

Eurex Clearing AG

Assessment of Eurex Clearing AG's compliance against the CPMI-IOSCO Principles for financial market infrastructures (PFMI) and the disclosure framework associated to the PFMIs

February 28, 2022

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1 Executive Summary

In April 2012, the Committee on Payment and Settlement Systems (CPSS)¹ and the Technical Committee of the International Organization of Securities Commissions (IOSCO) published the report “Principles for financial market infrastructures” (PFMI). In December 2012, CPSS and IOSCO published a report containing the “Disclosure framework for financial market infrastructures” (disclosure framework) and the “Assessment methodology for the principles for FMIs and the responsibilities of authorities” (assessment methodology).

Eurex Clearing Aktiengesellschaft (Eurex Clearing AG, Eurex Clearing) performed an update of its 2020 assessment of its compliance with the CPMI-IOSCO PFMI in accordance with the CPMI-IOSCO assessment methodology². Based on the results of this updated assessment Eurex Clearing is of the opinion that it fully observes the CPMI-IOSCO PFMI.

Eurex Clearing is one of the leading global central counterparties (CCPs), assuring the safety and integrity of markets while providing innovation in risk management, clearing technology and client asset protection. It clears a broad scope of products — both on- and off-exchange — under a single framework in Europe and accepts a wide spectrum of eligible collateral. The offering comprises flexible trade management functions, advanced risk management services, efficient collateral and delivery management tools. Eurex Clearing delivers a comprehensive value chain of clearing services with our high-quality, cost-efficient and state-of-the-art clearing and risk management systems.

Eurex Clearing is a credit institution under the German Banking Act and fulfils the requirements under the European legislation, in particular Capital Requirements Regulation (CRR) / Capital Requirements Directive (CRD) and Banking Recovery and Resolution Directive (BRRD), the respective German legislation including the German Recovery and Resolution Act (SAG) and Regulation (EU) 2021/23 (CCP RRR) on a framework for the recovery and resolution of central counterparties, which entered into force on 11 February 2021, with most of its provisions applying from 12 August 2022. As the CCP RRR is effective, the EU rules supersede the former national rules.

On 10 April 2014, Eurex Clearing received a permission from the German Federal Financial Supervisory Authority to perform clearing services pursuant to Article 17 of Regulation (EU) 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). The authorisation as EMIR-compliant CCP also determines Eurex Clearing as a qualifying CCP under CRR/CRD. On 1 February 2016, Eurex Clearing was registered with the Commodity Futures Trading Commission (CFTC) as a Derivatives Clearing Organisation (DCO) for clearing swaps for US Clearing Members and their customers in accordance with the Commodity Exchange Act. Furthermore, Eurex Clearing has been recognized as Recognised Clearing House by the Monetary Authority of Singapore (MAS) on 14 September 2018, as Foreign Central Counterparty by the Swiss Financial Market Supervisory Authority (FINMA) on 29 March 2018 and as Financial Instrument Clearing Organization by the Japanese Financial Services Agency (JFSA) on 12 March 2020. Additionally, Eurex Clearing has been exempted from the requirement to be recognized as a clearing agency in Ontario by the Ontario Securities Commission on 14 July 2017.

¹ On September 2014 the Committee on Payment and Settlement Systems (CPSS) was renamed to Committee on Payments and Market Infrastructure (CPMI).

² Eurex Clearing assessed its compliance against all PFMI except PFMI 10, PFMI 11 and PFMI 24 which are not applicable to CCPs.

2 Summary of major changes since the last update of the disclosure

This is the updated version of Eurex Clearing's 2020 assessment against the CPMI-IOSCO PFMI. This document includes a number of editorial and linguistic adjustments to improve the readability and understandability of the disclosure document. Further information answering the PFMI have been added. Major changes since the last update to the content are highlighted below with respect to the respective Principles:

Principle 1 – Legal basis

No material changes.

Principle 10 – Physical deliveries

Not applicable to Eurex Clearing.

Principle 2 – Governance

No material changes.

Principle 11 – Central securities depositories

Not applicable to Eurex Clearing.

Principle 3 – Framework for the comprehensive management of risks

No material changes.

Principle 12 – Exchange-of-value settlement systems

No material changes.

Principle 4 – Credit risk

No material changes.

Principle 13 – Participant default rules and procedures

No material changes.

Principle 5 – Collateral

No material changes.

Principle 14 - Segregation and portability

No material changes.

Principle 6 – Margin

No material changes.

Principle 15 – General business risk

No material changes.

Principle 7 – Liquidity risk

No material changes.

Principle 16 – Custody and investment risk

No material changes.

Principle 8 – Settlement finality

No material changes.

Principle 17 – Operational risk

No material changes.

Principle 9 – Money settlements

No material changes.

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Principle 18 – Access and participation requirements

No material changes.

Principle 19 – Tiered participation arrangements

No material changes.

Principle 20 – FMI links

No material changes.

Principle 21 – Efficiency and effectiveness

No material changes.

Principle 22 – Communication procedures and standards

No material changes.

Principle 23 – Disclosure of rules, key procedures, and market data

No material changes.

Principle 24 – Disclosure of market data by trade repositories

Not applicable to Eurex Clearing.

3 General background on Eurex Clearing

General description of the FMI and the markets it serves

Eurex Clearing assures the safety and integrity of markets while providing innovation in risk management, clearing technology and client asset protection. Eurex Clearing clears the broadest scope of products under a single framework in Europe — both listed products and OTC — and accepts the world’s widest spectrum of eligible collateral. Eurex Clearing provides its services for derivatives, equities, bonds and secured funding, and the securities financing market. We stand between the buyer and the seller, which makes us the central counterparty for all transactions. In addition, Eurex Clearing provides a direct access model for the buy side which allows for higher capital efficiencies with both derivatives and securities financing transactions. We mitigate counterparty risk and maximize operational efficiency. Our one-stop shop combines seamless post-trade services, efficient collateral, and delivery with industry-leading risk management.

Overview on served markets and product groups:

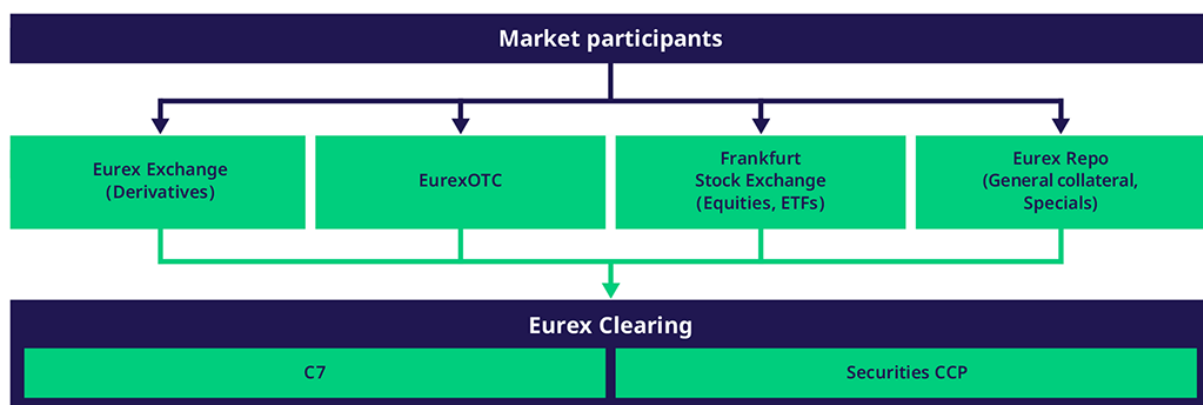


Figure 1: Eurex Clearing's served markets and product groups³

- Eurex Exchange is one of the largest global derivatives exchanges with a product suite comprising the most actively traded and liquid market in EUR-denominated equity index and fixed income derivatives; as well as a broad offering in single equity products, alternative asset classes and commodities.
- With its service EurexOTC Clear for OTC interest rate, inflation and FX derivatives, Eurex Clearing has fully integrated execution with clearing and collateral management of OTC and listed derivatives in a single CCP within one single legal and operational framework. EurexOTC Clear offers clearing services for a broad range of standardised interest rate OTC derivatives in various currencies, OTC derivatives in inflation-indices, OTC FX swaps, forwards as well as cross-currency swaps for the currency pairs Euro vs. US Dollar and Pound Sterling vs. USD.
- For its OTC IRD business, Eurex Clearing is furthermore connected to the following external Approved Trade Sources:
 - MarkitSERV Ltd
 - Bloomberg Trading Facility LTD
 - Bloomberg Trading Facility BV
 - Bloomberg SEF LLC
 - Bloomberg Tradebook Singapore PTE LTD
 - Tradeweb EU BV

³ In Q3/2021 the Securities CCP was replaced by C7. However, repo transactions are still cleared via the Securities CCP.

- Tradeweb Europe LTD
- Tradeweb SEF LLC
- For its OTC FX business, Eurex Clearing is connected to the following external Approved Trade Sources:
 - 360 Treasury Systems AG
 - MarkitSERV Ltd
- Cash equity trading is undertaken via the FWB® Frankfurter Wertpapierbörse (the Frankfurt Stock Exchange) – both Xetra® and floor, cleared by Eurex Clearing as CCP and settled in Clearstream Banking Frankfurt and Clearstream Banking Luxembourg. Cash transactions are settled in Euro and Swiss Francs via Central Banks and in US Dollars and Pounds Sterling via commercial banks.
- Eurex Repo ranks among the leading electronic markets for secured funding and financing and is the marketplace for the collateralised money market in Swiss Francs and Euros as well as for the GC Pooling® offering. Repo trading is undertaken via Eurex Repo, cleared by Eurex Clearing as CCP and settled in Clearstream Banking Frankfurt, Clearstream Banking Luxemburg and Euroclear Bank.
- For its repo business, Eurex Clearing is furthermore connected to the following external Approved Trade Sources:
 - NEX BrokerTec Europe Limited
 - CME Amsterdam B.V.
- Eurex Clearing has discontinued clearing services for the securities lending market in Q2 2021.

Eurex Clearing serves 206 Clearing Members located in 21 countries worldwide (as of 31 December 2021) and manages a collateral pool of approximately EUR 70.5 billion (monthly average in 2021). In 2021, Eurex Clearing processed approximately 1,85 billion transactions. Transaction volumes in the Eurex OTC Clear service show a strong increase over the last years.

| In millions | 2019 | 2020 | 2021 |
|---------------------------------------|-------------|-------------|-------------|
| Number of transactions | 2,055 | 2,029 | 1,848 |
| Value of transactions (ETD) (EUR) | 121,173,839 | 118,040,296 | 126,094,913 |
| EurexOTC Clear - Notional Value (EUR) | 14,032,000 | 17,031,000 | 21,256,000 |
| Total Margin Collateral Value (EUR) | 57,697 | 66,598 | 74,371 |
| Default Fund (EUR) | 3.829 | 4.736 | 6,330 |
| Number of Clearing Members | 211 | 215 | 206 |
| of which: Foreign Clearing Member | 149 | 152 | 147 |

Figure 2: Eurex Clearing volumes

More statistics on Eurex Clearing’s participant base are provided in the quarterly CPMI-IOSCO public quantitative disclosure on the “AggregatedDataFile” tab, where one can find:

- Number of General Clearing Members (18_1_1_1),
- Number of Direct Clearing Members (18_1_1_2),
- Number of Basic Clearing Members (18_1_1_3),
- Number of central bank participants (18_1_2_1),
- Number of bank participants (18_1_2_3),
- Number of other participants (18_1_2_4),
- Number of domestic participants (18_1_3_1), and
- Number of foreign participants (18_1_3_2).

The list of cleared products, descriptions of services offered, and a broad range of basic and performance statistics is constantly updated and available on the Eurex Clearing website (www.eurex.com).

Eurex Clearing has documented and established governance arrangements that provide for clear responsibility and accountability for both the Eurex Clearing Executive Board and Supervisory Board. These arrangements are disclosed to relevant stakeholders at different granularity.

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 arrangements that comply with Part 4, Section 1 and 2 of the Stock Corporation Act (Aktiengesetz, AktG).

Legal and regulatory framework

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

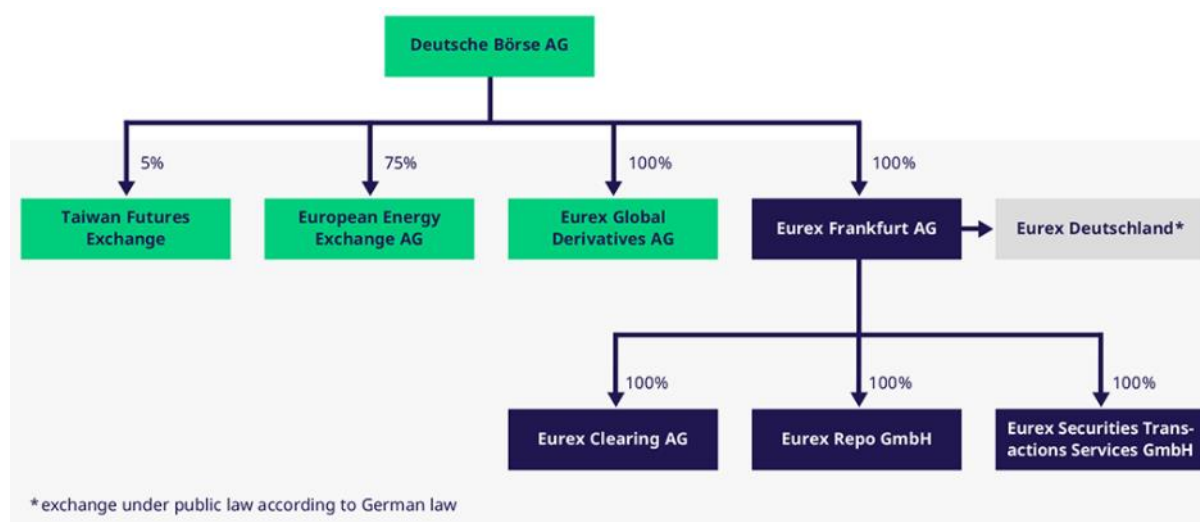


Figure 3: Shareholder structure of Eurex Clearing

Eurex Clearing's objective is to ensure full compliance with regulatory standards for CCPs. Methodologies and risk management practices are regularly reviewed.

Eurex Clearing's rules are stipulated in the Clearing Conditions which are part of the general terms and conditions. Eurex Clearing reserves the right to amend the Clearing Conditions at any time; those amendments and additions are announced via electronic circular to Clearing Members and Disclosed Direct Clients at least fifteen (15) business days prior to the effective date fixed in the relevant notice. The Clearing Conditions of Eurex Clearing are available to the public via the Eurex Clearing website (www.eurexclearing.com).

Eurex Clearing is a CCP in accordance with EMIR as approved by German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht or BaFin) on 10 April 2014. Eurex Clearing is listed in the European Securities and Markets Authority's register of central counterparties authorised to offer services and activities in the European Union in accordance with EMIR (https://www.esma.europa.eu/sites/default/files/library/ccps_authorized_under_emir.pdf). On a national level, the legal framework is further based on Section 32 KWG enabling Eurex Clearing to perform its services as a CCP.

System design and operation

Eurex Clearing safeguards market integrity and also offers customers ways to streamline their business. The core functions increase overall efficiency and promote standardisation in the clearing and settlement industry. From trade capture to risk management and on to delivery management, Eurex Clearing offers the complete value chain.

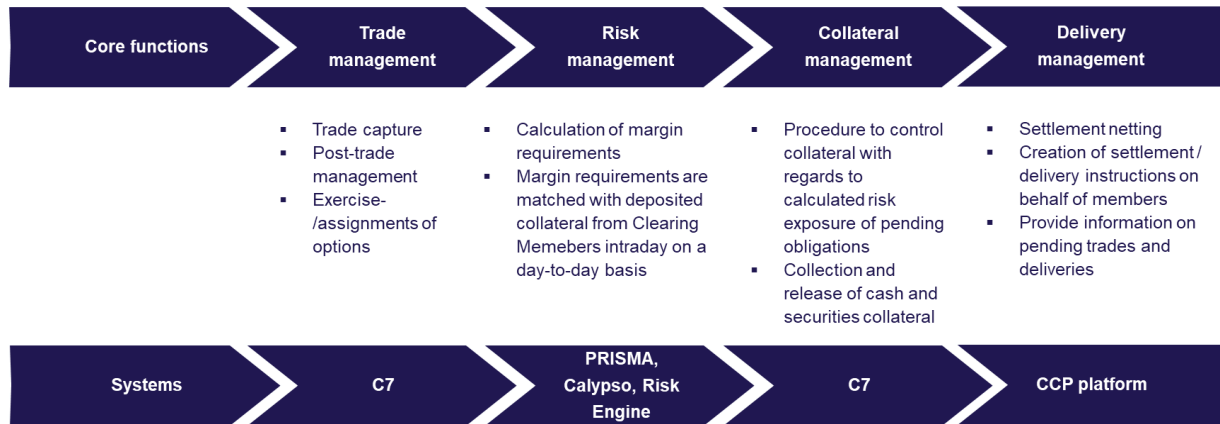


Figure 4: Clearing value chain of Eurex Clearing⁴

⁴ In Q3/2021 the Securities CCP was replaced by C7. However, repo transactions are still cleared via the Securities CCP.

4 Principle-by-principle narrative disclosure

Principle 1: Legal Basis

An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.

Key Consideration 1:

The legal basis should provide a high degree of certainty for each material aspect of an FMI's activities in all relevant jurisdictions.

Eurex Clearing AG (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 10 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

(https://www.esma.europa.eu/sites/default/files/library/ccps_authorized_under_emir.pdf).

Eurex Clearing is also holding a German banking licence for the provision of the services as a central counterparty (zentraler Kontrahent), deposit taking business (Einlagengeschäft), lending business (Kreditgeschäft) and own account trading not relating to a client (Eigengeschäft) pursuant to Section 1 (1) and 32 of the German Banking Act (Kreditwesengesetz – "KWG").

Further, Eurex Clearing is a registered derivatives clearing organization ("DCO") with the U.S. Commodity Futures Trading Commission (the "CFTC"). Eurex Clearing is thus subject to and complies with the CFTC's DCO Core Principles. Eurex Clearing is allowed to clear interest rate swap ("IRS") transactions for U.S. Clearing Members for their own account and client accounts.

Eurex Clearing's offering of clearing services to Clearing Members is governed by either the Clearing Conditions of Eurex Clearing AG or the FCM Regulations of Eurex Clearing AG. Entering into a clearing relationship with Eurex Clearing requires the entering into a Clearing Agreement between Eurex Clearing and its Clearing Members. These standard Clearing Agreements are publicly available as Appendices 1, 5, 6, 10 of the Clearing Conditions and Appendix 1 to the FCM Regulations. The Clearing Conditions and FCM Regulations form part of the relevant Clearing Agreements and regulate all significant features of Eurex Clearing's operations and are enforceable against its participants by virtue of the contractual relationship.

There are two legal structures how cleared transactions are established between the CCP and its participants, namely open offer and novation. Open offer is foreseen by the Clearing Conditions for transactions concluded on Frankfurt Stock Exchange, Eurex Deutschland and Eurex Repo GmbH. OTC Transactions transmitted to Eurex Clearing for clearing will be established by novation. The novation requires fulfilment of the novation criteria set by the CCP.

The timing of assumption of liability as CCP

The relevant point of time for the establishment of Transactions with the CCP via open offer is the confirmation of the matching of the orders and quotes entered into the order books of the relevant trading platform. The novation will be confirmed by the CCP directly.

Netting Arrangements

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 Code (Bürgerliches Gesetzbuch – “BGB”). Netting procedures are also included in the FCM Regulations and are based on the set-off-principles under U.S. law.

Collateral arrangements

The Clearing Conditions provide rules for collateral arrangements. One has to differentiate between the different Clearing Models. Generally, the Clearing Member fulfils its margin requirement by the delivery of collateral in the form of cash and securities. Under the Elementary Clearing Model, collateral in the form of cash is granted in the form of a full title transfer, whereas collateral in the form of securities is provided by way of pledging the securities in favour of Eurex Clearing. This holds true also for FCM Clearing Members under the FCM Regulations and Basic Clearing Members under the Basic Clearing Member Provisions. Under the ISA Provisions, margin in the form of cash is granted by way of full title transfer and margin in the form of securities is provided either by way of pledge or by way of full title transfer.

Regarding the transfer of title and the granting of pledges with respect to securities, based on general legal principles, in particular the *lex rei sitae* principle applies, which stipulates that the transfer of title and granting a pledge with respect to securities is governed by the laws of the jurisdiction where the relevant central securities depository system (“CSD”) is located, in which the relevant security is deposited. If the security is maintained with Clearstream Banking AG, German law is applicable with respect of securities that are located in Germany as far as a right in rem is concerned. If the security is maintained with Clearstream Banking S.A., Luxembourg law will be applicable. If the security is maintained with SIX SIS AG, Swiss law applies. Legislation of the European Union (in particular Directive 98/26/EC of the European Parliament and of the Council on settlement finality in payment and securities settlement systems (Settlement Finality Directive) and Directive 2002/47/EC of the European Parliament and of the Council on financial collateral arrangements (Financial Collateral Directive) increases the degree of legal certainty.

Furthermore, regarding margin requirements and collateral, Articles 41 and 46 of EMIR - together with the respective delegated regulations – provide further requirements Eurex Clearing has to fulfil.

Default procedures

Eurex Clearing’s default rules include rules for

- the default of a Clearing Member and Basic Clearing Member,
- the default of a Clearing Agent under the Basic Clearing Member,
- the default of an FCM Clearing Member under the FCM Regulations, and
- Eurex Clearing’s default.

Eurex Clearing’s default procedures comply with requirements set out by Articles 42 (Default Fund), 45 (Default Waterfall) and 48 (Default Procedures) of EMIR and/or the requirements under U.S. law and stipulated by 17 CFR Part 22.

Finality of transfers of funds and financial instruments

The finality of transfers of funds and financial instruments is ensured by the involved CSDs and the use of central bank monies.

Further details on the settlement finality and on cash settlements can be found in Eurex Clearing’s answer to Principle 8 and 9, respectively.

Interoperability

Currently, Eurex Clearing does not engage in any interoperability arrangements. However, in case requests of other CCPs would occur, an adequate framework is in place to govern these arrangements as explained in Eurex Clearing’s answer to Principle 20.

Key Consideration 2:

An FMI should have rules, procedures, and contracts that are clear, understandable, and consistent with relevant laws and regulations.

Eurex Clearing ensures that its rules, procedures and contractual arrangements are clear, comprehensive, in writing and in compliance with EMIR, U.S. law as well as all other applicable regulatory and supervisory requirements. The Compliance Function has the responsibility to detect any risk of failure by Eurex Clearing and its employees to comply with the obligations under EMIR, including the relevant regulatory and implementing technical standards.

Certain documents (including the Clearing Conditions and the FCM Regulations) are publicly available via Eurex Clearing's website; others are available for involved parties and can be found in the member section as linked on the website. The competent authority has access to all documents.

Eurex Clearing identifies and analyses the soundness of the rules, procedures and contractual arrangements of Eurex Clearing.

These rules, procedures, and contractual arrangements and any accompanying material are accurate and up to date. The respective policies ensure that where expertise, necessary to fulfil the requirements, is not available internally, the compliance function may have recourse to the expertise or technical means of third parties outside the Deutsche Börse Group.

Eurex Clearing has in place adequate rules to make amendments to the Clearing Conditions and the FCM Regulations.

Key Consideration 3:

An FMI should be able to articulate the legal basis for its activities to relevant authorities, participants, and, where relevant, participants' customers, in a clear and understandable way.

Certain documents (including the Clearing Conditions and the FCM Regulations) are publicly available via the Eurex Clearing website, others are available for involved parties and can be found in the member section on Eurex Clearing's website. The competent authority has access to all documents.

Furthermore, on its website, Eurex Clearing provides information on its regulatory framework (<https://www.eurex.com/ec-en/find/about-us/company-profile>). The FAQ on the website further provides more details on the legal status of Eurex Clearing, which licenses it holds and by which authorities it is supervised (<https://www.eurex.com/ec-en/find/faqs>).

Key Consideration 4:

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.

Eurex Clearing has rules, procedures and contracts in place that are enforceable in all relevant jurisdictions.

Before accepting a Clearing Member having its registered seat in a new jurisdiction, Eurex Clearing mandates a local law firm to analyze the enforceability of the main principles of the relevant clearing models offered in such jurisdiction under the relevant national law. These legal opinions are updated on a regular basis. Depending on market demands, Eurex Clearing may commission further enforceability opinions.

Only in case of a positive outcome of such legal assessment, Eurex Clearing accepts Clearing Members from the relevant jurisdictions.

Key Consideration 5

An FMI conducting business in multiple jurisdictions should identify and mitigate the risks arising from any potential conflict of laws across jurisdictions.

Clearing Member Jurisdictions

Eurex Clearing is required to ensure the enforceability of the main principles of Eurex Clearing's clearing models in all jurisdictions, in which Eurex Clearing offers clearing services to Clearing Members. Whenever uncertainty exists regarding Eurex Clearing's choice of law, the Chief Compliance Officer of Eurex Clearing shall obtain reasoned and independent legal opinions and analysis in order to address properly such uncertainty.

Whenever Eurex Clearing mandates a local law firm to analyse the enforceability of the main principals of the relevant clearing models offered in the relevant jurisdiction, the enforceability of Eurex Clearing's choice of law is also assessed.

Further, when potential conflicts of law issues would arise otherwise, Eurex Clearing identifies and analyses the issues. If necessary, Eurex Clearing will contact local law firms to provide legal opinions. 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 and the developed rules and procedures to mitigate legal risk resulting from such issues (cf. Article 5 para. 4 Regulation (EU) No 153/2013)

Security Collateral Locations

Additionally, Eurex Clearing ensures to maintain securities collateral provided by its Clearing Members with security collateral locations, which ensure the availability of such margin assets in case of the default or insolvency of the relevant Clearing Member. Eurex Clearing requires from the security collateral location enforceable first ranking rights on the securities, as well as prompt access to this collateral under the legal concept of title transfer or pledge.

Legal certainty of these rights has to be confirmed in the form of a legal opinion from internal and/or external legal counsels – i.e. initially during the due diligence process, and over the course for the recognized collateral locations always where a significant change makes it necessary.

Assessment of principle:

Observed

Principle 2: Governance

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.

Key Consideration 1

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.

Eurex Clearing AG (Eurex Clearing) is recognized as a German credit institution and separately received permission to act as a central counterparty under the supervision of the German Federal Financial Supervisory Authority and the German Central Bank.

Eurex Clearing supports the financial stability by guaranteeing every transaction made in the markets for which it provides services. Eurex Clearing provides clearing services ('Clearing Business') for derivatives, equities, bonds, and secured funding and securities financing markets. Eurex Clearing assures the safety and integrity of markets while providing innovation in risk management, clearing technology and client asset protection.

To foster fair and efficient markets, Eurex Clearing's objective is to ensure full compliance with regulatory standards for central counterparties and, as far as applicable, the relevant standards for credit institutions.

In order 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 has an adequate information technology system and ensures 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).

Additionally, the Internal Control System (ICS) is a key management instrument and comprises principles, procedures and measures implemented by Deutsche Börse Group's (DBG) management. It is designed to achieve the corporate objectives, in particular ensure the effectiveness and efficiency of the operating business, the correctness and reliability of internal and external accounting and to comply with laws and other regulations that apply to the company.

In addition, Eurex Clearing will continue to foster innovation in risk management services. The objectives can be summarized by the following three pillars:

Create leading risk management infrastructure

Risk management services are the core value proposition of a central counterparty and a non-substitutable service. The objective is to improve both the risk integrity and competitiveness in risk product design to cope with accelerating speed in trading activities as well as to improve business intelligence and resource capacity in designing risk products as prerequisite for the third pillar.

Expand OTC services and third market coverage

The ambition of Eurex Clearing is to maintain its position as the leading CCP in Europe. Based on this goal, the objective is to expand existing clearing services to new markets worldwide and to leverage the Eurex Clearing value proposition of leading risk management services into OTC markets with new clearing services and flexible platforms to acquire new business.

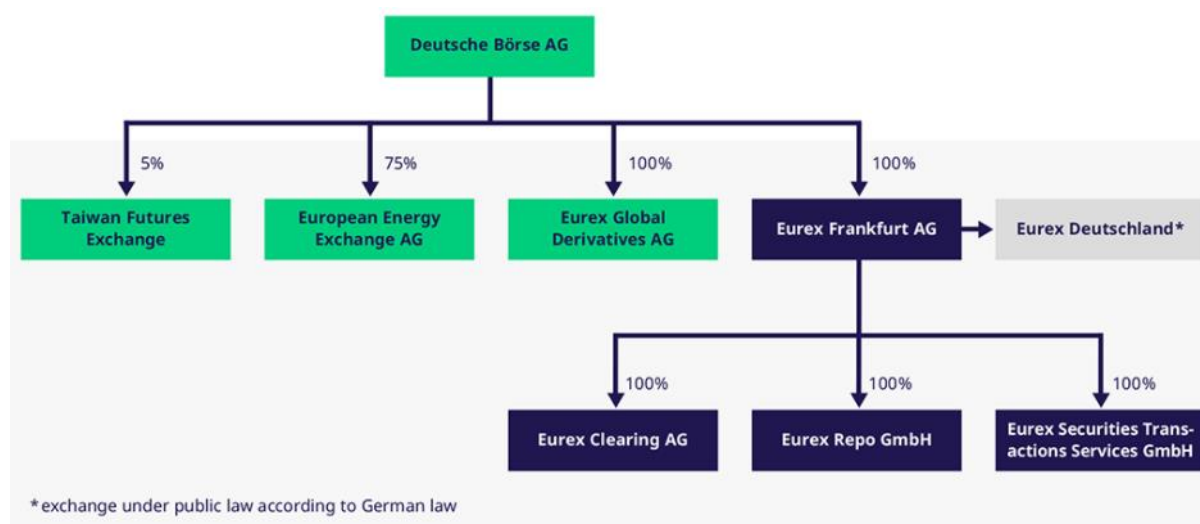
Transparency in services and markets

Eurex Clearing clears the broadest scope of products under a single framework in Europe — both listed products and OTC. Eurex Clearing provides its services for derivatives, equities, bonds, and secured funding and securities financing markets, providing a one-stop shop offering that combines seamless post-trade services, efficient collateral and delivery management with an industry-leading risk management. Increasing market integrity is key at Eurex Clearing.

Key Consideration 2

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.

Eurex Clearing is a wholly owned subsidiary of Eurex Frankfurt AG, which is a wholly owned subsidiary of Deutsche Börse AG. Details of the shareholder structure can be consulted on the corporate governance section of the Eurex Clearing website.



(Find more information on <https://www.eurex.com/ec-en/find/corporate-overview/corporate-structure>.)

In accordance with the requirements of the German Corporate Governance Code, it publishes the corporate governance report in combination with the corporate governance declaration in accordance with section 289a of the Handelsgesetzbuch (HGB, German Commercial Code). The Executive Board and the Supervisory Board of Deutsche Börse AG submitted their annual declaration of conformity in accordance with section 161 of the Aktiengesetz (AktG, German Stock Corporation Act). The annual declaration of conformity in accordance with section 161 of the AktG is printed in the corporate governance declaration and is publicly available on the company's website at www.deutsche-boerse.com/declconformity. The declarations of conformity for all available previous years can also be accessed there.

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 & 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.

Eurex Clearing established adequate risk steering and controlling processes to ensure Identification, Assessment, Steering as well as Supervision and Communication of substantial risk including the respective risk concentration. The Eurex Clearing Risk Strategy is aligned with the business strategy and regulates the scope of risks based on the executed or planned transactions. This is done via risk control and risk limitation. Eurex Clearing ensures that all reasonable measures are taken to avoid, reduce or to port risks.

The department CCP Risk Management is obliged to promptly inform the Eurex Clearing Executive Board and the Eurex Clearing Supervisory Board about identified risks. When discovering any irregularity, CCP Risk Management would initiate all necessary steps immediately.

Furthermore, the group-wide Internal Control System (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.

In the yearly review of the policies and procedures, the management as well as the EMIR Risk Committee (for risk related topics) is included whenever the changes are seen as significant or the involvement is mandatory. The EMIR Risk Committee will advise the Executive and Supervisory Board of Eurex Clearing on the review of several policy frameworks.

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

- risks are adequately identified and mitigated by appropriate controls;
- significant financial and operational information is accurate and reliable;
- resources are used effectively and are adequately protected;
- the organization is in compliance with internal policies and procedures, as well as applicable laws and regulations.

The CEO of Eurex Clearing is the management representative for audit matters. In order to ensure independence of the Internal Audit function, the Head of Internal Audit (Chief Internal Auditor) reports to the Executive Board and to the Audit and Risk Committee of Eurex Clearing with an administrative reporting line to the CEO of Eurex Clearing. The Head of Internal Audit maintains at his or her own discretion formal lines of communication with the chairman of the respective Board, the chairman of the Audit and Risk Committee, the external auditor as well as, where required, with the relevant regulators.

Eurex Clearing does not share its staff with other group entities, unless under the terms of an outsourcing arrangement in accordance with Article 35 of Regulation (EU) No 648/2012. This is ensured via the Outsourcing Management process.

The organizational structure of Eurex Clearing is defined in the Business Distribution Plan. The composition of both the Supervisory Board and 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 (For more information, please visit: <https://www.eurex.com/ec-en/find/corporate-overview>). 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 AktG.

The Rules of Procedure for the Executive Board define the reporting lines between the Executive and the Supervisory Board. § 8 of the Rules of Procedure of the Executive Board of Eurex Clearing stipulates that the reporting to the Supervisory Board shall be conducted pursuant to § 90 AktG. Written reports to the Supervisory Board shall be submitted to the chairperson of the Executive Board with the request for forwarding.

According to the Business Distribution Plan, the Chief Executive Officer is responsible to supervise and monitor the Compliance function, also the part which is outsourced to Deutsche Börse Group. The Compliance function, which helps to ensure compliance of Eurex Clearing with all regulatory requirements, monitors and analyses regulatory developments, administers compliance policies and procedures as well as manages relationships to national and international regulatory and policy-making bodies. The Eurex Clearing Chief Compliance Officer in accordance with EMIR is leading this section.

Accountability to stakeholders is ensured by news updates on the Eurex Clearing website (Public and Member Section), complemented by reporting obligations to stakeholders. Furthermore, Eurex Clearing is in continuous

dialogue with its customers. To facilitate this, Eurex Clearing hosts a number of committees to inform and integrate members from all market segments (e.g. Derivatives Clearing Committee, Securities Clearing and Settlement Committee). Furthermore, Eurex Clearing has an EMIR Risk Committee that is set up in accordance with Article 28 EMIR and aims to improve risk management services, practices and functionalities of Eurex Clearing. The committee focuses on adjustments of Eurex Clearing's risk management methodology, improvements of its risk management infrastructure and the definition of value-added risk management services for members. Members of the EMIR Risk Committee comprise representatives of the Clearing Members as well as Clients (Clearing Members, Basic Clearing Members and/or Customer (affected customers)) and independent members.

In addition, circulars, press releases and information on the Eurex Clearing website - and intranet for employees - provide accountability to relevant stakeholders. In accordance with § 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. Numerous committees further inform and integrate members from all market segments into the consultation process.

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 of, or failure to perform, any regulatory requirements that need to be fulfilled by Eurex Clearing may file the complaint, and how that complaint will be investigated and resolved. The Complaints Procedure Manual is also in line with the group-wide Policy on Complaints Management that represents a general framework for complaints management procedures in order to ensure a fair and professional treatment of customers and clients in accordance with relevant regulatory requirements.

Certain functions are outsourced within Deutsche Börse Group in accordance with the Deutsche Börse Group Outsourcing Policy. Moreover, as Eurex Clearing remains fully responsible for discharging all of its obligations under EMIR, it shall continue to monitor the compliance of the Deutsche Börse Group Outsourcing Policy also in the future.

The Business Distribution Plan details the content of the area of responsibility for the Members of the Executive Board. The Plan further indicates the responsibility of each business unit, thereby clearly separating the lines of responsibility. As can be seen from the organisational structure, Eurex Clearing has a Chief Risk Officer, a Chief Compliance Officer, a Chief Audit Officer and a Chief Technology Officer. All of these functions are to 100% assigned to Eurex Clearing resources and are performed by different individuals. The Chief Risk Officer and the Chief Technology officer can be seen from the Business Distribution plan. The Chief Compliance Officer is heading the Compliance section and the Chief Audit Officer is heading the Internal Audit section as shown in the Distribution Plan.

The Conflicts of Interest Policy specifically addresses conflicts of interest at the level of Managers (including the Executive Board, Supervisory Board and their committees). If a member of the Executive Board has a business relationship, a family relationship or another relationship with Eurex Clearing's controlling shareholders, including the members of the Executive Board, Supervisory Board, Administrative Board or of a similar body and the employees, this may constitute or give rise to a conflict of interest.

Key Consideration 3

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 performance and the performance of its individual board members regularly.

The responsibilities of the board are allocated to the Supervisory Board and the Executive Board.

a) As part of conducting the business of Eurex Clearing in accordance with § 76 German Stock Company Act), the Executive Board establishes the objectives and strategies for Eurex Clearing. The Supervisory Board approves the company planning as well as important corporate decisions;

b) Consistent with § 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;

c) The Compensation Review Committee designs and further develops the remuneration policy with regard to the Executive Board and reviews the integrity of the process on a regular basis. Additionally, the CRC supervises the reasonableness of the remuneration system of the members of the Executive Board and of the employees, and in particular the appropriateness of the compensation of the head of the risk control function and of the compliance function as well as of such employees having a substantial influence on the overall risk profile of the enterprise. The committee supports the Supervisory Board in monitoring the reasonableness of the remuneration system regarding the employees of the enterprise and at the same time assesses the effects of the remuneration system to the risk-, capital- and liquidity management.

d) The Nomination Committee supports the Supervisory Board by the (i) identification of candidates to fill Executive Body vacancies and preparing of nominations regarding the election of members of the Supervisory Board, (ii) development of a target to promote the representation of the under-represented gender on the Supervisory Board and a strategy to achieve it, (iii) periodical, at least annual assessment of the structure, size, composition and performance of the Executive Board and the Supervisory Board and express recommendations to the Supervisory Board in this regard, (iv) periodical, at least annual assessment of the knowledge, skills and experience of the individual members of the Executive Board and of the Supervisory Board as well as of the respective board collectively, and (v) periodical review of the policy of the Executive Board for selection and appointment of senior management and recommendations of the Supervisory Board to the Executive Board.

e) As described in the Business Distribution Plan , the Executive Board establishes and oversees the Risk Management;

f) The Audit and Risk Committee, as derived from the Supervisory Board, performs the oversight of the compliance and internal control function as well as audit related topics ;

g) The oversight of outsourcing arrangements is ensured by the Executive Board, who must approve the Outsourcing Policy . In addition, the Executive Board is responsible to approve new outsourcings as part of the outsourcing process;

h) Consistent with the Eurex Clearing AG Compliance Policy, EMIR compliance is assessed by the Chief Compliance Officer and is reported to the Executive Board;

i) Circulars, press releases and information on the Eurex Clearing website - and intranet for employees - provide accountability to relevant stakeholders. Accountability to Clearing Members and customers is further ensured by the complaints process as well as by numerous committees to inform and integrate members from all market segments into the consultation process.

As part of Deutsche Börse Group, Eurex Clearing is subject to the Deutsche Börse Policy on Conflicts of Interest that outlines the effective arrangements of Eurex Clearing for identifying and managing potential conflicts of interest between Eurex Clearing, including its managers, employees, or any person with direct or indirect control or close links on the one hand, and its Clearing Members, and their Disclosed Direct Clients on the other hand. The Conflicts of Interest Policy was approved by the Eurex Clearing Executive Board.

The Conflict of Interest Policy applies to all employees and external service providers who work for Deutsche Börse Group (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.

More detailed information regarding the Eurex Committees is available on the Eurex Clearing website (<https://www.eurex.com/ec-en/find/about-us/Committees-11430>).

Key Consideration 4

The board should contain suitable members with the appropriate skills and incentives to fulfil its multiple roles. This typically requires the inclusion of non-executive board member(s).

The Supervisory Board of Eurex Clearing is generally composed out of 12 members. One third, but no less than two, of the members of the Supervisory Board shall be independent in the meaning of Art. 27 EMIR.

Similar to the members of the Executive Board, members of the Supervisory Board are also recognized by the national competent authority in accordance with § 36 (3) KWG ensuring their reputation and expertise. Furthermore, the Supervisory Board annually assesses the suitability of the members of the Supervisory Board and its Committees according to the guidelines published by the European Banking Authority

In accordance with § 101 (1) 1 AktG the shareholders' meeting appoints the Supervisory Board members of Eurex Clearing. Members of the Supervisory Board must be of good reputation, reliable and need to prove their theoretical and practical knowledge in the respective business area to be able to evaluate, to supervise and to control the business of Eurex Clearing. All these German legal requirements can be deemed to provide a Financial Market Infrastructure (FMI) with a management with appropriate experience.

Furthermore, the Executive Board members of Eurex Clearing are appointed by the Supervisory Board as provided by § 84 (1) 1 AktG.

In the run-up to the appointment by the shareholders' meeting (only for Supervisory Board members) and the Supervisory Board, respectively, Eurex Clearing applies the following procedures to ensure the suitability of members of the governing bodies (Supervisory Board and Executive Board) and other key function holders (staff members whose positions give them significant influence over the direction of Eurex Clearing, but who are not members of the Supervisory and Executive Board. Key function holders might include heads of significant business lines and other senior management). Members of the Executive Board need to prove a certain mix of skills such as their theoretical and practical knowledge as well as their leadership experience in the respective business areas. According to § 32 KWG the CCP is obliged to provide BaFin with evidence about the professional qualification of the management board. This is ensured by a suitability assessment that is conducted in compliance with the Policy for Assessment of the Suitability of Members of the Governing Bodies and Key Function Holders. The AktG provides several rules about the duty of care and the responsibility of the members of the Management Board (§ 90-93 AktG). Moreover, the integrity of Eurex Clearing is ensured by "Minimum Requirements for Risk Management" rules issued by BaFin and § 36 KWG, defining requirements for BaFin to call for a revocation of board members. These rules include standards with regard to all main organizational issues and business activities, which need to be complied with by the CCP.

The Supervisory Board is responsible for ensuring that members of the governing bodies fulfil the suitability criteria in case of a new assignment but also on an on-going basis. This means that before a member takes up his or her position in the Supervisory Board or Executive Board, a suitability assessment will be done. The Chairman of the Supervisory Board will initiate this assessment with support from HR, Boards & Committees Eurex and Legal (upon request). The Supervisory Board will take the decision on the suitability upon the recommendation of the Nomination Committee. The suitability assessment of the key function holders is initiated and conducted by the Executive Board and supported by HR and Legal (upon request) and the decision is made by the Executive Board.

Furthermore, the national competent authority assesses and recognizes the trustworthiness and professional qualification of all members of the Executive Board in accordance with the § 33 (2) German Banking Act before being appointed as member of the Executive Board or Supervisory Board.

The Remuneration for the Executive Board is in line with the business strategy, objectives, values and long-term interests, such as sustainable growth prospects as well as the risk strategy.

The Supervisory Board compensation system does not provide for a variable remuneration component. Therefore, there is no direct relation to business performance.

Eurex Clearing lists the members of the Executive Board (<https://www.eurex.com/ec-en/find/corporate-overview/executive-board>) and Supervisory Board (<https://www.eurex.com/ec-en/find/corporate-overview/supervisory-board>) on its website.

Key Consideration 5

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.

The members of the senior management are assessed based upon the Suitability Policy. Relevant key functions in the senior management are defined including the job responsibilities and required qualifications in the Side letter of Eurex Clearing. The job descriptions for the key function holders are reviewed and updated on a yearly basis in order to ensure the suitability of the CCP's senior management.

The Executive Board is responsible for ensuring that the senior management of Eurex Clearing shows the appropriate experience, mix of skills and the integrity necessary for the operating and risk management criteria in case of a new assignment but also on an on-going basis. This means that before a manager takes up his or her position, a suitability assessment will be done consisting of multiple interviews with HR and Executive Board member in which both, technical know-how and personal integrity is tested.

Key Consideration 6

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.

Risk Management Framework

Eurex Clearing has a clearly defined and documented Risk Strategy, which includes a risk appetite statement. The risk strategy is based upon Eurex Clearing's business strategy and defines the extent of risk taken within the various business activities carried out by Eurex Clearing. The risk strategy does this by determining conditions for risk management, control and limitation. Eurex Clearing gives considerable attention to its risk mitigation process and ensures that appropriate measures are taken to avoid, reduce and transfer or intentionally accept risk. The risk strategy also defines that the appropriateness of the risk management and controlling systems is to be checked continuously.

The Risk Strategy assigns the Executive Board of Eurex Clearing as the ultimate responsible owner for managing the risks. The Risk Strategy further reflects the risk appetite, which defines the maximum loss the Executive Board is willing to take in one year, the tolerance in the light of the risk as well as the performance levels aspired. The Executive Board ensures that the risk strategy is integrated into the business activities throughout Eurex Clearing entirely and that adequate measures are in place to implement the strategies, policies and procedures.

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. Further 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.

The Chief Risk Officer is responsible for implementing the risk management framework including the policies and procedures established by the board and ensures that the framework is revised annually or if any material change makes it necessary.

A mechanism is implemented to ensure that all necessary approval requirements are always met. On behalf of the Executive Management, the Section Policies & Procedures initiates the so-called Update Request with the responsible Line Managers of Eurex Clearing once a year.

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).

Governance

The organizational 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 & 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.

With regards to governance, it is ensured that dedicated areas like Risk Control Function (represented by ERM), Compliance Function and Internal Audit have unrestricted information access rights and direct reporting lines to the Executive Board, which is specified in the respective Policies). Also any potential shortcomings in quantitative or qualitative resourcing would be made transparent via these channels and enable the Executive Board to trigger specific analysis when deemed necessary and upon the assessed results decide whether to take any mitigating measures.

The internal audit function of Eurex Clearing is responsible for assessing the organization's framework of risk management, control and governance processes, and for determining whether:

- risks are adequately identified and mitigated by appropriate controls
- significant financial and operational information is accurate and reliable
- resources are used efficiently and are adequately protected
- the organization is in compliance with internal policies and procedures, as well as applicable laws and regulations.

The Internal Audit Charter defines the role and responsibilities of the internal audit function within Deutsche Börse Group as well as their relationship with auditees, executive managements and supervisory functions. The Charter is reviewed on a regular basis.

Eurex Clearing regularly reviews and validates its risk models, identified based on the model definition in the CCP Risk Management Policy. The processes include controls to ensure that the respective process is completed successfully. Eurex Clearing commits itself to the validation of new risk models by an independent party prior to the launch of the new model. For the on-going revision and improvement of the model, Eurex Clearing regularly seeks the advice of the EMIR Risk Committee. Any major changes and adjustments are presented to the EMIR Risk Committee and approved by the Executive Board of Eurex Clearing. Basic assumptions as well as the model as a whole are reviewed annually.

All validation results and related model risk are presented to the Executive Board on a regular basis. Moreover, results will be made available for clearing members without breaching confidentiality.

Key Consideration 7

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.

Eurex Clearing continuously strives to enhance its products and services that help create safer markets for all participants. This is done jointly in continuous dialogue with its customers. To facilitate this, Eurex Clearing hosts a number of committees to inform and integrate members from all our market segments into the decision-making process for changes and new developments to the services offered by Eurex Clearing. For detailed information on the committees, please refer to the Eurex Clearing website at <https://www.eurex.com/ec-en/find/corporate-overview>.

Major decisions 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 - and intranet for employees. In accordance with § 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.

Stakeholders receive important information like clearing volumes, generated profit, etc. through the Annual Report including the management report, which is available on the Eurex Clearing webpage. The Annual Report mentions in more detail the strategic objectives of Eurex Clearing and to what extent they were achieved, e.g. financial statement. 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.

The Eurex Clearing AG Complaints Procedure Manual, which 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.

Eurex Clearing has implemented the DBG Policy on Conflicts of Interest that outlines the effective arrangements of Eurex Clearing for identifying and managing potential conflicts of interest between Eurex Clearing, including its managers, employees, or any person with direct or indirect control or close links on the one hand, and its Clearing Members, and their Disclosed Direct Clients on the other hand.

Assessment of principle:

Observed

Principle 3: Framework for the comprehensive management of risks

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.

Key Consideration 1

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.

Eurex Clearing has a clearly defined and documented Risk Strategy. The risk strategy is based upon Eurex Clearing's business strategy and governs to which extent risks can be taken within the various business activities carried out by Eurex Clearing. The risk strategy determines conditions for risk management, control and limitation. Eurex Clearing pays considerable attention to its risk mitigation process and ensures that appropriate measures are taken to avoid, reduce, transfer or intentionally accept risk. The appropriateness of the risk management and controlling systems is validated continuously.

Next, Eurex Clearing has a comprehensive risk management framework composed of objectives, measures, and tools defined at company level. The 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.

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 are contemplated by external reporting, i.e. interim and annual reports.

The risk management processes cover the identification, notification, assessment, control and reporting of risks.

Eurex Clearing's risk appetite framework constitutes the tools and concepts that are used to manage risks. The aim is to be able to monitor risks continuously and thereby manage risks according to the risk appetite. The risk appetite takes account of internal risk modelling, regulatory capital, concentration limit framework and stress tests.

Risk Management Approach

It is ECAG's intention to manage risks in an effective and efficient manner based on defined risk limits and risk statements. Risk limits intend to maintain risk at an appropriate and acceptable level. Depending on the risk characteristics there are basically four types of management strategies:

- Risk reduction or elimination, i.e. measures to reduce either severity or frequency of losses
- Risk transfer, i.e. insurance or liability agreements in contracts with third-parties
- Risk avoidance, i.e. changes to the business which prevent risks from happening
- Risk acceptance, i.e. a deliberate decision to take risks and monitor their development

Risk Management policies, procedures and systems are developed by the Risk Management department of Eurex Clearing, reviewed by internal stakeholders, consulted with the EMIR Risk Committee and approved by the Executive Board and, if necessary, the Supervisory Board of Eurex Clearing.

The policies and procedures are reviewed at least annually but can be ad hoc, if deemed necessary.

§ 2 of the Statutes of the EMIR Risk Committee states that the EMIR Risk Committee will advise the Executive and Supervisory Board of Eurex Clearing on the review of its policies and processes.

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

- risks are adequately identified and mitigated by appropriate controls
- significant financial and operational information is accurate and reliable
- resources are used efficiently and are adequately protected
- the organization is in compliance with internal policies and procedures, as well as applicable laws and regulations

According to § 107 Companies Act, the supervisory board of Eurex Clearing has the obligation to assess the effectiveness of the risk management system. The supervisory board may in particular appoint an audit committee that is to monitor the financial reporting process, the effectiveness of the internal control system, the risk management system and the internal audit system. The effectiveness of the risk management system can be assessed through its functional capability and adequacy. This includes the assessment of

- Identification and management of risks
- Handling of significant risks
- Follow-up on identified weaknesses
- Good Practice Standards

Furthermore, effectiveness is tested independently by various internal control functions, internal and external auditors as well as real-live events.

Key Consideration 2

An FMI should provide incentives to participants and, where relevant, their customers to manage and contain the risks they pose to the FMI.

Eurex Clearing ensures that Clearing Members are able to properly manage and contain the risks they pose to the CCP. This is achieved, firstly, by providing Clearing Members with sufficient information regarding all relevant aspects of the CCP's risk management framework (<https://www.eurex.com/ec-en/services/risk-management>), and, secondly, dedicated reports on especially margin requirements help Clearing Members to properly manage and contain their own risks as well as the risk their customers pose to the CCP. Margin requirements adequately protect Eurex Clearing's customers against credit risk without tying up excess capital. Margining encompasses the entire process of measuring, calculating and administering the collateral that must be put up to collateralize open positions. The provision of collateral is required to mitigate the credit risks Clearing Members pose to the clearing house. Eurex Clearing calculates margin requirements in near to real-time to ensure that it has an overview of the members' current profit and loss situations as well as an estimation of the risk exposures. Intraday margin figures are also accessible to the Clearing Members and their customers. Tools such as the cPME (cloud Prisma Margin Estimator), a simulation program, are designed to help members calculate and simulate the impact of their trading behaviour and portfolio structure on their margin requirements. (<https://eurexmargins.prod.dbgservice.com/>)

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

- Real-time order and trade information (via Order and Trade Confirmation Broadcast)
- Stop Trader / Business Unit (for CMs and Disclosed Client Market Participants)
- Report information via End-of-Day and Intra-Day reports
- Position transfer between members via Give up/ Take up functionality
- Advanced Risk Protection
- Maximum TES Quantity

- Maximum Order Quantity
- Maximum Spread Quantity
- Incremental Risk Check for IRS

Distribution of backtesting results to members takes place upon request in specific cases. Detailed information and data is additionally provided in the quarterly CPMI IOSCO data disclosures (see: <https://www.eurex.com/ec-en/find/about-us/regulatory-standards>).

Eurex Clearing has established a Member Compliance Framework to assess Clearing Members' compliance with the participation requirements set out by Eurex Clearing. In addition, an important part of Eurex Clearing's risk management framework is the development and monitoring of Clearing Members' creditworthiness through an internal credit rating system that also takes into account external ratings.

The Clearing Conditions further prescribe that Eurex Clearing may reject to grant a clearing license, if, based on its evaluation, this is necessary to avoid or mitigate risks for the CCP.

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.

The Clearing Conditions of Eurex Clearing set out various incentive measures to ensure that the Clearing Members monitor and manage the timely fulfilment of their obligations and thus monitoring the risk they pose towards Eurex Clearing.

Eurex Clearing helps its Clearing Members in understanding the applicable rules and procedures. Eurex Clearing informs and involves its members in designing its policies and systems. This is achieved through participation of members and clients in the EMIR Risk Committee where all relevant changes to risk management policies and systems are presented and discussed as well as through the possibility members and clients have to consult Clearing Condition changes whenever material changes to the risk management shall be implemented.

Eurex Clearing sets certain concentration limits on member as well as on CCP level and enables CMs and Direct Client Market Participants to set up pre-trade limits for specific transactions/markets in their own agreements. In case such a pre-trade limit is breached and the Clearing Member as a consequence is no longer willing to execute the clearing of the transaction of the respective client, the suspension of the client's trading admission can be ordered and orders or quotes of the concerned client will then be prevented from entering in the order books or, when already existing in the order books, the orders or quotes will be deleted.

Eurex Clearing has further published the cPME (cloud Prisma Margin Estimator), which allows an estimation of the potential margin requirement for a portfolio and can also be accessed via an API (application programming interface). In addition, Eurex Clearing publishes model descriptions for its risk models. Both ensure that participants can determine which effect their trading behavior can have on the associated margin requirements.

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 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 are traders who will advise on and execute the agreed hedging strategies as coordinated by Eurex Clearing.

Key Consideration 3

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.

Eurex Clearing is exposed to risks resulting out of its CCP activities, its treasury activities as well as to exposures arising from cash held in nostro accounts. To consider these risks on a consolidated basis, Eurex Clearing applies a comprehensive framework, which takes multiple roles a Clearing Member may have with Eurex Clearing into account.

System interdependencies are considered by defining mission critical units, business functions and related systems for Eurex Clearing. Additionally, risk analyses and the BCM Plans take into account external links and interdependencies within the financial infrastructure and functions or services that have been outsourced to third-party providers.

Further, Eurex Clearing relies on multiple parallel infrastructures to minimize risk concentrations against other entities.

Concentration and wrong way risks are monitored and mitigated daily. Similarly, cover-2 stress tests of Eurex Clearing's liquid and total financial resources are performed on a daily basis. Tests of the business continuity plans are conducted regularly, at least annually and can be either announced or are triggered unannounced.

Key Consideration 4

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 information needed for purposes of resolution planning.

Eurex Clearing is under EMIR obliged to have sufficient own funds for a winding down or the recovery of its own business (pursuant to Art. 2 (EU) 152/2013). Therefore, an appropriate time period for winding down/the recovery of its own business was estimated.

Eurex Clearing developed wind-down plan that serves the purpose to determine the procedure and time period necessary to wind down or restructure the business of Eurex Clearing and describes the underlying assumptions.

Additionally, Eurex Clearing, as a licensed credit institution, annually updates its recovery plan following the legal requirements stipulated in the German act on recovery and resolution of credit institutions SAG, transposing the Bank Recovery and Resolution Directive (BRRD) into German national law as well as the Minimum Requirements for the Design of Recovery Plans. As of March 2020, on national level additional arrangement for CCPs regarding recovery and resolution have been introduced to the German Recovery and Resolution Act.

As a CCP authorized under Article 14 of Regulation (EU) 648/2012 (EMIR), Eurex Clearing will prepare its recovery plan in accordance with Regulation (EU) 2021/23 (CCP RRR) from 12 February 2022. From that date, the provisions of the BRRD and all subordinated and national implementing legislation, including the SAG, will cease to apply to Eurex Clearing.

The most essential part of restructuring is the application of several recovery options, since they will protect the soundness of Eurex Clearing in a stressed situation. To identify whether a recovery situation has occurred, Eurex Clearing has stipulated conservative recovery indicators along the following observation dimensions:

- Capital;
- Liquidity;
- Operational Capacity.

These observation dimensions capture the impact of financial and operational risk drivers. The recovery indicators are derived for all relevant observation dimensions. For each indicator a recovery limit is defined, indicating that a triggering event has occurred in the respective observation dimension. Additionally, early warning triggers are established and are part of the regular risk management monitoring and reporting. Concerning operational risk, Eurex Clearing's Business Continuity Management planning determines the maximum system downtime of critical functions to be limited to two hours.

Please also refer to Principle 15 for further information.

Assessment of principle:

Observed

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 its credit exposures to its participants and the credit risks arising from its payment, clearing, and settlement processes. Credit exposure may arise from current exposures, potential future exposures, or both.

Eurex Clearing measures its credit exposure on a comprehensive basis taking into account multiple roles a Eurex Clearing counterpart might have. Credit exposures arising from CCP activities as well as from Treasury activities, which in general are collateralized (reverse repurchase agreements) and uncollateralized placements, derivatives for hedging purposes as well as balances left with payment banks are taken into account.

Credit exposure limits are in place to maintain the credit risk within acceptable parameters.

The identification and measurement of credit exposure considers the following five dimensions:

- Types of relationships with counterparties;
- Grouping of counterparties to enable e.g. single legal entity view, geographic view;
- Definitions of exposures from each type of relation;
- Duration of the exposure (when the exposure begins and ends);
- Level of collateralization (secured or unsecured exposure).

Credit risk is generally defined as the loss, which Eurex Clearing would suffer if a counterpart failed to meet its contractual obligations.

In the course of its business activities, Eurex Clearing is exposed to credit risk arising from a number of different sources. Consequently, a certain level of credit losses must be expected as an inherent cost of doing business. A counterpart may have different relationships with Eurex Clearing directly or with parts of Deutsche Börse Group. These counterparts are defined as the following:

- CCP activities: credit exposures arising from Clearing Members' portfolios
- Treasury counterpart for such activities as:
 - Unsecured Placements
 - Secured Placements (Reverse Repo)
 - Derivatives (e.g. hedging FX risks)
 - Settlement Institutions:

- Commercial banks used for CCP payment infrastructure
- Commercial banks used for other purposes
- Security Settlement Systems and Custodians

Credit Exposure Measurement

The notional exposure concept is applied for purposes of consolidated reporting on the Group level. Thereby, the concept on notional exposure is applied to all CCP activities, Treasury counterparts and payment infrastructures. In addition, the risk exposure is calculated for the total margin requirements from CCP activities.

For each source of credit risk, several types of exposures are defined:

- Notional Exposure (Notional Cash Exposure and Notional Derivatives Equivalent)
 - Gross Notional exposure (secured and unsecured)
 - Notional exposure considering several levels of netting
- Risk Exposure
 - Secured Exposure
 - Unsecured Exposure

Limit Breaches

In case a counterparty breaches a granted exposure limit, the responsible Unit Risk Analytics will inform the responsible member of the Executive Board of Eurex Clearing. In addition, the Credit Committee of Eurex Clearing assesses additional information available covering the overall situation of the counterparty taking into account for instance:

- Level of exceedance of exposure limit;
- Credit quality of the Clearing Member;
- Current collateral coverage and the quality of the provided collateral;
- Overall concentration and wrong way risk constellation;
- Degree of correlation between the creditworthiness of a member and its exposure

and prepares a proposal to the Executive Board of Eurex Clearing to decide on changes of exposure limits and/or further actions to be taken. In case the Clearing Member does not remedy the breach of the relevant credit risk limit within a reasonable period of time, Eurex Clearing is entitled to demand the provision of Supplementary Margin.

Margining

For its CCP business, Eurex Clearing measures credit exposures arising from the portfolios Eurex Clearing is facing with each Clearing Member. The core of the risk model consists out of two different risk methodologies: Portfolio Risk Margining (PRISMA) and Risk Based Margining (RBM), which quantifies potential losses that may occur during a default event of a Clearing Member. This risk model is complemented by stress tests. Eurex Clearing measures its exposure to its participants on a near to real-time basis as soon as updates of position or pricing data are available (“event-driven”).

The framework is reviewed at least annually to reflect changing environments and market practices. For the introduction of products, a new product as well as a new risk model process is in place. When a new product is introduced, the inherent risks must be incorporated into the general risk management framework. First, it must be checked whether it is suitable for direct incorporation into existing risk models. Should this not be the case, a new method will be designed in consultation with stakeholders, based on the specific risk profile of the product in question.

While adequately covering the risks for the CCP, the goal is to ensure a smooth and rapid launch of products, and to consult and incorporate all the affected departments into the development and launch process.

Key Consideration 2

An FMI should identify sources of credit risk, routinely measure and monitor credit exposures, and use appropriate risk-management tools to control these risks.

Eurex Clearing calculates margin requirements at near to real-time basis as soon as updates of positions or pricing data are available (“event-driven”). Further details can be found in Eurex Clearing’s response to Principle 6. Eurex Clearing performs cover-2 credit stress tests on a daily basis. In addition, credit, concentration and wrong way risk limit utilizations are monitored on a daily basis.

Credit Risks are mitigated by:

- using preferably central bank money where possible to settle cash payments. In case where no access to central bank money is available, only counterparts with highest credit quality are acceptable. In addition, placements at these institutions are limited and concentration limits are in place.
- using Delivery versus Payment (DvP) instructions in order to settle any securities deliveries or Free of Payment (FoP) instructions for collateralization purposes. In any case, the golden rule “the CCP never delivers first” applies. In general, the CCP tries to net as many instructions as possible and only settles the net top remainder in one settlement run. For instructions entering later into the system, RTS settlement reduced the time between trade and ultimate settlement.
- limiting intraday margin credit based on the credit quality of the counterparty. In general, Eurex Clearing will call the full collateral deficit, if any intra-day collateral shortfall exceeds 10% of the total margin requirement as of the end of the last business day and is not less than EUR 10mn. However, in case of emergency, Eurex Clearing is entitled to reduce this credit line even intra-day.
- monitoring of members’ collateral pool as well as its portfolio of transactions outstanding with the CCP with regards to credit-, concentration and wrong way limits. Therefore, Eurex Clearing uses a traffic light approach in order to classify its members and their exposures, respectively. The classification is based on the credit quality of members, issuers and/or countries.
- Eurex Clearing approaches credit quality in these dimensions by classifying them into five different groups, which are rooted on the major rating codes:
 - Green: Highest, very high or high credit quality
 - Yellow: Good credit quality
 - Orange: Speculative credit quality
 - Red: Highly speculative credit quality or high default risk
 - Not accepted: e.g. issuer is in default

This traffic light classification corresponds to the current market standards and is in line with a qualitative credit risk assessment.

Key Consideration 3

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.

Not applicable.

Key Consideration 4

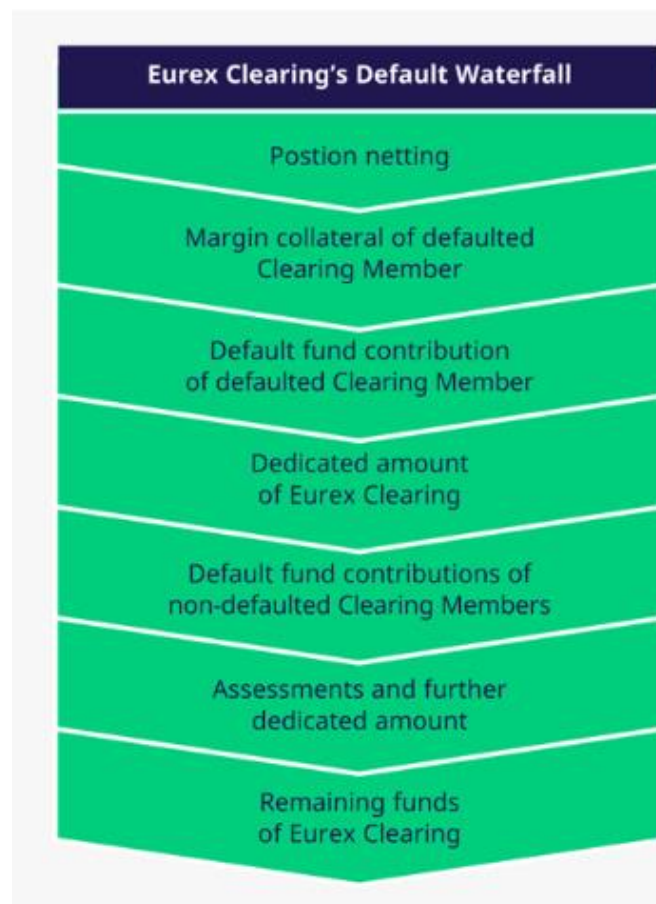
A CCP should cover its current and potential future exposures to each participant fully with a high degree of confidence using margin and other prefunded financial resources (see Principle 5 on collateral and Principle 6 on margin). In addition, a CCP that is involved in activities with a more-complex 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 total financial resources it maintains.

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. While the mainstay of this safety system is the margin, which Clearing Members have deposited as collateral for open positions, the lines of defence consist of several additional layers of safety nets. In the event of a default, these layers are applied in the order that is outlined in the diagram below. Information on the lines of defence is also available on the webpage of Eurex Clearing (<https://www.eurex.com/ec-en/services/risk-management/default-waterfall>).

Eurex Clearing maintains a pre-funded Default Fund that is calibrated to cover the losses resulting from the default of the two Clearing Members, and its affiliates, with the largest exposures in extreme but plausible scenarios. 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 Default Fund, a parental guarantee and the remaining capital of Eurex Clearing.

Furthermore, Eurex Clearing has the possibility to require Clearing Members to contribute to the Default Fund up to two times of their initial requirement (assessment). Simultaneously with the assessments, Eurex Clearing would provide a further dedicated amount.



As of 30 July 2021, Eurex Clearing’s default waterfall contained the following amounts:

| Default waterfall | Amount |
|--|---|
| Total margin collateral | approximately EUR 67.4 billion |
| Total Default Fund requirements of all clearing members | approximately € 5.4 billion |
| Eurex Clearings dedicated own reserves | EUR 200 million |
| <p>Additionally, two assessments of the Default Fund are possible to ensure a limited liability of Clearing Members. Those assessments are contractually committed Clearing Members’ contributions to the Default Fund and represent an amount equal to two times the Default Fund requirements of all non-defaulted members. Simultaneously with the assessments Eurex Clearing provides a further dedicated amount (capped at EUR 300 m, part of the Letter of Comfort of DBAG).</p> | |
| Letter of Comfort | Max. EUR 600 million |
| The remaining equity of Eurex Clearing | <p>approx. EUR 550 million</p> <p>(EUR 200 million represent the dedicated own reserves contributed to the Default Fund and thus have to be deducted from Eurex Clearing’s overall equity of EUR 750 million)</p> |

The Default Fund is separated into different Default Fund Segments (called DFSs), whereby each Liquidation Group is assigned to one DFS. The size of each DFS depends on the exposure of the Clearing Members active in this Liquidation Group relative to the overall exposure of this member. The DFSs sum up to the total Default Fund of the CCP.

Eurex Clearing maintains a pre-funded Default Fund, including Eurex Clearing’s dedicated own reserves, that is calibrated to cover the losses resulting from the default of the two Clearing Members, and its affiliates, with the largest exposures in extreme but plausible scenarios.

In addition to that, Eurex Clearing has access to further financial resources, namely a parental guarantee and the remaining capital of Eurex Clearing. Furthermore, Eurex Clearing has the possibility to require Clearing Members to contribute to the Default Fund up to two times of their initial requirement (assessment) and in such a case Eurex Clearing would also provide a further dedicated amount.

Key Consideration 5

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 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 participants increases significantly. A full validation of a CCP's risk-management model should be performed at least annually.

In determining the adequate size of its Default Fund, Eurex Clearing conducts rigorous 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.

By conducting daily stress testing, it is verified that the sum of the margins provided by the two largest members plus the Default Fund, including Eurex Clearing's dedicated own reserves, are sufficient to cover the losses resulting from the simultaneous default of the two Clearing Members with the largest exposure under extreme but plausible market conditions. Eurex Clearing defines "extreme but plausible" scenarios as the largest risk factor movements over the stress period of risk with a confidence level of 99.9%.

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:

- Daily stress test report to the Chief Risk Officer (CRO);
- Monthly stress test report to the Executive Board;
- Quarterly Risk Report to the Executive Board, Supervisory Board, Audit and Risk Committee, and EMIR Risk Committee.

Additional event-driven analysis is performed and reported depending on the market situation.

The daily stress testing report is the basis monitoring for compliance with the cover-2 requirement and initiating mitigating actions if pre-defined thresholds are breached. Member-specific mitigating actions apply as soon as a single Clearer Group consumes a large part of the Default Fund.

General mitigating actions may apply in case multiple Clearer Groups stand out in stress testing. In this case, the root cause will likely be a structural or general market change, which requires a strengthening of the CCP's overall Default Fund. Measures for this situation are an ad hoc review of the model determining the Default Fund requirement or a recalibration of the dynamic component in each Clearing Member's Default Fund contribution.

A full review of the stress testing framework is done at least annually, especially with respect to its appropriateness for the Default Fund sizing, and presented to the Executive Board, Supervisory Board and EMIR Risk Committee. In addition, the stress testing model is validated on an annual basis by the Model Validation team.

Eurex Clearing reports a summary of stress test results to the Executive Board on a monthly basis. At the start of each month (together with the monthly reporting to the Executive Board) or if market conditions or other circumstances require this, Eurex Clearing verifies whether any scenarios, assumption or parameters need to be amended.

Model Validation performs periodic and initial validation activities. Periodic validation ensures continuous independent assessment of model performance. Each risk model is subject to an annual validation assessment and the validation scope is set by concrete validation examinations defined within the respective validation concepts. In addition to periodic validation, Model Validation performs initial validation based on external triggers such as model changes, new product initiatives or stressed market conditions.

All validation results are documented including analyses of the outcomes of test results. They are regularly communicated to internal stakeholders including the Executive Board of Eurex Clearing.

Validation instruments to validate the adequacy of the initial margin include but are not limited to portfolio backtesting and parameter sensitivity analysis. Portfolio backtesting compares the initial margin with the realised profits and losses. The results are assessed using statistical tests. Validation at parameter level is performed by means of a parameter sensitivity analysis, which is conducted to determine the margin model's

response to changes in model parameters. Results from backtesting and parameter sensitivity analysis are regularly reported to the Risk Committee in a form that does not breach confidentiality.

Key Consideration 6

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.

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. Following some examples of risk factors which are considered in the tests are displayed:

- Number of defaulting Clearing Members or Clearing Member groups,
- Interrelatedness between Clearing Members (e.g. country, sector, affiliation, common clearer for one client),
- Options implied volatilities,
- Interest rates,
- Correlations,
- Value of instruments issued by Clearing Members,
- Equity prices,
- Bond prices,
- Recovery rates, and
- FX rates.

In Eurex Clearing's Stress Testing Framework it is outlined in detail which specific aspects are considered in the stress tests. In the following, some examples of scenarios and specific aspects that are considered in the tests are displayed:

- Historical market scenarios: Eurex Clearing considers historical scenarios, including periods of extreme market movements observed over the past 30 years, or as long as reliable data is available, that would have exposed Eurex Clearing to greatest financial risk,
- Hypothetical market scenarios - define a combination of extreme but plausible market risk factor moves (underlying price, volatility, FX or interest rates),
- Special risk factor scenarios, not necessarily with plausible magnitudes, for further analysis purposes,
- 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 for major risk factors. These spread moves are incorporated in the hypothetical market scenarios,
- Number of defaulting Clearing Members or in general Clearing Member groups with largest exposures,
- Types of grouping Clearing Members,
- Treatment of segregation structure,
- Decrease in value of instruments issued by a defaulting Clearing Member.

Eurex Clearing identifies, measures and considers relevant risk factors specific to the contracts it clears. A detailed overview about the risks Eurex Clearing faces, how these risks can be measured, which risk factors are considered for each type of risk and how these risk factors are taken into account in the stress test scenarios can be found in the stress testing framework and underlying stress testing concept documents.

Key Consideration 7

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.

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 defense" or default waterfall. While the mainstay of this safety system is the margin, which Clearing Members have deposited as collateral for open positions, the lines of defence consist of several additional layers of safety nets.

If the total Default Fund is realized as a result of a Clearing Member default, the non-affected Clearing Members are obliged to contribute to the relevant Default Fund(s) up to the relevant contribution requirement applicable to it. 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 Default Fund, be two times the originally applicable contribution requirement to the relevant Default 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 Default Fund contribution. The required pre-funded Default Fund contribution for each member is determined on a monthly 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 Default Fund contribution at the start of the capped period. Capped periods will end after 3 months, regardless of further defaults.

Eurex Clearing will reinstate its dedicated own resources within one month after it has fallen under the minimum requirement. 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.

Letter of Comfort is a one-off amount provided by Deutsche Börse. According to the Letter of Comfort, Deutsche Börse commits to provide the required funding within 3 business days.

Moreover, Eurex Clearing has prepared a recovery plan in accordance with the Bank Recovery and Resolution Directive (BRRD) 2014/59/EU to be read in conjunction with the German Recovery and Resolution Act (SAG) and the Minimum Requirements for the Design of Recovery Plans. 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.

In its recovery plan, Eurex Clearing thoroughly has outlined the recovery measures that strengthen the capital basis and the liquidity position of the clearing house in potential stress situations, e.g. when an early warning trigger has been breached. An impact analysis has been performed and the process for implementing the options identified are laid out in detail.

The recovery plan is updated annually.

Assessment of principle:

Observed

Principle 5: Collateral

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.

Key Consideration 1

An FMI should generally limit the assets it (routinely) accepts as collateral to those with low credit, liquidity, and market risks.

In order to accept certain financial instruments as eligible margin collateral at Eurex Clearing, they must satisfy a number of collateral acceptance criteria: high credit quality, low market risk, high liquidity, immediate accessibility, and valuation. Eurex Clearing accepts securities (bonds, equities and selected Exchange Traded Funds (ETFs)) and cash (in several currencies), and does not accept commercial bank guarantees or central bank guarantees.

Eurex Clearing's operationalization of minimal market risk requirement is captured by regularly monitoring the reference data of the instrument and issuer. In addition, all financial instruments that are Own Issues (i.e. issues by the same legal entity of the collateral provider) or Close Links (i.e. issues by the collateral provider's highly interlinked cooperation) are not eligible, unless they are guaranteed by public issuers with highest credit quality or covered with sufficiently segregated assets (issued compliant with prudent covered bond laws). Only in cases where the instrument is itself secured with high quality assets and in case the issuer of such instrument has sufficient credit quality, an exception from this rule can be granted.

The Clearing Conditions provide general provisions on eligible assets in Chapter I, Part 1, Number 3.2 and specific provisions for the Elementary Clearing Model, the ISA Provisions and the Basic Clearing Member Provisions. Following the requirement in Number 3.2.1, Eurex Clearing publishes an overview of eligible margin assets on the Eurex Clearing website (cash collateral: <https://www.eurex.com/ec-en/services/collateral-management/cash-collateral>, securities collateral: <https://www.eurex.com/ec-en/services/collateral-management/securities-collateral>).

Eurex Clearing regularly monitors the collateral deposits related to eligibility. If collateral has been delivered that is set to ineligible, the participant is required to substitute the collateral value by another security, or alternatively by cash, within a time specified by Eurex Clearing.

Key Consideration 2

An FMI should establish prudent valuation practices and develop haircuts that are regularly tested and take into account stressed market conditions

Eurex Clearing applies a haircut methodology distinguishing the collateral type of the deposited collateral (bond, equity, ETFs, cash currency). In addition, collateral specific valuation factors and yield shift factors are considered to express the actual price movements in the markets and to cover for a potential decline in the value of the assets. Haircuts reflect the potential for the market value to decline over the interval between the last revaluation and the time by which they can reasonably be assumed to be liquidated. In addition, Eurex Clearing maintains currency haircuts for foreign currency (FX) collateral (securities and cash).

Eurex Clearing is valuing the collateral at least on a daily basis and 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 market prices. Eurex Clearing regularly calculates theoretical prices for all bonds. Valuation is based on financial valuation models, which determine the present value of all expected future cash flows of the security. The present values of cash flows are obtained by applying a bond specific discount curve.

Model prices are used, if no current market prices are available. However, if a current market price is available, it is preferred.

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. In addition, the haircuts are calibrated on a very high and therefore conservative confidence level (99.9%) to cover extreme market conditions, i.e. 99.9% of respective historic price changes are below the applied haircut. Furthermore, securities' 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 the actual volatility of the respective instrument. The model parameters of the collateral haircut determination are validated regularly and adjusted, if necessary. 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.

To monitor the adequacy of the valuation procedures and models, respective assumptions and individual parameters are validated by a clearly defined risk model validation procedure. This includes a detailed validation of the overall models via back-testing. Collateral valuation, as one Standard of the CCP Credit Risk Management Policy, is reviewed annually, and whenever a material change occurs that affects Eurex Clearing's risk exposure.

Key Consideration 3

In order to reduce the need for procyclical 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.

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. In addition, the haircuts are calibrated on a very high and therefore conservative confidence level (99.9%) to cover extreme market conditions, i.e. 99.9% of respective historic price changes are below the applied haircut. Furthermore, securities' 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 the actual volatility of the respective instrument. The model parameters of the collateral haircut determination are validated regularly and adjusted, if necessary. 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.

Key Consideration 4

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.

To keep the collateral pool value stable also in extreme market conditions, a selection of high-quality collateral with low credit and market risk, high liquidity and accessibility and the appliance of appropriate valuation methods including "haircuts" are combined.

Concentration limits and Wrong Way Risk thresholds are established by the rules laid out in the CCP Credit Risk Management Policy.

The Additionally Monitored Risks Framework describes Eurex Clearing's approach towards concentration risk in a more comprehensive way. It outlines the approaches to identify, monitor, mitigate and report concentration & wrong way risks that may arise out of the clearing business of Eurex Clearing. The CCP Credit Risk Management Policy and the Additionally Monitored Risks Framework ensure that the provided collateral remains sufficiently diversified to allow its liquidation within a defined holding period without a significant market impact. The Additionally Monitored Risks Framework further describes what mitigation measures are to be applied when the concentration limits are exceeded.

As the Additionally Monitored Risks Framework describes, Eurex Clearing determines concentration limits at the level of:

- individual issuers;
- type of issuer;
- type of asset;
- each Clearing Member;
- each Collateral Pool owner;
- Clearing House (sum of all Clearing Members).

Concentration limits are determined in a conservative manner. The Additionally Monitored Risks Framework describes the relevant criteria that are taken into account, including:

- financial instruments issued by issuers of the same sector or geographic region;
- the level of credit risk of the financial instrument or of the issuer based upon an internal assessment by the CCP.

In order to ensure efficient monitoring of credit-, concentration and wrong way risks, entities are classified based on a comprehensive risk classification approach, which corresponds to the current market standards and is in line with a qualitative credit risk assessment. The definition of the risk classification is based on internal assessments, the major credit rating codes and might be enhanced with additional market data, such as CDS spread considerations and stock price observations.

To further take into consideration the credit risk of financial instruments accepted as collateral, Eurex Clearing performs an additional assessment based on the credit quality of the country in which the financial instruments are issued. For example, in case Eurex Clearing downgrades a certain issuer to the orange or red category, it will exclude their issues from the eligible collateral database.

Key Consideration 5

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.

Eurex Clearing offers direct provisioning of security collateral at designated operators of a Securities Settlement Systems (SSS), ideally with access to the European System of Central Bank (ESCB) facilities for reasons of process stability, providing the necessary collateral management and custody services for Eurex Clearing and its participants. Security collateral is provided through the security collateral locations ((I) CSDs) Clearstream Banking AG (CBF), Clearstream Banking S.A. (CBL), and SIX SIS Ltd.

Cash collateral is provided through Eurex Clearing's payment banks, i.e. the amount is deposited at the respective cash collateral location as announced by Eurex Clearing to the participant (see <https://www.eurex.com/ec-en/services/collateral-management/cash-collateral>). Commercial bank money is only accepted according to the payment finality rules in the General Provisions of the ECAG Clearing Conditions.

Collateral processing takes place in a straightforward manner via standardized interfaces, which mitigates operational and market risks. Eurex Clearing's risk and collateral management procedures ensure that the accepted collateral types can be covered with limited involvement of operational supervising and risk controlling units.

Moreover, Eurex Clearing's risk management requirements towards the respective collateral locations / systems ensure that the allocation of securities is in line with eligibility criteria of collateral, with the valuation parameters, concentration limits and under wrong way risk considerations.

Any collateral location has to ensure legal certainty based on dedicated regulations (e.g. Financial Collateral Directive) regarding the first ranking of legal rights of Eurex Clearing to access the collateral in a timely manner. Eurex Clearing has prompt access to the financial instruments when required, i.e. first ranking in terms of legal rights and immediate access to the posted collateral of any type at any time. This applies also in the event of a

participant's default, irrespective of the legal concept, i.e. pledge / title transfer. Legal certainty is given for any of these aspects under the German Insolvency Code and is required for foreign insolvency laws, in each case to be confirmed by legal counsels. The legal certainty and operational set-up 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 benefit of the CCP ensures that collateral cannot be moved by the participant and can only be used by Eurex Clearing starting at the decision point in time until Eurex Clearing releases the collateral for the collateral provider or third parties.

Key Consideration 6

An FMI should use a collateral management system that is well-designed and operationally flexible.

The scope of Eurex Clearing's collateral management service comprises the connection of designated collateral locations, the acceptance of a broad range of eligible collateral, collateral valuation and composition for the Eurex Standard Collateral Pools (i.e. Margin, Default Fund, Company Capital) 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. These services are provided by the dedicated collateral management system infrastructure of Eurex Clearing and by the respective collateral locations' applications.

Participants can choose to open securities accounts either at CBF, CBL or at 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 or transferred by title to Eurex Clearing.

The collateral to cover the requirements of Eurex Clearing can be managed in Triparty collateral management systems, i.e. in CBF's collateral management system Xemac® or in CBL's collateral management system CmaX®. Automated facilities of Xemac® allow for optimal use of collateral, which is offering clients more efficient, real-time asset management. Collateral can also be managed in connection with the money market operations of the Deutsche Bundesbank, GC Pooling® of Eurex Repo, and bilateral transactions among Xemac® customers. Similar features apply in using CBL's triparty collateral management service through the CmaX® system. In addition, the security collateral can be monitored and managed directly in the settlement system of the respective service provider, also using functionalities of the Eurex C7 System and its GUI.

Eurex Clearing aims to provide best in class, diversified collateral management services that create maximum value for its customers and simultaneously ensure the integrity of the CCP. For that matter, Eurex Clearing regularly adjusts its collateral management practices and procedures including the services developed by and requested from the CMS service providers.

The collateral management function is sufficiently staffed to ensure smooth operations even during times of market stress.

Assessment of principle:

Observed

Principle 6: Margin

Principle 6: Margin

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

Key Consideration 1

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.

Eurex Clearing imposes, calls and collects margins to limit its credit exposure from its Clearing Members.

The following points summarize the guidelines for Eurex Clearing's margining methodology:

- The risk model must be in line with the CCP Credit Risk Management Policy, including appropriate inclusion into the lines of defense.
- The first priority in a risk model is the financial integrity and security of the CCP, granting offsets or adherences to market practice are important, but secondary considerations.
- The model must be transparent, communicable and replicable given the respective input parameters.
- The methodology must be technically and operationally feasible.
- The calculated results need to be considerably stable in order to avoid potential procyclical effects.

In general, margining encompasses the entire process of measuring and calculating a Clearing Member's risk exposure. The provision of collateral is intended to ensure that all financial commitments related to the open positions of a Clearing Member can be offset within a very short period of time. Margining generally comprises a backward looking as well as a forward-looking component.

Eurex Clearing currently operates two different margin methodologies - Portfolio-based Risk Margining (PRISMA) which is used for margining of its derivatives positions and Risk Based Margining (RBM) used for margining of cash markets and securities financing transactions. A member's total margin requirement, whether parts of it have been calculated with PRISMA or RBM, is the amount that is equivalent to such member's risk exposure and provides a transparent view of the Exposure at Default (EaD) with a high level of confidence and represents the anticipated liquidation costs. Overstating the margin requirement would unnecessarily tie up the liquidity of the Clearing Member, while an understated position represents a potential threat to the guarantee of contract fulfillment and the integrity of the Clearing House and the Clearing Member community.

Key Consideration 2

A CCP should have a reliable source of timely price data for its margin system. A CCP should also have procedures and sound valuation models for addressing circumstances in which pricing data are not readily available or reliable.

In general, the preferred source of price data for the margin model is market prices. Dependent on the product, the prices are provided by the Eurex Exchanges and the Wertpapier Service System (WSS). In addition, third party providers such as Bloomberg, Reuters and Clarus FT and Tradition are used as necessary. In summary, Eurex Clearing uses the following market data as part of margining:

- Spot prices for equities and bonds,
- Option prices,
- FX spot prices,
- OIS Swap rates,
- Interest Rate Swap Quotes,

- Benchmark Rates Fixings (such as EONIA),
- Market Capacities,
- Bid-Ask Spreads.

Prices received via the exchange system represent current market prices established via the order book. Before those prices are submitted to Eurex Clearing, they are subject to various validation steps conducted by market supervision and further monitored by trading surveillance. Afterwards, a final sanity check is conducted by Eurex Clearing before the data are used in the clearing risk management process.

Theoretical prices and models to derive prices are more relevant for cleared OTC products. For Eurex Clearing, relevant products are OTC Interest Rate Swaps (IRS) as well as 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. These prices are used for valuation if no current market prices are available. However, market prices are preferred. 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, a market standard model is in place to determine theoretical prices based on discounting and forward curves which are calibrated to quoted par-swap rates. The quoted par-swap rates received from Inter-Dealer Brokers are subject to a cleansing procedure (both automated and manual) to monitor and mitigate unavailability or unreliability of prices.

To price options, Black 76, Black/Scholes and Cox/Ross/Rubinstein models are used, which is in line with common market practice.

Key Consideration 3

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 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.

Forward-looking component

The forward-looking component, called initial margin, collateralizes potential future exposure making use of default management's assumptions regarding the holding period. Eurex Clearing applies liquidation periods of 2 days in RBM and between 2 and 5 days in PRISMA. More specifically 2-3 days are applied to listed products, 5 days for OTC derivatives depending on the liquidation group and corresponding default management assumptions, internal expertise, and fire drill experience.

Eurex Clearing aims to have sufficient margin collateral to cover a member's default loss in "all but extreme market circumstances" (tail events). Eurex Clearing defines "all but extreme market circumstances" such that in 99 out of 100 cases (99% confidence level) the potential loss in case a member defaults will not exceed margin requirements. In case of OTC derivatives Eurex Clearing requires a confidence level of 99.5%. The potential loss will be covered by collateral provided for margin requirements from the defaulting Clearing Member. Losses beyond the margin requirement will be absorbed by the other lines of defense, such as the Clearing Member's Default Fund contributions.

The margin requirements of each Clearing Member are calculated intraday on a near to real-time basis. If the potential future price risk 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.

Eurex Clearing breaks down the forward-looking component into two main sub-components in order to ensure that margins are accurate, stable and robust: a market risk component as well as a liquidity risk component. Model components, assumptions, and outcomes are regularly tested and validated through a dedicated validation function.

The market risk component is designed to hold on a confidence level of 99% for listed and 99.5% for OTC products. In PRISMA a Value-at-risk measure is calculated based on 75% of filtered historical scenarios and 25% of stress period scenarios, where the latter are included to ensure stability and limit procyclicality. In addition, model adjustments are in place as a supplement to the VaR measure. They account for correlation breaks, expiry risk, compression in modelling risk factors and long option credits.

A liquidity risk component is in place to capture the potential additional costs when liquidating portfolios. The component is based on the relative size of positions as compared to the available market capacity and depends on the market risk of the respective products.

In summary, the following assumptions apply for PRISMA:

- The market risk component and the liquidity risk component are calculated using profit and loss distributions for the Liquidation Group Splits based on a set of different scenario prices for the underlying instruments
- The CCP standard time to liquidate the portfolio is assumed to be between 2 and 5 days
- Liquidation Group (Splits) contain products sharing the similar risk characteristics which can thus be liquidated together
- Portfolio margining is possible within Liquidation Groups; margin offsets across Liquidation Groups are not possible
- Eurex Clearing applies a portfolio specific Liquidity Risk Adjustment
- Position and price changes are monitored near-to-real time

Risk Based Margining is a systematic risk-oriented model to estimate future losses. While the methodology may vary between products, applied methods will satisfy a number of criteria to ensure objectives of security and efficiency as well as consistency across products. The coverage of market price risk is ensured via those parts of the margin parameter that are calibrated to historical observations (volatilities). Long-term historical characteristics are used as a floor via a minimum parameter. Short-term dynamics influence the margin parameter via current market volatilities. Overall, tail properties attached to the required confidence level are expressed in the risk factor, which is calibrated to empirical data.

The margin parameter in RBM accounts for market and credit risk via a decomposition into a market risk and a credit risk factor. Liquidity risk is considered by a liquidity factor.

The following assumptions apply for RBM:

- No explicit distributional assumption about risk factor returns is made.
- It is assumed that the risk factor returns applicable to the liquidation horizon are purely dominated by their volatility and Annex no measurable drift.
- By up-scaling the volatility estimate with a suitable risk factor, a two-sided range of future risk factor levels can be estimated to achieve a desired level of confidence. The resulting risk factors Annex fat tails.
- Using varying time frames when estimating risk factor volatility allows to further protect against more general changes in market regimes at a desired level of confidence.

- Built-in model memory, based on look-back periods of preset length, can suitably be mitigated via long-term based minimum margin parameters.
- A statistical confidence level of 99% is assumed for all products margined with RBM.
- The standard time to liquidate a portfolio is assumed to be 2 days.
- Eurex Clearing applies a product-specific liquidity factor.
- Position changes and volatility of prices are monitored near-to-real time.

Backward looking component

In addition to the forward-looking component, intraday margin calls include the backward-looking component of the margin requirement. This includes Variation Margin, Premium Margins and Current Liquidating Margin. Variation Margin applies to future styled derivatives and Interest Rate Swaps and can be covered by eligible collateral intraday and is settled in cash in the product currency end of day. Premium Margin and Current Liquidating Margin reflect the value of traditional options and spot market products as well as repos, respectively. Premium Margin and Current Liquidating Margin can be covered by any 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) then this credit can be used to offset margin requirements of other positions but is not paid out.

Key Consideration 4

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 and operational capacity to make intraday margin calls and payments, both scheduled and unscheduled, to participants.

Eurex Clearing has the authority and capability to request and to pay out Variation Margin as well as to conduct intraday margin calls or demand supplementary margin: The authority to demand and transfer Variation Margin is clearly stipulated in the Clearing Conditions. This includes the right to demand supplementary margin.

Variation Margin

The backward-looking component of the margin requirement includes Variation Margin, Premium Margins and Current Liquidating Margin. Variation Margin applies to future styled derivatives and Interest Rate Swaps and can be covered by eligible collateral intraday and is settled in cash in the product currency end of day. Premium Margin and Current Liquidating Margin reflect the value of traditional options and spot market products as well as repos, respectively. Premium Margin and Current Liquidating Margin can be covered by any 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) then this credit can be used to offset margin requirements of other positions but is not paid out.

Using Variation Margin, profits and losses that arise due to the price fluctuations of open positions are offset daily. When option 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 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, such 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.

Margin Calls

Margin calls are issued when during the continuous intraday monitoring of positions an under-collateralization is discovered. Eurex Clearing monitors margin requirements near to real-time. Risk exposure is calculated event driven whenever there are updates on

- Prices,

- Volatilities,
- Interest rates,
- Derivative positions (listed as well as OTC),
- Settlements in cash products and repos.

Eurex Clearing will call the full collateral deficit if any intra-day collateral shortfall:

- exceeds 10% of the margin requirement as of the end of the last business day, or
- exceeds an absolute number that is subject to the current size of the Default Fund, or
- is not less than EUR 10 million.

The Executive Board may set lower or higher thresholds for a specific Clearing Member.

Eurex Clearing issues an intra-day margin call payment request provided that the risk position is not reduced within 30 minutes.

Eurex Clearing requests the Clearing Member to cover the intraday margin call payment within additional 30 minutes by placing collateral to one or more of the dedicated securities accounts in one of the accepted collateral locations or by placing cash in eligible currencies on its cash account (German Bundesbank, SNB, Bank of England or a payment bank for USD) or alternatively by transferring cash in eligible currencies to Eurex Clearing.

Key Consideration 5

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.

Portfolio margining is possible under PRISMA as well as under RBM.

PRISMA

With Eurex Clearing 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 capital efficient margining. With the introduction of Eurex Clearing PRISMA, the default management process is on (sub-) portfolio level rather than on position level.

These sub-portfolios are called “liquidation group splits” and comprise positions 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 and positions in the same liquidation group split. 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 split, where Eurex Clearing limits portfolio diversification at 80% by means of supplementary margin in compliance with EMIR Art. 27. Furthermore, Eurex Clearing includes a dedicated correlation break adjustment in its margining approach in order to mitigate the risk of sudden changes in correlation in a stressed market environment. 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 liquidation group composition will be 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 Eurex Clearing as the responsible CCP in case of a Clearing Member default.

The 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 a number of features: from taking only the tail of the distribution of portfolio profit-and-loss scenarios in VaR, through flooring the margins with stress period VaR with the associated stressed correlations to the inclusion of model adjustments especially correlation break adjustments, with which changing correlations between products are further penalised in the portfolio margining process.

In order to measure the PRISMA portfolio margining offsets, the hypothetical gross margin requirement on product level is computed as “undiversified value at risk” (UndivVaR). In this context, the term “undiversified value at risk” denotes the value at risk of a sub-portfolio without accounting for risk offsetting across products within this portfolio. The undiversified value at risk regards a portfolio as a set of isolated products, each having an own profit and loss structure and no risk offsetting across products applies.

Margin reductions related to portfolio margining are subject to a sound stress test program.

RBM

Investors can reduce their exposure to individual asset risk by holding a diversified portfolio of assets. Diversification may allow for portfolios with equal return but reduced risk.

Price inter-relationships between assets, which were observed

- to have an economic rationale,
- to be statistically stable

are used to offset margin requirements.

Eurex Clearing considers risk-reducing effects by its concept of margin classes and margin groups. Instruments will only be assigned to the same margin group if they have proven to have a correlation greater than 0.5. Eurex Clearing considers risk-reducing effects by its concept of margin classes and margin groups.

Two or more margin classes whose underlying instruments are correlated with respect to their risk structure are combined in a “margin group”. Within a given margin group, cross margining is again possible, i.e. the offsetting of comparable risks. Portfolio Margining offsets between different financial instruments is capped at 50% in RBM well below the regulatory maximum of 80%.

Key Consideration 6

A CCP should analyse and monitor its model performance and overall margin coverage by conducting rigorous daily back testing – 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.

The adequacy of the market risk initial margin is primarily validated by daily portfolio backtesting, which compares the market risk initial margin with the observed profits and losses for each productive portfolio. Model add-ons for liquidity risk are excluded from backtesting. The term portfolio refers to the group of positions, which is subject to portfolio margining. This means that there is no netting of positions in backtesting, which are not subject to portfolio netting in the first place.

Backtesting uses statistical tests to assess a) the frequency and b) the severity of outliers, i.e. it uses statistical inference techniques. The classification of the assessment results can be derived from the probabilities of type I errors (i.e. the probability of rejecting a correct model based on the observed test statistic).

The test results are classified according to a Eurex Clearing defined traffic light system and, if necessary, actions are commenced according to the following scheme:

- Green Light: The results of the analysis/report lie within the normal specifications. No significant

model inaccuracies were identified and no further actions are necessary.

- **Yellow Light:** The results of the analysis/report are outside the expected range. A thorough analysis of the results and their implication towards the adequacy of the model / parameterization is necessary. No severe damages are expected in the short-term.
- **Red Light:** The results of the analysis/report show material deficiencies and the validity of the model has to be questioned. An immediate action is necessary to avoid potential severe damages. Any red backtesting traffic light needs to be further analyzed by Model Validation following the Backtesting Analysis Process Description.

The Eurex Clearing margining models contain several model parameters. The parameters are periodically determined by calibration to observed market risk factors, by fundamental analysis, or by expert judgment.

Model parameter sensitivities are used to investigate the response of the margin model to deviations of the model parameters. The deviations are determined either by normal market scenarios as well as stressed historical and hypothetical market scenarios. Furthermore, the stressed market scenarios cover the most volatile periods observed by Eurex Clearing. The parameter sensitivities are calculated regularly for all member portfolios, i.e. all participant positions are considered. Note that the analysis can be performed more frequently or ad-hoc, if required. Sensitivity analysis is also used for the impact analysis of a parameter re-calibration.

For most of the parameters, scenarios corresponding to up- and down shifts are defined. Only if a shift in one direction would not correspond to a challenge of the model or would violate a regulatory threshold it is not considered for sensitivity testing.

Sensitivities are measured in terms of their relative impact on margins and always compared to historical values. This helps to assess the plausibility of the sensitivity profile of the model given the current market situation.

Regular meetings of the CCP Risk Management facilitate the discussions on validation outcomes and potential problems at an early stage, so that any required enhancements or fixes can be implemented in good time.

Furthermore, for the on-going revision and improvement of the model, Eurex Clearing regularly seeks the advice of the EMIR Risk Committee. Any major changes and adjustments will be presented to the EMIR Risk Committee and approved by the Executive Board of Eurex Clearing.

Model Validation may trigger a significant model change. The implementation of a significant model change needs to be in accordance with the CCP Model Change Framework and to be approved by the relevant external authorities (i.e. EMIR Risk Committee, the Competent National Authority / Federal Financial Supervisory Authority (BaFin) as well as ESMA / College if necessary) beforehand. In the meantime, supplementary margin can be charged as outlined in the Clearing Conditions. The amount of supplementary margin charged is approved by the Chief Risk Officer (CRO) of Eurex Clearing. Minor changes such as parameter updates do only need to be approved by the CRO unless the impact is judged as being economically significant.

In case only a minor change or parameter update is required, approval by the CRO or the respective Head of Section is sufficient.

Key Consideration 7

A CCP should regularly review and validate its margin system.

Eurex Clearing commits itself to a regular and thorough validation of all risk models. Throughout the year, the independent Model Validation uses several validation instruments to regularly validate the conceptual soundness of the frameworks and adequacy of the risk models. All risk models, including margin models, in scope are validated at least annually. For each risk model in scope there exists a dedicated validation concept which outlines concrete validation examinations along the categories of model input, methodology and assumptions, model performance and model use covering the entire model chain. Each model validation concept contains a minimum set of model validation examinations which are carried out during the periodic or ad-hoc validation. In the annual validation report for each model, all validation results obtained throughout the year are summarized and combined with a fundamental review of the methodology and the model

parametrization. This yields an overall review of model performance and appropriateness, taking into account both the theoretical and empirical perspective.

Material revisions and adjustments of the margin methodology follow the process defined by the CCP Model Change Framework. Depending on whether the change is significant or not, a number of internal and potentially external approvals is required.

Descriptions of the margin models and methodologies as well as their general principles can be accessed via Eurex Clearing's webpage.

For PRISMA:

https://www.eurex.com/resource/blob/32818/7bcf119060b658ad4e487f588744140d/data/brochure_eurex_clearing_prisma.pdf

For RBM:

https://www.eurex.com/resource/blob/279400/8c6578060521017f030ef3bb335c0c2c/data/brochures_risk_based_margining.pdf

ECAG reports aggregated backtesting and sensitivity analysis results, i.e. in a form that does not breach confidentiality, to the EMIR Risk Committee on a quarterly basis.

Clearing Members can request test results for their own and their client's portfolio.

Assessment of principle:

Observed

Principle 7: Liquidity risk

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.

Eurex Clearing measures, monitors, and manages its liquidity risk according to its Liquidity Risk Management Framework which is documented in ECAG's Liquidity Risk Management Policy. The Framework has been set up in accordance and compliance with EMIR and is updated on a regular basis with consultation of the EMIR Risk Committee and the Eurex Clearing Executive Board.

It incorporates the Liquidity Plan and has been set up in accordance with respective regulatory standards. The Eurex Clearing Executive Board and Eurex Clearing Supervisory Board approve the Liquidity Risk Management Policy at least annually.

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. It addresses:

- Liquidity risk management and methodology,
- Liquidity risk in the daily business,
- Liquidity risk concentration,
- Liquidity stress testing,
- Monitoring,
- Contingency Funding Plan, and
- Reporting.

The execution of the above mentioned is supported by the use of implemented operational and analytical tools, such as e.g. Intraday Liquidity Management ("ILM") tool allowing for nearly real-time data monitoring of the CCP bank accounts; set of comprehensive limits introduced to monitor and manage the various risk types; an array of the liquidity indicators (partially based on stress tests results) supporting the monitoring of liquidity positions and associated risks - enabling to trigger the appropriate escalation and mitigation procedure in case of indicator breach. And finally, the daily performed liquidity stress tests enable to monitor the liquidity needs and potential liquidity stresses arising from various factors modelled across liquidity stress scenarios. These stress tests results are reported daily and implemented in the Liquidity Plan by Treasury departments. In case of the identified liquidity shortfall, appropriate actions to address such shortfall would be decided on and implemented by Eurex Clearing. Additionally, the results of the stress tests are presented to the management bodies on a regular basis, and the results of the ongoing monitoring and analysis of these tests are taken into account when designing, assessing and/or updating the liquidity risk management framework that is a fundamental part of the Eurex Clearing's Liquidity Risk Management Policy. This Policy is updated regularly on an annual basis during which the review of its adequacy is performed.

Maintaining sufficient liquid financial resources is inherent to Eurex Clearing's ability to perform its services and activities, even under extreme market conditions. In assessing the adequacy of its liquid resources, Eurex Clearing considers the size of liquidity risks and the nature of its obligations and takes appropriate measures to anticipate (e.g.: stress tests) and avoid liquidity shortfalls (mitigating measures).

In addition to the regulatory 'Cover-2' stress test and in line with industry standards, Eurex Clearing applies a range of further liquidity stress scenarios:

- Late funding scenario,
- Idiosyncratic scenario,
- Market disruption scenario,
- Market disruption / idiosyncratic scenario.

Eurex Clearing's liquidity management aims to ensure sufficient liquidity sources to cover all liquidity stress scenarios. For this purpose, the above-mentioned liquidity stress testing is performed on a daily basis in a EUR aggregated view as well as in single currencies views for all currencies Eurex Clearing may have exposure to.

Key Consideration 2

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.

Eurex Clearing identifies, measures and monitors settlement and funding flows on a continuous basis. Throughout the day, payment and settlement systems are used to monitor intraday liquidity and to identify intraday liquidity risk as well as excess cash to be invested and liquidity gaps to be funded.

For that purpose, Eurex Clearing operates an Intraday Liquidity Management Tool that automatically updates information on account balances on a counterparty and currency basis. The tool enables Eurex Clearing to monitor liquidity in near real time and manage intraday balances and/or liquidity needs.

Eurex Clearing's Liquidity Plan is outlined in the ECAG Liquidity Risk Management Policy. A quantified report is produced and reviewed on a daily basis.

Liquidity needs are monitored, on a daily basis, across stress scenarios that include a simultaneous default of the two Clearing Members to which Eurex Clearing has the largest. Additionally, key liquidity indicators, considering pre-financing activities and cover-2 requirements, are monitored on a daily basis.

Eurex Clearing performs both daily and quarterly reporting on its liquidity needs and available liquid financial resources as governed by the Liquidity Risk Management Framework, which includes the required level of granularity.

Key Consideration 3

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 limited to, the default of the participant and its affiliates that would generate the largest aggregate payment obligation in extreme but plausible market conditions.

Not applicable.

Key Consideration 4

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 to the CCP in extreme but plausible market conditions.

Eurex Clearing measures, monitors and manages liquidity risks in accordance with its robust liquidity risk management framework.

Eurex Clearing runs a comprehensive stress testing programme of its liquid financial resources as part of its Liquidity Risk Management Framework. Liquidity stress tests are conducted on a daily basis in order to assess potential future liquidity needs.

Besides the regulatory 'Cover-2' stress scenario, Eurex Clearing applies a range of liquidity stress scenarios:

- Late funding,
- Idiosyncratic scenario,
- Market disruption scenario,
- Market disruption / idiosyncratic scenario.

The liquidity stress testing framework includes the exhaustive range of potential liquidity risk identified in Eurex Clearing's business procedures. Liquidity exposures resulting from the default of a Clearing Member consider all potential cash flows between the date of the default until the end of the respective liquidation period of each product. Furthermore, the stress scenarios consider liquidity risk generated by long-term investments, member cash deposit repayments, settlement pre-financing activities of Eurex Clearing as well as liquidity exposure generated by late funding.

The liquidity stress testing scenario setup is currently under review and an adjustment of the so called "Cover-2" scenario is planned to incorporate the potential liquidity risk stemming from investment & BAU settlement pre-funding activities and potential member cash deposit repayments in this stress event as well.

Eurex Clearing has established an array of liquidity indicators based on its liquidity stress test results in order to maintain sufficient liquid resources to meet payment obligations on time, with a high degree of confidence and under extreme but plausible market conditions. The key liquidity indicator is set to cover the liquidity risk generated by the default of the two Clearing Members including all affiliates to which Eurex Clearing has the largest exposures in order to ensure sufficient financial resources at all times. Early warning and recovery triggers are in place to detect critical developments in an early state. In case of a breach of a liquidity indicator, measures to strengthen the liquidity position have been defined and are outlined in Eurex Clearing's Liquidity Risk Management Policy, and in more detail, in Eurex Clearing's Funding and Contingency Funding Plan.

Liquidity stress scenarios include all sources of potential liquidity risk identified in Eurex Clearing's business procedures, including its investment activities. In its liquidity risk management framework, Eurex Clearing takes into account interdependencies and multiple relationships as with settlement banks, payments systems, securities settlement systems nostro agents, custodian banks, liquidity providers, interoperable CCPs, service providers or investment counterparties.

In general, Eurex Clearing applies restrictive standards to financial instruments qualifying as investments or accepted as collateral for secured investment. As the leading principle, financial instruments need to fulfil the conditions applicable to highly liquid financial instruments as laid out by the European Market Infrastructure Regulation and the relevant Commission Delegated Regulations so that they shall allow for quick liquidation with little, if any, adverse price effect. This is true for both a) secured money market transactions and b) direct purchases of debt instruments.

Securities may be pledged to central banks to which Eurex Clearing has been granted access to or be monetized in reverse repo transactions. Eurex Clearing has access to the monetary operations of Deutsche Bundesbank (available also under stressed conditions). Furthermore, prearranged and highly reliable funding arrangements are in place with a broad range of institutions. The ability to mobilize securities is tested regularly as stated in the Eurex Clearing's Treasury Policy.

All investments as well as the ECB eligible collateral received in reverse repo transactions are considered in the Liquidity Stress Testing scenarios.

Uninvested cash shall be deposited with the central bank for all currencies Eurex Clearing holds an account with. If no access to a central bank's standing deposit facility has been granted, Treasury shall place uninvested funds overnight among several credit institutions to avoid concentration risk.

In case these credit institutions are clearing members, the unsecured overnight placements are considered in the Liquidity Stress Testing model to determine the clearing members Eurex Clearing has the largest liquidity exposure to.

In order to identify strong linkages, liquidity exposures are determined per corporate group including all affiliated entities. The "Cover-2" stress scenario which is reported to the regulator on a daily basis calculates the liquidity exposure of the two corporate groups and all their affiliates to which Eurex Clearing has the largest exposure.

The Liquidity Risk Management Framework of Eurex Clearing covers all currencies in which Eurex Clearing is active in, indicating however, that Euro is considered as the most relevant currency. Liquidity stress scenarios are calculated for each currency Eurex Clearing may have liquidity exposure to and closely monitored for all major currencies on a daily basis. All clearing currencies (EUR, CHF, GBP) as well as all currencies with a liquidity gap larger than 50 m EUR equivalent on at least one day during the last year are defined as major currencies.

Key Consideration 5

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 resources should be available when needed.

Eurex Clearing's liquid financial resources either stem from its own funds or from Clearing Members' cash collateral. Whereas its own funds are mainly denominated in EUR, Eurex Clearing accepts EUR, CHF, GBP, USD and JPY as cash collateral (AUD is accepted for late intraday delivery). Moreover, Eurex Clearing maintains balances in further currencies, where product-related payments, such as variation margin, premiums etc., need to be settled in the underlying product currency.

Eurex Clearing runs a comprehensive stress testing programme of its liquid financial resources to determine the sufficiency of its liquid resources and to detect potential shortfalls as early as possible. Liquidity stress tests are conducted on a daily basis in order to assess potential future liquidity needs. Besides the EMIR required 'Cover-2' stress scenario, Eurex Clearing applies a wide range of liquidity stress scenarios to forecast the impact of e.g. member defaults, stressed market conditions and idiosyncratic effects on its liquidity position and combinations thereof. In stress test scenarios that model a default or temporarily unavailability of Clearing Members (e.g. Cover-2 Stress Test) the committed credit and FX lines provided by Clearing Members, that are assumed to be in default, are not considered as liquidity source. As laid out in the Liquidity Risk Management Policy, stress testing results are monitored on an EUR aggregated level considering all future cash flows in the different currencies. Furthermore, the stress testing scenarios are calculated in single currency views for all currencies Eurex Clearing may have liquidity exposure to.

As a principle, Eurex Clearing's liquid financial resources are commensurate to its liquidity requirements. The CCP maintains its liquid financial resources in the currency initially provided by its Clearing Members (all traded on highly liquid markets). For currencies where Eurex Clearing has no access to a central bank account, Eurex Clearing also has in place ISDA Master Agreements or German Master Agreements for Financial Derivatives Transactions ("DRV") with a set of multiple highly reliable authorised credit institutions and may enter into FX

swap contracts - if needed - accordingly. In addition, a committed FX swap line is in place. The usage of such sources is being tested on a regular basis. In addition, the Clearing Conditions entitle Eurex Clearing to settle payment obligations in Euro as an alternative currency in case of a disruption in the FX market. Eurex Clearing has several qualifying liquid resources available such as e.g. cash at central banks and creditworthy commercial banks, committed lines of credit and highly liquid financial instruments to cover existing and potential liquidity needs. The full list of the liquidity sources is described in detailed in ECAG Liquidity Risk Management Policy and in ECAG Funding Plan.

Key Consideration 6

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.

Eurex Clearing has set up two different kinds of credit line agreements with its liquidity providers: (a) uncollateralized (clean) credit lines and (b) collateralized credit lines (committed FX swaps). In the EUR aggregated view of the liquidity stress testing scenarios only committed, uncollateralized credit lines are counted as liquidity source. In the single currency views the committed collateralized credit lines are considered as well (in case ECAG has sufficient cash in another currency (e.g. EUR) available to collateralize the credit line in the respective scenario currency), thus, no double-counting of liquid sources is possible in the aggregated as well as single currency views.

Eurex Clearing's liquidity resources are mainly provided via Clearing Member cash deposits to meet their margin and Default Fund requirements. Top contributors to Eurex Clearing's liquidity sources considered in its liquidity stress testing programme (i.e. cash deposits on margin and Default Fund collateral as well as uncollateralized credit lines) are monitored and reported to the Executive Board of Eurex Clearing on a monthly basis. Besides the 25% concentration limits on committed credit lines, no strict limits for cash deposits have been set. In case significant changes to the distribution would be recognized over a longer period, additional measures could anyway be defined.

Central Banks

Eurex Clearing safely places Euro, Swiss Franc and British Pound with the relevant central bank money accounts. The funds on the cash accounts can generally be accessed with immediate effect during the payment systems' operating hours. Additionally, Eurex Clearing has access to the monetary operations of the Eurosystem via its account with Deutsche Bundesbank, allowing the CCP to promptly convert ECB eligible collateral into cash. As Eurex Clearing accepts highly liquid and central bank eligible collateral only, the CCP considers these securities to be marketable even under severe stress.

Commercial Banks

Eurex Clearing carefully chooses its payment banks. Potential and existing banks are assessed internally based on quantitative and qualitative criteria that, among others, take into account factors like creditworthiness, technical infrastructure, operational effectiveness and operational reliability.

Supplemental liquid resources are uncommitted credit lines with commercial banks. Access to these resources is tested on a regular basis. The size of supplemental liquid resources is provided in the CPMI-IOSCO public quantitative disclosure (number 7_3).

Highly marketable collateral

Eurex Clearing, although carefully assessing commercial banks, intends to reduce any unsecured overnight balances with commercial banks to a minimum. Cash shall generally be deposited on a secured basis, i.e. via

central bank deposit or via collateralised placements with creditworthy commercial banks. In the latter, Eurex Clearing accepts only highly liquid financial instruments with minimal credit and market risk.

Eurex Clearing maintains prearranged and highly reliable funding arrangements with a wide range of highly rated financial institutions to mobilise the securities if needed. Alternatively, the securities can also be pledged with the central bank to obtain intraday and overnight credit. For both, the mobilisation process allows Eurex Clearing to generate liquidity on an intraday basis. The repo counterparties are internally assessed based on quantitative and qualitative criteria. Eurex Clearing tests the reliability of the counterparties in its capacity to perform repo and reverse repo transactions periodically, at least quarterly.

The size of qualifying liquid resources is publicly disclosed in the CPMI-IOSCO quantitative disclosure (<https://www.eurex.com/ec-en/find/about-us/regulatory-standards>) under the tab 'CCP_DataFile_7_1'.

Key Consideration 7

An FMI should obtain a high degree of confidence, through rigorous due diligence, that each provider of its minimum 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.

As indicated by the public quantitative disclosure, Eurex Clearing usually does not need to use liquidity providers to meet its minimum required qualifying resources. However, Eurex Clearing maintains committed lines of credit with liquidity providers to diversify its sources of funding and to cover its liquidity needs in case not all of its financial resources are immediately available.

Eurex Clearing performs rigorous due diligence that its liquidity providers have enough capacity to perform according to the liquidity arrangements. The assessment is made annually and/or event-driven. In general, committed lines of credit are maintained only with commercial banks whose core competencies is to provide such facilities. Eurex Clearing periodically, tests to access its lines of credit to check reliability of procedures and the speed of access. The procedure is governed by the Liquidity Risk Management Policy and described in detail in Treasury ECAG Procedures and Process Description. The outcomes of the liquidity generation tests are documented.

A high concentration of credit facilities with an individual institution, however, may cause liquidity issues in case this institution withdraws credit facilities. Hence, if an individual liquidity provider provides more than 25% of the committed required lines of credit, its credit line is only considered up to a maximum of 25% of required committed credit lines. Moreover, several scenarios in Eurex Clearing's liquidity stress testing framework assume the unavailability of committed credit lines. All liquidity stress testing scenarios do not consider uncommitted credit lines and other funding arrangements.

Besides, prearranged and highly reliable funding arrangements in the form of repo framework agreements are tested regularly.

Key Consideration 8

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.

Eurex Clearing maintains central bank accounts with Deutsche Bundesbank, Swiss National Bank and Bank of England.

Cash payments in Euro are settled via TARGET2, which is the real-time gross settlement system operated by the Eurosystem. For Swiss Francs, Eurex Clearing maintains a settlement account with SIX Interbank Clearing, who operates the payment system SIC on behalf of the Swiss National Bank. Additionally, as Eurex Clearing is subject to the minimum reserve, it may participate in the Eurosystem's monetary instruments. This allows the CCP to access the standing facilities as well as the open market operations.

Cash accounts directly held with the Bank of England are not being offered to facilitate clearing related British Pound payments. However, Eurex Clearing has the option that funds provided through commercial banks in British Pound are transferred to the central bank account with Bank of England.

Payments and settlements in any other currency are conducted using commercial bank infrastructure as central bank access is difficult to establish.

In general, Eurex Clearing intends to use central bank's payments and settlement services to the extent possible to avoid any unsecured settlement and liquidity exposures. Furthermore, Eurex Clearing intends to place financial instruments that are not placed with an operator of a securities settlement system, with a central bank that ensures the full protection of its assets and that enables Eurex Clearing to promptly access its assets when needed.

Key Consideration 9

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 should document its supporting rationale for, and should have appropriate governance arrangements relating to, the amount and form of total liquid resources it maintains.

Eurex Clearing's liquid financial resources are tested over the range of liquidity-specific stress scenarios. The core element is the "Cover-2" liquidity exposure, which is monitored on a daily basis. Eurex Clearing aims to ensure sufficient liquid financial resources to cover the liquidity requirement generated by the default of the two clearing members to which it has the largest exposures.

Liquidity 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:

- Daily stress test report to various recipients within the Treasury and Risk Department as well as the national regulator;
- Monthly Stress test report to the Executive Board;
- Quarterly Risk Report to the Executive Board, Supervisory Board, Audit and Risk Committee, and EMIR Risk Committee.

Additional event-driven analysis is performed and reported depending on the market situation.

The daily stress testing report is the basis for monitoring compliance with the "Cover-2" requirement and initiating mitigating actions if early warning or recovery triggers are breached. The ECAG Liquidity Risk Management Policy together with ECAG Funding and Contingency Funding Plan and the Recovery Plan of Eurex Clearing AG define mitigating actions and reporting lines once a trigger has been reached. ECAG Liquidity Risk Management Policy gives an overview of identified options to strengthen the liquidity position, and these are described in more detail in ECAG Funding and Contingency Funding Plan.

Eurex Clearing considers a wide range of liquidity-specific stress scenarios. Both stresses to the exposure and stresses to the liquidity sources are considered. Market disruption scenarios as well as idiosyncratic stress factors are taken into account. The extreme but plausible assumptions are applied on Member Cash deposit repayments, term investments, CCP pre-financing activities as well as payment obligations resulting from Clearing Member defaults.

A comprehensive Model Validation Framework with strong governance ensures effective identification of potential model risks related to models used at Eurex Clearing. Eurex Clearing commits itself to a regular and thorough validation of all risk models in scope of the Model Risk Management Policy.

Throughout the year, the independent model validation uses a number of validation instruments to regularly validate all risk models considering the model quality criteria of model input, methodology & assumption, model performance and model use. In particular, there exists a dedicated validation concept for each risk model in scope. All risk models are subject to a validation assessment at least on an annual basis. All validation results are documented including analyses of the outcomes of test results. Validation results and identified model risks are regularly communicated to internal stakeholders including the Executive Board of Eurex Clearing.

With the stress testing validation, the appropriateness of the stress testing methodology (both credit and liquidity stress testing) with all its components such as scenarios, parameters and assumptions is tested on an annual basis. In detail, the validation scope for credit- & liquidity stress testing is defined in dedicated validation concepts. Anonymized results of the annual review are presented to the EMIR Risk Committee.

Key Consideration 10

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.

Eurex Clearing's procedures for using its liquid financial resources to fulfil its payment obligations during a liquidity shortfall are outlined in the Liquidity Risk Management Policy, as well as in the ECAG Funding Plan which includes the Contingency Funding Plan. Additionally, all the related procedures, including the access of cash deposits or overnight investments of cash deposits, execution of the same-day market transactions, or drawing on prearranged liquidity lines are described in detailed in ECAG Cash Management Processes & Procedure document. The regular testing (on a quarterly basis) is also covered in this document.

The main events, which could cause a potential liquidity shortfall for Eurex Clearing, are defaults of Clearing Members. In case of a Clearing Member default, Eurex Clearing ensures the fulfilment of all payment obligations to all non-defaulted Clearing Members. If Eurex Clearing purchases securities on behalf of the defaulted Clearing Member, they may be pledged to Deutsche Bundesbank or used for repo transactions with credit institutions to generate liquidity. Repo framework agreements are in place with a broad range of international credit institutions.

Additionally, in case of a liquidity shortfall, Eurex Clearing may mobilise the defaulted Clearing Members' securities collateral as well as default fund collateral and pledge ECB eligible securities to Deutsche Bundesbank to obtain credit.

Positions will be closed out within their margin period of risk (MPOR). The MPOR needs to be reflected in the calibration of the margin parameters. Eurex Clearing's procedures for using its liquid financial resources to fulfil its payment obligations during a liquidity shortfall are outlined in Eurex Clearing's Liquidity Risk Management Framework. Eurex Clearing's Treasury has short-term measures in place to support the liquidity position in a stress situation. As an example, credit lines could be drawn upfront to ensure their availability or pre-financing of settlement activities may be managed in order to reduce liquidity requirements to a minimum. If cash resources have been invested through reverse repo deals, the securities received as repo collateral will be mobilised through the pledge facility of Deutsche Bundesbank.

In case a Clearing Member defaults, Eurex Clearing will purchase securities to fulfil the defaulted Clearing Member's settlement obligation. Prior to liquidation of these securities, they can be pledged to Deutsche Bundesbank or sold in a repurchase agreement to commercial banks to generate liquidity. In case of a "failure to pay" event, Eurex Clearing will also purchase securities to fulfil 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 fulfil settlement.

Eurex Clearing may use purchased securities to enter into a SFT (GC Pooling) trade with non-failed Clearing Members. As an additional measure, central bank eligible securities purchased by Eurex Clearing may be pledged to Deutsche Bundesbank in order to obtain credit intraday and/ or overnight. Other securities (e.g. equities) may be transferred to commercial banks in repo transactions to generate liquidity.

In principle, during the Default Management Process, liquidity sources are automatically replenished with the liquidation of the portfolio and the defaulted Clearing Member's collateral by the Default Management Team. Besides this, Eurex Clearing has defined a diverse set of replenishment measures to strengthen the liquidity position also in stress situations as described above.

Assessment of principle:

Observed

Principle 8: Settlement finality

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.

Eurex Clearing as a CCP is responsible for the clearing of transactions. For the purpose of settlement Eurex Clearing is forwarding transfer instructions (settlement instructions) to Central Securities Depositories (CSD), also for its Clearing Members. The settlement of transactions is further treated by the settlement systems, which have contractual business relationships with Eurex Clearing (for linked CSDs see below). In the moment the CSD settled the transaction, Eurex Clearing will receive the respective information. Once the CSD reports back settlement, Eurex Clearing considers the instruction as settled / final. Thereafter, Eurex Clearing sends a report / confirmation (SWIFT message) to its Clearing Members that the settlement is final and the transaction cannot be revoked. In case the instructions could not be settled by the CSD, Eurex Clearing cancels the instruction. In that case, finality is not reached and Eurex Clearing considers those transactions as still pending. Pending transactions will be forwarded for settlement on the next business day.

From a legal point of view, the settlement of delivery obligations takes place when the counterparties to a securities transaction have performed their entire obligations (such as the transfer of rights to a security or effecting a cash payment) so that all reciprocal claims arising from the transaction have been satisfied in full and are consequently extinguished.

The European Directive 98/26/EC on Settlement Finality stipulates that finality as the legal enforceability and irrevocability of instructions occurs when transfer orders are entered into a system.

As regards the irrevocability of instructions: Under German law the irrevocability of instructions is clearly defined based on general rules. Based on these rules Clearing Members are not entitled to revoke instructions unilaterally once entered into the clearing system.

Eurex Clearing has at all times detailed information on the settlement of open payments, transfer instructions or other obligations. The processing of settlements is performed with SWIFT-formatted messages that contain clear references to the beneficiary. This way the key steps are documented using a system that sets the internationally recognized industry standards for settlement.

The central source for information to the exchange participants, clearing members 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. In particular, the needs of today on trading level have resulted in the development of a high-tech tool that has also improved Eurex Clearing's capabilities to meet the customers' increasing demand for the latest risk information on clearing level and settlement level.

Detailed information regarding the settlement of transactions can be found in the Clearing Conditions. The Clearing Conditions as well as other more general information on the settlement processes can be found on the website of Eurex Clearing (<https://www.eurex.com/ec-en/rules-regs/rules-and-regulations/1.-Clearing-Conditions-53674>).

The CCP maintains settlement accounts at multiple settlement locations. It settles transactions at the location chosen by the respective member in the trading location giving rise to the trades. As an example, a member could specify one settlement location for German government bonds and another for Swiss government bonds.

Eurex Clearing supports a variety of Central Security Depositories.

Key Consideration 2

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.

Eurex Clearing ensures settlement finality on the value date as it creates instructions technically to observe the Intended Settlement Day. Settlement Finality is reported with report Settled Delivery.

The delivery obligation in the case of novation or open offer where the participant A sells to or buys from the Central Counterparty is to be fulfilled on the value date, regardless of whether the CCP is being delivered by or delivering to participant B.

According to the Clearing Conditions of Eurex Clearing, Clearing Members shall fulfil their delivery and payment obligations resulting from Transactions in accordance with the instructions of Eurex Clearing. This also means that each Clearing Member and Eurex Clearing shall ensure, through appropriate instruction of the respective Settlement Location, that Transactions can be processed at the time specified in the relevant Special Clearing Provisions, on the delivery days agreed, respectively. The Clearing Members shall authorize Eurex Clearing, by providing the appropriate power of attorney vis-à-vis the respective Settlement Location, to give, release and transmit all delivery instructions and to supplement, change or cancel the delivery instructions as required for the timely and correct fulfilment of its delivery and payment obligations against Eurex Clearing arising from Transactions in the name of and binding for and against such Clearing Member. The same applies with regard to the corresponding payment instructions.

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. Depending on the cleared market and the asset class, a different fail process applies. Generally, daily fines for late deliveries will be charged for shares that fall under the EU Short Selling Regulation (EU) No 236/2012. Next to the fines under the EU Short Selling Regulation, also other types of fines exist.

Key Consideration 3:

An FMI should clearly define the point after which unsettled payments, transfer instructions, or other obligations may not be revoked by a participant.

The Clearing Conditions do not stipulate a certain point in time at which payments and instructions or other obligations cannot be revoked by any participant. Under German law, an express determination of such point 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 BGB (German Civil Code), 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 BGB).

Based on these principles, CMs/NCMs/RCs are generally not entitled to revoke instructions unilaterally (notwithstanding system functionalities) once entered into the clearing system.

The aforementioned principles are supported by the restrictions enlisted in the Clearing Conditions.

Assessment of principle:

Observed

Principle 9: Money settlement

Principle 9: Money settlement

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 minimise 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 offers its Clearing Members an attractive payment infrastructure and provides access to a broad range of currencies for the fulfilment of payment obligations that arise from the clearing process (e.g. variation margin, premiums, fees). For this purpose, Eurex Clearing is connected to a number of central and commercial banks. Central bank connectivity is preferred since payment transactions are settled on a continuous basis, in central bank money and with immediate finality. All settlement and funding flows are monitored on an ongoing and timely basis.

Eurex Clearing defines the admissible central and commercial banks and publishes them on its webpage: <https://www.eurex.com/ec-en/services/collateral-management/cash-collateral>.

Eurex Clearing predominantly settles cash flows in central bank money, i.e. for EUR via TARGET2 and for CHF via Swiss National Bank. Settlement only takes place in commercial bank money in case Eurex Clearing or the Clearing Member does not participate in the central bank's payment infrastructure.

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.

Eurex Clearing ensures that funds provided through commercial banks are safely placed with the relevant central bank money account of Eurex Clearing (where available) or are invested on a secured basis to the extent possible. Eurex Clearing limits any remaining credit and liquidity risks with commercial banks by performing an internal assessment of the bank's creditworthiness as well as of its operational reliability, by applying a strict limit framework and by monitoring the cash accounts throughout the day.

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 Executive Board of Eurex Clearing.

When using commercial banks, Eurex Clearing monitors the credit rating of the entity. A sudden change in a bank's credit quality may trigger a re-assessment of the relationship and/or reduction or cancellation of its limit.

Eurex Clearing, as part of the clearing process, needs to pay and receive payments to and from the Clearing Members. Other than payments in EUR and CHF, Eurex Clearing uses a network of Payment and Correspondent Banks (together called "Banks") to assist with the process. Given Eurex Clearing's reliance on these Banks for the efficient working of the clearing processes, Eurex Clearing has developed criteria for the assessment of these Banks.

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 also required to fulfil the requirement to strictly limit cash settlement risks' as stipulated in Article 50 EMIR.

Key Consideration 3

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, capitalisation, 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.

Initially, every potential new financial company that should be connected to Eurex Clearing undergoes a thorough creditworthiness assessment. This assessment is based on a dedicated internal rating methodology tailored to companies of the financial sector. The methodology relies mainly on the CAMELS (Capital, Asset quality, Management capabilities, Earnings, Liquidity and Support) methodology. In general, Eurex Clearing only accepts counterparts with very low credit risk. An annual, mandatory re-assessment of the credit quality of direct counterparts complements the risk framework to manage and mitigate credit risk from settlement banks.

In addition, Eurex Clearing applies a Monitoring Concept based on the defined criteria to regularly ensure compliance of those criteria by the connected Banks. Furthermore, for each Bank a Relationship Manager is assigned. Results of the monitoring are reported to the Executive Management of Eurex Clearing beyond other relevant stakeholders. In case of non-performance immediate actions are undertaken and monitored for remediation.

Eurex Clearing's Risk Management Framework ensures adequate controls over credit risk arising from Eurex Clearing activities. 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 to monitor the exposures.

Furthermore, the Risk Management Frameworks foresee coverage of multiple relationships that an entity may have with Eurex Clearing. Relevant relationships that are addressed are, among other: Clearing Membership, treasury counterparty, settlement location and payment bank. In all cases, entities belonging to the same legal group are considered jointly, meaning that all exposures from individual companies are aggregate to one group exposure for risk management purposes.

The Liquidity Management Information System 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.

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.

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.

Key Consideration 4

If an FMI conducts money settlements on its own books, it should minimise and strictly control its credit and liquidity risks.

Eurex Clearing does not conduct any money settlement on its own books.

Key Consideration 5

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.

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 (Section 116)).

Eurex Clearing has various legal agreements with payment banks in place to ensure the cash settlement.

Moreover, the college of regulators approved in the EMIR re-authorization process that Eurex Clearing strictly limits cash settlement risks.

Funds received are available to Eurex Clearing without any restrictions. The cash is generally transferred to Eurex Clearing free and clear from any rights and claims of the transferring party and of any third party. As such the cash is transferable immediately, i.e. intraday, when received.

Assessment of principle:

Observed

Principle 10: Physical deliveries

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

An FMI's rules should clearly state its obligations with respect to the delivery of physical instruments or commodities.

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.

Physical Delivery as mentioned in Principle 10 concerns the delivery of an asset, such as an instrument or a commodity, in physical form. For example, the settlement of futures contracts cleared by a central counterparty may allow or require the physical delivery of an underlying financial instrument or commodity.

“Examples of physical instruments that may be covered under this principle [10] include securities, commercial paper, and other debt instruments that are issued in paper form.” (p. 70, 2012 CPMI IOSCO PFMI)

In its Clearing Conditions, Eurex Clearing also mentions physical deliveries. Eurex Clearing's assumption is that deliveries of “physical” instruments in this context are to be understood as deliveries of securities held in book-entry form (immobilized or dematerialized) and delivery obligations are fulfilled via book transfer. One example can be found in Chapter II, Part 2, Number 2.7.1 of the Clearing Conditions:

“(2) In case of Single Stock Futures Contracts to be fulfilled by physical delivery (Number 1.6.2 Paragraph 2 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland), physical deliveries and payments are made directly between the Clearing Members and Eurex Clearing AG on the second Business Day after the last trading day (Number 1.6.2 Paragraph 1 of the Contract Specifications for Futures Contracts and Options Contracts at Eurex Deutschland).

The physical deliveries are made via a Settlement Location and the payment is made via the account defined by the respective Settlement Location.

All Clearing Members shall ensure their ability to deliver and pay by having adequate positions in the deposit of the respective Settlement Location and credit on the according cash accounts.”

The CPMI IOSCO PFMI however explicitly exclude these deliveries as being physical in the sense of Principle 10: “Immobilized and dematerialized securities, which represent the normal market practice, are covered in Principle 11 on CSDs.”

Even in the case of the “Xetra Gold Exchange Traded Commodity (ETC)”, where the physical delivery of gold is a possibility, Eurex Clearing does not itself ensure the physical delivery. It is Clearstream Banking Frankfurt, a Deutsche Börse subsidiary, that stores the gold in its vault with highest security standards and oversees that each unit of Xetra Gold is at any time covered by one gram of gold. This saves investors the costs of transporting and physically storing the gold. Nonetheless, private investors can obtain the underlying gold in physical form from their bank if desired.

This means, that physical deliveries as mentioned by Principle 10 are not performed by Eurex Clearing. Therefore, Eurex Clearing deems Principle 10 as not applicable.

Assessment of principle:

Not applicable

Principle 11: Central securities depositories

Principle 11: Central securities depositories

A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues and minimise and manage the risks associated with the safekeeping and transfer of securities. A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry.

Key Consideration 1

A CSD should have appropriate rules, procedures, and controls, including robust accounting practices, to safeguard the rights of securities issuers and holders, prevent the unauthorised creation or deletion of securities, and conduct periodic and at least daily reconciliation of securities issues it maintains.

Key Consideration 2

A CSD should prohibit overdrafts and debit balances in securities accounts.

Key Consideration 3

A CSD should maintain securities in an immobilised or dematerialised form for their transfer by book entry. Where appropriate, a CSD should provide incentives to immobilise or dematerialise securities.

Key Consideration 4

A CSD should protect assets against custody risk through appropriate rules and procedures consistent with its legal framework.

Key Consideration 5

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.

Key Consideration 6

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.

As outlined in Key Consideration 1 of Principle 1, Eurex Clearing is an authorized CCP under EMIR and is not a Central Securities Depository. Therefore, Eurex Clearing deems Principle 11 as not applicable.

Assessment of principle:

Not applicable

Principle 12: Exchange-of-value settlement systems

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 and when finality occurs.

Eurex Clearing itself is not an exchange of value system. Eurex Clearing enters into the trade and becomes the buyer for the seller and the seller to the buyer. The seller needs to deliver the securities to the CCP and the CCP delivers the securities to the buyer. The process is supported by a Delivery vs. Payment/Receipt vs. Payment (DvP/RvP) settlement. The booking is performed in the chosen Central Securities Depository. The use of these mechanisms ensures that principal risk is eliminated. These settlement mechanisms are based on standard (SWIFT-format) message types, which ensure the timely and appropriate documentation for the availability of both securities and cash at the same time.

The final settlement of corresponding transactions based on linked obligations is ensured because Eurex Clearing issues delivery instructions in the Delivery vs. Payment (DvP) mode or processes according to the logic that both sides need to be fulfilled before the transaction is confirmed to the customer (Lending CCP service). 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 necessary deliveries. 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 vs. Payment mode have been verified to be able to process DvP instructions. The Clearing Conditions provide an adequate legal framework.

The Clearing Members or Basic Clearing Members (or the Clearing Agents acting on behalf of their Basic Clearing Members) shall authorise Eurex Clearing, by providing the appropriate power of attorney use vis-à-vis the respective Settlement Location, to give, release and transmit all delivery instructions and to supplement, change or cancel the delivery instructions as required for the timely and correct fulfilment of its delivery and payment obligations against Eurex Clearing.

Owing to the fact that Eurex Clearing must continue operating and fulfilling its contractual obligations to non-defaulting participants on schedule all financial transactions are subject to margin (for further details on the margining please see the Principle 6) until their settlement has been achieved.

Eurex Clearing offers both gross and net settlement options to its members. Members can mark transactions either for gross or for net processing. This functionality is available for both sell and buy transactions.⁵ At Eurex Clearing, more than 99% of all transactions are netted. For more information on limitations of netting due to the segregation of client assets, please see additionally the Principle 14.

Assessment of principle:

Observed

⁵ The Securities CCP which was decommissioned and replaced by C7 SCS in Q3/2021. Since then gross/ net processing is no longer available on a single transaction basis.

Principle 13: Participant-default rules and procedures

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

An FMI should have default rules and procedures that enable the FMI to continue to meet its obligations in the event of a participant default and that address the replenishment of resources following a default.

Within the rulebook of Eurex Clearing (Clearing Conditions), the default of a Clearing Member is called a Termination Event. A Clearing Member's termination leaves the CCP unbalanced and initiates the default management process (DMP). Eurex Clearing distinguishes between automatic and non-automatic termination events which may lead to a termination of the clearing membership.

In case of non-automatic trigger events, where feasible, the CCP will issue a grace period for the situation to be rectified by the affected member. In case of an automatic trigger event, as defined in the Clearing Conditions, the local insolvency law and/or regulation prevents this, i.e. the membership is terminated with immediate effect.

Default Management Process

The actions that the FMI can take when a default is declared:

Key objectives of default management procedures include minimizing further losses for the defaulting participant, winding down its positions in an orderly manner, enabling the CCP to continue performing its obligations and preserving other participants' and users' ability to manage their portfolios.

The event of a Clearing Member's default is assumed to be highly correlated to market stress and may be subject to further endogenous disruptions of the market. Given the impossibility of predicting the nature of future crises and potential defaults, the DMP is designed to be sufficiently flexible to take different default scenarios into account.

Nonetheless, a generic structure is required and desired to organize the complexity of defaults, which is defined by the following components:

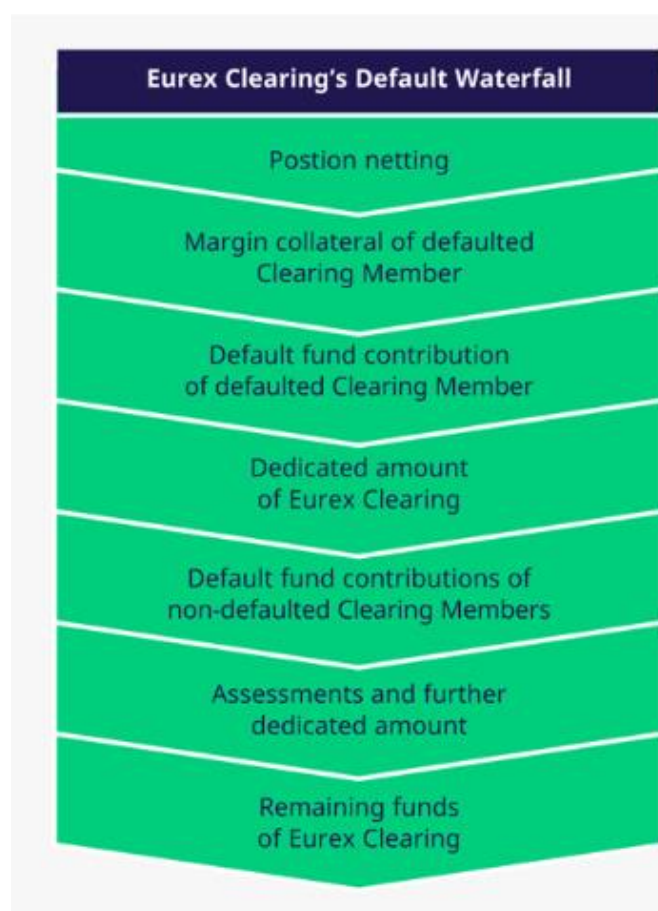
- **Predefined Liquidation Groups:** Products and instruments are arranged into one Liquidation Group, if their overall liquidation process is similar and offsets may exist between them. As such, the DMP can be seen as running in parallel for each Liquidation Group, with the specific actions and outcomes of each case following their own path. Given that the DMP is structured along Liquidation Group lines, the specificities of this process must be reflected in the margins applied to them. This will take into account possible shared risk factors and differing liquidity of the constituents of the Liquidation Group.
- **Default Management Committees (DMCs):** DMCs assist the CCP with regards to any relevant matter of the DMP. The DMC consists of representatives from Clearing Members with sufficient risk and trading expertise for a specific Liquidation Group. The DMC will be convened in case of a Clearing Member default situation or for regular default simulations or any reason, as defined in the Clearing Conditions.
- **Preliminary Measures:** These enable Eurex Clearing to be in the best possible starting position to manage a default quickly and efficiently. Preliminary measures are not actions that rebalance the CCP,

but technical preparations and set-up, governance, operational set-up and other preparations to ensure that Eurex Clearing has up-to-date information, fast and efficient decision-making process, and general readiness to act.

- **Hedging:** Hedging is the reduction of risk posed by the open positions of the CCP. Hedging is an optional stage, with great flexibility to enable a commensurate response depending on the nature of the portfolio. Generally, each Liquidation Group will be hedged with liquid products, permitting a rapid reduction of exposure to risk factors. This not only minimizes the uncertainty in the losses that the CCP's open positions would lead to, but also stabilizes the portfolio for auctions.
- **Auction & Independent Sale:** While hedging has the effect of matching the economics of the open positions to mitigate risk to the CCP and its lines of defense, independent sales and auctions will be the primary tool for fully recreating a matched book. Member participation in independent sales is voluntary, whereas auctions are mandatory for members. Auctioning off previously hedged portfolios to the non-defaulting participants is expected to be the primary method to rebalance the CCP for large portfolios.
- **Partial Tear-Ups (PTUs):** For the unlikely event that the DMP does not result in a rebalancing, Eurex Clearing has extended its rulebook since 31 December 2020 by introducing partial tear-up at the minimal set (ETD) and risk assignment tools (OTC). Tear up on the minimal set consists in the cash settlement in transactions opposite to the terminated transaction, while risk assignment corresponds to the novation of hedging transaction between the members' accounts and the CCP.
- **Cash Settlement of Liquidation Group Transactions:** If the CCP is unable to rebalance itself during the DMP and all default waterfall resources assigned to the affected Liquidation Group are utilized, recovery and resolution procedures are applied to the affected Liquidation Group to ensure that healthy asset classes can continue to be cleared. All open positions in products assigned to the Liquidation Group are cash settled and the clearing services for such products is discontinued.

These key components and the general DMP are described in the Clearing Conditions Chapter 1, Part 1, Number 7.5 . Additionally, dedicated Default Management Committee Rules and Default Management Auction Rules outline further details with respect to the implementation of the DMC and Default Management Auctions.

Eurex Clearing maintains a multi-layered security system to absorb the financial consequences of a Clearing Member's default, called "lines of defense" or the default waterfall. While the mainstay of this safety system is the margin, which Clearing Members have deposited as collateral to cover exposure for open positions, the lines of defense consist of several additional layers of safety nets. In the event of a default, these layers are applied in the order that is outlined in the diagram below.



Eurex Clearing is empowered at any time to draw any financial resources (i.e. margin collateral and Default Fund contributions) of the defaulting member to cover default related losses. Once the defaulter's collateral is utilized in full, Eurex Clearing provides its own contribution, i.e. the dedicated amount of EUR 200 million, to cover the outstanding losses. Only if these funds were insufficient, Eurex Clearing will utilize the Default Fund contributions of the non-defaulted members. Only if non-defaulted Clearing Members' Default Fund contributions are insufficient to cover all losses, Clearing Members are required to provide up to two times their Default Fund Contribution requirement determined at the time when the default is declared (the so-called "assessments") and Eurex Clearing provides a further dedicated amount. The obligation to provide the so-called "assessments" is limited within a capped period of 20 business days, which starts with the declaration of default of a Clearing Member and ends with the finalization of the DMP. The capped period can be rolled, that means that, if within the capped period another default occurs, another 20 days are triggered. However, when the capped period is rolled, each member is still only obliged to provide assessments up to two times the original amount of the Default Fund contribution provided at the start of the capped period. The capped period ends after 3 months, regardless of further defaults.

Simultaneously with the assessments, Eurex Clearing will provide a further dedicated amount which is capped at EUR 300 million and is backed by the Letter of Comfort issued by Deutsche Börse AG. At the end of the default waterfall, the remaining resources from the Letter of Comfort and Eurex Clearing's equity capital can be used to cover remaining losses.

Detailed information on the lines of defense is also available on the webpage of Eurex Clearing (<https://www.eurex.com/ec-en/services/risk-management/default-waterfall>). The order in which the lines of defense are utilized is documented in the Clearing Conditions.

In case of a Clearing Member's default, Eurex Clearing has to cover the following liquidity requirements:

- Eurex Clearing has to fulfill all pending securities settlements of the insolvent Clearing Member;
- Securities sales cannot be performed, as no securities are available to Eurex Clearing (if the securities

- were not purchased as part of other settlement transactions of the Clearing Member on prior days);
- The number of shares required is the “net pending settlements”. Only for the net pending settlements the full market value funding amounts will be subject to pre-financing. For offsetting transactions, the respective net cash balance will have to be funded;
- Any payment obligations resulting from derivatives and the liquidation process have to be funded.

In order to be able to fulfil these obligations at all times, Eurex Clearing applies stress scenarios, which determine the maximum liquidity requirement caused by the 2 largest Clearing Members over the planned maximum liquidation period (currently set at 5 business days).

Available liquidity sources to cover these requirements are:

- Eurex Clearing’s own funds,
- Clearing Members’ Cash Deposits,
- Credit facilities,
- Central bank access,
- Repurchase agreements.

Eurex Clearing may pledge securities to Deutsche Bundesbank in order to obtain intraday credit. Alternatively, securities may be transferred to commercial banks in repo transactions to generate liquidity. Repo framework agreements are in place with selected international commercial banks.

Key Consideration 2

An FMI should be well prepared to implement its default rules and procedures, including any appropriate discretionary procedures provided for in its rules.

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, winding down its positions in an orderly manner, enabling the CCP to continue performing its obligations and preserving other participants’ and users’ ability to manage their portfolios.

Roles, responsibilities and communication within DMP is organised as follows

The Default Management Section (DMP Team) is the primary line organization within Eurex Clearing responsible for Default Management. The DMP Team is responsible for both developing and executing the re-balancing of the CCP in the event of a member’s default.

In addition, Eurex Clearing has dedicated Porting and Communication Streams in place which are responsible for the client porting procedure and internal and external communication.

The Eurex Clearing’s Executive Board is the ultimate decision-making body and responsible for the DMP.

Eurex Clearing informs its competent authority, if it considers that the Clearing Member will not be able to meet its future obligations. To ensure timely information sharing with the competent authority, a dedicated communication process is set up between the DMP Team and the Chief Compliance Officer of Eurex Clearing who is in charge of providing such information to the competent authority. The decision whether a Clearing Member is considered not to be able to meet its future obligations is made by at least two members of the Executive Board of Eurex Clearing.

In case the Executive Board decides on a Termination, Eurex Clearing publishes a circular with a porting notice in order to trigger the process and communicates the decision to all relevant stakeholders. Furthermore, Eurex Clearing may decide to inform the wider market via news board messages published on the website of Eurex Clearing. In case of a default, Eurex Clearing activates the Communication Stream to ensure proper distribution of relevant information.

Testing and review of the DMP

The default procedures are tested in realistic default simulations, which take place at least once (participation is mandatory for Clearing Members) and at maximum three times per year. In a default simulation, the procedures and infrastructure of Eurex Clearing and the Clearing Members' readiness to participate in a real DMP are tested. Pre-assigned Clearing Members are required to second representatives to the DMC that will assist Eurex Clearing in handling the default. Representatives of the DMC are required to take part in default simulation at Eurex Clearing's premises or remotely, in case of extraordinary situations and if decided by Eurex Clearing. Furthermore, members are required to provide prices on a hypothetical portfolio during a default simulation, thus, Eurex Clearing ensures that members have the necessary procedures and infrastructure in place to participate in the auction during a real default. If during a default simulation Eurex Clearing detects that the default procedures are not feasible anymore, Eurex Clearing can take immediate action to remedy the shortcomings. The results of the annual simulation are provided to the national competent authority, discussed with the participants during bilateral debriefing sessions and are presented to the Executive Board of Eurex Clearing as well as to the EMIR Risk Committee. In addition, Eurex Clearing regularly conducts bilateral simulations with selected Clearing Members.

Any amendments to the DMP must be approved by the Eurex Clearing Executive Board, are discussed with the EMIR Risk Committee and undergo a market consultation.

All procedures executed by the DMP Section are captured in process documents, which are reviewed and audited annually.

Key Consideration 3

An FMI should publicly disclose key aspects of its default rules and procedures.

Eurex Clearing's default procedures are publicly disclosed on Eurex Clearing's webpage: <https://www.eurex.com/ec-en/services/risk-management/default-management-process>.

Eurex Clearing publishes information on its default management procedures including the definition of the default event as well as the actions which will be taken after a default has occurred and by whom these actions are taken. The publicly available procedures also outline the scope of the actions which may be taken, including the treatment of both proprietary and client positions, funds and assets, the mechanisms to address a CCP's obligations to non-defaulting Clearing Members as well as the mechanisms to help addressing the defaulting Clearing Member's obligations towards its clients, which are disclosed to Eurex Clearing.

The full set of rules with regards to the DMP is outlined in the publicly available Clearing Conditions, DMC Rules and DM Auction Rules. Furthermore, a detailed functional description of Eurex Clearing's DMP is given in the Default Management framework and process documents (Default Management Framework, Default Management Governance, Default Management Hedging, Default Management Auctions, Default Management Independent Sale, Default Management Post Liquidation) which are available on Eurex Clearing's Member Section. Any amendments to the DMP are discussed with the EMIR Risk Committee and undergo a market consultation.

Clearing Conditions of Eurex Clearing are available under: <https://www.eurex.com/ec-en/rules-regs/rules-and-regulations/Clearing-Conditions-53674>.

Key Consideration 4

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.

The default procedures are reviewed at least once a year as a part of the annual fire drill exercises. In addition, Eurex Clearing performs multiple bilateral member drills throughout the year. This review includes the verification of the concept, the hedging strategies, auction formats and the availability of the connected infrastructure. If necessary, the DMP is updated. Following any material change, the DMP is also tested.

During annual fire drills Eurex Clearing simulates a default of one of the largest Clearing Members active in various Liquidation Groups and convenes the DMC for the respective groups. Clearing Members are required to second representatives to the DMC that will assist Eurex Clearing in handling the default. Representatives of the DMC are required to take part in default simulation at Eurex Clearing's premises or remotely under extraordinary circumstances and if decided by Eurex Clearing. Furthermore, members (and clients on a voluntary basis) are required to participate in a simulated hedging process, provide prices for a hypothetical portfolio during the auction/independent sale and collateral liquidation process. Thus, Eurex Clearing tests every step of the process and ensures that members (and clients) have the necessary procedures and infrastructure in place to handle a real default.

Resolution of Clearing Members is indirectly in scope of the annual simulation as it is assumed that the largest Clearing Members are all subject to resolution regimes and are, therefore, unlikely to simply default. The tests scenario typically covers a resolution situation in which the responsible resolution authority has decided not to grant specific treatment to market infrastructures and the respective Clearing Member defaults on its obligation with the CCP.

If during a default simulation Eurex Clearing detects that the default procedures are not feasible anymore, Eurex Clearing takes immediate action to remedy the shortcomings. Lessons learned and feedback collected from the Clearing Members are used for continuous improvement of the DMP.

The results of annual simulations are reported to the Executive Board of Eurex Clearing, EMIR Risk Committee and the regulators.

Assessment of principle:

Observed

Principle 14: Segregation and portability

Principle 14: Segregation and portability

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.

As a CCP authorised under the European Market Infrastructure Regulation (Regulation (EU) 648/2012 - EMIR), Eurex Clearing offers both omnibus and individual segregation to Clearing Members and their direct clients. There are also segregation solutions offered for indirect clients.

In addition, the U.S. Commodity Futures Trading Commission (CFTC) granted Eurex Clearing the status of a Derivatives Clearing Organization (DCO) for the clearing of Swaps in relation to entities located in the U.S. Currently, Eurex Clearing supports clearing of OTC-traded Interest Rate Swaps (OTC IRS), Overnight Index Swaps (OIS) and Forward Rate Agreements (FRA) as a DCO. In this context, Eurex Clearing offers an LSOC-style (Legally Segregated Operationally Commingled) client-clearing framework in compliance with CFTC Regulation Part 22 under U.S. law for FCMs that clear client business.

Clients have the option as to how their positions and margin collateral are held and posted by their Clearing Member at Eurex Clearing, depending on each individual client's needs.

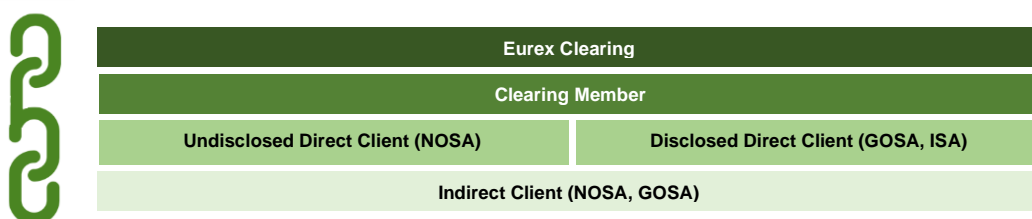
Eurex Clearing’s segregation offering in accordance with EMIR

An overview of Eurex Clearing’s segregation options for direct clients of a Clearing Member and key features can be found below:

| | NOSA | GOSA | ISA |
|---------------------------------|--------------------------------|----------------------------------|-------------------------------|
| Client Considerations | Net Omnibus Segregated Account | Gross Omnibus Segregated Account | Individual Segregated Account |
| Fellow customer risk | Yes | Limited | No |
| Trades held in position account | With other clients | Individual a/c | Individual a/c |
| Margin efficiency | Net | Gross | Gross |
| Collateral pool | Omnibus | Omnibus | Individual |

| | | | |
|--|---------------------------------|-------------------------|--|
| Securities collateral provided via | Pledge | Pledge | Pledge or title transfer |
| Cash collateral provided via | Title transfer | Title transfer | Title transfer |
| Collateral allocation | By value | By value | By asset |
| Porting | Available with fellow customers | Available as individual | Available as individual |
| Collateral return if porting fails | Via insolvency administrator | Direct from CCP | Direct from CCP |
| Direct collateral transfer | - | - | for title transferred security collateral |
| Direct reporting | - | Available | Available |
| CASS protection | Available | Available | Available under pledge for security collateral |
| Clearing model under Clearing Conditions | Elementary Clearing Model | | Individual Segregated Account |

Indirect clearing arrangements under EMIR and MiFIR provide an additional layer of protection to indirect clients.



Elementary Clearing Model (ECM)

Under the Elementary Clearing Model Eurex Clearing offers its Clearing Members the following omnibus client segregation:

- “net omnibus client segregation” (NOSA) where positions of multiple Undisclosed Direct Clients are held in one position and margin is posted by the Clearing Member to Eurex Clearing on a net basis across Transactions relating to all such Undisclosed Direct Clients. Porting is available with fellow customers.

- “gross omnibus client segregation” (GOSA) where a position account of a Direct Disclosed Client is held separately from other clients and margin is posted by the Clearing Member to Eurex Clearing on a gross basis across Transactions relating to a particular Direct Client. Porting is available for individual clients.

Special Provisions relating to CASS Rules

Furthermore, Eurex Clearing supports Clearing Members domiciled in the UK to clear certain Eurex Transactions or OTC Interest Rate Derivative Transactions in accordance with the rules of the Client Asset Sourcebook (CASS) of the United Kingdom Financial Conduct Authority (CASS Rules) for the benefit of their clients. Positions and assets forming part of a CASS Client Account are legally segregated from any non-CASS Transactions and assets. It’s the responsibility of the Clearing Member to comply with the CASS Rules.

Individual Segregated Account (ISA)

Maximum protection is achieved for Direct Clients which opt for individual segregation. Positions and margin collateral of an individually segregated client are held in dedicated, individual accounts at CCP level, and hence are completely ring-fenced from the Clearing Member's or other client's positions and margin collateral. Portability of client positions and margin collateral is available for each client.

Under the ISA model, Eurex Clearing facilitates indirect clearing services by providing, upon request of the Clearing Member, separate Transaction Accounts relating to Indirect Clients of the relevant Disclosed Direct Client. As required under EMIR and MiFID, these accounts are either an omnibus account for multiple indirect clients or an omnibus account for a single indirect client. The accounts of any indirect clients form together with the accounts of the ISA Client an ISA Transaction Accounts Group and are ported together.

Special Provisions relating to CASS Rules

Furthermore, Eurex Clearing supports Clearing Members domiciled in the UK to clear ISA Transactions in accordance with the CASS Rules for the benefit of their clients. If a Clearing Member chooses to deliver Eligible Margin Assets in the form of Securities under the CASS Rules, the securities collateral may only be provided under a pledge arrangement to Eurex Clearing. It’s the responsibility of the Clearing Member to comply with the CASS Rules.

Eurex Clearing’s segregation offering (LSOC) in accordance with the DCO Status

The LSOC-Models are only offered to clearing members which are registered as Future Commission Merchants (FCM) with the U.S. Commodity Futures Trading Commission (CFTC) and members of the National Futures Association (NFA) (FCM Clearing Member).

The FCM Clearing Member has the choice to provide clearing services to FCM Clients under the LSOC Without Excess Model and the LSOC With Excess Model:

- The LSOC Without Excess Model is the basic LSOC-Model, under which the portion of the FCM Client Margin Account reserved for a particular client (legally segregated value - LSV) is equal to the FCM Client Margin Requirement and the legally segregated value cannot exceed the FCM Client Margin Requirement on a day-to-day basis.
- The LSOC With Excess Model provides the FCM Clearing Member the option to assign specific portions of the FCM Client Margin Account to specific FCM Clients including excess margin. This requires the FCM Clearing Member to deliver a collateral value report (CVR) to Eurex Clearing in which the LSVs for all its FCM Clients are determined.

The choice under which LSOC-Model the FCM Clearing Member wants to clear FCM Client Transactions needs to be performed in the systems of Eurex Clearing when setting up the FCM Client Margin Account.

LSOC differs from the omnibus models under EMIR because the value of collateral associated with every individual swap clearing FCM Client is legally segregated and protected, but collateral related to all swap clearing

FCM Clients is operationally commingled in one account. The value of assets assigned to one FCM Client can never be utilized to meet the obligations of another FCM Client.

Portability arrangements in accordance with EMIR

Eurex Clearing has implemented detailed default management measures in accordance with EMIR to ensure a smooth porting of client positions and assets. In case of the occurrence of a termination with respect to a Clearing Member, Eurex Clearing informs all market participants about the Porting Period during which certain requirements must be fulfilled to enable porting.

Upon the publication of the Porting Notice, all Disclosed Direct Clients may use the Election Notice to provide their choice to Eurex Clearing: A client may choose between the transfer of its positions and assets to a Replacement Clearing Member or the close-out (termination).

Detailed information can be found on Eurex Clearing's website <https://www.eurex.com/ec-en/services/risk-management/default-management-process/default-of-a-cm-agent/porting-under-emir>.

Portability arrangements in accordance with the DCO Status

Eurex Clearing has further implemented detailed default management measures in accordance with the DCO Status.

Before the termination of FCM Client Transactions, Eurex Clearing will use reasonable efforts to transfer FCM Client Transactions (including Eligible Margin Assets) to one or more Replacement FCM Clearing Members. The porting process is initiated by Eurex Clearing by giving notice to all other FCM Clearing Members, all FCM Clients of the defaulted FCM Clearing Member, and to all Non-FCM Clearing Members of the occurrence of the Termination Event with respect to the FCM Clearing Member and that Eurex Clearing is initiating the porting process with respect to the FCM Client Transactions (the Replacement Notice). If all FCM Clearing Member Replacement Requirements in respect of the relevant FCM Client Transactions are fulfilled by the end of the Replacement Cut-Off Time, the FCM Client Transactions, and all rights and obligations of the Affected FCM Clearing Member arising from such FCM Client Transactions, will be transferred to the new FCM Clearing Member.

In case of the occurrence of an Insolvency Termination Event, Eurex Clearing may deviate from the provisions and processes described above, if so required by the CFTC and the bankruptcy trustee (or a comparable person responsible for administering the proceeding).

Detailed information can be found on Eurex Clearing's website <https://www.eurex.com/ec-en/services/risk-management/default-management-process/default-of-a-cm-agent/porting-under-lsoc>.

Client Asset Protection in relation to cash market services

Eurex Clearing offers several segregation and portability solutions for cash markets; hence alternative solutions for customer asset protection are not applicable.

Protection against the concurrent default of a Clearing Member and a fellow customer

- i. Eurex Clearing offers protection to customers to protect their positions and collateral against the concurrent default of the Clearing Member and a fellow customer by offering the **Individual Segregation Account (ISA)**.

The ISA 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 a specific ISA Client. ISA (Disclosed Direct) 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 occurrence of a Termination Date with respect to a Clearing Member will, at the election of the ISA Client, initiate a porting process by which all rights and obligations under the ISA Standard Agreement will be transferred and all Redelivery Claims for Margin and Variation Margin relating thereto will be assigned to a Replacement Clearing Member. If the ISA Client chooses not to port or if the Porting Requirements 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 relevant ISA Standard Agreement between Eurex Clearing and the Clearing Member expire and will be combined into a separate Difference Claim. Eurex Clearing will return any balance owed by it in respect of such ISA Standard Agreement following the completion of the default management process with respect to the Clearing Member.

- ii. Under the Elementary Clearing Model (ECM), 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 under the Elementary Clearing Model.

For GOSA segregated clients, fellow customer risk is limited to collateral shortfalls. A Disclosed Direct Client may port individually to a new Clearing Member and in the absence of porting, any remaining balance that is allocable to the GOSA client will be directly returned to the relevant client.

- iii. In addition to the EMIR Models, the primary objective of the LSOC Models is to minimize the "fellow customer risk" for FCM Clients in case of the default or insolvency of the FCM Clearing Member.

Such rules require that a DCO is restricted from utilizing the value of margin assets allocated to one FCM Client to meet the obligations arising from Own Transactions of the FCM Clearing Member and from FCM Client Transactions of another FCM Client. The LSOC Models provide for the segregation of transactions and margin assets of an FCM Clearing Member from the positions and assets of its FCM Clients and it also provides segregation of transactions and margin assets on a value basis from the positions and margin assets of any other FCM Client of such FCM Clearing Member.

The margin assets of all FCM Clients are commingled in the same FCM Client Margin Account, however, the portion of value of the FCM Client Margin Account which is reserved for the relevant FCM Client (LSV) is segregated from the LSV of each other FCM Client. FCM Clients do not bear the risk of losses arising from the Own Transactions of their FCM Clearing Member or from FCM Client Transactions of other FCM Clients of such FCM Clearing Member. LSOC Without Excess offers the full protection of an LSOC model but does not allow - in contrast to LSOC With Excess - for customer's excess collateral to be segregated at Eurex Clearing.

If a Termination Date occurs with respect to an FCM Clearing Member, Eurex Clearing is entitled to exercise the following rights separately for each FCM Client Netting Set:

- i. its right to transfer all FCM Client Transactions under the relevant FCM Client Netting Set (including the relevant Eligible Margin Assets) to one or more other FCM Clearing Members (each a Replacement FCM Clearing Member), or
- ii. its right to treat FCM Client Transactions under the relevant Netting Set as if they are terminated by issuing an FCM Client Declaration of Termination and calculating the Difference Claim with respect to such Netting Set. The final amount of the Difference Claim will, if it is a positive figure, be owed by Eurex Clearing to the FCM Clearing Member on behalf of the relevant FCM Client.

In case of the occurrence of an Insolvency Termination Event, the FCM Clearing Member would be subject to an insolvency proceeding pursuant to the applicable U.S. laws.

Evidence that the legal basis will support the CCP's arrangements to protect and transfer the positions and collateral of the clients

The legal segregation of the contractual rights and obligations arising from Own Transactions and client transactions and the segregation of the contractual rights and obligations arising from such transactions is achieved via the legal combination of certain transactions into separate netting sets.

The availability of all model-specific features depends on their compliance with the individual rules set out by the respective local jurisdiction of the Clearing Member. Porting of clients' transactions and collateral is intended and possible in all countries within the EU in which Eurex Clearing provides its services. For other jurisdictions Eurex Clearing determines whether restrictions within the default management process apply (including the porting mechanism) based on the legal circumstances in the jurisdiction where the Clearing Member is domiciled.

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.

Key Consideration 2

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.

Proprietary Accounts of the Clearing Member and the FCM Clearing Member

Any own transaction of the Clearing Member/ FCM Clearing Member is to be entered as a proprietary transaction of the Clearing Member/ FCM Clearing Member (an Own Transaction) under the Elementary Clearing Model between Eurex Clearing and the Clearing Member/ FCM Clearing Member under the Clearing Conditions and the FCM Regulation of Eurex Clearing. In this context Eurex Clearing maintains with respect to each Clearing Member Clearing Member Own Account(s) and FCM Clearing Member Own Transaction Account.

Thus, the assets and positions of one CM will not be recorded in a CM account dedicated to another CM. Eurex Clearing's own assets will not be recorded in CM accounts.

The netting of positions related to different CMs 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.

The assets covering the positions recorded in one CM account are not exposed to losses connected to positions recorded in another CM account. Legally this is ensured through respective provisions regarding the security purpose of the provided margin.

Customer Accounts of the Clearing Member in accordance with EMIR

Eurex Clearing currently offers the following client clearing models under the Clearing Conditions to provide flexibility in terms of available position and collateral account setups in order to meet customer specific needs: the Elementary Clearing Model (ECM) and the Individual Segregated Account (ISA).

Based on these models Eurex Clearing establishes and maintains internal accounts for each Clearing Member, which allow for separate record keeping in terms of transactions, cash amounts and margins of such Clearing Member and their clients.

Omnibus Accounts

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. Under the Elementary Clearing Model, Eurex Clearing offers its Clearing Members the following omnibus client segregation:

- a) "net omnibus client segregation" where margin is posted by the Clearing Member to Eurex Clearing on a net basis across Transactions relating to multiple Undisclosed Direct Clients (UDC), and
- b) "gross omnibus client segregation" where margin is posted by the Clearing Member to Eurex Clearing on a gross basis across Transactions relating to a particular Direct Client (DC).

In addition, Eurex Clearing offers net omnibus segregated accounts and gross omnibus segregated accounts for indirect client clearing in relation to omnibus accounts.

Furthermore, Eurex Clearing supports Clearing Members domiciled in the UK that wish to clear certain Omnibus Transactions in accordance with CASS Rules for the benefit of their clients. Positions and assets forming part of a CASS Client Account are legally segregated from any non-CASS Transactions and assets.

Any Omnibus Transaction between Eurex Clearing and a Clearing Member to be cleared under the Elementary Clearing Model (ECM Transaction) is entered into as a Client-Related Transaction (an Omnibus Transaction,

which may be a UDC-Related Transaction or a DC-Related Transaction (in each case including own transactions of the relevant Direct Client and transactions of such Direct Client that relate to its Indirect Clients).

For the purpose of omnibus client segregation, Eurex Clearing maintains with respect to each Clearing Member the following types of Transaction Accounts in which the omnibus transactions of the Clearing Member have to be booked:

- a) "NOSA UDC Account(s)" with respect to UDC-Related Transactions of the Clearing Member relating to transactions of multiple Undisclosed Direct Clients;
- b) "DC Own Account(s)" with respect to own transactions of each Disclosed Direct Client of the Clearing Member;
- c) "NOSA Indirect Client Account(s)" for the clearing of Client-Related Transactions relating to multiple Indirect Clients of a Direct Client of the Clearing Member;
- d) "GOSA Indirect Client Account(s)" for the clearing of Eurex Transactions and OTC Interest Rate Derivative Transactions relating to one particular Indirect Client of a Direct Client of the Clearing Member.

Transaction Accounts are combined in one or more Transaction Accounts Groups. The Transactions booked to the Transaction Accounts forming part of the same Transaction Accounts Group and the Eligible Margin Assets allocated to the Transaction Accounts of such Transaction Accounts Group constitute a separate ECM Standard Agreement.

Individual Segregated Account (ISA)

The ISA is an individual client segregation model within the meaning of Article 39 (3) EMIR. It provides for the segregation of DC-Related Transactions of the Clearing Member with respect to each Disclosed Direct Client. Individually segregated DCs bear neither the risk of losses relating to proprietary transactions of their Clearing Member nor the risk of losses relating to other Client-Related Transactions of their Clearing Member. Additionally, all Eligible Margin Assets provided as Margin to Eurex Clearing with respect to a specific Disclosed Direct Client are segregated from the Eligible Margin Assets of all other clients of the Clearing Member.

In addition, Eurex Clearing offers net omnibus segregated accounts and gross omnibus segregated accounts for indirect client clearing in relation to ISA accounts.

Furthermore, Eurex Clearing supports Clearing Members domiciled in the UK that wish to clear ISA Transactions in accordance with CASS Rules for the benefit of their clients. For further reference, please also see the Clearing Conditions of Eurex Clearing.

For the purpose of individual account segregation Eurex Clearing maintains with respect to each Disclosed Direct Client of the Clearing Member the following types of Transaction Accounts in which the ISA Transactions of the Clearing Member have to be booked:

- a) one or more DC Own Accounts;
- b) one or more NOSA Indirect Client Accounts;
- c) one or more GOSA Indirect Client Accounts

(each such account an ISA Transaction Account).

All ISA Transaction Accounts of a Clearing Member relating to a particular Disclosed Direct Client form a separate group of Transaction Accounts (each such group an ISA Transaction Accounts Group). Each Transaction Accounts Group constitutes a separate ISA Standard Agreement.

Customer Accounts in accordance with the DCO Status

Eurex Clearing maintains with respect to FCM Client Transactions, a separate account for each FCM Client (each, an FCM Client Transaction Account). All FCM Client Transactions of each FCM Client booked into the relevant FCM Client Transaction Account of such FCM Client form a separate Netting Set (each an FCM Client Netting Set). Further Eurex Clearing maintains one or more internal margin accounts for FCM Client Transactions (each

an FCM Client Margin Account) to which the collateral value with respect to the relevant FCM Client Transactions are booked and recorded separately.

Collateral coverage of customer positions

A Clearing Member is required to provide Elementary Omnibus Margin, Omnibus CASS Margin, ISA Margin or ISA CASS Margin as applicable. In addition, an FCM Clearing Member is required to deliver separate cover with respect to each FCM Client Margin requirement.

The applicable margin requirement consists of the sum of all relevant Margin Requirements separately calculated by Eurex Clearing in accordance with the relevant applicable Margin Methodology subject to and in accordance with the relevant segregation model.

Omnibus Accounts

Under the ECM Model, the Clearing Member is required to provide Margin for each Omnibus Standard Agreement.

Margin in the form of cash is granted by way of transfer of title. Margin in the form of securities is provided by way of pledge.

A Clearing Member may request the setup of multiple Internal Margin Accounts and thus establish multiple omnibus collateral pools.

In each case, all Eligible Margin Assets so booked to an Internal Omnibus Margin Account will be further allocated by means of an allocation algorithm to each Client Transaction Account linked to such Internal Omnibus Margin Account. With the allocation algorithm applied by Eurex Clearing to assign each Client Transaction Accounts Group with margin collateral out of a common Internal Omnibus Margin Account, clients will receive a portion of the available margin collateral based on their margin requirement.

The Clearing Member is required to separately demand margin from its clients with respect to the transactions between them that correspond to the Omnibus Transactions.

The same mechanisms apply as well to Transactions designated as Omnibus CASS Eligible Transactions.

Individual Segregated Accounts

Under the ISA Model, the Clearing Member is required to provide Margin for each ISA Standard Agreement.

Margin in the form of cash is granted by way of title transfer. Margin in the form of securities is provided either by way of pledge or by way of title transfer. The Clearing Member is required to separately demand margin from its ISA Client in an amount which shall at least be equal to the sum of the Margin Requirement applicable to each ISA Transaction Account.

The same mechanisms apply as well to Transactions designated as ISA CASS Eligible Transactions.

LSOC Accounts

Under the LSOC Model, the FCM Clearing Member is required to provide Margin for each FCM Client.

FCM Client Margin can be provided in the form of cash or in the form of securities. Eligible Margin Assets in the form of cash are transferred to Eurex Clearing via full title transfer. Margin in the form of securities is provided by way of pledge.

Eurex Clearing operates and maintains Cash Trust Accounts at commercial bank(s) or central bank(s) as an open trust account solely for purposes of holding Initial Margin or Supplementary Margin for FCM Client Transactions or for investment purposes for margin assets in cash delivered by all FCM Clearing Members of Eurex Clearing in respect of any FCM Client Margin Account(s). This ensures insolvency protection in relation to Eligible Margin Assets in the form of cash delivered to Eurex Clearing by the FCM Clearing Member in respect of the FCM Client Margin Account in case of Eurex Clearing's insolvency.

Under the LSOC Without Excess Model, it is not permitted that the LSV for an FCM Client exceeds the FCM Client Margin Requirement on a day-to-day basis, but an LSV may exceed the FCM Client Margin Requirement on an intraday basis (excess margin). If any excess margin is attributable to an FCM Client following a close of the end-of-day clearing cycle, Eurex Clearing transfers any excess margin to the FCM Client Unallocated Excess Sub-Account of the FCM Client Margin Account, whereupon such excess margin becomes FCM Client Unallocated Excess.

If the Margin Requirement with respect to an FCM Client exceeds the LSV intraday, Eurex Clearing is permitted to apply any portion of the FCM Client Buffer booked in the FCM Client Buffer Sub-Account to satisfy the margin shortfall for such FCM Client (the Encumbered FCM Client Buffer). Eurex Clearing will issue a Margin Call with respect to an FCM Client only if the FCM Client Margin Requirement exceeds the sum of the LSV and any Encumbered FCM Client Buffer.

In the end-of day settlement cycle, Eurex Clearing will calculate the Margin Requirement for each FCM Client without regarding any (Encumbered) FCM Client Buffer. However, the FCM Clearing Member may elect to use the Encumbered FCM Client Buffer to meet the Margin Call. In such case, the Encumbered FCM Client Buffer becomes part of the LSV and no longer constitutes Encumbered FCM Client Buffer.

The Clearing Member is required to separately demand margin from its FCM Client in an amount which shall at least be equal to the sum of the Margin Requirement applicable to each FCM Transaction Account.

Key Consideration 3

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.

If a Termination Date occurs with respect to a Clearing Member, Eurex Clearing will initiate a porting process separately with respect to each Omnibus and ISA Standard Agreement. Eurex Clearing will use reasonable efforts to port each Disclosed Direct Client individually to a non-defaulting Clearing Member (Replacement Clearing Member). If the Porting Requirements are fulfilled within the Porting Period, all rights and obligations of the defaulted Clearing Member under the relevant Standard Agreement, including with respect to corresponding margin, will be transferred to the Replacement Clearing Member. The instructions of the direct client will also apply to the respective indirect clients.

Further details with regards to the portability arrangements under EMIR can be found on Eurex Clearing's website (<https://www.eurex.com/ec-en/services/risk-management/default-management-process/default-of-a-cm-agent/porting-under-emir/porting-14028?frag=250266>).

A comparable porting process is initiated if a Termination Date occurs with respect to an FCM Clearing Member. Eurex Clearing will use reasonable efforts to port each FCM Client individually to a separate Replacement FCM Clearing Member. If all FCM Clearing Member Replacement Requirements in respect of the relevant FCM Client Transactions are fulfilled by the end of the Replacement Cut-Off Time, the FCM Client Transactions, and all rights and obligations of the Affected FCM Clearing Member arising from such FCM Client Transactions including a portion of the value of Eligible Margin Assets booked on the FCM Client Margin Account equal to the LSV of the relevant FCM Client, will be transferred to the new FCM Clearing Member.

The Clearing Conditions and the FCM Regulations provide for the rules under which positions and collateral are ported. By signing the Clearing Agreement or the FCM Clearing Agreement (as prerequisite of a Clearing Member/ FCM Clearing Member license), a Clearing Member or FCM Clearing Member gives his consent to the porting rules because these agreements incorporate by reference the Clearing Conditions or FCM Regulations.

Further details with regards to the portability arrangements under LSOC can be found on Eurex Clearing's website (<https://www.eurex.com/ec-en/services/risk-management/client-asset-protection-lsoc/cap-porting-under-lsoc>).

Key Consideration 4

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.

Eurex Clearing provides summary descriptions of its clearing models on its website, namely

- i. the "Disclosure pursuant to Article 39 (7) EMIR with respect to the Clearing Conditions of Eurex Clearing AG",
- ii. the "Singapore Addendum Risk Disclosures by Recognised Clearing House in Singapore and
- iii. the "Disclosure pursuant to Article 39 (7) EMIR with respect to the FCM Clearing Conditions of Eurex Clearing AG". The published documents describe the levels of protection of the available clearing models, including the main legal implications related to these clearing models and the applicable insolvency laws.

In addition, the recent versions of the Clearing Conditions and FCM Regulations are available for download on Eurex Clearing's website. Detailed descriptions of the respective porting procedures are also published on Eurex Clearing's website as well as jurisdiction related information.

The above-mentioned documents as well as the website further specify that Eurex Clearing does not charge costs that specifically relate to the use of a certain clearing model. However, the Price List of Eurex Clearing is the relevant document, where the commercial terms of Eurex Clearing's services are officially published.

Assessment of principle:

Observed

Principle 15: General business risk

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.

The Risk Strategy defines business risk as the sensitivity to macroeconomic evolution and vulnerability to event risk arising from other external threats and internal weaknesses.

Eurex Clearing is not directly exposed to business risk. This is due to the following two aspects:

- Eurex Clearing is operating under the business ownership of its parent companies. All income is collected in the name of the operating (parent) companies. Eurex Clearing is getting reimbursed its total expenditures plus a defined margin by the operating companies (Betriebsführungsstruktur).
- Eurex Clearing has entered into a profit and loss pooling agreement with its 100% parent company Eurex Frankfurt AG. Therefore, any loss that might occur is to be recovered by Eurex Frankfurt AG.

According to the Risk Strategy, business risks are covered by the Control and Profit and Loss Transfer Agreement (“Beherrschungs- und Ergebnisabführungsvertrag”) with Eurex Frankfurt AG and therefore not relevant for Eurex Clearing.

Key Consideration 2

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 to achieve a recovery or orderly wind-down, as appropriate, of its critical operations and services if such action is taken.

Eurex Clearing holds liquid net assets funded by equity in such an amount that it can continue operations and services if it incurs general business losses that would than due to the existing profit and loss transfer agreement be transferred finally to the mother company.

Art. 16 EMIR and corresponding ESMA regulatory technical standards demand a specific capital base for CCPs that consists of CET1 capital, retained earnings and reserves. The ESMA regulatory technical standards further demand own funds for winding down/restructuring, operational/legal risk, credit risk, counterparty risk, market risk and business risk.

The main assumption for determining the time span for a winding down procedure is driven by idiosyncratic risks rather than market risks (i.e.: operational risks, general business losses, fraud or other neglect at the CCP or related institutions e.g. theft of funds from accounts).

When determining the time period necessary for winding down or restructuring, the first crucial question is whether the services of Eurex Clearing 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 necessary. Therefore, Eurex Clearing assumes a time period of one month as appropriate in order to come to a final conclusion if a winding down or recovery of the business is possible. As mentioned before, the estimation of the necessary time frame is based on assumptions.

The wind down and recovery of Eurex Clearing is assumed to be completed within up to six months. As shown in the document called "Wind down or restructuring of Eurex Clearing AG's business" several options are available to conduct a wind down or recovery of Eurex Clearing's business which will result in an expected time period lower than six months. The main driver for this time frame is the scenario of a transfer to a different CCP, whereby other scenarios, especially the termination of all position can be done more quickly. However, based on the uncertainty related to the process, Eurex Clearing has decided to choose the most conservative assumption for its wind down or restructuring period which is, based on the above scenarios, six months.

Key Consideration 3

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.

A central counterparty must have sufficient own funds for winding down or restructuring of its own business. Therefore, an appropriate time period for winding down or restructuring of its own business is to be estimated within the "Wind down or restructuring of Eurex Clearing AG's business" that serves the purpose to determine the procedure and time period necessary to wind down or restructure the business.

Pursuant to Art. 2 paragraphs 1 and 4 (EU) No 152/2013, the capital base required for winding down or restructuring is calculated as number of months needed for winding down or restructuring it business times the average gross operational expenses per month of the last audited financial.

The annual gross operating expenses can be derived from the Annual Report of Eurex Clearing AG, which is published on the Eurex Clearing homepage (<https://www.eurex.com/ec-en/find/corporate-overview/annual-reports>).

According to the description within the document 'Wind down or restructuring of Eurex Clearing AG's business', according to Art. 2 paragraph 2 (EU) No 152/2013, the winding down or restructuring period of Eurex Clearing is estimated with no longer than 6 months. Nevertheless, for the calculation of capital requirements the minimum of 6 months is set as winding down or restructuring period.

The appropriate time span for winding down or restructuring is regularly estimated and documented within the document 'Wind down or restructuring of Eurex Clearing AG's business' to be compliant with Art. 2 paragraph 3 (EU) 152/2013. A change of the time period assumed can be caused by new products cleared that may increase or decrease the complexity of the wind down or restructuring process.

Given the information above, the capital requirements for winding down / restructuring period are calculated as follows:

The gross operating expenses divided by 12 months, resulting in the gross operating expenses per month. Six months of winding down period times operating expenses per month result in the capital requirements for winding down / restructuring.

Eurex Clearing considers regulatory capital requirements for placements pursuant to the Capital Requirements Regulation (CRR) as well as the capital rules under EMIR and corresponding regulation (EU) 152/2013 at all times. Furthermore, the rules on liquidity as laid down in the CRD IV, CRR and EMIR rules are considered.

A continuous monitoring and reporting assure that the own equity is always sufficient to cover the assigned risks and that the resources foreseen for the Default Waterfall are not used inappropriately.

Key Consideration 4

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 projected operating expenses under a range of scenarios, including in adverse market conditions.

Eurex Clearing's Treasury Policy outlines the objectives and general conditions of the treasury management of Eurex Clearing. Specifically, the investment of cash collaterals and own liquid 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 and market risk in placements. Therefore, Eurex Clearing will only invest 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 .

As a principle, the own funds of Eurex Clearing shall be invested applying the same mechanisms as the placement of Clearing Member funds. The preferred instrument is the reverse repo. Eurex Clearing may invest part of its own funds through direct securities purchases in correspondence to the criteria and limits as mentioned in the Treasury Policy.

Operational accounts for the CCP business are, with the exception of the account at Deutsche Bundesbank, segregated from accounts for proprietary business.

Treasury has put strict controls in place to report any kind of limit breaches on a daily basis to the affected areas, including the Chief Risk Officer of Eurex Clearing, and even directly to the whole Executive Board of Eurex Clearing in case of extraordinary circumstances as defined in the Liquidity Risk Management Policy.

To ensure the liquidity of Eurex Clearing, strict mismatch limits are established based on the stable balance of customer cash. Mismatch limits are reviewed at least on a quarterly basis.

In order to avoid counterparty concentration and related risks, the placements are spread to the extent reasonable taking into account counterparty quality. At least 95% of cash balances must be invested on a secured basis.

Placement of funds is subject to credit limits governed by the Credit Policy for Treasury Activities. Group Credit approves credit limits based on the quality of counterparties. Credit limits can only be approved within the authority, which has been delegated to Group Credit by the Eurex Clearing Executive Board. Furthermore, Group Credit undertakes a regular credit review of all Treasury counterparties as described in the Credit Policy for Treasury Activities. A credit review recommends continuing, changing or cancelling the relationship with a counterparty. To mitigate risks, placement amounts shall be spread in principle among institutions. Limits according to CRR apply.

Treasury Middle Office reports these transactions in a monthly report to different affected areas and the Executive Board of Eurex Clearing. In addition, limit violations are reported ad hoc.

Key Consideration 5

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.

Eurex Clearing, as an authorized CCP under EMIR, is required to have sufficient own funds for a winding down or the recovery of its own business. Both, the wind down/restructuring assessment plan as well as a recovery plan assess the option to strengthen the capital base by raising additional equity.

Eurex Frankfurt AG, which is the 100% parent of Eurex Clearing AG, can increase Eurex Clearing's equity through a payment into Eurex Clearing's capital reserve. In the event that Eurex Clearing needs to raise additional equity, the Eurex Clearing Executive Board will address the Eurex Frankfurt Executive Board. 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).

To achieve an increase of equity easily and in a short time frame, a payment by the shareholders into the capital reserve is the most convenient way. The increase of capital reserve needs to be paid in cash or liquid low risk securities to meet the investment and liquidity requirements of the clearing business. The increase of equity would have its immediate effect once the approval process is finished and the cash is paid in. It is assumed that the shareholders are able and willing to pay the needed amount into the capital reserve. Legally, agreements and decisions of the Executive Board of Eurex Clearing and Eurex Frankfurt and, at least, a notification to the Supervisory Boards are necessary. An agreement of the supervisory authorities (BaFin/Bundesbank) is not legally required; however, a notification would have to be submitted. Operationally, it must be ensured that the backing of the parent company and the necessary decisions are available over the time horizon of the specific stress situation. Eurex Clearing increased its capital multiple times in past years, i.e. it has successfully passed this process before.

Assessment of principle:

Observed

Principle 16: Custody and investment risks

Principle 16: Custody and investment risks

An FMI should safeguard its own and its participants' assets and minimise 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.

Given this context, Eurex Clearing places Clearing Members' cash collateral and its own funds on a secured basis or, through direct investments, in highly liquid financial instruments. These are deposited with operators of a securities settlement system if available, or with authorised financial/credit institutions providing highly secure arrangements. Uninvested cash is deposited with the central bank of issue, if access has been granted. Where Eurex Clearing deposits cash other than with a central bank, cash is deposited with authorised credit/financial institutions, as defined under Regulation (EU) 648/2012 of the European Parliament and of the Council of 4 July 2012 (EMIR) in conjunction with Directive 2006/48/EC of the European Parliament and of the Council (EU Banking Directive), that have low credit risk based upon an internal assessment by the CCP. If the institution is not domiciled in one of the Member States, then EMIR requires the third country financial institution to be subject to and to comply with prudential rules that are considered to be as stringent as those laid down in the EMIR in conjunction with Banking Directive.

Eurex Clearing legally segregates the investment of own funds from those resulting from cash collateral as stipulated in Article 47 (5). Operational accounts for the CCP business are segregated from accounts for proprietary business. The only exception is the Bundesbank account – however, ECAG's books and records enable to generate a detailed overview of which cash amounts constitute ECAG's own cash and the cash belonging to its clearing members at any time. Financial instruments are deposited with (I)CSDs where contractual agreements and business setup ensure prompt access to the assets when required (as outlined further below).

For highly liquid financial instruments received through the collateralised investment of cash, the main criteria for choosing a (International) Central Securities Depository or custodian is that it operates a securities settlement system, ideally with access to the European System of Central Banks (ESCB) facilities, to ensure process stability and full protection of the instruments. The services to be provided by a securities collateral location comprise safe-keeping, collateral eligibility checks and valuation protection of the assets posted in favour of the CCP, as well as custody (incl. tax) processing and supporting Eurex Clearing's segregation models based on the legal concepts of pledge or transfer of title. Especially for the event of a participant's 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.

Key Consideration 2

An FMI should have prompt access to its assets and the assets provided by participants, when required.

The range of services provided by a collateral location must meet a diverse set of requirements in order to be connected to the CCP, i.e. regulatory, formal/legal, operational and technical requirements as defined in Eurex Clearing's Security Collateral Location Framework. Only collateral locations that meet these criteria of the CCP can access Eurex Clearing as service provider to its Clearing Members. The connected collateral locations are monitored continuously by the responsible areas of Eurex Clearing and Group Credit. In addition, it is re-assessed on a regular basis in line with the Review / Monitoring Procedure for recognized Collateral Locations. Eurex Clearing's and its participants' assets are always protected, i.e., in the event of a participant's default,

irrespective of the legal concept (pledge or transfer of title). Eurex Clearing has legal certainty regarding the home country jurisdiction of the Clearing Member and of the location where the collateral is held, in connection with the German law applying to Eurex Clearing.

Based on dedicated regulations (e.g. Financial Collateral Directive) and laws (e.g. the German Insolvency Code (InsO)), Eurex Clearing ensures a sound legal basis by legal analyses and opinions through legal counsels coordinated by the Deutsche Börse Group Legal Department. The legal certainties include the foreign insolvency laws, i.e. home country jurisdictions of non-German Clearing Members as well as of each location where the collateral is held, in connection with the German jurisdiction of Eurex Clearing.

Accordingly, the regulations provide an appropriate legal environment to ensure access in normal cases, as well as in the case of a Clearing Member's insolvency in order to liquidate the collateral. Hence, Eurex Clearing has first ranking rights and prompt access to the financial instruments when required.

The enforceable rights of appropriation of Eurex Clearing with regard to the securities held at a CSD is explicitly described in the Clearing Conditions of Eurex.

Key Consideration 3

An FMI should evaluate and understand its exposures to its custodian banks, taking into account the full scope of its relationships with each.

Eurex Clearing does not have material exposures to custodian banks as it mainly uses (I)CSDs for the deposit of securities collateral and highly liquid financial instruments. All (I)CSDs used are operators of securities settlement systems (SSS) and, as such, subject to prudential regulation and supervision.

Key Consideration 4

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.

The Executive Board of Eurex Clearing is ultimately responsible for the risk strategy of the CCP. The risk strategy defines the overall risk appetite, including the maximum loss the Executive Board is willing to take in one year, the tolerance in the light of the risk as well as the performance levels aspired to. The Executive Board ensures that the risk strategy is integrated into the business activities throughout the entire CCP and that adequate measures are in place to implement the strategies, policies and procedures in line with the overall risk appetite. The investment strategy itself also follows this logic and is approved by Eurex Clearing's Executive Board.

The general principles of Eurex Clearing's investment strategy a) capital preservation and b) liquidity maximisation are outlined in the ECAG Treasury Policy and the main objectives are disclosed to the public on the CCP's homepage (<https://www.eurex.com/ec-en/services/collateral-management/cash-collateral-investment-policy-22304>). The relevant risk management processes are additionally described and disclosed in Eurex Clearing Pillar 3 report (published on <https://www.eurex.com/ec-en/find/about-us/pillar-3-disclosure-report/Pillar-3-Disclosure-Report-31368>).

Eurex Clearing AG's Treasury Policy outlines the objectives and general conditions of the treasury management of the clearing house. Specifically, the investment of Clearing Members' cash collateral and Eurex Clearing's own funds are described, as well as the approved instruments and constraints of treasury management. In accordance with the applicable regulations, the primary investment objectives are to ensure Eurex Clearing's ability to satisfy payment obligations (liquidity maximisation) at all times, as well as to minimise counterparty and market risk in placements. Thus, Eurex Clearing only invests in cash or in highly liquid financial instruments, bearing minimal market and credit risk that are capable of being liquidated on a short-term basis with minimal adverse price effect.

The Executive Board of Eurex Clearing approves the eligibility criteria for the CCP's investments. In general, Eurex Clearing applies restrictive standards to financial instruments qualifying as investments. As the leading principle, financial instruments need to fulfil the conditions applicable to highly liquid financial instruments as laid out by the European Market Infrastructure Regulation and the relevant Commission Delegated Regulations

so that they shall allow for quick liquidation with little, if any, adverse price effect. This is true for both a) secured money market transactions and b) direct purchases of debt instruments.

- Investments secured by high-quality obligors:
In secured money market transactions, the primary exposure is counterparty credit risk. Hence, Eurex Clearing assesses counterparties with an internal developed rating methodology, while Eurex Clearing refers to external ratings for the consideration of the quality of financial instruments underlying the reverse repo transactions. If an issuer's rating falls below the minimum rating requirements, the instruments shall be deemed to be ineligible with immediate effect and must be replaced by the counterparty with eligible collateral.
- Claims on high-quality obligors:
For direct purchases of debt instruments, Eurex Clearing performs an internal assessment on its obligors to ensure low credit and market risk. In general, the assessment considers quantitative and qualitative criteria. The obligor's credit quality is expressed in the form of an internal rating. Eurex Clearing monitors and reviews the credit quality on a regular basis, at least annually. A reduction of credit quality may trigger a reduction or cancellation of the limit that has been allocated to this obligor.

Additionally, the so-called CreditWatch serves as an early warning indicator for obligors likely to require a reduction in the limit or rating downgrade in the near future. Factors that may affect counterpart's creditworthiness, e.g. downgrade by a major rating agency or deterioration of financials, are taken into account.

Assessment of principle:

Observed

Principle 17: Operational risk

Principle 17: Operational risk

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 fulfilment of the FMI's obligations, including in the event of a wide-scale or major disruption.

Key Consideration 1

An FMI should establish a robust operational risk-management framework with appropriate systems, policies, procedures, and controls to identify, monitor, and manage operational risks.

Eurex Clearing has established a Risk Management process that ensures identification, notification, assessment, controlling and reporting of all operational risks. The process is reviewed at least annually.

The Risk Strategy defines operational risk 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 operational risk assessment is fully integrated into Eurex Clearing's Risk Management process. Its output is integrated into the assessment of Eurex Clearing's overall risk profile and therefore monitoring and controlling of operational risks are ensured.

Enterprise Risk Management (ERM) is the independent risk control function of Eurex Clearing. ERM reports material operational risks, its assessment, and possible countermeasures to the Executive Board of Eurex Clearing on a quarterly basis.

The Group Risk Management Policy documents the enterprise-wide risk management concept by describing the risk management framework in terms of processes, roles and responsibilities applicable to all staff and organizations of DBG entities. The risk management process covers the following five key phases: Risk Identification, Risk Notification, Risk Assessment, Risk Control and Risk Reporting. The Risk Identification involves – to the most complete extent possible – the identification of all threats to DBG, as well as causes of loss and potential disruptions as described in the DBG risk tree. Risks may arise as a result of internal activities or external factors and the risk examination must be performed with regard to existing or new processes, when concluding new business or entering new service areas. The Risk Identification process can be reactive, following an incident. It should also be pro-active, based on regular review of processes in order to identify weak areas, or based on scenarios of failure taking into consideration all sources of issues. The Risk Identification also involves a phase of quantification implying the definition of parameters, which can be based on statistical data in case of actual process monitoring, or on subjective expert appraisal when no statistics are available. These parameters illustrate the risk and are determined by the relevant organisational unit in accordance with the Group Risk Management Policy. All organizational units and individual employees must identify and quantify by themselves potential risks in their area of responsibility. Newly identified risks shall be mapped by ERM to this existing risk classification. The Incident Notification Procedure stipulates the requirements, nature and deadlines for incident notifications to ERM and is intended to qualify statements in the Group Risk Management Policy regarding notification requirements. The procedure stipulates that organisational units are responsible for the identification, measurement and control of the risk in their area of operations. ERM is responsible for the assessment and the reporting phase of the risk management process and assessing the adequacy of contingency measures. Specifically, this means that departments are responsible for the:

- 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 the Enterprise Risk Management function, which is independent of the operational areas, reporting to Eurex Clearing's Chief Risk Officer. Furthermore, adequate monitoring is ensured by the quarterly ECAG Risk Report to the Eurex Clearing Executive Board and a yearly Operational Risk review.

As stated in the Eurex Clearing Business Continuity Management 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.

In addition, a well-defined physical security policy is in place. The Corporate Security Policy of Deutsche Börse Group, 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 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,
- Security Risk: Risk of security breaches, cyberattacks, malicious insiders and fraud
- Risk from Legal Offences and Business Practices: This risk class covers losses arising from acts or omissions offending laws, regulations, guidelines, and contractual commitments or from improper products or business practices, e.g. fraud, employment regulation, money laundering, anti-trust, corporate governance, or contract risk.

Several data sources are used in operational risk management. Apart from internal data on operational risk events having materialised 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.

Operational risks comprise of potential losses from inadequate or faulty systems and internal processes, from human or technical failure and from damage to tangible assets, as well as from legal and business practice risks. Particular risk drivers are availability, human errors, damage to physical assets, fraud, employment practice, business practice and contract risk. The most substantial operational risks Eurex Clearing faces relate to a malfunction or interruption in the provision of its core products, in particular, the clearing systems and the systems for calculating margin requirements.

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 Business Continuity Management.

The scenario analysis is reviewed annually by Enterprise Risk Management and the results of this analysis are reported to the Eurex Clearing Executive Board.

Identification and assessment of the operational risk is conducted annually based on workshops with Enterprise Risk Management and staff belonging to respective departments to include the relevant expertise for the assessment of operational risks that Eurex Clearing is exposed to. On that basis, operational risk scenarios are developed. These scenarios mirror probability and financial extent stemming from operational risk. Furthermore, an Eurex Clearing Organizational Manual has been set up and maintained 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. The Organizational Manual defines standards and work flows for all kind of documentation, procedures and policies in order to fulfil the organizational requirements constituted by law.

Risk control involves determining and implementing the most appropriate treatment to the identified risk. It encompasses the following: risk avoidance, risk reduction, risk transfer and intentional risk acceptance. All organization units and employees must perform risk control and implement mitigating action according to the established escalation process. In general, the monitoring of the effectiveness of implemented control measures is performed in an iterative way, starting at the quantification phase of the Risk Identification process. Enterprise Risk Management performs monitoring of the effectiveness of control measures decided by the Executive Board.

As far as operational risk is concerned, the key preventive measures consist of strong internal control processes, which are performed, and ongoing initiatives to further reduce errors and omissions. Further, the impact of a risk materialising 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.

In addition, Deutsche Börse Group rolled out a group-wide mandatory online training to foster the risk culture and risk awareness within the company. The focus of this training is the personal responsibility of every individual employee regarding risk management. This includes understanding compliance of internal and external regulations, policies and procedures.

On-site trainings about risk management are offered to all employees on various location. Specific trainings for specific risk management-related roles are also available.

The Policy on the Prevention of Other Criminal Offences of Deutsche Börse Group is intended to prevent fraudulent behaviour within Deutsche Börse Group in order to guarantee the protection of group assets. The guideline applies to all group entities including Eurex Clearing. To prevent fraud, all employees must comply with the established rules of conduct, and suitable, group-wide structures must be maintained. For the purpose of the policy, the term "fraud" is defined to encompass any intentional deceptive act/legal offense, which could directly or indirectly result in a threat to the assets or a substantial damage to the reputation of Deutsche Börse Group. This includes, in particular, any deceptive act or omission by a third party (business partner, customer, non-customer) and by at least one internal party (employees or members of institutional organizations).

The general responsibility for the prevention or detection of criminal acts lies with the respective business areas, specifically, with each employee and their respective supervisors. To this end, clear rules and responsibilities must be defined and existing policies and instructions must be observed.

The risk management aspect requires that projects need to analyse their individual risk. Project risks must be identified, documented and managed on regular intervals. This includes the project risk analysis with

- a) an assessment of a risk's likelihood/probability,
- b) evaluating the risk's impact on the project's objectives and
- c) deriving the severity for each new risk identified, and, based upon that information, defining a suitable risk response (e.g. mitigating actions, acceptance, etc.).

Every project manager has the responsibility to timely notify project risks and risk responses to the steering body and as needed to Group Risk Management.

While project risk can be a key risk driver, it will materialise as financial and operational risk and its relevant sub-risks which are captured in the risk inventory. The impact of project risk is thus quantified and limited as part of operational risk and financial risk.

Key Consideration 2

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.

The risk strategy assigns the Executive Board of Eurex Clearing as the ultimate responsible for managing the risks. The risk strategy further reflects the risk appetite, which defines the maximum loss the Executive Board is willing to take in one year. The Executive Board ensures that the risk strategy is integrated into the business activities throughout Eurex Clearing entirely and that adequate measures are in place to implement the strategies, policies and procedures.

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 Group Risk Management Policy further states 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. The Chief Risk Officer of Eurex Clearing is heading the CCP's Risk Management department and is responsible to oversee Enterprise Risk Management.

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

Consistent with MaRisk BT 2.1, the risk-based internal audit plan covers all relevant aspects of the CCP including the risk management processes and control mechanisms. Audits are planned at least on a yearly basis for areas assessed to be of "high" risk; every two years for "medium" rated and every three years for "low" rated areas. Independent audit opinions on the appropriateness of the risk control and risk management functions are given. In addition, the results of these examinations also feed into the risk management system. Furthermore, Chapter 3 of the Deutsche Börse Group Risk Management Policy concerns Internal Audit to support ensuring the suitability and effectiveness of the risk management process by independently auditing the process and the reporting system.

The Audit and Risk Committee - in compliance with the European's financial rules in CRR/CRD IV (Capital Requirements Regulation/Capital Requirements Directive) and EMIR (European Market Infrastructure Regulation) - 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 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. The Committee consists of three members who are elected by the Supervisory Board.

Consistent with MaRisk BT 2.3, it is ensured that special audits that are required at short notice, e.g. due to deficiencies, which have arisen, or certain informational requirements, can be performed at any time. The Internal Audit plan considers respective person days for special audits.

As Eurex Clearing is annually conducting its workspace and staff unavailability tests during business hours, relevant external parties are implicitly involved. The test results have been assessed by the BCM function. Any

received feedback from the involved third parties will be processed and, where relevant, incorporated in the BCM plans or future tests.

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.

Key Consideration 3

An FMI should have clearly defined operational reliability objectives and should have policies in place that are designed to achieve those objectives.

According to Eurex Clearing's risk strategy, timely, complete, and reliable risk management is one of the general risk principles at Eurex Clearing. Risk management is an elementary component of the management and the control of Eurex Clearing and the affiliated companies. Effective and efficient risk management is fundamental in protecting Eurex Clearing's interests. It enables Eurex Clearing to achieve its corporate goals and safeguards its continued existence. The risk management framework provides complete, timely and consistent information about risk. The risk-related information enables the risk to be identified, notified, assessed, controlled and reported appropriately. Adequate quality standards are established and reviewed on an ongoing basis.

A risk measure quantifies a risk exposure in monetary terms. The aim of a risk measure is to determine the amount of losses that should be covered by a risk-bearing capacity.

Value-at-Risk

The Value-at-Risk (VaR) is defined as the cumulated loss amount in a given time horizon that is not exceeded in q% cases of all years. Different confidence levels q could be used. A detailed description of the methods and assumptions used for VaR calculation is given in the document "SIAM (Simulation, Insurance, Allocation and Measuring of Risks) User Documentation".

Two types of VaR are calculated:

- a) **Economic Capital**
The required Economic Capital is the VaR 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 the required Economic Capital, but on the other hand exceptional limit breaches do not automatically require capital increase.
- b) **Earnings at risk**
The Earnings at risk 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.
Risk-bearing capacity for Earnings at risk is defined as 50% of the actual planned EBITDA for the Eurex segment. The concept regarding the risk-bearing capacity is designed to ensure that emerging risks can be absorbed and will safeguard the continued existence (going concern) of Eurex Clearing. The risk-bearing capacity for Earnings at risk as well as its utilization is calculated monthly.

Eurex Clearing Executive Board ensures that risk is limited regarding each risk type. Due to diversification effects across risk types, the sum of VaRs of the single risk types is not equal to the total VaR. Therefore, the absolute limits for individual risk types (i.e. operational risk and financial risk) in Euro is calculated as percentage of the sum of total risk-bearing capacity and diversification effect. It needs to be ensured that in total the risk does not exceed 100% of the defined risk-bearing capacity. Thus, in exceptional cases the limit for a single risk type may be exceeded.

It is Eurex Clearing's intention to manage risks in an effective and efficient manner based on defined risk limits and risk statements. Risk limits intend to maintain risk at an appropriate and acceptable level. Depending on

the risk characteristics there are basically four types of management strategies, which are further elaborated on the level of the single risk type:

- Risk reduction or elimination, i.e. measures to reduce either severity or frequency of losses.
- Risk transfer, i.e. insurance or liability agreements in contracts with third-parties.
- Risk avoidance, i.e. changes to the business which prevent risks from happening.
- Risk acceptance, i.e. a deliberate decision to take risks and monitor their development.

In order to ensure capital adequacy to cover even more severe operational events, an effective set of stress tests provides Eurex Clearing with a better understanding of their operational risks, controls, indicators and potential losses but also indicate the interactions and causal relationships of risks.

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. The approach, scenarios and the results of this stress test are reported to the Executive Management of Eurex Clearing.

Furthermore, Eurex Clearing strives to provide products and services with utmost reliability. It gives the highest importance to the resilience of its business to safeguard it against incidents and disasters, as the unavailability of core processes and resources represents a substantial risk for Eurex Clearing and potential systemic risk to the markets as a whole. Therefore, Eurex Clearing aims to satisfy itself and the markets of its ability to continue to operate under adverse conditions or in the face of unexpected events or disasters.

In case of business interruption, operations must be resumed within appropriate time scales primarily in order to:

- Safeguard Eurex Clearing from significant losses, maintain revenue generation and shareholder value,
- Maintain customer confidence, market stability and liquidity, and minimize systemic risk,
- Maintain management control, fulfil contractual obligations and regulatory compliance.

Consequently, Eurex Clearing implements and maintains effective and efficient business continuity plans designed to minimise the impact of unavailability of the key resources, i.e. ICT systems, workspace and facilities, staff, suppliers and other external dependencies. Eurex Clearing adopts industry standard best practices in line with its needs and regulatory requirements.

The business continuity plans specify how services, processes and resources will be reinstated to a predetermined level within pre-defined time scales after a disruptive incident. The functions, which are indispensable for the critical daily operations in view of the above objectives, are called 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). The resilience and disaster tolerance of critical processes and resources is commensurate with the business impact and the prevailing risks.

To ensure that Eurex Clearing is able to respond to an incident in a 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.

Business continuity plans are used, tested or exercised regularly in the most realistic way, without causing unacceptable business impact, to ensure their effectiveness and viability and in order to provide assurance that a real incident could be successfully managed. All relevant staff must be competent in the execution of incident and crisis management plans and business recovery procedures.

Key Consideration 4

An FMI should ensure that it has scalable capacity adequate to handle increasing stress volumes and to achieve its service-level objectives.

Information technology systems used by Eurex Clearing are secure and have an availability rate of more than 99.9% over the last 12 months, proving their reliability. 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 in place to ensure that Eurex Clearing is scalable and can deal with operational needs and the risks faced, even in stressed market conditions.

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. The system test must demonstrate that the system can handle the required volumes of transactions and perform within the specified parameters of speed and memory. The test also examines the behavior of the system under extreme and worst-case conditions.

Transaction volumes on Eurex Clearing's core systems are constantly monitored and reported to responsible Board members following the Capacity Management Process. An overall capacity target for the critical transaction systems is defined by the responsible steering committee, consisting of the responsible board members and IT representatives. It is based on the peak historic transaction rates plus capacity headroom and is continuously monitored. In case of new peak transaction rates, the target capacity is adjusted and an action plan to increase system capacity is initiated to meet the new capacity target.

Key Consideration 5

An FMI should have comprehensive physical and information security policies that address all potential vulnerabilities and threats.

An ISO 27001 based information security framework is in place to manage the information security risk for the security objectives available. The Deutsche Börse group-wide Information Security Policy, which is part of the security framework, is applicable to Eurex Clearing. This policy determines the approach and organisational roles and responsibilities with regard to Information Security Management.

The overall Business Continuity Management 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.

Eurex Clearing currently uses a scenario-based risk analysis as part of the operational risk process. 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 geographical position of Germany, and thus the location of Frankfurt, does not expose Deutsche Börse Group or its data centres to any large-scale natural disasters. A risk assessment containing a Security Controls Questionnaire is completed including physical vulnerabilities. The construction and technical safety provisions in place at both locations adequately and reliably protect these data centres against the few environmental hazards that are to be expected in central Europe.

Due to high availability requirements of data centres, not only high security is required but also a safety infrastructure, which provides high available services. To assure highest security standards and highest availability of a data centre, a regular Physical Security Standards Data Centre (PSSDC) analysis is essential. Therefore, Deutsche Börse Groups' main data centres will be analysed either ad hoc on relevant changes or every second year. Deutsche Börse Groups' points of presence (PoP) will be evaluated in a five years period. Results of analysis will be fed into the BCM and risk management process.

Eurex Clearing follows the new vulnerability management processes, which require regular scanning of infrastructure and applications and a holistic management of vulnerability closure processes.

All applications with critical production workload have to regularly test their application code (code scan and penetration testing).

Key Consideration 6

An FMI should have a business continuity plan that addresses events posing a significant risk of disrupting operations, 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.

Eurex Clearing, as part of the Deutsche Börse Group, disposes of a group-wide Business Continuity Management (BCM) Program. The group-wide BCM Program is governed by the BCM Policy of Deutsche Börse Group. The BCM Policy describes the broad approach and organizational roles and responsibilities with regard to business continuity management. The BCM Policy provides a governing framework for the development, establishment, implementation, validation and maintenance of unit-specific Business Continuity Plans (BCP). The BCPs are developed by the various organizational units, since they are assigned the responsibility for the continuity and operational resilience of their respective business activities. The BCPs specify how critical processes, activities and resources will be reinstated to a predetermined level within pre-defined timescales after a business disruption affecting one or several of the key resources (i.e. staff, workspace and facilities, IT systems incl. networks or information, suppliers or external dependencies).

The central coordination, monitoring and validation of the group-wide Business Continuity preparedness is managed by the Business Continuity Management Unit (hereafter referred to BCM Unit). Eurex Clearing's BCM preparedness is conducted by Eurex Clearing's BCM function, which is a direct reporting function to the respective Chief Risk Officer. The combination of the BCM Policy, BC Plans and BCM Unit ensures a consistent yet individually tailored approach on business continuity topics.

As a result of the EMIR requirements, Eurex Clearing has developed an appendix to the group wide BCM Policy. The Eurex Clearing BCM Policy Appendix specifies minimum requirements in line with EMIR. The Eurex Clearing BCM Policy Appendix is applicable to all units or departments of the Deutsche Börse Group that provide critical services to the functioning of Eurex Clearing.

The overall BCM Framework, composed of the group wide BCM Policy, the Eurex Clearing BCM Policy Appendix and the BC Plans at unit level, ensure that Eurex Clearing secures the functioning and timely recovery of its crucial systems and processes in case of a disaster or emergency event. Recovery of transaction is enabled by a high availability and redundant IT infrastructure set up. IT production and backup operations are distributed over two remote data centres which provides full redundancy. Workloads are distributed across the data centers and multiple components (i.e. networks, servers, storage, backup, etc.). In the event of one component becomes unavailable, an automated failover mechanism ensures that the "remaining" data center can cover workloads on a normal level.

The Eurex Clearing BCM System and Program is subject of both internal and external audit inspections on a regular basis to assess the company's adherence to Laws, Regulations and other internally established requirements.

Eurex Clearing maintains an adequate procedure ensuring the timely and orderly settlement or transfer of the assets and positions of clients and clearing members in the event of a withdrawal of authorization. Eurex Clearing is convinced that the current risk method approach allows to settle all open positions and to transfer back the client assets. Additionally, as specific circumstances have to arise in this situation; Eurex Clearing will conduct the orderly wind-down in close alignment with its competent authority based on case-by-case decisions.

Moreover, pursuant to the German Recovery and Resolution Act (SAG) Eurex Clearing maintains a recovery plan updated on a yearly basis and provides input to the resolution plan written by the national resolution authority. Furthermore, Eurex Clearing maintains a wind down plan pursuant to EMIR regulation updated on a yearly basis.

Hence, Eurex Clearing has a complete process to settle all open positions. As a clearing house, Eurex Clearing provides services to market and financial intermediaries and is therefore vital for the functioning of financial markets or certain market segments. Therefore, Eurex Clearing carefully takes into consideration best practices issued by regulatory experts for its business activities. The wind-down process is covered in the resolution and recovery plan and can be applicable in the case of the withdrawal of a CCP authorization as well.

Key Consideration 7

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 addition, an FMI should identify, monitor, and manage the risks its operations might pose to other FMIs.

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 impact on system capacities, which could lead to disruptions of Eurex Clearing's services. The operational risk profile is reviewed at least on a yearly basis. Regular monitoring is carried out by business units.

Eurex Clearing has implemented a business continuity management that is integrated into the overall BCM of Deutsche Börse. For all outsourced functions that are critical to the business of Eurex Clearing, the BCM rules of Eurex Clearing are applicable. This ensures that business continuity plans of all outsourced functions adhere to the EMIR and requirements with regard to business continuity and disaster recovery.

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 within both 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.

Any outsourcing of activities requires the prior consultation of Eurex Clearing's outsourcing coordinator as stipulated in the DBG 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 service provider's capabilities to meet the internal Business Continuity Management standards.

Additionally, external providers and relevant institutions in the financial infrastructure with which interdependencies have been identified in the BCM plans in the testing process.

Eurex Clearing will share the test results with all relevant 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.

Assessment of principle:

Observed

Principle 18: Access and participation requirements

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

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.

A license issued by Eurex Clearing AG (Eurex Clearing) for each transaction type (each, a “Clearing License”) is required in order to be authorized to participate in the clearing of the relevant Transactions as a Clearing Member. Clear and transparent admission criteria per clearing license are determined by Eurex Clearing.

The admission requirements are set forth in the Clearing Conditions in Chapter I for the general prerequisites and in Chapters II, IV, V, VIII for special prerequisites for the relevant transaction types and in the FCM Regulations of Eurex Clearing. Eurex Clearing offers special licenses for dedicated Repo Transactions (Specific Repo License). The requirements for such clearing licenses are set forth in Chapter IV Part 3.

In addition, Eurex Clearing (having been granted the status as a Derivatives Clearing Organization (“DCO”) since 2016) offers a client clearing framework in compliance with CFTC Regulation Part 22 under U.S. law for FCMs that clear client business (LSOC style – Legally Segregated Operationally Commingled). Admission criteria for FCM Clearing Members are set forth in Chapter I of the FCM Regulations of Eurex Clearing.

These and other rules and regulations are available on the Eurex Clearing website (<https://www.eurex.com/ec-en/rules-regs/rules-and-regulations>).

Eurex Clearing’s participation requirements are non-discriminatory, objective and do not limit access on grounds other than risk (e.g. sufficient own funds or equivalent regulatory capital, compliance with technical requirements, verification of the legal validity and enforceability of the Clearing Conditions, etc.). To ensure this purpose, Eurex Clearing assesses its admission requirements continuously based on feedback from market participants and changes in regulation. Any recommendations to amend the admission criteria are generally discussed in advance with market participants, Clearing Members, the Eurex Clearing Committees (Derivatives, Securities) and the Eurex Clearing Risk Committee.

Eurex Clearing requires Clearing Members to provide evidence of sufficient financial resources and operational capacity to meet their obligations and minimize the risk towards the CCP.

Eurex Clearing uses a risk-based approach to determine the level of financial resources that its Clearing Members need to prove.

The main financial requirements are listed below:

- Minimum own funds or equivalent regulatory 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 for own funds or equivalent regulatory capital requirements that is scaled to represent the risk of the individual Clearing Member. The dynamic component is calculated as a percentage of each Clearing Member’s margin requirement. The requirements for minimum own funds or equivalent regulatory capital requirements are publicly available on the website of Eurex Clearing (<https://www.eurex.com/ec-en/join/admission-requirements/clearing-member>, under the tab Admission Requirements, Capital Requirements).
- If Clearing Members have insufficient own funds or equivalent regulatory capital for a clearing license,

Eurex Clearing may determine that the shortfall may be made up by collateral in cash and/or securities.

- With regards to FCM Clearing Members at the time of the application, it must have adjusted net capital, calculated in accordance with CFTC Regulation 1.17, in the minimum amount published by Eurex Clearing on its website. The minimum static amount required is equivalent to EUR 30 million whereas a dynamic component of 20% of the Initial Margin requirement applies if higher.
- Clearing Members must contribute to the Default Fund.

The Default Fund contribution is determined as the maximum amount out of the minimum requirement of each Clearing Member (including FCM Clearing Members) and the requirement based on the risk exposure of a member firm. Clearing Members are required to deposit the higher of the following amounts:

- A minimum amount (static component) for the Default Fund (including OTC Interest Rate Derivatives and OTC Currency Transactions)
- A dynamic amount which is proportional to the Stress-Loss-Over-Margin (SLOM) value of the Clearing Member. SLOM is defined as the difference of the simulated value of a portfolio under a certain stress scenario and the Total Margin Requirement of the same portfolio to display potential losses not yet collateralized via Margin Requirements.

(For more information: <https://www.eurex.com/ec-en/services/risk-management/default-waterfall/default-fund>).

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 established a Member Compliance Framework to assess Clearing Members' (including FCM Clearing Members') compliance with the participation requirements set out by Eurex Clearing.

Key Consideration 2

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.

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 on-going during their membership.

Eurex Clearing offers the following types of Clearing Memberships:

- General Clearing Membership (in accordance with the Clearing Conditions of Eurex Clearing);
- Direct Clearing Membership (in accordance with the Clearing Conditions of Eurex Clearing);
- Basic Clearing License Membership (in accordance with the Clearing Conditions of Eurex Clearing);
- Specific Repo License (in accordance with the Clearing Conditions of Eurex Clearing Part IV) and
- FCM Clearing License (in accordance with the FCM Regulations of Eurex Clearing)

Unless otherwise provided in the relevant Special Clearing Provisions, a General Clearing License entitles the holder thereof (a General Clearing Member) (i) to clear Own Transactions, Client-Related Transactions or, in respect of OTC IRS U.S. Clearing Members, Own Transactions and (ii) to support the Clearing of Basic Clearing Member Transactions as a Clearing Agent subject to further requirements as set out in the Basic Clearing Member Provisions. A Direct Clearing License entitles the holder thereof (a Direct Clearing Member) to clear Own Transactions, Client-Related Transactions (in case of DC-Related Transactions limited to Transactions

relating to DC Market Participants, and in the case of transactions relating to Indirect Client Market Participants limited to Indirect Client Market Participants, affiliated with it. (Clearing Conditions Chapter I).

The specific license entitles the respective holder to clear Own Transactions with specific product characteristics.

A Basic Clearing Member License entitles the holder thereof (a Basic Clearing Member) to clear Own Transactions.

An FCM Clearing Member License entitles the holder thereof (an FCM Clearing Member) (i) to clear Own Transactions and (ii) FCM Client Transactions in accordance with the FCM Regulations of Eurex Clearing).

To ensure that Clearing Members (including FCM Clearing Members) have necessary additional financial resources, different own funds or equivalent regulatory capital are required per Clearing Membership, cleared products and markets served. The different categories are shown in the table below.

| No | Product | Market | GCM/FCM ⁶ CM own funds (or equivalent amount) required in EUR mn | DCM/BCM ⁷ own funds required in EUR mn |
|----|---|------------------------------|--|--|
| 1 | Futures/ Options | Eurex Frankfurt | 30 | 7.5 |
| 2 | Securities (Repos) | Eurex Repo/ NEX BrokerTec | 200 | 50 |
| 3 | Securities (Equities) | FSE/Xetra | 15 | 3.75 |
| 4 | OTC Interest Rate Derivatives and Currency Transactions | EurexOTC Clear | 30 | 7.5 |

Furthermore, different minimum requirements for the Default Fund contribution are applicable depending on the type of Clearing Membership. At admission, a Clearing Member's contribution to the Default Fund is as follows:

- GCM: EUR 5mn
- DCM: EUR 1mn/ 0.1 mn (depending on company type for OTC IRD)
- BCM: EUR 1mn/ 0.1 mn (depending on company type)
- FCM CM: EUR 5mn

In addition to the abovementioned distinctions, each specific license may provide for extra conditions such as specific technical connections, legal restrictions, etc. as stated in Chapters II-IX for special prerequisites for the relevant transaction types.

⁶ Only relevant for a limited scope of OTC Derivatives

⁷ Only relevant for Eurex Repo and OTC Derivatives

Key Consideration 3

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.

The Clearing Conditions/ FCM Regulations prescribe that Clearing Members are obliged, at the request of Eurex Clearing, to provide evidence of compliance with the prerequisites for a Clearing License.

Compliance with financial resource requirements is monitored on a regular basis. The Clearing Members must provide evidence of the level of their own funds or equivalent regulatory capital at admission and at least once a year. All Clearing Members are required to submit proof of own funds or equivalent regulatory capital annually by June 30 for the previous fiscal year to Client Service, Trading & Clearing (Department). FCM Clearing Members have to provide Form-1 FR or FOCUS report on a monthly basis to prove equivalent regulatory capital.

The overall risk exposure of the single Clearing Member (including FCM Clearing Member) towards the CCP is calculated regularly. Both, the own funds or equivalent regulatory capital requirement and the Default Fund requirement are newly determined at the end of each month or ad-hoc, if required. Monitoring is performed once a week for own funds or equivalent regulatory capital requirements against reported own funds or equivalent regulatory capital and collateral as well as for the Default Fund requirements.

Should the Clearing Member have insufficient own funds or equivalent regulatory capital for a Clearing License, Eurex Clearing may determine that the shortfall may be made up by collateral in cash or securities.

In addition, Eurex Clearing evaluates and monitors the operational strength of its Clearing Members (including FCM Clearing Members) on a regular basis and ad-hoc basis if required.

Eurex Clearing has implemented a Member Compliance Framework to monitor the Clearing Members (including FCM Clearing Members) compliance with the admission criteria and the operational adequacy on an ongoing basis. The audit practice is based on evaluations of the Clearing Members' fulfilment of the admission criteria.

In case of irregularities detected by the standard audit activities or in case of doubt regarding the compliance of the clearing member, the elements of the Member Compliance Framework can be triggered to investigate/ confirm compliance. Beside internal evaluation, on-site audits can be considered as an escalation measure and for the investigation of specific irregularities.

Furthermore, on-site audits could be required to investigate an alleged breach of a Clearing Member (including FCM Clearing Member) with regards to its obligations to Eurex Clearing within the framework of Eurex Clearing's Disciplinary Procedure Rules.

Eurex Clearing is entitled to request further information and evidence concerning the orderly conduct of outsourced functions from the outsourcer. An escalation can be an audit by external auditors, for example, on the basis of the International Standard on Assurance Engagements (ISAE) 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information", published by the International Federation of Accountants.

Assessment of principle:

Observed

Principle 19: Tiered participation arrangements

Principle 19: Tiered participation arrangements

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

Key Consideration 1

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.

Eurex Clearing's rules, procedures and agreements are governed by the Clearing Conditions and FCM Regulations and other related legal framework. From a legal perspective, Eurex Clearing employs a principal-to-principal clearing model under the Clearing Conditions, where Eurex Clearing has contractual relationships with its Clearing Members only.

Also, in the LSOC model under the FCM Regulations, which is legally structured as a U.S agency clearing model, the FCM Clearing Member is the sole contractual counterparty to Eurex Clearing, and Eurex Clearing treats the FCM Clearing Member as a principal, in respect of FCM Client transactions the FCM Clearing Member clears through Eurex Clearing. In effect FCM Clients have no rights against Eurex Clearing, and Eurex Clearing has no liability to FCM Clients in respect of FCM Client transactions.

The FCM Clearing Member acts in its capacity as an agent (for purposes of CFTC Regulation 39.12 (b) (6)) on behalf and for an account of the FCM Client when clearing the FCM Client's transactions. FCM Clearing Members are fully responsible to Eurex Clearing for performance of transactions. At the same time, the FCM Client is obligated towards the FCM Clearing Member to make all payments, including margin payments related to the relevant transactions.

Even though no direct contractual relationship between Eurex Clearing and a client exists, the functional set-up of Disclosed Clients of a Clearing Member as well as of FCM Clients of an FCM Clearing Member allow Eurex Clearing to gather relevant basic information to identify, monitor and manage relevant concentrations of risk relating to the provision of services to clients.

The Member Compliance Framework foresees that Eurex Clearing requests information directly from the Clearing Members to confirm compliance with certain requirements in the Eurex Clearing rules and regulations within the yearly Due Diligence Questionnaire. This Due Diligence Questionnaire also contains a chapter with questions related to the Risk Management Framework of the Clearing Member (e.g. related to margin calculation for clients, monitoring of client portfolios for concentration and wrong way risks, stress testing of client positions, liquidity requirements from client defaults, etc.).

Based on the Due Diligence Questionnaire, Eurex Clearing verifies if Clearing Members are able to comply with the requirements with respect to customer business of the Clearing Member.

In addition to the Due Diligence Questionnaire, Eurex Clearing can conduct on-site audits at the premises of the Clearing Members. The content of the on-site meeting will be adapted to the situation of the individual Clearing Member. The audits can also include the inspection of processes of the Clearing Members regarding their client business.

When selecting candidates for standard on-site meetings, Eurex Clearing takes into consideration criteria such as clearing volumes, trading volumes, margin requirements and significant changes to these indicators. This evaluation includes both proprietary and client business of a Clearing Member. Based on these criteria the

annual audit schedule is defined, i.e. Clearing Members which have large trading and clearing volume in undisclosed client accounts as well as a high margin required caused by the undisclosed client activities will receive a high audit priority. In special cases, also the internal credit ratings are considered when defining the audit schedule.

In addition, the monitoring of Clearing Members' and their clients' business is ensured by a framework, which identifies, monitors and reports concentration & wrong way risks that may arise out of the clearing business of Eurex Clearing. This monitoring includes the level of exposure of a Clearing Member, the quality of the collateral pool as well as the overall trading activities. Events that are considered as concentrations of risk in the sense of this document could also be trigger events for requests for information or on-site meetings as described above.

Key Consideration 2

An FMI should identify material dependencies between direct and indirect participants that might affect the FMI.

For Eurex Clearing main sources of material dependencies between direct and indirect participants are the ownership structure and risk concentrations between these entities. Eurex Clearing's account set-up and segregation models enable the identification and differentiation between direct and indirect participants' activities.

Ownership structure

In terms of ownership structure, Eurex Clearing defines a material dependency as a close link. A close link is 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% or more of the voting rights or capital of an undertaking or a control agreement exists. Those close links are of special importance between issuers of instruments eligible as collateral and Clearing Members. These links are addressed by grouping all Issuer Identification Numbers of those entities that have an ownership structure that classifies them as a close link and are 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.

Risk concentration

Risk concentration is monitored e.g. by the monitoring of trading and clearing volumes as well as margin requirements caused by proprietary and client trading activities. Risk concentration could be represented by a client clearing through multiple Clearing Members, thereby interrelating these members. Such concentrations are considered in Eurex Clearing's stress testing program to ensure availability of sufficient collateral to cover potential losses in a default scenario.

Key Consideration 3

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 order to manage the risks arising from these transactions.

The supervision of indirect participants' activities is mainly the responsibility of the direct participants (Clearing Members including FCM Clearing Members). Nevertheless, Eurex Clearing has several measures, which allow monitoring of indirect participants in addition to the supervision conducted by direct participants.

- a) Eurex Clearing's account set-up and segregation models enable the identification and differentiation between direct and indirect participants' activities. Direct participants (Clearing Members including FCM Clearing Members) activities are reflected on the respective proprietary accounts, whereas indirect participants activities are reflected on the (disclosed or undisclosed) client accounts. Therefore, Eurex Clearing has the ability to identify the proportion of activity that each direct participant conducts on behalf

of indirect participants. The posted collateral has to be sufficient to cover the direct as well as indirect participants' exposure. In addition, Eurex Clearing applies concentration limits at two levels; the CCP level and the Clearing Member level. Limits on the CCP level are applied across every Clearing Member (including FCM Clearing Member) and their clients at Eurex Clearing. Concentration limits at the member level apply per Clearing Member (including FCM Clearing Member), this includes the Clearing Member's own business and the business of their clients in the various Clearing Models. In the case that accounts demonstrate behaviors outside the typically observed standards, e.g. large transaction volume or position build up, Eurex Clearing can request information.

b) Eurex Clearing has information about indirect participants to whom its direct participants are offering clearing services if these indirect participants are known to Eurex Clearing and thus is able to identify direct participants that act on behalf of a large number of indirect participants. In case indirect participants are not known to Eurex Clearing, large volumes and movements on client accounts can be caused by a Clearing Member serving a large client community. Large volumes and movements on accounts can be a trigger for activities based on the Member Compliance Framework. Thus, it can be identified whether large volumes are caused by a large client community or by other reasons (e.g. few clients with high volumes).

c) As stated in the response to b) for indirect participants known to Eurex Clearing, the proportion of their turnover in the systems is transparent to Eurex Clearing. For indirect participants not known to Eurex Clearing, information on clients responsible for a significant proportion of turnover in the system can be requested during on-site visits at Clearing Members.

Key Consideration 4

An FMI should regularly review risks arising from tiered participation arrangements and should take mitigating action when appropriate.

Established policies and procedures are to be reviewed on an annual basis as well as ad-hoc if necessary.

Assessment of principle:

Observed

Principle 20: FMI links

Principle 20: FMI links

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

Key Consideration 1

Before entering into a link arrangement and on an 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.

Eurex Clearing has no clearing link in place and therefore does not provide services linked to clearing that pose significant additional risks to it. However, Eurex Clearing is open to establish links in the future. Links between CCPs may be driven by co-operations between CCPs / market places or by regulatory initiatives. Before entering into a link, risks are evaluated (including due diligence or other analysis/measures as seen fit).

Once a link is implemented and is operational, the risks are evaluated daily.

Any request of a CCP to establish an interoperability arrangement within the product scope as mentioned above will be subject to objective and transparent, in particular risk-related, criteria as established in Eurex Clearing's Process Description of Interoperability arrangements for cash markets.

Eurex Clearing will first set the minimum key (information and risk) requirements that a CCP willing to submit a formal interoperability request must fulfil. Afterwards, the requesting CCP will have to provide a comprehensive and documented self-certification response in order that Eurex Clearing shall consider the interoperability request as complete. Eurex Clearing will conduct a comprehensive completeness- and conformity check. The CCP approval process will be started once the completeness and conformity check has been successfully conducted. Within the CCP approval process the design of the interoperability arrangement will be determined, starting with a proposal filed by the requesting CCP. A detailed risk assessment has to be conducted and mitigating measures will be defined. When the checks are completed, the Executive Board of Eurex Clearing can decide whether Eurex Clearing can enter into an interoperability arrangement or has to reject the request in order to avoid potential risks arising from the arrangement.

Payment and Correspondent Banks (for central and commercial bank money)

Eurex Clearing provides access to a broad range of currencies for the fulfilment of payment obligations that arise from the clearing process (e.g. variation margin, premiums, fees). For this purpose, Eurex Clearing is connected to a number of central banks and commercial banks serving as cash collateral locations and/or payment and correspondent banks. In order to ensure maximum safety, cash collateral should preferably be provided in central bank money by Clearing Members as it helps to mitigate risks adequately, especially counterparty and credit risk.

Given Eurex Clearing's reliance on the payment and correspondent banks for the efficient working of the clearing processes, predefined criteria are used to evaluate banks to take the decision whether to connect the bank or not.

Eurex Clearing created a Monitoring Concept to regularly ensure compliance of those criteria by the connected commercial banks. Furthermore, for each central and commercial bank a Relationship Manager is assigned. In case of non-performance, immediate actions are undertaken and monitored for remediation.

Settlement Locations of Eurex Clearing

Eurex Clearing needs to maintain link arrangements with so-called Settlement Locations in order to settle security transactions and fulfil subsequent related services, both within the DvP / FoP procedure as a part of the

clearing process. Due to the importance of those Settlement Locations for Eurex Clearing's operability within the sphere of the financial market as a CCP, it is crucial for Eurex Clearing to strictly limit any link-related risk exposure using predefined criteria. The usage of these criteria to assess any existing or potential future links to a Settlement Location ensures the efficiency of the clearing process with respect to the highest possible extent of trouble-free and smooth clearing operations. The criteria are based on necessary internal requirements of Eurex Clearing as well as on all applicable regulatory requirements on an international and European level. Eurex Clearing's obligation to assess connected Settlement Locations is also stated on a European-wide regulatory level in Article 50 EMIR.

Security Collateral Locations

Eurex Clearing is linked to Central Securities Depositories through the deposit of financial instruments posted as margins and default fund contributions.

Instruments are posted to Clearstream Banking AG, Frankfurt (Germany), and Clearstream Banking S.A., Luxembourg – both notified according to Article 10 of the Settlement Finality Directive (SFD, 98/26/EC).

In addition, a link to deposit the security collateral is existing with SIX SIS AG, Olten (Switzerland), that is a T2S participant fulfilling the ECB requirements to CSDs, and is the authorised operator of one of the systemically important payment and settlement systems in Switzerland and as such overseen by the Swiss National Bank, as well as by the Swiss Financial Market Supervisory Authority fulfilling the provisions of Art. 61 FinfraG. Hence, the full protection of the financial instruments is being ensured.

Eurex Clearing has defined access criteria in accordance with Art. 47 (3) EMIR and the corresponding ESMA RTS (EU) 2013/153 Art. 44 regarding highly secured arrangements, as well as with Art. 53 CSDR and Art. 89, 90 and Annex V (EU) 2017/393 Cpt. XIII.

Trade Repositories (TRs)

Eurex Clearing is linked to a TR as Art. 9 EMIR requires transaction reporting service for derivative transactions for member states of the EU and the EEA. The Link to the European Trade Repository REGIS-TR has been set up and does not pose any material risk to Eurex Clearing. REGIS-TR is located in Luxembourg, supervised in Luxembourg by the Commission de Surveillance du Secteur Financier (CSSF) and offers its services under Luxembourg law. On 7th of November 2013 the ESMA registered REGIS-TR as Trade Repository in accordance with Article 55 EMIR.

In addition, Eurex Clearing, in its capacity as an authorized Derivatives Clearing Organization (DCO), is linked to Trade Repositories (1) DTCC's Global Trade Repository (DTCC) and (2) CME Global Repository (CME) in order to fulfill swap data reporting requirements on basis of Dodd-Frank Act Title VII - CFR Title 17 Part 45, Part 39, OSC Rule 91-507 and FIEA in combination with the Cabinet Ordinance.

Eurex Clearing ensures the adequate fulfilment of the regulatory requirements by using Deutsche Börse's reporting and consultancy services. Within this reporting, it is essential to have a link to all relevant US Swap Data Repositories. So far, links have been set up to DTCC and CME. The links are necessary for the required Dodd-Frank reporting services and do not pose any material risk for Eurex Clearing.

DTCC and CME are Swap Data Repositories ("SDR") registered with the Commodity Futures Trading Commission (CFTC) and operate as SDRs in the U.S. under U.S. law. They both also operate other repository services under multiple jurisdictions. CME and DTCC follow CPSS-IOSCO principles.

With the start of Eurex Clearing's reporting obligation under § 22 WPHG in connection with Article 26 EU 600/2014 (MIFIR), Eurex Clearing ensures the adequate fulfilment of the regulatory requirements under MIFIR by using Deutsche Börse's reporting and consultancy services. All transaction reports under MIFIR are sent directly to BaFin and the link therefore does not pose any material risk for Eurex Clearing.

Key Consideration 2

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.

Eurex Clearing is supervised by the German Federal Financial Supervisory Authority (BaFin). FMIs linked with Eurex Clearing are established in various jurisdictions, e.g. Germany, Luxembourg, the UK, Switzerland and the US. The legal agreements between Eurex Clearing and the linked FMIs clearly state the applicable law.

The existing links to the FMIs are stated in Key Consideration 1 of Principle 20. Key Consideration 3

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.

Not applicable

Key Consideration 4

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.

Not applicable

Key Consideration 5

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.

Not applicable

Key Consideration 6

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.

Not applicable

Key Consideration 7

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 three or more CCPs, each CCP should identify, assess, and manage the risks of the collective link arrangement.

Eurex Clearing has no link with another CCP in place.

Key Consideration 8

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 fulfil its obligations to its own participants at any time.

Not applicable

Assessment of principle:

Observed

Principle 21: Efficiency and effectiveness

Principle 21: Efficiency and effectiveness

An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.

Key Consideration 1

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.

Eurex Clearing has in place adequate processes for taking into account the needs of its participants and the markets it serves. First of all, Eurex Clearing is in continuous dialogue with its customers. Eurex Clearing hosts a number of specialist committees to inform and integrate members from all its market segments into the consultation process. Detailed information regarding those Eurex Committees is available on the Eurex Clearing website at <https://www.eurex.com/ec-en/find/corporate-overview>.

In addition, 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's success has been built on the development of reliable and state-of-the-art, customer-focused technology. The Technology Roadmap, which comprises a variety of components across all trading and clearing layers, includes the implementation of software and hardware enhancements. By this, Eurex Clearing aims to minimize the impact on its members when upgrading software and launching new services. As a matter of course, Eurex Clearing continuously enhances its services for the benefits of customers and the wider financial marketplace. An example is the introduction of powerful risk management and clearing technology that both address the members' current needs, yet also anticipate future developments in the financial landscape.

In order to provide its members with innovative and cost-efficient technologies, Eurex Clearing's 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.

Another example of how Eurex Clearing tries to meet its clients' needs can be found in the cash management. Eurex Clearing ensures that members' cash liabilities are settled as quickly and securely as possible, bearing in mind the currency mix of its business. Eurex Clearing offers its members an attractive payment infrastructure. The broad payment network offers members a high degree of flexibility in terms of payment locations for multiple currencies. Eurex Clearing holds accounts with multiple commercial and central banks allowing the choice of where to pay and receive funds. Money settlement risk is kept at a minimum. Cash is deposited only with selected banks and subject to appropriate limits as detailed in the Treasury Policy. The Treasury Policy of Eurex Clearing states that the primary goal of treasury management is to ensure Eurex Clearing's ability to satisfy payment obligations at all times (liquidity management) as well as the minimisation of market and counterparty risk in placements, thereby clearly indicating the focus on effectiveness.

Furthermore, news updates on the Eurex Clearing website (public and section for members only) complemented by reporting obligations make sure that stakeholders are well-informed.

In addition, Eurex Clearing is a member of the European Association of Clearing Houses (EACH) as well as the Global Association of Central Counterparties (CCP12).

EACH works with public authorities and representatives from the financial industry on a broad range of issues. It offers the consolidated opinion of its membership in regulatory discussions and consultations and helps member CCPs to agree appropriate standards and guidelines. Furthermore, EACH develops frames of reference,

publishes standards and acts as a forum for the development of the personal contacts necessary to build a constructive working relationship with other infrastructure and user associations.

The Global Association of Central Counterparties (CCP12) serves as a global association for all CCPs and works collaboratively in information sharing, development of analysis and position papers, and promoting the development and adoption of best practice standards in CCP risk management and operational activities.

Based on this background Eurex Clearing is completely confident to taking into account the needs of its participants and the market it serves.

Key Consideration 2

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 expectations, and business priorities.

As part of conducting the business of Eurex Clearing in accordance with § 76 German Stock Company Act (Aktengesetz, AktG), the Executive Board establishes the objectives and strategies for Eurex Clearing. Consistent with § 111 AktG, the Supervisory Board oversees the work of the Executive Board.

In order to ensure reasonable assurance achieving the corporate objectives in accordance with applicable laws and regulations, the Executive Board of Eurex Clearing 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.

In addition, the objectives of Eurex Clearing's Technology Roadmap are to assure the safety and integrity of markets while providing innovation in risk management and clearing technology as well as cost-efficient technologies. The same can be said for the Treasury Policy of Eurex Clearing, which states that the primary goal of treasury management is to ensure Eurex Clearing's ability to satisfy payment obligations at all times (liquidity management) as well as the minimisation of market and counterparty risk in placements, thereby clearly indicating the focus on effectiveness.

The Business Continuity Management approach of the Deutsche Börse Group (DBG), which is also applicable to Eurex Clearing, consists of the sustainable effort *"to provide products and services with utmost reliability. It thus gives the highest importance to the resilience of its business to safeguard it against incidents and disasters, as the unavailability of core processes and resources represents a substantial risk for DBG and potential systemic risk to the markets as a whole. Therefore, DBG aims to satisfy itself and the markets of its ability to continue to operate under adverse conditions or in the face of unexpected events or disasters.*

In case of business interruption, operations must be resumed within appropriate time scales primarily in order to:

- *Safeguard DBG from significant losses, maintain revenue generation and shareholder value.*
- *Maintain customer confidence, market stability and liquidity and minimise systemic risk.*
- *Maintain management control, fulfil contractual obligations and regulatory compliance.*

The functions, which are indispensable for the critical daily operations in view of the above objectives, are called 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."

In determining the Recovery Time Objective for each function, the potential overall impact on market efficiency shall be taken into account.

The Annual Report of 2020 mentions Eurex Clearing's key objectives that include the effective protection of customer positions and deposited collateral through reductions in counterparty risk and cost-effective risk and position management.

One factor that has strongly determined the development of Eurex Clearing's business strategy in recent years is the adoption of new regulatory conditions. The business strategy provides the framework for more detailed goals and objective on cost, volume, financial and risk level.

Two core pillars of the Eurex Clearing business strategy are safety and efficiency. Safety focuses on the effective mitigation of counterparty risk, whereas efficiency aims at minimizing clearing costs. These pillars translate into strategic objectives in the areas Distribution, Products & Services, Risk Mitigation and Technology & Infrastructure

Moreover, an annual budget planning takes place, which is approved by the Eurex Clearing Management as well as the Eurex Clearing Supervisory Board and monitored on a continuous basis. Every month, the Financial Accounting and Controlling department (FAC) issues a set of financial reports that are distributed to the executive management and certain line managers. These documents include comparison of budgets with actual and previous year's figures. They are prepared following the IFRS commercial format. A forecast for the entire year is also produced and revised periodically; additionally, a rolling forecast has been implemented.

Eurex Clearing ensures accountability with respect to achieving goals and objectives to its stakeholders. One aspect thereof is the provision on information on the performance of the company (e.g. EBIT). This is done via news updates on the Eurex Clearing website for the public. Clearing Members and customers receive information (e.g. clearing volumes, generated profit) through reports and on the Eurex Clearing webpage in the section for members only.

To facilitate the continuous dialogue with and information to its customers, Eurex Clearing hosts a number of committees to inform and integrate members from all market segments as described in detail in the Assessment Report 'Boards & Committees'. Furthermore, regulators are informed regarding the performance of the company via detailed reports on a regular basis.

Additionally, stakeholders receive important information like clearing volumes, generated profit, etc. through the Annual Report including a management report on the situation of the company, which is available on the Eurex Clearing webpage. The Annual Report mentions in more detail the strategic objectives of Eurex Clearing and to what extent they were achieved, e.g. financial statement.

Furthermore, Eurex Clearing has specific measures in place to measure and assess the goals and objectives on risk level.

The Project & Change Initiative Management Policy provides a general framework for project management within Deutsche Börse Group. It provides rules that project managers and line managers have to follow to ensure a successful project delivery against time, cost and quality parameters.

Moreover, Eurex Clearing's information technology systems are secure and reliable. 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 in place to ensure that Eurex Clearing is scalable and can deal with operational needs and the risks faced, even in stressed market conditions.

Key Consideration 3

An FMI should have established mechanisms for the regular review of its efficiency and effectiveness.

The Internal Control System (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.

The ICS Policy of the Deutsche Börse Group applies to all Deutsche Börse Group companies including Eurex Clearing. 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 Group. The ICS Policy was approved by the Eurex Clearing Executive Board.

Internal Audit shall review the effectiveness of measures taken in the business areas and shall also assess the effective operation of the ICS. 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. Provided that the internal audit function maintains its independence, it may provide advisory support and consulting services to management or other organisational units of the financial institution within its domain of competences.

In addition, Eurex Clearing has in place procedures to control its operational costs. All budgets are reviewed and approved by the management. Every month, the Financial Accounting and Controlling department issues a set of financial reports that are distributed to the Executive Management and certain line managers. These documents include comparison of budgets with actual and previous year's figures. They are prepared following the IFRS commercial format. A forecast for the entire year is also produced and revised periodically; additionally, a rolling forecast has been implemented.

The review of service levels, operational reliability as well as the capacity levels is seen as vital for the daily business of Eurex Clearing. These are performed on a regular basis. An ongoing profit and loss analysis is conducted, and the outcome is provided to the Executive Board of Eurex Clearing regularly. Across the serviced products, member meetings are held on a regular basis to discuss new product developments and service enhancements. The forums are used to gather direct, specific feedback for the respective new offering, but as well the forum to raise enhancement requests. The meetings take place on at least three times per year for derivatives and at least twice per year for the cash products cleared. The technical interfaces provided are standardized across the same type of products, where feasible, and either meets market practice or is at this stage the most cost-effective solution.

Assessment of principle:

Observed

Principle 22: Communication procedures and standards

Principle 22: Communication procedures and standards

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.

Eurex Clearing uses the following internationally accepted standards for their external communication with Clearing Members, Trading Participants and Financial Markets Infrastructure:

- FIX (Financial Information eXchange) Protocol standard (<http://www.fixtrading.org/overview>);
- Financial Products Markup Language (FpML) standard (<http://www.fpml.org>);
- SWIFT ISO 15022 messaging standard (<http://www.swift.com/standards>);
- Advanced Message Queuing Protocol (AMQP) standard (<http://www.amqp.org>).

Eurex Clearing uses FIX for the vast majority of its communication with Clearing Members as well as to obtain on-book and off-book trades from the trading system for listed derivatives. FIX is an internationally accepted standard that supports a number of syntaxes. Based on the XML Standard, FIXML is the globally preferred syntax for listed derivatives. FIX has been extended in recent years to natively cover the area of OTC derivatives. Previously, this was the sole domain for FpML, whereby FIX allows embedding FpML syntax within FIXML in order to define the OTC derivative product. FpML is developed under the auspices of ISDA.

The Eurex Clearing FIXML Interface provides Eurex members with a highly flexible, standards compliant and cost-effective way to use Eurex Clearing services. FIX Protocol is an open standard and does not require a specific kind of system or software. The FIXML interface uses AMQP, an open standard to allow secure connections and a standardised transport. AMQP Version 1.0 is an ISO standard (ISO/IEC 19464). Deutsche Börse Group was an active member of the AMQP Working Group that originally developed the standard.

Eurex Clearing uses SWIFT ISO 15022 for the central counterparty (CCP) services in the securities market related to gross delivery management and numerous reports.

Additionally, Eurex Clearing uses SWIFT ISO 15022 and ISO 20022 for delivery instructions in the FX market as well as for payment services in the derivatives market.

Eurex Clearing uses ISO standards where applicable to identify financial instruments and counterparties. These are ISINs (ISO 6166) for products and underlyings, currency codes (ISO 4217), MICs (ISO 10383) for exchanges and clearinghouses, LEIs (ISO 17442) for member firms (internal mapping).

Eurex Clearing uses AMQP (ISO 19464) for the message transport layer towards its Clearing Members.

Assessment of principle:

Observed

Principle 23: Disclosure of rules, key procedures, and market data

Principle 23: Disclosure of rules, key procedures, and market data

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, fees, and other material costs they incur by participating in the FMI. All relevant rules and key procedures should be publicly disclosed.

Key Consideration 1

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.

Eurex Clearing participants are subject to the Clearing Conditions or the FCM Regulations when clearing through Eurex Clearing.

(i) The Clearing Conditions are governed by the German civil law and are structured as general terms and conditions (Allgemeine Geschäftsbedingungen) within the meaning of Sections 305 et seqq. of the BGB. The first chapter of the Clearing Conditions contains general provisions regulating the clearing relationship between Eurex Clearing and its Clearing Members. The other chapters (chapters II to VIII) contain market specific provisions.

Furthermore, Eurex Clearing published rules and procedures relating to the roles of participants determined in the Clearing Conditions. The following documents are disclosed:

- Statutes for the EMIR Risk Committee,
- Default Management Committee Rules,
- Default Management Auction Rules,
- Statutes for the IRS Product Committee,
- Auction Terms of Eurex Clearing AG,
- Statutes for the Disciplinary Committee,
- Disciplinary Procedures Rules,
- Price List of Eurex Clearing AG,
- General Terms and Conditions to the Agreement on Technical Connection to the Clearing EDP of Eurex Clearing AG,
- Price List to the Agreement on Technical Connection to the Clearing EDP of Eurex Clearing AG.

(ii) FCM Regulations: the LSOC clearing models are set out in the FCM Regulations. The FCM Regulations comprise general and LSOC model-specific rules in Chapter I of the FCM Regulations as well as product-specific provisions for swaps in Chapter II of the FCM Regulations. The FCM Regulations are governed by U.S. law and the laws of New York.

The FCM Regulations are supplemented by separate FCM Default Rules, which are governed by German law containing rules relating to the default of FCM Clearing Members.

Furthermore, Eurex Clearing published rules and procedures relating to the default of an FCM Clearing Member and further documents accompanying the FCM Regulations:

- FCM Default Rules,
- Default Management Committee Rules,

- Default Management Auction Rules,
- Price List of Eurex Clearing AG,
- General Terms and Conditions to the Agreement on Technical Connection to the Clearing EDP of Eurex Clearing AG,
- Price List to the Agreement on Technical Connection to the Clearing EDP of Eurex Clearing AG.

Transparency of all these rules and regulations is also provided by disclosing them to the public via the Eurex Clearing website to allow applicants of the system to assess their rights, risk and obligations (<https://www.eurex.com/ec-en/rules-regs/rules-and-regulations>). Other documents are available for involved parties and can be found in the member section on the website. The competent authority has access to all documents.

Eurex Clearing ensures that its rules, procedures and contractual arrangements are clear, comprehensive, in writing and in compliance with EMIR as well as all other applicable regulatory and supervisory requirements. These rules, procedures, and contractual arrangements and any accompanying material are accurate and up to date. Eurex Clearing identifies and analyses the soundness of the rules, procedures and contractual arrangements of Eurex Clearing. There is no indication that rules and regulations are not internally coherent.

On the Eurex Clearing website, the default management procedures are treated in detail (<https://www.eurex.com/ec-en/services/risk-management/default-management-process>).

Also business continuity information is published on the Eurex Clearing website (<https://www.eurex.com/ec-en/find/about-us/business-continuity-planning>).

Key Consideration 2

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.

Eurex Clearing publishes two disclosure documents pursuant to Article 39 (7) of EMIR with respect to

(i) the Clearing Conditions ("Disclosure pursuant to Article 39 (7) of Regulation (EU) No 648/2012 of the European Parliament and the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories ("EMIR") with respect to the Clearing Conditions of Eurex Clearing AG"), and

(ii) the FCM Regulations ("Disclosure pursuant to Article 39 (7) of Regulation (EU) No 648/2012 of the European Parliament and the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories ("EMIR") with respect to the FCM Clearing Conditions of Eurex Clearing AG").

Both documents set out the information required to be disclosed under Article 39 (7) EMIR. They provide a summary description of the client clearing models currently offered by Eurex Clearing under the Clearing Conditions and the FCM Regulations that provide for different levels of client segregation, including information on the main legal implications of the respective levels of segregation and applicable insolvency law. Both documents can be found on the Eurex Clearing's website (<https://www.eurex.com/ec-en/services/risk-management/client-asset-protection-emir>).

With respect to the FCM Regulations, Eurex Clearing additionally publishes the "FCM Client Disclosure Statement for FCM Clients clearing Swaps at Eurex Clearing AG". The purpose of this document is to provide prospective clients with a written disclosure of certain risks associated with clearing swaps at Eurex Clearing through a Future Commission Merchant ("FCM"). The document provides for a brief overview on the following items: (a) certain provisions of the FCM Clearing Conditions providing a general overview on the levels of protection and segregation under the relevant LSOC clearing models, (b) the holding of Eligible Margin Assets in the form of securities with Clearstream Banking AG, and (c) the operation Framework 2 of the CFTC Part 190 Regulations.

The Eurex Clearing website provides system documentation on Eurex Clearing's clearing architecture to help Clearing Members with the ability to connect to and make use of Eurex Clearing's clearing architecture (<https://www.eurex.com/ec-en/support/technology/c7>)

The documentation is grouped into the following areas per C7 release:

- Overview and Functionality,
- Eurex Clearing GUIs,
- Interfaces,
- Reports,
- Network Access.

Further details can also be found in Principle 22 Key Consideration 22.1.

Key Consideration 3

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.

Eurex Clearing deals with educated/sophisticated financial market participants and thus assumes a certain level of basis knowledge of the clearing process and the risks associated with the clearing process. In addition, 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, one requirement among others is to provide evidence that a sufficiently qualified member of staff works in the Clearing Member's back-office to orderly fulfil the clearing obligations during the business day and to be available as a reliable contact person via telephone.

Furthermore, Eurex Clearing offers a wide variety of training courses and education materials. A robust and reliable CCP needs to operate with qualified clearing staff on its members' side. To maintain high qualification levels of Clearing Member staff in a rapidly changing environment, Eurex Clearing requires from its members at least one qualified employee, referred as "Qualified Clearing Staff (QCS)". This requirement applies to all General Clearing Members and Direct Clearing Members. Eurex Clearing offers an individual test for each clearing license, 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 assumed to be reached if the respective clearer test is passed successfully. If this requirement can no longer be confirmed, Eurex Clearing can decide to treat this as a breach of admission requirements and act accordingly. Depending on the severity of the detected irregularity, the escalation measure (e.g., spot test, on-site meeting, third party confirmation) is decided.

Every Clearing Member enters into a so-called clearing agreement with Eurex Clearing. These standard clearing agreements are publicly available as Appendices 1-7, 10, 11 of the Clearing Conditions. Therefore, Eurex Clearing may not have a direct contractual relationship with any client. Only the Clearing Members have a complete overview of all clients that they offer a clearing service. This legal setup has to be taken into account to adequately assess the disclosure requirements of a CCP. The general education of the private clients that are not members of Eurex Clearing lies within the responsibility of financial institutions or financial service providers that deal with this group of clients. Art. 39 (5) sentence 1, EU 648/2012 (EMIR) requires that the Clearing Member informs its clients of the costs and level of protection associated with the choice between omnibus client segregation and individual client segregation. The Clearing Member has an obligation to disclose clearing model related information to the client. Eurex Clearing discloses the price information used to calculate the end-of-day exposures. This information is sent to the Clearing Members in so-called Price Files or reports and can be found in the Member Section of the Eurex Clearing website. Eurex Clearing's competent authorities have access on request to this information based on the applicable disclosure requirements.

These file services include in particular theoretical price data and all 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. Both end-of-day and intraday data is available. Additionally, relevant risk parameters are published under the Risk Management tab of Eurex Clearing's website to provide Clearing Members with margin parameters, haircuts and a specification of accepted collaterals.

The website further provides Clearing Members with necessary data to compute option prices using different pricing models. As already mentioned, this data comprises the theoretical values and parameters for various products, which are required for the margining of the day.

So far, there have been no major instances of participants not being able to understand Eurex Clearing's rules, procedures and the risks faced from participating in the FMI.

Key Consideration 4

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 descriptions of priced services for comparability purposes.

Eurex Clearing publicly discloses the prices and fees associated with the services provided for clearing. The Clearing Conditions in combination with the Price List of Eurex Clearing AG outline 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:

- a one-time fee upon conclusion of the first Clearing Agreement,
- an annual fee for the granting of a Clearing License, payable by the Clearing Member on January 31 of each year,
- further fees for certain actions (e.g. general service fees) and transactions (listed ETDs as well as OTC derivatives) and
- collateral service fees for cash and non-cash (securities) collateral provided to Eurex Clearing to cover margin requirements as well as default fund contributions.

The Clearing Conditions as well as the Price List are both publicly available via the Eurex Clearing website. Transaction fees and incentive schemes are either published via the Price List or via Eurex Clearing Circulars. A summary of all available fees and incentives is provided on the Eurex Clearing website by the file "Overview of transaction fees and incentives" (<https://www.eurex.com/ec-en/rules-regs/rules-and-regulations/Overview-of-transaction-fees-and-incentives-ECAG--249698>). Eurex Clearing provides a transparent, non-discriminatory fee and rebate scheme. No bilateral agreements exist. Additionally, Eurex Clearing maintains a close contact to Clearing Members and Disclosed Direct Clients by informing of any envisaged fee amendments in publicly available circulars with at least 10 business days of prior notice.

Eurex Clearing's Clearing Members and Disclosed Direct Clients/Specified Clients may request access to the member section of Eurex Clearing for nominated users. All registered users who have access to the member section of Eurex Clearing can subscribe to receive circulars as mentioned above as a personal newsletter to their professional e-mail address to stay adequately and timely informed. Furthermore, they are granted access to all fee reports showing their own transactions and fees in detail.

Eurex Clearing discloses the prices and fees based on

- different products or product groups,
- execution types (order book or Trade Entry Services trades), and
- accounts.

The Price List includes provisions regarding the conditions to benefit from reduced fees and volume rebates. Furthermore, all Liquidity Providers have to sign a Liquidity Provider Agreement (LPA) to benefit from Liquidity Provider rebates as outlined in the Price List. The LPA together with its attachments includes the conditions to benefit from Liquidity Provisioning rebates and is published on the Eurex Exchange website and accessible for all Clearing Members, Basic Clearing Members and/or other Customers (affected customers).

The account structure of Eurex Clearing allows Clearing Members and their clients to have separate access to the specific services provided with the clearing of a specific transaction type. For the avoidance of doubt, the services in conjunction with a clearing function cannot be accessed as such (e.g. service fee for collaterals) as they utilize services provided for clearing.

Eurex Clearing accounts for costs and revenues separately. The revenues as a result of the services provided can be listed in due course. Likewise, the allocation of costs to services is reviewed on a regular basis. This information is disclosed to the competent authority, for instance during on-site audits or on request.

The public availability of Eurex Clearing's fees and incentive models as well as the uniform application to all market participants results in adequate transparency, also for the purpose of comparison.

Key Consideration 5

An FMI should complete regularly and disclose publicly responses to the CPSS-IOSCO disclosure framework for financial market infrastructures. An FMI also should, at a minimum, disclose basic data on transaction volumes and values.

Eurex Clearing's objectives are fully compliant with regulatory standards for CCPs. Eurex Clearing reviews its methodologies and risk management practices regularly against the Recommendations for Central Counterparties developed by the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) and discloses the results on its website at least every two years (<https://www.eurex.com/ec-en/find/about-us/regulatory-standards>). A detailed Assessment of Observance on Eurex Clearing Observance of the CPSS-IOSCO Recommendations for Central Counterparties for Germany was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed in June 2016 (report: <https://www.imf.org/external/pubs/ft/scr/2016/cr16197.pdf>).

Eurex Clearing publishes a comprehensive set of quantitative data based on the CPMI-IOSCO public quantitative disclosure template. Quarterly updates are provided on Eurex Clearing's website (<https://www.eurex.com/ec-en/find/about-us/regulatory-standards>) in accordance with the frequencies set out by CPMI-IOSCO.

Eurex Clearing's File Services include theoretical price data and all 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. Both end-of-day and intraday data is available. 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.

Eurex Clearing also discloses the price information used to calculate the end-of-day exposures. This information is sent to the Clearing Members in so-called Price Files or Reports and can also be found in the Member Section for File Services of the Eurex Clearing website. Eurex Clearing's competent authorities have on request access to this information based on the applicable disclosure requirements.

The website further provides Clearing Members with necessary data to compute theoretical option prices using certain pricing models.

Volumes of the cleared transactions for each class of instruments cleared by the CCP on an aggregated basis along with other statistics are published on the Eurex 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 (<https://www.eurex.com/ec-en/services/data/volume-statistics>).

Assessment of principle:

Observed

Principle 24: Disclosure of market data by trade repositories

Principle 24: Disclosure of market data by trade repositories

A TR should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

Key Consideration 1

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.

Key Consideration 2

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.

Key Consideration 3

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 format that permits it to be easily analysed.

As outlined in Key Consideration 1 of Principle 1, Eurex Clearing is an authorized CCP under EMIR and not a trade repository. Therefore, Eurex Clearing deems Principle 24 as not applicable.

Assessment of principle:

Not applicable