

## MANAGE YOUR RISK

# HOW CLEARING WORKS

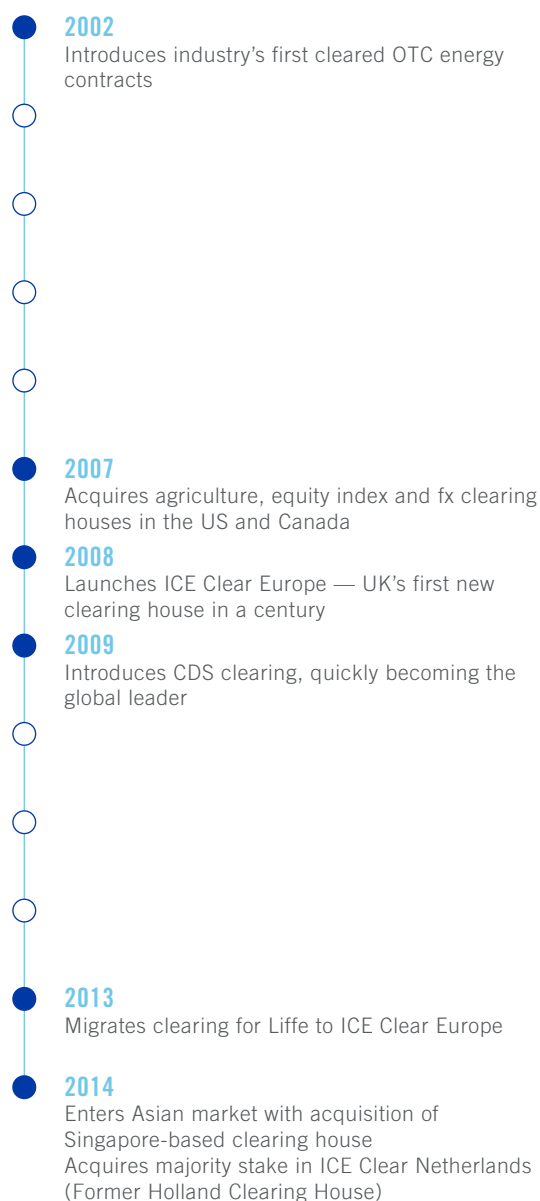
We operate leading global clearing houses that offer market participants risk mitigation, price transparency, capital security and operational efficiency across a range of liquid derivatives markets including energy, interest rates, agriculture, credit, bonds, currency and equities.

### HOW IT WORKS

Through a system of financial safeguards our regulated clearing houses maintain market integrity and capital protections by standing in the middle of each trade — the buyer to every seller’s clearing member and the seller to every buyer’s clearing member. Once a trade has been matched, the clearing house becomes the central counterparty to the trade, thereby guaranteeing financial performance of the contract. This robust counterparty risk intermediation is critical to supporting the availability of efficient and liquid markets.

### WHY CLEAR?

- **Risk Mitigation** — Margin requirements, guaranty funds and other financial safeguards mitigate risk in the event of a clearing member default
- **Capital Efficiency** — Cross margining available across correlated ICE products lowers capital costs
- **Price Transparency** — Settlement prices provide market participants with a transparent and independent pricing methodology to value their positions daily
- **It’s Required** — Regulatory requirements mandate clearing for all exchange traded futures and options contracts and a growing number of swaps
- **Delivery Facilitation** — Clearing houses, along with the exchanges, facilitate the delivery process to varying degrees depending on the product



## FINANCIAL SAFEGUARDS

Our clearing houses have in place a comprehensive set of procedures and a robust risk management framework that includes:

- Real-time position monitoring
- Intraday mark to market margining
- Substantial default resources
- Rigorous stress testing
- Comprehensive oversight
- Extensive transparency

## MEMBERSHIP

In order to become an ICE clearing member, firms must meet a series of tailored requirements to ensure that they are suitable to act as clearing members in those products. This includes carefully calibrated minimum capital levels, operational and technical capabilities, and demonstrated risk management competence. Once admitted, clearing members are actively monitored for on-going compliance with stringent financial, risk management and operational requirements.

## MARGIN

Throughout the trading day our clearing houses monitor the positions and market exposure of each clearing member to ensure that there are enough funds on deposit to cover their risk. This is done through real-time profit and loss calculations using up-to-date pricing and position monitoring. Our margin requirements are risk based and regularly reviewed.

- **Original Margin** — We collect original margin, also known as initial margin, for all open positions based on a risk model that takes into account a broad range of stress and / or historically observed scenarios. The amount of original margin required is driven by the historical price fluctuations for the given contract. Original margin is calculated to cover the largest theoretical loss a clearing member could incur in a specified, market-specific risk horizon based on historical market prices and their volatility. In general, more volatility in the price requires the need for additional margin. The margin requirement for each contract is regularly adjusted in line with changes in market volatility. Products that correlate from a price perspective and result in offsetting risk are eligible for margin reductions.
- **Variation Margin** — Our clearing houses maintain the ability to make intra-day margin calls, both scheduled and unscheduled, as determined by market circumstances. For example, in times of significant price volatility or changes in position, an

intra-day variation payment may be required. All positions are marked-to-market on a daily basis in order to ensure adequate margin. End-of-day variation payments are typically due the following business day.

- **Back-Testing** — We conduct daily back-testing in order to ensure the adequacy of our margin requirements. This includes verifying that losses on a per product basis are consistent with our projections and that our calculations meet a confidence level of 99%. Additionally, we conduct sensitivity analysis on a regular basis that tests our margin methodologies under a wide range of volatility circumstances.

## POSITION LIMITS

Limits can be established to restrict the size of the total positions that can be carried by each clearing member. If a clearing member exceeds their limit, a margin surcharge is levied. Clearing houses can increase or reduce a clearing member's position limits as warranted by circumstances.

## GUARANTY FUND

In addition to the margin collected, each of our clearing houses maintains guaranty funds that provide further protections in the event of a clearing member default. Each clearing member is required to contribute to the guaranty fund based on the risk they bring to the clearing house and on the utilization of the clearing services.

## DEFAULT WATERFALL

In order to ensure that our economic and risk interest is aligned with that of our clearing members, ICE has contributed more than \$200 million in capital to our clearing house guaranty funds which could be drawn upon in the event of a default.



## CUSTOMER PROTECTIONS

Various protections are in place to ensure that customer funds are always segregated from “house” funds associated with the clearing member’s proprietary trading activities. Customer funds cannot be used to cover the defaults associated with clearing member house accounts although any house excess can be used to cover defaults on the customer accounts. Additionally, in clearing for US swap contracts and in certain EU individually-segregated accounts, one customer’s funds cannot be used to cover losses resulting from another customer’s default.

## RECOVERY AND RESOLUTION

We have plans and procedures in place for the recovery or wind down of our clearing houses should circumstances require. In the unlikely event that a clearing member default is not absorbed through the margin and guaranty fund contributions of the defaulting clearing member, a recovery plan will be implemented that utilizes the significant financial resources and stages of the default waterfall as outlined above.

## REGULATION

We operate clearing houses globally and work with regulators across jurisdictions including:

- Bank of England
- Commodity Futures Trading Commission
- Manitoba Securities Commission
- Monetary Authority of Singapore
- Securities and Exchange Commission

Regulatory oversight extends to our financial resources, participant and product eligibility, risk management, settlement procedures, treatment of funds, default rules and procedures, rule enforcement and system safeguards. Each of our clearing houses is subject to ongoing examination and inspection by regulators. Regulators receive routine reports on various factors including any significant changes to the risk profiles of our clearing members.

Each of our clearing houses has robust internal governance processes in place that often includes consulting with a Risk Committee made up of market participants that provide industry expertise from various areas of the market.

## TRANSPARENCY & ACCESS

Our clearing houses operate based on clear and comprehensive sets of rules that enable our clearing members and other market participants to fully understand their risks, fees and obligations. Each of our clearing houses publishes its rulebook on the website and all rule changes are filed with regulators and posted online.

Membership requirements are publicly disclosed and are designed to permit for open and fair access, while protecting the clearing house and its clearing members. The requirements are the same for all applicants and include financial standards, operational standards and capital requirements.


















Each of our clearing houses perform regular stress tests and share the results of those tests with regulators.

**6+** million futures and OTC contracts cleared daily

**1st** to offer clearing in the OTC energy and credit markets

The world’s **leading** clearer of energy futures and credit default swaps

## CENTRAL CLEARING HOUSES

|                       |   |
|-----------------------|---|
| ICE CLEAR U.S.        |        |
| ICE CLEAR EUROPE      |       |
| ICE CLEAR CANADA      |    |
| ICE CLEAR SINGAPORE   |      |
| ICE CLEAR CREDIT      |    |
| ICE CLEAR NETHERLANDS |    |

 AGRICULTURE

 BONDS

 CREDIT DERIVATIVES

 ENERGY

 EQUITIES/INDEX/OPTIONS

 EXCHANGE TRADED PRODUCTS

 FX

 INTEREST RATES

 PRECIOUS METALS

## GLOBAL NETWORK OF CLEARING HOUSES

### ICE CLEAR US

Serves the agriculture, foreign exchange and equity index markets of ICE Futures U.S.

[Overview](#) / [Rulebook](#) / [Membership](#) / [Financial Resources](#) / [Margins](#)

### ICE CLEAR EUROPE

Clears energy and agricultural commodities, interest rates, bonds, and equity derivatives, as well as European credit default swaps (CDS).

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### ICE CLEAR CANADA

Provides clearing services for ICE Futures Canada's agriculture markets.

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### ICE CLEAR SINGAPORE

ICE Clear Singapore will provide counterparty clearing services for Asian financial and commodity markets.

[Overview](#) / [Rulebook](#) / [Membership](#) / [Fees](#)

### ICE CLEAR CREDIT

A US-based clearing house for credit markets, ICE Clear Credit is the leading clearing house for CDS.

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### ICE CLEAR NETHERLANDS

The continental European derivatives clearing house based in Amsterdam is the primary clearing house for TOM Multilateral Trading Facility.

[Overview](#) / [Rulebook](#) / [Membership](#)