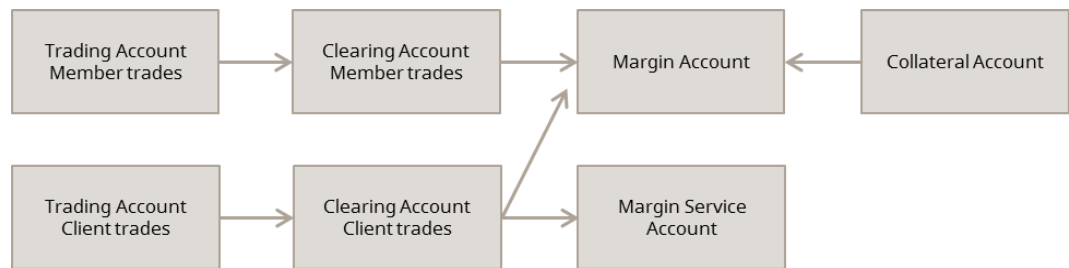
In the picture below the separation is on clearing account level. A margin service account can be used to show the margin for the client trades.



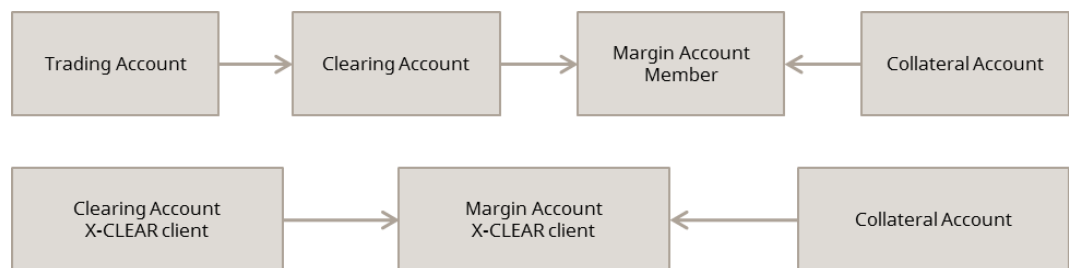


## Service Description SIX x-clear Ltd for Members on CLARA

A separation on Margin account is also possible, but it will not be a segregated account. (All collateral can be used in case of default)

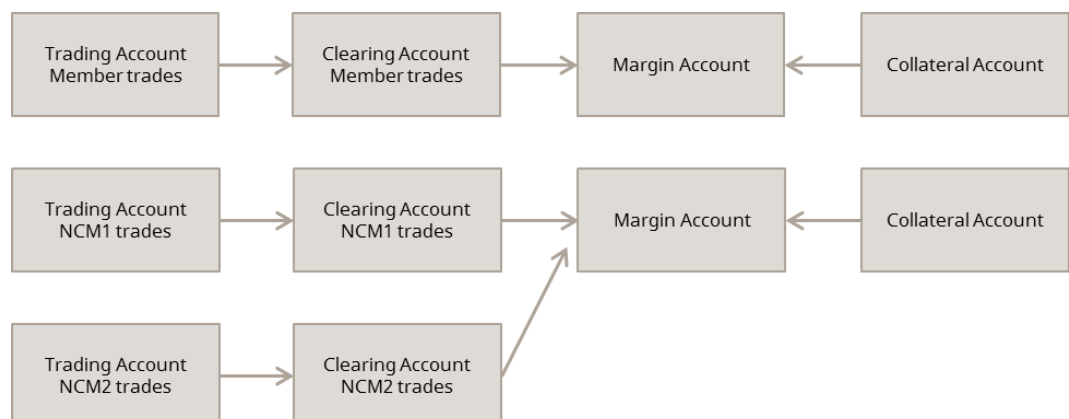


In case the ICM have x-clear clients, they will be separated from the member positions and each x-clear client will have a separate segregated clearing, margin and collateral account(s).



### Examples: Account set up for GCM in the clearing system

A GCM must segregate its own positions from its NCM's positions. A standard set up will be like shown below (Omnibus Client segregation):



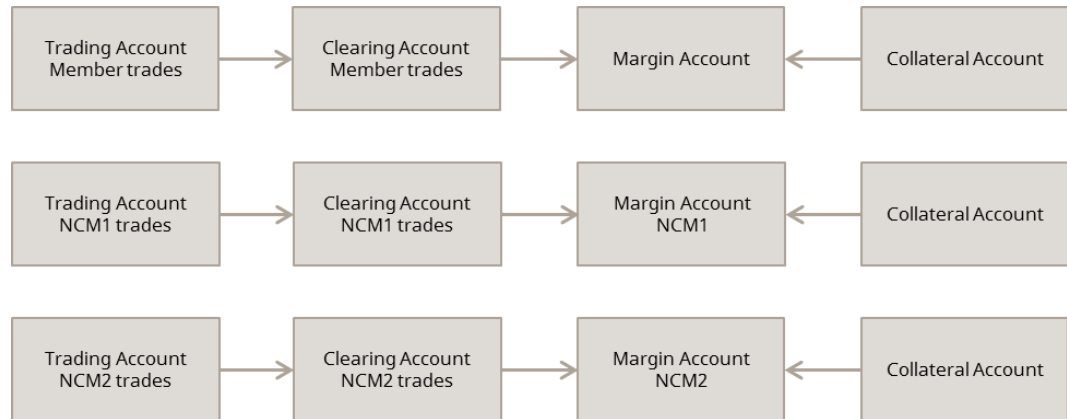
The GCM may use excessive collateral from its own collateral account(s) to cover margins on the segregated NCM account (and any x-clear clients), but not vice versa.

It is also possible to margin all or some of the NCM's separately.

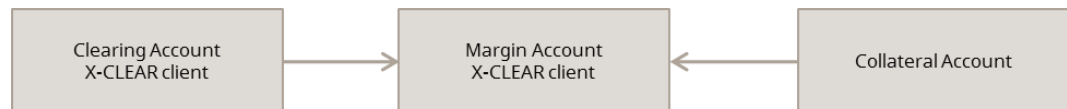


## Service Description SIX x-clear Ltd for Members on CLARA

The picture below shows an Individual Client Segregation set up in the clearing system:



In case the GCM have x-clear clients they will be separated from the GCM and NCM positions and each x-clear client will have a separate clearing, margin and collateral account (s) in the clearing system.



This Service Description serves for information purposes only. SIX x-clear Ltd reserves the right to make changes at any time. SIX x-clear Ltd disclaims all liability for the inaccuracy or incompleteness of the information given therein.

In this context, SIX x-clear Ltd draws the Members' attention to clauses **7.1 lit. f., chapter 17.0 and 25.3** General Terms and Conditions of SIX x-clear Ltd stipulating that the Member bears responsibility for the tax requirements and consequences of clearing with x-clear pursuant to the Applicable Law and that SIX x-clear Ltd assumes no liability for any charges or other negative consequences arising in conjunction with clearing through SIX x-clear Ltd that are a result of tax laws or ordinances issued by tax authorities pursuant to the Applicable Law.

**SIX x-clear Ltd**  
Hardturmstrasse 201  
CH-8002 Zurich

Mailing address:  
P.O. Box 1758  
CH-8021 Zurich

T +41 58 399 4311  
F +41 58 499 4311  
[www.six-group.com](http://www.six-group.com)

**SIX x-clear Ltd**  
Tollbugata 2  
NO-0152 Oslo

Mailing address:  
P.O. Box 5  
NO-0051 Oslo

T: +47 23 17 96 00  
F: +47 23 17 96 01  
[www.six-group.com](http://www.six-group.com)

