

**France: Financial Sector Assessment Program—
Detailed Assessment of Observance of CPSS/IOSCO Recommendations for
Securities Settlement Systems and for Central Counterparties**

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FINANCIAL SECTOR ASSESSMENT PROGRAM

FRANCE

LCH.CLEARNET SA OBSERVANCE OF THE CPSS-IOSCO
RECOMMENDATIONS FOR CENTRAL COUNTERPARTIES

DETAILED ASSESSMENT OF
OBSERVANCE

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GLOSSARY

ACP	Autorité du Contrôle Prudentiel
AMF	Autorité des Marchés Financiers
BCP	Business Continuity Plan
BCM	Business Continuity Management Policy
BDF	Banque de France
BDP	Banco de Portugal
CC&G	Cassa di Compensazione e Garanzia
CCP	Central Counterparty
CDS	Credit Default Swap
CEBS	Committee of European Banking Supervisors
CESR	Committee of European Securities Regulators
CFTC	United States Commodities Futures Trading Commission
CMVM	Comissão do Mercado de Valores Mobiliários
CPSS	Committee on Payment and Settlement Systems
CRB	Clearing Rule Book
CRD	Capital requirements directive
CSD	Central securities depository
CVaR	Conditional value at risk
DCM	Direct Clearing Member
DVP	Delivery-versus-payment
DTCC	Depository Trust and Clearing Corporation (DTCC)
EACH	European Association of CCP Clearinghouses
EC	European Commission
EEA	European Economic Area
EEC	European Commodity Clearing
ESCB	European System of Central Banks
EUR	Euro
MFC	Monetary and Financial Code
FSA	Financial Service Authority
FX	Foreign Exchange
GCM	General Clearing Member
GBP	British pound
ICSDs	International Central Securities Depositories
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commission
MOF	Ministry of Finance
MOJ	Ministry of Justice
MOU	Memorandum of Understanding
OTC	Over-the-counter
RBM	Risk-based margining
RCCP	Recommendation for Central Counterparties
ROCH	Recognized Overseas Clearinghouse
RSSS	Recommendation for Securities Settlement Systems
SEC	United States Securities and Exchange Commission
SSS	Securities settlement systems
U.K.	United Kingdom

I. EXECUTIVE SUMMARY

LCH.Clearnet SA displays a high level of observance of the CPSS/IOSCO recommendations. It has a sound, coherent, and transparent legal basis. It has developed an adequate risk-management framework to address financial and operational risks. The participant default rules and procedures, which are publicly available, are comprehensive. Participant assets, as well as the CCP's collaterals, are kept safely in supervised banks and regulated securities depositories. The liquidity risk is minimized by settling the cash in central bank money and having access to central bank facilities, including liquidity. LCH.Clearnet SA governance arrangements and composition of Boards and management are well defined and adequately staffed.

LCH.Clearnet SA has managed well the challenges of the financial crisis, and enhancement of its functionalities will further contribute to financial stability. It has dealt promptly with the default of some major participants. It has also managed effectively the risk of increased price volatility, including of sovereign debts. Nevertheless, LCH.Clearnet SA resilience could further be strengthened by monitoring and measuring its exposures continuously throughout the business day and intensifying the use of stress testing and back-testing mechanism. To further enhance the protection of customers' assets in the event of default, LCH.Clearnet SA should introduce an operational segregation mechanism between the proprietary assets and clients' assets for all fixed-income products. LCH.Clearnet SA should strengthen its control on the IT companies that supply and operate the infrastructure, and formalize the external audit of these companies. The selection criteria for Board members and the mitigation of conflict of interests should be formalized and enhanced. The current ongoing reorganization of ownership structure and the realignment of business lines should not compromise that LCH.Clearnet SA retains the necessary level of independence to meet its regulatory obligations as a distinct legal entity.

The regulatory and oversight framework is comprehensive and effective. As a credit institution, LCH.Clearnet SA is subject to the supervision of the Autorité du Contrôle Prudentiel (ACP), as a Clearing House to the regulation of the Autorité des Marchés Financiers (AMF), and as a clearing and settlement system for financial instruments to the oversight of Banque de France (BDF). The authorities' objectives, policies, and roles are well defined and made public. Nevertheless, BDF should be empowered to issue regulations and undertake measures to enforce its oversight responsibility effectively. Enforcement of supervisory and oversight framework can be further improved by increasing the intensity of on-site inspections, including the participation of staff from all relevant authorities. The cooperation and coordination between domestic competent authorities have a solid legal basis, including the exchange of confidential information. Cross-border cooperation with relevant foreign authorities is well developed and seems to be implemented effectively, including the existence of comprehensive Memoranda of Understanding (MOUs), and a college that meets on a regular basis.

II. INFORMATION AND METHODOLOGY USED FOR ASSESSMENT

1. **The assessment of LCH.Clearnet SA against the CPSS/IOSCO Recommendation for Central Counterparties (RCCP) was undertaken in the context of the IMF’s Financial Sector Assessment Program (FSAP) Update for France in January and June, 2011.** The assessor was Elias Kazarian of the IMF’s Monetary and Capital Markets Department. At the request of BDF, LCH.Clearnet SA conducted a self-assessment against the European System of Central Banks and the Committee of European Securities Regulators (ESCB\CESR) Recommendations, which are identical to the RCCP in 2011.¹

2. **LCH.Clearnet SA provides clearing services to several European markets.** For this reason, BDF, as a ‘lead overseer’, invited other competent authorities in France, Belgium, The Netherlands, and Portugal to cooperate in the preparation of the assessment of LCH.Clearnet SA aspects that are of common interest. In addition, information was exchanged between the French and Italian authorities within the context of the self-assessment, on the link between LCH.Clearnet SA and the Italian CCP, Cassa di Compensazione e Garanzia (CC&G).

3. **The assessment of LCH.Clearnet SA benefited from discussions with the ACP, AMF, and BDF, as well as LCH.Clearnet SA senior management and staff, and representatives for the participants in the system.** The French authorities and the management of LCH.Clearnet SA have been cooperative in providing supplemental information and organizing additional meetings to fulfill the assessment.

III. INSTITUTIONAL AND MARKET STRUCTURE

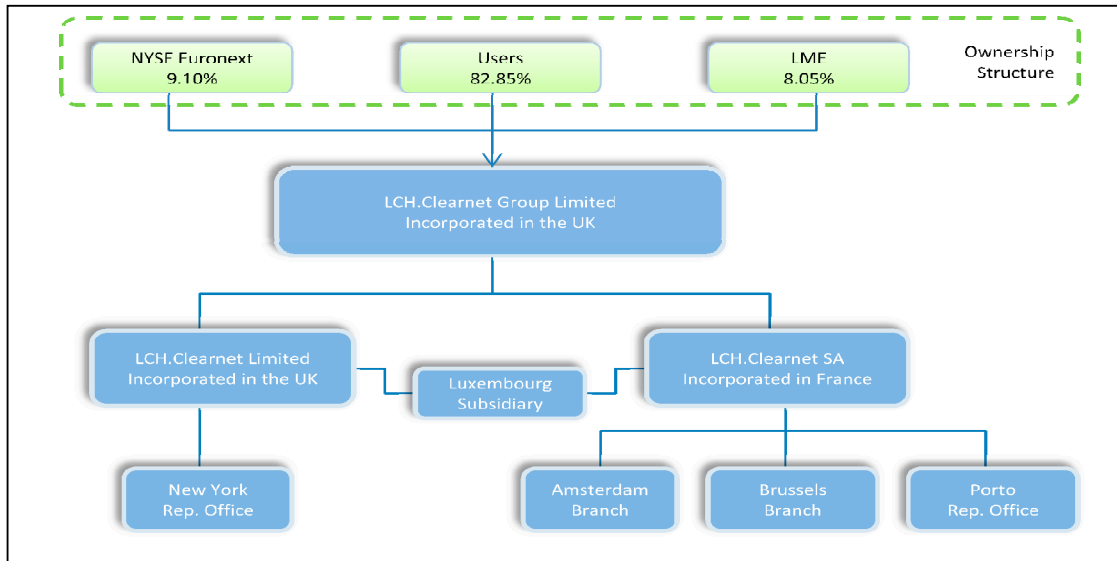
4. **Since December 2003, LCH.Clearnet SA is fully owned by the holding company LCH.Clearnet Group Ltd., which is a private company limited by shares and registered in the United Kingdom (U.K.).** The holding company was created as part of a merger in December 2003 to oversee the two wholly owned subsidiaries of the Group: (i) LCH.Clearnet Limited (formerly London Clearinghouse Limited); and (ii) LCH.Clearnet SA (officially “Banque Centrale de Compensation SA”). The latter became an independent legal entity at the time of the merger, having previously been part of the Euronext Group. The shareholders of the holding company are mainly its users with 83 percent of total shares (Figure 1), and the remaining part is owned by New York Stock Exchange (NYSE) Euronext (9 percent), and London Metal Exchange (8 percent).

5. **LCH.Clearnet SA (Banque Centrale de Compensation) is a company limited by shares incorporated in France, licensed as a credit institution and, therefore, governed by French law.** It has branches in Amsterdam and Brussels and a representative office in Portugal. It has developed cross-border activities in Germany, Italy, Luxembourg, and Spain.

¹ A joint Working Group of the European System for Central Banks (ESCB) and the Committee of European Securities Regulators (CESR) developed recommendations to assess national market infrastructures. The ESCB/CESR recommendations are almost identical with the CPSS/IOSCO recommendations.

6. **This assessment covers only LCH.Clearnet SA using the CPSS/IOSCO methodology.** Other aspects of the holding company will be discussed as needed.

Figure 1. France: LCH.Clearnet Group Structure



7. **LCH.Clearnet SA clears a broad range of products traded on stock exchanges, electronic trading platforms, and over-the-counter (OTC) markets.** These products can be classified as follows:

- *Listed cash products:* cash equities, convertible equities, and bonds listed on the NYSE Euronext markets.
- *Listed derivatives products:* equity and commodity derivatives listed on the NYSE Euronext markets.
- *Fixed-income products:* government debt securities (Italian, French, and Spanish states) traded on electronic trading platforms such as MTS Italy, Euro MTS, Icap, and Brokertec (this segment is often called ‘bonds and repo’ in LCH.Clearnet SA’s documentation).
- *OTC product:* credit derivative Swap (CDS).

8. **LCH.Clearnet SA provides CCP services to the following markets:**

- Cash products and derivatives listed on the NYSE Euronext markets;
- Cash products listed on Bourse du Luxembourg;
- Cash products traded on Equiduct, NYSE BondMatch;
- Fixed-income products traded on MTS Italy, Euro MTS, Icap, Brokertec; and
- CDS traded over the counter.

9. **LCH.Clearnet SA operates a link with CC&G, an Italian CCP, which is part of the London Stock Exchange (LSE) group.**

10. **Two major developments took place recently:**

- The Board of the group initiated a “Transformation Plan” aimed at creating “One Firm” by consolidating and rationalizing some of the operations of both the French and U.K. subsidiaries. In the past, these subsidiaries operated without any business and operational integration. The transformation plan would lead to promoting the horizontal multi-asset class clearing model, and enhancing the risk and collateral management capability within LCH.Clearnet Group Ltd. As part of the transformation, fixed-income clearing will be the first business line, currently provided by the French CCP, to be cleared on the single platform, which is located in London.
- In March 2012, the LSE Group offered a bid to acquire at least 50 percent, and up to 60 percent, of LCH.Clearnet Group Ltd share capital. The transaction is expected to be completed by the fourth quarter of 2012, subject to regulatory approvals, including competition clearance.

11. **Key figures on the activities of LCH.Clearnet SA are provided in Table 1.**

IV. REGULATORY STRUCTURE

12. **LCH.Clearnet SA is incorporated in France and operates under French law.** By law, a Clearing House in France must have a credit institution statute and be licensed and supervised by the banking supervisory authority, ACP. It is a credit institution within the meaning of the European Directive 2006/48/EC dated June 14, 2006 (“Banking Directive”). As a clearing entity, it is regulated by the securities regulator, AMF, which approves its operating rules. As a clearing and settlement system for financial instruments, LCH.Clearnet SA is overseen by the central bank, BDF.

13. **LCH.Clearnet SA is also subject to the regulation and oversight of the Dutch, Belgian, and Portuguese competent authorities.** It provides clearing services for NYSE Euronext Amsterdam, NYSE Euronext Brussels, and NYSE Euronext Lisbon to coordinate the regulation and oversight of LCH.Clearnet SA, Memorandum of Understandings (MOUs) have been signed between the National Bank of Belgium (NBB) and Financial Services Market Authority, De Nederlandsche Bank, and Nederlandsche Autoriteit Financiële Markten; and Banco de Portugal and the Comissão do Mercado de Valores Mobiliários. A college has been set up for this purpose.

14. **LCH.Clearnet SA is also licensed as a Recognized Overseas Clearinghouse (ROCH) by the Financial Service Authority (FSA) in the United Kingdom.** An MOU is signed by all involved authorities, including France, Belgium, the Netherlands, Portugal, and the United Kingdom, for exchange of information at the level of the LCH.Clearnet Group Ltd (Table 2).

Table 1. France: Key Statistics of LCH.Clearnet SA, 2008–2011

	2008	2009	2010	2011
1. Number of transactions cleared (Million)	899,74	795,76	852,80	889,82
1.1 Listed cash products	388,90	344,61	373,76	445,72
1.2 Listed Derivatives	509,64	449,93	477,43	442,05
of which Equity derivatives	504,20	442,65	463,17	421,83
of which Commodity derivatives	5,45	7,28	14,26	20,22
1.3 Fixed-income	1,20	1,21	1,61	2,05
1.4 CDS	-	-	0,001	0,001
2. Value of transactions (EUR billion) ^{1/}	50 748,23	45 039,87	59 682,26	67 008,00
2.1 Listed cash products	7 392,24	4 569,79	5 492,36	5 960,10
2.2 Listed Derivatives	10 066,97	6 206,06	7 861,14	7 592,21
of which Financial	9 998,79	6 142,08	7 701,39	7 322,84
of which Commodity	68,18	63,98	159,75	269,37
2.3 Fixed-income	33 289,02	34 264,02	46 273,08	53 394,74
2.4 CDS	-	-	55,68	61,83
3. Average daily value of transactions (EUR billions)	198,24	175,94	234,97	264,86
4. Number of clearing members (end of year)	105	103	103	114
of which Foreign clearing members	41	54	57	68
5. Default fund (EUR millions) (Value as of month of December)	944,76	1 404,65	1 491,09	1 605,00
5.1 Listed products (equities, bonds, derivatives)	575,00	874,71	1 106,35	603,00
5.2 Fixed-income	369,76	529,94	384,74	750,00
5.3 CDS	-	-	200,00	217,00

Source: LCH.Clearnet SA.

1/ Notional amount for derivative products.

15. For the link between LCH.Clearnet SA and the Italian CC&G, an MOU is signed by the French authorities and the relevant authorities in Italy-Banca d'Italia (BDI) and Consob.

16. Table 2 summarizes the MOUs between the involved domestic and foreign competent authorities.

Table 2. France: Summary of MOUs Between Involved Domestic and Foreign Authorities

Systems/Activities	MOUs
LCH.Clearnet SA	Belgium (FSMA, BNB), France (AMF, BDF, and ACP), Netherlands (AFM and DNB), Portugal (CMVM, and BdP since 2003)
LCH.Clearnet Group	Belgium, France, the Netherlands, Portugal, and United Kingdom (FSA, BOE)
Link LCH.Clearnet SA-Cassa di Compensazione e Garanzia	France (AMF, BDF, ACP) and Italy (Bdl, Consob)
LCH.Clearnet SA-Bourse du Luxembourg	MOU between France (AMF, BDF, and ACP), Luxembourg (Commission de Surveillance du Secteur Financier CSSF).
LCH.Clearnet SA-German infrastructures: clearing services for the German platform Equiduct by LCH.Clearnet SA	MOU to be finalized between France (AMF, BDF, and ACP), and Germany (Bundesbank and Bafin).

Source: Banque de France.

V. MAIN FINDINGS

Legal Framework (Rec. 1)

17. **LCH.Clearnet SA activities are governed by a consistent and solid set of laws, regulations, and rules.** In particular, the legal framework supports the enforcement of transactions, netting procedures, and protection of customer assets. There are adequate rules for addressing the event of a participant default, including the effective use of collateral. The implementation of the settlement finality and collateral directives provide a solid protection both in France and other European Economic Area (EEA) countries.

Participation requirements (Rec. 2)

18. **LCH.Clearnet SA access and exit criteria are well defined and publicly disclosed.** LCH.Clearnet SA's participation requirements are objective and clearly stated on its website. They do not limit access on grounds other than risks. Only regulated credit institutions and investment firms are eligible to become clearing members. Furthermore, participants should meet financial resources and operational reliability. LCH.Clearnet SA monitors participants' compliance on a regular basis

Financial risk management (Rec. 3–6)

19. **LCH.Clearnet SA has a comprehensive risk-management framework.** It monitors its participants' exposures at least once a day and conducts intraday margin calls. It employs several tools to limit its exposures to potential losses from defaulting participants, including a high level of required capital, margin requirements, and contributions to the clearing fund. LCH.Clearnet SA can also require additional financial

resources from participants in situations where unusual prices levels are detected. Recently, LCH.Clearnet SA developed dedicated risk-management procedures to handle sovereign debt. Nevertheless, LCH.Clearnet SA should measure its exposure continuously throughout the business day; i.e., an exposure is calculated continuously intraday once the positions, the participants, or the prices of the products have changed.

Custody and investment risks (Rec. 7)

20. **Cash and securities are kept safe in the central bank account and in national and international central securities depositories.** LCH.Clearnet SA has an account in TARGET-2. LCH.Clearnet SA investment policy is conservative by investing in highly rated government instruments. It ensures that its overall credit exposure to any individual issuer remains within acceptable concentration limits by the daily monitoring procedures.

Operational risk (Rec. 8)

21. **LCH.Clearnet SA business continuity arrangements are well developed and cover all aspects of its operation and communication networks.** As a credit institution, LCH.Clearnet SA has implemented the Operational Risk Framework of Basel II Capital Accord requirements. The Operational Risk Management is an ongoing process based on a formalized methodology. The monitoring of operational risks and loss events is performed through a dedicated tool. Contingency plans and back-up facilities are regularly tested and maintained to ensure the resilience of LCH.Clearnet SA. A simulation exercise with market participants should be carried out annually. Furthermore, the relevant authorities should formalize the assessment of the operational risk, including onsite inspections, of the insourcing company that develops and manages the largest part of LCH.Clearnet SA activities.

Money settlements (Rec. 9)

22. **LCH.Clearnet SA uses both central bank money and private settlement bank for cash processing (margin and settlement).** Central bank money is used for the vast majority of euro payments, about 85 percent for cash equity segment and 100 percent for other asset segments. Euroclear Bank is used for about 10 percent of the volume of NYSE Euronext markets, and Clearstream Luxembourg is used for the settlement of transactions on Bourse de Luxembourg, although the amount is very low. Commercial bank money is also used for the settlement of margins in British pounds and U.S. dollars, which are very negligible.

Physical deliveries (Rec. 10)

23. **LCH.Clearnet SA clearly identifies and manages its obligation for physical delivery.** The deliveries of securities are carried out in book-entry form (dematerialized and immobilized), and delivery obligations are fulfilled via book transfer. LCH.Clearnet SA has developed comprehensive rules and instructions for the delivery of commodity contracts.

Risks in links between central counterparties (Rec. 11)

24. **LCH.Clearnet SA has a link to the Italian CCP—CC&G—for the clearing of Italian government bonds.** LCH.Clearnet SA has specific rules and risk methodology aimed at minimizing its risk exposures to CC&G. Both CCPs collect margins from each other based on a methodology that is applied to their members, but they do not contribute to the other's clearing fund, in order to minimize contagion risk that may result from members' default. The link is subject to the regulation and oversight of the relevant French and Italian competent authorities. Both central counterparties (CCPs) are designated payment systems according to Article 10 of the Settlement Finality Directive 98/26/EC, which provides legal protection to finality and collaterals.

Efficiency (Rec. 12)

25. **LCH.Clearnet SA reviews its pricing and service levels, as well as capacity levels on a regular basis.** It performs periodic benchmarking studies with comparable CCPs in other European countries to assess its costs and fees. An ongoing profit-and-loss analysis is conducted.

Governance (Rec. 13)

26. **LCH.Clearnet SA is a wholly owned subsidiary of LCH.Clearnet Group Ltd.** LCH.Clearnet SA governance arrangements and composition of the Boards are clear and publicly available on its website. The Board, which includes four independent Board members, is accountable to the shareholders. However, there is no formal selection criteria or procedure used to choose the "user representative" on the Board, so as to ensure the Board has appropriate skills and incentives. Procedures to identify and mitigate conflicts of interests should be further enhanced. A transformation plan is currently being implemented, aimed at streamlining the operations of both subsidiaries based on product lines, and some of the functionalities will be concentrated at the group level. In this context, it is crucial that the new organization does not compromise that LCH.Clearnet SA retains the necessary level of independence to meet its regulatory obligations as a distinct legal entity.

Transparency (Rec. 14)

27. **LCH.Clearnet SA discloses to its clearing members and other market participants its rules, procedures, and policies on its website.** These rules cover, among other things, governance issues, the rights and obligations of participants, procedures and tools for handling risks, and fees for using its services. Also, important notices and information are posted on the website. LCH.Clearnet SA has not completed and disclosed a comprehensive self-assessment following the RCCPs assessment methodology.

Regulation and oversight (Rec. 15)

28. **The objectives and responsibilities of the regulators of LCH.Clearnet SA are well defined and transparent.** The supervision and oversight of LCH.Clearnet SA are comprehensive and effective. LCH.Clearnet SA is regulated and supervised by several domestic and foreign authorities. Cooperation and coordination between these authorities are governed by French law and, where necessary, formalized in several MOUs.

29. **A general discussion with the system operator and the regulators indicates that LCH.Clearnet SA will, in principle, be able to meet the newly revised CPSS/IOSCO principles.** In particular, the new principles would not have any significant impact on LCH.Clearnet SA, and it will be able to adjust to the new requirements as far as needed.

Table 3. France: Collection of Assessment Results of LCH.Clearnet SA by Assessment Category

Assessment Category	Recommendations
Observed	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15
Broadly observed	13
Partly observed	14
Non-observed	-
Not applicable	-

Table 4. France: Detailed Assessment of Observance of the LCH.Clearnet SA of the CPSS-IOSCO Recommendations for Central Counterparties

Recommendation 1	<p>Legal framework. A CCP should have a well founded, transparent and enforceable legal framework for each aspect of its activities in all relevant jurisdictions.</p>
Answers to key questions	<p>KQ1. 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?</p> <p>LCH.Clearnet SA is subject to a clear, coherent, and robust regulatory framework. Its rules, procedures, and contractual arrangements are public and readily accessible.</p> <p>LCH.Clearnet SA activities are governed and regulated by:</p> <ul style="list-style-type: none"> – the Monetary and Financial Code (MFC), including European Directive; – the French Code Civil governing the notion of “netting” (completed by the MFC regarding the multilateral netting) and “novation;” – the Companies Act of 1985 for the governance structure, including the role of the Board and Directors; – the Commercial Code for private contractual arrangements; – Clearing Rule book (CRB) for its operations; and – contractual arrangements with clearing members. <p>LCH.Clearnet SA is also subjected to EU Directive 98/26/EC on Settlement Finality in payment and securities settlement systems and has been notified as a settlement and clearing system to the European Commission in February 2001.</p> <p>Does the legal framework demonstrate a high degree of assurance that there is a clear and effective legal basis for:</p> <ul style="list-style-type: none"> – the CCP to act as counterparty, including the legal basis for novation, open offer or any other legal concept in relation to all cleared products; – the timing of assumption of liability as CCP; – netting arrangements, acceleration and termination of outstanding obligations; – the CCP’s interest in collateral (including margin) that a participant pledges or transfers to the CCP and prevents the defeat of such interest by the participant or a third party; – default procedures; – finality of transfers of funds and financial instruments; and – other significant aspects of the CCP’s operations, risk management procedures, and related rules vis-à-vis all participants, including—if applicable—assets provided by nonclearing participants. <p>The legal basis for novation is provided in the CRB. In particular, LCH.Clearnet SA acts as a central counterparty between the clearing</p>

	<p>member of the buyer and the clearing member of the seller. Novation occurs upon registration and, as a result of novation, LCH.Clearnet SA becomes subject to the rights and obligations arising from the transaction registered in the name of such clearing member (Article 1.3.2.1). These provisions fit with the concept of novation as defined in Article 1271 and seq. of the French Civil Code.</p> <p>For CDS contract, the CRB for CDS, dated May 9, 2012, provides the contractual provisions for the central counterparty novation. Novation occurs with respect to an original transaction between participants provided it is eligible for clearing by LCH Clearnet SA pursuant to controls and verification performed in accordance with section 3.1.1 CRB of CDS.</p> <p><i>The timing of assumption of liability as CCP</i></p> <p>When the transaction is matched following the trade execution, LCH.Clearnet SA guarantees that the transaction is registered in the clearing system unless otherwise provided in a notice. It is not liable if a transaction is improperly registered in the clearing system because of a third party's fault or <i>force majeure</i> (section 1.3.3 of the CRB).</p> <p>As a CCP, the scope of LCH.Clearnet SA's obligation of guarantee varies according to the type of financial instrument. Thus, a difference has to be made between securities and by-products, such as options contracts or futures contracts (including commodities). Pursuant to Article 1.3.2.6 of the CRB, LCH.Clearnet SA guarantees:</p> <ul style="list-style-type: none"> – Securities transactions, including the payment of cash and the delivery of the securities. <p>Option contracts, including payment of option premium pursuant to transactions and of cash amounts resulting from exercise and assignment, payment of cash and delivery pursuant to the settlement of positions in the underlying financial instruments or asset resulting from exercise and assignments.</p> <ul style="list-style-type: none"> – Futures contracts (excluding commodities), including payment of variation margin and, in the case of deliverable financial futures, delivery financial instruments versus payment. – Futures contracts on commodities, including payment of variation margin and the amount due to the selling clearing member, and the delivery of commodities to the buying clearing member. – Repos, including both the initial and return transactions, the payment of cash and the delivery of the debt securities, – Regarding the CDS segment: LCH.Clearnet SA assumes its responsibility as a CCP to deliver or to pay each clearing member on the basis of the transactions resulting from the novation of the original transaction and to be registered in its name. <p><i>Novation and netting arrangements</i></p> <p>The legal basis for "novation" is in the French Civil Code (see Article 1271). It says "novation" occurs when:</p> <ul style="list-style-type: none"> – When the debtor contracts toward his creditor a new debt which has replaced the old, which is extinguished;
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	<ul style="list-style-type: none"> – If a new debtor is substituted for the former which is discharged by the creditor; – When, by the effect of a new commitment, a new creditor is substituted for the old, to whom the debtor is discharged. <p>The legal basis for netting arrangements is provided by Article 1289 of the French Civil Code. Netting is achieved when the debt of two persons, debtors to one another, are extinguished, to the limit of their respective amount. Furthermore, multilateral netting is supported by Article L. 330-1 of the MFC, resulted from the transposition of the Finality Directive 98/26/CE as amended by the Directive 2009/44/EC. Article L. 330-1 of the MFC, states that upon registration in the clearing system, netting shall be legally enforceable and shall be binding on third parties.</p> <p><i>(d) The protection of the CCP's interest in collateral (including margin)</i></p> <p>According to the CRB, collateral is defined as any security, cash, or central bank guarantee pledged, granted or transferred outright to LCH.Clearnet SA aimed at securing the performance of the clearing member's obligations. It also covers the collection of assets performed by LCH.Clearnet SA through margin requirements and calls for contribution to the clearing funds.</p> <p><i>LCH.Clearnet SA's interest in collateral</i></p> <p>The CCP's interest in collateral is legally protected by the implementation of Settlement Finality Directive and the collateral Directive, which have been transposed in the French law n° 98-546 on July, 2, 1998, the Order n° 2005-171 on February, 24, 2005, and the Order n° 2011-398 on April 14, 2011.</p> <p>Both the Settlement Finality and Collateral Directives aim at ensuring that a financial collateral arrangement can take effect notwithstanding the commencement or continuation of winding-up proceedings or reorganization measures in respect of the collateral provider. They also state that, in case of potential conflict of laws, the applicable law is the one of the country in which the relevant securities account is maintained.</p> <p><i>Default procedures</i></p> <p>Default procedures are mainly defined in the CRB Chapter on Risk Management. It defines two types of default; contractual event of default and the insolvency event of default, and Chapter 5 specifies the measures to take in case of a default (notably the available resources LCH.Clearnet SA may use in case of default, in order to perform its obligations pursuant to its guarantee). Furthermore, Section 4.4.2 gives details concerning the liability of the defaulting clearing member and details regarding measures in case of event of default.</p> <p>The French statutory laws, such as Article L. 440-7 and L. 440-8 of the MFC, provide a legal basis for default rules and include rules for the default of a member.</p> <p><i>Finality of transfers of funds and financial instruments</i></p> <p>Article L. 330-1-III of the MFC, which transposes the Directive 98/26/EC ensures the finality of transfers of funds and financial instruments in a settlement system.</p>
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	<p>For euro-denominated settlements of securities, transactions are settled via Euroclear France, Euroclear Netherlands, Euroclear Bank, Euroclear Belgium, Interbolsa (Portugal) and Express II Monte Titoli (Italy). These systems are notified to the EC in accordance with the Directive on settlement finality. For settlements in foreign currencies, LCH.Clearnet SA uses different settlement banks (cf. Recommendation 7). However, considering the negligible value of non-euro denominated settlements, no deep risk analysis is carried out hereunder (see Recommendation 9).</p> <p>Transfers of funds in euro take place in TARGET-2, except for the cash settlements related to the life of the products on the CDS segment (coupons, premiums, credit events) which take place in CLS. This system is also notified to the EC and thereby the finality is protected.</p> <p>KQ3. 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?</p> <p>The French law provides a sound legal basis for the rights and obligations of LCH.Clearnet SA participants in case of insolvency proceedings. As Directive 98/26/EC and Directive 2009/44/CE have been transposed in French law, Article L. 330-1-I of the MFC states that “In the event of insolvency proceedings being opened against a participant in an interbank settlement system or a financial instrument settlement and delivery system in the European Economic Area, the rights and obligations arising from, or in connection with, the participation of that participant shall be determined by the law governing that system (...).”</p> <p>KQ4. 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 and provide adequate protection to both CCPs in the operation of the arrangement? Are there conflicts of laws issues and, if so, have they been addressed? Have cross-border collateral arrangements been evaluated?</p> <p>LCH.Clearnet SA has a significant level of cross-border activities mainly within the Economic European Area (EEA). The contractual arrangements are governed in accordance with the French laws.</p> <p>Concerning the applicability of French law for governing the relationships between LCH.Clearnet SA and its clearing members, it should be specified that Belgium, Netherlands and Portugal are part of the EU legislation and subject to the EU Directives on finality and collateral. Furthermore, these countries have ratified the Rome Convention. Since the admission agreement is governed by French law, which determines whether the commitments resulting from the agreement constitute valid and enforceable obligations between the Belgian, Dutch and Portuguese clearing members and LCH.Clearnet SA. The choice of French law as the governing law of the proposed documentation is recognized and applied as a valid choice of law, subject to the public policy rules of each relevant country and to the legal regime instituted by the Rome Convention.</p>
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	<p>Moreover, LCH.Clearnet SA has asked for legal opinions in order to make sure that its rules regarding netting arrangements were compatible with the jurisdictions of the foreign countries where it carries out its activities. For clearing activities within the EEA here is no indication that conflict of law that inhibits sound and safe clearing activities.</p> <p>LCH.Clearnet SA has a non-EEA clearing member domicile in Switzerland. As per the French Regulation (Article L.440-2 § 5 of the MFC and article 541-13 AMF general regulation), AMF shall give a prior approval to such a request, in close consultation with the ACP, which is also in charge of the supervision of clearing members located outside the French Republic territory (see Article L. 612-2 I A 2° c) and L. 613-33-1 of the MFC). For this purpose, the AMF and the ACP have required from the Swiss competent authority (FINMA) a comfort letter which completes the MOU already in place to ensure, in particular, the exchange of information. Furthermore, LCH.Clearnet SA requested the applicant to provide an independent legal opinion, which demonstrates that the domestic law will not inhibit the ability of LCH.Clearnet SA to act effectively under its clearing rules.</p>
Assessment	Observed
Comments	
Recommendation 2	<p>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.</p>
Answers to key questions	<p>KQ1. 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)?</p> <p>According to the MFC, entities that are eligible to become a clearing member are credit institutions and investment firms having their registered office in the EEA and subject to regulation and supervision by competent authorities. Subject to AMF approval, delivered in close consultation with the ACP, credit and investment firms located outside the EEA can also be clearing members. Furthermore, LCH.Clearnet SA has defined specific financial and operational requirements to be met by the applicant to be a clearing member.</p> <p>The capital requirements, imposed by LCH.Clearnet SA, are determined according to the category of the participant, i.e., a clearing member (to clear transactions for its own account) and general clearing member (for its own account and/or for the account of its clients). The level of capital requirement is also dependent on the products to be cleared by the member, where the highest is to clear CDS, fixed-income transactions and the lowest for equities products.</p> <p>According to its rule book, participants must proof that they have the adequate technical equipment, and sufficiently qualified staff. The participant must also have adequate risk management procedures.</p>

	<p>Prior to activating membership, applicants are required to conduct different types of testing with LCH.Clearnet SA.</p> <p>Concerning the operational and the organizational requirements, LCH.Clearnet SA asks clearing members to provide annually an update to the member organization.</p> <p>LCH.Clearnet SA “Members’ Financial Monitoring Service” team is in charge of monitoring that the participation requirements are met on a regular basis. It establishes half-yearly reports for all clearing members. These reports, presented to risk-management team, contain an assessment of the core and the supplementary capital of the clearing members, and their compliance with the financial and technical requirements.</p> <p>When the rating of a participant, provided by rating agencies, indicates that the creditworthiness of that participant may have deteriorated, an ad-hoc assessment is proceed. The risk-management team may take action to monitor or mitigate the risk associated with the clearing member such as conducting a membership review.</p> <p>Suspension and termination of participants’ membership</p> <p>LCH.Clearnet SA’s CRB specifies clearly the circumstances in which a membership may be suspended or terminated. It may do so if events could or are likely to result in a situation in which the clearing member no longer satisfies LCH.Clearnet SA requirements, or endangers the proper functioning of the clearing system, or no longer comply with its obligations under the clearing rules. Before exercising such power, LCH.Clearnet SA may enter into consultations with the clearing member.</p> <p>Membership suspension and termination occur in the following circumstances:</p> <ul style="list-style-type: none"> - When LCH.Clearnet SA is of the opinion that some events could or are likely to result in a situation which a clearing member no longer satisfies one or more of the participation requirements set out in the Rule Book and the related instructions; - When LCH.Clearnet SA deems that the clearing member endangers the proper functioning of the clearing system or is unable (or is likely to become unable) to meet its obligations in respect of one or more transactions or otherwise under the clearing rules; - When the clearing member asks for LCH.Clearnet SA to terminate its membership as a clearing member. <p>The clearing member is informed in writing of the reasons for suspension or termination. The termination is subject to a period of notice of at least ten days as set out in the admission agreement. Moreover, suspension or revocation of membership shall be notified to all clearing members by publication in a notice. LCH.Clearnet SA shall also promptly notify the competent authorities and the operator of the markets concerned.</p> <p>KQ3. 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?</p> <p>The participation requirements are listed in LCH.Clearnet SA’s rule books and instructions, and are publicly disclosed. This and other rules</p>
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	<p>and regulations are available via the LCH.Clearnet SA website. LCH.Clearnet SA's participation requirements are objective and clearly stated. They do not limit access on grounds other than risks. Access requirements enable any types of institutions (in compliance with French regulation) to participate given they meet LCH.Clearnet SA financial, technical and organizational requirements. Nevertheless, LCH.Clearnet SA reserves the right to not allow an applicant to become a member dependent on the judgment made concerning the participation requirements.</p> <p>In case of refusal of access, on the request of the applicant that was not admitted, LCH.Clearnet SA motivates its decision within one month after the request. There is no internal specific procedure of appeal to solve a litigation linked to the refusal of a membership by LCH.Clearnet SA. However, LCH.Clearnet SA shall duly motivate its refusal on the request of the applicant. The decision can be refer to the Court based on the fact that LCH.Clearnet SA didn't give a fair access to its activities and didn't have legitimate reason to justify it. For legitimate commercial reasons, a Clearing House may refuse access to a credit institution or an investment firm having its registered office in a Member State of the EC.</p>
Assessment	Observed
Comments	Due to the unique position of LCH.Clearnet, as a single CCP serving specific markets, an applicant should have the possibility to appeal to a third party (cf. competent authority) rather than addressing a court, which is a lengthy process, to solve litigation linked to the refusal of a membership by LCH.Clearnet SA.
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 of its participants in normal market conditions so that the operation of the CCP would not be disrupted and nondefaulting participants would not be exposed to losses that they cannot anticipate or control.
Answers to key questions	<p>KQ1. 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?</p> <p>LCH.Clearnet SA measures its exposures to its participants at least once a day and has the capacity to do it on an intraday basis. The timing of intraday exposure measurement varies across markets. The frequencies of calculation of exposures (snapshots of exposure) are fixed up-front and performed as a fully automated straight through process.</p> <p>For exchange traded cash products, there are currently no automated intraday exposure measurements. However, ad hoc intraday exposure measurements can be performed in case of volatile market conditions.</p> <p>In such situations, the Risk Department evaluates exposures versus available collateral coverage, and potential intraday margin call is collected. For exchange traded derivatives, a total of nine snapshots of exposure are made during the day, but only one of these results in a margin call on a regular basis. The measurement of exposures resulting</p>

in a margin call is run at 1:45 pm. LCH.Clearnet SA may decide in case of extreme volatility in the market to use any of the other eight runs to call intraday margin.

For fixed-income, an intraday margin calculation is performed once per day at 1:45 pm. An additional intraday measurement may take place intraday on an ad hoc basis depending on market volatility. In all these cases, such additional measurement of exposures results in an adjustment of the margin call.

The triggers for additional intraday margin calls for the above-mentioned instruments are not formalized with specific procedures and policies.

For CDS, there is no intraday margin call at the time of the assessment. For the clearing of CDS indexes, the CCP receives trades on a batch mode, once a day from the DTCC trade information warehouse, whilst for other markets trades are received on an on-going basis throughout the day. Therefore, on the CDS segment, the exposure of a clearing member cannot build on an intraday basis, due to the acceptance of new trades by the CCP.

Exposures' calculation is performed using the most recently available market prices. For exchange traded cash products, intraday exposure measurements can be performed in case of volatile market conditions based on real time prices, while real-time underlying value prices are used for exchange traded derivatives.

For fixed-income, end-of-day prices are used for the intraday margin call covering trades of the previous day and for new trades the trade prices are used. Indeed, intraday quotes are not necessarily available for all bonds. All end-of-day prices go through an automated verification algorithm before being used in margin runs. Near real-time updated positions are used, including performed settlements and same-day repos.

	Measurement of exposure	Prices	Positions
Exchange traded cash products	Ad hoc depending on the volatility	Real time	Real time
Exchange traded derivatives	9 per day	Near real time	Real time
Fixed-income	1 per day + 1 additional depending on the volatility	End-of-day prices for trades of the previous day trade prices for new trades	Near real-time
CDS	1 per day	End-of-day prices for previous trades of the previous day trade prices for new trades	New positions are received once per day

	<p>For CDS, LCH.Clearnet SA measures its participants' exposures to CDS indexes daily after having received new trades from the DTCC Trade Information Warehouse in the morning, as well as updated composite prices from Markit. Contributed prices from LCH.Clearnet SA members can also be used.</p> <p>KQ2. 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 nondefaulting participants to losses that they cannot anticipate or control?</p> <p>Several tools are used to limit LCH.Clearnet SA exposures to participants. All members are subject to prudential supervision and participation requirements. These criteria aim to ensure the credit-worthiness of the clearing members and the appropriateness of their financial and operational conditions. LCH.Clearnet SA's regularly monitors the financial condition of the clearing members by a dedicated "financial monitoring" team. For instance, LCH.Clearnet SA monitors at a daily frequency the members' creditworthiness using Market Implied Rating (Bond, Equity and CDS)/Credit Edge data (EDF Expected Default Frequency and Implied Rating). An alert is generated whenever the difference between a member's Market Implied Rating and its official rating exceeds a pre-determined threshold. Following the outcome of an alert, a desk-based investigation is carried out, and the Risk Executive has the discretion to take further action to monitor or mitigate the risk associated with the member, such as requesting an increase in margin.</p> <p>Furthermore, LCH.Clearnet SA may set a limit to an open position and risk exposure limits. When these limits are reached, LCH.Clearnet SA can increase the margin requirements in respect of a clearing member's open positions.</p> <p>In addition, LCH.Clearnet SA may order a clearing member to reduce its open positions within a stipulated time limit. If the open position is not reduced within the time limit, LCH.Clearnet SA can automatically liquidate the open positions that exceed the authorized limits.</p>
Assessment	Observed
Comments	<ul style="list-style-type: none"> - LCH.Clearnet SA should measure its exposure continuously throughout the business day, i.e., exposure is calculated continuously intraday once the positions, the participants, or the prices of the products have changed. - For fixed-income instruments, LCH.Clearnet SA should use intraday prices for the calculation of its exposures. - The triggers for additional intraday margin calls for exchange traded equities should be formalized with specific procedures and policies. - LCH.Clearnet SA should develop a model that allows the calculation of margin call for CDS on the same day prices rather than the prices of previous day.

Recommendation 4	<p>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.</p>
Answers to key questions	<p>KQ1. 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?</p> <p>In order to cover exposures, LCH.Clearnet SA relies primarily on margin requirements. It calculates and calls initial and variation margins each clearing day for each participant. Methods of margin calculation differ for product classes, taking into account the products' specificities.</p> <p>According to its policies, the margin requirements calculated and called by LCH.Clearnet SA aimed at covering the losses which LCH.Clearnet SA would incur should a clearing member default in normal market conditions, which corresponds to a confidence interval of 99.7 percent over the price movement observed in the previous year or two years for the CDS segment (this period is called "look back period").</p> <p>The purpose of initial margin is to cover the CCP losses subsequent to a member's default in all but extreme market conditions, defined as conditions inside a 99.7 percent confidence level. Extreme market conditions are instead covered by the Default Funds.</p> <p>For CDS, initial margins are computed according to an adapted SPAN methodology (the SPAN methodology that is currently used for Euronext derivatives markets is adapted to the features of CDS indexes contracts). Basically, the SPAN methodology is applied replacing the underlying value price by the spread of the CDS contract. Given the specificities of CDS indexes contracts, it is necessary to determine whether the proposed methodology is internally consistent and allows to take into account all the specific risks raised by CDS indexes contracts, namely:</p> <ul style="list-style-type: none"> – Spread risk; – Expected recovery rate risk; – Recovery rate risk (in case of actual default); – Default risk; – Interest rate risk; – Time risk; and – Basis risk (index versus components spreads). <p>The initial margin calculation in SPAN methodology is a combination of three amounts: the scanning risk, the inter-month spread charge, and the inter-commodity spread credit.</p> <p>Variation margining requirements are established for each member at the account level, in order to reflect the current market valuation of each member's portfolio.</p>

For the fixed-income segment (sovereign debt), following the lessons learnt during the management of the default of MF Global, LCH.Clearnet SA has implemented a concentration margin in order to cover positions that are concentrated toward a specific country or toward a specific asset (same ISIN code), thus having a lower liquidity.

Price estimation

For listed cash equities, the valuation price applied to the position is mainly the official market closing price obtained from the most liquid market place cleared by the CCP on which the relevant products are traded.

For exchange-traded derivatives, the valuation price of options and futures is the official market closing obtained from NYSE Euronext-Liffe and from BlueNext (for carbon futures).

For fixed-income products, prices are sourced from the data provider Interactive Data, except for Italian debt, whose prices are provided by MTS Italy. Before being used for calculating fixed-income margins, all prices go through a control process with an automated verification algorithm applying consistency and with a manual control, when sanity criteria have not been fulfilled.

For CDS, prices are sourced from Markit each day. Contributed prices based on clearing members quotes can also be used if the number of clearing members/quotes is sufficient.

Concerning the prices movements of the underlying assets for derivatives, in most cases, LCH.Clearnet SA derives the parameters input on the models from statistical analysis based on historical data. For cash equities and derivatives, historical data are used starting from the early '90s. For bonds and repos, time interval over which potential price movements are measured is five years.

In most cases, the prices movements cover an interval of several days called by LCH.Clearnet SA the "liquidation period" which is the period between the default and the estimated moment of liquidation of the collateral, i.e., the period during which the CCP runs a market risk. The liquidation period, also called "close out periods" is set by LCH.Clearnet SA at:

- three days on cash equities and bonds;
- three days on listed derivatives;
- three days on the fixed-income segment; and
- five days on the CDS segment.

A three-day interval means, for instance, that the CCP estimates that the liquidation of transactions is feasible within one or two days or three days, i.e., at the latest by D+3 (D being the date of the default), depending on whether the clearing member has defaulted in the morning before the payment of its margin call of the day or after this payment. Based on experience from managing previous defaults, this appears to be a reasonable assumption for liquid products. For instance, Lehman defaulted on Monday, September 15, 2008 and its derivatives position was liquidated and transferred on Thursday, September 18 whereas its bonds & repos position was liquidated for the largest part on Thursday, September 18, 2008, a remaining part of mainly long maturity forward repos was hedged on Friday, September 19, 2008.

	<p><i>Validation of the models and parameters</i></p> <p>The models are checked by the Risk Committee (including users), which proposes them for validation to LCH.Clearnet SA's CEO before implementation. From 2011, Internal Audit undertakes independent review of risk models (collateral haircuts, cash equities, swaps mark-to-market, portfolio sensitivity and all treasury related products). A yearly plan for parameters' adequacy revision is designed and implemented by the CCP upon validation by the Risk management committee. A minimal frequency of revision (monthly, quarterly or yearly) is associated to each parameter, depending on its nature and on its criticality. At least, the parameter is reviewed according to the stated frequency. However, revision of each parameter may also occur on an ad hoc basis.</p> <p>Furthermore, LCH.Clearnet SA commissioned an independent review of CDS risk model, undertaken by Ernst & Young.</p> <p>An improving back-testing mechanism has been introduced recently by LCH.Clearnet SA. Improvements are still needed in automation, trailing and accuracy in parameters' calculation. It is noticeable that the adequacy of the model was tested during the Lehman Brother's default and the MF Global default. After the liquidation of Lehman Brother's position, the CCP was still left with positive initial margin.</p> <p>KQ2. Does the CCP have the authority and operational capacity to demand margin intraday to maintain the desired coverage? Under what circumstances?</p> <p>According to its CRB, LCH.Clearnet SA has the right to call intraday margin either on the entire clearing member's position or on open positions of a specific instrument. In particular, LCH.Clearnet SA has implemented over the years a set of policies that allow appropriate and adequate intraday margin calls. However, automated intraday margin calls are applied for derivatives and fixed-incomes whereas there is none for cash equity.</p> <p>The intra-day margin calls are performed automatically by the risk and the treasury departments at 1.45 pm on derivatives and fixed-income segments. Moreover, additional intraday margin calls can be triggered each hour.</p> <p>KQ3. 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?</p> <p>LCH.Clearnet SA accepts the following assets as margin:</p> <ul style="list-style-type: none"> – Cash in Euros, British pound, or U.S. dollars; – Central banks guarantees (this option being available with De Nederlandsche Bank and the National Bank of Belgium); – Public debt securities issued by the French, Spanish, Dutch, Italian, German, Portuguese, British and the United States; and – Stocks incorporated in the main European indexes; underlying stocks of options listed on NYSE Euronext markets; corporate bonds if the stocks of the relevant company are accepted as collateral.
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The list of eligible securities accepted as collateral by LCH.Clearnet SA is much narrow that the one used by the Eurosystem.

The “wrong way risk” is not specifically taken into account when accepting collateral. A participant can deposit specific sovereign debt securities as collateral to cover positions in debt instruments of the same country. However, in periods of financial distress, LCH.Clearnet SA enters in bilateral contact with its participant in order to ensure they deposit diversified collateral and not only sovereign debt securities issued in their country.

Cash represents on average around 63 percent of the collateral deposited with LCH.Clearnet SA, while securities and central bank guarantees represent 26 percent and 10 percent, respectively.

Moreover, cash deposits are almost entirely made in EURO. Concerning the securities held, equities represent a very small part, less than 10 percent.

The haircuts on government debt securities are changed on an ongoing basis in order to take into account the market evolution. In setting the haircut for market risk, the policy is to cover a 3 day price move at a 99.7 percent confidence level, based on a five year price history. These haircuts are back tested by LCH.Clearnet SA monthly since November 2011. The haircuts applied are published on LCH.Clearnet SA website in risk notices;

http://www.lchclearnet.com/risk_management/sa/risk_notices/

As of March 29, 2012, the applied haircuts are the following:

Band Number	1	2	3	4	5	6	7	8	9
Modified duration	<= 0.5 year	< 0.5 and <= 1 year	< 1 and <= 3 years	< 3 and <= 5 years	< 5 and <= 7 years	<7 and <= 10 years	<10 and <=15 years	<15 and <=30 years	> 30 years
Class I (France)	0.5%	0.75%	1.25%	2%	2.5%	3.5%	6.25%	15%	20%
Class II (Belgium)	1.25%	1.25%	3%	4.75%	6%	7.75%	10.5%	17.5%	na
Class III (Portugal)	80%	80%	80%	80%	80%	80%	80%	80%	na
Class IV (UK)	0.5%	0.75%	1.75%	2.75%	3.75%	5.5%	8.75%	16.5%	na
Class V (Italy)	1.75%	1.75%	3.75%	6%	7.75%	9.5%	9.75%	18.25%	na
Class VI (Spain)	1.25%	1.25%	3.5%	6%	7.75%	10.25%	13%	18.75%	na
Class VII (USA)	0.5%	0.75%	1.75%	2.75%	3.75%	5.5%	8.75%	16.5%	na
Class VIII (Germany)	0.5%	0.75%	1.25%	2%	2.5%	3.5%	6.25%	15%	na
Class IX (Netherlands)	0.5%	0.75%	1.25%	2%	2.5%	3.5%	6.25%	15%	na

All individual equities eligible as collateral are reviewed regularly against the 35 percent threshold. Any individual equity which has shown a price move of more than 25 percent over the expected liquidation period will be excluded from the eligible collateral list. A fixed haircut of 35 percent of market price is applied on equity. This percentage is well above the level of price movement observed on any equity index containing stocks eligible for collateral over the expected liquidation period.

As part of the intraday margin calculation, the collateral is revaluated against the recent market price and applying the effective haircut.

For collateral deposited in the form of cash (which represents 63 percent of collateral deposited in 2011), in order to account for foreign exchange

	risk, an amount equal to a 99.7 percent confidence level is calculated over a five year price history for two-day currency movements, and added to the market risk haircut.
Assessment	Observed
Comments	<ul style="list-style-type: none"> – Improvements are still needed in automation, trailing and accuracy in parameters' calculation, and to intensifying the use of stress testing and back-testing mechanism. – To enhance transparency and reduce uncertainty, LCH.Clearnet SA should formalize its policy to address wrong way risk. – LCH.Clearnet SA should commission an independent review of its risk models for all its products and not only for CDS. – Automated intraday margin call should also be applied on cash equity.
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.
Answers to key questions	<p>KQ1. 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?</p> <p>In order to cover the possible losses that exceed the margin requirements met by a defaulting clearing member, LCH.Clearnet SA maintains mutualized financial resources.</p> <p>LCH.Clearnet SA has introduced three separate default funds: a default fund for exchange traded markets (NYSE Euronext, Bluenext, etc); a default fund for fixed-income markets (MTS Italy, Brokertec, etc); and a default fund for CDS markets. Each default fund is dedicated and can only be used to cover losses in the relevant market. The reason being that the membership requirements and risks across the different markets are different and, according to LCH.Clearnet SA, it would not be appropriate to have mutualisation of risks across the participants to each default fund.</p> <p>LCH.Clearnet SA calibrates each specific clearing fund of one particular segment so that together with the margin calls it covers 100 percent of the estimated maximum potential future exposure of the biggest participant on this specific segment, this estimate being held with at least 99.7 percent confidence under extreme but plausible conditions.</p> <p>In order to maintain sufficient and adequate financial resources, especially in the case of extreme but plausible market conditions, LCH.Clearnet SA frequently performs stress tests that rely on two set of stress scenarios:</p>

- Historical scenarios consist in replicating the largest past variations (i.e., to replicate the past crisis) on the member portfolios.
- Theoretical scenarios aim at describing potential future plausible crisis not yet occurred. Alternatively, the theoretical scenarios use the largest variations occurred upon other markets (than cleared) but upon similar products.

In addition, the Generalized Extreme Value theory (GEV) will be used for the calculation of the default fund sizing and contributions for several markets (under implementation for the Cash & Derivative Default Fund).

The stress tests are, in practice, performed daily and additional margins are called in case there is an uncovered stress risk (risk covered neither by the margins nor by the current level of default fund). The stress scenarios are planned to be reviewed once a year at least. The calendar review and the frequency can be indeed different regarding the products cleared.

In case of a subsequent default, LCH.Clearnet SA has the possibility to request its members for an immediate and full replenishment of the same default fund. LCH.Clearnet SA may only call in aggregate for one replenishment of the default fund up to the same amount as the last default fund amount called. The same mechanism is in place for the cash and derivatives clearing fund, the listed derivatives clearing fund and the CDS clearing fund.

KQ2. 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?

LCH.Clearnet SA has set up a multi-tiered system of financial resources to cover losses from its participants' defaults. The different layers of financial resources are:

- *Individual margins.*
- *Mutual clearing funds.*
- *LCH.Clearnet SA's own funds.*

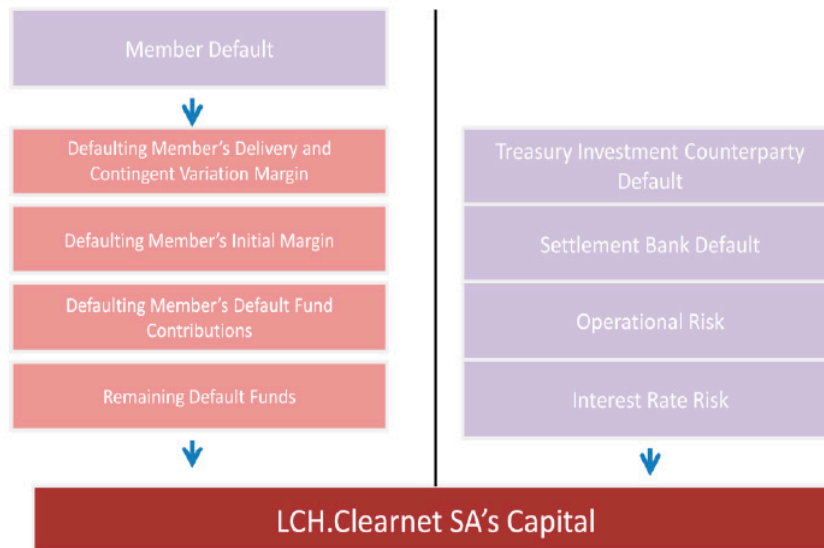
In addition on the CDS segment, LCH.Clearnet SA would contribute with EUR 20 million of its own capital prior any contribution of the mutual CDS clearing fund (this mechanism is also named as "skin in the game").

As February 2012, LCH.Clearnet SA financial resources were (in MEUR):

	Default fund	Margins
Cash Equity & derivatives	971	4 022
Bonds & Repos	750	15 512
CDS	225	264
Total	1 946	19 798

In addition, LCH.Clearnet SA's own funds are EUR 141 million. For the clearing fund contributions, LCH.Clearnet SA accepts only cash in EURO, British pound or U.S. dollar.

LCH.Clearnet SA Financial Resource Structure



KQ3. 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 allows 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?

LCH.Clearnet SA has a liquidity risk management framework in place in order to monitor and ensure that sufficient liquidity is available to close out positions in case of the default of the clearing member with the largest liquidity risk in case of its default. In practice, this framework determines the amount that the treasury department should have at its disposal in the appropriate liquid form. The required amount of liquidity is calculated daily by the risk department. For instance, all resources intended to cover the default of the member to which LCH.Clearnet SA has the highest exposure are immediately available to meet LCH.Clearnet SA's obligations. On the CDS segment, the resources are intended to cover the default of the 2 members to which LCH.Clearnet SA has the highest exposure.

	<p>As a credit institution, LCH.Clearnet SA has also access to central bank liquidity in Target 2 against collateralized securities.</p> <p>LCH.Clearnet SA has also access to the money market and to noncommitted credit lines with commercial banks. However, the latter is highly uncertain during financial distress.</p> <table border="1" data-bbox="566 384 1378 636"> <thead> <tr> <th data-bbox="566 384 1008 447">Noncommitted Credit Lines with Commercial Banks</th> <th data-bbox="1008 384 1378 447">EUR 380000000</th> </tr> </thead> <tbody> <tr> <td data-bbox="566 447 1008 478">BNPP</td> <td data-bbox="1008 447 1378 478">EUR 110 000 000</td> </tr> <tr> <td data-bbox="566 478 1008 510">SG</td> <td data-bbox="1008 478 1378 510">EUR 100 000 000</td> </tr> <tr> <td data-bbox="566 510 1008 541">ING</td> <td data-bbox="1008 510 1378 541">EUR 100 000 000</td> </tr> <tr> <td data-bbox="566 541 1008 573">Natixis</td> <td data-bbox="1008 541 1378 573">EUR 50 000 000</td> </tr> <tr> <td data-bbox="566 573 1008 604">BPCE</td> <td data-bbox="1008 573 1378 604">EUR 20 000 000</td> </tr> </tbody> </table>	Noncommitted Credit Lines with Commercial Banks	EUR 380000000	BNPP	EUR 110 000 000	SG	EUR 100 000 000	ING	EUR 100 000 000	Natixis	EUR 50 000 000	BPCE	EUR 20 000 000
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Assessment	Observed												
Comments													
Recommendation 6	<p>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 pressure and to continue meeting its obligations. Key aspects of the default procedures should be publicly available.</p>												
Answers to key questions	<p>KQ1. 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?</p> <p>The CRB of LCH.Clearnet SA's clearly states the circumstances that constitute a default or an insolvency case. These rules allow LCH.Clearnet to control, manage, or close the positions of the defaulting member in a way that ensures market integrity and the protection of LCH.Clearnet SA. It also has the right to transfer the customers' positions of the defaulting member to a nondefaulting member. The waterfall model of LCH.Clearnet SA lines of defense starts by liquidating the positions and collateral of the defaulting participants, in accordance with the MFC provisions.</p> <p>The CRB defines an event of default as both a contractual event of default and an insolvency event of default which are:</p> <ul style="list-style-type: none"> – contractual event of default: clearing member failing at any time duly to comply with any of its obligations under the clearing rules or being likely to become unable to meet any of its obligations under the Clearing Rules; and – insolvency event of default: (i) the clearing member being subject to an insolvency proceeding; or (ii) on the basis of publicly available information, the clearing member being likely to become subject to an insolvency proceeding. <p>LCH.Clearnet SA may declare a contractual event of default in the case the clearing member is unable, or is likely to become unable, to meet its</p>												

obligations in respect of one or more transactions. LCH.Clearnet SA may also take the view that a contractual event of default has happened in the light of the occurrence of any of the following events:

- failure to pay or deliver any or all balances, financial instruments, cash payment or assets owed to LCH.Clearnet SA in respect of open positions registered in the name of the defaulting clearing member with LCH.Clearnet SA, within the stipulated deadlines;
- failure to pay initial margin, variation margin, intra-day margins or any additional margin, imposed by LCH.Clearnet SA or failure to make a required contribution to the clearing fund, within the stipulated time limits; and
- unsuccessful setting of net fails via a buy-in or a sell-out procedure.

In the case of default, the first step undertaken by LCH.Clearnet SA is to transfer positions, especially client positions, to another clearing member within a set period of time. Next step, LCH.Clearnet SA will try to close out and settle the defaulting member's open positions. LCH.Clearnet SA may use an auction process to liquidate the defaulter's position as a whole or in slots to the nondefaulting members.

On the CDS segment, LCH.Clearnet SA can proceed to a distribution of the losses and ultimately proceed to the close out of the segment if necessary.

KQ2. 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?

LCH.Clearnet SA has the legal power for the compulsory liquidation of a member's position. Article L.440-7 of the MFC provides the legal basis to the CCP by stating that, whatever the nature of the deposits made by clients to the clearing members for guaranteeing the positions on financial instruments held by the CCP, these deposits are deemed the full ownership of CCP itself as soon as they are posted. The rights of the CCP on its deposits are applicable even if the event of a bankruptcy of a member is opened in a foreign jurisdiction.

Regarding the identification and separate treatment of customer assets and proprietary assets, LCH.Clearnet SA requires its members to open position accounts in order to record separately their own positions and those of their clients for listed equities and derivatives. Hence, it can take proceedings in order to liquidate/transfer the positions of a defaulting member through strictly distinguishing the member's own positions ("house positions") and those of its clients. In particular, in the event of judiciary bankruptcy procedure regarding a clearing member or any other kind of event of default, the MFC (Art. L.440-9) states that the Clearing House is fully entitled to transfer the deposits covering the positions of nondefaulted principals (final investors) of the defaulting member to another clearing member.

For CDS, there is no possibility for LCH.Clearnet SA to distinguish between the proprietary assets of the clearing member and those of its clients, such possibility is planned to be developed when client servicing is developed by LCH.Clearnet SA (for the moment the service is not open to clients).

	<p>For fixed-income, LCH. Clearnet SA offers account segregation for some debt instruments.</p> <p>KQ3. 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?</p> <p>Default procedures are implemented by means of detailed internal operational business procedures for processing a clearing member default. Prior the decision of liquidation, an assessment is made by the Default Management Committee, which provides detailed information about the potential defaulting member such as positions and collateral. In particular, the liquidity needs for the liquidation are quantified.</p> <p>Moreover, as stated in article 4.5.2.2, upon the occurrence of an event of default, LCH.Clearnet SA may discretionary take any measures that it deems necessary or useful taking into account the need to act promptly in the manner LCH.Clearnet SA thinks best to contain its exposure and to mitigate resulting effects over market participants.</p> <p>KQ4. Are the key aspects of the default procedures (specified in paragraph 4.6.9) publicly available?</p> <p>The key aspects of the default procedures are specified in LCH.Clearnet SA’s CRB and Instructions, which are publicly disclosed on its website. The default procedures are also disclosed to the clearing members.</p>
Assessment	Observed
Comments	LCH.Clearnet SA should introduce a mechanism to allow the segregation between the clearing member’s proprietary assets and its clients’ assets for CDS contracts when the client clearing will be available. LCH.Clearnet SA should introduce an operational segregation mechanism for all fixed-income products.
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 minimized. Assets invested by a CCP should be held in instruments with minimal credit, market and liquidity risks
Answers to key questions	<p>QK1. 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?</p> <p>Securities provided as collateral to LCH.Clearnet SA by its participants are only deposited with central securities depositories (CSDs) and international CSDs (ICSDs), which are supervised by national authorities. The participants’ securities are held in dedicated accounts in the name of the participant, but pledged in favor of LCH.Clearnet SA. These securities can only be withdrawn with the consent of LCH.Clearnet SA.</p>

	<p>The depositories' entities are listed in the annexes to instruction IV.4-1 entitled « collateral accepted to meet margin requirements and cash payments. This instruction is available on http://www.lchclearnet.com/Images/IV.4-1%20Collateral%20-VA%20version%2027%2006%202011_tcm6-48744.pdf .</p> <p>Cash collateral in euro must be credited on LCH.Clearnet SA's Target-2 account held at BDF.</p> <p>Cash collateral in U.S. dollar and British pound, which constitutes less than 1 percent, is collected and held with commercial banks:</p> <ul style="list-style-type: none"> – for U.S. dollar: Deutsche Bank Trust Company America (U.S.); and Crédit Agricole S.A.; and – For GBP: HSBC Bank PLC (GB); and Crédit Agricole S.A; <p>QK2. 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?</p> <p>LCH.Clearnet SA does not carry out an assessment of Euroclear Settlement of Euronext-zone Securities (ESES), which includes Euroclear France, Euroclear Netherlands and Euroclear Belgium systems. It relies on the assessments conducted by BDF, De Nederlandsche Bank and National Bank of Belgium. The assessment was published on the website of ESES on March 2011.</p> <p>LCH.Clearnet SA has prompt access to securities in the case of a participant default, collateral is transferred in full ownership to LCH.Clearnet SA, which is supported by the French regulation.</p> <p>LCH.Clearnet SA invests cash funds related to margins, and default fund contributions, with approved counterparties, through fixed deposits, swaps, and repo transactions.</p> <p>Cash is also deposited in Central Bank account. It has invested over 95 percent of its portfolio in high quality investments, i.e., governments (AA- and above), central bank, supranational and government guaranteed institutions.</p> <p>Moreover, the policy defines also counterparty limits for cash deposits, interest rate swaps and repo limits, those limits are based on the nature and on the rating of the counterparties. LCH.Clearnet SA monitors on a daily basis the interest rate risk. For all investments with a maturity exceeding 6 months, the interest rate exposure must be hedged through an interest rate swap.</p> <p>Regarding repo investment, haircuts are applied depending on their maturity. Such haircuts are detailed in LCH.Clearnet SA Treasury Investment Policy. According to its investment policy, LCH.Clearnet SA is not allowed to invest its own capital or margin in its own securities.</p> <p>QK3. 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?</p> <p>LCH.Clearnet SA's concentration risk limits are detailed in the Treasury investment policy. LCH.Clearnet SA ensures that its overall credit exposure to any individual obligor remains within acceptable concentration limits by the daily monitoring of the Risk Management,</p>
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	Treasury Investment and Finance Management. The Risk Management Department also monitors the collateral received from the repo counterparties to identify any transactions which, amongst other things, may raise concerns. In addition, LCH.Clearnet SA concentration risk is limited by the Large Exposure Rules of the Capital Requirements Directive since LCH.Clearnet SA is also licensed as a bank.
Assessment	Observed
Comments	
Recommendation 8	Operational risk. A CCP should identify sources of operational risk and minimize 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 fulfillment of a CCP's obligations.
Answers to key questions	<p>KQ1 - Does the CCP have a process for actively identifying, analyzing and addressing its operational risk, including risks arising from its outsourced operations and its other activities?</p> <p>As a credit institution, LCH.Clearnet SA has implemented the Operational Risk Framework of Basel II Capital Accord requirements. The Basic Indicator Approach was adopted for the capital requirements determination. The Operational Risk Management function is an on-going process based on a formalized methodology. The monitoring of operational risks and loss events is performed through a dedicated tool (ERA software & database) implemented at group level.</p> <p>According to the formalized methodology, each department assesses its operational risk in a worst-case scenario. 119 risks have been identified (half of which belong to the Basel 2 risk "execution, delivery and process management") and have been evaluated on a scale from 1 to 5 according to the risk's frequency and potential loss incurred. Each risk is assigned to a responsible person ("owner") who in most cases is the director of the department. In addition, each department appoints an operational risk correspondent responsible for analyzing, documenting and reporting operational risks and losses.</p> <p>The operational risks arising from outsourced operations are also monitored. Such risks are controlled in the framework of Service Level agreement concluded with contractors.</p> <p>KQ2 - 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?</p> <p>LCH.Clearnet SA staff comprises 194 persons with a permanent contract and 50 persons with a temporary contract. The Operations Department, comprising about 20 persons, is in charge of the daily follow-up of the clearing transactions, performs daily detailed controls on the result of the night batch treatments before the beginning of the clearing day, the parameters input in</p>

	<p>software, the fails, etc. Moreover, six persons are in charge of the operational risk and business continuity aspects within the “Business Continuity Management and Security” Department.</p> <p>LCH.Clearnet SA has established an Operational Risk Framework & Permanent Control Committee. The main role of the Committee is to collectively provide, on a quarterly basis, senior management and the Board of LCH. Clearnet SA with:</p> <ul style="list-style-type: none"> – Up-to-date operational risk information for business decision making. – Status update and feedback on the on the operational risk profile and risk environment of the Company. – Reasonable assurance that there is no significant gap in the operational risk and control mapping, including the risk profile of outsourced activities. <p>There is an independent audit (IA) function, staffed with 4.5 full-time equivalent persons that report directly to the CEO, which does review operational risk policy and controls. IA also audits the outsourcing arrangements and the outsourced operations when deemed appropriate. However, the available audit report dates back to 2006. Since the assessment of LCH.Clearnet SA against CPSS/IOSCO standards in 2005, an internal audit of the operational risk management framework concluded with a “satisfactory opinion.”</p> <p>In addition the internal audit department has performed audits in the field of business continuity management (BCM) in 2006, 2008, and 2011.</p> <p>KQ3 - 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?</p> <p>The Business Continuity & Security Department (BCS) of LCH.Clearnet SA implements a business continuity and disaster recovery plan. The responsibilities of the BCS are clear and formalized. Significant improvements in the business continuity area have been achieved since 2010, including:</p> <ul style="list-style-type: none"> – Business Continuity & Security committees are held on a regular basis. – A Businesses Impact Analysis is conducted every year and a Risk Assessment was ratified by the Board in June 2011. – Following an internal audit recommendation, BCS acquired a dedicated tool (PARAD) to manage business continuity plans and documentation. This tool, implemented in May 2010, was upgraded in 2011 from a stand-alone solution to a server based solution hosted by third party for service resilience purposes. This tool allows documentation management, crisis steering (test or real disaster) and reporting and also manages the plans, phases, actions, all referential data and documentation/appendices. <p>BCS initiated a Business Continuity Testing Universe in 2010, which identifies BCS tests and controls, their frequency and controls delegated to other departments for action. This Testing Universe was</p>
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	<p>validated by BCS Governance. All of the continuity plans are documented and regularly tested, as is the crisis management process. That process is based on the standard BCM approach, which begins with an initial emergency response and proceeds with mobilisation of crisis teams (command and operations) that manage strategic, tactical and operational aspects for the duration of the incident and until the crisis is resolved. In 2011, a dedicated mass communication tool (including crisis management team and staff contacts) has been implemented.</p> <p>The BCS department released its “Operator Recovery Plan” (ORP) in June 2010, which covers a list of threats and identified several vulnerabilities related to LCH.Clearnet SA’s organization, procedures, systems, buildings and so forth.</p> <p>Data are replicated synchronously between three IT sites, connected through a secured network Colt with duplicated lines. In case the primary site becomes unavailable during the day, less than 4 hours would be needed before production can resume from the secondary site, with no loss of data and no impact on Clearing House members. In practice, fire-drill tests show that a 2 ½ hour RTO is achievable including IT and Operations.</p> <p>Regarding the IT infrastructure, LCH.Clearnet SA maintains two data centres, one primary data centre and one back-up data centre, both managed by ATOS, a third party supplier. Plans were under way to move, by end 2012, the location of the back-up data Center to 35km away from the primary Center.</p> <p>During the course of 2009-2011, Atos has been implementing the compliance of the primary and disaster recovery data centre according to LCH.Clearnet SA audit recommendations and observations in order to ensure compliance both with the obligations under Basel and compliance with the service level agreement between ATOS and LCH.Clearnet SA.</p> <p>In case of a building disruption of the Paris Centorial site (HQ1), which is the primary business office, one backup site (HQ2) exists where critical applications are implemented on the basis of regularly updated masters. The distance between the sites allows a move of the staff from the primary site to the backup sites in less than two hours. Furthermore, half of LCH.Clearnet SA’s staff can have remote access to the backup site via their laptops. In case no site is accessible, Business Continuity plans can be activated remotely by the staff, by a remote control system known as PARAD. Both office sites are connected to both data sites so that the system can operate from the backup office site and from the secondary data site.</p> <p>For the Amsterdam, Brussels and Lisbon locations, the business continuity strategy is to resume activities at the Paris site. Procedures are in place for this at the Paris administrative site, and operational procedures for the transfer of activity (updated annually) have been designed and communicated to participants.</p> <p>For the moment clearing participants are not involved in the tests undertaken by LCH.Clearnet SA.</p> <p>– KQ4 - 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?</p>
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	<p>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?</p> <p>Since June 2011, LCH.Clearnet SA grades incidents affecting its key systems on a scale of priorities from 1 to 4, with 1 being the most serious and 4 the least. Each incident which is not solved immediately leads to a bypass measure and then a problem is open to which a degree of priority is given. Incidents and problems are not considered closed until corrective or proactive action has been taken, even if palliative action has already been implemented. LCH.Clearnet SA provides a monthly report to the authorities detailing the key figures concerning system availability. These reports provide a breakdown of incidents according to severity, business area, root cause, business consequences and external/internal nature. There is no indication from the reporting that the key systems are not reliable, secure and able to handle volume under stress conditions.</p> <p>Currently, the operational capacity of LCH.Clearnet SA on the cash equity segment in terms of volume is 3 million trades per day, which is well above the peak recorded (around 2 million trades per day during the Lehman crisis). LCH.Clearnet SA maximum capacity is up to 6 million trades per day and expects ultimately up to 10 million trade/day.</p> <p><i>IT Outsourcing</i></p> <p>LCH.Clearnet SA relied on outsourcing for all IT Services, from data centres and hardware/infrastructure and production, to (software) development and maintenance of applications. LCH.Clearnet SA relies on a pool of providers, with ATOS as major provider (representing roughly 85 percent of the IT production costs).</p> <p>The outsourcing relationships are governed by contractual frameworks, including a comprehensive framework agreement with ATOS in place.</p> <p>LCH. Clearnet SA makes use of telecoms service provider COLT for communication between the data centres.</p> <p>Moreover, for the CDS clearing service, operational, technical and contingency procedures were concluded in March 2010 between LCH.Clearnet SA and DTCC/Markit for the provision of prices by Markit and the exchange of information between DTCC TIW and LCH.Clearnet SA.</p>
Assessment	Observed
Comments	<ul style="list-style-type: none"> – An external audit of the business continuity plan should be carried out annually. – LCH.Clearnet SA should formalize the external audit of the operational risk of the outsourced activities. – The relevant authorities should formalize the assessment of the operational risk of the insourcing companies, including on-site inspection. – The business continuity plan should regularly be tested with participants. – A feasibility study, including cost assessment, should be undertaken by LCH.Clearnet SA to reduce the Recovery Time Objective (RTO) from four hours to preferably less than one hour.

Recommendation 9	<p>Money settlements. A CCP should employ money settlement arrangements that eliminate or strictly limit its settlement bank risks, that is, its credit and liquidity risk from the use of banks to effect money settlements with its participants. Funds transfers to a CCP should be final when effected.</p>
Answers to key questions	<p>KQ1 - Does the CCP use the central bank model or the private settlement bank model?</p> <p>LCH.Clearnet SA settlement and payment risk policy clearly states that “LCH.Clearnet SA has a preference to effect the transfer of cash margins and cash settlement using central bank money. Where this is not possible, commercial banks which meet rigorous credit risk and operational capability requirements may be used.”</p> <p>Central bank money is used for the vast majority of euro payments, about 85 percent for cash equity segment and 100 percent for other asset segments in 2011. The payments in euro are settled in Target-2 in LCH.Clearnet SA account with BDF. The clearing members must, therefore, hold a Target-2 account, or be represented by a payment agent holding such an account.</p> <p>There are a limited number of cases where central bank money is not used, in particular:</p> <ul style="list-style-type: none"> - <i>For euro transactions:</i> <p>Euroclear Bank is used for the settlement of cash transactions, accounting for about 10 percent of the volume of NYSE Euronext markets. The CCP could have a positive amount on its cash account in Euroclear Bank but will be requested to be transferred to LCH.Clearnet SA’s account in Target-2.</p> <p>Clearstream Luxembourg is used for settlement of cash transactions for Bourse de Luxembourg, although the volumes are very negligible.</p> <p>On the CDS segment, CLS is used for the payments related to the life cycle event of CDS: payment of premium, coupons, cash compensation following a credit event. LCH.Clearnet SA accesses CLS Bank through Société Générale, acting as a payment agent.</p> <ul style="list-style-type: none"> - <i>For foreign currencies transactions:</i> <p>Commercial bank money in British pound and U.S. dollar is used for a very small percentage of the payment of margins (less than 0.1 percent). Indeed, British pound and U.S. dollar are eligible foreign currencies for the payment of margins by clearing members. The Clearing member deposits such assets on accounts that LCH.Clearnet SA has opened in commercial banks (For U.S. dollar: Deutsche Bank Trust Company Americas (U.S.) and Crédit Agricole S.A.; for GBP: HSBC Bank PLC (GB), Crédit Agricole S.A). Kas Bank is used for the “cash payment” (e.g., option premiums) related to a small volume of derivatives denominated in U.S. dollar on the NYSE Euronext Amsterdam market.</p> <p>KQ2 - 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?</p>

	<p>Considering the insignificance of non-euro payments in commercial bank money, no deep analysis is carried out on non-euro payments in the following answer to key question 2. Therefore, this answer to key question refers to payments in euro which are made:</p> <p><i>- In Target 2</i></p> <p>Payments in euro are made through Target 2 Real Time Gross Settlement (RTGS) system, which ensures finality of payments in accordance with the Finality Directive 98/26 EC.</p> <p>LCH Clearnet SA's clearing members receive settlement confirmation messages from BDF to confirm that funds transfers have been effected as and when required. Regarding the intraday finality, payment systems provide real-time finality during their operating hours, i.e., from 7.00 am to 6.00 pm CET</p> <p><i>- In Euroclear Bank</i></p> <p>Euroclear Bank is assessed by NBB as ensuring intraday finality of payments and settlements (cf. NBB assessment of Euroclear Bank in 2009 http://www.nbb.be/doc/cp/fr/settle/fsr2009cpps.pdf). LCH.Clearnet SA's clearing members receive settlement confirmation messages from Euroclear Bank.</p> <p><i>- In CLS</i></p> <p>The transfer of funds is final when effected in the morning between 9.30 a.m. and 12 a.m. CLS is regularly assessed by the competent authorities.</p> <p>KQ3 - 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?</p> <p>Different cases of use of private settlement agent can be distinguished:</p> <ul style="list-style-type: none"> - When an ICSD is used, LCH.Clearnet SA does not directly monitor such ICSD but ensures that this ICSD is regulated. LCH.Clearnet SA does not assess the concentration of exposures and the liquidity pressure posed by its exposure by Euroclear Bank. In the case of Clearstream Luxembourg, the values and exposures are insignificant. - When private bank agent is used, LCH.Clearnet SA has in place monitoring criteria, described in the payment and settlement risk policy, including: <ul style="list-style-type: none"> - An average credit rating of at least A-, or a guarantee from a sovereign government or parent company with an average credit rating of at least a demonstrable operational suitability. <p>LCH.Clearnet SA assesses its potential losses and liquidity pressures in the case of a settlement agent's failure. For instance, a cash exposure limit is maintained on BNPP as a group.</p> <p>As stated above, LCH.Clearnet SA uses Deutsche Bank Trust Company Americas, Crédit Agricole S.A., HSBC Bank PLC and Kas Bank N.V. for very low values in British pound or U.S. dollar.</p> <p>Some payment agents may concentrate payments of several clearing members with the CCP; the default of a payment/settlement agent to transfer cash collateral payments to the CCP may consequently prevent the</p>
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	<p>CCP from receiving in due time the cash collateral of several clearing members. LCH.Clearnet SA's rules state that the choice of payment agents made by clearing members has to be submitted to the CCP before the agreement comes into effect.</p> <p>Moreover, as detailed in the LCH.Clearnet SA's Payment and Settlement Policy, the CCP does monitor the rating and the number of members of one particular payment agent. However, the clearing members remain liable vis-à-vis the CCP for the fulfilment of their payment obligations, even in case of default of their payment agents, and ultimate cash transfers take place in central bank money with immediate finality.</p> <p>KQ4 - 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?</p> <p>LCH.Clearnet SA monitors its exposures toward the used banks to avoid any concentration.</p>
Assessment	Observed
Comments	Once the volume of non-euro payments in commercial bank money increases, LCH.Clearnet SA should carry out an assessment of the finality of these payments.
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.
Answers to key questions	<p>KQ1 - Does the CCP have rules that clearly state its obligations with respect to deliveries of physical instruments?</p> <p>LCH.Clearnet SA does not deliver any securities in physical form. All deliveries are carried out in book-entry form (immobilized or dematerialized) and delivery obligations are fulfilled via book transfer.</p> <p>The CRB describes LCH.Clearnet SA general delivery obligations. The article refers to instructions for the definition of the conditions under which LCH.Clearnet SA should fulfil its obligations for each segment of activity. These conditions include:</p> <p>The number of days after which LCH.Clearnet SA launches a buy-in procedure for securities (e.g., 10 days on French debt, 30 days on Italian debt);</p> <p>DVP mechanism is always used for all market LCH.Clearnet SA is active, including Euroclear settlement system ESES used in Belgium, France and the Netherlands.</p> <p>KQ2 - 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?</p> <p>The CCP has obligations to make or receive deliveries of physical instruments. LCH.Clearnet SA commits itself to deliver the assets to the buying counterparty, even in case of default of the selling clearing member. As far as commodities contracts (traded on NYSE-Euronext Paris) are concerned, LCH.Clearnet SA generally does not directly intervene as deliverer in the settlement process, as the intent of market participants is to</p>

	<p>end the transactions in cash and not by physical delivery. As a consequence, LCH.Clearnet SA commits itself to pay cash compensation to the nondefaulting clearing member. LCH.Clearnet SA's volume of activity on commodities remains quite limited in comparison with its total activity on securities.</p> <p>KQ3 - 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?</p> <p>Concerning the delivery of commodities, counterparties are directly placed in contact with each other. Consequently, it seems that LCH.Clearnet SA is not submitted to liquidity, storage and delivery risks.</p> <p>The use of settlement agents by LCH.Clearnet SA offers the possibility for clearing members to use the services of third parties to make and receive physical deliveries. Before entering into an agreement with a settlement agent, clearing members have to obtain the agreement of LCH.Clearnet SA, which can accept or not the settlement arrangement. However, LCH.Clearnet SA remains only exposed to the clearing member failure to deliver. To this end, in case of default of a settlement agent, the clearing member would have to find another settlement agent and all the obligations of the clearing member would remain.</p>
Assessment	Observed
Comments	
Recommendation 11	<p>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.</p>
Answers to key questions	<p>KQ1 - 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 minimize or contain these risks such that the CCP remains able to observe the other recommendations contained in this report?</p> <p>LCH.Clearnet SA operates a link with CC&G S.p.A., which is an Italian CCP that is part of LSE Group. The assessment of CC&G against CPSS/IOSCO Recommendations is publicly available on BDI and Consob website; http://www.bancaditalia.it/sispaga/sms/docum/altri/Assessment_CCG.pdf</p> <p>The link between LCH.Clearnet SA and CC&G was designed in 2002 and activated in August 2004. It covers the clearing of Italian government bonds traded on MTS Italy, Euro MTS, and Brokertec. This enables LCH.Clearnet SA's and CC&G's members to benefit from common CCP services without participating simultaneously in the two CCPs. For the implementation of the link, the two CCPs have become participant to each other.</p> <p>For cross-border trades between their respective members, i.e., covered by the link, LCH.Clearnet SA and CC&G interpose themselves between the original counterparties as for any domestic trade. Consequently, they are reciprocally liable for the settlement of their bilateral net positions and not in contractual relation with the clearing members of the other CCP. Payments are effected in central bank money in euro and the delivery of securities takes place through Monte Titoli (the Italian CSD).</p>

	<p>The link, before going live, has been approved by the competent French and Italian authorities.</p> <p>LCH.Clearnet SA has carried out an initial risk assessment of the potential sources of risks that may stem from CC&G. This assessment is based on internally developed principles and policies, including:</p> <ul style="list-style-type: none"> – Subject to regulatory supervision by competent authorities; – Stringent membership requirements including both capital and operational criteria that are aimed at ensuring that only the most creditworthy participants can clear through them; and – Monitoring and measurement of exposures to its market participants, including collateralisation. <p>A prudent investment policy; due to the nature of a CCP's role in the markets, a CCP does not invest in risky instruments in order to make</p> <ul style="list-style-type: none"> – a profit, under normal market conditions a CCP has a flat position; and – The organization is specifically designed to withstand the default of its largest participant under the most extreme market conditions; as such it has additional layers of post-default backing that supplements its margin protections. <p>Also, according to its policy, LCH.Clearnet SA Executive Board should review all links with CCPs on an annual basis and verify if these still meet the requirements set out in this policy and report to the Risk Committee.</p> <p>Ad-hoc meetings between LCH.Clearnet SA and CC&G risk management team take place to address specific issues. Such dedicated meetings took place recently in June 2011 to address issues such as the fine-tuning of the convergence of the margining methodology, improvements of the procedure of daily margins calls, extension of the link to new asset classes (Corporate bond and French and Spanish debts). In December 2011, the risk management teams of the two CCPs implemented, at the request of regulators, a joint test of default management related to a financial group having a membership on both CCPs. Both CCPs review the risk parameters on a monthly basis, following the formal agreement between their risk management committees.</p> <p>KQ2 - 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?</p> <p>The link is subject to relevant EU law and each system is subject to national law and regulation enforced in respective jurisdiction.</p> <p>As specified in Recommendation 1, at a national level, LCH.Clearnet SA is subject to a clear and robust legal and regulatory environment due to the fact that post-market activities are strictly defined and supervised under French Law and regulation, and benefits from a set of well established rules.</p> <p>Moreover, clearing and settlement activities benefit from the legal framework set by Directive 98/26/CE relating to the irrevocability and enforceability of transfer orders and from that of Directive 2004/39/EC on markets in financial instruments which organizes access to central counterparties, clearing and settlement facilities (Articles 34 & 35).</p>
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	<p>The Directive 98/26/EC and the directive 2009/44/EC have also been transposed in Italian law.</p> <p>The rules, procedures, and contracts of the CCP are enforceable when a linked CCP or a participant in a linked CCP defaults or becomes insolvent. As a consequence, French law is applicable to the rights and obligations of LCH.Clearnet SA's participants in case of insolvency proceedings.</p> <p>The CCPs conferred each other the status of "Allied Clearinghouse" and regard each other as a special clearing member. Therefore, the partner CCP's Rulebook provisions are applicable to each of the CCP.</p> <p>From LCH.Clearnet SA's side, "A Service agreement for Allied Clearinghouse to the LCH.Clearnet SA Clearing System" was drafted and jointly signed by LCH.Clearnet SA and CC&G 6 February 2007. This agreement is drafted under French law. From CCG's side, "A Service Agreement for Special Clearing members to the CC&G has been drafted and jointly signed in May 2006. This agreement is drafted under Italian law.</p> <p>KQ3 - 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?</p> <p>The potential sources of operational, credit, liquidity and settlement risks arising from the link are identified and jointly addressed by LCH.Clearnet SA and CC&G. The main risks are:</p> <ul style="list-style-type: none"> - Risk measure arbitrage; the margin calculation methodology has been fully harmonized between the two. - The contagion risk is the risk that the CCP suffers losses as a result of a default of another CCP's clearing member. To address this problem, LCH.Clearnet SA does not contribute to the CC&G's Default Fund and vice-versa. - Exposures; It shall be noted that LCH.Clearnet SA has a direct exposure to CC&G but not to the CC&G members. <p>To reduce its exposures, LCH.Clearnet SA does, on a daily basis, request margins from CC&G using the same methodology and parameters as it uses for its clearing members for the calculation of initial and variation margins. The bilateral exposures between LCH.Clearnet SA and CC&G are covered by margins which are deposited by each CCP with the other CCP. Initial and variation margins are calculated to be applied to net positions, resulting from the aggregation of all such trades executed by one or several CC&G members with one or several LCH.Clearnet SA members. The collateral that LCH.Clearnet deposits with CC&G is segregated from the linked CCP's assets in order to avoid it becoming part of the estate of the defaulting CCP and the risk that it cannot be retrieved in case of a default."</p> <p>There is adequate legal protection of the margins provided by LCH.Clearnet SA supported by the Italian Civil Code and Decrees.</p> <p>Unlike what applies to clearing members, the linked clearinghouses have chosen to exempt one another to contribute to their respective default fund. This exemption is aimed at avoiding "default risk contagion" between members of CC&G and those of LCH.Clearnet SA, i.e., the situation where CCPs mutualise their risks by contributing reciprocally to their clearing funds.</p>
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	<p>However, to compensate for the lack of contribution to the clearing fund, additional margins are called by each CCP. Empirically, the collection of margin did not fully cover the risk exposure of LCH.Clearnet SA toward CC&G. In January 2011, the monthly average of daily uncovered risk following CC&G stress risk exposure was EUR 375.7, with a peak of EUR 2,614.3 million on January 3, 2011. Since July 2011, such uncovered risk has reduced.</p> <p>LCH.Clearnet SA is arguing that the current level of risk is manageable since the risk of default of CC&G would be remote and significantly lower than the risk run on a regular clearing member due to its structural risk aversion.</p> <p>In case a member of LCH.Clearnet SA using the link would default, according to the default management process, the margin provided by the defaulter will be needed to cover losses resulting from the liquidation of the position of the defaulter.</p> <p>If a loss is made on the position, the loss will be covered by LCH.Clearnet SA taking resources from the initial margin provided by the defaulter. In case LCH.Clearnet SA has passed on some of this initial margin to CC&G, it may have to pre-fund this part of the margin amount. As a way of illustration, albeit the Lehman Brothers' portfolio contained a significant part of Italian debt, the margin applied by LCH.Clearnet SA has proven to be more than adequate to cover the loss incurred in the auction.</p> <p>CC&G is allowed to invest the margins received in its own name in money market instruments and financial market instruments which can be promptly realised and which are issued by entities with a high credit rating, according to the joint regulation of BDI and Consob.</p> <p>CC&G might also be allowed to re-hypothecate the margins that it receives from LCH Clearnet SA, that is, to use those margins in order to secure obligations vis-à-vis of third parties, according to article 70 of the Italian Financial Services Act.</p> <p>In case CC&G realized a loss in the investments made using LCH.Clearnet SA margins and became insolvent, however, LCH.Clearnet SA could be left with an unsecured claim against CC&G insolvent estate in order to recuperate the balance that LCH.Clearnet SA should have received their after the settlement of its contractual positions.</p> <p>Although the Italian law provides adequate protection of the margins provided by LCH.Clearnet SA, in case of insolvency of CC&G, the delay necessary to identify the margins might be lengthy creating financial uncertainty for LCH.Clearnet SA.</p> <p>KQ4 - 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?</p> <p>Co-operation and co-ordination framework between the relevant competent French and Italian authorities is defined in an MOU.</p> <p>The primary objective is to ensure adequate monitoring of risks related to the link. The MOU also recalls that each local authority remains primarily responsible for its CCP.</p>
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	<p>The MOU defines the conditions under which LCH.Clearnet SA and CC&G provide information to the authorities, as well as the framework for exchanges of information between the authorities themselves. The MOU recalls that information received by the authorities is confidential.</p> <p>Both French and Italian authorities have the possibility to request information from CC&G and LCH.Clearnet SA. Authorities' cross-border requests can be transferred either indirectly through the local authorities or directly to the CCP, although the domestic authority should be informed.</p> <p>Authorities commit themselves to exchange information and keep each other informed of any major change regarding their national legal framework of supervision and oversight of securities clearing and settlement systems. Authorities are also committed to inform each other promptly about irregularities in the conduct of the CCPs, including meeting the requirement of fitness and proper.</p> <p>French and Italian authorities rely on each other for carrying out on-site inspections of their respective CCPs and agree to share the results upon request.</p> <p>Italian and French authorities notably concluded that after Lehman Brothers' default, the improvements in the functioning of the link were satisfactory. Indeed, LCH.Clearnet SA analysed its relationship with CC&G and Monte Titoli in order to improve the functioning of the link on a liquidity management and in order to work jointly on improvements such as having access to Monte Titoli's system for on-going management of intraday settlements and cash flow.</p>
Assessment	Observed
Comments	<ul style="list-style-type: none"> - LCH.Clearnet should collect adequate level of additional margin from CC&G as contribution to the default fund is not made. - LCH.Clearnet SA should ensure that the collateral provided to CC&G is safely invested by minimizing credit and liquidity risks.
Recommendation 12	Efficiency. While maintaining safe and secure operations, CCPs should be cost-effective in meeting the requirements of participants.
Answers to key questions	<p>KQ1 - 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 analyzing the reasons for significant differences)? Does the CCP have in place procedures to regularly review its pricing levels against its costs of operation?</p> <p>LCH.Clearnet SA performs regular check of the performance management data with an executive review of monthly profit and loss (P&L) account. Dedicated actions are undertaken in order to control costs, including procurement management, monitoring of contractors contracts and fees, and regular re-negotiations with providers. Management accounts are reviewed by the LCH.Clearnet SA Executive Committee on a monthly basis. They are also discussed by LCH. Clearnet SA board as a recurring item on its agenda.</p> <p>LCH.Clearnet SA benchmarks its costs and fees by assessing its financial items monthly and yearly versus LCH.Clearnet Ltd. Financials are thoroughly reviewed by the Audit Committee and the Board of LCH. Clearnet SA, and compared versus those of LCH.Clearnet Ltd by LCH.Clearnet Group Limited (LCH.Clearnet Group) Board and Audit Committee members. However, given that LCH.Clearnet Ltd in recent</p>

	<p>years has been structurally generating losses compared to LCH.Clearnet SA, the comparison is subject to a risk of bias.</p> <p>The mechanisms in place to review the costs and prices are based on statistical studies on member volumes, benchmarking analysis versus available tariffs from competitors and cost distribution per business streams to produce breakeven prices. Tariffs reviews are conducted on an ad-hoc basis, whilst costs are monitored on an on-going basis. However, LCH.Clearnet SA claimed that it is difficult to assess its costs and fees versus those of competitors, given the confidentiality of this information and the difference in the business models. LCH.Clearnet SA management analyses the fees and costs of competitors when made public. LCH.Clearnet SA relied on comparative analysis made by independent consultants. LCH.Clearnet SA launched a cost control program in a context of income reduction. This has led to cost cutting initiatives, such as project cost negotiations with providers, IT run optimization, and rent re-negotiations, among others.</p> <p>LCH.Clearnet SA has progressively cut its prices. For instance, the price for equity transactions has been reduced from EUR 0.53 per transaction in January 2006 to EUR 0.064 per transaction in January 2010.</p> <p>Since the last changes in the governance of LCH.Clearnet Group Ltd, user representation makes up to 80 percent of the voting rights of the holding company. This has allowed the users to influence the pricing policy of LCH.Clearnet SA. Furthermore, LCH.Clearnet SA has regular consultative meetings with the Users Consultation Group, where pricing and service level are discussed. Participants are also represented in LCH.Clearnet SA Board.</p> <p>KQ2 - 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?</p> <p>LCH.Clearnet SA has in place procedures to control its operational costs. All budgets are reviewed and approved by management. All pricing levels are repeatedly reviewed. LCH.Clearnet SA closely monitors participants' satisfaction through performance indicators for several service areas, including operations, treasury, customers' support, projects, marketing, invoicing & finance, membership & legal and risk management. The analysis of such indicators permits LCH.Clearnet SA to respond to its clients' needs.</p> <p>Across the serviced products, LCH.Clearnet SA organizes member meetings on a regular basis to discuss new product developments, service enhancements, and costs and fees.</p> <p>LCH.Clearnet SA has a dedicated governance framework for on-going management of operational reliability, with regular meetings of the operational risk management committee and internal audit committee. This framework is complemented by the formalization of permanent controls on key process within the same governance framework. These monitoring tools help management to take preventive actions and progressively lower the likelihood and impacts of operational risks.</p> <p>Furthermore, the Internal Audit systematically covers operational reliability, in line with its risk-based approach. Internal Audit reports are made available to regulators.</p>
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Assessment	Observed
Comments	
Recommendation 13	Governance. Governance arrangements for a CCP should be clear and transparent to fulfill 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.
Answers to key questions	<p>KQ1 - What are the governance arrangements for the CCP? What information is publicly available about the CCP, its ownership and its Board and management structure?</p> <p>LCH.Clearnet SA is fully owned by LCH.Clearnet Group Ltd, which is incorporated as a private company in England and listed as financial holding company by the ACP and, therefore, subject to a consolidated prudential supervision (namely capital requirements, large exposures and market risk) : see. Article L. 517-1 of the MFC and Article 3 of the CRBF Regulation 2000-03. LCH.Clearnet Group Ltd has no activity other than its role as holding company of its two subsidiaries LCH.Clearnet SA and LCH.Clearnet Ltd. The share capital of the LCH.Clearnet Group Ltd is held by two categories of shareholder; "users" and "exchanges" with 83 and 17 percent, respectively. There is no correlation between a user's business volumes and the size of its stake other than this one.</p> <p>The Board of LCH.Clearnet Group Ltd is currently composed of 21 directors, including four independent non-executives (INEDs) of which one is acting as the Chairman. The four INEDs are considered independent based on the criteria set out in the company's articles of association, also taking into account the similar criteria contained in the U.K. Corporate Governance Code.</p> <p>The criteria set out in the articles for assessing the independence of potential directors do not exactly match the criteria set out in the U.K. Code on Corporate Governance. In fact, two criteria set out in the Code are omitted in the articles, namely if a candidate has a material business relationship with the company, and if a candidate has significant links with other directors through involvement in other companies or bodies. It is argued that LCH.Clearnet Group Ltd omits these criteria because they would restrict too many potential candidates for the role of Independent Director and also be potentially negative by depriving the company of the expertise of recently retired senior.</p> <p>The Board of LCH.Clearnet Group Ltd is responsible for creating and maintaining the framework within which the Group operates. It sets strategy, objectives and policies and approves budgets, material initiatives and commitments. The supervision by the Board of the executive management is a core responsibility of the Board.</p> <p>The Board of LCH.Clearnet SA consists of 7 directors, of which one acts as a Chairman. It has one direct shareholder representative and four INEDs, and two directors are executives. The role of the Board of LCH.Clearnet SA is to determine the company's business policies and oversee that they are effectively implemented. Although decisions on strategy and policy are taken at the level of the Group.</p> <p>The continuity between the three Boards (Group level, LCH.Clearnet SA and LCH.Clearnet Ltd) is provided by the four Group INEDs, by the Chief</p>

	<p>Executive Officer of the holding company who sits at all three Boards and through the subsidiary Chief Executives who sit at the two local Boards. However, currently the CEO of the holding is also the CEO of one of the subsidiary (LCH.Clearnet Ltd) and such cross attendance to Boards with multiple office holding has the potential to create conflict of interests.</p> <p>The governance arrangements of LCH.Clearnet SA and information on the clearing systems and its activities are available on LCH.Clearnet SA website.</p> <p>KQ2 - 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?</p> <p>The organizational structure of LCH.Clearnet SA is set up so that the segregation of duties between departments offers sufficient independence. There is a clear separation in the reporting lines between risk management and other operations of LCH.Clearnet SA. The Risk Management Unit reports directly to the Board. Since January 2012, there is a Euro zone treasurer who reports directly to the CEO of LCH.Clearnet SA and the Group Treasurer, also called Head Collateral and Liquidity services. Ultimately the CEO of LCH.Clearnet SA is responsible for decisions regarding the risk management. In particular, his approval would be necessary for any decision impacting significantly key functions such as the risk management framework (admission criteria, margin methodology, treasury investments) and the management in case of a default.</p> <p>The LCH.Clearnet SA Risk Committee considers risk management policies and other developments affecting the risk profile of LCH.Clearnet SA. The committee reviews the adequacy of the clearing and default fund of LCH.Clearnet SA and advises the Board accordingly.</p> <p>KQ3 - 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?</p> <p>As a credit institution, the French banking regulation stipulates the basic requirements for the Management Board of LCH.Clearnet SA (see Article L. 511-13 of the MFC). They need to prove their theoretical and practical knowledge as well as their leadership experience in the respective business areas. The ACP is in charge of the supervision of the fitness and properness of the LCH.Clearnet SA., which is obliged to provide the ACP with evidence about the professional qualification of the Management Board.</p>
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	<p>Board members are made accountable for their performance vis-à-vis the shareholders' assembly according to the legal features of LCH.Clearnet SA, whereby Board members may be dismissed at short notice.</p> <p>Management of LCH.Clearnet SA and LCH.Clearnet Group Ltd is held responsible and made accountable for their decision-making vis-à-vis the Board through remuneration incentives. The non-executive Board members earn participation fees but do not receive any incentive remuneration package. The remuneration framework of the LCH.Clearnet Group Ltd and LCH.Clearnet SA is under the ACP supervision in the framework of CRD III regulation. Whilst LCH.Clearnet SA is deemed to be compliant with CRD III, the role of the Board of LCH.Clearnet SA in the area of remuneration is not stipulated, the reasons of the absence of a Remuneration Committee are not explained, no information on the specificities of the remuneration package for the control functions.</p> <p>Under French law, the CEO of LCH.Clearnet SA takes decision for LCH.Clearnet SA with the support of the Executive Committee, and he reports to the Board through the CEO report. The LCH.Clearnet SA Board is responsible for selecting and removing the CEO, and senior management.</p> <p>KQ4 - 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?</p> <p>LCH.Clearnet SA and its parent company ensure the transparency of its governance through a special section on corporate governance on its website. This section covers the Group's legal and regulatory structure, the Board composition and terms of reference of all four board committees.</p> <p>LCH.Clearnet SA imposes, in line with the French Companies Act of 1985, certain duties on directors so that they may not take advantage of their position in the company and to avoid conflict of interest. To achieve this directors are obliged to make full disclosure of certain interests, so that others connected with the company are kept fully aware of the interests of the director.</p> <p>Moreover, the composition of the Risk Committee at LCH.Clearnet SA is designed to reflect the interests faced by each category of member, being users (who contribute to the clearing fund and many of whom are also shareholders), all shareholders (whose capital is at risk and who have the ultimate responsibility of funding the company) and management (who have the executive responsibility). Each member of the LCH.Clearnet SA Risk Committee has signed a document named fitness self certification to avoid any conflict of interest. Both at the level of LCH.Clearnet SA and of the LCH.Clearnet Group Ltd, the Chairman of the respective Boards is responsible for managing any potential conflict of interest. The decisions of the Board must be either by a majority decision at a meeting or by unanimous resolution agreed to by each eligible director in writing. Once a potential Conflict has been reported it will be assessed and consideration given to what action may be appropriate.</p>
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	<p><i>Public interest objectives</i></p> <p>There is no legal requirement for LCH.Clearnet SA to have explicit public interest objectives. In particular, it is established as a credit institution and, according to the license, its function is restricted to offer CCP service.</p> <p>The main public objective of LCH.Clearnet Group Ltd, publicly disclosed, are:</p> <ul style="list-style-type: none"> – To reduce risk and safeguard the financial infrastructure in the markets. – To deliver market leading and cost-effective clearing services. – To be the leading multi-asset clearinghouse, independently serving diverse markets around the world. <p>LCH.Clearnet Group Ltd participates actively in domestic and international fora discussion and produce opinions on how to enhance the safety and efficiency of clearing. It produces several documentations and newsletters aimed at increasing public awareness of the importance of CCP and securities markets related issues.</p>
Assessment	Broadly Observed
Comments	<ul style="list-style-type: none"> – LCH.Clearnet Group Ltd should adjust its criteria to the independence of the non-executive Board to be in line with the U.K. Code on Corporate Governance. In particular, Criteria 2 on “no material business relationship with the company” and criteria 5 on no “cross-directorships were omitted from the articles.” – At the level of LCH.Clearnet SA and at the LCH.Clearnet Group Ltd qualification and criteria to select Board members should be disclosed to ensure the Board has appropriate skills and right incentives. – LCH.Clearnet should formalize the selection criteria used to choose the “user representative” on the Board. – LCH.Clearnet SA should provide clarity on its remuneration policy. – LCH.Clearnet at the level of the Group and LCH.Clearnet SA should carry out a review of its structure and to identify the possible types of conflict of interests and enabling prompt actions from the independent directors and from the chairman of each Board. <p>LCH.Clearnet Group Ltd is aware of some of the shortcomings mentioned above and is undertaking initiatives to address them.</p> <ul style="list-style-type: none"> – It is important to ensure that the transformation plan that will lead to further integration of the clearing activities within the Group would not erode the decision making process at the level of LCH.Clearnet SA with an adverse impact on managing the risks and meeting the needs of the local market.
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.
Answers to key questions	KQ1 - 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

	<p>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 fulfillment 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?</p> <p>LCH.Clearnet SA discloses to its clearing members and other market participants its rules, procedures, and policy on its website. These rules cover, among other things, governance issues, procedures for handling risks, the rights and obligations of participants, and the costs of using its services. Also important notices are posted on the website. http://www.lchclearnet.com/rules_and_regulations/sa/cash_derivatives_fixed_income.asp</p> <p>LCH.Clearnet SA discloses the circumstances it accepts trades for clearing and thus assumes exposure as a central counterparty. The legal basis of its activities “Clearing Rule Book” is also available online – http://www.lchclearnet.com/rules_and_regulations/sa/</p> <p>In addition, LCH.Clearnet SA discloses to its members information on the risk methodologies used (i.e., Risk Based Margining—scenario based matrix approach and historical simulation), risk parameters, and other calculations (e.g., detailed risk scenario calculations). Assessment of risks and costs are publicly distributed on a periodic basis (for example, parameters; margin, and haircuts).</p> <p>LCH.Clearnet SA updates its Clearing Rules and Instructions on a regular basis and provides information about these changes posted on the website.</p> <p>All the information related to the governance of LCH.Clearnet Group Ltd is available on the website of LCH.Clearnet http://www.lchclearnet.com/about_us/corporate_governance/.</p> <p>LCH.Clearnet SA fee grids are available on its website http://www.lchclearnet.com/fees/sa/. The fee grid clearly distinguishes the nature of the fee to be supported by Clearing Members.</p> <p>Moreover, LCH.Clearnet SA reports to its Clearing Members daily specific clearing, settlement and financial information. Clearing Members also receive quarterly statistics on their activity (fees paid and volumes). The details per month and per business line are provided and sent through e-mails. More detailed statistics (e.g., at product level) are also available upon clients’ request. The statistical services are free of charge.</p> <p>The parameters used for the stress testing correspond to extreme but plausible market conditions. The Risk Models used to determine uncovered risks and therefore the size of the Default Funds are the ones used for margining. The parameters corresponding to the extreme but plausible conditions – as well as the parameters corresponding to margining – are made available to Clearing Members as follows:</p> <ul style="list-style-type: none"> – Risk Notices are issued and sent to Clearing Members by e-mail to notify any changes in risk parameters; and – All the risk notices remain available on the website http://www.lchclearnet.com/risk_management/sa/risk_notices/
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	<p>The risk management margining methodologies of LCH.Clearnet SA are available on-line http://www.lchclearnet.com/risk_management/sa/margining_methodolog/</p> <p>However, the access to the risk management methodologies for a particular segment on the LCH.Clearnet is exclusively restricted to Clearing Members of this particular segment. The access to the margin calculation engines is also restricted to Clearing Members.</p> <p>KQ2 - How is information made available? In what language or languages? In what form?</p> <p>LCH.Clearnet SA uses different means of communication, according to the relevance of the information.</p> <p>As a general rule, LCH.Clearnet SA disseminates e-mails with information to the relevant staff of the Clearing Members. Most of this information is then made available on the website, either on the public area or on the members' area, the latter requesting a secured access.</p> <p>The cross companies services, performed between LCH.Clearnet SA and LCH.Clearnet Ltd, are also largely reported to the Clearing Members, based in joint and harmonised service provisions arrangements.</p> <p>LCH.Clearnet SA publishes all relevant information in English and in French.</p> <p>KQ3 - 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?</p> <p>LCH.Clearnet SA has not completed and disclosed the answers to the key questions of the assessment report against the CPSS-IOSCO Recommendations for CCPs.</p> <p>LCH.Clearnet SA does not have a formal procedure for review of disclosures.</p>
Assessment	Partly Observed
Comments	LCH.Clearnet SA should complete and disclose the answers to the key questions set out in the CPSS/IOSCO report on RCCP. It should also review the answers at least once a year or when major changes occur.
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 co-operate with each other and with other relevant authorities.
Answers to key questions	<p>KQ1 - How is the CCP regulated/overseen? Describe the laws that authorize 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?</p> <p>The French CCP LCH.Clearnet SA is registered and operates under French law, by which clearinghouses must have a credit institution status (Article L. 440-1 of MFC). Thus, it is covered by the European "Banking" Directive 2006/48/EC dated June 14, 2006. As a credit institution, it is</p>

	<p>licensed and supervised by ACP. As a Clearing House and settlement system, it is regulated by the AMF (Article L. 621 and seq. of the MFC). It is also subject to the oversight of BDF. Pursuant to L141-4 II of the MFC (Banque BDF's Statute), BDF is in charge of the oversight of clearing and settlement systems for financial instruments.</p> <p>LCH.Clearnet SA owns branches in Amsterdam and Brussels, and a representative office in Portugal related to the clearing of the NYSE Euronext markets. Since LCH.Clearnet SA provides clearing services for NYSE Euronext Amsterdam, NYSE Euronext Brussels and NYSE Euronext Lisbon, it is also subject to the supervision of the Dutch, Belgian, and Portuguese regulatory authorities in addition to the supervision by the French authorities.</p> <p>LCH.Clearnet SA is also supervised by the U.K. Financial Service Authority (FSA) as a Recognised Overseas Clearinghouse (ROCH). Furthermore, in order to service U.K. CDS market, LCH.Clearnet SA is also approved by FSA as a ROCH for CDS.</p> <p>LCH.Clearnet SA, as well as its sister company, LCH.Clearnet Ltd, is fully owned by LCH.Clearnet Group Limited incorporated in the United Kingdom, which is a financial holding company as defined in the Banking Directive. To this end, the holding company is subject to the ACP.</p> <p><i>Legal capacities and resources of the authorities</i></p> <p>– <i>French authorities</i></p> <p>French authorities have legal capacities to fulfil their regulatory, supervisory and oversight missions. In particular:</p> <p>Article L.612-1 of the MFC empowers ACP to regulate and supervise LCH.Clearnet SA. The ACP carries out off site supervision and onsite inspection. It can also impose sanctions such as warning, reprimand, temporary suspension/compulsory resignation of one or more of the managers.</p> <p>The AMF's regulation powers are also based on the MFC, specified in the Articles L.621-6 to L.621.30. It can carry out on-site inspections and impose disciplinary sanctions. The AMF can refer a specific matter to a court in order to stop quickly illegal practices.</p> <p>Pursuant to the Article L.141-4 of the MFC, BDF is in charge of the oversight of LCH. Clearnet SA. BDF assesses LCH.Clearnet SA against the ESCB-CESR standards, which are the European version of the RCCP.</p> <p>– <i>Belgium authorities</i></p> <p>The NBB oversees and supervises LCH.Clearnet SA, based on: (i) Article 36/25 of the NBB Organic Law dated 22 February 1998; and (ii) Article 65 and following of the Law of March 22, 1993 on the legal status and supervision of credit institutions (Host country supervisor of SA Brussels branch as a Belgian branch of a French credit institution). Furthermore Article 36/25 provides that the initial rules for clearing of LCH.Clearnet SA as well as amendments to those rules shall be subject to prior approval by the NBB upon opinion of the FSMA. The Belgium Financial Services and Markets Authority (FSMA) is involved in the supervision of LCH.Clearnet SA from the point of view of the protection of the interests of the participants and the investors, and of the good functioning of the market.</p>
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	<p>– <i>Dutch authorities</i></p> <p>In absence of statutory provision directly relating to financial infrastructures, LCH. Clearnet SA is subject to statutory supervision and oversight as it acts as the Clearing House for NYSE Euronext Amsterdam. NYSE Euronext Amsterdam has been granted a license as a Regulated Market under Dutch law and is required to arrange for adequate clearing and settlement of its markets. Therefore LCH.Clearnet SA, as the provider of clearing services, is subject to supervision and oversight by AFM and DNB.</p> <p>The Dutch authorities have entered into a Regulatory Cooperation Agreement (RCA) to regulate and oversee LCH.Clearnet SA. Supervision and oversight on LCH.Clearnet SA is further detailed in the Oversight Framework Clearing and Settlement NYSE Euronext, which is an annex to the RCA.</p> <p>– <i>Portuguese authorities</i></p> <p>Under Article 359 of the Portuguese Securities Code, the Comissão do Mercado de Valores Mobiliários (CMVM) is the competent authority for the supervision of clearing activities carried out by participants, clearing systems and central counterparties. In this context, CMVM has the legal power to monitor the functioning of the settlement and clearing systems.</p> <p>Banco de Portugal (BDP) has the legal power to oversee payment and settlement systems, as stated in Article 14 of its Organic Law. It has also the power to supervise a representative office of a credit institution with a head office abroad, such as the case with LCH.Clearnet SA. It may carry out onsite inspection, include the inspection of accounting books and any other data deemed necessary.</p> <p><i>Financial recourses</i></p> <p>BDF has 13 staff members dealing with payment, clearing and securities settlement systems oversight, of which three staffs oversee payment systems, four staffs for clearing and settlement activities, and four staff for data gathering and management. The staff has a diversified background, including economics, legal and business administration.</p> <p>ACP has three staff involved in the regulation and supervision of LCH.Clearnet SA. To monitor the compliance of LCH.Clearnet with the banking regulation ACP staff carry out off-site supervision and on-site inspection, covering risk management, operational risk. AMF has four staff involved in regulating and supervising clearing and settlement activities, including international cooperation and monitoring.</p> <p>KQ2 - 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?</p> <p>The objectives of BDF are publicly described in its Oversight Report; http://www.banque-france.fr/gb/sys_mone_fin/telechar/rapports/2009/Meas_Payment_Transfer_Systems_Oversight_Report_2009.pdf</p> <p>For ACP and AMF, there is no dedicated documentation related to CCPs which outlines the objectives, responsibilities and policies of respective authority.</p>
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	<p>Nevertheless, as for all credit institutions, responsibility and main policies of the ACP are clearly defined and publicly disclosed.</p> <p>The objectives and responsibilities of the competent authorities are also described in two documents provided to LCH.Clearnet SA, of which both are part of the “supervisory and oversight Guide of the Coordination Committee on Clearing Euronext.” The documents are drafted in order to be fully understood by LCH.Clearnet SA.</p> <p>KQ3 - 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?</p> <p>French authorities have the right to require any information from LCH.Clearnet SA to achieve their objectives. Article L.141-6 of the MFC sets out the obligation of the credit institutions to communicate any information or document required by BDF. Article L612-24 of the MFC gives the same power to the ACP to require from credit institution the necessary documents and data. If needed, documents must be communicated to the AMF in the case of an investigation. In addition, the professional secrecy cannot be opposed to the AMF (Article L.621-9-3) and data have to be provided on a regular basis.</p> <p>LCH.Clearnet SA provides ACP information on outsourced activities and operations in conformity with the regulation on internal control of credit institutions.</p> <p>Crisis management framework has been developed by all the involved authorities. This encompasses a list of information to be requested in case of crisis (operational or financial crisis), including a defaulting participant’s open positions and the liquidity needs of the CCP. This crisis communication framework has been tested on several occasions and recently in December 2011.</p> <p>LCH.Clearnet SA is required to report significant events and any changes in risk management procedures. Changes to CRB must be approved by the AMF and the NBB college. Changes in risk management procedures are communicated and documented. A consolidated report on outages is communicated monthly to the authorities with some significant delay up to 3 months.</p> <p>KQ4 - Is there a framework for cooperation between relevant authorities for the CCP, including domestic and nondomestic authorities? If so, describe the principles underlying this (these) framework(s) and their main contents, including any information sharing arrangements and decision making procedures.</p> <p><i>Domestic Cooperation</i></p> <p>Several provisions of the MFC urge the relevant competent authorities to cooperate and coordinate their policy and regulation for CCP and other infrastructures. In particular BDF, AMF and ACP have very frequent contacts, regular exchange of reports and information, and there have been several joint inspections and reporting.</p>
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	<p>Cooperation is also recognized at the highest senior management level as the governor of BDF is the Chairman of the ACP and a permanent member of AMF Board. Issues related to infrastructure discussed at the AMF or the ACP respective Board are prepared with the cooperation of the other agencies' staff.</p> <p>The ACP and AMF signed an agreement in 1999, which allows the ACP to carry out inspections on behalf of the AMF. Moreover, pursuant to the Article L.612-19 of the MFC, BDF provides financial resources to the ACP, and its staffs are financed by BDF.</p> <p><i>Cross-border Cooperation</i></p> <p>Memorandum of Understandings (MOUs) has been signed between relevant competent authorities for the cooperation and coordination of regulation, supervision and oversight of LCH.Clearnet SA clearing activities. A College has also been set up for this purpose --Coordination Committee on Clearing (CCC). The cooperation among these authorities is coordinated by a Permanent Secretariat held by BDF, which also acts as the contact point between the various authorities and LCH.Clearnet SA for the transmission of the necessary information. The CCC covers all relevant matters of oversight and supervision of LCH.Clearnet SA, including analysis of risks and risk control measures, project and services developments, changes to its operating rules, and assessment against ESCB-CESR standards. According to BDF, coordination among the involved authorities has been smooth, although there is a room for improvement in a very quickly evolving market.</p> <p>According to MFC Article L. 631-1-1, BDF, ACP and AMF should cooperate among themselves and are allowed to exchange confidential information with the consent of the authority or the entity, which provides the information.</p> <p>Another MOU has been signed between the French authorities and the U.K. Financial Supervision Authority (FSA) and the Bank of England (BOE) for exchange of information at the level of the Group. A College has been set up for this purpose --Joint Regulatory Authorities (JRA). The cooperation among these authorities is coordinated by a Permanent Secretariat currently held by BDF. This MOU between the "Joint Regulatory Authorities (JRA) sets out the terms and conditions for cooperation between the authorities responsible for overseeing LCH.Clearnet Group Ltd, especially in the form of a mechanism for exchanging information, the quest for harmonised oversight methods and the assessment of risk management methods and the practices developed by companies in the group over time.</p> <p>An MOU was signed in 2003 between the French and Italian competent authorities (Consob and Banca d'Italia) for the link between LCH.Clearnet and CC&G for transactions carried out on MTS Italy.</p> <p>An MOU has been signed in May 2012 between the French and the regulatory authority in Luxembourg (CSSF, Commission de Surveillance du Secteur Financier) for LCH.Clearnet SA clearing transactions on Bourse de Luxembourg.</p> <p>For LCH.Clearnet SA activity on the German platform Equiduct an MOU is in the process of being established between the French and the German authorities (Bafin and Bundesbank).</p>
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	<p>The signed MOUs covering LCH.Clearnet SA activities are illustrated below.</p> <table border="1" data-bbox="558 260 1383 915"> <thead> <tr> <th data-bbox="558 260 932 327">System</th> <th data-bbox="932 260 1383 327">MOU</th> </tr> </thead> <tbody> <tr> <td data-bbox="558 327 932 470">LCH.Clearnet SA</td> <td data-bbox="932 327 1383 470">March 2001 : Belgium (FSMA, BNB), France (AMF, BDF, ACP), The Netherlands (AFM, DNB), Portugal (CMVM and BDP since 2003)</td> </tr> <tr> <td data-bbox="558 470 932 554">Link LCH.Clearnet SA -CC&G</td> <td data-bbox="932 470 1383 554">February 2003 : France (AMF, BDF, ACP), Italy (Bdl, Consob)</td> </tr> <tr> <td data-bbox="558 554 932 722">LCH.Clearnet SA - German infrastructures: clearing services for the German platform Equiduct by LCH.Clearnet SA</td> <td data-bbox="932 554 1383 722">MoU in the process of being finalized: France (AMF, BDF, ACP), Germany (Bundesbank and Bafin)</td> </tr> <tr> <td data-bbox="558 722 932 806">LCH.Clearnet SA-Bourse du Luxembourg</td> <td data-bbox="932 722 1383 806">May 2012: France (AMF, BDF, ACP), Luxembourg (CSSF)</td> </tr> <tr> <td data-bbox="558 806 932 915">LCH.Clearnet Group</td> <td data-bbox="932 806 1383 915">February 2005 : Belgium, France, The Netherlands, Portugal, United Kingdom (FSA, BOE)</td> </tr> </tbody> </table>	System	MOU	LCH.Clearnet SA	March 2001 : Belgium (FSMA, BNB), France (AMF, BDF, ACP), The Netherlands (AFM, DNB), Portugal (CMVM and BDP since 2003)	Link LCH.Clearnet SA -CC&G	February 2003 : France (AMF, BDF, ACP), Italy (Bdl, Consob)	LCH.Clearnet SA - German infrastructures: clearing services for the German platform Equiduct by LCH.Clearnet SA	MoU in the process of being finalized: France (AMF, BDF, ACP), Germany (Bundesbank and Bafin)	LCH.Clearnet SA-Bourse du Luxembourg	May 2012: France (AMF, BDF, ACP), Luxembourg (CSSF)	LCH.Clearnet Group	February 2005 : Belgium, France, The Netherlands, Portugal, United Kingdom (FSA, BOE)
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Assessment	Observed												
Comments	<p>BDF should be empowered to issue regulation and undertake measures to effectively enforce its oversight responsibility.</p> <p>ACP and AMF should produce a policy note clearly defining and publicly disclosing their respective objectives, roles and responsibilities with regard to the soundness and efficiency of LCH.Clearnet SA.</p> <p>To increase transparency and accountability, the three involved competent authorities -BDF, AMF and ACP- should produce a joint policy note clearly defining and publicly disclosing their respective objectives, roles and responsibilities with regard to the soundness and efficiency of LCH.Clearnet SA.</p>												

Table 5. France: Actions to Improve Compliance

Reference Recommendation	Recommended Action
<p>Recommendation 13: <i>Governance</i></p>	<p>LCH.Clearnet Group should adjust its criteria to the independence of the non-executive Board to be in line with the U.K. Code on Corporate Governance. In particular, criteria 2 on “no material business relationship with the company” and criteria 5 on no “cross-directorships were omitted from the articles.”</p> <p>At the level of LCH.Clearnet SA and at the Group Ltd qualification and criteria to select Board members should be disclosed to ensure the Board has appropriate skills and right incentives.</p> <p>LCH.Clearnet should formalize the selection criteria used to choose the “user representative” on the Board.</p> <p>LCH.Clearnet SA should provide clarity on its remuneration policy.</p> <p>LCH.Clearnet at the level of the Group and LCH.Clearnet SA should carry out a review of its structure and to identify the possible types of conflict of interests and enabling prompt actions from the independent directors and from the chairman of each Board.</p> <p>LCH.Clearnet Group Ltd is aware of some of the shortcomings mentioned above and is undertaking initiatives to address them.</p>
<p>Recommendation 14: <i>Transparency</i></p>	<p>LCH.Clearnet SA should complete and disclose the answers to the key questions set out in the CPSS/IOSCO report on RCCP. It should also review the answers at least once a year or when major changes occur.</p>

Table 6. France: Further Recommended Actions

Reference Recommendation	Recommended Action
Recommendation 2: <i>Participation requirements</i>	Due to the unique position of LCH.Clearnet SA, as a single CCP serving the French financial markets, an applicant should have the possibility to appeal to a third party (cf. competent authority) rather than addressing a court, which is a lengthy process, to solve litigation linked to the refusal of a membership.
Recommendation 3: <i>Risk management</i>	<p>LCH.Clearnet SA should measure its exposure continuously throughout the business day, i.e., exposure is calculated continuously intraday once the positions, the participants, or the prices of the products have changed.</p> <p>For fixed-income instruments, LCH.Clearnet SA should use intraday prices for the calculation of its exposures.</p> <p>The triggers for additional intraday margin calls for exchange traded equities should be formalized with specific procedures and policies.</p>
	LCH.Clearnet SA should develop a mechanism that allows the calculation of margin call for CDS on the same day prices rather than the prices of previous day.
Recommendation 4: <i>Margin requirements</i>	<p>Improvements are still needed in automation, trailing and accuracy in parameters' calculation.</p> <p>To enhance transparency and reduce uncertainty, LCH.Clearnet SA should formalize its policy to address wrong way risk.</p> <p>LCH.Clearnet SA should commission an independent review of its risk models for all its products and not only for CDS.</p> <p>Intraday margin call should also be applied on cash equity.</p>
Recommendation 6: <i>Default procedures</i>	LCH.Clearnet SA should introduce a mechanism to allow the segregation between the clearing member's proprietary assets and its clients' assets when the segment is developed for CDS contracts. . LCH.Clearnet SA should introduce an operational segregation mechanism for all fixed-income products.
Recommendation 8: <i>Operational risk</i>	<p>An external audit of the business continuity plan should be carried out annually.</p> <p>LCH.Clearnet SA should formalize the external audit of the operational risk of the outsourced activities.</p> <p>The relevant authorities should formalize the assessment of the operational risk of the insourcing companies, including on-site inspection.</p> <p>The business continuity plan should be tested regularly with participants.</p> <p>A feasibility study, including cost assessment, should be undertaken by LCH.Clearnet SA to reduce the Recovery Time Objective (RTO) from four hours to preferably less than one hour.</p>

Reference Recommendation	Recommended Action
Recommendation 9: <i>Money settlements</i>	Once the volume of non-euro payments in commercial bank money increases, LCH.Clearnet SA should carry out an assessment of the finality of these payments.
Recommendation 11: <i>Risk in links</i>	LCH.Clearnet should collect adequate level of additional margin from CC&G as contribution to the default fund is not made. LCH.Clearnet SA should ensure that the collateral provided to CC&G is safely invested by minimizing credit and liquidity risks.
Recommendation 13: <i>Governance</i>	It is important to ensure that the transformation plan that will lead to further integration of the clearing activities within the Group would not erode the decision making process at the level of LCH.Clearnet SA with an adverse impact on managing the risks and meeting the needs of the local market.
Recommendation 15 <i>Regulation and oversight</i>	BDF should be empowered to issue regulation and undertake measures to effectively enforce its oversight responsibility. ACP and AMF should produce a policy note clearly defining and publicly disclosing their respective objectives, roles and responsibilities with regard to the soundness and efficiency of LCH.Clearnet SA.
	To increase transparency and accountability, the three involved competent authorities—BDF, AMF and ACP—should produce a joint policy note clearly defining and publicly disclosing their respective objectives, roles and responsibilities with regard to the soundness and efficiency of LCH.Clearnet SA.

VI. AUTHORITIES' RESPONSE TO THE ASSESSMENT

The authorities did not have any comments.