# Pillar III Disclosure Report including CSDR public disclosures Clearstream Banking S.A.

Disclosures as of 31 December 2023

Pillar III Disclosure Report including CSDR public disclosures Clearstream Banking S.A. -

Pillar III Disclosure Report of Clearstream Banking S.A., according to Part Eight of Regulation (EU) No 575/2013 (Capital Requirement Regulation, CRR) as amended by Regulation (EU) No 876/2019 (Capital Requirements Regulation II, CRRII) and, in conjunction with § 26a German Banking Act (Kreditwesengesetz, KWG), including public disclosures according to Articles 28 and 40 of Regulation (EU) No 2017/390 supplementing Regulation (EU) No 909/2014 (Central Securities Depositories Regulation, CSDR).

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#### Foreword

The purpose of this document is to meet regulatory disclosure requirements, based on the revised Basel banking framework, known as "Basel III". At the European Union (EU) level, the disclosure framework covers the Basel III requirements, and includes additional components as laid down by Directive 2013/36/EU (Capital Requirement Directive, CRD) as amended and Regulation (EU) No 575/2013 (Capital Requirements Regulation, CRR) as amended by Regulation (EU) No 2019/876 (Capital Requirements Regulation 2, CRR 2). The Commission Implementing Regulation (EU) 2021/637 laying down implementing technical standards (ITS on Pillar III disclosures) with regard to public disclosures by institutions of the information referred to Titles II and III of Part Eight of Regulation (EU) No 575/2013 (CRR) is applicable since 28 June 2021.

In addition, this document includes public disclosures on credit and liquidity risk management in accordance with Articles 28 and 40 of Regulation (EU) No 2017/390 supplementing Regulation (EU) No 909/2014 (Central Securities Depositories Regulation, CSDR).

Clearstream Banking S.A. (CBL) is a directly fully owned subsidiary of Clearstream Holding AG (CH), which is a financial holding company as defined in Article 4 Paragraph 1.20 CRR. Together with its subordinated companies, CH forms a financial holding Group under German law.

In application of Article 13(1) CRR EU parent institutions should comply with Part Eight CRR on consolidated basis. Consolidated disclosures of CH are available on the Clearstream website:

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Additionally, significant subsidiaries and the subsidiaries which are of significance for their local market are required to disclose information to the extent applicable in respect to own funds, capital requirements, countercyclical capital buffers, credit risk, remuneration policy, leverage ratio and liquidity requirements on an individual basis. CBL being designated as O-SII, it falls under the scope of individual disclosures.

#### 1. Impact of current events on Clearstream Banking S.A.

2023 was still dominated by geo-political challenges world-wide, of which Russia's ongoing war in the Ukraine and the conflict in the middle east gained special management attention. The Bank's response to these tensions can be summarised as following.

#### 1.1. Russia-Ukraine War

On 24 February 2022, Russia began a military invasion of Ukraine. Following the invasion, NATO allies led by the United States of America, the European Commission (EC), and G7 members, financial and non-financial sanctions were implemented against the government of the Russian Federation, the Central Bank of Russia, and Russian oligarchs and government officials. These developments impacted CBL operations on the links to the Russian Federation on instruments issued by targets of sanctions.

During 2023, CBL continued to be affected by Russia's full-scale invasion of Ukraine requiring a significant level of management attention. In late 2021, the executive Risk Committee of Clearstream Holding AG, the CRC, organised a Ukraine Crisis Response Team (UCRT). The UCRT continued to meet on a twice-weekly cadence throughout 2023 to manage the various impacts arising from the Russia-Ukraine war. The primary focus of the UCRT has been on adjusting its procedures and controls to adapt to the countermeasures deployed by Russia in response to Western sanctions.

At the time of the full-scale invasion, Russia legislated to restrict securities deposits of foreign depositories, including CBL Russian legislation additionally blocked corporate action proceeds due on securities held by foreign depositories. The corporate action payments have not been credited to accounts opened or controlled by CBL. Accordingly, these balances have not been recognised in its accounts and have been reported to the entitled clients as memorandum, contingent claims. At the time of the full-scale invasion, CBL has also switched its RUB cash processing to the NSD in response to the designation and disconnection from the Swift network of its RUB cash correspondent, Sberbank. On 25 March 2022, CBL determined that its cash account with NSD had been blocked by the NSD pending guidance from its regulator. Following force majeure, CBL advised affected clients that it will recredit the corresponding RUB amounts due to clients contingent on its regaining access to the funds. As of 31 December 2023, the RUB-denominated balance of the affected account stood at the equivalent of EUR 105 million, this amount has been fully written off as Expected Credit Loss.

The sanctions actions taken in response to Russia's full-scale invasion of Ukraine involve a scale and a complexity that is novel, increasing the risks of control failures and of violating or facilitating the violation of an applicable law or regulation. CBL assesses that its sanctions controls have operated effectively. As a consequence of reducing client relations with Russian state actors, CBL holds only a negligible cash balance on behalf of Russian sovereigns.

CBL operates the only direct international settlement link to Ukraine, offering a critical channel for foreign inward investment in Ukrainian, local currency sovereign debt. In order to continue to support Ukraine and accommodate the capital controls introduced by Ukraine following the invasion, CBL maintains a cash account with the NBU to minimise counterparty exposure, becoming the only foreign bank to participate in the domestic payment system.

CBL remains vigilant to be in compliance with the sanctions implemented in the EU and abroad, and CBL remains well-capitalised in the event of a deterioration in the dynamic of the Russia-Ukraine war. In conclusion, no successful cyber-attacks stemming from the current situation have been observed against the Bank's infrastructure.

#### 1.2. Middle East Crisis

Clearstream has not been affected by the crisis in the Middle East that has developed since the Hamas attack of 7 October 2023. CBL operates a settlement link to Israel which has operated normally since the attack. The Group's security teams monitor developments in the region continuously.

### Disclosure Map

CRR requirement	Report chapter	Comment
TITLE I: GENERAL PRINCIPLES		
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TITLE II: TECHNICAL CRITERIA ON TRANSPARENCY A		
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Article 436: Disclosure of the scope of application	Chapter 2.4, Chapter 6	Voluntary. Full disclosure according to CRR and EBA ITS
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Article 441: Disclosure of indicators of global systemic importance	Not applicable as not G-SII	
Article 442: Disclosure of exposures to credit risk and dilution risk	Chapter 11	Mandatory
Article 443: Disclosure of encumbered and unencumbered assets	Chapter 9	Voluntary. Full disclosure according to CRR and EBA ITS
Article 444: Disclosure of the use of the Standardised Approach	Chapter 11.4.1	Voluntary. Full disclosure according to CRR and EBA ITS
Article 445: Disclosure of exposure to market risk	Chapter 13	Voluntary. Full disclosure according to CRR and EBA ITS
Article 446: Disclosure of operational risk management	Chapter 10	Voluntary. Full disclosure according to CRR and EBA ITS
Article 447: Disclosure of key metrics	Chapter 3	Voluntary. Full disclosure according to CRR and EBA ITS
Article 448: Disclosure of exposures to interest rate risk on positions not held in the trading book	Chapter 13.5.2	Voluntary. Full disclosure according to CRR and EBA ITS

Article 449: Disclosure of exposures to securitisation positions	Not applicable as no securitisation positions	
Article 449a: Disclosure of environmental, social and governance risks (ESG risks)	Chapter 15	Voluntary. Free format disclosure
Article 450: Disclosure of remuneration policy	Chapter 16	Mandatory
Article 451: Disclosure of the leverage ratio	Chapter 8	Mandatory
Article 451a: Disclosure of liquidity requirements	Chapter 12	Mandatory
TITLE III: QUALIFYING REQUIREMENTS FOR THE USE METHODOLOGIES	OF PARTICULAR IN	STRUMENTS OR
Article 452: Disclosure of the use of the IRB Approach to credit risk	Not applicable as not used	
Article 453: Disclosure of the use of credit risk	Chapter 11.4.4	
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mitigation techniques Article 454: Disclosure of the use of the Advanced Measurement Approaches to operational risk	Chapter 10	Voluntary. Full disclosure according to CRR and EBA ITS

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	EU INS1 - Insurance participations EU INS2 - Financial conglomerates information on own funds and capital adequacy ratio	Article 438(f) Article 438(g)	Not applicable Not applicable
	EU OVC - ICAAP information	Article 438(a) and (c)	Chapter 5.12
Disclosure of risk management policies	EU OVA - Institution risk management approach	Article 435(1)	Chapter 5
and objectives	EU OVB - Disclosure on governance arrangements	Article 435(2)	Chapter 4
Disclosure of the scope of application	EU LI1 - Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories	Article 436(c)	Chapter 6.1
	EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements	Article 436(d)	Chapter 6.1
	EU LI3 - Outline of the differences in the scopes of consolidation (entity by entity)	Article 436(b)	Chapter 6.1
	EU LIA - Explanations of differences between accounting and regulatory exposure amounts	Article 436(b) and (d)	Chapter 6.1
	EU LIB - Other qualitative information on the scope of application	Article 436(f), (g) and (h)	Not applicable
	EU PV1: Prudent valuation adjustments (PVA)	Article 436(e)	Not applicable
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	EU CC2 - Reconciliation of regulatory own funds to balance sheet in the audited financial statements	Article 437(a)	Chapter 7.2
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	derivatives, SFTs and exempted		
	<u>exposures)</u>		
	EU LRA: Free format text boxes for	Article 451(1)(d)	Chapter 8.1
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	EU CQ1: Credit quality of forborne	Article 442(c)	Not applicable
	exposures EU CQ2: Quality of forbearance	Article 442(c)	Not applicable
	LO GGZ. Guanty of follogal affice	AI (1016 442(C)	Not applicable

	EU CQ3: Credit quality of performing	Article 442(d)	Chapter 11.4.2
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	EU CR6 – IRB approach – Credit risk	Article 452(g)(i)-	Not applicable
	exposures by exposure class and PD	(v)	
	range		
	EU CR6-A – Scope of the use of IRB	Article 452(b)	Not applicable
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	EU CR7 – IRB approach – Effect on	Article 453(j)	Not applicable
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	EU CR7-A – IRB approach –	Article 453(g)	Not applicable
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	EU CR8 – RWEA flow statements of	Article 438(h)	Not applicable
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	EU CR9 -IRB approach - Back-	Article 452(h)	Not applicable
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	(fixed PD scale)		
	EU CR9.1 –IRB approach – Back-	Article 180(1)(f)	Not applicable
	testing of PD per exposure class	- ( - ( - ( - ( - ( - ( - ( - ( - ( - (	11
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	(only for PD estimates according to point (f) of Article 180(1) CRR)		
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	EU CCR4 – IRB approach – CCR exposures by exposure class and PD scale	Article 439(l) Article 452(g)	Not applicable
	EU CCR5 – Composition of collateral for CCR exposures	Article 439(e)	Chapter 11.4.8.2
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	EU-SEC3 - Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as originator or as sponsor	Article 449(k)(i)	Not applicable
	EU-SEC4 - Securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor	Article 449(k)(ii)	Not applicable
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	EU MRB: Qualitative disclosure requirements for institutions using the internal Market Risk Models	Article 455(a), (b), (c), (f)	Not applicable
	EU MR2-A - Market risk under the internal Model Approach (IMA)	Article 455(e)	Not applicable
	EU MR2-B - RWA flow statements of market risk exposures under the IMA	Article 438(h)	Not applicable
	EU MR3 - IMA values for trading portfolios	Article 455(d)	Not applicable
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#### 2. Introduction

#### 2.1. Regulatory Framework

In December 2010, the Basel Committee on Banking Supervision published the global regulatory framework on minimum capital and liquidity requirements for banks, commonly known as Basel III, a set of standards aiming at strengthening the stability and resilience of the banking system.

The Basel framework consists of three mutually reinforcing pillars, as outlined below.

- Pillar I concerns the minimum quantitative (capital) requirements related to credit, operational and market risks.
- Pillar II requires banks to integrate the risks of Pillar I and further significant and substantial risks into integrated capital management and risk management considerations. Additionally, the interaction between the banks' own assessments and the banking supervisors' review is prescribed.
- Pillar III promotes market discipline through disclosure and thereby transparency to the public.

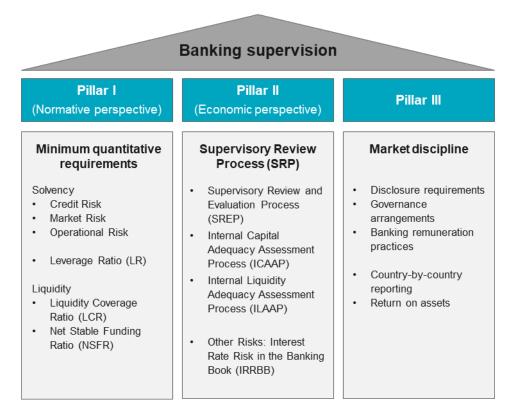


Figure 1: Overview regulatory framework

The Basel III standards were further enhanced through, among others, the revision of existing frameworks for assessing risk weighted assets (RWA) most notably through publication of the "Basel III: Finalising post-crisis reforms" in December 2017.

The first elements of the Basel III standards were implemented in European law by the Capital Requirements Regulation (EU) No 575/2013 (CRR) and the Capital Requirements Directive 2013/36/EU (CRD), generally applying since 2014. In Luxembourg, the law of 23 July 2015 transposed, among others, CRD 4, which entered into force on 4 August 2015, by amending the law of 5 April 1993 on the financial sector. In May 2019, a revised prudential regulation package was adopted, further transposing the Basel III standards into European law through amending the CRR (through Regulation (EU) 2019/876 or CRR 2) and the CRD (through Directive (EU) 2019/878 or CRD 5).

In addition, the EU banking package published in May 2019 also contained a revised Banking Recovery and Resolution Directive (BRRD, amended as per Directive (EU) 2019/879 – BRRD2), reflecting changes related to legislation on the Minimum Requirement for own funds and Eligible Liabilities (MREL) and the Total Loss-Absorbing Capacity (TLAC) for global systemically important institutions. Except for dedicated exemptions, CRR 2 applies since 28 June 2021, whereas CRD 5 and BRRD2 were transposed in Luxembourg law through the Law of 20 May 2021, which entered into force on 25 May 2021. All information provided in this CRR disclosure report relates to CRR II.

The EU rules deviate in some respects from the Basel III standards to take into account some European specificities. One key amendment is the introduction of the proportionality concept, which exempts small and non-complex institutions from certain obligations while subjecting large institutions to enhanced requirements. Furthermore, the adjustments consider specific activities and pass-through models not undertaking any significant maturity transformation, including activities conducted by CSDs. As such, CRR 2 contains important amendments from a CBL perspective.

According to Article 6(4) point (b) CRR, institutions authorised as CSDs according to Article 16 and point (a) of Article 54(2) CSDR are exempted from the Net Stable Funding Ratio (NSFR) on an individual basis. Similarly, exposures of CSDs authorised as credit institutions arising from banking type ancillary services offered to participants in a securities settlement system and holders of securities accounts, have been excluded from the total exposure measure of the Leverage Ratio according to point (o) of Article 429a(1) CRR, as those activities do not create a risk of excessive leverage.

With these exemptions, the impact of the regulatory requirements on CBL was significantly reduced.

The Basel III standards are not yet fully transposed into European Law. To provide banks with greater operational capacities to react to the ongoing COVID-19 crisis, the Basel Committee on banking supervision deferred the implementation of the 2017 reforms, initially foreseen for 1 January 2022, by one year to 1 January 2023. With publication of three legislative proposals in October 2021 amending CRR, CRD as well as BRRD, the EU initiated the finalisation of the implementation of Basel III. In December 2023, the trilogue negotiations on the banking package were concluded and the final publication is expected in the first half of 2024. The European Council and European Parliament have endorsed the banking package transposing the BCBS requirements on the finalisation of the implementation of Basel III within the EU through legislative acts amending Regulation (EU) No 575/2013 (CRR III), Directive 2013/36/EU (CRD VI) and Directive 2014/59/EU ("daisy chain"). To account for the particularities of the European banking landscape, Member States agreed on specific

deviations from the Basel III framework, in the field of risk treatment for unrated corporates, mortgages, intra-group equity exposures, credit valuation adjustment for derivatives, prudential treatment for securitisations and the output floor. In addition to Basel IV (finalisation of Basel III), the changes endorsed by the EU include, among others, prudential requirements on environmental, social and governance (ESG) risks in the framework. While the proposed introduction of the Output Floor limiting minimum capital requirements calculated with internal models to 72.5% of minimum capital requirements calculated with standardised approaches, is not expected to affect CBL, proposed changes relating to the use of the credit risk standardised approach, the calculation of capital requirements for operational risk and identification, management and disclosure of ESG risk will be respectively monitored closely to ensure timely and appropriate implementation. While changes to CRR shall apply as of 1 January 2025 (with exemptions to apply to operational risk and the output floor), changes resulting from CRD VI shall apply 18 months following the date of entry into force, that is, potentially as of June 2025.

In addition to the previously mentioned regulation and directive, this report considers the following regulatory publications:

- Commission Implementing Regulation (EU) 2021/637 of 15 March 2021 laying down implementing technical standards with regard to public disclosures by institutions of the information referred to in Titles II and III of Part Eight of Regulation (EU) No 575/2013 of the European Parliament and of the Council and repealing Commission Implementing Regulation (EU) No 1423/2013, Commission Delegated Regulation (EU) 2015/1555, Commission Implementing Regulation (EU) 2016/200 and Commission Delegated Regulation (EU) 2017/2295.
- EBA/GL/2014/14 of 23 December 2014: Guidelines on materiality, proprietary and confidentiality and on disclosure frequency under Article 432(1), 432(2) and 433 of Regulation (EU) No 575/2013.
- EBA/GL/2018/01 of 16 January 2018: Guidelines on uniform disclosures under Article 473a of Regulation (EU) No 575/2013 as regards the transitional period for mitigating the impact of the introduction of IFRS 9 on own funds.
- EBA/GL/2021/05: Final Report on Guidelines on internal governance under Directive 2013/36/EU.
- EBA/GL/2021/04: Final Report on Guidelines on sound remuneration policies under Directive 2013/36/EU.
- ESMA (ESMA/36-36-2319) and EBA (EBA/GL/2021/06): Guidelines on the assessment of the suitability of members of the management body and key function holders.
- CSSF Circular 23/830 Clarification on the public disclosure framework applicable to credit institutions and CRR investment firms (Pillar 3), referring to Guidelines of the European Banking Authority on disclosure requirements under Part Eight of Regulation (EU) No 575/2013 (EBA/GL/2016/11), and also repealing CSSF Circulars 15/605, 17/673 and 18/676.
- CSSF Circular 18/687 (as amended by Circular 20/755) Adoption of the EBA
   Guidelines on uniform disclosures under Article 473a of Regulation (EU) No 575/2013
   as regards the transitional period for mitigating the impact of the introduction of IFRS
   9 on own funds (EBA/GL/2018/01) as amended by the EBA/GL/2020/12.

In the following, the respective laws and regulations in place as of 31 December 2023 are referred to, if not stated otherwise.

#### 2.2. Objective of the Report

The objective of this Disclosure Report is to implement and fulfil the disclosure requirements pursuant to Articles 431-455 of Regulation (EU) 2019/876 (CRR II) of the European Parliament and of the Council of 20 May 2019 amending Regulation (EU) No. 575/2013 (CRR I) as at 30 September 2023 and Article 38 of the Luxembourg Law of 5 April 1993 ("Luxembourg Banking Act"), at the legal entity level of CBL.

On 24 June 2020, the European Banking Authority (EBA) published the final drafts for regulatory reporting (EBA/ITS/2020/05) and disclosure (EBA/ITS/2020/04) in accordance with CRR II. EBA's technical implementation standards EBA/ITS/2020/04 of 24 June 2020 specify the tables integrated into the report. The specified table names are marked with the prefix EU. All information provided in this CRR disclosure report relates to CRR II.

More specifically, the report intends to provide a detailed overview on the Bank's:

- Legal structure;
- Capital structure;
- Risk management framework including governance arrangements, risk management methodology and risk reporting; and
- Risk management in terms of identified risk types.

#### 2.3. General Requirements for Disclosure

#### 2.3.1. Pillar 3 Disclosure Approach (Article 431(1), (2) CRR)

This Disclosure report provides a comprehensive and detailed description of the risk profile of the Bank in accordance with CRR, taking into account the materiality principle pursuant to Article 432 (1) CRR. The following subchapters provide an overview of the approach and means of disclosures.

The information in this Pillar III Disclosure report is unaudited. Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.

#### 2.3.2. Disclosure Policy (Article 431(3) CRR)

To ensure adequate application of the disclosure requirements a Disclosure Policy has been established, which is reviewed and adapted, where necessary, on a yearly basis. The Executive Board of CBL is ultimately responsible for the Disclosure Policy and must approve any material changes to the policy. Further, the Disclosure Policy defines disclosure content, allocates responsibilities, and defines processes.

In line with the Disclosure Policy, a dedicated process must be followed if CBL considers omitting certain disclosures due to these disclosures being immaterial, proprietary or

confidential. Where the Bank classifies information as non-material in this this report, this has been stated accordingly in the related disclosures.

#### 2.3.3. Formal Attestation (Article 431(3) CRR)

The Disclosure Report complies with the applicable legal and regulatory requirements and is prepared in accordance with the company's internal guidelines, procedures, systems and internal controls. The CBL Executive Board has approved this report for publication and confirmed that CBL meets the requirements of Article 431(3) CRR.

# 2.3.4. Qualitative Narrative and any other Supplementary Information (Article 431(4) CRR)

The Bank provides both quantitative and qualitative disclosures to present the relevant information and to explain its approach to capital management, capital adequacy and an analysis of the risk positions and exposures. Where appropriate, the disclosures include comparative figures for the previous reporting dates or previous period for increased transparency. This is supplemented with an analysis or explanation of the main changes in case of significant movements for a deeper insight into the risk management approach.

#### 2.3.5. Explanations of Rating Decisions (Article 431(5) CRR)

While CBL reports exposures to corporate counterparties, provisions of Article 431(5) with regard to the explanation of rating decisions to SMEs and other corporate applicants for loans, is not applicable. Exposures to corporate counterparties are limited to intercompany recharges withing the group and a small amount of various other receivables, which do not represent loans.

# 2.3.6. Non-material, Proprietary or Confidential Information (Article 432 CRR)

With exemption of disclosures laid down in point (c) of Articles 435(2) and 437 CRR, disclosure content can be omitted according to Article 432 CRR and relating EBA Guideline 2014/14 if the information is non-material, proprietary or confidential.

#### 2.3.7. Frequency of Disclosure (Article 433 and 433a CRR)

The report is updated once a year, whereas in line with Article 433a CRR dedicated information is disclosed on a semi-annual or quarterly basis as required.

#### 2.3.8. Means of Disclosures (Article 434 CRR)

In accordance with Article 434 CRR, CBL publishes its Disclosure Report on the website:

#### Pillar III Disclosure Report (clearstream.com)

In addition to the Pillar III report, the following documents are also made available:

 A remuneration report and remuneration policy that fulfil the requirements according to Article 450 CRR. That report is disclosed by year on the website of Clearstream Group: <a href="https://www.clearstream.com/clearstream-en/about-clearstream/regulation-1-/remuneration-information">www.clearstream.com/clearstream-en/about-clearstream/regulation-1-/remuneration-information</a>.

The remuneration policy is also publicly available under the following <u>link</u>.

Information about the return on assets (RoA) according to Article 38-4 of the Luxembourg Banking Act is disclosed by CBL under Note 9.3 in the notes to its financial statements, which are published in the Luxembourg Trade and Companies Register ("Registre de Commerce et des Sociétés").

# 2.3.9. Policy on Diversity with regard to Selection of Members of the Management Body (Article 435(2)(c) CRR)

CBL has defined several diversity principles that govern the selection of Executive Board and Supervisory Board members. To benefit from a balanced gender diversity and to fulfil the requirement of Article 27(4) of the Regulation (EU) No 909/2014 the Supervisory Board of CBL has approved the Gender Diversity Policy as <u>published on Clearstream's website</u> and decided on a target to increase the number of the under-represented gender in the management body.

The principles are detailed in <u>4.1 General Arrangements</u> and refer to educational and professional background, gender, age and geographical provenance with the aim to achieve a variety of views and experiences and to facilitate independent opinions within the Executive Board and the Supervisory Board.

#### 2.4. Scope of Application (Article 436 CRR)

Throughout the Pillar III Disclosure Report, as of 31 December 2023 CBL had one subsidiary namely <u>Clearstream London Limited (CLL)</u> and three branches: <u>London</u>, <u>Singapore</u>, and <u>Japan</u>. However, on grounds of non-materiality these are not consolidated for accounting purposes and CBL has also been exempted of consolidation for regulatory reporting purposes.

As such, this Disclosure Report covers CBL with mention of the subsidiary and branches described in <u>2.6. Business Operations.</u>

All disclosed information is reported in CBL's accounting and reporting currency, Euro, if not otherwise specified.

#### 2.4.1. Clearstream Banking S.A.

Clearstream Banking S.A. ("CBL") was founded in 1970 in Luxembourg and has its registered office at 42 Avenue J.F. Kennedy, L-1855 Luxembourg.

CBL is classified as a public limited company (Société Anonyme). It is governed by its Articles of Incorporation and Luxembourg company law.

#### 2.5. Corporate Structure

As of 31 December 2023, the Bank was directly fully owned by Clearstream Holding AG ("CHAG"). CHAG is itself directly fully owned by Deutsche Börse AG, the ultimate parent company. The ownership structure of CBL as part of Deutsche Börse Group ("DBG") is shown below.

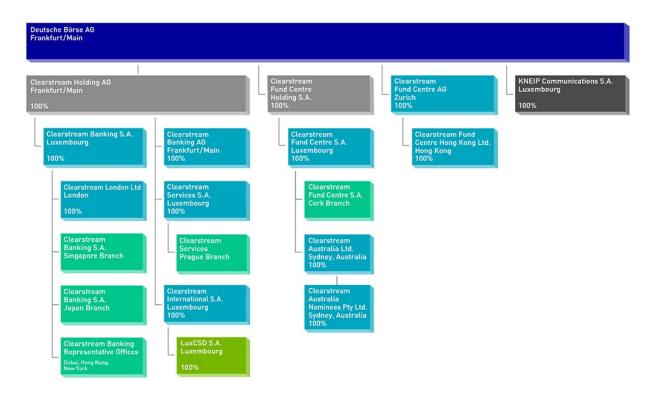


Figure 2: Overview corporate structure

#### 2.6. Business Operations

CBL acts as an International Central Securities Depository (ICSD) which provides settlement and custody services for international securities.

These services include:

- Delivery versus payment and delivery free of payment settlement transactions;
- Comprehensive custody management;
- Value-added services, such as securities lending, collateral management etc.; and
- Transactional information distribution.

Further services offered by the Bank include the issuance of securities, Clearstream Funds Services and Collateral, Lending and Liquidity Solutions, consisting of securities lending as well as collateral management services. In addition, CBL provides operative treasury services for Clearstream Banking AG ("CBF").

Additionally, CBL applied for authorisation as CSD according to Article 16 including providing banking-type ancillary services according to Article 54 Paragraph (2) lit. (a) of Regulation (EU) No 909/2014 ("Central Securities Depositories Regulation", "CSDR").

CBL holds the following branches/participations:

#### 2.6.1. Clearstream London Limited ("CLL")

Clearstream has had a presence in London since 1985. In January 2016, Clearstream transformed its representative office in London into a fully-fledged branch. By establishing the new Clearstream Banking S.A. London branch, Clearstream showed its strong commitment to existing and potential new clients in the UK. The opening of the new branch allowed Clearstream to enhance its services and its operational excellence in the region for the UK-based clients.

Clearstream London Limited (CLL), a new fully owned subsidiary of CBL was incorporated on 27 December 2018 and duly authorised as an Article 3 MiFID exempt firm by the FCA on 31 January 2020. CLL filed in October 2022 a Variation of Permission (VOP) to request FCA to approve CLL's activation. Following the approval by the FCA, most of the business of the Clearstream Banking S.A. London Branch transferred to CLL on 1 July 2023, The London Branch was deauthorised by FCA soon after that date and will be subsequently closed.

#### 2.6.2. CBL Singapore branch ("CBS")

CBS is a branch of CBL and its first operational centre outside Europe. In November 2009, CBL obtained a banking licence, which has been updated in October 2017. CBL's products and services, including Collateral, Lending and Liquidity solutions and Issuance and Distribution, are offered locally to clients in the Asia-Pacific region.

#### 2.6.3. CBL London branch ("CBUK")

In January 2016, Clearstream transformed its representative office in London into a fully-fledged branch, which took over the activities of the representative office. In conjunction with Brexit, on December 2022 the CBL London branch began operating under FCA and PRA's Temporary Permissions Regime (TPR) meaning it has been able continue its pre-Brexit activities effectively under its existing license for a limited period of time. Following the approval by the FCA, most of the business of the CBUK transferred to CLL on 1 July 2023. The UK regulators subsequently approved the cancellation of the London Branch's regulatory authorisations and it is planned to complete the Branch's closure in 2024.

#### 2.6.4. Clearstream Banking Tokyo branch ("CBJ")

At the beginning of 2022, a branch licence was granted to CBJ, thus becoming a branch fully owned by CBL The purpose of establishing a branch is to further fortify the presence of the Bank and ensure a solid regulatory environment by enabling a transparent, long-term business position in Japan.

#### Regulatory Supervision 2.7.

Commission de Surveillance du Secteur Financier ("CSSF") is the competent authority for the supervision of CBL as a credit institution according to Article 42 and 43 of the Luxembourg Banking Act. Furthermore, Banque Centrale du Luxembourg ("BCL") has a shared responsibility for liquidity supervision on the basis of Article 2(4) of the Law of 23 December 1998 concerning the monetary status.

Moreover, CBL is subject to regulatory supervision in relation to the securities settlement system ("SSS") according to Title V of the Luxembourg Law of 10 November 2009 relating to payment services. BCL is responsible for the oversight of SSSs, as per Article 110 of the Law of 10 November 2009. The oversight focuses on the operational and financial stability of each system individually, the participants in such systems as well as the stability of the financial system as a whole. Furthermore, specific regulations for SSSs must be considered (for example, circulars BCL 2001/163 and 2001/168).

Additionally, being authorised in accordance with Article 16 and Article 54 Paragraph (2) lit. a of Regulation (EU) No 909/2014 (CSDR), CSSF acts also as the designated competent authority carrying out the duties under CSDR for the supervision of CBL in accordance with Article 11 CSDR.

As of 1 January 2018, CBL is classified as Other Systemically Important Institution ("0-SII") since the competent authorities comply with the EBA Guidelines 2014/10 on criteria to determine the conditions of application of Article 131(3) of Directive 2013/36/EU (CRD) in relation to the assessment of other systemically important institutions. Due to its classification as an O-SII, CBL must produce a stand-alone Pillar III disclosure report. This classification was reconfirmed in November 2023 (as per CSSF Regulation N° 23-05).

CHAG as the superordinate company of the financial holding group according to §10a (1) of the German Banking Act (KWG) as well as being approved as financial holding company in accordance with Article 21 CRD, is responsible for fulfilling the regulatory obligations on a consolidated/Group level vis-à-vis the German supervisory authorities and presents a Pillar III report in compliance with the disclosure requirements pursuant to Part Eight CRR and § 26a KWG.

#### 3. Key Prudential Metrics

As outlined in Article 433c(2)(e), and Article 447 CRR, CBL discloses its data on own funds, risk-weighted exposures, capital ratios, leverage ratios, and liquidity coverage using template EU KM1. Disclosure periods T, T-1, T-2, T-3 and T-4 are defined as quarterly periods and shall be populated depending on the frequency set by Articles 433a, 433b and 433c CRR. Institutions disclosing the information in this template on a semi-annual basis shall provide data for periods T, T-2 and T-4. Consequently, for the annual report 2023, CBL discloses the information for 31 December 2023, 30 June 2023 and 31 December 2022.

		Т	T-1	T-2	T-3	T-4
	(in 000 of €)	31/12/2023		30/06/2023		31/12/2022
	Available own funds (amounts)					
1	Common Equity Tier 1 (CET1) capital	1,011,696		1,007,535		1,008,281
2	Tier 1 capital	1,011,696		1,007,535		1,008,281
3	Total capital	1,011,696		1,007,535		1,008,281
	Risk-weighted exposure amounts					
4	Total risk exposure amount	2,495,150		3,115,647		3,498,887
	Capital ratios (as a percentage of risk-weig	hted exposure am	nount)			
5	Common Equity Tier 1 ratio (%)	40.55%		32.34%		28.82%
6	Tier 1 ratio (%)	40.55%		32.34%		28.82%
7	Total capital ratio (%)	40.55%		32.34%		28.82%
	Additional own funds requirements to addr	ess risks other th	an the risk	of excessive lev	erage (a	a percentage
	of risk-weighted exposure amount)  Additional own funds requirements to	I				
EU 7a	address risks other than the risk of excessive leverage [%]	0.50%		0.50%		0.50%
EU 7b	of which: to be made up of CET1 capital (percentage points)	0.28%		0.28%		0.28%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	0.37%		0.37%		0.37%
EU 7d	Total SREP own funds requirements (%)	8.50%		8.50%		8.50%
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)					nount)
8	Capital conservation buffer (%)	2.50%		2.50%		2.50%
EU 8a	Conservation buffer due to macro- prudential or systemic risk identified at the level of a Member State (%)	0.00%		0.00%		0.00%
9	Institution specific countercyclical capital buffer (%)	1.33%		0.71%		0.14%
EU 9a	Systemic risk buffer (%)	0.00%		0.00%		0.00%
10	Global Systemically Important Institution buffer (%)	0.00%		0.00%		0.00%
EU 10a	Other Systemically Important Institution buffer (%)	0.50%		0.50%		0.50%
11	Combined buffer requirement (%)	4.33%		3.71%		3.14%
EU 11a	Overall capital requirements (%)	12.83%		12.21%		11.64%
12	CET1 available after meeting the total SREP own funds requirements (%)	32.05%		24.06%		20.54%
	Leverage ratio					

13	Total exposure measure	3,708,458		4,648,804		4,085,331
14	Leverage ratio (%)	27.28%		21.67%		24.68%
	Additional own funds requirements to address the risk of excessive leverage (as a percentage of total exposure measure)					
EU 14a	Additional own funds requirements to address the risk of excessive leverage [%]	n/a		n/a		n/a
EU 14b	of which: to be made up of CET1 capital (percentage points)	n/a		n/a		n/a
EU 14c	Total SREP leverage ratio requirements (%)	3.00%		3.00%		3.00%
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
EU 14d	Leverage ratio buffer requirement (%)	0.00%		0.00%		0.00%
EU 14e	Overall leverage ratio requirement (%)	3.00%		3.00%		3.00%
	Liquidity Coverage Ratio					
15	Total high-quality liquid assets (HQLA) (Weighted value -average)	17,737,456		18,911,083		18,917,693
EU 16a	Cash outflows - Total weighted value	13,438,736		16,683,157		18,677,745
EU 16b	Cash inflows - Total weighted value	989,514		1,510,241		1,969,601
16	Total net cash outflows (adjusted value)	12,449,222		15,172,916		16,708,143
17	Liquidity coverage ratio (%)	142.48%		124.64%		113.22%
	Net Stable Funding Ratio					
18	Total available stable funding	n/a		n/a		n/a
19	Total required stable funding	n/a		n/a		n/a
20	NSFR ratio (%)	n/a		n/a		n/a

Template EU KM1 - Key metrics

The detailed information on the metrics and their evolution is available in relevant chapters:

- Available own funds Chapters 7.1 and 7.2;
- Risk weighted exposure amounts <u>Chapter 7.4</u>;
- Countercyclical capital buffer Chapter 7.3;
- Leverage ratio Chapter 8;
- Liquidity coverage ratio Chapter 12.5.1.1;
- Net stable funding ratio exemption <u>Chapter 12.5.1.2</u>.

As an O-SII, CBL is subject to additional buffer requirement of 0.5%.

Further to the provisions of Article 59-5 of the Law of 5 April 1993 on the financial sector, CBL is subject to additional capital requirement equal to 2.5% of total risk exposure amount (TREA) corresponding to the capital conservation buffer.

Within its supervisory review and evaluation process (SREP) in 2019, further to Article 28(1) of CSSF Regulation 15-02, the CSSF has concluded that, in excess of the requirements specified in Article 92 CRR, CBL is required to maintain the additional own funds equal to 1% of TREA, of which 100% CET1 capital. In its letter dated 4 August 2022 the CSSF confirmed the reduction of this requirement to 0.5% of TREA, to be held in the form of 56,25% CET1

capital and 75% of Tier 1 capital as a minimum, which was reconfirmed in its letter dated 8 May 2023.

There is no additional requirement for the risk of excessive leverage.

#### 4. Governance Arrangements

Institutions shall disclose the information referred to in Article 435(2) CRR with regard to the governance arrangements using EU OVB template below. To facilitate the reading the relevant information is provided as free text in the following chapters.

Legal basis	Row number	Free format	Disclosure chapter
Point (a) of Article 435(2) CRR	(a)	The number of directorships held by members of the management body.	Chapter 4.2, Chapter 4.3
Point (b) of Article 435(2) CRR	(b)	Information regarding the recruitment policy for the selection of members of the management body and their actual knowledge, skills and expertise.	Chapter 4.2, Chapter 4.3
Point (c) of Article 435(2) CRR	(c)	Information on the diversity policy with regard of the members of the management body.	Chapter 4.1
Point (d) of Article 435(2) CRR	(d)	Information whether or not the institution has set up a separate risk committee and the frequency of the meetings.	Chapter 4.3.2
Point (e) Article 435(2) CRR	(e)	Description on the information flow on risk to the management body.	Chapter 5.1, Chapter 5.2, Chapter 5.6, Chapter 10.7, Chapter 11.4.9, Chapter 10.8, Chapter 13.8.

Table EU OVB - Disclosure on governance arrangements

#### 4.1. General Arrangements

CBL is incorporated in Luxembourg in the form of a public limited company (Société Anonyme). According to its Articles of Incorporation, CBL has an Executive and a Supervisory Board. The members of the Executive Board and the Supervisory Board conduct the business of the Company in accordance with all applicable laws and regulations, notably the Law of 10 August 1915 on commercial companies, as amended, as well as the Law of 5 April 1993 on the financial sector, as amended, CSSF circulars, notably the CSSF Circular 12/552, as amended, the relevant EU framework, notably the Central Securities Depositories Regulation (CSDR) including its implementing acts, the Articles of Incorporation, the Rules of Procedure of the Supervisory Board, and the Rules of Procedure of the Executive Board.

CBL maintains a comprehensive suitability assessment policy and a corresponding sideletter defining specific job descriptions of Supervisory Board and Executive Board members. The objective of this policy is to ensure that members of the Executive Board of CBL, the members of the Supervisory Board and key function holders of CBL are suitable in terms of reputation, experience and governance criteria, as stipulated in the joint ESMA and EBA "Guidelines on the assessment of the suitability of members of the management body and key function holders under Directive 2013/36/EU and Directive 2014/65/EU" (EBA/GL/2017/12/ESMA71-99-598) as well as in the Luxembourg Banking Act and Central Securities Depositories Regulation ("CSDR").

In addition to the suitability assessment policy, CBL has defined several diversity principles that govern the selection of Executive Board and Supervisory Board members. The principles, listed below in detail, refer to educational and professional background, gender, age and geographical provenance with the aim to achieve a variety of views and experiences and to facilitate independent opinions within the Executive Board and the Supervisory Board:

- CBL aims to achieve a balance representation of women and men;
- The age structure of the Boards should be of an appropriately broad range;
- An appropriately broad range of education and professional backgrounds should be present in the Boards; and
- The composition of the Boards should reflect CBL's international profile.

The suitability assessment is initiated when it is intended to appoint or elect a new member of the Executive Board or the Supervisory Board, if a member resigns from the mandate causing material changes to the composition of the management body, in the event of any material changes (for example, reduction of work time, change regarding the scope or nature of the mandate or negative event with regard to the reputation) and on a regular basis, at least once a year.

To benefit from a balanced gender diversity and to fulfil the requirement of Article 27(4) of the Regulation (EU) No 909/2014 the Supervisory Board of CBL has approved the Gender Diversity Policy as <u>published on Clearstream's website</u> and decided on a target to increase the number of the under-represented gender in the management body.

The members of the Supervisory Board of CBL agreed on the proposed 20% target quota for the representation of the under-represented gender (currently female) in both the Supervisory Board and the Executive Board by 31 December 2026.

From 2018, the rules of the limitation of mandates in accordance with Article 38-2 of the Luxembourg Banking Act must be complied with. Under this definition, and in consideration of the legal permissibility of the aggregation of mandates, on 31 December 2023 all members of the Executive Board and the Supervisory Board of CBL complied with these rules.

In the following paragraphs, the composition of all boards and committees is reflected as at the end of the reporting period, being 31 December 2023.

#### 4.2. Supervisory Board

According to the Articles of Incorporation of CBL, the Supervisory Board consists of at least three (3) members. The members of the Supervisory Board are required to fulfil certain criteria, as laid down in the Suitability Assessment Policy, and to comply with regulatory requirements, as set out in the section above. Furthermore, the Supervisory Board in its entirety must have the necessary skills, capabilities, and experience to supervise and control the Executive Board of CBL. This requires understanding of the business of a credit institution/central securities depository. Such criteria include but are not limited to:

Members of the management body should have an up-to-date understanding of the business, of the Bank and its risks. The assessment of a member's knowledge, skills and experience should consider both the theoretical experience attained through education and training and the practical experience gained in previous occupations.

A member of the management body should be considered to be of good repute, honesty, and integrity if there are no objective and demonstrable grounds to suggest otherwise, and no reason to have reasonable doubt about his or her good repute, honesty and integrity.

The Nomination Committee prepares a job description and a candidate profile for a specific position, which is resolved by the Supervisory Board. Subsequently, the Nomination Committee identifies and recommends suitable candidates, who are sent for approval to the General Meeting of Shareholders. Following selection and nomination, Boards and Committees Clearstream prepares the formal decision of the General Meeting of Shareholders to appoint the candidate as new member. The appointments of members to the Supervisory Board require prior express approval by the competent authority (CSSF).

On 31 December 2023, the Supervisory Board consisted of the persons displayed in Table 1, which also discloses the number of directorships held by each member as required by Article 435(2) of CRR 2.

In 2023, one new directorship was approved by the competent authorities. The Supervisory Board typically meets four (4) times per year, with additional meetings possible at the discretion of the Chairman. In these meetings, it is informed about normal business activities as well as all substantial business events. In the event of extraordinary incidents, the CBL Supervisory Board is informed immediately.

Name – position	Number of directorships
Stephan Leithner – Chairman	1
Gregor Pottmeyer – Vice Chairman	2
Oliver Engels	1
Heike Eckert	1
Wolfgang Gaertner	2
Marie-Jeanne Chevremont	4

Table 1: Supervisory Board Members

#### 4.3. Executive Board

According to CBL's Articles of Incorporation, the Executive Board shall be composed of at least three (3) members who are appointed by the Supervisory Board of CBL for a period of four (4) years. The Executive Board is chaired by the CEO.

The recruitment process of members of the Executive Board starts with the Nomination Committee to prepare the process, and the Supervisory Board to resolve on a job description and candidate profile for a specific position. Afterwards, the Nomination Committee identifies and recommends suitable members for the approval to the Supervisory Board. After the selection and nomination of a candidate, Boards and Committees Clearstream prepares a formal decision of the Supervisory Board. The appointment of new members of the Executive Board of CBL requires prior approval by the CSSF.

The Executive Board is responsible for managing CBL in accordance with the applicable laws, the Articles of Association, and its internal rules and regulations with the objective of creating sustainable value in the interest of the Company, and taking into consideration the interests of the shareholders, employees and other stakeholders. The Executive Board is responsible for establishing a proper business organisation, encompassing appropriate and effective risk management.

The members of the Executive Board must be professionally suitable and reliable for the management of a credit institution and central securities depository and they must be able to devote sufficient time to fulfil their tasks. Further, sufficient theoretical and practical knowledge of the business of a central securities depository/credit institution is required from all members of the Executive Board. In addition, the members of the Executive Board must have:

- An understanding of banking and financial markets, especially within the regulatory framework;
- An understanding of managing credit institutions; and
- Sufficient experience in managerial positions.

The business distribution scheme regulates the allocation of tasks and responsibilities between the Board members. Nevertheless, the Executive Board remains collectively responsible for the fulfilment of the duties as defined by law and set out in the Articles of Incorporation (overall responsibility).

#### 4.3.1. Frequency of Meetings

Meetings of the Executive Board are held twice monthly or more frequently if required.

On 31 December 2023, the Executive Board consisted of the persons displayed in Table 2, which also discloses the number of directorships held by each member, as required by Article 435(2) CRR.

Name – position	Number of directorships
Philip Brown – Chief Executive Officer	1
João Amaral	1
Jean-Marc Di Cato	1
Yannick Goineau	1

Name – position	Number of directorships	
Anne-Pascale Malréchauffé	1	
Denis Schloremberg	1	
Guido Wille	2	

Table 2: Executive Board Members

#### 4.3.2. Committees

In 2021, the CBL Supervisory Board Committees comprised the Audit Committee, Risk Committee, Nomination Committee and Remuneration Committee. All four committees have three members each and the Audit Committee is chaired by an independent member of the Supervisory Board. In addition, CBL established a User Committee for the security settlement system it operates in accordance with the CSDR.

#### 4.3.2.1. Audit Committee

Members	Tasks and responsibilities
<ul> <li>Marie-Jeanne Chevremont –         Chairperson</li> <li>Wolfgang Gaertner – Vice         Chairperson</li> <li>Heike Eckert</li> </ul>	<ul> <li>Monitors accounting and financial reporting processes;</li> <li>Monitors the effectiveness of the risk management process, in particular, the Internal Control System (ICS), the risk management system and internal audit;</li> <li>Monitors the execution of audits, in particular, in relation to the selection and independence of the auditor and the services provided by the auditor (for example, scope, frequency or reports); and</li> <li>Submits recommendations to the Supervisory Board to ensure the integrity of the reporting and accounting processes.</li> </ul>

#### 4.3.2.2. Nomination Committee

М	embers	Ta	sks and responsibilities
•	Wolfgang Gaertner – Chairperson	•	Identifies, recommends and promotes, for the
•	Stephan Leithner		approval of the Supervisory Board (SB) and
•	Marie-Jeanne Chevremont		General Meeting of Shareholders, candidates to

# fill vacancies in the Executive Board (EB) and SB, with the objective to reach a balance and diversity of knowledge, skills and experience, as well as gender diversity amongst the respective members; Periodically assesses the general structure and performance of EB and SB and provides related recommendations to the SB for improvements; and Assesses the knowledge, skills, and experience of respective boards, on an individual and collective basis.

#### 4.3.2.3. Remuneration Committee

	1 1 1 11 11 11 11 11 11 11 11 11 11 11
Members Ta	sks and responsibilities
<ul> <li>Stephan Leithner – Chairperson</li> <li>Gregor Pottmeyer – Vice Chairperson</li> <li>Wolfgang Gaertner</li> </ul>	Supervises the reasonableness of the remuneration system of executive management members. In particular, it supervises the appropriateness of the compensation of the Head of the risk function and of the compliance function as well as employees having a substantial influence on the overall risk profile of the institution. It also supports the Supervisory Board in monitoring the reasonableness of the remuneration system of employees as well as the institution. At the same time, it assesses the impacts of the remuneration system on the risk, capital, and liquidity management; and, Supports the Supervisory Board in overseeing the internal control system and all other relevant areas in the structuring of the remuneration

system

#### 4.3.2.4. Risk Committee

#### **Members**

- Oliver Engels Chairman
- Stephan Leithner Vice Chairman
- Heike Eckert

#### Tasks and responsibilities

- Advises the Supervisory Board on the institution's overall current and future risk appetite, risk tolerance and risk strategy and assists the Supervisory Board in overseeing the implementation of that strategy;
- Reviews whether the conditions offered to clients take into account the institution's business model and risk structure. If this is not the case, the Risk Committee submits proposals to the Executive Board, about how the conditions applied to clients in accordance with the business model and the risk structure could be created;
- Examines whether incentives provided by the remuneration system take into consideration the risk, capital and liquidity structure of the institution and the likelihood and timing of earnings; and
- Takes advice from external experts, if necessary. It determines type, comprehensiveness, format and frequency of information to be provided by the Executive Board with regard to strategy and risk.

#### 4.3.2.5. User Committee

#### Members

#### Tasks and responsibilities

- European Investment Bank
- Bank of New York Mellon
- Citibank
- BNP Paribas Securities Services
- Union Bank of Switzerland
- Barclays
- Northern Trust

- Submits non-binding opinions to the management body;
   and
- Advises the Executive Board on key arrangements that may affect its members, including the criteria for accepting issuers or clients in their respective securities settlement systems and at the service level and the pricing structure.

# 5. Risk Management Overview

In application of Article 435(1) CRR II the qualitative information on risk management in CBL is disclosed using guidance for template EU OVA below in the following chapters:

Legal basis	Row number	Qualitative information - Free format	Report chapter
Point (f) of Article 435(1) CRR II	(a)	Disclosure of concise risk statement approved by the management body	Chapter 5.1
Point (b) of Article 435(1) CRR II	(b)	Information on the risk governance structure for each type of risk	Chapter 5 Chapter 10 Chapter 11 Chapter 12 Chapter 13 Chapter 14 Chapter 15
Point (e) of Article 435(1) CRR II	(c)	Declaration approved by the management body on the adequacy of the risk management arrangements.	Chapter 5.4
Point (c) of Article 435(1) CRR II	(d)	Disclosure on the scope and nature of risk disclosure and/or measurement systems.	Chapter 5.1 Chapter 5.2 Chapter 5.6
Point (c) of Article 435(1) CRR II	(e)	Disclose information on the main features of risk disclosure and measurement systems.	Chapter 5.2 Chapter 5.3
		Strategies and processes to manage risks for each separate category of risk.	Chapter 5.3 Chapter 5.6
Points (a) and (d) of Article 435(1) CRR II	(g)	Information on the strategies and processes to manage, hedge and mitigate risks, as well as on the monitoring of the effectiveness of hedges and mitigants.	Chapter 5.6

Table EU OVA - Institution risk management approach

#### 5.1. Concise Risk Statement

In accordance with Article 435 (1)(e) and (f) of the CRR, the concise risk statement represents the statement approved by the Executive Board on the appropriateness of the risk management system and procedures and the description of the entity's risk profile associated with the business strategy.

In the executive board meeting on 24 April 2024, CBL Executive Board approved the below concise risk statement as part of the approval of this Pillar III Disclosure Report. The concise risk statement also includes the concise credit risk statement as outlined in <a href="Chapter 11.2">Chapter 11.2</a>
<a href="Concise Credit Risk Statement">Concise Credit Risk Statement</a> as well as the concise liquidity risk statement as outlined in <a href="Chapter 12.9.2">Chapter 12.9.2</a>. Concise Liquidity Risk Statement.

CBL is a post-trade services provider, fully owned by Deutsche Börse AG (DBAG) since July 2002. As an international central securities depository (ICSD) headquartered in Luxembourg, Clearstream provides the post-trade infrastructure for the Eurobond market and services for securities from over 59 domestic markets worldwide. Clearstream' services include the settlement and custody of securities, issuance services, investment fund services as well as collateral, lending and liquidity management. Clearstream ensures that cash and securities are promptly and effectively traded between market participants and that its clients are

always notified of the rights and obligations attached to the securities they keep under its custody.

Effective and efficient risk management safeguards CBL's continued existence and enables it to achieve its corporate goals in the long term. To this end, CBL has established a risk strategy and a risk management framework, which defines roles, processes and responsibilities and is binding for all staff.

CBL's risk strategy (as covered by the Clearstream Holding AG risk strategy) is based on its business strategy and sets limits specifying the maximum risk permitted for operational risks, financial risks, pension risks, business risks and winding-down and restructuring risk. This is done by laying down respective requirements for risk management, risk control and risk limitation.

The Risk Strategy accomplishes this by determining conditions for risk management, control and risk limitation. Clearstream gives considerable attention to its risk treatment process and ensures that appropriate measures are taken to avoid, reduce, transfer risk or, where appropriate, consciously accept it. The business strategy is updated annually and incorporates internal and external environmental changes and Material Change Process view and action plan for projects and investments the company is engaging in. Clearstream Risk Management ensures consistency of the Risk Strategy with the annual business strategy especially through the analysis of possible new risks and threats. Forward-looking risk scenarios are taken into account in order to minimise the risk exposure on capital and liquidity. The Internal Capital Adequacy Assessment builds upon the material risks identified in the Risk Strategy. Clearstream's Risk Strategy ensures and enables the timely and adequate control of risks. The information required for controlling risks is assessed using structured and consistent methods.

CBL ensures that appropriate measures are taken to avoid, reduce and transfer, or intentionally accept, risk. The risk strategy enables risks to be identified and controlled in a timely and adequate manner. Information is captured and assessed based on the structured and consistent procedures in place. The results of the assessments are collected in the reporting system, which is used to systematically analyse and control the risks. Risk reports are prepared on a regular quarterly and ad-hoc basis and cover existing as well as potential risks identified.

Regular risk reports (at least quarterly) contain risk quantification results in comparison with the limits, risk related qualitative information, information about stress tests, and capital adequacy information for CBL. Clearstream Risk Management reports the limit utilisation of the economic perspective to the Executive and Supervisory Boards of CBL via the regular risk reports using traffic lights that signal the respective limit utilisation. Limits are defined and approved by the CBL Executive Board as part of the risk appetite set in the company's Risk Strategy. The Risk Metric is a measured Risk Appetite in terms of defined Risk Metric against Red, Orange and Amber thresholds, which have been approved by the Executive Board. Clearstream Risk Management may issue ad hoc reports when a new risk situation or development of existing risk should be reported to the CBL Executive Board. The

CBL Executive Board is informed in a timely and comprehensive manner about the company's risk profile, relevant risks and relevant losses.

CBL follows the listed pre-defined principles in its risk management:

- Each member of the Executive Board bears the ultimate responsibility for risk management of CBL.
- All responsible management levels must always be informed about the relevant risks of CBL in an open, timely and complete manner.
- The awareness of risk and the associated risk culture is ensured by clear organisational structure, defined responsibilities and roles, viable processes and continuous knowledge transfer to employees.
- Effective and efficient risk management supports CBL in achieving its corporate goals
  and safeguards CBL's continued existence. The risk management framework is
  designed to provide complete, timely and consistent risk-related information in order
  to ensure the identification, notification, assessment, monitoring and reporting of
  risks.

CBL's risk management framework ensures that all management committees within CBL are able to control the risk profile of the entire Bank, as well as specific material risks, in a timely manner. The aim is to identify developments that could threaten CBL's interests and to take appropriate countermeasures promptly.

The identified risks are mapped to the internal, annually updated risk inventory. The risk inventory process aims to ensure that Clearstream undertakes a regular, structured identification and assessment process of the risks Clearstream might be exposed to due to its current/future business model and the industry environment. For the purpose of an effective review of the overall risk profile, the risk inventory process is not limited to certain areas of Clearstream's activities or products but to all the entity's financial and non-financial activities, subsidiaries, and other connected entities (incl. step-in risk and exposures to shadow banking entities), and outsourcing arrangements. The risk inventory process is subject to an annual review performed by Risk Management on legal entity level and is approved by the relevant Executive Boards. As defined by the Risk Inventory, Clearstream's risk profile consists of five Aggregated Risk Types: Operational Risk, Financial Risk, Business Risk, Pension Risk, and Winding-down and Restructuring Risk.

The Risk Inventory/Taxonomy gives a comprehensive and complete list of all the potential risk items that Clearstream may be exposed to due to its current and future business operations, and therefore, includes all the risks the entity is aware of. The Risk Inventory/Taxonomy is categorised by four levels. The five Aggregated Risk Types cover multiple risk items. The Risk Inventory/Taxonomy is regularly assessed, following the risk management framework. The risk profile, definitions and risk concentrations are explained in this chapter. The mitigating measures per risk are reviewed and amended if needed. Clearstream Risk Management additionally analyses future developments, projects and strategic initiatives.

CBL uses various quantitative and qualitative risk management methods to monitor and control the risk profile. The combination of different methods is intended to provide a

comprehensive picture of the current risk situation as accurate as possible. This allows CBL to take appropriate measures to safeguard CBL's continued existence.

In terms of quantitative risk appetite in the economic perspective, it is the objective to ensure that it is 99.9% likely or greater (that is, no more than once in 1,000 years) that the total capital will not be lost within the next 12 months (Economic Perspective). This principle establishes how much risk Clearstream must be able to withstand and the level of risk appetite that it has. Clearstream's risk appetite framework consists of the tools and concepts used to manage risks. The aim is to be able to monitor risks continuously and thereby manage risks according to the risk appetite. The risk appetite comprises of aggregate risk, regulatory capital and stress tests.

The Risk Bearing Capacity (RBC) concept is designed to ensure that any (emerging) risks that arise can be absorbed, thus securing the company's continued existence of Clearstream (as going concern). The risk appetite corresponds to the amount of risk that Clearstream is prepared to run to carry out its business.

The allocation of RBC to material risk types (operational risk, business risk, pension risk and financial risk with sub-limits for credit risk and market risk) takes into account the risk profile of the respective regulated entity. Furthermore, all relevant factors (for example, historic values of required economic capital (REC) for certain risk types, planned development of revenues, transaction volumes, margin requirements, credit portfolio, etc. as well as intended model changes to quantify certain risk types) have to be considered. The risk appetite is set by the Executive Board of CBL and the Supervisory Board of CBL per risk confidence level and risk type.

Clearstream also performs VaR calculations to detect potential risk concentrations, as well as stress test calculations.

The quantitative and qualitative aspects of liquidity risk are consistent and aligned with the institution's business strategy and overall risk appetite. The liquidity risk strategy is one component of the overall risk strategy. In addition, the liquidity risk concepts and methodologies, and the liquidity stress testing framework are aligned with the risk strategy and constitute core components of the risk appetite framework.

The liquidity risk strategy is expressed through the following elements:

- Liquidity risk strategy statement,
- Liquidity risk appetite/tolerance,
- Liquidity risk limit framework.

It demonstrates how liquidity risk fits into the overall risk appetite framework, including a description and definition of each of the risk appetite measures related to liquidity. In this way, the ILAAP is interlinked with the liquidity risk strategy and risk appetite.

Given the banking type ancillary services offered by CBL (for example, client cash accounts, Unconfirmed Funds Facilities (UCFs), intraday Technical Overdraft Facility (iTOF), etc.), intraday liquidity risk is one of the most material liquidity risks for Clearstream. This is reflected in Clearstream's risk strategy via policies, processes and systems which the

institution uses for the identification, measurement, ex ante and ex post management and monitoring of intraday liquidity risk. Intraday liquidity exposures resulting from banking type ancillary services are mostly secured credit exposures. Thus, intraday aspects of the risk strategy are closely intertwined with credit (via the ex-ante solution "MoCCo", operated by the Treasury & Liquidity Controls unit) and market risk (haircut framework).

In order to meet the minimum requirements for the regulatory Liquidity Coverage Ratio (LCR), the entity has established corresponding limits and early warning indicators. In the past financial year 2023, CBL significantly exceeded the required minimum ratio of 100% on every reporting date. At the end of 2023, the LCR was 138.95%. Given Clearstream's short term business model without significant maturity transformations, the NSFR is not considered as steering relevant and does not need to be reported by CBL on the basis of Article 6 Paragraph 4 Regulation (EU) No 575/2013 (and the amending regulation (EU) 2019/876).

The leverage ratio of CBL was 27.28% as at 31 December 2023.

From the economic perspective, the institution manages its liquidity adequacy taking into consideration the specific features of its business model and ensuring that the expected outflows are adequately covered by internal liquidity. Given the institute specific vulnerabilities, all relevant and quantifiable risks identified in the risk identification process are considered and are assessed under baseline and stressed scenarios.

This is done by defining a number of internal liquidity metrics and running a set of stress tests using internally defined assumptions and methodologies.

In 2023, CBL had excess liquidity on a daily basis and no liquidity shortage occurred in the normal course of business. In conclusion, the Executive Board of CBL considers the entity's liquidity position and ILAAP adequate to cover all identified risks related to liquidity.

Capital planning is conducted over a time-horizon of 3 years, which is in line with the time horizon for the strategic planning. The mid-term capital planning is in line with the overall capital strategy and is part of the overall capital management together with ongoing solvency/economic perspective monitoring and stress testing.

In the year under review, the risks to which CBL was exposed to were well managed. Clearstream's governance constantly identifies, updates, notifies, assesses, aggregates and monitors the institution's risk. The risk identification has been performed with the required diligence and comprehensiveness to identify all risks that have occurred and the risks, which have been provisioned. Those risks are stress tested in order to achieve a better understanding of the largest risks to which the firm is exposed to and to adequately model capital requirements.

For all applicable risk categorised and sub-categorised, Clearstream stress tested in the year under review the scenarios created, benchmarked against the Risk Bearing Capacity (RBC) and reviewed the frequency and has come to the conclusion that even the maximum loss possible would be covered with capital. Clearstream ensures that the institution holds adequate internal capital in relation to the institutions risk profile. In order to absorb

potential (unexpected) losses, Clearstream implemented an internal management procedure of Risk Bearing Capacity. The calculated required economic capital to cover potential risk related exposure is compared with the Available Risk Bearing Capacity, which Clearstream defined as regulatory own funds.

In addition to traditional risk type specific stress tests, which analyse the impacts of predefined stress scenarios, Clearstream also calculates reverse stress tests on a regular basis. With the help of this instrument, a combination of eligible stress scenarios that would exceed the entity's Available Risk Bearing Capacity are identified. The findings from the reverse stress tests can give rise to further analysis and implementations of measures to mitigate/reduce risks. In addition, Clearstream also quantifies risk wide stress tests, covering the simultaneous impacts of predefined stress scenarios combining several risk types. Additionally, the institution has created adverse scenarios which are used for Capital Planning purposes.

As at 31 December 2023, CBL required economic capital amounting to EUR 338 million and was covered by a risk-bearing capacity amounting to EUR 925 million. The Executive Board of CBL is sufficiently confident regarding the effectiveness of its risk management system.

CBL evaluates its risk environment and profile on an ongoing basis. Considering the stress test results, the pertaining required economic capital, and the risk management system, the Executive Board of CBL concludes that the risk-bearing capacity is sufficient. Moreover, no risks with more than quite remote probabilities are identified, which could jeopardise CBL's viability as a going concern. The risk management system put in place by CBL is assessed as adequate for the institution's profile and strategy.

The current macroeconomic and geopolitical risks are being monitored by Clearstream Risk Management.

Further key risk ratios and figures are contained in EU KM1, EU OVC sections as well as in the various risk type-specific sections.

In addition, details are laid out in the following referenced sections:

Article 435(1)(f) CRR II requirements	Reference sections
Risk profile	5.8 Risk profile
Strategy	5.3 Risk strategy
	5.5 Risk culture
Management of risk	5.2 Risk management framework
	5.6 Risk management process
	5.6.1 Risk identification
	5.6.2 Risk notification
	5.6.3 Risk assessment
	5.6.4 Risk treatment
	5.6.5 Risk monitoring and reporting
	10. Operational risk
	11. Credit risk
	12. Liquidity risk

	40.14		
	13. Market risk		
	14. Other Risk Types		
	15. Environmental social and governance		
	(ESG) risks		
Risk tolerances	5.6.3 Risk assessment		
Key ratios and figures	3 Key prudential metrics		
	7 Own funds and capital		
	8 Leverage ratio		
	9 Assets encumbrance		
	10 Operational risk		
	11 Credit risk		
	12 Liquidity risk		
	13 Market risk		

Table 3: Concise risk statement

CBL does not have any transactions within the group, with affiliates and related parties, that have material impact on its risk profile.

### 5.2. Risk Management Framework (Article 435(1) CRR II)

Risk management is a fundamental component of the Bank's management and control framework. Effective and efficient risk management is vital to protect the Bank's interests and simultaneously enables Clearstream to achieve its corporate goals. Clearstream has therefore established a Group-wide risk management system comprising roles, processes and responsibilities applicable to all employees and organisational units of Clearstream. This ensures that emerging risks are identified and managed as early as possible.

In addition, Clearstream's risk strategy is based upon the business strategy and regulates the extent of risks taken throughout the various business activities carried out. This is ensured by determining conditions for risk management, control and limitation. As a result, Clearstream gives considerable attention to its risk treatment process and ensures that appropriate measures are taken to avoid, reduce and transfer risk or, where appropriate, consciously accept it. Thus, timely and adequate control of risk must be ensured.

Information required for controlling risk is assessed using structured and consistent methods and processes. The results are collated and incorporated into a reporting system enabling measurement and control of risks. Consequently, risk reporting is based on reliable information and carried out on a regular basis and ad hoc basis for existing and potential risks. All members of the Executive Board of Clearstream are ultimately responsible for the risk strategy, which reflects Clearstream's risk appetite defining the maximum loss the Executive Board is willing to assume in one year, the risk tolerance as well as desired performance levels. It is Clearstream's intention to maintain risk at an appropriate and acceptable level. Moreover, the members of the Executive Board ensure that the risk strategy is integrated into the business activities throughout the entire Group and that

adequate measures are in place to implement the strategies, policies and procedures. The risk strategy implementation is outlined below.

## 5.3. Risk Strategy

Based on its business strategy, Clearstream has adopted a corresponding risk strategy which describes the overall risk profile. The risk strategy includes statements concerning risk appetite and sets limits to the Risk-Bearing Capacity per risk type. Required Economic Capital is compared with the available Risk-Bearing Capacity which is defined as regulatory own funds (eligible regulatory capital) minus adjustments for unrealised losses driven mainly by ongoing litigations, for non-consolidated entities as well as for potential further reasons. The allocation of Risk-Bearing Capacity for 2023 for Clearstream was as follows: Operational Risk max 41%, Financial Risk max 52%, Business Risk max 6% and Pension Risk max 1%.

The risk strategy was approved by the Executive Board of Clearstream in May 2023. The overall risk profile as defined, adopted, and approved via the risk strategy links to the business strategy outlined above. 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. Those tools and concepts include Risk-Bearing Capacity and Value at Risk. Other tools, while critical and important, are in addition to these two concepts.

# 5.4. Declaration of Adequacy of Risk Management Arrangements (Article 435(1)(e) CRR II)

For the purpose of Article 435 CRR II, in the Executive Board meeting on 5 March 2024 the Executive Board concluded that the Risk Management System is effective and adequate with regard to risk profile and strategy of the Bank.

#### 5.5. Risk Culture

At Clearstream, a risk awareness and a corresponding risk-conscious culture is encouraged through appropriate organisational structures and responsibilities, adequate processes and the knowledge of employees. The appropriateness of the Bank's risk management and controlling systems are regularly checked. Overall, Clearstream's risk culture is based on the Financial Stability Board's four indicators of a sound risk culture: Tone from the top, accountability, effective communication and challenge and incentives, thereby striving for clear risk ownership and accountability. Efforts to strengthen risk culture in the company throughout all employees range from a virtual refresher training to the publication of a regular short case study on the intranet. As a supportive measure, annual people survey analysis was performed to provide an understanding as to how the risk culture is perceived within Clearstream. In addition, mandatory in person risk awareness training for all Clearstream Operations staff in Luxembourg, Frankfurt and Prague were performed in 2023. The main objective of the mandatory risk awareness training is to promote the corporate risk culture, raise awareness of the risk management cycle and reflect on risks, processes, controls and communication, including escalation processes.

## 5.6. Risk Management Process

Overall, the risk management process 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);
- Treated; and,
- Reported in a timely and consistent manner, together with suitable recommendations to the respective Executive Board.

These five key elements, as well as adequate quality standards, are defined in the Group Risk Management Policy and reviewed on an ongoing basis by an independent audit function, which ensures the suitability and effectiveness of the risk management process.

Risk Controlling is performed in the decentralised business areas, that is, where the risks occur. Risk control in the Clearstream operational units is ensured by nominating "Operational Risk Representatives" who are responsible for identifying, notifying and controlling any risk in their area. Clearstream Risk Management, a central function within Clearstream, assesses all existing and potential new risks and reports on a quarterly basis and, if necessary, ad hoc to the relevant Executive Board (see risk management process below).



Figure 3: Risk management process

#### 5.6.1. Risk Identification

Risk Identification consists of the identification of all threats to Clearstream, as well as causes of loss and potential disruptions. Risks may arise due to internal activities or external factors and the risk examination must be performed with regard to existing or new processes, when concluding new business or entering new service areas, etc. All organisational units and individual employees must identify and quantify by themselves potential risks in their area of responsibility.

The risk identification process is, on one hand, proactive, based on regular reviews of processes to identify weak areas and or based on scenarios of disruption or failure taking

into consideration all sources of issues (unavailability of systems, human error etc.). And on the other hand, the risk identification process is reactive, following an incident and, where appropriate, learning from this event. Post-mortem assessments are usually performed by the business.

The risk management framework also allows reflecting the potential impact of strategic initiatives (new products, acquisitions, etc.) as part of the scenario analysis. Additionally, the identified risks are mapped to the internal, annually updated risk inventory. The risk inventory process aims to ensure that Clearstream undertakes a regular, structured identification and assessment process of the risks Clearstream might be exposed to due to its current/future business model and the industry environment. For the purpose of an effective review of the overall risk profile, the risk inventory process is not limited to certain areas of Clearstream's activities or products but to all the entity's financial and non-financial activities, subsidiaries, and other connected entities (incl. step-in risk and exposures to shadow banking entities), and outsourcing arrangements. The risk inventory process is subject to an annual review.

#### 5.6.2. Risk Notification

Risk Notification is the step in the risk management process that ensures risks are centrally recorded. All organisational units and individual employees must notify Clearstream Risk Management in a timely manner of any risks that have been identified and quantified. However, where a Clearstream entity oversees its own risk management function, the timely notification of risks pertaining to that entity is made, in the 1st instance, to that dedicated Risk Management function, which in turn and without delay must notify Clearstream Risk Management of matters of relevance.

#### 5.6.3. Risk Assessment

Following the notification of risk, the assessment of an incident or a potential risk development includes not only a quantification of risk using the "Value at Risk" ("VaR") methodology but also a comparison of the result with the available Risk-Bearing Capacity. The purpose is to allow the overall quantitative risk appetite to be expressed in a comprehensive and easily understandable way while facilitating the prioritisation of risk management actions.

The VaR quantifies the risks to which a company is exposed to and indicates the maximum cumulative loss Clearstream could face if certain independent loss events materialise over a specific time horizon for a given likelihood. Clearstream's models are based on a one-year time horizon and correlations between individual risk estimates that are recognised when calculating the capital charge for operational risk. The VaR is calculated at a confidence level of 99.90% (Regulatory VaR as well as Economic Capital).

Clearstream also performs stress test calculations, which consider even more conservative parameters than the regular VaR calculations. Risk-wide stress tests, which incorporate the interaction of all material risk types, are also carried out and reported to the Executive Board on a quarterly basis.

In addition to traditional stress tests that analyse the impacts of predefined stress scenarios, Clearstream calculates so-called reverse stress tests. These reverse stress tests have the goal to identify the stress scenarios that would exceed the Available Risk-Bearing Capacity. The findings of reverse stress tests can give rise to further analyses, and to implementation of additional measures to reduce risk(s).

#### 5.6.4. Risk Treatment

Risk Treatment involves determining and implementing the most appropriate treatment mitigation for the identified risk. It encompasses risk avoidance, risk mitigation, risk transfer and intentional risk acceptance. Each business area within CBL decides and implements the most appropriate treatment mitigation in each case. Operational Risk control in the Clearstream operational units is ensured by nominating "Operational Risk Representatives" covering all relevant units, who are primarily responsible for identifying, notifying and controlling any risk in their areas.

## 5.6.5. Risk Monitoring and Reporting

In the final risk management process step, the relevant Boards and Committees are informed consistently and in a timely manner about risks and about the related risk (control) measures in order to take appropriate action. Clearstream Risk Management is responsible for providing this information to the relevant Boards and Committees.

These regular risk reports (at least quarterly) contain risk quantification results in comparison to the limits, risk-related qualitative information, information about stress tests and capital adequacy of the Bank. Clearstream Risk Management reports the limit utilisation of the economic perspective to the Executive and Supervisory Boards of CBL via the regular risk reports using traffic lights that signal the respective limit utilisation. Limits are defined and approved by the CBL Executive Board as part of the risk appetite set in the company's Risk Strategy. The Risk Metric is a measured Risk Appetite in terms of defined Risk Metric against Red, Orange and Amber thresholds, which have been approved by the Executive Board. Clearstream Risk Management may issue ad hoc reports when a new risk situation or development of existing risk should be reported to the CBL Executive Board. This is the case when a risk has a material impact on the risk profile of the Bank.

Information is captured and assessed based on the structured and consistent procedures in place. The results of the assessments are collected in the reporting system, which is used to systematically analyse and control the risks. Risk reports are prepared on a regular quarterly and ad-hoc basis and cover existing as well as potential risks identified.

Ultimately, the internal audit function acts as a third line of defence by providing further assurance via independent audits, which verify that risk control and risk management is performed adequately. The results of these audits are also part of the risk management system.

#### 5.7. ICAAP Information

In application of points (a) and (c) of Article 438 CRR II the institutions shall disclose the approach to assessing the adequacy of their internal capital (ICAAP, Internal Capital Adequacy Assessment Process) using template EU OVC.

To facilitate the reading the relevant information is provided as free text below.

Legal basis	Row number	Free format
Article 438(a) CRR II	(a)	Approach to assessing the adequacy of the internal capital.
Article 438(c) CRR II	(b)	Upon demand from the relevant competent authority, the result of the institution's internal capital adequacy assessment process.

Table EU OVC - ICAAP information

#### Article 438(a) CRR II

The Internal Capital Adequacy Assessment of Clearstream is defined centrally and calculated on a regular basis. The Executive Board of CBL (as well as the Executive Boards of Clearstream Holding AG and Clearstream Banking AG respectively) and the Supervisory Board of CBL are ultimately responsible for the Risk Strategy of Clearstream and oversee the internal capital adequacy process. Clearstream Risk Management prepares, updates and reviews the ICAAP report, presents it to the relevant Executive Boards for approval and provides the report to the regulatory authorities.

The ICAAP is supported by the Risk Strategy and reflects the risk profile and risk principles of the company, and the Group Risk Management Policy of Deutsche Börse Group, which includes the overall risk process and governance structure. The respective Executive Boards shall be informed on an ongoing basis about the risks, how the company intends to mitigate identified risks, and how much capital is required after taking mitigating factors into consideration. The ICAAP should enable assessment of the level of capital required to support all current and future risks in the business. The assessment of internal capital adequacy is based upon several key components. The outcome of the regular capital adequacy assessment, namely the Required Economic Capital (Value-at-Risk 99.9%) – covering all material risks – is regularly compared to the Available Risk Bearing Capacity (ARBC), which is defined as regulatory own funds (eligible regulatory capital) minus adjustments for unrealised losses driven mainly by mark-to-market adjustments for the Treasury portfolio and for non-consolidated entities. The risk management framework connects different aspects of the internal capital adequacy process. The ICAAP report includes these aspects and underlines the inter-dependencies within the framework.

The ICAAP report is subject to a quality assurance process. The checks are performed using the EBA Readers Manual. The input to the report is prepared and collected by Clearstream Risk Management team members including other relevant parties. The final report is reviewed by the Chief Risk Officer of CBL, the Chief Risk Officer of Clearstream Holding AG (CH) and the Head of Risk Management of Clearstream Banking AG (CBF).

The process includes the first and second line of defence. The ICAAP Report is also reviewed by CH and CBL Compliance in line with CSSF requirements. The CH and CBL Chief Compliance Officers issue recommendations after their review to CRM. Internal Audit, as the third line of defence, audits the ICAAP regularly. Additionally, Clearstream follows clearly defined escalation procedures.

The Executive Board of CBL and the Supervisory Board of CBL are ultimately responsible for the Risk Strategy of Clearstream and the ICAAP with a focus on:

- Ensuring full compliance with the ICAAP objective concerning risk taking, mitigation and internal capital planning;
- Assuring adequate capitalisation of the Company;
- Ensuring effective risk management structures including risk policies and procedures to address and mitigate all risks to which Clearstream is exposed to;
- Ensuring that the Risk Strategy is integrated into the business activities throughout the entire group and that adequate measures are in place to implement the strategies, policies and procedures;
- Approving capital planning;
- Overseeing the integration of internal capital adequacy statement and framework (ICAAP) into the Company.

The Executive Board of CBL approves the capital adequacy statement and the ICAAP report including the key components of the ICAAP report which are defined as follows:

- Consistency between the business and risk strategies;
- Integration within the overall risk management and risk appetite frameworks; including early warning indicators, limit structures, and escalation procedures;
- Identification, measurement, assessment, and aggregation of material risks;
- Assessment, planning and allocation of capital requirements for the normative and economic perspectives;
- Derivation and monitoring of the Available Risk Bearing Capacity;
- Stress testing and consistency with the recovery plan;
- Overall governance and IT support;
- Reporting;
- Capital Adequacy Statement.

The components are supported by objectives, assumptions and methodologies and are captured by clear, concise and consistent documentation approved by Executive Management.

#### Article 438(c) CRR II

There was no specific demand from the relevant competent authority (CSSF) to disclose the result of the institution's internal capital adequacy assessment process in Pillar III report, hence this part is omitted.

#### 5.8. Risk Profile

Clearstream differentiates between five major risk types that are managed and controlled with distinct methods. These risk types are operational risk, financial risk, business risk, pension risk and winding-down and restructuring risk. The risk types are illustrated in Figure 4 and are described in more detail in the following sections. Project risk also exists but is not specifically quantified, it can arise as a result of project undertakings (launches of new products, services, processes or systems), which may have a significant impact on the operational risk category. Project risks are assessed by Clearstream Risk Management and are addressed in the early stages of major projects. Risks connected with the delivery of projects, such as budget risk, quality/scope risk and deadline risk, are monitored and reported by the units performing these projects. Based on relevant monitoring and control, project risks are continuously analysed and assessed.

The Risk Inventory/Taxonomy gives a comprehensive and complete list of all the potential risk items that Clearstream may be exposed to due to its current and future business operations, and therefore, includes all the risks the entity is aware of. The Risk Inventory/Taxonomy is regularly assessed, following the risk management framework. The mitigating measures per risk are reviewed and amended if needed. CRM additionally analyses future developments, projects and strategic initiatives.

The risk profile of Clearstream differs fundamentally from those of other financial services providers. Operational risk, business risk and winding-down and restructuring risk are assessed as material risk types within Clearstream. Pension Risk is considered as an immaterial risk in the risk profile, but processes are applied treating it as a material risk type. Financial risk is also assessed and managed as a material risk type and is discussed in subsequent chapters.



Figure 4: Risk profile of Clearstream

# Linkages between Financial Statements and Regulatory Exposures

## 6.1. Financial Statement Linkages Overview

This paragraph specifies the requirements included in Article 436 of Part Eight CRR regarding the scope of application of disclosures. In the application of Article 436(b), institutions are required to disclose an outline of the differences in the basis of consolidation for accounting and prudential purposes.

As of 31 December 2023, CBL had one direct subsidiary:

Clearstream London Limited ("CLL"), company, incorporated on 27 December 2018. Registered office: Westferry House, 2nd Floor, 11 Westferry Circus, Canary Wharf, London E14 4HE, United Kingdom. Clearstream London Limited is directly 100% owned by the Bank. Following the approval by the FCA, most of the business of the Clearstream Banking S.A. London Branch transferred to CLL on 1 July 2023.

As of 31 December 2023, CBL had the three following branches:

- Clearstream Banking S.A., Singapore branch (created in 2009). Registered office: 9 Raffles Place #55-01 Republic Plaza Singapore 048619 Singapore.
- Clearstream Banking S.A., UK branch (opened in 2016) which took over the activities
  of its former representative office. Registered office: Westferry House, 2nd Floor, 11
  Westferry Circus, Canary Wharf, London E14 4HE, United Kingdom. Following the
  transfer of most of the business of the Clearstream Banking S.A. London Branch to
  CLL, the UK regulators subsequently approved the cancellation of the London
  Branch's regulatory authorisations, and it is planned to complete the Branch's
  closure in 2024.
- Clearstream Banking S.A., Japan branch (created in 2021). Registered office: 27F, Marunouchi Kitaguchi Building, 1-6-5, Marunouchi, Chiyoda-ku, Tokyo, Japan.

The information on the consolidation method applied for each entity within the accounting and regulatory scopes of consolidation is provided in the following table:

а	b	С	d	е	f	g	h
	Method of		Method o	of prudential cons	solidation		Description of the entity
Name of the entity	accounting consolidation	Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	
Clearstream London Limited	Not consolidated				Х		Ancillary services undertaking

Template EU LI3 - Outline of the differences in the scopes of consolidation (entity by entity)

As per Article 83 of the Law of 17 June 1992, as amended, CBL does not prepare consolidated financial statements because CBL only has subsidiary undertakings that are not material for the purpose of Article 85(3) of the Law of 17 June 1992, as amended

(consolidated accounts shall give a true and fair view of the assets, liabilities, financial position, and profit or loss of the undertakings included therein taken as a whole), both individually and as a whole.

According to CRR provisions CBL is not required to comply with prudential requirements on sub-consolidated basis. Consequently, there is no difference between accounting and prudential scope of consolidation.

The table below shows a breakdown of the differences in the scope of consolidation along accounting and regulatory lines and allocates the different amounts to the regulatory risk categories, namely, credit risk, counterparty credit risk and market risk, as well as the part that is not subject to capital requirements or subject to deduction from capital.

		a	Ь	С	В	e	f	g
						Carrying values of items	5	
	(in 000 of I)	Carrying values as reported in published financial statements	Carrying values under scope of prudential consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to own funds requirements o subject to deduction from own funds
balance si statement	_							
1 Cash, cas demand d	h balances at central banks and other eposits	11,438,436	7,535,921	7,535,921			7,535,921	
2 Financial a	assets held for trading	7,331	8,477	1,146	7,331		8,477	
3 comprehe	assets at fair value through other nsive income	7,699	7,699	7,699			7,699	
4 loss	assets at fair value through profit and	1,146		-			-	
	assets at amortized cost	5,570,502	9,475,334	9,475,334			9,475,334	
00	ch Debt securities	<i>t.41t.047</i>	1.411.896	1.411.896			1.411.896	
	ch Loans and Advances	4, 159, 456	<i>8,0</i> 63,439	<i>8,0</i> 63,439			8,063,439	1
	s - hedge accounting	5,314	5,314		5,314		5,314	
9 Investmen associate:	its in subsidiaries, joint ventures and	6,498	6,496	6,496			6,496	
10 Tangible a		14,242	14,679	14,679			14,679	
11 Intangible		1	1	1,,010			1	
12 Tax assets		9	154				154	2
13 Other asse	ets	33,639	35,142	35,142			35,142	
13a of which	ch Other assets	32.297	33,844	33,644			33,644	
136 of whic	ch Prepayments and accrued income	1.343	1.498	1.498			1.498	
Total as:		17,084,817	17,089,217	17,076,416	12,646		17,089,217	22
balance si statement	_							
	iabilities held for trading	2,628	2,628		2,628		2,628	
	iabilities measured at amortised cost	15,136,054	15,135,316				15,135,316	15,135,310
3 Provisions		34,953	47,880				47,880	47,88
4 Tax liabiliti		199,805	202,971				202,971	202,97
5 Other liabi		72,758	52,905				52,905	52,90
	ch Other liabilities	8,223	52,305				52,305	52,90
	oh Accruals and deferred income	<i>64.535</i>	JE 111 700		0.000		-	-
Total lial	bilities	15,446,198	15,441,700		2,628		15,441,700	15,439,072

Template EU LI1 - Differences between the accounting scope and the scope of prudential consolidation and mapping of financial statement categories with regulatory risk categories

The following table provides information on the main sources of differences between the published financial statements and COREP reporting (other than those due to different scopes of consolidation):

		а	ь	С	d	е
				Items su	bject to	
		Total	Credit risk	Securitisation	CCR	Market risk
	(in 000 of €)		framework	framework	framework	framework
1	Assets carrying value amount under the scope of prudential consolidation (as per template					
'	LI1)	17,089,195	17,076,416		12,646	17,089,217
2	Liabilities carrying value amount under the scope of prudential consolidation (as per					
4	template LI1)	2,628	-		2,628	15,441,700
3	Total net amount under the scope of prudential consolidation	17,086,567	17,076,416	-	10,018	1,647,516
4	Off-balance-sheet amounts	521,683	521,683			
5	Differences in valuations					
6	Differences due to different netting rules, other than those already included in row 2					
7	Differences due to consideration of provisions					
8	Differences due to the use of credit risk mitigation techniques (CRMs)	(8,117,531)	[8,117,531]			
9	Differences due to credit conversion factors					
10	Differences due to Securitisation with risk transfer					
11	Other differences	36,583			36,583	
12	Exposure amounts considered for regulatory purposes	9,527,301	9,480,568	-	46,600	64,052

Template EU LI2 - Main sources of differences between regulatory exposure amounts and carrying values in financial statements

In application of points (b) and (d) of Article 436 CRR, institutions shall provide explanation to differences in templates LI1 and LI2 by completing template EU LIA.

Legal basis	Row number	Qualitative information - Free format.
Article 436(b) CRR	(a)	Differences between columns (a) and (b) in template EU LI1.
Article 436(d) CRR	(b)	Qualitative information on the main sources of differences between the accounting and regulatory scope of consolidation shown in template EU LI2.

Table EU LIA - Explanations of differences between accounting and regulatory exposure amounts

To facilitate the reading the required information is disclosed as free text below.

#### Article 436(b) CRR

The main differences between the financial statements and the regulatory scope arise due to the following reasons:

- The difference in demand deposits and loans and advances is caused, in part, by a different classification of overnight repos, that is, classification of overnight repos as demand deposits in the financial statements and classification as loans and advances in prudential reports.
- The difference in loans and advances and in financial liabilities measured at amortised cost is due to a reclassification of fee receivables from other assets to loans and advances, and the reclassification of debtor amounts between assets and liabilities as no netting on counterparty level is performed for regulatory reporting purposes.
- The difference in other liabilities is due to reclassification of some items to financial liabilities in FINREP.

• In addition, the difference in all the positions is explained using different foreign exchange rates, that is, Bloomberg rates are used for accounting purposes whilst ECB rates are used for FINREP.

#### Article 436(d) CRR

The differences between the assets carrying amount under regulatory scope and the actual risk exposures used in COREP are caused by the following factors:

- Intangible assets and deferred tax assets are directly deducted from own funds.

  Hence, they are included in the carrying amount under regulatory scope but not in the credit risk exposure for risk reporting.
- The difference in the CCR framework is due to the different value in derivatives exposure, since the standardised approach under provisions of Chapter 6 of Title II of Part Three CRR is used for risk reporting whereas the fair value is recognised for the purpose of FINREP.
- The difference for the market risk framework exposure arises due to the netting of long and short positions for foreign exchange exposures in the risk reporting.
- Off-balance exposures include exposures arising from the ASL program (see <u>11.4.6</u> ASL).
- Differences due to the use of credit risk mitigation techniques (CRMs) correspond to the amount of collateral after volatility adjustments received for reverse repurchase agreements, ASL.

# 7. Own Funds and Capital

## 7.1. Composition of Capital

Following the disclosure requirements in Article 437 CRR, as specified in Implementing Regulation (EU) No 1423/2013 of December 2013, institutions are required to provide information concerning the capital composition, including reconciliation with their balance sheet and the main features of the regulatory capital instruments.

Furthermore, Article 438 CRR requires disclosure of an overview of the total RWA and the related minimum capital requirements. Further breakdowns of RWAs are presented in subsequent parts of this report.

The total regulatory capital of CBL consists of Common Equity Tier 1 (CET1) capital, which comprises following items:

- Subscribed capital;
- · Share premium;
- Reserves and retained earnings;
- Revaluation reserves.

The profit of the year is not considered as generally not audited at the moment of preparation of reports. In addition, with exception of mandatory contribution to reserves, the profit of the year is generally distributed in form of dividends and not held in retained earnings.

Deductions of CET1 arise from following items:

- Intangible assets (Article 36(b) CRR);
- Deferred tax assets (Article 36(c) CRR);
- Revaluation reserve for cash-flow hedges (Article 33 CRR);
- 20% of net worth tax (NWT) reserve;
- Regulatory adjustments:
  - Amount of insufficient coverage for non-performing exposures (Article 36(m) CRRI:
  - o Amount corresponding to prudent valuation adjustment (Article 34 CRR).

CBL does not hold any investments in fincancial sector entities that should be deducted from own funds in accordance with points (f), (g), (h), (i) of Article 36 CRR.

The amount of deduction for non-performing exposure was 2.290.300 € as of 31 December 2023, as the credit risk adjustment for such losses was not sufficient.

Following Article 438(c) to (f) CRR, institutions should disclose an overview of total RWA forming the denominator of the risk-based capital requirements calculated per Article 92 CRR and summary of the institution's calculation approaches chosen. Select rows are not shown given no values to report at the Bank on 31 December 2023. Below template EU CC1 provides the information on the composition of Own Funds on 31 December 2023 with accompanying ratios.

		(a)	(b)
	(in 000 of €)	Amounts	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Common Equity Tier 1 (CE	T1) capital: instruments an	d reserves
1	Capital instruments and the related share		equity (1)+(2)
	premium accounts	321,935	
	of which: Instrument type 1 - Paid-in capital	92,000	equity (1)
	of which: Instrument type 2 - Share premium	229,935	equity (2)
2	Retained earnings	227,733	
	Accumulated other comprehensive income		
3	(and other reserves)	708,904	equity (3)+(4)+(5)
EU- 3a	Funds for general banking risk		
	Amount of qualifying items referred to in		
4	Article 484(3) CRR and the related share		
	premium accounts subject to phase out from CET1		
5	Minority interests (amount allowed in		
_	consolidated CET1)		
EU- 5a	Independently reviewed interim profits net of any foreseeable charge or dividend		
6	Common Equity Tier 1 (CET1) capital before		
	regulatory adjustments	1,030,839	
Comm	on Equity Tier 1 (CET1) capital: regulatory adjust	ments	
7	Additional value adjustments (negative	(31)	PVA on assets (3), (4), (5), (7), (8) and
	amount) Intangible assets (net of related tax liability)	(31)	liabilities (1),(3),
8	(negative amount)	(1)	assets (10)
9	Not applicable		
	Deferred tax assets that rely on future		
40	profitability excluding those arising from		
10	temporary differences (net of related tax liability where the conditions in Article 38(3)		
	CRR are met) (negative amount)		
	Fair value reserves related to gains or losses		
11	on cash flow hedges of financial instruments	(0.000)	equity (3a)
	that are not valued at fair value	(3,989)	
12	Negative amounts resulting from the calculation of expected loss amounts		
	Any increase in equity that results from		
13	securitised assets (negative amount)		
	Gains or losses on liabilities valued at fair		
14	value resulting from changes in own credit		
	standing  Defined-benefit pension fund assets (negative		
15	amount)		
	Direct, indirect and synthetic holdings by an		
16	institution of own CET1 instruments (negative		
	amount)  Direct, indirect and synthetic holdings of the		
	CET 1 instruments of financial sector entities		
17	where those entities have reciprocal cross		
''	holdings with the institution designed to		
	inflate artificially the own funds of the institution (negative amount)		
	,5		

1	1		
	Direct, indirect and synthetic holdings by the		
	institution of the CET1 instruments of financial		
18	sector entities where the institution does not		
10	have a significant investment in those entities		
	(amount above 10% threshold and net of		
	eligible short positions) (negative amount)		
	Direct, indirect and synthetic holdings by the		
	institution of the CET1 instruments of financial		
	sector entities where the institution has a		
19	significant investment in those entities		
	1 3		
	(amount above 10% threshold and net of		
	eligible short positions) (negative amount)		
20	Not applicable		
	Exposure amount of the following items which		
EU-	qualify for a RW of 1250%, where the		
20a	institution opts for the deduction alternative		
EU-	of which: qualifying holdings outside the		
20b	financial sector (negative amount)		
EU- 20c	of which: securitisation positions (negative		
	amount)		
EU-	of which: free deliveries (negative amount)		
20d	· ·		
	Deferred tax assets arising from temporary		
21	differences (amount above 10% threshold, net		assets (11)
21	of related tax liability where the conditions in		assets (11)
	Article 38(3) CRR are met) (negative amount)	(21)	
00	Amount exceeding the 17,65% threshold		
22	(negative amount)		
	of which: direct, indirect and synthetic		
	holdings by the institution of the CET1		
23	instruments of financial sector entities where		
23			
	the institution has a significant investment in		
	those entities		
24	Not applicable		
25	of which: deferred tax assets arising from		
25	temporary differences		
EU-	Losses for the current financial year (negative		
25a	amount)		
	Foreseeable tax charges relating to CET1		
	items except where the institution suitably		
EU-	adjusts the amount of CET1 items insofar as		
	=		
25b	such tax charges reduce the amount up to		
	which those items may be used to cover risks		
	or losses (negative amount)		
26	Not applicable		
65	Qualifying AT1 deductions that exceed the AT1		
27	items of the institution (negative amount)		
			Deductible net worth tax reserve in
			equity (5a)
27a	Other regulatory adjustments		Insufficient coverage for non-
		(15,102)	performing exposures
	Total regulatory adjustments to Common	(10,102)	performing exposures
28	Equity Tier 1 (CET1)	(19,143)	
	Equity Her 1 (CE11)	(17,143)	
29	Common Equity Tier 1 (CET1) capital	1,011,696	
	Additional Tier	1 (AT1) capital: instruments	
30	Capital instruments and the related share		
	premium accounts		
31	of which: classified as equity under applicable accounting standards		
01			

Amount of qualitying items referred to in Article 484(4) CRR and the related share premium accounts subject to phase out from ATI  Amount of qualitying items referred to in Article 484(4) CRR subject to phase out from ATI  Amount of qualitying items referred to in Article 484(4) CRR subject to phase out from ATI  Qualitying tier Lapital included in row Ji issued by subsidiaries and held by third parties of which: instruments issued by subsidiaries and held by third parties of which: instruments issued by subsidiaries subject to phase out additional Tier 1 (ATI) capital before regulatory adjustments  Direct, indirect and synthetic holdings by an institution of own ATI instruments insight to display a mount of capital with the institution flowage with the institution down of the institution designed to inside artificially the own funds of the ATI instruments of financial sector entities where these entities have reciproal cross holdings with the institution designed to inside a critically the own funds of the institution design to the ATI instruments of financial sector entities where the institution design to the institution design to the ATI instruments of financial sector entities where the institution design to the ATI instruments of the ATI in	32	of which: classified as liabilities under		
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Tier 2 (T2) capital: instruments  46	44	Additional Tier 1 (AT1) capital		
Capital instruments and the related share premium accounts  Amount of qualifying items referred to in Article 484(5) CRR and the related share premium accounts subject to phase out from T2 as described in Article 486(4) CRR  EU- Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from	45	Tier 1 capital (T1 = CET1 + AT1)	1,011,696	
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premium accounts subject to phase out from T2 as described in Article 486(4) CRR  Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from		, , ,		
T2 as described in Article 486(4) CRR  Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from	47	1		
47a Article 494a(2) CRR subject to phase out from				
4/8				
	47a			

EU-	Amount of qualifying items referred to in		
47b	Article 494b(2) CRR subject to phase out from T2		
	Qualifying own funds instruments included in consolidated T2 capital (including minority		
48	interests and AT1 instruments not included in		
	rows 5 or 34) issued by subsidiaries and held		
	by third parties		
49	of which: instruments issued by subsidiaries		
	subject to phase out		
50	Credit risk adjustments  Tier 2 (T2) capital before regulatory		
51	adjustments		
		al: regulatory adjustments	
F0	Direct, indirect and synthetic holdings by an		
52	institution of own T2 instruments and		
	subordinated loans (negative amount)  Direct, indirect and synthetic holdings of the		
	T2 instruments and subordinated loans of		
F0	financial sector entities where those entities		
53	have reciprocal cross holdings with the		
	institution designed to inflate artificially the		
	own funds of the institution (negative amount)		
	Direct, indirect and synthetic holdings of the		
	T2 instruments and subordinated loans of		
54	financial sector entities where the institution does not have a significant investment in those		
	entities (amount above 10% threshold and net		
	of eligible short positions) (negative amount)		
54a	Not applicable		
	Direct, indirect and synthetic holdings by the		
	institution of the T2 instruments and		
55	subordinated loans of financial sector entities		
33	where the institution has a significant		
	investment in those entities (net of eligible		
	short positions) (negative amount)		
56	Not applicable		
EU-	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the		
56a	institution (negative amount)		
EU-	Other regulatory adjustments to T2 capital		
56b	Total regulatory adjustments to Tier 2 (T2)		
57	capital		
58	Tier 2 (T2) capital		
59	Total capital (TC = T1 + T2)	1,011,696	
60	Total Risk exposure amount	2,495,150	Assets (1) to (13)
	Capital ratios and r	equirements including buff	iers
61	Common Equity Tier 1 capital	40.55%	
62	Tier 1 capital	40.55%	
63	Total capital	40.55%	
64	Institution CET1 overall capital requirements	9.11%	

l	of which: capital conservation buffer	 	
65	requirement	2.50%	
66	of which: countercyclical capital buffer		
	requirement	1.33%	
67	of which: systemic risk buffer requirement	0.00%	
	of which: Global Systemically Important		
EU- 67a	Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0.50%	
074	requirement		
	of which: additional own funds requirements		
EU- 67b	to address the risks other than the risk of	0.28%	
- 076	excessive leverage		
	Common Equity Tier 1 capital (as a		
68	percentage of risk exposure amount) available after meeting the minimum capital	32.27%	
	requirements	32.27 /0	
		a (if different from Basel III)	
69	Not applicable	amor one ir oni baset iii.	
70	Not applicable		
71	Not applicable		
	Amounts below the threshol	ds for deduction (before ris	k weighting)
	Direct and indirect holdings of own funds and		
	eligible liabilities of financial sector entities where the institution does not have a		
72	significant investment in those entities		[4]
	(amount below 10% threshold and net of		
	eligible short positions)	7699	
	Direct and indirect holdings by the institution		
	of the CET1 instruments of financial sector		
73	entities where the institution has a significant investment in those entities (amount below		(8)
	17.65% thresholds and net of eligible short		
	positions)	6496	
74	Not applicable		
	Deferred tax assets arising from temporary		
75	differences (amount below 17,65% threshold,		
	net of related tax liability where the conditions in Article 38(3) CRR are met)		
	, , , ,	e inclusion of provisions in	Tion 2
	Credit risk adjustments included in T2 in	e inclusion of provisions in	ilei Z
76	respect of exposures subject to standardised		
	approach (prior to the application of the cap)		
77	Cap on inclusion of credit risk adjustments in		
	T2 under standardised approach		
	Credit risk adjustments included in T2 in respect of exposures subject to internal		
78	ratings-based approach (prior to the		
	application of the cap)		
79	Cap for inclusion of credit risk adjustments in		
	T2 under internal ratings-based approach		
	Capital instruments subject to phase-out arrang	ements (only applicable be	tween 1 Jan 2014 and 1 Jan 2022)
80	Current cap on CET1 instruments subject to		<del></del>
	phase out arrangements		
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and		
	maturities)		
82	Current cap on AT1 instruments subject to		
	phase out arrangements		

83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	
84	Current cap on T2 instruments subject to phase out arrangements	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	

Template EU CC1 - Composition of regulatory own funds

Institution CET1 overall capital requirements include regulatory requirement of 4.5% plus overall buffer requirement composed of:

- Capital conservation buffer;
- Institution specific countercyclical buffer;
- 0-SII buffer;
- SREP buffer requirement;

As an O-SII CBL is subject to additional buffer requirement of 0.5%.

Further to the provisions of Article 59-5 of the Law of 5 April 1993 on the financial sector, CBL is subject to additional capital requirement equal to 2.5% of total risk exposure amount (TREA) corresponding to the capital conservation buffer.

Within its supervisory review and evaluation process (SREP) in 2019, further to Article 28(1) of CSSF Regulation 15-02, the CSSF has concluded that, in excess of the requirements specified in Article 92 CRR, CBL is required to maintain the additional own funds equal to 1% of TREA. In August 2022 this requirement was reduced to 0.5% to be held in the form of 56,25% CET1 capital and 75% of Tier 1 capital as a minimum.

#### 7.1.1. Main Features of Own Funds

Disclosure under point (b) of Article 437 CRR 2 is shown in the template EU CCA below, in line with the requirements set out in Implementing Regulation (EU) No 1423/2013.

		(a)
		Qualitative or quantitative information
1	Issuer	Clearstream Banking S.A.
2	Unique identifier (e.g. CUSIP, ISIN or Bloomberg identifier for private placement)	n/a
2a	Public or private placement	Private
3	Governing law(s) of the instrument	Luxembourg Company Law: Law of 10 August 1915 on commercial companies
3a	Contractual recognition of write down and conversion powers of resolution authorities	n/a
	Regulatory treatment	
4	Current treatment taking into account, where applicable, transitional CRR rules	Common Equity Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo
7	Instrument type (types to be specified by each jurisdiction)	Ordinary Shares

8	Amount recognised in regulatory capital or eligible liabilities (Currency in million, as of most recent reporting date)	EUR 321
9	Nominal amount of instrument (currency in millions)	EUR 92 (920,002 shares of 100 nominal)
EU-9a	Issue price	100
EU-9b	Redemption price	Not determined as not quoted on regulated markets
10	Accounting classification	Shareholders' equity
11	Original date of issuance	1970
12	Perpetual or dated	Perpetual
13	Original maturity date	n/a
14	Issuer call subject to prior supervisory approval	No
15	Optional call date, contingent call dates and redemption amount	n/a
16	Subsequent call dates, if applicable	n/a
	Coupons/dividends	
17	Fixed or floating dividend/coupon	Floating
18	Coupon rate and any related index	n/a
19	Existence of a dividend stopper	No
EU-20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Fully discretionary
EU-20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Fully discretionary
21	Existence of step up or other incentive to redeem	No
22	Noncumulative or cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	n/a
25	If convertible, fully or partially	n/a
26	If convertible, conversion rate	n/a
27	If convertible, mandatory or optional conversion	n/a
28	If convertible, specify instrument type convertible into	n/a
29	If convertible, specify issuer of instrument it converts into	n/a
30	Write-down features	No
31	If write-down, write-down trigger(s)	n/a
32	If write-down, full or partial	n/a
33	If write-down, permanent or temporary	n/a
34	If temporary write-down, description of write-up mechanism	n/a
34a	Type of subordination (only for eligible liabilities)	n/a
EU-34b	Ranking of the instrument in normal insolvency proceedings	Rank 1
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	n/a
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	n/a
37a	Link to the full term and conditions of the instrument (signposting)	n/a

Table EU CCA: Main features of regulatory own funds instruments and eligible liabilities instruments

# 7.2. Balance Sheet Reconciliation

In application of point (a) of Article 437(1) CRR the following EU CC2 template provides the reconciliation between the audited financial statements for the year-end disclosures with the own funds presented in template EU CC1. Reference column provides the cross reference for corresponding item in template CC1.

		(a)	(b)	(c)				
		Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference				
		As at period end	As at period end					
	Assets - Breakdown by asset classes according to the balance sheet in the published financial statements							
1	Cash in hand, balances with central banks	6,584,032	6,766,827	(60)				
2	Loans and advances to credit institutions repayable on demand	4,854,404	769,093	(60)				
3	Financial assets held for trading - FX derivatives	7,331	8,477	(7),(60)				
4	Financial assets FVOCI - Participating interests	7,699	7,699	(7),(60),(72)				
5	Financial assets FVPL - Participating interests	1,146		(7),(60)				
6	Financial assets at amortised cost	5,570,502	9,475,334	(60)				
6a	Debt securities	1,411,047	1,411,896	(60)				
6b	Loans and advances	4,159,456	8,063,439	(60)				
7	Derivatives – hedge accounting - cash flow hedges	5,314	5,314	(7),(60)				
8	Investments in subsidiaries, joint ventures and associates	6,498	6,496	(7),(60),(73)				
9	Tangible assets	14,242	14,679	(60)				
10	Intangible assets	1	1	(8)				
11	Deferred tax assets	9	21	(21)				
12	Other assets	32,297	33,933	(60)				
13	Prepayments and accrued income	1,343	1,343	(60)				
	Total assets	17,084,817	17,089,217					
	Liabilities - Breakdown by liability classes	according to the balance :	sheet in the published fina	ancial statements				
1	Financial liabilities held for trading - FX derivatives	2,628	2,628	(7)				
2	Financial liabilities measured at amortised cost	15,136,054	15,135,316					
2a	Deposits	14,427,262	14,438,636					
2b	Debt securities issued	549,205	549,309					
2c	Other financial liabilities	159,587	147,371					
3	Derivatives – Hedge Accounting - cash flow hedges	0	0	(7)				
4	Other liabilities	8,223	-860					
5	Accruals and deferred income	64,535	53,765					

6	Provisions for pension and similar obligations	2,907	0	
7	Other provisions	32,046	47,880	
8	Current tax liabilities	196,295	197,211	
9	Deferred tax liabilities	3,510	5,760	
	Total liabilities	15,446,198	15,441,700	
		Shareholders' Equity		
1	Paid in capital	92,000	92,000	(1)
2	Share premium account	229,935	229,935	(1)
3	Accumulated other comprehensive income	10,563	11,985	(2)
3a	Cash flow hedges (effective portion)	3,989	3,989	(2),(11)
<i>3b</i>	Actuarial gains/losses on defined benefit pension plans	0	-1,266	(2)
Зс	Fair value changes of equity instr. measured FVOCI	2,257	4,945	(2)
4	Legal reserves	4,317	4,317	(2)
5	Other reserves	9,200	9,200	(2)
5a	Deductible NWT reserve	686,401	687,719	(27a)
6	Profit for the financial year	15,000	15,000	
	Total shareholders' equity	610,520	616,677	

Template EU CC2 - reconciliation of regulatory own funds to balance sheet in the audited financial statements

The main differences are stemming from:

- Various reclassifications between positions;
- Usage of mixed regime LuxGAAP with IFRS options in financial statements vs full IFRS for regulatory reporting purposes;
- Usage of different Foreign Exchange (FX) rates.

For more information please refer to Chapter 6.1 Financial Statement Linkages Overview.

Additional reconciliation of accounting equity as reported in financial statements with regulatory own funds is provided below:

Balance Sheet Reconciliation	(in 000 of €)
Own Funds elements in the Annual Financial Statements	
Subscribed Capital	92,000
Share premium	229,935
Accumulated other comprehensive income	10,563
Capital Reserve	0
Legal Reserve	9,200
Other reserves and retained earnings	686,401
Profits for the financial year	610,520
Total Own Funds Elements in Audited Financial Statements	1,638,619
Profits for the financial year	-610,520
Eligible Capital (CET1) before adjustments	1,028,099
Regulatory adjustments	
Deduction other intangible assets	-1
Deduction of deferred tax	-9
Deduction of cash flow hedge reserve	-3,989
Prudent valuation adjustment	-31
Deduction of net worth tax reserve (20%)	-15,100
Other adjustments	-2.29
Valuation differences	2,728
Common Equity Tier 1 Capital/Total Eligible Own Funds	1,011,696

Table 4: Reconciliation of regulatory own funds to accounting equity in the audited financial statements

From the above reconciliation, the own funds in the financial statements of CBL considers profits allocated to retained earnings with the approval of the financial statement and year-end profits, neither of which qualify for the regulatory own funds on 31 December 2023. The profits allocated to retained earnings do not count as CET1 capital if the financial statements are not approved or if prior permission by the competent authority according to Article 26 paragraph 2 CRR is not granted.

Other differences arise from regulatory deductions and from valuation differences due to the usage of different FX rates, mostly reflected in historical value of reserves.

# 7.3. Countercyclical Capital Buffer

The countercyclical capital buffer (CCyB) aims to ensure that banking sector capital requirements take account of the macro-financial environment in which banks operate, by building up capital to create buffers that strengthen the resilience of the institution. According to Delegated Regulation (EU) 2015/1555 on the disclosure of information concerning the compliance of institutions with the requirement for a countercyclical buffer, which implements Article 440 CRR, where institutions are required to disclose their capital buffers.

Template EU CCyB1 below provides the information on the exposures in the countries, where countercyclical buffer rate is different from 0. Clients should refer to <a href="Appendix A">Appendix A</a> for full

country-specific/geographic distribution of credit exposures that are relevant for the countercyclical buffer.

Template EU CCyB2 provides the information on the calculated institution-specific countercyclical capital buffer as of 31 December 2023.

	1	a	h		d		f	g	h	i	i	k		m
		General credit	exposures	Relevant credit expos		Securitisation exposures	Total	5	Own fund requirements		J	Risk-weighted	Own fund Coun	Countercyclical
	(in €)	Exposure value under the standardised approach	Exposure value under the IRB approach	Sum of long and short positions of trading book exposures for SA	Value of trading book exposures for internal models	Exposure value for non-trading book	exposure value	Relevant credit risk exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total	exposure amounts	weights (%)	buffer rate (%)
010	Breakdown by country:													
	UNITED KINGDOM	134,543,612					134,543,612	10,763,822			10,763,822	134,547,772	61.03%	2.00%
	DENMARK	1.54					2	0			0.12	1.50	0.00%	2.50%
	GERMANY	3,433,492					3,433,492	274,679			274,679	3,433,492	1.56%	0.75%
	FRANCE	668,845					668,845	53,508			53,508	668,845	0.30%	0.50%
	NORWAY	18,917					18,917	1,513			1,513	18,917	0.01%	2.50%
	SWEDEN	390,352					390,352	31,228			31,228	390,352	0.18%	2.00%
	LUXEMBOURG	38,964,629					38,964,629	3,117,163			3,117,163	38,964,533	17.67%	0.50%
	ROMANIA	6,413					6,413	513			513	6,414	0.00%	1.00%
	HONG KONG	159,161					159,161	12,677			12,677	158,462	0.07%	1.00%
	NETHERLANDS	575,452					575,452	46,036			46,036	575,453	0.26%	1.00%
	IRELAND	968,934					968,934	77,515			77,515	968,934	0.44%	1.00%
020	Total	179,729,809					179,729,809	14,378,654			14,378,654	179,733,173	81.52%	

Template EU CCyB1 - Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer

	(in 000 €)	a
1	Total risk exposure amount	2,495,150
2	Institution specific countercyclical capital buffer rate	1.33%
3	Institution specific countercyclical capital buffer requirement	33,275

Template EU CCyB2 - Amount of institution-specific countercyclical capital buffer

# 7.4. Risk-Weighted Capital

The following table summarises the capital requirements of CBL for the different types of risks and the relevant calculation method:

		Total risk o		Total own funds requirements
		a	b	С
	(in 000 of €)	31/12/2023	31/12/2022	31/12/2023
1	Credit risk (excluding CCR)	428,312	623,469	34,265
2	Of which the standardised approach	428,312	623,469	34,265
3	Of which the Foundation IRB (F-IRB) approach			
4	Of which slotting approach			
EU 4a	Of which equities under the simple risk-weighted approach			
5	Of which the Advanced IRB (A-IRB) approach			
6	Counterparty credit risk - CCR	32,791	35,246	2,623
7	Of which the standardised approach	18,230	22,631	1,458
8	Of which internal model method (IMM)			
EU 8a	Of which exposures to a CCP	7,253	3,782	580
EU 8b	Of which credit valuation adjustment - CVA	7,308	8,833	585
9	Of which other CCR			
10	Not applicable			
11	Not applicable			
12	Not applicable			
13	Not applicable			
14	Not applicable			
15	Settlement risk			
16	Securitisation exposures in the non-trading book (after the cap)			
17	Of which SEC-IRBA approach			_
18	Of which SEC-ERBA (including IAA)			
19	Of which SEC-SA approach			
EU 19a	Of which 1250% / deduction			

20	Position, foreign exchange and commodities risks (Market risk)	64,052	43,785	5,124
21	Of which the standardised approach			
22	Of which IMA			
EU 22a	Large exposures			
23	Operational risk	1,969,994	2,796,386	157,600
EU 23a	Of which basic indicator approach			
EU 23b	Of which standardised approach			
EU 23c	Of which advanced measurement approach	1,969,994	2,796,386	157,600
24	Amounts below the thresholds for deduction (subject to 250% risk weight)			
25	Not applicable			
26	Not applicable			
27	Not applicable			
28	Not applicable			
29	Total	2,495,150	3,498,887	199,612

Template EU OV1 – Overview of total risk exposure amounts

Operational risk calculated under Advanced Measurement Approach (AMA) represent the most significant risk for CBL. Detailed information on the management, monitoring and measurement of operational risk is available in <a href="Chapter 10 Operational Risk">Chapter 10 Operational Risk</a>.

Credit risk represents the exposures from on-balance and off-balance sheet items with the exception of derivatives. For credit risk exposures from SFT (reverse repurchase agreements and ASL) CBL applies standardised approach for credit risk as per Chapters 2 and 4 Title II Part Three of CRR rather than specific provisions for counterparty credit risk as per Chapter 6 Title II Part Three of CRR.

# 8. Leverage Ratio

# 8.1. Leverage Ratio

The disclosure requirements concerning the leverage ratio are laid out in Article 451 CRR and specified in Article 6 of Commission Implementing Regulation (EU) No 2021/637 of 15 March 2021.

In application of point (b) of Article 451(1) CRR the following table shows the reconciliation of the leverage ratio total exposure measure with the relevant information in the published financial statements as on 31 December 2023.

		(a)
	(in 000 of €)	Applicable amount
1	Total assets as per published financial statements	17,084,817
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	
4	[Adjustment for temporary exemption of exposures to central banks (if applicable)]	
5	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the total exposure measure in accordance with point (i) of Article 429a(1) CRR)	
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	
7	Adjustment for eligible cash pooling transactions	
8	Adjustment for derivative financial instruments	35,708
9	Adjustment for securities financing transactions (SFTs)	19,900
10	Adjustment for off-balance sheet items (i.e. conversion to credit equivalent amounts of off-balance sheet exposures)	521,683
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	
EU-11a	(Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)	
EU-11b	(Adjustment for exposures excluded from the total exposure measure in accordance with point (j) of Article 429a(1) CRR)	
12	Other adjustments	(13,953,649)
13	Total exposure measure	3,708,458

Template EU LR1 - LRSum: Summary reconciliation of accounting assets and leverage ratio exposures

Adjustment for derivative financial instruments corresponds to the difference between the accounting value of the foreign exchange derivatives recognised as assets and the leverage ratio exposure value as determined by application of Article 429c CRR.

Adjustment for SFT corresponds to the add-on for counterparty credit risk and counterparty credit risk for SFT transactions exposures by application of points (a) and (c) of Article 429(4) in conjunction with Article 429e CRR.

Adjustment for off-balance sheet items corresponds to the exposures arising from ASL transactions calculated in accordance with Article 429f and Article 111(1) CRR.

Other adjustments include the deduction of exposures due to banking-type ancillary services of CSD in accordance with point (o) of Article 429a(1) CRR as well as valuation differences arising from the usage of different FX rates and accounting standards.

In application of Article 451(1) CRR following table provides the information on the calculation of the leverage ratio and the breakdown of total exposure measure on 31 December 2023 and 31 December 2022. The on-balance sheet exposures are the biggest make-up for the exposure measure for the leverage ratio. In addition to the on-balance sheet items, the off-balance sheet items (for ASL business see 10.4.6), derivatives and SFT exposures (for reverse repurchase agreements see 10.4.5) are considered to determine the leverage ratio exposure measure and the leverage ratio. As authorised CSD, CBL deducts the exposures arising from banking-type ancillary services of in accordance with point (o) of Article 429a(1) CRR. During the transitional period no derogation for the capital measure from Part Ten CRR (Article 499 CRR) were used.

		CRR leverage r	atio exposures
		(a)	(b)
	(in 000 of €)	31/12/2023	31/12/2022
	On-balance sheet exposures (excluding derivativ	ves and SFTs)	
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	9,328,978	11,471,472
2	Gross-up for derivatives collateral provided, where deducted from the balance sheet assets pursuant to the applicable accounting framework		
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)		
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)		
5	(General credit risk adjustments to on-balance sheet items)		
6	(Asset amounts deducted in determining Tier 1 capital)	(4,043)	(5,298)
7	Total on-balance sheet exposures (excluding derivatives and SFTs)	9,324,934	11,466,174
	Derivative exposures		
8	Replacement cost associated with SA-CCR derivatives transactions (i.e. net of eligible cash variation margin)	18,587	14,025
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach		

9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	29,767	86,786		
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	27,707	50,750		
EU-9b	Exposure determined under Original Exposure Method				
10	(Exempted CCP le.g. of client-cleared trade exposures) (SA-CCR)				
EU-10a	(Exempted CCP le.g. of client-cleared trade exposures) (simplified standardised approach)				
EU-10b	(Exempted CCP le.g. of client-cleared trade exposures) (Original Exposure Method)				
11	Adjusted effective notional amount of written credit derivatives				
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)				
13	Total derivatives exposures	48,353	100,811		
	Securities financing transaction (SFT) exp	osures			
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	7,747,593	5,622,397		
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)				
16	Counterparty credit risk exposure for SFT assets	10,895	22,661		
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR				
17	Agent transaction exposures	9,005	34,127		
EU-17a	(Exempted CCP le.g. of client-cleared SFT exposure)				
18	Total securities financing transaction exposures	7,767,493	5,679,185		
	Other off-balance sheet exposures				
19	Off-balance sheet exposures at gross notional amount	521,683	1,385,230		
20	(Adjustments for conversion to credit equivalent amounts)				
21	(General provisions deducted in determining Tier 1 capital and specific provisions associated with off-balance sheet exposures)				
22	Off-balance sheet exposures	521 493	1,385,230		
Excluded exposures					
EU-22a	(Exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)				
EU-22b	(Exposures exempted in accordance with point (j) of Article 429a(1) CRR (on and off balance sheet))				
EU-22c	(Excluded exposures of public development banks (or units) - Public sector investments)				
EU-22d	(Excluded exposures of public development banks (or units) - Promotional loans)				
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units))				

EU-22f	(Excluded guaranteed parts of exposures arising from export credits)		
EU-22g	(Excluded excess collateral deposited at triparty agents)		
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	(13,954,006)	(14,546,069)
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)		
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)		
EU-22k	(Total exempted exposures)	(13,954,006)	(14,546,069)
	Capital and total exposure measure		
23	Tier 1 capital	1,011,696	1,008,281
24	Total exposure measure	3,708,458	4,085,331
	Leverage ratio		
25	Leverage ratio (%)	27.28%	24.68%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) [%]	27.28%	24.68%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	27.28%	24.68%
26	Regulatory minimum leverage ratio requirement (%)	3.00%	3.00%
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	n/a	n/a
EU-26b	of which: to be made up of CET1 capital		
27	Leverage ratio buffer requirement (%)	n/a	n/a
EU-27a	Overall leverage ratio requirement (%)	3.00%	3.00%
	Choice on transitional arrangements and relevan	nt exposures	
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in
	Disclosure of mean values		
28	Mean of daily values of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of		
	associated cash payables and cash receivable	7,747,593	7,660,358
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables		
		7,747,593	5,622,397
30	Total exposure measure (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	3,708,458	6,123,292
30a	Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of		
	associated cash payables and cash receivables)	3,708,458	6,123,292

31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	27.28%	16.47%
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	27.28%	16.47%

Template EU LR2 - LRCom: Leverage ratio common disclosure

In accordance with point (b) of Article 451(1) CRR following templates provides the information on the breakdown of on-balance sheet exposures.

		(a)
	(in 000 of €)	CRR leverage ratio exposures
EU-1	Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:	2,804,697
EU-2	Trading book exposures	
EU-3	Banking book exposures, of which:	2,804,697
EU-4	Covered bonds	
EU-5	Exposures treated as sovereigns	2,531,916
EU-6	Exposures to regional governments, MDB, international organisations and PSE, not treated as sovereigns	
		406
EU-7	Institutions	167,450
EU-8	Secured by mortgages of immovable properties	
EU-9	Retail exposures	
EU-10	Corporates	69,968
EU-11	Exposures in default	121
EU-12	Other exposures (e.g. equity, securitisations, and other non-credit obligation assets)	34,837

Template EU LR3 - LRSpl: Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures)

Given the size of the on-balance sheet exposures, and in accordance with Article 451(1)(d) and (e) CRR, in conjunction with Article 6 of Regulation (EU) No 2021/637, CBL is required to provide following information specified in template EU LRA.

Row	
(a)	Description of the processes used to manage the risk of excessive leverage
(b)	Description of the factors that had an impact on the leverage ratio during the period to which the disclosed leverage ratio refers

Table EU LRA - Disclosure of LR qualitative information

To facilitate the reading the relevant information is provided as free text below.

#### Point (a)

Clearstream processes large daily volumes of client transactions, which are collateralised by either cash or pledged securities. Cash collateral received is reinvested in short maturity transactions with low credit and market risk. This increases the total leverage exposure of Clearstream. The resulting leverage ratio therefore reflects both transaction volume at the reporting date and client use of cash (rather than pledged securities) as collateral. Clearstream is able to manage its leverage ratio relative to prudential norms through balance sheet and client collateral allocation strategies. CBL continues to monitor CRD V developments as part of its medium-term planning.

#### Point (b)

The leverage exposure and ratio are primarily influenced by the volume of client deposits, and the corresponding actions taken by Clearstream to place these funds in the market in as low risk a way as possible through on-balance sheet placements and securities financing transactions. The impact from the increase of client activity is counterbalanced by the deduction of corresponding exposures according to the provisions of Article 429a(1)(o) CRR.

## 9. Asset Encumbrance

#### 9.1. Asset Encumbrance

The EBA specified the disclosure of information on asset encumbrance under Article 443 CRR with the EBA Guidelines on the disclosure of encumbered and unencumbered assets on 26 June 2014<sup>1</sup>. The disclosures described below are made on the basis of this guideline. The values are calculated as medians for quarterly values reported in 2023.

		Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
			notionally eligible EHQLA and		notionally eligible EHQLA and		of which EHQLA and HQLA		of which EHQLA and HQLA
(in 000s of €)		010	030	040	050	060	080	090	100
010	Assets of the reporting institution	141,376	-			19,192,159	11,158,695		
030	Equity instruments	-	-	-	-	9,138	-	9,138	-
040	Debt securities	-	-	-	-	1,526,690	1,526,690	1,485,682	1,485,682
050	of which: covered bonds	-	-	-	-	-	-	-	-
060	of which: securitizations	-	-	-	-	-	-	-	-
070	of which: issued by general governments	-	-	-	-	643,295	643,295	624,683	624,683
080	of which: issued by financial corporations	-	-	-	-	883,394	883,394	860,999	860,999
090	of which: issued by non- financial corporations	-	-	-	-	-	-	-	-
120	Other assets	141,376				17,656,331	9,632,005		

Template EU AE1 - Encumbered and unencumbered assets (median values)

The next table shows the fair value of encumbered or unencumbered collateral received:

		Fair value of encumbered collateral received or own debt securities issued		Unencumbered  Fair value of collateral received or own debt securities issued available for encumbrance	
			of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA
	(in 000s of €)	010	030	040	060
130	Collateral received by the disclosing institution	541,259	541,259	7,002,892	7,002,892
140	Loans on demand				
150	Equity instruments				
160	Debt securities	541,259	541,259	7,002,892	7,002,892
170	of which: covered bonds	0		0	
180	of which: securitisations				
190	of which: issued by general governments	465,613	465,613	6,023,658	6,023,658
200	of which: issued by financial corporations	75,496	75,496	886,152	886,152
210	of which: issued by non-financial corporations	301	301		
220	Loans and advances other than loans on demand				
230	Other collateral received				
240	Own debt securities issued other than own covered bonds or securitisations				
241	Own covered bonds and securitisations issued and not yet pledged				
250	TOTAL COLLATERAL RECEIVED AND OWN DEBT SECURITIES ISSUED	682,636	541,259		

Template EU AE2 - Collateral received and own debt securities issued (median values)

Guidelines on disclosure of encumbered and unencumbered assets:

http://www.eba.europa.eu/documents/10180/741903/EBA-GL-201403+Guidelines+on+the+disclosure+of+asset+encumbrance.pdf/c65a7f66-9fa5-435b-b843-3476a8b58d66

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The sources of encumbrance are shown in the following table:

		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and securitisations encumbered
	(in 000s of €)	010	030
010	Carrying amount of selected financial liabilities	515,293	682,636

Template EU AE3 - Sources of encumbrance

The institutions should disclose qualitative information on asset encumbrance using template EU AE4. To facilitate the reading of disclosure the relevant narrative is provided as free text below.

Row number	Qualitative information - Free format
(a)	General narrative information on asset encumbrance.
(b)	Narrative information on the impact of the business model on assets encumbrance and the importance of encumbrance to the institution's business model, which provides users with the context of the disclosures required in Template EU AE1 and EU AE2.

Table EU AE4 - Accompanying narrative information

#### Point (a)

The primary sources of encumbrance are the following:

- Securities repledged in repurchase agreements mainly done with Clearstream Banking AG account for 73% of total encumbered assets and collateral. Such securities are received as collateral through reverse repurchase agreements and are mostly eligible as HQLA;
- The reverse amounts at the BCL and Monetary Authority of Singapore (MAS), representing 26% of encumbered assets and collateral; and
- Cash margin posted for derivatives and reverse repurchase agreements.

Furthermore, unencumbered assets are mainly related to the following positions:

- Loans on demand, representing 53%, and mainly consist of client liquidity that is placed overnight with the BCL and CCBs;
- Other loans and advances, representing 39%, that are mainly made up of repurchase agreements as described in 11.4.5. Repurchase Agreements;
- Another 8% of unencumbered assets consist of debt securities, which are extremely high-quality liquid assets (eHQLA); and
- The remaining amount is mainly other receivables and fixed assets.

#### Point (b)

However, the overall encumbrance is low, as the business model of Clearstream does not suppose having any items that could lead to significant increase in encumbered assets. Client deposits are placed in a manner that they can be easily withdrawn. The volume of margined derivatives transactions is low and maintained only to cover market risks. The amounts of collateral pledged are also limited.

# 10. Operational Risk

In application of Article 446 CRR II institutions shall disclose risk management objectives and policies for operational risk using template EU ORA. To facilitate the reading the descriptive information is provided as free text in the following chapters.

Row number	Qualitative information - Free format	Disclosures chapter
(a)	Disclosure of the risk management objectives and policies	Chapter 5 Chapter 10
(b)	Disclosure of the approaches for the assessment of minimum own funds requirements	Chapter 10.3
(c)	Description of the AMA methodology approach used (if applicable)	Chapter 10.3
(d)	Disclose the use of insurance for risk mitigation in the Advanced Measurement Approach <i>(if applicable)</i>	Chapter 10.6

Table EU ORA - Qualitative information on operational risk

### 10.1. Operational Risk Overview

Clearstream's risk strategy, as described in <u>5. Risk management overview</u>, also applies to the management of operational risk (hereinafter, "Operational risk" "OpRisk") and the four other risk types: financial risk, business risk, pension risk and winding-down and restructuring risk. Defined in this risk strategy is the risk capital dedicated to cover losses resulting from operational risk, setting a limit for this risk type.

Operational risk is defined as the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events. Operational Risk contains sixteen Risk Clusters: Compliance Risk, Contagion Risk, Corporate Tax Risk, Custody Risk, Information Security Risk, Information Technology Risk, Legal Risk, Model Risk, Operational Project Risk, People Risk, Physical Security Risk, Processing and Execution Risk, Product Tax Risk, Risk Management Risk, Secondary Reputational Risk, and Third-Party Risk.

CBL actively manages operational risk with the aim of systematically identifying its risk profile as well as risk concentrations to define and implement appropriate measures for risk treatment. Operational risk can be differentiated according to the severity and frequency of losses. As operational risk management depends on the risk position of Clearstream, the general principles are as follows:

- All main risks are identified and analysed regarding the expected or real effect on frequency and severity.
- For risks with a low frequency but high severity, risk transfers are considered for example, through insurance contracts.
- For risks with high frequency but low severity, risk reduction is considered for example, by optimising processes.

The following chapter discloses the requirements laid down in Article 446 CRR II, concerning the approach for the assessment of own-funds requirements for operational risk and Article 454 CRR II on the use of the Advanced Measurement Approach to operational risk. Approaches are disclosed in upcoming chapters.

Operational risk capital is intended to represent the required risk capital for unexpected operational risk losses. As part of the AMA within Clearstream, a model for calculating operational risk capital requirements has been developed, based on the individual risk profile of the institution. In line with the common practice in other risk areas, capital requirements are calculated using the Value at Risk (VaR) concept. Based on a statistical analysis of relevant data, a loss distribution is determined, which enables calculation of the required figures.

The model has been designed to have the following features:

- Capital requirements reflect the risk profile of CBL.
- Confidence levels can be adjusted according to the risk appetite of the bank.
- Incentives for proper risk management can be included in the model.
- Major risk drivers and ESG factors can be identified.
- Risk mitigation effects such as insurance can be considered.
- Insurance policy is not considered as a risk mitigating affect in the Operational Risk capital model.

The model is explained in detail in subsequent chapters.

Insurance is an additional tool used by Clearstream to mitigate the impact of operational risk by transferring risks above a certain threshold to third parties through a comprehensive insurance program. To achieve the optimum risk/benefit versus premium ratio, insurance policies are negotiated either through insurance brokers or directly with highly rated insurers to purchase tailor-made policies reflecting the specificities of CBL's business.

#### 10.2. Governance

Operational risk represents a major risk type for the Bank, and one that is systemically managed and controlled. Clearstream follows an Advanced Measurement Approach (AMA) for calculating the regulatory capital requirement for operational risk. Thus, Clearstream established a comprehensive framework and set of instruments meeting the requirements from both a regulatory and a business perspective.

Since receiving regulatory approval in January 2008, CBL applies the AMA to calculate the capital requirements for operational risk.

The ultimate responsibility for operational risk management lies with the members of the Executive Board of CBL, who are supported by different units and functions. The five steps of the risk management process described under Chapter <u>5.6 Risk Management Process</u> are key to the framework.

It is the responsibility of line management units to control operational risk within their area on a day-to-day basis. This includes the identification of suitable measures to mitigate operational risk, and to improve the effectiveness and efficiency of operational risk management. To achieve this target, the Executive Board appoints "operational risk representatives" for their respective area with a direct reporting line to the ultimate risk owner on the Executive Board.

The operational risk representative is the key contact for both the employees in the respective organisational unit as well as for Clearstream Risk Management. They also support their line management with all tasks regarding operational risk and are especially responsible for the collection of operational risk event data within their organisational unit. In addition, the operational risk representatives take an active role in further developing operational risk tools and instruments. They also coordinate operational risk training for their respective organisational unit.

#### 10.3. Measurement

Operational risk capital is intended to represent the required risk capital for unexpected operational risk losses. As part of the AMA within Clearstream, a model for calculating operational risk capital requirements has been developed, based on the individual risk profile of the bank. Below table provides the information on operational risk own funds requirements, under the AMA, for the year 2023.

	Banking activities		b	С	d	е	
			Relevant indi	cator	Own funds	Risk exposure	
	(in 000 of €)	Year-3	Year-2	Last year	requirements	amount	
1	Banking activities subject to basic indicator approach (BIA)						
2	Banking activities subject to standardised (TSA)/alternative standardised (ASA) approaches						
3	Subject to TSA:						
4	Subject to ASA:						
5	Banking activities subject to advanced measurement approaches AMA	104,699	105,700	127,155	157,600	1,969,994	

Template EU OR1 - Operational risk own funds requirements and risk-weighted exposure amounts

Although CBL uses AMA approach to calculate own funds requirements for operational risk, the table provides for information purposes relevant indicator calculated as per Article 316 CRR based on the following items:

• Interest receivable and similar income.

- Interest payable and similar charges.
- Income from shares and other variable/fixed-yield securities.
- Commissions/fees receivable.
- Commissions/fees payable.
- Net profit or net loss on financial operations.
- Other operating income.

Own fund requirements represent 8% of risk exposure amount measured as described below.

Input data for the model are results of a structured scenario analysis, as well as internal/external loss data, severe internal/external audit findings and (Key) Risk Indicators (KRIs, RIs). If loss data is sufficiently available, the application of a statistical model gives a reliable estimate of the underlying risk represented by the data. However, some operational risk losses are not sufficiently available for all risk drivers. Internal loss data can be used as input for the scenario analysis insofar as they are relevant and applicable for respective scenario.

In addition, it is assumed that banks doing similar business also have similar risk profiles. If this assumption holds, publicly available losses or losses from a banking consortium could be used to fill the gap of missing internal loss information. However, Clearstream has a unique business model that, as of today, is not sufficiently represented in any bank consortium or public database. Therefore, Clearstream has decided to use external loss data only where appropriate. Furthermore, Clearstream decided to apply a statistical model to scenario losses that are created in a structured process by business experts. During this process, experts from all areas of the specific unit/Clearstream estimate the potential impact and the likelihood of a scenario loss.

The VaR model for the calculation of the operational risk capital uses internal and external loss data, KRIs, RIs, severe Internal Audit findings (S3/S4), severe External Audit findings (F3/F4) and scenarios as input. Internal and external loss data, internal and external audit findings as well as KRIs and RIs, enter the model indirectly by serving as the foundation of the Operational Risk scenario framework. The scenarios, which are subject to permanent validation, are the source of the parameters that determine the aggregate loss distribution generated by a Monte Carlo simulation. The quantile of that distribution represents the Value at Risk at the corresponding confidence level.

## 10.3.1. Aggregate Loss Distribution

The overall objective of the operational risk model is to simulate a loss distribution for a given time frame, which is one year (for regulatory purposes referred to as holding period in regulatory publications).

Combining the loss distributions for all scenarios by Monte Carlo simulation gives the required aggregate loss distribution. From the aggregate loss distribution, the required risk figures are derived.

- Expected loss: The expected loss is generally defined as the actual monthly statistical mean of the aggregated loss distribution (it indicates which annual loss the Company has to face on average over a long period of time). With regard to Clearstream the expected loss (in the context of following calculations) is defined, in particular, as the minimum of a) the amount of provisions, booked in the budget at the beginning of the year, to cover expected losses resulting from claims (against Clearstream) and b) the actual monthly statistical mean of the aggregated loss distribution.
- Value at Risk: The Value at Risk (VaR) is defined as the amount that is not exceeded in
  q percentile cases of all years. For internal purposes, 99.90 percentile as well as for
  regulatory purposes (Clearstream)/for the economic perspective the 99.00 percentile
  are calculated. Any other percentile can also be derived from the aggregate loss
  distribution.
- Unexpected loss: The unexpected loss is generally defined as the difference between the 99.90 percentile VaR and the expected loss. The unexpected loss determines the regulatory capital requirements of CBL for operational risk.
- Expected shortfall to the q-percentile: Defined as the statistical mean of the loss distribution above the q-percentile. It is used as a proxy for the loss amount the specific unit/entity could face if the q-percentile is exceeded.

For effective day-to-day management of OpRisk, the Bank differentiates OpRisk into sixteen risk clusters. Operational Risk contains sixteen Risk Clusters:

- Compliance Risk;
- Contagion Risk;
- Corporate Tax Risk;
- Custody Risk;
- Information Security Risk;
- Information Technology Risk;
- Legal Risk;
- Model Risk;
- Operational Project Risk;
- People Risk;
- Physical Security Risk;
- Processing and Execution Risk;
- Product Tax Risk;
- Risk Management Risk;
- Secondary Reputational Risk; and
- Third-Party Risk.

The distributions of all operational risk scenarios in a "cluster" need to be combined to derive the aggregate loss distribution for a "cluster" and, based on that, the total loss distribution for operational risk. Clearstream implemented a Monte Carlo simulation, which enables the highly precise numerical determination of the loss distribution.

Assume that there are n operational risk scenarios in a simulation "cell", where for each scenario i  $(1 \le i \le n)$ :

- The frequency distribution follows a Poisson distribution with mean  $\lambda_i$  (calculated as 1/"frequency estimation") for generic scenarios and the majority of specific scenarios, or a Bernoulli distribution with probability  $p_i$  (calculated as 1/"Frequency estimation"), only for such specific scenarios which have the nature of only possibly occurring once within the next 12 months, never more often (for example, specific tax items or legal cases which can be claimed only once).

A single Monte Carlo simulation cycle is carried out in three steps:

- Generate for each operational risk scenario i (1 κ i κ n) a random number L<sub>i</sub> of
  events for this scenario from a Poisson distribution (or in above mentioned specific
  cases a Bernoulli) with mean λ (or probability p);
- Generate for each operational risk scenario i (1  $\[ \] \[\] \[ \] \[ \] \[ \] \[ \] \[ \] \[ \] \[ \] \[\] \$
- Sum all loss amounts  $l_{i,j}(1 \land i \land n, 1 \land j \land L_i)$  to calculate the total loss amount of one year.

Repeating the Monte Carlo cycles numerous times gives a loss distribution for a simulation group with the required accuracy. The current implementation of the model uses 25 million simulation trials.

### 10.3.2. Monte Carlo simulation

The underlying assumption that justifies this procedure is the independence of events. The loss data collection and scenario analysis are focusing on assessing the risk arising from individual OpRisk events, for example, a system outage or a detected money laundering event. Although not limited to these examples, the severity of an event depends on its direct financial impact and on subsequent losses that are caused by this event. There is one reason of dependence between individual events that exists: Events triggered by preceding events could be captured separately. These events are dependent upon on each other, which needs to be considered in the model. As part of the loss data collection and scenario analysis, the total impact of an event is considered, including the losses generated in other areas of the Bank because of the scenario event. These subsequent losses are estimated and documented within the risk scenario template as "related effects" and taken into consideration when estimating the severity of a risk scenario. During the scenario analysis process, the scenarios are not captured separately. Therefore, none of the scenarios depend on each other and can be treated in the model separately (identically, independently distributed and therefore uncorrelated).

To summarise, all (sub-)scenarios are created independently from each other. All (sub-) scenarios cover all related effects across all risk causes/drivers, meaning from a statistical

point of view, that neither linear nor higher order dependencies between the (sub-) scenarios exist. For each of the (sub-)scenarios, the continuous Uniform distribution will be applied as severity distribution (equally distributed between minimum and maximum loss). No correlation between the frequency and the severity distribution is assumed. An appropriate model for this situation is a zero-correlation model (not using correlation matrices ensures the transparency of the model), in which the occurrence and the size of losses are generated randomly.

To calculate the OpRisk loss, all scenarios and sub-scenarios are simulated together as an implementation of a zero-correlation model. Clearstream Risk management carries out a regular monthly check of the reasonability of the quantified required capital. Therefore, monthly, quarterly and yearly safeguards have been defined as follows. Whenever the total 99.90% VaR moves up or down by:

- at least 3% of its previous month value; or
- at least 10% of its previous year value.

The input data and the result must be examined to ensure the correctness of the figure. Explanation of any variation above the safeguards is included in the quarterly risk report.

### 10.4. Stress Testing

To achieve a better understanding of the most significant risks and to adequately model capital requirements, Clearstream Risk Management runs stress tests on the regular and if necessary, on the ad-hoc basis. The stress testing aims to gauge the potential capital vulnerability to exceptional but plausible events. The stress test process is defined as follows:

- All scenarios agreed during the scenario analysis process with a probability of higher or equal to once in 1,000 years and with a maximum loss amount of greater or equal to 1mn Euro are considered when selecting scenarios for the stress test. The scenarios with a frequency less than one loss in every 1,000 years have to be neglected since these scenarios are deemed as unrealistic and implausible events. The scenarios with a maximum loss of less than 1m Euro are also excluded since they do not create a sufficient stress.
- The identified vulnerabilities and risk drivers are combined into storylines to stress
  Operational Risk based on a plausible combination of eligible Operational Risk
  Scenarios, assuming they will occur during a short period of time in a stressed
  situation within a one-year time frame.
- Based on the Operational Risk scenarios fulfilling the mentioned criteria, storylines
  that represent plausible and relevant, but extreme situations for the entities are
  derived. The storylines combine existing Operational Risk scenarios, assuming that
  these Operational Risk scenarios will occur during a short period of time in a
  stressed situation within a one-year timeframe,
- Risk drivers and vulnerabilities are combined into scenarios that are then translated into stressed parameters.

The Operational Risk scenarios are reviewed on the regular basis, if the landscape of the OpRisk has changed, it would trigger ad-hoc stress test in the Operational Risk as well as RWST.

A reverse stress test for operational risk is performed as well. It assumes the materialisation of several operational risk scenarios. It aims to combine multiple scenarios to indicate whether Operational Risk could potentially be a weak spot for the entity.

### 10.5. Mitigation

As laid out in its <u>risk strategy</u>, CBL devotes considerable attention to mitigating the different types of operational risk mentioned above with the aim of reducing the frequency and amount of potential financial losses arising from corresponding risk events. To this end, various quality and control measures are taken to protect CBL business from all cases of fraud and operational business losses. In addition to compliance with international best practice quality standards, these measures include a careful analysis of operational risk events that have occurred so that steps can be defined to reduce the probability of their recurrence.

The process comprises several quality and control initiatives whose objective is to ensure that Clearstream's operations have sufficient controls to prevent any fraud or operational service deficiency. If an event of this kind occurs in Clearstream's operations, a thorough analysis is performed to be in the position to define measures to reduce the probability of recurrence. The key preventive measures of risk mitigation consist of robust internal control processes and ongoing initiatives to further reduce errors and omissions. This is supported by many measures that will take effect at the time or after an incident, such as Business Continuity Management (BCM) and insurance programs.

#### 10.5.1. Internal Controls

The Executive Board of CBL has implemented an internal control system, designed to ensure the effectiveness and profitability of the business operations, prevent or detect financial loss and thus protect all its business assets. Clearstream's internal control system, an integral part of the risk management system, is continuously developed and adjusted to reflect changing conditions. It comprises both integrated and independent control and safety measures. In 2018, Clearstream established the Control Assurance and Monitoring (CAM) function to further enhance the documentation and monitoring of the internal control system. In 2022, Clearstream established additionally a Risk and Control Assurance Unit with the main objective of validating the design and operating effectiveness of internal controls regularly or on ad-hoc basis. Internal Audit carries out risk-oriented and process-independent controls to assess the effectiveness and appropriateness of the internal control system.

# 10.5.2. Business Continuity Management

Within the operational risk framework, Clearstream has implemented a comprehensive Business Continuity Management (BCM) as the unavailability of core processes and resources poses a substantial risk to Clearstream and is a potential systemic risk for financial markets in general. The BCM framework encompasses precautionary measures and effective responses to mitigate the impact of incidents and ensure continuity of critical business processes at an acceptable level. Business Continuity Plans are developed, maintained, and tested regularly to ensure overall readiness.

### 10.5.2.1. BCM Organisation at Clearstream

The Executive Board is responsible for ensuring the continuity of business at CBL. This responsibility is delegated to the various organisational units, which are directly responsible for the operational resilience and disaster tolerance of their respective business areas. Reporting to executive management, the Business Continuity Management function is responsible for the overall coordination and monitoring of Clearstream's preparedness to deal with incidents and crises.

The organisational roles and responsibilities and the guiding principles to ensure operational resilience are documented in a formal BCMS policy.

### 10.5.2.2. BCM Arrangements

The implemented BCM arrangements aim to minimise the impact of the unavailability of key resources and address the unavailability of systems, workspace, staff and suppliers to ensure the continuity of the most critical operations on a minimum business continuity objective level. Clearstream also leverages on its operational locations in Eschborn, London, Luxembourg, Prague and Singapore to maintain the continuity of its services.

### 10.5.2.3. Systems Unavailability

Data centres are geographically distributed to form active centres, acting as backups of each other. Data is mirrored in real time across the data centres. The infrastructure is designed to ensure the online availability and integrity of all transactions to limit the impact due to any disruption.

## 10.5.2.4. Workspace Unavailability

Exclusively dedicated backup workspace facilities provide backup office space for mission-critical functions requiring onsite presence if an office location becomes unavailable. Backup facilities are fully equipped, networked and operationally available at all times. Moreover, business transfer capabilities between Clearstream's different operational locations and remote working can be used to further mitigate workspace unavailability.

## 10.5.2.5. Staff Unavailability

Business continuity solutions also cover the significant unavailability of staff, for example, during a pandemic-related incident or terrorist attacks. Solutions are designed to ensure that the minimum staff and skills required are available. Staff dispersal and business transfer capabilities between Clearstream's different locations are in place where available in order to support in case any location is impacted. Mission-critical activities can be continued by staff in other locations or staff working remotely, for example, to mitigate cross contamination risks. Measures are defined to mitigate the availability risks during a

widescale pandemic, either with a regional or cross regional impact. Focus is on ensuring the well-being of staff, for example, by rotational working or remote working, thus ensuring staff availability. Measures are adaptable to also adhere to any recommendations or directives issued by local authorities.

### 10.5.2.6. Supplier Unavailability

Clearstream ensures the continuous provision of critical supplier services by several means, such as regular due diligence reviews of suppliers' BCM arrangements, provision of services by alternative suppliers where possible, and service level agreements describing minimum service levels and contingency procedures.

### 10.5.2.7. Incident and Crisis Management Process

A Group-wide incident and crisis management response structure is implemented to support the activation, escalation and control of the organisation's response in the event of a disruption. The response structure ensures structured and effective mechanisms that facilitate a coordinated response and rapid reaction to an incident or crisis. The process aims to minimise business and market impact, enabling a swift recovery and return to regular business activity.

Incident managers are appointed in the respective business areas and act as single points of contact if there are incidents and crises to ensure the appropriate response mechanisms are activated and to ensure an escalation up to the Executive Board and the notification of clients as well as other relevant external parties if necessary.

## 10.5.2.8. "Real-life" Simulation Testing

Clearstream has adopted a comprehensive and ambitious business-continuity testing approach that simulates scenarios as close as possible to real-life situations whilst reducing associated risks and avoiding client impacts. BCM plans are tested regularly, at least annually in an announced and unannounced method.

BCM test results are validated against the following objectives:

- Functional effectiveness: Validating all technical functionalities.
- Execution ability: Staff must be familiar with and knowledgeable in the execution of BCM procedures.
- Recovery time: The functions in the scope of the business continuity plans must be operational within the defined recovery time objective.

Test results are reported to the Executive Board. Clients are regularly invited to participate in Clearstream's annual IT-Disaster Recovery test to provide them with the direct assurance of Clearstream's BCM preparedness.

#### 10.6. Insurance

Insurance is an additional tool used by Clearstream to mitigate the impact of operational risk by transferring insurable risks to third parties through insurance policies. To achieve the

optimum risk/benefit versus premium ratio, insurance policies are negotiated either through insurance brokers or directly with highly rated insurers to purchase tailor-made policies reflecting the specificities of CBL's business.

## 10.7. Monitoring and Reporting

The reporting approach laid out in <u>5.6.5</u>. Risk monitoring and reporting also applies to the management of operational risk. Operational risk is monitored in the context of the Internal Capital Adequacy Assessment Process (ICAAP) of Clearstream, which is defined centrally and calculated on a regular basis. Detailed information on ICAAP is laid out in <u>5.7</u>. ICAAP information.

## 11. Credit Risk

Institutions shall describe their risk management objectives and policies for credit risk by providing the information specified in template CRA below:

Qualita	tive disclosures	Report chapter
(a)	In the concise risk statement in accordance with point (f) of Article 435(1) CRR, how the business model translates into the components of the institution's credit risk profile.	Chapter 11.2
(b)	When discussing their strategies and processes to manage credit risk and the policies for hedging and mitigating that risk in accordance with points (a) and (d) of Article 435(1) CRR, the criteria and approach used for defining the credit risk management policy and for setting credit risk limits.	Chapters 11.2, 11.3, 11.4
(c)	When informing on the structure and organisation of the risk management function in accordance with point (b) of Article 435(1) CRR, the structure and organisation of the credit risk management and control function.	Chapters 11.2, 11.3, 11.4
(d)	When informing on the authority, status and other arrangements for the risk management function in accordance with point (b) of Article 435(1) CRR, the relationships between credit risk management, risk control, compliance and internal audit functions.	Chapter 11.4

Table EU CRA: General qualitative information about credit risk

To facilitate the reading this information is disclosed as free text in following chapters.

#### 11.1. Sources of Credit Risk

As a financial market infrastructure provider (FMI), Clearstream has a dedicated focus on maintaining strong internal risk controls, limits, processes, and having a framework that encompasses a safe and stable financial institution. One example of this is through setting credit limits, which are mainly granted for the purpose of facilitating the settlement of securities transactions. Credit risk mainly arises from intraday credit, as well as from custody, securities financing, treasury operations, and settlement over the Bridge with Euroclear for CBL.

Sources of credit risk are assessed after considering all business segments, products and services. The Bank's list of sources of credit risk is updated annually (should changes occur) as part of our policies and risk inventory. These sources of credit risk include:

- Credit risk from settlement activities (including income events), that is, when CBL grants intraday credit (cash loans) to its participants, mainly to facilitate settlement activities, but also for cash withdrawals (that is, the credit risk relating to income events, FX trades, corporate actions requiring payment of exercise fees).
- Credit risk from its securities financing business: In the securities financing business,
  the ASL program provides opportunities for borrowers to avoid settlement failures,
  and for lenders to earn additional income from their portfolios. Regarding ASL, the
  Bank is exposed to credit risk as it acts as a guarantor. Credit risk from treasury
  activities, including repos, reverse repos, FX trades, interest rate and currency
  swaps, and unsecured placements. This credit risk arises if the counterparty defaults
  prior to the performance of the respective obligation.

- Additionally, from a treasury investment perspective, issuer risk may arise from a credit event affecting an issuer of securities and resulting in either the deterioration of the market value of the securities or in the issuer's inability to pay amounts due.
- Credit risk from Bridge activities, in the event of a default of Euroclear Bank before having paid for securities already delivered by Clearstream.

#### 11.2. Concise Credit Risk Statement

Clearstream credit risk is in accordance with Article 435(1), 442 and 453 CRR 2, the following paragraph will provide required information on credit risk and credit risk mitigation as laid down in section 4.8 – Credit risk and general information on CRM in the EBA Guidelines on disclosure requirements under Part Eight of Regulation (EU) No 575/2013 and the amending (EU) No 2019/876.

Credit is granted exclusively on a collateralised basis where prudent haircuts are applied to the pertinent collateral, apart from certain unsecured settlement limits granted to sovereign and supranational institutions based on the strong credit quality of these counterparts where zero risk weight is applied in line with Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 (CRR), and amending Regulation (EU) No 2019/876 (CRR 2), and with specific approval by the Executive Board. Furthermore, credit limits are set for the placement of funds with counterparties; credit processing is arranged in guidelines and work instructions.

Continuing in the scope of credit limits, these are set in accordance with the client's financial standing, as indicated by factors such as the client's credit rating and net worth taking into account the level of activity in the client's accounts and level of collateralisation. The evaluation of counterparties and the credit risk classification takes place within the "credit assessment," which is performed by the Bank's credit division. A quarterly internal rating benchmarking exercise with regard to external sources is performed and internal ratings are adjusted when deemed necessary. The collateral recoverability is part of the tests performed by the Credit Default Management Team.

From a governance point of view, the Executive Board determines the governing principles within Clearstream's Credit Strategy. This includes overall credit granting criteria and ensuring that the Bank's credit activities executed within the framework are articulated within the Credit Strategy. The credit risk management function of Clearstream provides independent monitoring on all credit risk-related activities. The credit division is also responsible for implementing the credit strategy, and developing policies and procedures aimed at identifying, measuring, monitoring, controlling, and reporting credit risk for all activities throughout Clearstream.

The credit risk management function is responsible for ensuring credit exposures remain within levels consistent with prudential standards and therefore within predefined limits. It ensures that exceptions to the Credit Policy, procedures, and limits are reported on a timely basis to the Executive Board, and other relevant functions. All members of the Executive Board are ultimately responsible for the risk strategy, which reflects the Bank's risk appetite

in defining the maximum loss the Executive Board is willing to assume in one year, the risk tolerance and desired performance levels.

Furthermore, risk management is a fundamental component of Clearstream's management and control framework. Overall effective and efficient risk management is vital to protect Clearstream's interests and simultaneously enabling it to achieve its corporate goals. Clearstream has established a Group-wide risk management system comprising roles, processes and responsibilities applicable to all employees and organisational units of Clearstream. This ensures that emerging risks are identified and managed as early as possible.

Clearstream's risk strategy is based upon the business strategy and regulates the extent of risks taken throughout the various business activities of Clearstream. Clearstream ensures this by determining conditions for risk management, risk control and risk limitation. Thus, Clearstream gives considerable attention to its risk mitigation process, and ensures that appropriate measures are taken to avoid, reduce, and transfer risk or, alternatively, to intentionally accept it. This means that timely and adequate control of risk must be ensured, and information required for controlling risk is assessed using structured and consistent methods and processes. The results are collated and incorporated into a reporting system enabling measurement and control of risks. Consequently, risk reporting is based on reliable information and carried out on a regular basis and ad hoc, if necessary.

According to Article 178 CRR, a debtor is in default when either or both of the following conditions apply:

- The institution has material reason to consider that the obligor is unlikely to pay its (credit) obligations in full, without recourse by the institution to actions such as realising collateral (if held).
- The obligor is past due more than 90 successive calendar days on any material part of its overall credit obligation to the institution.

Clearstream's internal definition of "impairment" according to the International Financial Reporting Standards (IFRS) is compliant with the definition of "default" outlined in Article 178 of CRR.

The key figures for credit risk are provided in this report as part of risk-weighted capital in Chapter 7.4 Risk-Weighted Capital and in below disclosures in the use of standardised approach and credit risk mitigation.

The concise risk statement of credit risk is approved as part of general <u>concise risk</u> <u>statement</u> in Chapter 5.1.

## 11.3. Public Disclosure: Article 28 of Regulation (EU) 2017/390

CBL has been authorised under the Article 54 of Regulation (EU) 909/2014 to provide banking-type ancillary services on 12 April 2021. In the set of related obligations, Article 28, for the purpose of the Article 18(1) of Delegated Regulation (EU) 2017/390 supplementing Regulation (EU) 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 require the public disclosure of a comprehensive qualitative statement that specifies how credit risk, including intraday credit risk, is measured, monitored and managed on an annual basis.

To respond to the identified sources of credit risks described above, CBL has put in place controls and an operational framework to answer the prudential requirements on credit risk as per DR (EU) 2017/390 supplementing Regulation (EU) 909/2014.

#### Credit and Collateral Risk Management Framework

In conformity with Article 18(1) of the DR (EU) 2017/390, CBL has in place credit risk management framework that comply with the following requirements:

- (a) Measurement of intraday and overnight credit risk: CBL identifies and measures intraday credit risk exposure through analytical tools such as the Exposure Monitoring Credit and Collateral (EMC2) system (previously referred to as CEMT (Credit Exposure Monitoring Tool). These tools enable the measurement and monitoring of credit exposures and credit limits at (i) account level, (ii) institution level, and (iii) Principal Holding level. More specifically, the identification and measurement of intraday credit risk is calculated at least daily for the metrics depending on external data availability and on ongoing basis. The EMC2 relies on the latest intraday capture of the data from several source systems (credit, collateral, settlement, treasury, income, etc.) enriching its data set for an in-depth analysis and monitoring.
- (b) Monitoring of intraday and overnight credit risk: the monitoring activity is
  performed through a set of daily and monthly reports and controls with the
  measurement tools described above. These are used to monitor and report intraday
  and overnight credit exposures against limits and collateral, as well as credit
  concentration risks.
- (c) Management of intraday and overnight credit risk: through the combination of, among others, predefined credit limits, the monitoring, and the regular review of the creditworthiness of the individual participants, the collateral classification and valuation, early-warning signals, as well as the intraday and overnight credit exposure monitoring and reporting, CBL has appropriate risk-management tools in place to manage and control the identified credit risks.
- (d) Measure, monitor and manage the collateral and other equivalent financial resources: CBL ensures full coverage of credit exposures with collateral or other equivalent financial resources (such as an irrevocable letter of credit in favour CBL in the event of a credit event impacting the Bridge with Euroclear), as outlined in Article 59(3)(c) of Regulation (EU) 909/2014. This collateral is automatically verified in real time basis and re-evaluations are performed intraday. The collateral eligibility criteria and haircuts are subject to strict rules in compliance with Articles 9 and

Article 10(1)(2) of DR EU 2017/390. CBL has in place daily monitoring of collateral concentration limits at both CSD and client level. The check for collateral coverage of credit exposures related to Bridge is performed via an automated control mechanism aiming at maintaining the relative exposure resulting from the settlement between the ICSDs within the limits of a letter of credit. Furthermore, CBL has in place reports and controls to measure and monitor collateral on daily, monthly, and ad-hoc basis.

- (e) Analyses and plans how to address any potential residual credit exposures: To address any potential residual credit exposures [Article 25 of DR 2017/390], CBL monitors and identifies potential residual credit exposures on a daily basis through a set of reports and analytical tools. According to the duration, amount, and other risk factors, including markets conditions and early warning signals, CBL has in place a framework for escalating and reporting of potential residual credit exposures.
  - Additionally, CBL has also implemented alerts notifying every time there is an unsecured exposure above a specific threshold. These alerts are integrated in the daily control mentioned above.
- (f) To comply with Article 59(3), point (i) of Regulation (EU) 909/2014 and Article 26 of DR (EU) 2017/390, Clearstream has put in place effective reimbursement procedures of intra-day credit and discourage overnight credit through the application of sanctioning rates which act as an effective deterrent. The sanctioning rates are applied to all overnight exposures, independent of their root cause (such as delay in covering their usage of the credit limits or operational corrections like reversals).
- (g) Report its credit risks to the relevant competent authorities: for the purpose of Article 27 of DR (EU) 2017/390, CBL reports to the relevant competent authorities, on a monthly basis the metrics referred to in the corresponding Article 19, submits annually a qualitative statement that specifies how credit risk, including intraday credit risk, is measured, monitored and managed, and reports on ad-hoc basis any material change as well as breaches or risk of breaching Regulation (EU) 909/2014 daily, through their duration, until compliance is restored.
- (h) Publicly disclose its credit risks: For the purpose of Article 28 of DR (EU) 2017/390, this chapter of the Pillar III Disclosure Report, serves as CBL's credit risk disclosure.

The policies and procedures referred to above are reviewed at least annually or ad-hoc in the event of a material changes.

CBL has in place monthly and quarterly internal reporting including the metrics described in Article 18(4) of DR (EU) 2017/390 to the Executive Board and the Credit and Risk Governance Committee.

As per the "Credit and Collateral Risk Management Framework" described above, Clearstream, as CSD-banking service provider, has designed and implemented policies and procedures to comply with the requirements of Article 18 of DR (EU) 2017/390.

### 11.4. Governance

Clearstream's general risk management structure, organisation, and process, as well as its risk strategy, are specified in <u>Chapter 5. Risk management overview</u>. The present status and the business direction for credit risk are stated in the Clearstream Credit Strategy. The Executive Board periodically examines and adjusts the Clearstream Credit Strategy as necessary. The Clearstream Credit Strategy is reported annually to the Supervisory Board.

The objective of the Clearstream Credit Strategy is to provide a framework for ensuring that credit decisions taken in CBL are based on a set of sound, well defined and objective credit granting criteria. The Clearstream Credit Policy subordinates and supports the Clearstream Credit Strategy. The Credit Policy outlines the credit risk framework for all activities of CBL which give rise to credit risk and is in conformity with and aligned to the Clearstream Credit Strategy.

The Clearstream Credit Strategy together with the Clearstream Credit Policy represent the framework and define the principles, the credit appetite, the credit granting authorities, collateral eligibility, the basic counterparty quality, as well as the fundamental country risks as well as credit risk concentrations.

The Executive Board of CBL, taking into account CBL's business strategy, its role as operator of a securities settlement system, as well as the overall risk profile that CBL expects to achieve on its credit portfolio, including targeted levels of diversification and concentration tolerances, are responsible for establishing the Credit Appetite.

The Credit Policy defines the credit risk control including credit limits which are monitored regularly and ad hoc. A credit limit is the maximum amount of credit that can be granted to a counterpart. Credit limits help to ensure that CBL's credit granting activity does not exceed stipulated levels and that lending is adequately diversified. Credit limits are granted to individual clients but monitored at an institutional, client group and country level. Processes are in place to ensure prompt identification, accurate assessment, proper approval, and consistent monitoring and reporting of credit risk. CBL reviews the credit limits granted to a borrowing participant at least annually.

Clients should refer to the Concise Credit Risk Statement above for additional information.

The credit risk management section manages country risk by setting limits for each country based on the country's internal credit rating. Any exception to the Clearstream Credit Policy must be approved by the Executive Board. All credit risk exposures are regularly reviewed and monitored. In addition, Clearstream conducts special reviews when information indicating an adverse change materially impacting the risk profile is received from external and internal sources.

The exposure limit, mentioned above, is set to ensure that Clearstream does not take on a very large exposure, resulting in excessive risk, by attributing it on too few participants or counterparties. Luxembourg banking regulations also impose risk concentration limits that must be respected for each applicable exposure. The exposures after credit risk mitigation

techniques, that is collateral, to an individual client or group of connected clients above 25% of own funds, are reported as a breach under the Large Exposures regulation.

Credit risk control is performed by the credit risk management section, and is an independent function, while working across the organisation to ensure stable credit risk management. The credit risk management section is responsible for issuing a monthly credit report to the Executive Board and Clearstream Risk Management, as well as for credit exposure reporting to Clearstream Risk Management, which forms the basis of the credit VaR calculations.

Capital reserved for credit risk is sufficient at CBL level. In addition, capital adequacy control is performed by Clearstream Risk Management on a monthly basis based on actual credit limit usage across all credit risk drivers. This is a regular ex-post control which can trigger adjustments to ensure capital reserved for credit risk is sufficient.

## 11.4.1. Use of Standardised Approach

As per Article 444 CRR, institutions using standardised approach to calculation of credit risk shall disclose the information by following the guidance for template EU CRD.

Legal basis	Row number	Qualitative information - Free format
Article 444(a) CRR	(a)	Names of the external credit assessment institutions (ECAIs) and export credit agencies (ECAs) nominated by the institution, and the reasons for any changes over the disclosure period;
Article 444(b) CRR	(b)	The exposure classes for which each ECAI or ECA is used;
Article 444(c) CRR	(c)	A description of the process used to transfer the issuer and issue credit ratings onto comparable assets items not included in the trading book;
Article 444(d) CRR	(d)	The association of the external rating of each nominated ECAI or ECA (as referred to in row (a)) with the risk weights that correspond with the credit quality steps as set out in Chapter 2 of Title II of Part Three CRR (except where the institution complies with the standard association published by the EBA).

Table EU CRD - Qualitative disclosure requirements related to standardised model

#### Article 444(a) and (b) CRR

Prior to August 2020, for the exposure class pertaining to central governments and central banks, Clearstream used the credit assessments by the OECD<sup>2</sup>. In addition, Clearstream also nominated the external credit assessment institution (ECAI) Standard & Poor's for the same exposure class, because OECD stopped assessing so-called "high-income countries" in 2013. In August 2020, external credit assessment institutions Fitch and Moody's were added as nominated ECAIs and Luxembourg supervisor was notified accordingly. For the "regional governments or local authorities" and "public sector entities" and "institutions" (credit institutions, investment firms and other dedicated financial counterparties) exposure classes, the dedicated risk weight is derived from that of the respective country of domicile.

#### Article 444(c) CRR

The risk transfer of the credit rating between the issuer and the issue is used solely for debt securities in own investment portfolio and received as collateral for credit risk mitigation for the securities issued by central governments and assimilated if issue rating is not available.

#### Article 444(d) CRR

CBL applies standard association of ECAI ratings to risk weights published by EBA.

The exposures of Clearstream are mainly to the exposure classes of institutions (54% of original exposures including SFT), corporates (29%) and central governments or central banks (14%); the remainder are shown below with the accompanying risk weight. The current exposures to central governments and central banks are mainly risk-weighted at 0%. Exposures to institutions generally have a short original maturity of less than or equal to three months. Therefore, under Article 120 paragraph 2 CRR the risk weight is 20%. The risk weighting for multilateral development banks is in most cases 0%. All other exposures in the different exposure classes mostly achieve the prescribed risk weighting of an unrated position ("unrated" implies that no credit rating by an eligible ECAI exists or no ECAI has been nominated for that purpose). Clearstream complies with the risk weighting as defined in Section 2, Chapter 2 of Part 3, Title II CRR. The templates below show the breakdown of exposures in exposure classes in CRR and applied risk weights for each exposure class.

	(in 000 of EUR)	Exposures before	CCF and before CRM	Exposures post	CCF and post CRM	RWAs a	nd RWAs density
	Exposure classes	On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet exposures	RWAs	RWAs density (%)
		a	b	С	d	е	f
1	Central governments or central banks	6,792,857		6,792,857		3,075	0%
2	Regional government or local authorities	211,955		211,955		1	0%
3	Public sector entities	785,793		785,793		24	0%
4	Multilateral development banks	299,909		299,909		3	0%
5	International organisations	88,897		88,897		-	0%
6	Institutions	970,893	360,331	970,893	8,610	191,828	20%
7	Corporates	143,716	161,352	143,716	395	144,806	100%
8	Retail						
9	Secured by mortgages on immovable property						
10	Exposures in default	121		121		182	150%
11	Exposures associated with particularly high risk						
12	Covered bonds						
13	Institutions and corporates with a short-term credit assessment						
14	Collective investment undertakings						
15	Equity	14,505		14,505		14,505	100%
16	Other items	20,310		20,310		20,307	100%
17	TOTAL	9,328,956	521,683	9,328,956	9,005	374,731	4%

Template EU CR4 – standardised approach – Credit risk exposure and CRM effects

	(in 000 of EUR)							Risk w	reight								Total	Of which unrated
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	lotat	of which unrated
	Exposure classes	a	b	С	d	e	f	g	h	i i	j	k	l	m	n	0	р	q
1	Central governments or central banks	6,788,159				1,837		403			2,362	96					6,792,857	
2	Regional government or local authorities	211,951				5											211,955	211,955
3	Public sector entities	785,673				120											785,793	785,793
4	Multilateral development banks	299,891				17											299,909	299,909
5	International organisations	88,897															88,897	88,897
6	Institutions		22,624			956,879		-									979,503	979,503
7	Corporates										142,721	1,390					144,111	144,111
8	Retail exposures																	
9	Exposures secured by mortgages on immovable property																	
10	Exposures in default											121					121	121
11	Exposures associated with particularly high risk																	
12	Covered bonds																	
	Exposures to institutions and corporates with a short- term credit assessment																	
14	Units or shares in collective investment undertakings																	
15	Equity exposures										14,505						14,505	14,505
16	Other items	3									20,307						20,310	20,310
17	TOTAL	8,174,574	22,624			958,858		403			179,896	1,607					9,337,962	2,545,104

Template EU CR5 – standardised approach

For the purposes of breakdown below SFT exposures under the use of the standardised approach are reported separately as follows:

	(in 000 of EUR)	Exposures before	CCF and before CRM	Exposures post	CCF and post CRM	RWAs a	nd RWAs density
	Exposure classes	On-balance-sheet exposures (repos)	Off-balance-sheet exposures (ASLplus)	On-balance-sheet exposures (repos)	Off-balance-sheet exposures (ASLplus)	RWAs	RWAs density (%)
		a	b	С	d	e	f
1	Central governments or central banks						
2	Regional government or local authorities						
3	Public sector entities						
4	Multilateral development banks						
5	International organisations						
6	Institutions	5,903,190	-	111,449	-	29,608	26.57%
7	Corporates	1,844,403	-	31,291	-	42,202	134.87%
8	Retail						
9	Secured by mortgages on immovable property						
10	Exposures in default						
-11	Exposures associated with particularly high risk						
12	Covered bonds						
13	Institutions and corporates with a short-term credit assessment						
14	Collective investment undertakings						
15	Equity						
16	Other items						
17	TOTAL	7,747,593	-	142,740	-	71,811	50.31%

Template EU CR4 bis - standardised approach - Credit risk exposure and CRM effects (SFT)

	(in 000 of EUR)							Risk v	veight								Total	Of which unrated
	Exposure classes	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1250%	Others	Total	Of Which unrated
	Exposure classes	a	ь	С	d	e	f	g	h	i	j	k	l	m	n	0	Р	q
1	Central governments or central banks																	
2	Regional government or local authorities																	
3	Public sector entities																	
4	Multilateral development banks																	
5	International organisations																	
6	Institutions					148,041											148,041	148,041
7	Corporates										39,491	1,808					41,298	41,298
8	Retail exposures																	
9	Exposures secured by mortgages on immovable property																	
10	Exposures in default																	
11	Exposures associated with particularly high risk																	
12	Covered bonds																	
13	Exposures to institutions and corporates with a short- term credit assessment																	
14	Units or shares in collective investment undertakings																	
15	Equity exposures																	
16	Other items																	
17	TOTAL					148,041					39,491	1,808						189,340

Template EU CR5 bis - standardised approach (SFT)

### 11.4.2. Credit Risk Exposure Distribution

In application of Article 442 CRR the institutions shall provide qualitative and quantitative information on credit risk quality. The qualitative information shall be disclosed using instructions for template EU CRB.

Qualitative disclos	ures
(a)	The scope and definitions of 'past-due' and 'impaired' exposures used for accounting purposes and the differences, if any, between the definitions of past due and default for accounting and regulatory purposes as specified by the EBA Guidelines on the application of the definition of default in accordance with Article 178 CRR.
(b)	The extent of past-due exposures (more than 90 days) that are not considered to be impaired and the reasons for this.
(c)	Description of methods used for determining general and specific credit risk adjustments.
(d)	The institution's own definition of a restructured exposure used for the implementation of point (d) of Article 178(3) CRR specified by the EBA Guidelines on default in accordance with Article 178 CRR when different from the definition of forborne exposure defined in Annex V to Commission Implementing Regulation (EU) 680/2014.

Table EU CRB: Additional disclosure related to the credit quality of assets

The relevant information is provided as free text below.

## 11.4.2.1. Definition of past due

The CRR classifies an exposure as "past due" if a counterparty has failed to make a payment when contractually due, when the debtor has exceeded an external limit communicated to it, as well as when the debtor has utilised credit without prior consent.

All financial assets are subject to the impairment testing under current accounting standards, consequently there are no past-due exposures that are not considered to be impaired.

# 11.4.2.2. Definition of default or non-performing

According to Article 178 CRR, a debtor is in default when either or both of the following conditions apply:

- The institution has material reason to consider that the obligor is unlikely to pay its (credit) obligations in full, without recourse by the institution to actions such as realising collateral (if held).
- The obligor is past due more than 90 successive calendar days on any material part of its overall credit obligation to the institution.

Clearstream's internal definition of "impairment" according to the International Financial Reporting Standards (IFRS) is compliant with the definition of "default" outlined in Article 178 CRR.

Related to our definition of default or non-performing exposures, credit risk mainly arises in the short term and with credit institutions or governmental counterparties. Treasury counterparties, as well as CCBs for the operational network, are selected based on a high degree of creditworthiness and operational reliability. Due to the short-term nature of the business performed by Clearstream, strict internal guidelines and close monitoring of business, there have been no material credit losses at Clearstream since 1970.

### 11.4.2.3. Value adjustments and provisions

Clearstream assesses at each balance sheet date, whether there is objective evidence that a financial asset or group of financial assets is impaired, where appropriately applying the expected loss model as introduced by IFRS 9 Financial Instruments.

The losses represent a forward-looking measurement of future losses that are generally subject to estimates.

- Stage 1: The impairment upon initial recognition is measured on the basis of the expected losses in the event of default within the next twelve months after the reporting date.
- Stage 2: If a financial asset's credit risk has increased significantly, the expected credit loss is determined over the entire term. A significant increase in credit risk is determined individually using internal ratings and is assumed if there is a downgrade of three notches within the internal rating system.
- Stage 3: Credit-impaired financial assets are allocated to Stage 3 and the impairment is based on the full lifetime expected credit losses. This is the case if there are observable data of significant financial difficulties and there is a high risk of default, even if the definition of a default has not yet been met.

If, at the balance sheet date, there is an absolutely low credit risk for debt instruments measured at amortised cost and at fair value through other comprehensive income or for balances on nostro accounts for which the simplified impairment model is not applied, these remain in Stage 1 even if the default risk increases.

Within the Bank, the expected credit losses for trade receivables are measured based on the simplified approach, which requires lifetime expected losses to be recognised from initial recognition of a receivable.

Clearstream does not have material amounts of value adjustments and provisions for credit risk exposures at present, mainly because of its business model, which is focused on short-term lending activities to enable efficient and secure settlement processes, and the possibility to directly collect trade receivables within two (2) days.

### 11.4.2.4. Forborne exposures

As of 31 December 2023, there were no forbearance or restructuring measures applied by Clearstream to any clients' exposures.

### 11.4.2.5. Distribution of credit risk exposures

In application of points (c) to (g) of Article 442 CRR, the following paragraphs provide the information on the distribution of the credit risk exposures, both performing and non-performing, broken down by exposure classes, geographical area, industry, past-due status and residual maturity, as well as the information on related accumulated impairment and its changes during the year.

Building on the performing and non-performing exposures, on 31 December 2023, the allocation per exposure class is shown in the table below. As shown below, CBL holds its exposures with central and regional governments, central banks, PSEs, MDBs and financial entities. No retail or SME exposure were reported during the year under review. Most of the exposures held by Clearstream are with central banks and credit institutions, which account for 85% of on-balance exposures. Those counterparties are deemed to be in good standing, as shown by the performing nature.

Due to the current situation nostro account with Russian National Settlement depository, reported under loans and advances to financial corporations, was classified as IFRS stage 3 and fully impaired. Of the remaining non-performing exposures, EUR 0.4 mn is driven by credit institutions, however, they have not moved beyond their current stage in non-performance.

	1	a	h	c	d	e	4	q	h			l.	1	m	n	0
					u	e	'			'	J			- ""		•
			Gross carry	ying amount/	nominal amo	unt		Accumula	ted impairme		ated negative cl and provisions		value due to	Accumulated		and financial es received
		Perf	orming exposure	5	Non-pe	Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – di accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			On performing exposures	On non- performing exposures
	(in 000 of €)		Of which stage	Of which		Of which	Of which	1	Of which	Of which		Of which	Of which	1	,	
	,		1	stage 2		stage 2	stage 3		stage 1	stage 2		stage 2	stage 3			
005	Cash balances at central banks and other demand deposits	7,535,917	7,535,917													
010	Loans and advances	8,063,192	8,063,014		984		-	-	-		(737)		-		7,736,698	
020	Central banks	5,196	5,196		151						(142)					
030	General governments	4,255	4,255													
040	Credit institutions	6,406,620	6,406,620		405						(311)				6,183,873	
050	Other financial corporations	1,645,887	1,645,887		372		-	-	-		(248)		-		1,552,825	
060	Non-financial corporations	1,056	1,056		56			-	-		(36)					
070	Of which SMEs															
080	Households	177														
090	Debt securities	1,412,143	1,412,143					(248)	(248)							
100	Central banks															
110	General governments	637,991	637,991					(248)	(248)							
120	Credit institutions	774, 152	774,152													
130	Other financial corporations															
140	Non-financial corporations															
150	Off-balance-sheet exposures	521,683	521,683													
160	Central banks															
170	General governments															
180	Credit institutions	521,267	521,267													
190	Other financial corporations	416	416													
200	Non-financial corporations															
210	Households															
220	Total	17,532,935	17,532,757		984		-	(248)	[248]	-	(737)			-	7,736,698	

Template EU CR1: Performing and non-performing exposures and related provisions.

Due to the specificity of Clearstream business, the maturity of exposures is extremely short term. 44% of on-balance exposures are classified as on demand, while another 47% does not

exceed one year and are mainly composed of reverse repurchase agreements with residual maturity under three months.

		a	ь	С	d	е	f
				Net exposure value			
	(in 000 of €)	On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Loans and advances	69,146	7,994,292				8,063,439
2	Debt securities		220,144	1,191,751			1,411,896
3	Total	69,146	8,214,437	1,191,751	-	-	9,475,334

Template EU CR1-A: Maturity of exposures

		a
	(in 000 of €)	Gross carrying amount
010	Initial stock of non-performing loans and	
010	advances	10,188
020	Inflows to non-performing portfolios	974
030	Outflows from non-performing portfolios	(10,179)
040	Outflows due to write-offs	(10,179)
050	Outflow due to other situations	
060	Final stock of non-performing loans and	
000	advances	984

Template EU CR2: Changes in the stock of non-performing loans and advances

		a	b
	(in 000 of €)	Gross carrying amount	Related net accumulated recoveries
010	Initial stock of non-performing loans and advances	10,188	
020	Inflows to non-performing portfolios	974	
030	Outflows from non-performing portfolios	(10,179)	
040	Outflow to performing portfolio		
050	Outflow due to loan repayment, partial or total		
060	Outflow due to collateral liquidations		
070	Outflow due to taking possession of collateral		
080	Outflow due to sale of instruments		
090	Outflow due to risk transfers		
100	Outflows due to write-offs	(10, 179)	
110	Outflow due to other situations		
120	Outflow due to reclassification as held for sale		
130	Final stock of non-performing loans and advances	984	

Template EU CR2a: Changes in the stock of non-performing loans and advances and related net accumulated recoveries

The split of performing and non-performing loans by the count of days past-due is available in the following template. Most of past due exposures correspond to trade receivables where the amounts due for provision of services by Clearstream could not be debited directly on client accounts for various reasons (that is, clients under sanctions).

		a	b	С	d	e	f	g	h	i	j	k	L
						Gross carrying an	nount/nomin	al amount			•		
		Per	forming exposures			Non-performing exposures							
	(in 000 of €)		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
005	Cash balances at central banks and other demand deposits	7,535,917	7,535,917										
010	Loans and advances	8,063,192	8,063,026	166	984	-	63	172	353	396			
020	Central banks	5,196	5,196	-	151		-	7	52	93			
030	General governments	4,255	4,255										
040	Credit institutions	6,406,620	6,406,529	91	405		31	58	144	172			ĺ
050	Other financial corporations	1,645,887	1,645,816	72	372		25	95	143	109			
060	Non-financial corporations	1,056	1,053	3	56		7	12	15	22			
070	Of which SMEs												
080	Households	177	177		-								i
090	Debt securities	1,412,143	1,412,143										ĺ
100	Central banks												
110	General governments	637,991	637,991										
120	Credit institutions	774,152	774,152										
130	Other financial corporations												ĺ
140	Non-financial corporations												i
150	Off-balance-sheet exposures	521,683											
160	Central banks												
170	General governments												
180	Credit institutions	521,267											
190	Other financial corporations	416											
200	Non-financial corporations												
210	Households												
220	Total	17,532,935	17,011,087	166	984	-	63	172	353	396			

Template EU CQ3: Credit quality of performing and non-performing exposures by past due days

Below template provides the information on the geographical breakdown of non-performing exposures. The full breakdown including performing exposures is included in included in the Appendix B.

	I	a b c d		d	e	f	g			
ŀ			oss carrying/nominal amoun		·	Accumulated	Provisions on off-	Accumulated		
		Ĭ	Of which non-performing		Of which	impairment	Provisions on off- balance-sheet	negative changes in fair value due to		
			51 WILLEH HOLL-	contoning	subject to		commitments and			
				Of which	impairment		financial guarantees	credit risk on non-		
	(in 000 of €)			defaulted			given	performing exposures		
010	On-balance-sheet	984	984		984	(222)				
020	exposures Belgium	0	0		0	(737)				
030	Brazil	11	11		11	- /7/				
040	Canada	12	12		12	(12)				
050	Switzerland	61	61		61	(12)				
060	China	0	0		0	[24]				
070	Germany	1	1		1					
080	Denmark	6	6		6	- /0/				
090	France	0	0		0	1-7				
100		_	0		0	(0)				
110	United Kingdom	0 28			28					
120	Guernsey		28			(27)				
130	Greece	232	232		232	(168)				
140	Hong Kong	5	5		5	(4)				
150	Indonesia	1	1		1	(1)				
	Ireland	13	13		13	(5)				
160	Italy	14	14		14	(13)				
170	Jersey	19	19		19	(19)				
180	Kuwait	5	5		5	(4)				
190	Cayman Islands	1	1		1	-				
200	Kazakhstan	1	1		1	(1)				
210	Luxembourg	0	0		0	(0)				
220	Oman	357	357		357	(248)				
230	Russian Federation	1	1		1	(1)				
240	Singapore	2	2		2	-				
250	United States of America	9	9		9	(7)				
260	Venezuela	193	193		193	(182)				
270	Virgin Islands	9	9		9	(9)				
280	Viet Nam	5	5		5	(4)				
290	Off-balance-sheet exposures	503.017								
300	taly	7,036								
310	United Kingdom	178,204								
320	France	78,340								
330	Spain	8,011								
340	Germany	231,013								
350	Belgium	164								
360	Australia	250								
370	Total	504,001	984		984	(737)				
570		304,007	704	_	704	(/3/)				

Template EU CQ4: Quality of non-performing exposures by geography

Although Clearstream deals primarily with institutions, central banks or central governments, there is a limited number of corporate counterparties, also mentioned in 11.4.1. Use of Standardised Approach. The next table shows the split of the defaulted and non-defaulted exposure per economic sector of the counterparty. On 31 December 2023, Clearstream's non-performing exposures were EUR 1.1 mn, and mostly consisted of information and communication counterparties, related to provision of services ancillary to Clearstream business Mainly allocated to intercompany exposure with Clearstream Services S.A.

		a	b	С	d	е	f	
			Gross car	rying amoun				
			Of whic perfor		Of which loans and advances subject to impairment	Accumulated impairment	Accumulated negative changes in fair value due to credit risk on nonperforming exposures	
(in 000 of €)				Of which defaulted			performing exposures	
010	Agriculture, forestry and fishing							
020	Mining and quarrying	11			11			
030	Manufacturing	9			9			
040	Electricity, gas, steam and air conditioning supply	2			2			
050	Water supply							
060	Construction							
070	Wholesale and retail trade	51			51			
080	Transport and storage	37			37			
090	Accommodation and food service activities	3			3			
100	Information and communication	622	1		622	(1)		
110	Financial and insurance actvities	-			-			
120	Real estate activities	-	-		-	-		
130	Professional, scientific and technical activities	164	47		164	(29)		
140	Administrative and support service activities	205	8		205	(7)		
150	Public administration and defense, compulsory social security							
160	Education							
170	Human health services and social work activities							
180	Arts, entertainment and recreation	-			-			
190	Other services	9			9			
200	Total	1,112	56		1,112	(36)		

Template EU CQ5: Credit quality of loans and advances to non-financial corporations by industry

While CBL reports exposures to corporate counterparties, provisions of Article 431(5) with regard to the explanation of rating decisions to SMEs and other corporate applicants for loans, is not applicable. Exposures to corporate counterparties are limited to intercompany recharges withing the group and a small amount of various other receivables, which do not represent loans.

The following template provides the information on collateralisation of performing and nonperforming on-balance exposures. The collateralised loans are limited to reverse repurchase agreements secured by high quality bonds.

		a	b	С	d	6	f	g	h	i	j	k	L
		Loans and advances											
			Performing		Non-performing								
						Unlikely to pay that	Past due > 90 days						
				Of which past		are not past due or		Of which	Of which:	Of which:	Of which:	Of which:	Of which:
	(in 000 of €)			due > 30 days ≤		are past due ≤ 90		past due >	past due >	past due	past due >		past due
				90 days		days		90 days ≤ 180 days	180 days ≤ 1 year	> 1 years ≤ 2 years	2 years ≤ 5 years	o years ≤ 7 years	> 7 years
010	Gross carrying amount	8,064,175	8,063,192	166	984	-	984	63	172	353	396	yeara	
020	Of which secured	7,747,593	7,747,593										
030	Of which secured with	, ,											
030	immovable property												
	Of which												
040	instrument s with LTV												
040	s With LIV higher than												
	60% and												
	Of which												
	instrument												
050	s with LTV												
	higher than												
-	80% and Of which												
	instrument												
060	s with LTV												
	higher than												
	Accumulated impairment for secured												
	assets												
080	Collateral												
090	Of which value capped at the value of	7.736.698											
100	exposure Ut wnich immovable	7,730,078											$\vdash$
110	Of which value above the cap	7.005.000											$\vdash$
120	or which value above the cap or which immovable	7,895,982											$\vdash$
	Secondary Control of the Control of												
	Financial guarantees received												
140	Accumulated partial write-off										l		

Template EU CQ6: Collateral valuation - loans and advances

No collateral was taken in possession due to default of counterparties, consequently the related templates are not disclosed.

### 11.4.3. Stress Testing

As part of a robust risk management framework, Clearstream performs stress tests on our credit risk function. The term "stress test" comprises the entirety of qualitative and quantitative analysis methods of rare but plausible events. There are two stress tests performed for credit risk:

- The "Default of the Largest Counterparty Group Stress Test," where the default of the counterparty Group with the largest unsecured exposure is simulated on a monthly basis, after utilisation of all respective collateral and after taking the recovery rate into account.
- The "Economic Deterioration Stress Test," where the impact on Clearstream of a deterioration of the economic environment is simulated on monthly basis. To capture the worsening of the economy, certain credit risk model parameters are adjusted compared to the standard VaR simulation.

The results of the "Default of the Largest Counterparty Group Stress Test" and the "Economic Deterioration Stress Test" are compared to limits, which are defined as a fraction of the available Risk-Bearing Capacity. The stress test results are reported to the Executive Board every quarter and semi-annually to the Supervisory Board.

In addition to the stress tests defined above, two specific "Reverse Credit Stress Tests" are performed, which aim to identify events leading to full utilisation of the available risk-bearing capacity.

In 2023, the stress tests did not reveal any risks endangering the going concern of Clearstream's business.

### 11.4.4. Mitigation

Disclosure requirements concerning credit risk mitigation are laid down in Section C EBA Guidelines on disclosure requirements under Part Eight of Regulation (EU) No 575/2013 and 2019/876 in conjunction with Article 453 CRR and CRR 2. Following information on mitigations technics should be disclosed as per template EU CRC.

Legal basis	Row number	Free format
Article 453(a) CRR	(a)	A description of the core features of the policies and processes for on- and off-balance sheet netting and an indication of the extent to which institutions make use of balance sheet netting.
Article 453(b) CRR	(b)	The core features of policies and processes for eligible collateral evaluation and management.
Article 453(c) CRR	(c)	A description of the main types of collateral taken by the institution to mitigate credit risk.
Article 453(d) CRR	(d)	For guarantees and credit derivatives used as credit protection, the main types of guarantor and credit derivative counterparty and their creditworthiness used for the purposes of reducing capital requirements, excluding those used as part of synthetic securitisation structures.
Article 453(e) CRR	(e)	Information about market or credit risk concentrations within the credit mitigation taken.

Table EU CRC - Qualitative disclosure requirements related to CRM techniques

#### Article 453(a) CRR

The credit risk mitigation technique used by CBL for solvency purposes is collateralisation. For Clearstream, only net positions are relevant.

The portfolio companies of Deutsche Börse Group are highly integrated and perform a variety of services for each other. Therefore, respective fees are invoiced, resulting in payables and receivables. To optimise cash flows and reduce payment efforts in situations with material cash flows in both directions, positions are held in current accounts based on netting agreements. Debits and credits are netted immediately and net positions are settled once a month.

Accounts with clients or CCBs are generally maintained on a current account basis. Therefore, all movements in these accounts and currencies are immediately netted to single account balances.

For credit purposes, except as otherwise agreed between the client and Clearstream, all client accounts with Clearstream, in whatever currency they are denominated, are deemed to form elements of a single, indivisible current account and Clearstream may at any time set off, in whole or in part, credit and debit balances standing to any accounts held by the

client with Clearstream. Despite these netting options, no netting takes place for regulatory and risk management purposes. For credit purposes, cash credit positions from these arrangements are taken as cash collateral. For solvency purposes, this collateral is not considered.

With regards to the on-balance exposures only repurchase agreements are considered to be collateralised. For more information, clients should refer to <a href="#">Chapter 11.4.5</a>. Repurchase Agreements

Other types of transactions, for which credit risk mitigation is used, are ASL and ASLplus transactions. More detailed information is available in Chapters 11.4.6 ASL and 11.4.7. ASLplus

In the following table, all unsecured carrying amounts on 31 December 2023 were made up of other term loans, trade receivables, and overnight balances. For the purposes of template EU CR3 below the balances with central banks and demand deposits with credit institutions are excluded.

		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
	(in 000 of €)	a	b	С	d	e
1	Loans and advances	315,846	7,747,593	7,747,593		
2	Debt securities	1,411,896				
3	Total	1,727,741	7,747,593	7,747,593		
4	Of which non-performing exposures	247				
EU-5	Of which defaulted					

Template EU CR3 – CRM techniques overview: Disclosure of the use of credit risk mitigation techniques

#### Article 453(d) CRR

No guarantees and credit derivatives are used as credit protection.

### 11.4.4.1. Collateral (Article 453(b), (c) and (e) CRR)

The purpose of the settlement credit limit is to facilitate the settlement of securities transactions against payment. Two types of settlement credit limit are currently available, the Technical Overdraft Facility (TOF) and the Unconfirmed Funds Facility (UCF). Under the Credit Terms and Conditions and the General Terms and Conditions, CBL has a pledge on all client assets held in the client account(s) defined as pledge account(s) to secure client obligations to CBL for the services rendered by CBL to this client. These contracts are complemented by netting provisions permitting the offset of credit and debit balances standing to client accounts.

Collateral eligibility is defined and approved by the Credit section within the boundaries of the Credit Policy as approved by the Executive Board. Eligibility and haircut are dependent on the security's credit, market, liquidity, and legal risks. The valuation is performed daily on the basis of latest available prices.

#### Article 453(c) CRR

Eligible collateral in the form of securities are subject to a margin deduction from their market value; haircuts range from 2% to 100% depending on the issue type, credit quality, security's market and liquidity risks. The following instruments are eligible as collateral to support cash financing facilities:

- Fixed income securities with a minimum Standard & Poor, Fitch or Moody's rating of BBB-/Baa3, issued by sovereigns and central banks, local and regional governments, government agencies and supranational institutions, corporate and credit institutions;
- European covered bonds; and,
- Select equities included in STOXX Europe 50 and STOXX North America 50 indices.

In general, all securities not classified as eligible are ineligible as collateral, including the following:

- Investment funds;
- Warrants;
- Structured securities, for example, CDO, CLO, CLN, MBS;
- Own paper; and
- Subordinated securities.

#### Article 453(b) CRR

Collateral haircuts are automatically recalculated daily; the collateral policy is reviewed at least once a year. Client collateral positions are evaluated daily, based on prices received from various reliable securities data vendors. The system automatically blocks any transaction on a given account whose settlement requires more than the available collateral.

In the application of Article 453(f) and (g), information on exposure value covered by financial collateral, other collateral, guarantees, and credit derivatives is to be understood as information on outstanding secured exposures and the secured amount within those exposures.

As explained above, for loans provided to clients, exposures are secured by pledges on clients' accounts and all assets are held with CBL, and not via guarantees or credit derivatives. The debt instruments are of high quality, issued by central and regional governments, PSE, MDBs or large credit institutions. In the table below, the majority of the off-balance sheet guarantees and commitments are secured by eligible financial collateral.

#### Article 453(e) CRR

Credit limit concentration threshold relating to country group, client internal ratings and collateral as well as currency concentration limits are established and reported to the CBL Executive Board on a monthly basis.

In addition to the set up limits the exposures from collateral concentration are part of quarterly Large Exposures reporting according to Part Four CRR. In application of point 4 of Pillar III Report

Article 401 CRR when the eligible credit risk mitigation technique is used, the part of the exposure by which the exposure to the client has been reduced is reported as the exposure to the protection provider, meaning collateral issuer (mandatory substitution approach). However, in application of Clearstream's policies on the eligibility of collateral the collateral the biggest exposures to collateral issuers are limited to the issuers qualifying for exemptions set up in Article 400 CRR (central governments and assimilated with 0% risk weight).

For regulatory reporting purposes CBL applies financial collateral comprehensive method to calculate the effects of credit risk mitigation from exposures. For regulatory purposes, standard haircuts as per Article 224 CRR are applied. The haircuts are based on available issue ratings by nominated ECAIs, namely Standard & Poor, Moody's and Fitch. For securities without own issue rating, issued by central governments and assimilated, the rating of the issuing central government is applied.

The information on exposures before and after risk mitigation is provided in <u>Chapter 11.4.1</u> in template EU CR4. ASL business is reported as off-balance exposures while exposures from repurchase agreements and ASLplus business, classified as securities financing transactions and hence neither on- nor off-balance exposures within COREP templates, are disclosed separately.

### 11.4.5. Repurchase Agreements

CBL bases a significant part of the Group's liquidity on reverse repo agreements with a maximum maturity of one year, but usually with maturities of three months or less. Repo transactions must be governed by a Global Master Repurchase Agreement (GMRA) and are only concluded with banking counterparties fulfilling minimum rating criteria.

Repo transactions are settled via Clearstream's settlement system, or the Euroclear system via the "Bridge," or the domestic settlement systems of Clearstream's depositories. All settlement systems used are proven for that type of transaction.

Total exposure before application of credit risk mitigation and after credit risk mitigation as well as risk weighted assets is provided in <u>Chapter 11.4.1</u> as part of template EU CR4.

Securities taken as collateral in repo-style transactions must fulfil specific requirements:

- Only the most liquid, least volatile and daily priced debt instruments with a defined credit rating (minimum long-term credit rating of Moody's [Aa3] or Standard & Poor's [AA-] or Fitch [AA-]); in the absence of a rating for the issue, the issuer rating (lowest available is relevant) are eligible as collateral for repo transactions;
- Issuers are limited to sovereigns, local governments, government agencies explicitly guaranteed by national governments, supranational banks and all issuers with an explicit sovereign or local government guaranty;
- Items not acceptable as collateral include ABS, MBS (RMBS and CMBS) and other forms of non-standard collateral (such as CDOs, derivative bonds, credit-linked bonds, callable bonds, perpetual bonds, warrants);
- All collateral must have an active market and must be liquid;

- Subordinated securities are not eligible;
- Transactions in which the securities given as collateral are issued by either the counterparty ("own assets") or an affiliate of the counterparty are not allowed. For this reason, specific wrong way risk is not a factor for Clearstream; and
- The maximum remaining life to maturity of the accepted securities is ten (10) years.

Cross-currency collateralisation is generally possible. It was not used for bilateral transactions but in the context of tri-party repos. Bilateral transactions must be "plain vanilla" on a single fixed-income security. In tri-party transactions (including Eurex Repo GC Pooling transactions), multiple fixed-income securities may be taken as collateral. Structured transactions are not allowed. Haircuts on the securities are applied within tri-party repo transactions (including Eurex Repo GC Pooling transactions). All collateral is valued daily. To secure the cash lent through reverse repurchase agreements, CBL agrees on margin calls with the repo counterparty daily to keep cash and collateral in balance.

For solvency purposes, according to Article 227 CRR, the application of zero volatility adjustments is possible in most cases. Where the conditions of the regulation stated above are not fulfilled, supervisory haircuts as laid down in Article 224 CRR apply. In cases of FX mismatch, further cross-currency haircuts are to be applied.

#### 11.4.6. ASL

ASL (Automated Securities Lending) is a lending program that allows clients who are short of securities due to settlement failure to borrow securities from other Clearstream clients (lenders).

#### CBL acts as:

- Lending agent, offering:
  - Automatic detection of loan requirements to cover a failed trade;
  - Automatic identification of loan supply from ASL lenders;
  - Anonymous transfer of securities to the ASL borrower (the undisclosed relationship between lender and borrower); and
  - o Administration of the loan.
- Collateral agent, monitoring the quality and sufficiency of collateral regarding:
  - Eligibility;
  - Collateral value;
  - Concentration limits;
  - Fluctuations in the market values of positions pledged as collateral (mark-to-market of the loan and the collateral);
  - Securities prices, reviewed several times a day depending on the closing time of the market; and
  - Automatic collateral substitution.
- Guarantor for the collateralised loans:
  - Underwriting the risk involved if the borrower defaults on its obligations;
  - Managing collateral securities pledged by the borrower to CBL; and

 Assigning loan limits to borrowers to avoid any new loan opening if the limit is reached.

In the ASL program, each loan position is guaranteed by CBL. The guarantee is backed by securities pledged by the borrower, as follows:

- Collateral securities are pledged by the borrower to CBL under a first-ranking pledge under Luxembourg law. Collateral quality and sufficiency are monitored by CBL daily; and
- A second-ranking pledge on collateral in favour of the lender in the unlikely event of a simultaneous default by CBL and the borrower, the right to the collateral passes to the lender.

The coverage value of the guarantee related to an ASL loan is equal to the market value of the securities plus an additional margin. Standard margins, varying from 0% to 15%, are applied depending on the securities lent.

The collateral eligibility criteria of the ASL program are the same as those for Clearstream's settlement engine. Collateral eligibility is defined and approved by the Credit section. Eligibility and haircut are dependent on the credit, market, liquidity and legal risks of the security.

Eligible securities are subject to a margin deduction from their market value; haircuts range from 2% to 100% depending on the issue type, credit quality, security's market and liquidity risks. Securities issued by or correlated to the client are not eligible as collateral. Collateral haircuts are automatically recalculated daily; collateral policy is reviewed at least once a year.

Clients' collateral positions are evaluated daily, based on prices received from various data vendors. The system automatically blocks any transaction on a given account whose settlement requires more than the available collateral.

Total exposure before application of credit risk mitigation and after credit risk mitigation as well as risk weighted assets is provided in <u>Chapter 11.4.1</u> as part of template EU CR4.

# 11.4.7. ASLplus

The ASLplus Programme combines the opportunity of the lender of securities to enhance the revenues with the demand of the borrower for securities. CBL role in this set-up is considered as an intermediary between the lender and the borrower upon the borrower's securities request. The Bank does not initiate any lender transactions before the collateral has been settled. The program is based on a back-to-back contractual mechanism supported by the representative model of a commissionaire resulting in the Bank having an agent role and as such is not exposed to risk nor rewards of the securities.

Following the guidelines of IFRS 9 "Financial instruments" the Bank does not need to account for the ASLplus related transactions on its balance sheet. In addition, since there is no commitment from the Bank at any moment of the contractual relationship to purchase or

borrow securities, it does not fall into the scope of off-balance sheet item as per the Law of 17 June 1992 definition either.

The risk born by the Bank is limited to the cases of misconduct, gross negligence in the internal execution of the obligations as system, or as agent: wrong execution of the mandate, contractual liability. These risks do not qualify as credit or liquidity risk per se and the risks arising from a borrower's default are born by the lender. This means that the ASLplus transaction does not require the Bank at any time to engage its own financial resources.

### 11.4.8. Counterparty Credit Risk

As per Articles 439, 444 and 452 CRR, banks are required to disclose the counterparty credit risk regarding instruments referred to in Part Three, Title II, Chapter 6 CRR by following the instructions for the template EU CCRA. To facilitate the reading the relevant information is provided in the following chapters. Due to the very low volume of transactions subject to counterparty credit risk the disclosures are of limited applicability.

	Flexible format disclosure	Report chapter
(a)	Article 439(a) CRR  Description of the methodology used to assign internal capital and credit limits for counterparty credit exposures, including the methods to assign those limits to exposures to central counterparties	Chapter 11.4.8
(b)	Article 439(b) CRR  Description of policies related to guarantees and other credit risk mitigants, such as the policies for securing collateral and establishing credit reserves	Chapter 11.4.8
(c)	Article 439(c) CRR  Description of policies with respect to Wrong-Way risk as defined in Article 291 of the CRR	Chapter 11.4.8.1
(d)	Article 431(3) and (4) CRR  Any other risk management objectives and relevant policies related to CCR	Chapter 11.4.8.1 Chapter 11.4.8.2
(e)	Article 439(d) CRR  The amount of collateral the institution would have to provide if its credit rating was downgraded	Omitted as not material

Table EU CCRA - Qualitative disclosure related to CCR

The exposures to the counterparty credit risk are part of the general credit risk strategy, which is set in accordance with the Risk Management Policy and reported annually to the supervisory board. The credit risk strategy represents the framework and defines, amongst other things, the principles, credit risk appetite, the credit authorities, collateral eligibility, the basic counterparty quality, as well as the fundamental country and currency risk categories.

Credit limits are set in accordance with the client's financial standing, as indicated by factors such as the client's credit rating and net worth taking into account the level of activity in the client's accounts and level of collateralisation.

The evaluation of counterparties and the credit risk classification takes place within the "credit assessment," which is performed by the Credit section. A quarterly internal rating benchmarking exercise with regards to external sources is performed and internal ratings are adjusted when deemed necessary.

Collateral recoverability is also part of the tests performed by the Credit Default Management Team.

The credit risk strategy is set in accordance with the Risk Management Policy and reported annually to the supervisory board. The credit risk strategy represents the framework and defines, amongst other things, the principles, credit risk appetite, the credit authorities, collateral eligibility, the basic counterparty quality, as well as the fundamental country and currency risk categories.

As previously mentioned, the general risk management structure, organisation, and process, and the risk strategy are described in <u>5. Risk management overview</u>. As with credit risk, business directives for counterparty credit risk are stated in the credit risk strategy, which is set in accordance with the Risk Management Policy and reported annually to the supervisory board. The credit risk strategy sets the operating limits for counterparty credit exposure, which are regularly monitored as per the Credit Policy. Moreover, the Credit Policy defines the risk controlling (incl. wrong-way risk) and risk mitigation techniques.

#### 11.4.8.1. Governance

In CBL, exposure to CCR arises from both over-the-counter (OTC) and centrally cleared derivatives.

As previously mentioned, the general risk management structure, organisation and process, and the risk strategy are described in <u>5</u>. Risk management overview. As with credit risk, business directives for counterparty credit risk are stated in the credit risk strategy, which is set in accordance with the Risk Management Policy and reported annually to the supervisory board. The credit risk strategy sets the operating limits for counterparty credit exposure, which are regularly monitored as per the Credit Policy. Moreover, the Credit Policy defines the risk controlling (incl. wrong-way risk) and risk mitigation techniques.

CBL is not generally involved in the derivatives business. CBL has modest derivatives positions to hedge interest rate or foreign exchange risk. There were limited positions in place at the end of 2022.

# 11.4.8.2. Measurement and Mitigation

Following points 114, 115, 116 and 117 of the guidelines on disclosure requirements, institutions are supposed to disclose information regarding the methods used to measure the exposure value of instruments subject to capital requirements for CCR and a comprehensive picture of the institution's exposure to CCPs.

At Clearstream, derivative instruments are only used to a small extent, primarily for hedging purposes. Such instruments can only be used in established and regularly tested operational procedures. Hedging documentation is maintained to IAS 39 standards. The dealings with interest rate or foreign exchange risks (measurement, assignment of internal capital and limits, etc.) are described in detail in 13. Market risk.

In cases where a certain level of foreign exchange exposure, and therefore risk, is exceeded, the risk of each currency exposure should be hedged. For Clearstream, the level of

materiality is expressed as 10% of consolidated EBITDA of the budget year to be hedged for each currency exposure. For the protection of Clearstream's budgeted interest income, the Treasury section may hedge the budgeted interest income for up to 50% of the client credit balances for the upcoming budget period(s) through approved hedging instruments. Foreign exchange outright contracts hedging the foreign exchange risk are settled via Continuous Linked Settlement (CLS)³ to minimise settlement risk and executed with counterparties only where a Credit Support Annex (CSA) is signed to mitigate credit risk resulting from market movements.

FX swaps are considered as a funding or an investment vehicle for currencies where no or limited deposit market exists (overnight swaps) or for the conversion of USD liquidity (overnight and/or term FX swaps) into EUR used to purchase/repo against highly liquid paper delivered to BCL serving as a liquidity buffer.

At the implementation of CRR2 CBL opted for Original Exposure Method (OEM) to calculate the counterparty credit risk from its FX derivatives transactions. In August 2022, CBL exceeded the absolute threshold set out in point (b) of Article 273a(2) CRR for three consecutive months. In replacement of OEM, the bank decided to apply standardised approach (SA-CCR). As the recognition of netting contracts is still in progress no netting at counterparty level or deduction of variation margins as collateral is applied. In application of Article 277 CRR, foreign exchange risk is recognised as the only material risk driver.

For securities financing transactions, which include the exposures arising from repurchase agreements and ASLplus transactions, CBL opted to the usage of standardised approach for credit risk as per Chapter 2 Title II Part Three CRR rather than rather than specific provisions for counterparty credit risk as per Chapter 6 Title II Part Three CRR. However, the aforementioned exposures are included in the reporting templates dedicated to counterparty credit risk where relevant.

The following table discloses a comprehensive view of the methods used to calculate CCR regulatory requirements and the main parameters used within each method.

		a	b	С	d	e	f	g	h
	(in 000 of €)	Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU-1	EU - Original Exposure Method (for derivatives)				1.4				
EU-2	EU - Simplified SA-CCR (for derivatives)				1.4				
1	SA-CCR (for derivatives)	13,276	20,010		1.4	46,600	46,600	46,600	18,230
2	IMM (for derivatives and SFTs)								
2a	Of which securities financing transactions netting sets								
2b	Of which derivatives and long settlement transactions netting sets								
2c	Of which from contractual cross-product netting sets								
3	Financial collateral simple method (for SFTs)								
4	Financial collateral comprehensive method (for SFTs)					7,747,593	142,740	142,740	53,580
5	VaR for SFTs								
6	Total					7,794,193	189,340	189,340	71,811

Template EU CCR1 – Analysis of CCR exposure by approach

The next table provides a summary of the CVA regulatory calculations.

CLS (Continuous Linked Settlement): CLS is a global multi-currency settlement system that aims to eliminate foreign exchange (FX) settlement risk due to time-zone differences by settling both legs of an FX transaction simultaneously (payment vs. payment).

	a	b
(in 000 of €)	Exposure value	RWEA
1 Total transactions subject to the Advanced method		
2 (i) VaR component (including the 3× multiplier)		
3 (ii) stressed VaR component (including the 3× multiplier)		
4 Transactions subject to the Standardised method	46,600	7,308
EU-4 Transactions subject to the Alternative approach (Based on the Original Exp	oosure Method]	
5 Total transactions subject to own funds requirements for CVA r	isk 46,600	7,308

Template EU CCR2 - Transactions subject to own funds requirements for CVA risk

As per point 117 of the EBA Guidelines on the disclosure requirements for this report, the following table discloses a breakdown of CCR exposures by exposure class and by risk weight (riskiness attributed):

	Exposure classes		Risk weight										
	Exposure classes	а	ь	С	d	e	f	g	h	i	j	k	l
	(in 000 of €)	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
1	Central governments or central banks												
2	Regional government or local authorities												
3	Public sector entities												
4	Multilateral development banks												
5	International organisations												
6	Institutions					148,041							148,041
7	Corporates									39,491	1,808		41,298
8	Retail												
9	Institutions and corporates with a short-term credit assessment												
10	Other items												
11	Total exposure value					148,041	-			39,491	1,808		189,340

Template EU CCR3 – Standardised approach – CCR exposures by regulatory exposure class and risk weights

On 31 December 2023, the exposures to central counterparties were limited to default fund contribution as disclosed in the template EU CCR8 below.

		a	b
	(in 000 of €)	Exposure value	RWEA
1	Exposures to QCCPs (total)		7,253
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which		
3	(i) OTC derivatives		
4	(ii) Exchange-traded derivatives		
5	(iii) SFTs		
6	(iv) Netting sets where cross-product netting has been approved		
7	Segregated initial margin		
8	Non-segregated initial margin		
9	Prefunded default fund contributions	26,785	7,253
10	Unfunded default fund contributions		
11	Exposures to non-QCCPs (total)		
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which		
13	(i) OTC derivatives		
14	(ii) Exchange-traded derivatives		
15	(iii) SFTs		
16	(iv) Netting sets where cross-product netting has been approved		
17	Segregated initial margin		
18	Non-segregated initial margin		
19	Prefunded default fund contributions		
20	Unfunded default fund contributions		

Template EU CCR8 - Exposures to CCPs

In addition to the overall information on counterparty credit risk, Article 439 CRR also requires disclosure of risk mitigation concerning CCR as laid out in points 120 and 121 of EBA Guidelines on disclosure requirements under Part Eight of Regulation (EU) No 575/2013 and amending (EU) No 2019/876.

The collateral disclosed in the following template corresponds to the collateral received for reverse repurchase agreements.

		a	b	С	d	e	f	g	h	
	(in 000 of €)	Col	lateral used in de	erivative transa	ictions	Collateral used in SFTs				
	Collateral type	Fair value of collateral Fa		Fair value of p	Fair value of posted collateral		collateral received	Fair value of posted collateral		
	,,	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	
-1	Cash - domestic currency									
2	Cash - other currencies									
3	Domestic sovereign debt									
4	Other sovereign debt						6,462,658			
5	Government agency debt						363,814			
6	Corporate bonds						-			
7	Equity securities									
8	Other collateral						1,069,468			
9	Total						7,895,940			

Template EU CCR5 - Composition of collateral for CCR exposures

On 31 December 2023, CBL did not hold any credit derivatives on its books. Hence, the report does not include related templates.

# 11.4.9. Monitoring and Reporting

The credit risk team reports the volume of credit limits, of intraday and overnight credit exposures to Executive Board. Besides that, limit breaches – if any – are reported to the Executive Board.

The reporting approach described under <u>5.6.5</u>. Risk monitoring and reporting also applies to the management of credit risk. On this basis, Clearstream Financial Risk assesses the credit risk and reports VaR results as well as risk issues to the Executive Board. Besides the assessment of the VaR, Clearstream Financial Risk also measures credit risk concentration and performs stress test calculations on credit risk (see <u>11.4.3 Stress testing</u>).

# 12. Liquidity Risk

In application of point 4 of Article 451a CRR, institutions shall disclose the arrangement, systems, processes and strategies put in place to identify, manage and monitor their liquidity risk. Qualitative information should be provided by using template LIQA below. To facilitate reading, the relevant information is provided as free text in the following chapters and Table EU LIQA - Liquidity risk management contains the reference to the chapter where the required information is disclosed.

Row number	Qualitative information - Free format	Report chapter
(a)	Strategies and processes in the management of the liquidity risk, including policies on diversification in the sources and tenor of planned funding.	Chapters 12.1, 12.2, 12.3, 12.6, 12.7, 12.8, 12.9
(b)	Structure and organisation of the liquidity risk management function (authority, statute, other arrangements).	Chapters 12.1, 12.3
(c)	A description of the degree of centralisation of liquidity management and interaction between the group's units.	Chapters 12.1, 12.3
(d)	Scope and nature of liquidity risk reporting and measurement systems.	Chapters 12.1, 12.4, 12.5, 12.8
(e)	Policies for hedging and mitigating the liquidity risk and strategies and processes for monitoring the continuing effectiveness of hedges and mitigants.	Chapters 12.1, 13
(f)	An outline of the bank's contingency funding plans.	Chapters 12.1, 12.7.2
(g)	An explanation of how stress testing is used.	Chapters 12.1, 12.6, 12.7
(h)	A declaration approved by the management body on the adequacy of liquidity risk management arrangements of the institution providing assurance that the liquidity risk management systems put in place are adequate with regard to the institution's profile and strategy.	Chapter 12.9.1
(i)	A concise liquidity risk statement approved by the management body succinctly describing the institution's overall liquidity risk profile associated with the business strategy. This statement shall include key ratios and figures (other than those already covered in the EU LIQ1 template under this ITS) providing external stakeholders with a comprehensive view of the institution's management of liquidity risk, including how the liquidity risk profile of the institution interacts with the risk tolerance set by the management body.  These ratios may include:	Chapters 5.1, 12.9.2, 12.5
	Concentration limits on collateral pools and sources of funding (both products and counterparties).	
	Customised measurement tools or metrics that assess the structure of the bank's balance sheet or that project cash flows and future liquidity positions, taking into account off-balance sheet risks which are specific to that bank.	

Row number	Qualitative information - Free format	Report chapter
	Liquidity exposures and funding needs at the level of individual legal entities, foreign branches and subsidiaries, taking into account legal, regulatory and operational limitations on the transferability of liquidity.	
	Balance sheet and off-balance sheet items broken down into maturity buckets and the resultant liquidity gaps.	

Table EU LIQA - Liquidity risk management

### 12.1. Liquidity Risk Overview

CBL's liquidity risk appetite represents the level of liquidity risk that CBL accepts to take in order to pursue its business objectives and in meeting its regulatory obligations. The risk acceptance criteria are translated into a limit system and into a strong liquidity stress test framework.

Regarding the limit systems and in addition to regulatory ratios, CBL has defined prudent internal limits to mitigate liquidity risk.

CBL's Treasury function performs the liquidity management of CBL. Treasury closely monitors the intraday liquidity position per currency against expected incoming and outgoing flows as well as CBL's available resources, and manages the liquidity exposure of CBL by means of a broad network of cash correspondent banks and money market counterparties.

For contingency situations, Treasury mainly relies on CBL's own funding capacity, including a number of committed funding lines set up by CBL with a wide range of liquidity providers and comprising liquidity funding capacity for all of CBL's relevant currencies.

CBL also has in place a dedicated contingency funding plan with a set of specific contingency measures tailored to CBL's business model. The Liquidity Contingency Funding Plan describes:

- Roles and responsibilities;
- · Standard and exceptional liquidity generation measures;
- Liquidity saving measures;
- Escalation procedure;
- The review of the plan.

For further details on CBL's liquidity risk mitigation, please refer to <u>Chapter 12.7 Risk mitigation</u>. No liquidity risk hedging is performed.

The Treasury & Liquidity Controls monitors and controls daily limit observances and reports breaches to CBL Executive Management and Clearstream Risk Management.

The Treasury & Liquidity Controls unit is responsible for issuing daily and monthly reports to CBL Executive Management and Clearstream Risk Management.

Liquidity stress tests are performed by Clearstream Risk Management, analysing whether enough sources are available to cover needs in stressed market conditions within a certain time frame. The design of a stress test scenario is such that the assumptions are extreme, but plausible. The stress tests are calculated daily/monthly and reported monthly to the Asset and Liabilities Committee (ALCO). Based on the results, CBL evaluates the adequacy of its liquidity sources and makes relevant adjustments, if necessary.

Following CSSF Circular 09/403, CBL has formulated its Liquidity Management Policy, which is approved by the Executive Board of CBL. The liquidity parameters/models stated in this policy are reviewed regularly.

The Policy contains specific requirements to implement a liquidity risk strategy that includes contingency planning, governance and the definition of senior management responsibilities. Required changes are proposed for approval via the ALCO to CBL Executive Management within the annual update cycle or on ad-hoc basis if required.

Day-to-day implementation of the liquidity management strategy is the responsibility of the Head of Treasury Front Office, reporting the Key Performance Indicators to the member of the CBL Executive Board responsible for Treasury.

Clearstream Risk Management oversees the liquidity risk exposure from the second line of defence perspective validating the assessment, monitoring and reporting activities. CBL's ALCO monitors and oversees those activities and makes recommendations to the Executive Board.

# 12.2. Strategy

As outlined in <u>Chapter 5.3</u>, CBL has adopted a comprehensive risk strategy reflecting amongst others its appetite with regard to liquidity risks. The liquidity risk appetite represents the level of liquidity risk that CBL accepts to take in order to pursue its business objectives while meeting regulatory obligations. The risk acceptance criteria are translated into a limit system, and liquidity stress test results are evaluated in accordance with the risk appetite.

Concretely, the target for liquidity management is the ability to:

- Manage CBL's varying cash position because of client and own activity with the aim of having sufficient liquidity available in all currencies for a timely provision of domestic and cross-border settlement and payment services as they fall due, including liquidity management of cross-currency exposure where relevant;
- Keep intraday cash balances with cash correspondent banks within the boundaries set by the liquidity risk tolerance and established concentration limits; and
- Have in place measures to deal with unexpected disruptions to its cash flows.

This is ensured by a permanent measurement, monitoring and control of the expected and actual cash flows.

### 12.3. Structure and Organisation

Liquidity risk management is incorporated into CBL's structure and organisation.

Treasury Front Office as first line of defence function performs the day-to-day liquidity risk management for CBL.

Treasury & Liquidity Controls controls the activities of Treasury Front Office. The unit is responsible for the monitoring of internal liquidity metrics and daily limit observances, as well as the issuance of daily and monthly reports of such controls to the CBL Executive Management and Clearstream Risk Management, including ad-hoc communication of limit breaches.

Clearstream Risk Management oversees the liquidity risk exposure as the second line of defence, validating the assessment, monitoring and reporting activities of the first line of defence. Clearstream Risk Management is also responsible for the performance of liquidity stress tests (please refer to <u>Chapter 12.6</u> for more details on stress testing).

CBL's Asset and Liability Committee (ALCO) monitors and oversees all activities related to liquidity risk management and makes recommendations to the Executive Board.

The ultimate responsibility for the soundness and oversight of CBL's liquidity risk management lays with the Executive Board of CBL.

### 12.4. Public Disclosure: Article 40 of Regulation (EU) 2017/390

This chapter is added to meet the regulatory requirement stated in the Commission Delegated Regulation (EU) 2017/390 (DR 2017/390) Article 40 on public disclosure of a comprehensive qualitative statement that specifies how liquidity risks, including intraday liquidity risks are measured, monitored and managed.

CBL's liquidity requirements are mainly intraday. CBL is required to mitigate the liquidity risks arising from the provision of CSDR banking-type ancillary services with qualifying liquid resources (QLR) in each relevant currency. The minimum amount of CBL's available QLR (Cover 2 requirement/minimum requirement) shall at any time be at least sufficient to manage the risk to which CBL would be exposed following the default of two clients (including their parent undertakings and subsidiaries) towards which CBL has the highest exposures intraday.

To address the CSDR related liquidity risk requirements, CBL has at its disposal the following QLR, in line with Article 34 DR 2017/390:

- Own cash (uninvested portion of CBL's own funds) deposited at the Central Bank of Luxembourg in a dedicated account separated from CBL's client cash;
- Committed lines of credit or similar arrangements;
- Own assets funded by CBL's own funds; and
- Appropriated client collateral in case of the client's default.

All sources of liquidity risk are considered for the measurement, monitoring and management of CBL's liquidity risk (including intraday) which includes its relations to linked

financial market infrastructures or other entities that may pose liquidity risk to its intraday liquidity flows, that is, Treasury counterparties, cash correspondent banks (CCBs), depositories, etc.

#### 12.4.1. Measurement

For liquidity risk measurement, CBL has put in place effective operational and analytical tools to measure and compare on an ongoing basis its liquid resources to its liquidity needs (intraday, overnight, and multiday period). Concretely, the liquidity metrics required by DR 2017/390 Article 30(1), such as CBL's available qualifying and non-qualifying liquid resources, as well as additional internally defined metrics are measured on an ongoing basis and used to calculate the appropriate value of intraday funding required. A prudent value of the liquid assets is assessed by considering their quality, concentration, immediate availability and market conditions. Intraday qualifying liquid resources are valued and calibrated under stressed market conditions including all stress scenarios referred to in DR 2017/390 Article 36(7).

For further details on CBL's measurement of liquidity risks, please also refer to Chapters 12.5 Liquidity metrics and 12.6 Stress testing.

### 12.4.2. Monitoring

The operational and analytical tools used to measure liquidity risks (mentioned above) allow CBL to effectively monitor its actual intraday liquidity positions against its expected activities and available resources based on account balances and remaining intraday liquidity capacity. They also allow the monitoring of CBL's intraday and overnight liquidity exposures on an ongoing basis against the maximum intraday liquidity exposure that has been historically recorded.

Concretely, to monitor its actual cash balances held with its CCBs, depositories and central bank accounts, CBL captures intraday credit and debit advices received from its agents, intermediaries and central banks, and compiles intraday on a near to real-time basis the current actual available cash balances in its Intraday Liquidity Management (ILM) tool. This tool is also used by CBL to match its expected liquidity flows (clients' cash and securities settlement instructions and CBL's Treasury activities) against incoming and outgoing funds to ensure that expected balances and pending entries can be investigated. In addition, it produces management reports that support the intraday liquidity management process, and issues intraday alerts in case defined intraday thresholds at CCB and/or currency level are breached.

On a daily basis, CBL runs extreme but plausible scenarios (including, but not limited to, those prescribed under CSDR) to identify and manage the risk of unexpected disruptions to its intraday liquidity flows. The liquidity stress tests model inter alia the liquidity risk resulting from the default of at least two clients to which CBL has the largest liquidity exposure intraday.

### 12.4.3. Management

For each currency for which CBL acts as settlement agent, CBL estimates the intraday liquidity inflows and outflows for all banking-type ancillary services provided, anticipates the timing of these flows and forecasts the intraday liquidity needs that may arise at different periods during the day.

CBL's liquidity (including intraday) is managed by CBL's Treasury function per currency and per cash correspondent bank or depository acting as cash agent with the aid of the ILM tool. ILM is capable to monitor CBL's actual cash flows as reported online by its cash correspondent banks/agents and central banks, using standard Swift reporting capabilities, as well as CBL's expected forthcoming cash flows from its clients, corporate actions or other payment flows. A real-time online overview of such flows combined with an automated alerting system ensures that Treasury can detect intraday unsecured exposure to CBL's cash correspondent banks/agents in excess of predetermined intraday concentration limits as well as intraday overdraft positions and take mitigating actions in due time. These measures aim to protect against liquidity risk which may arise from the temporary failure of a cash correspondent bank/agent or underlying participant. The online overview of flows allows to identify potential liquidity issues and escalate immediately if necessary.

CBL has arranged to acquire sufficient intraday funding to meet its intraday objectives, to manage the timing of its liquidity outflows and to deal with unexpected disruptions of its intraday liquidity flows.

In parallel, CBL prudently values its liquid assets by monitoring their quality, concentration, and assessing their availability under stressed market conditions. CBL has in place appropriate governance on the placement of its liquid assets. These are maintained in separate accounts under the direct management of the liquidity management function and may only be used as source of contingent funds during stress periods.

For managing its ability to provide sufficient liquidity to honour its liquidity management objectives (for more details see <u>Chapter 12.2 Strategy</u>), CBL has put in place ex-ante measures to control the required level of liquidity (for more details see <u>Chapter 12.7 Risk mitigation</u>). A verification that all payment obligations have been met is done ex post. Any pending payment due to insufficient cash balance requires escalation.

CBL has intraday control procedures in place defining intraday liquidity management processes, timelines, thresholds for escalation to Management and crisis management system alerting the appropriate level of Management depending on the criticality of the liquidity incidents.

CBL's liquidity management policy states the roles and responsibilities when facing a crisis event where day-to-day liquidity generation measures would not be sufficient to cover a liquidity shortage in one or several currencies. The liquidity issue would be escalated to CBL's Executive Board which can decide in view of the liquidity crisis event to activate exceptional liquidity generation measures listed in CBL's liquidity contingency funding plan.

### 12.5. Liquidity Metrics

CBL manages its liquidity risk using both regulatory liquidity ratios (reflecting the normative perspective) as well as internally defined liquidity metrics (covering the economic perspective).

### 12.5.1. Regulatory Liquidity Ratios

For CBL, regulatory ratios have been defined by European and national laws.

### 12.5.1.1. Liquidity Coverage Ratio (LCR)

In accordance with Commission Delegated Regulation (EU) No 2015/61 (LCR DA) with regard to liquidity coverage requirements, CBL needs to hold a sufficient liquidity buffer of high-quality liquid assets (HQLA) to cover the net cash outflows in stressed conditions over thirty days. Reporting duties are monthly. The minimum ratio for CBL is 100%, with internal early warning and recovery indicator set respectively to 110% and 105%. In addition to monthly reporting to the regulator, CBL monitors the ratio on a daily basis.

The evolution of this ratio for the year 2023 as well as its components is presented in following template.

	Scope of consolidation: solo		Total unweighted	d value (average)		Total weighted value (average)				
	(in 000 of €)	Т	T-1	T-2	T-3	Т	T-1	T-2	T-3	
EU 1a	Quarter ending on (DD Month YYY)	31/12/2023	30/09/2023	30/06/2023	31/03/2023	31/12/2023	30/09/2023	30/06/2023	31/03/2023	
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12	
HIGH-Q	UALITY LIQUID ASSETS	<u>.</u>								
1	Total high-quality liquid assets (HQLA)					17,737,456	18,486,162	18,911,083	18,937,953	
CASH -	OUTFLOWS									
2	Retail deposits and deposits from small business clients, of which:	0	0	0	0	0	0	0	0	
3	Stable deposits									
4	Less stable deposits									
5	Unsecured wholesale funding	12,208,659	14,275,927	16,307,017	17,878,144	12,940,671	14,613,577	16,269,275	17,470,970	
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	5,046,565	3,979,403	2,635,621	1,340,921	1,261,630	994,849.32	658,904.81	335,230	

7	Non-operational deposits (all counterparties)	12,028,010	14,119,165	16,048,629	17,514,095	11,498,392	13,461,966	15,351,981	16,771,690
8	Unsecured debt	180,649	156,762	258,389	364,049	180,649	156,762	258,389	364,049
9	Secured wholesale funding	-				9	9	9	9
10	Additional requirements	262,925	269,450	260,326	230,023	262,925	269,450	260,326	230,023
11	Outflows related to derivative exposures and other collateral requirements	262,925	269,450	260,326	230,023	262,925	269,450	260,326	230,023
12	Outflows related to loss of funding on debt products								
13	Credit and liquidity facilities								
14	Other contractual funding obligations	284,778	241,626	187,102	141,966	235,132	197,899	153,562	110,288
15	Other contingent funding obligations	963,294	1,202,581	1,447,706	1,565,797	0	0	0	0
16	TOTAL CASH OUTFLOWS					13,438,736	15,080,935	16,683,171	17,811,290
CASH -	INFLOWS								
17	Secured lending (e.g. reverse repos)	6,370,608	6,384,504	6,878,496	7,143,366	22,952	14,599	23,416	22,276
18	Inflows from fully performing exposures	1,281,017	1,461,217	1,693,071	1,789,965	854,848	1,076,889	1,389,392	1,621,321
19	Other cash inflows	371,934	407,037	375,623	396,142	111,714	110,083	97,544	106,200

EU- 19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in nonconvertible currencies)								
EU- 19b	(Excess inflows from a related specialised credit institution)								
20	TOTAL CASH INFLOWS	8,023,560	8,252,759	8,947,190	9,329,473	989,514	1,201,572	1,510,352	1,749,798
EU- 20a	Fully exempt inflows								
EU- 20b	Inflows subject to 90% cap								
EU- 20c	Inflows subject to 75% cap	8,023,560	8,252,759	8,947,190	9,329,473	989,514	1,201,572	1,510,352	1,749,798
TOTAL	ADJUSTED VALUE								
EU-21	LIQUIDITY BUFFER					17,737,456	18,486,162	18,911,083	18,937,953
22	TOTAL NET CASH OUTFLOWS	-				12,449,222	13,879,363	15,172,819	16,061,491
23	LIQUIDITY COVERAGE RATIO					142.48%	133.19%	124.64%	117.91%

Template EU LIQ1 - Quantitative information of LCR

For the purposes of this disclosure the values of LCR elements are calculated as the simple averages of month-end observations over the twelve months preceding the end of each quarter.

In application of Article 451(2) CRR institutions shall provide qualitative information on LCR by using template EU LIQB. To facilitate the reading the relevant information is disclosed as free text below.

Row number	Qualitative information - Free format
(a)	Explanations on the main drivers of LCR results and the evolution of the contribution of inputs to the LCR's calculation over time
(b)	Explanations on the changes in the LCR over time
(c)	Explanations on the actual concentration of funding sources
(d)	High-level description of the composition of the institution's liquidity buffer.
(e)	Derivative exposures and potential collateral calls
(f)	Currency mismatch in the LCR
(g)	Other items in the LCR calculation that are not captured in the LCR disclosure template but that the institution considers relevant for its liquidity profile

Table EU LIQB on qualitative information on LCR, which complements template EU LIQ1.

#### Points (a) and (b)

As the balance sheet of CBL is essentially short term the variation in the ratio is driven by the total size of the balance sheet. In addition, CBL launched a project to classify part of clients' positions as operational deposits from clearing, custody and settlement activities with the preferential outflow rate according to the provisions of Article 27 LCR DA. The model was approved by the Regulator and successfully implemented in January 2023. The split of deposits into operational and non-operational deposits led to a reduction of weighted outflows and therefore an increase of the LCR of an average of 25 percentage points between T and T-3, whereby the liquidity buffer and net cash outflows were calculated for each of the four calendar quarters (January-March, April-June, July-September, October-December) preceding the disclosure date as the simple averages of month-end observations over the twelve months preceding the end of each quarter.

#### Point (c)

The biggest part of outflows corresponds to the deposits made by CBL's clients as provision for their settlement activity. CBL places these funds in the market through on-balance sheet placements with central banks or securities financing transactions to mitigate credit and liquidity risk. Additional information on concentration of funding sources can be found in <a href="Chapter 12.5.2.6">Chapter 12.5.2.6</a>.

#### Point (d)

The liquidity buffer of CBL is composed of the following elements:

- Withdrawable reserves with central banks, mainly BCL;
- Securities in own investment portfolio;
- Securities received as collateral in reverse repurchase agreements.

CBL invests in extremely high-quality bonds issued by EU governments, public sector entities guaranteed by such governments, multilateral developments banks and international organisations that qualify for 0% risk weight under CRR rules.

Under the current Treasury Policy, collateral accepted for reverse repurchase agreements also qualifies as high-quality liquid assets under Article 10 LCR DA.

Securities which were repledged in repurchase agreements are excluded from the liquidity buffer.

#### Point (e)

Derivative exposures are arising from FX forwards and swaps used to mitigate FX risk. An additional outflow for derivatives based on variation margins is calculated using a historical look back approach.

#### Point (f)

The information on currency mismatch management is provided in <a href="Chapter 12.5.2">Chapter 12.5.2</a>.

#### Point (q)

In application of Article 23 LCR DA, CBL submits an annual assessment of potential other outflows arising from other products. Main elements of this analysis are ASL business (see <a href="11.4.6 ASL">11.4.6 ASL</a>) and intraday overdraft facilities. However, these items do not create any material outflows.

# 12.5.1.2. Net Stable Funding Ratio (NSFR)

According to Article 6(4) point (b) CRR, institutions authorised as CSDs according to Article 16 and point (a) of Article 54(2) CSDR are exempted from the Net Stable Funding Ratio (NSFR) on an individual basis. As a result, CBL is exempt from reporting of the NSFR. The ratio is, however, reported on quarterly basis to the regulator on consolidated level by Clearstream Holding AG.

# 12.5.2. Internal Liquidity Metrics

To complement the regulatory liquidity ratios, several internal liquidity metrics are in place. These metrics are calculated using assumptions specific to the liquidity risk drivers inherent in CBL's business model.

### 12.5.2.1. Intraday liquidity risk tolerance

The intraday liquidity risk tolerance indicator sets thresholds for intraday liquidity usage. These thresholds represent the maximum intraday liquidity usage per currency, represented by the usage of uncommitted lines, that CBL tolerates.

Thresholds are based on the committed funding lines available in each currency and are represented in a color-coded alert system.

#### 12.5.2.2. Mismatch limits

The mismatch limit defines the maximum net amount of assets and liabilities within a portfolio for trades with a tenor exceeding three business days. The mismatch limit for CBL is derived from the amount of client cash expected to be available on a permanent basis, thus limiting the liquidity risk. The methodology and its assumptions and parameters are described in detail in the Clearstream Banking Investment Policy.

Mismatch limits are defined for money market and investment portfolios and reviewed quarterly.

### 12.5.2.3. Internal liquidity ratio I (liquid assets/net client cash)

The objective of the internal liquidity ratio I limit is to ensure a more dynamic adaptation to a changing liquidity situation. These limits prevent the new creation of mismatch positions by traders in cases of a sudden/temporary decrease of net client cash balances until this is permitted again by the liquidity risk exposure.

The basis for the calculation of the liquid assets and net client cash is the treasury operating system, in which all treasury transactions are recorded. Liquidity is calculated for EUR, USD, GBP, AUD and JPY.

The ratio is monitored daily by Treasury & Liquidity Controls, an independent unit, and reported monthly to CBL's Executive Management, Risk Management and the Head of Treasury. The ratio is the responsibility of the Head of Treasury, who acts as the secondary controlling body. During 2023, the internal liquidity ratio I was not breached.

On 31 December 2023, the internal liquidity ratio I was as follows:

Currencies	Ratio	Limits
EUR	144%	>50%
USD	91%	>60%
GBP	100%	>90%
AUD	97%	>90%
JPY	97%	>90%

Table 5: Internal liquidity ratio I

### 12.5.2.4. Internal liquidity ratio II (liquidity sources/client credit usage)

The objective of the internal liquidity ratio II is to ensure that liquidity sources provide sufficient liquidity to cover peak client end-of-day overdraft balances observed over the preceding two years. The ratio is calculated monthly.

During 2023, all ratios and limits were in line with the limits set in the Clearstream Banking Liquidity Management Policy. The internal ratio II on 31 December 2023 was reported as follows:

Currencies	Ratio	Limits
EUR+USD	588%	>200%
EUR	497%	>100%
USD	403%	>100%

Table 6: Internal liquidity ratio II

### 12.5.2.5. Liquidity buffer

Further, CBL has defined liquidity buffers in EUR, USD and GBP. The EUR liquidity buffer is the sum of cash held at the central bank, cash held with creditworthy financial institutions, and unencumbered assets/collateral readily available and convertible into cash. The USD and GBP liquidity buffers are composed of cash held with creditworthy financial institutions and unencumbered assets/collateral readily available and convertible into cash.

Minimum required liquidity buffers, and additionally target buffers, have been determined. Target buffers indicate the EUR equivalent liquidity amount which should constantly be available in each of the three currencies.

During 2023, the liquidity buffers were comfortably above the limits and targets as set in the Clearstream Banking Liquidity Management Policy.

Currency	Actual buffer (in EUR '000,000)	Minimum required liquidity buffer (in EUR '000,000)		option indicator	Liquidity recovery option indicator (red)
EUR	6,604	1,700	4,000	4,000	1,700
USD	6,410	1,000	1,900	1,900	1,000
GBP	710	150	250	250	150

Table 7: Clearstream Liquidity buffer as of 31 December 2023

# 12.5.2.6. Funding source concentration

To avoid excessive intraday cash concentration on CBL's cash correspondent network, intraday cash concentration limits are set and constantly monitored. Intraday overstepping of cash concentration limits results in alerts to Treasury, which is responsible for day-to-day liquidity management, and requires immediate action to reduce the current cash concentration.

Treasury also ensures diversification of its liquidity sources by arranging multiple types of committed funding arrangements and ensuring a minimum number of liquidity providers for each relevant currency. Treasury & Liquidity Controls controls the concentration of liquidity providers via daily reporting and notifies the CBL Executive Board of any breaches to the limits.

### 12.6. Stress Testing

A variety of stress tests is used as the main control tool for liquidity risk from a second line of defence perspective.

A liquidity stress test is performed by identifying the liquidity needs arising in a pre-defined stress event and analysing whether enough liquidity sources would be available to cover those needs within a given time frame. The design of a stress test scenario is such that the assumptions are extreme, but plausible.

CBL's Liquidity Stress Testing framework was designed to comply with the CSDR. The Commission Delegated Regulation (EU) 2017/390 specifies the details of the frameworks and tools required for monitoring, measuring, managing, reporting and publicly disclosing liquidity risks, including those that occur intraday. The key requirements on liquidity stress testing are described in Articles 35(5), 36(6) and 36(7) of Commission Delegated Regulation (EU) 2017/390.

The CSDR-compliant Liquidity Stress Testing model is forward-looking and considers all entities and products that may pose a material liquidity risk to CBL. It is calculated on combined and relevant currency level, whereby the liquidity exposures are tested against CBL's qualifying liquid resources. Ten different stress scenarios have been defined, eight of which are calculated on a daily basis and two on a monthly basis. The stress scenarios were designed using different combinations of the requirements described in Article 35(5), 36(6) and 36(7) of Commission Delegated Regulation (EU) 2017/390. They comprise amongst others the default of the two clients towards which CBL has the largest intraday liquidity exposures (Cover 2) and the default of an important service provider.

As result of the stress tests, the end-of-day liquidity gap is derived per scenario and currency over a 30-day stress horizon. It is defined as the relevant key risk indicator used to monitor the viability of CBL's business model under stressed conditions. The aim is to ensure a sufficient buffer of QLR under consideration of available liquidity sources and available committed FX swap lines.

If the liquidity stress tests result in breaches, that is, the liquidity needs could not be covered by available liquidity sources on a same-day basis, Clearstream Risk Management reports the breach to the ALCO. Based on an analysis of the breach(es), CBL will review and adjust its contingency funding plan and/or funding plan, if required. The Executive Board will be informed accordingly. Also, the adequacy of CBL's liquidity risk management framework and set of liquidity providers will be assessed considering the liquidity stress test results and their analysis, and adjusted if necessary.

Throughout 2023, in the large majority of calculated liquidity stress scenarios, Clearstream had sufficient qualifying liquid resources to cover the identified liquidity need. Any potential liquidity gaps have been appropriately assessed and all necessary actions have been taken by Clearstream to prevent reoccurrence.

### 12.7. Risk mitigation

To meet its liquidity management objectives, CBL maintains several liquidity sources. Specifically, in compliance with CSDR, CBL has set up qualifying liquid resources. It is ensured that the minimum amount of available QLR is at any time at least sufficient to manage the risk to which CBL would be exposed following the default of at least two clients (including their parent undertakings and subsidiaries) towards which CBL has the largest intraday exposures.

To further ensure a sufficient level of liquidity to satisfy liquidity obligations under normal and stressed conditions, CBL has defined liquidity buffers in EUR, USD and GBP. Chapter 12.5.2 Internal liquidity metrics provides further details.

To complement the permanent liquidity buffers, CBL has – amongst others – the following arrangements and measures in place to mitigate liquidity risks:

- A network of cash correspondent banks to support the funding requirements for CBL's settlement operations in more than 40 currencies via uncommitted, unsecured overdraft lines (see Chapter 12.7.1);
- A broad range of money market counterparties for both secured and unsecured funding (see Chapter 12.7.1);
- Procedures for prioritisation of payment obligations (see Chapter 12.4);
- Intraday procedures and tools to anticipate and forecast potential intraday liquidity shortfalls (see Chapter 12.4); and
- Escalation and contingency funding procedures (see Chapter 12.7.2).

# 12.7.1. Standard Liquidity Generation Measures

Given the short-term nature of CBL's liquidity risk because of its core settlement activities, CBL established a variety of standard liquidity generation measures.

The following instruments are available for short-term funding:

- Access to overnight repo markets in EUR, USD and GBP against eligible collateral
- Reliable repo framework agreements with a range of financial institutions in multiple currencies;
- Access to unsecured uncommitted funding via a range of creditworthy financial institutions:
- Reliable framework agreements for foreign exchange swaps with a range of financial institutions in multiple currencies;
- Access to routine credit at the central bank (in EUR and GBP).

### 12.7.2. Contingency Funding

Additional liquidity generation capabilities are available to face a contingency situation. These additional contingency funding capabilities and measures are listed below.

- Exceptional liquidity generation measures:
  - Usage of CBL's own QLR and/or the remaining liquidity buffers
  - Committed unsecured, repo and FX swap facilities (available in multiple currencies)
  - EUR 750 mn revolving credit facility (including a EUR 400 mn intraday swing line):
  - Monetisation and liquidation of client collateral (in the event of a client's default);
  - Monetisation and/or liquidation of collateral from CBL Treasury repo transactions;
  - Sale and repo out of CBL's proprietary securities portfolio;
  - Marginal Lending Facility (available in EUR only);
  - EUR 1 bn multi-currency Euro Commercial Paper program (available in EUR and USD currencies);
  - Intra-group funding.
- Exceptional intraday liquidity saving measures:
  - Cancellation of client credit lines;
  - Flagging income and redemption proceeds as not available for cash loan, thereby preventing clients' withdrawals (by using their credit line) of cash that has not yet been received by CBL;
  - Timed payments/prioritised payments.

# 12.8. Monitoring and Reporting

On a daily basis, CBL's liquidity risk exposure and breaches of limits are controlled and reported by Treasury & Liquidity Controls. Any limit excesses which occurred as part of Treasury activity are reported to CBL's Executive Management upon their detection. Also, any breach that occurred in daily liquidity stress tests is reported to the Chief Risk Officer and ALCO members on the day of the detection of the breach.

On a monthly basis, a summary of liquidity stress results is reported by Clearstream Risk Management via the ALCO to the Clearstream Risk Committee.

Further to this, the reporting approach laid out in <u>5.6.5</u>. Risk monitoring and reporting also applies to the management of Liquidity Risk, that is, liquidity risk exposures and limit breaches are included in the quarterly risk report to the Executive Management of CBL.

On an annual basis, the Internal Liquidity Adequacy Assessment Process (ILAAP) of Clearstream, defined at Clearstream Holding level, is reviewed and the corresponding ILAAP report is produced as a cross-unit effort (including first and second line of defence) under the lead of Clearstream Risk Management. The final report is reviewed amongst others by CBL Compliance and the Chief Risk Officer of CBL and CH, and then submitted to the

relevant Executive Boards for approval, before its submission to the regulatory authorities. Internal Audit, as the third line of defence, audits the ILAAP regularly.

### 12.9. Liquidity Adequacy

CBL ensures the adequacy of its liquidity via the ILAAP, which stands next to the Internal Capital Adequacy Assessment Process (ICAAP) and ensures that CBL manages its liquidity position adequately within a holistic management framework and meets all payment obligations on time.

Liquidity adequacy is secured from two forward-looking perspectives complementing each other and forming an integrated management approach:

- From an economic perspective, CBL considers the specific features of the company business model and ensures that the expected outflows are executed in a timely manner
- In the normative perspective, CBL manages its regulatory liquidity requirements by internal management buffers on top of regulatory limits as well as projections of regulatory ratios under economic stress assumptions.

The Executive Board is ultimately responsible for the soundness of the ILAAP, with a focus on:

- Ultimate responsibility for the liquidity adequacy statement as well as for the review and approval of the ILAAP;
- Review and approval of internal risk management documentation;
- Approval of the overall risk strategy and risk appetite;
- Approval of the risk quantification methodologies, including high-level risk measurement assumptions, parameters, data, and systems used;
- Approval of the risk identification process as well as the internal risk inventory and taxonomy;
- Approval of the stress testing framework;
- Ongoing review and approval of the monthly liquidity risk related reporting;
- Approval of the Liquidity Risk Management Framework;
- Approval of the liquidity strategy and capital planning; and
- Overseeing the integration of internal capital and liquidity framework (ICAAP and ILAAP) into the Company.

The components are supported by objectives, assumptions, and methodologies, and are captured by clear, concise and consistent documentation approved by the Executive Management. To determine the required liquidity, the complete risk profile of CBL has been considered.

# 12.9.1. Liquidity Risk Adequacy Declaration

The Executive Board of CBL approves and signs on an annual basis the Liquidity Adequacy Statement, according to which CBL is compliant with the regulatory requirements having tools and measures in place to monitor, manage and report liquidity risk appropriately.

In 2023, CBL had excess liquidity on a daily basis, and no liquidity shortage occurred under business-as-usual conditions. In conclusion, CBL's liquidity is considered adequate to cover all identified risks related to liquidity.

### 12.9.2. Concise Liquidity Risk Statement

Due to CBL's business model, CBL's funding is mainly composed of short-term liabilities (that is, overnight and intraday client credit balances), own funds, funding raised to cover client debit balances, as well as funds raised in the money and capital markets to increase CBL's liquidity.

Hence, CBL's liquidity risk profile is strongly focused on short-term (mainly intraday) liquidity. The liquidity risk appetite is defined by the Executive Management, taking business needs, regulatory requirements as well as the overarching risk strategy and appetite into account. This liquidity risk appetite is translated into a limit system, providing boundaries for the day-to-day liquidity management in the first line of defence (see <a href="Chapter 12.2 Strategy">Chapter 12.2 Strategy</a>).

In compliance with CSSF Circular 09/403, a comprehensive liquidity risk management framework has been established at Clearstream group level, summarised in the Clearstream Banking Liquidity Management Policy. This policy is reviewed by the ALCO and approved by the Executive Boards of CBL and Clearstream Banking AG on an annual basis. It comprises inter alia the definition of liquidity parameters, contingency planning, governance and the definition of senior management responsibilities.

Within the established liquidity risk management framework, liquidity risks are measured, monitored and mitigated as described in <u>Chapter 12.4</u>. Regulatory ratios are calculated and projected as part of the normative perspective, while internal liquidity metrics are defined to support the management of liquidity risks in the economic perspective. A qualitative and quantitative overview of these key ratios and metrics is provided in <u>Chapter 11.5</u>.

Further to this, liquidity stress testing is used to test the sufficiency of CBL's liquidity resources in extreme but plausible scenarios. It is thus an important tool to address and appropriately manage the liquidity risk arising from CBL's business activities. Details can be found in <a href="Chapter 12.6">Chapter 12.6</a>.

To ensure the continuous adequacy of CBL's liquidity risk management and reflect any relevant external/internal developments, CBL regularly reviews and adjusts its measurement, monitoring and management processes for liquidity risk.

This statement is approved as part of the general concise risk statement.

# 13. Market Risk

In application of Article 435 CRR institutions shall disclose their strategies and processes to manage market risk using template EU MRA below. To facilitate the reading of the disclosures the relevant information is provided as free text in following chapters.

		Disclosures chapter
a	Points (a) and (d) of Article 435(1) CRR  A description of the institution's strategies and processes to manage market risk, including:  - An explanation of management's strategic objectives in undertaking trading activities, as well as the processes implemented to identify, measure, monitor and control the institution's market risks  - A description of their policies for hedging and mitigating risk and strategies and processes for monitoring the continuing effectiveness of hedges	Chapters 13.1, 13.2, 13.3, 13.4
b	Point (b) of Article 435(1) CRR  A description of the structure and organisation of the market risk management function, including a description of the market risk governance structure established to implement the strategies and processes of the institution discussed in row (a) above, and that describes the relationships and the communication mechanisms between the different parties involved in market risk management.	Chapters 13.1, 13.2
С	Point (c) of Article 435(1) CRR Scope and nature of risk reporting and measurement systems	Chapter 13.1, 13.2, 13.4, 13.5

Template EU MRA: Qualitative disclosure requirements related to market risk

#### 13.1. Market Risk Governance

As per the Clearstream Banking Investment Policy, CBL is not involved in proprietary trading activities and does not maintain a trading book. Market risks arise as forex risk in net positions in foreign currencies. It also arises as an interest-rate risk in the banking book, particularly from money market activities (mostly secured) and investments in securities that are purchased with the intention to "buy and hold."

Clearstream's general structure, organisation and process of risk management and its risk strategy are described in the section <u>5</u>. <u>Risk management overview</u>.

The Clearstream Banking Investment Policy sets the framework for hedging future currency risk and interest income. It includes the approved hedging instruments and the delegation of power for hedging interest income and foreign exchange risk. Any individual currency exposure exceeding the level of materiality has to be hedged.

The risk strategy is translated into a limit system, which is monitored daily. The Clearstream Banking Investment Policy defines limits, and responsibilities. Treasury & Liquidity Controls (hierarchically independent from Treasury Front Office) controls that all risk parameters set in the investment policy are respected and directly reports to senior management any related breaches accordingly.

#### 13.2. General Measurement

Besides the overall risk appetite calculated via VaR, interest rate risk is calculated on all positions under Treasury management, applying a predefined parallel shift on the yield curve. Interest rate risk on all positions under Treasury management is computed daily by applying a 1% parallel shift for the money market portfolio and a 2% parallel shift for the investment portfolio to the respective yield curve and assessing the effect on the net present value (NPV) of this portfolio.

In cases where Clearstream's budgeted interest income should be hedged, the effectiveness of potential hedges is measured, and the credit rating of the trade counterparties is regularly controlled.

Foreign exchange risk is controlled using a limit system. Since Clearstream has payables and receivables in foreign currencies, only the net exposure is relevant for the exposure calculation. In cases where a certain level of foreign exchange exposure is exceeded in a currency, the risk of this currency exposure should be hedged. The effectiveness of potential foreign exchange risk hedges is measured, and the credit rating of the trade counterparties is regularly controlled.

Since CBL calculates its market risk exposure for regulatory purposes according to the standardised approach, it is required to disclose its capital requirements according to point 127 of the EBA Guidelines in conjunction with Article 445 CRR. However, as previously mentioned, CBL does not maintain a trading book. Hence, CBL's only risk exposure – which is addressed in this chapter – is the foreign exchange risk in the banking book.

The information on FX risk stemming from currency position is provided in the following template:

	<b>T</b>	
	(in 000 of €)	RWEAs
	Outright products	64,052
1	Interest rate risk (general and specific)	
2	Equity risk (general and specific)	
3	Foreign exchange risk	64,052
4	Commodity risk	
	Options	-
5	Simplified approach	
6	Delta-plus approach	
7	Scenario approach	
8	Securitisation (specific risk)	
9	Total	64,052

Template EU MR1 - Market risk under the standardised approach

The split of the foreign exchange position is provided below:

(in 000 of €)	ALL POSITIONS		NET POSITIONS		POSITIONS SUBJECT TO CAPITAL CHARGE		TOTAL RISK EXPOSURE AMOUNT
	LONG	SHORT	LONG	SHORT	LONG	SHORT	
TOTAL POSITIONS	19,263,977	17,742,270	1,525,017	3,310	64,052	0	64,052
Currencies closely correlated	7,277,739	5,816,774	1,460,965	1			
of which: reporting currency			1,460,965				
All other currencies (including CIUs treated as different currencies)	11,986,239	11,925,496	64,052	3,309	64,052	0	

Table 8: Foreign exchange position as of 31 December 2023

### 13.3. Market Risk Mitigation

Market price risk can arise in connection with cash investments or borrowing because of fluctuations in interest rates, foreign exchange rates and other prices, as well as through corporate transactions. In the year under review, the expected foreign exchange exposure resulting from CBL's budgeted USD-based net interest income (NII) was hedged against a change in foreign exchange rate.

If a foreign exchange hedge is undertaken, testing of the effectiveness of hedging transactions is performed regularly in compliance with IFRS 9.

### 13.4. Monitoring and Reporting

Treasury & Liquidity Controls performs market risk control. Treasury & Liquidity Controls is responsible for monitoring compliance with limits and issues monthly reports to the relevant executive management and Clearstream Financial Risk. Treasury & Liquidity Controls monitors exposures against limits daily and immediately reports excesses to executive management, Clearstream Financial Risk and Treasury. This function is independent of the Treasury Front Office, which manages liquidity and executes transactions (liquidity management function).

# 13.5. Foreign Exchange Risk

CBL transacts settlement and custody services business in more than 40 different currencies.

Clients maintain cash and securities accounts with CBL in those currencies in which they transact their business. Amounts in currency transmitted to CBL by clients are registered in the respective clients' account(s) in that currency. The same is true for any withdrawal of funds by clients (for example, for settlement purposes or custody payments).

Debits and credits of all clients in the same currency are held by CBL at its cash correspondent banks (CCBs). Treasury analyses balances for each currency as a basis for placings. Where there is a requirement to fund net currency credit facilities, such takings are always made in the relevant currency. Therefore, concerning multi-currency settlement, CBL bears no material currency risk.

A limited amount of local currency is held at CBL representative offices in each location to cover expenses. Also, interest earned on currency placings above interest payable to clients on currency balances will cause (generally long) currency positions.

Additionally, Clearstream provides foreign exchange services to its clients. To remain within the approved limits set in the Clearstream Banking Investment Policy, foreign exchange risk resulting from the execution of client foreign exchange requests is covered daily in the foreign exchange market.

### 13.5.1. Foreign Exchange Risk Measurement

Foreign exchange currency positions stemming from corporate activities and client foreign exchange transactions are covered via spot foreign exchange transactions. The Clearstream Banking Investment Policy defines the maximum open foreign exchange position allowed for all currencies. A report showing the foreign exchange positions in all currencies is produced daily. Treasury & Liquidity Controls (hierarchically independent from Treasury) controls the foreign exchange positions against the limit on a daily basis and reports any overstepping of the limit to the executive board.

Forward foreign exchange transactions may be undertaken in anticipation of expected future exposures in foreign currencies to hedge the expected foreign exchange exposure resulting from CBL's budgeted USD based net interest income (NII). Hedges were performed in 2023.

### 13.5.2. Interest Rate Risk in the Banking Book

CBL's cash is placed and refinanced primarily through overnight secured reverse repos and placings with BCL in EUR currency and overnight foreign exchange swaps. In addition, CBL primarily purchases highly liquid and low-risk-weighted investments. The investment portfolio of CBL aims at capital preservation and providing core capital investment. Consequently, these portfolios are constructed to contain both market and credit risks and consist mainly of zero-risk-weighted debt securities.

Derivative instruments are not offered to clients. The use of derivative instruments is restricted to:

- Forward foreign exchange contracts that hedge or eliminate structural foreign exchange exposures.
- FX swap contracts to avoid large unsecured exposures with commercial banks and/or to convert available funds in one currency into another currency where funds are required to support the securities settlement efficiency.

Clearstream monitors currency and interest rate exposures daily using reporting generated by the general ledger accounting system and its client cash ledgers or the treasury ledger.

Clearstream's assets and liabilities are managed to contain interest rate risk (IRR) within limits established by the Clearstream Banking Investment Policy. Liabilities usually determine the structure of its assets. The close matching of investments and client deposits ensures that Clearstream can control its IRR.

The Clearstream Banking Investment Policy defines the maturity mismatch limits, the IRR sensitivity limits, and the maximum tenor for each currency or group of currencies. Limits are based on the IRR and the concepts of duration and gap. Duration means the remaining maturity of every deal on the asset and liability side. Gap means the IRR on the asset side minus the IRR on the liability side. The IRR is calculated daily based on the net present value (NPV) of a 1% interest rate change for trades/instruments with a remaining life to maturity of less than one year and otherwise a 2% interest rate change.

	31 December 2023 (€' 000)				31 December 2022 (€' 000)			
	Mismatch/Po	rtfolio	Interest Rate Risk (IRR)		Mismatch/Portfolio		Interest Rate Risk (IRR)	
	Exposure	Limit	Exposure	Limit	Exposure	Limit	Exposure	Limit
CBL Investment portfolio (Fixed and FRN)	1,401,816	2,500,000	45,787	72,000	1,558,115	2,500,000	63,509	72,000
CBL MM portfolio	417,744	5,800,000	4	18,000	559,804	5,800,000	763	18,000

Table 9: Mismatch and IRR limits

Based on requirements of Article 448 CRR CBL discloses the qualitative and quantitative information on interest rate risk in the banking book using templates IRRBB1 and IRRBBA below.

		а	b	С	d	
Supervisory shock		Changes of the econor	mic value of equity	Changes of the net interest income		
	scenarios	Current period 31/12/23	Last period 31/12/22	Current period 31/12/23	Last period 31/12/22	
1	Parallel up	-44,697,771	-68,737,678	8,021,646	-6,145,862	
2	Parallel down	21,906,860	34,372,441	-8,021,646	6,145,862	
3	Steepener	10,248,392	3,832,470			
4	Flattener	-30,635,949	-35,414,515			
5	Short rates up	-45,395,971	-59,824,001			
6	Short rates down	23,421,495	24,506,948			

Template EU IRRBB1 - Interest rate risks of non-trading book activities

Row number	Qualitative information - free format
(a)	A description of how the institution defines IRRBB for purposes of risk control and measurement.

Clearstream only engages in limited term transformation, assets and liabilities mainly have matching terms. Changes in interest rates may impact Clearstream's P&L. Hence, the interest rate risk (IRR) between interest-earning assets and interest-bearing liabilities shall be limited. Interest rate sensitive assets mostly include Clearstream's money market and investment portfolios, while interest rate sensitive liabilities mainly consist of client cash balances.

For risk management purposes, the IRRBB is defined as the risk arising from interest rate changes which have an adverse impact on Clearstream's economic value and earnings. The risk is measured and monitored on a regular basis using a 99.9%-VaR Monte-Carlo simulation as well as the EBA shock scenarios.

(b)	A description of the institution's overall IRRBB management and mitigation strategies.
	lished constraining the maximum market risk from potential adverse changes in market interest the basis of the net present value (NPV) of a predefined yield change calculated for the remaining n reset.
historical movements in m	arstream applies a parallel shift of the yield curve (parameters are defined on the basis of narket yields and depending on remaining days to maturity) and assesses the resulting effect on a daily basis. An IRR limit defines the maximum acceptable loss which can be caused by an urve.
(c)	The periodicity of the calculation of the institution's IRRBB measures, and a description of the specific measures that the institution uses to gauge its sensitivity to IRRBB.
	ormed on a quarterly basis for the purpose of regulatory reporting. However, the interest-rate risk monthly for internal purposes using a 99.9%-VaR Monte-Carlo Simulation simulating the change
(d)	A description of the interest rate shock and stress scenarios that the institution uses to estimate changes in the economic value and in net interest income (if applicable).
purposes, a Monte-Carlo S	ng, Clearstream follows the shock scenarios prescribed in the EBA guidelines. For internal Simulation is performed. Hence, no specific shock is used in the base case. For ICAAP stress case itive flat 409 basis points shock.
(e)	A description of the key modelling and parametric assumptions different from those used for disclosure of template EU IRRBB1 (if applicable).
n/a	
(f)	A high-level description of how the bank hedges its IRRBB, as well as the associated accounting treatment (if applicable).
-	d controlled by a set of limits and triggers. In case of interest rate risk limit or trigger being vof the portfolio shall be conducted, and potential actions shall be decided.
not limited to, market disr	IRR arising from the benchmark related compensation system, in exceptional cases such as, but ruptions, Clearstream reserves the right to calculate client interest rates on the basis of interest ment of funds instead of predefined benchmark rates if necessary.
•	ly done indirectly, via the management of assets and liabilities, within the investment guidelines of g based on interest rates derivatives is not pursued.
on a regular basis, and iss	rols monitors compliance with all limits stipulated in the Clearstream Banking Investment Policy sues regular reports to the Clearstream Executive Board and to Clearstream Risk Management. re reported immediately to Senior Management incl. Clearstream Executive Board which is IRR
(g)	A description of key modelling and parametric assumptions used for the IRRBB measures in template EU IRRBB1 (if applicable).
	ructure of the items on our books, we do not overlay behavioural assumptions over the contractual The EBA guidelines shock scenarios are used for reporting purposes.
(h)	Explanation of the significance of the IRRBB measures and of their significant variations since previous disclosures.
The IRRBB measures are	fairly stable over the reporting periods.
(i)	Any other relevant information regarding the IRRBB measures disclosed in template EU IRRBB1 (optional).
n/a	
[1] [2]	Disclosure of the average and longest repricing maturity assigned to non-maturity deposits.

Due to the plain vanilla structure of the items on our books, we do not overlay behavioural assumptions over the contractual features of the products. Accordingly, all deposits are treated as overnight deposits for the purposes of IRRBB.

Template EU IRRBBA - Qualitative information on interest rate risks of non-trading book activities

## 14. Other Risk Types

The following subchapters are added to the report to provide supplementary information in regard to other risk types that were classified as material risks of CBL's overall risk profile.

#### 14.1. Business Risk

Business risk reflects the sensitivity to macroeconomic evolution and vulnerability to event risk arising from external threats, such as changes in the competitive, macroeconomic, regulatory or political environment or internal weaknesses (incl. erroneous strategic management decisions). It comprises, for example, threats from competition, a negative economic environment and other aspects, which lead to lower than projected revenues or higher than projected costs.

Revenue risk arises if the competitive environment may deteriorate as a result of the demand situation on the market, or a change in this situation; for example, due to an inability to sell the services, changes in client requirements, missed trends, a change in business areas, overpricing, or a lack of production efficiency. Major cost drivers for cost risk are, for example, labour, hard- and software or external providers, may deteriorate in the future. Moreover, Clearstream has direct and indirect dependencies on the EBITDA like interest rates, the Gross Domestic Product, interest or foreign exchange rates which could result in risk from macroeconomics. Besides the requirement to fulfil all current regulatory requirements, the risk of changing laws may additionally negatively impact Clearstream.

Summarised, Business Risk is the unexpected residual loss, which arises when the Earnings at Risk of Clearstream exceeds the anticipated earnings before tax, which can be due to the various reasons explained above. The unexpected loss due to deviations (positive or negative) from earnings before tax is calculated via the Earnings at Risk. Business Risk is reported, if the calculated Value at Risk is higher than the budgeted earnings before tax for the next four quarters.

For the regular monitoring of Business Risk, several control systems are used to understand the business risk environment and identify possible changes in the underlying risk profile. Clearstream Risk Management constantly monitors and reviews the external business risk with the help of Business Risk specific Key Risk Indicators. The Business Risk specific Key Risk Indicators are reported within the quarterly risk reporting. The purpose of the underlying early warning system is to determine if an ad hoc review of a particular risk component is required and to outline the required reporting to the Executive Management in case of a trigger event. In addition, different working groups and committees are established which are held on a regular and ad-hoc basis and support the review of the above described risk drivers including potential emerging or increased business risks for Clearstream.

#### 14.2. Pension Risk

Pension Risk is defined as the risk of losses due to increased costs from post-employment benefit plans based on non-market risk factors. The expected pension payments, and therefore the overall Pension Risk, are influenced by several factors:

- longevity in terms of unexpected changes compared to the anticipated life expectancy,
- inflation in terms of unexpected changes compared to the anticipated inflation rate,
- salary growth in terms of unexpected changes compared to the anticipated salary growth, and
- discount rate in terms of unexpected changes compared to the anticipated discount rate.

Pensions of current and past employees (incl. management personnel) are managed, especially through a variety of Pension Plans. Pension risk arises due to changes in significant parameters: discount rate, salary growth, inflation increase and life expectancy of employees. The majority of this risks arise due to the effect of changes in the discount rate effect on the amount of pension obligations and pension plan assets. This is reflected within Market Risk. The management of pension risk, including the financial risk aspects, is pension risk in the broad sense. Pension Risk, as an Aggregated Key Risk, covers pension risk in the narrow sense only, excluding the risks and impacts captured within Financial Risk.

The company may choose to take actions that result in a mitigation (/transformation) of Pension Risk. Examples of these mitigating actions include re-designing the approach used for the entity's pension fund structure, increasing the amount invested into external pension funds, altering how the pensions of new employees are handled, to stop taking new pensions, and to change the types of pension plan being offered.

### 14.3. Winding-Down and Restructuring Risk

Winding-Down and Restructuring Risk is defined as the risk of losses due to insufficient capital being held for an orderly winding-down or restructuring of operations and services, in the case where new capital cannot be raised. Winding-Down and Restructuring Risk comprises the situation in which the entities are faced with the need to restructure or wind down and the financial resources required to do so not being available.

Wind-down could be done by termination/service closing and realisation of assets whereas restructuring may be achieved by the application of recovery plans.

Capital requirements for winding-down and restructuring arise from a situation where usual operations still need to continue even though the actual expenses during a wind-down or restructuring of the operations may be significantly higher than the gross annual operational expenses because of the wind-down or restructuring costs.

Based on Article 47(2) of the Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 (CSDR), CBL has the responsibility to prepare a restructuring and wind-down plan. In this context, CBL has compiled this plan which shall form the basis for CBL to decide on potential strategies (that is, restructuring and wind-down strategies) to be followed in a restructuring or wind-down scenario, for identifying applicable tools, which could be implemented within these strategies and for ensuring the orderly winding-down or restructuring of its operations and services where the CSD is unable to raise new capital. The main objective of the plan is to show how the critical business functions will be maintained to ensure the continuation of systemically important business activities until those can be substituted or taken over by another entity. Furthermore, the plan is designed to provide procedures ensuring the timely and orderly settlement and transfer of the assets of clients and participants to another CSD in the event of a withdrawal of authorisation and outline the available wind-down strategies, in case other strategies were not successful or are no longer viable. CBL, as part of Clearstream Group, already has various risk mitigating measures in place that have proven sound in the past, such as stringent crisis management procedures and detailed business contingency measures. Due to this fact as well as CBL's risk profile and its financial strength, only very extreme events could trigger a potential near-default situation. The plan is subject to at least annual review and update.

## 15. Environmental, Social and Governance (ESG) Risks

According to the provisions of Article 449a CRR, as of 28 June 2022, large institutions which have issued securities that are admitted to trading on a regulated market of any Member State shall disclose information on ESG risks, including physical risks and transition risks.

While qualifying as large institution due to O-SII status, CBL is not a listed institution, and is wholly owned by Clearstream Holding AG and ultimately by Deutsche Börse AG. Neither shares nor debt securities issued by CBL are admitted to trading on any regulated markets.

In its communication to the CSSF dated 28 November 2022, CBL confirmed that it shall not be considered as a "listed institution" and therefore is not subject to ESG disclosures.

However, considering the growing importance of ESG risks, CBL has developed a comprehensive ESG strategy focusing notably on Corporate Social Responsibility, ESG Products and Services, ESG Risk and Compliance and ESG Communication with measurable targets and clear next steps to contribute to group-level targets.

Corporate Social Responsibility is divided into four areas: Environment Friendliness, Responsible Employer, Corporate Governance and Community Engagement. It comprises several initiatives ranging from the further development of employees' resource groups aiming at fostering diversity and inclusion, the inception of wellbeing and mental health programs, engagement with local communities in Luxembourg as well as environmental corporate savings measures performed with lighting change, electronics savings, waste management and staff awareness. ESG Products and Services offers a market infrastructure of choice for sustainable finance, providing access to financing across 60 markets and offering specific ESG products and services, such as reporting on markets or holdings.

The ESG Risk and Compliance focuses on structured views on short-, mid-, and long-term ESG regulatory requirements and management of ESG risks as per reference from supervisory bodies on climate and environmental risks. In practice, ESG dimensions have been incorporated within CBL's risk management and governance frameworks. Each risk identified in CBL's risk taxonomy is flagged if a potential ESG impact is anticipated, along with descriptions of the potential direct and indirect ESG impacts. ESG considerations are also an integral part of CBL's risk materiality assessment process and certain material risk scenarios include ESG drivers. To support this analysis, ESG data is sourced from selected providers. The next steps include further enhancements of the current methodology and approach following the implementation of the Circular No 21/773 on the Management of Climate-related and Environmental Risks until end of 2024. This includes further enhancing the integration of ESG considerations within the risk management framework and within the risk models and stress-testing approach.

Finally, ESG Communication focuses on formulating our ESG strategy and managing communication to stakeholder groups, both internal and external.

### 16. Remuneration

#### 16.1. Remuneration Overview

The Remuneration Policy ("Policy") is a central element for the implementation of the remuneration systems within the organisation. It is composed, in particular, according to Regulation (EU) No 2019/876 ("CRR 2"), Directive (EU) 2019/878 ("CRD V"), the EBA Guidelines EBA/GL/2021/04 on sound remuneration policies, Law of 5 April 1993 on the financial sector (as amended) ("Luxembourg Law"), and related CSSF circulars. The Policy is regularly reviewed to ensure compliance with the latest regulations; the last review took place in May 2023.

The qualitative disclosures on remuneration policy should be provided using table EU REMA below. "Policy" refers to Remuneration Policy, "Report" – to annual Remuneration Report, "Pillar III" - to present disclosures.

#### Table EU REMA - Remuneration policy

	re disclosures	Policy	Report	Pillar
(a)	Information relating to the bodies that oversee remuneration. Disclosures shall include:			
	<ul> <li>Name, composition and mandate of the main body (management body or remuneration committee as</li> </ul>			
	applicable) overseeing the remuneration policy and the number of meetings held by that main body during the			
	financial year.			
	<ul> <li>External consultants whose advice has been sought, the body by which they were commissioned, and in which</li> </ul>	1.2, 1.3	2	16.2
	areas of the remuneration framework.			10.2
	<ul> <li>A description of the scope of the institution's remuneration policy (eg by regions, business lines), including the</li> </ul>			
	extent to which it is applicable to subsidiaries and branches located in third countries.			
	<ul> <li>A description of the staff or categories of staff whose professional activities have a material impact on</li> </ul>			
4. 1	institutions' risk profile.			
(b)	Information relating to the design and structure of the remuneration system for identified staff. Disclosures shall include:			
	<ul> <li>An overview of the key features and objectives of remuneration policy, and information about the decision-</li> </ul>			
	making process used for determining the remuneration policy and the role of the relevant stakeholders.			
	<ul> <li>Information on the criteria used for performance measurement and ex ante and ex post risk adjustment.</li> </ul>			
	<ul> <li>Whether the management body or the remuneration committee where established reviewed the institution's</li> </ul>	3.2	3.1, 3.2	16.2
	remuneration policy during the past year, and if so, an overview of any changes that were made, the reasons for	J	0.1, 0.2	10.2
	those changes and their impact on remuneration.			
	<ul> <li>Information of how the institution ensures that staff in internal control functions are remunerated independently</li> </ul>			
	of the businesses they oversee.			
	<ul> <li>Policies and criteria applied for the award of guaranteed variable remuneration and severance payments.</li> </ul>			
(c)	Description of the ways in which current and future risks are taken into account in the remuneration processes. Disclosures	31 / 1	3.2. 3.4.3.7	16.2
	shall include an overview of the key risks, their measurement and how these measures affect remuneration.			10.2
(d)	The ratios between fixed and variable remuneration set in accordance with point (g) of Article 94(1) CRD.	3.6	3.3, 3.5	16.2
(e)	Description of the ways in which the institution seeks to link performance during a performance measurement period with			
	levels of remuneration. Disclosures shall include:			
	<ul> <li>An overview of main performance criteria and metrics for institution, business lines and individuals.</li> </ul>			
	<ul> <li>An overview of how amounts of individual variable remuneration are linked to institution-wide and individual</li> </ul>			
	performance.	3.7, 3.8	3.5	16.3
	<ul> <li>Information on the criteria used to determine the balance between different types of instruments awarded</li> </ul>			
	including shares, equivalent ownership interest, options and other instruments.			
	<ul> <li>Information of the measures the institution will implement to adjust variable remuneration in the event that</li> </ul>			
	performance metrics are weak, including the institution's criteria for determining "weak" performance metrics.			
(f)	Description of the ways in which the institution seeks to adjust remuneration to take account of longterm performance.			
	Disclosures shall include:			
	<ul> <li>An overview of the institution's policy on deferral, payout in instrument, retention periods and vesting of variable</li> </ul>	l		1
		l		I
	remuneration including where it is different among staff or categories of staff	4.5	3.5.1, 3.5.2, 3.6	16.3
	remuneration including where it is different among staff or categories of staff.	4.5	3.5.1, 3.5.2, 3.6	16.3
	<ul> <li>Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting,</li> </ul>	4.5	3.5.1, 3.5.2, 3.6	16.3
	<ul> <li>Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).</li> </ul>	4.5	3.5.1, 3.5.2, 3.6	16.3
(n)	<ul> <li>Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).</li> <li>Where applicable, shareholding requirements that may be imposed on identified staff.</li> </ul>	4.5	3.5.1, 3.5.2, 3.6	16.3
(g)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit	4.5	3.5.1, 3.5.2, 3.6	16.3
(g)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration	4.5		
(g)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including	4.5	3.5.1, 3.5.2, 3.6 3.5.1, 3.5.2	16.3
(g)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and	4.5		
	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.	4.5		
(g)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the	4.5	3.5.1, 3.5.2	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.	4.5		
	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point [k]	4.5	3.5.1, 3.5.2	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point [k]  For the purposes of this point, institutions that benefit from such a derogation shall indicate whether this is on	4.5	3.5.1, 3.5.2 Not required	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point (k)  For the purposes of this point, institutions that benefit from such a derogation shall indicate whether this is on the basis of point (a) and/or point (b) of Article 94(3) CRD. They shall also indicate for which of the remuneration	4.5	3.5.1, 3.5.2	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point (k)  For the purposes of this point, institutions that benefit from such a derogation shall indicate whether this is on the basis of point (a) and/or point (b) of Article 94(3) CRD. They shall also indicate for which of the remuneration principles they apply the derogation(s), the number of staff members that benefit from the derogation(s) and	4.5	3.5.1, 3.5.2 Not required	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point [k]  For the purposes of this point, institutions that benefit from such a derogation shall indicate whether this is on the basis of point (a) and/or point (b) of Article 94(3) CRD. They shall also indicate for which of the remuneration principles they apply the derogation(s), the number of staff members that benefit from the derogation(s) and their total remuneration, split into fixed and variable remuneration.	4.5	3.5.1, 3.5.2 Not required	
(h)	Information of the institution' criteria for ex post adjustments (malus during deferral and clawback after vesting, if permitted by national law).  Where applicable, shareholding requirements that may be imposed on identified staff.  The description of the main parameters and rationale for any variable components scheme and any other non-cash benefit  Information on the specific performance indicators used to determine the variable components of remuneration and the criteria used to determine the balance between different types of instruments awarded, including shares, equivalent ownership interests, share-linked instruments, equivalent non cash-instruments, options and other instruments.  Upon demand from the relevant Member State or competent authority, the total remuneration for each member of the management body or senior management.  Information on whether the institution benefits from a derogation laid down in Article 94(3) CRD in accordance with point (k)  For the purposes of this point, institutions that benefit from such a derogation shall indicate whether this is on the basis of point (a) and/or point (b) of Article 94(3) CRD. They shall also indicate for which of the remuneration principles they apply the derogation(s), the number of staff members that benefit from the derogation(s) and	4.5	3.5.1, 3.5.2 Not required	

Following templates as EBA Guidelines are available in published <u>remuneration report</u> in Chapter 4:

- Template EU REM1 Remuneration awarded for the financial year
- Template EU REM2 Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff)
- Template EU REM3 Deferred remuneration
- Template EU REM4 Remuneration of EUR 1 mn or more per year
- Template EU REM5 Information on remuneration of staff whose professional activities have a material impact on institutions' risk profile (identified staff)

However, as the CRR disclosure requirements are fulfilled in the Remuneration Policy and annual Clearstream Group Remuneration Report, this report only provides a summary of the key points and features of the Policy. For more detailed information, interested persons can

refer to the <u>Clearstream Remuneration Policy</u><sup>4</sup> or the <u>Clearstream Group Remuneration Report</u><sup>5</sup>.

#### 16.2. Governance

The Remuneration Committee is set up by the Supervisory Board and responsible for advising the Supervisory Board on the remuneration policy. The following are members of the Remuneration Committee of CBL, Luxembourg:

Chairman	Stephan Leithner
Vice-Chairman	Gregor Pottmeyer
Member	Wolfgang Gaertner

#### Tasks and responsibilities:

- Supervises the reasonableness of the remuneration system of executive
  management members. In particular, it supervises the appropriateness of the
  compensation of the Head of the risk function and of the compliance function as well
  as employees having a substantial influence on the overall risk profile of the
  institution. It also supports the Supervisory Board in monitoring the reasonableness
  of the remuneration system of employees as well as the institution. At the same time,
  it assesses the impacts of the remuneration system on the risk, capital and liquidity
  management.
- Supports the Supervisory Board in overseeing the internal control system and all other relevant areas in the structuring of the remuneration system.

Further details regarding the CBL Remuneration Committee, in particular its composition and tasks/responsibilities, are stipulated in the CBL Supervisory Board Internal Rules and Regulations.

The Executive Board of Clearstream Holding AG as a superordinate company according to the German Banking Act (KWG) is responsible for the implementation of a Clearstream Group-wide policy. The Clearstream Group remuneration system including remuneration schemes and the respective Terms and Conditions of instruments, which apply to the respective categories of staff, is implemented according to a cascading process from Clearstream Holding AG at Group level down to entity level of inter alia CBL, especially taking into account the regulatory requirements of Luxembourg.

<sup>4</sup> https://www.clearstream.com/resource/blob/3626312/9a810d558e835fe52471bb05e4492b86/clearstream-group-remuneration-policy-2023-ci-cbl-cs-data.pdf

https://www.clearstream.com/clearstream-en/about-clearstream/regulation-1-/remuneration-information

The Clearstream Group Remuneration Policy for Clearstream International S.A., CBL and Clearstream Services S.A. (including their subsidiaries, branches and representative offices) provides the applicable framework for the design and implementation of the Remuneration systems for all employees of the Company.

The contents are the same across the Clearstream Group for all Companies unless there are relevant differences in the business model, the risk profiles or local requirements that justify a difference in an individual case.

CBL shall conduct an annual risk analysis to identify categories of staff whose professional activities have a material impact on the institution's risk profile ("Risk Takers") and to whom specific requirements apply according to the respective regulatory specifications, unless exemptions apply.

An employee is deemed to be identified as Risk Taker especially if one of the qualitative and appropriate quantitative criteria on the identification of Risk Takers set out in Regulation (EU) 2021/923 is met. In this respect and amongst others, the following categories of staff are identified as Risk Takers:

- All members of the Executive Board or Supervisory Board.
- Members of the senior management.
- Employees responsible and accountable to the management body for control activities of the independent risk management function, compliance function or internal audit function.
- Employees heading or having managerial responsibility and whose professional activities are deemed to have a material impact on risk profile of a material business unit.
- Employees heading a (control) function responsible for legal affairs, finance including taxation, budgeting and accounting procedures, human resources, remuneration policy, information technology (which is considered as a technology function), information security, the management of outsourcing arrangements, the prevention of money laundering and terrorist financing or economic analysis.
- Employees identified pursuant to quantitative criteria, for example, employees whose total Remuneration exceed criterions set out by regulation and whose professional activities are deemed to have a material impact on the institution's risk profile.

Within CBL, the Supervisory Board decides on the remuneration system for the members of the Executive Board. The Executive Board decides on the remuneration system of all employee groups except for members of the Supervisory Board and members of the Executive Board.

The remuneration system has been elaborated in cooperation with the relevant Clearstream Group's control units (that is, Risk Management, Compliance, Internal Audit and the Group Compensation Officer, in the following "Compensation Officer"), taking into account Luxembourg specificities.

Within the Group, the competent functions of the consolidating institution and subsidiaries, including CBL, are supposed to interact and exchange information as appropriate.

If individual performance is determined, this shall be based on the achievement of a mix of quantitative/financial and qualitative/non-financial agreed goals, which shall be challenging and ambitious. The goals shall be consistent with the business and risk strategies, corporate values, risk appetite, long-term interests, as well as the cost of capital and the liquidity of the Group/Company.

The full amount of variable remuneration is subject to an ex-ante risk adjustment in the event of negative performance contributions, breach of duty and unconscionable conduct; it can be reduced to zero before the bonus award is made. The reduction shall not be compensated by positive performance contributions.

The performance of members of the Executive Board, Risk Takers and other employees is measured annually and documented and tracked in the respective appraisal systems. The performance assessment is executed by the respective line manager or, for members of the Executive Board, by the Supervisory Board.

The individual performance measurement is ensured through the respective appraisal systems.

The Policy is regularly reviewed to ensure compliance with the latest regulations; the last review took place in 2023 and reflects the revised requirements of CRD V and CRR II as adopted into national law.

The individual targets for Risk Takers in control units shall be independent from the performance of the business area they monitor and should not compromise their independence or create conflicts of interest in their advisory role.

To ensure that the remuneration parameters of Risk Takers in control units and the business units they monitor are not predominantly synchronised, targets only include the Group target achievement of Deutsche Börse Group as well as individual goals. The overall target achievement is measured by the Group target achievement of Deutsche Börse Group and by the individual goals, which are equally weighted.

Specifically, for Risk Takers in control units primarily control targets shall be set.

Guaranteed variable remuneration is exceptional and is only allowed in connection with the hiring of new staff, is limited to a maximum period of one year and subject to appropriate equity and liquid resources as well as sufficient capital in order to ensure the Company's Risk-Bearing Capacity.

In general, severance payments are variable remuneration. Payments in connection with premature termination shall take due account of the performance over time and shall not reward falling short of performance expectations or misconduct following Article 38-6(h) Luxembourg Law.

The variable remuneration must not limit the Group's or CBL's ability to sustainably maintain or recover an appropriate capital base. If the Group's or CBL's ability to sustainably maintain or recover an appropriate suitable capital base is limited, no variable remuneration is to be granted. The total amount of the variable remuneration ("Total Amount") shall be

determined in a formal, transparent and comprehensible process. Representatives of the relevant control units (for the determination of the bonus pool, performance criteria and remuneration awards) shall be involved within their scope of duties.

The Total Amount of variable remuneration is determined by summing up the actual individual variable remuneration that shall be awarded to all employees of the Company whereas such summed up amount is subject to the examination of side conditions, for example, on performance criteria derived from the Company's business and risk strategy in order to promote long-term sustainable success of the Company and to adequately reflect costs of capital and liquidity as well as risks incurred.

For the determination of the variable remuneration the target achievement on Company measurement level and the target achievement of the individual targets are multiplied with a risk adjustment factor. The risk adjustment factor is in general a combination based on the ratio of Value at Risk ("VaR") relative to the Available Risk Bearing Capacity ("ARBC") and the liquidity risk consideration reflecting the limits according to the respective risk strategy. In line with the Company's risk strategy, the VaR incorporates applicable risk types such as operational, financial and business risk as well as liquidity risk. The limit utilisation of each risk type (for example, operational, financial, business and liquidity risk) is measured on a regular basis, and evaluated using a traffic light system in accordance with the limits defined in the risk strategy. In the situation of a yellow or red traffic light, an assessment of the escalation process and mitigating measures (for example, capital allocation) is conducted to derive a potential reduction factor.

There shall be an appropriate ratio between the fixed and the variable remuneration. The variable remuneration may amount up to a maximum of 100% of the fixed remuneration. If national regulatory requirements allow the shareholders, owners or members of the institution to approve a ratio of 1:2 between the Fixed and Variable Remuneration components, the Variable Remuneration may amount up to a maximum of 200% of the Fixed Remuneration.

#### 16.3. Performance Link with Remuneration Levels

The Total Amount of the variable remuneration is based on a combination of the assessment of the performance of the overall result of the Group as well as individual goals including the area of responsibility. Details are stipulated in the respective remuneration scheme and the documentation of the determination of the Total Amount of variable remuneration.

The Variable Remuneration shall take into account the overall performance of Deutsche Börse Group, the Company (derived from Segment level) and the Individual level (including the area of responsibility) as applicable, which shall each in general be equally weighted in accordance with regulatory requirements. The allocation of the variable remuneration components within the Company shall also consider all types of current and future risks. When assessing individual performance, financial and non-financial criteria are considered. Further, the assessment of the performance is set in a multi-year framework. The criteria for determining the variable remuneration shall be consistent with the objective of long-term sustainable performance. Details are stipulated in the remuneration scheme.

Guidelines for variable remuneration shall take due account of possible mismatches of performance and risk periods. Payments of variable remuneration shall be deferred as appropriate. Variable remuneration is not guaranteed, that is, all variable remuneration is based on a performance measurement and can be zero.

If the deferral rule applies, at least 50% of the deferred and non-deferred parts of the variable remuneration shall be linked to the Group's long-term performance. For this purpose, the corresponding parts of the variable remuneration shall be granted in the form of Deutsche Börse AG share-based remuneration (instruments). Instruments shall be applied to both the deferred and non-deferred (upfront) portion of variable remuneration. Exemption limits in accordance with regulatory requirements of the Company and the Group may apply.

The payout schedules shall be sensitive to the time horizon of risks. If variable remuneration is paid, due account shall be taken of possible mismatches of performance and risk periods and it shall be ensured that payments are deferred as appropriate. If the deferral rule applies, at least 40% or respectively, 60% (depending on the category of Risk Taker or in the event of a variable remuneration of a high amount) of the variable remuneration component shall be deferred over a period that is no less than four to five years. Remuneration payable shall vest no faster than on a pro rata basis.

Prior to vesting, there is only an entitlement to an accurate determination of the respective part of the variable remuneration. Details, in particular the payout schedule, are stipulated in the remuneration scheme and the terms and conditions of instruments, in each case as applicable from time to time. Exemption limits in line with regulatory requirements of the Company and the Group may apply.

This exemption on the level of the individual relates to the payout of parts of variable remuneration in instruments and the deferral of parts of the variable remuneration.

The sustainability of the performance contributions of each Risk Taker, his/her area of responsibility as well as the overall performance of the Company will be considered. Moreover, the financial situation of the Company, in particular significant changes in the capital base, decreases in the financial capacity and the risk-bearing capacity will be taken into account (back-testing).

In the event of a negative back-test, malus can apply to all elements: the cash portion as well as share-based portions of deferred remuneration, in case of evidence of misbehaviour or serious error (for example, breach of code of conduct and other internal rules, especially concerning risks), negative performance contributions, significant failure of risk management respectively significant changes in the capital base or significant downturn in the financial performance. If the circumstances described above have occurred to a significant degree, a reduction or forfeiture of portions of the deferred variable remuneration including the share-based instruments applies.

The regulations on adjustment of variable remuneration are complemented through the implementation of repayment obligations for Risk Takers in accordance with regulatory requirements (so-called "Clawback"). In the event of a significant involvement in or the

responsibility for a behaviour which led to a significant loss for the Company or to a major regulatory sanction, or a severe breach of relevant external or internal regulations concerning standards of suitability and conduct has been carried out, the respective Risk Taker is obliged to repay any variable remuneration already paid out respectively any claim to payment of variable remuneration shall lapse.

In addition to the share-based components already mentioned for identified Risk Takers, there are no shareholding requirements.

For more detailed information we refer to the additional <u>Clearstream Group Remuneration</u> <u>Report</u> mentioned above, which will be published on the Clearstream website.

# Appendix A

Following template provides the information on full country-specific/geographic distribution of credit exposures that are relevant for the countercyclical buffer.

		a	ь	c Relevant credit exp	d	e	f	9	h	ı	1	k	- 1	m
		General credit e	exposures	risk	osures - Market	Securitisation			Own fund	requirements			Own fund	
		Exposure value	Exposure	Sum of long and	Value of	exposures	Total exposure		Relevant	Relevant credit	]	Risk-weighted exposure	requirements	Countercyclica buffer rate
		under the	value under	short positions of	trading book	Exposure value for	value	Relevant credit risk exposures -	credit exposures	exposures - Securitisation	Total	amounts	weights	(%)
		standardised approach	the IRB approach	trading book exposures for SA	exposures for internal models	non-trading book		Credit risk	- Market	positions in the			(%)	
010	Breakdown by country:	арргозоп	арриозоп.	coposaics to con-	The trial tribacio				risk	non-trading book				
	GUERNSEY	23,425					23,425	1,874			1,874	23,425	0.01%	
	VIETNAM	2,603					2,603	208			208	2,603	0.00%	
	GIBRALTAR CZECH REPUBLIC	3,273 370,397					3,273 370,397	262 29,632			262 29,632	3,273 370,398	0.00%	
	CANADA	6,576,721					6,576,721	526,138			526,138	6,576,721	2.98%	
	OMAN	55,995					55,995	4,480			4,480	55,996	0.03%	
	BELGIUM	8,036,520					8,036,520	520,795			520,795	6,509,941	2.95%	
	LATVIA PHILIPPINES	55,678 675,224					55,678 675,224	4,454 54,018			4,454 54,018	55,678 675,224	0.03%	
	INDIA	3,865					3.865	309			309	3,865	0.00%	
	ECUADOR	30,750					30,750	3,690			3,690	46,126	0.02%	
	VIRGIN ISLANDS, BRITISH	138					138	11			11	138	0.00%	
	THAILAND BRAZIL	2,430,453 8,241					2,430,453 8,241	194,436 659			194,436 659	2,430,453 8,241	1.10%	
	KUWAIT	82,549					82,549	6,604			6,604	82,549	0.00%	
	AUSTRALIA	250,253					250,253	20,020			20,020	250,253	0.11%	
	KOREA, REPUBLIC OF	87,493					87,493	6,999			6,999	87,493	0.04%	
	UNITED KINGDOM BOSNIA AND HERZEGOVINA	134,543,612 2,350					134,543,612 2,350	10,763,822 188			10,763,822	134,547,772 2,350	61.03%	2.00%
	ISRAEL	11,702					11,702	936			936	11,702	0.00%	
	LIBYA	39,721					39,721	3,178			3,178	39,722	0.02%	
	ITALY TOMIDAD AND TORACO	65,112					65,112	5,209			5,209	65,112	0.03%	
<del>   </del>	TRINIDAD AND TOBAGO SANMARINO	61,264 30,611	-				61,264 30,611	4,901 2,449	-		4,901 2,449	61,264 30,611	0.03%	-
	RUSSIAN FEDERATION	568,568					568,568	68,203			68,203	852,542	0.01%	
	GEORGIA	185,619					185,619	14,850			14,850	185,619	0.08%	
	UNITED STATES	2,615,339					2,615,339	209,227			209,227	2,615,339	1.19%	
	EL SALVADOR DOMINICAN REPUBLIC	3,900 58,514					3,900 58,514	468 4,681			468 4,681	5,850 58,514	0.00%	
	MEXICO	1,648					1,648	132			132	1,648	0.00%	
	DENMARK	2					2	0			0	2	0.00%	2.50%
	POLAND	26,358					26,358	2,109			2,109	26,358	0.01%	
<u> </u>	BERMUDA	16,653					16,653	1,332	<del></del>		1,332	16,653	0.01%	-
	PUERTO RICO	3,727		I			3,727	298	_	1	298	3,728	0.00%	T
	CYPRUS	10,233					10,233	819			819	10,233	0.00%	
	NORTH MACEDONIA	7,858					7,858	629			629	7,858	0.00%	
	CURAÇAD	33,535					33,535	2,683			2,683	33,535	0.02%	
	SINGAPORE HOLY SEE (VATICAN CITY STATE)	256,700 119.316					256,700 119.316	20,536 9,545	_		20,536 9,545	256,700 119.316	0.12%	
	JAPAN	161,133					161,133	12,891	_		12,891	161,133	0.05%	
	GERMANY	3,433,492					3,433,492	274,679			274,679	3,433,492	156%	0.75%
	FRANCE	668,845					668,845	53,508			53,508	668,845	0.30%	0.50%
	JERSEY AUSTRIA	199,122 18,777					199,122 18,777	15,930 1,502			15,930 1,502	199,122 18,777	0.03%	
	MOROCCO	5,447					5,447	436			436	5,448	0.00%	
	SAUDI ARABIA	62					62	5			5	62	0.00%	
	HUNGARY	329					329	26			26	329	0.00%	
	CAYMAN ISLANDS SPAIN	37,907 3,634					37,907 3,634	3,033 291	_		3,033 291	37,907 3,634	0.02%	
	NORWAY	18,917					18,917	1,513			1,513	18,917	0.01%	2.50%
	EGYPT	115,095					115,095	13,811			13,811	172,643	0.08%	
	MALAYSIA	3,444,159					3,444,159	275,533			275,533	3,444,159	156%	
	URUGUAY ANDORRA	394,592 5,030					394,592 5,030	31,567 402	_		31,567 402	394,592 5,030	0.18%	
	PANAMA	45,959					45,959	3,677			3,677	45,959	0.02%	
	TAIWAN, PROVINCE OF CHINA	1,953,233					1,953,233	156,259			156,259	1,953,233	0.89%	
	QATAR	99,504					99,504	7,960			7,960	99,504	0.05%	
	SRILANKA BRUNEI DARUSSALAM	4,672 3,388					4,672 3,388	561 407	_		561 407	7,008 5,081	0.00%	_
	SWEDEN	390,352					390,352	31,228			31,228	390,352	0.18%	2.00%
ļ.,	ARGENTINA	19,365					19,365	2,324			2,324	29,047	0.01%	
	SOUTH AFRICA	820,143					820,143	65,611			65,611	820,143	0.37%	
	BAHRAIN INDONESIA	95,795 38,857					95,795 38,857	7,664 3,109	_		7,664 3,109	95,795 38,857	0.04%	
	COLOMBIA	22,671					22,671	1,814			1,814	22,671	0.01%	
	LUXEMBOURG	38,964,629					38,964,629	3,117,163			3,117,163	38,964,533	17.67%	0.50%
	KAZAKHSTAN	2,752,030					2,752,030	220,162			220,162	2,752,030	1.25%	
	LEBANON MALTA	81,876 13,437					81,876 13,437	9,825 1,075	_	<del>                                     </del>	9,825	122,813 13,438	0.06%	+
	UNITED ARAB EMIRATES	995,930					995,930	79,470			79,470	993,376	0.45%	
	VENEZUELA, BOLIVARIAN REPUBLIC O	671,836					671,836	80,620			80,620	1,007,754	0.46%	
	ROMANIA ENLAND	6,413					6,413	513	_		513	6,414	0.00%	1.00%
	FINLAND KENYA	1,318 5,559					1,318 5,559	105 445	_		105 445	1,318 5,559	0.00%	+
<del></del>		0,000	-	-	-		- 0,000	+ ~~	-	-	+ 175		0.007	+
	CHLE	70,437					70,437	5,635			5,635	70,437	0.03%	
	Guatemala	20,322					20,322	1,626			1,626	20,322	0.01%	
	MACAO HONG KONG	92,926					92,926	7,434			7,434	92,926	0.04%	4 000
	HONG KONG MONACO	159,161 36,076					159,161 36,076	12,677 2,886			12,677 2,886	158,462 36,076	0.07%	1.00%
	GREECE	62,653					62,653	5,012			5,012	62,653	0.02%	
1:	ISLE OF MAN	76,996					76,996	6,160			6,160	76,996	0.03%	
	UKRAINE	1,811,545					1,811,545	217,385			217,385	2,717,318	1.23%	
	CHINA PERU	980					980	78 5 561			78 5,561	980 69,509	0.00%	-
	NETHERLANDS	69,509 575,452					69,509 575,452	5,561 46,036			46,036	575,453	0.03%	1.00%
E	BAHAMAS	688					688	55			55	688	0.00%	
	ARMENIA	51,922					51,922	4,154			4,154	51,922	0.02%	
	SWITZERLAND IRELAND	3,393,771 968,934					3,393,771 968,934	271,502 77,515			271,502 77,515	3,393,771 968,934	1.54% 0.44%	1.00%
. 10		105,368					105,368	8,429			8,429	105,368	0.44%	1.00%
	COSTARICA													

# Appendix B

Following template provides the information on full geographical breakdown of performing and non-performing exposures.

		а	b	С	d	е	f	g
		ū		ng/nominal amount		Accumulated		Accumulated
	-			non-performing	Of which subject to	impairment	Provisions on off-	negative changes
					impairment		balance-sheet commitments and	in fair value due t
				Of which defaulted			financial	credit risk on non
	(in 000 of €)			Or Willeri delidatica			guarantees given	performing exposures
	On-balance-sheet							exposures
010	exposures	17,012,236	984	_	17,012,236	(985)		
020	Andorra	5	-		5	-		
030	United Arab Emirates	1,495	_		1,495	_		
040	Armenia	1,902	_		1,902	_		
050	Argentina	2,677	_		2,677	_		
060	Austria	1,610	_		1,610	_		
070	Australia	648,241	_		648,241	_		
080	Bosnia and Herzegovina	2	_		2	_		
090	Bangladesh	55			55	-		
100	Belgium	424,645	- 0		424,645			
110	Bulgaria	1,063			1,063			
120	Bahrain		-			-		
130	Bermuda	135	-		135	-		
140		17	-		17	-		
	Brunei Bezzil	3	- 11		3	- (2)		
150	Brazil Bahamas	138	11		138	(7)		1
160		,	- 12		/00 000	- (12)		
170	Canada	439,290	12		439,290	(12)		
180	Switzerland	199,292	61		199,292	(24)		
190	Chile	70	-		70	-		
200	Cameroon	4	-		4	-		
210	China	3,408	0		3,408	-		
220	Colombia	23	-		23	-		
		105	_		105	-		
230	Costa Rica							
240	Costa Rica Cabo Verde	1	-		1	-		
			-			-		
240	Cabo Verde	1			1			
240 250	Cabo Verde Curação	1 34	-		1 34	-		Б
240 250 260	Cabo Verde Curação  Cyprus	34 306	1		306	-		
240 250 260 270	Cabo Verde Curação  Cyprus Czechia	306 2,956	1		306 2,956			
240 250 260 270 280	Cabo Verde Curação  Cyprus Czechia Germany	306 2,956 1,381,912	- 1 - 6		306 2,956 1,381,912	- - - (0)		
240 250 260 270 280 290	Cabo Verde Curação  Cyprus Czechia Germany Denmark	306 2,956 1,381,912 900	1 - 6 0		306 2,956 1,381,912 900			
240 250 260 270 280 290 300	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic	306 2,956 1,381,912 900 59	1 - 6 0		306 2,956 1,381,912 900 59	- - (0) (0)		
240 250 260 270 280 290 300 310	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria	306 2,956 1,381,912 900 59	1 - 6 0		306 2,956 1,381,912 900 59	- - (0) (0)		
240 250 260 270 280 290 300 310 320	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador	306 2,956 1,381,912 900 59 90	1 - 6 0		306 2,956 1,381,912 900 59 90	- - (0) (0)		
240 250 260 270 280 290 300 310 320 330	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia	306 2,956 1,381,912 900 59 90 31 51	1 - 6 0		306 2,956 1,381,912 900 59 90 31	- - (0) (0) -		
240 250 260 270 280 290 300 310 320 330 340	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador	306 2,956 1,381,912 900 59 90 31 51	1 - 6 0 - -		306 2,956 1,381,912 900 59 90	- - (0) (0) - -		
240 250 260 270 280 290 300 310 320 330 340 350	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain	306 2,956 1,381,912 900 59 90 31 51	1 - 6 0 - -		306 2,956 1,381,912 900 59 90 31	- - (0) (0) - - -		
240 250 260 270 280 290 300 310 320 330 340 350 360	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland	306 2,956 1,381,912 900 59 90 31 51	1 - 6 0 - - -		306 2,956 1,381,912 900 59 90 31 51	- - (0) (0) - - - -		
240 250 260 270 280 290 300 310 320 330 340 350 360 370	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain	306 2,956 1,381,912 900 59 90 31 51 115 470,875	1 - 6 0 - - - - -		306 2,956 1,381,912 900 59 90 31 51 115 470,875	- (0) (0) - - - - - -		
240 250 260 270 280 290 300 310 320 330 340 350 360	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland	306 2,956 1,381,912 900 59 90 31 51 115 470,875	1		306 2,956 1,381,912 900 59 90 31 51 115 470,875	- - (0) (0) - - - -		
240 250 260 270 280 290 300 310 320 330 340 350 360 370	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji	306 2,956 1,381,912 900 59 90 31 51 115 470,875			306 2,956 1,381,912 900 59 90 31 51 115 470,875	- (0) (0) - - - - - -		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242	1 - 6 0 - - - - 0		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242	- (0) (0) - - - - - - - (275)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751	1 - 6 0 - - - - 0 - - - - - - - - - - - -		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751	- (0) (0) - - - - - - (275) (168)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751	1 6 0 - - - - 0 - - 28 232		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751	- (0) (0) - - - - - - - (275) (168)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey	306 2,956 1,381,912 900 59 90 31 115 470,875 137 1,211,242 4,121,751 196	1 6 0 - - - - 0 - - 28 232 - 5		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49	- (0) (0) - - - - - - - (275) (168)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751 196 49	1		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751	- (0) (0) - - - - - (275) (168) - (4)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Geuernsey Gibraltar Greece	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49	1		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49	- (0) (0) - - - - - (275) (168) - (4)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49			306 2,956 1,381,912 900 59 90 31 511 115 470,875 137 1,211,242 4,121,751 196 49	- (0) (0) - - - - - - (275) (168) - (4)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Geuernsey Gibraltar Greece Guatemala Hong Kong	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505			1 34 34 36 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751 196 49 3 3 517	- (0) (0) - - - - - - (275) (168) - (4) - (1)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hong Kong Croatia	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505	1		1 34 34 36 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505	- (0) (0) - - - - - (275) (168) - (4) - (1)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hong Kong Croatia Hungary Indonesia	306 2,956 1,381,912 900 59 90 31 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311	1		306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505 82	- (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hong Kong Croatia Hungary Indonesia Ireland	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789	1		306 2,956 1,381,912 900 59 90 311 511 115 470,875 137 1 1,211,242 4,121,751 196 49 3 3 517 20 9,505 82 311 12,788 4,606	- (13)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 400 410 420 430 440 450 460 470 480 490 500	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hong Kong Croatia Hungary Indonesia Ireland	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,606 3,888	1		306 2,956 1,381,912 900 59 90 31 151 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,606 3,888	- (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hungary Indonesia Ireland Israel Isle of Man	306 2,956 1,381,912 900 59 90 31 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,666 3,888 78	1		306 2,956 1,381,912 900 59 90 31 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,606 3,888 78	- (0) (0) (0)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hong Kong Croatia Hungary Indonesia Ireland Israel Isle of Man India	306 2,956 1,381,912 900 59 90 31 51 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,606 3,888 78	1		1 34 34 36 2,956 1,381,912 900 59 90 31 115 470,875 137 1 1,211,242 4,121,751 196 49 3 3 517 20 9,505 82 311 12,789 4,606 3,888 78	- (0) (0)		
240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510	Cabo Verde Curação  Cyprus Czechia Germany Denmark Dominican Republic Algeria Ecuador Estonia Egypt Spain Finland Fiji France United Kingdom Georgia Guernsey Gibraltar Greece Guatemala Hungary Indonesia Ireland Israel Isle of Man	306 2,956 1,381,912 900 59 90 31 115 470,875 137 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,666 3,888 78	1		306 2,956 1,381,912 900 59 90 31 115 470,875 137 1 1,211,242 4,121,751 196 49 3 517 20 9,505 82 311 12,789 4,606 3,888 78	- (0) (0) (0)		

	rsey	284	5	284	(4)	
	rdan	13	-	13	-	
580 Jap	pan	15,004	-	15,004	-	
	nya	6	-	6	-	
600 Koi	rea	421	1	421	-	
610 Ku	wait	117	1	117	(1)	
620 Cay	yman Islands	178	-	178	-	
630 Kaz	zakhstan	2,757	0	2,757	(0)	
	o People's Democratic oublic	1	_	1	_	
	banon	82	-	82	_	
	echtenstein	210	-	210	-	
	Lanka	5	-	5		
	huania	3	_	3	_	
	xembourg	6,313,091	357	6,313,091	(248)	
	tvia	185	-	185	(240)	
710 Lib		169	-	169	-	
	rocco	119	-	119	-	
	naco					
		133	-	133	-	
	ntenegro rth Macedonia	1	-		-	
		12	-	12	-	
	ngolia	1	-		-	
	icao	234	-	234	-	
	uritania	3	-	3	-	
790 Ma	lta Idives	170	-	170	-	
		6	-	6	-	
	xico	1,837	-	1,837	-	
	laysia	3,450	-	3,450	-	
	therlands	182,225	-	182,225	-	
840 No.	rway - · ·	364,235	-	364,235	-	
	w Zealand	802	-	802	-	
	nan	57	1	57	(1)	
	nama	49	-	49	-	
880 Pei		9	-	9	-	
	ilippines	759	-	759	-	
	land	834	-	834	-	
	erto Rico	4	-	4	-	
	rtugal	290	-	290	-	
930 Qai		161	-	161	-	
	mania	1,161	-	1,161	-	
	rbia	21	-	21	-	
	ssian Federation	573	-	573	-	
	udi Arabia	243	-	243	-	
	reden	1,641	-	1,641	-	
	ngapore	23,341	2	23,341	-	
	ovenia	79	-	79	-	
	ovakia	232	-	232	-	
	n Marino	40	-	40	-	
	negal	2	-	2	-	
	Salvador	4	-	4	-	
	ailand	2,431	-	2,431	-	
	nisia	19	-	19	-	
	rkiye	2,980	-	2,980	-	
1080 Tri	inidad and Tobago	61	-	61	-	
1090 Tai	iwan	3,723	-	3,723	-	
1070	raine	24	-	24	-	
		740,519	9	740,519	(7)	
1100 Uk	ited States of America	7.10,017				
1100 Uk 1110 Un	uted States of America uguay	488	-	488	-	
1100 Uk 1110 Un 1120 Ur			-	488	-	

1360	Total	17,533,918.47	984	-	17,012,236	(985)	
1370	Other countries	16,252					
1360	Australia	2,413					
1350	Belgium	250					
1340	Canada	164					
1330	Germany	231,013					
1320	Spain	8,011					
1310	France	78,340					
1300	United Kingdom	178,204					
1290	Italy	7,036					
1280	Off-balance-sheet exposures	521,683	-	-			
1270	Other countries	388,822	-		388,822	-	
1250	South Africa	497	-		497	-	
1170	Vanuatu	3	-		3	-	
1160	Viet Nam	16	5		16	(4)	
1150	Virgin Islands	9	9		9	(9)	

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