

# Risk Management



At *Bolsa Mexicana de Valores* (BMV Group), we are aware of the importance that risk management has for compliance with the different business strategies, therefore, through our Risk Management System we can identify, evaluate, monitor and report the risks to which we find ourselves exposed. This System is based on the international COSO-ERM model, allowing alignment of the strategy with risk management, analyzing those risks with the most significant impact on our operation, and allowing us to respond better to them.

Our Risk Management System also considers best practices such as PFMIs, (Principles Applicable to Financial Market Infrastructures). By implementing guidelines in compliance with these principles, effective risk management is sought in anticipation of possible events affecting our objectives' fulfillment.

Within our Internal Control framework, one of our main objectives is to have internal policies, guidelines and procedures that help us establish controls that provide us: a) reasonable assurance about the effectiveness and efficiency of our operation, b) regulatory compliance, c) achievement of objectives.

We have an Incident Management policy that allows us to detect deviations affecting our objectives' achievement. Through the root cause analysis of these events, we design robust controls and corrective action plans.

#### **Risk Governance**

The Chief Executive Officer (CEO) of BMV Group delegates the responsibility for implementing and monitoring compliance with the approved Risk Management System to the Chief Legal and Compliance Officer and to the Comprehensive Risk Management Office.

Risk management has been implemented following the instructions of the Board of Directors, which has five members with experience.

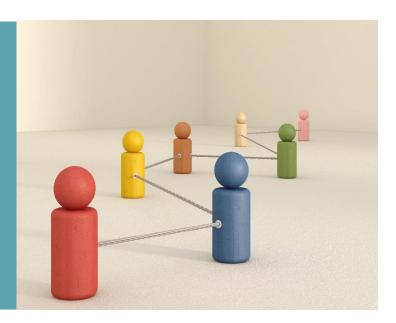
The CEO maintains the necessary independence between Group companies and the Comprehensive Risk Management Office is responsible for the risk management system. The BMV Group Risk Committee was established to coordinate the institutional activities aimed at the correct evaluation and management of risk in the companies that are members of the Group (composed of the Mexican Stock Exchange and the legal entities controlled by the Company).

The Risk Committee operates as an auxiliary body of the Audit Committee, whose purpose is to monitor the company's risk level following the tolerance levels and the established risk appetite. Additionally, it coordinates the institutional activities tending to the correct evaluation and risk management of the companies that are members of the BMV Group, with the collaboration of the Directors of the companies and the Comprehensive Risk Management. It meets periodically, and the risk culture is reinforced among its members. In each session, the topics addressed help to reinforce the knowledge regarding risks and give a broader picture of the Group and its strategy.

The Risk Committee of BMV Group is comprised of:

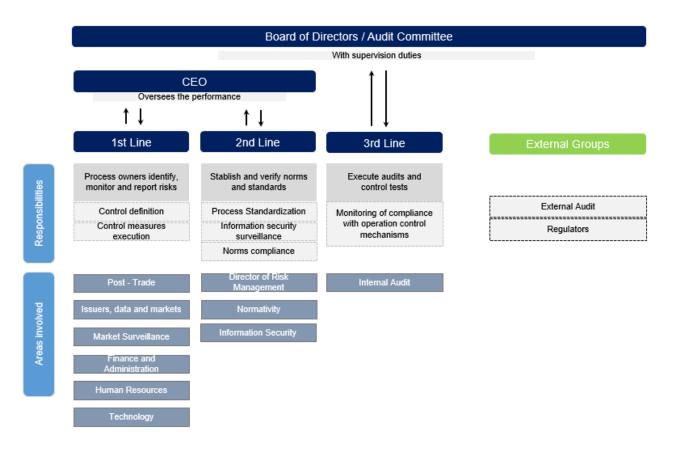


- Chief Capital Formation, Information Services and Markets Officer
- Chief Post-Trade Officer
- Chief Financial and Sustainability Officer
- Chief Information Officer
- Executive Director of Capital Markets
- Director of Comprehensive Risk Management



# **Organization**

Our Risk Management System includes the three lines of defense model, which is implemented as follows:



#### 1.- First Line of Defense: Business Lines, Directors of each business area, and Process owners.

In addition to carrying out the operational activities of the group, the first line of defense:

- Is responsible for the timely communication of operational events and the documentation and implementation of the corrective actions.
- Management of the relevant risks of their teams.
- Establishes mitigating actions for risks with levels above the risk appetite.
- Execute the established controls

#### 2.- Second Line of Defense: Operational Risk, Internal Control, Compliance, Information Security

The second line of defense activities in the risk management model are carried out independently from the rest of the business and operational areas.

The main actions carried out by the operational risk team as part of the second line of defense include the following:

- Documentation of risks, controls and action plans.
- Design and maintenance of the operational risk management model.
- Accompaniment with the operational teams in implementing the risk management model.
- Monitoring of action plans.
- Review of the organization's relevant processes identify possible findings, opportunities for improvement and eventual risks and controls.

#### 3.- Third Line of Defense: Internal Audit.

- Review of the 1st and 2nd line of defense.
- Provides an independent perspective.
- Guide regarding the processes and guestions their execution.

This model represents a defined internal control structure in BMV Group to face potential risks, achieving a solid and independent government with explicit functions, timely and transparent communication.

We continuously work to strengthen our risk management process by identifying the key risks that affect the continuity of our business if they materialize, and accepting those risks that, due to their nature and in accordance with our risk appetite and tolerance level, we can assume.

By strengthening our internal control environment, we can minimize exposure to operational risk, encourage compliance with BMV Group policies, promote a culture of organizational efficiency, obtain timely information, provide a reasonable degree of assurance in achieving objectives, and strengthen the Group's operation.

#### **Risk Identification**

At Bolsa Mexicana de Valores Grop, we identify and manage risks throughout our value chain, which outlines the core and support processes that a company undertakes to design, produce, market, and deliver a final product. The value chain and risk management are closely related, as processes can be affected by a myriad of risks at any stage of both primary and secondary activities.

Therefore, there are different types of risks that present various scenarios in which they can impact us, requiring the implementation of mitigation measures. Risk identification and reassessment are conducted annually or whenever there is a change in the processes. Additionally, risk identification is carried out during the development of new products or services. It is worth mentioning that within Grupo BMV, we have a defined risk appetite that is monitored and reported within our Governance model, allowing us to recognize any potential deviations from our risk tolerance levels and enabling us to react promptly to any possible materialization of risks.

#### Tolerance

BMV Group has established a risk appetite and tolerance, applicable to the processes and companies that comprise it, this being the leading risk indicator.

#### **Priorization**

The prioritization of risks is carried out during the valuation process, in which the probability and impact are identified, considering the design and execution of the controls to determine the residual risk, as well as considering the risk appetite dictated by the CEO, the priority of attention can be determined for the identified risks.

#### **Risk Culture**

As part of Grupo BMV's culture, through a defined corporate governance and an appropriate risk management strategy, we ensure that the activities of the areas meet the expected objectives aligned with the Group's values. Employees are responsible for managing the risks that arise in their daily functions, so the risk culture permeates all levels, through the support provided by the Comprehensive Risk Management Office in identifying and mitigating inherent risks in their processes.

Risk management is based on the culture of sharing knowledge and ensuring that everyone in the organization understands and manages the risks that are part of their daily work. This allows employees to proactively identify and know the way to report potential risks that they identify in their processes and encourage continuous improvement.

The Comprehensive Risk Management Office publishes and distributes the Risk Manual and Methodology and the Incident Management Policy and reinforces it through various means of internal communication such as emails, postcards, communication on screens in the building, and newsletters, among others.

Additionally, in order to reinforce the risk culture and identify the company's maturity, incorporating different measurement criteria in risk management, internal control, regulatory compliance, information security, and internal audit has been established as a financial incentive. These criteria are considered as part of the variable compensation for Grupo BMV. This is measured through employees' participation in the initiatives promoted by the Comprehensive Risk Management Department.

# **Types of Risks Inherent to the BMV Group**

Below we describe some risks that, due to their nature, are inherent to the operation of the BMV Group. For each risk we identify its impact and corresponding mitigation measures:

	Description		Impact		Mitigation Measures
Operational	It is the risk that the deficiencies that may occur in the information systems or internal processes, human errors, management failures, or alterations caused by external events lead to reduced, deteriorated, or interrupted services.	•	Operational Errors Fraud materialization Reprocess of activities Increase in operational workload	•	Risk Manual and Methodology Policy of incident management Risk monitoring and reporting Access management
Technologycal	Failures, interruptions or delays in the services of the trading platforms which may cause financial damage to a client	•	Services unavailability Failures or intermittence in the applicatives Frauds due to an incorrect management of users/profiles	•	The technological and telecommunications infrastructure have HA (high availability) and the same capacity in the CDP servers. (Production Data Center) and CDA (Alternate Data Center). The execution of internal and union tests of DRP is carried out.
Compliance or Regulatory	Existing or emerging threats related to non-compliance with the regulatory and normative framework applicable to BMV, internal policies, or violation of the Code of Ethics and Conduct, which could negatively impact the image and reputation of BMV and its collaborators and generate negative financial consequences.	•	Fines or sanctions by the authorities Notices/observations from authorities Loss of operating license	•	Compliance monitors regulatory and normative sources; when a change is detected, it informs the responsible areas.  There is a periodic review of compliance with the regulations based on the inventory of obligations which is permanently updated.  The Legal area supervises group activities' contractual and legal framework, including system participants, providers, and regulators.
Reputational	Internal and external threats or dangers can damage the image, perception, or opinion of the GBMV, negatively affecting the achievement of objectives and relationships with third parties.	•	Litigation Loss of clients Economic losses	•	Reputational Risk Policy
Strategic	Current and future impacts on business continuity and sustainability that could arise from adverse business decisions, misapplication of decisions, or lack of responsiveness to changes in the financial sector. Related to Institutional objectives that affect the critical processes of BMV.	•	Economic losses due to poorly designed products. Inadaptability to market changes Poorly implemented methodologies	•	Clear and defined objectives Tolerance levels Risk appetite Identification of emerging risks

Continuity	Relevant threats that are considered critical for the continuity of the Institution's operation, in case of contingency, are managed through the Business Continuity Plan	•	Inability to recover critical operations Economic losses Reprocessing of activities Notices/observations from authorities	•	Business Continuity Policy BCP BIA Continuity Tests
Cybersecurity	Threats that put at risk the information that is processed, stored and transported by the information systems and applications that are interconnected.	•	Loss of critical information. Information retrieval expenses Reputational damage due to information leaks Identity fraud	•	Information Security Policies Safety Standards Vulnerability scanning Awareness campaigns Access management



### **Emerging Risks**

In risk management, it is essential to analyze the context in which we operate on a day-to-day basis and be aware that this context and environment are constantly changing. Therefore, it is vital to analyze emerging risks, and although we have yet to learn much about these, we know that they could have a high impact. Hence the importance of measuring the external and internal environment and our level of exposure.

	Description	Impact	Mitigation Measures
Disruptive Technologies	New business models based on Blockchain, advances in Artificial Intelligence (AI), and the Cloud could change markets behavior and customer preferences	New technologies could directly impact the performance of our trading and post-trading businesses, by reducing the need for centralized intermediaries (CCPs) and, on the other hand, could impact our Market Data Services, migrating to the Cloud services.	<ul> <li>Constant monitoring of preferences market and technological developments</li> <li>Dialogues with the strategic areas of the Group to evaluate possible impacts on their products</li> <li>Participation with regulators, for exploration of new regulatory frameworks</li> <li>Information security tests to strengthen the cybersecurity controls</li> </ul>
Environmental Changes	The increase in the intensity of weather events both extreme and gradual could change the conditions of our whole value chain	A direct increase of the severity and frequency of extreme weather events may increase the costs of adaptation measures and even change the entire value chain, from suppliers of technological infrastructure due to power supply failures, to a physical displacement of listed companies and impact on their operations.	<ul> <li>Incorporation of Climate scenarios in the Business Continuity Plan (BCP) and the Disaster Recovery Plan (DRP)</li> <li>Greater promotion of labeled bonds as an alternative to finance preventive and climate change mitigation projects of the issuers</li> </ul>

## Climate Change Risks

Continued greenhouse gas (GHG) emissions could raise the planet's average temperature by more than 2°C above pre-industrial times, with severe and irreversible economic, environmental, and social consequences. At Grupo BMV, we identify risks due to climate change that bring present and future challenges and financial opportunities. Within this category, we develop two categories of risks whose prioritization is evaluated under impact and probability of occurrence standards.

Below we present a more detailed description of the impact and mitigation measures of each identified climate change risk.

Transition Risks						
	Description	Impact	Mitigation Measures			
Reputational	a) Concerns in various stakeholders concerning listed companies     b) Perception of the role that stock exchanges play in the climate transition	Companies not carrying out ESG practices and do not have an environmental strategy may affect their reputation. Grupo BMV's role as a stock exchange is essential for the growth of green markets. Failure to address this change with leadership can affect the reputation of the organization and the attractiveness of the markets for investors.	<ul> <li>Greater accompaniment to listed companies and potential issuers</li> <li>Greater participation in initiatives of the Sustainable Stock Exchange (SSE) and dissemination of shares.</li> <li>Disclosure of the environmental strategy of the BMV Group</li> <li>Accompaniment to the listed companies through the generation of capacities</li> </ul>			
Market	<ul> <li>a) Decline in competitiveness and demand for BMV Group products and services</li> <li>b) Change in investor behavior and industry stigmatization</li> </ul>	Changes in client priorities may reflect a decrease in the consumption of financial instruments, such as indices, benchmarks that do not consider ESG factors. Not being prepared with alternatives can affect the income of the company and reduce its capitalization value	<ul> <li>Greater promotion of bonds labeled and linked to sustainability</li> <li>Generation of indices, benchmarks and ETF's ESG</li> <li>Program of sustainable accompaniment to listed companies</li> <li>Sustainability guide for companies</li> <li>Carbon Neutrality Guide</li> </ul>			
Regulatory	a) Regulatory changes     b) Price increases of greenhouse emissions	Regulations for listed companies to implement and disclose their climate strategy on a mandatory basis. It can represent a barrier for new companies to list and companies already listed to delist.	<ul> <li>Program of sustainable accompaniment to listed companies</li> <li>Sustainability guide for companies</li> </ul>			
		Physical Risks				
Acute	Increase in the intensity of extreme weather events	An immediate increase in the severity and frequency of extreme weather events may increase the costs of adaptation measures and repairs to crucial business infrastructure or even make it impossible for employees to reach the office physically.	Climate scenarios in the     Business Continuity Plan (BCP)     and the Disaster Recovery Plan     (DRP)			
Chronic	Changes in environmental conditions  A temperature rise scenario above 2°C could change the entire value chain, from suppliers of technological infrastructure due to power supply failures, to a physical displacement of listed companies and impact on their operations.		Greater promotion of labeled bonds as an alternative to finance preventive and climate change mitigation projects of the issuers			