

# Risk Committee Report

## Risk Statement

Effective risk management is important to the Group's achievement of its strategic goals.

The Group manages risk across multiple risk domains, including but not limited to financial, business and strategic, operational (including IT and cyber security), ESG, and legal and regulatory risks. Business operations are managed in line with risk appetite tolerances set by the Board.

The Group seeks to ensure it achieves its strategic goal of being the global markets leader in the Asian time-zone; building upon our role as the leading venue for investing into and out of Mainland China, while increasing our international relevance to China, and our Asia relevance to the global markets.

This includes acting in the interest of the public with particular regard to the interest of the investing public, maintaining stakeholder trust, and supporting the integrity of the financial system. The Group recognises its role as a market infrastructure provider and manager of systemic risk, and that its long-term sustainability is dependent on its pursuit of strategic goals while simultaneously managing risks, having sufficient capital and liquidity, ensuring continuity of operations, and protecting its reputation.

The Group aims to maintain sufficient capital and liquidity to meet its regulatory obligations, which require it to have financial resources to cover potential losses and liquidity needs for a range of stress scenarios taking into account extreme but plausible market conditions. As a business, the Group also aims to maintain sufficient capital over and

above that required to meet its regulatory obligations in order to fund its strategic development objectives while ensuring the appropriate balance between risk and shareholder returns. The Group applies risk management measures to strategic initiatives that are designed to limit the Group's exposure to potential losses. It also seeks to maintain liquid financial resources to meet unforeseen cash outflows. The Group strives to maintain stakeholder trust by avoiding business practices that could lead to reputational damage or harm to the Group. The Group, therefore, seeks to operate within all relevant rules and regulations and to avoid disruptions to its business operations that would have a negative impact on stakeholders.

## The Risk Committee

The Risk Committee is delegated by the Board to oversee the Group's overall Risk Management Framework and to advise the Board on the Group's risk-related matters. The Committee is also responsible for reviewing the Group's risk and compliance policies and, in conjunction with the Audit Committee, assessing the adequacy and effectiveness of the Group's risk management and internal control systems. The Committee's terms of reference are available on the HKEX Group website [OS](#). The Committee comprises six INEDs whose names and biographies are set out in the Board and Committees section of this Annual Report. The Committee held four meetings in 2022. Members' attendance records are disclosed in the Corporate Governance Report contained in this Annual Report.



## Summary of Work in 2022/2023

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- Approved the new HKEX Conflicts of Interest Policy
- Approved the new Group Code of Conduct
- Approved the Group Risk Taxonomy
- Approved the Group Cyber Risk Management Policy
- Approved the Group Third Party Risk Management Policy
- Approved the clearing risk protocol for the Swap Connect project
- Approved the HKCC Default Fund Sizing Assumption from “Cover 1+5” to “Cover 2”
- Approved the Holiday Trading, Clearing and Risk Management Arrangement
- Approved the Group Model Risk Governance Policy
- Endorsed the Committee’s Terms of Reference Compliance Assessment
- Endorsed the Group Risk Appetite Statements updates
- Endorsed the Treasury Risk Appetite updates
- Reviewed VaR Platform (formally known as NGRM) Assurance
- Reviewed the revision of the Group Whistleblowing Policy
- Reviewed the HKEX Group Compliance Framework
- Reviewed Market Contingency Plan and Business Continuity Drill Update
- Reviewed the results of annual Attestation and Inspection Programme and the plan for 2022
- Reviewed the results of Independent Validation, plan for Independent Validation 2022 and the implementation of the Model Risk Management System
- Reviewed the Issue Management update
- Reviewed the Independent Risk Review update
- Reviewed the Cyber Improvement update
- Reviewed the Clearing Risk Committee report
- Reviewed the Monitoring and Testing Plan
- Reviewed the results of the Group’s quarterly Group Risk Management processes that cover HKEX, the LME Group, and QME, including risk heatmaps and dashboards, summaries of assurance activities, emerging risks and clearing house liquidity, capital adequacy, and solvency levels
- Reviewed the management confirmation on the adequacy and effectiveness of the Group’s risk management and internal control systems

Operating an adequate and effective risk management and internal control system is essential for achieving the Group’s strategic objectives and maintaining service delivery targets. The Risk Committee is responsible for overseeing the Group’s risk management approach, policy and framework. The Group operates a consistent methodology using the Group Risk Management Framework for the identification, assessment, reporting and management of risks. Risk identification and management is the responsibility of Group management. 2022 was a year characterised by a significant increase in volatility across global asset

markets. Emergent risk events were escalated and managed in accordance with established Group processes and procedures. Of most significance was the management of the disorderly nickel market in Q1 2022. The risk management and internal control systems adopted by the Group remain adequate and effective in evaluating, determining and managing significant risks that the Group may take in achieving its strategic objectives. The Group has satisfactorily maintained appropriate levels and control measures in response to the Covid-19 pandemic which was particularly relevant during the first half of 2022.

## Risk Governance

The Group’s risk governance structure is based on a “Three Lines of Defence” model, with oversight and direction from the Board, the Risk Committee, and Group management through the Executive Risk Committee (ERiC).

ERiC is delegated by the Management Committee to oversee and manage the Group’s risk management activities and report to the Risk Committee on a quarterly basis. ERiC reviews and evaluates the Group’s risk profiles and the associated risks in achieving the Group’s strategic objectives; reviews the Group’s risk and compliance policies; monitors the effectiveness of controls across all key risk types; and fosters risk management culture across the Group. ERiC also delegates specific tasks to management sub-committees for further discussion and handling when necessary.



## Group Risk Management

The Group Risk Management Framework, approved by the Risk Committee, mandates a consistent and effective approach applied across the Group to manage the risks associated with its business and operations. The framework is based on the International Organisation for Standardisation (ISO) 31000 Risk Management – Principles and Guidelines. The following diagram illustrates the key processes adopted under the Group Risk Management Framework.



## Principal Risks

The Group faces a number of principal risks and uncertainties that, if not properly managed, could create an exposure for the Group. Thorough risk assessment and mitigation help ensure these risks are well managed and governed effectively. The Group focuses on addressing the following principal risks.

Principal Risk	Description	Key Mitigations
<b>Strategic Risk</b>	The risk of material adverse changes to the Group's business performance, development prospects and/or ability to deliver its objectives and strategic goals, caused by changes in the business, economic, regulatory or political environments in which the Group operates	<ul style="list-style-type: none"> <li>Proactive monitoring of global exchange industry trends, competitors, climate change and innovations</li> <li>Proactive monitoring of and preparation for global and local changes in regulations affecting the Group</li> <li>Responsive project controls in place to allow strategic flexibility and timely resource allocation</li> <li>Proactive monitoring of geopolitical developments, including impacts of sanctions</li> </ul>
<b>Human Capital Risk</b>	The risk of operational impact as a result of not being able to retain key personnel, engage employees and develop new capabilities	<ul style="list-style-type: none"> <li>Enhancement of the risk measures used as an indicator of the trend in attrition across the Group. This is coupled with the time required to backfill these vacancies to provide a more holistic view</li> <li>Enhancement of the succession plan to cover all key positions across the organisation</li> </ul>
<b>Legal &amp; Compliance Risk</b>	<p>The risk of unexpected or uncertain application of a law or regulation to the Group's business or operations</p> <p>The risk of incurring penalties, financial loss and/or loss of operating licence resulting from the Group's failure to act in accordance with industry laws and regulations, statutory obligations, internal policies or prescribed best practices</p>	<ul style="list-style-type: none"> <li>Implementation of a new Contract Management System</li> <li>Legal review of contracts</li> <li>Establishment of new functions for monitoring and testing and advisory</li> <li>Implementation of a new HKEX Conflicts of Interest Policy to better manage conflict of interest</li> </ul>
<b>Data Risk</b>	The risk of any unexpected or underestimated adverse impact on the Group as a result of limitations to or issues arising from its ability (or that of a third party) to effectively, appropriately or lawfully process, manage and/or protect its data in its ownership or possession	<ul style="list-style-type: none"> <li>Site and data centre security</li> <li>Establishment of the Group Data Protection Office providing consultation to day-to-day operations and new business initiatives</li> </ul>
<b>Treasury Investment Risk</b>	The risk of financial impact on the Group resulting from Group treasury activities	<ul style="list-style-type: none"> <li>Investment capital at risk limited by investment policies, restrictions, and guidelines</li> <li>Investment portfolio stress limits</li> <li>Exposure to foreign exchange risk limited due to HKD/USD peg and immaterial hedged exposure to other currencies</li> </ul>
<b>Credit Risk</b>	The risk that a counterparty will not settle an obligation in full value, either when due or any time thereafter	<ul style="list-style-type: none"> <li>Default management and recovery procedures in place</li> <li>A credit risk management function in place</li> <li>Stress testing of collateral and margin deposits</li> <li>Assessment of financial impact on the Group from counterparty defaulting</li> </ul>

Principal Risk	Description	Key Mitigations
<b>Liquidity Risk</b>	The risk of being unable to settle obligations as they fall due whether relating to the Group's or HKEX's actual or modelled cash flow requirements and/or regulatory requirements under extreme but plausible market conditions	<ul style="list-style-type: none"> <li>Investment policy, restrictions, and guidelines in place covering Corporate Funds, Margin Funds, and Clearing House Funds</li> <li>Clearing liquidity risk management requirements met through established stress testing practices</li> </ul>
<b>Market Risk</b>	The risk resulting from adverse movements in market rates or prices such as foreign exchange rates, interest rates, or equity prices impacting a defaulted participant's and/or member's portfolio	<ul style="list-style-type: none"> <li>Backtesting of margin and collateral haircut sufficiency</li> <li>Default contingent market risk managed through collateral management and margin collection</li> </ul>
<b>Model Risk</b>	The risk of adverse consequences arising from actions and decisions taken on the basis of incorrect or miscalculated model outputs and reports and such consequences may result in financial loss, ill-advised business or strategic decisions, poor risk capital deployment or reputational damage	<ul style="list-style-type: none"> <li>Establishment of Model Risk Governance Framework</li> <li>Internal model validation activities</li> <li>Implementation of Model risk register</li> </ul>
<b>Cyber &amp; Technology Risk</b>	The risk of operational disruption or impact, financial loss or reputational damage due to technology failures, operational inefficiencies in existing technologies and IT processes, or cyber incidents, cyber attacks and/or unauthorised access by malicious internal or external parties	<ul style="list-style-type: none"> <li>Defence-in-depth cyber controls including segregation of critical systems</li> <li>Ongoing testing and evaluation of cyber risk controls</li> <li>Pre-launch risk advice on strategic projects</li> <li>Low latency, highly resilient IT service design</li> <li>Regular system performance monitoring, active capacity planning, maintenance and drills (including disaster recovery)</li> </ul>
<b>Operational Risk</b>	The risk of financial loss, reputational damage or inability to provide services and products to customers resulting from inadequate or failed processes	<ul style="list-style-type: none"> <li>Continuous development of an understanding of the evolving internal critical processes and controls and their impact on people, process and technology</li> <li>Organisational leadership structure and operating model changes</li> <li>Maintenance of a confident state of preparedness to respond to and recover from business disruptions through regular drills on crisis management of major incident scenarios</li> </ul>
<b>Third Party Risk</b>	The risk that business operations or reputation of the Group is adversely impacted by third party actions or a failure by the third party in provisioning services to the Group in line with business agreements	<ul style="list-style-type: none"> <li>Implementation of a new Group Third Party Risk Management Policy and framework along with tooling to enhance monitoring and control in alignment with international standards</li> <li>Quarterly monitoring programme</li> </ul>

More information about the climate-related risks faced by the Group and the Group's approach to other CSR topics that are material or relevant to its business, including but not limited to information security and anti-corruption, is set out in the 2022 CSR Report.

### **CHOW WOO Mo Fong, Susan**

Chairman of the Risk Committee

Hong Kong, 14 February 2023