

Clearing Terms of SIX x-clear Ltd

TURQUOISE

January 2012



Clearing Terms of SIX x-clear Ltd

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1.0 Purpose of the Clearing Terms

In accordance with the Contract for Clearing Services (English Law) between SIX x-clear Ltd (hereinafter "x-clear") and the x-clear Member, these Clearing Terms form part of the Contractual Relationship between x-clear and the x-clear Member and shall be read in conjunction with the Contract for Clearing Services (English Law), the Pledge Agreements, the Financing Agreement for the financing of the Inter-CCP Collateral, the General Terms and Conditions for Business for Clearing of Trading Platform Transactions (English Law) (the "**GTCB**") and the Trading Platform Specific GTCB for Clearing of Transactions on Turquoise Multilateral Trading Platform (the "**Trading Platform Specific GTCB**"), operated by Turquoise Global Holdings Limited ("TGHL").

Certain requirements set out in the GTCB and the Trading Platform Specific GTCB will be defined in more detail in these Clearing Terms. Capitalised terms used in these Clearing Terms shall, unless specifically provided otherwise, have the meanings given to them in the GTCB, the Trading Platform Specific GTCB and, where appropriate, any other documents of the Contractual Relationship as mentioned in the paragraph above.

The specifications of the technical infrastructure (such as information technology or communications) are described separately in the Business Partner Specifications and are published on the x-clear website.

2.0 Technical and operational specifications

The x-clear Member may not commence operations that result in the provision of Clearing by x-clear to that member until it has confirmed in writing to x-clear that it has conducted tests that demonstrate that it is technically and operationally ready to participate in Clearing.

The relevant confirmation form will be provided to the x-clear Member by x-clear and will form part of its application for membership.

3.0 Formation of Contracts

Single Contracts arising from the provision of Clearing by x-clear to the x-clear Member are formed in accordance with the provisions of the GTCB and the Trading Platform Specific GTCB. x-clear Members should note that:

1. The scope of Clearing by x-clear is restricted to orders matched and executed on the Turquoise MTF Trading Platform's order books.
2. The Turquoise MTF Rules determine how orders on the Turquoise MTF Trading Platform are matched and executed so as to result in Turquoise MTF Transactions.
3. x-clear provides Clearing in respect of Turquoise MTF Transactions where at least one party to such a transaction is an x-clear Member or an x-clear NCM. Where at least one counterparty to the Turquoise MTF Transaction is neither an x-clear Member nor an x-clear NCM, a Co-CCP will clear the Turquoise MTF Transaction on behalf of that other party.

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4. Where x-clear is Clearing only one leg of a Turquoise MTF Transaction, and the other leg is being cleared by a Co-CCP, an Inter-CCP Contract shall arise between x-clear and the relevant Co-CCP in accordance with the relevant Link Agreement. The corresponding Single Contract between x-clear and the x-clear Member shall arise no earlier than the time when the Inter-CCP Contract arises.
5. Pursuant to the GTCB and/or the Trading Platform Specific GTCB, x-clear reserves the right to refuse to clear a Turquoise MTF Transaction or to cancel the corresponding Single Contract if the Turquoise MTF Transaction was not executed on the Turquoise MTF Trading Platform in accordance with the Turquoise MTF Rules, or any data in relation to such a transaction was not transmitted in accordance with the transmission specifications, as agreed between Turquoise MTF and x-clear, or if Turquoise MTF confirms by the end of the trading day that the Turquoise MTF Transaction arose as a result of an error or any other ground or basis set out in the GTCB or Trading Platform Specific GTCB.
6. Trades executed outside the order books of the Turquoise MTF Trading Platform are not currently subject to Clearing by x-clear.
7. The x-clear Member accepts the transaction journal of x-clear as evidence of Turquoise MTF Transactions transmitted to x-clear by means of the FIX protocol (Non-Repudiation). The data transmitted to x-clear with the identifying features of the x-clear Member are considered to be data and a declaration of intent of the x-clear Member. The x-clear Member bears the risk resulting from any misuse of its identifying features.

4.0 Margins

4.1 Total margin

The total of all Margin requirements for all Exchanges and MTFs in respect of which x-clear provides Clearing corresponds to the Initial Margin, multiplied by the risk rating coefficient, taking into account the Variation Margin.

The amount of Permissible Collateral required to be provided by an x-clear Member is reviewed by x-clear on a regular basis to enable a prompt response to market developments and to any changes in an individual x-clear Member's situation.

If an x-clear Member is a Turquoise MTF Member or a participant in other Exchanges and MTFs in respect of which x-clear provides Clearing, the Margin requirement for all such Exchanges and MTFs (including the Turquoise Trading Platform and other Trading Platforms) in which the x-clear Member is a participant, can be consolidated on the basis of all Outstanding Contracts (for the purpose of these Clearing Terms, this term refers to any unsettled contracts with x-clear as the Central Counterparty arising from transactions on all Exchanges and MTFs in respect of which x-clear provides Clearing) of each such Exchange and MTF. All Margin requirements are computed in Swiss francs (CHF).

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4.2 Initial margin and risk rating coefficient

4.2.1 Initial margin

4.2.1.1 Principle

The Initial Margin requirement is continually calculated for each Security and currency held by the x-clear Member on the basis of the net positions in all Outstanding Contracts of Exchanges and MTFs for which x-clear provides Clearing. In the case of multiple listed Securities, the x-clear Member's open positions as well as the Initial Margin will be computed by taking into account that member's net position from Outstanding Contracts on all Exchanges and MTFs in respect of which x-clear provides clearing. In so doing, the maximum value resulting from the calculation of the short-term and long-term VaR is decisive. For the calculation of the Initial Margin, Securities are allocated to different risk buckets.

Using the historic Value-at-Risk (VaR) model, the current VaR is calculated per Security. For this purpose, the historic data of the previous 2 years (approximately 500 working days) are adopted for the long-term VaR and the previous 3 months (approximately 90 days) for the short-term VaR, by calculating the 2-days' VaRs for equities and ETFs and the 7-day VaR for bonds, based on a confidence interval of 99% for equities, ETFs and bonds. The VaR is generally calculated on a weekly basis. However, in case of difficult market conditions, it may also be calculated daily.

If the same Securities are traded on different Exchanges and MTFs, they are subject to the same risk bucket structure. Risk buckets are formed at intervals of 5% for equities and ETFs and 1.5% for bonds. Securities eligible for Clearing with similar risks (defined by the VaR) are allocated to the same buckets and, for this purpose, the respective differentiated Initial Margin is calculated on the basis of the positions that have been netted per bucket.

Bucket structure for equities and ETFs

Risk bucket	VaR range in %	Initial margin in %
No. 1	0 to 5	3.5
No. 2	5 to 10	7.5
No. 3	10 to 15	12.5
No. 4	15 to 20	17.5
No. 5	20 to 25	22.5
No. 6	25 or more	27.5

For all Securities where trading prices are not available for a period of at least 250 Exchange or MTF trading days, the expected VaR amounts to between 10% and 15% for equities and ETFs.

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4.2.1.2 Risk netting coefficient I (intra-bucket)

Due to the fact that the Securities contained in a risk bucket do not correlate perfectly, a risk netting coefficient (based on the average correlation) is used to net the respective Securities positions within the same bucket (risk netting coefficient I). For each Security, the Initial Margin is therefore calculated first on the basis of the net position (long or short) in that Security. Subsequently, the total of all net long positions and the total of all net short positions within the same bucket are netted using the risk netting coefficient I for the smaller of both values.

4.2.1.3 Risk netting coefficient II (inter-bucket)

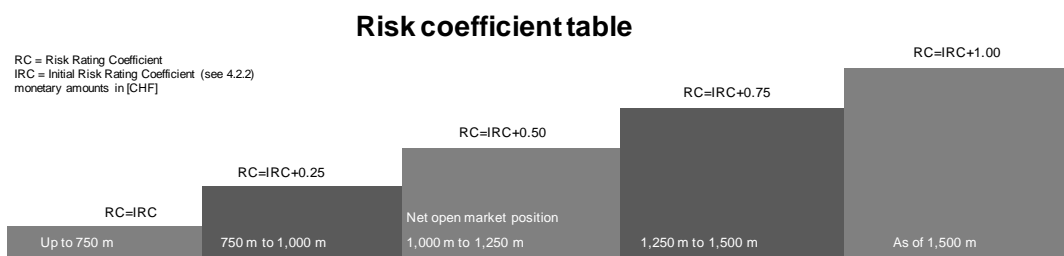
Additionally, a further risk netting coefficient is applied between the risk buckets of the same asset class. The net Initial Margins per risk bucket (positive/negative values) are aggregated across all buckets, taking into account the algebraic sign (plus/minus). This results in the total of the Initial Margins net long and the total of the Initial Margins net short. The smaller of these two figures is multiplied by the inter-bucket coefficient and the Initial Margin is reduced by that amount.

4.2.1.4 Initial Margin

Initial Margin requirements vary in real time with each transaction in a Security. The total amount of the Initial Margin is derived from the net position of all Outstanding Contracts relating to Securities and arising from transactions on all Exchanges and MTFs Cleared by x-clear contained in a risk bucket, by adding up all buckets.

4.2.1.5 Extreme net open risk position

In the case of extreme net open positions of a participant (i.e. the absolute values of a net long open minus a net short open position) of CHF 750 million or above (taking into account the consolidated position of the x-clear Member across all Exchanges and MTFs cleared by x-clear), the participant's existing risk rating coefficient is increased for the period in which this situation persists, i.e., the Initial Margin requirements are accordingly higher (see table below). The x-clear Member will be informed in the event that its Initial Margin requirements are increased on this basis.



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4.2.2 Risk rating coefficient

The risk rating coefficient depends on the x-clear Member's credit rating and has a direct bearing on the Initial Margin requirements. The risk rating coefficient is the factor by which the Initial Margin is multiplied to arrive at the Initial Margin requirement. x-clear accepts credit ratings from the following external rating agencies:

- Standard & Poor's
- Moody's
- FITCH/IBCA

The risk rating coefficient takes into account the probability of non-performance on the part of an x-clear Member. The risk rating coefficient is determined on the basis of the x-clear Member's credit rating and is used to weight the Initial Margin, i.e. Initial Margin requirements increase or decrease depending on the x-clear Member's credit rating.

The level of the risk rating coefficient is reviewed at least once a year and is determined as follows:

Rating			Risk rating coefficient
Standard & Poor's	Moody's	FITCH	
AAA to A-	Aaa to A3	AAA to A-	1
BBB+ to BBB-	Baa1 to Baa3	BBB+ to BBB-	1.5
BB+ to BB-	Ba1 to Ba3	BB+ to BB-	2
B+ or lower	B1 or lower	B+ or lower	determined case by case

x-clear uses the long-term rating. If several credit ratings are available, the second-best rating is used.

If an institution does not have an external credit rating or the external credit rating deviates strongly from x-clear's credit assessment, x-clear will determine an internal credit rating by means of a benchmarking process. Major benchmarking criteria include:

- Capital resources
- Degree of self-financing
- Profitability
- Background (company history, ownership structure, etc.)
- Domicile
- Reputation

4.3 Variation margin

The Variation Margin requirement covers market price fluctuations that impact upon open positions per Security. The Variation Margin requirement is marked to market several times daily, normally every hour, on the basis of the net position of all Outstanding Contracts of the x-clear Member per Security. The level of the Variation Margin depends solely on the market valuation. Positive and negative values (price gains/losses) are netted out across all

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Securities. Based on these values, negative values are charged additionally while positive values offset Initial Margin requirements.

4.4 Margin calls

If, at any time, the Margin provided is insufficient, or if the value of the Default Fund falls below x-clear's requirements for whatever reason, such that there are outstanding obligations of an x-clear Member to pay Contributions, x-clear will automatically issue a margin call in real time denominated in Swiss francs (CHF).

The following rules apply:

1. The Margin call is in principle to be met in the form of cash.
2. Every x-clear Member is required to designate an account which x-clear is entitled to debit with the amount of the Margin call in accordance with the Trading Platform Specific GTCB. The following types of account may be used:
 - Account denominated in sterling (GBP) or euro (EUR) at the x-clear Member's Payment Bank;
 - SIX Interbank Clearing account ("**SIC Account**"); or
 - Ordinary money account at SIX SIS Ltd (hereinafter called "**SIX SIS**").

For the purpose of transferring Margins, x-clear will open an x-clear Cash Collateral Account at SIX SIS for each x-clear Member in accordance with Clause 7.2.1.2 of these Clearing Terms.

3. Each Margin call must be met within sixty minutes after the call is issued to the x-clear Member.
4. If the Margin call is not satisfied by the x-clear Member within the stipulated time and the Margin requirements have still not been met, by no later than one hour before the start of trading on the next Business Day, Clearing by x-clear of future Turquoise MTF Transactions to which that x-clear Member is a party shall be suspended from that time and x-clear shall cease to act as the Central Counterparty in respect of that x-clear Member. x-clear will have an option at the same time to issue a Default Notice and declare the x-clear Member to be in Default. Any Default of an x-clear Member will be notified to TGHL.

4.4.1 Settlement of margin calls through a Payment Bank

As a membership requirement, an x-clear Member which decides to satisfy Margin calls through a Payment Bank must have an account denominated in sterling (GBP) or euro (EUR) at its Payment Bank. Margin calls will be processed by SIX SIS (on behalf of x-clear) by directly debiting the x-clear Member's sterling (GBP) or euro (EUR) account at its

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Payment Bank, in favour of the cash collateral account at SIX SIS, in the name of x-clear. Before Clearing by x-clear can commence in relation to an x-clear Member, SIX SIS (on behalf of x-clear) requires an appropriate direct debit authority/mandate signed by both the x-clear Member and its Payment Bank.

Upon an x-clear Member's request for the withdrawal of cash, subject to the availability of sufficient underlying Permissible Collateral to meet Margin and Default Fund contribution requirements (so that such requirements would continue to be satisfied after such withdrawal), x-clear shall arrange for the return of cash to the x-clear Member's account denominated in sterling (GBP) or euro (EUR) at its Payment Bank. Such available cash collateral is transferred/paid by SIX SIS (on behalf of x-clear) via its Payment Bank (whether a concentration or a correspondence bank) in London.

x-clear has secured the co-operation of several financial institutions with regard to the required Margin call settlement services, whose names are published on the x-clear website. The x-clear Member is responsible for meeting all banking charges imposed or charged by its Payment Bank.

4.5 **Margin deposits**

4.5.1 **Accepted collateral types**

x-clear will generally accept different types of collateral as Permissible Collateral. For further details see the separate lending norm rules which are described in the "Lending Norms" and can be accessed on the Clearing pages of the SIX Securities Services website at www.six-securities-services.com > Clearing > Quick Navigation > Lending Norms.

Permissible Collateral deposited is accounted for at market value and subject to a Haircut. Due to the Applicable Laws, Securities and other instruments issued in the United States of America cannot be accepted as Permissible Collateral.

Collateral must be replaced 15 days prior to the maturity of the relevant instrument posted as collateral. Following the expiry of the maturity date of an instrument posted as collateral, it shall no longer be counted as satisfying the x-clear Member's Margin requirements.

Upon request, other types of collateral can be examined for eligibility by x-clear on a case-by-case basis.

4.5.2 **Delivery into the x-clear Collateral Accounts**

Every x-clear Member may transfer Margins deposited in its respective Collateral Account as required by the Margin requirements of x-clear ("**Margin Deposits**") to the x-clear Collateral Accounts at all times. The delivery of Securities can be initiated through SIX SIS or Euroclear UK and Ireland. The delivery of cash can be initiated through SIX SIS or Payment Banks by x-clear Members. The transfer is effected via an ATF (MT542 or MT598-100) instruction for Securities or MT202 instruction for cash transfers, which is to be issued by the x-clear Member. x-clear only accepts as Margin Deposits the Permissible Collateral which is defined in Art. 4.5.1 of these Clearing Terms as Margin Deposits.

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4.5.3 **Withdrawal from the x-clear Collateral Accounts**

The withdrawal of Margin Deposits may be instructed automatically by each member (ATF or MT 202/200) or manually by x-clear. The x-clear Member is, in the case of manual processing, required to submit an appropriate request in writing, by fax or e-mail, to x-clear. Margin Deposits may be withdrawn only when no longer required to satisfy the x-clear Member's Margin requirements. If an x-clear Member wishes to replace the Margin Deposits, the new Permissible Collateral must be delivered prior to withdrawing the old Permissible Collateral.

Margin Deposits requested by 5:00 pm CET will be delivered to the x-clear Member on the same day by taking into account the currency transfer deadlines of SIX SIS; requests received after 5:00 pm CET will be executed as soon as reasonably practicable.

5.0 **MTF Default Fund**

The amount of the Default Contribution payable by the x-clear Member into the MTF Default Fund is dependent both on the membership category (x-clear ICM/x-clear GCM) and on the Average Gross Open Position over the previous three months.

The value of the Securities and/or currencies (in relation to cash) deposited by way of Contribution is calculated on the basis of their current market value after applying the applicable Haircut (published on the x-clear website) and not on the nominal value of the Securities or currencies deposited.

The types of Permissible Collateral and their respective values are specified in Clause 4.5.1 of these Clearing Terms. However, Securities which are equity Securities (including, but not limited to, shares in the capital of a company, or other securities or instruments with a similar or higher risk profile) will not be accepted as Permissible Collateral for the Default Fund.

If applicable, Permissible Collateral in the form of Securities must be replaced fifteen days prior to the maturity date or redemption of the Securities (and from the date of such replacement, such Securities cease to be treated as a Margin Deposit).

5.1 **Definitions**

5.1.1 **Average Gross Open Position**

The Average Gross Open Position is calculated monthly on a gross basis by reference to the Daily Gross Open Positions arising from MTF Transactions during the preceding three months. The Daily Gross Open Position means the total of all open positions of an x-clear Member in relation to MTF Transactions at the end of a Business Day.

5.2 **Additional Default Fund Contributions**

x-clear Members are obliged to make additional Default Fund Contributions to the MTF Default Fund if any of the following occur:

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5.2.1 **Change in gross open position over the previous three months**

There is a change in the x-clear Member's Average Gross Open Position over the previous three months. The Average Gross Open Position over the previous three months is calculated on a monthly basis according to Clause 5.1 of these Clearing Terms. A change in the Average Gross Open Position (increase/decrease) will necessitate an adjustment to the Default Fund Contribution to be made. The amount of the Default Fund Contribution is adjusted in accordance with Clause 5.4 of these Clearing Terms. If the Default Fund Contribution needs to be adjusted, the relevant x-clear Member shall be notified of the same. The adjustment must be effected within two calendar days of the notification. If the additional Default Fund Contribution is not made within the stipulated period of two calendar days, x-clear will issue a Margin call and perform a direct debit. The debit is made to the x-clear Member's designated account for direct debits applicable to Margin requirements in accordance with Clause 4.4 of these Clearing Terms. The provisions of Clause 4.4 above apply to margin calls issued under this Clause 5.2.1.

5.2.2 **Price fluctuations**

If, as a result of a diminution in the value of the Permissible Collateral provided by way of a Default Fund Contribution, the Contribution requirements are not met and x-clear notifies the x-clear Member of the same, the x-clear Member shall provide additional Permissible Collateral within sixty minutes of being so notified by x-clear.

5.3 **Use of the MTF Default Fund (obligation to provide additional Permissible Collateral)**

Each x-clear Member is obliged to provide additional Permissible Collateral in favour of the MTF Default Fund in an amount not exceeding that x-clear Member's current Contribution liability in respect of the MTF Default Fund. x-clear can demand that additional Permissible Collateral be provided if the MTF Default Fund is used on one or more occasions. This obligation to provide additional Permissible Collateral may have to be met in one single instalment (full drawdown on the entire MTF Default Fund) or, in the event that several drawdowns are made and the first drawdown does not exhaust the entire MTF Default Fund, in several instalments (partial drawdowns). The amount of additional Permissible Collateral to be provided by each x-clear Member is calculated on a pro rata basis, i.e. corresponding to the proportion which each Member's Default Fund Contribution liability bears to the total existing size of the MTF Default Fund.

Notifications requiring the x-clear Member to provide additional Permissible Collateral in favour of the MTF Default Fund will be made by x-clear to x-clear Members in writing.

Permissible Collateral by way of Default Fund Contribution to restore the amount drawn down must be transferred to x-clear within five Business Days of the drawdown.

5.4 **Amount of Default Fund Contribution**

The Default Fund Contribution liability towards the MTF Default Fund is secured by means of a Regular Pledge governed by Swiss law in favour of x-clear and is determined monthly on the basis of the participant's Average Gross Open Position over the preceding three months

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in proportion to the Average Gross Open Position over the preceding three months of the remaining x-clear Members. The following minimum Contributions apply (with no upper cap limit):

x-clear ICMs: Swiss francs (CHF) 0.5 million

x-clear GCMs: Swiss francs (CHF) 5.0 million

All Contributions are rounded up to the next Swiss franc (CHF) 0.5 million increment. An upfront Default Fund Contribution, defined by x-clear, will be required for the initial phases of the Clearing of Turquoise MTF Transactions.

5.5 **Delivery and withdrawal of pledged collateral into and from the Default Fund**

The pledged collateral for the Default Fund will remain in the x-clear Member's Default Fund Collateral Account(s) (Securities and/or cash) at SIX SIS. A corresponding pledge entitlement for x-clear will be annotated on the x-clear Member's accounts.

6.0 **Order of realisation of collateral (defence lines)**

The Initial Margin, the Variation Margin and the Default Fund shall be realised/sold on the open market in the circumstances provided for in the GTCB and the Pledge Agreements in the following order:

- Margins provided by the Defaulting x-clear Member;
- Contributions of the Defaulting x-clear Member to the MTF Default Fund;
- Per calendar year, a maximum of 50% of available free reserves set aside by x-clear to satisfy outstanding obligations of the x-clear Member following a Default;
- Contributions of non-Defaulting x-clear Members to the MTF Default Fund;
- Additional collateral (whether or not Permissible Collateral) arising from the replenishment of the MTF Default Fund; and
- The remainder of x-clear's provisions and its capital and reserves.

The purpose of this Art. 6 and, *inter alia*, the provision of Margin and Default Fund Contributions is to address and prevent the incidence of systemic risk that may arise in relation to Clearing, the Turquoise Trading Platform and other platforms operated by TGHL or other Exchanges or MTFs in respect of which x-clear provides Clearing.

7.0 **Account structure**

Each x-clear Member is required to maintain specific accounts for the purposes of Clearing. It is immaterial for this purpose whether the x-clear Member is an x-clear GCM or an x-clear ICM. A distinction is made between

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- a. **Clearing Accounts** where positions are recorded (the "**Clearing Accounts**", which comprise a "House Account" and "Client Account" for each x-clear Member);
- b. **Collateral Accounts** where collateral for the purposes of Margin and Default Fund Contributions is maintained (for cash collateral in a "Cash Collateral Account" and for Securities collateral in a "Securities Collateral Account", each a "**Collateral Account**"); and
- c. **Financing Contribution Accounts.**

x-clear Members have to maintain cash and custody accounts for collateral management at SIX SIS (on behalf of x-clear). SIX SIS account query options are defined in the Business Partner Specifications.

x-clear may use accounts at the x-clear Member's Payment Bank in order to collect amounts owing in cash from x-clear Members following a Margin call and pay on request amounts owed in cash to x-clear Members.

7.1 Clearing Accounts

The x-clear Member's Outstanding Contracts from trades effected on Turquoise MTF are recorded in Clearing Accounts. The Clearing Accounts are maintained at x-clear.

As standard, x-clear will open two Clearing Accounts (a House Account and Client Account) for x-clear Members who are x-clear GCMs. Trades which the x-clear GCM is Clearing for itself will be allocated to the House Account and those being cleared by the x-clear GCM for x-clear NCMs will be allocated to the Client Account.

On the basis of the net positions of all Outstanding Contracts per Security, the required Margin is calculated on the basis of these Clearing Accounts and matched against the Permissible Collateral.

7.2 Margining

7.2.1 x-clear Collateral Accounts for Margin Deposits

For the purpose of posting Margin, x-clear will open for each x-clear Member Collateral Accounts (cash and Securities) at SIX SIS in the name of x-clear. The Permissible Collateral will be provided to x-clear by way of an Irregular Pledge under a Pledge Agreement for Margins.

The x-clear Member shall at all times ensure that its x-clear Collateral Accounts show a credit balance in the amount of the deposits made by it to fulfil its obligations to provide Margin and satisfy Margin calls.

Information on the extent of use of the Permissible Collateral can be requested by the x-clear Member at any time.

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The extent of usage of the collateral can be called up by the x-clear Member at any time.

7.2.1.1 **x-clear Securities Collateral Account**

x-clear accepts cash and Securities as Permissible Collateral in accordance with Art. 4.5.1 of these Clearing Terms.

7.2.1.2 **x-clear Cash Collateral Account**

In addition to Permissible Collateral in the form of Securities, x-clear Members may also provide collateral in the form of cash. x-clear will open a Cash Collateral Account for each currency in which cash is provided.

7.2.2 **Dispo Collateral Accounts**

At the end of each Business Day x-clear will transfer any Permissible Collateral not required to meet the x-clear Member's Margin requirements (Securities and/or cash) from the x-clear Collateral Accounts to the relevant Dispo Collateral Account(s) operated on behalf of the x-clear Member. Permissible Collateral which is transferred from the Securities or Cash Collateral Account(s) to the Dispo Collateral Accounts shall be rounded down to the next smallest unit (for cash) or denomination (for Securities).

At the beginning of each Business Day x-clear will transfer any Permissible Collateral in the Dispo Collateral Accounts from the x-clear Member's Dispo Collateral Accounts to the x-clear Collateral Accounts.

7.3 **Default Fund Collateral Accounts**

x-clear will open Default Fund Collateral Account(s) at SIX SIS for each x-clear Member (Securities and/or cash) for the purposes of Default Fund Contributions (a "Default Fund Collateral Account").

The accounts will be in the name of the x-clear Member. The credit balance of the Default Fund Collateral Accounts will be pledged to x-clear by means of a Regular Pledge under a Pledge Agreement for the Default Funds as governed by Swiss law.

7.4 **Financing Contribution Accounts**

x-clear will open Financing Contribution Account(s) at SIX SIS for each x-clear Member (Securities and/or cash).

The Financing Contribution Accounts at SIX SIS will be in the name of x-clear. The credit balance of the Financing Contribution Accounts will be transferred to x-clear according to the Financing Agreement for the financing of the Inter-CCP Collateral as governed by Swiss law.

In case of the default of x-clear, the Inter-CCP Collateral financed by the x-clear Members will be used to cover the inter-CCP exposure.

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8.0 Competitive Clearing

A Co-CCP is a Central Counterparty appointed by TGHL for the Clearing of Turquoise MTF Transactions and party to a Link Agreement with x-clear. x-clear will always apply a risk coefficient of 1 for a Co-CCP. Co-CCPs are exempt from Default Fund Contribution requirements.

The x-clear Member acknowledges that x-clear may act on behalf of a Co-CCP to facilitate settlement performance or corporate action procedures, to execute a buy-in or a Late Settlement regime or other procedures as determined by the relevant Link Agreement. Further, the x-clear Member acknowledges that in accordance with the European Code of Conduct for Clearing and Settlement dated 7 November 2006 (including the Access and Interoperability Guidelines dated 28 June 2007), any part of the Contractual Relationship may be amended by x-clear as a consequence of an exercise by an incumbent Co-CCP of its rights to define the key principles and terms of interoperability or in order to ensure that x-clear can interoperate with such incumbent Co-CCP all in accordance with the Contract for Clearing Services (English Law) executed by x-clear and the x-clear Member.

9.0 Financing Contribution and Additional Financing Contribution

SIX x-clear can use the Financing Contributions and the Additional Financing Contributions only for the financing of the Inter-CCP Collateral.

9.1 Three pillars approach

If Members trade in inter-operative markets, inter-CCP exposures can arise between two or more CCPs due to different CCP membership of the involved parties. Such inter-CCP exposures have to be covered by additional assets, independent and segregated from any other collateral provided by the x-clear Member, to fulfil Inter-CCP Collateral requirement of Co-CCPs. Each x-clear Member shall, in addition to providing Margin and making Default Fund Contributions, provide (Additional) Financing Contributions to x-clear for the financing of the Inter-CCP Collateral. Such (Additional) Financing Contribution will be provided in accordance with and subject to the Financing Agreement for the financing of the Inter-CCP Collateral and as further described below. An (Additional) Financing Contribution shall be required for so long as there is a Trading Platform which is also cleared by a Co-CCP in respect of which x-clear provides Clearing to the x-clear Member.

To finance the Inter-CCP Collateral, a fixed fund (which has been set for the time being at an amount of CHF 200 million) is maintained based on a three-pillar system:

1st pillar: The Financing Contribution from all x-clear Members is the sum of an Initial Contribution from each Member and reflects half of the fixed fund. It must be provided to x-clear as individual participant contributions.

2nd pillar: The other half of the fixed fund is provided by SIX x-clear.

3rd pillar: Any peaks (triple witching day, etc) that cause the fixed fund to be exceeded are to be covered by Additional Financing Contributions.

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SIX x-clear will review the adequacy of the fund from time to time and make any corrections to the amount of the Initial Contribution as required by informing x-clear Members 30 days in advance of such change.

x-clear can issue an x-clear Member with a Credit Call in order to top up the Financing Contribution if the value of the Financing Contribution made available by the x-clear Member under Pillar 1 has reduced (whereby this value is calculated on the basis of the current market value less the applicable Haircut) and this reduction in value has caused the value of the same x-clear Member's Financing Contributions under Pillar 1 to fall below the level required by the same x-clear Member to meet the financing of the Initial Contribution.

9.2 Financing Contribution

The Financing Contribution of an x-clear Member has to be provided by way of Securities Funds and/or Currency Funds. The Financing Contribution is calculated on a monthly basis and has to be delivered within two Business Days after receipt of a Utilisation Request (Credit Call). If the requested Financing Contribution is not received after two Business Days, x-clear may initiate a direct debit and debit the account provided for Margin of the relevant x-clear Member with the outstanding Financing Contribution.

The calculation and allocation method for the Financing Contribution is based on the same approach as used for Default Funds. The Financing Contribution is calculated using the following formula:

$$\frac{\text{Average Gross Open Position (per x-clear Member)}}{\text{Average Gross Open Position (all x-clear Members)}} \times \text{Initial Contribution}$$

The average gross open position is based on the average of the Daily Gross Open Positions calculated over the three months preceding each of the Monthly Calculation Dates of the Financing Contribution. The value of the Securities Funds and/or Currency Funds deposited for the purpose of a Financing Contribution is calculated on the basis of their current market value after applying the applicable Haircut (see Lending Norms published on the x-clear website) and not on the nominal value of the Securities Funds or Currency Funds deposited. All funds are rounded up to the next Swiss franc (CHF) 10,000 increment.

The transfer is effected via an ATF (MT542 or MT598-100) instruction for Securities or MT202 instruction for cash transfer, which is to be issued by the x-clear Member. The x-clear Member is, in the case of manual processing, required to submit an appropriate request in writing either by fax or by e-mail.

x-clear accepts as Eligible Securities and/or Eligible Currency (both as defined in the Financing Agreement for the financing of the Inter-CCP Collateral) only the products and/or currencies as prescribed in the Rules and Regulations and Lending Norms.

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9.3 **Additional Financing Contribution (Credit Call)**

9.3.1 **Request for Additional Financing Contributions**

If additional assets are required for the financing of the Inter-CCP Collateral, x-clear may at any time during the Monthly Calculation Period of the Financing Contribution request one or more Additional Financing Contributions from an x-clear Member by means of a Credit Call. The sum of the Additional Financing Contributions are capped at a maximum of two times the individual x-clear Member's Financing Contribution.

x-clear Members are obliged to make Additional Financing Contributions if the sum of all Daily Gross Open Positions of all x-clear Members considerably deviates from the usual sum of the Daily Gross Open Positions of all x-clear Members (e.g. triple witching Friday) and if this deviation leads to a shortfall in the amounts made available under Pillar 1 and Pillar 2 falling to a level insufficient to guarantee the financing of their Inter-CCP Collateral, a Credit Call will be issued for all x-clear Members to cover such shortfall. The amount to be provided by each x-clear Member will be calculated in accordance with the provisions of the Financing Agreement for the financing of the Inter-CCP Collateral. If the increased amount is no longer required, x-clear shall notify the x-clear Member by e-mail.

9.3.2 **Rules for providing Additional Financing Contributions**

The following rules apply:

1. The calculation and allocation method for Additional Financing Contributions refers to the same approach as used for Default Fund Contributions.
2. The credit call for Additional Financing Contributions is in principle to be met in the form of Eligible Currencies.
3. Every x-clear Member is required to designate an account which x-clear is entitled to debit with the amount of the credit call. The following types of account may be used:
 - a. Account denominated in sterling (GBP) or euro (EUR) at the x-clear Member's Payment Bank;
 - b. SIC account; or
 - c. Ordinary money account at SIX SIS.

Additional contributions will be transferred by x-clear to the Currency Funds Account.

4. Each Credit Call for Additional Financing Contributions during the month must be met within sixty minutes after the credit call is issued to the x-clear Member. If the Credit Call is not satisfied by the x-clear Member within the stipulated time, Clearing by x-clear of future Turquoise MTF Transactions in respect of that x-clear Member shall be suspended from that time, and x-clear shall cease to act as Central Counterparty in respect of that x-clear Member. x-clear will have an option at the same time to issue a Default Notice and declare

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the x-clear Member to be in Default. Any Default of an x-clear Member will be notified to Turquoise.

9.4 **Withdrawal and replacement of (Additional) Financing Contribution into the x-clear Financing Contribution Accounts**

The withdrawal of Excess Funds (as defined in the Agreement for the Financing of the Inter-CPP Collateral) may be instructed manually by each x-clear Member or by x-clear. The x-clear Member is, in the case of manual processing, required to submit an appropriate request in writing to x-clear either by e-mail, fax or letter. Upon receiving a written request for a withdrawal from the x-clear Member, x-clear will retransfer any Excess Funds on a best-effort basis depending on the availability of Inter-CCP Collateral from the external collateral manager (Clearstream Banking, Luxembourg).

If an x-clear Member wishes to replace Eligible Securities and/or Eligible Currency deposited for the purpose of (Additional) Financing Contribution, the new Eligible Securities and/or Eligible Currency must be delivered prior to withdrawing the old Eligible Securities and/or Eligible Currency (see chapter 5.5.1 *Accepted collateral types*).

Eligible Securities deposited for the purpose of a Financing Contribution must be replaced fifteen days prior to the maturity date or redemption of Securities (and from the date of such replacement, such Securities cease to be treated as a Financing Contribution).

Upon termination of the Financing Agreement, x-clear will retransfer the Financing Contribution and Additional Financing Contribution at the end of the current Monthly Calculation Period.

10.0 **Settlement**

10.1 **General remarks**

Turquoise MTF Transactions subject to Clearing by x-clear will be settled on the basis of the Applicable Laws, rules and market practices prevailing in the market of the relevant Security. Each x-clear Member must have appropriate settlement arrangements in place to enable Settlement to take place in accordance with these Clearing Terms. x-clear Members shall notify x-clear of their settlement arrangements for different countries and markets. x-clear will use SIX SIS as its custodian for settling its leg of the settlement instruction in different markets. The settlement of the settlement instruction will be on an over-the-counter basis.

10.2 **Settlement Netting**

x-clear offers optional net settlement to its members for Turquoise MTF Transactions, which are subject to Clearing by x-clear. Net settlement reduces the settlement transactions to one or more transactions per Security/currency and trade date. Settlement netting will have no impact on the Margining of Outstanding Contracts. The x-clear Member must indicate the netting preference details in the static data form of Turquoise MTF and x-clear.

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x-clear allows optional Trade Date Netting ("**TDN**") for x-clear Members for Turquoise MTF Transactions subject to Clearing by x-clear. Such netting will be performed after the clearing window at the Turquoise MTF Trading Platform is closed for the trading day.

x-clear will extend its settlement netting facility to enable settlement netting to take place on a cross-Trading Platform basis, subject to the Applicable Laws, market practices, the co-operation of Trading Platforms and Approved Settlement Systems, as well as harmonisation between Co-CCPs.

10.3 **Shaping**

As a result of the netting, as discussed above, the net settlement transaction may represent a substantially large size in terms of amounts payable in respect of it (as determined by x-clear at its sole discretion). To prevent such large sizes, the x-clear Member may instruct x-clear to specify a maximum amount per currency for the net settlement transaction. Where the net transaction amount in relation to a net settlement transaction exceeds this cap a "shaping" process takes place, in which the net settlement transaction is divided into a number of net settlement transactions of smaller amounts.

10.4 **Strange nets/Exotic instructions**

If the netting of settlement instructions results in any of the following exotic instructions, namely, security and money transactions, money-only transactions or null deliveries, then a special treatment is applied to such "strange nets", "exotic instructions" or "odd settlements".

x-clear offers clients the choice as to how strange nets are handled. The options offered include:

- Direct strange net settlement: only where the local CSD allows for strange net settlement.
- Second level shaping: which divides the strange nets into a combination of Versus Payment and Free of Payment Instructions.
- Aggregation: which separately aggregates gross buys and nets to net RVPs and DVPs.
- Segregation: which separates Securities and cash to independent instructions.

x-clear will extend its services to give the x-clear Members an additional choice of directional netting, which aggregates the gross buys and sells separately to net RVPs and net DVPs.

10.5 **Place of Settlement**

x-clear will participate in Settlement at the Settlement location on the Home Market Basis on its own or through a settlement agent. The member must indicate the Settlement preference details in the static data form of the Turquoise Trading Platform to x-clear.

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To date, the Approved Settlement Systems in relation to various markets are set out in separate guides published on the x-clear website and acknowledged by means of Clearing notices.

x-clear's own Settlement arrangements and service levels in relation to the various markets are set out in the country-specific MTF Settlement Agent Guides published on the x-clear website.

10.6 Settlement instruction generation

Settlement of transactions happens on an over-the-counter basis at the predefined place of Settlement. The x-clear Member may choose to receive either a settlement allegation message (MT578) or a copy of the settlement instruction (MT54x) from x-clear for the generated net/gross transactions. The instructions from x-clear can be used by the x-clear Member to input the settlement instructions at the place of Settlement.

x-clear can generate the settlement instruction for the x-clear Member for onward transmission to that Member's settlement agent in the local market, if the x-clear Member so requests. The x-clear Member must provide an appropriate power of attorney to x-clear. This allows x-clear to send the settlement instruction on behalf of the x-clear Member to its settlement agent.

The x-clear Member is solely responsible and liable for meeting the functional requirements, time deadlines and other requirements with respect to its settlement arrangements at the place of Settlement.

x-clear will use SIX SIS as its settlement agent for the Settlement of transactions at the local market. SIX SIS will in turn use its custodial network or direct links with central Securities depositories to effect Settlement on x-clear's behalf. With the input of the settlement instructions from the x-clear Member and/or its settlement agent and from the settlement agent of x-clear at the place of Settlement, Settlement will be sought to be effected on the Intended Settlement Date. On Settlement of Single Contracts, x-clear Members will receive the Settlement information through their settlement agents only. x-clear will not send any Settlement-related information to x-clear Members or their settlement agents.

Turquoise MTF allows cross-trading venue settlement netting, except for the United Kingdom market. x-clear supports settlement netting across trading venues, subject to the Applicable Laws, market practices, the co-operation of Trading Platforms and Approved Settlement Systems, as well as harmonisation between Co-CCPs.

x-clear Members are solely responsible for:

- reporting transactions appropriately for applicable stamp duty purposes and keeping records if required by local tax authorities; and
- obtaining UK stamp duty reserve tax relief and Irish stamp duty relief.

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11.0 Late Settlement & Buy-In

To support the Settlement discipline and fulfil the Settlement obligations, x-clear may take the following measures:

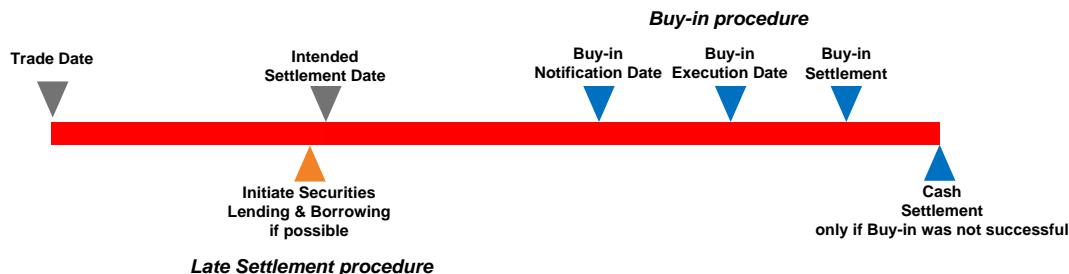
Late Settlement procedure consisting of

- Late settlement fee
- Securities lending and borrowing
- Buy-in procedure

A Late Settlement fee for a specific trading venue will only be introduced if the settlement discipline is not satisfactory for this execution venue. A corresponding Clearing notice will be issued in due time to announce the start of the Late Settlement fee regime.

A buy-in regime is in place for all trading venues from the start. The buy-in periods and schedules may change over time and may be different from venue to venue. Corresponding deviations from the schedule in this document are announced in due time via Clearing notices.

The graphic below shows a generic overview of the schedule of these procedures.



If Settlement is not anticipated for the intended Settlement date ("ISD"), x-clear may engage in securities lending and borrowing to enable the trade to settle despite the seller's non-delivery. A Late settlement fee may be charged to the failing x-clear member (the Selling x-clear Member). Half of this fee would be passed on to the Buying x-clear Member in cases where it was not possible to borrow the relevant Securities.

If the Selling x-clear Member has not delivered Securities in time, a buy-in process will be started after a certain market-specific time period. x-clear, as the formal counterparty to the Buying x-clear Member, will acquire the missing Securities in the market and pass on the costs incurred to the Selling x-clear Member. The aim of performing a buy-in process is to ensure liquidity in the market and to fulfil the agreed trades in a reasonable timeframe.

Currently, established rules and market practice for buy-ins differ significantly in local markets. Harmonising the rules applied would increase the efficiency and transparency of the buy-in process and benefit market participants (Giovannini Barrier 6). Negotiations have started with the aim of replacing current market practice by more standardised terms.

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Therefore, buy-in rules currently regarded as market practice are presented in this document, as a complement to x-clear's market-specific user guides. If market standards change, x-clear may decide to align its processes with the market, in order to offer an optimal service to clients.

For a detailed description of the Late Settlement and buy-in procedure please refer to the separate "Late Settlement and Buy-In Guide" on the x-clear website. The Addendum to the Clearing Terms entitled "Late Settlement and Buy-In Guide" forms an integral part of these Clearing Terms.

12.0 Corporate actions

Distributions on Securities deposited with x-clear as collateral are directly credited by the main paying agent to the x-clear Members (and not via x-clear).

x-clear mandates the settlement agent of x-clear in the home market of the Turquoise MTF Product to handle any corporate actions processing on Outstanding Contracts which are eligible for corporate action benefits.

The execution of corporate actions is different for Turquoise MTF Products that are already held in a custody account ("**existing positions**") and for Turquoise MTF Products that have been purchased but not yet delivered ("**open transactions**"). Distributions on existing positions are made in accordance with the rules of the Approved Settlement System with which the Turquoise MTF Products are deposited.

With respect to distributions on open transactions, two types of corporate actions may apply:

1. Mandatory corporate actions, such as cash dividends or awards of bonus shares; and
2. Corporate actions with a choice of options ("**elective corporate events**"), such as takeover offers, repurchase offers, rights issues/capital increases. These distributions are made in accordance with the Applicable Laws and local market practices.

As a general rule, x-clear offers corporate claims processing as well as buyer protection throughout the markets cleared by it. x-clear's corporate action service levels in relation to the various markets are set out in the country-specific User Guides published at www.six-securities-services.com > Clearing > Trading Venues > Market Information.

Claims

Compensation claims or transactions in relation to Outstanding Contracts resulting from corporate actions are handled by the settlement agents or Approved Settlement Systems in accordance with their rules and Applicable Laws. The basis for initiating a claim or compensation procedure can be on an ex-date or record-date basis depending on the local market practices and Applicable Laws. The necessary transactions are automatically generated by the respective settlement agents or Approved Settlement Systems.

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x-clear always acts as the counterparty for compensation transactions in relation to x-clear Members, and therefore these transactions fall under x-clear's risk management until they are booked or settled.

Compensation transactions are booked as per the local market practices and Applicable Laws of the place of Settlement.

12.1 Elective Events

Buyer election practices at the Settlement location will be mandated by x-clear. Elections and allocations must be performed via the settlement agent of the x-clear Member only. x-clear does not accept elections outside the relevant Approved Settlement System.

12.2 Stamp Duty and Capital Gains Tax

If a liability to pay any tax relating to dividends or other income and/or benefits from Turquoise MTF Products arises or any liability to pay tax due to corporate events arises, x-clear will have the right to require compensation for such tax liabilities and for any related costs or expenses from the relevant x-clear Member. x-clear is entitled to debit the amount of such compensation from the relevant x-clear Member's Cash Collateral Account. Upon entry into the Contractual Relationship, the x-clear Members confirm that they are familiar with all relevant Applicable Laws, requirements and procedures of the place of Settlement regarding withholdings and taxes.

13.0 Amendments to the Clearing Terms

These Clearing Terms may be amended in accordance with the provisions of the Contract for Clearing Services (English law).

14.0 Address for x-clear Members wishing to contact x-clear

The address for x-clear Members wishing to contact x-clear in accordance with the GTCB is:

SIX x-clear Ltd
Brandschenkestrasse 47
8002 Zurich
Switzerland
xclearops@sisclear.com

The contact details are mentioned in the list of SIX x-clear contacts published at www.six-securities-services.com > Clearing > Contacts > Risk Management team

SIX x-clear Ltd
Brandschenkestrasse 47
CH-8002 Zurich

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

T +41 58 399 4311
F +41 58 499 4311
www.six-securities-services.com