

# **ICE CLEAR EUROPE**

## **Compliance with Principles for Financial Market Infrastructure Disclosure**

**30 September 2016**

**Version 2.0**

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## INTRODUCTION

### **Responding institution:**

ICE Clear Europe Limited ("ICEU" or the "Clearing House" or "CCP")

### **Jurisdiction in which the FMI operates:**

United Kingdom / United States of America

### **Authority regulating, supervising or overseeing the FMI:**

Bank of England / CFTC / SEC

The date of this disclosure is 30 September 2016. This disclosure can also be found at [www.theice.com](http://www.theice.com). For further information, please contact ICEU Compliance at [ICEUClearEuropeCompliance@theice.com](mailto:ICEUClearEuropeCompliance@theice.com).

### **I. Executive summary**

ICEU has completed its self-assessment against the internationally recognised "Principles for Financial Market Infrastructure" ("PFMI") published in February 2012 and developed jointly by the Committee on Payments and Market Infrastructures ("CPMI"), formerly known as the Committee on Payment and Settlement Systems ("CPSS"), and the Technical Committee of the International Organisation of Securities Commissions ("IOSCO"). This document is reviewed and approved by the ICE Clear Europe Senior Management Team and updated at a minimum of every two years and, where appropriate, on an ad hoc basis to reflect any significant changes to ensure the disclosure document remains accurate in all material respects.

ICEU is part of the Intercontinental Exchange, Inc. Group ("ICE") and was incorporated in England and Wales on 19 April 2007 as a private limited company under the Companies Act 1985 (as amended) with registered number 06219884. ICEU's registered office is at: 5th Floor, Milton Gate, 60 Chiswell Street, London EC1Y 4SA. ICEU's operations are provided from its registered address. ICEU was formed to provide clearing services to certain markets operated by the ICE Group and for certain Over-the-Counter ("OTC") contracts. The provision of clearing services commenced on 3 November 2008.

The clearing services provided at the date hereof comprise the energy, emissions, financials and soft commodities markets operated by ICE Futures Europe ("IFEU") (a UK recognised investment exchange or "RIE"), the energy markets operated by ICE Endex Derivatives B.V. ("ICE Endex") (a regulated market in the Netherlands), the energy markets operated by ICE Futures US ("IFUS"), and European Over-the-Counter ("OTC") credit default swaps ("CDS"). ICEU has developed an OTC Foreign Exchange ("FX") clearing service which has received all necessary regulatory approvals but for which a launch date has yet to be set.

ICEU is a UK Recognised Clearing House ("RCH") under Part XVIII of the Financial Services and Markets Authority 2000 ("FSMA") and a Recognised Central Counterparty ("RCCP"), and is supervised as such by the Bank of England. Recognition was granted on 12 May 2008. As a RCH, ICEU is subject to the Recognition Requirements for Investment Exchanges and Clearing Houses Regulations 2001 ("REC") and the relevant parts of the Bank of England's policies, rules and standards.

ICEU has been authorised as a European Market Infrastructures Regulation ("EMIR") compliant CCP under 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, and under the Financial Services and Markets Act 2000. Recognition was granted on 19 September 2016.

ICEU also holds registrations as a Derivatives Clearing Organisation ("DCO") from the US Commodity Futures Trading Commission ("CFTC") and as a Securities Clearing Agency ("SCA") from the Securities and Exchange Commission ("SEC").

ICEU is also recognised as an inter-bank payment system under the Banking Act 2009 and regulated by the Bank of England in this respect. Additionally, ICEU has received settlement finality designation ("SFD") under the Financial Markets and Insolvency (Settlement Finality) Regulations 1999 and as such ICEU's systems are now designated under the EU's Settlement Finality Directive.

ICEU has 78 Clearing Members located in various jurisdictions including: France, Germany, Italy, Spain, Sweden, Switzerland, the Netherlands, the United Kingdom and the United States of America.

## **II. General Description of ICE Clear Europe**

As a CCP, ICEU's systems are designed to protect the financial integrity of the markets for which it acts as CCP by maintaining collateral, facilitating payments and collections, and limiting counterparty risk. Positions are marked to market at least daily, and in some cases at regular intervals throughout the day. ICEU maintains a comprehensive set of rules and policies in addition to customer protection, risk management and governance frameworks.

ICEU currently provides clearing services in relation to IFEU, ICE Endex and IFUS, and in respect of European OTC CDS contracts. ICEU has also developed an OTC FX clearing service which has received all necessary regulatory approvals but for which a launch date has yet to be set. The clearing services generically include, inter alia:

- (a) Trade registration and management;
- (b) Position management, margin and collateral;
- (c) Treasury, cash payment/receipt and billing;
- (d) Clearing risk management;
- (e) Default management; and

(f) Contract expiry and deliveries.

ICEU accepts transactions on the basis of an open offer mechanism for exchange-traded derivatives and on the basis of novation for OTC CDS contracts, pursuant to which contracts arise automatically on the occurrence of certain events. Under an open offer mechanism, at the point an open buy order matches with an open sell order at the relevant market, ICEU will become the buyer to the seller and the seller to the buyer. For off-screen trades which are registered with ICEU for clearing (i.e. Block Trades, Exchange for Physical and Exchange for Swaps) a contract will form upon complete details being sent to the relevant market and accepted through their systems at which point ICEU becomes counterparty to the trade based on open offer. Under the novation mechanism, ICEU will become buyer to every seller and seller to every buyer at the point that the trade is registered with ICEU and in accordance with the Clearing Rules.

Whenever a Contract is recorded in a Customer Account of a Clearing Member, a back-to-back Customer-CM Transaction with equal terms will also arise between the Clearing Member and its Customer. The liabilities and obligations of ICEU will extend only to, and be enforceable only by, Clearing Members. ICEU can also request additional Margin or restrict a Clearing Member from increasing its open position, inter alia, if a Clearing Member exceeds its Position Limit.

ICEU's clearing systems (described below) receive details of trades in real-time from the relevant market. Affirmed OTC CDS trades are registered with ICEU through either a weekly clearing cycle for older transactions or a real-time clearing cycle for transactions done on Approved CDS Trade Execution Platforms. ICEU becomes counterparty to the trade through the process of novation.

ICEU receives only validated data in relation to both matched trades and block trades. The trading systems are designed to ensure that only details of matched trades or complete block trades are passed to ICEU for clearing. However, ICEU retains a right to reject contracts in the event of an error.

Clearing Members have rights and obligations set out in the Rules and a Clearing Membership Agreement and, where applicable, an addendum to the Clearing Membership Agreement. Every Clearing Member agrees to be contractually bound by the Rules as a result of becoming a Clearing Member.

ICEU's IT functions, systems and services are predominantly outsourced to other ICE entities which include ICE Inc. ("ICE"), IFEU and ICE Clear Credit ("ICC"). The ICEU IT team works collaboratively with ICE Inc. and ICC IT teams, ICEU business teams and relevant external parties (e.g. Clearing Member firms) to ensure that the functionality of new/modified systems is acceptable and meet the intended business requirements. Intragroup arrangements between ICEU and the other ICE entities are governed by formal service agreements.

### III. Key metrics

ICEU clears approximately 4 million contracts every day and, as at 30 September 2016, holds initial margin of approximately \$47.8 billion.

ICEU monitors, on an intraday/daily basis, the amount of collateral that it holds together with its potential exposure to Clearing Members. In the event of a default, the following resources are available to ICEU in order that it can continue to meet its obligations to non-defaulting Clearing Members: (i) the defaulter's initial margin (including any other collateral on deposit); (ii) the defaulter's Guaranty Fund contribution; (iii) ICEU's own capital contribution; (iv) the Guaranty Fund contributions of non-defaulting Clearing Members; and (v) Powers of Assessment as described in the Rulebook.

ICEU monitors the amount of its own resources to meet regulatory requirements and has incident recording and reporting processes to track, in particular, the resilience of its systems and processes.

### IV. Summary of major changes since the last update of the disclosure

Since its previous disclosure, ICEU has undergone the following changes:

- In September 2016, ICEU was authorised as EMIR-compliant CCP under 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, and under the Financial Services and Markets Act 2000. A number of changes were made to ICEU's operations - most notably account structures and margin calculations - in order to meet the requirements of various updated EMIR requirements.
- In Q4 2015 ICEU deployed the Risk Governance Enhancement Programme ("RGEP") to raise the overall standard of risk identification and governance arrangements (see Principles 2 and 3 for more details) through enhancing risk governance capabilities, processes and structures. ICEU has already made significant changes: the formation of a Risk Appetite Framework (including a common risk taxonomy); strengthening of risk identification processes; a re-design of committee arrangements to improve oversight of risk governance and a revised approach to risk monitoring; and reporting and model risk governance. The RGEP is scheduled to be concluded by the end of 2016.
- ICEU enhanced its Recovery Plan in line with international guidance published since February 2014. The Recovery Plan describes how ICEU would maintain the continuity of its critical services and reduce the likelihood of the need for use of resolution powers by authorities and/or use of public money in a significant stress event. The final version of the Recovery Plan was approved by the ICEU Board (or "Board of Directors") at its meeting on 21 April 2016.
- ICEU developed plans to effect transfer of its investment management arrangements to avoid any dependence of the failed investment counterparty. ICEU has agreed procedures (roadmaps) with its investment and custody agents describing the steps and documentation required to change investment and custody activities from the non-performing agent to the performing one. These roadmaps will be executed by ICEU in case one of the agents is in default or cannot provide its services, while the assets affected are required by ICEU to meet its obligations.

## GLOSSARY OF ABBREVIATIONS

ADP	Alternative Delivery Procedure
AFI	Authorised Financial Institution
API	Application Programming Interface
APS Banks	ICEU's Approved Financial Institutions which are part of the Assured Payment System operated by ICEU
BCP	Business Continuity Plan
Board	ICE Clear Europe Board of Directors
BRC	Board Risk Committee
CCP	Central Counterparty
CDS	Credit Default Swaps
CEA	U.S. Commodity Exchange Act
CFTC	U.S. Commodity Futures Trading Commission
Clearing Rules	Clearing Rules of ICE Clear Europe
CM	Clearing Member of ICE Clear Europe
CMA	Clearing Membership Agreement
CMBCG	Cross Market Business Continuity Group
CPSS	Committee on Payment and Settlement Systems
CSD	Central Securities Depository
DCO	Derivatives Clearing Organization

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DNS	Deferred net settlement
DR	Disaster recovery
DvP	Delivery versus payment
ECS	Extensible Clearing System
EMIR	European Market Infrastructures Regulation
ERC	Executive Risk Committee
F&O	ICEU's Futures and Options business
FIA	Futures Industry Association
FMI	Financial Market Infrastructure
FSS	Fedwire Security Services, the securities settlement system of the Federal Reserve (US Central Bank).
FX	Foreign Exchange
GF	Guaranty Fund
ICE	Intercontinental Exchange
ICEU	ICE Clear Europe
IFEU	ICE Futures Europe
IFUS or ICE Futures US	ICE Futures U.S., Inc.
IOSCO	International Organisation of Securities Commissions
ISG	ICE SWIFT Gateway (interface between the internal clearing systems and the external industry standard SWIFT network)
ISOC	Individually Segregated margin-flow Co-mingled account

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IT	Information technology
LSOC	Legally Segregated Operationally Co-mingled account
LST	Liquidity Stress Testing scenarios
MDSP	Market delivery settlement price
PFMI	Principles for Financial Market Infrastructures
PTMS	Post Trade Management System
Repo	Repurchase agreement RTGS
	Real-time gross settlement
SOC	Service Organisation Controls
SFTP	Secure File Transfer Protocol
SP	Sponsored Principal
SSS	Securities Settlement System
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TOG	Technical and Operational Group
TR	Trade Repository

## DISCLOSURE OF PRINCIPLES

ICEU's Disclosure Framework for Financial Market Infrastructure is set out in the sections below.

## Principle 1: Legal

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

### Summary Narrative

ICE Clear Europe Limited ("ICEU") is part of the Intercontinental Exchange, Inc. ("ICE") group (the "ICE Group"). It was incorporated in England and Wales on 19 April 2007 as a private limited company under the Companies Act 1985 (as amended) with registered number 06219884. ICEU's registered office is at: 5<sup>th</sup> Floor, Milton Gate, 60 Chiswell Street, London EC1Y 4SA. ICEU provides clearing services to certain markets operated by the ICE Group and for certain over-the-counter ("OTC") contracts. The provision of clearing services commenced on 3 November 2008. The clearing services currently support markets operated by ICE Future Europe ("ICE Futures") (a UK recognised investment exchange, or "RIE"), ICE Futures US ("IFUS"), ICE Endex Derivatives B.V. ("ICE Endex"), ICE Endex Gas B.V. ("ICE Endex Continental") and ICE Endex Gas Spot Limited ("ICE Endex UK"). ICEU also clears OTC credit default swap ("CDS") contracts.

ICEU is currently a Recognised Clearing House ("RCH") under Part XVIII of the Financial Services and Markets Act 2000 (as amended, "FSMA") and a Recognised Central Counterparty ("RCCP"), and is supervised as such by the Bank of England. As a RCH, ICEU is subject to the Financial Services and Markets Act 2000 (Recognition Requirements for Investment Exchanges and Clearing Houses) Regulations 2001 (SI 2001/995) (as amended, the "Recognition Requirements") and the relevant parts of the Bank of England's policies, rules and standards.

ICEU is a RCCP under the European Market Infrastructure Regulation (Regulation (EU) No 648/2012) ("EMIR") and section 290(1)(b) of FSMA. As a result, it is subject to the associated regulatory technical standards and provisions of the Schedule to the Recognition Requirements implementing EMIR, including Part 5 (Recognition Requirements for Central Counterparties) and Part 6 (Recognition Requirements Applying to Central Counterparties: Default Rules). ICEU is also the system operator of a Designated System for the purposes of the Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (SI 1999/2979) (as amended, the "Settlement Finality Regulations"), with the effect that certain protections against the operation of normal insolvency law are afforded to ICEU in respect of transfer orders, collateral security, rules on the settlement of transfer orders and default arrangements of ICEU and net sums declared by ICEU. It is also a recognised payment system under the UK's Banking Act 2009. ICEU is also registered as a Derivatives Clearing Organisation ("DCO") by the US Commodity Futures Trading Commission ("CFTC") and as a Securities Clearing Agency ("SCA") by the Securities and Exchange Commission ("SEC").

ICEU is a recognised central counterparty under Part VII of the Companies Act 1989, with the effect that certain proceedings of ICEU (e.g. default rules, default proceedings, liquidation of Clearing Members' proprietary and customer account positions and related margin, and transfers of Clearing Member

account positions and related margin) take precedence over insolvency procedures. The Settlement Finality Regulations and Part VII of the Companies Act 1989 combine to significantly reduce the risk that actions taken by ICEU in managing a default would be subject to successful legal challenge.

The ICEU Clearing Rules, which are publicly available on ICEU's website,<sup>1</sup> are governed by the laws of England and Wales (Rule 102(s)) and the jurisdiction of England and Wales is the principal jurisdiction within which ICEU operates and in which it is incorporated and regulated.

The following are the material aspects of ICEU's activities that require a high degree of legal certainty:

- Legal enforceability of margin, Guaranty fund contributions, contracts, fees and other payment obligations;
- Settlement and delivery of futures contracts and detail around options contracts;
- Clearing Rules, including Default Rules (which contain netting provisions);
- Settlement finality;
- Terms of cleared products; and
- Enforceability of disciplinary and disputes provisions.

Each Clearing Member accedes to the Clearing Rules and Procedures through execution of the Clearing Membership Agreement governed by English law whereby the Clearing Member, among other matters, agrees to observe, comply with and be bound by the Clearing Rules and Procedures. The Clearing Rules are subject to extensive public and regulatory consultation and governance requirements. The Clearing Rules and Procedures were drafted in consultation with, and continue to be amended with the assistance of external counsel. ICEU sets out on its website a disclosure statement,<sup>2</sup> which describes in plain language a description of various key aspects and risks of clearing and the Clearing Rules. These levels of third party engagement and disclosures provide assurance that the Clearing Rules and Procedures are clear and understandable.

ICEU has close working relationships with its regulators, engages actively with market associations such as FIA and EACH as well as its members, and has an ongoing consultative and advisory relationship with external counsel, which ensure that it is fully apprised of relevant laws and regulations and that its Clearing Rules, Procedures and legal opinions are consistent with relevant laws and regulations.

Given the rate of current regulatory change for clearing, new issues are regularly identified and, where appropriate, addressed through changes to the

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<sup>1</sup> [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf).

<sup>2</sup> [http://www.theice.com/publicdocs/clear\\_europe/ICEU\\_EMIR\\_Disclosure\\_Statement.pdf](http://www.theice.com/publicdocs/clear_europe/ICEU_EMIR_Disclosure_Statement.pdf).

Clearing Rules and/or Procedures. Amendments to the Clearing Rules and Procedures relating to business-as-usual product launches and operational processes can be approved by the ICEU President and Managing Director, acting together with the Head of Regulation. Other rule amendments that are required to ensure compliance with relevant legislation directed at ICEU as a clearing organisation require approval of the board of directors of ICEU (the "ICEU Board") under ICEU's Articles of Association. In addition, Rule 109 of the Clearing Rules requires ICEU to hold public consultations on most proposed rule changes. Rule changes are also required to be filed with relevant regulators in advance of implementation as part of prescribed regulatory processes. The consultation process ensures that regulators and Clearing Members have the opportunity to consider and challenge the proposed rules or arrangements, including with respect to enforceability in specific jurisdictions.

The legal basis for ICEU's activities is articulated through: regulatory approval and authorisation processes with the Bank of England under the Recognition Requirements and EMIR (with respect to RCH/RCCP status), CFTC (with respect to DCO status), and SEC (with respect to SCA status). Legal opinions exist for all Clearing Member and Sponsored Principal jurisdictions covering applicable local licensing requirements and enforceability issues.

Under Commission Delegated Regulation (EU) No 153/2013 (the "EMIR RTS"), ICEU is required to identify and analyse potential conflicts-of-law issues and to develop rules and procedures to mitigate legal risk resulting from such issues, and if necessary, to seek independent legal opinions for the purpose of that analysis.<sup>3</sup> ICEU has therefore obtained legal opinions in all Clearing Member jurisdictions to, amongst other things, identify and analyse conflicts-of-law issues and to ensure that the Clearing Rules are enforceable in each respective jurisdiction. Conflicts-of-law issues identified in the legal opinions include governing law and insolvency issues. Governing law issues are addressed through clear governing law provisions in the Clearing Rules, Procedures and agreements.

As described above, insolvency issues are addressed by reliance on Part VII of the Companies Act 1989 (which includes specific provisions on the non-enforceability of contrary foreign judgments in relation to insolvency law) and the Settlement Finality Regulations. In the event that any other conflicts-of-law issues arise that are not addressed through governing law provisions or UK legislation, ICEU would seek to ensure that such conflict was addressed as appropriate by working with the local counsel and making rule amendments. For example, ICEU recently consulted on and published amended rules to address conflicts between German anti-boycott laws and US sanctions laws.

#### Publicly Available Resources

ICEU Clearing Rules and Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

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<sup>3</sup> Article 5(4), EMIR RTS.

Membership Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Membership\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Membership_Procedures.pdf)

Regulatory Filings: <https://www.theice.com/clear-europe/regulation#rule-filings>

Circulars: <https://www.theice.com/clear-europe/circulars>

ICEU Governance: [https://www.theice.com/publicdocs/clear\\_europe/Organisational\\_Structure\\_Objectives\\_Strategy.pdf](https://www.theice.com/publicdocs/clear_europe/Organisational_Structure_Objectives_Strategy.pdf)

ICEU Board Delegation: [https://www.theice.com/publicdocs/regulatory\\_filings/Clear\\_Europe\\_Board\\_Delegation02292016.pdf](https://www.theice.com/publicdocs/regulatory_filings/Clear_Europe_Board_Delegation02292016.pdf)

Companies Act 1989: <http://www.legislation.gov.uk/ukpga/1989/40/section/155>

## 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.

### Summary Narrative

ICEU's principal activity is the provision of clearing services to certain markets within the ICE Group and for certain OTC contracts. ICEU's clearing strategy is designed to complement a diverse market while meeting the risk management, capital and regulatory requirements of a dynamic global marketplace. ICEU clears, settles and guarantees the financial performance of futures contracts and options on futures contracts. ICEU also clears certain European OTC CDS instruments. The strategy of ICEU is based on the following objectives:

- Maintenance of regulatory licences – developing the business to meet ICEU's member and customer regulatory needs.
- Safeness and security – sound operational and risk management systems, models and procedures developed to meet the needs of users.
- Servicing the market – products and services tailored to the needs of users.

In implementing this strategy, management seeks to ensure that no new opportunity or initiative negatively impacts the efficacy of existing operations or takes priority over any initiative that is mandated by regulation. The ICEU Board is actively involved in overseeing ICEU's performance against its objectives and business risks as part of standard governance processes. ICEU has formally established risk objectives which support its Corporate Objectives, and are aligned with its risk taxonomy (a comprehensive, common and stable set of risk categories). The ICEU Board is responsible for ensuring that both the Risk Appetite (a set of high level statements expressing the level of risk the firm is prepared to incur or be exposed to) and Risk Appetite Metrics (a set of metrics which collectively articulate the level of risk the firm is prepared to incur or be exposed to) are compatible and consistent with ICEU's Corporate Objectives. In addition, the ICEU Board is responsible for approving both the Risk Appetite and Risk Metrics. ICEU's documented governance arrangements and the risk management framework are designed to promote its safety and efficiency and support the stability of the broader financial system, other relevant public interest considerations and the objectives of relevant stakeholders.

The constitution of ICEU (governed by the Companies Act 2006 (as amended, the "CA 2006") is set out in its Memorandum and Articles of Association (the "Articles"), which are available publicly from Companies House. ICEU's constitutional documentation specifies the governance arrangements for the ICEU Board and shareholders, as appropriate. Public disclosure of ICEU's organisational structure, including governance arrangements, is available on its

website.

The ICEU Board comprises ten Directors<sup>1</sup> of which three have executive roles within ICEU or the ICE Group, and five are currently treated as independent. These Directors are appointed based on skills and experience commensurate to ICEU's needs and legal and regulatory requirements such as those in the CA 2006 and EMIR.<sup>2</sup> Requirements in relation to conflicts of interest and disclosure obligations are set out in the Articles and the CA 2006. Relevant disclosures/conflicts are required to be disclosed by Directors to fellow ICEU Board members in accordance with relevant obligations under the Articles and CA 2006. The ICE Global Code of Business Conduct and ICEU Corporate Conflicts Policy set out the requirements for identifying, disclosing and managing potential conflicts and apply to all Directors and staff.

ICEU has a vetting processes for all new ICEU Board members, key individuals and other staff. Individuals are selected as Directors based on their skills and prior experience and are reviewed by the Nominations Committee prior to approval by the ICEU Board. The Chairman keeps the performance of ICEU Directors under review, and an annual self-assessment co-ordinated by the Company Secretarial Department is undertaken by the ICEU Board. This process includes occasional external reviews of ICEU Board effectiveness as well as annual internal reviews. ICEU Board member remuneration is reviewed and contains elements consistent with the long-term performance of the Company. The compensation policy is reviewed annually and is also subject to independent audit on an annual basis.

The ICEU Board is charged with ensuring that risk management and internal control personnel (including Internal Audit) have sufficient independence, influence, authority, resources, and access to the ICEU Board (as appropriate) so that the operations of ICEU are consistent with the risk management framework established by the ICEU Board. Specific elements of the operation of ICEU are delegated to the ICEU management through the Articles and relevant ICEU Board resolutions. The ICEU Board has six Standing Committees, each of which has separately agreed Terms of Reference that set out their roles and responsibilities. These comprise:

- three Risk Committees, namely the ICEU Board Risk Committee and the two Product Specific Risk Committees (i.e. CDS and futures and options ("F&O")), which all include Clearing Member representatives;
- the Audit Committee;
- the Compensation Committee; and

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<sup>1</sup> As at 30 September 2016

<sup>2</sup> ICEU discloses its board composition, which identifies the directors that it regards as independent – please refer to [https://www.theice.com/publicdocs/clear\\_europe/Organisational\\_Structure\\_Objectives\\_Strategy.pdf](https://www.theice.com/publicdocs/clear_europe/Organisational_Structure_Objectives_Strategy.pdf).

- the Nominations Committee.

The ICEU Board Risk Committee and two Product Risk Committees operate in an advisory capacity to the ICEU Board, while the Audit Committee, the Compensation Committee and the Nominations Committee oversee corporate governance requirements, providing oversight of ICEU. The ICEU Board, the Risk Committees and the Audit Committee meet at least quarterly. The ICEU Board Risk Committee receives regular reports on the status of the risk indicators and thresholds as appropriate. The Compensation Committee meets at least annually and the Nominations Committee meets as required.

The authority of the Internal Audit function is set out in the Internal Audit Charter approved by the ICEU's Audit Committee on behalf of the ICEU Board. Executive responsibility for day-to-day management and operations of ICEU rests with the President and Managing Director. The President and Managing Director is selected and evaluated by the ICEU Board. The President and Managing Director delegates to the Senior Management Team, as appropriate. ICEU's Management Committees include:

- the Executive Committee;
- the Executive Risk Committee; and
- the Model Oversight Committee.

Accountability to owners, participants and other relevant stakeholders is achieved through several methods, such as: the ICEU Board, including one executive and two shareholders' representatives amongst a total of ten; the ICEU Board Risk Committee and Product Risk Committees, including Clearing Members; and Rule amendments and business initiatives being consulted on with Clearing Members, other market participants and regulators, as appropriate. Decisions affecting Clearing Members are notified by Circular and posted on the ICEU website. The decisions of the ICEU Board and its Committees are formally documented, reviewed and subsequently approved. Formal notifications to regulators concerning material changes and Rule makings are made in line with their requirements.

ICEU has a low appetite for risks that threaten the safety and efficiency of its operations, achievement of its business objectives and the stability of the financial system of which it is a part. It is recognised that incidents do occur and ICEU has defined performance thresholds and levels of tolerance beyond these thresholds, for specific categories of risk (i.e. Financial Risks, Operational Risks, Legal & Regulatory Risks and Business Risks). Once set, these thresholds and tolerance levels guide and inform the setting of appropriate risk appetite metrics. The ICEU Board, Risk Committees (including the ICEU Board Risk Committee), and Audit Committee, together with Senior Management and staff regularly review ICEU's policies, procedures and controls to ensure that they are consistent with its risk tolerance and appetite.

ICEU has adopted a structured model for managing risks to which it is, or may be, exposed, which includes: (i) business lines and support functions (e.g.

Clearing Risk, Operations, Treasury and Banking) that manage day-to-day risks; (ii) risk oversight services (e.g. Risk Oversight, Information Security, Business Continuity Planning ("BCP")) which create, maintain and implement ICEU's risk framework and related policies; and (iii) the internal audit function and ICEU's external auditors. Relevant interests are identified and taken account of through various mechanisms within the ICEU governance arrangements, including ICEU Board (and shareholder) meetings and resolutions, Product Risk Committee meetings and ICEU Board Risk Committee meetings. Further information on ICEU's risk management framework is contained in Principle 3.

As a subsidiary of ICE, a NYSE publicly listed company, ICEU is subject to group standards, policies and procedures governing aspects of its operational risk management including Codes of Ethics, as well as group policies relating to information security and business continuity and disaster recovery. The ICEU Board considers the implications of these group policies, standards and procedures and is also subject to specific policies on conflict management (such as the Corporate Conflicts Policy) so that ICEU's governance arrangements continue to be clear and transparent, promoting safety and efficiency and supporting the stability of the broader financial system.

#### Publicly Available Resources

ICEU Organisation Structure and Strategy: [https://www.theice.com/publicdocs/clear\\_europe/Organisational\\_Structure\\_Objectives\\_Strategy.pdf](https://www.theice.com/publicdocs/clear_europe/Organisational_Structure_Objectives_Strategy.pdf)

Companies Act 1989: <http://www.legislation.gov.uk/ukpga/1989/40/section/155>

Companies House: [www.companieshouse.gov.uk](http://www.companieshouse.gov.uk)

ICEU Board Delegation: [https://www.theice.com/publicdocs/regulatory\\_filings/Clear\\_Europe\\_Board\\_Delegation02292016.pdf](https://www.theice.com/publicdocs/regulatory_filings/Clear_Europe_Board_Delegation02292016.pdf)

ICEU Clearing Rules and Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Circulars: <https://www.theice.com/clear-europe/circulars>

Regulatory Filings: <https://www.theice.com/clear-europe/regulation#rule-filings>

### 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.

#### Summary Narrative

ICEU has a comprehensive risk management framework. It has established Risk Objectives, a Risk Appetite<sup>1</sup> and Risk Appetite Metrics<sup>2</sup> and a commitment to manage risk. It has also put in place robust risk governance processes, as well as policies, procedures and controls that help identify, measure, monitor and manage the risks that arise in or are borne out by ICEU. The key policies and procedures include (but are not limited to):

- Risk Appetite Framework - details the processes and procedures for the setting, review, monitoring and reporting of ICEU's Risk Appetite and Risk Appetite Metrics, the escalation protocols for Risk Appetite Metric threshold breaches, and the roles and responsibilities attached to these processes and procedures.
- Risk Identification Framework - sets out four core components that help identify, assess and respond to risks posed to the Clearing House, including risk identification and classification, operational risk self-assessments and emerging risks assessment.
- Model Risk Governance Framework - establishes standards and principles for managing and mitigating the impact to the Clearing House's business caused by model error or inappropriate model use.
- Incident Management Policy and Procedures – these set out procedures for managing incidents that impact general business processes and/or IT production systems.
- Business Continuity and Disaster Framework – this specifies ICEU's overriding business continuity planning and disaster recovery policies and arrangements, which are designed to ensure timely recovery of operations and fulfilment of clearing obligations and effective coordination among affected parties during a business continuity and/or disaster recovery event.
- Clearing Rules and Procedures – every Clearing Member agrees to be contractually bound by the Clearing Rules and Procedures as a result of becoming a Clearing Member.

ICEU uses a Risk Taxonomy to define the types of risk which it is exposed to. This Taxonomy is aligned to the risk types identified at group level in the ICE Enterprise Risk Management Policy and identifies the following high level risk types:

- Legal and regulatory risk (such as enforceability risk and regulatory compliance);
- Financial risk (such as Clearing Member credit, default management, investment, concentration, custodian and liquidity risks);
- Operational risk (such as fraud, employment practices and workplace safety, staffing, business disruption and systems failure risks); and

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<sup>1</sup> set of high level statements expressing the level of risk the firm is prepared to incur or be exposed to

<sup>2</sup> set of metrics which collectively articulate the level of risk the firm is prepared to incur or be exposed to

- Business risk (such as revenue, reputational and regulatory evolution risk).

The ICEU Board conducts an annual review of the Risk Appetite and Risk Appetite Metrics. The ICEU Risk Committees regularly review the risk management framework including clearing membership requirements, margin parameter settings and sensitivity analysis, default management procedures, analysis of Guaranty Fund requirements, collateral management, counterparty risk reviews, liquidity analysis and stress scenarios.

ICEU uses a number of systems to help identify, measure, monitor and manage the range of risks that arise from its clearing activities. These systems use a combination of qualitative and quantitative measures. The systems include: Extreme Risk Identification; Model Risk Governance; Operational Risk Self-Assessment; new product and change management control processes; and systems to capture and track IT and operational incidents.

ICEU's risk management procedures and systems support the underlying policy framework and set out internal procedures and control activities to ensure that ICEU's risk exposure is adequately managed. ICEU's policy governance and review processes consists of, but is not limited to, the following key aspects:

- the number and complexity of the policies and procedures have been designed to match the risk appetite of ICEU and the level of regulatory requirements;
- the process for developing and approving risk management policies is formally documented;
- policy owners are accountable for setting policy and ensuring it is communicated and understood throughout ICEU; and
- policies are subject to the formal review by the ICEU Board and Risk Committees, with support from the management committees.

ICEU assesses the effectiveness of its risk management policies, procedures and systems by adopting the following measures:

- Risk Oversight Department review - the Risk Oversight Department provides independent oversight prior to any changes to risk policies, procedures and systems being approved by the Board as well as overseeing that periodic and ad-hoc reviews take place.
- Committee Oversight - as part of the governance process, the CDS/F&O Product Risk Committees, Audit Committee and the ICEU Board Risk Committee routinely review ICEU's policies.
- Model Risk Governance Framework - in accordance with the Model Risk Governance Framework, models are subjected to independent validations prior to application of a new model or change to a model as well as on a routine basis.
- Internal Audit Department assurance - Internal Audit provides regular periodic assurance over the risk management framework, including policies and procedures and the risk management activities undertaken by the business. The Internal Audit Function employs a risk-based approach to assess the efficiency and effectiveness of the design and operation of internal controls and risk management and periodically provides assurance to Senior Management and the ICEU Board.

ICEU management also keep abreast of industry best practices, and regulatory and market developments. The relevant Risk Committees, the Audit Committee and the ICEU Board are updated regularly, as appropriate, on the outcome of these reviews and action plans to be undertaken.

The ICEU core risk management policies, procedures and control systems that form part of ICEU's risk management framework are reviewed at least annually. ICEU's Senior Management is responsible in the first instance for identifying, measuring, monitoring, managing and reporting fluctuations in risk intensity, changing environments and market practices. The second and third lines of defence (i.e. compliance and audit) are responsible for keeping the risk frameworks under review and reporting to Senior Management, the ICEU Board and its advisory committees as required and appropriate, taking into account historical market experience, forward-looking market indicators, material changes to Clearing Members' portfolio composition, and other relevant factors.

ICEU provides a range of information to Clearing Members and, where relevant, to their customers to enable them to manage and contain the risks they pose to ICEU, including: feedback on the Counterparty Ratings System; the issues identified in membership applications and from ongoing membership oversight and due diligence; SPAN parameters and access to the methodology; daily reporting of margin requirements and positions; Intraday Margin files; and results of stress testing and back testing, etc.

The incentives provided by ICEU to Clearing Members and their customers to monitor and manage the risks they pose to ICEU include: margin and Guaranty Fund requirements (see Principle 4); margin add-ons (e.g. stress loss charges, APC charges); membership criteria; and Clearing Member Rules. The Product Risk Committees (F&O and CDS) include representation from suitably qualified Clearing Members who advise the Board on risk management arrangements and the adequacy of the relevant Guaranty Fund and other incentives. The Board Risk Committee includes representation from both Clearing Members and their customers and advice the Board more broadly on any arrangements that materially impact the risk management of the Clearing House.

Material risks that ICEU bears from and poses to other entities (e.g. other FMIs, Assured Payment System (APS) banks, investment agents and service providers) are considered and measured as part of the risk management framework. Key sources of such risks, including counterparty credit risk, wrong way risk, liquidity risk, investment risk, custodian risk, supplier risk, concentration and operational risk (which includes amongst others business continuity and information technology risks) are considered as part of routine risk assessment processes as well as emerging risk assessments.

ICEU identifies financial institutions on which it relies to effect settlement of cash, securities and physical transactions. For example ICEU has established a network of financial institutions to implement the APS. In addition, ICEU has dependencies on: infrastructure and service providers (see Principle 17 - Operational Risk); investment agents (see Principle 16 - Custody and Investment Risk); and liquidity providers (see Principle 7 - Liquidity Risk). The risks posed by ICEU to other entities are considered in the Recovery Plan. ICEU employs tools such as due diligence on providers, an Approved Financial Institution Policy, legal arrangements, and rights to access information on providers to address the material risks arising from interdependencies with other entities.

In line with the Recognition Requirements, ICEU maintains a Recovery Plan which sets out the actions and steps that would be taken to recover ICEU to a viable condition in the event that it came under severe financial stress; and to maintain effective arrangements for ensuring losses that threaten ICEU's

solvency are allocated. ICEU has adopted a risk-based approach to evaluate the effects of default and non-default losses, which is documented in the Recovery Plan. This risk based scenario analysis consists of different impact categories and severity levels, and provides the basis by which different types of stress scenarios are assessed.

The scenarios within ICEU's Recovery Plan take into account independent and related risks to which ICEU is exposed to, including: significant default and non-default losses and liquidity shortfalls; suspension or failure of ICEU's critical services, business functions and technology systems and infrastructure; and damage to other market infrastructure, with consequential uncertainty in the markets for which ICEU clears. Stressed scenarios that comprise of default losses (for F&O and CDS) and non-default losses are assessed with a varying degree of impact on ICEU, Clearing Members, other market infrastructure, wider market stability, and implications on ICEU's regulatory permissions and licences. The Recovery Plan identifies the early warning indicators and triggers that could lead to it being invoked, the tools that would be used by ICEU in such circumstances and the decision-making and governance around the use of such tools. It builds on ICEU's established default liquidity risk management frameworks, operational risk management frameworks and information security, business continuity and disaster recovery plans. It also reflects relevant provisions within the Clearing Rules. The Recovery Plan quantifies the severity of financial losses, liquidity risks and systems unavailability and identifies the tools that would be likely to be used depending on the security level. The Recovery Plan is reviewed and revised annually and material changes are subject to Board approval, following review and discussion by the Audit Committee.

In addition to ICEU's risk management framework and the Recovery Plan described above, ICEU has also established a range of mechanisms to manage the risk arising from interdependencies (e.g. services, technology and human resources) which include the following:

- Management of counterparty and credit risk, and model risks – (see Principle 4 (Credit) and Principle 6 (Margin)).
- Default Management Framework - (see Principle 13).
- Liquidity Risk Management Framework – (see Principle 7).
- Capital Resources – (see Principle 15).
- Operational Risk Framework – (see Principle 17).
- Business Continuity Framework – (see Principle 17).
- Information Security Framework – (see Principle 17).

Please also refer to Principle 15 for more information on ICEU's wind down arrangements.

ICEU Clearing Rules and Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Membership Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Membership\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Membership_Procedures.pdf)

#### **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.

#### **Summary Narrative**

##### **Credit Risk Management Framework:**

ICEU's risk management infrastructure is structured specifically to ensure robust clearing arrangements whilst also minimising risks for Clearing Members. ICEU has developed a comprehensive Six Tiered Waterfall approach to systemic risk management. The six tiers are:

1. Membership criteria and on-going monitoring;
2. Original Margin calculation and call/collection;
3. Variation Margin call/settlement;
4. Intraday Monitoring and Special Margin Call Execution;
5. Guaranty Fund contribution; and
6. Powers of Assessment.

ICEU also accounts for position concentration risk and highlights Clearing Members that require close monitoring using an internal Counterparty Rating System.

The day-to-day management of credit risk posed to ICEU by Clearing Members and the monitoring of exposures against limits is the responsibility of the Clearing Risk Department. The intraday position limits and capital to margin limits are approved and authorised by the relevant Risk Committee(s). The Clearing Risk Department ensures that bilateral limits to individual counterparties or groups of correlated counterparties are not exceeded, that exposures are measured and reported on a daily basis, and that credit mitigation techniques are employed where appropriate. The Treasury and Banking Services Department monitors the activities of ICEU's investment agents and custodians and monitors exposures against limits.

ICEU management has established risk governance processes to ensure new products, services and potential risks are appropriately assessed and governed. A core principle of ICEU's model risk governance in relation to credit risk is that all significant risk model changes must be reviewed at least annually by the

independent Risk Oversight Department (as defined by Model Risk Governance Framework) or equivalent team, who must be independent of the persons or team that carried out the model development. Finally, all risk model changes are approved by the appropriate Model Oversight Committee.

The Liquidity Risk Management Framework is designed to ensure with a high level of confidence that ICEU is able to effect payment and settlement obligations in all relevant currencies as they fall due, including, where appropriate, intraday. It also includes the assessment of ICEU's potential future liquidity needs under a wide range of potential stress scenarios (see Principle 7). The Liquidity Risk Management Framework is maintained by Treasury Operations, and is formally reviewed and updated at least annually.

**Risk Management Tools (identify, measure and monitor):**

ICEU utilises a combination of the Risk Identification Framework and the Model Risk Governance Framework (see Principle 3) to ensure that sources of risk are identified, mitigated and that the process of identification and mitigation is scrutinised.

The relevant Product Risk Committee(s) considers monthly formal risk reports from the Executive and has an opportunity to probe the Executive and the President of ICEU with regard to any aspect of risk that it may consider important.

ICEU has employed a range of methods to monitor and measure credit risk, such as daily monitoring of breaches/exceptions in Clearing Member performance measures; annual reviews of Clearing Members' financial position and membership requirements; monthly watch list<sup>1</sup> monitoring, daily credit reports for short term credit assessment and a review of monthly credit reports (at a minimum) with latest financial data submitted by Clearing Members.

Tools used to control identified sources of credit risk and how the effectiveness of these tools is measured are as follows:

- All positions are marked-to-market daily and intraday to control Clearing Member credit exposure.
- Intraday margins are recalculated and changes in margin requirements intraday are added to changes in mark-to-market to reflect an overall change in intraday liability of the Clearing Member. Thresholds are in place with regards to the risk tolerance permitted by ICEU.
- Controls are in place with regards to concentration charge, wrong way risk charge, delivery charges, liquidity (bid-offer) charges (for CDS), collateral haircuts, and jump-to-default charge (for CDS) that impact the credit risk undertaken by ICEU.
- In-depth assessment upon the accession of a Clearing Member, followed by an in-depth annual review.
- Periodic review of fundamental credit indicators coupled with the output of the Counterparty Rating System.

The Collateral and Haircut Policy sets out the arrangements by which ICEU considers the eligibility of specific assets for inclusion on the list of Permitted Cover and the appropriate valuation and haircut procedures. Only high grade sovereign bonds, gold or cash are accepted as collateral which is valued

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<sup>1</sup> Watch List highlights participants with a special risk situation with consideration to stress testing, credit reports and the Counterparty Rating System.

intraday. Furthermore, the Extensible Collateral System ("ECS") prevents Clearing Members withdrawing collateral which would leave them uncovered against their overnight margin requirement (see Principle 5).

**Margin:**

ICEU covers its current and potential future exposures to each Clearing Member by the following:

- The Clearing Rules require that Clearing Members prefund Initial Margin and Guaranty Fund contributions within agreed timescales to cover potential future exposures regardless of whether activities relate to CDS or F&O.
- The Clearing Rules also require that Clearing Members meet Variation Margin calls and Intraday Margin calls within agreed timescales to cover current exposures, regardless of whether activities relate to CDS or F&O.
- ICEU narrowly defines eligible collateral (see Principle 5).
- Use of a default waterfall approach (see above and Principle 13), which includes the ability of ICEU under its Clearing Rules to make Powers of Assessment on Clearing Members in the event that prefunded resources are not sufficient to cover losses.

ICEU has provision for three Guaranty Funds: F&O, CDS and FX (not yet in service). The Guaranty Funds are entirely separate and there is no provision for losses arising in one (e.g. CDS) being offset using the other Guaranty Fund (e.g. F&O). Within the F&O Fund, there is an energy segment and a financials and softs segment. The funds are calibrated to be sufficient to meet the losses in excess of Initial Margin held of the two largest Clearing Members under severe but plausible market conditions. ICEU itself makes a pre-defined contribution to each fund it operates. ICEU's F&O contribution is a total of \$100m and its CDS contribution is a total of \$50m.

ICEU Guaranty Fund sizing is either set with reference to a Guaranty Fund stress test (CDS) or set by the relevant Risk Committee (in case of F&O) where an additional comprehensive set of stress tests is utilised to test the sufficiency of the Guaranty Fund requirements. In summary, a Clearing Member's positions and margin requirements are extracted, and either historical stress scenarios or theoretical scenarios based on a higher confidence interval (e.g.  $q = 99.75\%$  or  $99.9\%$ ) are used for the stress calculation.

Back testing is also performed to monitor the adequacy of the margin parameters and margin model relative to expected coverage. To this end, a daily review is carried out to determine whether the losses sustained in each account over the appropriate close-out period have been covered by the Initial Margin posted at the beginning of such period. There are separate back-testing arrangements for CDS and F&O clearing services.

The Recovery Plan anticipates the tools and options available to ICEU in circumstances beyond the extreme but plausible market conditions used in stress testing. ICEU complies with EMIR requirements, including in respect of its own contributions to the Guaranty Funds and its regulatory capital.

**Review Arrangements:**

Clearing Risk Policies are reviewed and approved by the relevant Product Risk Committee and the ICEU Board at least annually. Changes to the Risk Margin Methodology are considered by the Clearing Risk Department, submitted to the relevant Risk Committee in accordance with the Model Risk Governance Framework ("MRGF") - see below. Risk Waterfall models that calculate Clearing Member requirements are subject to regular testing. If the model calibration consistently demonstrates exceptions outside of the required tolerance, the Clearing Risk Department reviews the models and recommends revisions to the relevant Risk Committee and/or the Board in line with governance requirements. The results of stress testing are presented to the Product Risk Committees monthly. The Policy Governance Review calendar and Clearing Risk policies set out the ongoing role of the relevant Committee, including the at least annual review of the continued adequacy of the Margining Policies.

**Model Validation:**

ICEU maintains a MRGF which establishes standards and principles for managing and mitigating the impact to the Clearing House's business caused by model error / failure or inappropriate model use. All models are formally independently validated at the frequency required by the original model documentation. The MRGF establishes a robust governance framework that provides explicit guidance on model risk management activities, allocates responsibilities for these activities and outlines the governance mechanism to ensure these activities are carried out as required.

**Stress Testing:**

Stress testing results are reviewed on a daily basis to identify any deficiency or breach, with escalation to ICEU management and calling of stress loss charge to maintain Guaranty Fund coverage at all times. At least annually, ICEU's Clearing Risk Department conducts a review of the standard stress testing scenario set and suggests for any scenario additions or retirement. ICEU maintains different approaches to stress testing scenarios, depending on the clearing service.

See Principle 6 for more information on stress testing.

**Default/Credit Loss Rules and Procedures:**

The ICEU Default Rules deal with the application of assets upon an event of default, the powers of assessment reserved to the Clearing House in the event of there being relevant shortfalls and the use of the Guaranty Fund in this context. Relevant liquidity policies provide detail in relation to the management of liquidity requirements.

The Clearing Rules allow ICEU in very extreme circumstances to use loss allocation techniques such as variation margin haircutting (F&O only), auctions, forced allocation (CDS only), product termination, porting of client positions or service closure to address the allocation of uncovered losses.

Replenishment of Guaranty Funds is required by the Clearing Rules and the specification of new amounts of Guaranty Fund is required in the event of the application of any Guaranty Fund Contributions. This applies for future defaults and is in addition to any usage of powers of assessment or similar indemnity payments in relation to Non-Default or Investment Losses through the mechanism of the indemnity provisions in Rule 919.

### Publically Available Resources

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

ICEU Risk Management: <https://www.theice.com/clear-europe/risk-management>

ICEU Regulation: <https://www.theice.com/clear-europe/regulation>

## 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.

### Summary Narrative

ICEU requires collateral with low credit, liquidity and market risks to manage its Clearing Members' credit exposure. ICEU sets and enforces conservative haircuts and concentration limits.

#### **Asset Eligibility:**

The Collateral and Haircut Policy sets out the arrangements by which ICEU considers the eligibility of specific assets for inclusion on the list of Permitted Cover (which is publicly available) and references the appropriate valuation and haircut procedures. ICEU has full decision-making powers on which assets are accepted as Permitted Cover. Eligibility for being included on the list of Permitted Cover is based on general principles set out in the Collateral and Haircut Policy (being those instruments with low credit, liquidity and market risks). The Collateral and Haircut Policy also includes absolute and relative limits and restrictions including cross-clearing house limits and market liquidity. The Collateral and Haircut Policy is reviewed at least on an annual basis or more frequently if there is a major change. The list of Permitted Cover is published and updated periodically. Haircuts are reviewed on a monthly basis. ICEU only accepts collateral listed in its Permitted Cover Circular.

#### **Collateral Management:**

In line with the Collateral and Haircut Policy, the Clearing Risk Department monitors the collateral limits on a daily basis. A Clearing Member will be considered to be in breach of a collateral limit if the total cover value of collateral posted, calculated by limiting the cover value of collateral for each collateral type to the maximum eligible cover value consistent with their respective limits, is less than that Clearing Member's total requirement. As such, where a Clearing Member meets its requirement but holds collateral in excess of the allowable limits and which is included in the calculation, the Clearing Member is not considered to be in breach of collateral limits.

#### **Wrong-way Risk:**

ICEU has documented its policies for the identification and mitigation of specific and general wrong-way risk within its acceptance of collateral. Clearing Members are not permitted (via rules and policy) to provide collateral referenced on themselves. In general, wrong-way risk stress testing is designed to encourage that collateral provided is not correlated with the net futures/options position and also that Clearing Members' positions and collateral is not exposed to joint domicile risk. Guaranty Fund contributions must be made using the appropriate referenced currency. Government bonds may be declined where that Clearing Member has a (significant) short position in the sovereigns of the government bonds pledged as part of the corporate CDS exposure or bond futures.

**Valuation Practice:**

In order to mitigate the risk of large intraday moves leading to significant losses of collateral value, ICEU monitors the value of assets on deposit on a real time basis. The portfolio of collateral for each Clearing Member is re-valued on an hourly basis using the latest available market prices. The Clearing Risk Department monitors changes in the value of collateral as part of the intraday risk management process. If ICEU deems that there has been a material deterioration or is likely to be a material deterioration based upon reasonable expectations in relation to the creditworthiness of the issuer of a security posted as collateral, or other potential issue, then ICEU may take steps to mitigate that risk. ICEU employs a very conservative approach to the valuation of acceptable collateral. In the event that market failure results in an inability to price collateral, Clearing Members will be required to replace the collateral with cash or other price transparent and acceptable collateral. In addition, ICEU has the ability to significantly increase haircuts in the short term to provide additional security with respect to collateral price valuation.

**Haircut Model:**

The haircut model is set out in the Collateral and Haircut Policy. Collateral haircuts are set by Clearing Risk Department and are applied in such a way that adequately reflects the potential for declines in asset values and considers market risk, credit risk, wrong-way risk and FX risk in addition to concentration and liquidity risk. The Collateral and Haircut Policy is reviewed on an annual basis by the Product Risk Committees as well as the Board Risk Committee, whilst the collateral haircut model is independently reviewed annually. The absolute limits are reviewed bi-annually. ICEU only permits Clearing Members to provide 5% of the estimated daily market volume to the Clearing House such that a 2 Clearing Member default would only require the Clearing House to liquidate 10% of a bond markets' average daily volume. As part of ICEU's annual default management test, the Treasury and Banking Services Department simulates the liquidation of client assets and provides feedback and performance information to the Clearing Risk Department.

**Minimum Haircut:**

ICEU's Procyclicality Framework outlines the approach for identifying and evaluating the potential procyclicality of haircut calibrations. The minimum haircut was determined using a 2-day return parametric VaR calculated using overlapping 1,000 day period over a historical data series. Ten year generic government bond yields have been chosen as benchmarks for France, Germany, the UK and the US. The maximum haircuts over the latter countries varied from 2.6% to 3.7%.

**Concentration Limits:**

The Collateral and Haircut Policy sets concentration limits based upon independent semi-annual market surveys of liquidity, and controls collateral concentration by restricting all securities (except US Treasuries) to 25% of portfolio requirement or 5% of daily market volume, whichever is the smaller. ICEU reviews and evaluates concentration policies and practices at least annually, in line with the Model Risk Governance Framework. As part of the annual review and evaluation concentration policies and practices are subject to independent validation and a report is available to the Model Oversight Committee and subsequently Risk Committee with respect to performance and any gaps identified.

**Legal Issues Concerning Collateral:**

Other than US FCM customer pledged collateral, ICEU takes all margin and Guaranty Fund assets by way of title transfer and thus has full unencumbered ownership for the vast majority of the assets it holds irrespective of their origin. US FCM customer collateral is received under a New York law pledge, in accordance with US regulatory requirements. ICEU has taken appropriate legal advice in relation to the manner in which it holds relevant assets and has structured its holding of relevant assets in such a way as to ensure, as far as possible, that it has an enforceable title and possession of such assets or an enforceable first security right. ICEU only records securities collateral to Clearing Member accounts when settlement has been confirmed by the Custodian or central securities depository ("CSD"). This process is the same for both domestic and cross-border delivery of securities.

As regards enforcement, the preamble to Part 9 of the Clearing Rules confirms the characterisation of Part 9 under relevant legislation as variously "default rules", containing a "default waterfall", "default proceedings", "default rules and procedures" and "default procedures" and the protections afforded to ICEU when taking relevant steps under Part 9. ICEU is also protected by the Settlement Finality Regulations.

**FX Issues:**

ICEU accepts collateral quoted in another currency to the liabilities it covers and applies cross-margining haircuts to mitigate FX risk. ICEU has various uncommitted FX facilities in place to mitigate temporary liquidity shortages or exchange assets in the currency of the loss experienced.

**Collateral Management System:**

The ECS system ("ECS") is developed and maintained by ICE. The system is well established and used by all clearing houses in the ICE Group. Regular maintenance is undertaken to reflect developments in the market. The ECS system provides Clearing Members with information about the assets deposited and can be used by Clearing Members to instruct a transfer of cash, securities or other assets to ICEU and, when there is surplus collateral in place, to instruct to withdraw assets. The primary features of ECS are:

- Real time updating of positions;
- Overnight mark-to-market valuation;
- Hard limits on the type and concentration of permitted collateral at issuer level;
- Separate review and approval of collateral change requests initiated by participants; and
- Automatic confirmation checks that requests for changes in collateral will not result in exposures not having sufficient collateral to manage the financial risks that arise from the exposure.

ECS is fully flexible and accommodates changes in acceptable collateral and also to changes in concentration limits at the International Securities Identification Number level. The collateral management system is designed to be agnostic of volume even during periods of market stress. Clearing Members initiate requests to amend collateral. ICEU's systems accept or reject changes (determined by the rules established to monitor acceptable collateral and concentration limits) with minimal manual intervention. Operations are staffed during publicised opening times.

## Publically Available Resources

ICEU clearing rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Permitted Cover: [https://www.theice.com/publicdocs/clear\\_europe/list-of-permitted-covers.pdf](https://www.theice.com/publicdocs/clear_europe/list-of-permitted-covers.pdf)

Part VII of the Companies Act 1989 & Settlement Finality Regulations and Companies Act 1989

Circulars: <https://www.theice.com/clear-europe/circulars>

## 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.

### Summary Narrative

#### Margin System:

ICEU's stated risk appetite is to ensure that Initial Margin ("IM") is set at an appropriate level to cover the foreseeable potential losses on a Clearing Member default. IM deals with ICEU's potential future exposures. ICEU also calculates Variation Margin ("VM") that corresponds to current exposure, which is the portfolio or segregated accounts positions' profit and loss - that is mark-to-market movement or settlement movement (as relevant). Rule 502 of the Clearing Rules establishes the right of ICEU to call and collect margin from its Clearing Members and to set the eligibility and form of collateral that may be lodged by Clearing Members with ICEU, as well as allowing the use of haircuts. In addition to IM, ICEU, where relevant, applies certain add-ons. ICEU operates an intraday risk system that allows it to recalculate IM and VM at small time intervals throughout the business day and to make intraday margin calls where necessary. ICEU operates two margin systems reflecting the differing nature of the risks within its CDS and its F&O businesses.

#### Margin Methodology Policy & Procedures:

The policies and procedures in relation to Margin Methodology are documented and approved by the relevant Product Risk Committees (i.e. CDS and F&O). While ICEU Policies are not publicly disclosed, the following methods are used by ICEU to disclose margin methodologies which allow participants to replicate margin calculation for their portfolios (or segregated accounts):

- CDS - procedure documentation, white papers, margin parameter files and software and web-based tools (e.g. CDS API); and
- F&O - procedure documentation and margin parameters published on ICEU website, and Margin Software (SPAN®) available for download from the ICE website.

#### Credit Exposure Determinants:

The determinants of credit exposures for all contracts are the volatility of the underlying, market price, the correlation of the market price with other economically linked risk factors, the change in volatility for non-linear contracts and the change in correlation of volatility with other economically linked risk factors.

For F&O, ICEU adds on to margin calculations amounts reflecting concentration of positions and potential for wrong way risk. Included within the CDS margin calculation are the following credit risk determinants: spread response requirement, recovery rate sensitivity requirement, basis risk, liquidity charge, concentration charge, jump-to-default requirement (including wrong way risk) and also interest rate charge.

#### Margin Requirements:

ICEU determines margin requirements commensurate with the risks, and particular attributes of its CDS and F&O businesses as follows:

<p><b>CDS</b></p> <p>The margin requirements are driven by:</p> <ul style="list-style-type: none"> <li>• CDS Mark-to-Market Margin (“MTMM”), where marked to market movements are credited/debited as appropriate; and</li> <li>• IM on portfolio positions (for each segregated account).</li> </ul> <p>While MTMM is a Profit and Loss (“PnL”) calculation based on intraday and End of Day (“EOD”) price, the IM is calculated through a statistical model in order to provide portfolio risk coverage against at least 5-day market realisations that would occur with probability 99.5%, or higher. The model performance is monitored via back-testing and via benchmarking against the Monte Carlo simulation framework.</p>	<p><b>F&amp;O</b></p> <p>The margin requirements are driven by:</p> <ul style="list-style-type: none"> <li>• VM, settlement movements where profit and loss are credited/debited; and</li> <li>• IM on portfolio positions (for each segregated account).</li> </ul> <p>While VM is a PnL calculation based on intraday and EOD price, the IM is calculated via SPAN® underpinned by margin rate parameters. These parameters are set as per ICEU Policies and reflect each product’s specific risk such as its volatility and cyclical and its underlying volatility.</p>
<p><b>Price Data:</b></p>	
<p><b>CDS</b></p> <p>CDS uses EOD Clearing Member price submissions to determine EOD prices, which are used for ICEU’s margin model.</p> <p>ICEU uses the International Swaps &amp; Derivatives Association (“ISDA”) Standard Model to convert between spread and clean price (%) and vice versa. ICEU also uses the ISDA Standard Model to compute dirty prices for the determination of upfront fees.</p> <p>The ICEU Clearing Risk Department and Operations Department manage the EOD price discovery process on a day-to-day basis. In accordance with the CDS Price Discovery Policy, Clearing Members are required to submit prices on the risk factors with cleared open interest. ICEU ensures that Clearing Members submit reliable prices through the firm trade process where, on random days, Clearing Members are periodically required to clear trades on a specific instrument based on the price submitted during EOD price discovery process.</p>	<p><b>F&amp;O</b></p> <p>ICEU uses IFEU's, ICE Endex's and IFUS’s settlement prices as the main data source for its margin model. EOD Prices from the exchanges are set according to the relevant exchange's Contract Procedures. ICEU uses returns (either log return or absolute) derived from the exchange prices in order to determine the margin rate parameters of a contract.</p>

**CDS and F&O Pricing Models and Margin Models:**

<b>CDS</b>	<b>F&amp;O</b>
<p>The IM requirements account for credit spread risk with portfolio benefits, bid-offer risk (liquidity exposure), basis risk, jump-to-default risk, concentration risk, interest rate risk and recovery rate risk. Features of the methodology include stress scenarios for credit spread realisations derived from estimated log-return credit spread distribution assumptions, and specific stress scenarios for previously defined IM components.</p> <p>Model assumptions are defined and documented.</p> <p>The IM requirement uses Value at Risk (“VaR”) and Monte Carlo (“MC”) approaches to account for the credit spread risk.</p> <p>The look-back period starts from the 1 April 2007 and the dataset is enriched by new observations as they become available. ICEU avoids, where possible, disruptive or big step changes in margin requirements and uses transparent and predictable procedures for adjusting margin requirements in response to changing market conditions.</p> <p>When calculating the underlying price volatility to be used for calculating margin parameters, the Clearing Risk Department will use a five-day calculation period. The five-day risk horizon consideration is consistent with the observed market behaviour during Lehman Brothers’ (“LB”) default. As LB was a large protection seller, the CDS market needed approximately three days to absorb the created risk dislocation, and to provide position replacement for market participants.</p> <p>The historical data to calibrate ICEU models includes periods of extreme market events such as the Bear Stearns collapse, the LB default, the US “Flash Crash” event and the European Sovereign Crisis. As such, ICEU overcomes the limitations of benign historical data.</p>	<p>ICEU determines potential future exposure (ICEU’s IM) using the SPAN® algorithm which is available and documented on ICEU’s website.</p> <p>Margin requirements are re-calculated separately for each account, which can be proprietary, omnibus net or gross client accounts or individually segregated accounts.</p> <p>The SPAN® model uses margin rate parameters as inputs. These inputs are set to meet a confidence level of 99% over a two-day holding period in accordance with Article 26, EMIR RTS (the alternative one-day holding period is used on customer accounts for some Energy contracts with gross margining). SPAN® determines the IM by identifying strategies (such as butterfly), calendar spreads and futures positions and applies the associated margin rates for all components to compute the Initial Margin. The algorithm then identifies pairs of contracts with different underlyings (within the same market or asset class) and applies a credit rate to opposite futures contracts in order to provide some level of diversification benefit.</p> <p>The margin rate parameters are calculated using historical prices and returns over a period covering the last two years. The VaR models used are: Filtered Historical Simulation; Historical Simulation; and Parametric.</p> <p>The look back periods are: 60 days; 100 days; 250 days; and 525 days.</p> <p>The margin rate parameter applied is the most conservative VaR value of the permutation above.</p> <p>ICEU determines an appropriate close-out period for each product by assessing the trading activity of such products. The Clearing Risk</p>

<p>The CDS IM Model accounts specifically for the liquidity risk over five days in stressed market conditions, i.e. the fact that positions are marked-to-market at the mid-price, but the liquidation price is at bid or offer. For each risk factor, liquidity costs are scaled for less actively traded coupons and tenors in order to capture the relative decrease of liquidity in these instruments. Liquidity charges are computed at single name and index family level and then aggregated at portfolio level without any portfolio benefit in a conservative manner.</p> <p>In order to address procyclicality, the Margin Methodology uses short term and long term lookback periods in the volatility calculations. The long term lookback period, which starts from 1 April 2007, includes stress periods. For the short term lookback period volatility calculation, at least 25% weight is applied to stressed observations from the long term lookback period.</p>	<p>Department regularly assesses (at least on a weekly basis) different measures of market liquidity such as Average Daily Volume for all products, with a particular focus on concentrated contract positions.</p> <p>However, when ICEU's assessment of market liquidity and Clearing Members' portfolio positions do not meet this minimum criteria (i.e. longer holding period to potentially close out positions), ICEU will have additional margin to cover for any liquidation shortfall called concentration charge.</p> <p>The standard liquidation period is one or two days as per European Rules and Regulations and ICEU follows this standard period as the default liquidation period.</p> <p>ICEU has adopted procedures compliant with EMIR, Article 28(b) where stress volatility is added to current volatility. A one year stressed volatility defined for each product is used as 25% weight in the margin rate parameter calibration.</p> <p>When product historical data is not available or considered too short, stressed volatility from benchmark contracts will be used.</p>
<p>Specific Wrong Way Risk ("WWR") arises due to self-referencing ("SR") contracts sold by a Clearing Member.</p> <p>SR contracts as outright positions are ineligible for clearing. However, they exist for Clearing Members who are constituents of index cleared positions. In the event of a merger or acquisition between the Clearing Member and the reference entity which potentially creates outright SR positions, the CDS Procedures detail that ICEU may conduct an auction process to terminate all SR CDS contracts.</p>	<p>From a market risk perspective, specific WWR can occur where a Clearing Member has positions in a derivative on its own stock (self-referencing positions). To mitigate such risk, additional margin will be called from Clearing Members where appropriate.</p> <p>To identify specific WWR, ICEU considers all the positions that a Clearing Member group (i.e. combining positions where two or more Clearing Members are linked by common ownership) holds in derivatives on its own stock. This can include futures, put and call options, in each case both long and short positions. A PnL is calculated for each derivative and subsequently the portfolio as a whole under the assumption of a Clearing Member defaulting. ICEU will call for this PnL as an additional specific</p>

WWR charge only where the Profit and Loss (“PnL”) is negative.

**Mark to Market:**

ICEU, as a minimum, marks or settles to market cleared positions or trades on a daily basis. Marking or settling to market results in either the collection or payment of PnL based on exchange settlement prices or based on mark to market values. Although settling or marking to market encompass different processes, both achieve the same outcome which is to ensure losses are properly accounted for and trades and positions are held at current market value. VM is made up of realised VM and unrealised VM. Realised VM consists of the mark to market value of positions which are closed out while unrealised VM consists of market to market value of opened positions.

VM reflects the daily change in market value of a position. VMs are also calculated intraday every five minutes comparing intraday most recent prices versus the EOD settlement price. VMs are collected daily EOD together with IMs and any other requirements. If the intraday Clearing Member’s exposure exceeds pre-defined thresholds, an intraday margin call including potential VM losses will be made that will have to be met within one hour.

**Cross margining and offsets used by CDS and F&O:**

CDS	F&O
<p>ICEU allows offsets across single names and single names and indices. The ICEU Risk Management approach provides portfolio benefits. The portfolio benefits for index risk factors are based upon their single name decompositions. There is no cross-margining between ICEU and any other CCP.</p>	<p>ICEU allows offsets between two contracts if they are both within the same market or asset class. The margin rate parameter itself is set as a percentage credit against the scanning range from the individual legs of the inter-commodity spread position. When deciding whether to provide risk offsets, the Clearing Risk Department takes into account the level of correlation and the reliability of the correlation. Additionally there must be an economic rationale for provision of a risk offset. There is no cross-margining between ICEU and any other CCP.</p>

**Assessment of Portfolio Margining Methodologies for CDS & F&O:**

CDS	F&O
<p>ICEU assesses its portfolio margining methodologies robustness by applying MC based IM methodology and comparing it to the output produced by the VaR model in order to monitor portfolio benefits. ICEU uses an MC simulation framework to monitor the level of provided portfolio benefits. The MC approach features the same univariate assumptions as the IM spread response computations while providing the ability to incorporate different dependence structures via Student-t</p>	<p>ICEU runs daily macro back-testing (portfolio level back-testing) to ensure sufficient collateral was collected to cover daily mark-to-market value. Insufficient collateral will lead to portfolio breaches and trigger a review of the individual margin rate parameters constituting the portfolio, including inter-commodity margin rate parameter offsets. ICEU also runs daily back testing on its inter-commodity rate offsets to ensure correlation has not broken between two legs since the last margin rate</p>

<p>copula. In addition, three different dependence structures are considered: historically observed, perfectly dependent and independent. Finally, ICEU runs daily back-testing on Clearing Members' portfolios to ensure margin requirements are sufficient to cover mark-to-market movements.</p>	<p>update as well as daily back-testing of all individual margin rate parameters components.</p>	
<p><b>Model Back-testing</b></p>		
<p><b>CDS</b></p>	<p><b>F&amp;O</b></p>	
<p>CDS Back-testing is performed using the production model for every business day in the available period prior to the current date. The back-tested results reflect the model performance for portfolios in each account. Projected VaR measures and exceedances are calculated at 99.5%. Basel Traffic Light System (“BTLS”) exceedance summary results are provided on a weekly basis to Product Risk Committees and regulators.</p> <p>The CDS Risk team uses a wide range of parameters and assumptions to capture a variety of historical and hypothetical conditions, including the most volatile periods that have been experienced by the markets it serves and extreme changes in the correlations between prices of contracts cleared by the CCP, in order to understand how the level of margin coverage might be affected by highly stressed market conditions.</p> <p>If poor back-testing results are identified for certain risk factors, an analysis is carried out on the spread log-return distribution assumptions, estimation techniques and estimated parameters, e.g. tail parameters, Mean Absolute Deviation (“MAD”) and shape scales. The Clearing Risk Department may update the risk factor parameters by including the latest market observations and re-calibrating, may introduce SN specific shape factors to remediate the poor univariate back-testing results, and may set increased minimum MAD scales corresponding to more volatile market conditions.</p> <p>The Clearing Risk Department will make the appropriate model changes in</p>	<p>The F&amp;O Risk team calculates the IM requirement to a 99% confidence level over a one and two-day time horizon at the individual product parameter level and at Clearing Member account level.</p> <p>In order to check IM requirements were sufficient to cover 99% of market price movements over a one or two-day time horizon, back-testing is conducted daily against clean PnL. On a daily basis, the Clearing Risk Department checks the adequacy of the level of IM at a portfolio level and at the individual contract level (margin rate parameter level).</p> <p>An important part of the back-testing exercise is the exploration of poor back-testing results and the decisions to take remedial actions where appropriate. Detailed portfolio back-testing results are reported to the F&amp;O Risk Committee monthly. Model remediation action on a Clearing Member portfolio is flagged to the responsible Risk Committee.</p> <p>Detailed margin parameters back testing is firstly undertaken internally and subject to review by the F&amp;O Risk Committee if a contract (or set of contracts) back testing performance is in the red zone. Where the performance has been remediated by an increase in margin rates, the Head of Clearing Risk may elect to inform the Clearing Members and F&amp;O Risk Committee by ICEU circular.</p> <p>Portfolio back-testing results are calculated and reported internally on a daily basis. Instances of back-testing breaches are reported daily and a weekly review covering all Clearing Members and statistical tests is run as</p>	

<p>a timely manner to adequately margin portfolios that exhibit poor back testing. This can be done by recalibrating the model parameters, or by applying a super margin whilst the poor performance of the model is being investigated. If needed, the Clearing Risk Department will recommend model revisions to the CDS Risk Committee and the ICEU Board for their review.</p>	<p>part of the standard procedures.</p> <p>Portfolio back-testing results are disclosed to Clearing Members, and Clearing Members have access to their own historical portfolio back-testing results. A high level summary of portfolio back-testing is also available on ICEU's website.</p>
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### Model Review and Validation

Risk models within the Model Risk Governance Framework are independently validated by a third party that has had no involvement in the model development process. A post implementation review is also completed by the same independent party within three months of the model go-live date. All models are independently validated at the frequency required by the original model documentation at least annually ensuring the model is sound theoretically and model outputs are as expected. All significant changes are reviewed by the independent third party and approved by the Model Oversight Committee. The Model Oversight Committee is the decision point within the organisation which confirms that: there is genuine business need for the model; the model and plans for its ongoing usage and monitoring are appropriate to the business needs and comply with the Framework; and any risks, flaws or assumptions in the model are appropriately flagged and there is a realistic plan in place to remedy them.

### Publicly Available Resources

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

ICEU Risk Management: <https://www.theice.com/clear-europe/risk-management>

ICEU Regulation: <https://www.theice.com/clear-europe/regulation>

Delivery Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Delivery\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Delivery_Procedures.pdf)

Finance Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Finance\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Finance_Procedures.pdf)

## **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.

### **Summary Narrative**

ICEU has robust arrangements for the management of liquidity risk during business-as-usual and stressed situations. An operational liquidity risk appetite and management limits are set and closely monitored by ICEU and daily stress testing is performed to determine the adequacy of its liquid resources. ICEU does not rely on supplemental liquid resources, or any assumption of the provision of central bank credit, in meeting its stressed liquidity needs.

#### **Liquidity Risk Management:**

ICEU's approach to managing its liquidity risk is documented in its Liquidity Risk Management Framework, Liquidity Plan and its Investment Management Policy. The Liquidity Risk Management Framework is subject to annual independent validation and is designed so that there is a high level of confidence in ICEU's ability to effect payment and settlement obligations in all relevant original currencies as they fall due, including where appropriate intraday. It also includes the assessment of ICEU's potential future liquidity needs under a wide range of potential stressed scenarios (defined as Liquidity Stress Test ("LST") scenarios). For the purpose of LST, the resources included in the immediate liquidity available to ICEU for the Regulatory and Best Practice scenarios are the investment trades maturing on the day, the outright purchased treasuries, and the defaulting Clearing Member's highly liquid non-cash assets. The Liquidity Plan covers the implementation of the Liquidity Risk Management Framework in normal and stressed situations. The purpose of the Liquidity Risk Management Framework and Liquidity Plan is broadly to cover liquidity in all relevant currencies, from its participants, settlement banks, nostro agents, custodian banks, liquidity providers and other entities.

ICEU uses the Assured Payment System ("APS") private settlement bank model, and its HM Treasury recognition for statutory supervision by the Bank of England as an interbank payment system, to transfer funds to and from Clearing Members. It employs three central consolidation banks and a number of approved payment banks. There is no central bank available to ICEU for USD or EUR. The Bank of England is used for GBP. No overnight central bank facilities are offered to ICEU.

#### **Liquidity Management Tools:**

ICEU has an in-house system managing cash flows from and to Clearing Members which provides real time insight into cash balances and status of pending transfers. The Treasury and Banking Services ("TBS") Department provides at least daily forecasts of available liquidity by currency, using the LST Scenarios. The TBS is able to use web-based proprietary access tools to perform enquiry activities on its bank accounts and utilise SWIFT message confirmations to monitor payment status and derive cash balances. ICEU monitors the flow of payments commencing at 7:30am and finishing following the completion of

the last margin call. ICEU is able to provide Treasury forecast reports of transactions for any duration at any point in time. Operational reporting is defined within the Liquidity Risk Management Framework and for regulatory oversight purposes, the Bank of England receives reports from ICEU of intraday exposures to the APS and Settlement Banks on a monthly basis.

**Stress Scenarios:**

ICEU conducts daily LSTs based on both business-as-usual and liquidity stressed losses in extreme historical and theoretical scenarios. ICEU assumes in a default stress scenario that all extreme market conditions are captured. Liquidity scenarios and stress tests are ICEU specific and take account of the ICEU payment and settlement structure and the liquidity risk that is borne directly by ICEU, by ICEU Clearing Members, or both. The various conditions, such as a sudden and significant increase in position and price volatility, position concentration, change in market liquidity, and model risk, including shift of parameters, form part of the default stress model which is the input for the LST.

In its LST Scenarios, ICEU sizes its payment obligations to the non-defaulting Clearing Members based on the defaulting party's payment obligations. The LST assumes a 1:1 relationship but in principle the Clearing Member is not obliged to take the amount out and so it can only be less than 100%. ICEU estimates the size of the liquidity requirement on an aggregated and per-currency basis. The Liquidity Risk process and scenario definition defined in the Liquidity Risk Management Framework is designed to provide early indications of potential liquidity shortfalls. A process is described to determine actions necessary to address the potential issue, and actions such as contacting and instructing investment providers to liquidate overnight purchases or close out or move trades to alternate counterparties could be undertaken. The ability for ICEU to obtain access to committed and uncommitted facilities is regularly tested.

**Liquid Resources:**

It is ICEU's intention through its Investment Management Policy and Liquidity Risk Framework to hold liquid resources for an amount equivalent to the stressed losses attributable to its two largest Clearing Members and their affiliates. Each morning as described above, the total cash available, net of announced withdrawals by participants and potential default loss (in extreme but plausible market conditions) is determined. The amount to be included in the default stress tests is calculated to a 99.9% confidence level.

ICEU is involved in activities with complex risk profiles, including clearing financial instruments that are characterised by discrete jump-to-default price changes (amongst others). ICEU maintains financial resources sufficient to cover a wide range of scenarios, that would cover the default of the two Clearing Members and their affiliates that would generate the largest aggregate payment obligation to ICEU in extreme but plausible market conditions. The Investment Management Policy determines the type of fixed-income securities and other instruments with debt-like characteristics on a fixed rate and floating rate basis that are permitted, which includes sovereign obligations, repurchase agreements and certain bank obligations. This is reviewed by Clearing Members through the Product Risk Committees.

**Qualifying Liquid Resources:**

The immediate liquidity available to ICEU is inherent within the margin collection and investment arrangements. All minimum liquid resource requirements of ICEU are met by qualifying liquid resources. For the purpose of liquidity stress testing, only the immediate liquid resources available to ICEU for the Regulatory and Best Practice scenarios are used.

ICEU has in place the following liquidity arrangements to obtain cash in currency: broker arrangements; uncommitted securities lending; uncommitted repo; uncommitted FX; and a multi-currency committed repo facility. The funding arrangements are tested annually to determine that they can be relied on even in severe market conditions. Supplemental liquid resources are available to ICEU and are detailed in the Liquidity Risk Management Framework. These include accessing uncommitted liquidity and committed intra-day credit facility.

In accordance with Article 44, EMIR and Article 33, EMIR RTS,<sup>1</sup> evidence that financial instruments included as available resources in the LSTs is readily available and can be converted into cash on a same-day basis using both committed and uncommitted pre-arranged and highly reliable funding arrangements is required. As such, ICEU executes a test, at least once a year, with its broker, repo and security lending counterparties to assess the liquidation for a value at least the size of its requirement in the LST on a same day basis in a severe market condition. The liquidity needs are covered 100% with all liquid resources in conjunction with its qualifying liquid resources to meet ICEU risk appetite.

**Access to Central Bank Accounts, Payment Services, or Securities Services:**

ICEU does not have access to routine overnight credit at a central bank. ICEU has an intraday facility with the Bank of England.

UK Government securities, either purchased outright or held as collateral for a triparty repo transaction, will be held at an ICEU account at Euroclear UK and Ireland, which is a designated Securities Settlement System ("SSS"). Euro-denominated securities, held as a result of tri-party repo transactions, will be held in an ICEU account at the triparty agent and CSD, Euroclear Bank, under the standard triparty agreements. Those purchased outright will be held in an account at Euroclear Bank. Euroclear Bank recognises the securities are owned by ICEU with a securities pledge agreement given by ICEU to the investment agent for the provision of intra-day credit facilities to facilitate timely payment transfers.

The CFTC requires that sufficient USD assets are held in the US to meet all USD obligations. For securities purchased outright, assets are held in a dedicated segregated account in the name of the custodian bank for ICEU at Fedwire Security Services ("FSS"), the securities settlement system of the Federal Reserve (US Central Bank). For securities held as a result of a triparty repo transaction, the assets are held in an omnibus account of the collateral agent at the FSS and segregated in the collateral agent's books and records as ICEU. Under EMIR, the FSS is not a designated SSS and is the settlement system for US Treasuries and US government-guaranteed securities, which are the assets accepted for ICEU investment purposes. Legal agreements with investment agents, CSDs and custodian banks have been agreed to safeguard assets as far as practicably and legally possible. The US triparty repo market within Europe (via Euroclear or Clearstream) does not have the critical mass or liquidity to make this a viable investment alternative.

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<sup>1</sup> Commission Delegated Regulation (EU) No 153/2013

Securities transferred to ICEU as collateral by Clearing Members are held in accounts in ICEU's name at the relevant CSD. The exceptions are US Treasuries, where the accounts are held in a dedicated commercial bank-provided account with the Federal Reserve, containing only ICEU assets and any assets that are subject to repo arrangements.

**Reporting & Escalation:**

The Liquidity Risk Management Framework and the Liquidity Plan stipulate the reporting and escalation procedures to be followed. Breaching the Risk Appetite level does not result in an immediate illiquid position but increases the risk of ICEU becoming illiquid if a certain extreme situation occurs and no action is taken. The process for raising awareness, obtaining guidance and instigating actions are described in the Liquidity Plan.

For regulatory oversight purposes, the Bank of England receives reports from ICEU of intraday exposures to the APS and Settlement Banks (monthly) and LST results are shared with the Bank of England weekly. Daily report of LST with breaches and larger changes in resources-loss comparison are shared with Senior Management, with immediate escalation to them upon breach in appetite. There is monthly reporting to Senior Management of the summary of LST results and periodic (at least 4 times per year) reporting of key highlights to the ICEU Board Risk Committee and the ICEU Board.

In the event of unforeseen and potentially uncovered liquidity shortfalls, ICEU has the ability under Rule 502 of the Clearing Rules to pay in an alternative currency or partially pay variation margin. In such an extreme event, ICEU has the ability under Rule 502(g) to impose, amend or withdraw additional margin requirements in respect of any Clearing Member at any time and at its discretion, which might be used to effectively retain collateral amounts that might otherwise be returned to Clearing Members as margin. Further, under Rule 110(b) and 110(c) and the definition of "Failure to Pay", in certain circumstances ICEU may extend timings in relation to submission of information or making payments when ICEU in its discretion considers that such extension is necessary or in the best interests of ICEU and Clearing Members in certain circumstances. Any extension or waiver for any length of time longer than three business days must be approved by the ICEU Board. Extensions for performance of Variation Margin or Mark-to-Market Margin may only be extended by more than one business day, meaning that a clearing house default could effectively be suspended by up to four business days in order to give time for such an obligation to be performed. Other performance is not so restricted from being delayed. The effect of the rights available to ICEU under the Clearing Rules is not included in determining payment obligations and liquidity available for any of the Stress Test scenarios.

**Publicly Available Resources**

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

ICE Website Treasury & Banking Services: <https://www.theice.com/clear-europe/treasury-and-banking>

ICE Website Regulation: <https://www.theice.com/clear-europe/regulation>

## **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.

### **Summary Narrative**

The Clearing Rules along with the ICEU Delivery Procedures and Finance Procedures, which are all publicly available, define the point at which settlement is final, the process for settlement and the point of irrevocability.

ICEU is the system operator of a Designated System for the purposes of the Settlement Finality Regulations in respect of "Transfer Orders" identified in the Clearing Rules, which represent the payment and transfer obligations between ICEU and Clearing Members. The point at which each different kind of Transfer Order becomes irrevocable is documented in Rule 1203 of the Clearing Rules. The Settlement Finality Regulations also afford ICEU certain protections against the operation of normal insolvency law in respect of, amongst other things, Transfer Orders and ICEU's default arrangements.

ICEU obtains external counsel's legal opinions on the enforceability of its Clearing Rules in the UK (including with respect to the application of the Settlement Finality Regulations and Part VII of the Companies Act 1989) and all jurisdictions in which it has Clearing Members to provide assurance of a high degree of legal certainty that finality will be achieved in all relevant jurisdictions.

ICEU provides real-time settlement, thereby ensuring that final settlement occurs no later than the end of the intended value date. Confirmation of settlement is generated by the delivery system and communicated via an automated messaging system (i.e. SWIFT or ECS) to the relevant Clearing Member. In line with published Delivery Procedures (which sets out the delivery procedures for each product category) and Finance Procedures, ICEU presumes that all trade dates and contractual settlement dates are equal to the date of entry of an instruction in the settlement system, ECS. Any deviation from this assumption must be notified to ICEU as it will result in a mismatch and non-settlement. Delivery settlements must take place during normal opening hours of the relevant settlement or depository system. ICEU does not give settlement instructions in extended settlement periods such as 'daylight' or 'Real Time Settlement' periods.

All settlements are to be executed by ICEU with a request for same day settlement. As deadlines for particular settlement systems or on particular days may vary, ICEU publishes details of normal deadlines for "free of payment" instructions for each supported settlement system by Circular. Deadlines for settlement systems are set out and updated in Circulars. Any adjustments of deadlines are published by Circular. Instructions received after a specified deadline will be rejected by the settlement system. There is no batch processing of settlement instructions.

Prior to a Transfer Order becoming irrevocable under Rule 1203 of the Clearing Rules, Clearing Members may cancel or amend settlement instructions in the circumstances allowed under Rule 1204, for non-cash asset transfers. This is generally speaking the time when ICEU sends settlement instructions to its

bank or custodian.

All unsettled transactions are automatically cancelled at the end of each day in ECS. In the event that the relevant settlement system or depository does not support one-sided cancellations and the transaction settles after the contractual settlement date, relevant securities will not be taken into account as Permitted Cover. If same day settlement does not occur but the Clearing Member still wishes to make settlement, it must cancel the instruction and re-enter that instruction.

### Publicly Available Resources

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Part VII of the Companies Act 1989 & Settlement Finality Regulations

Delivery Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Delivery\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Delivery_Procedures.pdf)

Finance Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Finance\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Finance_Procedures.pdf)

Circulars: <https://www.theice.com/clear-europe/circulars>

## Principle 9: Money Settlements

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

### Summary Narrative

Variation Margin is settled in currencies of the underlying clearing contracts. For Initial or Original Margin only EUR, GBP and USD cash is permitted.

ICEU has set criteria for credit worthiness that the Approved Payment System ("APS") banks (or Authorised Financial Institutions ("AFI")) must have Standard & Poor's ("S&P") short term and long term ratings of 'A' or better or the equivalent from other approved agencies. This is reviewed annually by the relevant Product Risk Committee and ICEU Board Risk Committee. In the assessment of the AFI's financial situation, credit and liquidity risks are monitored daily.

Prior to joining the APS system, and periodically thereafter, each AFI is subjected to a counterparty risk assessment by the ICEU Clearing Risk Department to ensure compliance with the requirements set for the APS participants.

ICEU obtains annual SOC ("Service Organisation Control") reports from their investment agents, which they review and discuss with them as part of the regular ongoing calls and meetings. ICEU holds bi-annual APS Forums which the AFIs are required to attend. A standing agenda item is the performance of the AFI against the Payment Service Agreement criteria.

ICEU monitors operational performance of each AFI on a daily basis. Non-performance or delays on the part of any AFI are reported, evaluated and discussed. Concerns about the creditworthiness or operational support can lead to exclusion of the AFI.

ICEU conducts stress and scenario testing to assess the capability of ICEU not just to cover the potential liquidity needs using scenarios required by the various regulatory authorities, but also caused by various extreme but plausible scenarios with the liquidity available by various means to ICEU. Various stress test scenarios have been defined, including the failure of ICEU's largest settlement bank. Liquidity Stress Testing has a default scenario where ICEU's investment agents fail in order for ICEU to assess the liquidity stresses from outsourcing its investment activities (see Principle 7).

To guard against an intraday failure of a commercial bank, which might affect the payment flows between ICEU and Clearing Members, the Clearing Rules detail that a Clearing Member will continue to be liable for any amount due under the Clearing Rules until it is transferred to one of ICEU's concentration banks. No payment obligation of a Clearing Member shall be treated as having been satisfied or discharged unless and until relevant funds are received by ICEU in relevant ICEU accounts at such a bank not subject to an insolvency. Further the ICE Investment Management Policy places limits on deposit exposures to commercial banks.

The Payment Services Agreements between ICEU and the AFIs state that fund transfers are final and irrevocable once an MT910 SWIFT message on either end has been given by the payment bank. Intraday finality is supported; once sent, the payment instruction is effective once the confirmation is received. The transaction is final and cannot be reversed. ICEU monitors all APS accounts from a return point of view. Cash is moved as soon as possible from the APS accounts into the concentration banks and periodic monitoring ensures cash sweeps are conducted. The investment programme has concentration guidelines which control the settlement bank risk failure. This process also helps to mitigate risk at the APS banks as cash is only held in APS accounts for a short time before the cash is transferred to the concentration banks.

The Payment Services Agreement, Part 12 of the Clearing Rules and the Clearing Membership Agreement stipulate that payments are effected and confirmed by SWIFT message and following receipt of relevant SWIFT confirmation, become irrevocable. Payments are made by Clearing Members, consistent with the Clearing Rules, to satisfy contractual obligations in respect of margin and Guaranty Fund payments.

Calls are made from Clearing Member APS Accounts for funds at close of relevant clearing runs in the early hours of the day following the relevant business (which has led to a call arising) being completed.

#### **Publically Available Resources**

ICEU Clearing Rules [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Finance Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Finance\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Finance_Procedures.pdf)

## 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.

### Summary Narrative

ICEU's obligations (and those of its Clearing Members) in relation to physical deliveries are stated in Section 7 of the publicly available Clearing Rules and Delivery Procedures as well as in the relevant exchange rules. In broad terms, the Clearing Rules and Procedures are defined in order to protect the buyer and the seller (in value terms where necessary) and to protect ICEU. They define a successful delivery but also afford ICEU flexibility in the event that either the seller or the buyer fails. The Clearing Rules and Procedures allow ICEU to take a series of steps to mitigate any failure, inter alia, substituting itself for the failing party, forcing an Alternative Delivery Procedure ("ADP") or cash settling a contract. ICEU also has the ability to pass on to Clearing Members any cost incurred as a result of the Clearing Member's failure to fulfil their delivery obligations.

ICEU and Clearing Members are contractually bound to comply with the ICEU Rules and Procedures pursuant to a Clearing Membership Agreement ("CMA") that is executed by ICEU and each Clearing Member prior to such Clearing Member commencing clearing activities with ICEU.

ICEU systems, processes and procedures are designed to actively position manage the delivery of physical instruments and commodities. ICEU monitors and considers factors such as storage capacity and the quality of the physically delivered instrument or commodity to further mitigate delivery risk. ICEU provides automated position reporting to its Clearing Members to enable them to accurately monitor their obligations, to allow them to ensure they have the necessary inventory to fulfil their obligation and that the inventory is of the right quality as defined in the contract specifications.

Operational risks associated with storage and delivery are identified and monitored through the operational risk framework. In the event that material costs are incurred under such circumstances, ICEU will seek to recover those costs from the offending Clearing Member, as supported by the Clearing Rules.

The ICEU Operations Department is responsible for and use the operational risk framework to manage the settlement and delivery process from exercise / expiry to completion. Operations Analysts, plus the associated Management team, are responsible for the following:

- Monitoring Deliveries;
- Partial Delivery processing;
- Fails processing and Compliance reporting;
- Maintaining Central Securities Depository ("CSD") account details;
- Maintaining liquidity arrangements;

- Managing buying-in process;
- Arranging payments for buying-in process;
- Running the tender allocation process;
- Updating deliverable bond lists in Guardian; and
- Liaising with the relevant exchange in advance of delivery windows with regard to positions in clearing.

Settlement Agents facilitate the physical settlement of each delivery (e.g. equities, bonds and energy products) by providing a number of key services, including:

- The management of all completed settlements on the settlement date;
- The management of any partial settlements or failures;
- The provision of liquidity facilities (caps) to guarantee cash flows at the CSD; and
- Interface to all required CSDs.

The ICEU Operations Department as a whole takes responsibility for supervising the Settlement Agent's function and activities.

Where relevant, the appropriate CSD facilitates the completion of the settlement process and reports back, via the Settlement Agent, details of all successfully settled delivery bargains plus any total or partial failures.

Wherever possible deliveries will be made through a Delivery Versus Payment ("DVP") mechanism. Where this is not possible, ICEU will always debit the buyer (via a buyer security or an invoice) before the delivery takes place. It will also only credit the seller (via a delivery contingent credit or an invoice) once the delivery has taken place and ICEU was able to confirm it. Collateral in the form of buyer's security and delivery contingent credit are calculated by reference to the relevant Market Delivery Settlement Price ("MDSP").

The Delivery Procedures define the deadlines and requirements for delivery preferences. Clearing Members have a deadline for submitting delivery preferences, and where received, those preferences are taken into account by the delivery matching algorithm. In the days and hours leading to a contract expiry, Operations staff will monitor open positions and will contact Clearing Members which are known not to have the systems and resources in order to encourage them to take appropriate actions. If a Clearing Member does hold to expiry a position in a contract that they are unable to physically deliver, mechanisms in the rules (ADP or Invoicing Back) or in the processes (use of a default broker) will allow ICEU to manage the situation to a satisfactory conclusion.

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Delivery Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Delivery\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Delivery_Procedures.pdf)

**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.

**Summary Narrative**

Not applicable for ICEU.

**Publically Available Resources**

N/A

## 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.

### Summary Narrative

The Clearing Rules, Procedures and Clearing Membership Agreement provide the legal and contractual basis for final settlement of relevant financial instruments. These, together with risk management arrangements in place, address principal risk to ICEU. Final settlement of one obligation occurs if, and only, if the final settlement of the linked obligation also occurs.

Where a futures or options expiry results in a physical delivery, ICEU will always debit the buyer for the value of the goods to be delivered before the delivery takes place. Conversely, the sellers will only be credited once ICEU has established unequivocally that the delivery has taken place (see Principle 10). This method will apply in any situation where Delivery Versus Payment (“DVP”) is not available.

Where DVP is available, ICEU will always use this facility when settling deliveries. This is currently the method used for the settlement of equities or bonds bargains resulting from the exercise of options or the expiry of futures for ICE Futures Europe equity or bond products. DVP is supported by the CSDs on all the markets in which ICEU operates, is commonly used for such purposes and is not known to fail. All linked obligations are settled on a gross basis.

For CDS, most credit events or similar events are cash-settled. Physical delivery, if necessary, would take place between pairs of matched members, who notify ICEU once delivery between them is complete, discharging linked obligations simultaneously. A similar matching approach is in place for commodity derivatives.

### Publicly Available Resources

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Delivery Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Delivery\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Delivery_Procedures.pdf)

CDS Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/CDS\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/CDS_Procedures.pdf)

### 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.

#### Summary Narrative

##### **Default Rules and Procedures:**

Rule 901 of the Clearing Rules details the events which constitute an "Event of Default". Financial defaults include Monetary Defaults and Insolvency. Operational defaults include failure to deliver. Each of these terms is defined in Rule 101 of the Clearing Rules.

Part 9 of the Clearing Rules addresses key aspects of a participant default, including, inter alia: actions to be taken following the declaration of a Clearing Member Event of Default;<sup>1</sup> termination and close out of Contracts on a Clearing Member Event of Default;<sup>2</sup> the default procedure for termination events;<sup>3</sup> margin haircutting;<sup>4</sup> termination of membership;<sup>5</sup> and use of Guaranty Fund contributions.<sup>6</sup>

The Clearing Rules also set out how and the order in which ICEU is able to make use of available financial resources that it maintains for covering financial losses and containing liquidity pressures arising from default (e.g. Guaranty Fund contributions and ICEU contributions).

In addition, prompt use of financial resources is maintained as follows:

- ICEU has documented its approach to handling a Clearing Member default in its CDS and F&O Default Management Frameworks. ICEU's default waterfall arrangements (illustrated below) set out the priority of use of available financial resources in the event of a Clearing Member default;
- ICEU's Liquidity Risk Management Framework and the Liquidity Plan describe ICEU's immediately available liquidity inherent in its margin collection and investment arrangements (see Principle 7 (Liquidity Risk));
- ICEU's Recovery Plan describes the use of certain recovery tools and options, including (where appropriate): powers of assessment; balancing of defaulting Clearing Member's portfolio (including auction); variation margin haircutting; replenishment; porting; service suspension; and service closure / contract tear up; and

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<sup>1</sup> Rule 908, Clearing Rules.

<sup>2</sup> Rule 905, Clearing Rules.

<sup>3</sup> Rule 912, Clearing Rules.

<sup>4</sup> Rule 914, Clearing Rules.

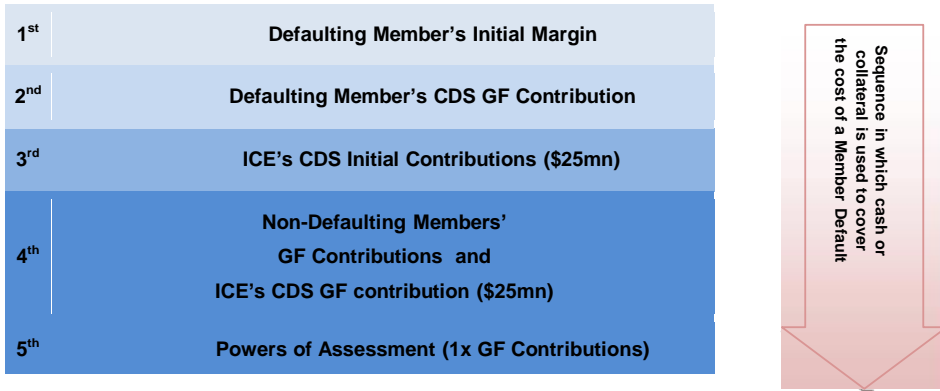
<sup>5</sup> Rule 918, Clearing Rules.

<sup>6</sup> Rule 1103, Clearing Rules.

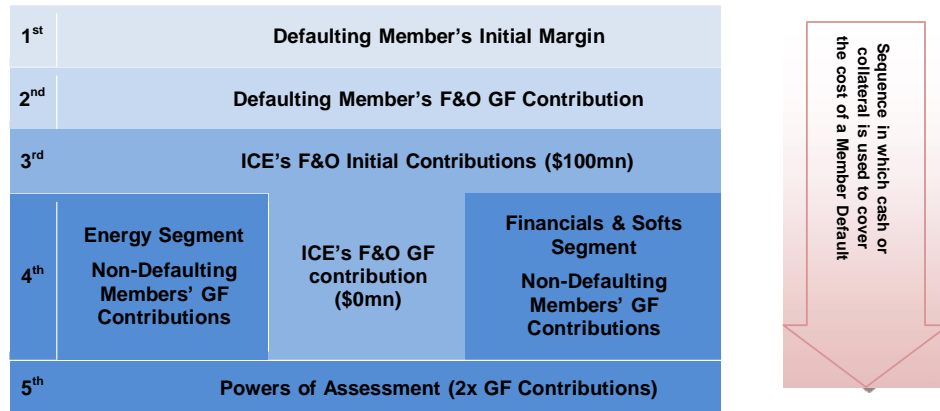
- ICEU has access to various sources of liquidity funding in addition to its stress tested liquidity plan.

Rule 908 of the Clearing Rules outlines the following order in which financial resources can be used for CDS and F&O:

**CDS:**



**F&O:**



As applicable, Clearing Members are required to replenish their Guaranty Fund contributions on demand.

**Implementation of Default Rules and Procedures:**

ICEU's Default Management Framework (for CDS and F&O) (the "DM Framework") sets out specific responsibilities with regards to the default provisions set out in the Clearing Rules. It outlines the actions that management will carry out in the event of a default. The DM Framework recognises that the cause of insolvency and post-insolvency actions may vary depending on the prevailing circumstances which lead to the default rules being implemented and as such is not designed to be prescriptive.

The DM Framework sets out clear roles and responsibilities when addressing a default. Prior to the declaration of a default, ICEU will work with the Senior Management of the Clearing Member experiencing difficulties, and regulators and other clearing houses as may be prudent, to seek solutions to the issue and avoid action under Default Rules. In the event that it is necessary to declare an Event of Default, the President and Managing Director or the Head of Clearing Risk of ICEU has authority to make this declaration. ICEU is responsible for notifying Clearing Members and exchanges and for publishing relevant notices on its website.

The President of ICEU will convene a daily meeting of the Default Management Committee throughout the default resolution process. Separate Committees may be convened if the Defaulting Clearing Member participates in several asset classes. The President of ICEU is also responsible for ensuring that all required notifications and, where relevant, information is shared to assist in the orderly management of a default.

**Public Disclosure of Default Rules and Procedures:**

ICEU's Default Rules are included in Part 9 of the Clearing Rules which are publicly available on its website. These cover: circumstances in which action may be taken; who may take these actions; scope of actions which may be taken; the mechanisms to address ICEU's obligations to non-defaulting participants; and, where direct relationships exist with participants' customers, the mechanisms to address the defaulting participant's obligations to its customers.

ICEU's risk management website<sup>7</sup> contains descriptions of key aspects of ICEU's default arrangements. Additionally, ICEU has set out Auction terms for F&O Default Auctions and FX Default Auctions.

ICEU's EMIR disclosure statement, publicly available on its website,<sup>8</sup> discloses the different risks arising from different means of segregation of assets and accounts.

**Testing and Review:**

The Default Management Frameworks are reviewed annually by the corresponding Risk Committees as well as the Board Risk Committee. Additionally, annual CDS and F&O Clearing Member Default Tests are held annually. During the simulation exercises, ICEU will verify that all Clearing Members, clients

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<sup>7</sup> <https://www.theice.com/clear-europe/risk-management>.

<sup>8</sup> [https://www.theice.com/publicdocs/clear\\_europe/ICEU\\_EMIR\\_Disclosure\\_Statement.pdf](https://www.theice.com/publicdocs/clear_europe/ICEU_EMIR_Disclosure_Statement.pdf).

(where applicable), and other relevant parties including, but not limited to, interoperable clearing houses and any related service providers, are duly informed and know the procedures involved in a default scenario.

Following each exercise, ICEU will review whether the Default Test procedures are adequate and, where necessary, amend the procedures. The timing of a Default Test may be brought forward at times of market stress to help ensure Default Procedures are current should a default occur. Results are communicated to the test participants and the Product Risk Committees for review and discussion.

#### **Publically Available Resources**

ICEU's Default Rules are included within Part 9: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

ICEU Risk management default arrangements: <https://www.theice.com/clear-europe/risk-management>

ICEU Auction Terms for F&O Default

Auctions: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Auction\\_Terms\\_FandO\\_Default\\_Auctions.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Auction_Terms_FandO_Default_Auctions.pdf)

## 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.

### Summary Narrative

#### **Segregation and Portability Arrangements:**

The client segregation and portability rules in the Clearing Rules and Procedures are designed to provide the framework whereby ICEU and its Clearing Members can provide clients with the choice between "omnibus client segregation" or "individual client segregation" (under EMIR) or other accounts (to meet US requirements).

Depending on the relevant insolvency and segregation regime, and on the election made by the customer, these accounts may facilitate the portability of assets and positions of clients to a non-defaulting Clearing Member. The account structure segregates customers' positions and related collateral from those of the Clearing Members themselves. This is achieved through use of separately identifiable accounts for house (proprietary business) and customers (client business). The protection between customers in the event of customer default varies according to the customer segregation model into which the customer elects to enter with the Clearing Member and which of the position accounts is used by the Clearing Member to hold the customer's business.

If the Clearing Member in default has customer-related positions, ICEU will, depending on the prevailing situation and pursuant to Part 9 of the Clearing Rules, seek, but not guarantee, to facilitate the transfer of customers' positions to another solvent Clearing Member, subject to agreement by the receiving Clearing Member.

ICEU has no obligation to enter into or effect any transfer if to do so would result in ICEU being under-collateralised with respect to any remaining contracts or would raise other risk management concerns. If ICEU is unable to transfer all positions on the defaulter's customer accounts to another non-defaulting Clearing Member, they will be liquidated via auction or directly via bilateral trades between ICEU and non-defaulting Clearing Members.

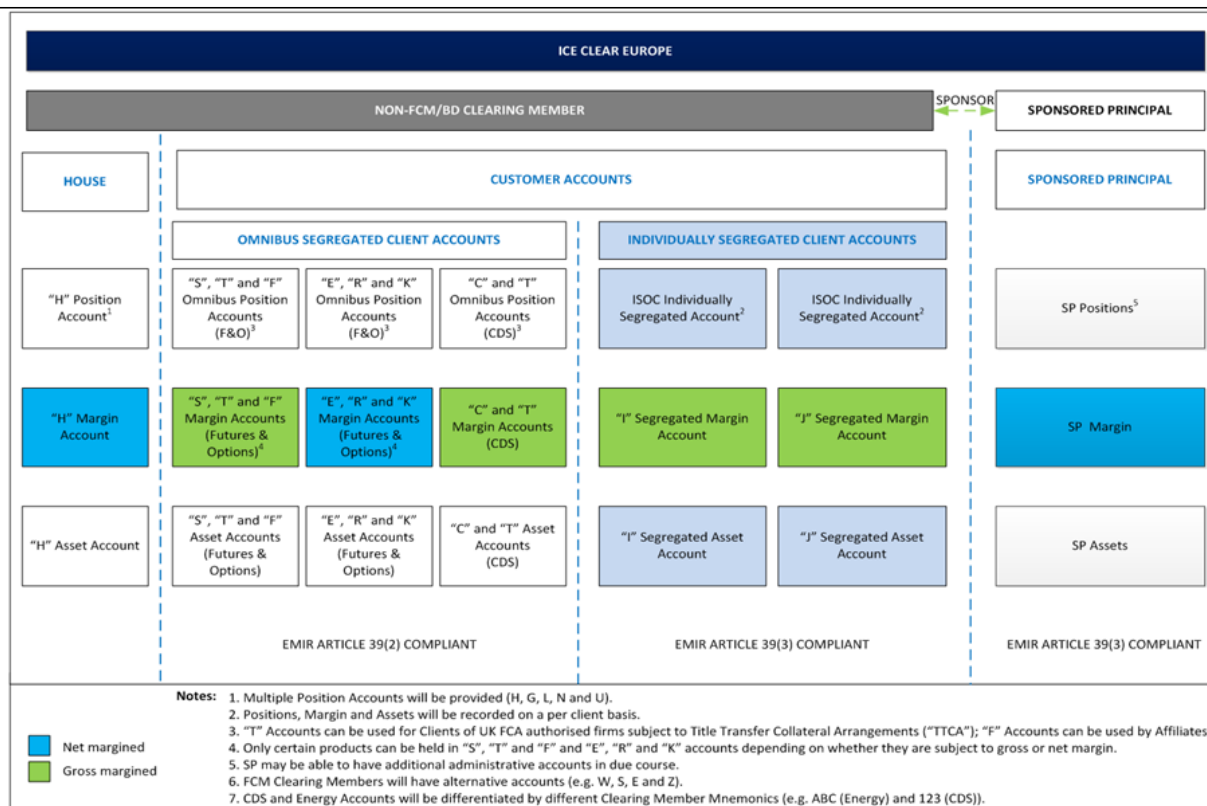
Portability will depend on the type of position account (omnibus client segregation, individually segregated margin-flow co-mingled ("ISOC") accounts, or sponsored principal accounts) in which the customer's positions are held.

#### **Account Structure:**

The Clearing Rules and Procedures (including those relating to segregation and portability) clarify whether a participant's customer's collateral is protected on an individual or omnibus basis depending on the segregated clearing model elected by the participant's customer (see illustration below).

Accounts available to European Clearing Members are described below:

1. Omnibus client segregation (net margin) – these accounts are available to non-Futures Commission Merchant ("FCM")/Broker Dealer ("BD") Clearing Members only for the purposes of clearing exchange-traded futures and options contracts.
2. Omnibus client segregation (gross margin) – these accounts are available to non-FCM/BD Clearing Members for ICEU's Credit Default Swap clearing service and FCM/BD Clearing Members for the clearing of exchange-traded futures and options contracts.
3. Individually segregated sponsored account – a customer can become a direct counterparty to ICEU (i.e. a "Sponsored Principal" or "SP") with an existing Clearing Member acting as a "Sponsor". The SP is liable jointly and severally with the Sponsor. SP positions are maintained within an identified position account at ICEU. SP assets are maintained within an identified asset account at ICEU which is ring-fenced in the event of default of the sponsoring Clearing Member. In the event of SP default, the Sponsor is required to deal with the default of the SP.
4. ISOC – the Clearing Member acts as principal to the positions but ICEU keeps a separate record of positions and assets at individual customer level. Clearing Members are responsible for contributing to the Guaranty Fund and meeting intraday and EOD margin calls. ICEU requires the identification of trades on a per client basis as part of the clearing workflow. Further, the Clearing Member will be required to report on assets deposited at ICEU. The Clearing Member will meet all margin calls in respect of each Customer Account.



Further information on these and other accounts is available in the EMIR disclosure statement published by ICEU.

Other than for individually segregated accounts, ICEU relies on Clearing Members to provide accurate records relating to individual customers. For individually segregated accounts, ICEU maintains its own records of relevant customers' positions and margin requirements.

**Portability Arrangements:**

ICEU requires a properly executed Default Porting Notice to be submitted in order to facilitate porting of client positions. This needs to be completed by both the customer and the non-defaulting Clearing Member to whom the positions will be ported.

**Disclosure of Rules, Policies and Procedures for Segregation and Portability:**

The Clearing Rules and Procedures, including those relating to segregation and portability, are publicly available on the ICEU website. Additional information is set out in the Customer Protection Framework and EMIR Disclosure Statement.

ICEU has publicly disclosed the levels of protection and the costs associated with the different levels of protection and segregation.

**Publically Available Resources**

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

ICEU's Customer Protection Framework: [https://www.theice.com/publicdocs/clear\\_europe/Customer\\_Protection\\_Framework.pdf](https://www.theice.com/publicdocs/clear_europe/Customer_Protection_Framework.pdf)

ICEU EMIR Disclosure Statement: [https://www.theice.com/publicdocs/clear\\_europe/ICEU\\_EMIR\\_Disclosure\\_Statement.pdf](https://www.theice.com/publicdocs/clear_europe/ICEU_EMIR_Disclosure_Statement.pdf)

### **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.

#### **Summary Narrative**

##### **Identification, Monitoring and Management of Business Risks:**

As part of wider risk management processes, ICEU has established a number of mechanisms to monitor and manage its business risks including: monitoring financial performance against budgets, forecasts and capital resources; analysis of emerging regulatory changes and tracking these to implementation; involvement of the Compliance team as appropriate in major projects and initiatives; and monitoring contract volumes and discussions with relevant exchanges and Clearing Members on competitiveness.

In order to identify specific business risk drivers, ICEU annually reviews and develops business risk scenarios in line with its risk identification and emerging risk processes. In addition, ICEU maintains a system of internal controls sufficient to provide reasonable assurance that transactions are executed in accordance with management's authorisation; transactions are recorded as necessary; access to assets is permitted only in accordance with management's authorisation; and recorded accountability for assets is compared with the existing assets at reasonable intervals.

##### **Liquid Net Assets:**

ICEU holds liquid net assets funded by equity (issued and fully paid ordinary share capital (other than ordinary share capital supporting ICEU's funded contributions to the Guaranty Fund) and retained earnings and reserves. ICEU's capital requirements are defined by EMIR under EU Regulation 153/2013. These requirements include a specific provision for business risk and wind down/restructuring costs with a minimum capital requirement equal to three months and six months of operating expenses for each, respectively. The resulting liquid net assets held would enable ICEU to continue its operations as a going concern, in the event it incurs a general business risk loss, or would enable ICEU to complete the steps necessary to achieve a recovery or orderly wind down of the CCP, as appropriate, if such action is taken.

##### **Wind Down Plan:**

ICEU has established a Wind Down Plan so that, if and when such circumstances dictate, ICEU management have a road map to wind down over a six month period. This Plan sets out wind down governance arrangements and provides the basis for resourcing and timelines associated with an orderly wind down. Central to the Wind Down Plan is the decision by the ICEU Board prior to its execution. In determining wind down, the plan identifies two options: transfer clearing service to another clearing house (transfer option) or terminate the clearing service (termination option).

Please also refer to Principles 3 and 13 for more information on ICEU's Recovery Plan.

**Quality of Assets Held:**

ICEU holds assets that are high quality and sufficiently liquid in order to allow it to meet its current and projected operating expenses under a range of scenarios, including in adverse market conditions. The Capital Investment Policy, which forms part of the risk management framework, is designed to minimise ICEU's exposure to potential credit losses arising from an investment counterparty defaulting. The Finance Department monitors compliance with capital adequacy on an on-going basis. The ICEU Board and Audit Committee further oversee business performance on a routine basis.

**Raising Additional Equity:**

ICEU monitors its capital resources regularly against capital resource requirements. An annual business risk scenario document is prepared and reported to the Board which provides an updated capital resource requirement number. Should there be a need for more capital, then as part of the recovery plan approved by the ICEU Board, ICEU will seek an injection of additional capital resources from ICE, which ultimately holds 100% of the share capital in ICEU. The ICEU Board is empowered to issue fresh shares and seek new sources of capital subject to satisfying pre-exemption rights of the existing shareholder.

**Publicly Available Resources**

European Market Infrastructure Regulations ("EMIR") (Article 5 of EU Regulation No 152/2013)

Finance Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Finance\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Finance_Procedures.pdf)

Annual Accounts and Financial Statements: [www.companieshouse.gov.uk](http://www.companieshouse.gov.uk)

### **Principle 16: Custody and Investment Risk**

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.

This principle should be reviewed in the context of Principle 4 on credit risk, Principle 5 on collateral, Principle 7 on liquidity risk, and other principles, as appropriate.

#### **Summary Narrative**

##### **Location of Assets Held:**

ICEU safeguards its own and its Clearing Members' assets through the use of approved settlement banks which were chosen based on their ability to provide the service required by ICEU - i.e. creditworthiness, relevant experience and operational stability. ICEU conducts due diligence reviews to assess whether its settlement banks employ adequate accounting practices, safekeeping procedures and internal controls that protect deposits, ensure full segregation and protection of financial instruments and allow ICEU prompt access to assets when required. ICEU has Global Custody Agreements in place with the approved settlement banks which have been reviewed by external legal counsel.

ICEU has agreed procedures (i.e. roadmaps) with its investment and custody agents, describing the steps and documentation required to change investment and custody activities from a non-performing agent to a performing one. These roadmaps will be executed by ICEU in case one of the agents is in default or cannot provide its services. The contingency facility is tested annually.

##### **Access to Assets:**

Financial instruments posted as margin, default fund contributions and other financial resources are received by ICEU with full title (except for US customer account assets, which are provided under a security interest). ICEU has global legal agreements with the approved settlement banks which confirm the enforceability of its interest in collateral held. ICEU has the right to access the financial instruments through issuing instructions for the movement of assets held by the settlement banks on demand in accordance with relevant market settlement deadlines.

##### **Exposure to Custodian Banks:**

ICEU operates accounts for GBP and EUR-denominated financial instruments using a Central Securities Depository ("CSD") and/or Securities Settlement System ("SSS"). For USD-denominated financial instruments, the accounts are designated as ICEU -owned assets held in accounts at the US CSD. This arrangement, combined with the financial strength of the settlement banks, minimises the need for diversification of custodians.

The Liquidity Risk Management Framework includes stress test scenarios regarding market infrastructure custodians.

**Investment Strategy:**

ICEU has a documented Investment Management Policy which is reviewed by the Board Risk Committee and approved by the ICEU Board. Investments on behalf of ICEU will be made in accordance with the "prudent person" rule, i.e. with judgement and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence would exercise not for speculation, but for investment, considering the probable safety of the principal as well as the potential income to be derived.

Funds collected to cover margin requirements and the Guaranty Fund contributions, are invested by investment managers appointed by ICEU. ICEU's investment strategy is closely aligned with its risk management practices, including daily monitoring of credit quality of all counterparties including investment agents and monitoring of credit risk within the investment portfolio. The Clearing Risk Department ensures that custodians are within the agreed requirements of the Investment Management Policy.

It should be noted that a loss of assets as a consequence of the insolvency of an investment counterparty of ICEU is not a risk covered by the Guaranty Fund or Initial Margin. The initial \$90m of any such investment loss is borne directly by ICEU. Beyond this loss, allocation occurs amongst the Clearing Members who are liable to make indemnity payments to cover future investment losses. ICEU monitors investment yield for poor performance.

Each Investment Manager is responsible for ensuring that investment of the available funds complies with the investment guidelines as well as conducting credit assessment on all investment counterparties, supplying sufficient liquidity to enable ICEU to meet its financial responsibilities, reporting on the individual investments, counterparties and their performance, and advising on investment opportunities to enhance security of the portfolio and/or the yield. This objective is achieved through setting appropriate controls over the Investment Managers within the Investment Management Policy and in the service agreements with the Investment Managers.

On a daily basis, ICEU monitors the amount of cash that is fully secured to ensure more than 95% of such cash, calculated over an average period of one calendar month, is fully collateralised. In addition the Treasury and Banking Services Department prepares Key Risk Indicators and Key Performance Indicators of the investment manager against guidelines in the Investment Management Policy.

General principles for accepting assets as suitable for investment purposes must meet the "goal" criteria including: being able to be revalued on a daily basis and quoted intraday by third party financial market news information providers; being highly liquid with either an active sale and repurchase agreement, with a diverse group of buyers and sellers or are secured instruments that are freely convertible into cash; and not being issued by a Clearing Member, or any entity that is part of the same group as the Clearing Member, or another clearing house.

The Investment Management Policy sets out limits for cash investments.

The ICEU Board reviews the Investment Management Policy at least annually to determine whether stated investment objectives are still relevant and achievable.

ICEU executes, on an annual basis (at a minimum), a test with its broker, repo and security lending counterparties, assessing the liquidation for a value of at least the size of its requirement in the Liquidity Stress Testing scenarios, on a same day basis in a severe market condition.

#### **Publically Available Resources**

Finance Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Finance\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Finance_Procedures.pdf)

List of Permitted Cover: [https://www.theice.com/publicdocs/clear\\_europe/list-of-permitted-covers.pdf](https://www.theice.com/publicdocs/clear_europe/list-of-permitted-covers.pdf)

### **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.

#### **Summary Narrative**

ICEU's overarching operational risk management framework incorporates the Operational Risk Management Policy ("ORMP"), the Operational Risk Self-Assessment ("ORSA") and the Risk Scenario Analysis, and specifically focuses on identifying, assessing, managing and responding to operational risk. Operational risk is defined by ICEU as the risk that deficiencies in information systems or internal processes, human errors, management failures or disruptions from external events will result in the reduction, deterioration or breakdown of services provided by ICEU. ICEU identifies plausible sources of operational risk, both internal and external, and mitigates their impact through the use of appropriate systems, policies, procedures and controls. ICEU's systems are designed to ensure a high degree of security and operational reliability and have adequate and scalable capacity. ICEU's business continuity management aims for the timely recovery of operations and the fulfilment of ICEU's obligations, including in the event of a wide-scale or major disruption. ICEU identifies, monitors and manages the risk that key participants, other FMIs and service and utility providers pose to ICEU's operations and also the risks that ICEU poses to other FMIs.

#### **Operational Risk Management Framework:**

ICEU's ORMP sets out the principles of operational risk management and methodology for the identification and assessment of operational risk, response options, monitoring procedures, and reporting and governance requirements.

#### **Management of Operational Risk:**

Operational risks are formally assessed by Risk Owners based on impact and likelihood of the risk crystallising to obtain a risk score/rating (i.e. Very Low to Very High). This rating is compared against ICEU's risk appetite (see Principle 3 for more information) in order to determine an appropriate course of action. Operational risks are recorded in the Risk Register on an on-going basis. Operational risk appetite metrics and associated risk limits are subject to on-going monitoring to ensure conformance. Any breaches or negative trends are escalated accordingly by the Risk Oversight Department.

To address operational risks relating to ICEU's staff, ICEU has documented HR policies that address hiring, training, retention and development of staff. Resourcing requirements to support ICEU's business strategy and operational requirements are discussed and agreed with Senior Management on an on-going basis. Potential employees are subjected to rigorous assessments (e.g. interviews and competency-based questionnaires) and pre-screening to ensure

qualified and talented staff are hired for ICEU positions.

**Roles and Responsibilities:**

Roles and responsibilities for operational risk management are defined within the ORMP, which clearly sets out the responsibilities for the identification, assessment, monitoring and management of operational risks. The ICEU Board is responsible for overseeing operational risk management and delegates authority to the Audit Committee to set the ORMP, monitor operational risk processes and report to the ICEU Board.

In conjunction with the Executive Risk Committee ("ERC"), which meets monthly, the Risk Oversight Department oversees the implementation of the ORMP. Management reporting to the ERC and Audit Committee provides an overall view of the operational risk profile of ICEU.

Risk Owners are responsible for complying with the ORMP and for updating and maintaining their entries in the Risk Register. Control Owners within first line management are responsible for the adequacy and performance of their controls, and the implementation and assessment of risk limits. ICEU Heads of Department are responsible for ensuring that their staff members have an awareness of operational risk and the policies and procedures to implement its requirements. They also ensure adequate training for their staff members in specific responsibilities.

**Operational Reliability Objectives:**

ICEU aims to provide a safe and efficient clearing service. The operational reliability objectives of ICEU's systems and processes are set out in the Risk Appetite Framework and service level objectives, which cover core services provided by ICEU. This includes:

- Interruption of services provided to participants through key systems – the appetite for interruption is zero. Any breaches of this are reported and managed as incidents with varying degrees of severity;
- Deadlines for the delivery of key outputs that must be made available by a certain time during the EoD run. Any failures to meet these deadlines are reported to management and the Audit Committee and managed as incidents with varying degrees of severity;
- Financial losses due to data and processing errors and inadequate investment of collateral, etc.; and
- Disaster recovery and business continuity objectives, with time targets by which the standby site must be fully functional.

ICE's incident management processes apply to any ICEU event which disrupts or could disrupt a service. ICEU has an incident management and service desk tool which is used to manage incidents and breaches and to allocate priorities in accordance with the severity level identified. All incidents are classified based on five severity levels. Incidents are investigated so that the root cause is understood and any issues appropriately remediated.

**Achievement of Service-Level Objectives:**

ICEU puts performance testing at the core of its systems engineering and design. ICE's IT Operations team oversees capacity management, database administration, server management and IT asset management (including software licensing). They are responsible for monitoring applications and servers at ICEU with respect to system performance and capacity to ensure that volume and operational requirements are met. All production, customer-facing, and ICEU back office servers are actively monitored as part of ICE Operational Procedures.

ICE has a dedicated performance testing team that uses automated tools to simulate multiple times production loads, i.e. stressing production systems to cope with multiples of peak daily volume. In addition, the Research and Development team continually evaluate the performance (and maturity) of the next generation of hardware available.

Different tools are used to capture and report performance across all ICEU systems using a dedicated performance database. This includes the capturing and reporting of daily process times as well as hardware performance metrics. The performance data are used to produce monthly performance reports across all systems. Situations where operational volumes may be nearing or exceeding capacity are recorded as incidents and prioritised according to the severity level allocated and managed as part of the incident management process.

**Physical and Information Security Policies:**

ICEU has adopted ICE's IT risk management and information security programmes which include: IT security risk assessments; the Cybersecurity Strategy; Information Security Policy and Procedures; threat and vulnerability testing regimes; and physical and environmental controls policy and procedures. ICEU operates within the ICE's Corporate Information Security Policy covering physical and information security. This Information Security Policy covers all information environments operated by ICEU or contracted with a third party by ICEU, includes methodologies to ensure compliance with regulatory and legal requirements, and conforms with the UK Government's "10 steps to cyber security" and recognised standards (such as COBIT).

ICEU protects its information resources through implementation of sound physical, environmental, and administrative security controls designed to reduce the risk of physical failure of infrastructure components, damage from natural or fabricated environmental hazards, and use by unauthorised personnel. ICE's Physical and Environmental Controls Policy and the group-wide Cybersecurity Strategy are developed having regard to relevant guidelines of the National Institute of Standards and Technology ("NIST"). The Cybersecurity Strategy is designed to maintain the highest possible levels of confidentiality, integrity, availability, and performance for all systems of ICE and its subsidiaries. It sets out high level functions of managing cybersecurity including the development and implementation of safeguards and control activities to ensure the following:

- identification of cyber risks and threats;
- protection of ICE systems, information assets and infrastructure;

- detection of cyber incidents and events; and
- response and recovery from a cybersecurity event.

The Information Security Department is responsible for technical implementation of security mechanisms, interfacing with clients and documenting policies and procedures. ICEU has documented its compliance with CPMI's and IOSCO's "Guidance on cyber resilience for financial market infrastructure", published in June 2016. A rigorous Service Organisation Control audit is performed annually to produce independent verification and testing of ICE's controls for external parties and auditors that rely on ICE.

ICE's Operational Oversight Committee ("OOC") is charged with governing ICE's information security and Business Continuity Plan ("BCP") programmes to ensure there are adequate processes and controls in place to manage technology risks and threats. It is also responsible for commissioning and reviewing third-party information security assessments.

At ICEU level, cyber risks are governed through the Executive Risk Committee, which is chaired by the President of ICEU. The Information Security Director serves as member of the ERC and reports on cyber-related matters and cybersecurity risks.

**Business Continuity Plan:**

The objective of ICEU's BCP and Disaster Recovery ("DR") Framework is to ensure:

- timely recovery of operations and fulfilment of clearing obligations, including in the event of a wholesale or major disruption; and
- effective coordination among affected parties during a BCP/DR event.

ICEU has established BCP and DR programmes which are supported by an annual Business Impact Analysis. Oversight over the programmes is provided by the OOC, ICEU's Audit Committee and Board of Directors.

ICEU has designed its BCP and DR testing regimes to support incident management, continuity and recovery in a crisis event, which typically include operational events such as loss of site/facilities or technology outages. ICEU conducts several annual BCP exercises to ensure its business can effectively respond to large scale disruptions, and maintain continuity of its operations. DR testing is also completed at least four times per year to verify ICEU's ability to recover its technology operations and systems.

The Executive Risk Committee and the Board Risk Committee oversees BCP and DR testing and results, and makes recommendations to the ICEU Board. BCP and DR documentation are revised as needed. The Disaster Recovery Strategy employed by ICEU is a warm site strategy. The production site which hosts all

of ICEU's production servers is replicated 1,000 kilometres away at the recovery site.

The Clearing Application Programming Interface incorporates strategies to enable third parties (i.e. Clearing Members) to establish the last successful transaction and re-transmit any uncollected transactions. This is tested as part of Clearing Member system implementation and as part of one of the annual in-flight DR tests.

The Crisis Communications and Management Plan provides a structure for managing communication with Clearing Members of ICEU at a time when ICEU is suffering severe financial stress and/or operational losses. In the case of an office-based disruption, ICEU has a range of actions that it can take, including: re-allocating specific duties to staff based in other ICE affiliates; using secure remote capability via VPN; and relocating staff to a secondary site. Extensive review, audit and testing are conducted with Clearing Members and participants, both when a new service is introduced and on an on-going basis.

**Risks arising from Key Participants, Other FMIs, and Service and Utility Providers:**

ICEU has operational dependency on ICE to provide clearing and other systems as well as utilities and facilities. Risks to ICEU's operations posed by Clearing Members, other FMIs and service/utility providers include:

- failure of SWIFT to recover sufficiently quickly to ensure that settlements and cash movements can be passed without market disruption;
- failure of other FMIs to restore its systems to ensure accurate recording of transactions and positions; and
- ability of appointed third party service providers to manage ICEU's treasury activities in accordance with the Investment Management Policy and to support the management of ICEU's liquidity risk.

All outsourced services are required to be governed by formal outsourcing or contractual arrangements. ICEU undertakes necessary measures to ensure that service providers meet adequate reliability and contingency requirements, including review of service providers' BCP and DR arrangements.

ICEU includes minimum reliability and contingency requirements within its contracts and service agreements with its custodian and investment agents and monitors adherence to these requirements on an on-going basis.

**Publicly Available Resources**

Basel Committee Principles for the Sound Management of Operational Risk: <http://www.bis.org/publ/bcbs195.pdf>

ICE Information Security: <https://www.theice.com/security>

ICE Technology: <https://www.theice.com/clear-europe/technology>

Published Business Continuity Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Business\\_Continuity\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Business_Continuity_Procedures.pdf)

## 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.

### Summary Narrative

#### **Fair and Open Access:**

ICEU provides fair and open access to its services based on risk-related participation requirements. ICEU's membership criteria are publicly available via its website.

The Clearing Member application process ensures that applicants evidence compliance and the on-going annual member return process ensures that relevant detail is regularly updated.

#### **Participation Requirements:**

To become a Clearing Member, an applicant must meet and continue to meet membership criteria listed in Rule 201 of the Clearing Rules and the Membership Procedures. Additional requirements for CDS Clearing Members are set out in the CDS Procedures. The criteria are monitored on an on-going basis and include, inter alia:

- holding sufficient capital;
- being party to a Clearing Membership Agreement;
- holding all necessary regulatory authorisations, licenses, permissions and approvals in its country of origin, the UK and any other jurisdiction in which it conducts business;
- it and its directors and officers being fit and proper;
- having appropriate technical and operational systems and controls;
- having appropriate business continuity procedures;
- being able to meet margin requirements;
- having contributed to the Guaranty Fund, as appropriate; and
- not being subject to insolvency or other event of default.

#### **Compliance with Participation Requirement:**

ICEU uses various tools to monitor compliance with access criteria, including watch list monitoring, review of monthly credit reports and annual credit reports summarising the Clearing Member's audited annual financial statements.

ICEU has objective and transparent procedures for the suspension and orderly exit of Clearing Members that no longer meet the criteria referred to above. ICEU may only deny access to Clearing Members meeting the objective criteria referred to above where duly justified in writing.

## Publicly Available Resources

ICEU Clearing Rules: <https://www.theice.com/clear-europe/regulation#rulebook>

Membership Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Membership\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Membership_Procedures.pdf)

CDS Procedures: <https://www.theice.com/clear-europe/cds>

FX Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/FX\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/FX_Procedures.pdf)

Clearing Membership Policy: <https://www.theice.com/clear-europe/membership>

Clearing Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Clearing\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Clearing_Procedures.pdf)

Delivery Procedures: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/procedures/Delivery\\_Procedures.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/procedures/Delivery_Procedures.pdf)

## Principle 19: Tiered Participation Arrangements

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

### Summary Narrative

#### **Gathering Basic Information about Indirect Participation:**

ICEU generally operates a principal-to-principal model of clearing participation which means that there is no direct exposure to the default of a Clearing Member's client (unless that default precipitates the default of the Clearing Member itself). However many Clearing Members provide intermediary services to clients, such indirect participation is available in all of ICEU's clearing services.

All applicants to become a Clearing Member are subject to membership due diligence both prior to becoming Clearing Members and on an on-going basis through the Counterparty Rating System. In all cases, the Clearing Membership application sets out whether or not a Clearing Member is permitted to clear for its indirect participants through offering a client account. Some of ICEU's Clearing Members are only permitted to operate a house account.

ICEU requires Clearing Members who offer client clearing to hold segregated house and client accounts for positions and margins and offers a choice of client segregated account structures. This model supports clearing of direct clients (i.e. clients of Clearing Members) as well as indirect clients (i.e. clients of clients of Clearing Members), which together are referred to as "indirect participants". ICEU has no duty of care or liability to indirect participants, except through the sponsored principal model. Any such liabilities are waived pursuant to the Standard Terms, which are contractually binding on all clients and Clearing Members. ICEU offers the following client segregated accounts so that Clearing Members can provide indirect participants with a choice in the level of asset protection: customer omnibus accounts for F&O Clearing; customer omnibus accounts for OTC CDS Clearing; and individual segregation through Sponsored Principal Account or individually segregated margin-flow co-mingled account ("ISOC"). ICEU also offers a FCM model that is compliant with CFTC requirements for Clearing Members that have US based clients. The various models are discussed and compared in detail in the EMIR disclosure statement, which is available publicly.

Indirect participants rely on the clearing services provided by ICEU's Clearing Members (i.e. direct participants). On a daily basis, ICEU requires all Clearing Members to provide a breakdown of positions of each indirect client in each Customer Account.

Where a Clearing Member provides services to clients, ICEU reviews the applicant's client risk management approach as part of its due diligence. Clearing Members are required to ensure that documentation put in place with indirect clients is in line with the Clearing Rules and ICEU's Standard Terms. ICEU evaluates risk based on the premise that it is directly exposed to the position or market risk resulting from the transactions made by indirect participants but faces the Clearing Member credit risk (regardless of whether risk originates from the Clearing Member or client).

The material risks arising at ICEU from tiered participation are the default of a client which disrupts or materially adversely affects a Clearing Member. ICEU mitigates such risks by assuming it is directly exposed to all positions and achieving the risk collateralisation to the same confidence level as the Clearing Member origin risk. ICEU has the authority, where a portfolio is overly concentrated, to apply margin multipliers to mitigate such risk at an account level.

**Material Dependencies between Direct and Indirect Participants:**

ICEU identifies material dependencies through real-time monitoring of Clearing Members and the activity in each of its client accounts, be they in omnibus or segregated accounts. ICEU is able to show the proportion of house to client activity for its Clearing Members, and where clients are known, ICEU is also able to calculate the exposure to named clients in total, by clearing service and by Clearing Members.

**Large Value/Volume Transactions:**

ICEU identifies indirect participants that are responsible for significant proportions of transactions by monitoring the activity of its Clearing Members and the activity in each of its accounts. ICEU's risk in the event of default by a Clearing Member is the net position of the Clearing Member (including client positions). Accordingly, ICEU's primary focus is on monitoring positions rather than volumes or values of transactions or individual clients.

Both ICEU and the exchanges to which it provides clearing services monitor trading activity and positions of indirect participants through Large Trader Reports and monitoring positions ahead of physical delivery. Where appropriate, ICEU will require additional margin to be posted in the form of concentration charges, stress loss charges or capital-to-margin ratios.

**Risks Arising from Tiered Participation Arrangements:**

ICEU reviews the risks arising from tiered participation arrangements through the production of daily client positions and associated cash flow reports. Margin multipliers are applied where a participant's client portfolio is overly concentrated. ICEU reviews risk posed by its direct participants and indirect participants through the Counterparty Rating System, a daily monitoring mechanism to review key risk factors covering credit, market price, and liquidity risk for market participants.

**Publicly Available Resources**

ICEU Clearing Rules (including Standard Terms in the annexes): [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Circulars: [https://www.theice.com/publicdocs/clear\\_europe/circulars/C14055.pdf](https://www.theice.com/publicdocs/clear_europe/circulars/C14055.pdf)

[https://www.theice.com/publicdocs/clear\\_europe/circulars/C14102.pdf](https://www.theice.com/publicdocs/clear_europe/circulars/C14102.pdf)

Customer Protection Framework: [https://www.theice.com/publicdocs/clear\\_europe/Customer\\_Protection\\_Framework.pdf](https://www.theice.com/publicdocs/clear_europe/Customer_Protection_Framework.pdf)

EMIR Disclosure Statement: [https://www.theice.com/publicdocs/clear\\_europe/ICEU\\_EMIR\\_Disclosure\\_Statement.pdf](https://www.theice.com/publicdocs/clear_europe/ICEU_EMIR_Disclosure_Statement.pdf).

**Principle 20: FMI Links**

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

**Summary Narrative**

ICEU operates within ICE's vertical trading and clearing model for F&O contracts as well as providing centralised clearing for certain OTC Credit Default Swaps. ICEU does not currently have any link arrangements in place with other FMIs.

In its Recovery Plan, ICEU has considered stress scenarios the impact of default loss and non-default loss, as appropriate, on certain exchanges and other elements of infrastructure. ICEU also recognises the dependency it has on the continued operation of elements of the financial infrastructure such as global payment and messaging systems. ICEU recognises that some of its Clearing Members are also participants in other ICE-owned clearing houses and at other third party clearing houses. As such, should an ICEU Clearing Member default, this could trigger default of the same counterparty at other clearing houses and vice versa. ICEU is able to communicate with other FMIs following any default.

**Publicly Available Resources**

N/A

## Principle 21: Efficiency and Effectiveness

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

### Summary Narrative

#### **Design Efficiency and Effectiveness:**

The Clearing Rules, which are publicly available on ICEU's website, require ICEU to consult with Clearing Members in respect of proposed additions or amendments. Through risk committees and other established working groups, ICEU seeks to meet the needs of its participants and the market in terms of products and services, clearing and settlement operations, risk management functions, and technology. ICEU has a formal process to publicly disclose Clearing Rules filings, quantitative disclosures, policy and procedural changes, and service and product changes through its website.

ICEU's Product and Board Risk Committees include Clearing Members, customers and independent representatives. These fora provide a platform to discuss and address participant requirements, considerations and concerns with regards to ICEU's clearing and settlement services and any proposed changes.

Two examples of internal arrangements for informal engagement and consultation with Clearing Members are:

1. The Technology and Operational Group ("TOG"), which is a forum of ICEU staff and Clearing Members that meets regularly to discuss the needs of Clearing Members and how ICEU's services could be adapted to meet these needs; and
2. Regular one-to-one meetings between ICEU staff and Clearing Members.

#### **Corporate Objectives and Goals:**

ICEU's documented corporate objectives and goals aim to provide safe and efficient clearing and settlement services while meeting risk management, operational, capital and regulatory requirements of a dynamic global marketplace.

The operational reliability objectives of ICEU's systems and processes are set out in its Risk Appetite Framework, which provides quantitative and qualitative definitions of risk appetite and tolerance covering core services provided by ICEU (see Principle 17 for more information). The Operational Risk Management Policy defines areas of risk, the overarching principles governing operational risk decisions, and risk reporting.

Through regular business, operational and risk management reviews, ICEU assesses its performance against its objectives on an ongoing basis. The President and Managing Director reports to the Board on progress made by ICEU in achieving its business objectives, including an assessment of the risks associated with those business objectives. The Executive and Risk Committee also submit information to the Audit Committee each quarter on the status of

thresholds and risk indicators.

The Head of ICEU's Internal Audit Department, with the support of the ICE Internal Audit Department, provides ICEU with an independent source of assurance on financial, operational and compliance controls.

**Review of Efficiency and Effectiveness:**

Management information, including ICEU's financial performance (budget vs actual), capital requirements, cleared volumes, margin levels, operational incidents (including cyber incidents) and clearing platform/system performance (e.g. critical system uptime and EOD processing) are reviewed at the monthly Executive Risk Committee meetings. Processes and metrics used to evaluate ICEU's efficiency and effectiveness are addressed in Principles 2, 3, 17 and 18.

**Publicly Available Resources**

ICEU Clearing Rules: [https://www.theice.com/publicdocs/clear\\_europe/rulebooks/rules/Clearing\\_Rules.pdf](https://www.theice.com/publicdocs/clear_europe/rulebooks/rules/Clearing_Rules.pdf)

Website : <https://www.theice.com/clear-europe/regulation>

**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.

**Summary Narrative**

ICEU uses Society for Worldwide Interbank Financial Telecommunication ("SWIFT") for messaging of payment transactions and Secure File Transfer Protocol ("SFTP"), WebSphere Messaging Queue ("MQ") and FIXML / FPML to message clearing of transactions (including both new transactions and amendments to transactions). These messaging protocols are internationally accepted communication standards and procedures.

ICE SWIFT Gateway ("ISG") functions as the interface between the internal clearing systems and the external industry-standard SWIFT network.

**Publicly Available Resources**

ICEU Technology: <https://www.theice.com/clear-europe/technology>

### **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.

#### **Summary Narrative**

##### **Disclosure of Rules and Procedures:**

The Clearing Rules and Procedures are publicly available on ICEU's website. ICEU consults with its Clearing Members on all proposed Clearing Rule amendments and undertakes prescribed regulatory filing and notification processes, all of which ensure a thorough review and challenge of the clarity and comprehensive nature of the Clearing Rules and Procedures.

The Standard Terms, which are annexed to the Clearing Rules, provides a mandatory contractual framework for agreements between clients and Clearing Members. These are also publicly disclosed.

##### **Disclosure of System's Design and Operations:**

ICEU publicly discloses on its website the general principles underlying its models and their methodologies and the nature of tests performed, with a summary of the test results and any corrective actions undertaken. Relevant discretions, rights and obligations reserved to and imposed on ICEU are clearly articulated in the Clearing Rules and Procedures. These, and the agreements executed by Clearing Members, establish Clearing Member rights and obligations, and powers and rights reserved to ICEU to deal with relevant foreseeable circumstances.

##### **Documentation and Training:**

ICEU ensures that its participants understand the Clearing Rules, Procedures, Standard Terms and risks associated with participating by making the Clearing Rules, Standard Terms and Procedures and disclosures publicly available on its website. ICEU has no knowledge or indication to suggest that its Clearing Members are anything other than sophisticated market participants co-operating fully with ICEU and meeting the relevant obligations and requirements.

In the event that ICEU identifies a participant whose behaviour demonstrates a lack of understanding of the Clearing Rules and Procedures, the relevant Clearing Member representatives will be challenged to ensure appropriate compliance.

##### **Disclosure of Fees:**

The costs of using ICEU's clearing services are documented in the relevant Circulars relating to clearing fees and Member Returns Circular which is published

on its website.

**CPSS-IOSCO Disclosure Framework:**

ICEU regularly reviews (at least annually) its responses to the CPSS-IOSCO Disclosure Framework for Financial Market Infrastructures with consideration to changes to its products/services; business and organisation structure; policy, processes and control environment; systems and technology; and the regulatory environment. These responses are publicly disclosed on ICEU's website. ICEU also discloses data on transaction volumes and values for the clearing services that it offers.

ICEU publishes the EOD prices used by the CCP for the purposes of undertaking settlement and/or mark-to-market of Clearing Member positions. This data is available through both secured and public channels to Clearing Members and their customers in ways including trade and position statements, SPAN arrays; price files; and third party quote vendors. ICEU's website has sections on Clearing Risk; Membership; Circulars; Operations; Technology; Treasury and Banking; Client Clearing; and Cleared Products.

**Publicly Available Resources**

ICEU Clearing Services: <https://www.theice.com/clear-europe/client-clearing>.

ICEU Clearing Rules and Procedures (including Standard Terms annexes): <https://www.theice.com/clear-europe/regulation#rulebook>

ICEU Circulars: <https://www.theice.com/clear-europe/circulars>

ICEU Quantitative Disclosures: <https://www.theice.com/clear-europe/regulation#quantitative-disclosures>

ICE Market Data: <https://www.theice.com/market-data>

ICEU Span Files: <https://www.theice.com/clear-europe/risk-management#span-overview>

EMIR Disclosure Statement: [https://www.theice.com/publicdocs/clear\\_europe/ICEU\\_EMIR\\_Disclosure\\_Statement.pdf](https://www.theice.com/publicdocs/clear_europe/ICEU_EMIR_Disclosure_Statement.pdf).

**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.

**Summary Narrative**

Not applicable for ICEU.

**Publicly Available Resources**

N/A

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