

# Service Description

## **Version 1.0**

Central counterparty for NASDAQ OMX Nordic (NASDAQ OMX)

July 2010

# Service Description

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### 1.0 Introduction

In June 2009 NASDAQ OMX announced that there will be interoperability on the NASDAQ OMX markets of Stockholm, Copenhagen and Helsinki. Interoperability between Central Counterparties (CCPs) allows members at NASDAQ OMX Nordic exchanges to interact with multiple clearing houses to clear and settle their trades. Interoperability has started on the 26 of March 2010 and SIX x-clear has been selected as one of the CCPs.

The primary functions of the CCP are:

- To ensure post-trade anonymity in order to prevent market distortions;
- To eliminate bilateral counterparty risks from trade date to settlement of a trade – a requirement that is gaining in importance due to the globalisation of electronic trading platforms and in the event of financial crisis;
- To permit settlement netting and, in consequence, reduce settlement volumes and costs.

The degree of importance attached to these three functions differs between market participants and depends on developments in the financial markets. Along with the netting functionality, risk minimisation plays a major role: due to the fully-automated matching of orders on electronic trading platforms, a trading party is not free to choose its counterparty. In view of the continued opening up of markets, stock exchange participants find it increasingly difficult to assess the counterparty risk since they no longer form part of a local, manageable group.

The clearing service is offered to the members of SIX x-clear to clear the eligible cash equity trades executed on NASDAQ OMX with settlement at a defined place of settlement. SIX x-clear is a wholly-owned subsidiary of SIX Group, the integrated Swiss financial market infrastructure provider.

### 1.1 Scope of the document

This document covers the SIX x-clear service description while providing clearing services to the NASDAQ OMX only. For the service description of SIX Swiss Exchange and London Stock Exchange, please refer to the existing service descriptions available on the SIX x-clear website.

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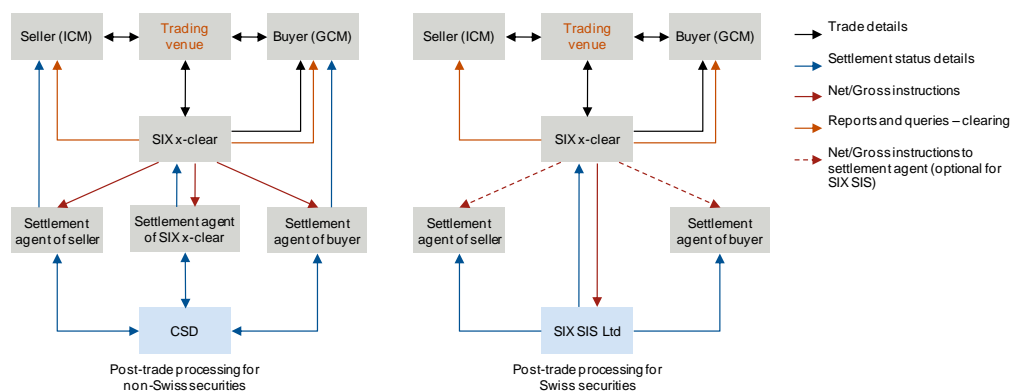
### 2.0 Concept of the CCP

#### 2.1 Clearing

As a post-trading process, clearing comprises the efficient handling of risks inherent in concluded but still unfulfilled (trading) contracts. The CCP steps into the contracts as intermediary and represents the buyer to each seller and the seller to each buyer to eliminate the counterparty risk.

#### 2.2 Clearing and settlement model

SIX x-clear offers clearing services to its clearing members for their trade executed on NASDAQ OMX. The diagram below depicts the business model applicable to the members of SIX x-clear:

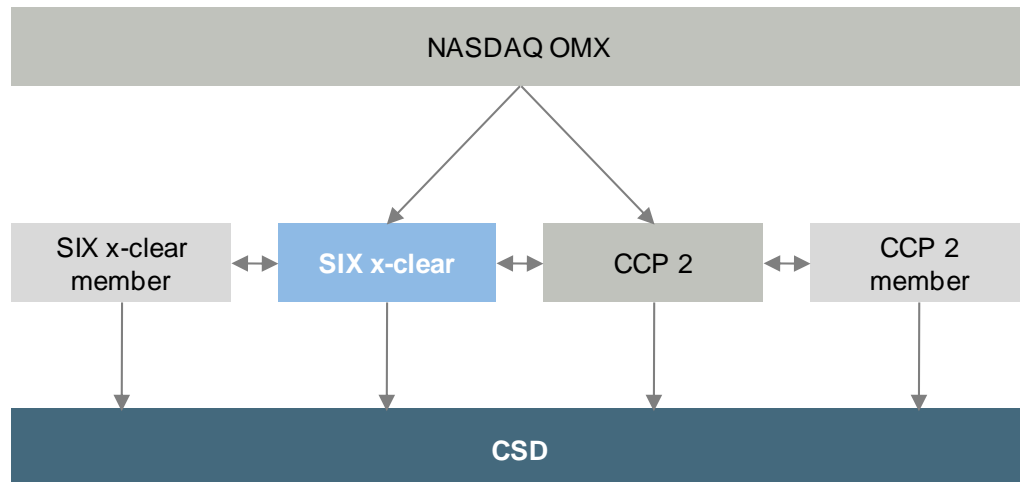


#### 2.3 Interoperability

Interoperability between the CCPs allows for a choice of CCP service provider for the trades executed on NASDAQ OMX. As the trading system maintains full anonymity, trading participants are not able to determine which CCP their trading counterparty is using, and it makes no difference to their post-trade processing which is only with their own CCP. The cross-CCP positions that arise are dealt with between the two CCPs without member involvement. The diagram below depicts the post-trade flow, clearing and settlement of cross-CCP trades.

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### 2.4 SIX x-clear as CCP

SIX x-clear has a banking licence under Swiss law and is thus regulated and supervised by the Swiss Financial Market Supervisory Authority (FINMA) and under the oversight of the Swiss National Bank. SIX x-clear started business operations in May 2003. The company has also been recognized by the Financial Services Authority (FSA) in the UK under the Financial Services and Market Act 2000 (FSMA) as a Recognized Overseas Clearing House (ROCH) since 2004. SIX x-clear is seeking approval or non-rejection as individual CCP from the Danish, Finnish and Swedish FSAs.

Besides extending clearing services for NASDAQ OMX, SIX x-clear offers clearing services for different national stock exchanges, such as London Stock Exchange and SIX Swiss Exchange as well as several MTFs. Integrated clearing services across different European markets enable SIX x-clear to provide cost-efficient services for its clearing members without the need to have additional interfaces. New members can choose one of the interface options to avail of the SIX x-clear services.

SIX x-clear performs the following functions:

- Counterparty risk: SIX x-clear automatically acts as the counterparty for all its members trading clearing-eligible securities on NASDAQ OMX.
- Post-trade anonymity: As clearing house, the CCP occupies an intermediary position between the trading parties. This ensures full post-trade anonymity.
- Settlement netting: Settlement netting allows for the offsetting of delivery and payment obligations, which in turn reduces the overall settlement volume and the number of delivery instructions. The netting service is optional.
- Risk Management: Central risk management serves to determine the members' individual risk positions and margin requirements by considering trades originating from different

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exchanges. Compared to calculation on a gross basis, net exposure – i.e. the offsetting of risk positions – reduces the total collateral to be pledged.

### 3.0 Membership of SIX x-clear

#### 3.1 General requirements

The general membership requirements are published on the SIX x-clear website:

[www.six-x-clear.com/ccp/clients/clients-member.htm](http://www.six-x-clear.com/ccp/clients/clients-member.htm)

To have trades effected on NASDAQ OMX and cleared by SIX x-clear, SIX x-clear members can either be trading members of NASDAQ OMX or can act as clearing-only participants. Each member must comply with the infrastructure requirements of NASDAQ OMX and SIX x-clear as applicable. In addition, each member must ensure that it has the required settlement arrangements in place.

Membership of SIX x-clear includes membership of SIX SIS as a prerequisite. SIX SIS acts as custodian for default fund collateral in the clearing relationship between a clearing member and SIX x-clear. The general membership requirements of SIX SIS are published on the SIX SIS website

[www.six-sis.com/sec/cm/index/clients/terms-conditions-participation.htm](http://www.six-sis.com/sec/cm/index/clients/terms-conditions-participation.htm)

#### 3.2 Member structure

Two categories of clearing membership are available at SIX x-clear:

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

Unlike ICMs, GCMs may provide clearing services for other trading participants of NASDAQ OMX without clearing membership (so-called Non-Clearing Members, NCM).

#### 3.3 Individual Clearing Members (ICM)

ICMs provide clearing for both their own transactions and transactions effected by their clients.

##### 3.3.1 Minimum rating

An external, long-term counterparty rating of A-/A3 or better is required. The second highest rating available from the rating agencies is considered. If no external rating is available, SIX x-clear carries out an internal rating by means of key financial figures (benchmarking).

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Although the rating represents no criterion for exclusion, it has an impact on the pricing and the determination of the amount of collateral to be provided (margining).

### 3.4 General Clearing Members (GCMs)

GCMs provide clearing of their own transactions as well as transactions effected by their clients and third parties, i.e. NASDAQ OMX participants without direct access to a clearing house. The GCM is responsible for compliance of its NCM with all rules and regulations of SIX x-clear.

#### 3.4.1 Minimum rating

An external, long-term counterparty rating of A+/A1 or better is required. The second highest rating available from the rating agencies is considered. If no external rating is available, SIX x-clear carries out an internal rating by means of key financial figures (benchmarking).

#### 3.4.2 Margining

The GCM is obliged to demand from its NCM margins that equal or exceed its own margins.

For further information about margining, please refer to the section margining under risk management.

#### 3.4.3 Operational capabilities

Since GCMs are also responsible for clearing transactions of third parties (i.e. its NCMs), they must ensure smooth operation of their trading, operating and settlement systems as well as availability of sufficient human resources.

#### 3.4.4 Duty of disclosure

The GCM is obliged to disclose the identity of the NCMs to SIX x-clear.

### 4.0 Money/Custody account structure

#### 4.1 Clearing

##### 4.1.1 Clearing accounts

The member's open positions are recorded in clearing accounts. Members have the option to clear their own trades in a "home" clearing account and client trades in a "client" clearing account.

#### 4.2 Margining

Members must maintain money and custody accounts with SIX SIS for collateral management to clear trades via SIX x-clear. This allows for the management of collateral for



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margin and Default Fund requirements. Members can use the same collateral accounts for clearing of all trades executed on the different trading venues supported by SIX x-clear. The money and custody accounts listed below are to be kept with SIX SIS on behalf and for account of SIX x-clear for collateral management purposes.

A dispo account will be opened in the name of the member. Over midnight, for book keeping purposes, excess collateral will be booked from the margin account to the member's dispo account.

### 4.2.1 Collateral accounts for margins (initial and variation margin)

SIX x-clear opens collateral accounts with SIX SIS in the name of SIX x-clear for members using the SIX SIS collateral management facility to meet margin requirements. These accounts are used to transfer the margins provided. The collateral is transferred to SIX x-clear as an irregular pledge with the right of SIX x-clear to re-use the collateral. The collateral collected as irregular pledge is limited to inter CCP use only.

The member can use the following collateral accounts:

Custody collateral account for margin-eligible securities

- Securities collateral can be provided by transferring from the member's custody account with SIX SIS.

Cash collateral account for margin-eligible currencies

- Cash can be provided from any freely convertible currency account (such as EUR, DKK, SEK, NOK) opened/held by a clearing member at SIX SIS

### 4.2.2 Default Fund collateral account

To enable members to meet the Default Fund requirements, SIX x-clear opens collateral accounts (custody and/or money) with SIX SIS. These accounts are held in the name of the member and are used to transfer the collateral provided. A separate collateral account is kept per Default Fund.

Remittance of the pledged assets is effected only via one of the collateral accounts. Subsequently, SIX x-clear allocates the pledged assets to the respective collateral accounts per Default Fund. The accounts will be in the name of the SIX x-clear members. SIX SIS is custodian. The contents of these collateral accounts will be pledged to SIX x-clear by means of a regular pledge. The member can use the following collateral accounts:

Custody default fund collateral account

- Securities collateral can be provided by transferring from the member's custody account with SIX SIS;

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Cash default fund collateral account

- Cash can be provided from any freely convertible currency account (such as EUR, DKK, SEK, NOK) opened/held by a clearing member at SIX SIS.

### 5.0 Risk Management

As CCP for NASDAQ OMX, SIX x-clear assumes the risk on the buy/sell side and is liable towards the respective members for the fulfilment of obligations (both on the cash and the securities side) arising from NASDAQ OMX trades. SIX x-clear guarantees the fulfilment of these obligations even in the event of default of a member; however, it does not guarantee timely execution of the transactions on the settlement date.

Clearing information such as open positions, margin details and the collateral placed for margins as well as the collateral utilisations can be viewed via online queries sent from the user's SIX x-clear interface.

A separate document is available detailing the reporting choice available for members and settlement agents.

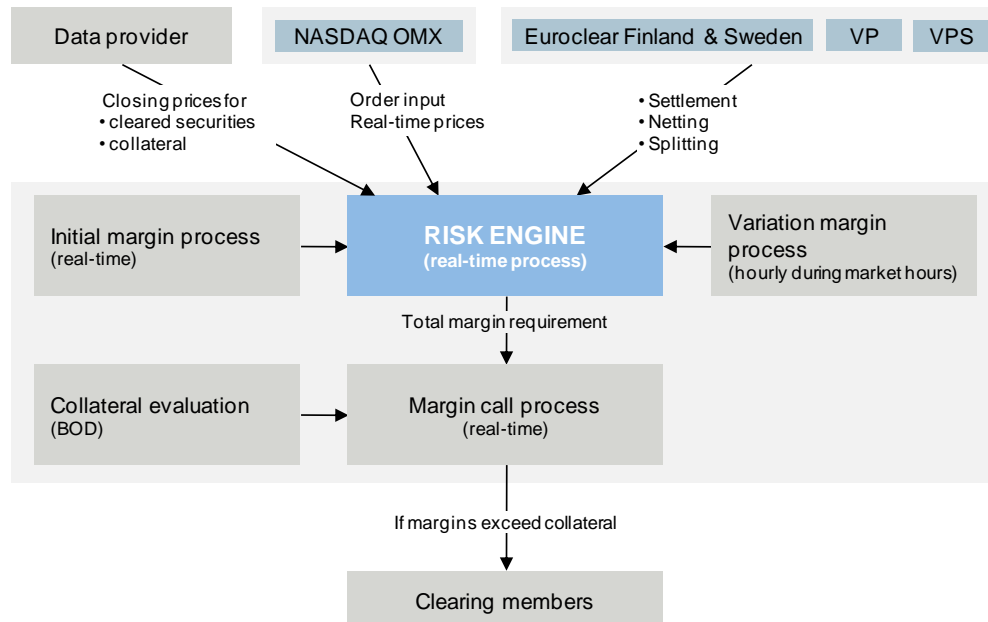
### 5.1 Objectives/Overview

The primary objective is to minimize potential risks through effective and accurate Risk Management. In the event of default of a member, the risk should be primarily borne by the defaulting member itself. Correspondingly, the following measures are employed to minimise risk:

- Safeguarding against the market risk to be expected subsequent to any default of a member by means of the collateral deposited by the member;
- Pledging of collateral in the Default Fund to cover unpredictable losses.

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### 5.2 Open positions

Initial and variation margin are applied on a clearing account's open positions. All unsettled trades on a member's clearing account are summarised per security and currency (of trade) into one position called "open position". The unsettled trades may be the result of trading on different trading venues. Hence, a clearing account normally has one open position per traded security and currency combination. Open positions are computed in real time by SIX x-clear and also include unsettled corporate action claims.

The following transactions impact a clearing account's open positions:

- A new clearing-eligible trade received from a trading venue;
- Settlement of such trades;
- Corporate action claim when the transaction becomes eligible for claims/compensation due to an appropriate corporate action;
- Settlement/Booking of such claims/compensation
- Cancellation of settlement order (possible due to netting and during corporate action transformation).

The process of computing open positions nets all unsettled trades, provided they are on the same security, clearing account and currency. Hence, the open positions for a clearing account are the same whether a member opts for settlement netting or not.

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### 5.3 Margins

The total margin required is the result of the initial margin multiplied by the risk rating coefficient, plus the variation margin. Calculation of margin is always based on net position, even if positions arise from various trading venues. Different instruments can be netted against each other as detailed in the chapter "Calculation of margins".

Risk Management consists of the following processes:

- Calculation of margin requirements
- Valuation of collateral
- Checking of margin coverage
- Margin call in case of insufficient margins

The daily valuation of the collateral is normally based on the previous day's closing price.

The initial margin is an estimate of the market risk inherent in a clearing member's open positions. It is designed to cover the CCP for the market risk it becomes exposed to for the period between the last margin cycle prior to a member's default and the close-out of the defaulting member's unsettled positions by the CCP.

The variation margin covers the mark-to-market fluctuations for a clearing member's open positions. The variation margin helps a CCP to protect itself against losses due to a clearing member's open positions. In case of gains to a clearing member's open positions due to favorable price movements, the variation margin offsets the initial margin requirement.

The margin requirement of the member is computed in CHF. SIX x-clear takes into account the currency risk during mark-to-market process and applies the latest foreign exchange rates to compute the total margin requirement of members. The foreign exchange rates are received using near real-time feed with a periodicity of once every hour. The total margins are recomputed with a periodicity of once every hour using the latest foreign exchange rates.

### 5.4 Calculation of margins

Open positions are computed in real time by SIX x-clear and also include unsettled corporate action claims. Such open positions form the basis on which the initial margin and the variation margin are computed.

#### 5.4.1 Initial margin (IM)

Calculation of the initial margin is based on the Value at Risk (VaR) of the underlying securities. According to this model, margins are computed in real-time using the VaR of the security. SIX x-clear adopts cross-margining – by considering equity trades executed on all

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trade venues where Clearing is done by SIX x-clear – while computing the margin requirements.

VaR is defined as the maximum possible loss for a given financial portfolio with a given confidence level. For example, if the 2-day VaR of Nokia is 5,6% with 99% confidence level, Vodafone's 2-day price changes are expected to exceed 5,6% in only 1 out of 100 instances.

For each clearing-eligible security, 2-day VaR is periodically computed using the "historical simulation" method, by choosing the higher of either the long term VaR based on a 2-year price (i.e. approx. 500 trading days/observations), or the short term VaR based on the 3-month price history (i.e. approx. 90 trading days/observations), which reflects short term changes in a volatile equity market. The procedure for computing VaR for a security is as follows:

- Compute 2-day historic returns using 2-year/3-month price history
- Arrange such 2-day returns in ascending order (largest negative return on top)

For 500/90 2-day returns, the instance of the negative return which has not been exceeded more than 1% of the times is considered as the long/short term VaR for that security. The higher of the long term or short term VaR is considered as the VaR of the security. The VaR is recalculated weekly. If there are volatile market conditions, it may also be calculated daily, if required.

### 5.4.2 Risk buckets

Securities are grouped in risk buckets based on their VaR values. The same risk bucket structure is used for grouping the securities of all the stocks which are cleared by SIX x-clear, irrespective of the exchanges on which they are traded. There are six risk buckets with the following parameters.

Risk bucket name	VaR (%) lower bound	VaR (%) upper bound	Initial margin (%)
BU01	0.00	5.00	3.50
BU02	5.00	10.00	7.50
BU03	10.00	15.00	12.50
BU04	15.00	20.00	17.50
BU05	20.00	25.00	22.50
BU06	25.00	and above	27.50

The process of forming the risk buckets always follows the computation of VaR, which is calculated weekly during normal market conditions.

#### 5.4.2.1 Risk netting coefficient I (intra-bucket netting coefficient or intra-BNC)

Opposing open positions on different stocks originating from different trading venues within a risk bucket have the effect of reducing the market risk posed by such open positions. Intra-

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BNC is designed to give effect to the high level of correlation between various securities comprised in a risk bucket, especially during volatile market moves. Opposing open positions within a risk bucket are netted off using the intra-BNC.

Assume that stock "A" is traded on SIX Swiss Exchange and stock "B" is traded on NASDAQ OMX; the following example uses an intra-BNC value of 0.80 (the current value):

Risk bucket	Security	Long or short	Open amount (CHF)	Initial margin (%)	Initial margin (CHF)	Bucket initial margin (CHF)
BU02	A	Long	1000	7.50	75.00	75-(52.5 X 0.80) = 33.00
	B	Short	-700		-52.50	
BU03	C	Long	400	12.50	50.00	100-(50 X 0.80) = 60.00
	D	Short	-800		-100	

Bucket initial margin = (higher of "bucket  $IM_{Long}$ " or "bucket  $IM_{Short}$ ") less "intra-bucket margin offset", where

- bucket  $IM_{Long}$  is the absolute sum of IM for all long positions within a risk bucket;
- bucket  $IM_{Short}$  is the absolute sum of IM for all short positions within a bond risk bucket;
- "intra-bucket margin offset" is the reduction of margin due to opposing positions within a bond risk bucket. This is equal to (the lower of bucket  $IM_{Long}$  or bucket  $IM_{Short}$ ) X Intra-BNC.

### 5.4.2.2 Risk netting coefficient II (inter-bucket netting coefficient, or inter-BNC)

Similar to opposing positions within a risk bucket, opposing net positions across buckets also have the effect of reducing the market risk. Inter-BNC is applied to net positions across risk buckets and has the effect of reducing the initial margin in the case of opposing net positions across different risk buckets. Inter-BNC is applied at the level of margins. The objective of introducing Inter-BNC is to reduce margins to account for the existence of predominantly opposing positions in different risk buckets. The following example uses an inter-BNC value of 0.40 (the current value):

Risk Bucket	Security	Long or Short	Open Amount (CHF)	Initial Margin (%)	Initial Margin (CHF)	Bucket Initial Margin (CHF)	Net Bucket Margin (CHF)	Inter-Bucket Margin Offset (CHF)	Total Initial Margin (CHF)
BU02	A	Long	1000	7.50	75.00	75-(52.5 X 0.80) = 33.00	22.50	22.50 X 0.40 = 9.00	33+60-9 = 84.00
	B	Short	-700		-52.50				

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BU03	C	Long	400	12.50	50.00	100-(50 X	-50.00		
	D	Short	-800		-100.00	0.80) =			

Each bucket would have one "net bucket IM", which could be either positive or negative. Positive values of "net bucket IM" should be added across all risk buckets to arrive at the "total net long IM". Similarly, negative values of "net bucket IM" should be added across all bond risk buckets to arrive at the "total net short IM". The smaller of these two figures (in absolute terms) multiplied by the inter-BNC is the value by which margins would have to be offset (inter-bucket reduction).

Total IM =  $\sum$  (IM for each bucket) less "inter-bucket margin offset", where

- " $\sum$  (IM for each bucket)" is the sum of margins for all risk buckets. "IM for each bucket" incorporates the effect of Intra-BNC.
- "inter-bucket margin offset" is the amount by which margins would be reduced to account for the opposing nature of net positions across buckets = (lesser of "total net long IM" or "total net short IM") X inter-BNC;
- "total net long IM" is the absolute sum of the net bucket IM where the net bucket IM is positive;
- "total net short IM" is the absolute sum of the net bucket IM where the net bucket IM is negative;
- "net bucket IM" is the arithmetic sum of the IM of all securities within a bond risk bucket (with plus/minus sign).

### 5.4.3 Variation margin (VM)

The variation margin is calculated hourly during the trading day and also during end of day processing. Intraday VM cycles use the latest market prices while the end of day VM cycle is based on closing prices as well as on the net positions of all open contracts per security.

### 5.4.4 Total margin

The total margin requirement for each clearing account is calculated as follows:

Total margin = (initial margin X risk rating coefficient) + variation margin

Hence, if a member has a "gain" from the variation margin due to favourable market movements, this has the effect of reducing the total margin, provided that the total margin does not sink below zero.

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A risk rating coefficient of 1.0 is usually applied, provided that the rating of the clearing member is at least A-. The risk rating coefficient may be increased for members with a lower rating. It may also be temporarily increased

- for members having substantial open positions;
- for all members during periods with extraordinary market conditions or due to instructions from regulators.

### 5.4.5 Margin monitoring

As outlined in this document, SIX x-clear may need to issue a margin call in response to insufficient collateral, pledged to SIX x-clear to meet margin and Default Fund requirements by a clearing member. At all times, the member has the possibility to monitor his margin requirement and collateral posted through various reporting options and real-time queries. A report functioning as a margin call pre-advice is available, which informs a member when a certain level of margin usage is reached. The respective trigger level can be chosen by the member. Upon request, a GCM has very flexible tools available to monitor margin requirement and placed margin collateral of each of his NCM.

### 5.4.6 Margin calls

Subsequent to insufficient collateral, SIX x-clear is entitled to debit the clearing member's applicable account at SIX SIS with the amount of the margin call. If funds available on the account are not sufficient to fulfil a margin call via direct debiting, transfer of the money to meet this additional margin requirement is due within

- a) 60 minutes after a margin call was issued to the clearing member as a consequence of insufficient collateral to meet margin requirements and
- b) 2 days after the collateral for the Default Fund becomes insufficient.

Such debit is effected by SIX SIS (on behalf of SIX x-clear) by directly debiting the clearing member's ordinary account, in favour of the respective cash collateral account at SIX SIS, in the name of SIX x-clear or the member. Before clearing can be initiated, SIX SIS (on behalf of SIX x-clear) requires a direct debit authority/mandate mutually signed between the clearing member and SIX SIS.

Unnecessary margin calls caused by temporary undercollateralization are avoided. SIX x-clear allows members to overdraw their margining account to a certain extent, in order to avoid such unnecessary margin calls if a member is temporarily undercovered by a very small amount.

Upon a clearing member's request for the withdrawal of cash collateral, subject to the availability of sufficient underlying collateral to meet margin and Default Fund requirements, SIX x-clear returns cash owned by the clearing member to the clearing member's account at



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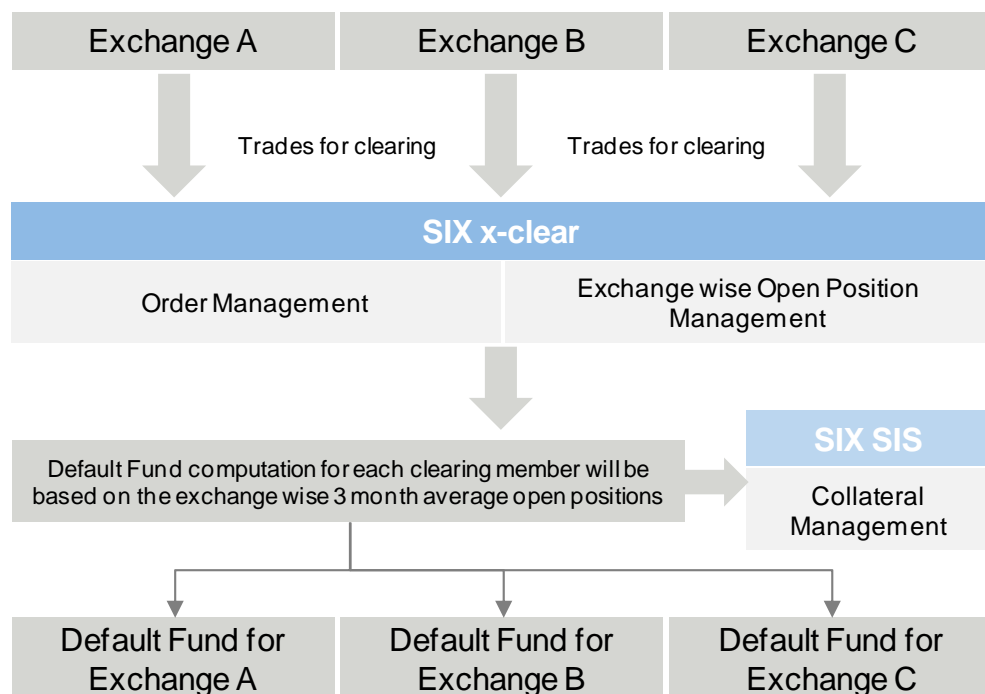
SIX SIS. Such available cash collateral is transferred/paid by SIX SIS (on behalf of SIX x-clear).

### 6.0 Default Fund for NASDAQ OMX

The total margin requirement should cover all expected market risks that may arise due to the default of a member. However, there is no guarantee that an initial margin calculated from historic data will withstand all future price developments under extreme market conditions. Therefore, a Default Fund for NASDAQ OMX is also used to cover unpredictable risks and losses. This Default Fund serves in particular to cover any systemic risk (domino effect). SIX x-clear will maintain one single default fund for NASDAQ OMX.

The Default Fund for NASDAQ OMX is supported by contributions from members who used clearing services of SIX x-clear. The amount to be contributed is, on the one hand, determined by the membership category (ICM/GCM) and, on the other hand, by the member's average gross open positions of the last three months, by considering cleared trades from NASDAQ OMX and re-adjusted with a monthly periodicity.

The diagram below depicts SIX x-clear's approach with regard to Default Fund distribution. If a member uses clearing services only for NASDAQ OMX, a Default Fund contribution is required solely for the exchange in question. The default of a member on an MTF or another exchange does not have any impact on the Default Fund maintained for NASDAQ OMX.



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Contributions to the SIX x-clear Default Funds are to be made in the form of money or securities. Members must meet the Default Fund requirement within the specified number of days from the date and time of the Default Fund requirement notice. If the member does not maintain the required Default Fund contribution, a direct debit is executed on the member's account held with SIX SIS.

Contributions to the Default Funds can be made by depositing securities eligible as collateral in a separate custody account. The securities are subject to daily mark-to-market valuation and must not fall below the value of the contributions required. The value of the deposited securities is calculated on the basis of their market value less a haircut, and not on the basis of their par value.

Should the mark-to-market valuation reveal that market values have fallen below the minimum value; the member is required to replenish the Default Fund contribution by a given deadline, i.e. 2 days upon notification. Default Fund contributions are secured by means of a regular lien.

### 6.1 Adjustment duty

According to SIX x-clear's defense lines, each member is obliged to make additional contributions to the Default Fund for NASDAQ OMX, if required. On the one hand, changes in the average gross open position of the last three months entail adjustments to the Default Fund contributions. On the other hand, price fluctuations resulting in a negative value change entail the member's obligation to make additional contributions.

Furthermore, according to SIX x-clear's defence lines outlined in this document, each member is obliged to replenish the Default Fund up to the amount of its current contribution. These additional contributions may be claimed in one payment or, if required, in instalments. SIX x-clear may demand that members make additional contributions if the Default Fund for NASDAQ OMX has been utilized once or more than once. The additional contribution is calculated on a proportional basis (membership contribution as a percentage of the total Default Fund volume).

### 6.2 Defense lines

Initial margin, variation margin and Default Fund are not the only means for SIX x-clear to absorb losses.

The defence lines of SIX x-clear are applied in the following order:

- Margins, i.e. the collateral provided by the defaulting member itself
- Contributions, i.e. the collateral provided by the defaulting member in favour of the Default Fund for NASDAQ OMX

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- Per calendar year, a maximum of 50% of available free reserves set aside by SIX x-clear to satisfy outstanding obligations of the SIX x-clear member following a default
- Default Fund for the NASDAQ OMX (i.e. contributions from other clearing members)
- Provision of additional collateral to the Default Fund for NASDAQ OMX
- Remaining provisions/reserves, profit and surplus capital from SIX x-clear

The defense lines and the Default Fund for SIX Swiss Exchange are intended to help prevent systemic risks (domino effect) for the entire financial market.

### 7.0 Accepted collateral types

The following table lists collateral generally acceptable as collateral for the Default Fund. The eligibility of collateral for the default fund is more restrictive than the eligibility of collateral for margins.

<b>Collateral type</b>
Cash (euro (EUR), Danish kroner (DKK), Swedish kroner (SEK), Norwegian kroner (NOK), sterling (GBP) or Swiss francs (CHF) or other freely convertible currencies, legal tender) specified as acceptable by SIX x-clear (each an "Eligible Currency")
Danish, Finnish, Norwegian and Swedish government bonds, denominated in euro (EUR), Danish kroner (DKK), Swedish kroner (SEK) or Norwegian kroner (NOK)
Swiss government bonds, both confederation and cantonal, denominated in Swiss francs (CHF) and UK government bonds (gilts) denominated in sterling (GBP)
Other first-class rated Swiss franc (CHF) denominated bonds (minimum rating of A-); including SNB money market book claims
Highly rated bonds (minimum rating of A-); including European Central Bank money market book claims and Danish mortgage bonds

Before placing collateral with SIX x-clear, a member must verify eligibility of collateral with SIX x-clear Risk Management and operations (xclearops@sisclear.com). The deposited collateral is accounted for at market value less a haircut. Due to IRS regulations, US securities cannot be accepted as collateral. Haircuts applied to collateral are in accordance with the Basel II requirements. SIX x-clear's lending norms are published on the website:

[www.six-x-clear.com/ccp/services/services-riskmanagement/services-riskmanagement-lending.htm](http://www.six-x-clear.com/ccp/services/services-riskmanagement/services-riskmanagement-lending.htm)

### 8.0 Formation of contract

#### 8.1 Novation

The formation of contract under novation implicates that the bilateral contract arising between the seller and the buyer from the order matching process in the trading system is replaced by

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two new single contracts a) between the seller or his GCM and the CCP and b) between the buyer or his GCM and the CCP.

As a CCP, SIX x-clear offers – subject to its rules stipulated in its General Terms and Conditions of Business and Trading Platform Specific General Terms and Conditions of Business for Clearing of Transactions on NASDAQ OMX Nordic Equity Market – to step into a clearing-eligible trade that results from matched NASDAQ OMX orders, provided that the matching parties are either clearing members or NCMs of SIX x-clear.

### 9.0 Settlement

Settlement of the trades executed on NASDAQ OMX will be effected as defined. For NASDAQ OMX transactions, SIX x-clear follows the following models for settlement:

- Denmark: Direct settlement model with SIX x-clear as clearing participant in VP.
- Finland: Direct settlement model with SIX x-clear as clearing party and account operator in Euroclear Finland.
- Norway: Custodian model with a SIX x-clear account in VPS
- Sweden: Direct settlement model with SIX x-clear as clearing party and account operator in Euroclear Finland.

For further market-specific details on settlement, please refer to the market-specific "User guides" for settlement agents, which will be published soon on SIX x-clear's website.

[www.six-x-clear.com/ccp/clearing/clearing-exchanges/clearing-nomx/settlement-guides.htm](http://www.six-x-clear.com/ccp/clearing/clearing-exchanges/clearing-nomx/settlement-guides.htm)

Each NASDAQ OMX transaction cleared by SIX x-clear has an intended settlement date (ISD). The ISD is usually T+3 (but may vary between T+1 to T+6). The member must ensure that a sufficient amount of funds or securities as required is available on the ISD.

SIX x-clear offers its members clearing of executed trades in clearing-eligible securities that are concluded within the clearing time frame defined by NASDAQ OMX. The transactions concluded on securities that are excluded from clearing are settled according to the non-CCP settlement model of NASDAQ OMX, where the trading parties have to settle directly between themselves bilaterally.

### 9.1 Settlement organization

SIX x-clear offers its members settlement at the home CSD of the security for transactions executed on NASDAQ OMX. SIX x-clear will participate in settlement at the settlement location on its own in Denmark, Finland and Sweden.

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The member must indicate the settlement preference details in the static data form of SIX x-clear.

The following are the places of settlement for the cleared markets of NASDAQ OMX:

Market	Place of settlement	Settlement instruction mode
SE	Euroclear Sweden	Bilateral input to place of settlement
FI	Euroclear Finland	Bilateral input to place of settlement
NO	Oslo Clearing ASA	Bilateral input to place of settlement
DK	VP	Bilateral input to place of settlement

### 9.2 Settlement amount

The settlement amount is neither generated by NASDAQ OMX nor delivered to SIX x-clear in the trade input. Instead, price and quantity are provided and SIX x-clear is computing the settlement amount based on the Deal Price of the security for the trade and the trade size. SIX x-clear always uses simple rounding to two decimal digits to arrive at the settlement amount.

#### For example:

A settlement amount of EUR 1500.155 and above is rounded to EUR 1500.16 and a settlement amount of EUR 1500.154 and below is rounded to EUR 1500.15.

Dependent on the client's requirement, SIX x-clear offers reports such as MT537, which allow the client to reconcile the amount on settlement instructions. Details about SIX x-clear's reporting options are available on SIX x-clear's private website. Please contact SIX x-clear for access details.

### 9.3 Settlement mode

SIX x-clear offers optional net settlement to its members for the transactions on NASDAQ OMX. Net settlement reduces the settlement transactions to one or more transactions per security/currency and trade date. Settlement netting has no impact on the margining of the open positions.

The member must indicate the netting preference details in the clearing and settlement standing instructions (CSSI) form of SIX x-clear which is published on SIX x-clear's website.

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### 9.3.1 Securities Settlement

The settlement of transactions is done at the home market CSD for the security. SIX x-clear is direct member in the local CSDs in Sweden, Finland and Denmark; however, in Norway, SIX x-clear uses a settlement agent. The settlement agents of the clearing members should instruct on an OTC basis against SIX x-clear at the home market CSD for the security.

### 9.4 Splitting and partial deliveries

The Danish settlement system offers an autosplitting functionality. Manual partials are supported as required.

### 9.5 Late delivery and Buy In

In case of late deliveries, SIX x-clear may at its own judgement and upon availability engage securities borrowing in order to fulfil its delivery obligation towards the buyer. This service of SIX x-clear underlines SIX x-clear's strive to contribute to high settlement rates in the markets where it acts as a clearer.

In the case where securities are not delivered within a defined time frame, a "buy-in" takes place. The resulting costs are charged to the defaulting party. A notification is sent to the member prior to execution of a buy-in on the market-specific notification date. In most markets, the market specific notification date is one day prior to the buy-in execution date. In addition, SIX x-clear may initiate a default procedure to exclude the delivering party from trading. Should it prove impossible to provide holdings, an adequate compensation payment is made according to the Clearing Terms of SIX x-clear.

For market-specific details of late delivery and buy-ins, please refer to the separate "Late Settlement and Buy-In Guide" published on SIX x-clear's website.

[www.six-x-clear.com/ccp/clearing/clearing-guides.htm](http://www.six-x-clear.com/ccp/clearing/clearing-guides.htm)

Details on fees are published on the SIX x-clear website:

[www.six-x-clear.com/ccp/services/fees-ccp.htm](http://www.six-x-clear.com/ccp/services/fees-ccp.htm)

### 10.0 Settlement netting for NASDAQ OMX trades

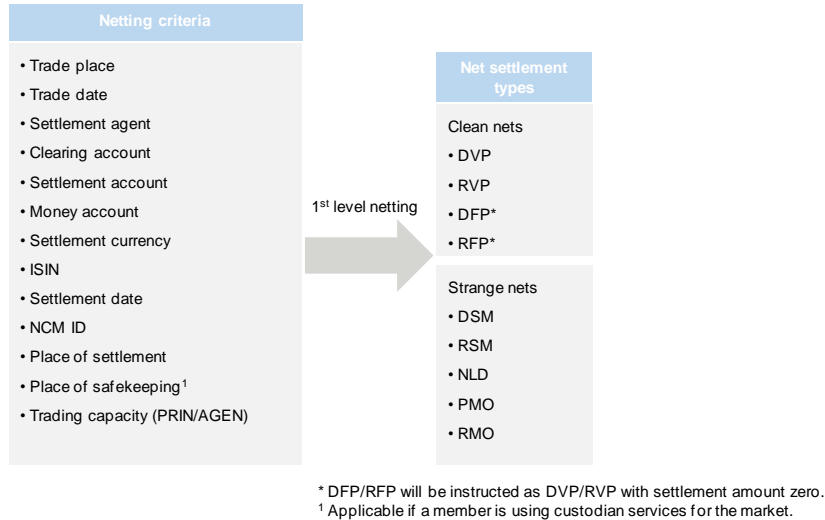
The settlement netting model offered by SIX x-clear to its clearing members is trade date netting (TDN). The TDN model followed by SIX x-clear is explained below.

### 10.1 Trade date netting (TDN)

SIX x-clear offers optional trade date netting (TDN) to its clearing members for the trades on NASDAQ OMX. Netting that is performed after the clearing window at NASDAQ OMX is closed for the trading day. The netting parameters used for trades on NASDAQ OMX are as follows:

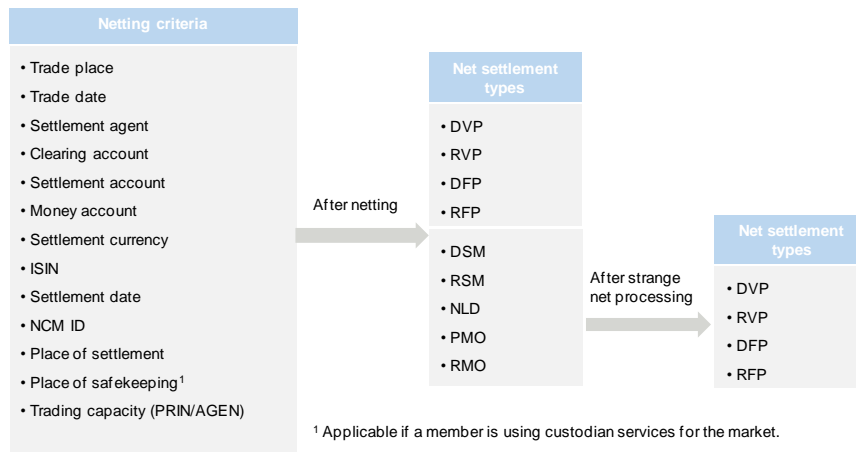
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### 10.2 Exceptional net handling

As the netting may result in exotic settlement (exceptional net) types like DSM (delivery of security and money, RSM (receipt of security and money), PMO (pay money only), RMO (receive money only) or NLD (null deliveries), the client is offered a choice of models for exceptional net handling. The client is invited to indicate his choice per market on the CSSI form.



- Model 1 – Second level shaping: Shaping of exceptional nets to form a combination of versus payment and free of payment instructions
- Model 2 – Aggregation model – Aggregation of deliveries and receivables for exceptional net settlement types

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Separate documentation providing additional details on the netting models can be obtained from SIX x-clear.

### 10.3 Shaping

As a result of the offsetting of gross settlement transactions, the net settlement transaction may be worth an undesirably large amount of money. To prevent such large amounts, the member may instruct SIX x-clear to define a maximum amount per currency. In the case where the net transaction amount exceeds this cap a "shaping" process takes place, in which the net transaction is divided into net transactions with smaller amounts. The clearing member can define the shaping limits for each currency.

Example: The netting process results in a net DVP transaction with a payment amount of CHF 120 m. The cap for shaping is fixed at CHF 100 m. This net transaction is divided into two transactions of CHF 60 m each.

### 10.4 Cross venue settlement netting

SIX x-clear supports settlement netting across trading venues, subject to applicable laws, market practices, the co-operation of trading platforms and approved settlement systems, as well as harmonization between Co-CCPs.

### 11.0 Static data setup

#### 11.1 Settlement standing instructions

Every trading member eligible to have cleared trades on NASDAQ OMX needs to provide SIX x-clear with its clearing and settlement standing instruction details (CSSI). SIX x-clear maintains a CSSI form for NASDAQ OMX which a trading member has to complete and provide. In the case of a NCM, SIX x-clear expects to receive the respective form from the GCM. Static data set-up for test and production in SIX x-clear's system for a trading participant is done based on the CSSI form.

The CSSI form contains the following information:

Form 002: needs to be filled in per trading member and trading venue

- Trade details
- Clearing details and preferences
- Settlement details

Form 002b

- Reporting choice to trading member



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- Reporting choice to third party

[www.six-x-clear.com/ccp/clearing/clearing-exchanges/clearing-nasdaq-omx.htm](http://www.six-x-clear.com/ccp/clearing/clearing-exchanges/clearing-nasdaq-omx.htm)

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