



LuxCSD S.A. (“LuxCSD”)

Internal Control Framework

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1. Introduction

This Memorandum outlines the main aspects of the Internal Control Framework of LuxCSD S.A. (“LuxCSD” or the “Company”).

2. ICS Approach

An effective Internal Control System (ICS) is a fundamental component of the overall risk management culture and of corporate governance. It consists of safeguards and controls embedded in the organizational structures, in particular within the business processes, to ensure that business processes and activities run in an orderly fashion and minimise risks. Thus, the design and implementation of an effective ICS is vital for managing risks, preventing material losses and achieving its corporate goals/business strategy and safeguard its continued existence.

The ICS approach applies to all business activities of LuxCSD. In accordance with the ICS approach, the duties of senior management of LuxCSD, comprise, inter alia, analysing and assessing the risk of the business process, implementing adequate safeguards and controls within the business processes, monitoring the application of safeguards and controls, reporting promptly if material shortcomings in the ICS have been identified and ensuring awareness of the employees regarding the ICS.

The BoD of LuxCSD has approved the Deutsche Börse Group ICS policy which recognises the Integrated Framework 2013 of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) as a leading framework for designing, implementing, and conducting internal control and assessing the effectiveness of internal controls. COSO outlines the components, principles, and factors also necessary to effectively manage its risks and controls to accomplish objectives, which it applies to all processes of LuxCSD, including the processes outsourced to third parties, since the risks remain with the risk owner.

Some key aspects of internal control that are applicable to LuxCSD are:

- Integrity and ethical values;
- Segregation of duties;
- Policies, standards and procedures (including sound administrative and accounting procedures);
- Definition of coherent objectives defined by the ComEx;
 - Definition of authorization levels; and
- Management information and control systems.

In addition, the three lines of defence model provides a common approach to enhance communications on risk management and control by clarifying essential roles and responsibilities. The three lines of defence model addresses how specific duties related to risk and control are assigned and coordinated. The three lines of defence are described below.

First line of defence: Functions that own and manage risks (Business Lines).

Second line of defence: Functions that oversee risks, i.e, the various control functions which support and advise the first line and senior management and the Board of Directors of LuxCSD. LuxCSD has appointed a Chief Compliance Officer, a Chief Risk Officer, a Chief Technology Officer and experts (e.g., the data protection officer, as well as the information security officer).

Third line of defence: Function that provides independent assurance, i.e., the Internal Audit function. LuxCSD has appointed a Chief Internal Auditor who provides senior management and the Board of Directors of LuxCSD with reasonable assurance of the adequacy and effectiveness of the risk management and control framework. Internal Audit follows the market and product processes, as well as the support services, ensuring that common standards of control are applied across all processes. Audits are conducted within the areas relevant for the defined process. The Chief Audit Officer has direct access to and reports directly to the Board of Directors and the Audit Committee.

LuxCSD has outsourced the majority of its operations, as well as the functions in the second and third line of defence and support functions (e.g., human resources). The primary service providers are Clearstream entities, i.e., Clearstream Banking S.A. ("CBL") and Clearstream Services S.A. ("CS"). Consequently, there is a high level of interconnectedness with Clearstream Group. It should be noted that the ICS framework as outlined above is applicable groupwide.

To strengthen the direct oversight of outsourced activities and the performance of the Chiefs for Risk, Compliance, Internal Audit and Technology, LuxCSD has established a Corporate and Outsourcing Monitoring Team. This team is in charge of monitoring the service performance and escalation to senior management in case of any deficiency in the service provision. Key Performance Indicators (KPIs) are in place with regard to all outsourced services. Services which are outsourced to third parties other than Clearstream entities are in the same manner subject to outsourcing monitoring by LuxCSD. This is the case, for example, for the third party outsourcing to T2S (settlement services). In all cases, the results of the controls are evaluated and reported to the ComEx. The BoD and the Risk and Audit Committees are kept informed of these results by the ComEx and by the respective Chiefs.

3. Risk Management Framework

It is LuxCSD's intention to confine risk to an appropriate and acceptable level. Risk management is a fundamental component of the management and control of LuxCSD. Effective and efficient risk management is vital to protect the interests of the stakeholders in LuxCSD and enables the company to achieve its corporate goals, while safeguarding its continued existence. LuxCSD has therefore established a risk management system comprising roles, processes and responsibilities applicable to all staff and organisational units of the company, including the outsourced activities of LuxCSD. This ensures that emerging risks are identified and managed as early as possible.

LuxCSD's risk strategy ensures that the execution of the business strategy systematically includes the identification, assessment, monitoring and mitigation of possible risks and the implementation of mitigating controls. It ensures and enables the timely and adequate control of risks. The risk strategy is reviewed annually and approved by the Board of Directors (BoD) and the Comité Exécutif (ComEx) of LuxCSD. The main part consists of the risk strategy statement, the risk management approach and risk types which are quantified in the risk appetite framework based on tools and concepts used to manage risk.

The BoD of LuxCSD holds the final responsibility for managing the company's risks. The ComEx is responsible for the daily management and coordination of risk management related activities. The members of the BoD of LuxCSD ensure that the risk strategy is integrated into the business activities throughout the organisation and that adequate measures are in place to implement the strategies, policies and procedures. To comply with the

requirements of CSDR and the related technical standards, LuxCSD constituted the Risk Committee in January 2018, which provides advice to the BoD on the current and future risk of the company.

The organisation of LuxCSD's second line support from risk management is decentralised, in line with the outsourcing structure in collaboration with the Clearstream group of companies. The Chief Risk Officer of LuxCSD reports regularly and, when necessary, ad-hoc to the ComEx, the Board of Directors and the Risk Committee.

The Deutsche Börse Group Risk Management Policy, which has been approved by the Board of LuxCSD as applicable, determines the five key processes of the risk management framework. These key processes are: risk identification, risk notification, risk assessment, risk control/migration and risk monitoring/reporting. The risk management framework aims at ensuring that all threats, causes of loss and potential disruptions are, properly identified as soon as possible, centrally recorded, assessed (that is, quantified in financial terms to the largest possible extent), controlled and reported in a timely manner and consistently, together with suitable recommendations to the BoD and ComEx.

A number of procedures are in place which implement the risk management framework in terms of processes, roles and responsibilities and which document how different areas within the 1st and 2nd line of defence work together and define roles and responsibilities. Add related link to description of the lines of defence. This includes the Group Risk Management Procedure, as well as several other procedures which provide a deeper overview of the risk framework and standards to ensure the sustainability of LuxCSD and thereby smooth and efficient market operations (e.g., "Guidelines on risks posed to us").

There are also specific procedures and reports in place to ensure key risks incurred by the company are completely and adequately identified, measured, monitored, managed and reported to BoD and ComEx of LuxCSD. In this context reference is made to the the OpRisk Procedure for operational risk which defines the approach and the major instruments applied within the process of OpRisk management on a high level. Additional guidance on the approach is given in the Handbook Operational Risk.

The following tasks are described across the different roles (including with regard to the outsourced business activities of LuxCSD):

- individual employees: supports the Risk Owner, OpRisk Representative and Risk Management. He/she performs or supports the collection or event data and key risk indicators as well as provides additional expertise when needed.
- OpRisk Representative: performs the day-to-day risk oversight and evaluation within the assigned area.
- Risk Owner: responsible to manage and mitigate operational risk within the assigned area.

Internally encountered operational risk events are captured and analysed as to the root cause in order to determine any mitigating actions to be taken. A high quality and the completeness of the data collection are key factors to achieve the goal of an effective and efficient management of operational risk. Any operational risk scenarios which are identified, are analysed for internal risk management purposes by LuxCSD. It should be noted that LuxCSD's regulatory capital requirements are calculated according to the basic indicator approach (i.e., 15% of the three-year average of gross revenues less volume related cost and the net interest income according to the rules as defined in Articles 315 and 316 CRR).

Business risk reflects sensitivity to macroeconomic evolution and vulnerability to prevent risk arising from external threats, such as the regulatory or political environment or regulatory changes. The detailed description

of the approach applied with the framework of business risk management for LuxCSD is laid down in a business risk handbook.

The exposure to financial risk is not significant in the case of LuxCSD, because LuxCSD does not have positions in derivatives, long settlement transactions and no exposure towards counterparty credit risk. Finally, LuxCSD is not exposed to liquidity risk, because it doesn't offer cash management or credit services to its participants. To sum up, LuxCSD encourages risk awareness and a corresponding risk-conscious culture, amongst other things, through appropriate organisational structures and responsibilities, adequate processes and the knowledge of each employee.

4. Compliance Framework

The LuxCSD Compliance Charter (hereinafter "the Charter") defines the roles and responsibilities of the Compliance function within LuxCSD, as well as its relationships with the ComEx, the Board of Directors (BoD) and the business and operational functions. It defines the mission of the compliance function as to supporting the management of the company to comply with applicable law and regulation, fulfilling regulatory obligations towards customers and supervisors, and protecting the integrity of the markets it serves.

In the structure in place, the Chief Compliance Officer, who also acts as the responsible Anti-Money Laundering Officer of the firm, is the individual appointed directly by the firm to manage the Compliance function, maintaining oversight over compliance, anti-money laundering and antiterrorist financing arrangements and related matters.

The Charter lists the details of the Compliance function within the scope of its defined mission, installs its independence from any other operational function and its direct reporting to the Board of Directors and the Audit Committee. It defines its relationship with the other business and central functions and defines General Principles as to its access to information, reporting to authorities, cases and findings management, recourse to external experts and possible delegation of some of its tasks, but not responsibility, within LuxCSD and/or to other entities of the same Group, subject to appropriate documentation.

The Charter remains a living document that is updated in regular intervals to take account of changes to applicable laws and regulation.