

GERMANY: FINANCIAL SECTOR ASSESSMENT PROGRAM  
DETAILED ASSESSMENT OF OBSERVANCE ON THE EUREX  
CLEARING AG OBSERVANCE OF THE CPSSIOSCO PRINCIPLES  
FOR FINANCIAL MARKET INFRASTRUCTURES



# GERMANY

## FINANCIAL SECTOR ASSESSMENT PROGRAM

June 2016

### DETAILED ASSESSMENT OF OBSERVANCE ON THE EUREX CLEARING AG OBSERVANCE OF THE CPSS- IOSCO PRINCIPLES FOR FINANCIAL MARKET INFRASTRUCTURES

This Detailed Assessment of Observance on the Eurex Clearing AG Observance of the CPSS-IOSCO Principles for Financial Market Infrastructures on Germany was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on June 2016.

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## DETAILED ASSESSMENT OF OBSERVANCE

June 2016

### EUREX CLEARING AG OBSERVANCE OF THE CPSS-IOSCO PRINCIPLES FOR FINANCIAL MARKET INFRASTRUCTURES

Prepared By  
**Monetary and Capital  
Markets Department**

This Detailed Assessment Report was prepared in the context of an IMF Financial Sector Assessment Program (FSAP) in Germany during November 2015 led by Ms. Michaela Erbenova. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at <http://www.imf.org/external/np/fsap/fssa.aspx>

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## Glossary

BaFin	Federal Financial Supervisory Authority
BBesG	Federal Civil Service Remuneration Act
BCM	Business Continuity Management
BCP	Business Continuity Plan
BGB	Civil Code
BRRD	Bank Recovery and Resolution Directive
CCP	Central Counterparty
CDS	Credit default swaps
CHF	Swiss franc
CPSS	Committee on Payment and Settlement Systems
CPMI	Committee on Payments and Market Infrastructures (formerly CPSS)
CSD	Central securities depository
CRR	Capital Requirements Regulation
CVaR	Conditional value at risk
DCM	Direct clearing member
DBG	Deutsche Börse Group
DTB	Deutsche Termin Börse
DVP	Delivery-versus-Payment
EBA	European Banking Authority
EC	European Commission
ECB	European Central Bank
EEA	European Economic Area
ECC	European Commodity Clearing
EEX	European Energy Exchange
EMIR	European Market Infrastructure Regulation
ESCB	European System of Central Banks
ESMA	European Securities and Markets Authority
Eurex Clearing	Eurex Clearing AG
EU	European Union
EUR	Euros
FinDAG	Act Establishing the Financial Supervisory Authority
FINMA	Swiss Financial Market Supervisory Authority
FMI	Financial Market Infrastructure
FMSA	Federal Agency for Financial Market Stabilization
FX	Foreign exchange
GBP	Great Britain Pound
GCM	General clearing member
GC	General Collateral
GG	Constitution of the Federal Republic of Germany
IMF	International Monetary Fund

## GERMANY

IOSCO	International Organization of Securities Commissions
ISO	International Organization for Standardization
NCM	Non-clearing member
MCO	Multilateral Clearing Organization
MOF	Ministry of Finance
MOJ	Ministry of Justice
MOU	Memorandum of understanding
OTC	Over-the-Counter
PFMI	Principles for Financial Market Infrastructures
RBM	Risk-Based Margining
ROCH	Recognized Overseas Clearing House
SEC	United States Securities and Exchange Commission
SIPS	Systemically Important Payment Systems
SKW	South Korean Won
SNB	Swiss National Bank
SREP	Supervisory Review and Evaluation Process
TVöD	Federal Collective Agreement on Civil Service
USD	U.S. Dollar

## EXECUTIVE SUMMARY

**Eurex Clearing observes the CPSS/IOSCO Principles for Financial Market Infrastructures (PFMIs).** It has a sound, coherent, and transparent legal basis. Its governance arrangements and composition of Boards and management are well defined, and the Boards are adequately staffed to promote the safety and efficiency of the CCP while supporting the stability of the financial system through a conservative approach to risk appetite. It has developed a comprehensive and adequate risk management framework to address financial, business, and operational risks. The participant default rules and procedures, which are publicly available, are comprehensive and adequate. Participant assets as well as Eurex Clearing's collaterals are safely kept in regulated central securities depositories and deposited at central banks accounts. The credit and liquidity risks are minimized by settling the cash in central bank money, by having access to central bank liquidity and by keeping up to stringent requirements concerning margins and financial resources.

**Eurex Clearing has managed well to cope with volatile markets and strengthened international standards and is encouraged to enhance some functionalities to further contribute to its soundness and to financial stability**

- Consider eliminating cross-managerial responsibility at the level of heads of departments in order to eliminate the potential conflict of interest, in particular, between the head of CCP Risk Management and that of the Clearing Product Design and Supervision.
- Consider enhancing business-as-usual liquidity stress tests by conducting them more frequently than quarterly.
- Consider for the sake of clarity reflecting explicitly in the Clearing conditions how the moment of irrevocability and the moment of entry are specified in German law.
- Ensure effective business continuity arrangement by strengthening the secondary site with appropriate staffing arrangements, sufficient resources, capabilities, and functionalities, which would allow swaps of operations between the primary and secondary sites on a business-as-usual basis.

**The regulatory, supervisory, and oversight framework is comprehensive and effective.** As a CCP and a credit institution, Eurex Clearing is subject to the regulation and supervision of Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht or BaFin) and the Deutsche Bundesbank, and as a financial market infrastructure (FMI) to the oversight of the Bundesbank. The Federal Agency for Financial Market Stabilization (FMSA) is vested by the Recovery and Resolution Act with the competence to address recommendations to BaFin on the Recovery Plan prepared by Eurex Clearing. The authorities' objectives, policies, and roles are well defined and made public. Nevertheless, the legal basis in the German law for Bundesbank's oversight function over CCPs should be strengthened. Given the increasing systemic relevance of Eurex Clearing as a global CCP at a time where clearing obligations enter into force, enforcement

of supervisory and oversight framework can be further improved by being more proactive and increasing the intensity of on-site inspection. The cooperation and coordination between domestic competent authorities have a solid legal basis, including exchange of confidential information. Cross-border cooperation with relevant European authorities has recently been strengthened by the establishment of the European Market Infrastructure Regulation (EMIR) supervisory college of authorities, and the role given to the European Securities and Markets Authority (ESMA) in fostering convergence of supervisory practices.



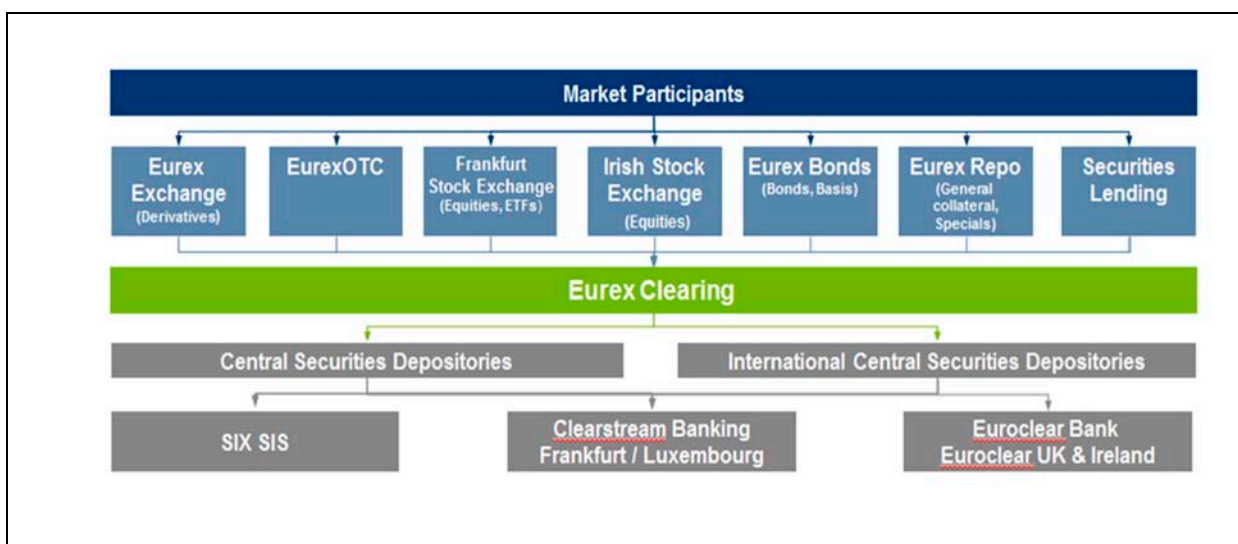
# OVERVIEW<sup>1</sup>

## A. Information and Methodology used for Assessment

**1. The assessment of Eurex Clearing against the CPSS/IOSCO Principles for Financial Market Infrastructures (PFMIs) was undertaken in the context of the IMF's Financial Sector Assessment Program (FSAP) Update for Germany, November 2015.** Prior to the mission, Eurex Clearing conducted a comprehensive self-assessment following the methodology of the PFMIs published in 2012. The assessors also benefited from discussions with BaFin, Deutsche Bundesbank, as well as market participants. The assessors also benefited from discussions with ESMA and European Central Bank (ECB). The mission would like to thank the German authorities, Eurex Clearing management and staff, and other stakeholders for their cooperation and hospitality.

## B. Institutional and Market Structure

**2. Eurex Clearing is a global central counterparty (CCP) that clears a broad range of both listed and over-the-counter (OTC) products.** It offers fully automated and straight-through post trade services to the derivatives markets Eurex Deutschland and Eurex Zürich, the Frankfurt Stock Exchange, the multilateral trading systems of Eurex Bonds GmbH and Eurex Repo GmbH, the Irish Stock Exchange as well as clearing services for OTC interest rate derivatives (EurexOTC Clear), as well as clearing services for transactions in cash equities, bonds, repos, derivatives, secure funding, securities financing and transactions. This comprises a trade management functions, comprehensive risk management services, and collateral management tools.



<sup>1</sup> The assessors were Elias Kazarian of the IMF's Monetary and Capital Markets Department, and Marguerite Zauberman, External Expert, IMF.

**3. Eurex Clearing maintains accounts at multiple central securities depositories (CSD) and International CSDs (ICSDs).** It reports to the trade repository REGIS-TR in order to fulfill the reporting requirements out of European Market Infrastructure Regulation (EMIR). Eurex Clearing does not have any link to other CCP.

**4. Eurex Clearing serves more than 183 clearing members, located in 17 European countries, as mid-2015.** It also manages a collateral pool of EUR 68.8 billion (as of 31 July 2015), including margin collateral contribution and the Clearing Fund contribution of Clearing Members. As end-2014, Eurex Clearing processed approximately 1.5 billion transactions (see Table 1).

**Table 1. Germany: Key Statistics of Eurex Clearing, 2010–2015**

	2010	2011	2012	2013	2014	2015
1. Number of contracts and transactions (millions) cleared by type of instruments	1,986.2	2,159.7	1,751.2	1,642.5	1,585.9	1,790.9
1.1 Equities	88.5	115.4	90.7	88.4	94.0	118.1
1.2 Debt instruments	0.01	0.01	0.02	0.02	0.02	0.01
1.3 Repo	0.2	0.3	0.2	0.3	0.3	0.2
1.4 Derivatives	1,897.4	2,043.9	1,660.2	1,553.8	1,491.6	1,672.6
1.5 OTC Derivatives			0.0	0.0	0.0	0.0
2. Value of transactions (EUR billions) cleared by type of instruments	158,834	185,592	180,957	190,348	196,111	200,949
2.1 Equities	1,471	1,672	1,228	1,228	1,360	1,749
2.2 Debt instruments	136	152	177	178	141	130
2.3 Repo	58,924	76,333	92,895	97,109	101,810	89,044
2.4 Derivatives	98,304	107,436	86,656	91,817	92,682	109,722
2.5 OTC Derivatives	0	0	0	15	118	304
<i>Trading days</i>	256	257	254	253	253	253
3. Average daily value of transactions (EUR billions)	620	722	712	752	775	794
4. Number of clearing members	128	149	163	175	183	186
4.1 of which: Foreign clearing members	75	91	101	110	120	122
5. Clearing fund (EUR millions)	1,299.3	1,368.7	1,416.1	1,604.7	2,971.1	3,809.2
Notes: Values in each cell are full numbers - the displayed number formats are as named in the respective label. Since 2014 clearing volume figures aligned with EMIR compliant reporting of Eurex Clearing AG, therefore the main indicators for transactions, value of transactions and clearing fund contribution are recalculated for the displayed reporting.						

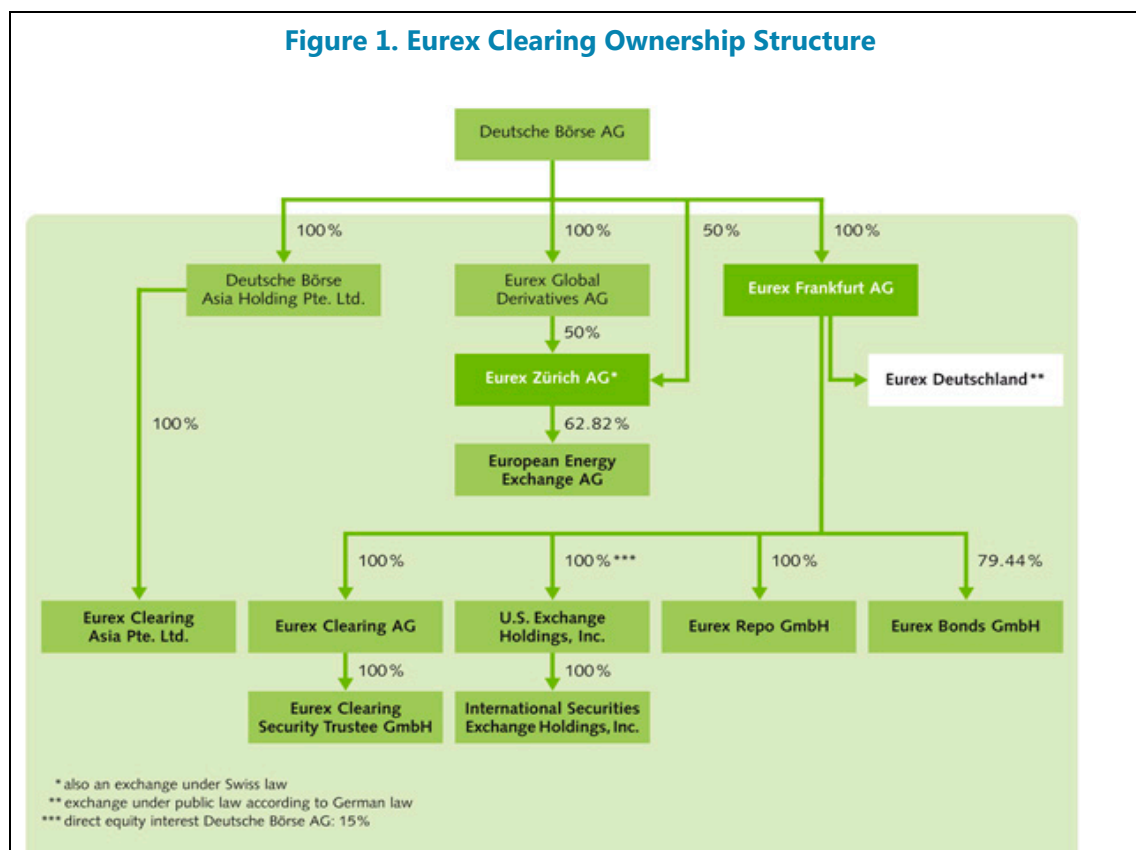
**5. Eurex Clearing offers two categories of membership:**

- A General Clearing Member (GCM) may clear its own transactions, those of its customers, as well as those of trading participants that do not hold a clearing license, Non-Clearing Member (NCM).
- A Direct Clearing Member (DCM) is entitled to clear only its own transactions, those of its customers, and those of its company-affiliated NCMs.

**6. Clearing membership is granted exclusively to financial companies that have to meet Eurex Clearing admission standards.** Only a clearing member—GCM or DCM—may be a counterparty of Eurex Clearing in a transaction. As a result, trading participants at the markets without a clearing license have to conclude a clearing agreement with a GCM or a company affiliated DCM. As a result, legal relationships are concluded between Eurex Clearing and a given clearing member, and in turn between that clearing member and the respective NCM.

### **C. Governance Structure of Eurex**

**7. Eurex Clearing is a stock corporation (Aktiengesellschaft) formed and incorporated under the laws of Germany and founded on March 9, 1998.** It is a wholly owned subsidiary of Eurex Frankfurt AG (Eurex Frankfurt), a German stock corporation which is wholly owned by Deutsche Börse AG, a German stock corporation listed at the Frankfurt Stock Exchange.



**8. Eurex Clearing was re-authorized by BaFin as a clearing house on April 10 2014, in accordance with EMIR, which is directly applicable to the EU member states.** It is also listed in the ESMA register of CCPs authorized to offer services and activities in the EU in accordance with EMIR and in ESMA's register of designated system following the Directive 98/26 on Settlement Finality "SFD". At the national level, the legal framework is further based on Section 32 KWG enabling Eurex Clearing to perform its services as a CCP.

**9. The Governance structure of Eurex clearing is published on Eurex Clearing website,** including composition of the Supervisory Board, its committees, as well as the composition and structure of senior management, represented by the Executive Board. The roles and responsibilities of the Board, the committees and senior management are laid down in arrangements that comply with Part 4, Section 1 and 2 of the Stock Corporation Act (Aktiengesetz, AktG).

**10. Eurex Clearing is also licensed as a bank.** It provides services as a CCP (*zentraler Kontrahent*), deposit business (*Einlagengeschäft*), lending business (*Kreditgeschäft*), and own account trading not relating to a client (*Eigengeschäft*).

**11. During the preparation of the application as a CCP under EMIR, Eurex Clearing amended its governance structure.** The Supervisory Board of Eurex Clearing and the Risk Committee were reassembled to comply with the requirements of EMIR. Furthermore, the formerly outsourced functions of Internal Audit, Outsourcing Coordination as well as Compliance, are now conducted by Eurex Clearing since April 2014.

**12. Moreover, the parts of the risk management function, which were outsourced to Deutsche Börse Group (DBG), are conducted by Eurex Clearing Enterprise Risk Management Department as of May 2014.**

#### **D. Regulatory, Supervisory, and Oversight Framework**

**13. Eurex Clearing is regulated and supervised by several authorities and agencies, including BaFin, Deutsche Bundesbank, and Federal Agency for Financial Market Stabilization (FMSA).** As it falls within the scope of the German Banking Act (KWG), Eurex Clearing is supervised in accordance with the allocation of responsibilities among the involved authorities. Pursuant to section 6 (1) of the German Banking Act, BaFin is the regulatory authority responsible for the supervision. Furthermore, the Act stipulates that the Bundesbank shall, as part of the ongoing supervision process, conduct off-site and onsite-inspections. As a financial market infrastructure, it is also subject to Bundesbank's oversight. In addition, it falls within the scope of the Recovery and Resolution Act (Sanierungs- und Abwicklungsgesetz, SAG).

**14. Furthermore, BaFin is designated as a National Competent Authority for the supervision of Eurex Clearing, as defined by EMIR.** Eurex Clearing has obtained (re)authorization as a CCP in November 2014, which was granted on the basis of compliance with EMIR. BaFin is chairing an EMIR college on the basis of written agreements between members of CCP colleges. The college has a statutory role defined in EMIR and is involved in the supervisory process, including the extension of authorization and the assessment of continuous compliance with EMIR.

**15. ESMA has a coordinating role within the supervisory college ('EMIR College') for Eurex Clearing.** ESMA also assumes certain direct competences namely with respect to coordination and supervisory convergence, in developing regulatory and implementing technical standards, and validating significant changes to CCPs risk models. BaFin is chairing the EMIR College for Eurex Clearing on the basis of written agreements between college members.

**16. As a credit institution, Eurex Clearing is considered a "Less Significant Credit Institution" pursuant to the Single Supervisory Mechanism (SSM).** In this respect it is subject to indirect prudential supervision by the European Central Bank (ECB). On this basis, the ECB can require BaFin to report about its supervisory activities relating to LSIs.

**17. The Governing Council of the ECB is involved in the oversight of FMIs.** In particular, it implemented the PFMIs in the euro area through: (i) their adoption of the Eurosystem's conduct in

relation to all types of FMIs in June 2013; and (ii) the Regulation of the European Central Bank No 795/2014 of 3 July 2014 on oversight requirements for systemically important payment systems. This Governing Council decision is binding for the Eurosystem's central banks as per Article 14.3 of the ESCB and ECB Statute.

**18. Eurex Clearing is also governed by the Recovery and Resolution Act, which transposes the EU Bank Recovery and Resolution Directive (Directive 2014/59/EU, BRRD) into German national law.** It is applicable for FMIs that are also authorized as CRR credit institutions. This Act provides the legal basis for the recovery planning to be performed by the CRR credit institution, early intervention powers to be performed by BaFin and the resolution planning to be performed by the FSMA as competent resolution authority, which is responsible for resolution planning and measures to remedy resolution impediments. The Act obliges Eurex Clearing to prepare and regularly update a recovery plan. It specifies structure and content of that plan and provides BaFin and the Bundesbank with the competence to review and assess the recovery plan.

## DETAILED ASSESSMENT

### A. Summary Assessment of Observance of the Principles and Responsibilities

Assessment Category	Principle
<b>Observed</b>	P1, P2, P3, P4, P5, P6, P7, P8, P9, P12, P13, P14, P15, P16, P18, P19, P20, P21, P22, and P23.
<b>Broadly observed</b>	P17.
<b>Partly observed</b>	-
<b>Not observed</b>	-
<b>Not applicable</b>	P10, P11, and P24.

Assessment Category	Responsibility
<b>Observed</b>	A, B, C, D, and E.
<b>Broadly observed</b>	-
<b>Partly observed</b>	-
<b>Not observed</b>	-
<b>Not applicable</b>	-

### B. Main Findings

#### General organization (Principle 1 to 3)

**20. Eurex Clearing has a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities and in all relevant jurisdictions.** Eurex Clearing's rules, procedures and contracts are clear and consistent with German laws and regulations. This legal framework supports the enforcement of its clearing models, novation and open offer, netting procedures, collateral arrangements, set-off, and close-out netting. There are adequate rules for addressing the event of a clearing member default, as well as Eurex Clearing default. Clearing

transactions when final are protected from insolvency procedures. Eurex Clearing's actively identifies and mitigates risks arising from its activities across jurisdictions.

**21. Eurex Clearing has governance arrangements that are transparent, and promote safety and efficiency, and support financial stability.** It is managed by highly skilled professionals and its Executive Board ensures that major decisions reflect appropriately the interests of its participants and relevant stakeholders. The Executive Board and Supervisory Board are advised by several Committees. The most important Committees are for both the Supervisory and the Executive Board, the EMIR Risk Committee, and for the Supervisory Board, the Audit and Risk Committee, focusing on risk management of Eurex Clearing's daily operation, and overall risk appetite and compliance, respectively.

**22. Eurex Clearing has a comprehensive risk management framework.** It pays considerable attention to identify, monitor, and mitigates its risks. This framework, periodically reviewed by the Executive Board, involves its clearing members in designing its policies and systems and provides various incentives for them to monitor the risk they pose to Eurex Clearing. A recovery plan covering orderly wind-down is prepared, reviewed annually, and submitted to relevant authorities. For the sake of transparency, Eurex Clearing should prepare in addition and publish a consolidated document of its risk management framework.

**23. In Eurex Clearing organizational structure could further be strengthened.** The Head of Clearing Product Design & Supervision Department and the Chief Risk Officer, who is heading the CCP Risk Management Department have cross-managerial responsibilities by deputizing one another. This might create a potential conflict of interest given the responsibility of the Risk Management Department to identify and manage the risks, including those arising by the activities of the Product Design and Supervision Department.

#### **Credit and liquidity risk management: (Principle 4 to 7)**

**24. Eurex Clearing has established a comprehensive risk management framework for credit risk exposures.** This framework is based on collateral requirements and credit limits to maintain the credit risk within acceptable parameters and maintains sufficient financial resources to cover losses resulting from the default of the two largest clearing members. To cover its current and future exposures, Eurex Clearing has developed multiple layers of defense, including pre-funded clearing fund, calibrated to cover losses resulting from the default of the two largest clearing members, and a dedicated amount of Eurex Clearing equity. As a crucial risk management tool, Eurex Clearing has developed a comprehensive set of stress tests to ensure that it is solvent under stress situation. Eurex Clearing reviews and validates its risk models on ongoing basis.

**25. Eurex Clearing has established a list of eligible collateral, which have to meet stringent eligibility criteria,** including high credit quality, minimum market risk, high liquidity, immediate accessibility and valuation. Furthermore, Eurex Clearing has comprehensive risk



management procedures to reduce the impact of procyclicality and wrong way risk, and defined dedicated concentration risk thresholds which are applicable to all counterparties.

**26. Eurex Clearing’s margining process is a multifaceted and time critical that takes into account a variety of factors in order to accurately calculate margins.** It has initial margin, and variation margining models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants. It has the power and operational capacity to make intraday margin calls and payments to participants. It regularly reviews and validates the adequacy of the overall margin methodology. For the ongoing revision and improvement of the model, Eurex Clearing regularly seeks the advice of its Risk Committee, which is composed, among other, by clearing members and authorities’ representative.

**27. Eurex Clearing has a robust framework to manage its liquidity risk.** Liquidity Risk Management Framework is designed to ensure that Eurex Clearing is able to effect payment and settlement obligations in all relevant currencies as they fall due. Furthermore, the potential simultaneous default of the two largest clearing members needs to be covered at all times (liquidity Cover-2 stress test). However, it should more frequently conduct liquidity stress tests taking into account potential losses from price volatility or fire sale of securities holdings.

#### **Settlement (Principles 8–10)**

**28. Finality of clearing transactions is achieved in Eurex Clearing system.** It is based on the German civil code for irrevocability and on the basis of the insolvency law for enforceability, and supported in the Clearing conditions. However, Eurex Clearing conditions should, for the sake of clarity, explicitly reflect how the moment of irrevocability and the moment of entry of a clearing transaction are specified in German law.

**29. Eurex Clearing uses mainly central bank money for the settlement of cash transactions.** The central bank model is used for Euro and Swiss Francs, accounting for more than 90 percent of total liquidity transactions. For other currencies, US Dollar and British Pound, Eurex Clearing relies on commercial payment banks. Eurex Clearing has rigorous risk management procedures to assess and monitor commercial settlement banks.

#### **CSD and exchange of value settlement system (Principles 11–12)**

**30. Eurex Clearing is not an exchange-of-value settlement system.** However, it has mechanisms in place that ensure the elimination of principal risk. Eurex Clearing settlement process is supported by a delivery-versus-payment/receipt-versus-payment (DvP/RvP) settlement eliminating principal risk.

#### **Default management (Principles 13–14)**

**31. Eurex Clearing has effective and clearly defined rules and procedures to manage a participant default.** These rules and procedures are designed to ensure that Eurex Clearing can

take timely action to contain losses and liquidity pressures and continue to meet its obligations. The procedures involve clearing members who are well prepared through simulation exercise and participation in Default Management Committee to assist Eurex Clearing in the management of the Default. Eurex Clearing conducts regular default simulations and fire drills.

**32. Eurex Clearing has rules and procedures that enable the segregation and portability of positions of a Clearing Members' customers and collaterals.** Customer collateral is held separately from both clearing member's collateral and Eurex Clearing own assets. Eurex Clearing offers three clearing models which provide for different levels of segregation, either an individual client segregation model or an omnibus segregation model.

### **General business and operational risk management (Principles 15–17)**

**33. Eurex Clearing has adequate risk management arrangements.** It developed policies, procedures, and systems to identify, monitor, and manage its business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses. Eurex Clearing holds sufficient liquid resources to cover potential business losses and sufficient own funds for a winding down or the recovery of its own business during a period of 6 months.

**34. Eurex Clearing holds its own and its participants' assets at supervised and regulated entities. Furthermore, it assesses the robustness and sound accounting practices, safekeeping procedures, and internal controls that fully protect these assets.** Moreover, effective and sound procedures are in place that allow prompt access to its and participants' assets. Eurex Clearing investment strategy is consistent with its overall risk management strategy and fully disclosed to its participants.

**35. Eurex Clearing has established a robust operational risk management framework.** This framework is comprised of appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks. Eurex Clearing has set up a secondary processing site that has IT capacity, resources, and functionalities to ensure the continuity of critical functions but is not a fully-fledged secondary site cloning the primary site, in particular, with appropriate staffing arrangements which would allow swaps of operations between the primary and secondary sites.

### **Access (Principles 18–20)**

**36. Eurex Clearing's participation requirements are risk based and transparent.** Eurex Clearing assesses its admission requirements continuously, monitors compliance with its participation requirements on an ongoing basis, and has clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.

**37. Eurex Clearing has in place rules, procedures, and agreements to identify and monitor and manage risks arising from clearing members' customers.** The rules allow it to

gather basic information about indirect participation in order to identify, monitor, and manage any material risks to its activities. An important tool to monitor the risks in relation to undisclosed clients of clearing members is the obligation to record transactions related to undisclosed clients on a dedicated account. In addition, different minimum requirements for the Clearing Fund contribution are applicable depending on the type of clearing membership.

**38. Eurex Clearing does not have any link to other CCPs.** It is connected to designated settlement and payment systems for the settlement of securities and cash that result from Eurex Clearing's activities. The risk management framework ensures the safety and soundness of these connections.

### Efficiency (Principles 21–22)

**39. Eurex Clearing has in place adequate processes for taking into account the needs of its participants and the markets it serves.** It has defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk management expectations, and business priorities.

**40. Eurex Clearing use internationally accepted communication procedures and standards.** It uses SWIFT ISO 15022 for communication with other Financial Market Infrastructures. For the derivatives markets, FIXML, an internationally accepted standard, is used to communicate with participants.

### Transparency (Principles 23–24)

**41. Eurex Clearing has clear and comprehensive rules and procedures that are fully disclosed to participants to allow the assessment of their rights, obligations, and related risks.** In particular, Eurex Clearing publicly discloses the prices and fees associated with the services provided for clearing. It has reviewed its methodologies and risk management practices against the PFMI and the results are published in the Disclosure Document on the Eurex Clearing website.

### Responsibilities A to E

**42. The authorities have clearly defined and publicly disclosed the criteria used to identify FMIs that should be subject to regulation, supervision, and oversight.** Full consistency with the PFMI is achieved by the policy-based central bank oversight authority on the top of supervisory authority, based on EMIR and the accompanying regulatory technical standards, and complemented by the German Recovery and Resolution Act concerning recovery planning.

**43. Authorities have the powers and resources consistent with their relevant responsibilities,** including the ability to obtain timely information and to induce change or enforce corrective action. Bafin and the Deutsche Bundesbank have different and complementary

mandates. However, the German law does not explicitly provide the Deutsche Bundesbank oversight power consistent with this responsibility over CCPs nor disclose its activities in the field. Therefore, the legal basis in the German law for Bundesbank's oversight function over CCPs should be strengthened.

**44. The policies of BaFin, Deutsche Bundesbank, and FMSA (as resolution authority), are clearly defined.** They are outlined in the laws and legally binding policy statement concerning their role, objectives and regulations applicable. These policies are publicly available and disclosed on the relevant authorities' websites.

**45. The PFMI for CCPs have been adopted by the regulatory, supervisory, and oversight authorities.** BaFin implemented these principles, as a rules-based approach through EMIR and accompanying technical standard, and for recovery of CCPs through the German Recovery and Resolution Act. The PFMI have also been adopted by the Deutsche Bundesbank, as overseer, through the adoption by the ECB of a policy statement for the conduct of Eurosystem oversight in relation to all types of financial market infrastructures, among which CCPs.

**46. BaFin, Deutsche Bundesbank, and FMSA, cooperate with each other, both domestically and internationally.** In the European context, this is achieved through college participation. At the international level, this cooperation is formalized by MOUs. Although it is considered a good practice, there is presently no staff exchange program with other relevant authorities.

## C. Recommendations for Eurex Clearing and Authorities

<b>Table 4. Germany: Prioritized List of Recommendations for Eurex Clearing</b>				
<b>Principles</b>	<b>Issue of Concern</b>	<b>Recommended Action</b>	<b>Relevant Parties</b>	<b>Timeframe for Recommended Action</b>
P3 Management of Risks	Enhancing transparency of Eurex Clearing's risk management framework.  Potential conflict of interest between two heads of departments	Consolidate in an overarching document Eurex Clearing's risk management framework.  Consider eliminating cross-managerial deputizing at the level of heads of departments, in particular, between head of CCP Risk Management and that of Clearing Product Design and Supervision	Eurex Clearing	6 months
P7: Liquidity risk	Business-as-usual liquidity stress test are conducted only quarterly	Consider conducting business-as-usual stress tests more frequently	Eurex Clearing	6 months
P8: Settlement Finality	Eurex Clearing conditions do not reflect on timing of finality, although finality of clearing is achieved in German law.	For sake of clarity, reflect in the Clearing Conditions explicitly how the moment of irrevocability and the moment of entry of a clearing transaction are specified in German law.	Eurex Clearing	3 months
P17: Operational Risk	Eurex Clearing business continuity arrangement includes a hot secondary site to ensure effective business continuity. However, not all members of the back-up business team are present at the secondary site all the time; some will work via remote access or can be called in if needed.	Eurex Clearing as a CCP systemically important in multiple jurisdictions should ensure the presence of a secondary business team on the premises of the secondary site to allow swaps of operation between the primary and secondary sites during business-as-usual.	Eurex Clearing	12 months

**Table 5. Germany: Prioritized List of Recommendations for Authorities**

<b>Responsibility</b>	<b>Issue of Concern</b>	<b>Recommended Action</b>	<b>Relevant Parties</b>	<b>Timeframe for Recommended Action</b>
Resp B: Regulatory, Supervisory, and Oversight	The overseer's legal basis for its oversight responsibility lacks specificity	Strengthening the legal basis for the Bundesbank's oversight function over CCPs in the national law in order to clarify its powers consistent with this responsibility.	Bundesbank	12 months
Resp E: Cooperation with other authorities	Enhancing understanding of the foreign regulatory environment where Eurex clearing authorities have cooperation arrangements in effect or in preparation	Establish a short-term staff exchange program with other jurisdictions relevant authorities where Eurex Clearing authorities have cooperation arrangements in effect or in preparation.	BaFin, Bundesbank	Immediately

## AUTHORITIES' RESPONSE

The German authorities BaFin, Deutsche Bundesbank, and FMSA, thank the IMF assessment team for their valuable work and detailed study on the application of the CPMI/IOSCO Principles for Financial Market Infrastructures regarding Eurex Clearing AG ("Eurex Clearing").

The German authorities indicate that on 1 February 2016, between the completion of this report by the IMF assessment team and its publication, Eurex Clearing was registered with the U.S. Commodity Futures Trading Commission (CFTC) as a Derivatives Clearing Organization (DCO). Shortly before, on 25 January 2016, BaFin and Deutsche Bundesbank signed a Memorandum of Understanding with the CFTC to enhance the existing supervision arrangements of cross-border clearing organisations.

As a consequence, CFTC, BaFin and Deutsche Bundesbank will cooperate even closer in order to ensure the sound supervision of Eurex Clearing. We envisage a tightened cooperation with the

CFTC including but not limited to the exchange of information both on ad hoc basis and upon request, periodic and ad hoc meetings and joint on-site visits.

The German authorities take note of the areas of concern where the IMF identifies room for improvement. With regard to operational risk (Principle 17), the German authorities would like to emphasize that Eurex Clearing has a secondary site with hot backup-arrangements in place. Even though not all members of the business team at the secondary site are present on a permanent basis, the members of the team can be called in on short notice or fulfill their duties via remote access, as appropriate. The German authorities are convinced that these arrangements fully observe the regulatory requirements on operational risk management.

With respect to Responsibility E, the enhanced cooperation with the CFTC will add to the understanding of the foreign regulatory environment both for the German and the US authorities. In addition, Deutsche Bundesbank and BaFin are in close contact with the Monetary Authority of Singapore (MAS), including by meeting in person on a regular basis, with regard to CCP supervision.

In general, the German authorities cooperate closely with other CCP supervisors to strengthen and widen their expertise in CCP-supervision (e.g. Eurex Clearing and LCH.Clearnet Ltd., a CCP supervised by the Bank of England, recently conducted a multi CCP fire drill with the supervisory authorities from the United Kingdom and Germany acting as sponsors).

**Table 6. Germany: Detailed Assessment of Eurex Clearing of the Principles**

<b>Principle 1. Legal Basis</b>	
An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.	
<p>Key Consideration 1</p> <p>The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.</p>	<p><b>Material aspects and relevant jurisdictions</b></p> <p><i>To act as counterparty, including the legal basis for novation and open offer.</i></p> <p>Eurex Clearing is a company incorporated in Germany. Eurex Clearing is a clearing house in accordance with the Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories (European Market Infrastructure Regulation, "EMIR") as approved by the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - "BaFin") on the 10th of April 2014. Eurex Clearing is listed in the ESMA register of Central Counterparties authorised to offer services and activities in the Union in accordance with EMIR: <a href="http://www.esma.europa.eu/page/Central-Counterparties">http://www.esma.europa.eu/page/Central-Counterparties</a>.</p> <p>Following Article 17-4 of EMIR, Eurex Clearing has been notified as a system pursuant to Directive 98/26/EC of the European Parliament and of the Council on settlement finality in payment and securities settlement systems (Settlement Finality Directive - "SFD"): <a href="http://www.esma.europa.eu/system/files/designated_payment_and_securities_settlement_systems.pdf">http://www.esma.europa.eu/system/files/designated_payment_and_securities_settlement_systems.pdf</a></p> <p>Furthermore, Eurex Clearing is also holding a German banking license for the provision of the services as a central counterparty (zentraler Kontrahent) , deposit business (Einlagengeschäft), lending business (Kreditgeschäft) and own account trading not relating to a client (Eigengeschäft) pursuant to Section 32 of the German Banking Act (Kreditwesengesetz – "KWG") and under supervision of BaFin.</p> <p>Eurex Clearing's operations are governed by a Clearing Agreement and/or the ICM (Individual Clearing Member) Participation Agreement entered into by Eurex Clearing and its participants. These standard Clearing Agreements and/or ICM Participation Agreement are publicly available as Appendices 1, 2, 3, 4, 7, 8 and 9 of the Clearing Conditions. The Clearing Conditions form part of the Clearing Agreements and/or ICM Participation Agreement and</p>



	<p>regulate all significant features of Eurex Clearing’s operations and are enforceable against its participants by virtue of the contractual relationship.</p> <p>General Clearing Members (GCM) do proprietary business and offer clearing services to all sorts of customers (disclosed to the CCP - NCM and RC- and non-disclosed, indirect clearers; through an individually segregated account or an omnibus account). Direct Clearing members (DCM) do proprietary business and offer clearing services to their affiliates and to non-disclosed customers. Non clearing Members (NCM) are disclosed clients who trade by themselves on the exchanges but clear through a GCM. Registered customers (RC) are customers disclosed to Eurex Clearing, who trade and clear through an intermediary. NCM and RC usually sign a trilateral contract (appendix 2 to 5) with their clearing member and Eurex Clearing.</p> <p>There are two legal mechanisms Eurex Clearing uses as a CCP: open offer and novation. Open offer is agreed according to the Clearing Conditions for transactions concluded on Frankfurt Stock Exchange, Eurex Deutschland and Eurex Zürich, Eurex Bonds, Eurex Repo, and Irish Stock Exchange (Clearing Conditions, Chapter I, Part 1, Number 1.1.2). OTC Transactions, Repo transactions transmitted by GC Pooling as well as securities lending transactions transmitted to Eurex Clearing for clearing are transferred by novation. The novation requires fulfillment of the novation criteria set by the CCP (Clearing Conditions, Chapter VIII, Part 1, Number 1.2.3 and Chapter IX, Part 1, Number 1.2.2).</p> <p><i>The timing of assumption of liability as CCP.</i></p> <p>The relevant point of time for the entrance of the CCP for open offer is the confirmation of the matching of the selling and the buying offer on the trading platform (Clearing Conditions, Chapter 1, Part 1, Number 1.2.2, Paragraph 1). The novation will be confirmed by Eurex Clearing directly (Clearing Conditions, Chapter VIII, Number 1.2.2 and Chapter IX, Number 1.2.1).</p> <p>The Clearing Conditions do not provide for the possibility that an open offer or a novation can be revoked by the relevant counterparties.</p> <p><i>Netting arrangements.</i></p> <p>Netting procedures are included in the Clearing Conditions and are based on the set-off-principles under Sections 387 et seqq. of the German Civil</p>
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	<p>Code (Bürgerliches Gesetzbuch—"BGB"), (Clearing Conditions, Chapter I, Part 1, Number 1.3).</p> <p><i>Collateral arrangements.</i></p> <p>The Clearing Conditions provide for collateral arrangements. Under the Elementary Clearing Model and the Net Omnibus Clearing Model, the clearing member has to fulfill its Margin Requirement by the delivery of collateral in the form of cash and securities. Cash collateral is granted through a full title transfer, whereas collateral in the form of securities is provided by way of pledging the securities to Eurex Clearing. Under the Individual Clearing Model, both, collateral in the form of cash and in the form of securities, are provided on a full-title-transfer-basis.</p> <p>Regarding the pledge of securities and based on general legal principles (the <i>lex rei sitae</i> principle), German law is applicable regarding pledged securities that are located in Germany as far as the right in rem is concerned. Legislation of the European Union – in particular Directive 98/26/EC "SFD" and Directive 2002/47/EC of the European Parliament and of the Council on financial collateral arrangements (Collateral Directive) – increases the degree of legal certainty regarding the law applicable.</p> <p>Furthermore, Articles 41 and 46 of EMIR - together with the respective Regulatory and Implementation Technical Standards – provide further requirements Eurex Clearing has to fulfill regarding margin calls and collection and the nature of collateral which can be accepted.</p> <p><i>Default procedures.</i></p> <p>Eurex Clearing's default rules include rules for the default of a clearing member (Clearing Conditions, Chapter I, Part 1, Number 7; Part 2, Number 8; Part 3 Subpart A, Number 8; Part 4, Number 8) and for Eurex Clearing's default (Clearing Conditions, Chapter I, Part 1, Number 9).</p> <p>Eurex Clearing's default procedures comply with requirements set out by EMIR in Articles 42 (Default fund – Clearing conditions: Chapter I, Part 1, number 6), 45 (Default waterfall - Clearing Conditions, Chapter I, Part 1, Number 6.2) and 48 (Default procedures- Clearing Conditions, Chapter I, Part 1, Number 7; Part 2, Number 8; Part 3 Subpart A, Number 8; Part 4, Number).</p> <p><i>Finality of transfers of funds and financial instruments.</i></p>
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	<p>The finality of clearing transactions is achieved on the basis of the German civil code for irrevocability and on the basis of the insolvency law for enforceability, and supported in the Clearing conditions. The finality of settlements is achieved in the Central Securities Depositories (CSD) with which Eurex Clearing has contractual relationships in accordance with the Settlement Finality Directive.</p> <p>Further details on the Settlement finality can be found in Principle 8.</p> <p><i>Interoperability.</i></p> <p>Interoperability arrangements are subject to Article 51 of EMIR. Currently, Eurex Clearing does not engage in any interoperability arrangements.</p> <p><i>Other significant aspects of the CCP's operations, risk management procedures and related rules.</i></p> <p>Material aspects of Eurex Clearing's activities are governed by Eurex Clearing's Clearing Conditions. Eurex Clearing participants are required to comply with the Clearing Conditions when providing clearing business. The Clearing Conditions are governed by German law (Clearing Conditions, Chapter I, Part 1, Number 17.1.1) and are structured as general terms and conditions (Allgemeine Geschäftsbedingungen) within the meaning of Sections 305 et seqq. of the BGB.</p> <p>Chapter I of the Clearing Conditions contains general provisions. Chapters II to IX contain the provisions applicable to each specific relevant market. The Clearing Conditions can be downloaded from Eurex Clearing's website under the following link: <a href="https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations/136778/">https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations/136778/</a>.</p>
	<p><b>The legal basis for each material aspect</b></p> <p>Within the European Union harmonized rules were implemented in each single EU Member State so that "in the event of insolvency proceedings being opened against a participant in a system (e.g., Eurex Clearing), the rights and obligations arising from, or in connection with, the participation of that participant shall be determined by the law governing that system" (EU Directive 98/26/EC "Settlement Finality Directive"). As a result German law applies generally between Eurex Clearing and its clearing members pursuant to Section 340 paras. 1 and 3 of the German Insolvency Code (Insolvenzordnung – InsO). Section 340 para. 3 InsO does not differentiate</p>

	<p>between CCP participants domiciled in EU Member States and CCP participants not domiciled in EU Member States.</p> <p>All Eurex Clearing’s clearing members have to submit themselves to German law once they sign the Eurex Clearing’s Clearing Agreement and/or ICM Participation Agreement. According to Chapter I, Part 1, Number 17.1.1 and 17.1.2 of the Clearing Conditions, any rights and obligations – including non-contractual - arising from, or in connection with, the Clearing Conditions shall be governed by German law. Thus, in case of any law suits between Eurex Clearing and its participants regarding the fulfillment, non-fulfillment, non-performance, etc. of obligations and/or rights in the context of Eurex Clearing’s clearing services or arising from any transaction cleared by Eurex Clearing, German law will primarily apply.</p> <p>In addition to being compliant with EMIR, the German framework is in line with the European legal framework after the implementation in German law of European directives, mainly, the Settlement Finality Directive, the Collateral Directive, the Banking Recovery and Resolution Directive.</p> <p>Currently, Eurex Clearing provides clearing business to more than 260 participants (clearing members, Non-clearing members, and Registered Customers) located in 20 European countries<sup>2</sup> and Switzerland. The relevant EU directives and regulations are directly relevant for participants from the EU area. Switzerland has a regime considered equivalent. As stated in Chapter I, Part 1, Number 2.1.2 of the Clearing Conditions, Eurex Clearing may require an applicant for a clearing license to provide, at its own expense, a legal opinion from leading counsel approved by Eurex Clearing that verifies the legal validity and enforceability of the Clearing Conditions in the respective jurisdiction according to standards provided by Eurex Clearing. For third-parties requesting a link to the CCP the same could apply, i.e., the party requesting a link should provide the necessary legal opinions.</p> <p>Irrespective of whether there is any uncertainty, Eurex Clearing mandates a local law firm in every jurisdiction from which it on-boards Clearing Members to analyze the enforceability of the Clearing Conditions and the choice of law (Regulatory Compliance Policy).</p>
<p>Key Consideration 2</p> <p>An FMI should have rules, procedures, and contracts</p>	<p>Eurex Clearing ensures that its rules, procedures and contractual arrangements are clear, comprehensive, and in compliance with EMIR as well as all other applicable regulatory and supervisory requirements.</p>

<sup>2</sup> Status as of August 2015.

<p>that are clear, understandable, and consistent with relevant laws and regulations.</p>	<p>Eurex Clearing’s compliance function which reports to the Executive Board has the responsibility to detect any risk of non-compliance with the obligations under EMIR by Eurex Clearing and its employees. The respective policies ensure that where certain expertise, necessary to fulfill the requirements, is not available internally, the compliance function may obtain the expertise or technical means of third parties outside the Deutsche Börse Group.</p> <p>Eurex Clearing’s rules, procedures, contractual arrangements and any accompanying material are maintained up-to-date.</p> <p>Furthermore, Eurex Clearing analyses the soundness of the rules, procedures and contractual arrangements on an ongoing basis through the EMIR annual assessment and through internal assessments against Key Performance Indicators KPI (for instance Outsourcing business surveillance).</p> <p>Eurex Clearing has in place adequate rules to make amendments to the Clearing Conditions (Chapter I Part 1 section 17-2 “Changes and Amendments to the Clearing Conditions” and 17-3 Consultation in case of changes and amendments of the Clearing Conditions). Clearing members, Non-Clearing-Members and Registered customers affected are consulted where changes are considered to “special provisions”. Each clearing member has the right to object to amendments by written notice. In case of an objection, discussions will take place with the respective clearing member to get this issue resolved. Changes and amendments are published.</p> <p>Any major amendments to the Clearing Conditions which may have effect on Eurex Clearing’s risk management should be introduced and discussed with BaFin and Deutsche Bundesbank before such amendments are implemented. This will either be done in one of the monthly meetings with BaFin and Deutsche Bundesbank or in separate meetings. In addition, any change that qualifies as a “significant change” to the risk models or parameters, or consists in an extension of activities or services to that of the initial authorisation of Eurex Clearing according to EMIR should be subject to authorization for the latter (extension of activities) or to validation by the EMIR college of authorities.</p>
<p>Key consideration 3</p> <p>An FMI should be able to articulate the legal basis for its activities to relevant</p>	<p>Eurex Clearing provides information on its regulatory framework, business continuity measures, financials, company profile and governance on its website.</p>

<p>authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.</p>	<p>Documents applicable to all parties, like the Clearing Conditions are publicly available via the Eurex Clearing's website, others like process descriptions, procedure, manuals, certain legal opinions, are available for participants only and can be found in the member section on the website. The competent authority has access to all documents which are made available to relevant authorities on request through BaFin.</p> <p>Compliance to EMIR requirements has to be demonstrated to the college of authorities and ESMA during the authorization process and in the subsequent supervisory process.</p>
<p>Key Consideration 4</p> <p>An FMI should have rules, procedures, and contracts that are enforceable in all relevant jurisdictions. There should be a high degree of certainty that actions taken by the FMI under such rules and procedures will not be voided, reversed, or subject to stays.</p>	<p><b>Enforceability of rules, procedures and contracts</b></p> <p>Eurex Clearing has rules, procedures and contracts in place that are enforceable in all relevant jurisdictions.</p> <p>Regarding the clearing services used, all clearing members of Eurex Clearing submit themselves to German law once they sign the clearing agreements and / or ICM Participation Agreement.</p> <p>The granting of a clearing license requires that Eurex Clearing has obtained all licenses and approvals that are required for the provision of clearing services towards the applicant in the relevant jurisdiction.</p> <p>Furthermore, Eurex Clearing obtained legal opinions from local law firms which confirm the effectiveness of the close-out netting rules and other principles of the relevant Clearing Models as requested by Article 48 (4) of EMIR and Article 5 (2) and (4) of Regulation No. 153/2013. These legal opinions are updated on a regular basis (last up-dates 2014 and 2015).</p> <p><b>Degree of certainty for rules and procedures</b></p> <p>Before accepting a clearing member in a new jurisdiction, Eurex Clearing mandates a local law firm to analyze the enforceability of the key principles of Eurex Clearing's clearing models under national law. Currently, Eurex Clearing had commissioned and reviewed such enforceability opinions for all EU Member States, Switzerland and Singapore. Depending on market demands, Eurex Clearing may commission further enforceability opinions.</p> <p>Only in case of a positive outcome of these legal assessments, Eurex Clearing offers respective clearing services.</p>

	<p>As part of the legal opinion the binding nature and enforceability of Eurex Clearing's provisions related to aspects like set-off, close-out netting, collateral provisioning is analyzed per jurisdiction.</p> <p>The enforceability of Eurex Clearing's relevant activities or arrangements under its rules and procedures has not been challenged as of now.</p>
<p>Key Consideration 5</p> <p>An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.</p>	<p>As a leading international central counterparty conducting business in multiple jurisdictions Eurex Clearing is fully aware of the risks arising from any potential conflict of laws across jurisdictions. Subsequently, Eurex Clearing identifies and mitigates those risks to the extent possible (see Key Consideration 4 above).</p> <p>This mirrors the requirements stipulated by Eurex Clearing's Regulatory Compliance Policy: The Chief Compliance Officer is responsible to monitor and, on a regular basis, assess the adequacy and effectiveness of the measures put in place to identify and analyse potential conflicts of law issues. Whenever uncertainty exists regarding the enforceability of the main principles of the Clearing Conditions, the Chief Compliance Officer of Eurex Clearing shall obtain reasoned and independent legal opinions and analysis in order to address properly such uncertainty and mitigate legal risk resulting from such issues.</p>
<p>Key Conclusions for Principle 1</p>	<p>Eurex Clearing has a well-founded, clear and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions and monitors the measures to identify any potential conflict of law issues which could arise.</p>
<p>Assessment of Principle 1</p>	<p>Observed.</p>
<p>Recommendations and comments</p>	<p>-</p>

### **Principle 2. Governance**

An FMI should have governance arrangements that are clear and transparent, promote the safety and efficiency of the FMI, and support the stability of the broader financial system, other relevant public interest considerations, and the objectives of relevant stakeholders.

<p>Key Consideration 1</p> <p>An FMI should have objectives that place a high priority on the safety and efficiency of the FMI and explicitly support financial stability and other relevant public interest considerations.</p>	<p>Eurex Clearing’s objective is to assure the safety and integrity of markets while providing innovation in risk management, clearing technology and client asset protection for OTC and listed derivatives and equities, for bonds and secured funding as well as securities financing market. As expressed in their 2014 financial statements, the company works for “further improving the technological leadership and stability of its electronic system – both in the interest of its customers and in the interest of systemic stability for the financial markets.”</p> <p>Eurex Clearing’s strategic objectives include the effective protection of customer positions and deposited collateral through reductions in counterparty risk and offering cost-efficient risk and trade management.</p> <p>Main departments to assess performance against the objectives of Eurex Clearing are Clearing Models function, Legal and CCP Risk Management, working together to develop and maintain clearing models which fulfill the highest standards (above minimum required) for the protection of customer assets. CCP Risk Management monitors and analyzes on an intraday basis the development of financial markets and if necessary conduct specific measures.</p> <p>Eurex Clearing also supports the financial stability by guaranteeing every transaction made in the markets for which it provides services and by offering various risk management services which benefit both its customers and the greater marketplace by enhancing overall safety.</p> <p>To foster fair and efficient markets Eurex Clearing’s objective must also ensure full compliance with regulatory standards for clearing houses. Furthermore, Eurex Clearing has set up a project (Regulatory Readiness) with the purpose to analyse the impact of upcoming regulations on the business and organisation of Eurex Clearing in order to ensure compliance with upcoming regulations.</p> <p>To ensure the safety and efficiency of its operations, Eurex Clearing offers fully automated and straight-through post trade services to the derivatives markets. Furthermore, Eurex Clearing’s information technology system aims at ensuring that the information and corresponding facilities are available when needed (availability), the information is accurate and complete when used (integrity), and the information is only accessible to the authorized entities (confidentiality).</p> <p>Furthermore, Eurex Clearing has in place an Internal Control System (ICS) as a key management instrument designed to provide reasonable assurance achieving the corporate objectives regarding effectiveness and efficiency of</p>
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	operations, reliability of financial reporting and compliance with applicable laws and regulations.
<p>Key Consideration 2</p> <p>An FMI should have documented governance arrangements that provide clear and direct lines of responsibility and accountability. These arrangements should be disclosed to owners, relevant authorities, participants, and, at a more general level, the public.</p>	<p><b>Governance arrangements</b></p> <p>Eurex Clearing has documented governance arrangements that provide for clear responsibility and accountability. These arrangements are disclosed to relevant stakeholders at different granularity.</p> <p>Eurex Clearing is a wholly-owned subsidiary of Eurex Frankfurt AG, which is a wholly-owned subsidiary of Deutsche Börse AG. Eurex Clearing decides independently about the clearing offering for products and is also responsible to implement a proper and effective risk framework in compliance with the existing rules.</p> <p>Governance arrangements that provide for clear responsibility and accountability are established for both the Eurex Clearing Executive Board and Supervisory Board. The composition of the Supervisory Board, its committees as well as the composition and structure of senior management, represented by the Executive Board, is published on the Eurex Clearing website in the corporate governance section. The roles and responsibilities of the board, the committees and senior management are laid down in Rules of procedure that comply with Part 4, Section 1 and 2 of the Stock Corporation Act (Aktiengesetz, AktG), §§ 76 – 116.</p> <p>Within Eurex Clearing, responsibilities of each department are clearly defined in an organisation chart. Eurex Clearing has nominated a Chief Risk Officer (CRO), Chief Compliance Officer (CCO), and Chief Technology Officer (CTO) in line with EMIR. They report to the Executive Board.</p> <p>Eurex Clearing has in place adequate processes for ensuring accountability to stakeholders. First of all, news updates on the Eurex Clearing website (Public and Member Section) complemented by regular reporting of information make sure that stakeholders are well-informed. Furthermore, Eurex Clearing is in continuous dialogue with its customers. To facilitate this, Eurex Clearing has initiated the following committees to inform and integrate members from different market segments into the decision-making process for changes and new developments to the services offered by Eurex Clearing:</p>

	<ul style="list-style-type: none"> <li>• Eurex Clearing has a Risk Committee that is set up in accordance with Article 28 EMIR, the EMIR Risk Committee. The task of the Risk Committee is to advise the Supervisory Board and the Executive Board on any arrangements that may impact the risk management of the CCP, such as a significant change in its risk model, the default procedures, criteria for accepting Clearing Members, and the clearing of new classes of instruments or the outsourcing of functions. It is composed of members of the Supervisory Board of Eurex Clearing, representatives of clearing members and representatives of clients. The competent supervisory authorities are entitled to attend meetings of the Risk Committee without voting rights and to be informed about the activities and decisions of the Risk Committee;</li> <li>• The Derivatives Clearing Committee has been established to provide Eurex Clearing Members with detailed information regarding potential changes in the area of listed and OTC derivative products including the introduction of new listed or OTC derivative products. Also, amendments to the functional architecture and processes of Eurex Clearing with respect to listed and OTC derivatives are discussed.</li> <li>• The Securities Clearing and Settlement Committee has been established to provide Eurex Clearing Members with detailed information regarding potential changes in the area of equity, bonds and repo (excluding GC Pooling) products and the introduction of new equity, bonds and repo products. Also, amendments in the area of delivery management for equity, bonds and repo (excl. GC Pooling) products and the settlement account infrastructure are addressed.</li> <li>• The Clearing Collateral Committee has been established to provide Eurex Clearing Members with detailed information regarding potential changes in the area of collateral management, including the types of accepted currencies or assets, the valuation of collateral, the collateral locations and the collateral account infrastructure. Also, potential amendments in the area of cash management, including the types of currencies accepted and the cash account infrastructure are discussed.</li> <li>• The Interest Rate Swaps (IRS) Product Committee was established to consult with and make recommendations to the Executive board of Eurex Clearing on matters relating to the clearing of IRS.</li> </ul>
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	<ul style="list-style-type: none"> <li>• The Default Management Committee (DMC) was set up to involve its Clearing Members and to ensure the availability of the best possible knowledge and expertise in case of a default. The DMC is convened to advise and assist the Eurex Clearing's Executive Board with regards to any relevant matter of the default management process (DMP) of one or more liquidation groups. In addition DMCs are participating in the regular default simulation exercises. DMC member institutions are eligible Clearing Members that are actively clearing with Eurex Clearing and each DMC member institution nominates a DMC member and a deputy. Members of the DMC will be traders who will advise on and execute the agreed hedging strategies as coordinated by Eurex Clearing.</li> </ul> <p>Detailed information regarding the Eurex Clearing Committees is available on the Eurex Clearing website (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/risk-committee">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/risk-committee</a> <a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/other-committees">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/other-committees</a>).</p> <p>Eurex Clearing accountability to Clearing Members and customers is further ensured by the Complaints Handling Process. The Complaints Procedure Manual describes how a person who has a complaint arising in connection with the performance of, or failure to perform any of Eurex Clearing's obligations as defined in the Clearing Conditions of Eurex Clearing and/or with the performance, or failure to perform, any regulatory requirements that need to be fulfilled by Eurex Clearing (Complaint) may file the Complaint, and how that Complaint will be investigated and resolved.</p>
	<p><b>Disclosure of governance arrangements</b></p> <p>Eurex Clearing discloses to its Clearing Members and other market participants its rules, procedures, and policies on its website (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/</a>).</p> <p>a) Information regarding its governance arrangements is disclosed on Eurex Clearing website, including:</p> <p>(i) Information regarding the corporate governance such as the organisational structure, and annual reports, including objectives and strategies.</p> <p>Key elements of the Remuneration Policy, containing amongst others the parameters, composition, total amount of the</p>

	<p>remuneration, split of fixed and variable remuneration, number of employees receiving a variable remuneration, involvement of external consultants and stakeholders (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/remuneration/">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/remuneration/</a>).</p> <p>(ii) Key financial information, including its most recent audited financial statements (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/annual-reports/">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/annual-reports/</a>).</p> <p>b) Information regarding its rules and procedures:</p> <p>(i) Default management procedures (<a href="http://www.eurexclearing.com/clearing-en/risk-management/default-management-process/">http://www.eurexclearing.com/clearing-en/risk-management/default-management-process/</a>).</p> <p>(ii) Business Continuity Policy (<a href="http://www.eurexclearing.com/clearing-en/about-us/business-continuity-planning/">http://www.eurexclearing.com/clearing-en/about-us/business-continuity-planning/</a>).</p> <p>(iii) In addition, Eurex Clearing discloses information on the risk methodologies used, risk parameters: (<a href="http://www.eurexclearing.com/clearing-en/risk-management/risk-parameters/haicut-and-adjusted-exchange-rate/">http://www.eurexclearing.com/clearing-en/risk-management/risk-parameters/haicut-and-adjusted-exchange-rate/</a>).</p> <p>Material changes in its governance arrangements, objectives, strategies, and key policies, as well as in its applicable rules and procedures are publicly disclosed via the website.</p>
<p>Key Consideration 3</p> <p>The roles and responsibilities of an FMI's board of directors (or equivalent) should be clearly specified, and there should be documented procedures for its functioning, including procedures to identify, address, and manage member conflicts of interest. The board should review both its overall</p>	<p><b>Roles and responsibilities of the board</b></p> <p>The roles and responsibilities of Eurex Clearing's Executive Board and Supervisory Board are clearly specified and documented in the Rules and Procedures.</p> <p>With respect to roles and responsibilities the Articles of Incorporation of Eurex Clearing as well as the rules and procedures define the composition, roles and responsibilities of the Supervisory Board and senior management as well as of any established board committees.</p> <p>The responsibilities of the "Board" are allocated to the Supervisory Board and the Executive Board as appropriate in compliance with Article 3, paragraph 5 of Commission Delegated Regulation (EU) No 153/2013 of 19 December 2012 complementing EMIR and with the Stock Corporation Act.</p>

performance and the performance of its individual board members regularly.

- As part of conducting the business of Eurex Clearing in accordance with provision 76 Stock Corporation Act AktG the Executive Board establishes the objectives and strategies for Eurex Clearing. The Supervisory Board approves the company strategy and planning as well as important corporate decisions;
- Consistent with provision 111 AktG, the most important function of the Supervisory Board is to oversee the work of the Executive Board. Furthermore, the Supervisory Board appoints the members of the Executive Board;
- The Remuneration Committee, set up by the Executive Board prepares proposals for the design and further development of the remuneration policy with regard to the employees, oversees its implementation and reviews on a regular basis;
- The Executive Board establishes and oversees the risk management and the daily operation of the CCP.

The oversight of outsourcing arrangements is ensured by the Executive Board. Outsourcing policy published on the website and Outsourcing surveillance published in Eurex Clearing Handbook (internal) are established and reviewed on a regular basis.

EMIR compliance is assessed by the Chief Compliance Officer and is reported to the Eurex Clearing Executive Board.

The Supervisory Board has constituted the following committees among its members:

- The Audit and Risk Committee – in compliance with CRD IV (Capital Requirements Directive) and EMIR – deals, on the one hand, with audit matters particularly related to the preparation of the annual budget, the accounting process, internal and external audits, compliance and control systems. The committee discusses and examines the annual financial statements and the auditor’s report on the annual financial statements in detail and reports the results to the Supervisory Board. It recommends whether the Supervisory Board should approve the annual financial statements. On the other hand, the Audit and Risk Committee addresses risk matters, inter alia advises the Supervisory Board on the institution’s current and future risk appetite and risk strategy and examines whether the incentives provided by the remuneration system take into account the risk,

	<p>capital and liquidity structure of Eurex Clearing. The Committee consists of three members who are elected by the Supervisory Board (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/audit-and-risk-committee/">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/audit-and-risk-committee/</a>);</p> <ul style="list-style-type: none"> <li>• The Compensation Review and Nomination Committee – in compliance with CRD IV, EMIR and the new Remuneration Ordinance – whose core tasks are to supervise the adequate arrangement of the remuneration system for Executive Board members of Eurex Clearing and to prepare the resolutions of the Supervisory Board on the remuneration of the Executive Board members, taking into account the implications for the risk and risk management of the institution. Further core competences of the committee are to identify candidates to fill vacancies in the Executive Board and to prepare the proposals for the election of members of the Supervisory Board, as well as to assess the composition and performance of the Executive Board and the Supervisory Board and to assess the knowledge, skills and experience of individual members of the Executive Board and the Supervisory Board periodically, at least annually. The Committee consists of three members who are elected by the Supervisory Board (<a href="http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/compensation-review-and-nomination-committee/">http://www.eurexclearing.com/clearing-en/about-us/corporate-overview/supervisory-board/compensation-review-and-nomination-committee/</a>).</li> </ul> <p>Internal Auditing reviews the effectiveness of measures taken in the business areas and also assesses the effective operation of the Internal Control System. The Head of Internal Audit reports to the Executive Board, to the Audit and Risk Committee of the Supervisory Board and has an administrative reporting line to the CEO.</p> <p>The Business Distribution Plan sets out the responsibilities of Senior Management (represented by the Eurex Clearing Executive Board).</p> <ul style="list-style-type: none"> <li>• The members of the Executive Board conduct the business of Eurex Clearing in accordance with the laws, the Articles of Incorporation, the Rules of Procedure, the Business Distribution Scheme and their service agreements.</li> <li>• As stated in the Business Distribution Plan, the CEO is, inter alia, responsible for Regulatory Compliance that ensures Eurex Clearing compliance with all regulatory requirements, manages external audits of Eurex Clearing (regulatory audits, due diligence, etc.), monitors and analyzes regulatory developments, administers</li> </ul>
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	<p>compliance policies and procedures as well as manages relationships to national and international regulatory and policy making bodies. The Eurex Clearing CCO is part of this unit.</p> <ul style="list-style-type: none"> <li>• The CEO is responsible for certain central functions such as Internal Auditing. In accordance with § 91 (2) AktG in connection with. § 25a (1) KWG and § 1 (2) sentence 1 KWG, the Eurex Clearing Executive Board is responsible for Internal Auditing, in particular to ensure that developments threatening the continuation of the company are detected early.</li> <li>• Furthermore, according to the Internal Audit Charter, internal auditing reviews the effectiveness of measures taken in the business areas and also assesses the effective operation of the Internal Control System (Chapter 4.4 of the ICS Policy, Annex 2.3.8). Chapter 8 of the Internal Audit Charter stipulates that it is the responsibility of the management to design, implement and maintain a system of internal controls.</li> <li>• The CEO and CCO ensure that sufficient resources are available for Regulatory Compliance and CCP Risk Management respectively.</li> </ul> <p>In accordance with Article 2 (28) EMIR “‘independent member’ of the board means a member of the board who has no business, family or other relationship that raises a conflict of interests regarding the CCP concerned or its controlling shareholders, its management or its clearing members, and who has had no such relationship during the five years preceding his membership of the board” Art. 27 (2) EMIR stipulates that at least one third of the members of the Board shall be independent. In relation to Eurex Clearing and in accordance With Art. 27 (2), ‘board’ is to be interpreted as the Supervisory Board of Eurex Clearing. The Supervisory Board has 12 members, elected for 5 years, among whom 11 are independent members (2 of them being Board members in other undertakings of the DBG).</p> <p>The Articles of Incorporation and the Business Distribution Plan of Eurex Clearing together with the Rules and Procedures of the Supervisory and the Executive Board define the composition, role and responsibilities of the board and senior management and any board committees.</p> <p>Eurex Clearing has implemented the Clearing Member and Client Conflicts of Interest Policy (only available internally) that outlines the effective arrangements of Eurex Clearing for identifying and managing potential conflicts of interest between Eurex Clearing, including its managers,</p>
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	<p>employees, or, any person with direct or indirect control or close links on the one hand, and its Clearing Members, and their Non-Clearing Members, Registered Customers and other customers known to Eurex Clearing on the other hand.</p> <p>Furthermore, as part of DBG, Eurex Clearing is also subject to the DBG Guideline on the Avoidance of Conflicts of Interest. This guideline applies to all employees and external service providers who work for DBG. The aim of the guideline is to identify and settle conflicts of interest and to avoid potential conflicts of interest, which could arise among employees in their relationship with DBG and its customers.</p>
	<p><b>Review of performance</b></p> <p>Consistent with Article 111 AktG, the most important function of the Supervisory Board is to oversee the work of the Executive Board. Furthermore, the Supervisory Board appoints the members of the Executive Board.</p> <p>The Rules of Procedure for the Executive Board define the reporting lines between the Executive and the Supervisory Board. The Rules of Procedure of the Executive Board stipulates that the reporting to the Supervisory Board shall be conducted pursuant to Article 90 AktG. Written reports to the Supervisory Board shall be submitted to the chairperson of the Executive Board with the request for forwarding.</p> <p>In accordance with article 101 (1) of the Stock Corporation Act, the shareholders' meeting appoints the Supervisory Board members of Eurex Clearing.</p> <p>The Supervisory Board is responsible for ensuring that members of the management body fulfil the suitability criteria in case of a new assignment but also on an on-going basis. The suitability criteria are based on EBA Guideline 2012.06 (Guideline on the assessment on the suitability of members of the management body and key function holders) as well as § 25d (11) and § 25a (1) KWG. Within Eurex Clearing they are laid down in the Suitability Policy and the Suitability Sideletter.</p> <p>The Rules of Procedure of the Supervisory Board of Eurex Clearing were amended to meet the requirements of the European Banking Authority (EBA) Guidelines on the assessment of the suitability of Members of the Management Body and Key Function Holders on the one hand and the requirements of the Capital Requirements Directive IV on the other hand.</p>



	<p>Both the Executive Board and the Supervisory Board approved a Policy for the annual assessment of the suitability of Members of the Management Body and Key Function Holders. .</p>
<p>Key Consideration 4</p> <p>The board should contain suitable members with the appropriate skills and incentives to fulfill its multiple roles. This typically requires the inclusion of non-executive board member(s).</p>	<p>Eurex Clearing Supervisory Board members have long-standing experience in the public and private sector of the financial industry and an international background. The diversity of appropriate skills is well suited to fulfil the various roles in overseeing and conducting the business of one of the largest and most diverse CCPs globally.</p> <p>Eurex Clearing’s Risk Committee according to EMIR Article 28 is chaired by an independent member of the Supervisory Board. Other committees of the Supervisory Board (Audit and Risk Committee and the Compensation Review and Nomination Committee) also comprise independent members of the Supervisory Board.</p> <p>The national competent authority has assessed and recognised the trustworthiness and professional qualification of all members of the Executive Board in accordance with Article§33 (2) German Banking Act..</p> <p>Based on all legal requirements a suitability assessment is performed before a new member takes up his or her new assignment / position in the Supervisory Board or Executive Board in accordance with EMIR, EBA Guidelines and with the Stock Corporation Act requirements.</p>
<p>Key Consideration 5</p> <p>The roles and responsibilities of management should be clearly specified. An FMI’s management should have the appropriate experience, a mix of skills, and the integrity necessary to discharge their responsibilities for the operation and risk management of the FMI.</p>	<p><b>Roles and responsibilities of management</b></p> <p>As outlined in Key Consideration 4, Eurex Clearing operates under a two-tiered board structure comprising a Supervisory Board and an Executive Board as management body. The Eurex Clearing Executive Board is responsible for the daily business operations and consists of five members. The Eurex Clearing Executive Board developed a business distribution plan to ensure that roles and responsibilities are clearly defined for a properly functioning of the business organisation.</p> <p><b>Experience, skills and integrity</b></p> <p>Eurex Clearing’s Supervisory Board oversees the work of the Executive Board and appoints its members as well as approves important corporate decisions and company planning.</p>

	<p>The assessment of the suitability of members of the management body follows along the line of the regulatory requirements and the policies and procedures as outlined in Key Consideration 4 of this Principle.</p> <p>According to Section 84 of the German Stock Corporation Act, the Supervisory Board may revoke the appointment of a member of the Executive Board for serious cause. In particular, such cause includes a gross breach of duties, inability to manage the stock corporation properly or a vote of no-confidence by the shareholders' meeting.</p>																																		
<p><b>Key Consideration 6</b></p> <p>The board should establish a clear, documented risk-management framework that includes the FMI's risk-tolerance policy, assigns responsibilities and accountability for risk decisions, and addresses decision making in crises and emergencies. Governance arrangements should ensure that the risk-management and internal control functions have sufficient authority, independence, resources, and access to the board.</p>	<p><b>Risk management framework</b></p> <p>As a CCP authorised under EMIR, Eurex Clearing has established a framework for the comprehensive management of all material risks with documented policies, procedures and systems to identify, monitor and manage such risks.</p> <p>Eurex Clearing has a clearly defined and documented Risk Strategy, which is based on Eurex Clearing's business strategy and regulates the extent of risk taken within the various business activities carried out by Eurex Clearing. The Risk Strategy determines the conditions for risk management, control and limitation. It is approved by the Risk Committee, the Executive Board and the Supervisory Board.</p> <table border="1"> <thead> <tr> <th colspan="2">Policy / Document Hierarchy</th> <th>Scope</th> </tr> </thead> <tbody> <tr> <td rowspan="14">DBAG Group Risk Management Policy</td> <td>ECAG Treasury Policy</td> <td>Investment risk management, Treasury limit management</td> </tr> <tr> <td>ECAG Policy for the use of Derivative Instruments</td> <td>Use of derivatives in the treasury process</td> </tr> <tr> <td>ECAG Liquidity Risk Management Policy</td> <td>Liquidity Management</td> </tr> <tr> <td>ECAG Liquidity Plan</td> <td>Liquidity plan of Eurex Clearing</td> </tr> <tr> <td>ECAG BCM Policy Appendix</td> <td>Crisis management procedures, and preventive technical and organizational controls</td> </tr> <tr> <td rowspan="8">DBAG Group Business Continuity Policy</td> <td>Credit Exposure Framework</td> <td>Credit Exposure Limit Framework</td> </tr> <tr> <td>Clearing Membership Requirements</td> <td>Prudent admission criteria, such as liable capital requirements, operational set-up, credit quality and regulatory oversight</td> </tr> <tr> <td>Risk Model Documentation</td> <td>Model Documentation (RBM, Prisma etc.)</td> </tr> <tr> <td>Collateral Management</td> <td>Valuation (theoretical bond prices) and Haircuts</td> </tr> <tr> <td>Concentration &amp; Wrong Way Risk Management</td> <td>Concentration and Wrong Way Risk Management</td> </tr> <tr> <td>Risk Model Supervision</td> <td>Risk Model Control Metrics (RBM), Model Supervision (Prisma)</td> </tr> <tr> <td>Stress Test and Reverse Stress Test</td> <td>Concepts of Stresstesting, reverse-Stresstesting and Clearing Fund sizing</td> </tr> <tr> <td>Default Management Process</td> <td>Concepts of Default Management Process</td> </tr> <tr> <td rowspan="2">Eurex Clearing CCP Credit Risk Management Policy</td> <td>Others</td> <td>Marked Data Quality Assurance, Intra-day Risk Monitoring, Cash Settlement and Physical Delivery, Post-Default Backings, Risk Control Services to Clearing Members, Linked CCPs, New Product Process</td> </tr> </tbody> </table> <p>The CRO heads the CCP Risk Management Department and implements the risk management framework including the policies and procedures</p>	Policy / Document Hierarchy		Scope	DBAG Group Risk Management Policy	ECAG Treasury Policy	Investment risk management, Treasury limit management	ECAG Policy for the use of Derivative Instruments	Use of derivatives in the treasury process	ECAG Liquidity Risk Management Policy	Liquidity Management	ECAG Liquidity Plan	Liquidity plan of Eurex Clearing	ECAG BCM Policy Appendix	Crisis management procedures, and preventive technical and organizational controls	DBAG Group Business Continuity Policy	Credit Exposure Framework	Credit Exposure Limit Framework	Clearing Membership Requirements	Prudent admission criteria, such as liable capital requirements, operational set-up, credit quality and regulatory oversight	Risk Model Documentation	Model Documentation (RBM, Prisma etc.)	Collateral Management	Valuation (theoretical bond prices) and Haircuts	Concentration & Wrong Way Risk Management	Concentration and Wrong Way Risk Management	Risk Model Supervision	Risk Model Control Metrics (RBM), Model Supervision (Prisma)	Stress Test and Reverse Stress Test	Concepts of Stresstesting, reverse-Stresstesting and Clearing Fund sizing	Default Management Process	Concepts of Default Management Process	Eurex Clearing CCP Credit Risk Management Policy	Others	Marked Data Quality Assurance, Intra-day Risk Monitoring, Cash Settlement and Physical Delivery, Post-Default Backings, Risk Control Services to Clearing Members, Linked CCPs, New Product Process
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	<p>established by the board. He also ensures that the framework is revised annually or when any material change makes it necessary.</p> <p>A mechanism is implemented to ensure that all necessary approval requirements are permanently met. It is performed by the section Policies &amp; Procedures which initiates an annual Update Request with the responsible Line Managers of Eurex Clearing.</p> <p>As part of its regular audit work, Internal Audit reviews these business processes and procedures underlying the audit subjects for correctness and completeness and for the effectiveness of the Internal Control System (ICS).</p> <p><b>Authority and independence of risk management and audit functions</b></p> <p>The organisational structure is set up so that the segregation of duties between departments offers sufficient independence. The separation of the functions trading / front office and back-office processing &amp; control is ensured through a clear allocation of responsibilities at Executive Board level. The clear separation of responsibilities is also ensured in the event of deputization, although the head of the department for clearing product design &amp; supervision deputizes another head of department responsible for CCP risk management.</p> <p>Furthermore, there is a clear separation in the reporting lines between risk management and other operations of Eurex Clearing.</p> <p>The compositing and function of each department is published on Eurex Clearing website.</p> <p>Internal Audit is responsible for assessing the organisation's framework of risk management, control and governance processes.</p> <p>An Internal Audit Policy is in place that defines the role and responsibilities of the internal audit function within Eurex Clearing as well as the relationship with auditees, executive management and supervisory functions. The policy is reviewed on a regular basis.</p> <p>Internal Audit seems to be a properly staffed independent function, free of influence by any element in the organisation, including matters of audit area, scope, procedure, frequency, timing or report content. In order to ensure independence, where applicable, the internal audit function reports directly to the Executive Board of Eurex Clearing. As required, Internal</p>
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	<p>Audit also reports to the Audit and Risk Committee of the Eurex Clearing Supervisory Board.</p> <p>Internal Audit uses a risk-based approach in defining specific areas of the organisation to audit. If necessary, the executive management may request additional audits to be performed as well as ad-hoc assurance services.</p> <p>The Executive Board of Eurex Clearing is ultimately responsible for the Risk Strategy of Eurex Clearing. It ensures that the Risk Strategy is integrated into the business activities throughout the entire Eurex Clearing and that adequate measures are in place to implement the strategies, policies and procedures. Risk awareness and a corresponding risk culture are encouraged, amongst other things, through appropriate organisational structures and responsibilities, adequate processes and the knowledge of the employees. The appropriateness of the risk management and controlling systems are reviewed continuously. In 2015, the risk function of Eurex Clearing is carried out by CCP Risk Management, comprised 50 staff located in Frankfurt and London.</p>
<p>Key Consideration 7</p> <p>The board should ensure that the FMI's design, rules, overall strategy, and major decisions reflect appropriately the legitimate interests of its direct and indirect participants and other relevant stakeholders. Major decisions should be clearly disclosed to relevant stakeholders and, where there is a broad market impact, the public.</p>	<p><b>Identification and consideration of stakeholder interests</b></p> <p>Eurex Clearing has a continuous dialogue with its customers through establishing number of committees (see above) to inform and integrate members from all market segments into the consultation process.</p> <p>Clearing members are involved in the management of a default through their participation in Default Management Committees to advise and assist Eurex Clearing in the process, and are prepared for this through simulation exercise. A consultation is organised in case of changes and amendments of the Clearing Conditions among affected stakeholder (see above).</p> <p>A complaints procedure is organised to address complaints arising in connection with the performance of, or failure to perform any of Eurex Clearing's obligations as defined in the Clearing Conditions.</p> <p><b>Disclosure</b></p> <p>Stakeholders receive important information on clearing volumes, generated profit, through the annual report including the management report, which is available on the Eurex Clearing webpage. The annual report covers the strategic objectives of Eurex Clearing and to what extent they were achieved.</p>

	<p>Major decisions with customer effect made by the Supervisory or Executive Board are disclosed to the relevant stakeholders by publishing circulars, press releases and other information on the Eurex Clearing website.</p> <p>In accordance with Article 131 AktG, upon request, each shareholder is provided with information at the shareholders' meeting by the Executive Board regarding the company's affairs, to the extent that such information is necessary to permit a proper evaluation of the relevant item on the agenda of the Shareholders' Meeting.</p> <p>Furthermore, news updates on the Eurex Clearing website (Public and Member Section for Members only) complemented by extensive reporting ensures that stakeholders are well-informed.</p>
Key conclusions for Principle 2	Eurex Clearing is managed by highly skilled professionals and has governance arrangements that are clear and transparent, promote safety and efficiency and support systemic stability for the financial markets.
Assessment of Principle 2	Observed.
Recommendations and comments	

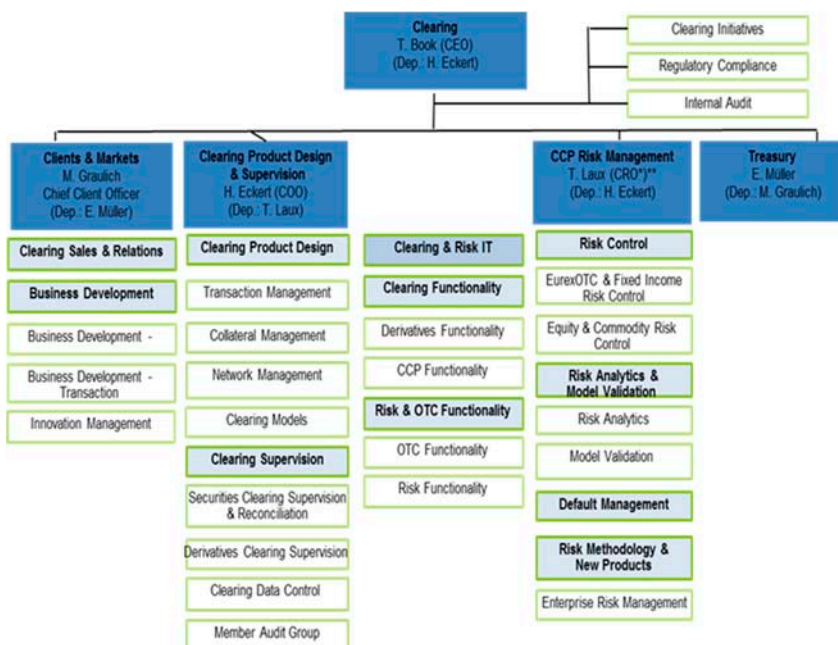
### Principle 3. Framework for the Comprehensive Management of Risks

An FMI should have a sound risk-management framework for comprehensively managing legal, credit, liquidity, operational, and other risks.

<p>Key Consideration 1</p> <p>An FMI should have risk-management policies, procedures, and systems that enable it to identify, measure, monitor, and manage the range of risks that arise in or are borne by the FMI. Risk-management frameworks should be subject to periodic review.</p>	<p><b>Risks that arise in or are borne by the FMI</b></p> <p>Eurex Clearing developed a comprehensive risk management framework, which is articulated in its business strategy and regulates the extent of risk that can be taken within the various business activities. In its risk management, Eurex Clearing has a holistic approach and considers the risk it bears from its relationship with its clearing members, clients, and other entities. The risk management is documented in the Credit Risk Management Policy and Group Risk Management (GRM). Eurex Clearing differentiates between four major risks:</p> <ul style="list-style-type: none"> <li>• Financial risk;</li> <li>• Operational risk;</li> </ul>
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	<ul style="list-style-type: none"> <li>• Project risk; and</li> <li>• Business risk.</li> </ul> <p>Financial risk comprises credit risk, market risk, liquidity risk as well as risk associated with regulatory parameters. Resulting from its business model as a CCP, Eurex Clearing is exposed to the risk that a clearing member cannot fulfill its contractual obligations resulting from any of its transactions until final settlement or any time thereafter (credit risk), or that a clearing member will settle obligations late (liquidity risk). Under a stressed market condition, a number of key clearing members may default at the same time (systemic risk). Operational risk is defined as the risk of loss resulting from inadequate or defective systems and internal processes, from human or technical failure, from inadequate or defective external processes and from legal risks. Project risk arises from the change of the current risk profile once the project will go live in the future. Business risk reflects the sensitivity to macroeconomic evolution and vulnerability to event risk arising from other external threats and internal weaknesses.</p> <p>Risk management of the operational, project, and business risks are conducted by Eurex Clearing's Enterprise Risk Management Unit, which is part of the CCP Risk Management Department since 10 April 2014.</p>
	<p><b>Risk management policies, procedures and systems</b></p> <p>Eurex Clearing has established documented policies, procedures, and processes to identify, monitor, and manage such risks. The aim is to make use of suitable safeguards and control measures such as guidelines and procedures, the segregation of functions, the principle of dual control, limit restrictions, and business continuity management to reduce the probability, frequency, and level of potential losses from the corresponding risk cases. Eurex Clearing Risk Management Framework ensures that all risks are recorded, assessed and controlled, and that a consolidated report on these risks is submitted to the Executive Board of Eurex Clearing. It produces Quarterly Risk Report containing Credit, Liquidity, Operational Risk and also Capital view. Operational Risk (OpRisks) incidents are recorded via template (unless there is another reporting).</p> <p>The Executive Board of Eurex Clearing is responsible for the company's Risk Management Framework. The company is organized in four specialized departments: Clients and Markets; Clearing Product Design and Supervision; CCP Risk Management; and Treasury. In addition, some functions, such as internal audit, Regulatory Compliance and Clearing Initiatives, are organized under the Chief Executive Office (CEO). Specialized</p>

departments identify risks and report them in a timely manner to the CRO, either through standardized templates or prepared documents. The Heads of the departments with the CEO constitute the Executive Board of Eurex Clearing. Some heads of departments act as deputies for the heads of other departments; cross managerial responsibilities. For instance, the Head of CCP Risk Management Department is the Deputy for the Head of Clearing Product Design Department, and vice versa.



Risks are openly and fully reported to the responsible level of management. The responsible management body is informed fully and timely about Eurex Clearing's risk profile, relevant risk(s) as well as about relevant losses. The internal reporting and communication is contemplated by external reporting, i.e., interim and annual reports.

Risk management policies, procedures and systems are developed by the Risk Management Department, reviewed by internal stakeholders, consulted with the Risk Committee, and approved by the Executive Board.

Additionally, Internal Audit is responsible for assessing the organization framework of risk management, control and governance processes, and for determining whether:

- risks are adequately identified and mitigated by appropriate controls;

	<ul style="list-style-type: none"> <li>• significant financial and operational information is accurate and reliable;</li> <li>• resources are used efficiently and are adequately protected; and</li> <li>• the organization is in compliance with internal policies and procedures, as well as applicable laws and regulations.</li> <li>• The following risk measures are applied to the different types of risk:</li> </ul> <p><i>Value-at-Risk</i></p> <p>Eurex Clearing uses a standardized approach – value at risk (VaR) – for measuring and reporting all risks. Two types of VaR are calculated:</p> <ol style="list-style-type: none"> <li>a. Economic Capital Value at Risk (VaR) is based on a one-year time horizon and 99.98 percent confidence level. This VaR is used to determine the minimum equity needed for a company. However, it is not the only measure used for capital management. So on one hand, the equity can be significantly higher than Economic Capital (EC) but, on the other hand, exceptional limit breaches do not automatically require capital increase.</li> <li>b. Management Value at Risk (MVaR) is defined as the VaR with a one-year time horizon and 99.0 percent confidence level. This is “a going concern” risk measure, which is not expected to have impact on capital and, therefore, it is not used for capital management. Management VaR is compared with the risk. Like Economic Capital, it is used as a risk management tool.</li> </ol> <p>The aim of this concept is to create a comprehensive overview of general risk tolerance and to facilitate the prioritization of risk measures.</p> <p>It calculates risk-bearing capacity as its main risk management tool. It uses VaR to calculate its required EC. It calculates its economic capital at a confidence level of 99.98 per cent and compares it to its risk-bearing capacity in order to be able to cover financially even extreme events in the next twelve months. Eurex Clearing uses the regulatory own funds as the risk-bearing capacity for its economic capital. For control purposes, Eurex Clearing regularly calculates the ratio of economic capital to risk-bearing capacity, or “utilization of risk-bearing capacity”, as an indicator.</p>
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	<p><i>Stress Tests</i></p> <p>a. Credit VaR Stress Test is subject to the default of the largest customer scenario and is defined as the loss after recovery rate in case the customers with the largest two uncollateralized exposure after utilization of all respective collateral default. This stress test comprises all credit exposures including credit exposures related to cash pooling. Credit VaR Stress Test in the case of "Default of largest customer" is performed monthly, for "Economic Deterioration" quarterly and "Cover 2 Default" daily.</p> <p>Liquidity Stress Tests for Eurex Clearing are performed by Treasury Frankfurt and described in detail in the Eurex Clearing Liquidity Risk Management Policy. There are two different types of stress tests in place: i) the "business-as-usual" stress test, which is reported quarterly to the Executive Board; and ii) the "Cover2 Default" stress test, which is performed and reported on a daily basis.</p> <p>b. Clearing Member Default or "Cover 2" liquidity stress test scenarios assume a potential actual or technical default of CMs to challenge Eurex Clearing's financing sources, including Default Fund contributions, against the funding requirements that occur during the default event. The results are available on Clearing Member and Corporate Group level as well as per Settlement Institution. "Business-as-usual" liquidity stress test scenarios focus on the soundness of daily pre-financing, repayment and investment activities performed by ECAG within its usual business. In particular, pre-financing of the bond, repo and GC-Pooling market and repayment of MCDs are investigated. The calculations are performed on clearing house level.</p> <p>c. Operational Risk Stress Tests are performed in the course of the yearly review of operational risk scenarios. Hereby, the loss of extreme operational events as well as the occurrence of several severe losses within one particular year is benchmarked with the risk-bearing capacity allocated to Operational risk.</p> <p>d. Further Stress Tests are performed to verify that the sum of the collateral pledged by the largest two members, plus the reserves of Eurex Clearing and the total amount of the Clearing Fund is sufficient to cover the risk exposure of these clearing members' in</p>
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	<p>999 out of 1000 events. More details are given in the CCP Credit Risk Management Policy.</p> <p><i>Credit Concentration Risk</i></p> <p>Credit VaR is calculated per counterparty taking into account all credit exposures of this counterparty. To identify a credit concentration, this Credit VaR per counterparty is compared to the Total Credit VaR. Concentrations in the counterparty's clearing positions are taken into account by credit, concentration, and wrong way risk framework, which limits all exposures to reasonable amounts. The objective is to keep the exposures throughout the membership balanced and to limit the building up of extremely concentrated positions, which might impair liquidation and thus would mean significant losses to Eurex Clearing or even the clearing community.</p> <p>Risk management policies, procedures, and systems are reviewed annually and designed to account for fluctuations in risk intensity. Eurex Clearing's Risk Management Framework is designed to cope with various stressed market situations and is not a static framework.</p>
<p>Key Consideration 2</p> <p>An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.</p>	<p>Eurex Clearing ensures that clearing members are able to properly manage and contain the risks they pose to the system. They are provided with sufficient information regarding the Eurex Clearing's risk management methodology. In addition, Eurex Clearing monitors the risk situation (i.e., overcollateralization) of each Clearing Member on a real time basis. This means that each change in position or change in price, the risk of the individual portfolio is recalculated real time. These figures are also visible to Clearing Members via data streams.</p> <p>In addition, the Clearing Conditions of Eurex Clearing set out various incentive measures to ensure that clearing members monitor and manage the timely fulfillment of their obligations and thus monitoring the risk they pose towards Eurex Clearing.</p> <p>Margining encompasses the entire process of measuring, calculating, and administering the collateral that must be provided to hedge open positions. Eurex Clearing calculates margin requirements in real-time to ensure that it has an overview of the members' current profit and loss situations as well as an estimation of the future risk situation.</p> <p>Mutualization of risks within the Clearing Fund ensures that participants are incentivized to care about the risk they pose to Eurex Clearing. Contributions to the Clearing Fund of non-defaulting clearing members</p>

may be used as financial resources to absorb losses that go beyond the Margins and Clearing Fund contribution of the defaulter and Eurex Clearing own contribution to the waterfall. Clearing Fund size is validated on a daily and calibrated on a quarterly basis.

Eurex Clearing further provides services to its Clearing Members to ensure an effective intraday control of their own and their client's trading activities, amongst other:

- Real-time order and trade information (via Order and Trade Confirmation Broadcast);
- Stop Button (for CMs and NCMs);
- Partial position transfers; and
- Incremental Risk Check for IRS.

Eurex Clearing has established a Member Compliance Framework to assess clearing members' compliance with the participation requirements set out by its rules. In addition, Eurex Clearing's Risk Management Framework includes the development and monitoring of clearing members' creditworthiness through internal and external credit ratings.

Eurex Clearing also assesses the participants' operational capability. Members must provide proof of the technical and functional connection, the use of appropriate technical equipment (back-office facilities), and sufficiently qualified back-office personnel.

Eurex Clearing has in place adequate processes for ensuring accountability to its participants. It involves its clearing members in designing its policies and systems. This is achieved through participation of members and clients in the various Eurex Clearing committees where all changes to services, products, risk management policies, and systems are discussed. In addition, members and clients have to be consulted on changes to the Clearing Conditions whenever changes to the risk management shall be implemented.

Eurex Clearing has further published a margin calculator to estimate margins requirements, which can be downloaded from its website. In addition, Eurex Clearing publishes a model for the risk management systems Risk Based Margining (RBM) and Portfolio Based Margining

	<p>(PRISMA). Both ensure that participants can determine the effect their trading behavior can have for the margin requirements.</p> <p>In addition, Eurex Clearing establishes Default Management Committees (DMC) to involve its Clearing Members and to ensure the availability of the best possible knowledge and expertise in case of a default. The DMC is a panel that is continuously defined, but only temporarily convened, to assist Eurex Clearing in any relevant matter of the Default Management Process (DMP) of one or more liquidation groups. DMCs are participating in the regular default simulation exercises. DMC member institutions are eligible clearing members that are actively clearing with Eurex Clearing and each DMC member institution nominates a DMC member and a deputy. Members of the DMC are traders who will advise on and execute the agreed hedging strategies as coordinated by Eurex Clearing. The last DMC was convened in the context of the annual fire drill on September 28 2015. The hedged portfolio was successfully auctioned to 21 Clearing Members.</p>
<p>Key Consideration 3</p> <p>An FMI should regularly review the material risks it bears from and poses to other entities (such as other FMIs, settlement banks, liquidity providers, and service providers) as a result of interdependencies and develop appropriate risk-management tools to address these risks.</p>	<p><b>Material risks</b></p> <p>Eurex Clearing is exposed to risks resulting from its clearing activities, its treasury activities, as well as to exposures arising from nostro accounts (cash balance). It consolidates the different activities a clearing member may have with Eurex Clearing and combines the resulting risk to one exposure figure towards the respective counterpart. Those counterparts are:</p> <ul style="list-style-type: none"> <li>• CCP activities: credit exposures arising from clearing members' portfolios;</li> <li>• Treasury counterpart for such activities as:</li> <li>• Unsecured Placements</li> <li>• Secured Placements (Repo)</li> <li>• Derivatives (e.g., hedging FX risks)</li> <li>• Nostro accounts (Cash Balances):</li> <li>• Commercial banks and Securities Settlement Systems used for CCP payment infrastructure</li> <li>• Commercial banks used for other purposes</li> </ul>

	<p><b>Risk management tools</b></p> <p>System interdependencies are considered by defining mission critical units, business functions, and related systems. Furthermore, risk analyses and the Business Continuity Management (BCM) take into account external links and interdependencies within the financial infrastructures and functions or services which have been outsourced to third-party providers. BCM performs an annual business impact assessment to identify Eurex Clearing critical units. All critical units have a Unit Recovery Plan (URP), in which system interdependencies are identified. Moreover, external links and interdependencies are identified for which Eurex Clearing reduces its dependency risk by having multiple parallel infrastructures/providers.</p> <p>In addition, concentration and wrong-way risks are monitored daily. Violations and breaches are immediately reported to the CRO and the Executive Board to decide about initiation of mitigating measures like charging supplementary margin or suspending respective members.</p> <p>Wrong-way is also collaterals classified as own issue; direct relationship between issuer and Clearing Members. For instance, collaterals will not be accepted if the issuer and the Clearing Member are the same legal entity and/or close links (direct or indirect ownership or control via voting rights between issuer and clearing member).</p>
<p>Key Consideration 4</p> <p>An FMI should identify scenarios that may potentially prevent it from being able to provide its critical operations and services as a going concern and assess the effectiveness of a full range of options for recovery or orderly wind-down. An FMI should prepare appropriate plans for its recovery or orderly wind-down based on the results of that assessment. Where applicable, an FMI should also provide relevant authorities with the</p>	<p><b>Scenarios that may prevent an FMI from providing critical operations and services</b></p> <p>Eurex Clearing currently uses scenario risk analysis as part of the operational risk process, as defined in the Group's overall Risk Management Framework.</p> <p>The scenario risk analysis includes disruption of clearing systems caused by hardware, network, software, terrorist attack; disruption of services from external providers, including utilities services; internal human errors and omissions related to calculation of settlement prices and delivery of securities.</p> <p>The results of the scenario risk analysis are assessed by Enterprise Risk Management during regular reviews of Eurex Clearing's BCM Policy as well as the BCM Plan. It also takes into account dependencies on external providers, including utilities services. Any contractual arrangements are centrally coordinated within the Group to ensure that adequate clauses are put in place.</p>

<p>information needed for purposes of resolution planning.</p>	<p><b>Recovery and orderly wind-down plans</b></p> <p>Eurex Clearing's maintains a recovery plan, which is designed to cover multi-member defaults in extreme idiosyncratic or market wide events, defines recovery limits as well as recovery options. In accordance with the recommendations provided in the CPMI-IOSCO Recovery of FMI of October 2014, Eurex Clearing focuses on recovery options which provide sufficient incentives to market participants while being effective, comprehensive, and transparent ex-ante to potential Clearing Members.</p> <p>Eurex Clearing also prepared a recovery plan in accordance with the Minimum Requirements of the German Recovery and Resolution Act (SAG) for the design of recovery plans (“Mindestanforderungen an die Ausgestaltung von Sanierungsplänen”). The main goal of the plan is to identify recovery options that strengthen the financial and operational robustness of Eurex Clearing in potential extreme stress situations. Within the (SAG) there are in-depth requirements for institutions to draw-up and maintain recovery plans. Eurex Clearing is required to submit a recovery plan that fully meets the requirements of the BRRD. The recovery plan has been assessed and approved by the competent authorities. This assessment includes whether the plan is comprehensive and could feasibly restore Eurex viability, in a timely manner, even in periods of severe financial stress. Eurex is obliged to include appropriate conditions and procedures in its recovery plan to ensure the timely implementation of recovery actions as well as a wide range of recovery options.</p> <p>Eurex Clearing has identified the clearing business as systemically and critically important, which can hardly be substituted by market participants in the short term, and a sudden termination or disorderly resolution could have a negative impact on financial stability.</p> <p>The most essential part of restructuring is the application of several recovery tools. To identify whether a recovery situation has occurred, Eurex Clearing has stipulated conservative recovery indicators inline with:</p> <ul style="list-style-type: none"> <li>• Regulatory capital (Pillar I)</li> <li>• Risk profile (Pillar II)</li> <li>• Liquidity</li> <li>• Operational risk</li> </ul>
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	<p>These indicators capture the impact of financial and operational risk drivers for which a recovery limit and an early warning trigger are defined. A recovery options were identified to strengthen the capital basis, liquidity position, and as well as mitigating operational risks.</p> <p>Eurex clearing assessment of external interconnectedness focuses mainly on all links to market participants, including liquidity providers, and other types of FMIs such as CSDs and ICSDs. In particular, To ensure Eurex Clearing can always cover the envisaged liquidity requirements arising out of the wind up activities of the clearing member portfolio, it monitors on a daily basis the liquidity requirements arising out of several members' default, while ignoring the liquidation or refinancing possibility of the margin collateral. This liquidity requirement also covers the parallel default of a collateral location.</p> <p>Eurex Clearing relies on the availability of margin collateral, which is typically held at CSDs and ICSDs. Eurex Clearing uses the services of Clearstream Banking Frankfurt (CSD) to deposit securities, and Clearstream Banking Luxembourg (CBL) and SIX SIS (both are ICSDs) to deposit margin collateral from clearing members. The margin collateral is pledged to Eurex Clearing and remain e.g., at CBL on the custody account of the clearing member. Should CBL stop providing settlement services, Eurex Clearing would consequently request from the clearing member securities via CBF, SIX SIS or to provide margin collateral in form of cash at short notice, to ensure that Eurex Clearing is always sufficiently covered.</p> <p>The Default Management Unit of Eurex Clearing's Clearing Risk Management Department, together with Enterprise Risk Management, is responsible for conducting the annual review of the "Wind-down" or restructuring of Eurex Clearing business.</p>
Key Conclusions for Principle 3	<p>Eurex Clearing has a comprehensive risk management framework that pays considerable attention to identify, monitor, and mitigates its risks and ensures that appropriate measures are taken to avoid and reduce of its risks without delay. This framework is validated continuously by its executive board.</p> <p>Eurex Clearing has in place adequate processes for ensuring accountability and transparency toward its participants. It involves its clearing members in designing its policies and systems through participation of Clearing Members and clients in the various Eurex Clearing committees where all changes to services, products, risk management policies, and systems are discussed. In addition, Clearing Members and Clients have to be consulted</p>

	on changes to the Clearing Conditions whenever changes to the risk management shall be implemented.
Assessment of Principle 3	Observed.
Recommendations and comments	<p>Eurex Clearing's risk management framework is not consolidated in an overarching document, although the contents are presented in several documents. For the sake of transparency, Eurex Clearing should prepare and publish a consolidated document on its risk management framework.</p> <p>Eurex Clearing should consider eliminating cross-managerial responsibility at the level of heads of departments in order to eliminate conflict of interest, in particular, between the head of the Department responsible for the Clearing Product Design and Supervision and that for CCP Risk Management.</p>

#### Principle 4. Credit Risk

An FMI should effectively measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes. An FMI should maintain sufficient financial resources to cover its credit exposure to each participant fully with a high degree of confidence. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure to the CCP in extreme but plausible market conditions.

##### Key Consideration 1

An FMI should establish a robust framework to manage credit exposures to its participants and the credit risk arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures,

Eurex Clearing has established a comprehensive Risk Management Framework for credit risk exposures, based on collateral requirements and credit limits to maintain the credit risk within acceptable parameters. Consistent reporting is in place to monitor Eurex Clearing's exposures. The framework is reviewed annually to reflect changing environments and market practices. Before updates are implemented a review by all effected stakeholders, including Clearing Members and authorities representatives, is conducted to include the planned changes in the overall risk framework of Eurex Clearing.

The Credit Risk Management policy encompasses among others, admission requirements, collateral management cornerstones, the guiding



potential future exposures, or both.	principles for the risk model including its validation methodologies as well as the cornerstones of the credit, concentration and wrong way risk monitoring and mitigation and the default management process.
<p>Key Consideration 2</p> <p>An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.</p>	<p>Eurex Clearing has developed a framework to identify sources of credit risk as well as to measure and monitor credit exposures, which include:</p> <ul style="list-style-type: none"> <li>• Types of relationships with counterparties;</li> <li>• Grouping of counterparties to enable e.g., single legal entity view, geographic view;</li> <li>• Definitions of exposures from each type of relation;</li> <li>• Duration of the exposure (when the exposure begins and ends); and</li> <li>• Level of collateralization (secured or unsecured exposure)</li> </ul> <p>In the course of its business activities, Eurex Clearing is exposed to credit risk arising from a number of different sources. A counterpart may have different relationships with Eurex Clearing directly or with parts of Deutsche Börse. These relationships result in different risk exposures.</p> <p>For measurement of credit exposure, Eurex Clearing consolidates the risk reporting at the Group level, including clearing activities, Treasury counterparts, and payment infrastructures. In addition, the risk exposure is calculated for the total margin requirements for a Clearing Member's activities; exposures are aggregated on legal entity level, i.e., all accounts economically belonging to the same legal entity are aggregated together. For each source of credit risk, several types of exposures are defined:</p> <ul style="list-style-type: none"> <li>• Notional Exposure (Notional Cash Exposure and Notional Derivatives Equivalent) <ul style="list-style-type: none"> <li>– Gross notional exposure (secured and unsecured)</li> <li>– Notional exposure considering several levels of netting</li> </ul> </li> <li>• Risk exposure <ul style="list-style-type: none"> <li>– Secured Exposure</li> <li>– Unsecured Exposure</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Notional Exposure</i></li> </ul> <p>Notional exposure is calculated based on notional amounts. For derivatives, the respective notional equivalent is calculated. Aggregation is done in gross terms, netting is allowed on different aggregation levels (e.g., for cash market products within same ISIN and for derivatives within the same underlying).</p> <ul style="list-style-type: none"> <li>• <i>Risk Exposure</i></li> </ul> <p>Risk exposure is calculated in addition to notional exposure that reflects a more precise view of the economic and liquidity risks than Notional Exposure.</p> <p><b>CCP activities</b></p> <p>For CCP activities, the risk exposure is calculated in addition to notional exposure. The risk Exposure reflects a more precise view on the economic risks than notional exposure by building on another set of netting rules tailored for CCP activities. The total risk exposure of the CCP's activities equals the total margin requirement, which is split into the secured exposure (collateral value) as well as the unsecured exposure (collateral shortfall, typically zero).</p> <p>- <i>Secured Exposure</i></p> <p>Secured exposure quantifies the risk perspective and corresponds to the margin requirement that is backed with collateral after haircut. Both, current exposures and potential future exposures are taken into account.</p> <p>- <i>Unsecured exposure</i></p> <p>Unsecured exposure is net exposure after considering collateral. It is fully covered for CCP business since most clearing members are over-collateralized. However, in some case Eurex Clearing may identify that a clearing member's total margin requirement is higher than its deposited collateral value. In this case, Eurex Clearing will issue a margin call overnight and/or intra-day if a given limit is breached.</p> <p>For its CCP business, Eurex Clearing measures credit exposures arising from the clearing relation between Eurex Clearing and its clearing member. The core risk model consists of two different risk methodologies: i) Risk Based Margining (RBM); and ii) Portfolio Based Margining (PRISMA), which quantify potential future losses that may occur during a default event of a clearing member. This risk model is complemented by stress tests. Eurex</p>
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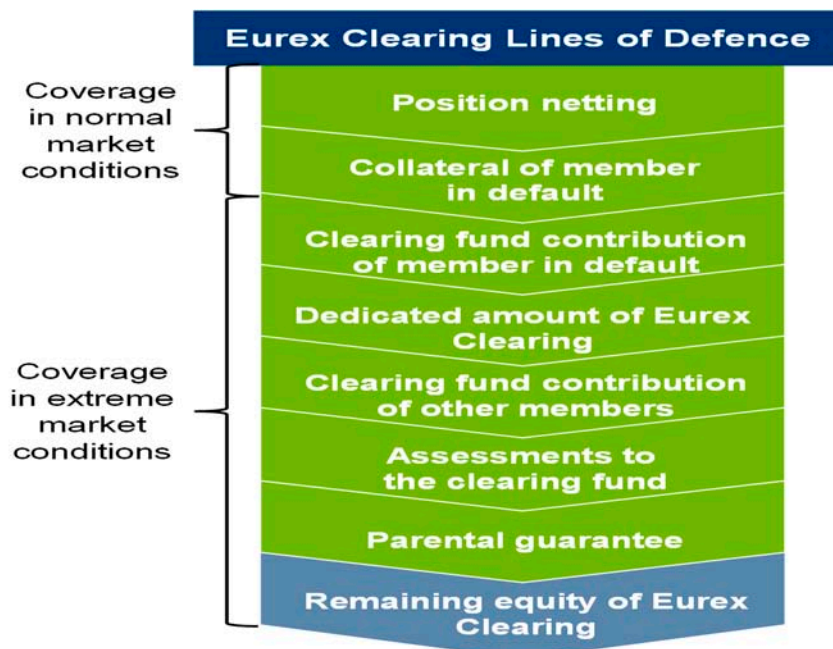
	<p>Clearing measures its exposure to its participants on a near to real-time basis as soon as updates of positions or pricing data are available (“event-driven”).</p> <p><b><i>Treasury activities</i></b></p> <p>Risk exposures for treasury activities are calculated based on the notional exposures weighted with a multiplier &lt; 1, if appropriate (e.g., for reverse repos a weighting of 2 percent is applied).</p> <p><i>- Credit Exposure Limits</i></p> <p>To maintain the credit risk exposure within acceptable parameters, credit exposure limits are set at the counterparty level. General thresholds are defined based on the rating of the counterparty. Specific threshold overrides may be applied considering further aspects such as business activities and collateral situation. Review of the credit limits is undertaken at least yearly or on demand.</p> <p><i>- Limit Breaches</i></p> <p>Once a counterparty breaches a granted exposure limit, Risk Control will inform the Executive Board as well as Group Risk Management. The Credit Committee assesses additional information available covering the overall situation of the counterparty taking into account for instance:</p> <ul style="list-style-type: none"> <li>• level of exceeded exposure limit</li> <li>• credit quality of the clearing member</li> <li>• the current collateral coverage and its quality</li> <li>• the overall concentration and wrong way risk constellation</li> <li>• the degree of correlation between the creditworthiness of a member and its exposure</li> </ul> <p>Based on this information, a proposal with action is submitted to the Executive Board:</p> <ul style="list-style-type: none"> <li>• Charging supplementary margin according to the Clearing Conditions</li> </ul>
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	<ul style="list-style-type: none"> <li>• If the member does not comply with the approved limits within a reasonable period of time, it may be granted an additional short “grace period” by the Executive Board at its own discretion.</li> </ul> <p>Additionally, Eurex Clearing will rectify the breach as soon as possible by notifying the affected members to decrease their exposures in line with the credit limits.</p>
<p>Key Consideration 3</p> <p>A payment system or SSS should cover its current and, where they exist, potential future exposures to each participant fully with a high degree of confidence using collateral and other equivalent financial resources (see Principle 5 on collateral). In the case of a DNS payment system or DNS SSS in which there is no settlement guarantee but where its participants face credit exposures arising from its payment, clearing, and settlement processes, such an FMI should maintain, at a minimum, sufficient resources to cover the exposures of the two participants and their affiliates that would create the largest aggregate credit exposure in the system.</p>	<p><b>Coverage of exposures to each participant</b></p> <p>Not applicable.</p> <hr/> <p><b>For DNS payment systems and DNS SSSs in which there is no settlement guarantee</b></p> <p>Not applicable.</p>
<p>Key consideration 4</p> <p>A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using</p>	<p><b>Coverage of current and potential future exposures to each participant</b></p> <p>To cover its current and future exposures, Eurex Clearing has developed multi-layers of defense or default waterfall. While the main element is margin requirement as collateral for open positions, the lines of defense</p>

margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should maintain additional financial resources to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. All other CCPs should maintain additional financial resources sufficient to cover a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would potentially cause the largest aggregate credit exposure for the CCP in extreme but plausible market conditions. In all cases, a CCP should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount of

consist of several additional layers of safety nets, which are defined in detail in Eurex Clearing's Risk Management Framework.

Eurex Clearing maintains a pre-funded Clearing Fund that is calibrated to cover the losses resulting from the default of the two clearing members with the largest exposures in extreme but plausible scenarios. Eurex Clearing defines "extreme but plausible" such that in 99.9 percent of all cases potential losses will be covered with collateral and post-default backings → collateral of defaulting member, Clearing Fund contribution of defaulting clearing member/Clearing Fund contributions of non-defaulting clearing members → based on scenario simulation. Scenarios include historical events as well as hypothetical scenarios based on Eurex Clearing's opinions. In addition, Eurex Clearing has access to further financial resources, namely dedicated own reserves of Eurex Clearing which are utilized after the defaulting clearing member's contribution but before the mutual Clearing Fund, parental guaranty and the remaining capital of Eurex Clearing.



In case primary risk materializes in form of a member default and the subsequent exposure of Eurex Clearing to market/liquidity and other risks previously borne by the member the waterfall is used to protect the CCP and allows to carry on with providing the CCP services to other members without interruption. At first all positions and exposures are netted already reducing the risk. Margins of the defaulted member are the second line and in the theoretical back tested events have been sufficient to cover all

<p>total financial resources it maintains.</p>	<p>costs resulting from any member exposure. The two real case events and the numerous fire drills also stayed in 100 percent of cases within this layer until the CCP could rebalance it. Further layers serve not only the extreme scenarios but also as an incentive scheme to members as well as the CCP to stay within the first two layers.</p> <p>The Clearing fund itself is calibrated to cover extreme market events in 999 out of 1000 events over the liquidation period for the respective products (2 to 5 days). Thus resources are immediately available to Eurex Clearing. In the unlikely event that these resources are not sufficient, Eurex Clearing has the right to request the non-defaulting clearing members to replenish the clearing fund. This is clearly stated in the Clearing Conditions, Chapter I, Part 1, Number 6.3: “to require from the Non-Affected Clearing Members, within a Capped period [the capped period shall be 20 business days after a termination event and is prolonged to 20 days after each further termination. The max duration is 3 month], by making one or several demands, and the Non-Affected Clearing Members shall, subject to the Liability Cap [two times in addition to the original clearing fund], be obliged to make, further contributions to the Clearing Fund, in each case as soon as possible but no later than one business day following receipt of Eurex Clearing demand...” Beyond that, Eurex Clearing remaining equity is the last line of defense.</p> <p>The Clearing Fund is separated into different Clearing Fund segments (CDFS) and liquidation groups, whereby each liquidation group is assigned to one particular CFS. Products sharing same risk characteristics can therefore be auctioned together in a clearing member default and are assigned to the same liquidation group. The size of each CFS depends on the exposure of the clearing member’s active CFS relative to the overall exposure of this member. The CFSs sum-up to the total Clearing Fund of the clearing house.</p> <p>In determining the adequate size of its Clearing Fund, Eurex Clearing conducts stress tests. Providing information on risk exposure under stressed market conditions, stress testing plays an important role in the Risk Management Framework of Eurex Clearing.</p> <p>Furthermore, margins are updated and monitored intraday whereas the Clearing Fund is recalibrated on a quarterly basis and in extreme market events.</p>
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	<p><b>Risk profile and systemic importance in multiple jurisdictions</b></p> <p>Eurex Clearing does not clear products with more-complex risk profiles, such as those classified as “exotics”, barrier, path dependent, or jump to default risk products such as CDS. It is systemically important in more than one jurisdiction. Eurex Clearing is under supervision of BaFin in Germany and is recognized as being systemically important to the Swiss market by both, the Swiss National Bank and the Swiss Banking Supervisory Authority.</p> <p><b>Additional financial resources</b></p> <p>The objective of the financial resources is that they are sufficient to cover the default of at least the two clearing members and their customers with the largest exposure. However, in the stress procedure the impact of the default of the three and the five clearing members with the largest exposure are regularly analyzed. As an EMIR requirement, it is also assessed how many members overall Eurex Clearing's lines of defense can withstand. All significant stress shortages are closely monitored.</p> <p><b>Supporting rationale and governance arrangements</b></p> <p>As described in Principle 2 Key Consideration 6, Eurex Clearing implemented and maintains a Risk Management Framework with policies and procedures in place, and conducts daily stress tests. In particular, the governance for market risk, credit risk as well as liquidity risk is monitored through the CCP Risk Management and the risks are reported on a continuous basis to the relevant Executive Management.</p>
<p>Key Consideration 5</p> <p>A CCP should determine the amount and regularly test the sufficiency of its total financial resources available in the event of a default or multiple defaults in extreme but plausible market conditions through rigorous stress testing. A CCP should have clear procedures to report the results of its stress tests to appropriate decision makers at the CCP and to</p>	<p><b>Stress Test</b></p> <p>Eurex Clearing has a comprehensive set of stress tests in place to test the sufficiency of 1) total financial resources (Principle 4, Credit Risk) and (2) liquid financial resources (Principle 7, Liquidity Risk) to ensure that Eurex Clearing is both solvent and liquid under stress situation.</p> <ol style="list-style-type: none"> <li>1. Total financial resources / Credit Risk. Total financial resources at Eurex Clearing are organized in the Default Waterfall, containing mainly margins, Eurex Clearing own contribution, and Clearing Fund. These are described in more detail under Principle 4, key consideration 4.</li> </ol> <p><i>“Credit Cover-2” stress tests</i> check the sufficiency of total financial resources under the scenario where the default of two participants occurs in combination with significant moves of</p>

<p>use these results to evaluate the adequacy of and adjust its total financial resources. Stress tests should be performed daily using standard and predetermined parameters and assumptions. On at least a monthly basis, a CCP should perform a comprehensive and thorough analysis of stress testing scenarios, models, and underlying parameters and assumptions used to ensure they are appropriate for determining the CCP's required level of default protection in light of current and evolving market conditions. A CCP should perform this analysis of stress testing more frequently when the products cleared or markets served display high volatility, become less liquid, or when the size or concentration of positions held by a CCP's participant increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.</p>	<p>market prices (extreme but plausible market conditions). More information on the scenario construction and market parameters being stressed (scenarios of different severities e.g., historical and hypothetical scenarios) are described under Principle 4, key consideration 6.</p> <p>2. Liquid financial resources / Liquidity Risk. Liquid financial resources at Eurex Clearing are, for example, CCP own contribution, member cash deposits and available credit facilities for liquidity purposes. Stress testing of liquid financial resources is comprised of two types of stress tests:</p> <p>2.1 "Liquidity business-as-usual" stress tests quantify the potential liquidity requirement under a scenario of normal (no participant in default) daily operations e.g., related to reduction in member cash deposits, outflows in case of prepayment during settlement cycles, unavailability of some credit facilities. Three sub-scenarios of different severities are in place (base scenario, market disruption, market disruption/idiosyncratic). Further information is provided under Principle 7, key consideration 9.</p> <p>2.2 "Liquidity Cover-2" stress tests quantify the largest liquidity requirement resulting from the default of two participants and are compared with the liquid financial resources. Liquidity requirements result from the necessity to fulfill the payment obligations of the defaulting members (sub-scenarios of different severities are in place). Further details are provided under Principle 7, key consideration 9.</p> <p>Following sections continue with Credit Stress Tests.</p> <p>Eurex Clearing has a stress test procedure in place that aims at verifying that the sum of the collateral posted by an individual defaulting member plus the total amount of the Clearing Fund is sufficient to cover the potential losses of the two clearing members and their customers with the largest exposure under extreme but plausible market conditions. The extreme but plausible conditions are defined at a confidence level of 99.9 percent. Each clearing member's risk exposure is stress tested against a comprehensive set of scenarios for all the product groups that it clears. Scenarios include the worst historical observations that have been experienced in each of the product groups as well as hypothetical scenarios representing expectations on worst potential future price movements to ensure that risk management is forward looking.</p>
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	<p>In general, stress scenarios are created for each asset class (liquidation group) individually by shifting relevant risk factors in the particular market. The shifts account for the holding period of the corresponding liquidation group as defined by the Default Management Process.</p> <p>The <i>hypothetical scenarios</i> are constructed to cover at least 999 out of 1,000 possible events over a 30 years look-back period. They account for the largest risk factor movements in both directions with a confidence level of 99.9 percent. The term 'risk factor movement' means the End-of-Day relative return over the particular holding period of the corresponding instrument or security. Unlike historical scenarios, hypothetical scenarios simulate extreme risk factor movements for all cleared asset classes and products simultaneously by combining all possible constellation of up and down moves across asset classes. The scenarios are kept plausible by adhering to consistent risk factor movements and pricing principles inside asset classes. For example, simulating a downturn of all single stocks and a simultaneous upturn of stock indices would not be considered as a plausible event.</p> <p>The selection of historic events follows a simple principle: if a historic price movement of a material risk factor is larger than its highest constructed shift in the hypothetical scenarios (i.e., 99.9 percent quantile), then the event is identified as extreme historic event. However, historical scenarios are not limited to this principle meaning that other well-known historic events with less market impact can be selected too. The current set of <i>historical scenarios</i> includes 13 events, examples include the 1987 Black Monday and the 2008 Lehman Default. Scenarios based on historical observations are mainly of two types:</p> <ul style="list-style-type: none"> <li>• Price movements across all product groups on specific crisis days;</li> <li>• Historically largest moves per product group independent of the observation day.</li> </ul> <p>The stress test is performed on the risk exposure of each clearing member. Potential losses based on stress scenarios are compared to each member's additional margin. Losses beyond additional margin are then compared to the Clearing Fund. How much of the Clearing Fund is consumed by the theoretical stress test calculations is identified and analyzed on a daily basis. Intraday stress tests are also performed by Eurex Clearing in extraordinary market situations.</p>
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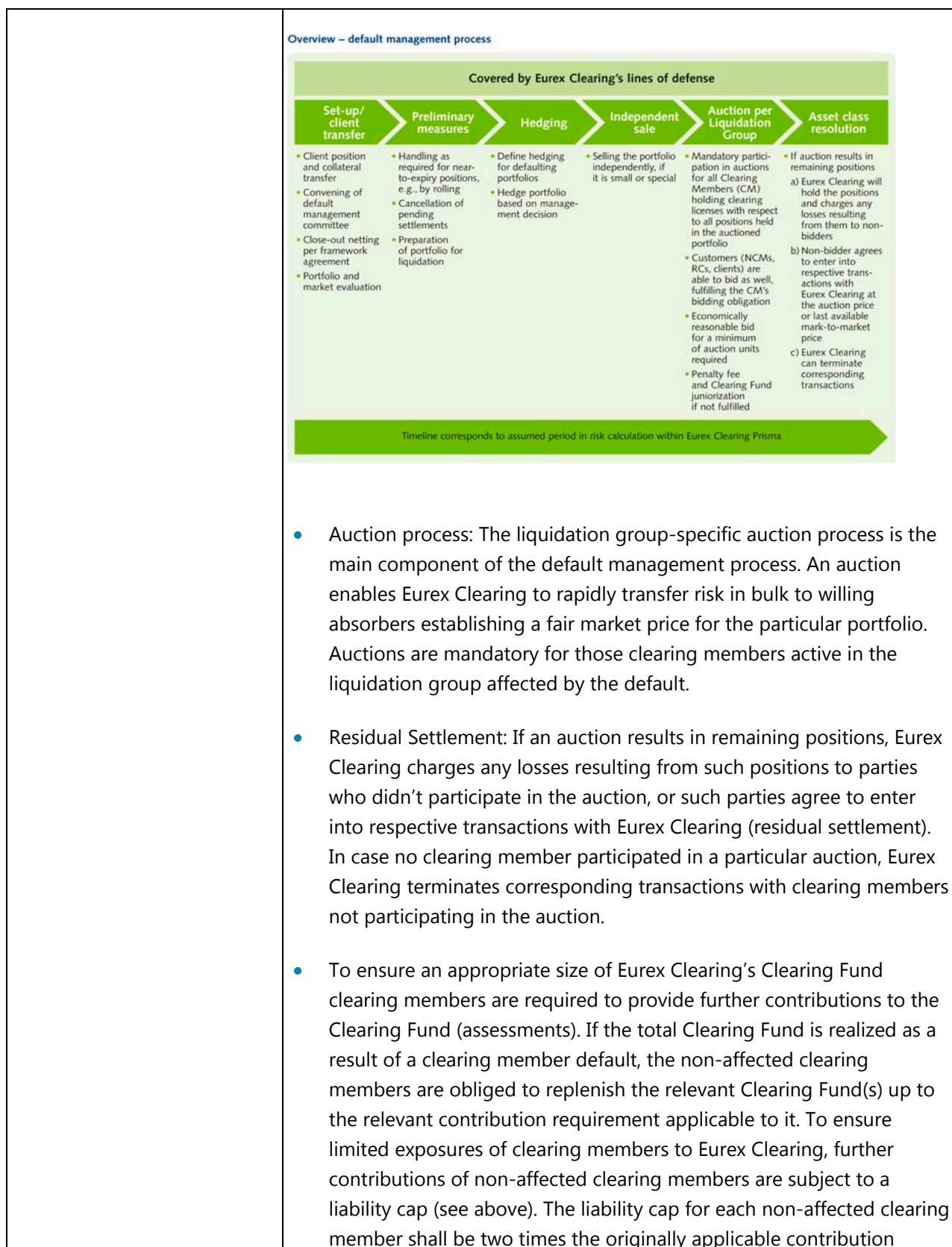
	<p>In the stress tests the segregation structure is respected by assuming that also clients default. Therefore, Eurex Clearing makes following assumptions in its stress tests:</p> <ul style="list-style-type: none"> <li>• the default of the two largest clearing members;</li> <li>• that all clients that are segregated in a Net Omnibus Account as well as the two largest individually segregated clients are also in default and are not able to find a new clearing member and consequently get liquidated together with their clearing member.</li> </ul> <p>Extreme but plausible market scenarios used for stress testing take into account the risk profile of Eurex Clearing. It identifies all the market risks, credit risks and liquidity risks to which Eurex Clearing is exposed, following the default of multiple clearing members. Moreover, the stress tests apply stressed parameters, assumptions and scenarios to the models used for the estimation of risk exposures to make sure its financial resources are sufficient to cover those exposures under extreme but plausible market conditions:</p> <ul style="list-style-type: none"> <li>• Simultaneous insolvency of multiple market participants;</li> <li>• Conduct stress tests that consider Eurex Clearing’s product mix and all elements of its models and their methodologies;</li> <li>• Uses defined stress testing scenarios, on both past and hypothetical extreme but plausible market conditions;</li> <li>• Time horizons for the liquidation period taking into account the characteristics of the financial instrument cleared and the period for the calculation and collection of the margins;</li> <li>• Considers the following: correlations, factors corresponding to the implied and historical volatility of the contract being cleared, concentration risks, interdependencies and multiple relationships, relevant risks including foreign exchange risks and reflect wrong-way risks.</li> </ul> <p>The stress test results are incorporated in the reporting to senior management to make sure that the outcomes are considered in the overall risk management and that senior management’s attention is focused on the sources of potential stresses in the decision making process. Furthermore, senior management is involved in determining the scope of the specific stress tests. Reporting of stress test results to the Risk</p>
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	<p>Committee is done quarterly; a review of the stress testing framework including the set of historical and hypothetical market scenarios used by Eurex Clearing to dimension the Clearing Fund size in consultation with the Risk Committee, is done at least annually and more frequently when market developments or material changes to the set of contracts cleared by Eurex Clearing may necessitate an adjustment to the scenarios.</p> <p>In addition, a comprehensive stress testing report is provided to the CRO and to the Executive Board of Eurex Clearing on a monthly basis.</p> <p>The general framework of the stress testing is presented to the risk committee, which, among other, is composed of clearing members, as well as to the regulators who finally approved it. Parameters are subject to a well defined calibration process which also has been presented to the mentioned bodies. Calibration results are approved by Eurex Clearing's Chief Risk Officer and finally presented to the risk committee.</p> <p>Stress test results are also reported to clearing members and clients. There are two types of external reports available:</p> <ul style="list-style-type: none"> <li>• Anonymous stress testing reports on clearing house level, giving the recipient information about potential risks of the clearing house without breaking confidentiality;</li> <li>• Detailed stress testing reports available for clearing members and clients providing detailed results for their portfolios only, which help the recipient to understand its risk profile and exposure.</li> </ul> <p><b>Review and validation</b></p> <p>Eurex Clearing regularly reviews and validates its risk models. Therefore, the Risk Management Framework comprises a documentation of all testing programs, processes and report structures which are in place. It validates new risk models by an independent party prior to the launch of the new model. The processes clearly define the roles and responsibilities, metrics, thresholds and actions. For the on-going revision and improvement of the model Eurex Clearing regularly seeks the advice of the Risk Committee. Any major changes and adjustments will be presented to the Risk Committee and approved by the Executive Board of Eurex Clearing.</p> <p>In general each risk model is validated on an on-going basis. Therefore, during the model development or change process the validation metrics is defined for the whole model and its parameters.</p>
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	<p>The basic instrument for evaluating the performance of the whole models is to look at back testing results. Back testing is used to test the accuracy and applicability of the risk model. Back testing is seeking to verify the reliability and practicability of the model and to identify if the model systematically understates or overstates risk. During this risk model validation Eurex Clearing regularly compares actual return performance (computed using realized and unrealized gains and losses) with modeled estimates to be able to demonstrate that such returns are within the expected range for the portfolio and individual holdings. Model parameter sensitivities are used to investigate the responsiveness of the margin model to changes of these model parameters.</p> <p>Basic assumptions as well as the model as a whole are reviewed annually. The annual revision also includes a benchmark analysis where current market standards and common practices are recognized. Some model components are validated more frequently.</p> <p>Backtests are conducted on a daily basis. Backtesting compares realized profits and losses (PnLs) with the model estimate, i.e., the market risk initial margin. Backtesting runs on a daily basis, meaning that every day PnLs are compared against margins. In case the loss exceeds the margin the observation is marked as an outlier. Frequency and severity of outliers are assessed by statistical tests such as the Kupiec POF test. Backtest results are summarized and reported to the management every month. Furthermore, detailed reports and monthly or ad-hoc management reports are generated. Stress tests are performed on a daily basis. Stress tests of Eurex Clearing's liquid financial resources are also done on a daily basis.</p> <p>A regular sensitivity analysis is performed as a daily monitoring and monthly validation of Eurex Clearing's haircuts and the factors on which they are based. In addition, intraday analyses are performed by Eurex Clearing in extraordinary market situations.</p> <p>The default procedures are tested by realistic default simulations. In a default simulation the procedures and infrastructure of Eurex Clearing and the clearing members are tested. The test and review of the default procedures (no simulation) are performed quarterly.</p> <p>New risk models are validated by an independent party, such as international consulting and accounting firms, prior to their launch. The external validation process and resulting findings/recommendations are an important and valuable element in the model development process and also reported back to the Executive Board.</p>
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<p><b>Key Consideration 6</b></p> <p>In conducting stress testing, a CCP should consider the effect of a wide range of relevant stress scenarios in terms of both defaulters' positions and possible price changes in liquidation periods. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions.</p>	<p>Eurex Clearing identifies and measures relevant risk factors specific to the contracts it clears and takes these risk factors into account in its Stress Testing Framework. Some of the risk factors, considered in the tests:</p> <ul style="list-style-type: none"> <li>• Number of defaulting clearing members or clearing member groups</li> <li>• Interrelatedness between clearing members (e.g., country, sector, affiliation, common clearer for one client)</li> <li>• Options implied volatilities</li> <li>• Interest rates</li> <li>• Correlations</li> <li>• Value of instruments issued by clearing members</li> <li>• Equity prices</li> <li>• Bond prices</li> <li>• FX rates</li> </ul> <p>The scenarios of the stress tests are specified in the Risk Management Framework:</p> <ul style="list-style-type: none"> <li>• Historical market scenarios: Eurex Clearing considers historical scenarios, including periods of extreme market movements observed in the past that would have exposed Eurex Clearing to greatest financial risk.</li> <li>• Hypothetical market scenarios: Combinations of extreme but plausible market risk factor moves (underlying price, volatility or interest rates).</li> <li>• Special risk factor scenarios: For further analysis purposes.</li> <li>• Correlation Stress: correlations can massively break down during periods of severe market stress with the result that cross product diversification and macro hedging strategies can fail. To model the correlation stress, extreme but plausible spread move scenarios are defined. These spread moves are incorporated in the hypothetical market scenarios.</li> </ul>
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<p>Key Consideration 7</p> <p>An FMI should establish explicit rules and procedures that address fully any credit losses it may face as a result of any individual or combined default among its participants with respect to any of their obligations to the FMI. These rules and procedures should address how potentially uncovered credit losses would be allocated, including the repayment of any funds an FMI may borrow from liquidity providers. These rules and procedures should also indicate the FMI's process to replenish any financial resources that the FMI may employ during a stress event, so that the FMI can continue to operate in a safe and sound manner.</p>	<p>As an important measure to contain the default of one clearing member, Eurex Clearing developed an Asset Protection Service, which offers a segregation and timely portability of client positions and collateral (both cash and securities). This service allows clearing members and their clients to choose between different, optional protection solutions - depending on the level of protection they require. Client Asset Protection is discussed further in Principle 14.</p> <p>Eurex Clearing's default management process is comprised of a set of procedures, designed to facilitate the orderly liquidation process of large and complex portfolios. The margin approach considers the expected duration of the default management process in its methodology so as to reflect actual risk throughout an actual default situation. The following briefly describes key components of the default management process, which comes into effect for remaining positions now maintained by the Eurex Clearing after successfully completed the porting of open client positions to a new:</p> <ul style="list-style-type: none"> <li>• Default Management Committees: Each Default Management Committee (DMC) consists of representatives of Clearing Members with sufficient trading and risk expertise in products belonging to the respective liquidation group(s) for which the Default Management Committee is convened. They assist Eurex Clearing with regards to any relevant matter of the default management process, especially hedging and auctioning. The Default Management Committees will be convened in case of a clearing member default situation and for regular default simulations.</li> <li>• Hedging: The purpose of hedging within the default management process is to enable Eurex Clearing to reduce the risk of a liquidation group and therefore reduce the risk for Eurex Clearing. Furthermore, it reduces the portfolio sensitivity to market moves and stabilizes it for auctions.</li> <li>• Independent sale: In order to grant sufficient flexibility during a default situation, liquidation groups can be sold independently, i.e., positions of the defaulted clearing member are then closed by the clearing house and subsequently opened in the position account of the clearing member that overtook the position.</li> </ul>
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requirement to the relevant Clearing Fund for such non-affected clearing. The required pre-funded Clearing Fund contribution for each member is determined on a quarterly basis.

### Replenishment of financial resources

Eurex Clearing requires each clearing member to pay a contribution to the Clearing Fund if the clearing member holds a clearing license in the respective business. Contributions can be paid in cash and securities. The amount of the contribution to be provided is determined by Eurex Clearing according to the announced method of calculation for each clearing member respectively. The basis for the calculation of the contribution to the Clearing Fund is the margin requirement of all positions and transactions of the respective clearing member, its Non-clearing members and Clients in the respective markets.

The contribution to the Clearing Fund of each member is comprised of a minimum component and a dynamic component. A clearing member's contribution to the general Clearing Fund is the highest amount of:

Market (1)	Product (2)	Dynamic contribution to Clearing Fund		
		GCM minimum (3)	DCM minimum (4)	Maximum of (5)
All markets	Respective products	5	1	<ul style="list-style-type: none"> <li>• 7 percent of average initial margin requirement (30 days)</li> <li>• 7 percent of average initial margin requirement (250 days)</li> <li>• or column (3)/(4)</li> </ul>

- 7 percent of average of initial margin requirements (30 days), which corresponds to the sum of futures spread margin and additional margin; or
- 7 percent of average of initial margin requirements (250 days); or
- General clearing member: EUR 5 million, Direct clearing member: EUR 1 million.

A minimum component below, which the size of the Clearing Fund cannot fall under any circumstances, is represented by the sum of the minimum components over all clearing members. To ensure that the size of Eurex Clearing's Clearing Fund does not fall below the minimum amount defined above; clearing members are required to provide further contribution. If



	<p>the total Clearing Fund is realized as a result of a clearing member default, the non-affected clearing members are obliged to replenish the relevant Clearing Fund(s) up to the relevant contribution requirement applicable to it (Clearing Conditions, Chapter I, Part 1, Number 6.3).</p> <p>To ensure limited exposures of clearing members to Eurex Clearing, further contributions of non-affected clearing members are subject to a liability cap. The liability cap for each non-affected clearing member shall, with respect to each Clearing Fund, be two times the originally applicable contribution requirement to the relevant Clearing Fund for such non-affected clearing member within 20 rolling business days, i.e., the overall liability of the clearing member is limited to three times its pre-funded Clearing Fund contribution. The required pre-funded Clearing Fund contribution for each member is determined on a quarterly basis. The capped period is rolling, that means that if within the capped period another default occurs then the period is restarted to last another 20 day. However when the capped period is rolled the number of assessments does not restart counting. Therefore within the rolling capped period each member is obliged to provide assessments up to two times the original amount of its clearing fund contribution at the start of the capped period.</p> <p>Eurex Clearing will reinstate its dedicated own resources within one month after it has fallen under the minimum requirement stipulated in Art. 35 Delegated Regulations (EU) No 153/2013. Where a subsequent default of one or more clearing members occurs before Eurex Clearing has reinstated the dedicated own resources, only the residual amount of the allocated dedicated own resources will be used in order to comply with the requirements stipulated in Art. 45 EMIR.</p>
Key Conclusions for Principle 4	<p>Eurex Clearing has established a comprehensive Risk Management Framework to identify and manage its credit risk exposures based on collateral requirements and credit limits to maintain the credit risk within acceptable parameters. Consistent reporting is in place to monitor Eurex Clearing's exposures.</p> <p>To cover its current and future exposures, Eurex Clearing has developed multiple layers of defense. While the main element is margin requirement as collateral for open positions, the lines of defense consist of several additional layers of safety nets, which are defined in detail in Eurex Clearing's Risk Management Framework. As a crucial risk management tool, Eurex Clearing has developed a comprehensive stress testing to monitor its risks exposure under stressed market conditions.</p>

	Eurex Clearing reviews and validates its risk models on ongoing basis. New risk models are discussed with Clearing Members and validated by an independent party prior to their launch.
Assessment of Principle 4	Observed.
Recommendations and Comments	

### Principle 5. Collateral

An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks. An FMI should also set and enforce appropriately conservative haircuts and concentration limits.

<p>Key Consideration 1</p> <p>An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.</p>	<p>Eurex Clearing accepts a wide range of eligible collateral, including debt instruments, equities, and cash. In order to accept financial instruments as eligible collateral, they must satisfy a number of criteria: high credit quality, minimum market risk, high liquidity, immediate accessibility and valuation. These criteria are described in the Clearing Condition Chapter 1, Part 1, Number 3.2, which are published on the website. Eurex Clearing publishes a list with the admissible collateral securities on a regular basis. Only securities which meet Eurex Clearing's stringent eligibility criteria will be included in the list.</p> <p>Clearing members can satisfy margin and Clearing Fund requirements by depositing cash and/or securities. Eurex Clearing has a limit on the amount of equity, provided as collateral, which should not exceed 30 percent of total collateral and one percent per issuer. It publishes an overview of eligible margin assets on its website. For cash collateral: <a href="http://www.eurexclearing.com/clearing-en/collateral-management/cash-collateral/">http://www.eurexclearing.com/clearing-en/collateral-management/cash-collateral/</a>, For securities collateral: <a href="http://www.eurexclearing.com/clearing-en/collateral-management/securities-collateral/">http://www.eurexclearing.com/clearing-en/collateral-management/securities-collateral/</a>.</p> <p>Eurex Clearing accepts four currencies as cash collateral. These are EUR, CHF, USD and GBP. In general, overnight margin calls will only take place in EUR and CHF. For covering intraday margin calls members may use all four currencies.</p>
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	<p>EUR and CHF may be deposited in central bank accounts at the Deutsche Bundesbank or Schweizerische Nationalbank (SNB). In the case of GBP and USD international commercial banks are used.</p> <p>Eurex Clearing stipulates and publishes which currencies are permitted for the deposit of cash collateral and also which securities are eligible for deposit of non-cash collateral. Accepted securities are validated on a daily basis.</p> <p>Eurex Clearing accepts fixed income securities denominated in EUR, CHF as well as other currencies. In addition, it accepts equities denominated in EUR and CHF.</p> <p>In the case of variation margin, (i.e., the daily settlement of profits and losses) and margin calls, overnight payments must be made in cash. In addition, the payment of premiums on traditional options and options on futures must always be made in cash.</p> <p>Eurex Clearing has implemented a Concentration and Wrong Way Risk Framework which identifies and manages different forms of respective risks.</p> <p>Eurex Clearing does not accept own issues due to procyclical effects (wrong-way risk) as well as close link securities as eligible collateral. Eurex Clearing defines a close link as a direct relationship between members - Clearing Members, Segregated Non-Clearing Members or Segregated Registered Customers (a disclosed customer which is not qualifying as a Trading Participant), and issuers of a security. A member is directly linked with an issuer by participation, i.e., by ownership, directly or by way of control, of 50 percent or more of the voting rights or capital of a company or by control, i.e., by the relationship between a parent company and a subsidiary, or a similar relationship between the member and a company. Debt securities that have a remaining term of 15 calendar days or less are not accepted as well.</p> <p>Eurex Clearing does not accept commercial bank guarantees or central bank guarantees. There is no collateral type, which is accepted on an exceptional basis. In order to keep the collateral pool value stable on clearing house level also in extreme market conditions, the high quality of security collateral is in a first instance defined by combining an acceptable credit risk of the issuer and minimum market risk of the issue. The operationalization of minimum market risk is captured within the credit quality category by regularly monitoring the reference data of the</p>
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instrument and the issuer; as well the volatility of the yield for fixed income instruments and the volatility of the price for equities deemed to be a valid proxy for market risk. Eurex Clearing regularly performs methodically objective credit risk assessments of the instrument's issuer based on external and internal rating information. Eurex Clearing monitors the credit ratings of issuers on a continuous basis. The internal credit assessment including approximations considers also the classification of the issuer's home country. Only if the internal credit quality considerations result in an issuer's "Investment Grade" the instrument is acceptable.

Referring to cash collateral, Eurex Clearing required central bank liquidity (EUR, CHF) due to the finality of bookings and for reasons of counterparty risk and credit risk reduction. Commercial bank money (USD, GBP) is acceptable via payment banks if they fulfill regularly assessed creditworthy and reliability criteria. Eurex Clearing does not have access to the U.S. FED or Bank of England.

Furthermore, as security collateral might be liquidated, e.g., in the event of a default under potentially stressed market conditions, within a short period of time, eligibility is depending on the availability of markets where Eurex Clearing has liquidation procedures in place. Hence, only bond assets that can be converted into cash via e.g., Eurex Clearing's access to a central bank's repo facility and that can be sold over-the-counter (OTC) to Eurex Clearing customers or other market participants are classified liquid and thus eligible. Therefore, Eurex Clearing monitors the central bank eligibility (market liquidity) daily in order to exclude instruments from the admissible securities list in case the required eligibility is revoked. Equity instruments must be tradable at any time in a market at an exchange or OTC.

Only in case of a Clearing Member default, when the margin collateral is transferred to Eurex Clearing, it is entitled to use these securities in order to generate liquidity via repurchase agreements (preferably with the central bank). In other words, Eurex Clearing does not rehypothecate Clearing Member collateral in a no default situation.

Precondition of liquidation is Eurex Clearing's prompt access to the collateral by means of first ranking within the respective legal or regulatory framework. This comprises the home jurisdiction of the collateral location and of the participant and the legal concept (pledge / title transfer) in which the collateral is held.

	<p>Eurex Clearing's valuation is based on the clean prices (mark-to-market) used from reliable and continuous data sources and haircuts.</p> <p>In order to avoid procyclicality, Eurex Clearing reviews the processes including impact analyses and reserves the right to gradually increase haircuts until the instrument is no longer eligible. This leads to naturally decreased allocated volumes in these particular instruments.</p> <p>Eurex Clearing validates and monitors the parameters of the respective criterion (haircuts, confidence factors, ratings etc.) for the admissible securities on a regular basis. Once a certain threshold is breached the eligibility of this security is reviewed.</p> <p>In addition, Eurex Clearing reserves the right to exclude all instruments of issuers that are regarded as not sufficiently sound, i.e., such individual assessment overrules the automatic functional and technical validations of the security master data.</p>
<p>Key Consideration 2</p> <p>An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions.</p>	<p><b>Valuation practices</b></p> <p>Consistent with market standards, Eurex Clearing evaluates its collateral on a daily basis. It manages the risks with regard to the valuation of collateral on an adequate basis by additionally marking-to-model when marking-to-market is not possible due to a lack of current market price data.</p> <p>Eurex Clearing calculates theoretical prices for all bonds in its central collateral database. The theoretical pricing is based on mathematical valuation models, which determine the present value of all expected cash flows of the security. The present values of the cash flows are computed by applying the bond specific discount curve. The model underlying bond pricing consists of three major components that flow into the discount curve derivation:</p> <ul style="list-style-type: none"> <li>• Risk free interest rate curves are given by government or swap curves.</li> <li>• Credit spread curves (sector curves) are bootstrapped out of bonds that belong to the same peer group.</li> <li>• Individual spread basis of a given bond is used for an adjustment on top.</li> </ul> <p>Theoretical prices might have a model inherent uncertainty; the theoretical pricing algorithms take certain model errors and uncertainties into account. Different confidence factors - ranging from 0 to 1 - help to</p>

	<p>mitigate risk arising from approximation errors and are to be applied to any theoretical price. In general, the confidence factor is the 99 percent of all historical absolute deviations of market prices and theoretical prices. The calibration of the confidence factors is based on the comparison of theoretical prices with bonds with valid market prices. Models that yield theoretical prices that are closer to the observable market prices get higher confidence factors than those where the theoretical prices diverge a lot.</p> <p>The calculated prices will be used for valuation in the Eurex Clearing systems where no current market prices are available for bond assets. However, if a current market price is available, this price is preferred. The eligibility of all instruments that have not received a valid market price during the last three months is revisited.</p>
	<p><b>Haircutting practices</b></p> <p>Eurex Clearing applies a haircut methodology, distinguishing the collateral type of the deposited collateral (bond, equity, cash currency). In addition, Eurex Clearing maintains currency haircuts for foreign currency (FX) collateral (securities and cash).</p> <p>Haircuts applied by Eurex Clearing recognize the fact that collateral may need to be liquidated in stressed market conditions. Therefore, market risk, credit risk, and liquidity risk are important components, while determining the appropriate haircuts. The general haircut calculation methodology encompasses a static minimum haircut component and a dynamic component. The minimum haircut ensures sufficient security also in calm market conditions and considers the higher volatility of instruments being close to maturity. The dynamic component calculates the haircut based on yield shifts. For each individual bond, the haircut is determined by the difference between the current price and a theoretical bond price under stressed yield. In addition, the haircuts are calibrated on a very high conservative confidence level (99.9 percent) for extreme market conditions. The dynamic haircut methodology reflects the individual risk and the inherent risk profiles of different collateral assets and takes into account actual volatility of the respective instrument. Prudent minimum haircuts are an appropriate measure to prevent and control pro-cyclical effects of haircuts to the extent that Eurex Clearing's soundness and financial security is not negatively affected.</p> <p>For bond collateral, Eurex Clearing considers the price sensitivity as a function of the shift in the yield to maturity to reflect the relative change of the present bond value, and thus the related haircut. The yield shift takes a general market risk, a specific credit risk, and a specific liquidity factor into</p>

	<p>account. Hereby the bonds are partitioned into groups in respect to their issuer group.</p> <p>For equity collateral, the haircuts consist out of a stress factor, which considers the historic price movement distribution, a volatility measure and a liquidity measure to take liquidity constraints into consideration. The Stress Factor is approximated by a multiple of the instruments long-term volatility to hold on a 99.9 percent confidence level. The targeted confidence level is 99.9 percent in order to also account for stressed market conditions instead of 99 percent confidence level for margin parameters which are calibrated to hold for “normal” market circumstances. The Stress factor is retrieved out of a given empirical distribution of returns and the respective long-term volatility.</p> <p>For securities denominated in a foreign currency, Eurex Clearing applies only the security haircut if the currency of the exposure is equal to the currency of the collateral. However, if the currency of the exposure is different from the currency of the collateral, both a currency and a security haircut are applied. In this case FX currency haircuts are applied to the collateral pledged to cover the clearing member’s margin requirement. FX haircuts depend on the volatility of exchange rates. The haircut for each cross currency in scope contains a minimum haircut, which acts as an empirical floor for the risk of the specific exchange rate, and a dynamic component. The dynamic component of currency haircuts are based on a multiple of the instruments long-term volatility to hold on a 99.9 percent confidence level.</p>
<p>Key Consideration 3</p> <p>In order to reduce the need for pro-cyclical adjustments, an FMI should establish stable and conservative haircuts that are calibrated to include periods of stressed market conditions, to the extent practicable and prudent.</p>	<p>Haircuts applied by Eurex Clearing recognize the fact that collateral may need to be liquidated in stressed market conditions. The haircuts are calibrated to achieve a very high and conservative confidence level (99.9 percent) for extreme market conditions, which means 99.9 percent of the expected price changes are below the applied haircut.</p> <p>Furthermore, haircuts are calibrated to ensure sufficient coverage over a five-day liquidation period even in stressed market conditions. The dynamic haircut methodology reflects the individual risk and the inherent risk profiles of different collateral assets and takes into account actual volatility of the respective instrument. The configurable parameters of the collateral haircut determination formulas are to be validated regularly and adjusted, if necessary. Moreover, prudent minimum haircuts are an appropriate measure to prevent and control procyclical effects of haircuts</p>

	to the extent that Eurex Clearing's soundness and financial security is not negatively affected.
<p>Key Consideration 4</p> <p>An FMI should avoid concentrated holdings of certain assets where this would significantly impair the ability to liquidate such assets quickly without significant adverse price effects.</p>	<p>Eurex Clearing conducts an internal credit assessment of all counterparties and performs continuous monitoring of credit, concentration and wrong-way risks. Eurex Clearing monitors all risks arising from the trading portfolios of counterparties on the one hand, and from the collateral deposited to secure such portfolios, on the other hand. The collateral deposited by a counterparty is aggregated in a so-called collateral pool, which contains all instruments in order to fulfill the counterparty's</p> <ul style="list-style-type: none"> <li>• Margin requirement;</li> <li>• Clearing Fund contribution; and</li> <li>• Company capital requirement.</li> </ul> <p>Eurex Clearing assumes a portfolio or collateral pool to be concentrated if the exposure of a particular position exceeds the aggregated market demand during the anticipated liquidation period. This is done by aggregating all exposures from different origins (portfolio, collateral pool, nostro account, treasury counterparts, etc.) and thus assessing the concentration risk in a holistic way. Concentration limits are subject to the credit quality of the respective instruments as instruments with high credit quality are in general more liquid and thus easy to liquidate compared to instruments having lower credit quality.</p> <p>To avoid losses for an illiquid market, Eurex Clearing defined dedicated concentration risk thresholds which are applicable to all counterparties. The concentration risk thresholds are available at Eurex Clearing's website: <a href="http://www.eurexclearing.com/clearing-en/risk-management/credit-concentration-wrong-way-risk">http://www.eurexclearing.com/clearing-en/risk-management/credit-concentration-wrong-way-risk</a>.</p> <p>In order to avoid wrong-way risk, Eurex Clearing does not allow counterparties to deposit own issues (or issues of closely linked entities) as collateral. Moreover, counterparties are not entitled to use such instruments as collateral for repo transaction or securities lending transactions.</p> <p>By defining dedicated wrong-way risk thresholds, Eurex Clearing defines thresholds to a counterparty's collateral pool and the counterparty's notional exposure. In particular, it sets thresholds that consider the home country of the counterparty and the home country of the issuers within the counterparty's collateral pool and portfolio. In addition, Eurex Clearing has</p>



	introduced an automatic ex-post check to identify close link securities in order to exclude these collaterals from being provided as margin, Clearing Fund contributions and substitutes for company equity capital collateral.
<p>Key Consideration 5</p> <p>An FMI that accepts cross-border collateral should mitigate the risks associated with its use and ensure that the collateral can be used in a timely manner.</p>	<p>Eurex Clearing offers direct provisioning of security collateral in designated Securities Settlement Systems (SSS), ideally with access to the European System of Central Bank (ESCB) facilities. Security collateral is provided through the security collateral locations, i.e., the German Central Securities Depository (CSD) Clearstream Banking Frankfurt (CBF), the International Central Securities Depository (ICSD) Clearstream Banking Luxembourg (CBL) and the Swiss CSD SIX SIS.</p> <p>Cash collateral is provided through Eurex Clearing’s correspondent banks, i.e., the margin amount is deposited at the respective cash collateral location as announced by Eurex Clearing to the participant: Euro in central bank money at the central bank in TARGET2, Swiss francs in central bank money at Swiss National Bank (SNB), as well as US Dollar and Great British Pound (GBP) in commercial bank money at selected payment banks in their payment infrastructure as in these currencies currently no central bank access is available.</p> <p>Collateral processing takes place in a straightforward manner via standardized interfaces, which mitigates operational and market risks.</p> <p>Moreover, Eurex Clearing’s risk management requirements towards the respective collateral locations ensure that the allocation of securities is in line with eligibility and non-eligibility criteria of collateral, with the valuation parameters, concentration limits and wrong-way risk considerations.</p> <p>Any collateral location has to ensure legal certainty based on dedicated jurisdictions (e.g., Financial Collateral Directive<sup>3</sup>, German Safe Custody Act) regarding the first ranking of legal rights of Eurex Clearing to immediately access the collateral at any time given. Legal certainty is given for any of these aspects under the German Insolvency Code (InsO) and is required for foreign insolvency laws, in each case to be confirmed by legal counsels. The legal certainty of any collateral location needs to provide the possibility for Eurex Clearing to freeze all allocated collateral in a dedicated account at any time, in particular in the event of a participant defaulting or deeming insolvent. This secure mechanism for the safety of the clearing</p>

<sup>3</sup> Directive 2002/47/EC of the European Parliament and of the Council of 6 June 2002 on financial collateral arrangements.

	<p>house ensures that collateral cannot be moved by the participants starting at the decision point in time until Eurex Clearing releases the collateral for the collateral provider or third parties.</p>
<p>Key Consideration 6</p> <p>An FMI should use a collateral management system that is well-designed and operationally flexible.</p>	<p><b>Collateral management system design</b></p> <p>Eurex Clearing developed a dedicated collateral management service that takes into account the collateral locations, acceptance of a broad range of eligible collateral, timely validation of margin requirements, collateral valuation and composition for the Eurex Clearing standard collateral pools across all relevant systems, transparency through intraday reports and monitoring functionalities, as well as highest protection through asset segregation and portability in line with regulatory requirements.</p> <p>Participants can choose to open (pledged) securities accounts either at CBF, CBL and SIX SIS. The securities accounts in the settlement systems of CBF (CASCADE), CBL (Creation) and SIX SIS are maintained on a participant's behalf with the securities pledged to Eurex Clearing. The collateral to cover the requirements of Eurex Clearing can be managed in CBF's collateral management system Xemac® for their own and segregated collateral of NCMs/RCs or in CBL's collateral management system CmaX®. Automated facilities of Xemac® allow for optimal use of collateral offering clients more efficient, real-time asset management. Collateral can be also managed in connection with the money market operations of the Deutsche Bundesbank, Euro GC Pooling® of Eurex Repo, and bilateral transactions among Xemac® customers.</p> <p>Similar features apply in using CBL's triparty collateral management service through the CmaX® system. CmaX® is a single platform centralizing all settlement/collateral management/ maintenance services under one umbrella, i.e., Triparty Repo Service for multicurrency repo transactions, Triparty Securities Lending Services, CCP Margining, Triparty Collateral Management Services for the collateralization (of e.g., bilateral cash loans, central bank discount borrowing), General Collateral (GC) Services for the management of electronic repo transactions combining the Eurex Clearing CCP services, as well as Pledge to Central Banks for the access to intraday or overnight liquidity, tender operations.</p> <p>In addition, the security collateral can be monitored and managed directly in the settlement system of the respective service provider, and also using functionalities of the Eurex @X-tract Clearing GUI. @X-tract is Eurex' front-end clearing application, which supports all clearing functions through its graphical user interface.</p>

	<p><b>Operational flexibility</b></p> <p>Eurex Clearing employs a dedicated collateral management infrastructure. To achieve smooth operations Eurex Clearing implemented in accordance with the overall DBG Business Continuity Management framework an own Business Continuity Management Policy Appendix. This framework also applies to the systems used for collateral management. It is designed to minimize the impact of unavailability of the key resources, i.e., information (electronic or other), IT systems and networks, workspace and facilities, staff, suppliers and other external dependencies.</p>
Key Conclusions for Principle 5	<p>Eurex Clearing established a list of eligible collateral, which have to meet Eurex Clearing's stringent eligibility criteria, including high credit quality, minimum market risk, high liquidity, immediate accessibility and valuation. Furthermore, Eurex Clearing has comprehensive risk management procedures to reduce the impact of procyclicality and wrong way risk. It evaluates its collateral daily on an adequate basis by additionally marking-to-model when marking-to-market is not possible due to a lack of current market price data. Eurex Clearing developed a dedicated collateral management service that takes into account the collateral locations, and based on relying on designated settlement and central depository systems.</p>
Assessment of Principle 5	Observed
Recommendations and Comments	

### Principle 6. Margin

A CCP should cover its exposure to its participants for all products through an effective margin system that is risk-based and regularly reviewed.

Key Consideration 1	<p><b>Description of margin methodology</b></p> <p>Eurex Clearing offers two different margin methodologies: Risk Based Margining (RBM) and Portfolio Based Margining (PRISMA). RBM is based on product-specific Margin Classes. Margin offsets between Margin Classes are granted if the correlations between different Margin Classes are stable and have a minimum value of 50 per cent. In the course of the next years it is planned to replace RBM with Eurex Clearing's new portfolio-based risk management methodology PRISMA. Eurex Clearing</p>
<p>A CCP should have a margin system that establishes margin levels commensurate with the risks and particular attributes of each product, portfolio, and market it serves.</p>	

	<p>PRISMA is being introduced in a stepwise approach. During 2015, RBM and PRISMA will continue to run in parallel, allowing members to migrate to the new risk method at their own pace. The main product group's equity derivatives, equity index derivatives and fixed income derivatives including over-the-counter (OTC) Interest Rate Swaps (IRS) are already available in PRISMA. RBM and PRISMA are further discussed below.</p> <p>The margin requirements of each clearing member are calculated intraday on a near to real-time basis. If the potential future price risks of a clearing member increases above the amount of collateral that is provided then Eurex Clearing issues an intraday margin call towards that clearing member that has to be covered within one hour. The calculation of the future risk exposure assumes worst case price changes within the assumed liquidation period on a given confidence level.</p> <p>Further to the forward looking component also the backward looking component (current exposure) is measured. This includes Variation Margin which applies to future styled derivatives and Interest Rate Swaps (IRS). Variation Margin can be covered by eligible collateral intraday and is settled in cash in the product currency end of day. Eurex Clearing calculates the margin requirement for all counterparties in real time. Whenever a margin shortfall is detected, which exceeds the granted intraday margin call limits, a margin call will be initiated. Once the respective member is informed about its shortfall, it has thirty minutes to reduce the exposure or provide additional collateral. If the counterparty is still under-collateralized after these thirty minutes the required amount will be debited to its central bank account. Premium Margin and current Liquidating Margin reflects the value of traditional options and spot market products as well as repos respectively. Premium Margin and current Liquidating Margin can be covered by</p> <p>eligible margin collateral. If a clearing member holds a position that results in a Premium Margin or current Liquidating Margin Credit (e.g., long option positions) this credit can be used to offset margin requirements of other positions but is not paid out otherwise.</p> <p>The margin methodology is designed to avoid potential procyclical effects. RBM uses minimum margin parameters to ensure the stability. PRISMA uses scenarios that ensure prudent forward looking properties and stability of the model. The model effectively captures substantial history through the economic cycle. Eurex Clearing introduces a stabilizing component in the model by including stress periods into scenarios and using volatility floors. To ensure that margins do not</p>
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	<p>decrease, when recent observed market volatility decreases, margin calculations consider scenarios from the most stressful times in the past and also volatilities used in the model are subject to volatility floors i.e., minimum values that are taken, even if current market volatility is lower.</p> <p>Eurex Clearing ensures that clearing members are able to properly manage and contain the risks associated with their cleared business: Firstly, by providing clearing members with sufficient information regarding the CCP's risk management (Please refer to the website: <a href="http://www.eurexclearing.com/clearing-en/risk-management/">http://www.eurexclearing.com/clearing-en/risk-management/</a>).</p> <p>Furthermore, the margin requirements help clearing members to properly manage and contain the risks associated with their cleared business. The provision of collateral is intended to ensure that all financial commitments related to the open positions of a clearing member or its clients can be offset within a very short period of time.</p> <p>Moreover, tools such as the Eurex MarginCalculator are publicly available and designed to help members to calculate and simulate their Eurex Clearing margin requirements.</p>
	<p><b>Credit exposures</b></p> <p>As outlined above, Eurex Clearing currently applies two margin methodologies, Risk Based Margining (RBM) and Portfolio Based Margining (PRISMA).</p> <p><i>RBM</i></p> <p>When determining the margin requirement with RBM, the exposure is calculated by margin parameters that measure price fluctuations over time. Price fluctuations are measured by the return volatility of the underlying closing prices for equity or equity-like products and by changes in yields for fixed income instruments. All other instruments, such as dividend futures, commodity derivatives, etc., are also based on the return volatility of the price of the underlying instruments. For options, vega risk is included into the risk calculation via respective shocks to the implied volatility conditional on the underlying returns as well as conditional on the monies and time to maturity of the options. The risk resulting from low or illiquid products is considered by the application of a liquidity factor. Eurex Clearing reviews the liquidity of products on a regular basis.</p>

	<p>Additionally, Eurex Clearing considers risk reducing effects by its concept of margin classes and margin groups. Derivative contracts based on the same underlying instrument are grouped together into so-called "margin classes". All futures and options with the same underlying security are put together in the same margin class. Risks from futures and options within the same margin class are offset against each other.</p> <p>Furthermore, two or more margin classes whose underlying instruments exhibit a stable and high correlation (minimum 50 per cent) can be combined in a margin group. Within a given margin group, cross margining is again possible, i.e., the offsetting of equal but opposite risks.</p> <p><i>PRISMA</i></p> <p>PRISMA model combines risks across all markets cleared by Eurex Clearing. Cleared products that share similar risk characteristics will be assigned to so-called liquidation groups, which result in more accurate risk calculations. Eurex Clearing has introduced the concept of liquidation groups since Clearing Members' portfolios typically feature heterogeneous structures, sizes and/or complexities. Given the complexity, it is assumed to be suboptimal to liquidate an entire member portfolio in one single transaction.</p> <p>These groups can be dealt with efficiently and quickly, simplifying the offsetting of risk in a Clearing Member default situation. Liquidation groups, however, can be hedged by Eurex Clearing, priced by clearing members and be auctioned within a reasonable period of time. The composition of liquidation groups is reviewed on a regular basis and can be adjusted due to market requirements. Eurex Clearing decides on the composition of liquidation groups after a consultation with its Clearing Members. General principles are:</p> <ul style="list-style-type: none"> <li>• Liquidation groups are pre-defined (they exist irrespective of a clearing member's default).</li> <li>• Portfolio risk margin offsets are only granted within these pre-defined liquidation groups.</li> <li>• Each liquidation group has a fixed holding period that reflects the time estimated to analyze, hedge and auction the respective products.</li> </ul> <p>As the Initial Margin is a forward-looking, it quantifies an estimate of future potential losses over the holding period of all clearing members'</p>
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	<p>liquidation groups at a pre-defined and appropriate confidence level. Initial Margin is calculated by taking into account potential correlation and netting effects for positions within a liquidation group. Initial margin figures for different liquidation groups and Clearing Member's position accounts are then aggregated to a single margin call. The Initial Margin consists of two main subcomponents:</p> <ul style="list-style-type: none"> <li>• The market risk component covers potential losses from market movements during the liquidation period. A risk factor based simulation approach to calculate the VaR of the market risk component is chosen.</li> <li>• The liquidity risk adjustment covers potential losses from realizing bid ask spreads and adverse price movements, connected in particular with the liquidation of large positions.</li> </ul> <p>The market risk component further includes a correlation break adjustment to account for sub-period variations in correlations.</p>
	<p><b>Operational components</b></p> <p>Independent from different time zones from which participants may operate, Eurex Clearing has deadlines in place until when margin collections and payments have to be fulfilled (Chapter I, Part 1, Number 3.3 of the 2.1.1 Clearing Conditions). All participants must be reachable during the Eurex Clearing business hours independent of their location to ensure adequate management and fulfillment of payments within the given deadlines.</p> <p>Furthermore, each Clearing Member must hold a central bank account in Clearing Currency, with the Bundesbank for EUR payments and the Swiss National Bank for CHF payments. Eurex Clearing has the power of attorney for both cash accounts and has the right to debit the respective account after informing the participant whenever margin collections and payments are necessary. For other currencies, payments are done via commercial bank accounts. For participants, trading products in non clearing currencies an account in the respective currency is obligatory to ensure the P/L payments.</p>
<p>Key Consideration 2</p> <p>A CCP should have a reliable source of timely price data for its margin system. A CCP</p>	<p><b>Sources of price data</b></p> <p>Eurex Clearing has direct access and only uses reliable sources like information provided by regulated markets to obtain timely price data. Margin requirements Futures are priced mark-to-market. To price options</p>

<p>should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.</p>	<p>mark-to market is the preferred solution. However, when market prices are not available, theoretical prices based on Black/Scholes and Cox/Rubinstein models are used. For equities, Eurex Clearing refers also to prices provided by Wertpapier Service System (WSS) (Xetra, FWB, SIX).</p> <p><b>Estimation of prices</b></p> <p>Theoretical prices and models to derive prices are more relevant for cleared OTC products such as OTC interest rate swaps (IRS), repurchase agreements, and securities lending transactions. For the latter theoretical bond prices are used. For Bonds, Eurex Clearing generally refers to prices provided by an internal data source or from third party market sources, e.g., Bloomberg, Reuters. Eurex Clearing calculates theoretical prices for all bonds in the Collateral Database. Those calculated prices will be used for valuation in the Eurex Clearing systems where no current market prices are available. If a theoretical price is chosen, a higher haircut is applied in order to account for any inaccuracy that is embedded in the calculation methodology. For OTC derivative contracts an own model is in place to determine theoretical prices based on discounting and forward curves for interest rate swaps.</p> <p>Models and the Risk Management Framework of Eurex Clearing are subject to yearly independent validations.</p>
<p>Key consideration 3</p> <p>A CCP should adopt initial margin models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants in the interval between the last margin collection and the close out of positions following a participant default. Initial margin should meet an established single-tailed confidence level of at least 99 percent with respect to the estimated distribution of future exposure. For a CCP that calculates margin at the</p>	<p><b>Initial margin model</b></p> <p>The amount of collateral which must be deposited is calculated on the basis of the total risk exposure of all accounts of the clearing member. The total risk exposure is determined from the price risk of the derivative, repo, securities lending and cash positions held in the accounts. The risk reducing effect of combinations of positions is taken into consideration in this calculation, in which equal but opposite risks within each account are offset against each other.</p> <p>Eurex Clearing defines “all but extreme market circumstances” such that for a given confidence level potential loss in case of a member default will not exceed margin requirements, except for OTC derivatives for which a confidence level of 99.5 percent is applied. This confidence level is set to 99 percent for listed derivatives and to 99.5 percent for OTC derivatives. The potential loss will be covered by collateral provided for margin requirements from the defaulting clearing member.</p> <p>Eurex Clearing risk model is not only focus on margining but also consider other additional protective mechanisms like admission criteria,</p>



<p>portfolio level, this requirement applies to each portfolio's distribution of future exposure. For a CCP that calculates margin at more-granular levels, such as at the subportfolio level or by product, the requirement must be met for the corresponding distributions of future exposure. The model should (a) use a conservative estimate of the time horizons for the effective hedging or close out of the particular types of products cleared by the CCP (including in stressed market conditions), (b) have an appropriate method for measuring credit exposure that accounts for relevant product risk factors and portfolio effects across products, and (c) to the extent practicable and prudent, limit the need for destabilising, procyclical changes.</p>	<p>intraday margining, model validation, stress testing, clearing and default management. Furthermore, risk must be measurable and chargeable within appropriate timeframes to prevent losses accumulating. The guidelines of Eurex Clearing's margining methodology are:</p> <ul style="list-style-type: none"> <li>• The risk model must be in line with the Risk Management Framework, including appropriate inclusion into the lines of defense.</li> <li>• The first priority in a risk model is the financial integrity and security of the clearing house, granting offsets or adherences to market practice are important, but secondary considerations.</li> <li>• The model must be transparent, comprehensible and replicable given the respective input parameters.</li> <li>• The methodology must be technically and operationally feasible.</li> <li>• The calculation results need to be considerably stable in order to avoid potential pro-cyclical effects.</li> </ul> <p>In case any of the aforementioned conditions fail, the launch of the product in question will not be proceeded with.</p> <p>The liquidation period is the assumed maximum time frame that is needed for the execution of the default management process. The assumption is product dependent and must be covered by the margin requirement calculated. Only if a product with a shorter liquidation period is cross margined with a product with a longer liquidation period, the longer liquidation period of the two products is assumed for both.</p>
	<p><b>Close-out and sample periods</b></p> <p>The holding period is the number of days Eurex Clearing needs to liquidate respective liquidation groups, which is in general between 2 and 5 days. The number of days has been established by the guidance of two sources:</p> <ol style="list-style-type: none"> <li>1. The first source is an internal estimation of the overall CCP Risk Management Department. Every single step of the default management process has been analyzed with respect to the needed time.</li> </ol>

	<p>i. After a default is legally confirmed (end of grace period / automatic trigger), the positions are transferred to a Eurex Clearing account.</p> <p>ii. Furthermore, preliminary measures are applied by DMP team and supporting interfaces (e.g., sensitivity calculations or identifying portfolio concentrations). Besides it may be necessary to convene a DMC for assisting Eurex Clearing in developing a hedging strategy.</p> <p>iii. Eurex Clearing might execute hedges depending on changing market conditions.</p> <p>iv. Independent sale can be started after hedging and should be finished within one day.</p> <p>v. The auction starts after hedging and should be finished within one day (equity liquidation group) respectively two days (fixed income liquidation group), including pricing and is anticipated to take one day (equity liquidation group) respectively two days (fixed income liquidation group) at maximum.</p> <p>An asset class resolution is triggered if the auction fails and takes at maximum one day.</p> <p>2. The second estimation source is taken directly from the market with the involvement of the Risk Committee, and aligned with regulatory requirements. As the proposal has already been validated by the Risk Committee the chosen holding periods are reasonable.</p> <p>Eurex Clearing conducted several default simulations in which the time frame for the Default Management process was challenged and has proven to be sufficient. In addition, the historic clearing member defaults that have been managed by Eurex Clearing proved that the liquidation period assumed is realistic.</p> <p>The margin parameter is set equal to the maximum value resulting from the exponentially weighted moving average (EWMA) volatilities or the un-weighted volatilities multiplied by a risk factor for fixed income derivatives and cash equity products based on 30 days, 250 days, or full observation period since inception of the product (equally weighted).</p> <p>The PRISMA methodology uses a risk-factor-based simulation approach to calculate the VaR for the market risk component. For this approach,</p>
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	<p>instrument price scenarios are attained by simulating risk factor scenarios that are subsequently used for theoretical pricing. Two sets of risk factor scenarios are simulated:</p> <ul style="list-style-type: none"> <li>• Filtered historical scenarios are simulated based on historically observed risk factor returns that are normalized and subsequently adapted to the most recent volatility regime.</li> <li>• Stress period scenarios are simulated by taking historical returns from periods of significant financial distress.</li> </ul>
	<p><b>Procyclicality and specific wrong-way risk</b></p> <p>In general Eurex Clearing's margin calculations are designed to be considerably stable in order to avoid potential procyclical effects. For RBM, an appropriate countercyclical component is ensured through setting a minimum margin parameter. The minimum margin parameters are based on long-term histories of respective products or benchmark instruments and are complemented by expert judgment. It is reviewed at least annually within the annual validation of the risk model. Currently the minimum margin parameter is calibrated based on the estimated volatility over a 10 year historical look back period and ensures that the margin requirement will not fall below the floor established by the minimum parameter. The minimum margin parameters are set conservatively high in order to cover the price movements in periods of low volatility. This involves a qualitative judgment that ensures that the minimum margin parameters support a countercyclical behavior of the margin requirement which may be induced by solely relying on the quantitative analysis of historical data.</p> <p>Eurex Clearings margin methodology PRISMA effectively captures substantial history of risk factor moves through the economic cycle. At least volatility floors are used in volatility-filtered scenarios, which are calibrated to reflect long term volatilities including periods of stress. Additionally, a weighted stress period value at risk, covering substantial periods of stress through the economic cycle, floors the initial margin.</p> <p>The stressed period value at risk (SVaR) is introduced as a non-procyclical component, which prevents the market risk component from subsiding too far in calmer market regimes and thereby enhances overall margin stability. It will be calculated from risk factor scenarios stemming from periods of significant financial distress. The number of stress period scenarios used is at least 25 percent of the total sample used to calculate</p>

	<p>the market risk component. The scenario prices within the stress period VaR are based on n-day returns without the application of the volatility filtering technique. Since VaR is drawn individually for the filtered historical as well as the stress period component, a downscaling factor is calibrated for SVaR to ensure a meaningful, comparable level of the two components while preserving the flooring property of the SVaR. This methodology is described in the Prisma Risk Model Description.</p> <p>Wrong way risks may arise if there is an unfavorable interrelatedness between clearing member's credit risk (CM as issuer), its portfolio value (portfolio) and/or the value of its collateral pool (collateral).</p> <p>Wrong-way-risks are addressed by the exclusion or the restricted usage of certain issuances for a specific member to post as margin collateral (CM as issuer vs. collateral) or to use it to securitize SFTs (CM as issuer vs. portfolio). Monitoring or even preventing wrong way risk constellations in a clearing member's portfolio and especially in its collateral pool is very important since Eurex Clearing does not consider such interdependencies in its margin methodology framework. It is assumed that the recovery rate of collateral is not related to the credit quality of the clearing member itself.</p> <p>As mentioned above, wrong way risk relations may also arise between a clearing member's trading portfolio (Portfolio) and the clearing member (CM as issuer) itself. However, it is hardly feasible to prevent this type of wrong way risk which is also not reasonable, as customers of a clearing member should be allowed to trade instruments issued or closely linked to their clearing member. Nevertheless, these positions are 100 percent collateralized in form of supplementary margin.</p> <p>Whenever it is possible to prevent certain wrong way risk constellations, such as the collateralization of SFTs with own issues and close links, it is prohibited. In all other cases, for example if instruments issued by entities allocated to the same sector and / or located in the same country shall be used for such purposes, thresholds are defined.</p>
<p>Key consideration 4</p> <p>A CCP should mark participant positions to market and collect variation margin at least daily to limit the build-up of current exposures. A CCP should have the authority</p>	<p>Eurex Clearing has the authority and capability to request and to pay-out variation margin as well as to conduct intraday margin calls. First of all it is important to distinguish between the purpose of variation margin payments and margin calls. Using variation margin, profits and losses that arise due to the price fluctuations of open positions are offset daily. When options positions are mark-to-market, calculation of the appropriate credits and debits depends on how the value of a call or put position changed during the trading day. The mark-to-market procedure ensures</p>

<p>and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.</p>	<p>that each position is re-valued at the daily settlement price. The difference between today's and the previous day's settlement price is offset by daily compensating payments. Therefore, the essential effect of marking positions to market is the "extraction" of potential liquidation profits or losses, so that on the last trading day only the difference between the daily settlement price of the previous day and the final settlement price of all open positions has to be calculated. In the case of options on futures, the final valuation is made at the final settlement price of either the expiration date of the option or the day on which it was exercised.</p> <p>Margin calls, however, are issued when during the continuous intraday monitoring of positions an under-collateralization is discovered. This can in general be caused by adverse market movements which translate into an increase of the margin requirement.</p> <p>Market movements are continuously monitored by Eurex Clearing's Risk Management Department which issues intraday margin calls or demands supplementary margin, if necessary. Eurex Clearing has sufficient operational capacities to make and complete intraday margin calls.</p>
<p>Key consideration 5</p> <p>In calculating margin requirements, a CCP may allow offsets or reductions in required margin across products that it clears or between products that it and another CCP clear, if the risk of one product is significantly and reliably correlated with the risk of the other product. Where two or more CCPs are authorised to offer cross-margining, they must have appropriate safeguards and harmonised overall risk-management systems.</p>	<p><b>Portfolio margining</b></p> <p>Eurex Clearing allows for offsets in its margining systems Risk Based Margining (RBM) and Portfolio Based Margining (PRISMA).</p> <p>Eurex Clearing considers risk reducing effects by its concept of margin classes and margin groups. Derivative contracts based on the same underlying instrument are grouped together into so-called "margin classes". For example, all DAX® options, together with the DAX futures, comprise the DAX margin class. Similarly, there is a separate class for every other type of equity index and interest rate future. In the case of equity options, all contracts with the same underlying security are grouped together. Unrealized profits and losses on futures contracts within the same margin class are offset against each other.</p> <p>Furthermore two or more margin classes whose underlying instruments are (positively) correlated with respect to their risk structure are combined in "margin group." Within a given margin group, cross margining is again possible, i.e., the offsetting of equal but opposite risks. An overview about all margin groups currently set up can be found in the document</p>

	<p>“CorrelationList_MarginGroups” that is published on Eurex Clearing’s website.</p> <p>The correlation is also validated through stress periods. Correlations can massively break down during periods of severe market stress with the result that cross-product diversification and macro-hedging strategies can fail. The narrow definition of margin groups in which margin offsets are allowed further ensures that Eurex Clearing is not exposed to any additional risk by granting margin reductions (only instruments whose underlying instruments are correlated with respect to their risk structure are assigned to one margin group).</p> <p>As regard PRISMA, Eurex Clearing only grants margin offsets within predefined groups of products. This is firstly to avoid any risk of margin shortfalls during the liquidation procedure due to previously granted offsets on portfolio level and secondly to ensure that cross-product offsets are not out-weighted by additional liquidity margins. With the introduction of Eurex Clearing PRISMA, the default management process is on (sub-) portfolio level rather than on position level.</p> <p>These sub-portfolios are called “liquidation groups” and comprise products that are anticipated to be auctioned together in case of a clearing member default. Portfolio margining is only possible for products which are assigned to the same liquidation group. However, assignment of certain products to the same liquidation group alone does not suffice to grant offsets between these products. Only restricted offsets are granted within one liquidation group, whereas ‘restriction’ is achieved by the inclusion of model adjustments especially correlation break adjustments. Through this procedure PRISMA, ensures that Eurex Clearing is not exposed to any potential risk from the margin reduction by incorporating into the margining only the offsets which are consistent with the Default Management Process. The set of liquidation groups is equally defined for all members on CCP level and is therefore unrelated to the size, the trading strategy or the positions of a particular clearing member to be liquidated. Liquidation groups are fixed over time unless the composition is adjusted in the framework of regular reviews. The definition of liquidation groups is based on the following considerations:</p> <ul style="list-style-type: none"> <li>• Standard liquidation process: Products that follow the standard liquidation process with an auction as central element can be assigned to the same liquidation group. Products that utilize a different liquidation process cannot be assigned to one liquidation group.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Proximity of products: Products within one liquidation group allow for objective proximity, Equities or equity indices, as an example. Proximate products own a set of common risk factors. This criterion represents market standard and business understanding including the consideration of required clearing licenses and settlement infrastructures. The correlations of common risk factors implicitly link the products within one liquidation group.</li> <li>• Hedge-ability: Dependency to other products in the liquidation group can be quantifiably proven and is stable. The hedge-ability is based on quantitative metrics. Products are assigned to the same liquidation group only if they can be hedged together.</li> <li>• Price-ability: The liquidation group can be priced by clearing members in a limited period of time. The price-ability is verified during the regular default simulations. Furthermore, it is subject to the auction format and hedging strategy.</li> </ul> <p>The liquidation group composition is reviewed internally and in default simulations on a regular basis. However, to ensure the integrity of the clearing house, the final decision regarding the definition of liquidation groups remains with the Executive Board</p> <p>In addition, Eurex Clearing monitors the cases where portfolio margin requirements result in an offset of 80 per cent or more compared to the gross margin requirement on product level. Such findings serve as input to the risk reporting and management process.</p>
	<p><b>Cross-margining</b></p> <p>Eurex Clearing does not have cross margin arrangements with other CCPs.</p> <p><b>Robustness of methodologies</b></p> <p>The margin procedure is subject to daily stress tests. Also back tests are conducted daily to ensure that the margin requirement meets the applicable confidence level (99 per cent for listed and 99.5 per cent for OTC products).</p>

<p>Key consideration 6</p> <p>A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily backtesting – and at least monthly, and more-frequent where appropriate, sensitivity analysis. A CCP should regularly conduct an assessment of the theoretical and empirical properties of its margin model for all products it clears. In conducting sensitivity analysis of the model’s coverage, a CCP should take into account a wide range of parameters and assumptions that reflect possible market conditions, including the most-volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices.</p>	<p><b>Backtesting and sensitivity analysis</b></p> <p>Eurex Clearing’s Model Validation Framework is designed for the validation of the overall margin figure based on back testing analyses and the validation and calibration of separate subcomponents of the model. The model validation framework comprises two main elements:</p> <ul style="list-style-type: none"> <li>• Validation of the adequacy of the overall margin methodology on a portfolio level by back testing several market risk figures for clearing member portfolios on different levels of the portfolio hierarchy.</li> <li>• Validation of the adequacy of the methods and parameter configurations used for the derivation of the initial margin figure and its subcomponents.</li> </ul> <p>The validation of the overall initial margin figure is conducted based on back testing techniques for various risk figures.</p> <p>Back testing is conducted on a daily basis. Results are reported to the Eurex Clearing management monthly or ad-hoc, if deemed necessary.</p>
	<p><b>Margin model performance</b></p> <p>Eurex Clearing takes into account a long data history for its back testing program to ensure that the observation window used is sufficient to mitigate any detrimental effect on the statistical significance.</p> <p>If the validation would reveal a severe deficit and a major adjustment is required, the adjusted model needs to go through the normal approval process and - if applicable – needs to be approved by the relevant external authorities, including Eurex Clearing Risk Committee, the Competent National Authority (BaFin) as well as the College of the European Securities and Markets Authority (ESMA) if necessary) before the changes are implemented. Minor changes such as parameter updates do only need to be approved by the CRO of Eurex Clearing. The back testing results are made available to clearing members without breaching confidentiality.</p> <p>For the regular validation, sensitivity simulations are performed for all parameters in scope and for all clearing member portfolios, resulting in sensitivity decomposition across all member portfolios.</p>



	<p>Sensitivities are analyzed for single model parameters or combinations of them. This is performed under various market conditions and for a number of confidence levels.</p>
<p>Key consideration 7</p> <p>A CCP should regularly review and validate its margin system.</p>	<p>Eurex Clearing regularly reviews and validates its risk models. Therefore, a Model Validation Framework which comprises a documentation of all testing programs, processes and report structures is in place. New risk models are validated by an independent party, such as international consultant and accounting firms, prior to their launch. The processes clearly define the roles and responsibilities, metrics, thresholds and actions. For the ongoing revision and improvement of the model Eurex Clearing regularly seeks the advice of the Risk Committee. Any major changes and adjustments will be presented to the Risk Committee and approved by the Executive Board of Eurex Clearing.</p> <p>In general, each risk model is validated on an ongoing basis. Therefore, during the model development or change process the validation metrics is defined for the whole model and its parameters.</p>
<p>Key Conclusions for Principle 6</p>	<p>Eurex Clearing's margining process is a multifaceted and time critical process that takes into account a variety of factors in order to accurately calculate margins. Its margin system is established by taking into account the features of each product, portfolio, and market it serves. Its margin calculation is based on reliable source of timely price data. Eurex Clearing has the power and operational capacity to make intraday margin calls and payments to participants. Eurex Clearing has initial margin, and variation margining models and parameters that are risk-based and generate margin requirements sufficient to cover its potential future exposure to participants. It regularly reviews and validates the adequacy of the overall margin methodology on a portfolio level by back testing several market risk figures for clearing member portfolios on different levels of the portfolio hierarchy. New risk models are validated by an independent party, such as international consulting and accounting firms, prior to their launch. The processes clearly define the roles and responsibilities, metrics, thresholds and actions. For the ongoing revision and improvement of the model, Eurex Clearing regularly seeks the advice of its Risk Committee, which is composed among other clearing members and authorities' representative and to be approved by the Executive Board of Eurex Clearing.</p>
<p>Assessment of Principle 6</p>	<p>Observed.</p>

Recommendations and Comments	
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### Principle 7. Liquidity Risk

An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate liquidity obligation for the FMI in extreme but plausible market conditions.

#### Key Consideration 1

An FMI should have a robust framework to manage its liquidity risks from its participants, settlement banks, nostro agents, custodian banks, liquidity providers, and other entities.

The Liquidity Risk Management Framework is designed to ensure that Eurex Clearing is able to effect payment and settlement obligations in all relevant currencies as they fall due. This framework addresses:

- potential sources of liquidity risk;
- measures for mitigation;
- the management and monitoring of Eurex Clearing’s liquid financial resources;
- processes in the event of liquidity shortfalls; and
- liquidity needs under a wide range of potential stress scenarios.

As a CCP, Eurex Clearing monitors and manages its liquidity needs stemming from its function and related pre-financing activities conducted to ensure settlement efficiency (business-as-usual). Furthermore, liquidity risk stems from a potential default of one or multiple clearing members .For both sources of liquidity risk, Eurex Clearing defined two triggers exceeding the minimum liquidity requirement by a mark-up of 40 percent (Early warning trigger) and 10 percent (Recovery trigger) in order to be able to take mitigating actions prior to reaching a potential liquidity shortage.

For the daily monitoring of the liquidity requirement caused by a simultaneous default of the two largest clearing members (liquidity Cover-2 ), a Management Information System (MIS) has been established. Available liquidity sources are compared to required financing needs on a daily basis.

	<p>To manage concentration risk, the provision of cash margins and credit facilities by individual clearing members Eurex Clearing Treasury Department quarterly reports to the Executive Board. In accordance with Article 44 of EMIR, a clearing member, parent undertaking, or subsidiary of that clearing member shall not provide more than 25 percent of the credit lines. If an individual clearing member provides more than 25 percent of the required liquidity, only 25 percent shall be taken into account as a maximum for the concentration analysis. With regards to concentration by liquidity provider, at any time, at least four clearing members provided Eurex Clearing with 60 percent of liquidity. If less than four members provide 60 percent or more of the required liquidity, Group Treasury shall consult with the Executive Board member of Eurex Clearing responsible for Treasury to determine mitigating actions.</p>
<p>Key Consideration 2</p> <p>An FMI should have effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis, including its use of intraday liquidity.</p>	<p>Within the Liquidity Risk Management Framework, settlement and funding flows are analyzed in all relevant currencies on an ongoing and timely basis.</p> <p>Operational online tools, e.g., online banking tools, SWIFT confirmations, Cascade and Creation settlement are part of the process of monitoring settlement and funding flows throughout the business day.</p> <p>Furthermore, as described above, on a daily basis the liquidity required to cover the simultaneous default of the two largest clearing members (“Liquidity Cover-2” stress test) is monitored to ensure the availability of sufficient liquidity sources.</p>
<p>Key Consideration 3</p> <p>A payment system or SSS, including one employing a DNS mechanism, should maintain sufficient liquid resources in all relevant currencies to effect same-day settlement, and where appropriate intraday or multiday settlement, of payment obligations with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be</p>	<p>Not applicable.</p>

<p>limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.</p>	
<p>Key Consideration 4</p> <p>A CCP should maintain sufficient liquid resources in all relevant currencies to settle securities-related payments, make required variation margin payments, and meet other payment obligations on time with a high degree of confidence under a wide range of potential stress scenarios that should include, but not be limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation to the CCP in extreme but plausible market conditions. In addition, a CCP that is involved in activities with a more-complex risk profile or that is systemically important in multiple jurisdictions should consider maintaining additional liquidity resources sufficient to cover a wider range of potential stress scenarios that should include, but not be limited to, the default of the two participants and their affiliates that would generate the largest aggregate payment obligation</p>	<p><b>Sufficient liquid resources</b></p> <p>Eurex Clearing, within its liquidity risk management framework, applies stress tests focusing on liquidity risks stemming from its CCP activities (liquidity business-as-usual stress test” as well as “Liquidity Cover-2” stress tests from a potential default of customers (liquidity Cover-2-stress tests).</p> <ul style="list-style-type: none"> <li>• Liquidity business-as-usual stress tests: for the business-as-usual stress tests, the Liquidity Risk Management Framework governs the performance of three defined liquidity stress scenarios.</li> <li>• Liquidity Cover-2” stress tests: for the potential liquidity requirement caused by the default of a clearing member, the Liquidity Risk Management Framework describes the performance of a Management Information System. The aggregated payment obligation caused by the simultaneous default of the two largest clearing members is being compared to the available qualifying liquidity sources.</li> </ul> <p>The Liquidity Risk Management Framework covers all currencies used by Eurex Clearing. However, clearing in Euro is the most important one and accounts for 87 percent of total liquidity clearing, and the rest is mainly in Swiss Franc 8 percent, US Dollar 4 percent and British Pound 1 percent. Liquidity risks in other currencies can be considered immaterial due to lower settlement volumes and since collateral is invested in the currency in which collateral was posted by the clearing members. However, if the volumes of the currencies settled by Eurex Clearing will gain significance, Eurex Clearing may convert available liquidity into a required currency through foreign exchange transactions. Eurex Clearing maintains ISDA Master Agreements with a set of highly reliable international credit institutions. In case Eurex Clearing is short in a currency, it will immediately enter into FX transactions (either FX Swaps or outright FX), to ensure same day settlement. The currencies settled by Eurex Clearing are major trading currencies with high market liquidity.</p>

<p>to the CCP in extreme but plausible market conditions.</p>	<p><b>Risk profile and systemic importance in multiple jurisdictions</b></p> <p>Eurex Clearing is not clearing products with complex risk profiles, but is systemically important in more than one jurisdiction. In Germany, Eurex Clearing is under supervision by BaFin. And additionally Eurex Clearing has been recognized by both, the Swiss National Bank and the Swiss banking Supervisory authority FINMA as being systemically important to the Swiss market. Both authorities therefore have put Eurex Clearing under their supervision.</p>
<p>Key Consideration 5</p> <p>For the purpose of meeting its minimum liquid resource requirement, an FMI's qualifying liquid resources in each currency include cash at the central bank of issue and at creditworthy commercial banks, committed lines of credit, committed foreign exchange swaps, and committed repos, as well as highly marketable collateral held in custody and investments that are readily available and convertible into cash with prearranged and highly reliable funding arrangements, even in extreme but plausible market conditions. If an FMI has access to routine credit at the central bank of issue, the FMI may count such access as part of the minimum requirement to the extent it has collateral that is eligible for pledging to (or for conducting other appropriate forms of transactions with) the relevant central bank. All such</p>	<p><b>Size and composition of qualifying liquid resources</b></p> <p>Eurex Clearing has several sources of qualifying liquid resources available, which are composed of (i) cash deposited at a central bank of issue; (ii) cash deposited at authorized credit institutions, (iii) committed lines of credit and (iv) highly marketable collateral received in reverse repo transactions.</p>
	<p><b>Availability and coverage of qualifying liquid resources</b></p> <p><i>Highly marketable financial instruments:</i></p> <p>In order to safeguard its clearing activities and its clearing members, Eurex Clearing follows a restrictive investment policy for cash investments:</p> <ul style="list-style-type: none"> <li>• Cash investments take place on a short-term basis, mainly overnight.</li> <li>• Cash is placed on a secured basis to the extent possible.</li> <li>• Securities received in repo transactions are required to be issued or guaranteed by high-quality obligors and, in addition, to be central bank eligible.</li> <li>• Cash investments only take place at counterparts with high creditworthiness.</li> </ul> <p><i>Cash deposited at central banks and credit institutions:</i></p> <p>Eurex Clearing holds accounts with Deutsche Bundesbank and the Swiss National Bank. Access to the funds placed on these accounts is available at any time during the payment systems opening hours. In addition, Eurex Clearing maintains accounts with authorized credit institutions,</p>

<p>resources should be available when needed.</p>	<p>whose reliability and operational effectiveness is assessed on a regular basis.</p> <p><i>Committed lines of credit:</i></p> <p>Eurex Clearing has established committed credit facilities with several investment grade rated commercial banks. To ensure availability, credit facilities are drawn on a regular basis.</p>
<p>Key Consideration 6</p> <p>An FMI may supplement its qualifying liquid resources with other forms of liquid resources. If the FMI does so, then these liquid resources should be in the form of assets that are likely to be saleable or acceptable as collateral for lines of credit, swaps, or repos on an ad hoc basis following a default, even if this cannot be reliably prearranged or guaranteed in extreme market conditions. Even if an FMI does not have access to routine central bank credit, it should still take account of what collateral is typically accepted by the relevant central bank, as such assets may be more likely to be liquid in stressed circumstances. An FMI should not assume the availability of emergency central bank credit as a part of its liquidity plan.</p>	<p><b>Size and composition of supplemental liquid resources</b></p> <p><b>Availability of supplemental liquid resources</b></p> <p>Eurex Clearing's liquidity needs are sufficiently covered by the qualifying liquid resources, as described in this Principle. However, access to supplemental liquid resources in the form of uncommitted credit lines are regularly tested. Performance reliability has proven to be very high in the past</p>
<p>Key consideration 7</p> <p>An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum</p>	<p><b>Use of liquidity providers</b></p> <p>Eurex Clearing performs due diligences of its liquidity providers in the form of an internal credit assessment. The assessment is made annually and event-driven. Committed credit facilities are only maintained with authorized credit institutions that hold a minimum rating of 'C', which</p>

<p>required qualifying liquid resources, whether a participant of the FMI or an external party, has sufficient information to understand and to manage its associated liquidity risks, and that it has the capacity to perform as required under its commitment. Where relevant to assessing a liquidity provider's performance reliability with respect to a particular currency, a liquidity provider's potential access to credit from the central bank of issue may be taken into account. An FMI should regularly test its procedures for accessing its liquid resources at a liquidity provider.</p>	<p>corresponds to the S&amp;P rating category of 'A-', or that exceptionally have been approved by the Executive Board.</p> <p><b>Reliability of liquidity providers</b></p> <p>Eurex Clearing credit facilities are drawn on a regular basis to ensure their availability.</p> <p>Furthermore, financial institutions providing Eurex Clearing with credit facilities have access to the central bank of issue.</p>
<p>Key consideration 8</p> <p>An FMI with access to central bank accounts, payment services, or securities services should use these services, where practical, to enhance its management of liquidity risk.</p>	<p>Eurex Clearing has access to central bank facilities of the Eurosystem and uses central bank accounts for its relevant clearing currencies, EUR and CHF.</p> <p>Therefore, clearing business related payments and settlement, which correspond to more than 90 percent of total activities in Euro and Swiss, is being conducted in central bank money.</p> <p>Eurex Clearing has access to EUR intraday and overnight credit facilities provided by Deutsche Bundesbank. Furthermore, cash that is not being placed secured, through reverse repo transactions, can be deposited with central banks.</p> <p>For other currencies, e.g., US Dollar and British Pound, Eurex Clearing uses commercial payment bank services.</p>

<p><b>Key Consideration 9</b></p> <p>An FMI should determine the amount and regularly test the sufficiency of its liquid resources through rigorous stress testing. An FMI should have clear procedures to report the results of its stress tests to appropriate decision makers at the FMI and to use these results to evaluate the adequacy of and adjust its liquidity risk-management framework. In conducting stress testing, an FMI should consider a wide range of relevant scenarios. Scenarios should include relevant peak historic price volatilities, shifts in other market factors such as price determinants and yield curves, multiple defaults over various time horizons, simultaneous pressures in funding and asset markets, and a spectrum of forward-looking stress scenarios in a variety of extreme but plausible market conditions. Scenarios should also take into account the design and operation of the FMI, include all entities that might pose material liquidity risks to the FMI (such as settlement banks, nostro agents, custodian banks, liquidity providers, and linked FMIs), and where appropriate, cover a multiday period. In all cases, an FMI</p>	<p><b>Stress test program</b></p> <p>The goals of Eurex Clearing’s liquidity risk management are to be able to fulfill demands for repayment of clearing member’s cash margins and to pre-finance purchases resulting from CCP transactions up to predefined levels (liquidity business-as-usual” stress tests). Additionally the potential simultaneous default of the two largest clearing members needs to be covered at all times (liquidity Cover-2 stress test).</p> <p>To determine the amount and to test the sufficiency of CCP’s liquidity resources, stress test framework is designed and implemented by CCP Risk Management. Results of the stress tests are reported to the Executive Board quarterly.</p> <p><i>Liquidity business-as-usual stress tests:</i></p> <p>For the quarterly business-as-usual liquidity stress test, three different scenarios are taken into account:</p> <ul style="list-style-type: none"> <li>• Baseline scenario;</li> <li>• Market disruption scenario; and</li> <li>• Market disruption / idiosyncratic scenario.</li> </ul> <p><i>Liquidity cover-2 stress test:</i></p> <p>The daily “liquidity Cover-2” stress test distinguishes between two scenarios:</p> <ul style="list-style-type: none"> <li>• Regular market scenario; and</li> <li>• Market stress scenario.</li> </ul> <p>For all liquidity stress test scenarios, the liquidity requirement is compared to available liquidity resources.</p> <p>For the business-as-usual, liquidity stress tests are conducted quarterly. The liquidity requirement stemming from a potential simultaneous default of the two largest clearing members, Cover-2, is being conducted on a daily basis. Regular reporting takes place quarterly to the Executive Board. For all scenarios early warning triggers as well as recovery limits are in place in order to detect potential liquidity shortfalls. Eurex Clearing Liquidity Risk Management Policy together with Eurex Clearing’s recovery</p>
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<p>should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.</p>	<p>and resolution plan defines mitigating actions and reporting lines once a trigger has been reached.</p>
	<p><b>Stress test scenarios</b></p> <p>For the above described liquidity business-as-usual stress tests three scenarios are applied, a base scenario, market disruption scenario and market disruption / idiosyncratic scenario, which challenge the level of available liquidity. Within those stress tests, assumptions on worst liquidity outflows are based on historically experienced pre-financing needs for CCP settlement processes. As a sufficient range of historical data, the 5 years preceding the reference date of the stress tests are taken into account. The expected result should be that sufficient liquidity is available to cover all stressed scenarios. Different levels of stress are applied per scenario with varying assumptions for available liquidity, such as member cash deposits, own funds and credit facilities, as well as for liquidity needs stemming from pre-financing activities and margin repayments.</p> <p>Whereas the base scenario focuses on an average available cash level and worst experienced cash outflows, the market disruption scenario assumes a historically minimal cash level as well as certain credit facilities to be not available. The market disruption / idiosyncratic scenario increases the stress on cash margin repayments and pre-financing needs by adding a mark-up to the worst experienced values.</p> <p>For the above described liquidity cover-2 stress test, regular as well as stressed market conditions are applied. Depending on the scenario, different refinancing factors are relevant. Such refinancing factors determine to what degree securities that ECAG has purchased on behalf of the defaulting clearing member can be refinanced.</p> <p>The factors are validated and aligned with haircuts and stress tests respectively as well as assumptions with regards to availability of refinancing opportunities.</p>
	<p><b>Review and validation</b></p> <p>Eurex Clearing regularly reviews and validates its risk models. Therefore, a model validation framework which comprises a documentation of all</p>

	<p>testing programs, processes and report structures is in place. The processes clearly define the roles and responsibilities, metrics, thresholds and actions. Within the Liquidity Risk Management Framework, the stress test assumptions are defined and regularly, at least annually, reviewed by CCP Risk Management.</p> <p>Major adjustments of the model need to be approved by the Executive Board after consultation of the Risk Committee.</p>
<p>Key consideration 10</p> <p>An FMI should establish explicit rules and procedures that enable the FMI to effect same-day and, where appropriate, intraday and multiday settlement of payment obligations on time following any individual or combined default among its participants. These rules and procedures should address unforeseen and potentially uncovered liquidity shortfalls and should aim to avoid unwinding, revoking, or delaying the same-day settlement of payment obligations. These rules and procedures should also indicate the FMI's process to replenish any liquidity resources it may employ during a stress event, so that it can continue to operate in a safe and sound manner.</p>	<p><b>Same day settlement</b></p> <p>Following EMIR Article 44, Eurex Clearing is obliged to hold at any time sufficient liquidity to cover a simultaneous default of the two largest clearing members. A management information system has been established to monitor the liquidity requirement on a daily basis, applying regular as well as stressed market conditions. Liquidity requirement is compared to available liquidity. As part of the contingency funding plan, an early warning as well as recovery limit trigger is set and monitored on a daily basis (trigger foresee a mark-up on cover 2 liquidity requirement). Therefore, prior to reaching a contingency situation, options to strengthen the liquidity position have been identified to replenish financial resources.</p> <p>In case of clearing member defaults, Eurex Clearing will purchase securities to fulfill the defaulted clearing member's settlement obligation. Prior to liquidation of these securities, they can be pledged to Deutsche Bundesbank or repoed to commercial banks to generate liquidity. In case of a failure to pay event (temporarily delayed payment), Eurex Clearing will also purchase securities to fulfill the respective clearing members' settlement obligation. However, Eurex Clearing can only use the purchased security after closing of settlement or after a confirmation of the clearing member that it is unable to fulfill settlement.</p> <p>In general, securities purchased by Eurex Clearing may be pledged to Deutsche Bundesbank in order to obtain credit, if they are European Central Bank eligible. Other securities (e.g., equities) may be transferred to commercial banks in repo transactions to generate liquidity. Repo framework agreements are in place with a broad range of international commercial banks.</p> <p>Available funding arrangements in terms of committed lines of credit are established until further notice (not limited to a certain expiration date).</p>

	All credit facilities of Eurex Clearing are drawn on a regular basis to ensure their availability.
	<p><b>Replenishment of liquidity resources</b></p> <p>The procedures to replenish the liquid financial resources in the event of a liquidity shortfall are laid out in the respective policies. These include the contingency funding plan framework, thresholds to early detect potential liquidity shortfalls as well as measures to replenish resources and therefore strengthen Eurex Clearing’s liquidity position.</p>
Key Conclusions for Principle 7	Eurex Clearing has a robust framework to measure, monitor, and manage its liquidity risk. It is designed to cover all payment obligations at any time in order to avoid a potential liquidity shortfall. The framework was approved by the Board after consultation with the Risk Committee and is updated on a regular basis involving the Risk Committee and the Board. Eurex Clearing has effective operational and analytical tools to identify, measure, and monitor its settlement and funding flows on an ongoing and timely basis. Eurex Clearing has several sources of qualifying liquid resources available, such as central bank money for Euro and Swiss franc, cash deposited at authorized international credit institutions, and committed repurchase agreements, and committed lines of credit.
Assessment of Principle 7	Observed
Recommendations and comments	While Eurex Clearing liquidity risk management is robust in particular as regard Cover-2 stress tests, it should consider conducting business-as-usual liquidity stress tests more frequently than quarterly

### Principle 8. Settlement Finality

An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.

#### Key Consideration 1

An FMI’s rules and procedures should clearly define the point at which settlement is final.

#### Point of finality

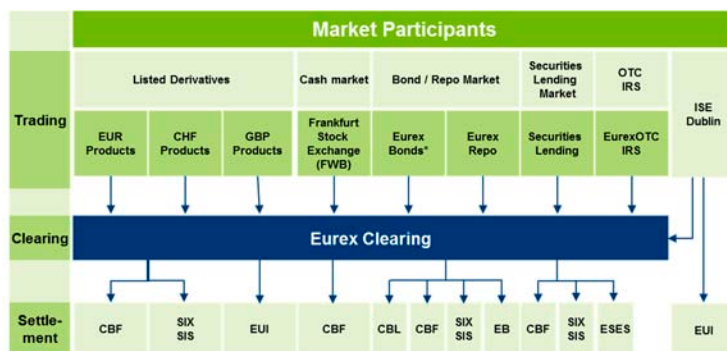
Settlement finality is a legally defined moment. The EU Settlement Finality Directive (98/26/EC) stipulates that finality is defined by irrevocability of instructions and by legal enforceability which occurs when transfer orders are “entered” into a system and requires such

	<p>system to define the moments of entry and irrevocability. Eurex Clearing is submitted to these provisions as a designated system. Being a CCP, settlement finality refers to finality of the clearing transaction.</p> <p>As indicated by Eurex Clearing, the Clearing Conditions do not stipulate a certain point in time at which instructions or obligations cannot be revoked by any participant or a point of entry of a clearing transaction in the clearing system.</p> <p><i>Irrevocability</i></p> <p>According to the authorities, under German law, an explicit determination of such points in time is not needed. Rather, the irrevocability of declarations of intent is regulated by general principles under German civil law. Pursuant to Section 130 of the German Civil Code (Bürgerliches Gesetzbuch), a declaration of intent becomes effective at the point in time when this declaration is received by the counterparty. However, it does not become effective if a revocation of the declaration of intent is received by the counterparty previously or at the same time (Section 130 para. 1 sentence 2 of the German Civil Code).</p> <p>This statutory rule applies to all civil law agreements and legal relationships. Under German Law and legal practice, it is not common to repeat or describe applicable law again in civil law agreements or rulebooks (i.e., General Terms and Conditions). Generally, only items are stipulated in civil law agreements or rulebooks which are not already defined by statutory law. Therefore, Eurex Clearing defines the "point of irrevocability" based on its rules in combination with applicable statutory law and understands statutory law as part of Eurex Clearing's rules.</p> <p>Based on these principles, Clearing Members are not entitled to revoke instructions unilaterally (notwithstanding system functionalities) once entered into the clearing system. These principles are supported by the restrictions listed in the Clearing Conditions, Chapter I part 1 1.2.2.</p> <p><i>Enforceability</i></p> <p>The points in time when transactions come into effect are defined:</p> <ul style="list-style-type: none"> <li>• at the moment of matching for traded transactions (open offer), following the relevant exchanges rules (Conditions for Trading at Eurex Deutschland and Eurex Zürich, section 2.3 Binding Nature of Transactions and 2.5 Execution of transaction; Conditions for</li> </ul>
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	<p>Transactions on the Frankfurter Wertpapierbörse, para2 Establishment of Transactions); and</p> <ul style="list-style-type: none"> <li>• At moment of novation for OTC derivatives, OTC securities or cash lending transactions or GC Pooling repo transactions executed on Eurex Repo at novation time, in Eurex Clearing conditions [in particular OTC transactions: under Chapter I Part 1 in connection with Chapter VIII Part 1; GC Pooling Repo transactions: under Chapter I Part 1 in connection with Chapter IV Part 3; Securities Lending Transactions: under Chapter I Part 1 in connection with Chapter IX Part 1] in general by making an OTC Novation Report available to the Clearing Members electronically.</li> </ul> <p>The authorities consider that such a definition of the "point of irrevocability" and "point of entry" is not necessary to benefit from the protection under the settlement finality directive and the German Insolvency Law for acknowledging the discharge of obligation between Eurex Clearing and its participants/clearing members or among clearing members.</p> <p>Under German Insolvency Law, instructions, transactions or discharge of obligations are not void only due to the fact that they were issued or established on the day of insolvency proceedings. While set-off is prohibited from the day of insolvency commencement, payment orders and transfers of securities orders introduced in systems are not hindered provided set-off is effected at the latest on the day of opening of the insolvency proceedings (Art. 96 (2)).</p> <p>The German lawmaker mentioned this specific background in the reasoning of the German Law that transposed the SFD into German Law (Deutscher Bundestag, Drucksache 14/1539, page 9).</p> <p>Eurex Clearing verifies the enforceability of each of its clearing models for each jurisdiction from which Clearing Members are admitted on the basis of comprehensive legal opinions from well reputed law firms in the relevant jurisdictions (these legal opinions were obtained in 2011 and 2012 and updated in 2014 and 2015. Most of the foreign law opinions were obtained in 2014 or 2015).</p>
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### Finality in the case of links

Eurex Clearing maintains links with a number of central securities depositories (CSD) as shown below.



CBF = Clearstream Banking Frankfurt; EB = Euroclear Bank; SIX SIS = SIX Securities Services;  
 CBL = Clearstream Banking Luxembourg; EUI = Euroclear UK & Ireland;  
 ESES = Euroclear Settlement for Euronext-zone Securities (currently Euroclear France, Euroclear Netherlands, Euroclear Belgium)

Eurex Clearing is responsible for the clearing of transactions and forwards transfer instructions (settlement instructions) to CSDs, also for its Clearing Members (based on irrevocable power of attorney) for the purpose of DVP settlement. The CCP issues instructions for DVP settlement, both for delivery and receipt. The settlement of transactions is further treated by the CSDs/SSSs which have contractual business relationships with Eurex Clearing. In the moment the CSD settled the transaction, Eurex Clearing will receive the confirmation. Once the CSD reports back settlement, Eurex Clearing considers the settlement of the instruction as final. Thereafter, Eurex Clearing sends a report / confirmation (SWIFT message) to its Clearing Members that the settlement is final. In case the instructions could not be settled by the CSD, finality of settlement is not reached and Eurex Clearing considers those transactions as still pending. Pending transactions will be forwarded for settlement on the next business day.

The Clearing Conditions enable Eurex Clearing to directly debit the relevant amounts to cash accounts or allocate the securities by way of title transfer or pledge to the securities accounts. In order to do so, Clearing Members are required to provide accounts for cash payments and securities transactions prior to admission. Hence, the CCP is in full control of the process.

	<p>The central source for information to the Clearing Members, exchange participants and software vendors on the settlement of transactions is the Common Report Engine, which is Eurex Group's central solution for trading and clearing report retrieval.</p> <p><a href="http://www.eurexclearing.com/clearing-en/transaction-management/">(http://www.eurexclearing.com/clearing-en/transaction-management/)</a>.</p>
<p>Key Consideration 2</p> <p>An FMI should complete final settlement no later than the end of the value date, and preferably intraday or in real time, to reduce settlement risk. An LVPS or SSS should consider adopting RTGS or multiple-batch processing during the settlement day.</p>	<p><b>Final settlement on the value date</b></p> <p>Clearing transactions become final in Eurex Clearing system in real time.</p> <p>Eurex Clearing takes all necessary steps for ensuring settlement finality on the value date at the CSD as it creates instructions technically to observe the Intended Settlement Day (ISD) using CSDs batch processing cycles.</p> <p>The Clearing Conditions oblige Clearing Members to fulfill their delivery and payment obligations resulting from transactions in accordance with the instructions of Eurex Clearing.</p> <p>In the event of a failure by a Clearing Member to deliver securities to Eurex Clearing on the applicable delivery date, Eurex Clearing is entitled at the cost of the defaulting Clearing Member to enter into a replacement purchase by way of a transaction with a third party or by way of a buy-in auction. As stipulated in the Clearing Conditions of Eurex Clearing, fines for late deliveries will be charged (the so called "contractual penalties").</p> <p>Furthermore, the CCP functionality Gross Delivery Management generally gives the CMs the possibility to make sure fails are avoided, by using block/release functionality.</p> <p><b>Intraday or real-time final settlement</b></p> <p>Eurex Clearing submits settlement instructions to the settlement locations for or on the value date, prior to the overnight deadlines of the respective CSDs/(I)CSDs (for example in CBF the night time batch STD technically runs on S-1 for value date S, the other batches run on S for value date S).</p>

	<p style="text-align: center;"><b>CBF settlement cycles</b></p> <p style="font-size: small;">STD: Standard/Night Time Processing, RT-STD: Realtime Standard, RTS: Realtime Settlement, SDS: Sameday-Settlement, Cont-SDS: Continuous Sameday Settlement</p> <p>If a participant does not have enough funds or securities at the relevant settlement time the status of the transaction will be “Pending Delivery” and potential “failure” penalties will apply. The sanctions for Non-Delivery are meant to be an incentive for Clearing Members to avoid fails. A report is issued with all trades that are partially or fully pending at this point of time. These trades are pending on the level CCP - CM or on the level CM – Customer. Pending transactions will be entered in the next value date and settled in the forthcoming batch.</p>
<p>Key Consideration 3</p> <p>An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.</p>	<p>See Irrevocability in KC 1</p>
<p>Key conclusions for Principle 8</p>	<p>Finality of clearing transactions is achieved in Eurex clearing system on the basis of the German civil code for irrevocability and on the basis of the insolvency law for enforceability, and supported in the Clearing conditions</p>
<p>Assessment of Principle 8</p>	<p>Observed</p>
<p>Recommendations and Comments</p>	<p>While enforcement of finality of clearing is achieved, Eurex Clearing should for the sake of clarity reflect explicitly in the Clearing conditions how the moment of irrevocability and the moment of entry are specified in German law.</p>



### Principle 9. Money Settlements

An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risks arising from the use of commercial bank money.

#### Key Consideration 1

An FMI should conduct its money settlements in central bank money, where practical and available, to avoid credit and liquidity risks.

Eurex Clearing uses both central bank money and commercial bank money for the settlement of cash transactions. The central bank model is used for Euro and Swiss Francs, TARGET2 account at Deutsche Bundesbank and CHF account at Swiss National Bank, respectively. For other currencies, Eurex Clearing uses commercial bank money, such as EuroSIC, Clearstream Banking Luxembourg (CBL), EuroClear Bank, and several commercial payment banks.

For all obligations that arise from the clearing process, such as fees, margin requirements, cash settlements and other cash obligations, Eurex Clearing manages the internal cash accounts in multiple currencies. However, initial margin and default fund contributions are collected in clearing currencies, EUR and CHF.



#### Key Consideration 2

If central bank money is not used, an FMI should conduct its money settlements using a settlement asset with little or no credit or liquidity risk.

The selection of commercial banks for cash settlement is based on a strict process checking credit quality and operational robustness and must be approved by the Eurex Clearing Executive Board. When using commercial banks, Eurex Clearing monitors the credit rating of the entity.

	<p>Given Eurex Clearing's reliance on commercial banks for the efficient working of the clearing processes, Eurex Clearing has developed criteria for the assessment of new banks.</p> <p>These criteria will be used to evaluate the Banks before going live and then on a regular basis to ensure compliance of these criteria at all times. This process is in line with the requirement to 'strictly limit cash settlement risks' as stipulated in Article 50 EMIR.</p> <p>The Payment Banks are required to provide credit lines to Eurex Clearing to ensure settlement in case of a clearing member default.</p>
<p>Key Consideration 3</p> <p>If an FMI settles in commercial bank money, it should monitor, manage, and limit its credit and liquidity risks arising from the commercial settlement banks. In particular, an FMI should establish and monitor adherence to strict criteria for its settlement banks that take account of, among other things, their regulation and supervision, creditworthiness, capitalization, access to liquidity, and operational reliability. An FMI should also monitor and manage the concentration of credit and liquidity exposures to its commercial settlement banks.</p>	<p>According to EMIR, Eurex Clearing is required to assess and monitor commercial settlement banks. It uses qualitative factors and quantitative factors. Qualitative factors include the operating environment, market position, and business model and transparency aspects. Quantitative factors include aspects of liquidity, capitalization, asset quality and profitability. After the initial assessment the fulfillment of the criteria is monitored regularly.</p> <p>Eurex Clearing settles cash with authorized and carefully selected credit institutions based on pre-defined criteria to ensure low credit risk which is also verified by an internal credit assessment by the credit department of the clearing house. Please see number 1) under Key Consideration 2 within principle 9.</p> <p>Overall Eurex Clearing assessment and evaluation of Banks for new currencies are based on criteria covering creditworthiness, technical and operational capabilities.</p> <ul style="list-style-type: none"> <li>- Creditworthiness</li> </ul> <p>Banks will be assessed internally based on the FACT methodology for their creditworthiness and the minimum rating acceptable will be an internal rating of 'C'. Internal rating of 'C' corresponds to S&amp;P/Fitch rating of 'A, A-' and Moody's 'A2, A3'</p> <ul style="list-style-type: none"> <li>- Technical capabilities</li> </ul> <p>Banks will be required to participate in the SWIFT network and support specific SWIFT message types and formats. Furthermore, the Bank is asked to provide Eurex Clearing with full access to their online banking facilities.</p>

	<p>- Operational capabilities</p> <p>Banks are required to commit to meet specific deadlines in the cash settlement process according to Eurex Clearing’s clearing lifecycle. Furthermore, Banks are requested to share their business continuity plans with Eurex Clearing to ensure system, workspace and staff is available at all required times. The Banks have to comply with Eurex Clearing’s business days and have to confirm that enquiries from Eurex Clearing get resolved within an agreed timeframe</p> <p>Furthermore, in principle, Eurex Clearing appoints at least two payment banks per relevant currency in order to avoid concentration and large exposures with one settlement institute. Another measurement for the avoidance of credit risk concentration at commercial bank level is that overnight cash balances with payment banks are being monitored and nostro limits per payment bank account are set. These nostro limits apply to the amount which remains on the settlement bank account overnight. In case, the development of nostro balances suggests further diversification, the set up of a further settlement bank is initiated.</p> <p>Also, as a result of its clearing business, Eurex Clearing’s liquidity risk management is based on an analysis of the settlement and funding flows of the clearing process.</p> <p>Settlement bank accounts per currency are monitored throughout the day. Cash inflows to the account are intended to be placed on a secured basis via reverse repo transactions backed with high quality collateral. As a result, this concept does not foresee significant unsecured overnight exposures. In order to avoid undue risk concentration in a currency, Eurex Clearing regularly monitors settlement volumes in each currency.</p> <p>The Management Information System (MIS) includes all exposures towards a defaulting clearing member in all relevant relationships with Eurex Clearing, i.e., as clearing member, settlement bank or nostro agent. In this context, a settlement bank is a bank that a clearing member uses to perform securities settlement. The liquidity risk is calculated by adding all liquidity risks of the clearing members using that particular settlement bank in the respective market, applying netting between the clearing members using that settlement bank.</p>
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	<p>A nostro agent is a bank that Eurex Clearing holds a cash account with to perform CCP settlement. The associated liquidity risk is the positive end-of-day account balance held at the nostro agent.</p>
<p>Key Consideration 4</p> <p>If an FMI conducts money settlements on its own books, it should minimize and strictly control its credit and liquidity risks.</p>	<p>Eurex Clearing does not conduct any money settlement on its own books.</p>
<p>Key Consideration 5</p> <p>An FMI's legal agreements with any settlement banks should state clearly when transfers on the books of individual settlement banks are expected to occur, that transfers are to be final when effected, and that funds received should be transferable as soon as possible, at a minimum by the end of the day and ideally intraday, in order to enable the FMI and its participants to manage credit and liquidity risks.</p>	<p>Legal agreements with settlement banks are in place and the laws of the relevant jurisdictions support the provisions of transfers and finality (Settlement Finality Directive, German Insolvency Law (InsO, Section 116)).</p> <p>Eurex Clearing has various contracts with payment banks in place to ensure the cash settlement. Its timing for debit and credit instructions differs per currency, acknowledging the business hours of the involved payment location. Credit instructions always take place on the same day. The general approach requires debit instructions to be met prior to releasing credit instructions, except Japanese Yen (JPY) being exempt from this requirement due to time difference. The credit instructions generally take place shortly after the debit instructions are met, e.g., within one hour for EUR, CHF, GBP and USD. Eurex Clearing's timing for debit and credit instructions looks as follows:</p>

	Debit instructions released	Debit instructions met	Credit instructions released
<b>Euro</b>	Around 06:00 CET	07:00 CET same day	Around 08:00 CET (after confirmation that debit instructions are met)
<b>CHF</b>	Around 06:00 CET	07:00 CET same day	Around 08:00 CET (after confirmation that debit instructions are met)
<b>GBP</b>	Around 06:00 CET	09:00 CET same day	Around 09:10 CET (after confirmation that debit instructions are met)
<b>USD</b>	Around 06:00 CET	08:00 CET same day	Around 08:10 CET (after confirmation that debit instructions are met)
<b>JPY</b>	Around 07:00 CET (after FXYCS system is closed)	08:00 CET the following day due to time difference	15:30 CET on same day as debit instructions (before the confirmation that debit instructions are met)
<b>KRW</b>	Around 03:10 CET	07:00 CET (08:00 CEST) same day	07:00 CET (08:00 CET CEST) same day (after confirmation that debit instructions are met)

Key Conclusions for Principle 9	Eurex Clearing uses both central bank money and commercial bank money for the settlement of cash transactions. The central bank model is used for Euro and Swiss Francs, accounting for more than 90 percent of total liquidity transactions. For other currencies, US Dollar and British Pound, Eurex Clearing uses commercial bank money, such as EuroSIC, Clearstream Banking Luxembourg (CBL), EuroClear Bank, and several commercial payment banks. Eurex Clearing has rigorous risk management procedures to assess and monitor commercial settlement banks. It uses qualitative factors and quantitative factors. Qualitative factors include the operating environment, market position, and business model and transparency aspects. Quantitative factors include aspects of liquidity, capitalization, asset quality and profitability.
Assessment of Principle 9	Observed.
Recommendations and Comments	

### Principle 10. Physical Deliveries

An FMI should clearly state its obligations with respect to the delivery of physical instruments or commodities and should identify, monitor, and manage the risks associated with such physical deliveries.

Key Consideration 1	Eurex Clearing does not have physical deliveries, and its Clearing Conditions have specific rules for physical deliveries to be understood as
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An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.	deliveries of securities held in book-entry form (immobilized or dematerialized) and delivery obligations are fulfilled via book transfer. Even in the case of the "Xetra Gold bond", where the physical delivery of gold is a possibility, Eurex Clearing relies on Clearstream Banking Frankfurt (CBF), a Deutsche Börse subsidiary that stores the gold in its vault.
Key Consideration 2  An FMI should identify, monitor, and manage the risks and costs associated with the storage and delivery of physical instruments or commodities.	Not applicable, as stated in Key Consideration 1 of this Principle.
Key Conclusions for Principle 10	All physical deliveries of securities are carried in a book entry form and this principle is not applicable to Eurex Clearing. For custody risk of immobilized and materialized securities, see Principle 16: Custody and Investment Risks.
Assessment of Principle 10	<i>Not applicable</i>
Recommendations and comments	

<b>Principle 11. Central Securities Depositories</b>	
<p>A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimize and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry.</p>	
<p><b>Key Consideration 1</b></p> <p>A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorized creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.</p>	<p><b>Safeguarding the rights of securities issuers and holders</b></p> <p>Not applicable.</p>
	<p><b>Prevention of the unauthorized creation or deletion of securities</b></p> <p>Not applicable.</p>
	<p><b>Periodic reconciliation of securities issues</b></p> <p>Not applicable.</p>
<p><b>Key Consideration 2</b></p> <p>A CSD should prohibit overdrafts and debit balances in securities accounts.</p>	<p>Not applicable.</p>
<p><b>Key consideration 3</b></p> <p>A CSD should maintain securities in an immobilized or dematerialized form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilize or dematerialize securities.</p>	<p>Not applicable.</p>
<p><b>Key Consideration 4</b></p> <p>A CSD should protect assets against custody risk through appropriate rules and</p>	<p>Not applicable.</p>

procedures consistent with its legal framework.	
<p>Key Consideration 5</p> <p>A CSD should employ a robust system that ensures segregation between the CSD's own assets and the securities of its participants and segregation among the securities of participants. Where supported by the legal framework, the CSD should also support operationally the segregation of securities belonging to a participant's customers on the participant's books and facilitate the transfer of customer holdings.</p>	Not applicable.
<p>Key Consideration 6</p> <p>A CSD should identify, measure, monitor, and manage its risks from other activities that it may perform; additional tools may be necessary in order to address these risks.</p>	Not applicable.
Key conclusions for Principle 11	
Assessment of Principle 11	<i>Not applicable</i>
Recommendations and Comments	-



### Principle 12. Exchange-of-value Settlement Systems

If an FMI settles transactions that involve the settlement of two linked obligations (for example securities or foreign exchange transactions) it should eliminate principal risk by conditioning the final settlement of one obligation upon the final settlement of the other.

#### Key Consideration 1

An FMI that is an exchange-of-value settlement system should eliminate principal risk by ensuring that the final settlement of one obligation occurs if and only if the final settlement of the linked obligation also occurs, regardless of whether the FMI settles on a gross or net basis when finality occurs.

Eurex Clearing is not an exchange-of-value settlement system. However, it has mechanisms in place that ensure the elimination of principal risk. Eurex Clearing settlement process is supported by a delivery-versus-payment/receipt-versus-payment (DvP/RvP) settlement eliminating principal risk as stated in the Clearing Conditions. The booking is performed end of day independent of the chosen Central Securities Depository (CSD). The use of these mechanisms ensures that principal risk is eliminated. These settlement mechanisms are based on standard (SWIFT) message types, which ensure the timely and appropriate documentation for the availability of both securities and cash at the same time. For the settlement of payment against payment (PVP) Eurex Clearing rely on commercial bank.

The final settlement of corresponding transactions based on linked obligations is ensured because Eurex Clearing issues delivery instructions in the delivery-versus-payment (DvP) mode. In order to get accepted any settlement institution has to meet Eurex Clearing's prerequisites. Selected settlement institutions are equipped with the technical capabilities to fully and timely receive Eurex Clearing's instructions and to accordingly perform the delivery of securities versus payment. At all times, Eurex Clearing requires that all settlement institutions must have such an essential mechanism installed. All CSDs to which Eurex Clearing instructs a delivery-versus-payment (DvP) mode have been verified to be able to process DvP instructions. Furthermore, the clearing members provide Eurex Clearing with the appropriate power of attorney, which authorizes Eurex Clearing to give delivery instructions in order to facilitate the settlement of the obligations.

Eurex Clearing offers both gross and net settlement options to its members. Members can mark single transactions from the trading venues may be processed gross by separate delivery instructions or offset with only the net surplus being included in a delivery instruction transactions either for gross or for net processing. This functionality is available for both sell and buy transactions. Transactions marked for gross processing are therefore not considered in the settlement netting process.

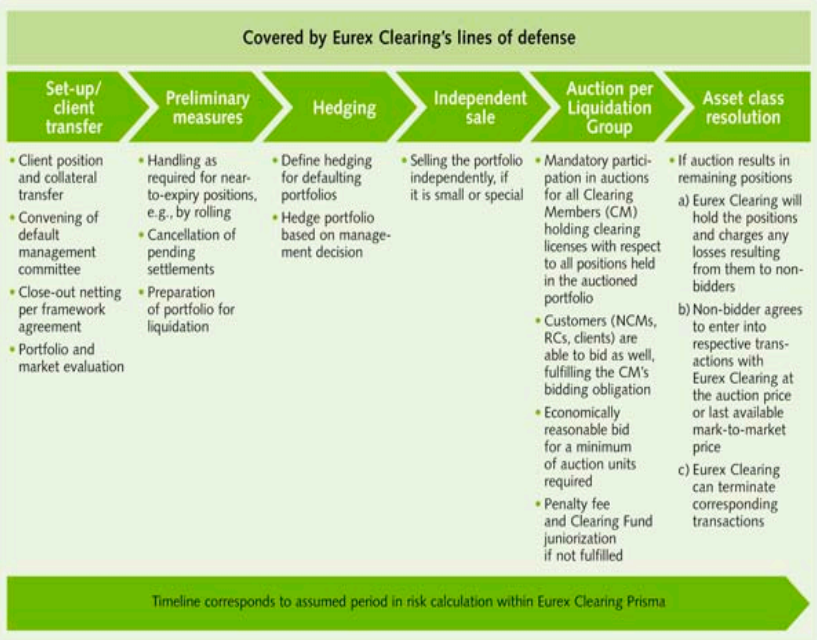
Key conclusions for Principle 12	Eurex Clearing is not an exchange-of-value settlement system. However, it has mechanisms in place that ensure the elimination of principal risk. Eurex Clearing settlement process is supported by a delivery-versus-payment/receipt-versus-payment (DvP/RvP) settlement eliminating principal risk.
Assessment of Principle 12	Observed
Recommendations and Comments	-

### Principle 13. Participant-default Rules and Procedures

An FMI should have effective and clearly defined rules and procedures to manage a participant default. These rules and procedures should be designed to ensure that the FMI can take timely action to contain losses and liquidity pressures and continue to meet its obligations.

Key Consideration 1	<p><b>Participant default rules and procedures</b></p> <p>Eurex Clearing distinguishes between automatic and non-automatic termination events. A commencement of insolvency proceedings over a Clearing Member's estate, results in an automatic termination of all transactions held between Eurex Clearing and such Clearing Member (Clearing Conditions, Chapter I, Part 1, Number 7.2.2). In addition, Eurex Clearing has defined a range of non-automatic termination events, including amongst others a (i) Failure-to-pay; (ii) Failure to comply with the Clearing Conditions and (iii) Insolvency related events. Where the (i) and (ii) also include operational defaults the later represents a financial default.</p> <p>The Clearing Conditions clearly state the circumstances that constitute a default or insolvency case (Chapter I, Part 1, Number 7.2.1.).</p> <p>In case of a Clearing Member's default, all proprietary positions held in the Clearing Member's proprietary accounts will be liquidated by Eurex Clearing, in line with its default management procedures. With respect to client positions, Eurex Clearing supports porting wherever possible. All client positions are segregated at Eurex Clearing, either individually or as part of an Omnibus Client Pool. Individual segregation is available for Non-Clearing Members and Registered Customers, who enter into a Clearing Agreement with Eurex Clearing and their respective Clearing Member. An individually segregated Non-Clearing Member / Registered</p>
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	<p>Customer can choose: (i) to directly port its positions and collateral to a non-defaulted back-up Clearing Member; (ii) to become a Clearing Member itself for a limited period of 5 days (to find a replacement Clearing Member to whom it can port); or (iii) for Eurex Clearing to liquidate its positions. In the Elementary Clearing Model (ECM) and the Net Omnibus Clearing Model (NOCM), client porting is only possible if all clients within a respective Omnibus Client Pool jointly agree to be transferred to one non-defaulted replacement Clearing Member, and such replacement Clearing Member accepts all clients and their respective positions within the Omnibus Client Pool. In an Omnibus Clearing Model, the possibility for a client to become a temporary Clearing Member itself does not exist.</p> <p>Non-defaulting participants will participate in Default Management Committees (DMC) which are established in accordance with the DMC Rules with respect to one or more groups of abstract transactions cleared and relating to one or more transaction types. Each DMC constitutes an internal Advisory Committee of Eurex Clearing (but not an independent legal person) and its members are subject to Eurex Clearing's decisions.</p> <p>Eurex Clearing has the right to convene a meeting of one or more DMCs upon the occurrence of a Termination Event or Insolvency Termination Event or to obtain advice on any DMC matters, and retains the ultimate decision on whether and under what terms and conditions the DMC proposals are implemented or not.</p> <p>Further non-defaulting members are required to participate in aforementioned auctions and have to replenish the Clearing Fund two times (so called assessments) in case the posted margin and Clearing Fund contribution of the defaulted member as well as Eurex Clearing's own contribution to the Clearing Fund are not sufficient to cover losses associated with the default.</p> <p><b>Use of financial resources</b></p> <p>Eurex Clearing guarantees the fulfilment of every transaction in every market for which services are provided. To ensure this commitment, a multi-level security system is set up, called "lines of defence" or default waterfall according to EMIR. The lines of defence consist of several layers of safety nets which are (i) the initial margin and other margins posted the defaulter; (ii) his contribution to the clearing fund; (iii) Eurex Clearing's own contribution to the Clearing Fund (according to EMIR, 25 percent of its capital); (iv) clearing fund contributions of non-defaulting clearing</p>
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	<p>members; (v) assessments to the clearing fund (with a maximum of 2 assessments in the capped period of twice the prefunded clearing fund contribution); (vi) parental guarantee; and (vii) remaining equity of Eurex Clearing. In the event of a default, these layers are applied in the order described (see also Principle 1 and diagram outlined in KC 4 of Principle 4). The order in which the Lines of Defence are utilized is documented in the Clearing Conditions (Chapter I, Part 1, 6.2).</p>
<p>Key Consideration 2</p> <p>An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.</p>	<p>The purpose of default procedures is to protect the continuing functioning of Eurex Clearing by limiting the potential for the effects of a default to spread beyond the defaulting participant. Key objectives of default procedures include minimizing further losses at the defaulting participant, allowing for client porting wherever possible, winding down its positions in an orderly way, enabling the CCP to continue performing its obligations and preserving other participants' and users' ability to manage their portfolios.</p> <p>The Default Management Process (DMP) will be conducted on liquidation group level. The section in charge reports directly to the Executive Board. Liquidation groups compile products which can be liquidated jointly at the same point in time. The following briefly describes key components of the DMP, which comes into effect for remaining positions now maintained by Eurex Clearing:</p> <p><b>Overview – default management process</b></p>  <p>The diagram illustrates the 'default management process' covered by Eurex Clearing's lines of defense. It consists of six sequential stages, each with specific actions:</p> <ul style="list-style-type: none"> <li><b>Set-up/client transfer:</b> Client position and collateral transfer; Convening of default management committee; Close-out netting per framework agreement; Portfolio and market evaluation.</li> <li><b>Preliminary measures:</b> Handling as required for near-to-expiry positions, e.g., by rolling; Cancellation of pending settlements; Preparation of portfolio for liquidation.</li> <li><b>Hedging:</b> Define hedging for defaulting portfolios; Hedge portfolio based on management decision.</li> <li><b>Independent sale:</b> Selling the portfolio independently, if it is small or special.</li> <li><b>Auction per Liquidation Group:</b> Mandatory participation in auctions for all Clearing Members (CM) holding clearing licenses with respect to all positions held in the auctioned portfolio; Customers (NCMs, RCs, clients) are able to bid as well, fulfilling the CM's bidding obligation; Economically reasonable bid for a minimum of auction units required; Penalty fee and Clearing Fund juniorization if not fulfilled.</li> <li><b>Asset class resolution:</b> If auction results in remaining positions: a) Eurex Clearing will hold the positions and charges any losses resulting from them to non-bidders; b) Non-bidder agrees to enter into respective transactions with Eurex Clearing at the auction price or last available mark-to-market price; c) Eurex Clearing can terminate corresponding transactions.</li> </ul> <p>Timeline corresponds to assumed period in risk calculation within Eurex Clearing Prisma</p>

	<p>Eurex Clearing conducts regular default simulations to ensure the best level of preparation for any default situation among its Clearing Members. Clearing Members are obliged to support Eurex Clearing when any such simulation takes place. Upon request of Eurex Clearing, each Clearing Member active in the respective liquidation group needs to be able to act as a potential counterparty for hedging positions and shall support testing of the auction process. Hence, Eurex Clearing ensures that members have the necessary procedures and infrastructure in place to provide prices during a real default. Eurex Clearing conducts at least one default simulations per year. Firedrills are announced via circular in order to ensure market participants, supervisors and regulators awareness. In addition ECAG directly contacts mandatory participants through the respective DMP coordinators.</p>
<p>Key Consideration 3</p> <p>An FMI should publicly disclose key aspects of its default rules and procedures.</p>	<p>Eurex Clearing publicly discloses key aspects of its default procedure which can be found on the Eurex Clearing website as they are part of the Clearing Conditions.</p>
<p>Key Consideration 4</p> <p>An FMI should involve its participants and other stakeholders in the testing and review of the FMI's default procedures, including any close-out procedures. Such testing and review should be conducted at least annually or following material changes to the rules and procedures to ensure that they are practical and effective.</p>	<p>Eurex Clearing simulates member defaults in various liquidation groups and convenes the DMC for the respective groups. Each DMC consists of representatives of Clearing Members with sufficient trading and risk expertise in products belonging to the respective liquidation group(s) for which the DMC is convened. Upon request this can include staff from clients provided the trading and risk expertise requirements are met. DMCs assist Eurex Clearing with regards to any relevant matter of the default management process, especially hedging and auctioning. The DMCs will be convened in case of a Clearing Member default situation and for regular default simulations. Eurex Clearing typically simulates a complete member default whereby resolution does not succeed in setting up a bridging institution or similar entity.</p> <p>As an EMIR-compliant CCP, Eurex Clearing conducts at least one and a maximum of three full simulations annually. In addition, it does multiple bilateral simulations with major members.</p> <p>The results of each simulation are shared with the Executive Board of Eurex Clearing and also the Risk Committee. The results will lead to procedural or technical alterations.</p>

Key Conclusions for Principle 13	Eurex Clearing has effective and clearly defined rules and procedures to manage a participant default. These rules and procedures are designed to ensure that Eurex Clearing can take timely action to contain losses and liquidity pressures and continue to meet its obligations. The procedures involve clearing members who are well prepared through simulation exercise and participation in Default Management Committee to assist Eurex Clearing in the management of the Default.
Assessment of Principle 13	Observed.
Recommendations and comments	

<b>Principle 14. Segregation and Portability</b>	
A CCP should have rules and procedures that enable the segregation and portability of positions of a participant's customers and the collateral provided to the CCP with respect to those positions.	
Key Consideration 1  A CCP should, at a minimum, have segregation and portability arrangements that effectively protect a participant's customers' positions and related collateral from the default or insolvency of that participant. If the CCP additionally offers protection of such customer positions and collateral against the concurrent default of the participant and a fellow customer, the CCP should take steps to ensure that such protection is effective.	<b>Customer protection from participant default</b>  Eurex Clearing enables clients to choose segregation and portability and have the option as to how their positions and margin collateral are held and posted by their Clearing Member at Eurex Clearing, depending on the individual client's needs.
	<b>Customer protection from participant and fellow customer default</b>  Eurex Clearing offers the Individual Clearing Model (ICM), which allows customers to protect their positions and collateral against the concurrent default of the Clearing Member and a fellow customer.  The ICM is an individual client segregation model within the meaning of Article 39(3) EMIR. It provides for the segregation of client-related positions of the Clearing Member with respect to each NCM and RC that is an ICM Client.  ICM Clients neither bear the risk of losses relating to proprietary transactions of their Clearing Member nor the risk of losses relating to other client-related transactions of the Clearing Member.  The transfer of collateral is based on a double Title Transfer, which supports the porting mechanism in case of a default.

### Legal basis

The contractual rights and obligations of a Clearing Member towards Eurex Clearing with respect to a certain ICM Client are legally segregated from all other rights and obligations between such Clearing Member and Eurex Clearing. This is ensured by an allocation of the respective positions to a separate standard agreement per ICM Client, the ICM Standard Agreement. Accordingly, one separate ICM Standard Agreement per ICM Client exists between the Clearing Member and Eurex Clearing.

The occurrence of a Termination Event with respect to a Clearing Member will, following the choice of the ICM Client, initiate a porting process by which the ICM Client positions are re-established with (and the corresponding margin is re-dedicated to) a new Clearing Member. Porting may either occur following an Interim Participation of the ICM Client in a direct clearing capacity (see Principle 13 KC 1) or, subject to certain conditions, immediately with a replacement Clearing Member. If the ICM Client chooses not to port or if the conditions for an Interim Participation or an immediate re-establishment are not met within the applicable cut-off times, a close-out netting will take place.

If close-out netting occurs, all payment and delivery obligations under the ICM Standard Agreement between Eurex Clearing and the Clearing Member, including any Redelivery Claims in respect of margin, will be combined into a separate "Difference Claim". At the same time, close-out netting will occur between the Clearing Member and the ICM Client and result in a separate Difference Claim between those parties.

The close-out netting is processed between Eurex Clearing and the Clearing Member and equally between Clearing Member and





The Clearing Member grants a security interests for the benefit of the ICM Client over its Difference Claim against Eurex Clearing under the ICM Standard Agreement. The purpose of such security interests is to secure the Difference Claim of the ICM Client against the Clearing Member under their corresponding ICM Standard Agreement.

Detailed information can be found in the information memorandum "Client Asset Protection - Client Porting in the Individual Clearing Model (ICM)", available on Eurex Clearing's website.

Eurex Clearing offers the ICM to all Clearing Member jurisdictions within the European Union in which clearing services are currently offered.

Porting under any Omnibus Clearing Model structure (Net Omnibus Clearing Model and Elementary Clearing Model) is possible only if all clients in the same Net Omnibus Client Collateral Pool or in the same Elementary Clearing Model Client Collateral Pool port to a single replacement Clearing Member (Transferee Clearing Member) and Eurex Clearing receives this confirmation by the close of the porting period. If a Termination Event has occurred, the porting period runs from the occurrence of the Termination Event until 13.00 CET on the immediately following business day.

The Net Omnibus Clearing Model is in compliance with EMIR as well as compliant with the UK Client Asset Sourcebook (CASS rules).

The figure below provides an overview of all levels of Client Asset Protection models.

Eurex Clearing Model	EMIR	Solution	Market scope
Elementary Clearing Model (ECM)	Omnibus client segregation	Asset Based Allocation Method: Collateral of the CM and its clients will be held separate from each other on CSD level. The Clearing Member may opt to set-up a maximum of five omnibus collateral pools.  Value Based Allocation Method: Collateral of the CM and its clients are segregated on clearing house level.	Across all markets cleared
UK CASS compliant Net Omnibus Clearing Model	Omnibus client segregation	Ensures CASS compliance by holding collateral of the CM and its clients separate from each other on CSD level. The Clearing Member may opt to set-up a maximum of five omnibus collateral pools.	Eurex Exchange, IRS
Individual Clearing Model (ICM)	Individual client segregation*	Individually segregated NCMs	Eurex Exchange, Eurex Bonds, Eurex Repo, Frankfurt Stock Exchange, Irish Stock Exchange
		Individually segregated RCs	Eurex Exchange, EurexOTC Clear for IRS
		Individually segregated funds/ flexible account structure	EurexOTC Clear for IRS

Eurex Clearing offers a modified form of its Omnibus and Individual Segregation models to non-EU Clearing Members in jurisdictions where



	<p>local law might interfere with the EMIR legal requirements enshrined in the standard Clearing Models. Therefore, Eurex Clearing introduced a modified Clearing Model in November 2014. The modified ICM provides segregation and portability arrangements that protect the non-EU CM's customers' positions and collateral from the default of the non-EU CM.</p> <p>The porting mechanism for clients of Clearing Members registered in jurisdictions of Singapore and Switzerland are subject to approval by the competent authority.</p> <p>Eurex Clearing verifies the enforceability of each of its Clearing Models, including the arrangements to protect and transfer the positions and collateral related to customers of a Clearing Member, for each jurisdiction from which Clearing Members are admitted on the basis of comprehensive legal opinions from leading well reputed law firms in the relevant jurisdictions (which have been updated some in 2014 and others in 2015).</p>
<p>Key Consideration 2</p> <p>A CCP should employ an account structure that enables it readily to identify positions of a participant's customers and to segregate related collateral. A CCP should maintain customer positions and collateral in individual customer accounts or in omnibus customer accounts.</p>	<p>According to Article 39 EMIR, Eurex Clearing as a CCP keeps separate records and accounts that allow it to identify the assets and positions held for the account of one Clearing Member from the assets and positions held for the account of any other Clearing Member and from its own assets.</p> <p>Therefore, Eurex Clearing establishes and maintains accounts for each Clearing Member (CM Account), in which transactions, cash amounts and margins (i.e., collateral in various forms) of such Clearing Member are recorded. Clearing Members are provided with reports reflecting the account status on a daily basis.</p> <p>The assets and positions of one Clearing Member will not be recorded in a CM Account dedicated to another Clearing Member. Eurex Clearing's own assets will not be recorded in CM Accounts.</p> <p>The netting of positions related to different Clearing Members and therefore recorded in different CM Accounts is legally not possible under German law as the debtor and the creditor in such scenario would not be identical (see Section 387 of the German Civil Code).</p> <p>Eurex Clearing opens and maintains with respect to each Clearing Member several accounts: one own account and one or more transaction accounts for Customer-Related Transactions of the Clearing Member; two transaction accounts for Non Clearing Member (NCM)</p>

	<p>related transactions, one transaction account with respect to own transactions of the NCM and one transaction account with respect to customer related transactions of the NCM; two transaction accounts for Registered Customer (RC) related transactions, one transaction account with respect to own transactions of the RC and one transaction account with respect to customer related transactions of the RC.</p> <p>Eurex Clearing currently offers three Clearing Models which provide for different levels of segregation:</p> <ul style="list-style-type: none"> <li>• the Elementary Clearing Model (“ECM”);</li> <li>• the Individual Clearing Model (“ICM”); and;</li> <li>• the Net Omnibus Clearing Model (“NOCM”)</li> </ul> <p>The Elementary Clearing Model is an omnibus client segregation model within the meaning of article 39(2) EMIR. It provides for the segregation of proprietary positions and assets of a Clearing Member from its client-related positions and assets. Client-related positions and assets may relate to NCMs, RCs or other un-disclosed customers of the Clearing Member.</p> <p>The Individual Clearing Model is an individual client segregation model within the meaning of Article 39(3) EMIR. It provides for the segregation of client-related positions of the Clearing Member with respect to each Non-Clearing Member and Registered Customer that is an ICM Client.</p> <p>The Net Omnibus Clearing Model enables Clearing Members domiciled in the United Kingdom to apply the Client Asset Sourcebook (“CASS”) provisions for the benefit of their clients. Like the Elementary Clearing Model, the Net Omnibus Model segregates all client-related positions (taken as a whole) that are designated to be cleared under such model from any other positions of the Clearing Member and thus qualifies as an omnibus client segregation model within the meaning of article 39(2) EMIR. A Clearing Member may set-up multiple omnibus collateral pools in order to further segregate client-related positions and assets. Each omnibus collateral pool corresponds to a Net Omnibus Standard Agreement.</p>
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<p>Key Consideration 3</p> <p>A CCP should structure its portability arrangements in a way that makes it highly likely that the positions and collateral of a defaulting participant's customers will be transferred to one or more other participants.</p>	<p>After a Termination Event or Insolvency Event occurs the Clearing Members' transactions are suspended and / or terminated. Eurex Clearing does not transfer positions and collateral directly. In accordance with German Insolvency Code (Section 104), Eurex Clearing closes out the positions and then re-opens them at the same price with an alternative participant when porting prerequisites are fulfilled. This achieves porting, in accordance with domestic law.</p> <p>Portability depends on the level of segregation chosen by the client. The replacement of Clearing Members is available in the Elementary Clearing Model (Chapter I, Part 2, section 9) and in the Individual Clearing Model (Chapter I, Part 3, Subpart A section 13).</p>
<p>Key Consideration 4</p> <p>A CCP should disclose its rules, policies, and procedures relating to the segregation and portability of a participant's customers' positions and related collateral. In particular, the CCP should disclose whether customer collateral is protected on an individual or omnibus basis. In addition, a CCP should disclose any constraints, such as legal or operational constraints, that may impair its ability to segregate or port a participant's customers' positions and related collateral.</p>	<p>Eurex Clearing published on its website the EMIR Disclosure Document that sets out the information required to be disclosed under Article 39 (7) EMIR. It provides a summary description of each of the three Clearing Models currently offered by Eurex Clearing, including information on the main legal implications of the respective levels of segregation and applicable insolvency law.</p> <p>Under the Elementary Clearing Model clients do not bear the risk of losses arising from proprietary transactions of their Clearing Member or from client-related transactions cleared under another Clearing Model, but do bear the risk of losses arising from other client-related transactions of the Clearing Member.</p> <p>ICM Clients neither bear the risk of losses relating to proprietary transactions of their Clearing Member nor the risk of losses relating to other client-related transactions of the Clearing Member.</p> <p>Pursuant to the Net Omnibus Clearing Model, clients do not bear the risk of losses arising from proprietary transactions of their Clearing Member or from client-related transactions cleared under another Clearing Model, but do bear the risk of losses arising from other client-related transactions of the Clearing Member that are cleared.</p> <p>The Disclosure document as well as the website further specifies that Eurex Clearing does not charge costs that specifically relate to the use of a certain Clearing Model. Instead the price list of Eurex Clearing applies. This price list is also publically available via the Eurex Clearing website.</p>
<p>Key conclusions for Principle 14</p>	<p>Eurex Clearing has rules and procedures that enable the segregation and portability of positions of a Clearing Members' customers and the</p>

	collateral provided to the Eurex Clearing with respect to those positions, and publishes the appropriate disclosure document.
Assessment of Principle 14	Observed.

### Principle 15. General Business Risk

An FMI should identify, monitor, and manage its general business risk and hold sufficient liquid net assets funded by equity to cover potential general business losses so that it can continue operations and services as a going concern if those losses materialise. Further, liquid net assets should at all times be sufficient to ensure a recovery or orderly wind-down of critical operations and services.

#### Key Consideration 1

An FMI should have robust management and control systems to identify, monitor, and manage general business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.

Eurex Clearing Executive Board defines its general business risk and responsible for the company's risk management system. Specialized departments identify risks and report them in a timely manner to the Credit Risk Office (CRO).

Eurex Clearing uses a standardized VaR approach for measuring and reporting all risks. It uses VaR to calculate its required economic capital (EC) with a confidence level of 99.98 percent and compares it to its risk-bearing capacity in order to be able to cover financially even extreme events in the next twelve months. Eurex Clearing uses the equity on its balance sheet as the risk-bearing capacity for its economic capital. For control purposes, Eurex Clearing regularly calculates the ratio of economic capital to risk-bearing capacity, or "utilization of risk-bearing capacity", as an indicator. The risk-bearing capacity is used within the liquidation approach, where it is analyzed if the economic capital is within the set limits, i.e., if enough capital is available to bear the existing risks of Eurex Clearing. Otherwise, it would use up its entire risk-bearing capacity, i.e., regulatory own funds, in a worst-case scenario, would be liquidated. The liquidation concept therefore assumes that liquidation of Eurex Clearing ("gone concern") is avoided.

Eurex Clearing has a Risk Strategy that is based upon its business strategy and regulates the extent of risk taken within the various business activities. The Risk Strategy determines conditions for risk management, control, and limitation. Eurex Clearing pays attention to its risk mitigation process and ensures that appropriate measures are taken to avoid, reduce, and transfer of intentionally accept risk. The risk management and controlling systems are validated continuously.

	<p>The Risk Strategy differentiates between four major risk types that are managed and controlled with distinct methods. For details please refer to Principle 3.</p>
<p>Key Consideration 2</p> <p>An FMI should hold liquid net assets funded by equity (such as common stock, disclosed reserves, or other retained earnings) so that it can continue operations and services as a going concern if it incurs general business losses. The amount of liquid net assets funded by equity an FMI should hold should be determined by its general business risk profile and the length of time required achieving a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.</p>	<p>According to Article 16 of EMIR and corresponding EBA technical standards, Eurex should have a specific capital base, which comprises of capital, retained earnings, and reserves. The minimum capital requirement is set at EUR 7.5 million and must be sufficient to cover all risks, such as credit, market, operational, business risks, costs for winding down, 10 percent EMIR reporting buffer, and skin in the game.</p> <p>The EBA technical standards require Eurex Clearing to have own funds for winding down/restructuring, operational/legal risk, credit risk, counterparty risk, market risk and business risk. On top of that, Article 1 paragraph 3 EBA technical standards set a notification threshold in case capital is lower than 110 percent of minimum capital required. In case the notification threshold is breached a notification is made to the competent authority according to the rules and procedures of the competent national authorities.</p> <p>To meet the EU regulation, such as EBA technical standards, Eurex Clearing should have procedures in place to identify all sources of risks that may impact its on-going functions and shall consider the likelihood of potential adverse effects on its revenues or expenses and its level of capital. To this end, all potential losses must be identified in good time, captured centrally, assessed (i.e., quantified in financial terms as far as possible), reported to the Executive Board together with recommendations, and controlled.</p> <p>When determining the time period necessary for winding down or restructuring, Eurex Clearing takes into account whether its services have to be closed/terminated (wind down) or whether a continuing of the business is still feasible (recovery). The decision about which strategy to take (winding down or recovery) depends on the situation at hand. Whereas in the vast majority of cases a recovery would be the most feasible solution, a winding down always serves as last solution. In addition, the decision whether a wind down or recovery shall be triggered might not be immediately possible. It might be the case that an initiated restructuring process fails and a wind down would become</p>

	<p>necessary. For both cases Eurex Clearing has documented procedures and policies in place.</p>
<p>Key Consideration 3</p> <p>An FMI should maintain a viable recovery or orderly wind-down plan and should hold sufficient liquid net assets funded by equity to implement this plan. At a minimum, an FMI should hold liquid net assets funded by equity equal to at least six months of current operating expenses. These assets are in addition to resources held to cover participant defaults or other risks covered under the financial resources principles. However, equity held under international risk-based capital standards can be included where relevant and appropriate to avoid duplicate capital requirements.</p>	<p><b>Recovery or orderly wind-down plan</b></p> <p>Eurex Clearing has developed a Recovery Plan following the legal requirement stipulated in the Act on Ring-fencing and Recovery and Resolution Planning for Credit Institutions and Financial Groups (“Gesetz zur Abschirmung von Risiken und zur Planung der Sanierung und Abwicklung von Kreditinstituten und Finanzgruppen”), which entails the Financial Stability Board “Key Attributes of Effective Resolution Regimes for Financial Institutions” of October 2014. The detailed content and structure of the Recovery Plan is based on the consultation document regarding the “draft of minimum requirements for the design of recovery plans” (“Mindestanforderungen an die Ausgestaltung von Sanierungsplänen”: MaSan draft) published by German Federal Financial Supervisory Authority (BaFin) as of November 2012. The main goal of the plan is to identify recovery options that strengthen the financial and operational robustness of Eurex Clearing in potential stress situations.</p> <p><b>Resources</b></p> <p>In line with EMIR requirement, Eurex Clearing is obliged to have sufficient own funds for a winding down or the recovery of its own business. Therefore, an appropriate time period, about six months, for winding down / the recovery of its own business was estimated. For that purpose Eurex Clearing determined documentation outlining how a recovery or an orderly wind down can be achieved. Eurex Clearing’s capital base for winding down / recovery is calculated according to Article 2 paragraph 1 EBA technical standards. According to these standards, the winding down/restructuring period of Eurex Clearing is no longer than 6 months.</p> <p>The recovery and wind-down documentation will be reviewed regularly. Within the review it will be verified if the time periods expected are still valid.</p>
<p>Key Consideration 4</p> <p>Assets held to cover general business risk should be of high quality and sufficiently liquid in order to allow the FMI to meet its current and</p>	<p>Eurex Clearing manages its general business risk and holds sufficient liquid resources to cover potential business losses. It only invests in cash or in highly liquid financial instruments with minimal market and credit risk that are capable of being liquidated rapidly with minimal adverse price effect.</p>

<p>projected operating expenses under a range of scenarios, including in adverse market conditions.</p>	<p>As a principle, the own funds of Eurex Clearing shall be invested applying the same mechanisms as the placement of clearing member funds. Eurex Clearing may invest part of its own funds through direct securities purchases in correspondence to the criteria and limits as mentioned in Eurex Clearing's Investment Policy.</p>
<p>Key Consideration 5</p> <p>An FMI should maintain a viable plan for raising additional equity should its equity fall close to or below the amount needed. This plan should be approved by the board of directors and updated regularly.</p>	<p>Eurex Clearing established triggers to monitor its capital needs and approval is predefined to increase capital. Eurex Frankfurt, the parent of Eurex Clearing, can increase Eurex Clearing's equity through a payment into Eurex Clearing's capital reserve. As Eurex Clearing and Eurex Frankfurt are stock corporations formed and incorporated under German law equity can only be raised pursuant to the German Companies Act (AktG).</p> <p>There are several ways to raise equity under the German Companies Act (AktG) (e.g., ordinary capital increase, authorized capital etc.). The fastest way (as outlined) is that a shareholder makes a payment into the capital reserve of a stock corporation according to §§ 150, 152 AktG and § 272 II No 4 of the German Trading Act (Handelsgesetzbuch, HGB). The legal requirements for such equity increase are only the payment and a declaration of the shareholder that the payment shall contribute to the capital reserve.</p> <p>The German Supervisory Authorities are notified on the capital increase.</p>
<p>Key Conclusions for Principle 15</p>	<p>Eurex Clearing has developed policies, procedures, and systems to identify, monitor, and manage its business risks, including losses from poor execution of business strategy, negative cash flows, or unexpected and excessively large operating expenses.</p>
<p>Assessment of Principle 15</p>	<p>Observed</p>
<p>Recommendations and Comments</p>	

**Principle 16. Custody and Investment Risks**

An FMI should safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets. An FMI's investments should be in instruments with minimal credit, market, and liquidity risks.

**Key Consideration 1**

An FMI should hold its own and its participants' assets at supervised and regulated entities that have robust accounting practices, safekeeping procedures, and internal controls that fully protect these assets.

Eurex Clearing deposits its own and clearing Members' collaterals at designated and regulated at central securities depository, ideally with access to the European System of Central Bank (ESCB) facilities. Based on this criterion, Eurex Clearing deposits financial instruments posted by the clearing members with Clearstream Banking AG, Frankfurt/Germany (CBF) and Clearstream Banking S.A., Luxembourg (CBL) – both notified according to Article 10 of the Settlement Finality Directive (98/26/EC), as well as with SIX SIS Ltd., Zurich/Switzerland, which is the operator of one of the systemically important payment and settlement systems (SECOM) in Switzerland and as such is overseen by the Swiss National Bank (SNB). SIX SIS Ltd. is licensed as bank by the Swiss Financial Market Supervisory Authority (FINMA) and therefore has to comply with the respective regulatory requirements, which together ensures the full protection of the financial instruments.

CBF, CBL and SIX SIS are market infrastructure providers, which have prudential requirements to ensure availability of their systems.

The clearing members need efficient allocation of the securities eligible collateral, either through a dedicated securities settlement and position holding on specific accounts, or through exposure management via tri-party collateral management services.

The services to be provided by a non-cash collateral location comprise safe keeping, collateral eligibility checks and valuation, restricted access to and protection of the assets posted in favor of the clearing house, as well as custody (incl. tax) processing and supporting Eurex Clearing's models based on the legal concepts of pledge or transfer of title. Especially for any event of a default / bankruptcy Eurex Clearing requires legal certainty in terms of first ranking access rights including collateral portability in each respective jurisdiction of the involved parties.

Hence, the range of services must be provided fulfilling regulatory, legal and contractual requirements, in addition to functional, operational and technical requirements.



	<p>As was discussed, cash collateral should be provided in central bank money when practically possible due to the finality of bookings within a protected payment system.</p> <p>Robustness and soundness of the collateral location’s accounting practices, administration, and operation including safekeeping facilities are ensured during the verification process of the respective selection criteria as well as by the regular assessment of Eurex Clearing’s processes with the connected collateral location or payment bank.</p> <p>In addition, Eurex Clearing offers both omnibus and individual segregation to clearing members and clients at the collateral location CBF. Whilst the securities collateral of a segregated NCM / Registered Customer is legally owned by Eurex Clearing, each clearing model serves different levels of protection:</p> <ul style="list-style-type: none"> <li>• Individual Clearing Model: Individual Segregated Accounts</li> <li>• Elementary Clearing Model: Multiple / Standard Omnibus Segregated Accounts (incl. CASS Net Omnibus Segregated Accounts)</li> </ul> <p>For further details on client asset protection please see Principle 14 and please refer to Eurex Clearing’s website on the link <a href="http://www.eurexclearing.com/clearing-en/risk-management/client-asset-protection">http://www.eurexclearing.com/clearing-en/risk-management/client-asset-protection</a>.</p>
<p>Key Consideration 2</p> <p>An FMI should have prompt access to its assets and the assets provided by participants, when required.</p>	<p>The regulations provide an appropriate legal environment to ensure access not only in normal cases, but as well as in the case of a clearing member’s insolvency in order to liquidate the collateral.</p> <p>Regardless of the collateral type, in case of a participant’s insolvency or default, Eurex Clearing must have first ranking in terms of legal rights and immediate access to the collateral at any time, either pledged by the clearing members in favor of Eurex Clearing, or transferred by the Non-clearing members, or Registered Customers to Eurex Clearing. Therefore, legal certainty regarding the jurisdiction, in particular, the insolvency procedures in the country where the participant is domiciled and regarding the location in the country where the collateral is held in favor of Eurex Clearing, must be obtained.</p> <p>Security collateral is to be pledged in favor of Eurex Clearing in a dedicated securities account within the respective collateral location (operators of security settlement systems). As an optional service for the clearing member’s client, collateral can also be posted via transfer of title</p>

	<p>in segregated accounts to be protected against the clearing member's default or insolvency. The standard service for clearing member's clients is to pledge securities using omnibus separated from the clearing member's proprietary positions and will be held in a segregated omnibus client account.</p> <p>The enforceable rights of appropriation of Eurex Clearing with regard to the securities held at a CSD are explicitly described in the Clearing Conditions of Eurex Clearing.</p> <p>Currently Eurex Clearing is not connected with a collateral location in another time zone than Central European Time (CET).</p>
<p>Key Consideration 3</p> <p>An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.</p>	<p>For securities collateral Eurex Clearing exclusively uses operators of SSS, which are under prudent regulation and supervision. Custodian banks are currently not connected in order to provide exposure management services.</p> <p>For cash collateral the access to central bank liquidity is preferred; this is applicable for EUR and CHF. Commercial bank money (USD and GBP) is only accepted via selected payment banks that fulfill the requirements set by Eurex Clearing.</p> <p>For the purpose of investments of own liquidity and received cash collateral Eurex Clearing has established relationships with a variety of counterparts to avoid concentration risk and considering placement limits. The assessment of counterparts takes into account both the creditworthiness of market counterparts as well as the total exposure towards counterparties in order to avoid any concentration of credit risk.</p> <p>Eurex Clearing takes into account its overall credit risk exposures to individual counterparties from different types of relationships the counterparties may have with Eurex Clearing. Credit exposure limits are in place to maintain the credit risk within acceptable parameters. Furthermore, consistent reporting is in place to monitor Eurex Clearing exposures.</p>

<p>Key Consideration 4</p> <p>An FMI's investment strategy should be consistent with its overall risk-management strategy and fully disclosed to its participants, and investments should be secured by, or be claims on, high-quality obligors. These investments should allow for quick liquidation with little, if any, adverse price effect.</p>	<p><b>Investment strategy</b></p> <p>Eurex Clearing maintains a Treasury Policy which was approved by its Executive Board. This Policy outlines the objectives and general conditions of the treasury management of Eurex Clearing. Specifically, the investment of clearing members' cash collaterals and Eurex Clearing's own funds are outlined, as well as the approved instruments and constraints of treasury management. The primary goal of treasury management is to ensure Eurex Clearing's ability to satisfy payment obligations at all times as well as minimizing counterparty risk in placements. In order to safeguard the clearing house and its clearing members, Eurex Clearing only invests in cash or in highly liquid financial instruments with minimal market and credit risk that</p> <ul style="list-style-type: none"> <li>• are capable of being liquidated rapidly with minimal adverse price effect; and</li> <li>• can quickly be pledged to the Central Bank to obtain liquidity.</li> </ul> <p>Eurex Clearing places cash on a secured basis via reverse repo transactions to the largest extent possible. Not less than 95 per cent of available cash that is not placed with a central bank are collateralized with highly liquid financial instruments meeting all requirements of Article 45 of the Regulation No 648/2012 of the European Parliament and of the Council in conjunction with Annex II of the Commission's Delegated Regulation No 153/2013.</p> <p>Securities need to be issued or guaranteed by central or regional governments, central banks, multilateral development banks (e.g., IBRD, EBRD, EIF, EIB), the European Financial Stability Fund (EFSF) or the European Stability Mechanism (ESM). Key information regarding Eurex Clearing's investment policy can be found on the website (<a href="http://www.eurexclearing.com/clearing-en/collateral-management/investment-policy/">http://www.eurexclearing.com/clearing-en/collateral-management/investment-policy/</a>)</p> <p><b>Risk characteristics of investments</b></p> <p>Eurex Clearing's Treasury Policy describes the procedures to limit concentration risk, including counterparty, issuer, and concentration limits and their monitoring in detail.</p> <p>As a principle, the own funds of Eurex Clearing are invested applying similar security mechanisms as the placement of clearing members' funds, preferring reverse repos. In accordance with Regulation No 648/2012,</p>
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	<p>Eurex Clearing does not invest participants' assets in the participants' own securities or those of its affiliates. See the description above.</p> <p>For the securities portfolio, the average time-to-maturity may not exceed 2 years. The maximum remaining time-to-maturity of the individual securities may not exceed 5 years. Securities issued by one issuer may not exceed 25 percent of the maximum amount of securities portfolio. Issuer limits are established by Credit Committee. Additionally, there are concentration risk limits per country based on the rating and per issue type. Eurex Clearing only invests in a very limited group of highest quality issuers: governments, central banks, and multilateral development banks. Treasury Back Office monitors compliance with the concentration limits upon each change of the securities portfolio (securities buy or sell) and reports excesses immediately to Risk Management.</p> <p>Money market placements shall take place on a secured basis through reverse repo transactions. In order to avoid counterparty concentration and related risks, the placements are spread to the extent reasonable taking into account counterparties' credit quality. To maintain the credit risk exposure within acceptable parameters, credit exposure limits are set at the counterparty level. Exposures to connected counterparties are treated in a consolidated way. General thresholds are defined based on the rating of the counterparty. Review of the credit limits is undertaken by Credit Committee at least yearly or on demand. As strict restrictions exist on counterparty creditworthiness and placement tenors, and as only indirectly exposed to the securities underlying reverse repo transactions, no concentration limits apply on the securities underlying reverse repo transactions. However, Treasury Back Office will monitor concentration of issuers daily.</p>
Key Conclusions for Principle 16	<p>Eurex Clearing holds its own and its participants' assets at supervised and regulated entities that have robust and sound accounting practices, safekeeping procedures, and internal controls that fully protect these assets. In addition, Eurex Clearing offers both omnibus and individual segregation to clearing members and clients at the collateral location. Moreover, effective and sound procedures are in place that allow Eurex Clearing to have prompt access to its assets and the assets provided by participants, when required.</p> <p>Eurex Clearing investment strategy is consistent with its overall risk-management strategy and fully disclosed to its participants.</p>
Assessment of Principle 16	Observed

Recommendations and Comments	-
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<b>Principle 17. Operational Risk</b>	
<p>An FMI should identify the plausible sources of operational risk, both internal and external, and mitigate their impact through the use of appropriate systems, policies, procedures, and controls. Systems should be designed to ensure a high degree of security and operational reliability and should have adequate, scalable capacity. Business continuity management should aim for timely recovery of operations and fulfillment of the FMI's obligations, including in the event of a wide-scale or major disruption.</p>	
<p><b>Key Consideration 1</b></p> <p>An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.</p>	<p><b>Identification of operational risk</b></p> <p>All organizational units and individual employees of Eurex Clearing must identify and quantify potential risks in their area of responsibility. Newly identified risk shall be mapped by Eurex Clearing Enterprise Risk Management (ERM). The procedure stipulates that organizational units are responsible for the identification, measurement, and control of the risk in their area of operations. The ERM is responsible for the assessment and the reporting phase of the risk management process and assessing the adequacy of contingency measures.</p> <p>Eurex Clearing's Risk Framework is governed by Risk Management Policies and Procedures. The Operational Risk process covers the following five key phases: Risk Identification, Risk Notification, Risk Assessment, Risk Control, and Risk Reporting. The Risk framework is coordinated by a central Risk Management function independent of the operational areas, reporting to the Eurex Clearing Executive Board.</p> <p>Eurex Clearing Risk Framework is governed by the Group Risk Management Policy (GRMP). The Risk Strategy differentiates between four major risk types that are managed and controlled with distinct methods: financial risk, operational risk, project risk, and business risk. Operational risk is defined as the risk of loss resulting from inadequate or defective systems and internal processes, from human or technical failure, from inadequate or defective external processes and from legal risks. The GRMP documents DBG group-wide risk management concept by describing the risk management framework in terms of processes, roles and responsibilities applicable to all staff and organizations of Deutsche Börse entities. Departments are responsible for the:</p>

- Capture of incidents impacting their area as early as possible,
- Conduct of necessary investigations to identify root cause and measure potential impact,
- Identification, implementation and monitoring of effectiveness of the necessary mitigation action aiming at controlling both the cause and the effect of the incident,
- Notification to Enterprise Risk Management (or to the dedicated risk management function which then in turn and without delay notifies ERM in case of legal entities which have implemented such a dedicated risk management function) according to the guidelines provided in this procedure.

The Risk framework is coordinated by a central Risk Management function, independent of the operational areas, reported to the executive management and under the supervision of Eurex Clearing's CRO. Furthermore, adequate monitoring is ensured by the quarterly Eurex Clearing Risk Report to the Eurex Clearing Executive Board and a yearly Operational Risk review.

Roles and responsibilities within the operational risk management are defined by the Operational Risk Procedure. In the identification of risk whether internal or external, Eurex Clearing uses operational risk scenarios for quantifying operational risks. For this purpose parameters are defined, which can be based on statistical data in case of actual process monitoring, or on subjective expert appraisal when no statistics are available.

As stated in the Business Continuity Management (BCM) Policy, Eurex Clearing takes into consideration external links and interdependencies within the financial infrastructure and functions or services which have been outsourced to third-party providers in the risk analyses and the BCM Plans.

In addition, a well-defined physical security policy is in place. The Corporate Security Policy of DBG, duly adopted by the Executive Management of Eurex Clearing defines the framework of all procedures, guidelines and practices for configuring and managing security in DBG in order to protect people and property and consequently integrity and reputation of DBG from potential threats.

Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events and consists of:

- *Availability Risk*: Risk of disruption in service delivery due to unavailability of resources. It includes risk of unavailability of technical infrastructure, facilities, and staff;
- *Risk of Service Deficiencies*: Risk arising from impaired (no or wrong) process or execution, due to product, process or execution deficiencies. It includes internal human errors and omissions, suppliers deficiencies and product flaws;
- *Risk of Damages to Physical Assets*: It includes the risks due to accidents and natural hazards, as well as terrorism and sabotage; and
- *Legal Risk*: Risk arising from the non respect of laws and regulations and all contractual commitments. It includes risks coming from non respect of existing laws and legal practices, contracts and corporate governance.

Furthermore, DBG has an OpRisk External Loss Database. DBG uses several data sources in Operational Risk management. Apart from internal data on Operational Risk events having materialized within DBG, external data may serve as another source. This means that information on Operational Risk events encountered by other companies is included into the DBG's own Operational Risk management process and considered during OpRisk scenario reviews. These external OpRisk events are stored in the OpRisk External Loss Database.

Eurex Clearing currently uses scenario based risk analysis as part of the Operational Risk process, as defined in the Group's overall risk management framework. The scenario risk analysis includes, for example, disruption of clearing systems caused by hardware, network, software or even terrorist attack; disruption of services from external providers, including utilities services; internal human errors and omissions related to calculation of settlement prices and delivery of securities. The results of the scenario risk analysis are assessed by Enterprise Risk Management in due course and will be taken into account during the regular reviews of the Eurex Clearing BCM Policy as well as the BCM plans.

	<p>The operational risk scenarios are reviewed annually by Enterprise Risk Management in conjunction with the business units and the results of this analysis are reported to the Eurex Clearing Executive Board.</p> <hr/> <p><b>Management of operational risk</b></p> <p>Together with DBG, Eurex Clearing has implemented a group-wide incident and crisis management process and Eurex Clearing's business continuity plan will support a coordinated reaction to incidents.</p> <p>Eurex Clearing's business continuity plan (BCP) is a group-wide policy describing DBG's approach and organizational roles and responsibilities with regard to the BCM. However, the critical services for Eurex Clearing are defined in its Appendix of the BCM Policy. The appendix was approved by the Eurex Clearing Executive Board on 12 June 2015. The mission critical functions within the Cash &amp; Derivatives Markets are for example functional operations of the Clearing and Risk systems for the mission critical tasks:</p> <ul style="list-style-type: none"> <li>• Cash and Collateral Management (cash receipts)</li> <li>• Delivery Management (Supervision of physical deliveries)</li> <li>• Risk Monitoring incl. processing of Intraday and overnight Margin Calls</li> <li>• Mission critical master data maintenance</li> <li>• Default Management Processing (Member Suspension and Member Default)</li> <li>• End-of-day processing CCP, CARMEN (interface cash payment system), Risk Engine</li> </ul> <p>In the risk analyses based on the BCM Plan, Eurex Clearing takes into consideration external links and interdependencies within the financial infrastructure and functions or services which have been outsourced to third-party providers.</p> <p>Assessment of the operational risk is conducted yearly on the basis of workshops with Enterprise Risk Management and staff belonging to respective departments to include the relevant expertise in for the assessment of operational risks that Eurex Clearing is exposed to,</p>
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	<p>thereby so-called damage scenarios are developed. These scenarios mirror probability and financial extent stemming from operational risk.</p>
	<p><b>Policies, processes and controls</b></p> <p>In accordance to Section 25a German Banking Act and Sections AT 5 and AT 6 of the “Minimum Requirements for Risk Management Rules” (MaRisk) issued by BaFin. Eurex Clearing defined and maintains standards and work flows for documentation, procedures and policies. For risk management purposes these mainly comprise the Group Risk Management Policy, Operational Risk Procedure, Incident Notification Procedure, Project Analysis Procedure and BCM Policy which are published in Eurex Clearings Intranet. The standards are regularly audited by Internal Audit as well as external auditors.</p> <p>With respect to fraud prevention, Eurex Clearing applies the anti-fraud guideline of DBG. The guideline intends to prevent so-called fraud within DBG in order to guarantee the protection of Group assets. To prevent fraud, all employees must comply with the established rules of conduct, and suitable, group-wide structures are maintained.</p> <p>Eurex Clearing has processes for Change Management in place that can cover changes to hardware, system software, ‘live’ applications software, and all documentation or procedures that are relevant to the running, support and maintenance of live systems, excluding Development.</p> <p>As far as Operational Risk is concerned, the key preventive measures consist in strong internal control processes, which are performed and documented in the framework of the ISAE 3402 certification, and ongoing initiatives to further reduce errors and omissions. Further, the impact of a risk materializing is reduced by a number of measures which will take effect at the time or after an incident, such as business continuity management and insurance programs.</p> <p>Employees are asked to report incidences of fraud or so-called potentially fraudulent conduct either to Group Compliance or their Line Manager, who will in turn notify Group Compliance if the concerns are justified. Where employees are in doubt as to whether certain conduct or an event may involve fraud, Group Compliance is available to give advice to all employees. If there is a suspicion of fraud, Group Compliance will seek further information. In order to clarify the matter,</p>

	<p>Group Compliance may enlist the support of other departments in the investigation.</p> <p>The Project Management Handbook describes the fundamental practices that the DBG project management community will follow to achieve project goals on time, within budget and to high quality. The Handbook is divided into different fundamental lifecycle phases based on the SUMMIT Iterative V-Model.</p> <p>SUMMIT is a methodological framework for software engineering, designed to address the entire project life cycle for a broad range of projects from small to large. It then guides the integration of these solutions into the user's business environment and fully implements these solutions to achieve the desired result. SUMMIT also refers to non-IT activities, ensuring that no business delivery tasks are overlooked and that a successful launch is achieved. The objective of SUMMIT is to enable project teams to develop new products and implement systems in the end-user's environment reaching Eurex Clearing's goals.</p> <p>There are also processes for Change Management that can cover changes to hardware, system software, 'live' applications software, and all documentation or procedures that are relevant to the running, support and maintenance of live systems, excluding Development.</p> <p>Two further Change Management processes are about Customer Technical Support and Patrol Configuration.</p>
<p>Key Consideration 2</p> <p>An FMI's board of directors should clearly define the roles and responsibilities for addressing operational risk and should endorse the FMI's operational risk-management framework. Systems, operational policies, procedures, and controls should be reviewed, audited, and tested periodically and after significant changes.</p>	<p><b>Roles, responsibilities and framework</b></p> <p>For Operational Risks roles and responsibilities are defined in the Operational Risk Procedure which was approved by the Executive Board of Eurex Clearing and adopted in April 2014. Within this procedure a segregation of duties into the central Risk Management functions, local OpRisk control (Risk Owners and OpRisk Representatives) as well as an independent review function (Internal Audit) is established, following the three lines of defence governance concept for OpRisk management. However, the ultimate responsibility for risk management lies with the Executive Board. The risk owner is responsible for managing and mitigating OpRisk within the assigned area. Furthermore, the OpRisk Representative is entrusted with the day-to-day risk oversight and evaluation. It is the responsibility of the Risk Management function to assess risks and to independently monitor the OpRisk management as well as to develop instruments for the overall OpRisk management and</p>

	<p>controlling. In general, the Risk Management functions must create transparency over the risk situation and oversight the risk profile.</p> <p>The risk management function at Eurex Clearing is performed by the CCP Risk Management Department, which develops and maintains operational risk procedures for new and existing clearing services.</p> <p>In addition, Eurex Clearing is included in the group-wide risk management process of DBG and its Risk Management Policy stipulates that the relevant boards and committees are timely and consistently informed about material risks - whether existing or potential - and the related risk control measures in order to take appropriate action. Adequate quality standards are established and reviewed on an ongoing basis. This policy was approved by the Executive Board of Eurex Clearing.</p>
	<p><b>Review, audit and testing</b></p> <p>The Risk Management Framework is reviewed on an ongoing basis by Eurex Clearing Executive Board. In addition, consistent with BT 2.1 of the “Minimum Requirements for Risk Management Rules” (MaRisk), issued by BaFin, the risk based internal audit plan covers all relevant aspects of the CCP including the risk management processes and control mechanisms. Audits are planned on a yearly basis for areas assessed. Independent audit opinions on the appropriateness of the risk control and risk management functions are given by Eurex Clearing’s Internal Audit function.</p> <p>Internal Audit conducts examinations of Enterprise Risk Management as well as of the Clearing Risk Management area based on the approved annual audit plan. Audit results and audit recommendations are reported to the responsible senior management as well as to Eurex Clearings’ executive management.</p> <p>The Internal Audit Plan is prepared annually, based on a three year audit cycle derived from a risk-based methodology. Furthermore, the Audit and Risk Committee addresses risk matters, inter alia advises the Supervisory Board on the institution’s current and future risk appetite and Risk Strategy and examines whether the incentives provided by the remuneration system take into account the risk, capital and liquidity structure of Eurex Clearing.</p> <p>Eurex Clearing conducts annually workspace and staff unavailability tests, during business hours. It also involves clearing members, external</p>

	<p>providers and relevant institutions with which interdependencies have been identified in the BCM Plans in the testing process.</p>
<p>Key Consideration 3</p> <p>An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.</p>	<p>Functions which are indispensable for the critical daily operations in view of the above objectives are defined as mission critical and must be resumed within a Recovery Time Objective (RTO) of 2 hours following a disruptive incident, crisis or disaster. The RTO is the time period following a disruptive incident within which products, services or activities must be resumed or resources must be recovered. During the last 12 months the availability rate was 100 percent.</p> <p>Outsourced services within DBG as well as to external parties are subject to a standardized outsourcing monitoring process, which is defined on DBG level and implemented by Eurex Clearing. Initial outsourcings will be assessed and classified via a standardized "contract routing card" process, which also requires an assessment of criticality by the business owner. Thereafter, assessments of outsourced services are conducted on an annual basis. Ad-hoc reviews will be initiated in case of regulatory changes or amendments to existing outsourcing arrangements.</p> <p>The business continuity plans specify how services, processes and resources will be reinstated to a predetermined level within pre-defined time scales after an incident or disaster. To ensure that Eurex Clearing is able to respond to an incident in rapid, controlled and effective manner, an incident and crisis management process is in place for the timely detection, escalation and assessment of incidents and the prompt activation of the business continuity plans. Some aspects of the</p> <p>The operational reliability objectives include:</p> <p>- <i>Systems unavailability</i></p> <p>Eurex Clearing's systems are replicated over two geographically separated redundantly laid out data centers one located in the Rhein-Main area. The data centers are operated remotely requiring no staff on-site. They are interconnected with high-speed redundant data links and provide redundant connectivity to clearing members. Data is written to multiple disks in real time across the two data centers. Should an event occur disabling the primary data center, the secondary could be brought into operation without loss of data and within the recovery objective of 2 hours. The observed recovery time is significantly shorter than the RTO objective. The data centers are equipped with environmental protection</p>

devices including intrusion and fire detectors, fire suppression systems, uninterruptable power supply and backup generators.

DBG further operates data centers in Chicago and Luxemburg hosting access points to its Frankfurt based trading and clearing systems, from which the Eurex Clearing in Frankfurt based clearing systems and networks can also be operated remotely. Routinely the Chicago staff operates the night shift.

*- Workspace unavailability*

Exclusively dedicated backup facilities exist at Frankfurt downtown to provide backup office space for the Eurex clearing critical business units in the event their normal office location would become unavailable. For critical IT staff the backup location are in the Prague and Chicago offices. The backup office facilities are fully equipped and networked to both the primary and secondary data centers and are kept operational at all times.

*- Staff unavailability*

Staff unavailability plans are in place for the critical units to address the loss of staff in catastrophic scenarios, such as terrorist attacks, or in case of a pandemic. The plans defined by the mission critical units should make sure that the minimum staff and skills required are available outside the impacted location or area, and typically consist of the following measures:

- Dispersed operations or business transfer: pre-positioned dispersal of staff between DBG locations on a business as usual basis or transfer of workload to staff in another DBG location at the time of an incident. Different dispersal or business transfer combinations are possible, depending on the skills available in the different locations: for example, Eschborn-Chicago, Eschborn-Luxembourg or Eschborn-Prague.
- Reliance on absent staff: staff not on site at the time of an incident, for example off shift or on holidays, are called in to resume operations.

*- Supplier unavailability*

Eurex Clearing aims at assuring itself of the continuous provision of critical supplier services to the extent possible through a regular due diligence review of suppliers' BCM arrangements, provision of services by

	<p>alternative suppliers if possible, service level agreements describing the minimum service levels expected from suppliers or definition of alternative contingency procedures.</p> <p>- <i>Crisis management</i></p> <p>Eurex Clearing is integrated in the DBG crisis management process which is documented in a group-wide crisis management guideline. Based on this guideline, there is a crisis management procedure for the Cash &amp; Derivatives Markets Division to ensure the timely and adequate detection, assessment, escalation and communication of incidents and crisis situations within and outside the impacted division.</p> <p>As Eurex Clearing is annually conducting its workspace and staff unavailability tests during business hours, relevant external parties are implicitly involved. Additionally, Eurex Clearing involves Clearing Members, external providers, and relevant institutions in the financial infrastructure with which interdependencies have been identified in the BCM Plans in the testing process. The test results have been assessed by BCM function. In the future, BCM function will also share these test results with all involved third parties.</p> <p>The Audit and Risk Committee are compliant with the European's financial rules in CRR/CRD IV (Capital Requirements Regulation/Capital Requirements Directive) and EMIR. The Committee discusses and examines the annual financial statements and the auditor's report on the annual financial statements in detail and reports the results to the Supervisory Board.</p> <p>In addition to the audits by Internal Audit, clearing operations, risk management processes, internal control mechanisms, and accounts are subject to independent audits of an external audit company on an annual basis. The result of the audit is communicated to the board and the competent authority.</p>
<p>Key Consideration 4</p> <p>An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.</p>	<p>The systems are capable of processing the necessary information to perform the activities and operations in a safe and efficient manner. System documentation on the information technology architecture is available and redundant system architecture with failover functions are placed to ensure Eurex Clearing is scalable and can deal with operational needs and the risks faced, even in stressed market conditions. Additionally, regularly tested business continuity measures are in place. To assess the need for introducing new technology including clear</p>

	<p>reversion plans, Eurex Clearing monitors system performance constantly. Reports of this monitoring are provided to the management regularly.</p> <p>Stringent testing is performed for each change to the system and changes are simulated in a separate technical environment including involvement of participants, vendors and other affected parties. Additionally a permanent simulation environment is operated for testing.</p> <p>Transaction volumes on Eurex Clearing's core systems are constantly monitored if they are within a defined overall capacity target and reported to responsible Executive Board members. If necessary, the capacity target is adjusted and an increase of system capacity is initiated to meet the new capacity target.</p> <p>Based on increased protection needs of a data center DBG documents the data centre specific security and safety standards and requirements (PSSDC). Security is the process or means of delaying, preventing, and protecting against external or internal dangers, loss, criminals, and other individuals or actions that threaten to weaken, hinder or destroy a data centre. Safety involves whatever contributes to maintaining the steady state of a data centre. Safety means stability over time, continuity of function and reliability of structure. Safety requirements are those requirements which cover all issues of quality, reliability, availability and maintainability.</p> <p>High available services mean, that the infrastructure of the data centre is rigid to environmental conditions i.e., flooding and provides power and cooling even in case of bigger outages. To assure highest security standards and highest availability of a DBG data centre a regular PSSDC analysis is essential. Therefore DBG's main data centers are analyzed every year. This analysis will be conducted alternating between a remote analysis and by an on-site analysis. DBG's access points will be evaluated every second year by a remote analysis and at least by one on-site analysis over a five years period. Results of analysis will be fed into the BCM and risk management process.</p> <p>The security standards set out the baseline requirements for the security concept for operating a data centre. They are based on the Corporate Security Policy and on the Group-wide physical security standards, which derive from the Corporate Security Policy. The requirements as per ISO 27000 (Information Security Management Systems) are included</p>
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	<p>in the document Protection &amp; Security Standards for Data Centers, which was co-developed with IT &amp; MD+S Infrastructure &amp; Operations.</p> <p>In February 2014 Eurex Clearing performed a Protection, Security, and Safety (PSSDC) analysis on its data centers (Hausen, Equinix FR2, Equinix CH1 and Level(3)). Hausen and Equinix FR2 are the main data centers of Eurex Clearing in Frankfurt while Equinix CH1 and Level(3) are the Eurex Clearing access points in Chicago. In the PSSDC analysis potential residual risks have been identified. All the major deviations of these standards are being addressed adequately and will be taken into account from an operational risk perspective in the next respective assessment in Q2 2014.</p> <p>The data centre's PSSDC set out the baseline requirements for the security concept for operating a data centre. They are based on the Corporate Security Policy and on the Group-wide physical security standards which derive from the Corporate Security Policy. The requirements as per ISO 27000 (Information Security Management Systems) are included in the document Protection &amp; Security Standards for Data Centers, which was co-developed with IT &amp; MD+S Infrastructure &amp; Operations.</p>
<p>Key Consideration 5</p> <p>An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.</p>	<p><b>Physical Security</b></p> <p>A risk assessment containing a Security Controls Questionnaire is completed including these physical vulnerabilities. Also, essential utility lines for power and telecommunication are laid underground and are thus not exposed to adverse weather conditions such as storm or lightning. The construction and technical safety provisions in place at both locations adequately and reliably protect these data centers against the few environmental hazards that are to be expected in central Europe. The risk of fire is handled via the two separate data centers; each equipped with fire suppression systems.</p> <p>The scenario analysis is also reviewed annually. The results of the reviews are reported to the Eurex Clearing Executive Board by Risk Management function. Hence, any physical security risks arising out of these assessments are regularly considered.</p> <p>Eurex Clearing currently uses scenario based risk analysis as part of the operational risk process, as defined in DBG's overall Risk Management Framework. The scenario risk analysis includes, for example, disruption of clearing systems caused by hardware, network, software or even terrorist attack; disruption of services from external providers, including utilities services; internal human errors and omissions related to calculation of</p>



	<p>settlement prices and delivery of securities. The results of the scenario risk analysis are assessed by BCM function and taken into account during the regular reviews of the Eurex Clearing BCM Plan. The scenario analysis is reviewed annually. The results of the reviews are reported to the Eurex Clearing Executive Board.</p> <p>Based on increased protection needs of a data centre Deutsche Börse Group documents the data centre's PSSDC.</p> <p>The overall BCM Framework ensures that Eurex Clearing secures the functioning and timely recovery of its crucial systems and processes in case of a disaster or emergency event.</p> <p><b>Information Security</b></p> <p>Eurex Clearing has a robust information security framework to manage the information security risk. The DBG-wide Information Security Policy is applicable to Eurex Clearing. The Policy determines the approach and organizational roles and responsibilities with regard to Information Security Management. The aim is to provide clear direction for the protection of information and corresponding facilities, used for information processing and communication, of DBG. Next to the Policy, the information security framework contains Information Security Standards &amp; Guidelines and Information Security Best Practices.</p> <p>Deutsche Börse Information Technology is certified as meeting the requirements of both ISO 9001:2008/TickIT and ISO/IEC 20000-1:2011. Based on the knowledge and experience of experts working in IT service management, International Standard ISO/IEC 20000-1 demonstrates well run IT service management processes in accordance with best practices. It relates closely to the IT Infrastructure Library (ITIL). ITIL is a widely accepted approach to IT service management built around a set of best practices, supported by a comprehensive qualifications scheme and accredited training organizations. ISO/IEC 20000-1 includes specific requirements for Information Security Management.</p>
<p>Key Consideration 6</p> <p>An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations,</p>	<p><b>Objectives of business continuity plan</b></p> <p>DBG has implemented a group-wide incident and crisis management process, which facilitates the coordinated response and rapid reaction to an incident or crisis in a controlled and effective manner. The process aims to minimize business and market impact, as well as enable the swift return to regular business activity.</p>

<p>including events that could cause a wide-scale or major disruption. The plan should incorporate the use of a secondary site and should be designed to ensure that critical information technology (IT) systems can resume operations within two hours following disruptive events. The plan should be designed to enable the FMI to complete settlement by the end of the day of the disruption, even in case of extreme circumstances. The FMI should regularly test these arrangements.</p>	<p><i>Escalation procedure</i></p> <p>Incident Managers are appointed as the unique points of contact in their respective business areas in case of incidents and crises. They also ensure the proper escalation up to the Executive Management and Executive Committee levels. In case of a crisis, a member of the Executive Committee acts as the Crisis Manager.</p> <p><i>Alert system</i></p> <p>An alert system classifies incidents and crises according to color-codes relating to a respective level of business impact. The alert system ensures an adequate response to incidents and crises, including the potential activation of business continuity plans. The system also provides for the timely notification of relevant internal and external parties.</p>
	<p><b>Design of business continuity plan</b></p> <p>Eurex Clearing’s business continuity plan is integrated into the overall Risk Management Framework. It comprises information, guidelines and procedures, including the loss of IT, workspace and staff — in order to maintain the continuity of critical services.</p> <p>All BCM Plans include a Recovery Time Objective (RTO) to ensure that critical services, processes and resources are recovered in time before Eurex Clearing is impacted beyond tolerable limits. The DBG group-wide BCM Policy and the Eurex Clearing BCM Policy prescribes a maximum RTO of 2 hours as an objective for all mission critical functions.</p> <p>Eurex Clearing’s Recovery Point Objective (RPO) is zero. It ensures this requirement by constantly synchronizing and mirroring all data in real time between two independent data centers. The BCM test approach includes a regular systems unavailability test to ensure and monitor the Recovery Point Objective of zero. The responsible IT units simulate the loss of one data centre and validate that critical systems can effectively run in the remaining data centre. The tests prove that in case of the unavailability of different clearing systems the recovery is possible to the full extent. In particular, the triggered fail-over mechanism that is processed by switching off services of one data centre and restarting services in another allow to assess the effect of any disruptions and to implement the processes to prevent a detrimental impact on the continuous operations.</p>

	<p>The DBG disposes of a Crisis Management Procedures Maintenance Guideline which requires a 6-monthly review of the divisional crisis management procedures. The group-wide Crisis Management Guideline includes provisions for both internal and external communication. The communication procedures included in the Guideline and in Eurex Clearing incident and crisis management procedure ensure that external stakeholders such as competent authorities, clearing members, clients, settlement agents, securities settlement and payment systems and trading venues will be kept adequately informed.</p>
	<p><b>Secondary site</b></p> <p>Eurex Clearing, as part of DBG, has a secondary processing site available. This secondary processing site has IT capacity, resources and functionalities to ensure the continuity of all critical functions but is not a fully-fledged secondary site cloning the primary site in particular with appropriate staffing arrangements, which would allow swaps of operations between the primary and secondary sites.</p> <p>The geographical risk profile of the secondary site is less than 50 kilometer from the primary site and according to Eurex Clearing, it is sufficiently distinct.</p> <p>Deutsche Börse Group determines both minimum and maximum dispersal criteria thereby avoiding the sharing of common infrastructure, such as power distribution stations or telecommunications to avoid a single point of failure. In addition, both data centers are equipped with Uninterruptible Power Supply (UPS) and Generators to cope with a power outage.</p> <p>Nevertheless the business continuity plan includes a Recovery Time Objective (RTO) to ensure that critical services, processes, and resources are recovered in time before Eurex Clearing is impacted beyond tolerable limits.</p> <p>In general, manual paper-based processes are not viable alternatives to the normal automated system-based processes therefore there are no manual procedures available.</p>
	<p><b>Review and testing</b></p> <p>Eurex Clearing's business continuity arrangements are tested on a regular basis. The group-wide BCM Policy, adopted by Eurex Clearing, requires that BCM plans must be used, tested or exercised regularly in the most</p>

	<p>realistic way to ensure their effectiveness and in order to provide assurance that a real incident could be successfully managed.</p> <p>The BCM Plans are tested for systems, workspace, and staff unavailability. The Recovery Time Objective is part of the test objectives. The workspace and staff unavailability tests are not announced to the participating units and are planned by Eurex Clearing's BCM function. The systems unavailability tests are planned by the respective IT department. Test reports are issued by Eurex Clearing's BCM function.</p> <p>Systems failover tests are also performed after significant modifications or new releases.</p> <p>Eurex Clearing currently conducts tests of BCM Plans involving scenarios of large scale disasters, involving the relocation of staff to the secondary site and switchovers between primary and secondary processing sites.</p> <p>Eurex Clearing takes the outcome of the tests and recommendations of independent reviews (Internal Audit Report, Annual Statement) and other reviews and of competent authorities into consideration when updating its Eurex Clearing BCM Policy and BCM Plans.</p> <p>Eurex Clearing reviews its Eurex Clearing BCM Policy and BCM Plan after every significant disruption, to identify the causes and any required improvements to its operations, business continuity policy and disaster recovery plan.</p> <p>As Eurex Clearing is conducting its workspace and staff unavailability tests during business hours, relevant external parties are implicitly involved. The test results are assessed by Eurex Clearing's BCM function. Eurex Clearing plans to share a summary of these test results with relevant third parties in accordance with the Business Continuity Management Policy. Consequently any received feedback from the involved third parties will be processed and were relevant incorporated in the BCM Plans or future tests.</p>
<p>Key Consideration 7</p> <p>An FMI should identify, monitor, and manage the risks that key participants, other FMIs, and service and utility providers might pose to its operations. In</p>	<p><b>Risks to the FMI's own operations</b></p> <p>Eurex Clearing has identified several operational risks that could be caused by key participants, service and utility providers. The unavailability of services or service deficiency by service providers, e.g., telecommunication providers, or critical suppliers, e.g., SWIFT, are considered as root causes within several operational risk scenarios of Eurex Clearing. Furthermore extreme actions of customers could have an</p>

<p>addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.</p>	<p>impact on system capacities which could lead to disruptions of services. The operational risk profile is reviewed at least on a yearly basis. Regular monitoring is carried out by business units.</p> <p>The proper interconnectedness of business continuity plans between outsourcing and insourcing company is already requested by the current national German framework for credit institutions. It is therefore implemented both within the business continuity framework and the outsourcing framework. In the course of the risk assessment, the proper functioning of the business continuity framework in an outsourcing relation is a crucial part and in assessing possible outsourcings the outsourcing coordinator will not recommend to the executive management any outsourcing where proper business continuity is not guaranteed and will also raise any problem detected by the business owner in that regards – on top of normal escalation processes within the business processes and risk management – to the executive management.</p> <p>Any outsourcing of activities requires the prior consultation of Eurex Clearing’s outsourcing coordinator as stipulated in the GDB Outsourcing Policy. In this process an initial outsourcing assessment is conducted that takes into account several aspects for critical services. The outsourcing coordinator triggers such an analysis and solicits the professional expert judgment from the business owner, who is obliged to raise objections if the service provider is not able to adequately provide services that are critical. A similar assessment is performed on a regular basis to monitor the services provider’s capabilities to meet the internal Business Continuity Management standards.</p>
	<p><b>Risks posed to other FMIs</b></p> <p>The Eurex Clearing BCM Policy contains a requirement to take into account external links and interdependencies within the financial infrastructure and critical functions or services which have been outsourced to third-party providers. Annex 2 includes a list of the mission critical external dependencies.</p> <p>Furthermore, Eurex Clearing involves Clearing Members, external providers, and relevant institutions in the financial infrastructure with which interdependencies have been identified in the BCM Plans in the testing process.</p>

	Eurex Clearing will share the test results with all involved third parties in accordance with the Business Continuity Management Policy. Consequently any received feedback from the involved third parties will be processed and where relevant incorporated in the BCM Plans or future tests. Further, Eurex Clearing takes external dependencies into account in its business continuity plans.
Key Conclusions for Principle 17	Eurex Clearing has established a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.
Assessment of Principle 17	Broadly observed
Recommendations and Comments	<p>Eurex Clearing business continuity arrangement includes a hot secondary site to ensure effective business continuity. However, not all members of the back-up business team are present at the secondary site all the time; some will work via remote access or can be called in if needed.</p> <p>Eurex Clearing as a CCP systemically important in multiple jurisdictions should ensure the presence of a secondary business team on the premises of the secondary site to allow swaps of operation between the primary and secondary sites during business-as-usual.</p>

### Principle 18. Access and Participation Requirements

An FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.

Key Consideration 1	<b>Participation criteria and requirements</b>
An FMI should allow for fair and open access to its services, including by direct and, where relevant, indirect participants and other FMIs, based on reasonable risk-related participation requirements.	<p>Eurex Clearing requires clearing members to provide evidence of sufficient financial resources and operational capacity to meet their obligations and minimize the risk towards Eurex Clearing. It uses a risk-based approach to determine the level of financial resources requirements that a clearing member needs to prove:</p> <ul style="list-style-type: none"> <li>• Minimum liable equity capital requirements are defined and depend on the product and the type of clearing membership the new member applies for. A minimum liable equity capital requirement is defined for admission and Eurex Clearing additionally employs a dynamic component ensuring that the liable equity capital requirements are scaled to represent the risk of the individual</li> </ul>

	<p>clearing member. The dynamic component is calculated as a percentage of each clearing member's additional margin requirement.</p> <ul style="list-style-type: none"> <li>• If Clearing Members have insufficient liable equity capital or equivalent own funds for a clearing license, Eurex Clearing may determine that the shortfall may be made up by collateral in cash and/or securities.</li> <li>• Clearing Members must contribute to the Clearing Fund whereas the contribution is determined as the maximum amount out of the minimum requirement of each clearing member and the requirement based on the risk exposure of a member firm. clearing members are required to deposit the higher of the following amounts: <ul style="list-style-type: none"> <li>– A minimum amount (static component): for the General Clearing Fund (including OTC IRS): EUR 5 million for a GCM/CM or EUR 1 million for a DCM. Specific Lender License Holders (SLLH) for Securities Lending is not concerned.</li> <li>– A dynamic component based on the member's total margin requirement across all products.</li> </ul> </li> </ul> <p>Eurex Clearing also assesses the participants' operational capability. Members must provide proof of the technical and functional connection, the use of appropriate technical equipment (back-office facilities) and sufficiently qualified back-office personnel.</p> <p>Eurex Clearing has established a Member Compliance Framework to assess clearing members' compliance with the participation requirements set out by Eurex Clearing.</p> <p>With respect to the default management process, each clearing member is obliged to participate (i) in Default Management Committees (if selected to do so by Eurex Clearing in accordance with its rules), (ii) in default simulations and (iii) in auctions of a defaulted clearing member's positions, with respect to all asset classes such clearing member is active in.</p>
	<p><b>Access to trade repositories</b></p> <p>Not applicable.</p>

<p>Key Consideration 2</p> <p>An FMI's participation requirements should be justified in terms of the safety and efficiency of the FMI and the markets it serves, be tailored to and commensurate with the FMI's specific risks, and be publicly disclosed. Subject to maintaining acceptable risk control standards, an FMI should endeavour to set requirements that have the least-restrictive impact on access that circumstances permit.</p>	<p><b>Justification and rationale of participation criteria</b></p> <p>The overall objective of clearing membership requirements is to admit firms, which are appropriately licensed in their local jurisdiction to provide credit to customers in relation to transactions of the respective market and receive collateral in the form of cash or securities.</p> <p>The scope of the membership requirements encompasses a set of quantitative and qualitative criteria, catering for excellent credit quality, indicating the financial and operational strength of clearing members at the time of admission and ongoing during their membership.</p> <p>Admission criteria can be categorized according to the following criteria and requirements:</p> <ul style="list-style-type: none"> <li>• Liable equity capital requirements;</li> <li>• Acceptable credit quality (initial and ongoing credit risk assessment);</li> <li>• Jurisdiction &amp; regulatory oversight;</li> <li>• Infrastructure requirements;</li> <li>• Operational set up (Including Qualified Clearing Staff); and</li> <li>• Contribution to the Clearing Fund (a clearing member's admission requires the payment to the Clearing Fund).</li> </ul> <p>Eurex Clearing offers two types of Clearing Licenses:</p> <ul style="list-style-type: none"> <li>• General Clearing License;</li> <li>• Direct Clearing License;</li> </ul> <p>General Clearing members and OTC clearing members are entitled to clear own transactions, their customers transactions as well as Non-Clearing Members transactions, and Registered Customers transactions. Direct Clearing Members are entitled to clear own transactions, their customers transactions, Registered Customers transactions, and only those Non-Clearing Members transactions referring to transactions by Non-Clearing Members, affiliated with it.</p> <p>To ensure that clearing members that clear transactions on behalf of their clients have necessary additional financial resources, different minimum</p>
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equity capital is required per clearing membership, cleared products and markets served. The different categories are shown in the table below. Furthermore different minimum requirements for the Clearing Fund contribution are applicable depending on the type of clearing membership.

No	Product	Market	GCM/ CM equity required in EUR mn	DCM equity required in EUR mn	Credit against No.
1	Futures/ Options	Eurex Frankfurt/ Eurex Zürich	50	12.5	7
2	Securities (Bonds)	Eurex Bonds	30	7.5	
3	Securities (Repos)	Eurex Repo	200	50	
4	Securities (Equities)	FWB	15	3.75	5, 6
5	Securities (IRSX)	Irish Stock Exchange (ISE)	15	3.75	4, 5
6	Futures/Options (EEX)	EEX	50	12.5	1
7	Securities Lending	CCP Services for Securities Lending	200	50	
8	Interest Rate Derivatives	EurexOTC Clear	30	-	

#### Least restrictive access

Eurex Clearing assesses its admission requirements annually or on an ad-hoc basis, if necessary. Any recommendations to amend the admission criteria are always discussed in advance with market participants, clearing members, the Eurex Clearing Committees (Derivatives, Cash Equity and Repo & Bonds) and the Eurex Clearing Risk Committee.

#### Disclosure of criteria

The admission requirements are set forth in the Clearing Conditions in Chapter I, Part 1 for the general prerequisites and in Chapters II-IX for special prerequisites for the relevant transaction type (Transactions concluded at Eurex Deutschland/Zürich, Eurex Bonds, Eurex Repo, Frankfurter Wertpapierbörse, Irish Stock Exchange and/ or European Energy Exchange as well as the novation of over-the-counter Transactions in interest rate swaps and securities lending). These criteria and other rules and regulations are available on the Eurex Clearing website: <https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations/136778/>.

<p>Key Consideration 3</p> <p>An FMI should monitor compliance with its participation requirements on an ongoing basis and have clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.</p>	<p><b>Monitoring compliance</b></p> <p>According to the Clearing Conditions, Clearing Members are obliged to provide evidence of compliance with the prerequisites for a clearing license. As part of each clearing member admission process it is ensured that all admission requirements are fulfilled. In order to also ensure the application of the admission criteria on an ongoing basis, clearing members are regularly audited based on the Member Compliance Framework. This includes on-site visits as well as due diligence questionnaires as the on-site evaluation will not always cover all aspects of the audit.</p> <p>Eurex Clearing monitors the compliance of operational procedures and the adequacy of back-office staff of clearing members with the operational minimum standards established by its admission criteria.</p> <p>The audit process also focuses on the compliance of clearing members who outsource clearing, risk and/ or back-office functions. Thereby, Eurex Clearing is entitled to request further information and evidence concerning the orderly conduct of outsourced functions from the outsourcer if deemed necessary. In addition, Eurex Clearing or an independent auditor, authorized by Eurex Clearing, has the right to conduct on-site visits.</p> <p>More specifically, compliance of clearing members with financial resource requirements is monitored on a regular basis to obtain evidence of the level of their liable equity capital at admission and at least once a year. All clearing members are required to submit proof of liable equity capital annually by June 30 for the previous fiscal year. A minimum liable equity capital requirement is defined for admission and Eurex Clearing additionally employs a dynamic component for liable equity capital requirements. The dynamic component ensures that the liable equity capital requirements are scaled to represent the risk of the individual clearing member. The dynamic component is calculated as a percentage of each clearing member's additional margin requirement.</p> <p>The same process is applied for the Clearing Fund contribution. A minimum contribution is required and the dynamic component ensures scaling of the Clearing Fund contribution to represent the risk of the individual clearing member.</p> <p>The overall risk exposure of the single clearing member towards the clearing house is calculated regularly. Both the liable equity requirement and the Clearing Fund requirement are newly determined at the end of</p>
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	<p>each calendar quarter or ad-hoc, if required. Monitoring is performed once a week for liable equity capital requirements against reported liable equity capital and collateral as well as for the Clearing Fund requirements.</p>
	<p><b>Suspension and orderly exit</b></p> <p>In case of irregularities detected by the standard audit activities or in case of any doubt regarding the compliance of the Clearing Member with the admission requirement Eurex Clearing applies measures like:</p> <ul style="list-style-type: none"> <li>• Spot Tests; and</li> <li>• On-site audits.</li> </ul> <p>According to the Clearing Conditions Eurex Clearing is entitled to request further information and evidence concerning the orderly conduct of outsourced functions from the outsourcer.</p> <p>In case of breaches of rules discovered during the clearing member's ongoing operative assessment, external assessment through the due diligence questionnaire or during on-site assessments, an escalation process is started.</p> <p>The Clearing Conditions give Eurex Clearing the right to suspend and/or terminate a license and its business relationship with that member in case the admission requirements are no longer fulfilled.</p> <p>In case of breaches of rules discovered during the Clearing Member's on-going operative assessment, external assessment through the due diligence questionnaire or during on-site assessments, an escalation process is started. Eurex Clearing sends a Disciplinary Procedure Notice to the affected Clearing Member. Once the investigation by Member Audit Group into the Alleged Breach is completed, a report containing the findings of the investigation and the description of the alleged Breach as well as an indication of Eurex Clearing's intended course of action is delivered to the relevant Clearing Member. The Clearing Member shall respond in writing, stating whether or not they approve the Report and hereby concede to the Alleged Breach. If an amicable settlement between the Clearing Member and Eurex Clearing cannot be reached, a Disciplinary Committee will be convened in accordance with the "Eurex Clearing Statutes For The Disciplinary Committee". The committee hears the case and makes recommendations to the Executive Board of Eurex Clearing in regards to any penalties (sanctions and/or</p>

	<p>mitigating actions and fines) that should be imposed on Clearing Member. At the end of the process, a Final Decision Notice is delivered to the Clearing Member informing them of whether or not the Board of Eurex Clearing has decided to sanction them, stating the Sanction(s), if any, to imposed on the Clearing Member as well as ruling any remedying actions the Clearing Member will have to comply with.</p> <p>Upon the occurrence of certain termination events as listed in the Clearing Conditions, the termination rules with respect to a Clearing Member outlines in detail the procedures to be followed. Additionally, the Clearing Conditions describe the consequences of termination events. Relevant termination events with respect to a Clearing Member are also represented by 'Failure to comply with Clearing Conditions' and 'Failure to comply with Clearing License prerequisites' (allowing for a grace period where appropriate).</p> <p>Eurex Clearing will deliver a corresponding notice to the Clearing Member, terminate transactions, ensure realization of margin and variation margin, payment of a difference claim and a transfer of positions shall occur, as further provided for in the Elementary Clearing Model Provisions, Individual Clearing Model Provisions or the Net Omnibus Clearing Model Provisions, as applicable.</p> <p>If Eurex Clearing becomes aware of a termination event with respect to a Clearing Member, Eurex Clearing may one or more times suspend or restrict the clearing of Non-Covered Transactions, Covered Transactions and/or Net Omnibus Transactions under the corresponding Standard Agreement with Eurex Clearing. In the case of a suspension or restriction, Eurex Clearing will notify the Clearing Member and all Non-Clearing Members of such Clearing Member of the decision to suspend or restrict the clearing. Eurex Clearing shall specify, in the notification, a reasonable period of time during which such suspension or restriction shall apply. Furthermore, if Eurex Clearing so demands, the relevant Clearing Member shall, at the Clearing Member's own expense, provide such information and evidence as Eurex Clearing may deem necessary, in the reasonable opinion of Eurex Clearing, to conduct an appropriate investigation of the facts and circumstances relating to the termination event.</p> <p>The Clearing Conditions give Eurex Clearing the right to suspend and/or terminate a license and its business relationship with that member. Participation requirements are clearly stated in the Clearing Conditions "General Prerequisites for Clearing Licenses". This and other rules and</p>
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	regulations are available on the Eurex Clearing website ( <a href="https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations/136778/">https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations/136778/</a> ).
Key Conclusions for Principle 18	Eurex Clearing's participation requirements do not limit access on grounds other than risk (e.g., sufficient liable equity capital, compliance with technical requirements, verification of the legal validity and enforceability of the Clearing Conditions, etc.). It established clear and transparent admission criteria, which are set forth in the Clearing Conditions. Eurex Clearing assesses its admission requirements continuously, monitors compliance with its participation requirements on an ongoing basis, and has clearly defined and publicly disclosed procedures for facilitating the suspension and orderly exit of a participant that breaches, or no longer meets, the participation requirements.
Assessment of Principle 18	Observed.
Recommendations and Comments	

### Principle 19. Tiered Participation Requirements

An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.

Key Consideration 1	<b>Tiered participation arrangements</b>
An FMI should ensure that its rules, procedures, and agreements allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to the FMI arising from such tiered participation arrangements.	In principle, Eurex Clearing enters into transactions only with its clearing members, who are obliged to fulfill obligations resulting from cleared transactions in relation to Eurex Clearing. Nevertheless, Eurex Clearing has direct contractual relationships with certain clients of its clearing members. Non-Clearing Members and Registered Customers (a disclosed customer but not qualified as a trading participant) enter into tripartite agreements with their Clearing Members and Eurex Clearing. These tripartite agreements stipulate the rights and obligations (including information) for all three involved parties. Based on these agreements: (i) clearing members are obliged to provide certain information to Eurex Clearing related to the clearing member's client business; and (ii) Eurex Clearing is entitled to request certain risk related information and data from clearing members, non-clearing members, and Registered Customers.

	<p>Prior to entering into such tripartite agreements certain procedures are applied to gather relevant information also from Non-clearing members and Registered Customers (“know your customer” procedures).</p> <p><b>Risks to the FMI</b></p> <p>Clearing Members, Non-Clearing Members, and Registered Customers are obliged to record proprietary and client related transactions on dedicated accounts in Eurex Clearing system. This allows Eurex Clearing to monitor the respective risks per clearing member, Non-clearing member and Registered Customer.</p> <p>Certain clients are known to the clearing member, but not disclosed to Eurex Clearing. Those clients do not enter into tripartite agreements with Eurex Clearing and, therefore, do not establish a direct contractual relationship to Eurex Clearing. Nevertheless, Clearing Members are obliged to submit certain client related information to Eurex Clearing. An important tool to monitor the risks in relation to undisclosed clients of clearing members is the obligation to record transactions related to undisclosed clients on a dedicated account (A Account).</p> <p>Eurex Clearing requires Clearing Members that clear transactions on behalf of their clients to have the necessary additional financial resources and operational capacity in place. In order to ensure that Eurex Clearing requires different minimum equity capital per clearing membership cleared products and markets served (for more details, see Principle 18).</p> <p>Compliance with financial resource requirements is monitored on a regular basis and members must provide evidence of the level of their liable equity capital at admission and, at least once a year.</p> <p>In addition, different minimum requirements for the Clearing Fund contribution are applicable depending on the type of clearing membership. The Clearing Fund contribution is determined as the maximum amount out of the minimum requirement of each clearing member and the requirement based on the risk exposure of a member firm. At admission, a clearing member’s minimum contribution to the Clearing Fund is as follows:</p> <ul style="list-style-type: none"> <li>• GCM/IRS CM: EUR 5 million;</li> <li>• DCM: EUR 1 million.</li> </ul> <p>This amount increase in case the CM has higher margin requirements.</p>
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	<p>To ensure operational capacity Eurex Clearing defined operational minimum standards:</p> <ul style="list-style-type: none"> <li>• Adequate systems and full operational support and back-up to ensure the continuity of members various linkages with Eurex Clearing.</li> <li>• Member's staff have appropriate experience and training.</li> <li>• Standards need to be established and training needs to be offered.</li> </ul> <p>Eurex Clearing monitors the compliance of operational procedures and the adequacy of back-office staff of clearing members.</p> <p>Eurex Clearing has established a Member Compliance Framework to monitor the risk associated with clearing members and their clients. The framework foresees that Eurex Clearing requests information directly from the clearing members to confirm compliance with the requirements in the Eurex Clearing rules and regulations and that clearing members are able to comply with the requirements with respect to customer business.</p> <p>Eurex Clearing takes into consideration criteria such as trading or clearing volumes, margin requirements and internal credit as an indication of potential concentrations of risk relating to the provision of services to clients. Furthermore, the monitoring of clearing members and their client's business covers concentration and wrong-way risks that may arise out of the clearing business of Eurex Clearing. It also includes the level of exposure of a clearing member, the quality of the collateral pool, as well as the overall trading activities.</p> <p>Eurex Clearing is entitled to transmit or to request from clearing and settlement institutions or independent auditors, which are subject to confidentiality regulations comparable to those applicable to Eurex Clearing, all data and information which refer to Clearing Members, Non-Clearing Members or Registered Customers and which are necessary for the orderly conduct of the Clearing and for the fulfillment of Transactions.</p> <p>It should be noted that EMR Article 37 (3) stipulates that the responsibility for ensuring that clients comply with their obligations remains with the Clearing Member. Furthermore the clearing member is required to separately demand or provide (additional) cover in respect of daily profits or losses arising in respect of the corresponding transactions with its Non-clearing members, Registered Customers and/or Customers in an</p>
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	amount not less than the Variation Margin Requirement applicable between the clearing member and Eurex Clearing.
<p>Key Consideration 2</p> <p>An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.</p>	<p>The main sources of material dependencies between direct and indirect participants are the ownership structure and risk concentrations between these entities:</p> <p><i>Ownership structure:</i></p> <p>In terms of ownership structure, Eurex Clearing defines a material dependency as a close link., defined as a direct or indirect ownership or control via voting rights between two entities (which may be direct and indirect participants), in which an ownership of 50 percent or more of the voting rights or capital of an undertaking or a control agreement exists. All issuer identification numbers of those entities that have an ownership structure that classifies them as close link are grouped and regularly monitored. Clearing members are not allowed to post financial instruments as collateral if those instruments were issued by an entity, which is highly interlinked with the clearing member. Furthermore, material dependencies are considered in determining the appropriate size of Eurex Clearing's default waterfall by considering not only the default of the clearing members in the stress tests but also the default of all their clients. Thereby also indirect participant defaults which result in potential direct participant insolvencies are implicitly considered.</p> <p>- <i>Risk concentration:</i></p> <p>Eurex Clearing's monitoring of risk concentration is detailed in Key Consideration 1 of this Principle.</p>
<p>Key consideration 3</p> <p>An FMI should identify indirect participants responsible for a significant proportion of transactions processed by the FMI and indirect participants whose transaction volumes or values are large relative to the capacity of the direct participants through which they access the FMI in</p>	<p>The general approach to monitoring and mitigating the risk of disclosed clients and undisclosed clients is already discussed above.</p> <p>Eurex Clearing has several measures which allow for a monitoring additional to the supervision conducted by direct participants. In particular, segregated account model enable the identification and differentiation between direct and indirect participants' activities. Activities of clearing members as direct participants are reflected on the respective proprietary accounts, whereas activities of clients of clearing members are reflected on the agent accounts or the respective Non-clearing member / Registered Customers accounts. Therefore, Eurex Clearing identifies and monitors the proportion of activity that each clearing member conducts on behalf of its clients. The posted collateral</p>



<p>order to manage the risks arising from these transactions.</p>	<p>has to be sufficient to cover the clearing member as well as its clients' exposure.</p> <p>In addition, as outlined above, Eurex Clearing applies concentration limits at two levels; the clearing house level and the clearing member level. Limits on the clearing house level are applied across every clearing member and their clients at Eurex Clearing. Concentration limits at the clearing member level apply per clearing member; this includes the clearing member's own business and the business of their clients.</p> <p>In the case that accounts indicate behaviors outside the typically observed standards, such as large transaction volume or position buildup, Eurex Clearing is entitled to requests further information or on-site meetings.</p>
<p>Key consideration 4</p> <p>An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.</p>	<p>All established policies and procedures are reviewed annual as well as on an ad-hoc bases when needed.</p>
<p>Key conclusions for Principle 19</p>	<p>Eurex Clearing has in place rules, procedures, and agreements that allow it to gather basic information about indirect participation in order to identify, monitor, and manage any material risks to its activities.</p>
<p>Assessment of Principle 19</p>	<p>Observed</p>
<p>Recommendations and Comments</p>	

### Principle 20. Financial Market Infrastructure Links

An FMI that establishes a link with one or more FMIs should identify, monitor, and manage link-related risks.

<p>Key Consideration 1</p> <p>Before entering into a link arrangement and on an</p>	<p>Eurex Clearing has no link with another CCP. It maintains accounts with CSDs and trade repositories (TRs).</p>
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<p>ongoing basis once the link is established, an FMI should identify, monitor, and manage all potential sources of risk arising from the link arrangement. Link arrangements should be designed such that each FMI is able to observe the other principles in this report.</p>	<p>For an overview of the link to CSDs for ensuring the settlement of transactions please refer to Principle 8 (Settlement Finality).</p> <p><i>Links with trade repositories:</i> Eurex Clearing reports derivatives transactions to the European trade repository REGIS-TR as required by Article 9 of EMIR. The TR is located in Luxembourg and supervised by the financial sector regulators, Commission de Surveillance du Secteur Financier (CSSF). On 7th of November 2013 the European Securities and Markets Authority (ESMA) registered REGIS-TR as Trade Repository in accordance with Article 55 of EMIR. While the link to TR does not generate any potential risk to Eurex Clearing, this link is monitored and evaluated regularly.</p>
<p>Key Consideration 2</p> <p>A link should have a well-founded legal basis, in all relevant jurisdictions, that supports its design and provides adequate protection to the FMIs involved in the link.</p>	<p>For the sound legal basis of Eurex Clearing design and operations, please refer to Principle 1.</p> <p>Eurex Clearing is linked to Clearstream Banking AG, Frankfurt, and Clearstream Banking S.A., Luxembourg for the deposit of financial instruments posted as margins and default fund contributions. It is also connected to SIX SIS Ltd., Olten, Switzerland. The three CSDs are designated as systemically important system and regulated by the German and Swiss authorities, respectively. The same holds true for the link to Euroclear UK &amp; Ireland, which is also notified according to Article 10 of the Settlement Finality Directive (98/26/EC).</p> <p>Eurex Clearing verifies whether the linked CSDs have valid accounting practices and safekeeping/internal control procedures in place, are appropriately regulated and have a strong financial position, as also required by the CPSS - IOSCO Principles for Financial Market Infrastructures. This assessment is performed on an annual basis and if deemed necessary.</p>
<p>Key consideration 3</p> <p>Linked CSDs should measure, monitor, and manage the credit and liquidity risks arising from each other. Any credit extensions between CSDs should be covered fully with high quality collateral and be subject to limits.</p>	<p>Not applicable.</p>

<p>Key Consideration 4</p> <p>Provisional transfers of securities between linked CSDs should be prohibited or, at a minimum, the retransfer of provisionally transferred securities should be prohibited prior to the transfer becoming final.</p>	<p>Not applicable.</p>
<p>Key Consideration 5</p> <p>An investor CSD should only establish a link with an issuer CSD if the arrangement provides a high level of protection for the rights of the investor CSD's participants.</p>	<p>Not applicable.</p>
<p>Key Consideration 6</p> <p>An investor CSD that uses an intermediary to operate a link with an issuer CSD should measure, monitor, and manage the additional risks (including custody, credit, legal, and operational risks) arising from the use of the intermediary.</p>	<p>Not applicable.</p>
<p>Key Consideration 7</p> <p>Before entering into a link with another CCP, a CCP should identify and manage the potential spill-over effects from the default of the linked CCP. If a link has</p>	<p><b>Linked CCP default</b></p> <p>Eurex Clearing does not have any link to other CCPs.</p>
	<p><b>Collective link arrangements (three or more CCPs)</b></p> <p>Not applicable.</p>

three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.	
<p>Key Consideration 8</p> <p>Each CCP in a CCP link arrangement should be able to cover, at least on a daily basis, its current and potential future exposures to the linked CCP and its participants, if any, fully with a high degree of confidence without reducing the CCP's ability to fulfill its obligations to its own participants at any time.</p>	<p><b>Exposures and coverage of exposures</b></p> <p>Not applicable.</p>
	<p><b>Management of risks</b></p> <p>Not applicable.</p>
	<p><b>Information provided to participants</b></p> <p>Not applicable.</p>
<p>Key Consideration 9</p> <p>A TR should carefully assess the additional operational risks related to its links to ensure the scalability and reliability of IT and related resources.</p>	Not applicable.
Key Conclusions for Principle 20	Eurex Clearing does not have any link to other CCPs. It is connected to designated settlement and payment systems for the settlement of securities and cash that result from Eurex Clearing's activities. The risk management framework to ensure the safety and soundness of these connections are already discussed in several Principles.
Assessment of Principle 20	Observed
Recommendations and Comments	

<b>Principle 21. Efficiency and Effectiveness</b>	
An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.	
<p><b>Key Consideration 1</b></p> <p>An FMI should be designed to meet the needs of its participants and the markets it serves, in particular, with regard to choice of a clearing and settlement arrangement; operating structure; scope of products cleared, settled, or recorded; and use of technology and procedures.</p>	<p>Eurex Clearing has set up several specialized committees with its market participants as an integral part of its consultation process. Following committees have been initiated to inform and integrate participants into the decision-making process for changes and new service developments. These committees are Risk Committee, Derivatives Clearing Committee, Securities Clearing and Settlement Committee, Clearing Collateral Committee, IRS Product Committee, and the Default Management Committees (DMC). In addition, the Supervisory Board has also constituted the Audit and Risk Committee in compliance with CRD IV (Capital Requirements Directive) and EMIR that deals with audit matters particularly related to the preparation of the annual budget, the accounting process, internal and external audits, compliance, and control systems. More detailed information regarding the Eurex Clearing’s Committees. Please refer to Principle 2.</p> <p>Eurex Clearing determined a Technology Roadmap aiming to assure the safety and integrity of markets, while providing innovation in risk management and clearing technology. Eurex Clearing deploys reliable and state-of-the art customer-focused technology.</p> <p>In order to provide its members with innovative and cost-efficient technologies, Eurex Clearing’s latest clearing interfaces use industry standards such as FIXML, which lets its members benefit from increased customization. This reduction in programming complexity allows further cost savings and operational efficiencies. Further information on the use of internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording can be found in Principle 22.</p>
<p><b>Key Consideration 2</b></p> <p>An FMI should have clearly defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management</p>	<p>The governance structure of Eurex Clearing (see Principle 2) contains an adequate system of checks and balances that help ensuring that the performance of management bodies is monitored.</p> <p>The Business Strategy provides the framework for more detailed goals and objective on cost, volume, financial and risk level. The achievements of these goals and objectives are monitored on a continuous basis. If</p>

<p>expectations, and business priorities.</p>	<p>necessary corrective measures will be directly decided within the Board meeting</p> <p>In order to achieve the corporate goals, the Executive Board of Eurex Clearing also bears the overall responsibility for the implementation and effective operation of the Internal Control System (ICS). The ICS is a key management instrument designed to provide reasonable assurance achieving the corporate objectives regarding effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations. The ICS is an essential component of good corporate governance.</p> <p>The internal control system is a tool which helps the management to get a comprehensive overview about the effectiveness of the organisation including controls of Eurex Clearing. All areas within Eurex Clearing have to follow the ICS rules. Some areas, like Accounting, Purchasing and Human Resources, are obliged to follow the enhanced approach which means that they have to document their main processes including the assigned controls and have to report the effectiveness on a yearly basis to the Audit and Risk Committee.</p> <p>The Business Continuity Management consists of three scenarios which are independently tested at least on a yearly basis: System Unavailability, Workspaces Unavailability and Staff Unavailability. The outcomes of the tests are reported to the Executive Board. IT-Strategy document defines the goals for the software development and new clearing technology. The progress and the achievements are reported on a regular basis and several Steering Committees and to the Executive Board of Eurex Clearing.</p> <p>The Business Continuity Management approach of Eurex Clearing aims at providing products and services with utmost reliability. It gives the highest importance to the resilience of its business to safeguard against incidents and disasters and the unavailability of core processes and resources. This includes the definition of mission critical areas where services must be resumed within a Recovery Time Objective (RTO) of 2 hours. However, the factual maximum time for recovery during the last 2 years has been about 30 minutes.</p> <p>Eurex Clearing has clear objectives of its technology development in order to assure the safety and integrity of markets, while providing innovation in risk management and clearing technology as well as cost-efficient technologies. Eurex Clearing's information technology systems are secure and have an availability rate of 100 percent over the last 2</p>
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	<p>years (2014 to July 2015) which proves their reliability. The systems are capable of processing the necessary information to perform the activities and operations in a safe and efficient manner.</p>
<p>Key Consideration 3</p> <p>An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.</p>	<p>Eurex Clearing applies the Internal Control System (ICS) Policy of the DBG. The ICS-Policy was approved by the Eurex Clearing Executive Board. The ICS-Policy is applicable to all individuals as well as organizational functions that are in charge with management and control of processes within the legal entities of Deutsche Börse AG. The ICS is a key management instrument designed to provide reasonable assurance achieving the corporate objectives regarding effectiveness and efficiency of operations, reliability of financial reporting and compliance with applicable laws and regulations. The ICS is an essential component of good corporate governance. The ICS consists of safeguards and controls embedded in the organizational structures, in particular within the business processes, of the group companies to ensure that business processes and activities run in an orderly fashion.</p> <p>The audit of the ICS is part of the annual financial audit of the external auditor of Eurex Clearing. Additionally Internal Audit checks within their audit the effectiveness of the controls required with regard to the ICS. Furthermore, some areas have to fulfill the enhanced ICS approach that means they have to document their main business processes including the related controls. An example is the billing process, here are controls in place to compare the submitted data from the clearing system with the received data within the billing system. Afterwards a similar control is conducted between the billing system and the account ledger to check if the cumulated invoice amount is equal to the amount of receivables.</p> <p>In addition, Eurex Clearing has in place procedures to control its operational costs and operational reliability as well as the capacity levels seen as vital for the daily business of Eurex Clearing.</p> <p>Across the serviced products, participants meetings are held on a regular basis to discuss new product developments and service enhancements. The participants of the committees cover a significant portion of the cleared volume in the respective type of product. The committees are used to gather direct feedback for the potential new product or service offering, but also as means to receive feedback on the service provided.</p>

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Key Conclusions for Principle 21	Eurex Clearing has in place adequate processes for taking into account the needs of its participants and the markets it serves. It has defined goals and objectives that are measurable and achievable, such as in the areas of minimum service levels, risk-management expectations, and business priorities.
Assessment of Principle 21	Observed.
Recommendations and Comments	



<b>Principle 22. Communication Procedures and Standards</b>	
An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards in order to facilitate efficient payment, clearing, settlement, and recording.	
Key Consideration 1  An FMI should use, or at a minimum accommodate, internationally accepted communication procedures and standards.	<b>Communication procedures</b>  Please see the answer to the communication standards, used by Eurex Clearing.
	<b>Communication standards</b>  Eurex Clearing uses SWIFT ISO 15022 for communication with other Financial Market Infrastructures (FMIs), thereby promoting standardization and greater market efficiency. In its communication with clearing members concerning the securities market, Eurex Clearing also uses SWIFT.  For the derivatives markets, FIXML, an internationally accepted standard, is used to communicate with participants. The Eurex Clearing FIXML Interface provides clearing members with a highly flexible, standards compliant and cost-effective way to use Eurex Clearing services. Based upon and compliant to the widely used FIX (Financial Information eXchange) standard, the interface allows members to choose and deploy their own operating systems and access interfaces. The Futures Industry Association (FIA)/Futures and Options Association (FOA) initiative for standardized post-trade processing has chosen FIX as the standard communication protocol. Eurex Clearing maintains detailed documentation on its website regarding FIXML.
Key Conclusions for Principle 22	Eurex Clearing use internationally accepted communication procedures and standards.
Assessment of Principle 22	Observed.
Recommendations and comments	

<b>Principle 23. Disclosure of Rules, Key Procedures and Market Data</b>	
<p>An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to enable participants to have an accurate understanding of the risks and fees and other material costs they incur by participant in the FMI. All relevant rules and key procedures should be publicly disclosed.</p>	
<p><b>Key Consideration 1</b></p> <p>An FMI should adopt clear and comprehensive rules and procedures that are fully disclosed to participants. Relevant rules and key procedures should also be publicly disclosed.</p>	<p><b>Rules and procedures</b></p> <p>Eurex Clearing activities and the business relationship with its participants are regulated by Eurex Clearing Conditions, which are based on German civil law and clearly stated and structured as general terms and conditions. The provisions of the Clearing Conditions are enforceable by a German court.</p>
	<p><b>Disclosure</b></p> <p>Eurex Clearing publicly discloses its Clearing Conditions, rules and procedures on the Eurex Clearing website to allow applicants to assess their rights, obligations, and related risks.  <a href="https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations">https://www.eurexclearing.com/clearing-en/resources/rules-and-regulations</a>).</p> <p>The following documents are disclosed:</p> <ul style="list-style-type: none"> <li>• Clearing Conditions of Eurex Clearing;</li> <li>• Price List of Eurex Clearing;</li> <li>• Statutes for the Risk Committee;</li> <li>• Default Management Committee Rules;</li> <li>• Default Management Auction Rules;</li> <li>• Statutes for the CDS Market Committee;</li> <li>• Statutes for the CDS Default Management Committee;</li> <li>• Statutes for the IRS Product Committee;</li> <li>• Auction Terms of Eurex Clearing;</li> </ul>

	<ul style="list-style-type: none"> <li>• Statutes for the Disciplinary Committee; and</li> <li>• Disciplinary Procedures Rules.</li> </ul> <p>Eurex Clearing ensures that its rules, procedures and contractual arrangements are clear, accurate, comprehensive, in writing and in applicable regulatory and supervisory requirements and up-to-date. Eurex Clearing regularly analyses the soundness of the rules, procedures and contractual arrangements. There is no indication that rules and regulations are not internally coherent.</p> <p>The processes for changing Eurex Clearing’s rules and procedures form an integral part of the Clearing Conditions as available via the Eurex Clearing website. As described in Chapter I, Part 1, Number 17.2, Eurex Clearing has in place adequate rules to make amendments to the Clearing Conditions. In addition, important news is disclosed via Press Release. Urgent information (e.g., about technical problems) is distributed via production news board. Additionally, emergency SMS and/or emails are sent to customers registered for this service.</p>
<p>Key Consideration 2</p> <p>An FMI should disclose clear descriptions of the system’s design and operations, as well as the FMI’s and participants’ rights and obligations, so that participants can assess the risks they would incur by participating in the FMI.</p>	<p>Relevant information on Eurex Clearing design and operations is to be found in the Technology tab on the Eurex Clearing website and is available to the public: <a href="http://www.eurexclearing.com/clearing-en/technology/">http://www.eurexclearing.com/clearing-en/technology/</a></p> <p>A detailed description of the concepts and messages of the Eurex Clearing Interfaces (Messaging Interfaces Connectivity and FIXML Interface), its XML representation and schema files, as well as all necessary information about Network Access and Eurex GUI Solutions can be found on the website and is organized using following categorization as can be seen in the figure below.</p> <div style="background-color: #f0f0f0; padding: 10px;"> <p>Overview of content</p> <ul style="list-style-type: none"> <li>• <b>Overview and Functionality</b></li> <li>• Eurex Clearing Interfaces</li> <li>• Network Access</li> <li>• Production</li> <li>• Eurex Clearing GUIs</li> <li>• Eurex Reports</li> <li>• Simulation</li> </ul> </div> <p>Eurex Clearing gives via its websites extensive information on its Risk Management Framework. The various key topics for an adequate management of risks are explained on the websites in detail such as the</p>

	<p>lines of defense of Eurex Clearing, the default management process or the margining process. (For more information please refer to: <a href="http://www.eurexclearing.com/clearing-en/risk-management/lines-of-defense">http://www.eurexclearing.com/clearing-en/risk-management/lines-of-defense</a>).</p> <p>As outlined in Key Consideration 1 of this Principle Eurex Clearing provides documentation on all Committees established to allow applicants and participants to assess their rights, risk and obligations related to Eurex Clearing.</p> <p>Eurex Clearing deploys real-time margining in order to provide clearing members with permanent risk assessments on their own exposures as well as the exposure of their clients (Non-clearing members) based on current market conditions and intraday changes in price volatility.</p>
<p>Key Consideration 3</p> <p>An FMI should provide all necessary and appropriate documentation and training to facilitate participants' understanding of the FMI's rules and procedures and the risks they face from participating in the FMI.</p>	<p>Eurex Clearing applies strict admission criteria for clearing members, which are necessary to ensure that clearing members have the necessary financial and technical resources and the know-how. Consequently, clearing members must provide evidence that a sufficiently qualified member of staff works in the clearing member's back-office to orderly fulfill the clearing obligations during the business day and to be available as a reliable contact person via telephone.</p> <p>In order to facilitate participant's understanding of Eurex Clearing's rules and procedures and the risks, Eurex Clearing offers a wide variety of training courses and education materials. To maintain high qualification levels of clearing member staff in a rapidly changing environment, Eurex Clearing requires from its clearing members at least one qualified employee, a Qualified Clearing Staff (QCS). This requirement applies to every single clearing license and as well for Non-clearing members trading on Eurex Exchanges. For each clearing license an individual test is offered by Eurex Clearing, consisting of one so called basic module which is about core clearing knowledge and a market module for the respective clearing license. Sufficient qualification is reached if the respective clearer test is passed successfully.</p>
<p>Key Consideration 4</p> <p>An FMI should publicly disclose its fees at the level of individual services it offers as well as its policies on any available discounts. The FMI should provide clear</p>	<p>Eurex Clearing publicly discloses the prices and fees associated with the services provided for clearing. Chapter I, Part 1, Number 5.1 of the Clearing Conditions outlines the fees charged by Eurex Clearing to its clearing members for admission as a clearing member, as well as a regular charge for holding a clearing license:</p> <ul style="list-style-type: none"> <li>• one-time fee upon conclusion of the first Clearing Agreement;</li> </ul>

<p>descriptions of priced services for comparability purposes.</p>	<ul style="list-style-type: none"> <li>• an annual fee for the granting of a Clearing License, payable by the clearing member on January 31 of each year; and</li> <li>• further fees for certain actions (e.g., general service fees) and transactions (e.g., transaction fees in various cleared markets).</li> </ul> <p>All fees and incentive models are publicly available and applied to all market participants on an equal basis. Fee structures and incentive models are made available in full detail in specifically updated sections of the Price List for Eurex Clearing. In addition, Eurex Clearing also maintains a close contact to clearing members, Non-clearing members/Registered Customers by informing of any envisaged amendments in publicly available circulars. In these circulars rebate models can also be presented and described in further detail.</p>
<p>Key Consideration 5</p> <p>An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO Disclosure framework for FMIs. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.</p>	<p>Eurex Clearing has reviewed its methodologies and risk management practices against the PFMIs. The results are published in the Disclosure Document on the Eurex Clearing website.</p> <p>With respect to the disclosure of basic data on transaction volumes and values, Eurex Clearing offers a wide range of information. This includes theoretical price data and necessary data to compute prices depending on the valuation of a product. It also contains theoretical values and parameters for equities, which are required for the risk-based margining of the day, theoretical values and parameters for subscription rights on equities, theoretical values and parameters for bonds and coupon dates and rates for all bonds which are required for the risk-based margining of the day. Additionally, relevant risk parameters are published under the Risk Management tab of Eurex Clearing’s website to provide clearing members and the broader public with margin parameters, haircuts and a specification of accepted collaterals (see the figure below).</p>

	<p><b>Risk parameters</b></p> <p>Haircut and adjusted exchange rates</p> <hr/> <p>Derivatives margin groups and classes</p> <hr/> <p>Maturity factors</p> <hr/> <p>Vola shifts</p> <hr/> <p>Securities margin groups and classes</p> <hr/> <p>Theoreticals</p> <hr/> <p>File services</p> <p>Furthermore, quantitative data concerning on various risk parameters are available to the public: Derivatives margin groups and classes, maturity factors, volatility shifts, Haircut and adjusted exchange rate. This data is available in intraday as well as end of day file version.</p> <p>The website further provides clearing members with necessary data to compute option prices or fair option prices for flexible options using the Cox-Ross-Rubinstein model. As already mentioned, this data comprises the theoretical values and parameters for various products, which are required for the risk-based margining of the day.</p> <p>Volumes of the cleared transactions for each class of instruments on an aggregated basis along with other statistics are published on the Eurex Clearing website on a monthly basis. Eurex Clearing provides a monthly view of the number of cleared trades and the cleared volumes across all market segments, i.e., Eurex Exchange, Frankfurt Stock Exchange, Eurex Repo, Eurex Bonds, ISE Dublin, EurexOTC IRS (<a href="http://www.eurexclearing.com/clearing-en/resources/volume-statistics/">http://www.eurexclearing.com/clearing-en/resources/volume-statistics/</a>).</p>
Key Conclusions for Principle 23	Eurex Clearing has clear and comprehensive rules and procedures that are fully disclosed to participants to allow the assessment of their rights, obligations, and related risks. In particular, Eurex Clearing publicly discloses the prices and fees associated with the services provided for clearing. It has reviewed its methodologies and risk management practices against the PFMI and the results are published in the Disclosure Document on the Eurex Clearing website.
Assessment of Principle 23	Observed

Recommendations and Comments	
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<b>Principle 24. Disclosure of Market Data by Trade Repositories</b>	
A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.	
<p>Key Consideration 1</p> <p>A TR should provide data in line with regulatory and industry expectations to relevant authorities and the public, respectively, that is comprehensive and at a level of detail sufficient to enhance market transparency and support other public policy objectives.</p>	Not applicable.
<p>Key Consideration 2</p> <p>A TR should have effective processes and procedures to provide data to relevant authorities in a timely and appropriate manner to enable them to meet their respective regulatory mandates and legal responsibilities.</p>	Not applicable.
<p>Key Consideration 3</p> <p>A TR should have robust information systems that provide accurate current and historical data. Data should be provided in a timely manner and in a</p>	Not applicable.

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format that permits it to be easily analyzed.	
Key Conclusions for Principle 24	
Assessment of Principle 24	<i>Not applicable.</i>
Recommendations and Comments	



**Table 7. Germany: Detailed Assessment of Responsibilities of the Authorities**

<b>Responsibility A: Regulation, Supervision, and Oversight of Financial Market Infrastructures</b>	
<p>FMI should be subject to appropriate and effective regulation, supervision, and oversight by a central bank, market regulator, or other relevant authority.</p>	
<p><b>Key Consideration 1</b></p> <p>Authorities should clearly define and publicly disclose the criteria used to identify FMIs that should be subject to regulation, supervision, and oversight.</p>	<p>The criteria to identify a CCP in the EU are defined in il EMIR. It defines a CCP as a legal person established in the Union intending to provide “clearing services by interposing itself between the counterparties to the contracts traded on one or more financial markets, becoming the buyer to every seller and the seller to every buyer”. Eurex Clearing is subject to these regulatory provisions and to supervision as a CCP.</p> <p>Furthermore as an FMI, Eurex Clearing is subject to the Bundesbank oversight (Oversight Function) against the PFMI in accordance with the ECB Governing Council adoption of the PFMI on June 3 2013. This Governing Council decision is binding for the Eurosystem’s central banks as per Article 14.3 of the Statute.</p> <p>Eurex Clearing, as a credit institution, is also subject to the supervision of the Deutsche Bundesbank jointly with BaFin (banking supervisory function) according to the German Banking Act.</p> <p>According to the “German Act on the Recovery and Resolution of Institutions and Financial Groups”, the recovery planning by Eurex Clearing is subject to review and assessment by BaFin, in consultation with the Deutsche Bundesbank.</p> <p>In addition, Eurex Clearing is licensed as a credit institution. Therefore it is regulated and supervised by several authorities both at the national and because it delivers services cross-border, at the EU level.</p> <p>EMIR allocates responsibility for the authorization and the supervision of CCPs to the national competent authorities, including the responsibility for verifying that a CCP applying for authorization complies with EMIR. BaFin is the designated national competent authority, as published on ESMA dedicated website.</p> <p>At the EU level, BaFin chairs a college of supervisors established for Eurex, which is composed of 20 members ((including BaFin as chairing authority). It comprises authorities that supervise the major clearing</p>

	<p>members, trading venues, and CSD, along with members of the ESCB as overseer and central bank of issue, and ESMA. At present, there are 20 members in Eurex College. The college functions according to a written agreement among its members. It provides the national authorities with a joint opinion on the compliance of the CCP with EMIR at the time of the authorization. Further, it reaches a joint opinion on the extension of the services provided by the CCP and on significant changes to the risk models and parameters. It ensures the coordination of supervisory examination programs based on the risk assessment performed by BaFin and is informed at least annually of the results of the review of the arrangements, strategies, processes and mechanisms implemented by the CCP.</p> <p>The basis for Eurex Clearing regulation, supervision, and oversight are publicly disclosed in:</p> <ul style="list-style-type: none"> <li>• EMIR / Regulatory Technical Standards: Official Journal of the European Union.</li> <li>• German Banking Act which has been modified to adapt to EMIR/ specifying regulations: Federal Law Gazette.</li> <li>• German Recovery and Resolution Act, which transposes the BRRD / EBA Regulatory Technical Standards and Guidelines: Federal Law Gazette.</li> <li>• Article 127 (2) of the Treaty on the functioning of the European Union, Article 22 of the Statute of the ESCB, Bundesbank Act (section 3): ECB website and Homepage of the Deutsche Bundesbank Oversight Section.</li> <li>• Adoption of the PFMI as Eurosystem oversight standards by the Governing Council of the ECB, Press release of 21 June 2013 and ECB website</li> </ul>
<p>Key Consideration 2</p> <p>FMI's that have been identified using these criteria should be regulated, supervised, and overseen by a central bank, market regulator, or other relevant authority.</p>	<p>On the basis of the respective statutory mandate of each national authority, as described above, Eurex Clearing is:</p> <ul style="list-style-type: none"> <li>• supervised by BaFin in cooperation with the Deutsche Bundesbank (Banking Supervision Function) as a CCP – with the scrutiny of a college of authorities- following EMIR, and as a credit institution, following the German banking Act;</li> </ul>

	<ul style="list-style-type: none"> <li>• overseen by the Deutsche Bundesbank (Oversight Function) as a CCP.</li> </ul> <p>The FMSA is the competent resolution authority for Eurex Clearing, following the German Act on the Recovery and Resolution of Institutions and Financial Groups and is responsible for resolution planning for CCPs in Germany in cooperation with BAFIN.</p> <p>Recovery planning is the responsibility of the CCP and is subject to review and assessment by BaFin in consultation with the Deutsche Bundesbank, then submitted with BaFin’s analysis to FMSA. If the resolution authority identifies impediments to the recoverability of Eurex Clearing, it may provide BaFin with recommendations in this respect.</p> <p>Gaps are being avoided in the regulatory, oversight, and supervision framework as the overlay of policy-based central bank oversight authority on the top of supervisory authority based on EMIR and the accompanying regulatory technical standards, complemented by the German Recovery and Resolution Act concerning recovery planning,</p> <ul style="list-style-type: none"> <li>• BaFin as national competent authority supervises Eurex Clearing in applying EMIR and prudential standards resulting from the German Banking Act in cooperation, German Banking Act Part I section 7, with the Deutsche Bundesbank (Banking Supervision Function).</li> <li>• The oversight is conducted by the Deutsche Bundesbank (Oversight Function) on the basis of the PFMI and central bank objectives based on the main objective of safety and efficiency of payment and clearing systems.<sup>4</sup></li> <li>• In addition, following the Act on monitoring financial stability, the Bundesbank is vested with responsibility for the ongoing analysis of factors key to financial stability, for identifying risks which may impair financial stability (macroprudential supervision), producing a report for the Financial Stability committee chaired by the Federal Minister of Finance and making proposals to this Committee for the issuing of warnings</li> <li>• BaFin, in consultation with the Bundesbank, is responsible for the assessment of Eurex Clearing’s recovery plans, and FMSA may</li> </ul>
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<sup>4</sup> See Implementation monitoring of PFMI: level 2 assessment report for Central counterparties and trade repositories – European Union: <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD478.pdf>

	<p>provide recommendations following its recoverability assessment. Off note, BaFin is entrusted with certain early intervention powers under the German Recovery and Resolution Act. It has to inform the FMSA if it executes those powers. Allocation of competences to the resolution authority and the supervisory authorities regarding recovery and resolution is stipulated in the German Recovery and Resolution Act.</p>
Key Conclusions for Responsibility A	<p>Both at the national and the EU levels, the authorities have clearly defined and publicly disclosed the criteria used to identify FMIs that should be subject to regulation, supervision, and oversight. Full consistency with the PFMI is achieved by the policy-based central bank oversight authority on the top of supervisory authority based on EMIR and the accompanying regulatory technical standards, and complemented by the German Recovery and Resolution Act concerning recovery planning.</p> <p>Notwithstanding the fact that these two PFMI requirements - replenishing and allocated and covered losses- are not covered by EMIR, they are addressed in Eurex Clearing recovery plan, which means that PFMI are enforced in practice.</p> <p>The expected legislation on Recovery and Resolution of CCPs for which the European Commission is about to publish a proposal which, will adjust the requirements provided by the Recovery and Resolution Act for credit institutions specifically for CCPs. It is anticipated that it will stipulate explicit rules for allocating uncovered credit losses and for replenishing any financial resources that Eurex Clearing may employ during a stress event in compliance with KC 7 of PFMI 4.</p>
Assessment of Responsibility A	Observed.
Recommendations and Comments	

### Responsibility B. Regulatory, Supervisory, and Oversight Powers and Resources

Central banks, market regulators, and other relevant authorities should have the powers and resources to carry out effectively their responsibilities in regulating, supervising, and overseeing FMIs.

<p>Key Consideration 1</p> <p>Authorities should have powers or other authority consistent with their relevant responsibilities, including the ability to obtain timely information and to induce change or enforce corrective action.</p>	<p><b>Powers or other authority consistent with relevant responsibilities</b></p> <p>For the supervision of Eurex Clearing, BaFin in cooperation with the Deutsche Bundesbank (Banking supervision function) is vested by law (Section 7 of the German Banking Act) with all necessary powers in order to exercise its task to ensure compliance of the CCPs with EMIR, the German Banking Act, and the German Recovery and Resolution Act. This entails mainly the following:</p> <ul style="list-style-type: none"> <li>• Authorization of CCPs / withdrawal of authorization.</li> <li>• Information gathering, data collection and inspections.</li> <li>• Issuing orders/inducing changes in order to ensure compliance with EMIR, the German Banking Act, the German Recovery and Resolution Act,</li> <li>• Rule making by contributing to the legislative work</li> </ul> <p>Although BaFin is a legally independent institution governed by public law, as part of the federal administration, under section 2 of the Act Establishing the Federal Financial Supervisory Authority (Finanzdienstleistungsaufsichtsgesetz – FinDAG) it is subject to the legal and technical supervision by the Federal Ministry of Finance, which bears the political responsibility for BaFin’s activities. Following BaFin’s articles of association, the Federal Ministry has the right to issue instructions to the Executive Board which has overall responsibility for managing the Supervisory Authority. Adoption of the organizational statute and rules of procedure require the approval of the Federal Ministry, as do amendments thereto. The members of the Administrative Council and their deputies are appointed and dismissed by the Federal Ministry pursuant to section 7 of the FinDAG, as well as the members of the Advisory Committee.</p> <p>The legal basis for Deutsche Bundesbank’ oversight activities (Oversight function) on CCPs is ground on the Treaty on the Functioning of the European Union Article 3.1 of the Protocol on the Statute of the</p>
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	<p>European System of Central Banks and of the European Central Bank (Statute of the ESCB), under which the ESCB is mandated with the task, among others, to "promote the smooth operation of payment systems", and the Article 22 of the Statute of the ESCB: "the ECB and national central banks may provide facilities, and the ECB may make regulations, to ensure efficient and sound clearing and payment systems within the Community and with other countries." This task is also reflected in section 3 of the Deutsche Bundesbank Act which states: "The Deutsche Bundesbank... shall arrange for the execution of domestic and cross-border payments and shall contribute to the stability of payment and clearing systems".</p> <p>The oversight role of the Deutsche Bundesbank entails the following:</p> <ul style="list-style-type: none"> <li>• Ongoing collection of information, meetings with Eurex Clearing board members, on-site visits, and meetings on expert level.</li> <li>• Moral suasion to induce changes in order to ensure compliance with the PFMI and more broadly the objectives of central bank oversight regarding CCPs.</li> </ul> <p>The role of central banks in the college of authorities established by EMIR (article 18) is in addition highlighted as authorities "responsible of the oversight of the CCP". This way, central bank oversight is incorporated into decisions expressed in an "opinion" concerning the authorization of CCPs where compliance with EMIR requirements has been assessed, the extension of a CCP's activities and services, significant changes to risk management models used by CCPs and the authorization of interoperability arrangements with other CCPs. Furthermore, oversight is also exercised with regard to the procedures and contingency plans for emergency situations relating to the supervised CCPs. These procedures and plans are also agreed within the colleges. EMIR requirements cover the PFMIs with identified gaps being investigated by the Deutsche Bundesbank (Oversight function) in the scope of their oversight.</p> <p>While a judgment of the Court of Justice of the European Union (case T 496/11) has decided that the "ECB does not have the competence necessary to regulate the activity of securities clearing systems", the oversight role of central banks over CCPs has never been challenged and the Bundesbank has never met any resistance to de facto exercising its oversight function.</p> <p>Nevertheless, strengthening the legal basis for the Bundesbank's oversight function in the national law might be of interest in order to</p>
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	clarify its powers consistent with this responsibility and to disclose its activities in the field.
	<p><b>Powers to obtain timely information</b></p> <p>On the basis of the German Banking Act, BaFin and Deutsche Bundesbank (Banking Supervision Function) are vested with supervisory and regulatory powers over CCPs. This entails the legal basis for information from and inspections of CCPs, ancillary service providers, financial holding companies and enterprises included in supervision on a consolidated basis and cross-border information and inspections They should be provided with information about all business activities, upon request. They may perform inspections with or without a special reason, including of undertakings to which operational functions, services or activities have been outsourced.</p> <p>The German Recovery and Resolution Act vests BaFin, Deutsche Bundesbank, and FMSA with powers for the purpose of recovery planning (see above Responsibility A KC2 – SAG section 12). BaFin will set a time limit to the CCP for presenting its recovery plan which should be updated following any significant change and at least annually and may require the institution to update it more frequently.</p> <p>Availability of information is ensured by transparency obligation, record keeping and information requirements to be complied with by the CCP pursuant to EMIR and RTS (article 5). Respective information is made available by daily reporting of intra-day margin calls, reporting pursuant to <a href="#">section 53 j German Banking Act</a> monthly regulatory interviews, regular participation as observers at the meetings of the Supervisory Board and of the Risk committee (in accordance with EMIR Art.28) .</p> <p>In addition, as a condition for re-authorization under EMIR, CCPs had to provide to BaFin and to the college of authorities all necessary information to demonstrate full compliance with EMIR. In case of extension of services/activities and in case of "significant" changes to risk models and parameters, Eurex Clearing will have to supply all information to obtain validation by BaFin and ESMA and an opinion of the college.</p> <p>The oversight function of the Deutsche Bundesbank implements an additional data collection from CCPs. Deutsche Bundesbank conducts on a case-by-case basis own meetings with board members or on-site visits and meetings on expert level.</p>

	<p><b>Powers to induce change or enforce corrective action</b></p> <p>BaFin has the necessary powers on the basis of administrative and administrative procedural law to directly order corrective action (section 53 I German Banking Act) to a central counterparty appropriate and necessary to ensure compliance with EMIR on the basis of the findings of the ongoing supervision carried out by the Deutsche Bundesbank (Banking Supervision Function). On the basis of the findings in the assessment of recovery plans by FMSA, decisions/orders issued by BaFin as NCA are legally binding and enforceable.</p> <p>These decisions are subject to judicial assessment. However as a general rule, any objections to or appeals against measures taken by BaFin do not have a postponing effect. In principle, the measures are immediately enforceable, i.e., the banking supervisory measures come into effect as soon as they have been notified.</p> <p>On the basis of the results of its assessment, the oversight function of the Deutsche Bundesbank can take action and induces change where it finds that a CCP does not comply with the PFMI. Although the scope of CCP oversight covers all PFMI applicable to CCPs, it should be noted that the Oversight Function tries to avoid duplicating the work achieved by BaFin in cooperation with Bundesbank (Supervision function) and by the college where it participates, with the objective of not subjecting Eurex Clearing to multiple and redundant assessment exercises</p> <p>To induce changes, the Deutsche Bundesbank has a range of tools available, including moral suasion, public statements, influence stemming from its participation in CCPs and from its provision of central bank services to CCPs and cooperation with other authorities.</p> <p>To date, moral suasion has been the main tool that the Deutsche Bundesbank (Oversight Function) has applied in order to induce change and ensure compliance by German CCPs with the applicable oversight standards and recommendations. Moral suasion typically means that the CCP – in close consultation with the Deutsche Bundesbank – draws up an action plan, which is implemented along a timeline agreed.</p> <p>Concerning the recovery plan which Eurex Clearing has to submit to BaFin and the Bundesbank for review and assessment, in case the plan is found not compliant with requirements concerning its structure or content, the capital and refinancing structure not appropriate, or in case of significant impediments to its implementation, BaFin will notify Eurex Clearing of the results of the assessment and request it to present a</p>
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	<p>revised recovery plan within 2 months which can be extended by 1 month.</p> <p>BaFin will also submit the recovery plans to the resolution authority which may provide BaFin with recommendations in case it identifies impediments to recoverability of the CCP, which in turn may issue an order.</p>
<p>Key Consideration 2</p> <p>Authorities should have sufficient resources to fulfill their regulatory, supervisory, and oversight responsibilities.</p>	<p><b>Resources</b></p> <p>- <i>BaFin</i></p> <p>BaFin is entrusted to cover its expenditure entirely out of its own income. It receives no funding from the Federal budget. BaFin raises the funds required to cover its costs from the undertakings it supervises in accordance with the Act Establishing the Federal Financial Supervisory Authority (FinDAG).</p> <p>BaFin's sources of funding consist primarily of fees, separate reimbursements and contributions. The actual amount of fees and contributions is calculated on the basis of the Ordinance on the Imposition of Fees and Allocation of Costs Pursuant to the FinDAG. BaFin's budget is established by its administrative council, and approved by the Federal Ministry of Finance.</p> <p>BaFin may recruit and deploy its personnel without restraint. Within the supervisory sector, BaFin employs both civil servants and public employees. Civil servants are remunerated according to the Federal Civil Service Remuneration Act (BBesG) whereas the salaries of the employees are based on the Federal Collective Agreement on Civil Service (TVöD). The staff members are ranked by group of remuneration or salary category respectively, following the regulations of the BBesG and the TVöD, with the former providing a relatively inflexible framework. BaFin is also allowed to employ staff outside the TVöD agreement in order to offer higher salaries for certain duties.</p> <p>For its staff BaFin has developed a training concept identifying relevant skills as regards supervisory tasks on an ongoing basis and offering the participation at respective trainings, seminars, lectures, etc.</p> <p>BaFin applies generally accepted management/controlling tools in order to define respective task and allocate necessary resources. Staff has increased to 7 FTE with the implementation of EMIR. The supervisory unit being responsible for CCPs can in addition draw upon resources from the</p>

	<p>banking supervisory department, the “restructuring department” (recovery and resolution) and a cross-sectoral quantitative department, where appropriate.</p> <p>BaFin is subject to an internal audit assessing the appropriateness of resources against the tasks that have to be exercised. This includes an assessment of necessary resources namely on the basis of EMIR, the German Banking Act and the German Recovery and Resolution Act.</p> <p>- <i>FMSA</i></p> <p>The <i>FMSA</i> must cover its expenditure for any measure under the German Recovery and Resolution Act and for associated activities entirely out of its own income. It receives no funding from the Federal budget. <i>FMSA</i> raises the funds required to cover its costs from the undertakings that fall within its resolution regime. Therefore, it charges fees and requires reimbursement of costs. The legal foundation for this is the Financial Market Stabilization Fund Act (Finanzmarktstabilisierungsfondsgesetz).</p> <p>In the transitional year 2015 <i>FMSA</i>’s expenditure for its tasks under the German Recovery and Resolution Act are supplementary funded by the German federal budget.</p> <p><i>FMSA</i> may recruit and deploy its personnel without restraint. Within the supervisory sector, <i>FMSA</i> employs both civil servants and public employees, mainly highly experienced staff in resolution relevant areas (see above regarding remuneration provisions). <i>FMSA</i> is also allowed to employ staff outside the TVöD agreement in order to offer higher salaries in certain cases, as relevant for obtaining the required senior level experts for resolution purposes.</p> <p>Staff have substantially increased with the implementation of the German Recovery and Resolution Act. Regarding the resolution of CCPs <i>FMSA</i> has a number of currently five people with dedicated experience on board, knowledge being currently extended to a wider group of resolution experts.</p> <p>- <i>Deutsche Bundesbank</i></p> <p>The Banking Supervision Function of the Deutsche Bundesbank is based in the regional offices of the Deutsche Bundesbank and reports to the Banking Supervision Department in the Central Office of the Deutsche Bundesbank as well as BaFin. The scope of the supervisory review of credit institutions including CCPs is defined in sections 6b and 7 of the</p>
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German Banking Act. The staff in the regional offices carries out the ongoing supervision (off-site) in order to compile the risk profile of the institution, and the on-site supervision (risk-oriented on-site inspections based on Minimum requirements for risk management, or in line with advanced measurement approach for operational risk) in the context of the collaboration of BaFin and Deutsche Bundesbank governed by section 7 (1) of the Banking Act. Since the EMIR-authorization of the German CCPs, the staff capacity for CCP-supervision has increased.

The Oversight Function of the Deutsche Bundesbank is based in the Department Payments and Settlement Systems of the Deutsche Bundesbank. The Oversight Section analyses and develops the Deutsche Bundesbank (Oversight Function) policies on market infrastructure developments and related legal initiatives at global and EU level. It conducts the assessments of all relevant payment, clearing and settlement systems for which it has oversight responsibility and contributes to the oversight of such systems when conducted in global or Eurosystem cooperation.

Deutsche Bundesbank staff possesses high qualifications and in-depth knowledge of market infrastructure issues. The allocation of responsibilities among staff for the various overseen FMIs is clearly defined (with back-ups).

Both in-house and external training is available to staff and evaluation of training needs and plans are an integral part of the annual appraisal process with staff and management. The funding is sufficient to adequately cover all costs, such as costs for personnel, travels, communication, training, modern equipment, and supplies. Since the implementation of the PFMI and the authorization of the German CCPs under EMIR, the number of staff in charge of CCP-oversight has been increased to 4,2 FTE for pure CCP oversight issues and 4,7 FTE for cross-sectional FMI issues that touch on CCP oversight such as SWIFT, CLS Services for CCP, and data analysts.

*Both relevant Deutsche Bundesbank functions:*

Effective work planning, periodic work reviews and the setting of priorities is a standard measure to ensure that the work of both relevant Deutsche Bundesbank functions, supervision and oversight, is focused and delivered. In each division, annual work plans are prepared and agreed for each Section.

	<p>Planning and funding are conducted on a yearly basis as part the annual budgeting procedure. Financial resources are monitored according to a standard accounting procedure that applies to the Deutsche Bundesbank as a whole. The total budget (including respective staff resources) is approved by the Executive Board. Adjustments during a fiscal year are generally possible via certain instruments (e.g., via budget transfer or transfer from a contingency reserve).</p> <p><b>Legal protections</b></p> <p><i>BaFin, FMSA</i> and their staff are protected from legal liability for acts committed or omitted in good faith in performance or purported performance of any function, or exercised or purported exercise of any power under the constitutional law.</p> <p><i>Deutsche Bundesbank</i> staff is also legally protected.</p> <p>Claims for damages may only be raised if a civil servant or other staff member intentionally or negligently misconducts its official duties vis-à-vis a third party.</p> <p>The addressee for such claims raised in the context of the performance of official duties of its staff members is the State or the Deutsche Bundesbank or the corporate body the civil servant is employed by. Only in cases where official duties are breached willfully or by gross negligence, the State, the Deutsche Bundesbank, may take recourse against its staff member.</p>
Key Conclusions for Responsibility B	<p>BaFin as supervisory authority, Deutsche Bundesbank (in their banking supervision, oversight and financial stability capacity), FMSA in relation to recovery, have the powers consistent with their relevant responsibilities. This includes (i) the power to obtain timely information about all business activities, either at predetermined frequencies or upon request and (ii) to induce changes through moral suasion by the Deutsche Bundesbank for the oversight function and/or to enforce corrective actions through orders by BaFin.</p> <p>The authorities have the necessary budgetary and highly skilled human resources enabling them to fulfill their mission, these having increased following the entry into force of EMIR and of the German Recovery and Resolution Act.</p> <p>The authorities staff benefit from legal protection in performing their supervisory, regulatory and oversight duties. Only in cases where official</p>

	duties were breached willfully or by gross negligence the State or the corporate body respectively may have recourse against the civil servant.
Assessment of Responsibility B	Observed
Recommendations and Comments	Strengthening the legal basis for the Bundesbank's oversight function over CCPs in the national law should be considered in order to clarify its powers, consistent with this responsibility and to enforce its activities in the field.

<b>Responsibility C. Disclosure of Policies with Respect to Financial Market Infrastructures</b>	
Central banks, market regulators, and other relevant authorities should clearly define and disclose their regulatory, supervisory, and oversight policies with respect to FMIs.	
Key Consideration 1  Authorities should clearly define their policies with respect to FMIs, which include the authorities' objectives, roles, and regulations.	<p>As a supervisory authority BaFin acts on the basis of applicable laws and its statutory provisions which are the framework for BaFin's policies. The German Banking Act provides that BaFin shall exercise supervision over credit institutions pursuant to its provisions and specifically over CCPs pursuant to the provisions of EMIR. It shall do so in cooperation with the Deutsche Bundesbank (Banking Supervision Function) whose regional branches perform the ongoing supervision.</p> <p>The German Banking Act lays down the objectives for supervisory assessments and action. Within the framework of supervision BaFin has to assess rules, strategies, procedures and mechanisms which an institution, including a CCP, has implemented in order to comply with supervisory requirements. Accordingly, BaFin should assess the risks the institution is exposed to, notably the risks revealed by stress testing, and systemic risks the institution poses to the financial system. On the basis of its review and evaluation, BaFin makes a forward-looking assessment of whether arrangements, strategies, procedures, and processes as well as liquidity and capital resources implemented by the institution ensure an appropriate and effective risk management as well as a prudent risk coverage. BaFin shall counteract undesirable developments in the banking and financial services sector, which may endanger the safety of the assets entrusted to institutions, impair the proper conduct of provision of financial services or lead to serious disadvantages for the economy as a whole.</p> <p>The Deutsche Bundesbank (Oversight Function) defines the oversight of</p>

	<p>payment, clearing and settlement systems as a central bank function whereby the objectives of safety and efficiency are promoted by monitoring existing and planned systems, assessing them against these objectives and the PFMIs, and, where necessary, fostering change. Safety and efficiency objectives are considered in relation to individual systems, however, safety objectives are also considered in relation to the overall market infrastructure. The scope of the Oversight Function of the Deutsche Bundesbank includes CCPs.</p> <p>The Deutsche Bundesbank (Financial Stability Department) is vested by the Act on monitoring Financial stability with a responsibility for the ongoing analysis of factors key to financial stability, for identifying risks which may impair financial stability (macroprudential supervision), and the objective of producing a report for the Financial Stability committee and making proposals to this Committee for the issuing of warnings.</p> <p>The FMSA acts on the basis of the German Recovery and Resolution Act, and its statutory provisions, which transposes the European Directive on Banks Recovery and Resolution in accordance with the FSB Key Attributes for Recovery and Resolution regimes, and are the framework for FMSA's policies with respect to credit institutions including those that are as well authorized as FMI, namely CCPs. <i>FMSA</i> is responsible for resolution planning and resolution measures. Concerning recovery planning, the FMSA will review the recovery plans which BaFin will submit with its analysis and make recommendations to BaFin in case it finds impediments for recoverability.</p>
<p>Key Consideration 2</p> <p>Authorities should publicly disclose their relevant policies with respect to the regulation, supervision, and oversight of FMIs.</p>	<p>- <i>BaFin</i></p> <p>Policies are disclosed in BaFin's statutory laws, the German Banking Act (mainly section 6), the German Recovery and Resolution Act, EMIR and its Regulatory Technical Standards, and are published on BaFin's website. <a href="http://www.bafin.de/SharedDocs/Aufsichtsrecht/EN/Satzung/aufsicht_bmf_bafin_en.html">http://www.bafin.de/SharedDocs/Aufsichtsrecht/EN/Satzung/aufsicht_bmf_bafin_en.html</a>.</p> <p>- <i>FMSA</i></p> <p>Policies are disclosed in FMSA's statutory laws and the German Recovery and Resolution Act.</p> <p>- <i>Deutsche Bundesbank (Oversight Function)</i></p> <p>On 3 June 2013 the Governing Council of the ECB adopted the 'Principles for financial market infrastructures', introduced in April 2012 by the</p>

	<p>Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO), for the conduct of Eurosystem oversight in relation to all types of financial market infrastructures (confer <a href="https://www.ecb.europa.eu/press/govcdec/otherdec/2013/html/gc130621.en.html">https://www.ecb.europa.eu/press/govcdec/otherdec/2013/html/gc130621.en.html</a>). This policy statement is binding for the Eurosystem central banks as per Article 14.3 of the Statute. The <i>Eurosystem</i> oversight policies and oversight related reports are published on the ECB web site.</p> <p>In addition, a general overview about the oversight activities of the Deutsche Bundesbank is available on the web site of the Oversight Section of the Deutsche Bundesbank. Information on the Deutsche Bundesbank oversight policies are also published in Annual Reports of the Deutsche Bundesbank and in contributions to Monthly Bulletins.</p>
Key Conclusions for Responsibility C	BaFin, Deutsche Bundesbank, and FMSA policies are clearly defined in the laws or legally binding policy statement concerning their role, objectives and regulations applicable. These policies are publicly available and disclosed on the authorities websites.
Assessment of Responsibility C	Observed
Recommendations and Comments	

<b>Responsibility D. Application of the Principles for Financial Market Infrastructures</b>	
Central banks, market regulators, and other relevant authorities should adopt the CPSS-IOSCO Principles for financial market infrastructures and apply them consistently.	
<p>Key Consideration 1</p> <p>Authorities should adopt the CPSS-IOSCO Principles for financial market infrastructures.</p>	<p><i>BaFin</i> has adopted the Principles for Financial Market Infrastructures by applying and enforcing the provisions of EMIR, the German Banking Act and the German Recovery and Resolution Act (complemented by EBA Regulatory Technical Standards and Guidelines, currently in the course of implementation) as follows:</p> <p>- <i>EMIR</i></p> <p>Eurex Clearing has been (re-)authorized on the basis of a full assessment of compliance with EMIR on April 10, 2014.</p>

EMIR is based on the Principles for FMIs (see Rec. 90, EMIR). EMIR and the regulatory and implementing technical standards establish requirements, which are consistent with the PFMI published by CPSS/IOSCO. The CPMI/IOSCO have published a report on the implementation monitoring of PFMI (see <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD478.pdf>).

BaFin has furthermore subscribed to an ESMA guideline that sets out that, when carrying out the duties resulting from EMIR for the authorization and supervision of CCPs, competent authorities should ensure that CCPs established in their territory comply with these requirements in accordance with the PFMI and operate in a manner that is consistent with them (ESMA Guidelines and Recommendations regarding the implementation of the PFMI, <http://www.esma.europa.eu/content/Guidelines-and-Recommendations-regarding-implementation-CPSS-IOSCO-Principles-Financial-Mark>).

According to this, EMIR and accompanying technical standards can be described as a rules-based approach for implementing the PFMI for CCPs by detailed regulations.

The process for (re-)authorization of CCPs pursuant to EMIR requires the applicant CCP to provide all information necessary to satisfy the national competent authority that the applicant CCP has established, at the time of authorization, all the necessary arrangements to meet the requirements laid down in this Regulation and that the CCP is notified as a system pursuant to Directive 98/26/EC. The competent authority shall immediately transmit all the information received from the applicant CCP and shall conduct a risk assessment of the CCP and submit a report to ESMA and the college of authorities. The college shall reach a joint opinion determining whether the applicant CCP complies with all the requirements. The competent authority shall duly consider the opinion of the college and grant authorization only where it is fully satisfied. Where the CCP's competent authority does not agree with a positive opinion of the college, its decision shall contain full reasons and an explanation of any significant deviation from that positive opinion. The CCP shall not be authorized where all the members of the college, excluding the authorities of the Member State where the CCP is established, reach a joint opinion by mutual agreement that the CCP not be authorized. That opinion shall state in writing the full and detailed reasons why the college consider that the requirements laid down in this Regulation or other Union law are not met.



*German Banking Act*

Eurex Clearing AG is licensed as a Credit Institution pursuant to the German Banking Act. In this respect, Eurex Clearing is subject to banking supervision as other banks in Germany.

*German Recovery and Resolution Act*

Recovery is addressed in Principles 3 Key Consideration 4, Principle 4 Key Consideration 7, Principle 13 Key Consideration 1, Principle 15 Key Considerations 3 and 5 and Principle 17 key considerations 3 and 6 of the PFMI. Supplemental guidance on the recovery aspect is given in the CPMI/IOSCO report on recovery of financial market infrastructures which does not create additional standards beyond the PFMI but provides a menu of tools by which jurisdictions can reach PFMI observance.

BaFin is the authority in charge of reviewing the recovery plan in consultation with Deutsche Bundesbank. For BaFin the supervisory unit responsible for the supervision of Eurex Clearing AG and the unit specialised in recovery and resolution of institutions acted jointly.

In December 2013, Eurex Clearing AG submitted its recovery plan and has updated it yearly since then. BaFin may require additional updates if necessary.

The FMSA is entrusted with the power to assess the recovery plan. The FMSA's assessment aims to identify and eliminate recoverability impediments and supply recommendations based on their findings, Eurex Clearing AG then revises the recovery plan according to their recommendations.

The German Recovery and Resolution Act requirements are not tailored to a CCP, nevertheless, they meet the requirements of the PFMI, namely to:

- identify critical services and operations;
- identify scenarios that may potentially prevent the CCP from being able to provide that operations and services as a going concern;
- assess a full range of options for recovery or orderly wind down; and

- prepare appropriate plans for recovery or orderly wind down.

Although EMIR's provisions in relation to financial risks are more prescriptive than the PFMIs, there are still a few Key Considerations (KC) and supplementary guidance by CPMI-IOSCO on recovery of FMIs which are not precisely covered by the implementation into EMIR and the German Recovery and Resolution Act – SAG. These gaps relate to Principle 4 KC 7, Principle 7 KC 10 and Principle 13 KC 1: the requirements for ex ante planning for the replenishment of financial resources which a CCP might have employed during a stress event and for ex ante rules and procedures to allocate uncovered losses and liquidity shortfalls. The European Commission is due to publish by the end of 2015 a legislative proposal concerning the Recovery and Resolution for CCPs which should cover these rules specific to FMIs.

However the requirement for ex ante planning for the replenishment of financial resources which a CCP might have employed during a stress event is covered in the Clearing conditions which provides for an assessment right by Eurex Clearing on the non defaulting clearing members up to two times their originally applicable contribution requirement to the clearing fund during a capped period. In addition, in case this proves insufficient, a parental guarantee (Letter of comfort) by Deutsche Börse AG up to EUR 700 million will be made available before the remaining equity of Eurex Clearing is involved.

Concerning ex ante rules and procedures to allocate uncovered losses and liquidity shortfalls, the Clearing conditions provide for a Default Management Process convening a Default Management Committee per "liquidation group". The Committee assists Eurex Clearing to define the hedging strategy aimed at reducing the impact of market movements during the process and to stabilize the portfolio for auctions, and to organize auctions. Auctions are mandatory for Clearing Members active in a "liquidation group". Loss distribution through juniorisation and penalties for non bidders are set in order to incentivize the provision of competitive bidding.

*Deutsche Bundesbank (Oversight Function):*

On 3 June 2013 the Governing Council of the ECB adopted the 'Principles for financial market infrastructures', introduced in April 2012 by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO), for the conduct of Eurosystem oversight in relation to all types of financial market infrastructures (confer

	<p><a href="https://www.ecb.europa.eu/press/govcdec/otherdec/2013/html/gc13062_1.en.html">https://www.ecb.europa.eu/press/govcdec/otherdec/2013/html/gc13062_1.en.html</a>). This policy statement is binding for the Eurosystem central banks as per Article 14.3 of the Statute.</p> <p>On this basis Deutsche Bundesbank periodically carries out PFMI assessments of domestic CCPs.</p> <p>The previously non-binding oversight framework for CCPs was transformed through EMIR into a legally binding regime at the European level. Since minor gaps were identified between the relevant European regulations and the PFMI, the Deutsche Bundesbank (Oversight Function) included these requirements in its oversight framework and monitors whether Eurex Clearing fulfill such PFMI requirements, which are not stipulated explicitly in EMIR.</p>
<p>Key consideration 2</p> <p>Authorities should ensure that these principles are, at a minimum, applied to all systemically important payment systems, CSDs, SSSs, CCPs, and TRs.</p>	<p>The PFMI are applied to all CCPs located in Germany.</p> <p>Furthermore, European law (i.e., EMIR, SIPS Regulation for systemically important payments systems, and CSD Regulation for Central Securities Depositories and Securities Settlement Systems) makes the PFMI binding for all other types of infrastructures.</p>
<p>Key Consideration 3</p> <p>Authorities should apply these principles consistently within and across jurisdictions, including across borders, and to each type of FMI covered by the principles.</p>	<p>Eurex Clearing is supervised by BaFin in collaboration with Deutsche Bundesbank (Banking Supervision Function) and overseen by the Deutsche Bundesbank (Oversight Function). Supervision and oversight carry out their respective tasks in close cooperation. Therefore, consistency in application is guaranteed.</p> <p>The establishment of supervisory colleges following Article 18 of EMIR and the common membership of authorities in many CCP's college is contributing to create understanding and trust, and to build convergence in the application of principles and supervisory practices.</p> <p>Concerning consistency across jurisdictions, Article 21 of EMIR provides that ESMA shall fulfill a coordination role between competent authorities and across colleges with a view to building a common supervisory culture and consistent supervisory practices, ensuring uniform procedures and consistent approaches, and strengthening consistency in supervisory outcomes. For the purposes of such coordination role, ESMA is required, at least annually, to conduct a peer review analysis of the supervisory activities of all competent authorities in relation to the</p>

	<p>authorisation and the supervision of CCPs in accordance with Article 30 of Regulation (EU) No 1095/2010 (ESMA Regulation). ESMA is present in all European colleges.</p>
Key Conclusions for Responsibility D	<p>The PFMI for CCPs have been adopted by the supervisory authority, BaFin, as a rules-based approach for implementing them through EMIR and accompanying technical standard, and for recovery of CCPs through the German Recovery and Resolution Act, and through their written commitment to follow ESMA guidelines which recommend ensuring that German CCPs will comply with the PFMI.</p> <p>The PFMI have been adopted by the overseer, Deutsche Bundesbank, through the adoption by the ECB of a policy statement for the conduct of Eurosystem oversight in relation to all types of financial market infrastructures, among which CCPs. This policy statement is binding for the Eurosystem central banks as per Article 14.3 of the Statute.</p> <p>While EMIR's requirements in relation to financial risks are more prescriptive than the PFMI, 2 requirements are not covered by EMIR concerning the ex ante planning for the replenishment of financial resources which a CCP might have employed during a stress event and for ex ante rules and procedures to allocate uncovered losses and liquidity shortfalls within the recovery phase. It is expected to be covered by the European Commission legislative proposal on Recovery and Resolution of CCPs. It is also covered in Eurex Clearing's Clearing conditions (replenishment of resources and loss allocation procedure) as well as by the German Recovery and Resolution Act.</p> <p>PFMI apply consistently within and across jurisdictions given the institutionalized cooperation between (i) the supervisory and oversight authorities (ii) the supervisory college, and furthermore given the role of ESMA in building convergence in supervisory practices and consistency in supervisory outcomes.</p>
Assessment of Responsibility D	Observed
Recommendations and Comments	

### Responsibility E. Cooperation with Other Authorities

Central banks, market regulators, and other relevant authorities should cooperate with each other, both domestically and internationally, as appropriate, in promoting the safety and efficiency of FMIs.

#### Key consideration 1

Relevant authorities should cooperate with each other, both domestically and internationally, to foster efficient and effective communication and consultation in order to support each other in fulfilling their respective mandates with respect to FMIs. Such cooperation needs to be effective in normal circumstances and should be adequately flexible to facilitate effective communication, consultation, or coordination, as appropriate, during periods of market stress, crisis situations, and the potential recovery, wind-down, or resolution of an FMI.

#### *Domestically:*

On a national level, cooperation between BaFin and Deutsche Bundesbank (supervision function) is provided for by the German Banking Act in relation to the supervision of CCPs against its provisions, EMIR requirements, and PFMI. This cooperation is further specified in BaFin supervision guideline and is achieved in the field.

Communication and consultation between the oversight function and the supervision function of Bundesbank is achieved through exchange of information, monthly and ad-hoc meetings. Cooperation between Bundesbank (oversight function) and BaFin is taking place on the basis of EMIR within Eurex Clearing college.

The cooperation and the allocation of responsibilities between BaFin, in consultation with Deutsche Bundesbank, and FMSA are specified in the Recovery and Resolution Act (SAG). BaFin is the supervisory authority and as such responsible for recovery planning and applying early intervention measures. FMSA is the resolution authority responsible for resolution planning and the actual resolution. The cooperation between the two of them is required by section 3 SAG and specified by the Cooperation Agreement (SAG-Kooperationsvereinbarung) in case of going concern (recovery) or of gone concern (resolution) with a three steps approach: (i) information and exchange of views, (ii) information with qualified discussion, and (iii) consent.

The recovery plan is subject to review and assessment by BaFin in consultation with the Deutsche Bundesbank, and submitted with BaFin's analysis to FMSA, which may provide BaFin with recommendations in case it identifies impediments to the recoverability of the supervised CCP.

According to section 6 (2) of Securities Trading Act, BaFin, the Deutsche Bundesbank (supervision function), the Federal Cartel Office, the stock exchange supervisory authorities, the trading surveillance units, the Federal Network Agency in the course of its activities pursuant to the Energy Industry Act and the competent bodies responsible for the supervision of insurance intermediaries and brokers of units in investment funds shall communicate to each other any observations and

	<p>findings, including personal data, which may be necessary for the performance of their functions.</p> <p>Facilitating cooperation is a general principle and exercised on a day-by-day basis on working level.</p> <p>- <i>European level:</i></p> <p>Supervision: Cooperation at the European level is organised by Art. 18 (2) EMIR which defines the Membership in the EMIR colleges. They function according to a harmonised College Framework Agreement established by ESMA (<a href="http://www.esma.europa.eu/news/ESMA-publishes-guidelines-written-agreements-between-members-CCP-colleges">http://www.esma.europa.eu/news/ESMA-publishes-guidelines-written-agreements-between-members-CCP-colleges</a>).</p> <p>On this basis, cooperation involves the following authorities:</p> <ul style="list-style-type: none"> <li>• ESMA, the CCP's competent authority,</li> <li>• the competent authorities responsible for the supervision of the clearing members of the CCP that are established in the three Member States with the largest contributions to the default fund of the CCP referred to in Article 42 on an aggregate basis over a one-year period.</li> <li>• the competent authorities responsible for the supervision of trading venues served by the CCP.</li> <li>• the competent authorities supervising CCPs with which interoperability arrangements have been established.</li> <li>• the competent authorities supervising central securities depositories to which the CCP is linked.</li> <li>• the relevant members of the ESCB responsible for the oversight of the CCP and the relevant members of the ESCB responsible for the oversight of the CCPs with which interoperability arrangements have been established.</li> <li>• the central banks of issue of the most relevant Union currencies of the financial instruments cleared.</li> </ul> <p>EMIR college members are granted access to necessary information in order to assess compliance with EMIR requirements and to exercise their mandates as members of the EMIR colleges. This includes the national competent authority's risk assessment, supporting documentation for re-</p>
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authorization and information with respect to ongoing supervision. EMIR colleges meet on a regular basis and are involved in supervisory issues, with a more formal procedure (opinion) where material changes affect the conditions of authorization and in case of extension of activities or addition of services.

ESMA and the college should be informed without undue delay of any emergency situation relating to a CCP, including developments in financial markets, which may have an adverse effect on market liquidity and the stability of the financial system in any of the Member States where the CCP or one of its clearing members are established.

*Oversight:* The “Crisis communication framework for oversight purposes” was established by the ESCB in October 2009 with a primary purpose on communication and information exchange between overseers in the ESCB in crisis situations regarding overseen market infrastructures with operations in and/or significant relevance for the Eurosystem or the EU. Where necessary, the members of the group will initiate the ad hoc involvement of supervisors, securities regulators and other authorities and dialogue with other relevant established oversight information groups (for example CLS).

*Recovery:* The German Recovery and Resolution Act which transposes the BRRD (Banking Recovery and Resolution Directive) provides for the legal basis for cross-border decision making in the field of recovery and resolution. If authorities which are competent under this act make decisions or initiate actions which may have consequences in one or more other Member States, they must ensure that decision-making and initiation of measures is implemented in a coordinated manner, consider the impact of any decision on the financial stability of concerned other Member States and the need for transparency.

*Global level*

BaFin and the Deutsche Bundesbank have concluded MOUs which are tailored for ongoing supervision with supervisory authorities of non-EU jurisdictions where Eurex Clearing exercise activities (Switzerland).

Furthermore, there is informal cooperation of the Deutsche Bundesbank (Oversight Function) with the Payments Oversight of the Federal Reserve Bank of New York, for Eurex Clearing USD clearing activities.

<p>Key consideration 2</p> <p>If an authority has identified an actual or proposed operation of a cross-border or multicurrency FMI in its jurisdiction, the authority should, as soon as it is practicable, inform other relevant authorities that may have an interest in the FMI's observance of the CPSS-IOSCO Principles for financial market infrastructures.</p>	<p>Cross-border and multicurrency services are monitored on an on-going basis and relevant authorities have been identified namely in the course of the re-authorization process pursuant to EMIR. BaFin and Deutsche Bundesbank are notified by the CCP of respective operations on a regular basis (daily/monthly/quarterly) and additionally on an ad-hoc basis if deemed necessary.</p> <p>Respective criteria relevant for BaFin and Deutsche Bundesbank (Banking Supervision Function) for determining which other relevant authorities should be informed are laid down in Chapter 7 and 7 a-d of the German Banking Act and in Article 23 and 24 EMIR. Guiding Principle is that competent authorities provide one another with the information required for the purpose of carrying out their duties. This implies that information has to be provided in a proactive manner against the criteria of the other authority's duties.</p> <p>BaFin has produced a template for its monthly reporting shared with the college authorities. For exchange of information and emergency situations there are protocols provided by ESMA (Information sharing CCP colleges, Protocol operation of college emergency situation). BaFin would provide information on events that could adversely affect another jurisdiction's financial market ASAP depending on the time-sensitivity and materiality of the underlying issue.</p> <p>With regards to form and timing for the provision of information to central banks, the Deutsche Bundesbank (Oversight function) would proceed within the central bank community in the same way as BaFin.</p>
<p>Key Consideration 3</p> <p>Cooperation may take a variety of forms. The form, degree of formalization and intensity of cooperation should promote the efficiency and effectiveness of the cooperation, and should be appropriate to the nature and scope of each authority's responsibility for the supervision or oversight of the FMI and commensurate with the FMI's systemic importance in the cooperating authorities' various jurisdictions. Cooperative</p>	<p><b>Forms of cooperation</b></p> <p>Cooperation is exercised on the basis of the requirements in the German Banking Act, EMIR, the German Recovery and Resolution Act, and according to the formal arrangements described in KC 1 (Supervision guidelines, cooperation agreements, MOUs).</p> <p>Therefore cooperation is based on this legal framework and on the principle that it is exercised in a way to enable the relevant authorities to carry out their duty.</p> <p><b>Efficiency and effectiveness of cooperation</b></p> <p>The European framework under EMIR has greatly strengthened the effectiveness of cooperation among authorities' members of Eurex Clearing college. College members have required greater transparency in</p>



<p>arrangements should be managed to ensure the efficiency and effectiveness of the cooperation with respect to the number of authorities participating in such arrangements.</p>	<p>the operation of Eurex Clearing college which has encouraged BaFin as the chair to prompt sharing of information. This is achieved monthly on the form of a template suggested by ESMA. The college process is also more effective and efficient, for example by avoiding the duplication of questions across college members. Furthermore, the CCP's competent authority shall act as a central point of contact for any matter related to the practical organization of the college.</p> <p>In addition to allowing the exchange of information, the college is a supervisory tool for the on-going supervision of Eurex Clearing. The seniority and level of engagement of its members mainly in the physical meetings once a year and in the voting meeting, and their ability to meet Eurex Clearing senior management, allow identifying and addressing issues of concern in order to strengthen the CCP according to EMIR requirements.</p> <p>ESMA is working to ensure improved convergence in supervisory practices. In this respect, proposals are being made for improving the efficiency of the supervisory processes of ongoing supervision concerning the extension of activities and services under Article 15 of EMIR and the validation of significant changes to the CCP's models and parameters under Article 49 of EMIR.</p> <p>On 08.01.2015 ESMA has published a report "Review of CCP colleges under EMIR, ESMA/2015/20" (<a href="http://www.esma.europa.eu/system/files/2015-20-report_on_esma_review_of_ccp_colleges.pdf">http://www.esma.europa.eu/system/files/2015-20-report_on_esma_review_of_ccp_colleges.pdf</a>).</p>
<p>Key consideration 4</p> <p>For an FMI where cooperative arrangements are appropriate, at least one authority should accept responsibility for establishing efficient and effective cooperation among all relevant authorities. In international cooperative arrangements where no other authority accepts this responsibility, the presumption is the authority or authorities with primary responsibility in</p>	<p>Following EMIR, BaFin has been designated as National Competent Authority (NCA) and chairs and organizes the colleges.</p> <p>The responsibilities of the NCA are defined and its tasks listed in the Commission Delegated Regulation (EU) No <a href="#">876/2013</a> of 28 May 2013 supplementing EMIR. They require the NCA to ensure the efficiency and effectiveness of the college, in its cooperative supervisory role.</p>

<p>the FMI's home jurisdiction should accept this responsibility.</p>	
<p>Key consideration 5</p> <p>At least one authority should ensure that the FMI is periodically assessed against the principles and should, in developing these assessments, consult with other authorities that conduct the supervision or oversight of the FMI and for which the FMI is systemically important.</p>	<p>BaFin as national competent authority exercises its supervisory mission, in cooperation with the Deutsche Bundesbank (Supervision function) in assessing annually the level of compliance of Eurex Clearing with EMIR, and with other prudential standards resulting from the German Banking Act. BaFin also reviews, in consultation with the Deutsche Bundesbank, and assesses Eurex Clearing recovery plan, measures related to this plan, measures to address recovery impediments according to the German Recovery and Resolution Act.</p> <p>The competence for the oversight of CCPs lies with the Deutsche Bundesbank (Oversight function). The ongoing oversight conducted by the Deutsche Bundesbank on the basis of the PFMI following the ECB Governing Council's adoption of the PFMI on June 3 2013 and central bank objectives builds a further layer in relation to CCPs. In practice, in order to avoid duplicating efforts and to achieve efficiency, Bundesbank relies on BaFin's and Bundesbank (supervisory function)'s assessments wherever they cover PFMI's.</p> <p>Consultation and information sharing with other relevant authorities is conducted within the context of the cooperation described under Key consideration 1.</p>
<p>Key consideration 6</p> <p>When assessing an FMI's payment and settlement arrangements and its related liquidity risk-management procedures in any currency for which the FMI's settlements are systemically important against the principles, the authority or authorities with primary responsibility with respect to the FMI should consider the views of the central banks of issue. If a central bank of issue is required under its responsibilities to conduct its own assessment of these arrangements and procedures, the central bank</p>	<p>Deutsche Bundesbank (oversight function) assesses the payment and settlement arrangements and their related liquidity risk management procedures for all relevant currencies used in Eurex Clearing transactions and monitors their volumes and relevance on an on-going basis. These currencies include EUR, CHF, USD, GBP, KRW. At this stage, only for Swiss Franc is Eurex Clearing of systemically importance.</p> <p>Deutsche Bundesbank participates in the MoU conducted by BaFin with the Swiss National Bank (SNB) and Switzerland's financial-markets regulator (FINMA). Therefore, the views of the Swiss Central Bank of Issue are duly considered.</p> <p>In case of specific interest from the central bank of issue (USD), an informal information sharing is implemented by the Deutsche Bundesbank with the relevant central bank (Federal Reserve).</p> <p>In addition, the consideration of the views of the central banks of issue is provided by the EMIR-colleges as described under Key consideration 1. The central banks of issue are provided with an annual risk assessment</p>

<p>should consider the views of the authority or authorities with primary responsibility with respect to the FMI.</p>	<p>by the national competent authority (BaFin) and thus can also take into account the view of the authority with primary responsibility for Eurex Clearing.</p>
<p>Key consideration 7</p> <p>Relevant authorities should provide advance notification, where practicable and otherwise as soon as possible thereafter, regarding pending material regulatory changes and adverse events with respect to the FMI that may significantly affect another authority's regulatory, supervisory, or oversight interests.</p>	<p>Information regarding pending material regulatory changes and/or adverse events with respect to Eurex Clearing that may significantly affect another authority's regulatory, supervisory, or oversight interests is provided either through BaFin's monthly reports to the members of the EMIR colleges, or through ad hoc information in case of emergency. In particular, the EMIR college provides for a forum for discussing/assessing potential impacts with respect to regulatory actions.</p>
<p>Key consideration 8</p> <p>Relevant authorities should coordinate to ensure timely access to trade data recorded in a TR.</p>	<p>Not applicable.</p>
<p>Key consideration 9</p> <p>Each authority maintains its discretion to discourage the use of an FMI or the provision of services to such an FMI if, in the authority's judgment, the FMI is not prudently designed or managed or the principles are not adequately observed. An authority exercising such discretion should provide a clear rationale for the action taken both to the FMI and to the authority or authorities with primary responsibility for the supervision or oversight of the</p>	<p>The EMIR re-authorization procedure and the opinions to be delivered by the college in the on-going supervisory processes regarding new services and significant changes to the risk model or parameters give the possibility for authorities members of the college to express through their vote a positive or negative opinion in case they are not convinced by the supporting documentation of the application including the risk assessment lead by BaFin.</p>

FMI.	
<p>Key consideration 10</p> <p>Cooperative arrangements between authorities in no way prejudice the statutory or legal or other powers of each participating authority, nor do these arrangements constrain in any way an authority's powers to fulfill its statutory or legislative mandate or its discretion to act in accordance with those powers.</p>	<p>Cooperation is embedded into the provisions of the German banking act, EMIR and the German Recovery and resolution act. As such, cooperation should in no way prejudice the statutory or legal or other powers of each participating authority in the cooperation.</p> <p>Nor do the arrangements concluded on the basis of their provisions constrain any concerned authority's powers to fulfill its statutory or legislative mandate or its discretion to act in accordance with those powers.</p>
Key Conclusions for Responsibility E	Central banks, market regulators, and other relevant authorities cooperate with each other, both domestically and internationally. In the European context, this is achieved through college participation. At the international level, this cooperation is formalized by MOUs.
Assessment of Responsibility E	Observed
Recommendations and Comments	In order to enhance the cooperation with the authorities of the jurisdictions where Eurex Clearing authorities have cooperation arrangements in effect or in preparation, and to strengthen the competences of the German authorities' staff, it would be beneficial to establish a short-term staff exchange program with the relevant authorities, such as secondment and swap.