KELER Ltd.
Risk Strategy

Name of the file:	3-19 KELER Risk Strategy v6.0.docx
Document owner organisational unit:	Risk Management
Regulation number	3-19
Effective date:	18th May, 2023
Adopted by the Board of Directors	by its resolution No. 5/2023/5.
Date of review:	April, 2023

keler HORVÁTH GÁBOR vezérigazgató
Digitálisan aláírta: Horváth Gábor Dátum: 2023.05.31 16:49:22 +02'00'

Horváth Gábor
Chief Executive Officer
KELER Ltd.

Dr. Boros Eszter
Digitálisan aláírta: Dr. Boros Eszter Dátum: 2023.05.26 15:50:58 +02'00'

Dr. Boros Eszter
Chief Legal Officer
KELER Ltd.

Table of Contents

1. General part

1.1. Purpose of the Regulation

The purpose of this Regulation is to provide a high-level presentation of the risks and risk management of KELER and to set out KELER's risk strategy.

1.2. Date of review

Until the end of the year following the last review, or in the event of any substantial changes.

1.3. Scope of the Regulation

Material scope: It covers the risks taken by KELER and the risk management principles. It does not extend to compliance and security risks[1].

Personal scope: It covers all employees involved in KELER's risk assumption process.

1.4. References

Related regulatory documents:

- 3-04 The Risk Assumption Regulation of KELER Ltd
- 3-11 The Investment Regulation of KELER Ltd
- 3-12 Rules for dealing with extraordninary liquidity situations
- 3-15 The Organisational and Operational Rules of KELER Ltd
- 3-18 The Recovery Plan of KELER Ltd
- 4-02 The Operational Risk Management and KRI Regulation of KELER Ltd
- 4-07 The Assets and Liabilities Management Regulation of KELER Ltd
- 4-22 The Client and Partner Rating Regulation of KELER Ltd
- 4-30 The Liquidity Management Regulation of KELER Ltd
- 4-36 The Limit System Regulation of KELER Ltd
- 5-01 The Instruction of the CEO of KELER Ltd on risk management tasks

Applicable legal rules:

- Regulation (EU) No 909/2014 of the European Parliament and of the Council on Improving Securities Settlement in the European Union and on Central Securities Depositories and Amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012 (CSDR),

[1] Including physical safety, information security and human risks.

- Commission Delegated Regulation (EU) No 909/2014 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on certain prudential requirements for central securities depositories and designated credit institutions offering banking-type ancillary services (EBA RTS)
- Commission Delegated Regulation 2017/392 of 11 November 2016 supplementing Regulation (EU) No 909/2014 of the European Parliament and of the Council with regard to regulatory technical standards on authorisation, supervisory and operational requirements for central securities depositories (ESMA RTS)
- Regulation (EU) No 575/2013 of the European Parliament and of the Council on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (CRR)
- Act CCXXXVII of 2013 on Credit Institutions and Financial Enterprises (Hpt.)
- Act CXX of 2001 on the Capital Market (Tpt)
- Act XXXVII of 2014 on the Further Development of the Institutional Framework to Strengthen the Safety of Certain Actors in the Financial Intermediation System (Resolution Act)
- The Internal Capital Adequacy Assessment Process (ICAAP), the Internal Liquidity Adequacy Assessment Process (ILAAP) and their supervisory review and the Business Model Analysis (BMA) - Methodology Manual for Supervised Institutions (ICAAP-ILAAP Manual)
- Recommendation No 7/2020 (VI.3.) of the National Bank of Hungary on the use of external service providers
- Recommendation No 14/2021 (IX.16.) of the National Bank of Hungary on the assumption, measurement, management and control of credit risk

1.5. Regulation repealed

None.

1.6. Version control

Version number of the current regulation: v6.0.

Version number of the previous regulation: v5.0.

Effective date of the previous regulation: 07. 02. 2022

1.7. Abbreviations used in the regulation

ANNA	Association of National Numbering Agencies
BMA	Business Model Analysis
CSD	Central Securities Depository
EBA	European Banking Authority
ALC	KELER Asset-Liability Committee

ESMA	European Securities and Markets Authority
EU	European Union
ICAAP	Internal Capital Adequacy Assessment Process
ILAAP	Internal Liquidity Adequacy Assessment Process
RC	Risk Committee
KELER	KELER Central Securities Depository Ltd.
CO	Controlling Group
KELER CCP	KELER CCP Central Counterparty Ltd.
RMD	Risk Management Department
TRE	Treasury Group
MNB	National Bank of Hungary
VaR	Value at Risk

1.8. Terms used in the regulation

Own Funds: As defined in3-04 The Risk Assumption Regulation of KELER Ltd.

Risk Appetite: Risk appetite expresses the amount of risk that KELER is willing to take in its operations in order to achieve its objectives while complying with the legal and regulatory framework. The risk appetite should be taken into account when defining the strategy of KELER to ensure that the results of the strategy are consistent with the risk appetite defined for the organisation.

Critical Service Provider: a service provider as defined in the CSDR, the Resolution Act or Recommendation No. 7/2020 of the National Bank of Hungary on the use of external service providers.

2. Introduction

KELER is the central securities depository subject to the CSDR which provides, in addition to its core services, non-banking and banking type services, therefore it is an institution subject to the Tpt and the Hpt. as well, in addition to the CRR. It has a special role and position in the capital market, therefore the risks arising are also specific, which is reflected in the internal regulation of KELER.

Legislation and recommendations emphasise the importance of creating a risk strategy and policy, which KELER aims to comply by creating this Regulation. The risk strategy is approved by the Board of Directors by the adoption of this document.

This document constitutes the highest level regulatory document containing principles and objectives.

3. Risk Strategy

The risk strategy is meant to summarise KELER's approach to risks and risk management. The risk strategy determines the main risk factors, the type of risks that can be taken and the extent to which they are acceptable.

The risk management strategy interacts with the business strategy in force at the time, KELER has developed its risk strategy along conservative and prudent risk management principles. Its methods, processes and built-in controls have also been designed accordingly.

The components of the risk strategy:

- the risk assumption policy,
- the risk appetite (the willingness and the capacity to take risks),
- the risk structure,

3.1. Risk assumption policy

KELER consciously takes certain risks in relation to the core services it provides. Risk-taking constitutes an integral part of KELER's core activity, adapted to its specific tasks among financial institutions and to the possibilities offered by legislation. Accordingly, the objective of risk management is not to minimise risk, but to ensure that the risks inherent in KELER's activities are properly identified, measured, managed and contained within defined limits so that the level of risk generated does not jeopardise the continuity of business operation.

In addition to the risks inherent in the core services, KELER may also take additional risks in relation to its non-banking activities, but mainly in relation to its banking-type services and in order to ensure effective financial activities. Other risks are inherent in the general operation of KELER (e.g. operational risk, general business risk, compliance risk).

The basic principle for risk taking is that KELER **should always have a stable capital position, that its risks should be clear, transparent and adequately covered**, and that **supervisory conditions, regulations and recommendations should be taken into account when taking risks**. KELER’s **risk assumption may not jeopardise the stable provision of critical services and the interests of the clients who use them.**

In order to achieve effective risk management, KELER establishes and continuously develops the risk culture within its organisation.

3.2. Risk appetite

Risk appetite can be defined by assessing the willingness and the capacity to take risks.

KELER, as a nationally critical systemic element, has a low **level of willingness to take risks** due to its role, which is almost entirely determined by the legislation applicable to KELER. CSDR defines the core activities and the scope of complementary activities of KELER, and sets prudential requirements in accordance with other legislation (e.g. Hpt.., CRR). Compliance with the law is therefore of paramount importance for the prudent operation of KELER.

For the above reasons, the determination of the rate of conversion of risk and return for KELER is also difficult.

Risks can also be identified in relation to core services, non-banking type services and banking type services at KELER.

The risks associated with the credit institution function are also subject to the legal restrictions relevant for investments and counterparties. In addition to the external constraints, KELER has adopted a conservative investment policy, which means investment in instruments which are simple, transparent and easily measurable in terms of risks.

In addition to the above, the risks taken towards KELER's subsidiary, KELER CCP, play a key role. The amount of risk taken through the size of the share is maximalised, but within this, the actual extent of risk assumption depends on the activity and open positions of clearing members, energy market non-clearing members and their principals, as well as market volatility.

Risk capacity is determined by the amount of own funds, which may be constant in the medium term (1-3 years) or variable depending on profitability and dividend payments. In KELER, the effective free capital is calculated as part of the own funds, that is not committed to cover risks. This part of the capital can be used to cover additional risks, i.e. it expresses in numerical terms the additional risk capacity of KELER. The Board of Directors sets the minimum expected level of actually free capital, derived from the result of the capital plans, which KELER must maintain at all times for the purpose of long-term prudent operation. Due to its prominent role within the system, KELER is expected to be able to hold own funds above the minimum level required by law.

Based on the above, KELER's **risk appetite** is strongly constrained by the regulatory environment and the internal rules reflecting it , compared to traditional banking risks, and therefore the potential risk appetite is significantly limited by regulation.

3.3. Risk structure

The design/development of KELER's risk structure also depends primarily on the regulatory environment (which limits risk-taking). In addition, the restrained internal risk appetite and the activity of the participants in the securities settlement system determine the degree of risk taken by KELER.

In accordance with the legal requirements, KELER shall prepare a comprehensive risk analysis for the Board of Directors at least once a year, in order for the Board of Directors, as the management body with governing powers, to review any changes in the risk structure/profile of KELER and initiate or adopt any necessary changes in the risk management principles and methodologies accordingly. The results of the comprehensive risk analysis are also reported by KELER to the Supervisory Board.

As part of this analysis, KELER updates its risk map every year, compares it with the principles and risk appetite set out in the risk taking policy and examines its consistency with the objectives set out in the business strategy.

4. Risk Committee

The Risk Committee is the body that deals with the overall risk management of KELER. Its purpose is to identify the risks falling within its powers and to make recommendations on their management. It reports to the Board of Directors and also informs the CEO and the Supervisory Board on its activities.

The Risk Committee can formulate opinions and make recommendations on the consistency of KELER's current and future risk structure, the risk taking policy and the risk strategy.

The Risk Committee has 10 members, and the main criterion for the selection of members is to cover all areas of KELER and therefore all potential risks.

The Risk Committee provides an opportunity for effective cooperation between the departments and functions operating the first and second lines of defence.

5. Main types of risks

The main types of risk shown on the KELER risk map are:

- The credit risk of CSD links and account-keeping institutions
- Risks assumed towards subsidiary
- Operational risk (including legal, reputational, ICT and outsourcing risks)
- Investment risk

The following section describes in more detail the types of risks listed above, the extent of the risks assumed and how they are managed.

5.1. The credit risk of CSD links and account management institutions

KELER does not provide traditional bank lending (to clients), nevertheless, it does take on credit risk through its account manager partners as a result of its banking activities.

KELER is linked to several types of institutions, mainly due to its involvement in international transactions (Cross Border Transactions), and incurs exposure to such institutions. KELER establishes CSD links for the settlement of international securities transactions and opens foreign exchange accounts with foreign institutions for the settlement of the cash side of the transactions.

The size of the current exposure to account management institutions and CSDs with banking licence is determined by the business activity of clients using settlement services, and therefore, due to its business, KELER only has limited and indirect influence. Due to the foregoing, a significant exposure may also appear temporarily in the balance sheet of KELER, which in addition to the exposure to the given counterparty, also includes exposure to the country of the registered seat of foreign institutions.

When choosing CSD links and account management institutions, a reliable and stable background and a good reputation are the main criteria. In addition to the usual data, the ratings also take into account – where relevant – the results of the counterparty assessment questionnaire and the external credit rating of the country, where the institution is established. The RMD regularly rates KELER's partners according to objective and subjective criteria and monitors its partners on an ongoing basis, whether they are subject to legal proceedings restricting payment (bankruptcy monitoring).

5.2. Risks assumed towards subsidiary

KELER has influence ensuring qualified majority (99.85%) in KELER CCP. The total amount of the share is to be deducted from the own funds of KELER pursuant to Section 46(4) of the CSDR. This is the most prudent treatment of the exposure from a capital adequacy point of view. (In principle, the unsecured exposure in KELER CCP may also be materially higher than the amount of this investment, for which KELER is not legally liable.)

Also linked to KELER CCP, there are the risk assumtions arising from the lines of credit granted, of which the intraday credit line can be granted with full coverage and the member's credit line can be drawn according to the current risk capacity of KELER, as may change from time to time.

The risks associated with KELER CCP shall be reviewed regularly (once a year as part of the annual comprehensive risk analysis and once during the regular annual rating).

5.3. Operational risk

Operational risk is the risk of loss resulting from inadequate or poorly functioning internal processes and systems, the inadequate performance of people or external events. Legal, reputational, ICT and outsourcing risks are also dealt with under operational risks by KELER.

KELER is particularly exposed to operational risks due to its significant and special role in the money and capital markets. Operational risks may affect not only the operations of KELER but indirectly also the operations of clients using KELER's services. The operational risk management framework covers all losses and near-loss events resulting from operational failures.

Under operational risks, KELER focuses on the following special sources of risk:

- risks related to participants, repositories, market infrastructures connected to the system of KELER,
- operational risks associated with major participants,
- operational risks associated with central securities depository relationships and market infrastructures,
- risks associated with critical service providers.

The smooth functioning of the domestic settlement system is ensured by the analysis process designed to identify risks related to the participants, CSDs and market infrastructures in the system connected to KELER, which also includes the identification of operational risks related to the main participants, while the operational risks related to the CSD links are managed to ensure the smooth settlement of international transactions.

KELER maintains contacts with a wide range of service providers. The risk of dependency on suppliers and how to manage them is therefore a key and relevant issue for KELER. A significant and essential part of the suppliers are IT service providers providing KELER operational support and development services for the operation of its systems. The performance and risks of these suppliers may have an impact on the stability of the capital and financial markets. KELER measures its dependency on its suppliers, regularly assesses the risks of its suppliers and evaluates their performance. The failure or default of suppliers may also affect the core services of KELER, including the smooth implementation of settlements. In order to manage these risks, KELER prepares business continuity and recovery plans as well as action plans for supplier failures. In its outsourcing activities, KELER pays due regard to ensuring that the right of management and control remains with KELER despite the outsourcing of any activity, as KELER does not transfer its responsibility to third parties by outsourcing its activities thereto. To that end, KELER defines organisational responsibilities and establishes a procedure to ensure that the party performing the outsourced activity shall comply with the legal requirements and exercise due care, thus ensuring that KELER may provide its services at the standard undertaken.

KELER has developed an indicator to measure the dependence on suppliers. The indicator aims to limit KELER's dependence on specific suppliers. The supplier dependency indicator takes an IT perspective, but also includes the impact of economic damage due to the disruption of related business processes.

KELER operates a company-wide operational risk management system. The aim of the system is to ensure that KELER should be constantly aware of its own risks, monitor them and mitigate them where possible, collect historical loss data and make expert estimates regarding potential events. An operational risk management contact person has been appointed at each department to forward any events of loss brought to his/her attention, as well as the key risk indicators collected by his/her department to the[2] operational risk manager. In addition to the system of contact persons, the RC meets regularly to formulate proposals related to operational risk management and to monitor the implementation of previous measures. The Operational Risk Manager reports to the RC on a quarterly basis.

KELER's Risk Manager reports to the Board of Directors and the Supervisory Board and informs the CEO on the work of the RC and the operational risks.

5.4. Investment risk

Pursuant to Article 335 of the Tpt, KELER maintains relations with a limited scope of partners. It

[2] The key risk indicator (KRI) is an indicator that is closely linked to risks and allows changes in risk exposure to be monitored. KRI's are evaluated on a regular basis, and the RC continuously monitors any changes to them and also formulates recommendations for the mitigation of risks, where necessary.

may deposit its funds and financial assets with central banks, authorised credit institutions or authorised central securities depositories at low credit, market and liquidity risk and in a manner allowing immediate access to them if necessary.

The composition of the liabilities is largely given, with the bulk of the liabilities beyond equity being short-term borrowings related to service activities, while there is also the possibility of interbank or MNB borrowing. KELER may determine the interest rate on its liabilities to clients autonomously, whereas the composition of the assets can be determined within the legal constraints, but their interest rates are set by the market.

KELER's specialised activities, including the ensuring of smooth settlements, makes it necessary for KELER to have liquid assets that can be mobilised quickly at all times. In addition to the legal constraints, KELER strives to select financial instruments which can be sold quickly, if necessary, to generate intraday liquidity.

KELER holds only a minimal amount of own foreign exchange, and therefore has a low net open foreign currency position.

As a result, counterparty, interest rate and liquidity risks are low, while foreign exchange risk is negligible.

Investment risk is measured, managed and reported in accordance with the standards adopted by the ALC. The principles are set by the Board of Directors and the Board of Directors is regularly informed about the operation. Risk management involves daily measurement, limit monitoring and reporting on the one hand, and periodic (quarterly) sensitivity tests and stress tests on the other.