# Clearing House Risk Management Basics
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## 1. What is clearing house capital adequacy?

A clearing house is a central counterparty (CCP). As its name implies, it substitutes itself as the "universal" counterparty and undertakes to settle trades by clearing participants as provided in its rules. As a result, risk of settlement failure by clearing participants is concentrated with the CCP. This key role typically results in CCPs being recognised as systemically important or vital to the financial markets they serve. Because of this, a CCP needs to properly manage its counterparty risk exposure and have an "adequately funded capital structure" to withstand the potential losses from clearing participant default.

As clearing houses are institutions of systemic importance, their strength is vital to the stability of the financial markets. Therefore, regulators usually set stringent requirements on clearing houses' risk management, such as stress testing assumptions and capital adequacy standards, to safeguard these institutions against loss from major default even under extreme market conditions.

## 2. What is the International Organisation of Securities Commissions (IOSCO)?

IOSCO is an international association of securities regulators which is recognised as the main international standard setting body for the world's securities and derivatives markets. Hong Kong's Securities and Futures Commission has been a member since its establishment.

## 3. What are IOSCO standards?

The IOSCO standards are set by IOSCO and the Committee on Payment and Settlement Systems[1] (CPSS), which aim to set out comprehensive standards for risk management of a CCP. They are similar to the standards governing the capital adequacy of internationally active banks set by the Basel Committee on Banking Supervision.

National regulators responsible for the regulation and oversight of CCPs are expected to assess whether the CCPs in their jurisdiction have implemented the IOSCO standards and to develop plans for implementation by CCPs where necessary.

[1] CPSS is based at the Bank for International Settlements in Switzerland and comprises major international central banks and banking regulators.

**4. What is margin/additional collateral?**

Margining and collection of additional collateral are risk management measures designed to cover the potential losses if a default occurs under "normal" market conditions.

Margin/additional collateral is "defaulter specific". This means that margin/additional collateral pledged by the defaulting clearing participant prior to default will be used to cover any loss resulting from its default. Margin/additional collateral pledged by non-defaulting clearing participants will not be used to cover default losses created by other clearing participants.

In the derivatives markets, margining has been a common practice for many years. In the securities markets, margining has been practiced by major clearing houses such as LCH.Clearnet Ltd (UK), LCH.Clearnet SA (France) and Eurex Clearing (Germany).

**5. What are the Guarantee Fund (GF) and Reserve Fund (RF)?**

HKEx's GF and RF are default funds. Default funds are designed to cover excess losses in a default that occurs under "extreme but plausible" market conditions agreed between the CCP and its regulator(s). Default funds are typically made up of contributions from both clearing participants and the clearing house. Unlike margin/additional collateral, default funds operate on a "pooled" basis, which means non-defaulting clearing participants may be required to share any losses due to a default of another clearing participant. Pooling enables a clearing participant to contribute less than it would be required to contribute if it had to provide collateral for its own risk exposure. Hence by using pooling, the CCP and its clearing participants are able to collectively achieve better funding efficiency.

Almost all major clearing houses, including ASX Clear (Futures) (Australia), CME Clearing (US), Eurex Clearing (Germany), LCH.Clearnet Ltd (UK), SGX-DC (Singapore) and The Central Depository (Singapore), have default funds supported by contributions from their clearing participants.

**6. Why do HKEx's clearing houses need default funds in addition to margining?**

Since margin is intended to cover the range of potential default losses under normal market conditions, clearing houses may find that the margin pledged by a defaulting clearing participant is not sufficient to cover losses if the default occurs under extreme market conditions. In this situation, losses in excess of the defaulting clearing participant's margin and GF/RF contribution will be covered by the default fund(s).