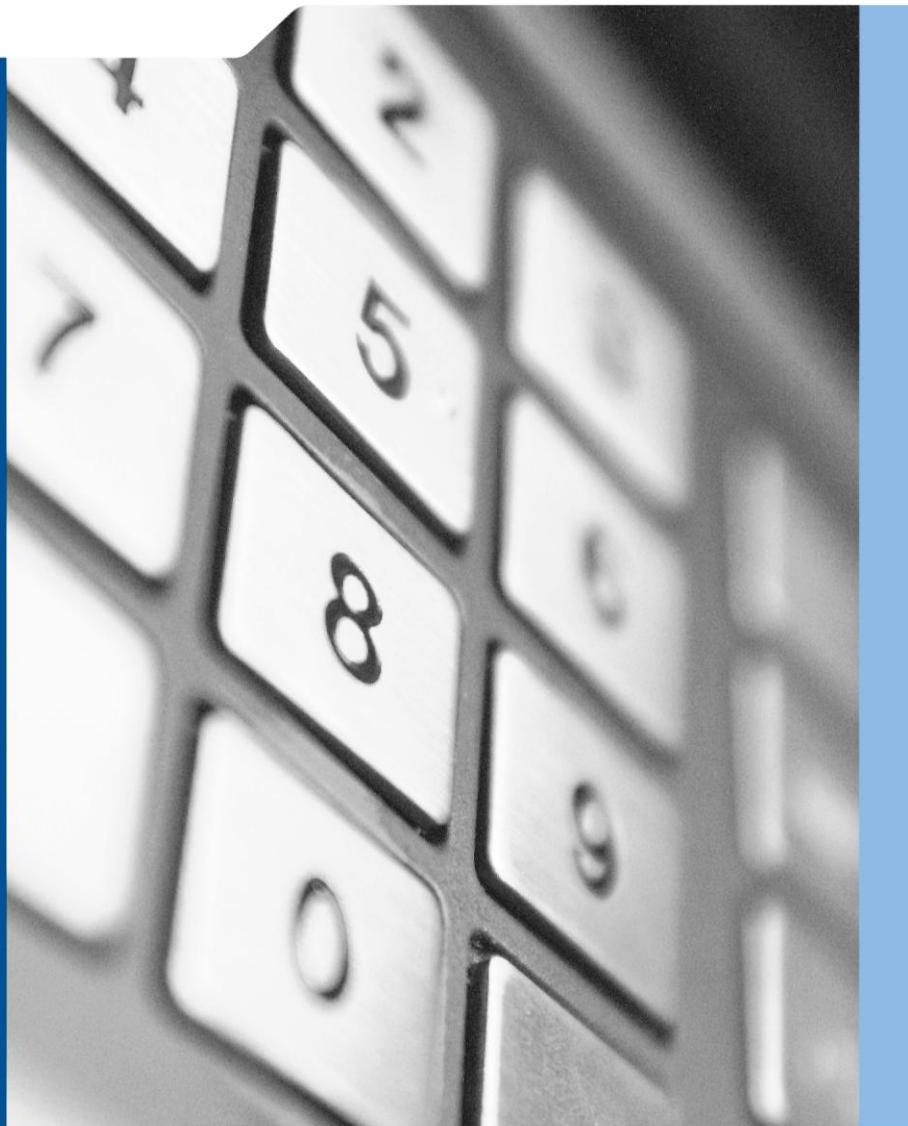


## CloseUp SIX x-clear Ltd

### **MTF Service Description**

May 2011





## CloseUp SIX x-clear Ltd

### MTF Service Description

#### Table of contents

<b>1.0</b>	<b>Introduction</b>	<b>4</b>
1.1	Scope of the document	4
<b>2.0</b>	<b>Concept of the CCP</b>	<b>4</b>
2.1	Clearing	4
2.2	Clearing and settlement model	5
2.3	SIX x-clear as CCP	5
<b>3.0</b>	<b>Membership of SIX x-clear</b>	<b>6</b>
3.1	General requirements	6
3.2	Member structure	6
3.3	Individual Clearing Members (ICMs)	6
3.3.1	Minimum rating	7
3.3.2	Default Fund	7
3.3.3	Margining	7
3.4	General Clearing Members (GCMs)	7
3.4.1	Minimum rating	7
3.4.2	Default Fund	8
3.4.3	Margining	8
3.4.4	Operational capabilities	8
3.4.5	Duty of disclosure	8
<b>4.0</b>	<b>Custody/Money account structure</b>	<b>8</b>
4.1	Clearing	8
4.1.1	Clearing accounts	8
4.2	Margining	8
4.3	Collateral accounts for margins (initial and variation margin)	8
4.3.1	Custody collateral account for margin eligible securities	9
4.3.2	Cash collateral account for margin eligible currencies	9
4.4	Default Fund collateral account	9
4.4.1	Custody Default Fund collateral account	9
4.4.2	Money Default Fund collateral account	9
<b>5.0</b>	<b>Risk Management</b>	<b>9</b>
5.1	Objectives/Overview	10
5.2	Risk management process	10
5.3	Open positions	10
5.4	Margins	11
5.5	Calculation of margins	12
5.6	Initial margin (IM)	12
5.7	Risk buckets	12
5.8	Variation margin (VM)	15
5.9	Margin calls	15
<b>6.0</b>	<b>Default fund for MTFs</b>	<b>16</b>



## CloseUp SIX x-clear Ltd

### MTF Service Description

6.1	Adjustment duty	17
6.2	Defense lines	18
<b>7.0</b>	<b>Accepted collateral types</b>	<b>18</b>
<b>8.0</b>	<b>Settlement</b>	<b>18</b>
8.1	Settlement organization	19
8.2	Settlement amount	20
8.3	Settlement mode	20
8.4	Settlement for Swiss securities	20
8.5	Settlement for non-Swiss securities	20
8.6	Settlement standing instructions	21
<b>9.0</b>	<b>Settlement netting for MTF trades</b>	<b>21</b>
9.1	TDN for Swiss securities	21
9.2	TDN and second level shaping for non-Swiss securities	22
<b>10.0</b>	<b>Shaping</b>	<b>23</b>
<b>11.0</b>	<b>Aggregation model</b>	<b>23</b>
<b>12.0</b>	<b>Reconciliation</b>	<b>24</b>
<b>13.0</b>	<b>Generation of settlement instruction – net/gross</b>	<b>24</b>
13.1	Generation of settlement instruction – Swiss securities	24
13.2	Generation of settlement instruction – non-Swiss securities	25
<b>14.0</b>	<b>Late delivery and buy-in</b>	<b>25</b>
<b>15.0</b>	<b>Corporate Actions</b>	<b>25</b>
15.1	Claims	26
15.2	Buyer election	26
<b>16.0</b>	<b>Default</b>	<b>26</b>
<b>17.0</b>	<b>UK Stamp Duty Reserve Tax (SDRT)</b>	<b>27</b>
<b>18.0</b>	<b>Operating Calendar</b>	<b>27</b>
<b>19.0</b>	<b>Member interface with SIX x-clear</b>	<b>27</b>
<b>20.0</b>	<b>Pricing</b>	<b>27</b>

The title of the document, "CloseUp SIX x-clear Ltd", in a large grey font, with "MTF Service Description" in a smaller grey font below it.A small, square inset image in the top left corner showing a close-up of a computer keyboard with keys like '7', '5', and '8' visible.

## MTF Service Description

### 1.0 Introduction

With the introduction of the Markets in Financial Instruments Directive (MiFID), a framework was provided for alternative trading venues to the national stock exchanges across pan-European equity market space. These alternative trading venues are termed as Multilateral Trading Facilities (MTFs).

The primary functions of central counterparties (CCP) are:

- To ensure post-trade anonymity in order to prevent market distortions;
- To eliminate bilateral counterparty risks from trade date to settlement of trade – a requirement of increasing importance as a result of globalization of electronic trading platforms and in the event of a 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 the developments in the financial markets. Along with the netting functionality, risk minimization 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 MTFs with settlement at a defined place of settlement. SIX x-clear is a wholly-owned subsidiary of SIX Group Ltd, the integrated Swiss financial market infrastructure provider.

### 1.1 Scope of the document

This document covers the SIX x-clear service description for provision of clearing services to MTFs. For the service description of SIX Swiss Exchange and the London Stock Exchange, please refer to the existing service descriptions available at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > Exchanges > SIX Swiss Exchange > Service Description and at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > Exchanges > London Stock Exchange > Service Description > *Service Description – Central Counterparty (CCP) for the London Stock Exchange*, respectively.

## 2.0 Concept of the CCP

### 2.1 Clearing

As a post-trade process, clearing is 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.

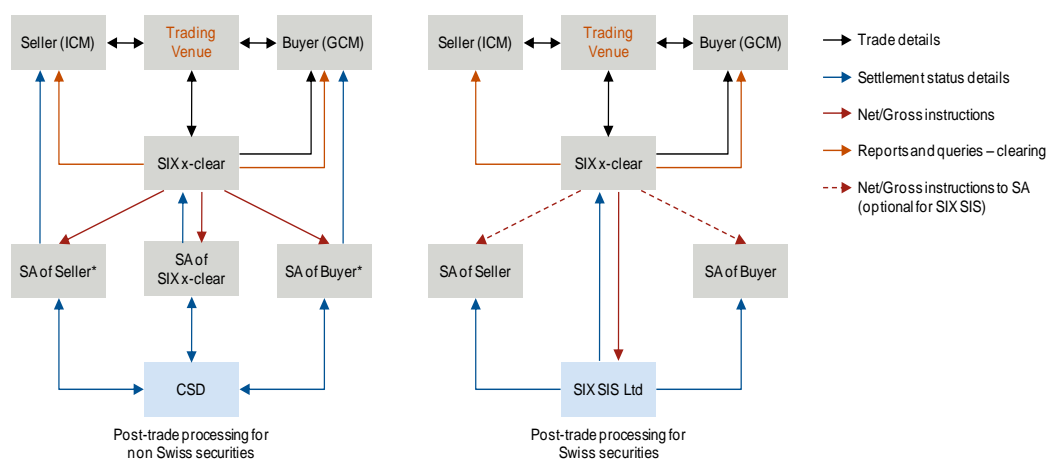
## CloseUp SIX x-clear Ltd

### MTF Service Description

#### 2.2 Clearing and settlement model

SIX x-clear offers clearing services to its clearing members for their trade executed on different MTFs for pan-European markets. The diagram below depicts the business model applicable to the members of SIX x-clear.

#### SIX x-clear Post Trade Processing Overview



\*Settlement agent of seller/buyer

#### 2.3 SIX x-clear as CCP

SIX x-clear has 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. The company also has a banking license 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 (SNB). SIX x-clear started business operations in May 2003.

Besides extending clearing services for MTFs, SIX x-clear offers clearing services for different national stock exchanges, such as the London Stock Exchange and SIX Swiss Exchange. 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 from one of the interface options to avail of SIX x-clear's 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 MTFs.

The title of the document, "CloseUp SIX x-clear Ltd", in a grey sans-serif font.

## CloseUp SIX x-clear Ltd

### MTF Service Description

- **Post-trade anonymity:** As a 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 as well as the reduction of 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 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 at [www.six-x-clear.com](http://www.six-x-clear.com) > Clients > Membership requirements.

To have trades effected on MTFs and cleared by SIX x-clear, SIX x-clear members can either be trading members of MTFs or can act as clearing-only participants of SIX SIS (for custody of SIX x-clear collateral and monthly fee collection) and have their own settlement arrangements to settle the trades at a defined place of settlement.

Each member must comply with the infrastructure requirements of MTFs, SIX x-clear and SIX SIS as applicable.

#### 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 MTFs participants that do not have clearing membership (Non-Clearing Members, NCMs).

#### 3.3 Individual Clearing Members (ICMs)

ICMs provide clearing for both their own MTF transactions and transactions effected by their clients. ICMS clear trades by having contractual relationships with the CCP on a principal basis.

The title of the document, "CloseUp SIX x-clear Ltd", in a grey sans-serif font.The subtitle of the document, "MTF Service Description", in a grey sans-serif font.Section 3.3.1 heading: "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). 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).

Section 3.3.2 heading: "3.3.2 Default Fund".

Please refer to chapter 6 *Default Fund for MTFs*.

Section 3.3.3 heading: "3.3.3 Margining".

The initial margin is calculated in real-time based on the net positions of all open contracts per security and currency combination held by the member. The open positions are computed by considering the net position resulting from trades on different exchanges in case of multiple listed stocks. Margin requirement is calculated based on the market specific risk factors and the member specific risk factor. Market-specific risk is measured according to a Value-at-Risk (VaR) based risk model, using a historical approach. The member's risk rating is used to calculate the member-specific risk factor. For the calculation of the initial margin, the same risk bucket structure (Further detail on risk buckets are explained in chapter 5 Risk Management) is applied to the securities traded on different exchanges, which are allocated to different risk buckets, depending on a security's VaR. Opposing positions within and across a risk bucket are netted using intra-risk and inter-risk bucket coefficients respectively. The process of computing the initial margin is explained in detail later. Depending on the member's rating, the margins are increased by the applicable risk rating coefficient.

Additionally, the variation margin is calculated hourly during market hours on the basis of the mark-to-market valuation of the net positions of all open contracts per security held by a member in a clearing account.

Section 3.4 heading: "3.4 General Clearing Members (GCMs)".

GCMs provide clearing for their own MTF transactions as well as transactions effected by their clients and third parties, i.e. MTF participants without direct access to a clearing house. The GCM is responsible for its NCMs' compliance with all rules and regulations of SIX x-clear. GCMs clear trades by having contractual relationships with the CCP on a principal basis.

Section 3.4.1 heading: "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).



## CloseUp SIX x-clear Ltd

### MTF Service Description

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).

#### 3.4.2 **Default Fund**

Please refer to chapter 6 *Default Fund for MTFs*.

#### 3.4.3 **Margining**

Please refer to chapter 3.3.3 *Margining* (for ICMs).

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

#### 3.4.4 **Operational capabilities**

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

#### 3.4.5 **Duty of disclosure**

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

### 4.0 **Custody/Money account structure**

#### 4.1 **Clearing**

##### 4.1.1 **Clearing accounts**

The members' open positions are recorded in clearing accounts. The members have the option to clear their own trades in a "House" clearing account and client trades in a "Client" clearing account.

#### 4.2 **Margining**

Members must maintain money and custody accounts for collateral management to clear trades via SIX x-clear. This allows for the management of collateral for margin and Default Fund requirements. The 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.

The sections below solely describe the collateral management facility at SIX SIS.

#### 4.3 **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 collateral management facility at SIX SIS to meet the margin requirements. These





## CloseUp SIX x-clear Ltd

### MTF Service Description

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 it.

The member can use the following collateral accounts:

#### 4.3.1 **Custody collateral account for margin eligible securities**

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

#### 4.3.2 **Cash collateral account for margin eligible currencies**

- Cash can be provided from a GBP or EUR account opened/held by a clearing member at a UK Protected Payment System bank (PPS bank).
- Cash can be provided from accounts held at SIX SIS or at SIC.

#### 4.4 **Default Fund collateral account**

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

##### 4.4.1 **Custody Default Fund collateral account**

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

##### 4.4.2 **Money Default Fund collateral account**

- Cash can be provided from a GBP or EUR account opened/held by a clearing member at a UK Protected Payment System bank (PPS bank).
- Cash can be provided from accounts held at SIX SIS or at SIC.

### 5.0 **Risk Management**

As CCP for MTFs, SIX x-clear assumes the risk on the buy/sell side and is liable towards the respective members for the fulfillment of obligations (both on the cash and the securities side) arising from MTFs trades. SIX x-clear guarantees the fulfillment 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.



## CloseUp SIX x-clear Ltd

### MTF Service Description

Clearing information such as open positions, margin details and the collateral placed for margins as well as the collateral utilizations can be viewed via online queries sent from the user's SIX x-clear interface. The clearing members also have the option of receiving this information using different reporting options available at SIX x-clear.

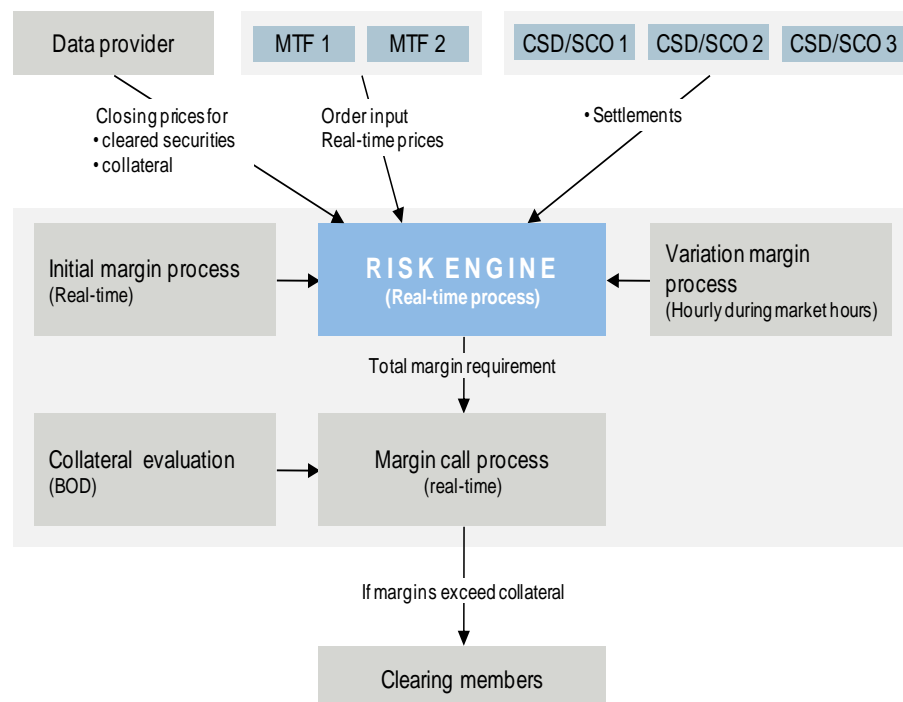
#### 5.1 Objectives/Overview

The primary objective is to minimize potential risks through effective and accurate risk management. In the event of the default of a member, the risk should be primarily borne by the defaulting member itself. Correspondingly, the following measures are employed to minimize 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 for margins.
- Pledging of collateral in the Default Fund to cover unpredictable losses.

#### 5.2 Risk management process

The following diagram provides a high-level overview of the risk management process:



#### 5.3 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 summarized per security and currency (of trade)

The title of the document, "CloseUp SIX x-clear Ltd", in a large grey font, with "MTF Service Description" in a smaller grey font below it.A small, square inset image showing a close-up of a computer keyboard, focusing on the keys with the numbers 7, 5, and 8.

### MTF Service Description

into one position called the "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.

## 5.4 Margins

The total margin required is the result of the initial margin multiplied by the risk rating coefficient, plus the variation margin.

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 to a clearing



## CloseUp SIX x-clear Ltd

### MTF Service Description

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 the 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 an hour. The total margins are recomputed with a periodicity of once an hour using the latest foreign exchange rates.

#### 5.5 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.

#### 5.6 Initial margin (IM)

Calculation of the initial margin is based on the 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 cleared trading venues – 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 Vodafone 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 three-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.

#### 5.7 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. (However, this setup could undergo changes based on the back testing results and the confidence level achieved.)

Risk bucket	VaR (%) lower	VaR (%) upper	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.

#### 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-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 Europe and stock "B" is traded on MTFs; 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*0.80) = 33.00
	B	Short	-700		-52.50	
BU03	A	Long	400	12.50	50.00	100-(50*0.80) = 60.00
	B	Short	-800		-100.00	

Bucket initial margin = (higher of "bucket IM<sub>Long</sub>" or "bucket IM<sub>Short</sub>") less "intra-bucket margin offset", where

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



## CloseUp SIX x-clear Ltd

### MTF Service Description

#### 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 IM (CHF)	Inter-bucket margin offset (CHF)	Total initial margin (CHF)
BU02	A	Long	1000	7.50	75.00	75-(52.5 * 0.80) = <b>33.00</b>	22.50	22.50*0.40 = <b>9.00</b>	33+60-9 = <b>84.00</b>
	B	Short	-700		-52.50				
BU03	C	Long	400	12.50	50.00	100-(50*0.80) = <b>60.00</b>	-50.00		
	D	Short	-800		-100.00				

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 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;



## CloseUp SIX x-clear Ltd

### MTF Service Description

- "net bucket IM" is the arithmetic sum of the IM of all securities within a risk bucket (with plus/minus sign).

#### 5.8 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.

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 favorable market movements, this has the effect of reducing the total margin, provided that the total margin does not sink below zero.

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.


#### 5.9 Margin calls

If a member's calculated margin requirements exceed the member's deposited collateral value, a margin call is automatically triggered in real time to settle the difference. A margin call must be met within

- 60 minutes after a margin call was issued to the clearing member as a consequence of insufficient collateral to meet margin requirements; and
- 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 GBP or EUR account at its UK payment bank, in favor of the cash collateral account at SIX SIS, in the name of SIX x-clear. 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 its UK payment bank.

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 denominated in GBP or EUR at its UK payment bank. Such available cash collateral is

The title of the document, "CloseUp SIX x-clear Ltd", in a grey sans-serif font.The subtitle of the document, "MTF Service Description", in a grey sans-serif font.A small image of a computer keyboard in the top left corner of the page.

transferred/paid by SIX SIS (on behalf of SIX x-clear) via its UK payment bank (concentration/correspondence) bank in London.

SIX x-clear has agreed with several financial institutions to co-operate with regard to the required margin call settlement services, whose names are published on the SIX x-clear website. Each clearing member may choose its UK Payment Bank (for margin call settlement purposes) at its own discretion. Such margin call settlement services are only required if a clearing member decides that neither its SIC account nor an account at SIX SIS is to be used to settle margin calls (money side) and to withdraw cash collateral.

## 6.0 Default fund for MTFs

The initial margin and the variation margin combined 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, the Default Fund for MTFs 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 a single joint default fund for MTFs. This leads to solidarity of risk taking between all SIX x-clear Members using the services of SIX x-clear on one or several MTFs. It facilitates the account keeping and the handling of the Default Funds for its Members because they have to deal with just one Default Fund.

The joint Default Fund for MTFs will be incrementally increased by extending clearing services to new MTFs. An upfront contribution defined by SIX x-clear will be required for the initial phases of the clearing of MTF transactions.

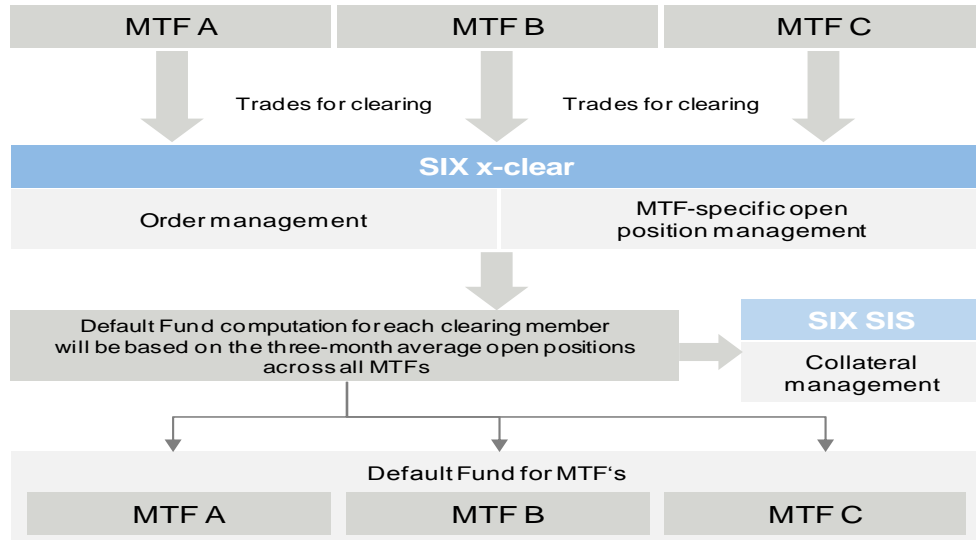
The Default Fund for MTFs is supported by contributions from members who used clearing services of SIX x-clear for MTFs. The amount to be contributed is, on the one hand, determined by the membership category (ICM/GCM) and, on the other hand, by the member's average gross open positions of the last three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

The diagram below depicts SIX x-clear's approach with regard to the Default Fund distribution. If a member uses clearing services for a MTF, a Default Fund contribution is required for the Default Fund of MTFs in question. The default of a member at any MTF which refers to the Default Fund for MTFs may have an impact. In case of insufficient margins the Default Fund contribution of the defaulting member and/or the contributions from all other members will be used to fulfill the obligations of the defaulting member.



## CloseUp SIX x-clear Ltd

### MTF Service Description



Contributions to SIX x-clear Default Funds are to be made in the form of money or securities. Members must meet the Default Funds 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 UK payment bank account, SIC account or an account held with SIX SIS.

Contributions to the Default Fund can be made by depositing securities eligible as collateral in a safe 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. two days upon notification. Default Fund contributions are secured by means of a regular pledge.

#### 6.1 Adjustment duty

Each member is obliged to make additional contributions to the Default Fund for MTFs. 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, 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 installments. SIX x-clear may demand that members make additional contributions if the Default Fund for MTFs 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).



## CloseUp SIX x-clear Ltd

### MTF Service Description

#### 6.2 Defense lines

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

The defense 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 favor of the Default Fund for the MTF
- Per calendar year, a maximum of 50% of the free reserves made in SIX x-clear's balance sheet
- Default Fund for the MTF (i.e. contributions from other clearing members)
- Additional collateral to the Default Fund for MTF arising from the replenishment of the MTF Default Fund
- Remaining provisions/reserves, profit and surplus capital from SIX x-clear

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

#### 7.0 Accepted collateral types

Eligible collateral to be provided within the framework of the overall risk management for margins and the Default Fund must be deposited with SIX x-clear

Accepted collateral types
Money (legal tender, freely convertible currencies accepted by SIX x-clear)
CH government bonds, confederation and cantons, denominated in CHF and UK government bonds (gilts) denominated in GBP
Other first-class CHF denominated bonds (minimum rating of A-); including SNB money market book claims
Highly rated bonds (minimum rating of A-); including ECB money market book claims

The deposited collateral is accounted for at market value less a haircut. Due to IRS regulations, US securities cannot be accepted as collateral.

#### 8.0 Settlement

Settlement of the trades executed on MTFs will be effected on as defined. SIX x-clear follows the following two models for settlement:

## CloseUp SIX x-clear Ltd

### MTF Service Description

- Custodian Model – Settlement using SIX x-clear's custodian (SIX SIS) to settle in the security's domestic market.
- Direct settlement model (only for Swiss market) – SIX x-clear will settle using its own account at SIX SIS, the domestic CSD for Swiss securities.

Each MTF transaction cleared by SIX x-clear has an intended settlement date (ISD). The ISD is either the third business day (e.g. T+3 – all markets except Germany) or second business day (e.g. T+2 – German market) based on the local market practices of security. 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 timeframe defined by the respective MTF. The transactions concluded on securities that are excluded from clearing are settled according to the non-CCP settlement model of the MTF, where the trading parties have to settle directly between themselves bilaterally.

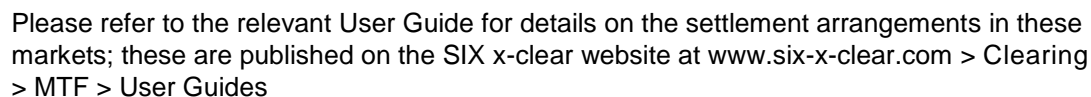
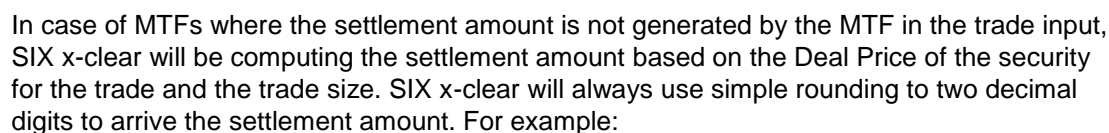
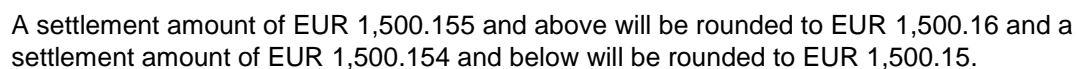
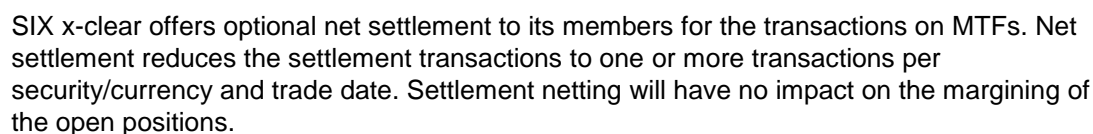
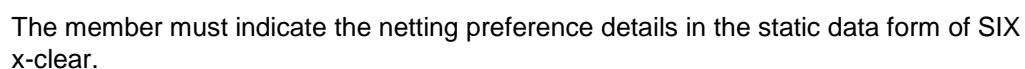
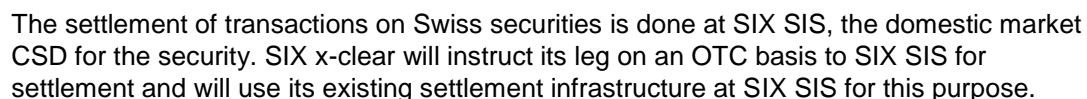
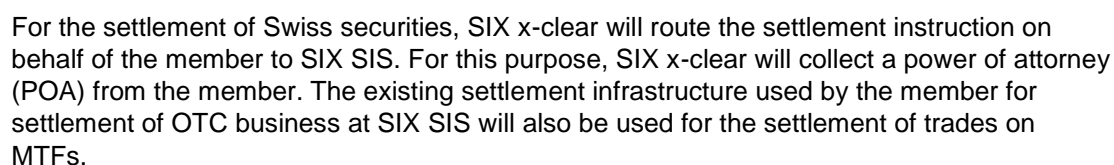
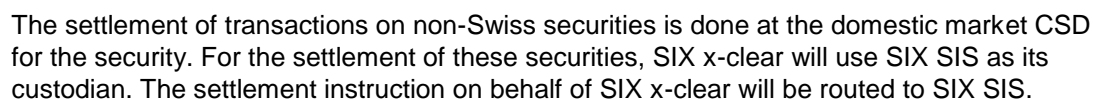
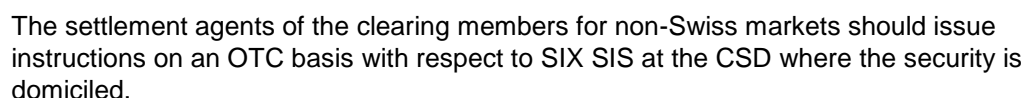
#### 8.1 Settlement organization

SIX x-clear offers its members settlement at the domestic CSD of the security for transactions executed on the MTF. SIX x-clear will participate in settlement at the settlement location on its own or through a settlement agent.

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 MTFs:

Market	Place of Settlement	Settlement instruction model
UK	Euroclear UK and Ireland	Bilateral input to Place of Settlement
NL	Euroclear Netherlands	Bilateral input to Place of Settlement
DE	Clearstream Banking Frankfurt	Bilateral input to Place of Settlement
FR	Euroclear France	Bilateral input to Place of Settlement
CH	SIX SIX Ltd	Direct CSD Settlement / Bilateral Input
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
BE	Euroclear Belgium	Bilateral input to Place of Settlement
AT	Oesterreichische Kontrollbank	Bilateral input to Place of Settlement
IT	Monte Titoli	Bilateral input to Place of Settlement
IE	Euroclear UK and Ireland	Bilateral input to Place of Settlement
ES	Sociedad de Gestion de los Sistemas	Bilateral input to Place of Settlement
PO	Interbolsa, Porto	Bilateral input to Place of Settlement
LU	Clearstream Banking Luxembourg	Bilateral input to Place of Settlement
EB	Euroclear Bank	Bilateral input to Place of Settlement
CZ	UNIVYC PLC	Bilateral input to Place of Settlement
HU	Központi Elszámolóház és Értéktár Rt (KELER)	Bilateral input to Place of Settlement

The title of the document, "CloseUp SIX x-clear Ltd", in a grey sans-serif font.The subtitle of the document, "MTF Service Description", in a grey sans-serif font.A paragraph of text providing a reference to user guides for settlement arrangements, published on the SIX x-clear website.Section header for the settlement amount, consisting of the number "8.2" and the bolded text "Settlement amount".A paragraph explaining the calculation of settlement amounts for MTFs, mentioning the use of deal price and trade size, and simple rounding to two decimal digits.A specific example of rounding rules for settlement amounts in EUR, showing how values above and below a certain point are rounded.Section header for the settlement mode, consisting of the number "8.3" and the bolded text "Settlement mode".A paragraph describing net settlement options for MTF transactions, highlighting that it reduces the number of transactions and has no impact on margining.A paragraph stating that members must specify netting preferences in the static data form provided by SIX x-clear.Section header for settlement for Swiss securities, consisting of the number "8.4" and the bolded text "Settlement for Swiss securities".A paragraph explaining that settlement for Swiss securities occurs at SIX SIS, with SIX x-clear using its existing infrastructure for this purpose.A paragraph detailing the routing of settlement instructions for Swiss securities to SIX SIS and the requirement for a power of attorney (POA) from the member.Section header for settlement for non-Swiss securities, consisting of the number "8.5" and the bolded text "Settlement for non-Swiss securities".A paragraph explaining that settlement for non-Swiss securities is done at the domestic market CSD, with SIX x-clear using SIX SIS as its custodian.A paragraph stating that settlement agents for non-Swiss markets should issue OTC instructions to SIX SIS at the CSD where the security is domiciled.



## CloseUp SIX x-clear Ltd

### MTF Service Description

#### 8.6 Settlement standing instructions

Every clearing member eligible to have cleared trades on an MTF needs to provide SIX x-clear with its clearing and settlement standing instruction details (CSSI). SIX x-clear maintains a CSSI form for each MTF which a member has to complete and provide. SIX x-clear will use these standing instructions to generate the clearing and settlement preference of the member on the MTF.

The CSSI Details will contain the following information:

##### 1. Clearing details

- Clearing member ID at SIX x-clear
- Default clearing account preference (Client (C)/House (H))

##### 2. Netting preference – gross/net

##### 3. Settlement details for each cleared market

- Settlement agent details
- Settlement account details – stock &/or cash
- POA to route the settlement instruction to the settlement agent

The CSSI details are specified for the following parameter combination:

- The trading source – MTF
- Trading firm ID
- Dealing capacity (PRINCIPAL/AGENCY)
- Settlement location

#### 9.0 Settlement netting for MTF trades

The settlement netting model offered by SIX x-clear to its clearing members is Trade Date Netting (TDN) and is explained below.

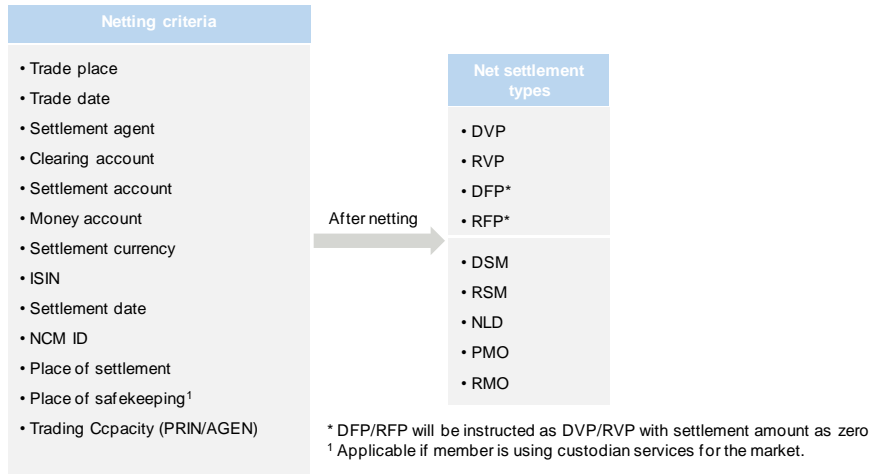
##### 9.1 TDN for Swiss securities

SIX x-clear offers optional TDN to its clearing members for trades on MTFs. The netting parameters used for such trades are as follows:

## CloseUp SIX x-clear Ltd

### MTF Service Description

#### Trade Date Netting at SIX x-clear – for MTF trades in Swiss securities

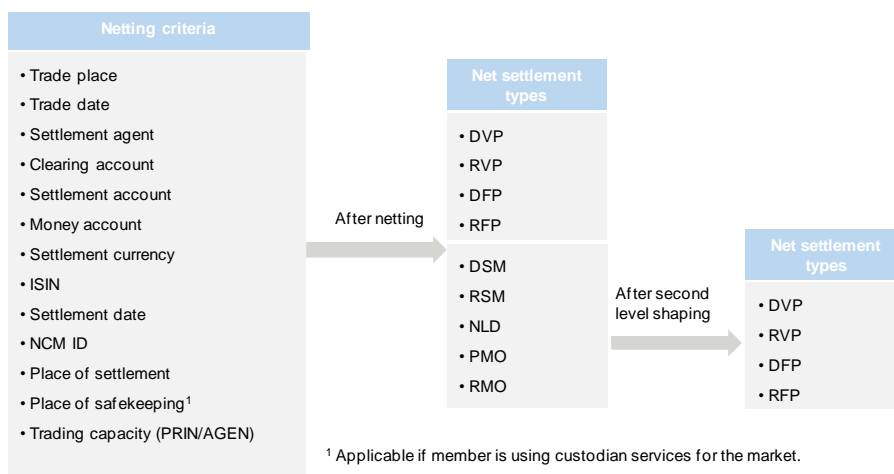


Netting will be performed after the clearing window at the MTF exchange is closed for the trading day. For Swiss securities all exotic settlement types such as DSM (delivery of security and money), RSM (receipt of security and money), PMO (pay money only), RMO (receive money only) or NLD (null deliveries) are supported.

#### 9.2 TDN and second level shaping for non-Swiss securities

SIX x-clear offers optional TDN to its clearing members for trades on MTFs. The netting parameters used for such trades are as follows:

#### Trade Date Netting at SIX x-clear – for MTF Trades in non-Swiss securities



Netting will be performed after the clearing window at the MTF exchange is closed for the trading day.



## CloseUp SIX x-clear Ltd

### MTF Service Description

In case the netting results into exotic settlement types such as DSM (delivery of security and money), RSM (receipt of security and money), PMO (pay money only), RMO (receive money only) or NLD (null deliveries), then these net orders will be further shaped to break the same into a combination of **versus payment** and **free of payment** instructions.

#### 10.0 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 case of the net transaction amount exceeding 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.

#### 11.0 Aggregation model

The aggregation model resolves the strange net positions by unwinding the strange net settlement types and performing aggregation of the delivery and receipt transactions separately and instruct them as independent DVP and RVP orders. In this model the member has the flexibility to restrict the strange net processing for null deliveries.

Members are required to choose between two different parameters:

- Strange net model
- Instruct NLD/NLR or not

For example, consider the following member:

Member	Trading place	Strange net model	NLD/NLR instructed	Member type
B124	CHIX	Aggregation model	Yes	GCM

Assume that the following transactions are sent to the system for each of the clearing members (other parameters such as trade date, settlement date, etc. are assumed to be same for clearing member, trading place and ISIN).

Member	Trade place	TRX type	ISIN	Quantity	Currency	Amount
B124	CHIX	DVP	ISIN1	50	GBP	500
B124	CHIX	DVP	ISIN1	50	GBP	500
B124	CHIX	RVP	ISIN1	100	GBP	1050

## CloseUp SIX x-clear Ltd

### MTF Service Description

B124	CHIX	DVP	ISIN2	100	GBP	1000
B124	CHIX	RVP	ISIN2	50	GBP	500
B124	CHIX	RVP	ISIN2	45	GBP	500
B124	CHIX	DVP	ISIN3	100	GBP	1030
B124	CHIX	RVP	ISIN3	100	GBP	1030

After the first level of netting, the transactions above would result in the following strange nets:

Member	Trade place	TRX type	ISIN	Quantity	Amount	Net references (pre aggregation)
B124	CHIX	PMO	ISIN1	0	-50	ABC01
B124	CHIX	DFP	ISIN2	-5	0	ABD01
B124	CHIX	NLD	ISIN3	0	0	ABE01

None these transactions are acceptable for settlement, hence it has to be further shaped into acceptable transaction formats.

As per the aggregation model, DVP and RVP are aggregated to two instructions per ISIN and clearing member and passed on for settlement.

Member	Trade place	TRX type	ISIN	Quantity	Amount	Net references (pre aggregation)
B124	CHIX	DVP	ISIN1	100	1000	ABC01001
B124	CHIX	RVP	ISIN1	100	1050	ABC01002
B124	CHIX	DVP	ISIN2	100	1000	ABD01001
B124	CHIX	RVP	ISIN2	95	1000	ABD01002
B124	CHIX	DVP	ISIN3	100	1030	ABE01001
B124	CHIX	RVP	ISIN3	100	1030	ABE01002

### 12.0 Reconciliation


SIX x-clear offers an optional message (Report ID: RDXO422) based gross/net reconciliation mechanism for the members. This would be sent during the end of day process at SIX x-clear. Members will get the details of the resulting net instructions and underlying gross transactions.

### 13.0 Generation of settlement instruction – net/gross

#### 13.1 Generation of settlement instruction – Swiss securities

Settlement of the transactions in Swiss securities happens on an OTC basis at SIX SIS, the domestic CSD for Swiss securities. For settlement of Swiss securities, SIX x-clear will instruct on its behalf and optionally on behalf of the member to SIX SIS. For instructing on behalf of the member, SIX SIS requires a POA from the member. The member can also instruct their settlement instruction directly to SIX SIS on a bilateral basis.





The member can continue to use the existing OTC settlement arrangement at SIX SIS for settlement of MTFs transactions on Swiss securities.

### 13.2 **Generation of settlement instruction – non-Swiss securities**

Settlement of the transactions in non-Swiss securities happens on an OTC basis at the domestic market CSD for the security on a bilateral input.

SIX x-clear informs its member with the settlement details either by a settlement allegation message (MT578) or a copy of the settlement instruction (MT540 – 543 based on settlement type) from SIX x-clear for the generated net/gross transactions. The instructions from SIX x-clear can be used by the member to input the settlement instructions at the place of settlement

SIX x-clear offers an optional service of generating the settlement instruction on behalf of the member to the settlement agent of member in the local market. To avail this service, the member needs to provide a POA to SIX x-clear. A POA allows SIX x-clear to send the settlement instruction (in ISO 15022 formats based on settlement type) on behalf of the member to the settlement agent of the member.

### 14.0 **Late delivery and buy-in**

The introduction of the late settlement regime is at the discretion of SIX x-clear in consultation with the trading platform.

The buy-in matrix for SIX Swiss Exchange is published on the SIX x-clear website at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > Guides > Late Settlement and Buy-In Guide (Addendum to Clearing Terms).

### 15.0 **Corporate Actions**

SIX x-clear mandates the settlement agent of SIX x-clear in the domestic market of the security to handle the corporate action processing on the open trades which are eligible for corporate action benefits.

The execution of corporate actions is different for securities that are already held in a custody account (existing positions) and for securities that have been purchased but not yet delivered (open transactions). Distributions on existing positions are made in accordance with the rules of the settlement organization with which the securities are deposited.

Distributions on positions deposited with SIX x-clear as collateral are directly credited by the main paying agent to the members of SIX x-clear (not via SIX x-clear).

With respect to distributions on open transactions, two types of corporate actions must be distinguished:

- Mandatory corporate actions, such as cash dividends or bonus shares



- Corporate actions with a choice of options (elective corporate events), such as takeover offers, repurchase offers, rights issues/capital increases.

For further details on corporate action processing, please refer the country specific user guides of SIX x-clear available at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > MTF > User Guides.

#### 15.1 **Claims**

Compensation/Claims on outstanding transactions due to corporate actions are handled by the settlement organizations according to the local market practices. The compensation procedure applied could be based on ex date or record date, depending on local market practices. The necessary transactions are automatically generated by the respective settlement organizations.

SIX x-clear always acts as the counterparty in its members' compensation transactions, and therefore these transactions fall under SIX x-clear's risk management until they are booked/settled.

Compensation transactions are booked as per the market practices of the place of settlement.

Further details are available in the country specific user guides published at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > MTF > User Guides.

#### 15.2 **Buyer election**

Buyer elections practices at the settlement location will be mandated by SIX x-clear.

Further details are available in the country specific user guides published at [www.six-x-clear.com](http://www.six-x-clear.com) > Clearing > MTF > User Guides.

#### 16.0 **Default**

The default procedure applied by SIX x-clear corresponds to the existing regulations and is summarized as follows:

A member that fails to fulfill its obligations under conditions defined in the General Terms and Conditions of Business (GTCB) can be declared a "defaulting member" by SIX x-clear upon consultation with the MTF, or will be declared in default by respective MTF(s). After having declared a member a "defaulting member", SIX x-clear issues a default notice and transmits it to the member. The consequences of a default notice take immediate effect.

After issuance of the default notice or the occurrence of an automatic close-out event, SIX x-clear does not register any new contracts of the defaulting member. In order to liquidate existing positions, close-out netting is done.

To compensate for any losses caused by the default of a member, the collateral of SIX x-clear is used, as described in chapter 6.2 *Defense lines*.



## CloseUp SIX x-clear Ltd

### MTF Service Description

#### 17.0 UK Stamp Duty Reserve Tax (SDRT)

The member is responsible for its tax reporting to HMRC and for establishing an account structure which will allow transactions to be reported correctly for stamp duty purposes.

#### 18.0 Operating Calendar

SIX x-clear accepts trades for clearing purposes on all days on which MTFs are open for trading.

SIX x-clear accepts settlement information from the different settlement locations on all operating days of the market (business day of the CSD in the domestic market).

Margins are calculated and margin calls sent on all operating days of SIX x-clear.

The SIX x-clear settlement calendar for different markets is published on the SIX Swiss Exchange website at [www.six-swiss-exchange.com](http://www.six-swiss-exchange.com) > Participants > Trading > Exchange Hours > Trading and Settlement Calendar.

#### 19.0 Member interface with SIX x-clear

webMAX is the interface provided for members using SIX x-clear as their CCP for different exchanges. Members can use this interface with SIX x-clear to perform online queries and receive clearing reports and margin call notices.

For receiving the settlement instructions, the members or the settlement agent of the member can use SWIFT connectivity or any existing messaging interface with SIX SIS.

#### 20.0 Pricing

The SIX x-clear pricing structure for post-trade can be accessed on the SIX x-clear website at [www.six-x-clear.com](http://www.six-x-clear.com) > Services > Pricing SIX x-clear.

The data contained in the above tables are valid as at 12 May 2011. SIX x-clear Ltd endeavors to keep these data complete, accurate and up to date.

Please note that links to websites of third parties are provided solely for information purposes and do not imply any recommendations whatsoever. SIX x-clear Ltd has neither provided nor processed the contents of the websites in question. Furthermore, SIX x-clear Ltd has not verified, reviewed or updated the contents of these websites and therefore disclaims all liability for the information contained therein.

**SIX SIS Ltd**  
Brandschenkestrasse 47  
CH-8002 Zurich

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

T +41 58 399 3111  
F +41 58 499 3111  
[www.six-sis.com](http://www.six-sis.com)