

Assessment of SIX x-clear AG against the Recommendations for Central Counterparties



SCHWEIZERISCHE NATIONALBANK
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1. Introduction

1.1 Assessors and objective

Assessors: The Swiss Financial Market Supervisory Authority FINMA (FINMA) and the Swiss National Bank (SNB).

Objective: To assess whether the methods used by SIX x-clear AG (x-clear) to manage the risks it faces as a central counterparty (CCP) comply with the internationally recognised 'Recommendations for Central Counterparties' developed jointly by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO).

1.2 Scope of the assessment

The CCP being assessed is x-clear. The company is part of SIX Group (SIX) (see Figure 1).

x-clear has outsourced certain functions to its sister company SIX SIS AG (SIS) which is the international central securities depository ((I)CSD) for the Swiss financial market. SIS is also 100% owned by SIX. The outsourced functions provided by SIS include:

- settlement and related corporate actions;
- client relationship management;
- securities lending and borrowing services for late settlements;
- cash management (overnight placements of excess liquidity/provision of short-term cash advances in case of insufficient liquidity).

- The following functions are performed by SIX Systems AG, which is also a fully owned subsidiary of SIX:
- operation and maintenance of IT infrastructure (hardware/software/internet);
 - IT security services (hardware/software/internet);
 - software development;
 - facility management.

Corporate services provided to x-clear by its parent company SIX comprise:

- legal and compliance services;
- financial accounting and controlling;
- internal audit;
- human resources management.

For all the functions mentioned above, the assessment also covers the relevant sister companies of x-clear and its parent SIX respectively.

x-clear's staff currently comprises 11 people. The company is organised as shown in Figure 2.

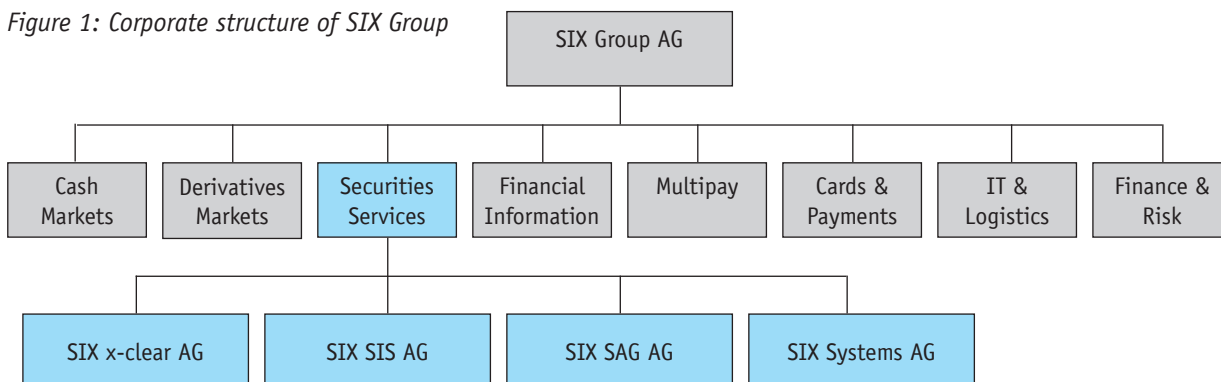
For the time being there are no other CCPs, guarantors or multilateral netting facilitators in the Swiss jurisdiction.

1.3 Scope of coverage of the CCP

x-clear acts as a CCP for the following exchanges and financial products:

- cash equities traded on SIX Swiss Exchange Switzerland and SWX Europe, including SWX Swiss Block, the non-displayed liquidity service from SWX Europe for Swiss blue-chip equities;
- exchange-traded funds (ETFs) traded on SIX Swiss Exchange;

Figure 1: Corporate structure of SIX Group



- the SETS equity order book of the London Stock Exchange (LSE).

Cleared transactions for the above products/exchanges also include (to some extent) off-order-book trades of SIX Swiss Exchange Switzerland and SWX Europe members. For more information, consult the exchanges' webpages.

1.4 Institutional and market structure

1.4.1 Market structure at SWX Europe and the LSE

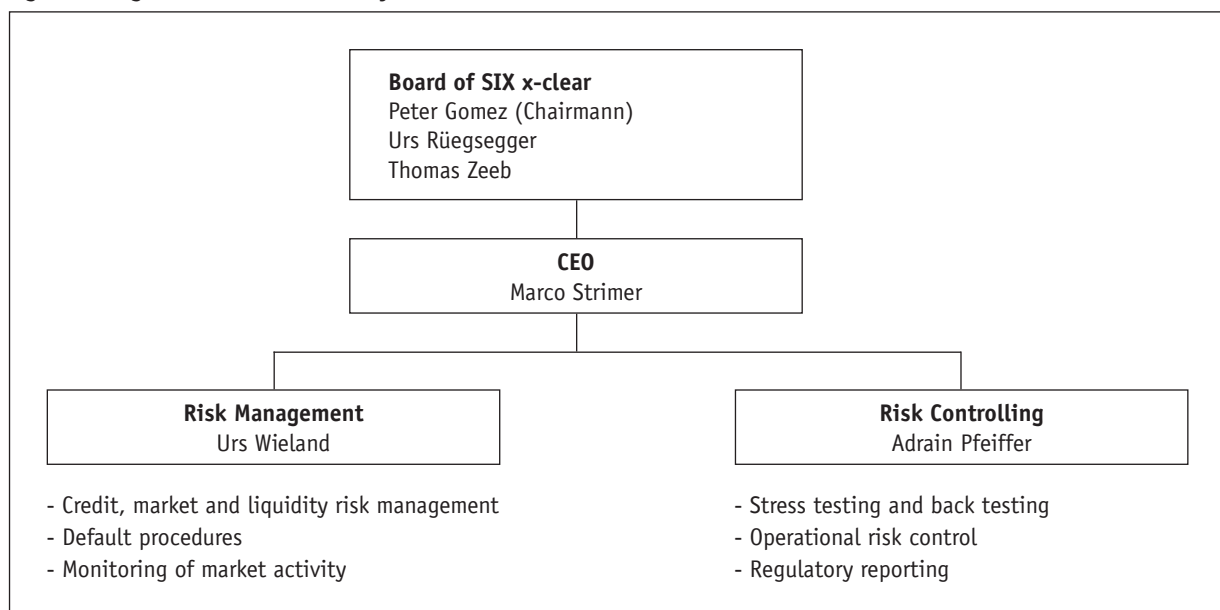
SWX Europe and LSE members have a choice of clearing organisation (see Figure 3 and 4). For both exchanges, clearing is currently provided by x-clear and the London Clearing House (LCH). Exchange participants can freely choose the CCP and, in consequence, the legal environment.

SWX Europe's settlement solution is based on co-operation between three interlinked (I)CSDs: SIS, Euroclear UK & Ireland and Euroclear Bank. SWX Europe members can decide which depository should settle for each jurisdiction of security. Thus they may employ one, two or all three (I)CSDs to settle their SWX Europe transactions. Equities traded on the LSE are exclusively settled in Euroclear UK & Ireland.

In 2008 x-clear processed 27.1 million clearing transactions at SWX Europe, of which 17.3 million involved inter-CCP transactions (one leg between x-clear and a member, the other leg between x-clear and LCH).

Competitive clearing at the LSE was introduced on 12 December 2008. By the end of December 2008, 870,000 million LSE clearing transactions had been processed by x-clear; most of these were inter-CCP transactions (one leg between x-clear and a member, the other leg between x-clear and LCH).

Figure 2: Organisational structure of x-clear



1.4.2 Market structure at SIX Swiss Exchange Switzerland

In September 2007 SIX Swiss Exchange Switzerland introduced a CCP service for eligible securities in conjunction with x-clear (see Figure 5). Although x-clear is currently the only CCP offering clearing services to SIX Swiss Exchange Switzerland, the clearing model is open and adheres to the Code of Conduct, allowing for further CCPs to offer their services alongside x-clear.

Settlement of SIX Swiss Exchange Switzerland transactions is performed by SIS.

In 2008 x-clear processed 6.5 million clearing transactions at SIX Swiss Exchange Switzerland.

1.5 Regulatory structure

1.5.1 Requirements in the Swiss jurisdiction

As a licensed Swiss bank, x-clear is subject to the Swiss Banking Act and the Swiss Banking Ordinance. Supervision of Switzerland's banking sector is the responsibility of FINMA.

The SNB is responsible for overseeing systemically important payment, clearing and securities settlement systems. On 13 December 2004, the SNB confirmed in an official note that x-clear is regarded as a systemically important operator of a clearing and settlement system. In consequence, x-clear also needs to comply with the minimum requirements set out in the National Bank Ordinance.

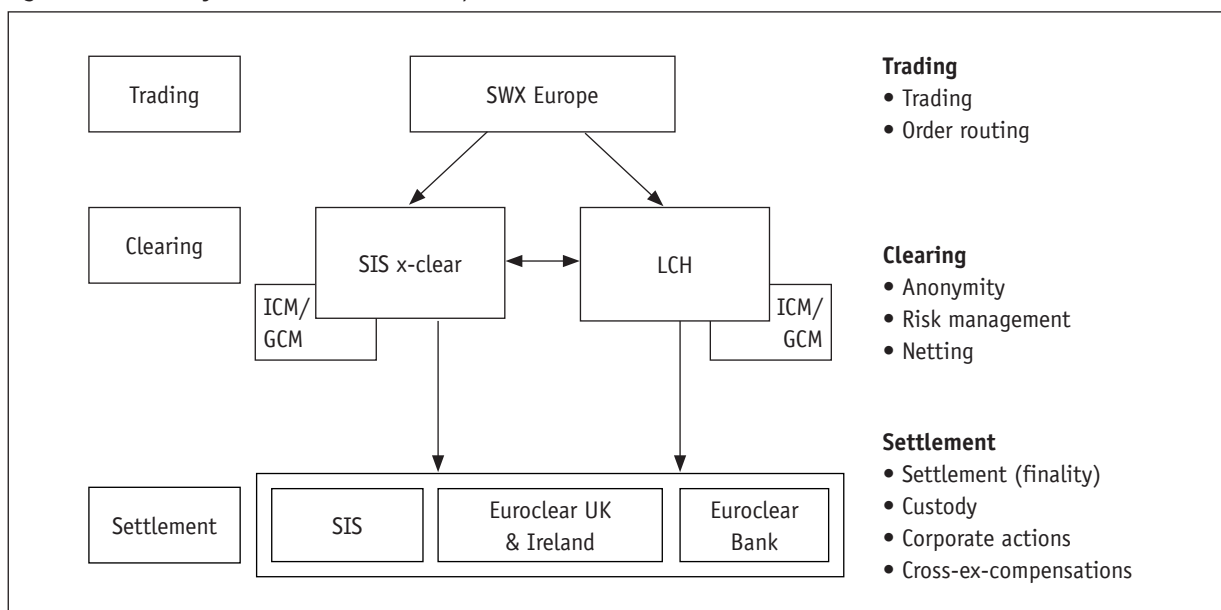
Both authorities cooperate closely in supervising and overseeing x-clear.

1.5.2 Requirements in the UK jurisdiction

Regarding its activities in the UK market, x-clear is subject to the requirements of the Financial Services and Markets Act 2000 (FSMA). On 19 August 2004 x-clear was granted Recognised Overseas Clearing House (ROCH) status by the UK Financial Services Authority (FSA).

The FSA, FINMA and the SNB have signed a Memorandum of Understanding that sets out cooperation and coordination between the individual authorities in supervising and overseeing x-clear.

Figure 3: Market infrastructure at SWX Europe



1.6 Information and methodology used for the assessment

The assessment follows the methodology developed jointly by the CPSS and IOSCO, as set out in their 'Recommendations for Central Counterparties' published in November 2004 by the Bank for International Settlements (BIS).

The assessors gathered sufficient information to formulate draft answers to the key questions, which were then discussed with x-clear and updated as appropriate.

The main sources of information used in the assessment were:

- x-clear's own documentation, its external and internal audit reports (including audit report required by FINMA), its self-assessment and its answers to supplementary questions;
- FINMA's and the SNB's cumulative knowledge and experience from their supervisory and oversight relationships with x-clear.

1.7 Limitation of liability

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Figure 4: Market infrastructure at the LSE

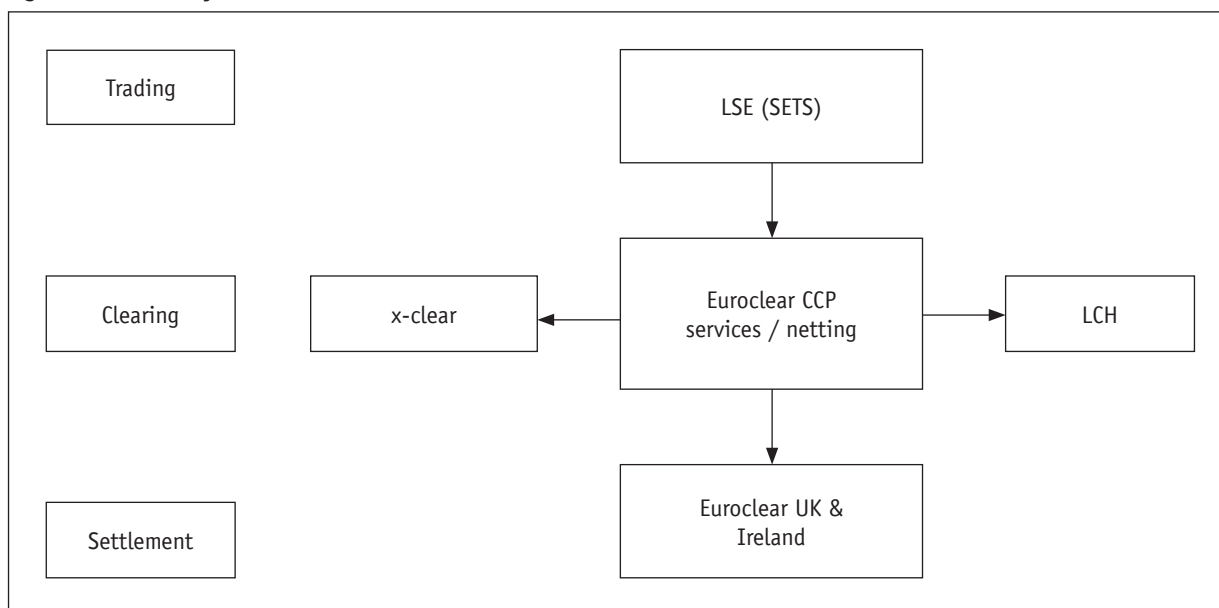
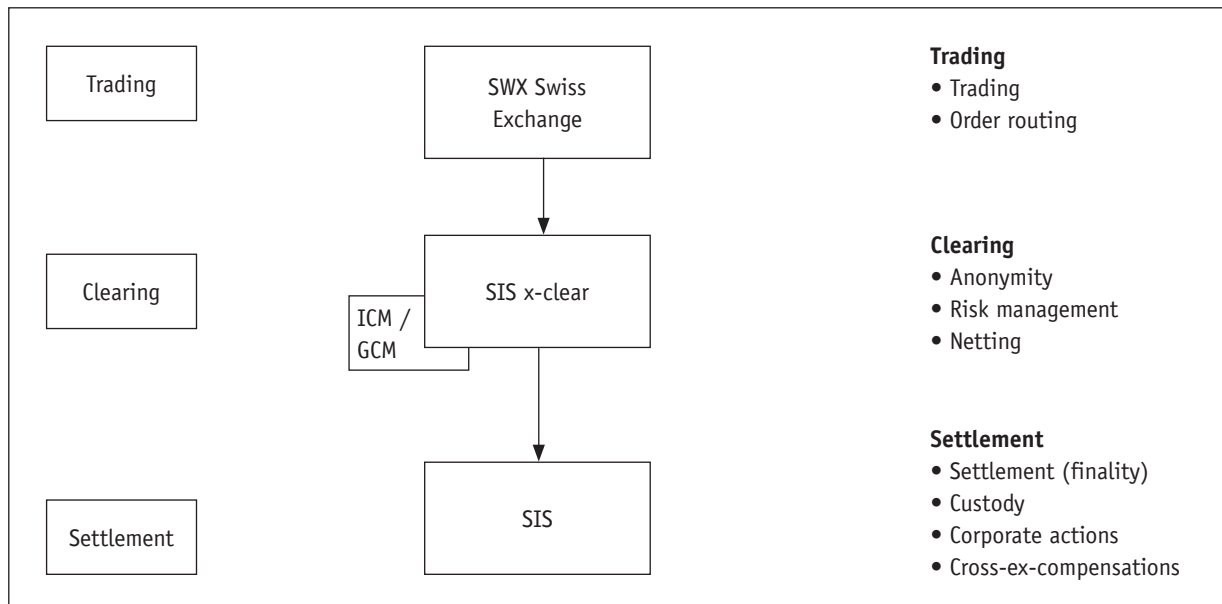


Figure 5: Market infrastructure at SIX Swiss Exchange Switzerland



2. Assessment of observance

2.1 Executive summary

This assessment takes account of the situation as at the end of January 2009. It is the first published assessment of x-clear against the CPSS-IOSCO Recommendations for CCPs by FINMA and the SNB. These recommendations represent an internationally agreed minimum standard of good practice that systemically important CCPs should seek to achieve.

x-clear observes 14 out of 15 recommendations (see Table 1 below). Recommendation 11 is partly observed.

For Recommendation 11 to be assessed as observed, x-clear would have to have sufficient margins from

LCH. This issue is under discussion between the two CCPs and relevant authorities in Switzerland and the UK.

In addition, as a licensed Swiss bank and a systemically important clearing and settlement system, x-clear has to comply with the minimum requirements set out in the Swiss Banking Act, the National Bank Act and related ordinances. In some areas, these requirements exceed the minimum standards described by the CPSS-IOSCO Recommendations.

2.2 Detailed assessments

In the following pages each recommendation is assessed in detail.

Table 1: Collation of assessment results by assessment category

Assessment category	Recommendations
Observed	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15
Broadly observed	None
Partly observed	11
Not observed	None
Not applicable	None

Recommendation 1: Legal risk

A CCP should have a well founded, transparent and enforceable framework for each aspect of its activities in all relevant jurisdictions.

Key question 1: *Are the laws and regulations governing the operation of a CCP and the rules, procedures and contractual provisions for its participants clearly stated, internally coherent and readily accessible to participants and the public?*

Answer: As a Swiss bank, x-clear is subject to the Swiss Banking Act and related ordinances.

As a systemically important clearing system, x-clear is subject to the National Bank Ordinance, which sets minimum requirements concerning the elements of operators' contracts, CCP risk management, system availability, recording of transactions and the exclusion of participants.

As a Recognised Overseas Clearing House (ROCH), x-clear is subject to the UK Financial Services and Markets Act 2000 (FSMA).

x-clear is a private corporation («Aktiengesellschaft») in Switzerland, governed by Swiss law. As a private limited company in the UK, x-clear is also subject to UK company law.

All applicable legislation, regulations and rules are publicly available on the relevant websites. The provisions governing the operation of a CCP are clearly stated, coherent and officially published on the websites of the Swiss government, the FINMA and the SNB. The contractual rules and regulations of x-clear describe the rights and duties of x-clear and its members comprehensively and clearly. The applicable UK legislation can also be found on the relevant national websites and the FSA's website.

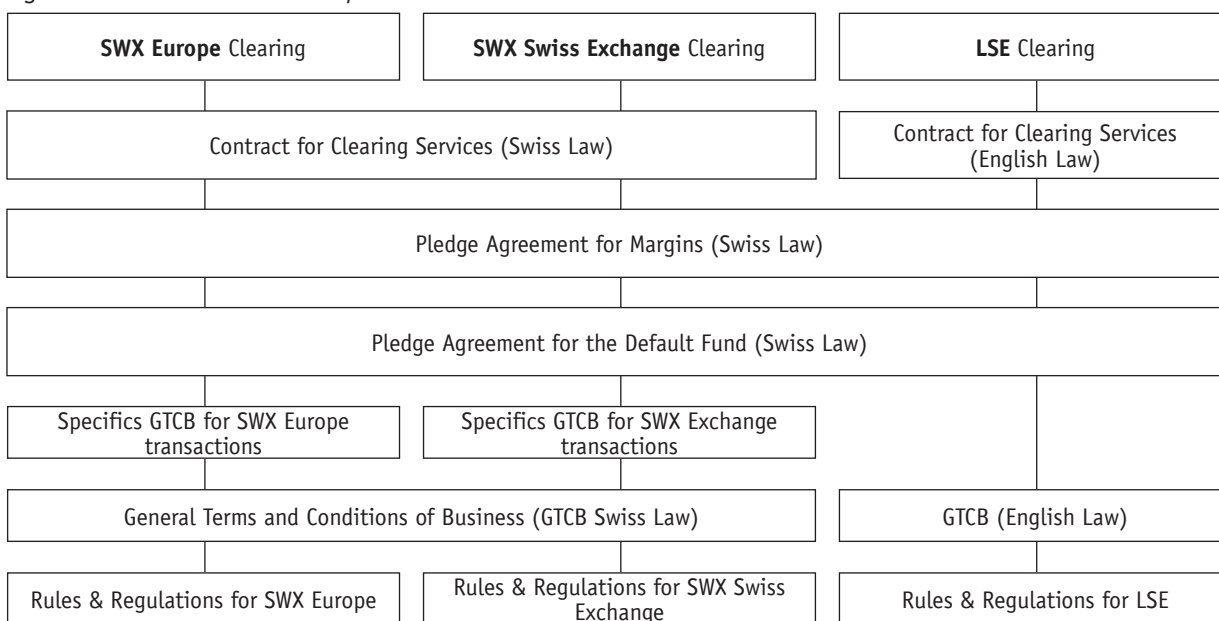
So far there have been no problems with any part of the legal and regulatory framework.

Assessment: Satisfied.

Key question 2: *Does the legal framework demonstrate a high degree of assurance that there is a clear and effective legal basis for:*

- *The CCP to act as counterparty, including the legal basis for novation or open offer.*
- *The timing of assumption of liability as CCP.*
- *Netting arrangements.*
- *The CCP's interest in collateral (including margin) that a participant pledges or transfers to the CCP.*
- *Default Procedures.*
- *Finality of transfers of funds and financial instruments.*
- *Other significant aspects of the CCP's operations, risk management procedures and related rules.*

Figure 6: Contractual relationship between x-clear and its members



Answer:

The contractual relationship between x-clear and its members is defined and agreed in several documents, as depicted below in Figure 6.

The legal framework clearly supports all significant aspects of x-clear's operations and risk management procedures. There is no evidence that x-clear's applicable rules, procedures and contracts are not enforceable against an x-clear member.

Finality issues are governed by the Swiss Banking Act, the Swiss Code of Obligations, and as of January 2010, the Swiss Federal Intermediated Securities Act (FISA). As the intent of the Banking Act was – inter alia – to implement rules on the prevention of systemic risk in line with international standards, in particular with the EU Settlement Finality Directive and the EU Financial Collateral Directive.

With regard to the custody of intermediated securities, the legal framework will be further strengthened by the entry into force of the FISA in January 2010.

Assessment: Satisfied.

Key question 3: *Are the rules, procedures and contracts of the CCP enforceable when a CCP participant defaults or becomes insolvent? Is there a high degree of assurance that actions taken under such rules and procedures may not later be stayed, avoided or reversed?*

Answer: As x-clear operates under a bank licence a special insolvency law regime applies. Under this regime it is unlikely that actions taken by x-clear in the aftermath of a participant's default may be stayed, avoided or reversed, provided such actions are in line with the applicable law. In particular, Swiss law prevents a liquidator from cherry-picking profitable contracts.

As regards finality, the legal framework will be enhanced once the FISA enters into force.

In the UK, x-clear is protected under Part VII of the Companies Act 1989 and under the Settlement Finality Regulations, which implement in the UK the EU Settlement Finality Directive (Directive 98/26/EC).

In 2008 x-clear experienced the first case of a participant's default so far. The rules, procedures and contracts of x-clear have not been challenged in this case. Neither has any of its actions been stayed, avoided or reversed.

Assessment: Satisfied.

Key question 4: *Is there a significant level of cross-border participation in the CCP? Has the CCP determined whether there are other jurisdictions relevant for determining the adequacy of the legal framework? Has the legal framework been evaluated for the other relevant jurisdictions? Do laws and rules support the design of any cross-border arrangement? Are there conflicts of laws issues and, if so, have they been addressed? Have cross-border collateral arrangements been evaluated?*

Answer: Conflict of laws issues are governed by the Swiss Private International Law Act (PILA). Switzerland will incorporate the rules of the Hague Securities Convention (HSC) into the PILA. Thus, those provisions will apply as of 1 January 2010 and will strengthen the legal framework.

x-clear has always paid the closest attention to the relevance and adaptability of the legal frameworks of foreign jurisdictions. It has identified and addressed any potential conflict of laws issues arising from cross-border arrangements. All pledge agreements contain a choice of law clause in favour of Swiss law. As the collateral pledged by the member is intermediated in Switzerland, such choice of law is valid under Swiss international law.

x-clear's contracts for its clearing activities at SIX Swiss Exchange and SWX Europe are exclusively governed by Swiss law. Membership contracts for members using x-clear's CCP service at the LSE are established under English law. x-clear has evaluated the enforceability of cross-border membership contracts. Legal opinions were obtained.

Assessment: Satisfied.

Overall assessment of Recommendation 1: Observed.

Recommendation 2: Participation requirements

A CCP should require participants to have sufficient financial resources and robust operational capacity to meet obligations arising from participation in the CCP. A CCP should have procedures in place to monitor that participation requirements are met on an ongoing basis. A CCP's participation requirements should be objective, publicly disclosed, and permit fair and open access.

Key question 1: *Does the CCP establish requirements for participants' financial resources and creditworthiness? If so, how? What factors are considered (for example, size, clearing for indirect participants, products cleared)? Does the CCP assess participants' operational capability? If so, how? What factors are considered (for example, arrangements to meet payment obligations, risk management policies, staffing, internal audit of risk controls and IT systems)?*

Answer: According to x-clear's General Terms and Conditions of Business, the following natural persons or legal entities who have been admitted as trading members of the relevant exchange may be admitted as members of x-clear:

1. Banks in accordance with the Swiss Banking Act;
2. Foreign banks which are subject to an adequate degree of regulation and supervision similar to that for banks in Switzerland;
3. Securities dealers as defined in the Swiss Federal Act on Stock Exchanges and Securities Trading (SESTA);
4. Foreign securities dealers who are subject to an adequate degree of regulation and supervision similar to that for securities dealers in Switzerland.

A Swiss banking licence is subject to a minimum capital requirement. In addition, a bank must fulfil Basel II minimum capital requirements for credit risk, market risk and operational risk.

Securities dealers also require FINMA authorisation. These institutions are subject to equivalent regulations to banks.

Regulations require both types of participants to have appropriate risk management procedures and an effective internal control system. Every institute must set up an internal audit department that is independent of management.

Assessment: Satisfied.

Key question 2: *Does the CCP monitor that participation requirements are met on an ongoing basis? If so, how? Through access to regulatory reports or directly? Are reports sufficiently timely to be useful for monitoring purposes? Under what conditions can the CCP suspend and terminate participants' membership? What arrangements does the system have in place to facilitate the suspension and orderly exit of participants that no longer meet the participation requirements?*

Answer: Every member is assessed and must be approved by x-clear's risk management department on an annual basis. The assessment is based on the financial statements of the x-clear member. It primarily involves the assessment of the member's credit risk (based on factors such as ratings, financial resources, profitability, etc.). All these factors are monitored on an ongoing basis by x-clear's risk management.

x-clear is entitled to suspend membership of an exchange for such period of time as is required to rectify any defects if

1. there is evidence that the member was granted membership on the basis of inaccurate information;
2. there is evidence that the member no longer satisfies the membership criteria;
3. there is evidence that the member has reason to submit a report as described in Section 16 of the General Terms and Conditions of Business but has failed to do so and if this measure appears reasonable.

Membership of the relevant exchange will be terminated in the following cases:

1. through termination by one of the contracting parties at thirty days' notice, effective at the end of a month. Notice of termination must be served in writing by registered letter;
2. with immediate effect if x-clear is notified of the termination of a member's membership by one or more relevant exchange(s) or the withdrawal of a member's licence by its home regulator;
3. with immediate effect in the event of a default;
4. with immediate effect if x-clear's services to the relevant exchange are terminated or suspended.

A case of default by a member has revealed that x-clear may not be adequately informed by foreign authorities about regulatory changes to a member's status, any associated measures taken and their implications. However, such information is relevant for a CCP to take corresponding action in the event of default, such as the membership suspension or termina-

tion mentioned above. FINMA and the SNB understand that x-clear's influence is limited. The Swiss authorities have taken up the issue with the relevant foreign authorities.

Assessment: Satisfied.

Key question 3: Do participation requirements limit access on grounds other than risks? Are they objective and do they permit fair and open access? Are participation requirements, including arrangements for orderly exit of participants, clearly stated and publicly disclosed?

Answer: Participation requirements are objective, permitting fair and open access. Missing regulatory status or non-membership of the relevant exchange are reasons for not granting membership to a market participant (see first key question above).

x-clear's membership requirements and arrangements for exit of participants are clearly stated and published on x-clear's website.

Assessment: Satisfied.

Overall assessment of Recommendation 2:
Observed.

Recommendation 3: Measurement and management of credit exposures

A CCP should measure its credit exposures to its participants at least once a day. Through margin requirements, other risk control mechanisms or a combination of both, a CCP should limit its exposures to potential losses from defaults by its participants in normal market conditions so that the operations of the CCP would not be disrupted and non-defaulting participants would not be exposed to losses that they cannot anticipate or control.

Key question 1: *How frequently does the CCP measure its exposures to its participants? Does the CCP have the capacity to measure exposures intraday? How timely is the information on prices and positions that is used in these calculations?*

Answer: All unsettled trades on a member's clearing account are combined into one position called the 'open position'. Open positions are computed in real time by x-clear and also include unsettled corporate action claims.

The following transactions impact on a clearing account's open position and cause real-time updates:

- a new clearing-eligible trade received from an exchange;
- settlement of such trades;
- a corporate action claim when the transaction becomes eligible for claims/compensation as a result of an associated corporate action;
- settlement/booking of such claims/compensation;
- cancellation of settlement order (possibly as a result of netting and during corporate action transformation).

Assessment: Satisfied.

Key question 2: *How does the CCP limit its exposures to potential losses from defaults by its participants? If margin requirements are used, does the CCP observe Recommendation 4? If not, how does the CCP ensure that closing out any participant's positions in normal market conditions would not disrupt the operations of the CCP or expose non-defaulting participants to losses that they cannot anticipate or control?*

Answer: x-clear limits its exposures to potential losses from defaults by its participants primarily through margin requirements requested in real time and default fund contributions (see Recommendation 5 for more details on defence lines). x-clear observes Recommendation 4.

Assessment: Satisfied.

Overall assessment of Recommendation 3:
Observed.

Recommendation 4: Margin requirements

If a CCP relies on margin requirements to limit its credit exposures to participants, those requirements should be sufficient to cover potential exposures in normal market conditions. The models and parameters used in setting margin requirements should be risk-based and reviewed regularly.

Key question 1: *What is the intended coverage of margin requirements? What is the time interval over which potential price movements are measured? Is the interval consistent with a reasonable assumption about how quickly a defaulting participant's positions could be closed out? How does the CCP validate the models and parameters used to determine the margin levels consistent with the intended coverage? How frequently does it review and validate the models?*

Answer: The margin requirements calculated by x-clear comprise both initial margin and variation margin. Initial margin is designed to cover the CCP for the market risk to which it becomes exposed 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 initial margin is based on a historical Value at Risk (VaR) of the underlying securities. It is calculated for a time horizon of 2 days at a 99% confidence level. Initial margin will thus cover the market risk of a member's unsettled positions in 99 out of 100 days. As most clearing-eligible securities in all relevant exchanges are traded frequently, the assumption of a 2-day time horizon for closing out a defaulting member's open positions is reasonable.

The variation margin is calculated in hourly cycles and covers the mark-to-market fluctuations for a clearing member's open positions. In the event of gains to a clearing member's open positions due to favourable price movements, the variation margin offsets the initial margin requirement.

By means of backtesting, x-clear validates whether the margin coverage is sufficient. Results are reported monthly to FINMA and the SNB.

Assessment: Satisfied.

Key question 2: *Does the CCP have the authority and operational capacity to demand margin intraday*

to maintain the desired coverage? Under what circumstances?

Answer: x-clear has the authority and operational capacity to make intraday margin calls. If margin requirements exceed the collateral value, a margin call is automatically triggered in real time to settle the difference. A margin call must be met within one hour at the latest; this is done exclusively by direct debit (money side) from:

- a) the member's account at its UK Payment Bank;
- b) its account in the Swiss Interbank Clearing (SIC) system; or
- c) an account held with SIS (by means of direct debit authorisation).

Assessment: Satisfied.

Key question 3: *What types of assets does the CCP accept as margin? What types are actually held? How frequently are the assets revalued? Are haircuts applied that adequately reflect the potential for declines in asset values between the last revaluation and liquidation?*

Answer: x-clear limits the assets accepted to meet margin requirements to highly liquid instruments. x-clear accepts the following types of assets as margin:

1. money (legal tender, freely convertible currencies accepted by x-clear);
2. bonds issued by the Swiss government, confederation and cantons, denominated in CHF, and UK government bonds (gilts) denominated in GBP;
3. other first-class CHF bonds (minimum rating of A-); including SNB money market book claims;
4. first-class foreign currency bonds (minimum rating of A-); including ECB money market book claims;
5. blue chips tradable on SWX Europe (SMI stocks).

Bonds must in principle be eligible for repo transactions with the SNB.

Daily valuation of the collateral is normally based on the previous day's closing price. Depending on market conditions, valuation may be done more frequently.

x-clear applies conservative haircuts that reflect the potential for their value to decline. The x-clear haircuts are based on the Basel II provisions. They accommodate market risk, liquidity risk, credit risk and operational risk appropriately.

Assessment: Satisfied.

**Overall assessment of Recommendation 4:
Observed.**

Recommendation 5: Financial resources

A CCP should maintain sufficient financial resources to withstand, at a minimum, a default by the participant to which it has the largest exposure in extreme but plausible market conditions.

Key question 1: *Has the CCP established procedures to stress test its exposures in extreme but plausible market conditions? What scenarios are evaluated? Do the scenarios include the most volatile periods that have been experienced by the markets for which the CCP provides services? Does the CCP have sufficient resources in the event of default by the participant with the largest exposure? Has the potential for multiple simultaneous defaults been evaluated? Are stress tests performed at least monthly, with a comprehensive reconsideration of models, parameters and scenarios occurring at least annually? Does the CCP have a clear policy on actions to be taken in the event that stress testing results indicate resources are not likely to be adequate to meet its obligations resulting from a default? Has it adhered to that policy? Is the policy made available to participants and authorities?*

Answer: x-clear has established default funds that, in combination with other financial resources, must be able to withstand the simultaneous default of the two group members or two individual members holding the largest positions in extreme but plausible stress scenarios. For SWX Europe and SIX Swiss Exchange Switzerland, a common default fund set to the fixed amount of CHF 200 million has been set up. The LSE's default fund has set a fixed amount of CHF 75 million.

The stress scenarios include the recent two-year price history and the five most volatile months experienced by the relevant financial markets.

x-clear reports on a monthly basis to FINMA and the SNB the cumulative maximum stress loss of specific members (or combinations of members) designated by FINMA and the SNB. The designated member combinations include the two members with the highest and second highest net open positions calculated for the six stress periods compared with the current amount of the default fund. The same information is disclosed to participants upon request.

The sizes of default funds are sufficient to withstand the default of the two participants to which x-clear has the largest exposure in extreme but plausible market conditions.

Stress tests are performed weekly, with a comprehensive review of scenarios occurring at least annually. If the default funds are shown to be insufficient, FINMA and the SNB must be notified immediately.

In addition, if the weekly stress test results show that financial resources of x-clear might not be sufficient the risk control unit presents the CEO with proposals for appropriate action to strengthen the defence lines.

This policy has been adhered to and is known by authorities and participants.

Assessment: Satisfied.

Key question 2: *What are the types and values of resources that the CCP has available to cover losses from participants' defaults? Is there a high degree of assurance that the CCP will be able to draw on those resources for the anticipated value in the event of a participant's default? Do the CCP's rules prohibit them from being used to cover operating losses or losses from other CCP activities?*

Answer: In case of a participant's default there exist various 'defence lines'. Defence lines are activated in the following order:

1. margins (securities or cash) provided by the defaulting member to the relevant exchange;
2. contribution provided by the defaulting member to the default fund of the relevant exchange;
3. per calendar year a maximum of 50% of available provisions set aside by x-clear;
4. the remaining part of the default fund of the relevant exchange;
5. members' obligation to top up any shortfall in the default fund of the relevant exchange;
6. x-clear's provisions (remaining portion), capital and reserves.

The participants' default fund contributions are remitted into segregated collateral accounts. The accounts are in the name of the x-clear member. SIS is the pledge holder. The collateral is pledged to x-clear by means of a regular pledge. According to Swiss civil law, pledged collateral may not be used by any entity for anything other than the intended purpose.

Assessment: Satisfied.

Key question 3: *Are any of the resources that the CCP is relying upon to cover losses from defaults not immediately available to meet the CCP's obligations? If so, has the CCP obtained committed credit lines subject only to presentment that allow it to borrow against those assets? If so, can those lines be drawn upon sufficiently*

quickly to ensure that the CCP can meet its obligations when due?

Answer: All collateral accepted by x-clear is immediately available in case of a default. In addition, x-clear has appropriate credit lines with SIS and Euro-clear UK & Ireland.

It is assumed that the above facilities will be sufficient in normal situations. Extreme liquidity stress situations may result in deliveries later than the target T+3 settlement but x-clear will still be able to meet its obligations since the CCP does not guarantee timely delivery of securities.

Assessment: Satisfied.

Overall assessment of Recommendation 5:
Observed.

Recommendation 6: Default procedures

A CCP's default procedures should be clearly stated, and they should ensure that the CCP can take timely action to contain losses and liquidity pressures and to continue meeting its obligations. Key aspects of the default procedures should be publicly available.

Key question 1: *Do the CCP's default procedures state clearly what constitutes a default? If a default occurs, do the CCP's default procedures provide it with authority to promptly close out or manage the positions of a defaulting participant and to apply the defaulting participant's collateral or other resources? Do the CCP's procedures, or mechanisms other than those of the CCP, permit the transfer or (as an alternative) liquidation of the positions and margin of customers of the defaulting participant? Do the procedures empower the CCP to draw promptly on any financial resources?*

Answer: x-clear's contractual framework clearly explains the circumstances in which a participant is considered to be at default. The procedures also specify under which circumstances (i) the declaration of default is triggered automatically by a specific event, or (ii) a specific decision must be taken by x-clear to declare the default. In 2008 the first and so far only default by a member of x-clear revealed inconsistencies between the default procedures for the different exchanges with regard to the duty of x-clear to provide information. These inconsistencies are under review by x-clear.

In the event of non-performance of contractual obligations, the contractual provisions enable x-clear to take measures which can lead to the exclusion from the system, the liquidation of the collateral and the close-out of the outstanding contracts.

Furthermore, x-clear's default procedures permit the use of financial resources it holds.

Assessment: Satisfied.

Key question 2: *Does the legal framework provide a high degree of assurance that the decisions to liquidate or transfer a position, to apply margin or to draw down liquidity resources in the event of the insolvency of a participant would not be stayed or reversed? Does national insolvency law permit identification and separate treatment of customer and proprietary assets?*

Answer: Under the existing legal framework in Switzerland it is unlikely that such decisions taken by x-clear would be stayed or reversed. Once the FISA comes into force the legal framework will be further strengthened.

The collateral is deposited in segregated collateral accounts with the SIS. Both the Banking Act and the FISA provide for the separate treatment of customer and proprietary assets.

Assessment: Satisfied.

Key question 3: *Does the CCP's management have internal plans for implementing its default procedures? Does the plan maintain a measure of flexibility for the CCP in deciding how best to implement its default procedures? Does the plan address the need for coordination in cases where more than one CCP, authority or a separate market operator is involved? How frequently is the plan reviewed?*

Answer: The x-clear management has established internal plans that clearly delineate the roles, responsibilities and processes for addressing a default, and provide guidance to its staff on the default procedure. The procedures foresee a dedicated approach for every particular market and a sufficient level of flexibility and coordination with other entities involved. The default procedures are reviewed from time to time. In 2008 a default by a participant gave rise to a real-life test of the default procedure. It showed that the procedure works properly. Based on this default, a review of the default procedure was conducted, revealing that only minor improvements were needed. Default procedures were adapted accordingly.

Assessment: Satisfied.

Key question 4: *Are the key aspects of the default procedures publicly available?*

Answer: The default procedures are described in detail in the General Terms and Conditions of Business which are available on x-clear's website.

Assessment: Satisfied.

Overall assessment of Recommendation 6:
Observed.

Recommendation 7: Custody and investment risks

A CCP should hold assets in a manner whereby risk of loss or of delay in its access to them is minimised. Assets invested by a CCP should be held in instruments with minimal credit, market and liquidity risks.

Key question 1: *At what types of entities is collateral held? Does the CCP verify that these entities' procedures and practices conform to Recommendation 12 of the RSSS? If so, how? Does the CCP confirm that its interest in the securities can be enforced and that it can have prompt access to the securities in the event of a participant's default, even if these securities are held in another time zone or jurisdiction? Does it monitor the financial condition of its custodians on an ongoing basis?*

Answer: The collateral collected by x-clear is deposited with the SIS, the Swiss (I)CSD. Recommendation 12 of the RSSS is observed. SIS's accounting practices, safekeeping procedures and internal controls protect the securities adequately against its insolvency, negligence, misuse of assets and other operational risks.

Under Swiss law, collateral held by the SIS is protected against claims by its creditors. The collateral is deposited in segregated collateral accounts with the SIS in the name of x-clear, who therefore has prompt access to the deposited securities in the event of the SIS's default.

Assessment: Satisfied.

Key question 2: *How is cash invested? Are investments secured? What standard does the CCP use to ensure that obligors are highly creditworthy? What standard does the CCP use to ensure that investments have minimal market and liquidity risks?*

x-clear's cash is held on cash accounts with the (I)CSDs SIS, Euroclear UK & Ireland, Euroclear Bank Bruxelles, and its UK concentration bank and is, therefore, not subject to market or liquidity risk.

Assessment: Satisfied.

Key question 3: *Does the CCP consider its overall exposure to an obligor in choosing investments? Are investments limited to avoid concentration of credit risk exposures? If so, how?*

Answer: Cash and securities are held with (I)CSDs and the concentration bank in the UK. These are regulated banks and/or systemically important settlement systems, which means that they are subject to the same level of regulation as x-clear. If cash is held with regulated banks, the institute has to meet high solvency standards.

As regards SIS, both it and x-clear belong to SIX Group. According to the Swiss Banking Ordinance concentration risks within a group are not subject to the concentration risk rules.

SIS adheres to a conservative risk policy limited to business that is closely related to the settlement business. The same is true for the other (I)CSDs mentioned before.

Therefore, although concentration risk exists, it is properly managed.

Assessment: Satisfied.

Overall assessment of Recommendation 7: Observed.

Recommendation 8: Operational risk

A CCP should identify sources of operational risk and minimise them through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. Business continuity plans should allow for timely recovery of operations and fulfilment of a CCP's obligations.

Key question 1: *Does the CCP have a process for actively identifying, analysing and addressing its operational risk, including risks arising from its outsourced operations and its other activities?*

Answer: x-clear has established an operational risk policy and a dedicated operational risk management process in which operational risk incidents are captured in an operational risk data base. This is reviewed by compliance officers and by the risk controlling department. Operational risk incidents are systematically analysed and reported to the management of x-clear. If deemed necessary once the incident has been analysed, improvement measures are initiated.

Assessment: Satisfied.

Key question 2: *Does the CCP have a business continuity plan that addresses events posing a significant risk of disrupting operations? Do plans ensure that critical information can be recovered in a timely manner? Do plans provide, at a minimum, for the recovery of all transactions at the time of the disruption to allow systems to continue to operate with certainty? Is the business continuity plan regularly reviewed and tested with participants? Have appropriate adjustments to operations been made based on the results of such exercises?*

Answer: SIX Group has business continuity plans to cover the failure of IT resources, the loss of staff and the loss of other key resources necessary for maintaining business processes. Backup servers provide for the recovery of all transactions at the time of disruption to allow systems to continue to operate with certainty. Business continuity plans are regularly reviewed and tested and appropriate adjustments are made based on the results of these exercises.

Assessment: Satisfied.

Key question 3: *Are there adequate management controls and sufficient (and sufficiently well qualified) personnel to ensure that procedures are implemented appropriately? Are operational reliability issues reviewed regularly by senior management, including review by persons not responsible for the relevant operations? Is there an internal audit function and does it review operational risk controls?*

Answer: Operational risk issues are regularly reviewed by the senior management of SIX Group and its subsidiaries. Operational risk and business continuity planning are adequately supervised by the board of directors and the risk committee of SIX Group. SIX Group and its subsidiaries' management and personnel are well qualified and possess an in-depth knowledge of the operational, technical and organisational environment. Operational risk controls are subject to periodic internal audits performed by SIX Group's internal audit department.

Assessment: Satisfied.

Key question 4: *How many times during the last year has a key system failed? What is the most common cause of failures? How long did it take to resume processing? How much transaction data, if any, were lost? How does the CCP ensure the integrity of messages? Does the CCP have capacity plans for key systems and are key systems tested periodically to determine if they can handle stress volume?*

Answer: x-clear has not experienced any significant key system failure in recent years. Processing was always resumed the same day and typically within minutes. Incidents are generally documented in dedicated reports. No transaction data have ever been lost. The integrity of messages is ensured by technical confirmations and automated checks. x-clear has sufficient processing capacity for stress volumes. The system performance is continually monitored and subject to periodic assessments by IT experts.

Assessment: Satisfied.

**Overall assessment of Recommendation 8:
Observed.**

Recommendation 9: Money settlements

A CCP should employ money settlement arrangements that eliminate or strictly limit its settlement bank risks, that is, its credit and liquidity risks from the use of banks to effect money settlements with its participants. Funds transfers to a CCP should be final when effected.

Key question 1: *Does the CCP use the central bank model or the private settlement bank model?*

Answer: The money settlement model of x-clear has aspects of both the private settlement bank model and the central bank model.

x-clear uses cash accounts at the (I)CSDs SIS, Euroclear UK & Ireland and Euroclear Bank Bruxelles.

x-clear members have three options as regards money settlement. From their perspective, money settlement can be effected via:

1. SIC, the Swiss RTGS system (i.e. settlement takes place in central bank money). x-clear's settlement bank in this case is SIS;
2. a money account at the (I)CSDs SIS, Euroclear UK & Ireland and Euroclear Bank Bruxelles in the name of the x-clear member;
3. a money account of the x-clear member, held with a cash agent which itself holds an account at SIS.

Key question 2: *Do the CCP's legal agreements with its settlement bank or banks provide that funds transfers to its accounts are final when effected? Do the laws of the relevant jurisdictions support these provisions? Do the payment systems for the currencies used support intraday finality? Does the CCP routinely confirm that funds transfers have been effected as and when required by those agreements?*

Answer: x-clear has arrangements with the SIS, Euroclear UK & Ireland and Euroclear Bank Bruxelles on the settlement of cleared x-clear trades.

Currently, the SIS' Market Guide provides that the payment order becomes irrevocable once the debit to the transferor's account and the corresponding credit to the transferee's account is confirmed by a system-generated message. As SIS operates under a bank licence the finality provision of the Banking Act applies and supports SIS' provisions. Once the FISA comes into force funds transfers become irrevocable once the funds transferred have been debited to transferor's account except where otherwise provided by the rules of the payment system.

The other relevant (I)CSDs are domiciled in the European Union where finality issues are governed by the Settlement Finality Directive.

Assessment: Satisfied.

Key question 3: *If the private settlement bank model is used, does the CCP establish and monitor strict criteria for the banks used that address their creditworthiness, access to liquidity, and operational reliability?*

Answer: All cash settlement takes place in SIS, Euroclear UK & Ireland and Euroclear Bank Bruxelles. All these institutions are overseen by the respective regulators and have to fulfil the CPSS/IOSCO Recommendations for Securities Settlement Systems.

Assessment: Satisfied.

Key question 4: *If the private settlement bank model is used, does the CCP actively monitor the concentration of exposures among the settlement banks, and routinely assess its potential losses and liquidity pressures from a settlement bank's failure?*

x-clear actively monitors exposures; in addition, it actively manages exposures –operationally on a daily basis and strategically on a yearly basis.

Assessment: Satisfied.

**Overall assessment of Recommendation 9:
Observed.**

Recommendation 10: Physical deliveries

A CCP should clearly state its obligations with respect to physical deliveries. The risks from these obligations should be identified and managed.

Key question 1: *Does the CCP have rules that clearly state its obligations with respect to deliveries of physical instruments?*

Answer: The service description states that x-clear assumes the settlement risk and is liable towards the respective member for the fulfilment of obligations (on both the money and the securities side) arising from stock exchange trades. x-clear guarantees the fulfilment of physical deliveries (in the event of default of a member); however, it does not guarantee timely execution of the transactions on the settlement date.

According to the clearing terms, x-clear assumes the obligation to perform late settlement procedures (including both securities lending and borrowing and the buy-in of outstanding securities) if a selling x-clear member defaults. Should it prove impossible to provide holdings within the time required as specified in the clearing terms, a cash compensation payment is made, which is passed on in full to the buying x-clear member.

Assessment: Satisfied.

Key question 2: *Does the CCP have obligations to make or receive deliveries of physical instruments? If yes, does the CCP use DVP mechanisms that eliminate principal risk? If no DVP mechanism is available, does the CCP take other steps to mitigate principal risk?*

Answer: x-clear executes physical deliveries by using the DVP mechanisms provided by SIS, Euroclear UK & Ireland and Euroclear Bank Bruxelles. These are all overseen entities that adhere to the CPSS/IOSCO Recommendations on Securities Settlement Systems, of which Recommendation 7 requires DVP mechanisms to be applied.

Assessment: Satisfied.

Key question 3: *Has the CCP identified the liquidity, storage and delivery (other than principal) risks to which it is exposed because of the delivery obligations that it assumes? Does the CCP take steps to mitigate these risks? What steps does it take?*

Answer: x-clear does not perform CCP services for commodities or commodities derivatives; therefore, it is not exposed to storage and delivery risk.

As regards liquidity risk, x-clear has sufficient credit lines with SIS and Euroclear UK & Ireland to ensure the availability of funds to pay a seller in the event that a buyer defaults on delivery. Furthermore, x-clear has access to the securities lending and borrowing facilities offered by SIS in case a seller defaults on the delivery of securities.

Assessment: Satisfied.

**Overall assessment of Recommendation 10:
Observed.**

Recommendation 11: Risks in links between CCPs

CCPs that establish links either cross-border or domestically to clear trades should evaluate the potential sources of risks that can arise, and ensure that the risks are managed prudently on an ongoing basis. There should be a framework for cooperation and coordination between the relevant regulators and overseers.

Key question 1: *What kinds of link are in operation? Has the CCP carried out a risk analysis of the potential sources of risks arising from the link? Are the resultant risk management arrangements designed to minimise or contain these risks such that the CCP remains able to observe the other recommendations contained in this report?*

Answer: An inter-CCP link is in place to serve the exchanges for which both x-clear and LCH act as CCPs (currently SWX Europe and the LSE). Within the clearing structure of SWX Europe, x-clear acts as a special clearing member of LCH in cases where one party to a trade is a member of x-clear and the other trading party is an LCH member. In the inter-CCP relationship at the LSE, a peer-to-peer structure has been set up in which both CCPs act as 'Co-operating Clearing Houses'.

x-clear has evaluated the potential risks arising from transactions at SWX Europe and LSE in this link. Each CCP accepts the other's risk management model. They both provide each other with collateral. With the consent of the regulators, they mutually forego default fund contributions.

Assessment: Satisfied.

Key question 2: *Which laws and contractual rules govern the link? What steps have the CCPs taken to satisfy themselves that these laws and rules support the design of the link and provide adequate protection to both CCPs in the operation of the link?*

Answer: The inter-CCP-relationship at SWX Europe is ruled by a Clearing Membership Agreement. A Clearing Link Agreement between x-clear and LCH governs all inter-CCP transactions at the LSE. These agreements are both governed by English law.

At SWX Europe, x-clear acts as a 'special clearing member' of LCH (sub-CCP). Hence, for inter-CCP transactions LCH's open offer procedure is used and LCH's default rules apply to x-clear. Contractual relations (at SWX Europe) between x-clear and its members are governed by Swiss law; however, they mirror x-clear's rights and obligations vis-à-vis LCH.

At the LSE, a peer-to-peer clearing structure has been established. The contractual relations (at the LSE) between x-clear and its members are subject to both English law (contract for clearing services and general terms and conditions of business for the LSE) and Swiss law (pledge agreement for margins and the default funds).

The laws and contractual rules governing the inter-CCP link support the design of the link and provide adequate protection for both CCPs in the operation of the link.

Assessment: Satisfied.

Key question 3: *What are the potential sources of operational, credit and liquidity risks arising from the link? Are effective mechanisms in place, including arrangements between the linked CCPs, to monitor and manage the risks identified?*

Answer: About 50% of all (clearing-eligible) transactions at SWX Europe and most transactions conducted on the LSE are cleared through the link between x-clear and LCH. Hence the two CCPs expose each other to credit risk, which is translated into market risk if a CCP defaults. In order to mitigate such market risk, both CCPs provide collateral to each other.

Since the introduction of LSE clearing, the volume and value of transactions cleared through the link have risen to an extent that leaves x-clear with too small a margin to cover LCH's margin requirement at x-clear. x-clear is aware of the risk and is discussing the issue with LCH. FINMA and the SNB have also informed the FSA about the issue.

There are tri-partite documents governing the operational procedures between the stock exchanges and the two CCPs. Operational risks and liquidity risks are limited and properly addressed. In addition, both CCPs are subject to close supervision and oversight.

Assessment: Not Satisfied.

Key question 4: *For the purposes of regulation and oversight of the link, is there a framework for cooperation and coordination between the relevant regulatory and oversight authorities, including provisions on information sharing and the division of responsibilities in the event of any need for coordinated regulatory action?*

Answer: The arrangements for cooperation between the regulators (FINMA, SNB and FSA) are set out in a Memorandum of Understanding. This arrangement facilitates cooperation and coordination between the regulatory authorities in the UK and in Switzerland. Authorities meet regularly to discuss any matters of relevance.

Assessment: Satisfied.

Overall assessment of Recommendation 11:
Partly observed.

Recommendation 12: Efficiency

While maintaining safe and secure operations, CCPs should be cost-effective in meeting the requirements of participants.

Key question 1: *Does the CCP have in place procedures to control costs (for example, by benchmarking its costs and charges against other CCPs that provide a similar service and by analysing the reasons for significant differences)? Does the CCP have in place procedures to regularly review its pricing levels against its costs of operation?*

Answer: x-clear's cost controls include cost accounting, periodic budgeting and the comparison of key performance indicators. These procedures allow x-clear to review its pricing levels against its operating costs. x-clear also regularly benchmarks its charges against its most important competitors.

Assessment: Satisfied.

Key question 2: *Does the CCP regularly review its service levels (for example, by surveying its participants)? Does the CCP have in place procedures to regularly review operational reliability, including its capacity levels against projected demand?*

Answer: The Client Relationship unit continuously reviews x-clear's service level with participants. Client Relationship's management is also in charge of identifying and recording customers' needs, and of initiating appropriate measures.

Operational reliability is monitored continuously by both senior and middle management.

Assessment: Satisfied.

Overall assessment of Recommendation 12:
Observed.

Recommendation 13: Governance

Governance arrangements for a CCP should be clear and transparent to fulfil public interest requirements and to support the objectives of owners and participants. In particular, they should promote the effectiveness of a CCP's risk management procedures.

Key question 1: *What are the governance arrangements for the CCP? What information is publicly available about the CCP, its ownership and its board and management structure?*

Answer: As part of SIX Group, x-clear is ultimately owned by its users, which include major Swiss banks, cantonal banks, foreign banks, commercial banks and asset management banks. The shares are widely distributed and no owner or bank category has an absolute majority.

x-clear is ultimately subject to the management and oversight of the Board of Directors of SIX Group. As the company's highest governing body, the Board of Directors is responsible for supervising the Group Executive Board. The duties and competencies of the Board of Directors, its Committees and the Group Executive Board as corporate bodies of SIX Group are defined in the articles of association, the organisation regulations and the competency rules. The members of the board of SIX Group are representatives of the shareholders of SIX Group and those organisations which have an interest in the operation of the market infrastructure in Switzerland. All of the members of the board hold senior positions in their respective organisations. The Board of Directors comprises ten members: seven bank representatives and three additional members.

x-clear also has a Board of Directors and an Executive Committee. The Board of Directors is responsible for overall management and control of x-clear. The Executive Committee is responsible on a day-to-day basis for managing all risks arising from CCP services.

Information about the governance agreement is publicly available in the Group's annual report 2008.

Assessment: Satisfied.

Key question 2: *Is there a clear separation in the reporting lines between risk management and other operations of the CCP? How is this separation achieved? Is there an independent risk management committee?*

Answer: x-clear has separate units for risk management and risk controlling. The two units report directly to the CEO of x-clear and are independent, both from each other and from other operational functions of the CCP. All functions apart from risk management and risk control are provided by different entities of SIX Group.

The risk management unit manages risks arising from CCP services. It also performs risk management on behalf of SIS. The risk controlling unit is responsible for operational risk controlling, stress testing and backtesting of x-clear's risk model and reporting to FINMA, the SNB and the FSA.

SIX Group's risk committee defines the risk policy applicable to credit risk, market risk and operational risk. The risk committee supervises the management of risks and reports to the Board of Directors of SIX Group.

Assessment: Satisfied.

Key question 3: *What steps are taken to ensure that management and the board have the adequate skills and incentives to achieve the CCP's objectives of delivering sound and effective services and to meet related public interest requirements? What are the mechanisms the board has in place to ensure that the objectives include delivering sound risk management and meeting related public interest requirements? How are management and the board made accountable for their performance? How is the composition of the board determined? Are there mechanisms to ensure that the board contains suitable expertise and takes account of all relevant interests? Are reporting lines between management and the board clear and direct? Is the board responsible for selecting, evaluating and if necessary, removing senior management?*

Answer: The Board of Directors and the Executive Board of SIX Group and x-clear have appropriate skills and incentives to achieve x-clear's objectives, particularly as regards delivering sound risk management and safe and efficient clearing services.

As a regulated CCP, x-clear is subject to the National Bank Ordinance, Article 22 of which states that the management of a system must have the necessary skills to perform their duties and must have a good reputation. Compliance with this requirement is regularly assessed.

As a licensed Swiss bank, x-clear is also subject to the Swiss Banking Act, which requires that the managers of a bank enjoy a good reputation and ensure

sound business operations. If this requirement were not met by x-clear, FINMA could withdraw its banking licence.

The management and board of x-clear are appointed by the SIX Group Executive Board. x-clear's management and board are fully accountable for their performance to the management of SIX Group and the board of SIX Group, which ultimately represents the interests of the users of the Swiss financial market.

The board of SIX Group contains a wide variety of expertise and takes into account all relevant interests. The composition of the board of x-clear is set down in the organisation and business regulations of SIX Group. There is a direct reporting line between the x-clear management and both the board of x-clear and the management of SIX Group.

Assessment: Satisfied.

***Key question 4:** Are the CCP's objectives, those responsible for meeting them and the extent to which they have been met disclosed to owners, participants and public authorities? If so, what/who are they?*

Answer: x-clear's objectives are focused on the provision of safe and efficient clearing services.

With reference to the quality of clearing services, the focus is on settlement performance, the netting process, collateral management and straight-through processing (STP) of post-trading functionalities.

These objectives are clearly indicated in the x-clear rules, documentation and communications, which are available on x-clear's website.

The extent to which the objectives have been met is discussed with participants in regular user group meetings. The general public is provided with relevant information via x-clear's website, its annual report and many other publications.

Assessment: Satisfied.

**Overall assessment of Recommendation 13:
Observed.**

Recommendation 14: Transparency

A CCP should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using its services.

Key question 1: *Does the CCP disclose to market participants its rules and regulations, relevant laws, governance procedures, risks, steps taken to mitigate risks, the rights and obligations of participants and the costs of using the CCP services? Does the CCP make clear when and in what circumstances it assumes counterparty exposure and any restriction or limitations on its fulfilment of its obligations? Does the CCP disclose appropriate quantitative information on its clearing, netting and settlement activities? Does the CCP provide market participants with sufficient information on default procedures and stress testing?*

Answer: x-clear provides market participants with sufficient information to evaluate the risks and costs of using its services. The following information has been made available on x-clear's website:

- Clearing Terms and General Terms and Conditions of Business, including the rights and obligations of participants;
- European Code of Conduct for Clearing and Settlement and its implementation by x-clear;
- organisation and governance of SIX Group (website of SIX Group);
- Service Description of x-clear (containing detailed information on risk management);
- detailed pricing information;
- x-clear's settlement rates.

The circumstances in which x-clear assumes counterparty exposure and any restriction or limitations on the fulfilment of its obligations are described in detail in the General Terms and Conditions of Business and in the Clearing Terms. x-clear's default procedures are disclosed in the General Terms and Conditions of Business. Quantitative information on clearing and netting activities as well as information on risk management performance (such as backtesting and stress testing results) are disclosed to market participants upon request.

Assessment: Satisfied.

Key question 2: *How is information made available? In what language or languages? In what form?*

Answer: The information is readily accessible through the internet. It is current, accurate and available in English, German and French.

Assessment: Satisfied.

Key question 3: *Has the CCP completed and disclosed the answers to the key questions set out in this report? Are there regular reviews to ensure that the information contained in the disclosures remains current, complete and accurate?*

Answer: This is the first publicly available assessment of x-clear's observance of the CPSS-IOSCO Recommendations for Central Counterparties. It is based on a self-assessment conducted by x-clear at the beginning of 2009.

Assessment: Satisfied.

**Overall assessment of Recommendation 14:
Observed.**

Recommendation 15: Regulation and oversight

A CCP should be subject to transparent and effective regulation and oversight. In both a domestic and an international context, central banks and securities regulators should cooperate with each other and with other relevant authorities.

Key question 1: *How is the CCP regulated/overseen? Describe the laws that authorise and govern the CCP's operation, the applicable regulatory bodies and their respective authority for the CCP's operation. Do the securities regulator and central bank have sufficient legal capacity and resources (including experienced staff and funding) to carry out effective regulation and oversight?*

Answer: A detailed description of the regulatory structure can be found in section 1.5 of this assessment report. The SNB considers the authorities concerned to have sufficient capacity and resources to carry out effective supervision and oversight. Furthermore, the authorities have drawn up a MoU governing their cooperation and coordination with regard to the supervision and oversight of x-clear.

Assessment: Satisfied.

Key question 2: *Are the objectives, responsibilities and main policies of the securities regulator, central bank and, where relevant, banking supervisor clearly defined and publicly disclosed? Are the regulations, roles and policies written in plain language so that they may be fully understood by CCPs and their participants?*

Answer: The objectives, responsibilities and main policies of the FSA, the SNB and FINMA are clearly defined and publicly disclosed on their respective websites and in the relevant laws. See also section 1.5 for further information.

Assessment: Satisfied.

Key question 3: *What information is the CCP required to provide, including information on operations that have been outsourced? How frequently is this information provided? Are there specific information requirements for participants' defaults and CCPs' financial difficulties? Is the CCP required to report significant events, such as rule changes, outages, and changes in risk management procedures?*

Answer: According to a FINMA decree, x-clear has to provide FINMA and the SNB with monthly reports on the positions of its five largest members. This report must contain:

- (a) the gross value of all open positions;
- (b) the net value of all open positions;
- (c) the size of the initial margin and variation margin deposits;
- (d) the cumulative stressed market risk compared with the size of the default fund;
- (e) the results of back testing;
- (f) any extraordinary events.

x-clear is also required to keep FINMA and the SNB informed at all times of the size of the default fund, the risk situation and its financial resources. It is also required to report immediately if the stressed market risk of one of the five largest members or the cumulative stressed market risk of the two largest members exceeds the current default fund.

The SNB has established various control objectives to ensure that the minimum requirements of the National Bank Ordinance are met. Control objectives dedicated to x-clear cover the following areas:

- (a) governance and contractual framework;
- (b) risk analysis, risk management and risk controlling;
- (c) information technology and security.

Compliance with control objectives is assessed at least annually, as well as in response to major changes. Information to assess compliance with control objectives is obtained from an annual self-assessment by x-clear, regular reporting, internal and external audits and frequent meetings between x-clear and the authorities. Should the SNB identify any non-compliance with the control objectives, it can require x-clear to take appropriate measures.

x-clear was granted recognition in the UK as an overseas clearing house on 19 August 2004. The FSA primarily relies on supervision by FINMA and oversight by the SNB, and is usually not involved in the day-to-day regulation of x-clear. x-clear is obliged to keep the Recognition Requirements under review and must notify the FSA in the event these are not likely to be met. x-clear has agreed to proactively confirm to the FSA if it has fallen below the UK financial resources requirement. Section 295 of the Financial Services and Markets Act 2000 (FSMA) requires each overseas recognised body to provide the FSA with an annual report

stating whether any events have occurred which are likely to:

- (a) affect the FSA's assessment of whether it is satisfied as to the requirements set out in section 292(3) of the FSMA;
- (b) have any effect on competition.

Assessment: Satisfied.

Key question 4: *Is there a framework for cooperation between relevant authorities for the CCP, including domestic and non-domestic authorities? If so, describe the principles underlying this (these) framework(s) and their main contents, including any information sharing arrangements and decision-making procedures.*

Answer: Domestic cooperation: There is a Memorandum of Understanding (MoU) between the SNB and FINMA which defines the responsibilities of the two regulators, describes their common fields of interest and governs their cooperation. This MoU is publicly available on the SNB website.

International cooperation: There is a MoU between the FSA (UK) and FINMA (Switzerland) governing the framework for domestic and non-domestic regulation. The purpose of this MoU is to establish a formal basis for cooperation, including the exchange of information and investigative assistance, with respect to all the functions entrusted to the authorities within their respective jurisdictions. In addition, the FSA, FINMA and the SNB have signed a MoU to facilitate coordination and cooperation between the Swiss authorities and the FSA in order to promote effective supervision and oversight of x-clear.

Assessment: Satisfied.

Overall assessment of Recommendation 15:
Observed.