Pillar III Disclosure Report of Clearstream Holding AG 2022 including CSDR public disclosures

Clearstream Banking S.A. and Clearstream Banking AG

Disclosures as of 31 December 2022

Pillar III Disclosure Report of Clearstream Holding AG, according to Part 8 of Regulation (EU) 575/2013 (CRRII) as amended by Regulation (EU) 876/2019 in conjunction with Section 26a German Banking Act (Kreditwesengesetz, KWG), including public disclosures according to Articles 28 and 40 of Delegated Regulation (EU) 2017/390 supplementing Regulation (EU) No 909/2014 (Central Securities Depositories Regulation, CSDR).

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Clearstream Holding AG is a Deutsche Börse Group company.

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Disclosure	Template	CRR article	Report chapter
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	EU CR7 – IRB approach – Effect on the RWEAs of credit derivatives used as CRM techniques	Article 453(j)	Not applicable
	EU CR7-A – IRB approach – Disclosure of the extent of the use of CRM techniques	Article 453(g)	Not applicable
	EU CR8 – RWEA flow statements of credit risk exposures under the IRB approach	Article 438(h)	Not applicable
	EU CR9 –IRB approach – Back-testing of PD per exposure class (fixed PD scale)	Article 452(h)	Not applicable
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	EU CCR4 – IRB approach – CCR exposures by exposure class and PD scale	Article 439(l) Article 452(g)	Not applicable
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Disclosure	Template	CRR article	Report chapter
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	EU-SEC1 - Securitisation exposures in the non-trading book	Article 449(j)	Not applicable
	EU-SEC2 - Securitisation exposures in the trading book	Article 449(j)	Not applicable
	EU-SEC3 - Securitisation exposures in the non-trading b–ok 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
	EU-SEC5 - Exposures securitised by the institution - Exposures in default and specific credit risk adjustments	Article 449(l)	Not applicable
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	EU MR1 - Market risk under the standardised approach	Article 445	Not applicable
	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 un–er the IMA	Article 438(h)	Not applicable
	EU MR3 - IMA values for trading– portfolios	Article 455(d)	Not applicable
	EU MR4 - Comparison of VaR estimates with gains/losses	Article 455(g)	Not applicable

Disclosure	Template	CRR article	Report chapter
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	EU OR1 - Operational risk own funds requirements and risk-weighted exposure amounts	Articles 446 and 454	Chap–er 8.7
Disclosure of remuneration policy	EU REMA - Remuneration policy	Article 450(1) (a), (b), (c), (d), (e), (f), (j) and (k) Article 450(2)	Chapter 12.1 Remuneration policy
	EU REM1 - Remuneration awarded for the financial year	Article 450(1)(h)(i)-(ii)	Remuneration report Chapter 4.5
	EU REM2 - Special payments to staff whose professional activities have a material impact on institutions' risk profile (identified staff)	Article 450(1)(h)(v)-(vii)	Remuneration report Chapter 4.5
	EU REM3 - Deferred remuneration	Article 450(1)(h)(iii)-(iv)	Remuneration report Chapter 4.5
	EU REM4 - Remuneration of 1 million EUR or more per year	Article 450(i)	Remuneration report Chapter 4.5
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	EU AE2 - Collateral received and own debt securities issued (median values)	Article 443	Not applicable
	EU AE3 - Sour–es of encumbrance	Article 443	Not applicable
	EU AE4 - Accompanying narrative information	Article 443	Not applicable
Disclosure on interest rate risk of non-trading book activities	EU IRRBB1 Interest rate risk of non-trading book activities	Article 448	Not applicable
	EU IRRBBA - Qualitative information on interest rate risks of non-trading book activities	Article 448	Not applicable

Disclosure Overview

CRR requirement	Report chapter	Comment
TITLE I: GENERAL PRINCIPLES		
Article 431: Disclosure requirements and policies	Chapter 1.3	
Article 432: Non-material, proprietary or confidential information	Chapter 1.3	
Article 433: Frequency and scope of disclosures	Chapter 1.3	
Article 434: Means of disclosures	Chapter 1.3	
Article 434a: Uniform disclosure formats	EBA tables and templates mapping	
TITLE II: TECHNICAL CRITERIA ON TRANSPARENCY AND DISCLOSURE		
Article 435: Disclosure of risk management objectives and policies	Chapter 4 Appendix D (Explanation of rating decisions to SMEs and other corporate applicants for loans not being applicable)	Voluntary. Full disclosure according to CRR and EBA ITS
Article 436: Disclosure of the scope of application	Chapter 1.3, Chapter 5	Voluntary. Full disclosure according to CRR and EBA ITS
Article 437: Disclosure of own funds	Chapter 6	Mandatory
Article 438: Disclosure of own funds requirements and risk-weighted exposure amounts	Chapter 6.4	Mandatory
Article 440: Disclosure of countercyclical capital buffers	Chapter 6.3	Mandatory
Article 441: Disclosure of indicators of global systemic importance	Not applicable as not G-SII	

CRR requirement	Report chapter	Comment
Article 442: Disclosure of exposures to credit risk and dilution risk	Chapter 9	Mandatory
Article 446: Disclosure of operational risk management	Chapter 8	Voluntary. Full disclosure according to CRR and EBA ITS
Article 447: Disclosure of key metrics	Chapter 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 13	Voluntary. Free format disclosure
Article 450: Disclosure of remuneration policy	Chapter 12	Mandatory
Article 451: Disclosure of the leverage ratio	Chapter 7	Mandatory
Article 451a: Disclosure of liquidity requirements	Chapter 10	Mandatory
TITLE III: QUALIFYING REQUIREMENTS FOR THE USE OF PARTICULAR INSTRUMENTS OR METHODOLOGIES		
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 mitigation techniques	Chapter 9.6	Mandatory
Article 454: Disclosure of the use of the Advanced Measurement Approaches to operational risk	Chapter 8	Voluntary. Full disclosure according to CRR and EBA ITS
Article 455: Use of internal market risk models	Not applicable as not used	

1. Introduction

1.1. Regulatory Framework

In December 2010, the Basel Committee on Banking supervision published the global regulatory framework on capital and liquidity, 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 1 concerns the minimum quantitative (capital) requirements related to credit, operational and market risks. In addition, when the Basel III framework was translated into European law, requirements to calculate a Leverage Ratio as well as Liquidity Coverage Ratio and Net Stable Funding Ratio came into force.
- Pillar 2 requires banks to integrate the risks of Pillar 1 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 3 promotes market discipline through disclosure and thereby transparency to the public.

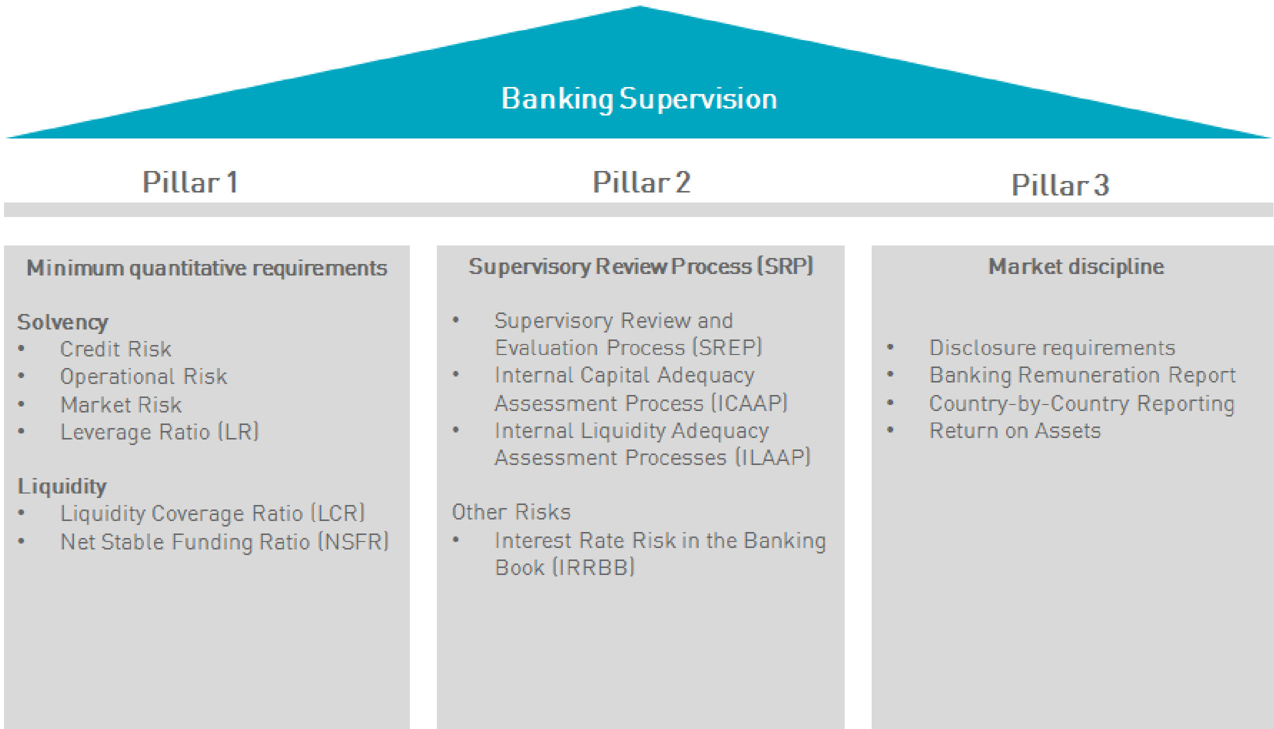

Figure 1: Overview regulatory framework

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 "Basel III: Finalising post-crisis reforms" in December 2017.

The first elements of the Basel III standards were introduced in European law by the Capital Requirements Regulation (EU) No 575/2013 (CRR) and the Capital Requirements Directive 2013/36/EU (CRD). In May 2019, a reformed prudential regulation package was introduced, further transposing the Basel III standards into European law through amended versions of 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 also contains 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.

This report provides the Pillar 3 disclosures on consolidated level of Clearstream Group as set out in Part Eight of the CRR. In Germany, the CRD disclosure requirements were transposed in Section 26a of the German Banking Act (Kreditwesengesetz, KWG).

The Basel III standards are not yet fully transposed into European Law. To provide banks with greater operational capacities to react to the 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 amending CRR, CRD as well as BRRD in October 2021, the EU initiated the finalisation of the implementation of Basel III.

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 Clearstream Holding AG, 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. The legislative proposals currently foresee application of the newly introduced and amended requirements as of 1 January 2025.

In addition to the previously mentioned regulations and directives, 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/2016/11 of 14 December 2016: Guidelines on disclosure requirements under Part Eight of Regulation (EU) No. 575/2013
- EBA/GL/2017/01 of 21 June 2017: Guidelines on LCR disclosure to complement the disclosure of liquidity risk management under Article 435 of Regulation (EU) No. 575/2013

- EBA/GL/2021/05: Guidelines on internal governance under Directive 2013/36/EU
- EBA/GL/2021/06: 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/2018/10 (Consolidated version) on disclosure of non-performing and forborne exposures

In the following, we refer to the respective laws in place as of 31 December 2022 if not stated otherwise.

1.2. Objective of the report

The objective of this Disclosure Report is to fulfil the disclosure requirements detailed in Part 8 CRR and Section 26a KWG for Clearstream Holding AG ("CH"). More specifically, the report intends to provide a detailed overview on Clearstream Holding Group's ("Clearstream Group"):

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

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. To ensure adequate fulfilment of the disclosure requirements and assessing the appropriateness of the disclosed information, a Disclosure Policy has been established, which is reviewed and adapted, where necessary, at least on a yearly basis. The Executive Board of CH is ultimately responsible for the Disclosure Policy and must approve any material changes to the policy. The policy defines disclosure content, allocates responsibilities, and defines disclosure processes and timelines.

In line with the *Disclosure Policy*, a dedicated process has to be followed in case Clearstream Group considers omitting certain disclosures due to these disclosures being immaterial, proprietary or confidential. Where the Group classifies information as non-material in this report, this has been stated accordingly in the related disclosures.

Scope of application (Article 436 CRR 2)

The figures for Clearstream Holding Group follow the consolidation provisions set out in Article 18 to 24 CRR in combination with the rules of Section 10a (4) KWG and the German Generally Accepted Accounting Principles (German GAAP), based on the German Commercial Cod– (Handelsgesetzbuch, HGB). As all Clearstream companies - –egardless of accounting and/or regulatory consolidation - are included in the consolidated annual accounts/annual report of the ultimate parent company Deutsche Börse AG ("DBAG"), Clearstream Group is, according to Section 291 HGB, exempted from the obligation to draw up consolidated statutory accounts. Consolidated financial figures are therefore set up for regulatory purposes only.

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

1.3. Disclosure Policy and Frequency

In accordance with Article 434 CRR 2, Clearstream Group publishes its Disclosure Report on its website:

Pillar III Disclosure Report (clearstream.com)

The report is updated once a year. In addition to the Pillar III report, the following documents are also made available:

- A remuneration report that fulfils the requirements according to Article 450 CRR 2. The report is disclosed on an annual basis on the website of Clearstream Group: www.clearstream.com/clearstream-en/about-clearstream/regulation-1-/remuneration-information
- The Country-by-Country reporting to fulfil the requirements according to Section 26a (1) sentence 2 KWG (implementation of Article 89 CRD IV into German law) is included as an annex to the financial statements of CH and that is published on the website of the German Federal Gazette (www.bundesanzeiger.de) and that can also be found on the website of Clearstream: https://www.clearstream.com/clearstream-en/about-clearstream/reports-and-ratings/annual-reports
- Information about the Return on Assets ("RoA") according to Section 26a (1) sentence 4 KWG (implementation of Article 90 CRD IV into German law) is disclosed in the management report of the financial statement of Clearstream Banking AG (hereinafter: CBF). Clearstream Banking Luxembourg S.A. (hereinafter: CBL) disclosed the RoA according to Article 38-4 of the Luxembourg Banking Act under note 9.3 in the notes to its financial statements. The financial statement of CBF is published on the website of the

German Federal Gazette (www.bundesanzeiger.de). The financial statements of CBL are published the Luxembourg Trade and Companies Register (Registre de Commerce et des Sociétés). The information can also be found on the website of Clearstream: https://www.clearstream.com/clearstream-en/about-clearstream/reports-and-ratings/annual-reports

In the following, we refer to the respective laws in place as of 31 December 2022 if not stated otherwise.

1.4. Clearstream Group

CH is licensed as a financial holding company as defined in Article 4 paragraph 1 point 20 CRR, and together with its subordinated companies, among others, CBL and CBF, forms a financial holding group under German law (see Figure 2).

CH was founded under the name Deutsche Börse Verwaltungs AG on 4 June 2007 in Frankfurt/Main. On 12 May 2009 the company was officially renamed Clearstream Holding AG, CH is headquartered in Germany and has its registered office at Mergenthalerallee 61, 60485 Frankfurt am Main, Germany.

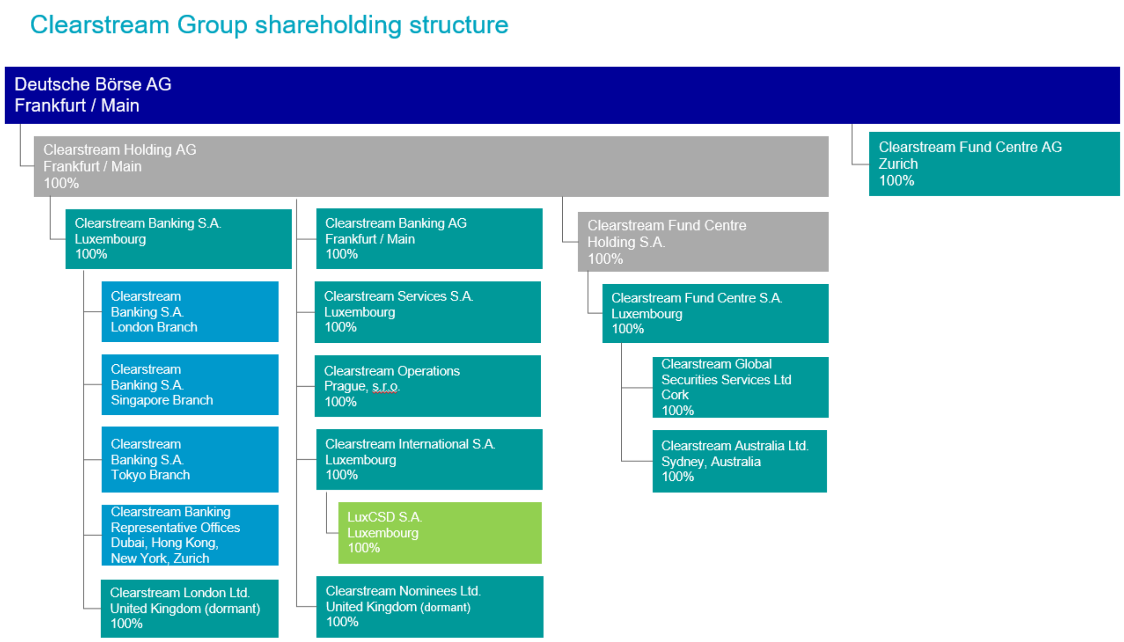

Figure 2: Overview of corporate structure

1.4.1. Business operations

Clearstream Group is a post-trade services provider and has been fully owned by DBAG since July 2002.

Clearstream Group's main business activities are custody and settlement of securities and can be further divided into:

- Domestic central securities depository business ("CSD") and
- International central securities depository business ("ICSD").

In terms of the domestic business, CBF acts as the central securities depository for the German market according to the German Securities Deposit Act ("Depotgesetz"), while CBL is only involved marginally in domestic CSD activities for Luxembourg securities.

The ICSD business, however, is mostly performed by CBL. More specifically, the ICSD business provides different types of settlement options to facilitate the settlement of transactions in international and domestic securities traded across borders, depending on the selected settlement location. CBF internationally only covers the services offered for Non-Collective Safe Custody business ("NCSC"), that is, book-entry credits on a fiduciary basis or trustee business.

Besides the afore-mentioned business activities, CBL also offers securities lending services, collateral management, banking services and Liquidity Hub Global Outsourcing (all included in the Collateral, Lending and Liquidity Solutions ("CLLS")) as well as Investment Fund Services (including order routing) which are all linked to its main business activities custody and settlement.

Further information on the business activities per entity is provided below.

1.4.1.1. Clearstream Holding AG, Frankfurt/Main

CH is classified as a financial holding company according to Article 4 paragraph 1 No 20 CRR and Section 2f KWG. It acts solely as a holding company in the interest of its subsidiaries and does not have material additional business activities and therefore risk positions except for risk positions within the Clearstream Group or vis-à-vis DBAG. Moreover, CH is the superordinated undertaking of the financial holding group according to Section 10a (1) KWG. CH in its role is responsible to fulfil the regulatory obligations on a consolidated/group level towards the German supervisory authorities and the college of supervisors.

1.4.1.2. Clearstream International S.A., Luxembourg ("CI")

CI is defined as an ancillary service undertaking in accordance with Article 4 paragraph 1 point 18 CRR. Following the recent CH-Group restructuring, CI only holds one participation, i.e., 100%

of the shares in LuxCSD S.A. CI's main business activities lie within its role as trustee providing operational support for ASL and ASLplus business. CI is authorised in Luxembourg as a specialised PSF (professional depository of financial instruments) according to article 26 of the Luxembourg Law of 5 April 1993 on the financial sector, as amended.

1.4.1.3. Clearstream Banking S.A., Luxembourg ("CBL")

CBL is defined as a credit institution in accordance with Article 4 paragraph 1 No 1 CRR. CBL was incorporated in 1970 and is an 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 CBL include the issuance of securities, Investment Funds Services ("IFS") and Global Securities Financing ("GSF"), consisting of securities lending as well as collateral management services. In addition, CBL provides operative treasury services for CBF as well as for CI and Clearstream Services S.A. ("CS").

Additionally, CBL applied for an authorisation as CSD according to Article 16 Regulation (EU) No 909/2014 ("Central Securities Depositories Regulation", "CSDR") for the core services listed in Section A of the Annex and non-banking-type ancillary services under Section B of the Annex and according to Article 54 paragraph 2 lit. (a) CSDR for providing banking-type ancillary services. The authorisations were provided on 12 April 2021.

CBL holds the following branches/participations:

CBL Singapore branch ("CBS")

CBS is a branch of CBL and its first operational centre outside Europe. In November 2009, the Singapore branch obtained a banking license, which has been updated in October 2017. All of CBL's products and services, including Global Securities Financing, Investment Funds Services and Issuance and Distribution are offered locally to customers in the Asia-Pacific region.

CBL London branch ("CLB")

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 the 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.

Clearstream London Limited ("CLL") (dormant as of 31 Decem'er 2022)

CBL submitted a compliant application to the UK's Financial Conduct Authority (FCA) in relation to the temporary recognition regime for non-UK EEA banking branches before the original 25 March 2019 deadline. This allows the Bank to continue providing services to its UK and international clients until the landing slot process for permanent authorisation has been published. To this end, 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, albeit with dormant permissions at the current time. Following the agreement with the FCA, CLL is planned to be activated on 1 July 2023. CLL filed in October 2022 a Variation of Permission (VOP) to request FCA to approve CLL's activation. As of 31 December 2022, the VOP is under FCA's review processes.

Clearstream Banking Japan branch ("CBJ")

At the beginning of 2022, a branch licence was granted to CBJ, thus becoming a branch fully owned by Clearstream Banking S.A. 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. However, the CBJ Ltd. company continues to operate.

1.4.1.4. Clearstream Fund Centre Holding S.A ("CFCH")

11.6.2.13. CFCH was established on 26 July 2022, and has its registered office at 42, Avenue John F. Kennedy, L-1855, Luxembourg, Luxembourg. CFCH is directly 100% owned by DBAG. The purpose of the company is to acquire and control the ownershsts of other companies in Luxembourg or abroad.

1.4.1.5. Clearstream Fund Centre S.A. ("CFC SA")

Clearstream Fund Centre S.A. ("CFC SA") was established on 16 November 2021, and has its registered office at 42, Avenue John F. Kennedy, L-1855, Luxembourg, Luxembourg. CFC SA is directly 100% owned by CFCH since 30 December 2022. This entity was establisherve out of the fund services business from CBL

11.6.2.13. 1.4.1.6. Clearstream Australia Limited, Sydney, Australia ("CAL")

CBL successfully completed the acquisition of Ausmaq Limited, Sydney, Australia, during the third quarter of 2019. With this acquisition, Clearstream is further expanding its offering in the investment funds space and has entered the Australian market. Ausmaq Limited has been a wholly owned subsidiary of Clearstream Banking Luxembourg since 31 July 2019. In June of 2020 it was renamed Clearstream Australia Limited. Due to the expansion of its geographical footprint, Clearstream expects the transaction to deliver revenue synergies. As a result of the carve out of the funds business and the establishment of CFC SA, all the shares in CAL held by CBL were transferred to CFC S.A.

1.4.1.7. Clearstream Australia Nominee Limited ("CAN")

CAN was registered in June 2020 as a Nominee company which is wholly owned by Clearstream Australia Limited. The nominee company was established to hold the assets of the company's clients. Clearstream Australia, in fulfilling its role as custodian, controls CAN and administers the assets on behalf of its clients who are the beneficial owners of the underlying managed funds.

1.4.1.8. Clearstream Banking AG, Frankfurt/Main ("CBF")

CBF is authorized as a credit institution in accordance with Article 4 paragraph 1 No 1 CRR. CBF is a CSD, which provides settlement and custody services in both, the Collective Safe Custody ("CSC"), which is mainly German domestic, and the Non-Collective Safe Custody businesses. The focus of the settlement business is thereby on the settlement of stock exchange transactions.

CBF is the only CSD in Germany. It operates a large vault where most of the securities issued in Germany, securities issued elsewhere, as well as physical gold are stored. Within the frame of individual or collective safe custody, the settlement and asset servicing of domestic and international securities are offered.

These services include:

- Delivery versus payment and delivery free of payment settlement transactions;
- Comprehensive custody management;
- Value-added services like collateral management etc.;
- Transactional information distribution.

Beyond that, CBF acts as a trustee to cover specific types of asset-backed bonds. With respect to commodity-backed bonds, the commodity (Gold) is stored physically in the vaults of CBF.

CBF is also authorized as a CSD according to Article 16 CSDR for providing core services listed in Section A of the Annex and non-banking-type ancillary services under Section B of the Annex since 21 January 2020. Additionally, CBF was granted an authorization for providing banking-type ancillary services according to Article 54 paragraph 2 lit. a CSDR on 24 August 2021.

1.4.1.9. Clearstream Services S.A., Luxembourg ("CS")

CS is defined as an ancillary services undertaking in accordance with Article 4 paragraph 1 No 18 CRR. CS provides information technology managed and application service provision. The company's services include hosting, network management, system management, security management, storage and data management, information technology operations, and disaster recovery planning, as well as consultancy, project management, and quality assurance services. It serves financial market customers in Luxembourg and internationally. The company was founded in 1997 and is based in Luxembourg. Main services are provided to CBL, CBF and CFCL. In addition, CS provides services to external customers.

1.4.1.10 Clearstream Operations Prague s.r.o., Prague ("COP")

COP is defined as an ancillary services undertaking in accordance with Article 4 paragraph 1 No 18 CRR. In 2008 CI established a subsidiary in Prague, Czech Republic. Clearstream Operations Prague s. r. o. ("COP") offers certain operational services in relation to CBL, CBF, and LuxCSD. Furthermore, COP functions as a shared services centre for certain administrative and support functions for major parts of the entire Deutsche Börse Group.

As the arrangements are governed by outsourcing contracts according to Luxembourg and German regulatory standards, the services performed are fully monitored and managed by Clearstream management structures and processes.

1.4.1.11. Clearstream Global Securities Services Ltd., Cork ("CGSS")

CGSS is defined as an ancillary services undertaking in accordance with Article 4 paragraph 1 No 18 CRR. CGSS is a wh'lly owned subsidiary of CFC SA and is one of Clearstream's servicing centres for mutual and hedge funds, as well as core client services support. CGSS also provides corporate IT support services for DB Group entities.

1.4.1.12. LuxCSD S.A., Luxembourg ("LuxCSD")

As a central securities depository, LuxCSD provides Luxembourg's financial community with services for settlement in EUR central bank money as well as with issuing and custody services for a wide variety of domestic and international securities including investment funds. LuxCSD was incorporated in July 2010 and is jointly owned by the Banque centrale du Luxembourg (BCL) and CI (equal shares; 50%/50%). CI acquired the 50% of shares from BCL on 10 December 2021, thus becoming the sole shareholder.

LuxCSD applied for an authorisation as CSD according to Article 17 of Regulation (EU) No 909/2014 ("Central Securities Depositories Regulation", "CSDR"). Authorisation has been granted on 15 April 2020.

1.4.1.13. Clearstream Nominees

Clearstream Nominees Limited is a dormant company registered in England and Wales which is owned by Clearstream Holding AG. The nominee concept is only used where necessary to fulfil local customer asset protection obligations.

1.4.2.Licencing and Regulatory supervision

CH as the superordinate company of the financial holding Group according to Section 10a (1) KWG, is responsible for fulfilling the regulatory obligations on a consolidated/Group level vis-à-vis the

German supervisory authorities and presents a Pillar 3 report in compliance with the disclosure requirements pursuant to Part Eight CRR and Section 26a KWG. CH is subject to consolidated supervision by the German Federal Financial Supervisory Authority.

The "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, the "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, CB29ecurebject 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 Art. 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 (e.g. circulars BCL 2001/163 and 2001/168). As applicable competent authority, the CSSF complies with the EBA Guidelines 2014/10 on criteria to determine the conditions of application of Art. 131(3) of Directive 2013/36/EU (CRD IV) in relation to the assessment of other systemically important institutions. Clearstream Banking S.A. is classified as Other Systemically Important Institution ("O-SII") since 1 January 2018 based on CSSF Regulation N° 17-04 of 31 October 2017. As at 31 December 2020, CBL was classified as an O-SII based on CSSF Regulation N° 19-09 of 29 October 2019. Classification as O-SII from 1 January 2021 onwards was confirmed by CSSF Regulation N°20-07 of 12 November 2020. Due to its classification as an O-SII, CBL must produce a stand-alone Pillar 3 disclosure report.

CBF is a company incorporated in Germany and licensed as a credit institution under supervision of the German Federal Financial Supervisory Authority ("Bundesanstalt für Finanzdienstleistungsaufsicht", "BaFin") together with Deutsche Bundesbank.

CBF accepts deposits and grants its clients short-term loans. It is therefore a CRR credit institution pursuant to Section 1 (3d) KWG. In addition, it is a CSD pursuant to Section 1 (1) No. 6, (6) KWG, Art. 2 (1) CSDR and authorised by BaFin as National Competent Authority.

Lastly, CBF is subject to regulatory oversight by Deutsche Bundesbank in relation to the operation of a securities settlement system ("SSS") according to Section 24b KWG. 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.

1.4.3. Scope of consolidation

All information provided in this report refers if not stated otherwise to the companies included in the regulatory scope of consolidation. The regulatory scope of consolidation differs slightly from the accounting scope of consolidation. CH is exempted from the preparation of consolidated annual accounts according to Section 291 (1) HGB. The accounting consolidation in this section refers to the consolidation method at Deutsche Börse group level.

Name of the entity	Method of accounting consolidation	Method of prudential consolidation					Description of the entity
		Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	
Clearstream Banking S.A., Luxembourg (CBL)	Full consolidation	X					Credit Institution
Clearstream Banking A.G., Frankfurt am Main (CBF)	Full consolidation	X					Credit Institution
Clearstream Fund Centre SA	Full consolidation	X					Credit Institution
Clearstream Holding AG Frankfurt am Main (CHAG)	Full consolidation	X					Financial Holding Company
Clearstream Fund Centre Holding SA	Full consolidation	X					Financial Holding Company
Clearstream Australia Ltd (CAL)	Full consolidation	X					Financial Institution
Clearstream Services S.A., Luxembourg (CS) [1]	Full consolidation	X					Ancillary Services Undertaking
Clearstream Operations Prague s.r.o., Prague (COP)	Full consolidation	X					Ancillary Services Undertaking
Clearstream Global Securities Services Ltd., Cork (CGSS)	Full consolidation	X					Ancillary Services Undertaking
Clearstream International S.A., Luxembourg (CI) [2]	Full consolidation	X					Ancillary Services Undertaking
Clearstream London Limited (CLL)	Full consolidation				X		Other Undertaking
Clearstream Nominees Ltd., London	At equity				X		Other Undertaking
Clearstream Australia Nominees Pty Ltd. (dormant) [3]					X		Other Undertaking
LuxCSD S.A., Luxembourg (LuxCSD)	At equity			X			Other Undertaking

EU LI3 Outline of the differences in the scopes of consolidation

2. Key Metrics

		T	T-1	T-4
	(in 000s of €)	31/12/2022		31/12/2021
	Available own funds (amounts)			
1	Common Equity Tier 1 (CET1) capital	1,777,329		1,790,596
2	Tier 1 capital	1,777,329		1,790,596
3	Total capital	1,777,329		1,790,596
	Risk-weighted exposure amounts			
4	Total risk exposure amount	5,552,743		5,397,118
	Capital ratios (as a percentage of risk-weighted exposure amount)			
5	Common Equity Tier 1 ratio (%)	32.01%		33.18%
6	Tier 1 ratio (%)	32.01%		33.18%
7	Total capital ratio (%)	32.01%		33.18%
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)			
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	7.20%		4.70%

	(in 000s of €)	T 31/12/2022	T-1	T-4 31/12/2021
EU 7b	of which: to be made up of CET1 capital (percentage points)	4.05%		2.64%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	5.40%		3.53%
EU 7d	Total SREP own funds requirements (%)	15.20%		12.70%
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)			
8	Capital conservation buffer (%)	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%
9	Institution specific countercyclical capital buffer (%)	0.30%		0.05%
EU 9a	Systemic risk buffer (%)	0.00%		0.00%
10	Global Systemically Important Institution buffer (%)	0.00%		0.00%
EU 10a	Other Systemically Important Institution buffer (%)	0.00%		0.00%
11	Combined buffer requirement (%)	2.80%		2.55%
EU 11a	Overall capital requirements (%)	18.00%		15.25%
12	CET1 available after meeting the total SREP own funds requirements (%)	16.81%		20.48%
	Leverage ratio			
13	Total exposure measure	5,686,674		6,111,439
14	Leverage ratio (%)	31.25%		29.30%
	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
EU 14b	of which: to be made up of CET1 capital (percentage points)	n/a		n/a
EU 14c	Total SREP leverage ratio requirements (%)	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%
EU 14e	Overall leverage ratio requirement (%)	3.00%		3.00%
	Liquidity Coverage Ratio			
15	Total high-quality liquid assets (HQLA) (Weighted value--average)	21,867,493		14,654,131
EU 16a	Cash outflows - Total weig–ted value	20,372,528		12,394,319

	(in 000s of €)	T 31/12/2022	T-1	T-4 31/12/2021
EU 16b	Cash inflows - Total weighted value	2,282,572		1,014,585
16	Total net cash outflows (adjusted value)	18,089,956		11,379,734
17	Liquidity coverage ratio (%)	120.88%		128.77%
	Net Stable Funding Ratio			
18	Total available stable funding	2,770,754		2,414,085
19	Total required stable funding	531,931	–	411,192
20	NSFR ratio (%)	520.89%		587.10%

EU KM1 - Key metrics, CH Group

	(in 000s of €)	T 31/12/2022	T-1	T-2 30/06/2022	T-3	T-4 31/12/2021
	Available own funds (amounts)					
1	Common Equity Tier 1 (CET1) capital	1,008,281		1,222,226		1,214,206
2	Tier 1 capital	1,008,281		1,222,226		1,214,206
3	Total capital	1,008,281		1,222,226		1,214,206
	Risk-weighted exposure amounts					
4	Total risk exposure amount	3,498,887		4,351,567		4,037,268
	Capital ratios (as a percentage of risk-weighted exposure amount)					
5	Common Equity Tier 1 ratio (%)	28.82%		28.09%		30.07%
6	Tier 1 ratio (%)	28.82%		28.09%		30.07%
7	Total capital ratio (%)	28.82%		28.09%		30.07%
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)					
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	0.50%		1.00%		1.00%
EU 7b	of which: to be made up of CET1	0.28%		1.00%		1.00%

	(in 000s of €)	T	T-1	T-2	T-3	T-4
		31/12/2022		30/06/2022		31/12/2021
	capital (percentage points)					
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	0.37%		1.00%		1.00%
EU 7d	Total SREP own funds requirements (%)	8.50%		9.00%		9.00%
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)					
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 (%)	0.14%		0.07%		0.05%
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 (%)	3.14%		3.07%		3.05%
EU 11a	Overall capital requirements (%)	11.64%		12.07%		12.05%
12	CET1 available after meeting the total SREP own funds requirements (%)	20.54%		19.09%		21.07%
	Leverage ratio					
13	Total exposure measure	4,085,331		5,002,800		4,503,574
14	Leverage ratio (%)	24.68%		24.43%		26.96%

	(in 000s of €)	T 31/12/2022	T-1	T-2 30/06/2022	T-3	T-4 31/12/2021
	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)	18–917,693		16,642,841		14,369,126
EU 16a	Cash outflows - Total weighted value	1–,677,759		15,756,405		14,010,879
EU 16b	Cash inflows - Total weighted value	1,969,713		1,607,633		2,081,076
16	Total net cash outflows (adjusted value)	16,708,046		14,148,772		11,929,803
17	Liquidity coverage ratio (%)	113.23%		117.63%		120.45%
	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

EU KM1 - Key metrics, CBL

	(in 000s of €)	T	T-1	T-4
		31/12/2022		31/12/2021
	Available own funds (amounts)			
1	Common Equity Tier 1 (CET1) capital	420,745		420,717
2	Tier 1 capital	420,745		420,717
3	Total capital	420,745		420,717
	Risk-weighted exposure amounts			
4	Total risk exposure amount	1,734,620		1,558,042
	Capital ratios (as a percentage of risk-weighted exposure amount)			
5	Common Equity Tier 1 ratio (%)	24.26%		27.00%
6	Tier 1 ratio (%)	24.26%		27.00%
7	Total capital ratio (%)	24.26%		27.00%
	Additional own funds requirements to address risks other than the risk of excessive leverage (as a percentage of risk-weighted exposure amount)			
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	7.70%		4.70%
EU 7b	of which: to be made up of CET1 capital (percentage points)	4.05%		2.64%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	5.40%		3.53%
EU 7d	Total SREP own funds requirements (%)	15.70%		12.70%
	Combined buffer and overall capital requirement (as a percentage of risk-weighted exposure amount)			
8	Capital conservation buffer (%)	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%
9	Institution specific countercyclical capital buffer (%)	0.21%		0.14%
EU 9a	Systemic risk buffer (%)	0.00%		0.00%
10	Global Systemically Important Institution buffer (%)	0.00%		0.00%
EU 10a	Other Systemically Important Institution buffer (%)	0.00%		0.00%
11	Combined buffer requirement (%)	2.71%		2.64%
EU 11a	Overall capital requirements (%)	18.41%		15.34%
12	CET1 available after meeting the total SREP own funds requirements (%)	8.56%		14.30%
	Leverage ratio			

	(in 000s of €)	T 31/12/2022	T-1	T-4 31/12/2021
13	Total exposure measure	1,157,200		1,129,704
14	Leverage ratio (%)	36.36%		37.24%
	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
EU 14b	of which: to be made up of CET1 capital (percentage points)	n/a		n/a
EU 14c	Total SREP leverage ratio requirements (%)	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%
EU 14e	Overall leverage ratio requirement (%)	3.00%		3.00%
	Liquidity Coverage Ratio			
15	Total high-quality liquid assets (HQLA) (Weighted val–e -average)	2,431,661		1,685,177
EU 16a	Cash outflows - Total we–ghted value	2,049,986		1,349,679
EU 16b	Cash inflows - Total weighted value	266,635		254,499
16	Total net cash outflows (adjusted value)	1,783,350		1,095,180
17	Liquidity coverage ratio (%)	136.35%		153.87%
	Net Stable Funding Ratio			
18	Total available stable funding	n/a		n/a
19	Total required stable–funding	n/a		n/a
20	NSFR ratio (%)	n/a		n/a

EU KM1 - Key metrics, CBF

3. 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 3.2 and 3.3
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 3.2 and 3.3
Point (c) of Article 435(2) CRR	(c)	Information on the diversity policy with regard of the members of the management body.	Chapter 3.1
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 3.3.2
Point (e) Article 435(2) CRR	(e)	Description on the information flow on risk to the management body.	Chapter 4

EU OVB – Disclosure on governance arrangements

3.1 Clearstream Holding AG

3.1.1. General Arrangements

Clearstream Holding AG is incorporated in Germany in the form of a stock corporation (Aktiengesellschaft). The German Stock Corporation Act (Aktiengesetz – "AktG") requires such a company to set up an Executive Board (§§ 76 et seq. AktG) and a Supervisory Board (§§ 95-116 AktG).

CH maintains a comprehensive *Suitability Assessment Policy* and a corresponding side-letter defining specific job descriptions of Supervisory Board and Executive Board members. The objective of this policy is to ensure that the members of the Executive Board, the members of the Supervisory Board and key function holders of CH (as well as of the subsidiaries of CH that are to be qualified as credit institutions) 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/2021-06/ESMA35-36-2319) and BaFin guidance notes regarding the members of the Executive Board and the Supervisory Board in accordance with the German Banking Act as amended.

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 and on a regular basis, at least once a year. The rules of the limitation of mandates in accordance with § 25c (2) KWG and § 25d (3) KWG must be complied with. Under this definition, and in consideration of the legal permissibility of the aggregation of mandates, on 31 December 2021 all members of the Supervisory Board and Executive Board of CH 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 2021.

3.1.2. Executive Board

According to CH's Articles of Incorporation, the Executive Board may consist of one or several members who are appointed by the Supervisory Board of CH for a period of three years. The Executive Board is chaired by the CEO. A notification is provided to the competent authorities in the event of the intention of an appointment and of the effectiveness of the appointment of new members of the Executive Board of CH.

The Executive Board is inter alia responsible for the proper business organisation (in accordance with § 25c (3) number 1 in connection with § 25a KWG). The Executive Board is also responsible for the adoption of the business distribution plan, which regulates the allocation of tasks between the board members in order to enable a more efficient management of the company. Nevertheless, the Executive Board, as a whole, remains responsible for the fulfilment of the duties as defined by law and set out in the Articles of Incorporation (overall responsibility).

The members of the Executive Board must be professionally suitable and reliable for the management of a Financial Holding Company and must be able to devote sufficient time to fulfil their tasks. Further, sufficient theoretical and practical knowledge of the business of a financial holding company 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 a financial holding company
- Sufficient experience in managerial positions.

Meetings of the Executive Board are held monthly; further details are determined by the chairperson. Additional meetings take place, if required for the well-being of CH.

On 31 December 2022, the Executive 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.

Name – Position	Number of directorships (as of 31/12/2022)
Samuel Riley – Chief Executive Officer	2 (thereof 1 within Deutsche Börse Group)

Philip Brown	3 (thereof 3 within Deutsche Börse Group)
Dr. Berthold Kracke	3 (thereof 3 within Deutsche Börse Group)
Dr. Stephanie Eckermann	7 (thereof 7 within Deutsche Börse Group)
Dr. Daniel Besse	3 (thereof 3 within Deutsche Börse Group)

Table 1: Executive Board Members, CH Group

3.1.3. Supervisory Board

CH has established a Supervisory Board to supervise the Executive Board, in accordance with the mandatory provision of the German Stock Corporation Act (§§ 95-116 AktG). The members of the Supervisory Board of CH are elected by the shareholders. This in principle takes place during the annual general meeting of shareholders. The members are elected for a period of five years (a term of office ending at the closing of the General Shareholders' Meeting, which votes on the discharge of the members of the Supervisory Board for the fourth fiscal year after the commencement of the term of office, not including such fiscal year in which the term of office has commenced). If there is the need of a replacement, this is done by an extraordinary shareholder's meeting. A notification is provided to the competent authorities in the event of the election of new members of the Supervisory Board of CH. There were no new elections in 2022.

According to the Articles of Incorporation of CH, the Supervisory Board consists of three 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 CH. This requires understanding of the business of a financial holding company. In addition, at least two members of the Supervisory Board should have a sound knowledge in each of the following areas:

- Accounting, finance, and audit;
- Risk management and compliance;
- Information technology and security;
- Clearing business; and,
- Regulatory requirements.

On 31 December 2022, the Supervisory 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) of CRR.

Name – Position	Number of directorships (as of 31/12/2022)
Dr. Stephan Leithner	9 (thereof 6 within Deutsche Börse Group)
Gregor Pottmeyer	6 (thereof 5 within Deutsche Börse Group)
Christoph Böhm	3 (thereof 3 within Deutsche Börse Group)

Table 2: Supervisory Board Members, CH

The CH Supervisory Board meets as often as business requires, but at least two meetings are scheduled each half-year. In these meetings, it is informed about normal business activities as well as all substantial business events. In case of extraordinary incidents, the CH Supervisory Board is informed immediately.

3.1.4. Committees

CH has currently not set up any committees, the Supervisory Board in its entirety ta–es over the responsibilities stipulated for committees in § 25d (8) - (12) KWG.

3.2 Clearstream Banking S.A.

3.2.1 General Arrangements

Clearstream Banking S.A. is incorporated in Luxembourg in the form of a public limited company (Société Anonyme). According to its Articles of Incorporation, Clearstream Banking S.A. 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.

Clearstream Banking S.A. maintains a comprehensive suitability assessment policy and a corresponding side-letter 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 case of any material changes (e.g. 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 Art. 27 (4) of the Regulation (EU) No. 909/2014 the Supervisory Board of Clearstream Banking S.A. has approved the Gender Diversity Policy as published on Clearstream's website 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 Clearstream Banking S.A. 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 Art. 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 2022 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 2022.

3.2.2 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 & 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).

Frequency of meetings

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

On 31 December 2022, the Executive Board consisted of the persons displayed in Table 3, which also discloses the number of directorships held by each member, as required by Art. 435 (2) CRR 2.

Name – position	Number of directorships
Philip Brown – Chief Executive Officer	3

Name – position	Number of directorships
João Amaral	1
Alain Courbebaisse	1
Anne-Pascale Malréchauffé	3
Denis Schloremberg	2
Guido Wille	1

Table 3: Executive Board Members, CBL

3.2.3 Supervisory Board

According to the Articles of Incorporation of CBL, the Supervisory Board consists of at least three (3) members, and current has six (6). In addition, according to Art. 27 (2) of the EU Central Securities Depositories regulation No 909/2014 (CSDR), one third, but at least two of the members must be independent. 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 2022, the Supervisory Board consisted of the persons displayed in Table 4, which also discloses the number of directorships held by each member as required by Art. 435 (2) of CRR 2.

In 2022, no new directorships were 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 case of extraordinary incidents, the CBL Supervisory Board is informed immediately.

Name – position	Number of directorships
Dr. Stephan Leithner – Chairman	9
Gregor Pottmeyer – Vice Chairman	6
Oliver Engels	3
Dr. Stephanie Eckermann	7
Wolfgang Gaertner	2
Marie-Jeanne Chevremont	5

Table 4: Supervisory Board Members, CBL

3.2.4 CBL Supervisory Board Committees

EU Central Securities Depositories regulation No 909/2014 (CSDR) requires each Central Securities Depository (CSD) to implement an Audit Committee, a Remuneration Committee and a Risk Committee. In addition to these committees CSSF Circular 12/552, as amended, requires credit institutions to implement a Nomination Committee. In 2022, 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.

3.2.5 Audit Committee

Members	Tasks and responsibilities
▪ Marie-Jeanne Chevremont – Chairperson ▪ Wolfgang Gaertner – Vice Chairperson ▪ Dr. Stephanie Eckermann	▪ Monitors accounting and financial reporting processes; ▪ Monitors the effectiveness of the risk management process, in particular, the Internal Control System (ICS), the risk management system and internal audit; ▪ 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, ▪ Submits recommendations to the Supervisory Board to ensure the integrity of the reporting and accounting processes.

3.2.6 Nomination Committee

Members	Tasks and responsibilities
▪ Wolfgang Gaertner – Chairperson ▪ Dr. Stephan Leithner ▪ Marie-Jeanne Chevremont	▪ Identifies, recommends and promotes, for the approval of the Supervisory Board (SB) and 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

Members	Tasks and responsibilities
	recommendations to the SB for improvements; and, ▪ Assesses the knowledge, skills, and experience of respective boards, on an individual and collective basis.

3.2.7 Remuneration Committee

Members	Tasks and responsibilities
▪ Dr. Stephan Leithner – Chairperson ▪ Gregor Pottmeyer – Vice Chairperson ▪ Wolfgang Gaertner	▪ 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

3.2.8 Risk Committee

Members	Tasks and responsibilities
▪ Oliver Engels – Chairman ▪ Dr. Stephan Leithner – Vice Chairman	▪ Advises the Supervisory Board on the institution's overall current and future risk appetite, risk tolerance and risk strategy and assists the

Members	Tasks and responsibilities
▪ Dr. Stephanie Eckermann	Supervisory Board in overseeing the implementation of that strategy; ▪ Reviews whether the conditions offered to customers 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 customers 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.

3.2.9 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 customers in their respective securities settlement systems and at the service level and the pricing structure.

3.3 Clearstream Banking AG

3.3.1 General Arrangements

Clearstream Banking AG (CBF) is a stock corporation incorporated in Germany. The German Stock Corporation Act (AktG) requires such a company to set up an Executive Board (§§ 76 et seq. AktG) and a Supervisory Board (§§ 95-116 AktG).

Clearstream Banking AG maintains a comprehensive *Suitability Assessment Policy*. The objective of this policy is to ensure that members of the Executive Board, members of the Supervisory Board and key function holders of CBF 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/2021-06/ESMA35-36-2319) and BaFin guidance notes regarding the members of the Executive Board and the Supervisory Board in accordance with the German Banking Act as amended. CBF follows a stringent *Recruitment Procedure* for the selection of members of the Supervisory Board and Executive Board as described below. A suitability assessment is initiated about each appointment or election of a new board member, the resignation of a board member causing material changes to the composition of the management body and on a regular basis, at least annually.

To benefit from a balanced gender diversity and to fulfil the requirement of Art. 27 (4) of the Regulation (EU) No 909/2014 the Supervisory Boards of Clearstream Banking AG and Clearstream Banking S.A. have approved the *Gender Diversity Policy* as published on Clearstream's website 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 Clearstream Banking AG agreed on a target quota amounted to 33% of the under-represented gender (currently female) in the Supervisory Board of Clearstream Banking AG and a target quota of 40% of the under-represented gender for the Executive Board of Clearstream Banking AG until 31 December 2026.

3.3.2 Executive Board

According to § 25a KWG and MaRisk certain functions and duties in several business areas have to be segregated up to the level of the Executive Board. In addition, all tasks have to be allocated in a clear manner to the responsible areas. Furthermore, the four-eyes principle as well as the role of a deputy should be determined. In order to fulfil the above-mentioned organisational requirements and in the light of the systemic importance of CBF, the articles of incorporation of CBF stipulate that the Executive Board consists of at least two members. A notification is provided to the competent authorities, as well as for Key Function Holders ("KFH"), (Chief Risk

Officer, Chief Compliance Officer and Head of Internal Audit according to MaRisk Article 4, and in the event of the appointment of new members of the Executive Board of CBF.

The Executive Board is inter alia responsible for the proper business organisation (in accordance with § 25c (3) number 1 in connection with § 25a of the German Banking Act). The Executive Board is also responsible for the business distribution plan which regulates the allocation of tasks between the board members in order to enable a more efficient management. Nevertheless, the Executive Board as a whole remains responsible for the fulfilment of the duties as defined by law and set out in the Articles of Incorporation (overall responsibility).

Meetings of the Executive Board shall be held regularly; further details, including but not limited to the interval between the meetings, shall be determined by the chairperson. Meetings are held as often as business requires, but at least one meeting per quarter should be scheduled each year.

The members of the Executive Board must be professionally suitable and reliable for the management of a credit institution and must be able to devote sufficient time to fulfil their tasks. Their professional competence requires sufficient theoretical and practical knowledge of the business of a credit institution.

Members of the Executive Board must have in particular:

- An understanding of financial markets, especially within the regulatory framework;
- Professional experience with credit institutions; and,
- Sufficient practical and professional experience in managerial positions.

The rules of the limitation of mandates in accordance with § 25c (2) KWG must be complied with. Under this definition and in consideration of the legal permissibility of the aggregation of mandates, on 31 December 2022 all members of the Executive Board of CBF complied with these rules.

Name – Position	Number of directorships
Dr. Berthold Kracke	3 (thereof 3 within Deutsche Börse Group)
Dirk Loscher	1 (thereof 1 within Deutsche Börse Group)
Martina Gruber	2 (thereof 2 within Deutsche Börse Group)
Volker Riebesell	1 (thereof 1 within Deutsche Börse Group)

Table 5: Executive Board Members, CBF

3.3.3 Supervisory Board

CBF has established a Supervisory Board to supervise the Executive Board, in accordance with the mandatory provisions of the German Stock Corporation Act (AktG) in connection with the German One Third Participation Act ("Drittelbeteiligungsgesetz", "DrittelbG"). According to the DrittelbG, one third of the members of the Supervisory Board (two out of six) are employee representatives. In addition, according to Art. 27 (2) of the EU Central Securities Depositories regulation No 909/2014 (CSDR), one third, but at least two of the members must be independent. The shareholders representatives of the Supervisory Board of CBF are elected by the shareholders in the annual general meeting of shareholders or, if there is the need of a replacement, in an extraordinary shareholders' meeting. The employee representatives are elected by the employees of CBF prior to that shareholders' meeting to elect an entirely new Supervisory Board. All members are elected for a period of five years (a term of office ending at the closing of the General Shareholders' Meeting, which votes on the discharge of the members of the Supervisory Board for the fourth fiscal year after 'he commencement of the term of office, not including such fiscal year in which the term of office has commenced).

According to the Articles of Incorporation, the Supervisory Board consists of six members. The Supervisory Board in its entirety must have the necessary skills, capabilities and experience to supervise and control the Executive Board of CBF. This requires understanding of the business of a credit institution. A notification is provided to the competent authorities in the event of the appointment of new members of the Supervisory Board of CBF. There were no new appointments in 2022.

In addition, at least two members of the Supervisory Board should have sound knowledge in each of the following areas:

- Accounting, finance, and audit;
- Risk management and compliance;
- Information technology and security;
- Clearing business; and,
- Regulatory requirements.

The rules of the limitation of mandates in accordance with § 25d (3) KWG must be complied with. Under this definition and in consideration of the legal permissibility of the aggregation of mandates, on 31 December 2022 all members of the Supervisory Board of CBF complied with these rules.

The Supervisory Board of CBF also agreed to support and make use of the existing Female Executive Mentoring (FEM) programme which is a part of the gender diversity initiative of Deutsche Börse Group as well as the Deutsche Börse Group's Women's Network; both programmes promote the underrepresented gender on different levels.

On 31 December 2022, the Supervisory Board consisted of persons displayed in Table 6, which also discloses the number of directorships held by each member, as required by Article 435 (2) of CRR.

Name – Position	Number of directorships
Dr. Stephan Leithner – Chairman	9 (thereof 6 within Deutsche Börse Group)
Oliver Engels – Vice Chairman	3 (thereof 3 within Deutsche Börse Group)
Prof. Peter Gomber	2 (thereof 2 within Deutsche Börse Group)
Christina Bannier	2 (thereof 2 within Deutsche Börse Group)
Peter Eck	1 (thereof 1 within Deutsche Börse Group)
Norfried Stumpf	1 (thereof 1 within Deutsche Börse Group)

Table 6: Supervisory Board Members, CBF

3.3.3.1 CBF Supervisory Board Committees

EU Central Securities Depositories regulation No 909/2014 (CSDR) requires each Central Securities Depository (CSD) to implement an Audit Committee, a Remuneration Committee and a Risk Committee.

3.3.3.1.1 Audit Committee

Members	Tasks and responsibilities
▪ Prof. Peter Gomber (Chairman) ▪ Oliver Engels (Vice Chairman) ▪ Norfried Stumpf	▪ Monitors accounting and financial reporting processes; ▪ Monitors the effectiveness of the risk management process, in particular, the internal control system (ICS), the risk management system and internal audit;

	▪ 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, ▪ Submits recommendations to the Supervisory Board to ensure the integrity of the reporting and accounting processes; and,

3.3.3.1.2 Remuneration Committee

Members	Tasks and responsibilities
▪ Dr. Stephan Leithner (Chairman) ▪ Prof. Christiane Bannier (Vice Chairman) ▪ Norfried Stumpf	▪ Supervises the reasonableness of the remuneration system of Executive Board 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; ▪ Prepares the Supervisory Board resolutions regarding the determination of the aggregate remuneration of any member of the Executive Board, and by doing so, takes into account what effects the resolutions have on the risk and the risk management of the institution as well as the long-term interests of the shareholders, investors and other stakeholders; ▪ Designs and further develops the Remuneration Policy including the remuneration of the Executive Board; ▪ Supports the Supervisory Board in overseeing the internal control system and all other relevant

	areas in the structuring of the remuneration system; ▪ The Remuneration Committee shall cooperate with the Risk Committee. The Remuneration Committee shall use internal advice, for example from risk controlling, and external advice from individuals independent of the Executive Board. The Chair of the Remuneration Committee may obtain information from the Head of internal audit and the Head of the organisational units responsible for the development of the remuneration systems; and, ▪ Members of the Executive Board are not allowed to participate in meetings of the Remuneration Committee, the subject of which is their remuneration.

3.3.3.1.3 Risk Committee

Members	Tasks and responsibilities
▪ Oliver Engels (Chairman) ▪ Dr. Stephan Leithner (Vice Chairman) ▪ Peter Eck	▪ 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; ▪ With the Audit Committee, submits proposals to the Executive Board about how the conditions applied to customers in accordance with the business model and the risk structure could be created; and ▪ 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. The tasks of the Remuneration Committee remain unaffected;

	▪ Reviews whether the conditions offered to customers take into account the institution's business model and risk structure; and, ▪ If this is not the case, the Risk Committee 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.

In 2022, the Risk Committee met 4 times (information disclosed as required by Article 435 (2) (d) CRR 2).

3.3.3.1.4 User Committee

According to the CSD Regulation, a CSD is required to establish a User Committee for each security settlement system it operates.

Clearstream Banking AG (CBF) operates the securities settlement systems CASCADE and CREATION and offers services through both systems. Consequently, CBF established two user committees.

The committees consist of representatives of issuers and participants in the securities settlement systems.

Members	Tasks and responsibilities
CASCADE ▪ BNP Paribas ▪ Citigroup ▪ Commerzbank ▪ CACEIS ▪ Deutsche Bank ▪ Dwpbank ▪ HSBC CREATION ▪ BNP Paribas ▪ CACEIS ▪ Commerzbank	▪ Pursuant to Article 28 of the CSD Regulation (EU) 909/2014 (CSDR), the User Committee advises the Executive Board of the Company on the following topics: o Committee shall advise the Executive Board on key arrangements that impact on its members, including the criteria for accepting issuers or participants in the securities settlement systems and on service level; o Committee may submit non-binding opinions to the Executive Board, containing detailed reasons regarding the

▪ Dwpbank ▪ HSBC ▪ LBBW	pricing structures of the securities settlement systems of the Company. ▪ The advice of the Committee shall be independent from any direct influence of the Executive Board; ▪ Apart from the CSDR requirements, the Executive Board may seek advice and recommendation from the User Committees with respect to matters which are of relevance for the business of the Company and its relationship with customers, in particular: o Business and marketing strategy; o Development of new products; and, o General market trends and requirements

4. Risk Management Overview

In application of Article 435(1) CRR the qualitative information on risk management in Clearstream Group 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	(a)	Disclosure of concise risk statement approved by the management body	Chapter 4.1 Concise Risk Statement
Point (b) of Article 435(1) CRR	(b)	Information on the risk governance structure for each type of risk	Chapter 4 Risk Management Overview Chapter 8 (Operational) Risk Management Chapter 9 Credit Risk Chapter 10 Liquidity risk and Investment Strategy Chapter 11 Market Risk
Point (e) of Article 435(1) CRR	(c)	Declaration approved by the management body on the adequacy of the risk management arrangements.	Chapter 4.3 Risk Strategy Chapter 4.9 ICAAP Information

Point (c) of Article 435(1) CRR	(e)	Disclose information on the main features of risk disclosure and measurement systems.	Chapter 4.3 Risk Strategy Chapter 4.9 ICAAP information
Point (a) of Article 435(1) CRR	(f)	Strategies and processes to manage risks for each separate category of risk.	Chapter 4.3 Risk Strategy Chapter 4.6 Risk Identification
Points (a) and (d) of Article 435(1) CRR	(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 4.3 Risk Strategy Chapter 4.7 Risk Mitigation and Control

EU OVA – Institution risk management approach

4.1. Concise Risk Statement

In application of point (f) of Article 435(1) of CRR, the CH Executive Board, in the executive board via circular resolution dated 14 August 2023 approved the below concise risk statement.

Article 435(1)(f) CRR requirements	Reference chapters
Risk Profile	4.3.2 Risk Profile
Strategy	4.3 Risk Strategy
Management of risk	4.2 Risk Management Framework 4.5 Risk Management Profess 4.6 Risk Identification 4.6.1 Risk notification 4.6.2 Risk assessment 4.7 Risk mitigation and control 4.8 Risk monitoring and reporting 8. Operational Risk Management 9. Credit Risk 10. Liquidity risk and investment strategy 11. Market Risk
Risk tolerances	4.6.2 Risk assessment
Key ratios and figures	2. Key metrics 5. Financial statement linkages 6. Own Fund and Capital 7. Leverage Ratio 8. Operational Risk Management

	9. Credit Risk 10. Liquidity Risk 11. Market risk

Table 7: Concise Risk Statement

4.2. Risk Management Framework

Risk management is a fundamental component of Clearstream's management and control framework. Effective and efficient risk management is vital to protect 'Clearstream'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.

4.3. Risk Strategy

Clearstream Risk Management (CRM) develops risk strategy statements focusing on three elements, which are linked to Clearstream's overall business strategy, related to all entities.

Risk limitation – CRM aims to protect and ensure continuity of operations with its risk limitation in both capital and liquidity terms. Supporting growth in the various business divisions – CRM supports the business division to expand their overall business.

Appropriate risk and return ratio – Clearstream has set itself the goal that risk and return should be in a reasonable proportion across the product and customer base. Also, the cost of liquidity must fairly reflect the benefits derived from maintaining sufficient liquidity levels.

Strategi– Alignment - The analysis of initiatives and project related to the business strategy is an essential part of the annual Risk Strategy review. The Clearstream Risk Strategy process follows a five-step process covering 1) planning & review, 2) assessment, 3) risk bearing capacity (RBC) limit allocation, 4) approval and 5) implementation. The strategy process takes changing market and the regulatory environment into account as well as feedback from internal and external stakeholders. Clearstream's risk strategy is based upon its business strategy and regulates the extent of risks taken through its various business activities.

All members of the Executive Board of Clearstream are ultimately responsible for the risk strategy, which reflects Clearstream's risk appetite by defining the maximum loss the Executive Board is willing to assume, the risk tolerance as well as desired performance levels in one year. 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 all business activities and that adequate measures are in place to implement the strategies, policies and procedures.

4.3.1. Risk appetite

The risk strategy includes statements concerning risk appetite and sets limits. The Required Economic Capital is the main concept to determine the risk appetite. The following two concepts are established and determine the risk appetite:

- Required Economic Capital – Economic perspective *(formerly Liquidation principle)*: The Required Economic Capital is the Value at Risk (VaR) based on a 99.90 percent confidence level (as of 01.01.2021, until then 99.98%). Required Economic Capital is compared with the Available Risk-Bearing Capacity ("ARBC"), 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 Available Risk-Bearing Capacity is updated acco58especto the respective regulatory reporting frequency.

Earnings at Risk: *Earnings at Risk* is the VaR based on 99.0 percent confidence level. This VaR is used for information purposes only at CH-Group, CBL and CBF level. It is not expected to have impact on capital and therefore it is not used for capital management. It is compared with the budgeted EBITDA.

The REC for individual risk types is defined as a fraction of the overall Risk-Bearing Capacity. When allocating the respective Risk-Bearing capacity to a risk type, the respective risk profile for Clearstream is taken into account.

4.3.2. Risk profile

The risk profile of Clearstream differs fundamentally from those of other financial services providers. Clearstream differentiates between three major risk types that are managed and controlled with distinct methods. These risk types are operational risk, financial risk, and business risk. Operational risk is assessed as the major risk type within Clearstream.

Financial risks (divided into credit, market, and liquidity risks), as well as operational risk are described in the further sections.

The risk strategy was approved by the Executive Board of Clearstream in May 2023.

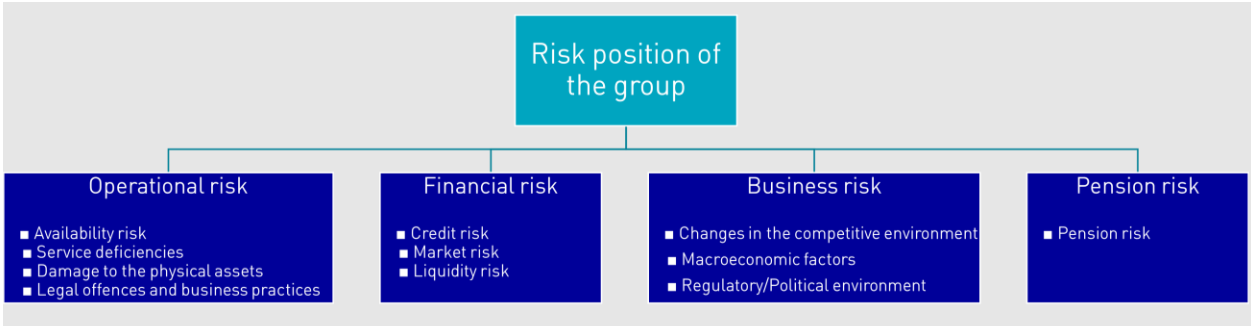

Figure 3: Risk profile of Clearstream

4.4. Risk Culture

Risk awareness and a corresponding risk-conscious culture are encouraged, amongst other things, through appropriate organisational structures and responsibilities, adequate processes and the knowledge of employees. The appropriateness of the risk management and controlling systems is 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.

4.5. Risk Management Process

Clearstream's risk management process is based on the three lines of defence model, see Figure 4. Furthermore, the process aims at ensuring that all threats, causes of loss and potential disruptions are:

- Properly identified as soon as possible (identification);
- Centrally recorded (notification);
- Assessed (that is, quantified in financial terms to the largest possible extent);
- Controlled (mitigation & control); and,
- Reported in a timely manner and consistently, together with suitable recommendations to the Executive Board (monitoring & reporting).

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

Controlling risks 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 risk controlling 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.

Figure 4: Risk management process

4.6. Risk Identification

Risk identification includes the identification of all threats, causes of loss and potential disruptions with regards to existing or new processes as well as internal activities or external factors.

More specifically, the risk identification process is on the one hand proactive, based on regular reviews of processes in order to identify weak areas and points of failure (e.g. manual input required, processes without double keying or four-eyes controls in place, specific procedures subject to high volumes or tight deadlines) or based on scenarios of disruption or failure taking into consideration all sources of issues (e.g. unavailability of systems, human error). For the purpose of properly identifying potential risks for Clearstream, a risk inventory process has been established. The inventory process is carried out at least once a year by Clearstream Risk Management. On the other hand, the ad-hoc risk identification process will be also triggered following an incident.

The identification phase also includes the quantification of risks in the form of parameters based either on statistical data, in the case of actual process monitoring, or on subjective expert judgement when available statistics are insufficient.

All organisational units and individual employees are obliged to identify and quantify potential risks within their area of responsibility.

4.6.1. Risk notification

The process step of risk notification ensures that risks are centrally recorded. To do so, all organisational units and individual employees must notify Clearstream Risk Management in a timely manner of the risks that they have identified.

4.6.2. Risk assessment

Clearstream assesses material risks on an ongoing basis. It applies both the economic perspective and the Earnings at Risk principle to aggregate risks at company level. The main instrument that Clearstream uses for the purpose of quantification is the Value at Risk ("VaR") concept. The VaR quantifies the risks to which a company is exposed and indicates the maximum cumulative loss that Clearstream could face if certain independent loss events materialise over a specific time horizon for a given probability.

Clearstream also considers extreme scenarios and factors into its risk management. Such extreme scenarios include both stress tests across all risk types and stress tests for specific material risk types.

4.7. Risk mitigation and control

Risk mitigation and control involves the determination and implementation of the most appropriate reaction to the identified risk. It encompasses risk avoidance, risk reduction, risk transfer and intentional risk acceptance.

All organisational units and employees must perform risk control and implement mitigating actions.

4.8. Risk monitoring and reporting

Clearstream Risk Management is the independent control function of Clearstream, responsible for monitoring and reporting risks.

A detailed risk report is submitted to the Executive Board of Clearstream at least once a quarter.

Limit breaches are explained in detail and reported to the Executive Board before the 15th business day following the end of the respective quarter of the year or ad-hoc in case the regular monitoring process identifies a limit breach. The regular risk reports contain risk quantification results in comparison with the limits, risk related qualitative information, information about stress tests and capital adequacy information.

In addition to the above-mentioned risk monitoring and reporting functions, Internal Audit serves as the 3rd line of defence and provides further assurance of the risk management process by conducting independent audits.

In the Executive Board meeting on 27 March 2023 the Executive Board concluded that the Risk Management System for the reporting period was effective.

4.9. ICAAP Information

In application of points (c) of Article 438 CRR the institutions shall disclose the approach to assessing the adequacy of their internal capital (ICAAP) 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	(a)	Approach to assessing the adequacy of the internal capital.
Article 438(c) CRR	(b)	Upon demand from the relevant competent authority, the result of the institution's internal capital adequacy assessment process.

EU OVC - ICAAP information

Article 438(a) CRR

The Internal Capital Adequacy Assessment of Clearstream is defined centrally and calculated on a regular basis. The Executive Boards of CH, CBL and CBF and the Supervisory Board of CBL are ultimately responsible for the Risk Strategy of Clearstream and oversee the internal capital adequacy process. CRM 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 report is subject to a 4-eyes principle. The checks are performed using the EBA Readers Manual. The input to the report is prepared and collected by CRM team members including other relevant parties. The final report is reviewed by the Chief Risk Officer of CH and the Head of Risk Management of CBL. Alternatively, the Head of CBF Risk Management can review the final report in support to the Chief Risk Officer of CH to ensure the 4-eye principle is met.

The process includes the first and second line of defence. The ICAAP Report is also reviewed by CBL Compliance in line with CSSF requirements. The CBL Chief Compliance Officer issues recommendations after having reviewed the report which will be discussed with CRM during a meeting and incorporated into the report. Internal Audit, as the third line of defence, reviews the

ICAAP regularly (see annex 12.16). Additionally, Clearstream follows clearly defined escalation procedures.

The Executive Boards of CH, CBF and 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; and,
- Overseeing the integration of internal capital adequacy statement and framework (ICAAP) into the company.

The Executive Boards of CH, CBF and CBL approve the capital adequacy statement and Executive Boards of CH and CBL approve the ICAAP report and 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; and,
- Capital Adequacy Statement.

Article 438(c) CRR

Article 428(c) CRR There was no specific demand from the relevant competent authorities to disclose the result of the institution's internal capital adequacy assessment process in Pillar III report, hence this part is omitted.

5. Financial statement linkages

A full reconciliation of own funds to audited financial statements pursuant to point (a) of Article 437 paragraph 1 CRR 2 must be applied by institutions as laid out in the Implementing Regulation (EU) No 1423/2013. As CH is exempted from the preparation of consolidated annual accounts in line with § 291 (1) HGB, a reconciliation with consolidated own funds is not possible. The balance sheet reconciliation for CBL and CBF is shown in EU LI1 CBL and EU LI1 CBF, respectively. For more information on CBL and the differences, please see the CBL 2022 Pillar 3 report.

		a	b	c	d	e	f	g
				Carrying values of items				
	(in 000 of €)	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 or subject to deduction from own funds
	Breakdown by asset clases according to the balance sheet in the published financial statements							
1	Cash, cash balances at central banks and other demand deposits	10,089,625	9,650,902	9,650,902			9,650,902	
2	Financial assets held for trading	4,723	5,096		5,096		5,096	
3	Financial assets at fair value through other comprehensive income	7,217	7,217	7,217			7,217	
4	Financial assets at fair value through profit and loss	1,734	1,734	1,734			1,734	
5	Financial assets at amortized cost	7,007,122	7,376,531	7,376,531			7,376,531	
5a	*of which Debt securities*	*1,591,044*	*1,591,475*	*1,591,475*			*1,591,475*	
5b	*of which Loans and Advances*	*5,416,079*	*5,785,056*	*5,785,056*			*5,785,056*	
8	Derivatives - hedge accounting	5,410	4,922		4,922		4,922	
9	Investments in subsidiaries, joint ventures and associates	14	14	14			14	
10	Tangible assets	12,200	11,482	11,482			11,482	
11	Intangible assets	1	1				1	1
12	Tax assets	1,102	1,100				1,100	1,100
13	Other assets	45,292	44,888	44,888			44,888	
13a	*of which Other assets*	*42,499*	*42,110*	*42,110*			*42,110*	
13b	*of which Prepayments and accrued income*	*2,793*	*2,778*	*2,778*			*2,778*	
	Total assets	**17,174,441**	**17,103,888**	**17,092,769**	**10,018**		**17,103,888**	**1,101**
	Breakdown by liability classes according to the balance sheet in the published financial statements							
1	Financial liabilities held for trading	118,360	118,064		118,064		118,064	
2	Financial liabilities measured at amortised cost	15,414,302	15,350,014				15,350,014	15,350,014
3	Provisions	16,323	16,408				16,408	16,408
4	Tax liabilities	91,837	92,816				92,816	92,816
5	Other liabilities	72,278	62,305				62,305	62,305
5a	*of which Other liabilities*	*14,645*	*8,540*				*8,540*	8,540
5b	*of which Accruals and deferred income*	*57,633*	*53,765*				*53,765*	53,765
	Total liabilities	**15,713,100**	**15,639,606**		**118,064**		**15,639,606**	**15,521,543**

EU LI1 - Differences between the accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories, CBL

	(in 000s of €)	a	b	c	d	e	f	g
				Carrying values of items				
		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 or subject to deduction from own funds
	Breakdown by asset clases according to the balance sheet in the published financial statements							
1	Cash at central banks	2,185	1,878,815	1,878,815	-	-	1,878,815	-
2	Receivables from banks	2,263,091	435,104	435,104	-	-	435,104	-
2a	*Due daily*	*2,263,091*	*90,505*	*90,505*	-	-	*90,505*	-
2b	*Other receivables*	-	*344,599*	344,599	-	-	*344,599*	-
3	Receivables from non-banks	2,750	-	-	-	-	-	-
4	Bonds and other fixed-income securities	443,832	443,832	443,832	-	-	443,832	-
4a	*Public-sector issuers*	*325,593*	*325,593*	*325,593*	-	-	*325,593*	-
4b	*Other issuers*	*118,239*	*118,239*	*118,239*	-	-	*118,239*	-
5	Intangible assets	21	21	-	-	-	-	21
6	Property, plant and equipment	75	75	75	-	-	75	-
7	Other assets	84,059	57,720	57,720	-	-	57,720	-
8	Prepaid expenses	47	-	-	-	-	-	-
9	Excess of plan assets over post-employment benefit liability	168	-	-	-	-	-	-
	Total assets	**2,796,228**	**2,815,567**	**2,815,546**	**-**	**-**	**2,815,546**	**21**
	Breakdown by liability classes according to the balance sheet in the published financial statements							
1	Liabilities due to banks	1,606,227	1,725,581	-	-	-	1,725,581	1,725,581
2	Amounts due to customers and other liabilities	78,093	-	-	-	-	-	-
3	Bonds issued	350,000	351,024	-	-	-	351,024	351,024
4	Other liabilities	33,231	22,804	-	441	-	22,804	22,363
5	Deferred income	1,024	-	-	-	-	-	-
6	Provisions	133,501	121,334	-	-	-	121,334	121,334
6a	*Provisions for pensions and other obligations*	*13,450*	*13,450*	-	-	-	13,450	13,450
6b	*Provisions for taxation*	*14,454*	*7,734*	-	-	-	7,734	7,734
6c	*Other provisions*	*105,597*	*100,150*	-	-	-	100,150	100,150
	Total liabilities	**2,202,077**	**2,220,743**	**-**	**441**	**-**	**2,220,743**	**2,220,302**

EU LI1 - Differences between the accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories, CBF

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):

		a	b	c	d	e
		Total	Items subject to			
	(in 000 of €)		Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	Assets carrying value amount under the scope of prudential consolidation (as per template LI1)	17,102,787	17,092,769		10,018	17,103,888
2	Liabilities carrying value amount under the scope of prudential consolidation (as per template LI1)	118,064	-		118,064	15,639,606
3	Total net amount under the scope of prudential consolidation	16,984,724	17,092,769	-	(108,046)	1,464,282
4	Off-balance-sheet amounts	1,385,230	1,385,230			
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)*	(49,306,155)	(49,306,155)			
9	*Differences due to credit conversion factors*					
10	*Differences due to Securitisation with risk transfer*					
11	*Other differences*	42,812,703	42,645,674		167,029	
12	Exposure amounts considered for regulatory purposes	11,876,502	11,817,518	-	58,984	43,785

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

	(in 000s of €)	a	b	c	d	e
		Total	Items subject to			
			Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	Assets carrying value amount under the scope of prudential consolidation (as per template LI1)	2,815,546	2,815,546	-	-	2,815,546
2	Liabilities carrying value amount under the scope of prudential consolidation (as per template LI1)	441	-	-	441	2,220,743
3	Total net amount under the scope of prudential consolidation	2,815,105	2,815,546	-	(441)	594,802
4	Off-balance-sheet amounts	-	-	-	-	
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)*	(223,548)	(223,548)	-	-	
9	*Differences due to credit conversion factors*	-	-	-	-	
10	*Differences due to Securitisation with risk transfer*		-	-	-	
11	*Other differences*	512	(5,404)	-	5,916	
12	Exposure amounts considered for regulatory purposes	2,592,069	2,586,593	-	5,475	-

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

In terms of consolidation, please see EU LI3 Outline of the differences in the scopes of consolidation.

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6. Own Funds and Capital

6.1 Composition of Capital

Following the disclosure requirements in Art. 437 CRR 2, as specified in the Implementing Regulation (EU) No. 637/2021 of March 2021, 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, Art. 438 of Part Eight CRR 2 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 Clearstream Holding AG, Clearstream Banking S.A., and Clearstream Banking AG, consists of Common Equity Tier 1 (CET1) capital, which is comprised of subscribed capital, share premium, reserves, and retained earnings. Deductions of CET1 arise from intangible assets, deferred tax assets and regulatory adjustments.

Following Art. 438 (c) to (f) CRR 2, institutions should disclose an overview of total RWA forming the denominator of the risk-based capital requirements calculated per Art. 92 CRR 2 and summary of the institution's calculation approaches chosen. Below is the composition of Own Funds on 31 December 2022 with accompanying ratios.

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	-	
	of which: Instrument type 1 - Paid-in capital	-	
	of which: Instrument type 2 - Share premium	-	
2	Retained earnings	(30,333)	Article 26(1)(c) CRR
3	Accumulated other comprehensive income (and other reserves)	1,705,485	Article 26(1)(e)CRR
EU-3a	Funds for general banking risk	169,309	Article 26(1)(f)CRR
4	Amount of qualifying items referred to in 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	(14,864)	Article 36(1) CRR
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**1,829,596**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-	
8	Intangible assets (net of related tax liability) (negative amount)	(52,267)	Article 36(1)(b) and 37 CRR
9	Not applicable		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	-	
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	-	
12	Negative amounts resulting from the calculation of expected loss amounts	-	
13	Any increase in equity that results from securitised assets (negative amount)	-	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-	
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)	-	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of 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)	-	
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	
20	Not applicable	-	
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-	
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)	-	
EU-20c	of which: securitisation positions (negative amount)	-	
EU-20d	of which: free deliveries (negative amount)	-	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38-(3) CRR are met) (negative amount)	-	
22	Amount exceeding the 17,65% threshold (negative amount)	-	
23	of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities	-	
24	Not applicable	-	
25	of which: deferred tax assets arising from temporary differences	-	
EU-25a	Losses for the current financial year (negative amount)	-	
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
26	Not applicable	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjustments	-	
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	(52,267)	
29	**Common Equity Tier 1 (CET1) capital**	1,777,329	
	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	-	
32	of which: classified as liabilities under applicable accounting standards	-	
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1	-	
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1	-	
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	
35	of which: instruments issued by subsidiaries subject to phase out	-	
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	-	
	Additional Tier 1 (AT1) capital: regulatory adjustments		
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)	-	
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
39	Direct, indirect and synthetic holdings of the AT1 instruments of 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)	-	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
41	Not applicable	-	
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
42a	Other regulatory adjustments to AT1 capital	-	
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	-	
44	**Additional Tier 1 (AT1) capital**	-	
45	**Tier 1 capital (T1 = CET1 + AT1)**	1,777,329	
	Tier 2 (T2) capital: instruments		
46	Capital instruments and the related share premium accounts	-	
47	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-47a	Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b(2) CRR subject to phase out from T2	-	
48	Qualifying own funds instruments included in consolidated T2 capital (including minority 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	-	
51	**Tier 2 (T2) capital before regulatory adjustments**	-	
	Tier 2 (T2) capital: regulatory adjustments		
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of 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	-	
55	Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
56	Not applicable	-	
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
EU-56b	Other regulatory adjustments to T2 capital	-	
57	**Total regulatory adjustments to Tier 2 (T2) capital**	-	
58	**Tier 2 (T2) capital**	-	
59	**Total capital (TC = T1 + T2)**	1,777,329	
60	**Total Risk exposure amount**	5,552,743	Article 92(3) and 95, 96 and 98 CRR
	Capital ratios and requirements including buffers		
61	Common Equity Tier 1 capital	32.01%	
62	Tier 1 capital	32.01%	
63	Total capital	32.01%	
64	Institution CET1 overall capital requirements	1134.52%	
65	of which: capital conservation buffer requirement	2.50%	
66	of which: countercyclical capital buffer requirement	0.14%	
67	of which: systemic risk buffer requirement	0.00%	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	0.50%	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	0.00%	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
68	Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements	24.01%	
National minima (if different from Basel III)			
69	Not applicable		
70	Not applicable		
71	Not applicable		
Amounts below the thresholds for deduction (before risk weighting)			
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	8,567	Article 44, 45, 46 and 49 CRR
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	7,304	Article 44, 45, 47 and 49 CRR
74	Not applicable		
75	Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)		
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in 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		
78	Credit risk adjustments included in T2 in respect of exposures subject to internal 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 arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to 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		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
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)		

EU CC1 - Composition of regulatory own funds CH Group

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	321,935	equity (1)+ (2)
	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		
3	Accumulated other comprehensive income (and other reserves)	706,644	equity (3)+(4)+(5)
EU-3a	Funds for general banking risk		
4	Amount of qualifying items referred to in 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**	**1,028,579**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	(137)	PVA on assets (3), (4), (5), (7), (8) and liabilities (1),(3)
8	Intangible assets (net of related tax liability) (negative amount)	(1)	assets (10)
9	Not applicable		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)		
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	(4,061)	equity (3a)
12	Negative amounts resulting from the calculation of expected loss amounts		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
13	Any increase in equity that results from securitised assets (negative amount)		
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing		
15	Defined-benefit pension fund assets (negative amount)		
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)		
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of 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)		
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		
20	Not applicable		
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative		
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)		
EU-20c	of which: securitisation positions (negative amount)		
EU-20d	of which: free deliveries (negative amount)		
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)	(1,100)	assets (11)
22	Amount exceeding the 17,65% threshold (negative amount)		

(in 000 of €)		(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
23	of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities		
24	Not applicable		
25	of which: deferred tax assets arising from temporary differences		
EU-25a	Losses for the current financial year (negative amount)		
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)		
26	Not applicable		
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)		
27a	Other regulatory adjustments	(15,000)	Deductible net worth tax reserve in equity (5a)
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	(20,298)	
29	**Common Equity Tier 1 (CET1) capital**	**1,008,281**	
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		
32	of which: classified as liabilities under applicable accounting standards		
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1		
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1		
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties		
35	of which: instruments issued by subsidiaries subject to phase out		
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**		
	Additional Tier 1 (AT1) capital: regulatory adjustments		
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)		
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
39	Direct, indirect and synthetic holdings of the AT1 instruments of 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)		
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)		
41	Not applicable		
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)		
42a	Other regulatory adjustments to AT1 capital		
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**		
44	**Additional Tier 1 (AT1) capital**		
45	**Tier 1 capital (T1 = CET1 + AT1)**	1,008,281	
	Tier 2 (T2) capital: instruments		
46	Capital instruments and the related share premium accounts		
47	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		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
EU-47a	Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from T2		
EU-47b	Amount of qualifying items referred to in Article 494b(2) CRR subject to phase out from T2		
48	Qualifying own funds instruments included in consolidated T2 capital (including minority 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		
51	**Tier 2 (T2) capital before regulatory adjustments**		
	Tier 2 (T2) capital: regulatory adjustments		
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)		
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of 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		
55	Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)		
56	Not applicable		
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)		
EU-56b	Other regulatory adjustments to T2 capital		
57	**Total regulatory adjustments to Tier 2 (T2) capital**		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
58	Tier 2 (T2) capital		
59	Total capital (TC = T1 + T2)	1,008,281	
60	Total Risk exposure amount	3,498,887	Assets (1) to (13)
	Capital ratios and requirements including buffers		
61	Common Equity Tier 1 capital	28.82%	
62	Tier 1 capital	28.82%	
63	Total capital	28.82%	
64	Institution CET1 overall capital requirements	7.92%	
65	of which: capital conservation buffer requirement	2.50%	
66	of which: countercyclical capital buffer requirement	0.14%	
67	of which: systemic risk buffer requirement	0.00%	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	0.50%	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	0.28%	
68	Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements	20.54%	
	National minima (if different from Basel III)		
69	Not applicable		
70	Not applicable		
71	Not applicable		
	Amounts below the thresholds for deduction (before risk weighting)		
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	7,217	(4)

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	14	(8)
74	Not applicable		
75	Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)		
Applicable caps on the inclusion of provisions in Tier 2			
76	Credit risk adjustments included in T2 in 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		
78	Credit risk adjustments included in T2 in respect of exposures subject to internal 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 arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to 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)		

EU CC1 - Composition of regulatory own funds CBL

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
Common Equity Tier 1 (CET1) capital: instruments and reserves			
1	Capital instruments and the related share premium accounts	26,108	equity (1)+ (2)
	of which: Instrument type 1 - Paid-in capital	25,000	equity (1)
	of which: Instrument type 2 - Share premium	1,108	equity (2)
2	Retained earnings	98,767	
3	Accumulated other comprehensive income (and other reserves)	295,892	equity (3)+(4)+(5)
EU-3a	Funds for general banking risk		
4	Amount of qualifying items referred to in 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**	**420,767**	
Common Equity Tier 1 (CET1) capital: regulatory adjustments			
7	Additional value adjustments (negative amount)	-	
8	Intangible assets (net of related tax liability) (negative amount)	(21)	assets (10)
9	Not applicable		
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)		
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
12	Negative amounts resulting from the calculation of expected loss amounts		
13	Any increase in equity that results from securitised assets (negative amount)		
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing		
15	Defined-benefit pension fund assets (negative amount)		
16	Direct, indirect and synthetic holdings by an institution of own CET1 instruments (negative amount)		
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of 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)		
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)		
20	Not applicable		
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative		
EU-20b	of which: qualifying holdings outside the financial sector (negative amount)		
EU-20c	of which: securitisation positions (negative amount)		
EU-20d	of which: free deliveries (negative amount)		
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met) (negative amount)		
22	Amount exceeding the 17,65% threshold (negative amount)		
23	of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
24	Not applicable		
25	of which: deferred tax assets arising from temporary differences		
EU-25a	Losses for the current financial year (negative amount)		
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)		
26	Not applicable		
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)		
27a	Other regulatory adjustments		
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	(21)	
29	**Common Equity Tier 1 (CET1) capital**	**420,745**	
	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		
32	of which: classified as liabilities under applicable accounting standards		
33	Amount of qualifying items referred to in Article 484 (4) CRR and the related share premium accounts subject to phase out from AT1		
EU-33a	Amount of qualifying items referred to in Article 494a(1) CRR subject to phase out from AT1		
EU-33b	Amount of qualifying items referred to in Article 494b(1) CRR subject to phase out from AT1		
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties		
35	of which: instruments issued by subsidiaries subject to phase out		
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Additional Tier 1 (AT1) capital: regulatory adjustments		
37	Direct, indirect and synthetic holdings by an institution of own AT1 instruments (negative amount)		
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
39	Direct, indirect and synthetic holdings of the AT1 instruments of 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)		
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)		
41	Not applicable		
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)		
42a	Other regulatory adjustments to AT1 capital		
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**		
44	**Additional Tier 1 (AT1) capital**		
45	**Tier 1 capital (T1 = CET1 + AT1)**	420,745	
	Tier 2 (T2) capital: instruments		
46	Capital instruments and the related share premium accounts		
47	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-47a	Amount of qualifying items referred to in Article 494a(2) CRR subject to phase out from T2		
EU-47b	Amount of qualifying items referred to in Article 494b(2) CRR subject to phase out from T2		
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
49	of which: instruments issued by subsidiaries subject to phase out		
50	Credit risk adjustments		
51	**Tier 2 (T2) capital before regulatory adjustments**		
	Tier 2 (T2) capital: regulatory adjustments		
52	Direct, indirect and synthetic holdings by an institution of own T2 instruments and subordinated loans (negative amount)		
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)		
54	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of 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		
55	Direct, indirect and synthetic holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)		
56	Not applicable		
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)		
EU-56b	Other regulatory adjustments to T2 capital		
57	**Total regulatory adjustments to Tier 2 (T2) capital**		
58	**Tier 2 (T2) capital**		
59	**Total capital (TC = T1 + T2)**	420,745	
60	**Total Risk exposure amount**	1,734,620	Assets (1) to (13)
	Capital ratios and requirements including buffers		
61	Common Equity Tier 1 capital	24.26%	
62	Tier 1 capital	24.26%	

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
63	Total capital	24.26%	
64	Institution CET1 overall capital requirements	1126.50%	
65	of which: capital conservation buffer requirement	2.50%	
66	of which: countercyclical capital buffer requirement	0.14%	
67	of which: systemic risk buffer requirement	0.00%	
EU-67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer requirement	0.50%	
EU-67b	of which: additional own funds requirements to address the risks other than the risk of excessive leverage	0.00%	
68	**Common Equity Tier 1 capital (as a percentage of risk exposure amount) available after meeting the minimum capital requirements**	0.00%	
	National minima (if different from Basel III)		
69	Not applicable		
70	Not applicable		
71	Not applicable		
	Amounts below the thresholds for deduction (before risk weighting)		
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	6,621	(4)
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	-	(8)
74	Not applicable		
75	Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)		
	Applicable caps on the inclusion of provisions in Tier 2		
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)		

	(in 000 of €)	(a) Amounts	(b) Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach		
78	Credit risk adjustments included in T2 in respect of exposures subject to internal 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 arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)			
80	Current cap on CET1 instruments subject to 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)		

EU CC1 - Composition of regulatory own funds CBF

6.1.1. Main features of own funds

		a
		Qualitative or quantitative information - Free format
1	Issuer	Clearstream Banking S.A.
2	Unique identifier (eg 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 229
9	Nominal amount of instrument (currency in millions)	EUR 92
EU -9a	Issue price	
EU -9b	Redemption price	
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

		a
		Qualitative or quantitative information - Free format
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
(1) Insert 'N/A' if the question is not applicable		

EU CCA - Main features of regulatory own funds instruments and eligible liabilities instruments, CBL

		a
		Qualitative or quantitative information - Free format
1	Issuer	Clearstream Banking Aktiengesellschaft
2	Unique identifier (eg CUSIP, ISIN or Bloomberg identifier for private placement)	DE0008053604
2a	Public or private placement	Public
3	Governing law(s) of the instrument	German Stock Corporation Act (AktG)
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 26
9	Nominal amount of instrument (currency in millions)	EUR 25
EU-9a	Issue price in millions	EUR 26
EU-9b	Redemption price	N/A
10	Accounting classification	Shareholders' equity
11	Original date of issuance	1949
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

		a
		Qualitative or quantitative information - Free format
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
(1) Insert 'N/A' if the question is not applicable		

EU CCA - Main features of regulatory own funds instruments and eligible liabilities instruments, CBF

6.2 Balance sheet reconciliation

		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	8,389,228	8,401,744	(60)
2	Loans and advances to credit institutions repayable on demand	1,700,397	1,249,158	(60)
3	Financial assets held for trading - FX derivatives	4,723	5,096	(7),(60)
4	Financial assets FVOCI - Participating interests	7,217	7,217	(7),(60),(72)
5	Financial assets FVPL - Participating interests	1,734	1,734	(7),(60)
6	Financial assets at amortised cost	7,007,122	7,376,531	(60)
6a	*Debt securities*	*1,591,044*	*1,591,475*	(60)
6b	*Loans and advances*	*5,416,079*	*5,785,056*	(60)
7	Derivatives – hedge accounting - cash flow hedges	5,410	4,922	(7),(60)
8	Investments in subsidiaries, joint	14	14	(7),(60),(73)

	ventures and associates			
9	Tangible assets	12,200	11,482	(60)
10	Intangible assets	1	1	(8)
11	Deferred tax assets	1,102	1,100	(21)
12	Other assets	42,499	42,110	(60)
13	Prepayments and accrued income	2,793	2,778	(60)
	Total assets	**17,174,441**	**17,103,888**	
Liabilities - *Breakdown by liability classes according to the balance sheet in the published financial statements*				
1	Financial liabilities held for trading - FX derivatives	118,360	118,064	(7)
2	Financial liabilities measured at amortised cost	15,414,302	15,350,014	
2a	*Deposits*	*14,739,872*	*14,742,915*	
2b	*Debt securities issued*	*504,545*	*504,545*	
2c	*Other financial liabilities*	*169,886*	*102,554*	
3	Derivatives – Hedge Accounting - cash flow hedges	0	0	(7)
4	Other liabilities	14,645	8,540	
5	Accruals and deferred income	57,633	53,765	
6	Provisions for pension and similar obligations	880	880	
7	Other provisions	15,444	15,529	
8	Current tax liabilities	87,895	88,874	
9	Deferred tax liabilities	3,942	3,942	
	Total liabilities	**15,713,100**	**15,639,606**	
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	11,863	11,863	(2)
3a	*Cash flow hedges (effective portion)*	*4,061*	*4,061*	(2),(11)
3b	*Actuarial gains/losses on defined benefit pension plans*	*3,847*	*3,847*	(2)
3c	*Fair value changes of equity instr. measured FVOCI*	*3,956*	*3,956*	(2)
4	Legal reserves	9,200	9,200	(2)
5	Other reserves	686,102	685,581	(2)
5a	*Deductible NWT reserve*	*15,000*	*15,000*	(27a)
6	Profit for the financial year	432,240	435,702	
	Total shareholders' equity	**1,461,341**	**1,464,282**	

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

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 5.1. of the Pillar III report of CBL.

An 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	11,863
Capital Reserve	0
Legal Reserve	9,200
Other reserves and retained earnings	686,102
Profits for the financial year	432,240
Total Own Funds Elements in Audited Financial Statements	1,461,341
Profits for the financial year	(432,240)
Eligible Capital (CET1) before adjustments	1,029,100
Regulatory adjustments	
Deduction other intangible assets	(1)
Deduction of deferred tax	(1,102)
Deduction of cash flow hedge reserve	(4,061)
Prudent valuation adjustment	(137)
Deduction of net worth tax reserve (20%)	(15,000)
Other adjustments	
Valuation differences	(519)
Common Equity Tier 1 Capital/Total Eligible Own Funds	1,008,281

Table 8: Balance sheet reconciliation, CBL

		Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference
	(in 000s of €)	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 at central banks	2,185	1,878,815	(60)
2	Receivables from banks	2,263,091	403,442	(60)
2a	Due daily	2,263,091	90,505	(60)
2b	Other receivables	-	312,937	(60)

	(in 000s of €)	Balance sheet as in published financial statements As at period end	Under regulatory scope of consolidation As at period end	Reference
3	Receivables from non-banks	2,750	31,764.0	(60)
4	Bonds and other fixed-income securities	443,832	443,832	(60)
4a	Public-sector issuers	325,593	302,767.66	(60)
4b	Other issuers	118,239	141,065	(60)
5	Intangible assets	21	21	(8)
6	Property, plant and equipment	75	75	(60)
7	Other assets	84,059	57,618	(60)
8	Prepaid expenses	47	-	(60)
9	Excess of plan assets over post-employment benefit liability	168	-	(60)
	Total assets	**2,796,228**	**2,815,567**	
Liabilities - Breakdown by liability classes according to the balance sheet in the published financial statements				
1	Liabilities due to banks	1,606,227	1,725,581	
2	Amounts due to customers and other liabilities	78,093		
3	Bonds issued	350,000	351,024	
4	Other liabilities	33,231	22,804	
5	Deferred income	1,024	-	
6	Provisions	133,501	121,334	
6a	Provisions for pensions and other obligations	13,450	13,450	
6b	Provisions for taxation	14,454	7,734	
6c	Other provisions	105,597	100,150	
	Total liabilities	**2,202,077**	**2,220,743**	
Shareholders' Equity				
1	Subscribed capital	25,000	25,000	(1)
2	Additional paid-in capital	297,000	297,000	(3)
3	Retained earnings	99,651	98,767	(1+2)

	(in 000s of €)	Balance sheet as in published financial statements	Under regulatory scope of consolidation	Reference
		As at period end	As at period end	
3a	Legal reserve	1,392	-	
3b	Other retained earnings	98,259	-	
4	Balance sheet surplus	172,500	174,057	
	Total shareholders' equity	**594,151**	**594,823**	

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

The main differences are stemming from:

- Various reclassifications between positions
- Earlier recognition of new own funds due to not distributed profit of the year 2022 in accounting than in regulatory reporting

An 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	25,000
Share premium	0
Accumulated other comprehensive income	0
Capital Reserve	297,000
Legal Reserve	1,392
Other reserves and retained earnings	98,259
Profits for the financial year	172,500
Total Own Funds Elements in Audited Financial Statements	594,151
Profits for the financial year	-172,500
Eligible Capital (CET1) before adjustments	421,651
Regulatory adjustments	
Deduction other intangible assets	-21
Deduction of deferred tax	0
Deduction of cash flow hedge reserve	0
Prudent valuation adjustment	0

Balance Sheet Reconciliation	(in 000 of €)
Deduction of net worth tax reserve (20%)	0
Other adjustments	
Not yet recognized as own funds	-885
Common Equity Tier 1 Capital/Total Eligible Own Funds	420,745

Table 9: Balance sheet reconciliation, CBF

6.3 Countercyclical buffer

Please refer to Appendix A for country-specific/geographic distribution of credit exposures that are relevant for the countercyclical buffer, and the institution-specific countercyclical buffer (CCyB1 and CCyB2) for each CH, CBL, and CBF.

6.4 Risk-Weighted Capital

		Total risk exposure amounts (TREA)		Total own funds requirements
		a	b	c
	(in 000 of €)	31-12-22	31-12-21	31-12-22
1	Credit risk (excluding CCR)	974,522	809,096	77,962
2	Of which the standardised approach	974,522	809,096	77,962
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	299,722	231,122	23,978
7	Of which the standardised approach	24,662	-	1,973

8	Of which internal model method (IMM)	-	-	
EU 8a	Of which exposures to a CCP	2,750	2,342	220
EU 8b	Of which credit valuation adjustment - CVA	11,145	56,615	892
9	Of which other CCR	261,165	172,165	
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)	51,158	-	4,093
21	Of which the standardised approach	51,158	-	
22	Of which IMA	-	-	
EU 22a	Large exposures	-	-	
23	Operational risk	4,227,341	4,356,900	338,187
EU 23a	Of which basic indicator approach	-	-	
EU 23b	Of which standardised approach	-	-	
EU 23c	Of which advanced measurement approach	4,227,341	4,356,900	338,187
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**	**5,552,743**	**5,397,118**	**444,219**

EU OV1 – Overview of total risk exposure amounts, CH Group

		Total risk exposure amounts (TREA)		Total own funds requirements
		a	b	c
	(in 000 of €)	31-12-22	31-12-21	31-12-22
1	Credit risk (excluding CCR)	623,469	838,768	49,878
2	Of which the standardised approach	623,469	838,768	49,878
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	35,246	183,090	2,820
7	Of which the standardised approach	22,631		1,810
8	Of which internal model method (IMM)			
EU 8a	Of which exposures to a CCP	3,782	2,046	303
EU 8b	Of which credit valuation adjustment - CVA	8,833	53,436	707
9	Of which other CCR		127,608	
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)	43,785	-	3,503
21	Of which the standardised approach			
22	Of which IMA			
EU 22a	Large exposures			
23	Operational risk	2,796,386	3,015,410	223,711
EU 23a	Of which basic indicator approach			
EU 23b	Of which standardised approach			
EU 23c	Of which advanced measurement approach	2,796,386	3,015,410	223,711
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**	**3,498,887**	**4,037,268**	**279,911**

EU OV1 – Overview of total risk exposure amounts, CBL

		Total risk exposure amounts (TREA)		Total own funds requirements
		a	b	c
	(in 000 of €)	31-12-22	31-12-21	31-12-22
1	Credit risk (excluding CCR)	67,400	78,507	5,392
2	Of which the standardised approach	67,400	78,507	5,392
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	7,456	9,151	596
7	Of which the standardised approach	3,098	-	248
8	Of which internal model method (IMM)	-	-	
EU 8a	Of which exposures to a CCP			-
EU 8b	Of which credit valuation adjustment - CVA	1,131	3,331	91
9	Of which other CCR	3,226	5,820	
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)	-	-	-
21	Of which the standardised approach	-	-	
22	Of which IMA	-	-	
EU 22a	Large exposures	-	-	
23	Operational risk	1,659,765	1,475,638	132,781
EU 23a	Of which basic indicator approach	-	-	

EU 23b	Of which standardised approach	-	-	
EU 23c	Of which advanced measurement approach	1,659,765	1,475,638	132,781
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**	**1,734,620**	**1,563,296**	**138,770**

EU OV1 – Overview of total risk exposure amounts, CBF

7. Leverage Ratio

7.1. Leverage Ratio

As CH is exempted from the preparation of consolidated financial statements in line with § 291 (1) HGB, a reconciliation with the leverage ratio total exposure is abstained from the report. Below, adjustments completed are shown for CBL and CBF on 31 December 2022.

	(in 000 of €)	Applicable amount
1	Total assets as per published financial statements	17,174,441
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	90,678
9	Adjustment for securities financing transactions (SFTs)	56,788
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	1,385,230
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	(14,621,805)
13	Total exposure measure	4,085,331

EU LR1 - LRSum: Summary reconciliation of accounting assets and leverage ratio Exposures, CBL

	(in 000s of €)	Applicable amount
1	Total assets as per published financial statements	2,815,567
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of prudential consolidation	0
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	0
4	(Adjustment for temporary exemption of exposures to central banks (if applicable))	0
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)	0
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	0
7	Adjustment for eligible cash pooling transactions	0
8	Adjustment for derivative financial instruments	5,775
9	Adjustment for securities financing transactions (SFTs)	-479,253

10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	0
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	0
EU-11a	(Adjustment for exposures excluded from the total exposure measure in accordance with point (c) of Article 429a(1) CRR)	0
EU-11b	(Adjustment for exposures excluded from the total exposure measure in accordance with point (j) of Article 429a(1) CRR)	0
12	Other adjustments	-1,184,889
13	**Total exposure measure**	**1,157,200**

EU LR1 - LRSum: Summary reconciliation of accounting assets and leverage ratio Exposures, CBF

(in 000 of €)		**31.12.2022**	**31.12.2021**
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	14,523,918	12,819,646
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)	(52,267)	(52,372)
7	**Total on-balance sheet exposures (excluding derivatives and SFTs)**	**14,471,651**	**12,767,274**
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	14,025	0
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	0	0

(in 000 of €)		31.12.2022	31.12.2021
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	95,409	
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach		
EU-9b	Exposure determined under Original Exposure Method	-	333,921
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)		
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)		
EU-10b	(Exempted CCP leg 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**	**109,434**	**333,921**
Securities financing transaction (SFT) exposures			
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	5,672,783	4,269,324
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)		
16	Counterparty credit risk exposure for SFT assets	-	15,025
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR		
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)		
18	**Total securities financing transaction exposures**	**5,672,783**	**4,284,349**
Other off-balance sheet exposures			
19	Off-balance sheet exposures at gross notional amount	1,386,586	885,672
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**	**1,386,586**	**885,672**
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))		

(in 000 of €)		31.12.2022	31.12.2021
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)		
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)	(15,953,781)	(12,159,777)
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)		
EU-22k	(Total exempted exposures)	(15,953,781)	(12,159,777)
Capital and total exposure measure			
23	Tier 1 capital	1,777,329	1,790,596
24	Total exposure measure	5,686,674	6,111,439
Leverage ratio			
25	Leverage ratio (%)	31.25%	29.30%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	31.25%	29.30%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	31.25%	29.30%
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	n/a	n/a
27	Leverage ratio buffer requirement (%)	n/a	n/a
EU-27a	Overall leverage ratio requirement (%)	3.00%	3.00%
Choice on transitional arrangements and relevant exposures			
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in

EU LR2 – LRCom: Leverage ratio common disclosure, CH Group

(in 000 of €)		12/31/2022	12/31/2021
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	11,471,472	10,213,442
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)	(5,298)	(35,845)
7	Total on-balance sheet exposures (excluding derivatives and SFTs)	11,466,174	10,177,596
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	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	86,786	
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach		
EU-9b	Exposure determined under Original Exposure Method		320,880
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)		
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)		
EU-10b	(Exempted CCP leg 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	100,811	320,880
Securities financing transaction (SFT) exposures			
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	5,622,397	4,269,441
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)		

(in 000 of €)		12/31/2022	12/31/2021
16	Counterparty credit risk exposure for SFT assets	22,661	12,193
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR		
17	Agent transaction exposures	34,127	32,063
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)		
18	**Total securities financing transaction exposures**	5,679,185	4,313,697
	Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	1,385,230	886,325
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**	1,385,230	886,325
	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)	(14,546,069)	(11,194,924)
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)	(14,546,069)	(11,194,924)
	Capital and total exposure measure		
23	**Tier 1 capital**	1,008,281	1,214,206
24	**Total exposure measure**	4,085,331	4,503,574
	Leverage ratio		

(in 000 of €)		12/31/2022	12/31/2021
25	Leverage ratio (%)	24.68%	26.96%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	24.68%	26.96%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	24.68%	26.96%
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 relevant 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	7,660,358	6,465,408
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	5,622,397	4,269,441
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)	6,123,292	6,699,541
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)	6,123,292	6,699,541
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)	16.47%	18.12%
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	16.47%	18.12%

(in 000 of €)		12/31/2022	12/31/2021
	sale accounting transactions and netted of amounts of associated cash payables and cash receivables)		

EU LR2 – LRCom: Leverage ratio common disclosure, CBL

(in 000s of €)		31.12.2022	31.12.2021
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	2,570,537	2,324,720
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)	(21)	(49)
7	Total on-balance sheet exposures (excluding derivatives and SFTs)	2,570,515	2,324,671
Derivative exposures			
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	-	-
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	5,775.36	-
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach		
EU-9b	Exposure determined under Original Exposure Method	-	14,833
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)		
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)		

(in 000s of €)		31.12.2022	31.12.2021
EU-10b	(Exempted CCP leg 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**	**5,775**	**14,833**
	Securities financing transaction (SFT) exposures		
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	239,627	132,439
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)		
16	Counterparty credit risk exposure for SFT assets	-	-
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR		
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)		
18	**Total securities financing transaction exposures**	**239,627**	**132,439**
	Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	-	-
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**	**-**	**-**
	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)		

(in 000s of €)		31.12.2022	31.12.2021
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	(1,658,717)	(1,342,238)
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)**	**(1,658,717)**	**(1,342,238)**
Capital and total exposure measure			
23	**Tier 1 capital**	**420,745**	**420,138**
24	**Total exposure measure**	**1,157,200**	**1,129,704**
Leverage ratio			
25	Leverage ratio (%)	36.36%	37.19%
EU-25	Leverage ratio (excluding the impact of the exemption of public sector investments and promotional loans) (%)	36.36%	37.19%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) (%)	36.36%	37.19%
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	n/a	n/a
27	Leverage ratio buffer requirement (%)	n/a	n/a
EU-27a	Overall leverage ratio requirement (%)	3.00%	3.00%
Choice on transitional arrangements and relevant exposures			
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in

EU LR2 – LRCom: Leverage ratio common disclosure, CBF

	(in 000 of €)	CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**4,037,823**
EU-2	Trading book exposures	-
EU-3	Banking book exposures, of which:	4,037,823
EU-4	Covered bonds	-
EU-5	Exposures treated as sovereigns	3,189,965

EU-6	Exposures to regional governments, MDB, international organisations and PSE, not treated as sovereigns	29
EU-7	Institutions	171,145
EU-8	Secured by mortgages of immovable properties	-
EU-9	Retail exposures	-
EU-10	Corporates	557,706
EU-11	Exposures in default	-
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	118,978

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

	(in 000 of €)	CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**2,497,329**
EU-2	Trading book exposures	
EU-3	Banking book exposures, of which:	2,497,329
EU-4	Covered bonds	
EU-5	Exposures treated as sovereigns	2,116,578
EU-6	Exposures to regional governments, MDB, international organisations and PSE, not treated as sovereigns	119
EU-7	Institutions	228,601
EU-8	Secured by mortgages of immovable properties	
EU-9	Retail exposures	
EU-10	Corporates	119,984
EU-11	Exposures in default	2,063
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	29,985

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

	(in 000 of €)	CRR leverage ratio exposures
EU-1	**Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:**	**911,820**
EU-2	Trading book exposures	-

	(in 000 of €)	CRR leverage ratio exposures
EU-3	Banking book exposures, of which:	911,820
EU-4	Covered bonds	-
EU-5	Exposures treated as sovereigns	698,119
EU-6	Exposures to regional governments, MDB, international organisations and PSE, not treated as sovereigns	-
EU-7	Institutions	160,479
EU-8	Secured by mortgages of immovable properties	-
EU-9	Retail exposures	-
EU-10	Corporates	46,037
EU-11	Exposures in default	-
EU-12	Other exposures (eg equity, securitisations, and other non-credit obligation assets)	7,185

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

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, Clearstream Group is required to provide following information specified in template EU LRA.

Row	Description
(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

EU LRA - Disclosure of LR qualitative information, CH Group

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

Point (a)

Clearstream Group processes large daily volumes of client transactions, which are collateralized 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 Group. 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 Group is able to manage its leverage ratio relative to prudential norms through balance sheet and client collateral allocation strategies. Clearstream Group continues to monitor CRD V developments as part of its medium-term planning.

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.

In addition to the increase in on-balance exposures compared to 2021, the off-balance sheet exposures from ASL business increased significantly impacting the leverage ratio of CBL.

Point (b)

In August 2022, Clearstream Group exceeded for three consecutive months the absolute threshold of EUR 100 million set out in Article 273a CRR allowing the usage of original exposure method (OEM) for the calculation of counterparty credit risk. As replacement of OEM Clearstream Group applied standardized approach for counterparty credit risk (SA-CCR) for FX derivatives starting from December 2022 onwards.

8. Operational Risk Management

In application of Article 446 CRR 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 4 Chapter 8
(b)	Disclosure of the approaches for the assessment of minimum own funds requirements	Chapter 8.7
(c)	Description of the AMA methodology approach used *(if applicable)*	Chapter 8.7
(d)	Disclose the use of insurance for risk mitigation in the Advanced Measurement Approach *(if applicable)*	Chapter 8.6

EU ORA – Qualitative information on operational risk

8.1. Operational Risk

Operational risk is defined as the risk of loss resulting from inadequate or defective systems and internal processes, from human or technical failure, from inadequate or defective external processes, from damage to physical assets as well as from legal risks that could arise from non- or inappropriate compliance with new or existing laws and regulations and all contractual commitments. Based on this definition, Clearstream distinguishes between four types of operational risk:

- Availability risk (e.g. technical infrastructure, facilities, staff);
- Service deficiencies (e.g. errors & omissions, supplier deficiencies, product flaws);
- Damage to physical assets (e.g. accidents, natural hazards, terrorism, sabotage);
- Legal offences and business practices (e.g. non-compliance with laws & regulation).

8.2. Strategy and Processes

Clearstream's risk strategy, as described in 4.3. Risk management overview, also applies to the management of operational risk (hereinafter, "Operational risk", "OpRisk") and the two other risk categories: financial risk and business 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 represents a major risk class for the Bank, and one that is systematically 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 and CBF applies the AMA to calculate the capital requirements for operational risk.

8.3. Structure & Organisation

The ultimate responsibility for operational risk management lies with the members of the Executive Boards of Clearstream, who are supported by different units and functions. The five steps of the risk management process are key to the framework (please refer to chapter 4.5. Risk Management Process).

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 to this, 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.

It is the responsibility of the employees to support Clearstream Risk Management, line management, and the operational risk representative of their organisational unit regarding any operational risk matters. Every employee is required to participate in the collection of operational risk event data. Furthermore, individual employees may be asked by their line manager, their operational risk representative, or Clearstream Risk Management to take an active role in the operational risk management process, for example, as experts within the scenario analysis process.

8.4. Assessment

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; and,

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 Art. 446 CRR 2, concerning the approach for the assessment of own-funds requirements for operational risk and Art. 454 CRR 2 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 properties:

- Capital requirements reflect the risk profile of Clearstream Group and individual group entities.
- Confidence levels can be adjusted according to the risk appetite of the bank;
- Incentives for proper risk management can be included into the model;
- Major risk drivers can be identified;
- Risk mitigation effects can be taken into account; and,
- 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. It is mentioned that risk mitigation effects are being considered within the AMA.

z reflects changing conditions. It comprises both integrated and independent control and safety measures. In 2018, Clearstream established the Control Assurance & Monitoring (CAM) function to further enhance the documentation and monitoring of the internal control system. Internal Audit carries out risk-oriented and process-independent controls to assess the effectiveness and appropriateness of the internal control system.

8.4.1. Business Continuity Management

Within the operational risk framework, business continuity management provides Clearstream the comfort we have the capabilities of meeting disruptions to the business while providing market infrastructure. In the unlikely event we experience the unavailability of core processes and resources, this represents a substantial risk for Clearstream and potential systemic risk to financial markets, and as a result, Clearstream has implemented a comprehensive Business Continuity Management (BCM) approach as key mitigation of availability risk. Related tests are performed throughout the year.

8.4.1.1. BCM organisation at Clearstream

The Executive Board is responsible for ensuring the continuity of business at Clearstream. 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, monitoring, and assessment 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 BCM policy.

8.4.1.2. BCM Arrangements

The implemented BCM arrangements aim to minimise the impact of the unavailability of key resources and address the unavailability of systems, workspace, and suppliers, but also the loss of significant numbers of staff in order to ensure the continuity of the most critical operations in cases of catastrophic events. Clearstream also leverage on its operational locations in Cork, Eschborn, London, Luxembourg, Prague, and Singapore to maintain the continuity of its services.

8.4.1.3. 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.

8.4.1.4. Workspace unavailability

Exclusively dedicated work facilities provide backup office space for mission-critical functions requiring onsite presence if an office location becomes unavailable. These backup facilities are always fully equipped and connected to the distributed data centres and are operational at all times. Also, business transfer plans between Clearstream's different operations locations and remote working can be used to mitigate workspace unavailability.

8.4.1.5. Staff unavailability

Business continuity solutions also cover the significant unavailability of staff, e.g., during a pandemic-related incident or terrorist attacks. Solutions are designed to ensure that the minimum staff and skills required are available outside the impacted location. Staff dispersal and business transfer plans between Clearstream's different operations locations are in place so that, if one of these locations is impacted, mission-critical activities can be continued by staff in other locations. 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 e.g., 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.

8.4.1.6. 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.

8.4.1.7. Incident and crisis management process

Clearstream has implemented a Group-wide incident and crisis management process that, in a structured and effective manner, facilitates 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 have been appointed in the respective business areas as single points of contact in case of incidents and crises to ensure the appropriate response mechanisms are in place to ensure an escalation up to the Executive Board and the notification of customers and other relevant external parties.

8.4.1.8. "Real-life" simulation testing

Clearstream adopts a comprehensive and ambitious business continuity testing approach that simulates scenarios as close as possible to real-life situations while reducing associated risks and avoiding customer impacts. BCM plans are tested on a regular basis, at least annually and mostly unannounced.

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. Customers are regularly invited to participate in Clearstream's BCM tests to provide them with the direct assurance of Clearstream's BCM preparedness.

8.5. Insurance

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 CH's business.

8.6. Measurement

Banking activities		a	b	c	d	e
		Relevant indicator			Own funds requirements	Risk exposure amount
(in 000 of €)		Year-3	Year-2	Last year		
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	154,989	163,019	173,012	338,187	4,227,341

EU OR1 - Operational risk own funds requirements and risk-weighted exposure amounts – CH Group

Banking activities		a	b	c	d	e
		Relevant indicator			Own funds requirements	Risk exposure amount
(in 000 of €)		Year-3	Year-2	Last year		
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	102,060	104,699	105,700	223,711	2,796,386

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

Banking activities		a	b	c	d	e
		Relevant indicator			Own funds requirements	Risk exposure amount
(in 000 of €)		Year-3	Year-2	Last year		
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	52,929	58,320	67,312	132,781	1,659,765

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

8.7. Monitoring and Reporting

The reporting approach laid out in 4.8. 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 (ICAAP) of Clearstream, which is defined centrally and calculated on a regular basis. For detailed information on ICAAP please refer to 4.9. ICAAP information.

9. Credit Risk

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

Qualitative 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 9.1
(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.	Chapter 9.1 and 9.11
(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.	Chapter 9.1 and 9.11
(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 9.3 to9.11

EU CRA -General qualitative information about credit risk

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 disclosures		Disclosure chapter
(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	Chapter 9.1
(b)	The extent of past-due exposures (more than 90 days) that are not considered to be impaired and the reasons for this.	Chapter 9.1
(c)	Description of methods used for determining general and specific credit risk adjustments.	Chapter 9.1.1

(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.	N/A

EU CRB - Additional disclosure related to the credit quality of assets

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

9.1. Concise credit risk statement

Sources of Credit Risk

As an O-SII, 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 for CBL and CBF mainly arises from intraday credit, as well as from custody, treasury operations, and for CBL from securities financing and settlement over the Bridge with Euroclear.

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 or CBF 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 CBL: 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. Moreover, credit risk may arise from the ASLplus and ASL principal programs, where CBL acts as a principal.
- Credit risk from treasury activities in CBL or CBF, including repos, reverse repos, FX trades, interest rate and currency swaps, and unsecured placements. This credit risk arises in case 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 CBL, in case of a default of Euroclear Bank before having paid for securities already delivered by Clearstream.

Concise Risk Statement

Clearstream credit risk is in accordance with Article 435(1), 442 and 453 CRR 2, the following paragraphs 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 (EU) No 876/2019.

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), Regulation (EU) No 876/2019 (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 customer's financial standing, as indicated by factors such as the customer's credit rating and net worth taking into account the level of activity in the customer'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. It 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 Art. 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 Art. 178 of CRR.

The assets on the balance sheet are valued and adjusted as follows:

1. Receivables and liabilities denominated in foreign currency are translated at Bloomberg average spot exchange rates upon acquisition and at the reporting date. Receivables and other assets are always carried at their nominal amount. All discernible risks are impaired on an item-by-item basis. In addition, portfolio impairments are made for foreseeable but not yet individually specified counterparty default risks.

2. Bonds and other fixed-interest securities are carried at cost and recognized in the balance sheet according to the moderate lower of cost or market principle.
3. In the case of financial assets, use is made of the option to recognize write-downs even in the case of impairments that are not expected to be permanent.
4. No impairments or provisioning is done for Nostro/ cash accounts.

The key figures for credit risk are provided in this report as part of risk-weighted capital in Chapter 6.4 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 concise risk statement in Chapter 4.

9.2. CBF public disclosure: Article 28 of Regulation (EU) 2017/390

As defined in paragraph 1.4.1.8. Clearstream Banking AG, Frankfurt/Main (CBF), has been authorised under the Article 54 CSDR to provide banking-type ancillary services on 24 August 2021. In the set of related obligations, Article 28, for the purpose of the Article 18(1) of 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, CBF has put in place controls and an operational framework to answer the prudential requirements on credit risk as per Regulation (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, CBF has in place credit risk management framework that comply with the following requirements:

- (a) Measurement of intraday and overnight credit risk: CBF identifies and measures intraday credit risk exposure through analytical tools such as the Credit Exposure Monitoring Tool (CEMT). 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 CEMT 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, CBF 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: CBF ensures full coverage of credit exposures with collateral or other equivalent financial resources, as outlined in Article 59(3)(c) of CSDR Level 2. 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 CSDR Level 2. CBF has in place daily monitoring of collateral concentration limits at both CSD and client level. Furthermore, CBF 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 Delegated Commission Regulation 2017/390], CBF 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, CBF has in place a framework for escalating and reporting of potential residual credit exposures.
    - Additionally, CBF 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) CSDR and Article 26 DR 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 the DR (EU) 2017/390, CBF 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 DR (EU) 2017/390, this chapter of the Pillar III Disclosure Report, serves as CBF'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.

CBF has in place monthly and quarterly internal reporting including the metrics described in Article 18(4) 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 DR (EU) 2017/390.

9.3. Strategy and processes

Given the unique nature of the Clearstream business, its lending operations cannot be compared with those of other credit institutions. Firstly, the loans are extended solely on an extremely short-term basis. Secondly, they are extended solely for the purposes of increasing the efficiency of securities settlement. With a few exceptions of selected central banks, these loans are fully collateralised. Moreover, loans are only granted to creditworthy customers and credit lines granted are uncommitted and can be revoked at any time. In addition, from a credit risk perspective, TFO in Frankfurt manages the surplus cash of CHAG and invests it into the Deutsche Börse AG ("DBAG") cash pool in-line with the approved limits.

Credit risk is classified as material risk in Clearstream's risk strategy. The risk strategy for credit risk follows the overall risk strategy laid out in 4.3. Risk strategy. The risk management process for credit risk follows the overall risk management process as presented in Chapter 4.5. Risk Processes.

9.4. Structure and organisation

The credit risk management function is performed by dedicated organisational units and governing bodies based on the *Credit Policy*. In particular, the following tasks are performed, and responsibilities are assigned:

- The creditworthiness of potential new counterparties and the creditworthiness of issuers of collateral accepted by Clearstream is assessed by Credit Section.
- The creditworthiness of existing counterparts is regularly reviewed and continuously monitored.
- Collateral eligibility is defined and approved by the Credit Section. The monitoring of recoverability of collateral is also operated by the Clearstream Default Management.
- Any exception to the *Credit Policy* must be approved by the respective Executive Board.

9.5. Assessment

In the natural course of day-to-day business transactions, Clearstream is exposed to credit risk from a multitude of sources. Credit risk is present in all of Clearstream's primary businesses – this includes custody (mainly related to asset servicing activities), settlement, securities financing, treasury operations and from settlement over the Bridge with Euroclear.

Sources of credit risk are assessed after considering all business segments, products, and services. The list of sources of credit risk is updated annually. Moreover, the list of sources of credit risk is updated as per the Material Change Procedure requiring new products/services to be subjected to a Clearstream Risk Committee (CRC) decision prior to approval.

Please see Appendix D for the credit quality of loans and advances by industry for CH, CBL, and CBF.

9.5.1. Use of Standardised Approach

Prior to August 2020, for the exposure class pertaining to central governments and central banks, Clearstream used the credit assessments by the OECD[1]. In addition, Clearstream also nominated the external credit assessment institution (ECAI) Standard & Poor's for the same exposure class because the 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.

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.

The exposures of Clearstream are mainly to the exposure classes of institutions, corporates, and central governments or central banks; 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 Art. 120 paragraph 2 CRR the risk weight is 20%. The risk weighting for multilateral development banks is in most cases 0%. Covered bonds obtain a risk weighting based on the risk weightings assigned to senior unsecured claims on the credit institution that issues the covered bond. 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).

9.5.2. Limits

With regards to credit risk, the credit risk strategy is translated into a limit system, which is monitored on a regular basis and ad hoc.

Credit is exclusively granted on a collateralised basis, with the exception of certain unsecured settlement limits granted to sovereign and supranational institutions (as per the exemption foreseen in Art.23.2 of CSDR (EU) No 2017/390). Borrowers in Clearstream are central banks,

[1] Country risk classification: http://www.oecd.org/tad/xcred/crc.htm.

banks and financial institutions. Furthermore, credit limits are set for the placement of funds with counterparties. The credit processing is arranged in guidelines and work instructions.

All credit risk exposures are regularly reviewed and monitored. The exposure limits (on level of each single customer, on level of each customer group and on level of each country) are set to ensure that Clearstream does not take too large an exposure, and therefore risk, on too few participants or counterparties.

Similarly, in the event of items that are deemed 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. Please see Appendix B for the performing and non-performing exposures, and related provisions and changes in the stock of non-performing loans & advances can be found for CH, CBL and CBF. The maturity of the exposures can be found for CBL only. CH and CBF report empty reports and fields for this template.

Similar to Appendix B, the breakdown of exposure in default and non-performing exposures, according to country are included in the Appendix C, quality of non-performing exposures by geography for CH, CBL, and CBF.

9.5.3. Stress testing

The term "stress test" comprises the entirety of qualitative and quantitative analysis methods of rare but plausible events. There are several stress tests performed for credit risk, for example:

- 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 of a deterioration of the economic environment on Clearstream is simulated on a 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 Boards on a quarterly basis and to the Supervisory Board on at least half-yearly basis.

In addition to the stress tests defined above, a "Reverse Credit Stress Test" is yearly being performed, whose aim is to identify the number of unsecured credit lines that exceed the available risk bearing capacity.

9.5.3.1. Ad-hoc stress testing

Ad-hoc stress tests may be triggered by a certain scenario proposed by the Executive Board or a Financial risk metric traffic light turned red. The relevant markets, countries and market rates are defined by expert judgement based on each entity's risk profile.

The ad-hoc stress scenarios are based on the currently established methodology for stress scenarios, where the specific parameters relevant for the respective risks are additionally stressed. The stress degree is based on expert judgement.

If the ad-hoc stress test leads to an increased result compared to the regular stress test, the ad-hoc stress test is reported. The ad-hoc stress test may also replace the regular stress test in the event it persists being relevant for longer than one quarter.

9.6. Mitigation and control

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 876/2019 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	Disclosure chapter
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.	Chapter 9.2
Article 453 (b) CRR	(b)	The core features of policies and processes for eligible collateral evaluation and management.	Chapter 9.2, 9.4 and 9.6
Article 453 (c) CRR	(c)	A description of the main types of collateral taken by the institution to mitigate credit risk.	Chapter 9.6 to 9.9 and 9.11
Article 453 (d) CRR	(d)	For guarantees and credit derivatives used as credit protection, the main types of guarantors and credit derivative counterparty and their creditworthiness used for the purposes of reducing capital requirements, excluding those used as part of synthetic securitisation structures.	n/a
Article 453 (e) CRR	(e)	Information about market or credit risk concentrations within the credit mitigation taken.	Chapter 3.1

EU CRC - Qualitative disclosure requirements related to CRM techniques

Credit risk mitigation techniques, used by Clearstream, are composed of hedging and collateralisation.

Collateral eligibility is recommended and reviewed on a yearly basis by the Credit Section and approved by the respective Executive Board. Eligibility and haircut are dependent on the credit, market, liquidity, and legal risks of the security. Securities that are eligible are subject to a margin deduction from their market value. Securities issued by or correlated to the customer are not eligible as collateral. Any transaction on a given account that would exceed the available collateral is automatically blocked by the system.

Collateralisations are also used in connection with the settlement credit limits. To facilitate the settlement of securities transactions against payment two types of credit limits are currently available:

- The Technical Overdraft Facility (TOF); and,
- The Unconfirmed Funds Facility (UCF).

Under the terms and conditions of the TOF and the UCF contracts Clearstream has a right of pledge on all the customer's assets held on the customer's account(s) defined as pledge account(s) to secure obligations towards Clearstream by the customer for the services rendered to this customer.

9.7. Collateralised placing

CBL places a major part of the Group's liquidity on the basis of reverse repo agreements with a maximum maturity of six months. Repo transactions must be governed by a Global Master Repurchase Agreement (GMRA) and are only closed with banking counterparties fulfilling minimum rating criteria. Securities eligible for these transactions must also fulfil a specific set of requirements (e.g., daily pricing, minimum rating or a maximum remaining life to maturity, etc.) specified in the Clearstream Investment Policy.

Cross-currency collateralisation is in general possible. It was not used for bilateral transactions but in the context of triparty repos. Bilateral transactions must be "plain vanilla" on a single fixed-income security. In triparty transactions, multiple fixed-income securities may be taken as collateral. Structured transactions are not allowed.

Haircuts on the securities are applied within triparty repo transactions. All collateral is valued daily. To secure the cash lent through reverse repurchase agreements, CBL agrees to margin calls with the repo counterparty daily to keep cash and collateral in balance.

For EUR, CBL holds an account with the Central Bank of Luxembourg, cash in this currency is placed here.

Below are tables covering credit risk exposures, standardised approach, pre- and post-collateral.

	Exposure classes	Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet exposures	RWAs	RWAs density (%)
	(in 000s of €)						
		a	b	c	d	e	f
1	Central governments or central banks	10,654,457	-	10,654,419	-	1,183	0.01%
2	Regional government or local authorities	302,143	-	302,143	-	4	0.00%
3	Public sector entities	988,664	-	988,664	-	-	0.00%
4	Multilateral development banks	394,095	-	394,095	-	11	0.00%
5	International organisations	151,854	-	151,854	-	-	0.00%
6	Institutions	1,299,202	575,397	1,284,651	234	257,369	20.03%
7	Corporates	592,263	811,190	576,436	51,163	610,030	97.20%
8	Retail	-	-	-	-	-	0.00%
9	Secured by mortgages on immovable property	-	-	-	-	-	0.00%
10	Exposures in default	-	-	-	-	-	0.00%
11	Exposures associated with particularly high risk	-	-	-	-	-	0.00%
12	Covered bonds	-	-	-	-	-	0.00%
13	Institutions and corporates with a short-term credit	-	-	-	-	-	0.00%
14	Collective investment undertakings	-	-	-	-	-	0.00%
15	Equity	15,872	-	15,872	-	15,894	100.14%
16	Other items	90,034	-	90,034	-	90,032	100.00%
17	TOTAL	14,488,583	1,386,586	14,458,168	51,397	974,522	6.72%

EU CR4 – standardised approach – Credit risk exposure and CRM effects, CH Group

	(in 000 of EUR)	Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and 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	c	d	e	f
1	Central governments or central banks	8,421,333		8,421,333		1,541	0%
2	Regional government or local authorities	203,222		203,222		1	0%
3	Public sector entities	903,092		903,092		19	0%
4	Multilateral development banks	375,774		375,774		4	0%
5	International organisations	110,723		110,723		-	0%
6	Institutions	1,291,246	575,397	1,291,246	34,000	265,366	20%
7	Corporates	134,034	809,833	134,034	126	134,216	100%
8	Retail						
9	Secured by mortgages on immovable property						
10	Exposures in default	2,063		2,063		3,094	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	7,232		7,232		7,232	100%
16	Other items	21,652		21,652		21,647	100%
17	**TOTAL**	**11,470,372**	**1,385,230**	**11,470,372**	**34,127**	**433,120**	4%

EU CR4 – standardised approach – Credit risk exposure and CRM effects, CBL

	Exposure classes	Exposures before CCF and before CRM		Exposures post CCF and post CRM		RWAs and RWAs density	
		On-balance-sheet exposures	Off-balance-sheet exposures	On-balance-sheet exposures	Off-balance-sheet exposures	RWAs	RWAs density (%)
	(in 000s of €)						
		a	b	c	d	e	f
1	Central governments or central banks	2,017,099	-	2,017,099	-	-	0.00%
2	Regional government or local authorities	101,272	-	101,272	-	-	0.00%
3	Public sector entities	147,594	-	147,594	-	-	0.00%
4	Multilateral development banks	44,954	-	44,954	-	-	0.00%
5	International organisations	45,916	-	45,916	-	-	0.00%
6	Institutions	160,479	-	160,427	-	32,086	20.00%
7	Corporates	46,037	-	46,037	-	28,151	61.15%
8	Retail	-	-	-	-	-	0.00%
9	Secured by mortgages on immovable property	-	-	-	-	-	0.00%
10	Exposures in default	-	-	-	-	-	0.00%
11	Exposures associated with particularly high risk	-	-	-	-	-	0.00%
12	Covered bonds	-	-	-	-	-	0.00%
13	Institutions and corporates with a short-term credit	-	-	-	-	-	0.00%
14	Collective investment undertakings	-	-	-	-	-	0.00%
15	Equity	6,621	-	6,621	-	6,621	100.00%
16	Other items	543	-	543	-	543	100.00%
17	TOTAL	2,570,515	-	2,570,463	-	67,400	2.62%

EU CR4 – standardised approach – Credit risk exposure and CRM effects, CBF

9.8. ASL

ASL (Automated Securities Lending) is a lending programme that allows customers who are short of securities due to settlement failure to borrow securities from other Clearstream customers (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,
  - 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.

9.9. ASLplus

The ASLplus Programme is a Securities Lending programme that enables customers to enhance the revenues that can be realised as a lender by offering access to the wholesale trading market. CBL acts as principal (borrower) to the lenders in ASLplus and lends on securities to market participants through various counterparties. CBL further undertakes administrative functions and provides a secure settlement environment.

The Credit Section defines collateralised securities borrowing limits for each borrower and credit limits are agreed on the basis of standard framework agreements between CBL and each borrower.

Collateral for ASLplus business is delivered in a collateral pool serving several loans. Out of the pool, collateral valued at least to the requested collateral value based on internal credit rules is blocked for the total of the associated loans. No allocation on a loan-by-loan basis is done for credit purposes.

As for the collateralised placing, a zero weighting by the application of Article 227 CRR is, in general, possible. As the lending business is covering a wider scope of securities that do not fulfil the criteria as laid down in Article 227 CRR, while the collateral given by the ultimate lender only partially fulfils these criteria, only a portion is zero weighted. For the remainder, the supervisory haircuts are applied. As there is a notable portion of cross-currency collateralisation additional FX haircuts are applied.

9.10. Monitoring and Reporting

The Credit Section reports new credit lines and changes of credit lines (increases as well as reductions), changes of the internal rating for customers and credit exposures to the Group Risk Management section. Besides that, limit breaches, if any, are reported to the relevant Executive Board and to Group Risk Management.

The reporting approach as described under 4.8. Risk monitoring and reporting also applies to the management of credit risk. On this basis, Group Risk Management assesses the credit risk and reports VaR results as well as risk issues to the Executive Boards. Besides the assessment of the VaR, Group Risk Monitoring also measures credit risk concentration and performs stress test calculations on credit risk (see 4.8. Risk monitoring and reporting).

9.11. Mitigation

Disclosure requirements concerning credit risk mitigation are laid down in Section C EBA Guidelines on disclosure requirements under Part Eight Regulation (EU) No. 575/2013 and 876/2019 in conjunction with Art. 453 CRR and CRR 2.

The following tables disclose all unsecured carrying amounts on 31 December 2021, and made up of other term loans, trade receivables, and overnight balances (on demand [call] and short noticed [current account]).

		Unsecured carrying amount	Secured carrying amount			
				Of which secured by collateral	Of which secured by financial guarantees	
						Of which secured by credit derivatives
	(in 000s of €)	a	b	c	d	e
1	Loans and advances	12,424,255	5,599,736	5,599,736	-	-
2	Debt securities	1,940,286	-	-	-	
3	Total	14,364,541	5,599,736	5,599,736	-	-
4	*Of which non-performing exposures*	-	-	-	-	-
EU-5	*Of which defaulted*	n/a	n/a			

EU CR3 CRM techniques overview: Disclosure of the use of credit risk mitigation techniques, CH Group

		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	c	d	e
1	Loans and advances	162,658	5,622,397	5,622,397		
2	Debt securities	1,591,475				
3	Total	1,754,133	5,622,397	5,622,397		
4	*Of which non-performing exposures*	410				
EU-5	*Of which defaulted*					

EU CR3 CRM techniques overview: Disclosure of the use of credit risk mitigation techniques, CBL

	(in 000s of €)	Unsecured carrying amount	Secured carrying amount	Of which secured by collateral	Of which secured by financial guarantees	Of which secured by credit derivatives
		a	b	c	d	e
1	Loans and advances	2,313,867	52	52	-	-
2	Debt securities	443,832	-	-	-	
3	Total	2,757,699	52	52	-	-
4	*Of which non-performing exposures*	-	-	-	-	-
EU-5	*Of which defaulted*	n/a	n/a			

EU CR3 CRM techniques overview: Disclosure of the use of credit risk mitigation techniques, CBF

9.12. Counterparty Credit Risk

Derivatives are only held at CBL to hedge against interest and foreign exchange risk. The derivative position includes forward foreign exchange contracts. As of 31 December 2022, the positions correspond to economic hedges and do not opt for IFRS9 hedge accounting for the Luxembourg entity. The dealings with interest rate or foreign exchange risks (measurement, assignment of internal capital and limits etc.) are described in detail in 11.3.1. Interest Rate Risk and 11.3.2. Foreign exchange risk.

Foreign exchange contracts for the purpose of hedging are settled via Continuous Linked Settlement (CLS)[2], to minimise settlement risk, and executed with counterparties only where a Credit Support Annex (CSA) is signed to mitigate credit risk resulting from market movement.

The Standardised Approach (SA-CCR) pursuant to Article 274 CRR is used by Clearstream Group to calculate the exposure value for OTC derivative instruments and long settlement transactions. The original exposure thus obtained is the exposure value.

Currencies where a repo market is not liquid are swapped on an overnight basis into USD and EUR. The proceeds are then investment via reverse repos and central bank deposits.

On 31 December 2022 Clearstream Group did not hold any credit derivatives on its books. Hence, the report does not include a table containing information in conjunction with Art.439 (g) and (h) CRR concerning credit derivatives.

[2] 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).

9.13. Equities in the non-trading book

Equities held in the non-trading book concern strategic participations in companies with business related to the business of Clearstream and a mandatory participation in the Society for Worldwide Interbank Financial Telecommunication (SWIFT), as CBL and CBF are some of the largest users of SWIFT. Due to the strategic alignment, no participation is held in order to make short-term profits (no trading intent).

Please Chapter 2. Organisation structure Clearstream for the participations held.

Due to the conditions laid out in Art. 19 CRR, these entities are excluded from the scope of prudential consolidation of Clearstream Group. Therefore, these participations are held as equity in the non-trading book. Owing to the SWIFT constitution, CBL and CBF must hold a participation in SWIFT as well.

For valuation and accounting purposes the German GAAP according to the German Commercial Code (HGB) is relevant for CH-Group on a consolidated level and for CBF's equities in the non-trading book. According to the specifications of HGB, equities in the non-trading book are defined as long-term financial assets.

10. Liquidity risk and investment strategy

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 following chapters and LIQA templates 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 10.3, 10.4, 10.5
(b)	Structure and organisation of the liquidity risk management function (authority, statute, other arrangements).	Chapter 10.2

Row number	Qualitative information - Free format	Report chapter
(c)	A description of the degree of centralisation of liquidity management and interaction between the group's units.	Chapter 10.2
(d)	Scope and nature of liquidity risk reporting and measurement systems.	Chapters 10.3, 10.4, 10.6
(e)	Policies for hedging and mitigating the liquidity risk and strategies and processes for monitoring the continuing effectiveness of hedges and mitigants.	Chapters 10.5, 11
(f)	An outline of the bank's contingency funding plans.	Chapter 10.5
(g)	An explanation of how stress testing is used.	Chapter 10.4.3
(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 10.6
(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 10.7.2, 10.4.1
	· 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.	

EU LIQA – Liquidity risk management

10.1. Liquidity Risk

Liquidity risk is the risk arising from the inability to meet short-term payment obligations in case of mismatches between liquidity needs and liquidity sources.

10.2. Governance

Liquidity risk management is incorporated into Clearstream's governance set-up. Treasury Front Office as first line of defence function performs the day-to-day liquidity risk management for Clearstream Banking S.A. (CBL) and Clearstream Banking AG (CBF).

Treasury Middle Office 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 to the CBL Executive Management and Clearstream Risk Management, including ad-hoc communication of limit breaches.

Clearstream Risk Management oversees the liquidity risk exposure from the second line of defence perspective, validating the assessment, monitoring, and reporting activities of the first line of defence. Also, Clearstream Risk Management is responsible for the performance of liquidity stress tests.

Clearstream's Asset and Liability Committee (ALCO), a working group of the Clearstream Risk Committee, 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 Clearstream's liquidity risk management lays with the Executive Board of CH.

10.3. Strategy and processes

The aim of Clearstream's liquidity management is the ability to respond to daily, including intraday, changing customer net long/short cash balances. Customers maintain cash balances with Clearstream and may additionally draw on credit facilities (unconfirmed funds facility (UCF) and intraday technical overdraft facilities (i-TOFs)) as a result of their securities settlement activities.

The next chapter specifies how liquidity risks, including intraday, are measured, monitored, and managed for Clearstream Banking AG (CBF) and meets the regulatory requirement on public disclosure on liquidity risks stated in the Commission Delegated Regulation (EU) 2017/390 (DR 2017/390) Article 40. The public disclosure for Clearstream Banking S.A. (CBL) can be found in CBL dedicated Pillar III document.

As Treasury's investment strategy is driven by the cash amounts customers leave on their settlement accounts with Clearstream, mismatch limits are established to limit term maturities that arise from Treasury investments. Funds are invested with a capital preservation objective and to enable fulfilling the organization's payment obligations on a timely basis. For more details on the Clearstream investment strategy, please refer to Chapter 10 liquidity risk and investment strategy.

Liquidity Stress Tests in line with CSDR are in place to test the sufficiency of Clearstream's liquid resources to fulfil all payment obligations even in case of contingency, including the default of the two participants of Clearstream towards which it has the largest credit exposures per currency.

Clearstream Risk Management oversees the liquidity risk management and validates assessments, monitoring, and reporting activities. In addition, the Asset and Liabilities Committee (ALCO) of Clearstream entities monitors and oversees those activities and makes recommendations to the relevant Executive Boards.

On an annual basis, Clearstream Risk Management reviews the liquidity risk inventory, which is a comprehensive and complete list of all the potential liquidity risk items that Clearstream may be exposed to due to its current and future business operations. This risk inventory should include all risks that Clearstream is aware of and represents a key input into the subsequent risk management processes. Once identified, the liquidity risks are assessed, controlled, and monitored/reported on a regular basis.

10.3.1. Liquidity risks (incl. intraday) measurement, monitoring and management: 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.

CBF liquidity management strategy is governed by the Clearstream Banking Liquidity Management policy.

CBF's liquidity requirements are mainly intraday and overnight. CBF 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 CBF's available QLR (Cover 2 requirement – minimum requirement) shall at any time at least be sufficient to manage the risk to which CBF would be exposed following the default of at least two participants (including its parent undertakings and subsidiaries) towards which CBF has the highest exposures.

To address the CSDR related liquidity risk requirements, CBF has at its disposal the following QLRs as specified in Article 34 DR 2017/390:

- Own cash (uninvested CBF's own funds) deposited at the Deutsche Bundesbank in a dedicated account separated from CBF's participant cash;
- Committed lines of credit or similar arrangements;
- Own assets funded with CBF's own funds; and,
- Appropriated participant collateral in case of the participant's default.

All sources of liquidity risk are considered for the measurement, monitoring, and management of CBF's liquidity (including intraday) which includes its relations to the entities and linked financial market infrastructures or other entities that may pose liquidity risk to its intraday liquidity flows, i.e., Treasury counterparties, cash correspondent banks (CCBs), depositories, etc.

Measurement

For liquidity risk measurement, CBF 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 CBF'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).

Monitoring

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

In practice, to monitor its actual cash balances held with its CCBs, depositories and central bank accounts, CBF 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 tool.

This tool is also used by CBF to match its expected liquidity flows (participants' cash & securities settlement instructions and Clearstream's Treasury activities) against incoming and outgoing funds to ensure that expected balances and pending entries can be investigated. This operational and analytical Intraday Liquidity Management tool allows on an ongoing basis liquidity management at CBF CCBs, depositories and central banks. The tool produces management reports that support the intraday liquidity management process and issues intraday alerts in case defined intraday thresholds at CCB and currency levels are breached.

In addition, CBF 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 i.e., the liquidity risk resulting from the default of at least two participants to which CBF has the largest liquidity exposure.

Management

For each currency for which CBF acts as settlement agent, CBF 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.

CBF's liquidity (including intraday) is managed by CBL's Treasury function (via a service level agreement between CBF and CBL) per currency and per cash correspondent bank or depository acting as cash agent with the aid of its intraday liquidity management tool. As already mentioned, the tool is capable to monitor CBF's actual cash flows as reported online by its cash correspondent banks / agents, and central banks, using standard SWIFT reporting capabilities, as well as CBF's expected forthcoming cash flows from its customers, corporate actions or other activities such as 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 CBF'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.

CBF 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, CBF assesses a prudent value of its liquid assets deemed sufficient for its intraday exposure by monitoring their quality, concentration, availability and by valuing its qualifying liquid resources under stressed market conditions. CBF 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, CBF has put ex-ante measures in place to control the required level of liquidity. A verification that all obligations have been met is done ex post. Any pending payment due to insufficient cash balance requires escalation.

CBF 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 seriousness of liquidity incidents.

The Clearstream 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 the CBF Executive Board which can decide in view of the liquidity crisis event to activate exceptional liquidity generation measures listed in CBF liquidity contingency funding plan.

10.4. Assessment

10.4.1. Key Liquidity Indicators

In line with regulatory standards, Clearstream has established a comprehensive set of liquidity indicators to detect critical developments early and initiate mitigating measures in time.

In the following, the key liquidity indicators are outlined:

Usage of uncommitted lines vs. committed lines

The "usage of uncommitted lines vs. committed lines" indicator sets thresholds for intraday liquidity usage. These thresholds represent the maximum intraday liquidity risk per currency that CBL and CBF tolerates.

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

Mismatch limit

The mismatch limit defines the maximum net amount of assets and liabilities within a portfolio for trades with a tenor exceeding three business days.

Mismatch limits are defined for money market and investment portfolios.
For CBL and CBF, the Treasury department reviews the mismatch limits quarterly.

	31 December 2022 (€' 000)		31 December 2021 (€' 000)	
	Mismatch/Portfolio		Mismatch/Portfolio	
	Exposure	Limit	Exposure	Limit
CBL Investment portfolio (Fixed and FRN)	1,558,115	2,500,000	1,487,016	2,500,000
CBF Investment portfolio (Fixed and FRN)	26,426	175,000	26,426	175,000
Clearstream Investment portfolio (Fixed and FRN)	1,513,442	2,675,000	1,513,442	2,675,000
CBL MM portfolio	559,804	5,800,000	344,861	5,800,000
CBF MM portfolio	0	300,000	0	300,000
Clearstream MM portfolio	344,861	6,100,000	344,861	6,100,000

Table 10: Mismatch limit

Internal liquidity ratio I (Liquid assets / Net customer 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 and combined for EUR and USD.

The ratio is monitored daily by the Treasury Middle Office, an independent unit, and reported monthly to CBL 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 2022, the internal liquidity ratio I was not breached.
On 31 December 2022, the internal liquidity ratio I was as follows:

Currencies	Ratio	Limits
EUR+USD	119%	>50%
EUR	178%	>50%
USD	73%	>60%
GBP	96%	>90%
AUD	130%	>90%
JPY	98%	>90%

Table 11: Internal liquidity ratio I

Internal liquidity ratio II (Liquidity sources / Customer 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 2022, 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 2022 was reported as follows:

Currencies	Ratio	Limits
EUR+USD	599%	>200%
EUR	421%	>100%
USD	582%	>100%

Table 12: Internal liquidity ratio II

Minimum required liquidity buffer

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 2022, the liquidity buffer was 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)	Target liquidity buffer (in EUR 000,000)	Liquidity recovery option indicator (amber)	Liquidity recovery option indicator (red)
EUR	8,780	1,700	4,000	4,000	1,700
USD	4,244	1,000	1,900	1,900	1,000
GBP	500	150	250	250	150

Table 13: Clearstream Liquidity buffer as of 31 December 2022

In order to identify potential liquidity shortfalls in advance, Clearstream implemented early warning triggers as well as recovery triggers (if applicable) for the Key Liquidity Indicators.

10.4.2. Liquidity Coverage Ratio (LCR)

The LCR focuses on the resilience of the liquidity risk profile and requires Clearstream to hold an adequate stock of unencumbered high-quality liquid assets (liquidity buffer) that can be converted into cash easily and immediately in private markets to meet its liquidity needs (net liquidity outflows) within a 30-calendar-day horizon. Regulation (EU) No 575/2013 (CRR) and Regulation (EU) No 876/2019 (CRR 2) supplemented by Commission Delegated Regulation (EU) 2018/1620 with regard to liquidity coverage requirements for credit institutions set out the detailed rules for the calculation of the LCR.

10.4.3. Liquidity Stress testing

Clearstream uses scenario analysis as part of its regular stress testing in reference to the BaFin minimum requirements for risk management as defined in the MaRisk of 16 August 2021 (BaFin Circular 10/2021) and CSSF Circular 09/403 requiring that institutions conduct liquidity stress tests that enable them to assess the potential impact of extreme but plausible stress scenarios on their liquidity positions and their current contemplated risk mitigation.

To analyse the liquidity risk of Clearstream and to ensure that sufficient liquid financial resources are maintained at all times, comprehensive monthly stress test calculations are carried out at holding level. Clearstream has implemented various scenarios, including market disruption and idiosyncratic events as well as a combination of both, and performs reverse stress testing on a regular basis.

In addition, Clearstream entities conduct regular liquidity stress tests at entity level. The stress scenarios are in line with the requirements stipulated in the Central Securities Depository Regulation (CSDR) and comprise amongst others the default of the two customers with the largest liquidity exposure (Cover 2), the temporary unavailability of a liquidity provider, a multiple default event and the downrating of Clearstream.

The conducted liquidity stress tests show Clearstream's ability to generate sufficient liquidity to fulfil its contractual payment obligations.

10.5. Mitigation and control

§ 25a KWG in combination with Chapter BTR 3 'Liquidity Risk' of MaRisk require institutions to develop effective contingency plans considering the outcome of alternative scenarios.

Treasury Front Office is responsible for designing and monitoring a Funding Plan which includes a Contingency Funding Plan. In addition, the Recovery Plan includes such measures to strengthen the liquidity position in case of a breach of an early warning or recovery indicator.

Within those documents, a wide range of measures is outlined which may be initiated in case of a severe deterioration of Clearstream's liquidity profile. Such measures include:

- Intragroup funding;
- Cancellation of customer UCF/TOF lines;
- Prioritisation of payments;
- Usage of committed facilities (FX Swap, Repo and unsecured lines);
- Liquidity generation via CCP cleared repo markets;
- Liquidation of customer collateral;
- Liquidation of Clearstream's securities from Treasury activities; and,
- Marginal lending facility.

With regard to hedging strategy and processes, please refer to the subsequent "Market risk" chapter.

10.6. Monitoring and reporting

Clearstream's liquidity risk exposure and breaches of limits are monitored and reported by the Treasury Middle Office. Reports are provided daily and monthly to Executive Board, Clearstream Risk Management, and Treasury. Limit breaches occurring within the Treasury activity are reported by Treasury Middle Office to Executive Board.

Liquidity stress tests are calculated and reported on a regular basis by Risk Management. In case the liquidity stress tests result in a limit breach, Clearstream Risk Management (CRM) will report without delay to the ALCO. The relevant Executive Boards of Clearstream will be informed of the liquidity stress test results via regular risk reporting. Treasury, Credit, Product, Risk, and the responsible Risk Committee evaluate the result of the liquidity stress tests and agree on mitigating actions, including adjustments of the liquidity framework and updates of the contingency liquidity funding plan if needed.

The Executive Board is informed on a monthly basis about liquidity indicators, and on a quarterly basis, the Executive Board receives a comprehensive liquidity risk reporting.

10.6.1 Liquidity Coverage Ratio (LCR)

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	

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

Point (d)

Liquidity buffer of Clearstream Group is composed of following elements:

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

Clearstream Group 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 weigh under CRR rules. Under 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 liquidity buffer.

Point (c)

The biggest part of outflows corresponds to the deposits made by Clearstream Group's clients as provision for their settlement activity. Clearstream Group places these funds in the market in as low risk a way as possible through on-balance sheet placements with central banks or cash corresponding banks and securities financing transaction. Additional information on concentration of funding sources can be found in Chapter 11.5.2.6. of the pillar III report of Clearstream Banking S.A.

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 historical look back approach.

Point (g)

In application of Article 23 LCR DA CBL submits annual assessment of potential other outflows arising from other products. Main elements of this analysis are ASL business (see 9.1.8.) and intraday overdraft facilities. However, these items do not create any material outflows.

Point (f)

The information on currency management is provided in Chapter 11.1.3.2.

Points (a) and (b)

As the balance sheet of Clearstream Group is essentially short term the variation in the ratio is driven by the total size of the balance sheet. During 2022 the significant growth in client activity leading to the increase of the balance lead to the decrease of LCR: To mitigate this effect end of 2022 Clearstream Banking S.A. issued commercial papers with longer maturities (up to six months) in order to increase available liquidity buffer. In addition, Clearstream Banking S.A. 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 for Clearstream Group and Clearstream Banking S.A., but not for Clearstream Banking AG.

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.

		a	b	c	d	e	f	g	h
		Total unweighted value (average)				Total weighted value (average)			
		T	T-1	T-2	T-3	T	T-1	T-2	T-3
EU 1a	Quarter ending on (DD Month YYY)	12/31/2022	9/30/2022	6/31/2022	3/31/2022	12/31/2022	9/30/2022	6/31/2022	3/31/2022
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
HIGH-QUALITY LIQUID ASSETS									
1	Total high-quality liquid assets (HQLA)					21,867,493	20,847,135	19,456,994	18,172,823
CASH - OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0	0	0	0	0
3	*Stable deposits*								
4	*Less stable deposits*								
5	Unsecured wholesale funding	21,018,023	19,771,050	18,149,571	17,055,655	20,105,366	18,922,379	17,271,491	16,242,530
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*								
7	*Non-operational deposits (all counterparties)*	20,627,336	19,356,112	17,868,872	16,888,459	19,714,679	18,507,441	16,990,792	16,075,335
8	*Unsecured debt*	390,687	414,938	280,699	167,195	390,687	414,938	280,699	167,195
9	*Secured wholesale funding*					0	0	69,698	69,698
10	Additional requirements	73,892	37,785	7,336	1,214	73,892	37,785	7,336	1,214
11	*Outflows related to derivative exposures and other collateral requirements*	73,892	37,785	7,336	1,214	73,892	37,785	7,336	1,214
12	*Outflows related to loss of funding on debt products*								
13	*Credit and liquidity facilities*								
14	Other contractual funding obligations	193,270	187,285	198,259	33,919	193,270	187,285	198,259	33,919
15	Other contingent funding obligations	1,532,849	1,522,032	1,328,735	1,244,060	0	0	0	1,711
16	TOTAL CASH OUTFLOWS					20,372,528	19,147,450	17,546,784	16,349,073
CASH - INFLOWS									
17	Secured lending (e.g. reverse repos)	7,166,509	6,853,330	6,196,401	5,785,591	26,129	40,566	88,166	172,095
18	Inflows from fully performing exposures	2,031,974	1,808,118	1,567,167	1,573,666	2,026,331	1,800,487	1,553,535	1,540,112
19	Other cash inflows	518,686	385,479	392,039	435,060	230,112	195,425	176,013	172,817
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 non-convertible currencies)								
EU-19b	(Excess inflows from a related specialised credit institution)								
20	TOTAL CASH INFLOWS	9,717,169	9,046,927	8,155,608	7,794,318	2,282,572	2,036,478	1,817,714	1,885,023
EU-20a	*Fully exempt inflows*								
EU-20b	*Inflows subject to 90% cap*								
EU-20c	*Inflows subject to 75% cap*	*9,717,169*	*9,046,927*	*8,155,608*	*7,794,318*	*2,282,572*	*2,036,478*	*1,817,714*	*1,885,023*
TOTAL ADJUSTED VALUE									
EU-21	LIQUIDITY BUFFER					21,867,493	20,847,135	19,456,994	18,172,823
22	TOTAL NET CASH OUTFLOWS					18,089,956	17,110,972	15,729,070	14,464,050
23	LIQUIDITY COVERAGE RATIO					120.88%	121.83%	123.70%	125.64%

EU LIQ1 - Quantitative information of LCR – CH Group

		a	b	c	d	e	f	g	h
		Total unweighted value (average)				Total weighted value (average)			
		T	T-1	T-2	T-3	T	T-1	T-2	T-3
EU 1a	Quarter ending on (DD Month YYY)	12/31/2022	9/30/2022	8/31/2022	3/31/2022	12/31/2022	9/30/2022	8/31/2022	3/31/2022
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
HIGH-QUALITY LIQUID ASSETS									
1	Total high-quality liquid assets (HQLA)					18,917,693	17,943,704	16,642,841	15,591,875
CASH - OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0	0	0	0	0
3	*Stable deposits*								
4	*Less stable deposits*								
5	Unsecured wholesale funding	19,238,222	18,045,765	16,403,933	15,322,755	18,382,810	17,228,969	15,556,552	14,486,993
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*								
7	*Non-operational deposits (all counterparties)*	18,847,535	17,630,826	16,123,234	15,155,560	17,992,123	16,814,031	15,275,853	14,319,797
8	*Unsecured debt*	390,687	414,938	280,699	167,195	390,687	414,938	280,699	167,195
9	*Secured wholesale funding*					10	2,022	2,117	2,434
10	Additional requirements	204,306	153,230	117,569	110,669	204,306	153,230	117,569	110,669
11	*Outflows related to derivative exposures and other collateral requirements*	204,306	153,230	117,569	110,669	204,306	153,230	117,569	110,669
12	*Outflows related to loss of funding on debt products*								
13	*Credit and liquidity facilities*								
14	Other contractual funding obligations	122,540	113,549	107,374	105,083	90,632	86,909	80,167	77,556
15	Other contingent funding obligations	1,532,736	1,444,184	1,250,721	1,165,991	0	0	0	0
16	TOTAL CASH OUTFLOWS					18,677,759	17,471,129	15,756,405	14,677,652
CASH - INFLOWS									
17	Secured lending (e.g. reverse repos)	7,177,791	6,835,180	6,275,392	5,884,900	23,723	38,168	29,787	33,920
18	Inflows from fully performing exposures	1,848,076	1,720,732	1,494,141	1,478,581	1,843,898	1,717,154	1,489,659	1,471,638
19	Other cash inflows	340,548	248,641	229,968	220,143	102,092	92,462	88,186	80,464
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 non-convertible currencies)								
EU-19b	(Excess inflows from a related specialised credit institution)								
20	TOTAL CASH INFLOWS	9,366,415	8,804,552	7,999,501	7,583,623	1,969,713	1,847,783	1,607,633	1,586,021
EU-20a	*Fully exempt inflows*								
EU-20b	*Inflows subject to 90% cap*								
EU-20c	*Inflows subject to 75% cap*	*9,366,415*	*8,804,552*	*7,999,501*	*7,583,623*	*1,969,713*	*1,847,783*	*1,607,633*	*1,586,021*
TOTAL ADJUSTED VALUE									
EU-21	LIQUIDITY BUFFER					18,917,693	17,943,704	16,642,841	15,591,875
22	TOTAL NET CASH OUTFLOWS					16,708,046	15,623,346	14,148,772	13,091,631
23	LIQUIDITY COVERAGE RATIO					113.23%	114.85%	117.63%	119.10%

EU LIQ1- Quantitative information of LCR – CBL

		Total unweighted value (average)				Total weighted value (average)			
		T	T-1	T-2	T-3	T	T-1	T-2	T-3
EU 1a	Quarter ending on (DD Month YYY)	12/31/2022	9/30/2022	6/30/2022	3/31/2022	12/31/2022	9/30/2022	6/30/2022	3/31/2022
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
HIGH-QUALITY LIQUID ASSETS									
1	Total high-quality liquid assets (HQLA)					2,431,661	2,354,008	2,376,908	2,330,543
CASH - OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	0	0	0	0	0	0	0	0
3	*Stable deposits*								
4	*Less stable deposits*								
5	Unsecured wholesale funding	1,889,368	1,785,563	1,786,755	1,795,101	1,860,280	1,768,960	1,767,618	1,782,688
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*								
7	*Non-operational deposits (all counterparties)*	1,889,368	1,785,563	1,786,755	1,795,101	1,860,280	1,768,960	1,767,618	1,782,688
8	*Unsecured debt*	0	0	0	0	0	0	0	0
9	*Secured wholesale funding*					0	0	0	0
10	Additional requirements	280	242	144	122	280	242	144	122
11	*Outflows related to derivative exposures and other collateral requirements*	280	242	144	122	280	242	144	122
12	*Outflows related to loss of funding on debt products*								
13	*Credit and liquidity facilities*								
14	Other contractual funding obligations	189,426	187,285	198,259	135,697	189,426	187,285	198,259	135,697
15	Other contingent funding obligations	0	0	0	0	0	0	0	0
16	TOTAL CASH OUTFLOWS					2,049,986	1,956,487	1,966,022	1,918,507
CASH - INFLOWS									
17	Secured lending (e.g. reverse repos)	265,379	246,904	264,024	377,342	623	626	4,364	13,266
18	Inflows from fully performing exposures	208,547	193,077	190,737	203,694	208,511	192,611	189,705	202,597
19	Other cash inflows	134,174	121,169	100,400	91,895	57,501	44,011	25,082	18,492
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 non-convertible currencies)								
EU-19b	(Excess inflows from a related specialised credit institution)								
20	TOTAL CASH INFLOWS	608,100	561,149	555,161	672,931	266,635	237,248	219,151	234,355
EU-20a	*Fully exempt inflows*								
EU-20b	*Inflows subject to 90% cap*								
EU-20c	*Inflows subject to 75% cap*	*608,100*	*561,149*	*555,161*	*672,931*	*266,635*	*237,248*	*219,151*	*234,355*
TOTAL ADJUSTED VALUE									
EU-21	LIQUIDITY BUFFER					2,431,661	2,354,008	2,376,908	2,330,543
22	TOTAL NET CASH OUTFLOWS					1,783,350	1,719,239	1,746,871	1,684,152
23	LIQUIDITY COVERAGE RATIO					136.35%	136.92%	136.07%	138.38%

EU LIQ1 - Quantitative information of LCR – CBF

10.6.2. Net Stable Funding Ratio (NSFR)

In application of Article 451a(3) CRR institutions shall provide information on the Net Stable Funding Ratio as below.

		a	b	c	d	e
	(in currency amount)	Unweighted value by residual maturity				Weighted value
		No maturity	< 6 months	6 months to < 1yr	≥ 1yr	
Available stable funding (ASF) Items						
1	Capital items and instruments	1,844,460	0	0	12,299	1,856,759
2	*Own funds*	1,844,460	0	0	12,299	1,856,759
3	*Other capital instruments*		0	0	0	0
4	Retail deposits		67	0	0	62
5	*Stable deposits*		35	0	0	34
6	*Less stable deposits*		31	0	0	28
7	Wholesale funding:		17,586,437	0	370,122	913,933
8	*Operational deposits*		0	0	0	0
9	*Other wholesale funding*		17,586,437	0	370,122	913,933
10	Interdependent liabilities		0	0	0	0
11	Other liabilities:	0	555,984	0	0	0
12	*NSFR derivative liabilities*	0				
13	*All other liabilities and capital instruments not included in the above categories*		555,984	0	0	0
14	**Total available stable funding (ASF)**					2,770,754
Required stable funding (RSF) Items						
15	Total high-quality liquid assets (HQLA)					0
EU-15a	Assets encumbered for a residual maturity of one year or more in a cover pool		0	0	0	0
16	Deposits held at other financial institutions for operational purposes		0	0	0	0
17	Performing loans and securities:		7,571,853	0	0	201,863
18	*Performing securities financing transactions with financial customers collateralised by Level 1 HQLA subject to 0% haircut*		5,548,231	0	0	0
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial*		2,009,301	0	0	194,703
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of*		14,321	0	0	7,160
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		5,512	0	0	2,756
22	*Performing residential mortgages, of which:*		0	0	0	0
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		0	0	0	0
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance*		0	0	0	0
25	Interdependent assets		0	0	0	0
26	Other assets:					
27	*Physical traded commodities*				0	0
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		0	0	0	0
29	*NSFR derivative assets*				3,534	3,534
30	*NSFR derivative liabilities before deduction of variation margin posted*				441	22
31	*All other assets not included in the above categories*		740,924	0	1,459,487	326,512
32	Off-balance sheet items		1,385,934	0	653	0
33	**Total RSF**					531,931
34	**Net Stable Funding Ratio (%)**					520.89%

EU LIQ2 - Net Stable Funding Ratio – CH Group

10.7. Liquidity adequacy

Clearstream ensures the adequacy of its liquidity via the Internal Liquidity Adequacy Assessment Process (ILAAP), which stands next to the Internal Capital Adequacy Assessment Process (ICAAP) and ensures that Clearstream 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, Clearstream 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, Clearstream 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 Clearstream has been considered.

10.7.1. Liquidity risk adequacy declaration

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

In 2022, Clearstream had excess liquidity on a daily basis, and no liquidity shortage occurred under business-as-usual conditions. In conclusion, Clearstream's liquidity is considered adequate to cover all identified risks related to liquidity.

10.7.2. Concise Liquidity Risk Statement

The business models of CBL and CBF, being central securities depositories, are highly dependent on client cash deposits, making CBL and CBF liability-driven institutions. The 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 Clearstream's liquidity.

Associated with this business model is a liquidity risk profile that 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 Chapter 10.4).

In compliance with MaRisk of 16 August 2021 (BaFin Circular 10/2021) and 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 CBF 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 Chapter 10.3. 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 Chapter 10.4.2.

Further to this, liquidity stress testing is used to test the sufficiency of Clearstream's liquidity resources in extreme but plausible scenarios. It is thus an important tool to address and appropriately manage the liquidity risk arising from Clearstream's business activities. Details can be found in Chapter 10.4.3.

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

10.8. Clearstream (CBF and CBL) investment strategy

Clearstream's investment strategy is governed by the Clearstream Banking Investment policy. The policy outlines the investment strategy, the regulatory framework, the governance structure, and the investment dedicated limits for CBF and CBL. The investment strategy is aligned with the strict requirements formulated in the regulation on CSDs (CSDR).

The main investment objective is capital preservation, i.e., minimizing market and credit risks. Clearstream does not classify any of its activities as trading.

Clearstream primarily invests in secured instrument types. These are placements with central banks, FX swaps, reverse repos, and direct purchases in debt instruments. For the latter, the collateral received, and the assets purchased are only highly liquid financial instruments with minimal market and credit risk as authorized in the Clearstream Banking Investment policy.

Other investment types like unsecured deposits with commercial banks and nostro balances are also used in the case no alternative secured instruments are available. To minimize the counterparty default risk, nostro balances and placements may only be left/executed with CCBs/depositories/counterparties of adequate creditworthiness. Credit quality is expressed through an internal rating assigned by the Credit Analysis unit and described in the Credit Policy.

Limited maturity transformation is authorised within strict and conservative liquidity limits set in the Clearstream Banking Investment policy.

Transactions in derivative instruments are only allowed for hedging purposes.

All investment criteria and limits set in the Clearstream Banking Investment policy must be respected during the whole investment horizon. Treasury Middle Office in its independent control and reporting function ensures that all criteria and limits are met and directly reports any policy breach to the respective CBF/CBL Executive Board.

11. Market Risk

In application of Article 435 CRR institutions shall discloser 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.

Row number	Qualitative information - Free format	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 11.1, 11.2
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 11.1, 11.2
c	Point (c) of Article 435 (1) CRR Scope and nature of risk reporting and measurement systems	Chapter 11.2

EU MRA – Qualitative disclosure requirements related to market risk

11.1 Strategy and process

The risk strategy and risk management process for market risk follows the overall risk management process as presented in 4.5 Risk Management Process. The described five steps of the risk management process is therefore applicable for market risk as well.

As national and international central securities depository authorized under CSDR, Clearstream's investments are aligned with the strict requirements formulated in the CSDR regulation. Clearstream is not involved in proprietary trading activities and does not maintain a trading book. Clearstream's investment activities, i.e., the placement of clearing members' cash collateral and the investment of Clearstream's own funds, are allocated to the non-trading book in accordance with the CRR. The main investment objective is capital preservation, i.e., minimizing market and credit risks. For details on Clearstream investment strategy, please refer to chapter 10. Liquidity risk and investment strategy.

11.2. Structure and organisation

Clearstream Treasury activities are governed by Deutsche Börse Group Treasury policy including limits and responsibilities. The processes are further detailed by Clearstream Banking Liquidity Management policy and Clearstream Banking Investment policy.

Treasury Front Office performs daily cash and risk management within predefined limits. This includes the application of mitigating measures to reduce market risk if necessary. Treasury Middle Office monitors compliance with the limits daily and reports breaches to the respective CBF/CBL Executive Board.

For details on Clearstream liquidity and investment strategy, please refer to chapter 10. Liquidity risk and investment strategy.

11.3. Assessment

The market risks are calculated using statistical simulations under Pillar II (Monte Carlo simulation), and the calculations of Interest Rate Risk in the Banking Book (IRRBB) are measured using sensitivity analysis. Clearstream monitors currency and interest rate exposures by means of reports generated by the general ledger accounting system and its customer cash ledgers or the Treasury ledger.

11.3.1. Interest Rate Risk

The interest rate risk at Clearstream stems primarily from asset liabilities mismatch. The non-exhaustive list of positions under scope contain customer cash and its placement either secured (reverse repo) or unsecured (nostros or overnight placements), loros, FX swaps, FX forwards, coupons of fixed bonds, pension assets and liabilities. These positions are quantified and monitored.

To protect Clearstream's budgeted net interest income, Treasury Front Office may hedge part of it through approved hedging instruments after approval from the respective CBF/CBL Executive Board.

Interest Rate Risk Limits for CH, CBL, and CBF

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

To manage and measure the IRR positions, an IRR limit shall be maintained. The IRR limit defines the maximum acceptable opportunity loss which can be caused by an adverse shift in the yield curve. IRR shall be calculated daily based on the net present value of a predefined hypothetical yield change calculated for the remaining days to maturity.

Interest rate risk is calculated by Risk Management under Pillar II and checked against the allocated risk bearing capacity. The IRR calculation takes places on a monthly basis and it is reported to Executive Board quarterly.

	31 December 2022 (€' 000)		31 December 2021 (€' 000)	
	Interest Rate Risk (IRR)		Interest Rate Risk (IRR)	
	Exposure	Limit	Exposure	Limit
CBL Investment portfolio (Fixed and FRN)	63,509	72,000	67,456	72,000
CBF Investment portfolio (Fixed and FRN)	6,959	8,000	6,959	8,000
Clearstream Investment portfolio (Fixed and FRN)	74,416	80,000	74,416	80,000
CBL MM portfolio	763	18,000	560	18,000
CBF MM portfolio	0	1,000	0	1,000
Clearstream MM portfolio	560	19,000	560	19,000

Table 14: Interest rate risk limits

11.3.2. Foreign exchange risk

Clearstream provides settlement and custody services in more than 40 different currencies. Amounts in currency transmitted to Clearstream by customers are registered on the respective customers' account(s) in that currency. The same is true for any withdrawal of funds by customers (for example, for settlement purposes or for custody payments).

Debits and credits of all customers in the same currency are held by the respective Clearstream legal entity at its cash correspondent banks (CCBs). Treasury analyses balances per currency as a basis for placings. Where there is a requirement to fund net currency, such takings are always made in that currency.

A limited amount of local currency is held on entity level as well as at CBL representative offices, to cover expenses. In addition, interest earned on currency placings above interest payable to customers on currency balances will cause (generally long) currency positions. Invoices in foreign currencies will cause short currency positions. These FX positions are monitored daily and covered in the foreign exchange market to remain within the approved limits set in the Clearstream Banking Investment Policy.

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

Foreign exchange risk limits

The foreign exchange positions are monitored against approved limits on a daily basis. Treasury Middle Office in its control function reports to the Executive Board in case of limit violations.

11.3.3. Equity price risk

Equity price risk could only arise in the Defined Benefit Clearstream pension fund portfolio in Luxembourg and in the Deutsche Börse Group pension plan assets (Contractual Trust Arrangement) in Germany.

The pension fund in Germany is managed by an external asset manager and the pension fund in Luxembourg is managed by selected asset managers in the Luxembourg Treasury department both with an aligned and restricted investment policy. The investments are executed and reported by the asset managers. If the performance of the portfolio reaches an upper or lower threshold, Treasury Middle Office in its control function (for the pension fund in Luxembourg) alerts the Board of Directors and the asset manager of Germany needs to inform the CTA investment committee.

Equity price risk is calculated by Risk Management under Pillar II and checked against the allocated risk bearing capacity. The IRR calculation takes place monthly and it is reported to the Executive Board quarterly.

11.3.4. Stress testing

In order to achieve a better understanding of the largest risks, help gauge the potential vulnerability to extreme but plausible events and assess the impact on the capital, Clearstream Risk Management runs stress tests. The stress tests focus on extreme but plausible events based on historical simulations.

Additionally, in accordance with the BaFin circular 06/2019 (BA)[3], Treasury computes and reports to BaFin the level of interest rate risk in its banking book (IRRBB).

11.4. Mitigation and control

Compliance with IRR and Mismatch limits shall be controlled by Treasury Middle Office. Treasury Middle Office reports limit breaches to the board members responsible for Treasury

Forward foreign exchange transactions may be undertaken in anticipation of expected future exposures in foreign currencies to hedge the expected foreign exchange exposure. A hedge (USD 54 million) was executed in 2022. If a foreign exchange hedge is undertaken, testing of the effectiveness of hedging transactions is performed on a regular basis in compliance with IFRS9.

11.5. Monitoring and reporting

Treasury Middle Office, independent of the Treasury Front Office department, is responsible for monitoring compliance with limits and issues monthly reports to the Executive Boards and to Group Risk Management. Limit excesses are monitored daily and are reported immediately to the Head of Treasury, Group Risk Management, the Chief Compliance Officer of Clearstream, and Clearstream's Executive Board Members.

[3] BaFin Circular (BA) -Interest rate risk in the Banking book: https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Rundschreiben/2019/rs_06-2019_ZAER.html

12. Remuneration

12.1. 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 2015/22 on sound remuneration policies[4] , 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 June 2022. 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.

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.

Qualitative disclosure		Policy	Report	Pillar III
(a)	Information relating to the bodies that oversee remuneration. Disclosures shall include: • Name, composition and mandate of the main body (management body or remuneration committee as applicable) overseeing the remuneration policy and the number of meetings held by that main body during the financial year. • External consultants whose advice has been sought, the body by which they were commissioned, and in which areas of the remuneration framework. • A description of the scope of the institution's remuneration policy (eg by regions, business lines), including the extent to which it is applicable to subsidiaries and branches located in third countries. • A description of the staff or categories of staff whose professional activities have a material impact on institutions' risk profile	1.2, 1.3	Chapter 2 Compensation governance	12.1

[4] The revised Guidelines EBA/GL/2021/04 apply from 31 December 2021

Qualitative disclosure		Policy	Report	Pillar III
(b)	Information relating to the design and structure of the remuneration system for identified staff. Disclosures shall include: • An overview of the key features and objectives of remuneration policy, and information about the decision-making process used for determining the remuneration policy and the role of the relevant stakeholders. • Information on the criteria used for performance measurement and ex ante and ex post risk adjustment. • Whether the management body or the remuneration committee where established reviewed the institution's remuneration policy during the past year, and if so, an overview of any changes that were made, the reasons for those changes and their impact on remuneration. • Information of how the institution ensures that staff in internal control functions are remunerated independently of the businesses they oversee. Policies and criteria applied for the award of guaranteed variable remuneration and severance payments.	3.2	Chapter 3 Remuneration systems	12.1
(c)	Description of the ways in which current and future risks are taken into account in the remuneration processes. Disclosures shall include an overview of the key risks, their measurement and how these measures affect remuneration.	3.1, 4.1	Chapter 3 Remuneration systems	12.1
(d)	The ratios between fixed and variable remuneration set in accordance with point (g) of Article 94(1) CRD.	3.1, 4.1	3.2. Overview of the remuneration systems	12.1
(k)	(k) information on whether the institution benefits from a derogation laid down in Article 94(3) of Directive 2013/36/EU.	3.1, 4.1	3.5. Variable remuneration scheme	12.1

EU REMA - Remuneration policy

Following templates as EBA Guidelines are available in published remuneration report in Chapter 4.5:

- 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 million 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 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 Clearstream Group Remuneration Report[5] .

13. 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.

None of the companies within the consolidation scope of Clearstream Holding Group fulfil the criteria.

However, considering the growing importance of ESG risks, Clearstream has developed a comprehensive ESG strategy with five building blocks: Sustainable Finance Marketplace, Corporate Social Responsibility, ESG Products and Services, ESG Risk and Reporting and ESG Communication. Each block has measurable targets and clear next steps.

The Sustainable Finance Marketplace building block covers Clearstream ESG KPIs to contribute to group-level targets and ensure implementation of Clearstream-specific ESG initiatives. We plan to conduct quarterly competitor analyses to assess market opportunities.

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[5] https://www.clearstream.com/resource/blob/3163066/36b10936f3fac998c8af91499c086cd4/clearstream-group-remuneration-policy-2022-chag-cbf-data.pdf

Corporate Social Responsibility is divided into four areas: Environment Friendliness, Responsible Employer, Corporate Governance, and Community Engagement. We have proposed a set of lighthouse projects following a review of our CSR activity, and plan to create a CSR overview for internal use.

Our ESG Products and Services block offers a market infrastructure of choice for sustainable finance, providing access to financing across 60 markets and offering specific ESG products and services.

The ESG Risk and Reporting block 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. We have identified priorities over time, such as integrating ESG risks into our Risk Strategy and conducting ESG stress testing.

Finally, ESG Communication and Capability-Building focuses on formulating our ESG strategy and managing communication to stakeholder groups, both internal e.g., though staff trainings and of a dedicated C-level training and external communication.

Appendix A

		a	b	c	d	e	f	g	h	i	j	k	l	m
		General credit exposures		Relevant credit exposures – Market risk				Own fund requirements						
	(in 000s of €)	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	Securitisation exposures Exposure value for non-trading book	Total exposure value	Relevant credit risk exposures Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total	Risk-weighted exposure amounts	Own fund requirements weights (%)	Countercyclical buffer rate (%)
	Breakdown by country:													
010	PRINCIPALITY OF ANDORRA	5	-	-	-	-	5	0	-	-	0	5	0.001%	0.00%
	UNITED ARAB EMIRATES	643	-	-	-	-	643	51	-	-	51	643	0.063%	0.00%
	REPUBLIC OF ARMENIA	36	-	-	-	-	36	3	-	-	3	36	0.004%	0.00%
	ARGENTINE REPUBLIC	36	-	-	-	-	36	4	-	-	4	53	0.005%	0.00%
	REPUBLIC OF AUSTRIA	111	-	-	-	-	111	9	-	-	9	111	0.011%	0.00%
	AUSTRALIA	1,926	-	-	-	-	1,926	154	-	-	154	1,926	0.188%	0.00%
	REPUBLIC OF BOSNIA AND HERZEGOVINA	2	-	-	-	-	2	0	-	-	0	2	0.000%	0.00%
	KINGDOM OF BELGIUM	8,597	-	-	-	-	8,597	688	-	-	688	8,597	0.840%	0.00%
	STATE OF BAHRAIN	70	-	-	-	-	70	6	-	-	6	70	0.007%	0.00%
	BERMUDA	128	-	-	-	-	128	10	-	-	10	128	0.012%	0.00%
	BRUNEI DARUSSALAM	3	-	-	-	-	3	0	-	-	0	3	0.000%	0.00%
	FEDERATIVE REPUBLIC OF BRAZIL	0	-	-	-	-	0	0	-	-	0	0	0.000%	0.00%
	COMMONWEALTH OF THE BAHAMAS	1	-	-	-	-	1	0	-	-	0	1	0.000%	0.00%
	CANADA	364	-	-	-	-	364	29	-	-	29	364	0.036%	0.00%
	SWISS CONFEDERATION	6,987	-	-	-	-	6,987	559	-	-	559	6,987	0.683%	0.00%
	REPUBLIC OF CHILE	40	-	-	-	-	40	3	-	-	3	40	0.004%	0.00%
	PEOPLE'S REPUBLIC OF CHINA	1	-	-	-	-	1	0	-	-	0	1	0.000%	0.00%
	REPUBLIC OF COLUMBIA	22	-	-	-	-	22	2	-	-	2	22	0.002%	0.00%
	REPUBLIC OF COSTA RICA	70	-	-	-	-	70	6	-	-	6	70	0.007%	0.00%
	NETHERLANDS ANTILLES	23	-	-	-	-	23	2	-	-	2	23	0.002%	0.00%
	REPUBLIC OF CYPRUS	1	-	-	-	-	1	0	-	-	0	1	0.000%	0.00%
	CZECH REPUBLIC	129	-	-	-	-	129	10	-	-	10	129	0.013%	1.50%
	FEDERAL REPUBLIC OF GERMANY	621,434	-	-	-	-	621,434	48,284	-	-	48,284	603,547	59.008%	0.00%
	KINGDOM OF DENMARK	0	-	-	-	-	0	0	-	-	0	0	0.000%	2.00%
	DOMINICAN REPUBLIC	50	-	-	-	-	50	4	-	-	4	50	0.005%	0.00%
	REPUBLIC OF ECUADOR	8	-	-	-	-	8	1	-	-	1	8	0.001%	0.00%
	ARAB REPUBLIC OF EGYPT	77	-	-	-	-	77	6	-	-	6	77	0.007%	0.00%
	KINGDOM OF SPAIN	13	-	-	-	-	13	1	-	-	1	13	0.001%	0.00%
	REPUBLIC OF FINLAND	2	-	-	-	-	2	0	-	-	0	2	0.000%	0.00%
	FRENCH REPUBLIC	12,239	-	-	-	-	12,239	979	-	-	979	12,239	1.197%	0.00%
	GREAT BRITAIN AND NORTHERN IRELAND	278,224	-	-	-	-	278,224	22,260	-	-	22,260	278,246	27.204%	1.00%
	REPUBLIC OF GEORGIA	2,551	-	-	-	-	2,551	204	-	-	204	2,551	0.249%	0.00%
	GUERNSEY	21	-	-	-	-	21	2	-	-	2	21	0.002%	0.00%
	HELLENIC REPUBLIC	35	-	-	-	-	35	3	-	-	3	35	0.003%	0.00%
	REPUBLIC OF GUATEMALA	19	-	-	-	-	19	2	-	-	2	19	0.002%	0.00%
	HONG KONG	36	-	-	-	-	36	3	-	-	3	36	0.004%	1.00%
	REPUBLIC OF HONDURAS	1	-	-	-	-	1	0	-	-	0	1	0.000%	0.00%
	REPUBLIC OF INDONESIA	34	-	-	-	-	34	3	-	-	3	34	0.003%	0.00%
	IRELAND	10,448	-	-	-	-	10,448	836	-	-	836	10,448	1.022%	0.00%
	STATE OF ISRAEL	4	-	-	-	-	4	0	-	-	0	4	0.000%	0.00%
	ISLE OF MAN	53	-	-	-	-	53	4	-	-	4	53	0.005%	0.00%
	REPUBLIC OF INDIA	3	-	-	-	-	3	0	-	-	0	3	0.000%	0.00%
	ITALIAN REPUBLIC	94	-	-	-	-	94	8	-	-	8	94	0.009%	0.00%
	JERSEY	27	-	-	-	-	27	2	-	-	2	27	0.003%	0.00%
	JAPAN	156	-	-	-	-	156	13	-	-	13	156	0.015%	0.00%
	REPUBLIC OF KENYA	6	-	-	-	-	6	0	-	-	0	6	0.001%	0.00%
	REPUBLIC OF KOREA	72	-	-	-	-	72	6	-	-	6	72	0.007%	0.00%
	STATE OF KUWAIT	113	-	-	-	-	113	9	-	-	9	113	0.011%	0.00%
	CAYMAN ISLANDS	28	-	-	-	-	28	2	-	-	2	28	0.003%	0.00%
	REPUBLIC OF KAZAKHSTAN	761	-	-	-	-	761	61	-	-	61	761	0.074%	0.00%
	LEBANESE REPUBLIC	78	-	-	-	-	78	9	-	-	9	117	0.011%	0.00%
	PRINCIPALITY OF LIECHTENSTEIN	0	-	-	-	-	0	0	-	-	0	0	0.000%	0.00%
	DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANK	4	-	-	-	-	4	0	-	-	0	4	0.000%	0.00%
	GRAND DUCHY OF LUXEMBOURG	35,285	-	-	-	-	35,285	3,698	-	-	3,698	46,220	4.519%	0.50%
	REPUBLIC OF LATVIA	48	-	-	-	-	48	4	-	-	4	48	0.005%	0.00%

	SOCIALIST PEOPLE'S LIBYAN ARAB JAMAHIRIYA	14	-	-	-	-	14	1	-	-	1	14	0.001%	0.00%
	KINGDOM OF MOROCCO	3	-	-	-	-	3	0	-	-	0	3	0.000%	0.00%
	MACEDONIA	8	-	-	-	-	8	1	-	-	1	8	0.001%	0.00%
	MACAU	80	-	-	-	-	80	6	-	-	6	80	0.008%	0.00%
	REPUBLIC OF MALTA	10	-	-	-	-	10	1	-	-	1	10	0.001%	0.00%
	UNITED MEXICAN STATES	2	-	-	-	-	2	0	-	-	0	2	0.000%	0.00%
	MALAYSIA	3,636	-	-	-	-	3,636	291	-	-	291	3,636	0.356%	0.00%
	KINGDOM OF NETHERLANDS	743	-	-	-	-	743	59	-	-	59	743	0.073%	0.00%
	KINGDOM OF NORWAY	14	-	-	-	-	14	1	-	-	1	14	0.001%	2.00%
	SULTANATE OF OMAN	40	-	-	-	-	40	3	-	-	3	40	0.004%	0.00%
	REPUBLIC OF PANAMA	35	-	-	-	-	35	3	-	-	3	35	0.003%	0.00%
	REPUBLIC OF PERU	24	-	-	-	-	24	2	-	-	2	24	0.002%	0.00%
	REPUBLIC OF THE PHILLIPINES	328	-	-	-	-	328	26	-	-	26	328	0.032%	0.00%
	REPUBLIC OF POLAND	29	-	-	-	-	29	2	-	-	2	29	0.003%	0.00%
	STATE OF QUATAR	94	-	-	-	-	94	8	-	-	8	94	0.009%	0.00%
	ROMANIA	6	-	-	-	-	6	0	-	-	0	6	0.001%	0.50%
	RUSSIAN FEDERATION	2,674	-	-	-	-	2,674	214	-	-	214	2,674	0.261%	0.00%
	KINGDOM OF SWEDEN	367	-	-	-	-	367	29	-	-	29	367	0.036%	1.00%
	REPUBLIC OF SINGAPORE	89	-	-	-	-	89	7	-	-	7	89	0.009%	0.00%
	REPUBLIC OF SAN MARINO	27	-	-	-	-	27	2	-	-	2	27	0.003%	0.00%
	REPUBLIC OF EL SALVADOR	3	-	-	-	-	3	0	-	-	0	5	0.001%	0.00%
	KINGDOM OF THAILAND	2,847	-	-	-	-	2,847	228	-	-	228	2,847	0.278%	0.00%
	REPUBLIC OF TRINIDAD AND TOBAGO	49	-	-	-	-	49	4	-	-	4	49	0.005%	0.00%
	TAIWAN, PROVINCE OF CHINA	1,608	-	-	-	-	1,608	129	-	-	129	1,608	0.157%	0.00%
	UKRAINE	2,990	-	-	-	-	2,990	359	-	-	359	4,485	0.438%	0.00%
	UNITED STATES OF AMERICA	376	-	-	-	-	376	30	-	-	30	376	0.037%	0.00%
	EASTERN REPUBLIC OF URUGUAY	165	-	-	-	-	165	13	-	-	13	165	0.016%	0.00%
	REPUBLIC OF VENZUELA	509	-	-	-	-	509	61	-	-	61	763	0.075%	0.00%
	VIRGIN ISLANDS (BRITISH)	0	-	-	-	-	0	0	-	-	0	0	0.000%	0.00%
	SOCIALIST REPUBLIC OF VIET NAM	2	-	-	-	-	2	0	-	-	0	2	0.000%	0.00%
	REPUBLIC OF SOUTH AFRICA	50	-	-	-	-	50	4	-	-	4	50	0.005%	0.00%
	OTHER COUNTRIES	30,010	-	-	-	-	30,010	2,401	-	-	2,401	30,010	2.934%	0.00%
020	**Total**	**997,941**	-	-	-	-	**997,941**	**79,425**			**79,425**	**992,819**	**97.066%**	

EU CCyB1 Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer, CH Group

	(in 000s of €)	a
1	Total risk exposure amount	5,552,743
2	Institution specific countercyclical capital buffer rate	0.295%
3	Institution specific countercyclical capital buffer requirement	16,394

EU CCyB2 Amount of institution-specific countercyclical capital buffer, CH Group

		a	b	c	d	e	f	g	h	i	j	k	l	m
		General credit exposures		Relevant credit exposures – Market risk		Securitisation exposures Exposure value for non-trading book	Total exposure value	Own fund requirements				Risk-weighted exposure amounts	Own fund requirements weights (%)	Countercyclical buffer rate (%)
		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			Relevant credit risk exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total			
010	**Breakdown by country:**													
	Other Countries	16,618,153					16,618,153	1,329,452			1,329,452	16,618,153	3.93%	
	ANDORRA	5,458					5,458	437			437	5,458	0.00%	
	UNITED ARAB EMIRATES	928,591					928,591	74,226			74,226	927,826	0.22%	
	ARMENIA	36,242					36,242	2,899			2,899	36,242	0.01%	
	ARGENTINA	18,428					18,428	2,211			2,211	27,643	0.01%	
	AUSTRIA	101,739					101,739	8,139			8,139	101,739	0.02%	
	AUSTRALIA	2,145,961					2,145,961	171,677			171,677	2,145,962	0.51%	
	BOSNIA AND HERZEGOVINA	2,397					2,397	192			192	2,397	0.00%	
	BELGIUM	7,292,230					7,292,230	585,876			585,876	7,323,455	1.73%	
	BAHRAIN	86,045					86,045	6,884			6,884	86,045	0.02%	
	BERMUDA	127,748					127,748	10,220			10,220	127,748	0.03%	
	BRUNEI DARUSSALAM	3,223					3,223	258			258	3,223	0.00%	
	BRAZIL	27,787					27,787	3,334			3,334	41,680	0.01%	
	BAHAMAS	1,287					1,287	103			103	1,287	0.00%	
	CANADA	1,339,167					1,339,167	107,133			107,133	1,339,167	0.32%	
	SWITZERLAND	2,936,039					2,936,039	235,823			235,823	2,947,789	0.70%	
	CHILE	40,353					40,353	3,228			3,228	40,353	0.01%	
	CHINA	3,748					3,748	424			424	5,298	0.00%	
	COLOMBIA	21,606					21,606	1,728			1,728	21,606	0.01%	
	COSTA RICA	69,621					69,621	5,570			5,570	69,621	0.02%	
	CURAÇAO	23,195					23,195	1,856			1,856	23,195	0.01%	
	CYPRUS	5,330,801					5,330,801	426,464			426,464	5,330,801	1.26%	
	CZECH REPUBLIC	1,307,223					1,307,223	104,578			104,578	1,307,223	0.31%	1.50%
	GERMANY	24,657,662					24,657,662	1,972,613			1,972,613	24,657,662	5.82%	
	DENMARK	98					98	8			8	98	0.00%	2.00%
	DOMINICAN REPUBLIC	49,709					49,709	3,977			3,977	49,709	0.01%	
	ECUADOR	13,559					13,559	1,085			1,085	13,559	0.00%	
	EGYPT	76,560					76,560	6,125			6,125	76,560	0.02%	
	SPAIN	643,056					643,056	51,445			51,445	643,057	0.15%	
	FINLAND	1,637					1,637	131			131	1,637	0.00%	
	FRANCE	17,785,405					17,785,405	1,422,887			1,422,887	17,786,091	4.20%	
	UNITED KINGDOM	20,749,424					20,749,424	1,072,307			1,072,307	13,403,838	1.00%	1.00%
	GEORGIA	2,550,748					2,550,748	204,060			204,060	2,550,748	0.60%	
	GUERNSEY	20,561					20,561	1,645			1,645	20,561	0.00%	
	GIBRALTAR	2,930					2,930	234			234	2,930	0.00%	
	GREECE	33,975					33,975	2,718			2,718	33,976	0.01%	
	GUATEMALA	19,405					19,405	1,552			1,552	19,405	0.00%	
	HONG KONG	144,569					144,569	11,525			11,525	144,062	0.03%	1.00%
	INDONESIA	225,957					225,957	19,248			19,248	240,596	0.06%	
	IRELAND	2,636,348					2,636,348	210,908			210,908	2,636,348	0.62%	
	ISRAEL	4,140					4,140	331			331	4,140	0.00%	
	ISLE OF MAN	53,441					53,441	4,275			4,275	53,441	0.01%	
	INDIA	10,364					10,364	829			829	10,364	0.00%	
	ITALY	20,871,369					20,871,369	1,670,463			1,670,463	20,880,781	4.93%	
	JERSEY	562,075					562,075	45,324			45,324	566,556	0.13%	
	JAPAN	156,620					156,620	12,530			12,530	156,620	0.04%	
	KENYA	5,751					5,751	460			460	5,751	0.00%	
	REPUBLIC OF KOREA	595,229					595,229	47,618			47,618	595,229	0.14%	
	KUWAIT	111,043					111,043	8,883			8,883	111,043	0.03%	

	CAYMAN ISLANDS	27,631					27,631	2,210			2,210	27,631	0.01%	
	KAZAKHSTAN	719,075					719,075	57,526			57,526	719,075	0.17%	
	LEBANON	78,247					78,247	9,390			9,390	117,371	0.03%	
	SRI LANKA	3,775					3,775	453			453	5,662	0.00%	
	LUXEMBOURG	82,358,794					82,358,794	6,631,677			6,631,677	82,895,966	19.58%	0.50%
	LATVIA	48,360					48,360	3,869			3,869	48,360	0.01%	
	LIBYA	13,592					13,592	1,087			1,087	13,592	0.00%	
	MOROCCO	3,390					3,390	271			271	3,390	0.00%	
	MONACO	20,933					20,933	1,675			1,675	20,933	0.00%	
	NORTH MACEDONIA	7,841					7,841	627			627	7,841	0.00%	
	MACAO	80,154					80,154	6,412			6,412	80,154	0.02%	
	MALTA	10,058					10,058	805			805	10,058	0.00%	
	MEXICO	1,600					1,600	128			128	1,600	0.00%	
	MALAYSIA	3,635,773					3,635,773	290,862			290,862	3,635,773	0.86%	
	NETHERLANDS	1,828,609					1,828,609	146,289			146,289	1,828,609	0.43%	
	NORWAY	14,266					14,266	1,141			1,141	14,266	0.00%	2.00%
	OMAN	40,395					40,395	3,232			3,232	40,395	0.01%	
	PANAMA	38,894					38,894	3,111			3,111	38,894	0.01%	
	PERU	23,882					23,882	1,911			1,911	23,882	0.01%	
	PHILIPPINES	602,150					602,150	48,172			48,172	602,150	0.14%	
	POLAND	28,845					28,845	2,308			2,308	28,845	0.01%	
	PUERTO RICO	3,887					3,887	311			311	3,887	0.00%	
	PORTUGAL	64,822,651					64,822,651	5,185,812			5,185,812	64,822,651	15.31%	
	QATAR	281,389					281,389	22,511			22,511	281,389	0.07%	
	ROMANIA	5,737					5,737	459			459	5,737	0.00%	0.50%
	RUSSIAN FEDERATION	2,679,509					2,679,509	214,361			214,361	2,679,509	0.63%	
	SAUDI ARABIA	349,540					349,540	27,963			27,963	349,540	0.08%	
	SWEDEN	975,804					975,804	78,064			78,064	975,804	0.23%	1.00%
	SINGAPORE	677,931					677,931	54,234			54,234	677,931	0.16%	
	SLOVENIA	36,589					36,589	2,927			2,927	36,589	0.01%	
	SAN MARINO	26,555					26,555	2,124			2,124	26,555	0.01%	
	EL SALVADOR	3,496					3,496	419			419	5,243	0.00%	
	THAILAND	2,822,109					2,822,109	225,769			225,769	2,822,109	0.67%	
	TRINIDAD AND TOBAGO	49,386					49,386	3,951			3,951	49,386	0.01%	
	TAIWAN	1,517,493					1,517,493	121,399			121,399	1,517,493	0.36%	
	UKRAINE	2,357,150					2,357,150	282,858			282,858	3,535,725	0.84%	
	UNITED STATES	130,689,570					130,689,570	10,455,162			10,455,162	130,689,530	30.87%	
	URUGUAY	168,535					168,535	13,483			13,483	168,535	0.04%	
	VENEZUELA	651,440					651,440	60,676			60,676	758,444	0.18%	
	VIRGIN ISLANDS	296,646					296,646	23,732			23,732	296,646	0.07%	
	VIET NAM	2,202					2,202	176			176	2,202	0.00%	
	SOUTH AFRICA	271,561					271,561	21,725			21,725	271,561	0.06%	
020	**Total**	**428,724,124**	**0**	**0**	**0**	**0**	**428,724,124**	**33,867,167**	**0**	**0**	**33,867,167**	**423,339,584**	**97.82%**	

EU CCyB1 Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer, CBL

	(in 000 of €)	a
1	Total risk exposure amount	3,498,887
2	Institution specific countercyclical capital buffer rate	0.14%
3	Institution specific countercyclical capital buffer requirement	4,791

EU CCyB2 Amount of institution-specific countercyclical capital buffer, CBL

		a	b	c	d	e	f	g	h	i	j	k	l	m
		General credit exposures		Relevant credit exposures – Market risk		Securitisation exposures Exposure value for non-trading book	Total exposure value	Own fund requirements				Risk-weighted exposure amounts	Own fund requirements weights (%)	Countercyclical buffer rate (%)
	(in 000s of €)	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			Relevant credit risk exposures - Credit risk	Relevant credit exposures – Market risk	Relevant credit exposures – Securitisation positions in the non-trading book	Total			
	Breakdown by country:													
010	REPUBLIC OF AUSTRIA	93	-	-	-	-	93	7	-	-	7	93	0.262%	0.000%
	KINGDOM OF BELGIUM	6,621	-	-	-	-	6,621	530	-	-	530	6,621	18.747%	0.000%
	CANADA	1	-	-	-	-	1	0	-	-	0	1	0.002%	0.000%
	SWISS CONFEDERATION	534	-	-	-	-	534	43	-	-	43	534	1.513%	0.000%
	PEOPLE'S REPUBLIC OF CHINA	1	-	-	-	-	1	0	-	-	0	1	0.002%	0.000%
	REPUBLIC OF CYPRUS	1	-	-	-	-	1	0	-	-	0	1	0.004%	0.000%
	CZECH REPUBLIC	199	-	-	-	-	199	16	-	-	16	199	0.564%	1.500%
	FEDERAL REPUBLIC OF GERMANY	29,081	-	-	-	-	29,081	896	-	-	896	11,196	31.703%	0.000%
	KINGDOM OF SPAIN	1	-	-	-	-	1	0	-	-	0	1	0.003%	0.000%
	FRENCH REPUBLIC	83	-	-	-	-	83	7	-	-	7	83	0.235%	0.000%
	GREAT BRITAIN AND NORTHERN IRELAND	539	-	-	-	-	539	43	-	-	43	539	1.525%	1.000%
	HELLENIC REPUBLIC	1	-	-	-	-	1	0	-	-	0	1	0.003%	0.000%
	IRELAND	962	-	-	-	-	962	77	-	-	77	962	2.723%	0.000%
	ITALIAN REPUBLIC	24	-	-	-	-	24	2	-	-	2	24	0.069%	0.000%
	REPUBLIC OF KAZAKHSTAN	42	-	-	-	-	42	3	-	-	3	42	0.120%	0.000%
	PRINCIPALITY OF LIECHTENSTEIN	0	-	-	-	-	0	0	-	-	0	0	0.000%	0.000%
	GRAND DUCHY OF LUXEMBOURG	13,509	-	-	-	-	13,509	1,081	-	-	1,081	13,509	38.253%	0.500%
	REPUBLIC OF LATVIA	0	-	-	-	-	0	0	-	-	0	0	0.000%	0.000%
	KINGDOM OF NETHERLANDS	390	-	-	-	-	390	31	-	-	31	390	1.103%	0.000%
	UNITED STATES OF AMERICA	65	-	-	-	-	65	5	-	-	5	65	0.185%	0.000%
	OTHER COUNTRIES	1,053	-	-	-	-	1,053	84	-	-	84	1,053	2.982%	0.000%
020	Total	53,200	-	-	-	-	53,200	2,825	-	-	2,825	35,314	100.000%	

EU CCyB1 Geographical distribution of credit exposures relevant for the calculation of the countercyclical buffer, CBF

	(in 000s of €)	a
1	Total risk exposure amount	1,734,620
2	Institution specific countercyclical capital buffer rate	0.215%
3	Institution specific countercyclical capital buffer requirement	3,729

EU CCyB2 Amount of institution-specific countercyclical capital buffer, CBF

Appendix B

	(in 000 of €)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
			Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
005	Cash balances at central banks and other demand deposits	11,722,334	-	-	-	-	-	-	-	-	-	-	-	-	-	-
010	Loans and advances	6,301,658	-	-	134,080	-	-	-	-	-	(134,080)	-	-	-	5,599,736	-
020	*Central banks*	*8,549*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
030	*General governments*	*5,512*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
040	*Credit institutions*	*4,845,835*	-	-	-	-	-	-	-	-	-	-	-	-	4,713,264	-
050	*Other financial corporations*	*1,439,455*	-	-	*134,080*	-	-	-	-	-	(134,080)	-	-	-	886,473	-
060	*Non-financial corporations*	*2,307*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
070	*Of which SMEs*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
080	*Households*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
090	Debt securities	1,940,286	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
110	*General governments*	977,965	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120	*Credit institutions*	665,706	-	-	-	-	-	-	-	-	(134,080)	-	-	-	-	-
130	*Other financial corporations*	296,615	-	-	-	-	-		-	-	-	-	-	-	-	-
140	*Non-financial corporations*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	Off-balance-sheet exposures	1,385,230	-	-	-	-	-	-	-	-	-	-	-		-	-
160	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
170	*General governments*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
180	*Credit institutions*	*1,382,679*	-	-	-	-	-	-	-	-	-	-	-		-	-
190	*Other financial corporations*	*2,551*	-	-	-	-	-	-	-	-	-	-	-		-	-
200	*Non-financial corporations*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
210	*Households*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
220	***Total***	***21,349,507***	**-**	**-**	***134,080***	**-**	**-**	**-**	**-**	**-**	***(134,080)***	**-**	**-**	**-**	***5,599,736***	**-**

EU CR1 Performing and non-performing exposures and related provisions, CH Group

	(in 000 of €)	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
			Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
005	Cash balances at central banks and other demand deposits	9,650,897	9,650,897													
010	Loans and advances	5,784,646	5,784,646		134,943		134,080	(1)	(1)		(134,533)		(134,080)		5,599,736	
020	Central banks	5,764	5,764		145			(0)	(0)		(93)					
030	General governments	4,458	4,458													
040	Credit institutions	4,822,433	4,822,433		427			(0)	(0)		(221)				4,713,264	
050	Other financial corporations	932,110	932,110		134,338		134,080	(1)	(1)		(134,196)		(134,080)		886,473	
060	Non-financial corporations	19,881	19,881		33			(0)	(0)		(22)					
070	Of which SMEs															
080	Households															
090	Debt securities	1,591,684	1,591,684					(208)	(208)							
100	Central banks															
110	General governments	719,630	719,630					(208)	(208)							
120	Credit institutions	872,053	872,053													
130	Other financial corporations															
140	Non-financial corporations															
150	Off-balance-sheet exposures	1,385,230	1,385,230													
160	Central banks															
170	General governments															
180	Credit institutions	1,382,679	1,382,679													
190	Other financial corporations	2,551	2,551													
200	Non-financial corporations															
210	Households															
220	**Total**	**18,412,457**	**18,412,457**		**134,943**		**134,080**	**(210)**	**(210)**	**-**	**(134,533)**		**(134,080)**	**-**	**5,599,736**	

EU CR1 Performing and non-performing exposures and related provisions, CBL

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions						Accumulated partial write-off	Collateral and financial guarantees received	
		Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions				On performing exposures	On non-performing exposures
	(in 000s of €)		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3		Of which stage 1	Of which stage 2		Of which stage 2	Of which stage 3			
005	Cash balances at central banks and other demand deposits	1,969,320	-	-	-	-	-	-	-	-	-	-	-		52	-
010	Loans and advances	344,599	-	-	7,093	-	-	-	-	-	(7,093)	-	-		0	-
020	*Central banks*	*3,937*	-	-	-	-	-	-	-	-	-	-	-		-	-
030	*General governments*	*1,659*	-	-	-	-	-	-	-	-	-	-	-		-	-
040	*Credit institutions*	*309,000*	-	-	7,093	-	-	-	-	-	(7,093)	-	-		-	-
050	*Other financial corporations*	*13,388*	-	-	-	-	-	-	-	-	-	-	-		0	-
060	*Non-financial corporations*	*16,615*	-	-	-	-	-	-	-	-	-	-	-		-	-
070	*Of which SMEs*															
080	*Households*	-	-	-	-	-	-	-	-	-	-	-	-			
090	Debt securities	443,832	-	-	-	-	-	-	-	-	-	-	-		-	
100	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
110	*General governments*	*302,768*	-	-	-	-	-	-	-	-	-	-	-		-	-
120	*Credit institutions*	*96,195*	-	-	-	-	-	-	-	-	-	-	-		-	-
130	*Other financial corporations*	*44,870*	-	-	-	-	-	-	-	-	-	-	-		-	-
140	*Non-financial corporations*	-	-	-	-	-	-	-	-	-	-	-	-		-	-
150	Off-balance-sheet exposures	-	-	-	-	-	-	-	-	-	-	-	-			
160	*Central banks*															
170	*General governments*															
180	*Credit institutions*															
190	*Other financial corporations*															
200	*Non-financial corporations*															
210	*Households*															
220	***Total***	***2,757,751***	**-**	**-**	***7,093***	**-**	**-**	**-**	**-**	**-**	***(7,093)***	**-**	**-**			

EU CR1 Performing and non-performing exposures and related provisions, CBF

	(in 000 of €)	a	b	c	d	e	f
		Net exposure value					
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Loans and advances	25,494	5,759,562				5,785,056
2	Debt securities		377,178	1,183,900	30,398		1,591,475
3	*Total*	*25,494*	*6,136,740*	*1,183,900*	*30,398*	-	*7,376,531*

EU CR1-A Maturity of exposures CBL

	(in 000 of €)	a
		Gross carrying amount
010	**Initial stock of non-performing loans and advances**	-
020	Inflows to non-performing portfolios	134,080
030	Outflows from non-performing portfolios	-
040	*Outflows due to write-offs*	-
050	*Outflow due to other situations*	
060	**Final stock of non-performing loans and advances**	**134,080**

EU CR2 Changes in the stock of non-performing loans & advances CH

	(in 000 of €)	a
		Gross carrying amount
010	**Initial stock of non-performing loans and advances**	**1,391**
020	Inflows to non-performing portfolios	134,607
030	Outflows from non-performing portfolios	(1,055)
040	*Outflows due to write-offs*	*(1,055)*
050	*Outflow due to other situations*	
060	**Final stock of non-performing loans and advances**	**134,943**

EU CR2 Changes in the stock of non-performing loans & advances CBL

	(in 000 of €)	a
		Gross carrying amount
010	**Initial stock of non-performing loans and advances**	-
020	Inflows to non-performing portfolios	7,093
030	Outflows from non-performing portfolios	-
040	*Outflows due to write-offs*	-
050	*Outflow due to other situations*	
060	**Final stock of non-performing loans and advances**	**7,093**

EU CR2 Changes in the stock of non-performing loans & advances CBF

	(in 000 of €)	a Gross carrying amount	b Related net accumulated recoveries
010	**Initial stock of non-performing loans and advances**	**-**	
020	Inflows to non-performing portfolios	134,080	
030	Outflows from non-performing portfolios	-	
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*	-	
110	*Outflow due to other situations*		
120	*Outflow due to reclassification as held for sale*		
130	**Final stock of non-performing loans and advances**	**134,080**	

EU CR2a - Changes in the stock of non-performing loans and advances and related net accumulated recoveries, CH Group

	(in 000 of €)	a Gross carrying amount	b Related net accumulated recoveries
010	**Initial stock of non-performing loans and advances**	**1,391**	
020	Inflows to non-performing portfolios	134,607	
030	Outflows from non-performing portfolios	(1,055)	
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*	*(1,055)*	
110	*Outflow due to other situations*		
120	*Outflow due to reclassification as held for sale*		
130	**Final stock of non-performing loans and advances**	**134,943**	

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

(in 000 of €)		a	b
		Gross carrying amount	Related net accumulated recoveries
010	**Initial stock of non-performing loans and advances**	-	
020	Inflows to non-performing portfolios	7,093	
030	Outflows from non-performing portfolios	-	
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*	-	
110	*Outflow due to other situations*		
120	*Outflow due to reclassification as held for sale*		
130	**Final stock of non-performing loans and advances**	7,093	

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

	(in 000 of €)	a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
			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	11,722,334	11,722,334	-	-	-	-	-	-	-	-	-	-
010	Loans and advances	6,301,658	6,301,658	-	134,080	134,080	-	-	-	-	-	-	-
020	*Central banks*	*8,549*	*8,549*	-	-	-	-	-	-	-	-	-	-
030	*General governments*	*5,512*	*5,512*	-	-	-	-	-	-	-	-	-	-
040	*Credit institutions*	*4,845,835*	*4,845,835*	-	-	-	-	-	-	-	-	-	-
050	*Other financial corporations*	*1,439,455*	*1,439,455*	-	*134,080*	*134,080*	-	-	-	-	-	-	-
060	*Non-financial corporations*	*2,307*	*2,307*	-	-	-	-	-	-	-	-	-	-
070	*Of which SMEs*	-	-	-	-	-	-	-	-	-	-	-	-
080	*Households*	-	-	-	-	-	-	-	-	-	-	-	-
090	Debt securities	1,940,286	1,940,286	-	-	-	-	-	-	-	-	-	-
100	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-
110	*General governments*	*977,965*	*977,965*	-	-	-	-	-	-	-	-	-	-
120	*Credit institutions*	*665,706*	*665,706*	-	-	-	-	-	-	-	-	-	-
130	*Other financial corporations*	*296,615*	*296,615*	-	-	-	-	-	-	-	-	-	-
140	*Non-financial corporations*	-	-	-	-	-	-	-	-	-	-	-	-
150	Off-balance-sheet exposures	1,385,230			-								-
160	*Central banks*	-			-								-
170	*General governments*	-			-								-
180	*Credit institutions*	*1,382,679*			-								-
190	*Other financial corporations*	*2,551*			-								-
200	*Non-financial corporations*	-			-								-
210	*Households*	-			-								-
220	***Total***	***21,349,507***	***19,964,277***	**-**	***134,080***	***134,080***	**-**	**-**	**-**	**-**			

EU CQ3 Credit quality of performing and non-performing exposures by past due days, CH Group

	(in 000 of €)	a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
			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	9,650,897	9,650,897										
010	Loans and advances	5,784,646	5,784,130	516	134,943	134,080	128	285	266	183			
020	*Central banks*	*5,764*	*5,758*	*7*	*145*		*19*	*33*	*34*	*59*			
030	*General governments*	*4,458*	*4,458*										
040	*Credit institutions*	*4,822,433*	*4,822,413*	*21*	*427*		*59*	*148*	*171*	*48*			
050	*Other financial corporations*	*932,110*	*931,623*	*487*	*134,338*	*134,080*	*45*	*98*	*44*	*71*			
060	*Non-financial corporations*	*19,881*	*19,879*	*2*	*33*		*4*	*7*	*18*	*5*			
070	*Of which SMEs*												
080	*Households*												
090	Debt securities	1,591,684	1,591,684										
100	*Central banks*												
110	*General governments*	*719,630*	*719,630*										
120	*Credit institutions*	*872,053*	*872,053*										
130	*Other financial corporations*												
140	*Non-financial corporations*												
150	Off-balance-sheet exposures	1,385,230											
160	*Central banks*												
170	*General governments*												
180	*Credit institutions*	*1,382,679*											
190	*Other financial corporations*	*2,551*											
200	*Non-financial corporations*												
210	*Households*												
220	*Total*	*18,412,457*	*17,026,711*	*516*	*134,943*	*134,080*	*128*	*285*	*266*	*183*			

EU CQ3 Credit quality of performing and non-performing exposures by past due days, CBL

		a	b	c	d	e	f	g	h	i	j	k	l
		Gross carrying amount/nominal amount											
		Performing exposures			Non-performing exposures								
	(in 000s 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	1,969,320	1,969,320	-	-	-	-	-	-	-	-	-	-
010	Loans and advances	344,599	344,599	-	7,093	7,093	-	-	-	-	-	-	-
020	*Central banks*	3,937	3,937	-	-	-	-	-	-	-	-	-	-
030	*General governments*	1,659	1,659	-	-	-	-	-	-	-	-	-	-
040	*Credit institutions*	309,000	309,000	-	7,093	7,093	-	-	-	-	-	-	-
050	*Other financial corporations*	13,388	13,388	-	-	-	-	-	-	-	-	-	-
060	*Non-financial corporations*	16,615	16,615	-	-	-	-	-	-	-	-	-	-
070	*Of which SMEs*	-	-	-	-	-	-	-	-	-	-	-	-
080	*Households*	-	-	-	-	-	-	-	-	-	-	-	-
090	Debt securities	443,832	443,832	-	-	-	-	-	-	-	-	-	-
100	*Central banks*	-	-	-	-	-	-	-	-	-	-	-	-
110	*General governments*	302,768	302,768	-	-	-	-	-	-	-	-	-	-
120	*Credit institutions*	96,195	96,195	-	-	-	-	-	-	-	-	-	-
130	*Other financial corporations*	44,870	44,870	-	-	-	-	-	-	-	-	-	-
140	*Non-financial corporations*	-	-	-	-	-	-	-	-	-	-	-	-
150	Off-balance-sheet exposures	-	-	-	-								
160	*Central banks*												
170	*General governments*												
180	*Credit institutions*												
190	*Other financial corporations*												
200	*Non-financial corporations*												
210	*Households*												
220	***Total***	2,757,751	2,757,751	-	7,093	7,093	-	-	-	-	-	-	-

EU CQ3 Credit quality of performing and non-performing exposures by past due days, CBF

	(in 000 of €)	a	b	c	d	e	f	g	h	i	j	k	l
		Loans and advances											
			Performing		Non-performing								
						Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days						
				Of which past due > 30 days ≤ 90 days				Of which past due > 90 days ≤ 180 days	Of which: past due > 180 days ≤ 1 year	Of which: past due > 1 years ≤ 2 years	Of which: past due > 2 years ≤ 5 years	Of which: past due > 5 years ≤ 7 years	Of which: past due > 7 years
010	Gross carrying amount	6,435,738	6,301,658	-	134,080	134,080	-	-	-	-	-	-	-
020	*Of which secured*	*5,622,450*	*5,622,450*										
030	*Of which secured with immovable property*												
040	*Of which instruments with LTV higher than 60% and lower or equal to 80%*												
050	*Of which instruments with LTV higher than 80% and lower or equal to 100%*												
060	*Of which instruments with LTV higher than 100%*												
070	Accumulated impairment for secured assets												
080	Collateral												
090	*Of which value capped at the value of exposure*	*5,599,789*											
100	*Of which immovable property*												
110	*Of which value above the cap*	*5,717,539*											
120	*Of which immovable property*												
130	Financial guarantees received												
140	Accumulated partial write-off												

EU CQ6 - Collateral valuation - loans and advances, CH Group

		a	b	c	d	e	f	g	h	i	j	k	l
		Loans and advances											
			Performing		Non-performing								
						Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days						
	(in 000 of €)			Of which past due > 30 days ≤ 90 days				Of which past due > 90 days ≤ 180 days	Of which: past due > 180 days ≤ 1 year	Of which: past due > 1 years ≤ 2 years	Of which: past due > 2 years ≤ 5 years	Of which: past due > 5 years ≤ 7 years	Of which: past due > 7 years
010	Gross carrying amount	5,919,589	5,784,646	516	134,943	134,080	862	128	285	266	183		
020	*Of which secured*	*5,622,397*	*5,622,397*										
030	*Of which secured with immovable property*												
040	*Of which instruments with LTV higher than 60% and lower or equal to 80%*												
050	*Of which instruments with LTV higher than 80% and lower or equal to 100%*												
060	*Of which instruments with LTV higher than 100%*												
070	Accumulated impairment for secured assets												
080	Collateral												
090	*Of which value capped at the value of exposure*	*5,599,736*											
100	*Of which immovable property*												
110	*Of which value above the cap*	*5,717,539*											
120	*Of which immovable property*												
130	Financial guarantees received												
140	Accumulated partial write-off												

EU CQ6 - Collateral valuation - loans and advances, CBL

		a	b	c	d	e	f	g	h	i	j	k	l
		Loans and advances											
			Performing		Non-performing								
						Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days						
	(in 000 of €)			Of which past due > 30 days ≤ 90 days				Of which past due > 90 days ≤ 180 days	Of which: past due > 180 days ≤ 1 year	Of which: past due > 1 years ≤ 2 years	Of which: past due > 2 years ≤ 5 years	Of which: past due > 5 years ≤ 7 years	Of which: past due > 7 years
010	Gross carrying amount	351,692	344,599	-	7,093	7,093	-	-	-	-	-	-	-
020	*Of which secured*	*52*	*52*										
030	Of which secured with immovable property												
040	Of which instruments with LTV higher than 60% and lower or equal to 80%												
050	Of which instruments with LTV higher than 80% and lower or equal to 100%												
060	Of which instruments with LTV higher than 100%												
070	Accumulated impairment for secured assets												
080	Collateral												
090	Of which value capped at the value of exposure	*52*											
100	Of which immovable property												
110	Of which value above the cap												
120	Of which immovable property												
130	Financial guarantees received												
140	Accumulated partial write-off												

EU CQ6 - Collateral valuation - loans and advances, CBF

Appendix C

		a	b	c	d	e	f	g
		Gross carrying/nominal amount				Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which subject to impairment			
	(in 000 of €)			Of which defaulted				
010	***On-balance-sheet exposures***	***8,376,046***	***134,080***	**-**	***8,376,046***	***(134,080)***		-
020	*Principality of Andorra*	*5*	-	-	*5*	-		-
030	*United Arab Emirates*	*670*	-	-	*670*	-		-
040	*Republic of Armenia*	*39*	-	-	*39*	-		-
050	*Argentine Republic*	*26*	-	-	*26*	-		-
060	*Republic of Austria*	*1,553*	-	-	*1,553*	-		-
070	*Australia*	*567,849*	-	-	*567,849*	-		-
080	*Republic of Bosnia and Herzegovina*	*2*	-	-	*2*	-		-
090	*People's Republic of Bangladesh*	*69*	-	-	*69*	-		-
100	*Kingdom of Belgium*	*211,214*	-	-	*211,214*	-		-
110	*Bulgaria*	*195*	-	-	*195*	-		-
120	*State of Bahrain*	*110*	-	-	*110*	-		-
130	*Bermuda*	*128*	-	-	*128*	-		-
140	*Brunei Darussalam*	*3*	-	-	*3*	-		-
150	*Federative Republic of Brazil*	*95*	-	-	*95*	-		-
160	*Commonwealth of the Bahamas*	*2*	-	-	*2*	-		-
170	*Canada*	*234,969*	-	-	*234,969*	-		-
180	*Swiss Confederation*	*12,752*	-	-	*12,752*	-		-
190	*Republic of Chile*	*22*	-	-	*22*	-		-
200	*Republic of Cameroon*	*1*	-	-	*1*	-		-
210	*People's Republic of China*	*3,352*	-	-	*3,352*	-		-
220	*Republic of Columbia*	*22*	-	-	*22*	-		-
230	*Republic of Costa Rica*	*70*	-	-	*70*	-		-
240	*Republic of Cape Verde*	*1*	-	-	*1*	-		-
250	*Netherlands Antilles*	*23*	-	-	*23*	-		-
260	*Republic of Cyprus*	*176*	-	-	*176*	-		-
270	*Czech Republic*	*479*	-	-	*479*	-		-
280	*Federal Republic of Germany*	*1,814,538*	-	-	*1,814,538*	-		-
290	*Kingdom of Denmark*	*211*	-	-	*211*	-		-
300	*Dominican Republic*	*50*	-	-	*50*	-		-
310	*Republic of Ecuador*	*8*	-	-	*8*	-		-
320	*Republic of Estonia*	*3*	-	-	*3*	-		-
330	*Arab Republic of Egypt*	*68*	-	-	*68*	-		-
340	*Kingdom of Spain*	*1,500*	-	-	*1,500*	-		-
350	*Republic of Finland*	*71*	-	-	*71*	-		-
360	*Republic of Fiji*	*1*	-	-	*1*	-		-
370	*French Republic*	*1,023,352*	-	-	*1,023,352*	-		-

380	Great Britain and Northern Ireland	2,669,495	-	-	2,669,495	-		-
390	Republic of Georgia	25	-	-	25	-		-
400	Guernsey	75	-	-	75	-		-
410	Gibraltar	3	-	-	3	-		-
420	Hellenic Republic	231	-	-	231	-		-
430	Republic of Guatemala	19	-	-	19	-		-
440	Hong Kong	3,487	-	-	3,487	-		-
450	Republic of Honduras	1	-	-	1	-		-
460	Republic of Croatia	205	-	-	205	-		-
470	Republic of Hungary	141	-	-	141	-		-
480	Republic of Indonesia	34	-	-	34	-		-
490	Ireland	18,770	-	-	18,770	-		-
500	State of Israel	177	-	-	177	-		-
510	Isle of Man	55	-	-	55	-		-
520	Republic of India	154	-	-	154	-		-
530	Republic of Iceland	133	-	-	133	-		-
540	Italian Republic	3,094	-	-	3,094	-		-
550	Jersey	275	-	-	275	-		-
560	Hashemite Kingdom of Jordan	18	-	-	18	-		-
570	Japan	301	-	-	301	-		-
580	Republic of Kenya	6	-	-	6	-		-
590	Republic of Korea	341	-	-	341	-		-
600	State of Kuwait	75	-	-	75	-		-
610	Cayman Islands	33	-	-	33	-		-
620	Republic of Kazakhstan	49	-	-	49	-		-
630	Lao People's Democratic Republic	1	-	-	1	-		-
640	Lebanese Republic	78	-	-	78	-		-
650	Principality of Liechtenstein	199	-	-	199	-		-
660	Democratic Socialist Republic of Sri Lank	4	-	-	4	-		-
670	Republic of Lithuania	2	-	-	2	-		-
680	Grand Duchy of Luxembourg	160,250	-	-	160,250	-		-
690	Republic of Latvia	91	-	-	91	-		-
700	Socialist People's Libyan Arab Jamahiriya	14	-	-	14	-		-
710	Kingdom of Morocco	3	-	-	3	-		-
720	French Republic	71	-	-	71	-		-
730	Montenegro	1	-	-	1	-		-
740	Macedonia	8	-	-	8	-		-

750	Mongolia	1	-	-	1	-		-
760	Macau	217	-	-	217	-		-
770	Islamic Republic of Mauritania	2	-	-	2	-		-
780	Republic of Malta	135	-	-	135	-		-
790	Republic of Maldives	6	-	-	6	-		-
800	United Mexican States	34	-	-	34	-		-
810	Malaysia	65	-	-	65	-		-
820	Kingdom of Netherlands	2,045	-	-	2,045	-		-
830	Kingdom of Norway	338,201	-	-	338,201	-		-
840	New Zealand	4	-	-	4	-		-
850	Sultanate of Oman	40	-	-	40	-		-
860	Republic of Panama	39	-	-	39	-		-
870	Republic of Peru	9	-	-	9	-		-
880	Republic of the Phillipines	401	-	-	401	-		-
890	Republic of Poland	523	-	-	523	-		-
900	Portuguese Republic	221	-	-	221	-		-
910	State of Quatar	165	-	-	165	-		-
920	Romania	56	-	-	56	-		-
930	Serbia and Kosovo	22	-	-	22	-		-
940	Russian Federation	134,098	134,080	-	134,098	(134,080)		-
950	Kingdom of Saudi Arabia	213	-	-	213	-		-
960	Kingdom of Sweden	379	-	-	379	-		-
970	Republic of Singapore	2,875	-	-	2,875	-		-
980	Republic of Slovenia	70	-	-	70	-		-
990	Slovak Republic	151	-	-	151	-		-
1000	Republic of San Marino	34	-	-	34	-		-
1010	Republic of Senegal	2	-	-	2	-		-
1020	Republic of El Salvador	3	-	-	3	-		-
1030	Kingdom of Thailand	118	-	-	118	-		-
1040	Republic of Tunisia	19	-	-	19	-		-
1050	Republic of Turkey	119	-	-	119	-		-
1060	Republic of Trinidad and Tobago	1	-	-	1	-		-
1070	Taiwan, Province of China	1,449	-	-	1,449	-		-
1080	Ukraine	12	-	-	12	-		-
1090	United States of America	616,289	-	-	616,289	-		-
1100	Eastern Republic of Uruguay	237	-	-	237	-		-
1110	Vatican City State (Holy See)	119	-	-	119	-		-

1120	*Republic of Venzuela*	*132*	-	-	*132*	-		-
1130	*Virgin Islands (British)*	*0*	-	-	*0*	-		-
1140	*Socialist Republic of Viet Nam*	*7*	-	-	*7*	-		-
1150	*Republic of Vanuatu*	*2*	-	-	*2*	-		-
1160	*Republic of South Africa*	*62*	-	-	*62*	-		-
1170	*Other*	*545,920*	-	-	*545,920*	-		-
1180	***Off-balance-sheet exposures***	***1,385,230***	-	-			-	
1190	*Italy*	*6,300*	-	-			-	
1200	*United Kingdom*	*819,924*	-	-			-	
1210	*France*	*332,252*	-	-			-	
1220	*Spain*	*98,569*	-	-			-	
1230	*Germany*	*119,813*	-	-			-	
1240	*Belgium*	*6,537*	-	-			-	
1250	*Australia*	*1,835*	-	-			-	
1260	***Total***	***9,761,276***	***134,080***	-	***8,376,046***	***(134,080)***	-	

EU CQ4 Quality non-performing exposures by geography, CH Group

(in 000 of €)		a	b	c	d	e	f	g
		Gross carrying/nominal amount				Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which subject to impairment			
				Of which defaulted				
010	***On-balance-sheet exposures***	***17,162,170***	***134,943***	***-***	***17,162,170***	***(134,742)***		
020	*Andorra*	*5*	-		*5*	-		
030	*United Arab Emirates*	*843*	-		*843*	-		
040	*Armenia*	*57*	-		*57*	-		
050	*Argentina*	*3,776*	-		*3,776*	-		
060	*Austria*	*1,784*	-		*1,784*	-		
070	*Australia*	*571,226*	-		*571,226*	-		
080	*Bosnia and Herzegovina*	*2*	-		*2*	-		
090	*Bangladesh*	*69*	-		*69*	-		
100	*Belgium*	*245,115*	*1*		*245,115*	*(0)*		
110	*Bulgaria*	*418*	-		*418*	-		
120	*Bahrain*	*133*	-		*133*	-		
130	*Bermuda*	*128*	-		*128*	-		
140	*Brunei*	*3*	-		*3*	-		
150	*Brazil*	*126*	*14*		*126*	*(4)*		
160	*Bahamas*	*2*	-		*2*	-		
170	*Canada*	*265,637*	*12*		*265,637*	*(9)*		
180	*Switzerland*	*28,060*	*25*		*28,060*	*(1)*		
190	*Chile*	*40*	-		*40*	-		
200	*Cameroon*	*1*	-		*1*	-		
210	*China*	*3,574*	*3*		*3,574*	*(0)*		
220	*Colombia*	*22*	-		*22*	-		
230	*Costa Rica*	*70*	-		*70*	-		
240	*Cabo Verde*	*1*	-		*1*	-		
250	*Curaçao*	*23*	-		*23*	-		
260	*Cyprus*	*195*	-		*195*	-		
270	*Czechia*	*1,681*	-		*1,681*	-		
280	*Germany*	*1,202,592*	*1*		*1,202,592*	*(0)*		
290	*Denmark*	*1,319*	*0*		*1,319*	*(0)*		
300	*Dominican Republic*	*50*	-		*50*	-		
310	*Algeria*	*75*	-		*75*	-		
320	*Ecuador*	*14*	-		*14*	-		
330	*Estonia*	*51*	-		*51*	-		
340	*Egypt*	*77*	-		*77*	-		
350	*Spain*	*9,712*	-		*9,712*	-		
360	*Finland*	*103*	-		*103*	-		
370	*Fiji*	*1*	-		*1*	-		

380	France	1,001,180	89		1,001,180	(248)		
390	United Kingdom	2,740,762	168		2,740,762	(69)		
400	Georgia	2,559	-		2,559	-		
410	Guernsey	83	5		83	(4)		
420	Gibraltar	3	-		3	-		
430	Greece	529	1		529	(0)		
440	Guatemala	19	-		19	-		
450	Hong Kong	11,430	5		11,430	(5)		
460	Croatia	265	-		265	-		
470	Hungary	194	-		194	-		
480	Indonesia	14,777	12		14,777	(0)		
490	Ireland	61,364	15		61,364	(14)		
500	Israel	2,151	-		2,151	-		
510	Isle of Man	55	-		55	-		
520	India	154	-		154	-		
530	Iran	37	-		37	-		
540	Iceland	10,204	-		10,204	-		
550	Italy	3,275	16		3,275	(8)		
560	Jersey	278	4		278	(2)		
570	Jordan	18	-		18	-		
580	Japan	133,214	-		133,214	-		
590	Kenya	6	-		6	-		
600	Korea	380	-		380	-		
610	Kuwait	111	0		111	(0)		
620	Cayman Islands	124	0		124	(0)		
630	Kazakhstan	722	0		722	(0)		
640	Lao People's Democratic Republic	1	-		1	-		
650	Lebanon	78	-		78	-		
660	Liechtenstein	188	-		188	-		
670	Sri Lanka	4	-		4	-		
680	Lithuania	3	-		3	-		
690	Luxembourg	8,576,990	308		8,576,990	(147)		
700	Latvia	233	-		233	-		
710	Libya	168	-		168	-		
720	Morocco	153	-		153	-		
730	Monaco	72	-		72	-		
740	Montenegro	1	-		1	-		

750	North Macedonia	15	-		15	-		
760	Mongolia	1	-		1	-		
770	Macao	217	-		217	-		
780	Mauritania	2	-		2	-		
790	Malta	148	-		148	-		
800	Maldives	6	-		6	-		
810	Mexico	6,024	-		6,024	-		
820	Malaysia	3,665	-		3,665	-		
830	Netherlands	21,162	-		21,162	-		
840	Norway	344,288	-		344,288	-		
850	New Zealand	39,896	-		39,896	-		
860	Oman	41	1		41	(1)		
870	Panama	43	-		43	-		
880	Peru	24	-		24	-		
890	Philippines	684	-		684	-		
900	Poland	560	-		560	-		
910	Puerto Rico	4	-		4	-		
920	Portugal	277	-		277	-		
930	Qatar	187	-		187	-		
940	Romania	112	-		112	-		
950	Serbia	23	-		23	-		
960	Russian Federation	136,764	134,080		136,764	(134,080)		
970	Saudi Arabia	239	-		239	-		
980	Sweden	625	-		625	(0)		
990	Singapore	130,416	4		130,416	(0)		
1000	Slovenia	120	-		120	-		
1010	Slovakia	150	-		150	-		
1020	San Marino	34	-		34	-		
1030	Senegal	2	-		2	-		
1040	El Salvador	3	-		3	-		
1050	Thailand	2,824	-		2,824	-		
1060	Tunisia	19	-		19	-		
1070	Türkiye	6,897	-		6,897	-		
1080	Trinidad and Tobago	49	-		49	-		
1090	Taiwan	1,601	-		1,601	-		
1100	Ukraine	21	-		21	-		
1110	United States of America	1,078,434	7		1,078,434	(6)		

1120	Uruguay	246	-		246	-		
1130	Vatican	119	-		119	-		
1140	Venezuela	810	161		810	(124)		
1150	Virgin Islands	9	9		9	(9)		
1160	Viet Nam	11	5		11	(4)		
1170	Vanuatu	2	-		2	-		
1250	South Africa	102	-		102	-		
1270	Other countries	486,526	-		486,526	(6)		
1280	**Off-balance-sheet exposures**	**1,385,230**	**-**	**-**				
1290	Italy	6,300						
1300	United Kingdom	819,924						
1310	France	332,252						
1320	Spain	98,569						
1330	Germany	121,170						
1340	Belgium	6,537						
1350	Australia	479						
1360	**Total**	**18,547,400**	**134,943**	**-**	**17,162,170**	**(134,742)**		

EU CQ4 Quality non-performing exposures by geography, CBL

(in 000 of €)		Gross carrying/nominal amount				Accumulated impairment	Provisions on off-balance-sheet commitments and financial guarantees given	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which subject to impairment			
				Of which defaulted				
010	***On-balance-sheet exposures***	***758,972***	***7,093***	***(7,093)***	***758,972***	***(7,093)***		
020	*Republic of Austria*	*452*	-	-	*452*	-		
030	*Australia*	*0*	-	-	*0*	-		
040	*Kingdom of Belgium*	*1,859*	-	-	*1,859*	-		
050	*Canada*	*1*	-	-	*1*	-		
060	*Swiss Confederation*	*1,424*	-	-	*1,424*	-		
070	*People's Republic of China*	*1*	-	-	*1*	-		
080	*Republic of Cyprus*	*1*	-	-	*1*	-		
090	*Czech Republic*	*199*	-	-	*199*	-		
100	*Federal Republic of Germany*	*264,206*	-	-	*264,206*	-		
110	*Kingdom of Denmark*	*3*	-	-	*3*	-		
120	*Kingdom of Spain*	*162*	-	-	*162*	-		
130	*Republic of Finland*	*27*	-	-	*27*	-		
140	*French Republic*	*101,014*	-	-	*101,014*	-		
150	*Great Britain and Northern Ireland*	*926*	-	-	*926*	-		
160	*Hellenic Republic*	*12*	-	-	*12*	-		
170	*Ireland*	*2,420*	-	-	*2,420*	-		
180	*Italian Republic*	*233*	-	-	*233*	-		
190	*Republic of Kazakhstan*	*42*	-	-	*42*	-		
200	*Principality of Liechtenstein*	*18*	-	-	*18*	-		
210	*Grand Duchy of Luxembourg*	*292,290*	*7,093*	*(7,093)*	*292,290*	*(7,093)*		
220	*Republic of Latvia*	*0*	-	-	*0*	-		
230	*Republic of Malta*	*3*	-	-	*3*	-		
240	*Kingdom of Netherlands*	*1,165*	-	-	*1,165*	-		
250	*Portuguese Republic*	*14*	-	-	*14*	-		
260	*Kingdom of Sweden*	*7*	-	-	*7*	-		
270	*Slovak Republic*	*1*	-	-	*1*	-		
280	*United States of America*	*1,623*	-	-	*1,623*	-		
290	*Other*	*90,869*	-	-	*90,869*	-		
300	***Off-balance-sheet exposures***	-	-	-				
310	***Total***	***758,972***	***7,093***	***(7,093)***	***758,972***	***(7,093)***		

EU CQ4 Quality of non-performing exposures by geography, CBF

Appendix D

While CH, CBL, and CBF report exposures to corporate counterparties, provisions of Article 431(5) with regards 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 within the group, and a small number of various remaining receivables, which do not represent loans.

		a	b	c	d	e	f
		Gross carrying amount				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which loans and advances subject to impairment		
	(in 000 of €)			Of which defaulted			
010	Agriculture, forestry and fishing	-	-	-	-	-	-
020	Mining and quarrying	32	-	-	32	-	-
030	Manufacturing	242	-	-	242	-	-
040	Electricity, gas, steam and air conditioning supply	95	-	-	95	-	-
050	Water supply	0	-	-	0	-	-
060	Construction	1	-	-	1	-	-
070	Wholesale and retail trade	63	-	-	63	-	-
080	Transport and storage	82	-	-	82	-	-
090	Accommodation and food service activities	4	-	-	4	-	-
100	Information and communication	1,007	-	-	1,007	-	-
110	Financial and insurance actvities	-	-	-	-	-	-
120	Real estate activities	19	-	-	19	-	-
130	Professional, scientific and technical activities	482	-	-	482	-	-
140	Administrative and support service activities	72	-	-	72	-	-
150	Public administration and defense, compulsory social security	-	-	-	-	-	-
160	Education	0			0		
170	Human health services and social work activities	0			0		
180	Arts, entertainment and recreation	201	-	-	201	-	-
190	Other services	6	-	-	6	-	-
200	***Total***	***2,307***	***-***	***-***	***2,307***	***-***	***-***

EU CQ5 Credit quality of loans and advances by industry, CH

	(in 000 of €)	a	b	c	d	e	f
		Gross carrying amount				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which loans and advances subject to impairment		
				Of which defaulted			
010	Agriculture, forestry and fishing						
020	Mining and quarrying	31			31		
030	Manufacturing	11			11		
040	Electricity, gas, steam and air conditioning supply	5			5		
050	Water supply						
060	Construction						
070	Wholesale and retail trade	44			44		
080	Transport and storage	31			31		
090	Accommodation and food service activities	25			25		
100	Information and communication	19,417	1		19,417	(1)	
110	Financial and insurance actvities	2			2		
120	Real estate activities	0	0		0	(0)	
130	Professional, scientific and technical activities	131	24		131	(15)	
140	Administrative and support service activities	20	8		20	(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			190		
190	Other services	6			6		
200	*Total*	*19,914*	*33*		*19,914*	*(22)*	

EU CQ5 Credit quality of loans and advances by industry, CBL

	(in 000s of €)	a	b	c	d	e	f
		Gross carrying amount				Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
			Of which non-performing		Of which loans and advances subject to impairment		
				Of which defaulted			
010	Agriculture, forestry and fishing	-	-	-	-	-	-
020	Mining and quarrying	1	-	-	1	-	-
030	Manufacturing	230	-	-	230	-	-
040	Electricity, gas, steam and air conditioning supply	87	-	-	87	-	-
050	Water supply	0	-	-	0	-	-
060	Construction	1	-	-	1	-	-
070	Wholesale and retail trade	3	-	-	3	-	-
080	Transport and storage	51	-	-	51	-	-
090	Accommodation and food service activities	-	-	-	-	-	-
100	Information and communication	15,843	-	-	15,843	-	-
110	Financial and insurance actvities	-	-	-	-	-	-
120	Real estate activities	19	-	-	19	-	-
130	Professional, scientific and technical activities	366	-	-	366	-	-
140	Administrative and support service activities	4	-	-	4	-	-
150	Public administration and defense, compulsory social security	-	-	-	-	-	-
160	Education	0	-	-	0	-	-
170	Human health services and social work activities	0	-	-	0	-	-
180	Arts, entertainment and recreation	11	-	-	11	-	-
190	Other services	0	-	-	0	-	-
200	***Total***	***16,615***	**-**	**-**	***16,615***	**-**	**-**

EU CQ5 Credit quality of loans and advances by industry, CBF