



# **Pillar 3 Disclosure Report of Eurex Clearing AG**

**Disclosures as of 31 December 2020**

## Pillar 3 Disclosure Report of Eurex Clearing AG 2020

According to Part 8 of the Regulation (EU) No 575/2013 (Capital Requirements Regulation [CRR]) in conjunction with § 26a German Banking Act (Kreditwesengesetz, KWG).

July 2021

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Eurex Clearing AG      July 2021

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## 1. Introduction

### 1.1. Regulatory framework

In 2004, the Basel Committee on Banking Supervision (“BCBS”) published its standards governing the capital adequacy of internationally active banks (“Basel II”). 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

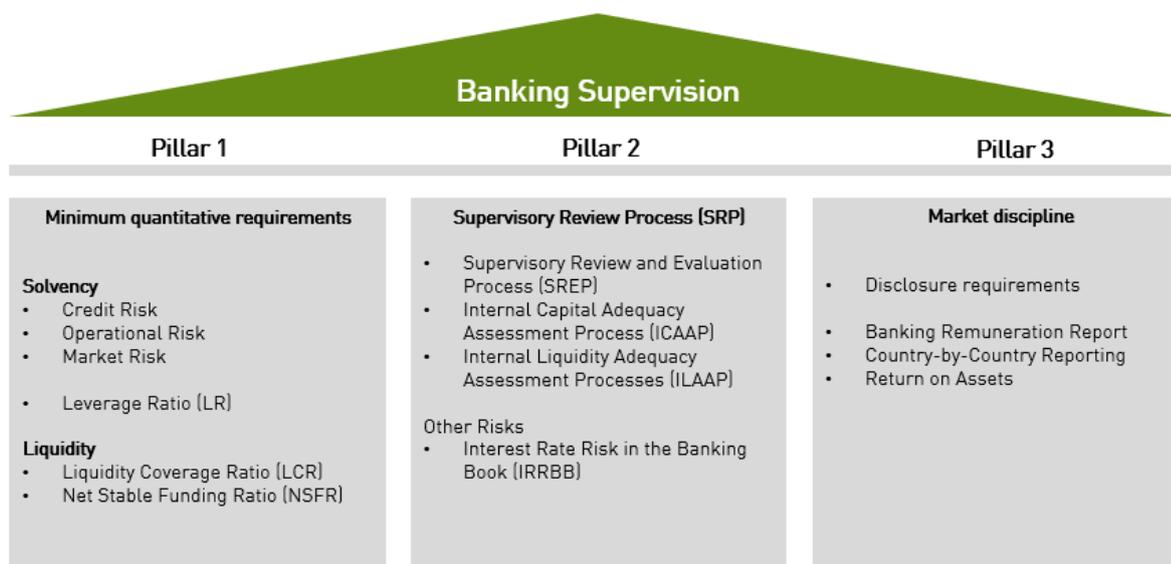


Figure 1. Overview regulatory framework

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 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 revised 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 - CRR 2) and the CRD (through Directive (EU) 2019/878 - CRD 5). In addition, the EU banking package also contained a revised Banking Recovery and Resolution Directive (BRRD, amended as per Directive (EU) 2019/879 – BRRD 2), 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.

The key elements of the CRR 2 and CRD 5 that are relevant to Eurex Clearing AG include:

- revised own fund requirements for the contribution to a default fund of a (Q)CCP;
- changes to the large exposure regime;
- extended reporting and disclosure requirements; and
- revised remuneration requirements, including the obligation to have a gender-neutral remuneration policy and the introduction of an extended deferral period for variable remuneration.

The EU rules deviate in some respects from the Basel III standards to take into account some European specificities. One key change is the introduction of the proportionality concept, which exempts small and non-complex institutions from certain obligations while subjecting large institutions to enhanced requirements. Furthermore, the adjustments consider specific activities and pass-through models not undertaking any significant maturity transformation but are nevertheless required to maintain a banking license. As such, CRR 2 contains important amendments from a Eurex Clearing AG perspective.

According to point (a) of Article 6 (4) CRR, institutions authorized as CCPs according to Article 14 Regulation (EU) No 648/2012 (EMIR) are exempted from the Net Stable Funding Ratio (NSFR) on an individual basis. Similarly, due to their distinct business model, CCPs have been exempted from the leverage ratio requirement according to Article 6 (5) CRR.

In January 2021, Regulation (EU) 2021/23 on a framework for the recovery and resolution of central counterparties was published, which will exclude CCPs authorised under EMIR from requirements under the BRRD, including MREL.

With these exemptions, the impact of the new regulatory requirements on Eurex Clearing AG was significantly reduced.

The Basel III standards are not yet fully transposed into European Law. Revisions to rules on the calculation of own funds for credit risk and operational risk, the market risk framework and supervisory reporting and disclosures will be part of a new legislative proposal, which the European Commission is expected to publish in 2021 and which will complete the implementation of Basel III in EU law.

Implementation has been initiated to ensure compliance with the new and amended requirements arising from CRR 2 applicable as of 28 June 2021. Additional implementing or technical standards issued by the European Banking Authority are considered where available.

This report provides the Pillar 3 disclosures of Eurex Clearing AG as set out in Part Eight of the CRR as applicable as of 31 December 2020.

In addition to the previously mentioned regulation and directives, this report considers the following regulatory publications specifying applicable disclosure requirements:

- Commission Implementing Regulation (EU) No 1423/2013 of 20 December 2013 laying down implementing technical standards with regards to disclosure of own funds requirements for institutions according to Regulation 575/2013 of the European Parliament and Council
- Commission Implementing Regulation (EU) 2016/200 of 15 February 2016 laying down implementing technical standards with regards to disclosure of the leverage ratio for institutions, according to Regulation (EU) No 575/2013 of the European Parliament and of the Council
- Commission Delegated Regulation (EU) 2015/1555 of 28 May 2015 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for the disclosure of information in relation to the compliance of institutions with the requirement for a countercyclical capital buffer in accordance with Article 440
- Commission Delegated Regulation (EU) 2017/2295 of 4 September 2017 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regards to regulatory technical standards for disclosure of encumbered and unencumbered assets

In the following, we refer to the respective laws in place as of 31 December 2020 if not stated otherwise.

### 1.1.1. Objective of the report

The objective of this Disclosure Report is to fulfil the disclosure requirements detailed in Part 8 CRR and § 26a KWG, at the legal entity level of Eurex Clearing AG (“Eurex Clearing”, “ECAG”). More specifically, the report intends to provide a detailed overview on Eurex Clearing AG’s:

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

To ensure adequate fulfilment of the disclosure requirements a *Disclosure Policy* has been established, which is reviewed and adapted, where necessary, on a yearly basis. The Executive Board of ECAG 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.

### 1.1.2. Scope of application (Article 436 CRR)

Eurex Clearing AG has no subsidiary that requires consolidated supervision based on Article 18 CRR or § 10a KWG. In addition, ECAG is not included in a group of undertakings that is subject to

supervision on a consolidated level. As such, this Disclosure Report only covers ECAG on a stand-alone basis.

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

### 1.1.3. Frequency and means of Disclosure (Article 433 & 434 CRR)

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

<https://www.eurexclearing.com/clearing-en/about-us/regulatory-standards/pillar-iii-disclosure-report/Pillar-III-Disclosure-Report-31368>

The report is updated once a year. In addition to the Pillar 3 report, the following documents are also made available:

- A remuneration report that fulfils the requirements according to Article 450 CRR. The report is disclosed on an annual basis on the website of ECAG:  
<https://www.eurex.com/ec-en/find/about-us/remuneration>
- The Country-by-Country reporting to fulfil the requirements according to § 26a (1) sentence 2 KWG (implementation of Article 89 CRD IV into German law) is included as an annex to the financial statements of ECAG that is published on the website of the German Federal Gazette ([www.bundesanzeiger.de](http://www.bundesanzeiger.de)) and that can also be found on the website of ECAG:  
<https://www.eurex.com/ec-en/find/corporate-overview/annual-reports>

Information about the Return on Assets ("RoA") according to § 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 ECAG that is published on the website of the German Federal Gazette ([www.bundesanzeiger.de](http://www.bundesanzeiger.de)) and that can also be found on the website of ECAG:  
<https://www.eurex.com/ec-en/find/corporate-overview/annual-reports>.

## 1.2. Eurex Clearing AG

Eurex Clearing AG was founded on 9 March 1998 in Germany and has its registered office at Mergenthalerallee 61, 65760 Eschborn, Germany. Eurex Clearing AG is a stock corporation (Aktiengesellschaft). It is governed by its Articles of Incorporation and German company law.

### 1.2.1. Corporate structure

Eurex Clearing AG is a wholly owned subsidiary of Eurex Frankfurt AG that in turn is wholly owned by Deutsche Börse AG ("DBAG"). A control and profit transfer agreement dated 18 November 1998 is in place between Eurex Frankfurt AG and Eurex Clearing AG. Eurex Clearing AG does not have any branches.

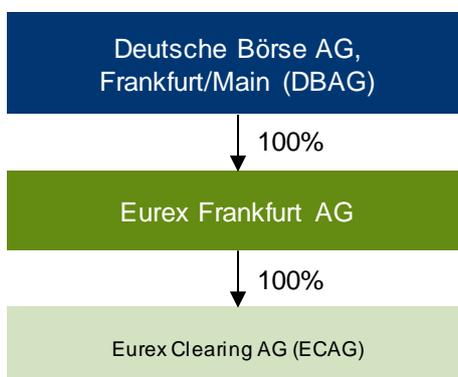


Figure 2. Overview corporate structure

## 1.2.2. Business operations

As one of the leading central counterparties globally, Eurex Clearing builds trusted relationships with and amongst market participants, paving their way for efficient risk management via unique clearing models.

By doing so, Eurex Clearing assures the safety and integrity of markets while setting standards in risk management. By clearing the broadest scope of products under a single framework in Europe — both listed products and OTC across derivatives and securities finance – and accepting the world’s widest spectrum of eligible collateral, Eurex Clearing delivers efficiencies to our clients. The main business objectives are:

- Providing clearing services (clearing business) for derivatives, equities, bonds and secured funding, and the securities financing market;
- Being a CCP that is legally interposed between buyer and seller of the transactions;
- Mitigating counterparty risk and maximising the clients’ operational efficiency;
- Continuously extending the scope and range of cleared products;
- Extending the services to new markets.

ECAG acts as a CCP for transactions concluded on Eurex Deutschland (“Eurex”) and for transactions involving domestic and foreign securities traded on Frankfurter Wertpapierbörse and for transactions processed on the trading platform of Eurex Repo GmbH. Additionally, ECAG is also providing CCP services for OTC transactions involving interest rate, inflation and currency products.

## 1.2.3. Licencing and regulatory supervision

Eurex Clearing AG is a company incorporated in Germany and licensed as a credit institution under supervision of the German Financial Supervisory Authority (“Bundesanstalt für Finanzdienstleistungs-aufsicht“, “BaFin”).

ECAG is licensed to perform proprietary trading in its own name and for its own account according to § 32 (1a) KWG. On 1 August 2013, ECAG was further licensed by the German Federal Financial Supervisory Authority to perform deposit taking business and lending business according to § 1 (1) sent. 2 no. 1 and no. 2 KWG and is therefore also classified as CRR credit institution.

On 10 April 2014, ECAG has been granted authorisation as a Central Counterparty under the European Market Infrastructure Regulation (“EMIR”). The authorisation as EMIR compliant CCP also determines Eurex Clearing as a qualifying CCP (“QCCP”) under CRR.

As of 1 February 2016, Eurex Clearing is also a derivative clearing organisation (“DCO”) registered with the U.S. Commodity Futures Trading Commission (“CFTC”).

ECAG is furthermore recognized

- as foreign central counterparty by the Swiss Financial Market Supervisory Authority (“FINMA”) as from 29 March 2018;
- as a Recognised Clearing House by the Monetary Authority of Singapore as from 14 September 2018;
- as a Financial Instrument Clearing Organization by the Japanese Financial Services Agency;
- and has a permanent exemption to offer clearing services in Ontario, Canada.

Further details on the licensing and supervision can be looked up on ECAG’s website<sup>2</sup>.

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<sup>2</sup> <https://www.eurex.com/ec-en/support/regulation/Regulation-2427010?frag=2427016>

## 2. Capital structure, Capital Ratio and Leverage Ratio

### 2.1. Capital components

The following subsections disclose the information as required by Article 437 paragraph 1 CRR and details set out in Commission Implementing Regulation (EU) No 1423/2013.

#### 2.1.1. Overview

The following [Table 1](#) summarises ECAG'S total amount of regulatory capital. Tier 1 capital represents the eligible own funds of ECAG and consists solely of subscribed capital and reserves.

**Common Equity Tier 1 capital: instruments and reserves (€' 000)**
**31 December 2020**

1	Directly issued qualifying common share (and equivalent for non-joint stock companies) capital plus related stock surplus	25,000
2	Retained earnings	9,501
3	Accumulated other comprehensive income (and other reserves)	715,313
4	Directly issued capital subject to phase-out from CET1 (only applicable to non-joint stock companies)	0
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	0
6	Common Equity Tier 1 capital before regulatory adjustments	749,813

**Common Equity Tier 1 capital: regulatory adjustments (€' 000)**

7	Additional value adjustments (negative amount)	0
8	Intangible assets (net of related tax liability) (negative amount)	0
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) are met) (negative amount)	0
11	Fair value reserves related to gains or losses on cash flow hedges	0
12	Negative amounts resulting from the calculation of expected loss amounts	0
13	Any increase in equity that results from securitised assets (negative amount)	0
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	0
15	Defined benefit pension fund net assets (negative amount)	0
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	0
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)	0
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)	0
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)	0
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	0
20b	of which: qualifying holdings outside the financial sector (negative amount)	0
20c	of which: securitisation positions (negative amount)	0
20d	of which: free deliveries (negative amount)	0
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	0
22	Amount exceeding the 15% threshold (negative amount)	0
23	of which: 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	0
25	of which: deferred tax assets arising from temporary differences	0
25a	Losses for the current financial year (negative amount)	0
25b	Foreseeable tax charges relating to CET1 items (negative amount)	0
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	0
28	Total regulatory adjustments to Common Equity Tier 1	0
29	Common Equity Tier 1 capital (CET1)	749,813

<b>Additional Tier 1 capital: instruments (€' 000)</b>		
30	Capital instruments and the related share premium accounts	0
31	of which: classified as equity under applicable accounting standards	0
32	of which: classified as liabilities under applicable accounting standards	0
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	0
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	0
35	of which: instruments issued by subsidiaries subject to phase out	0
36	Additional Tier 1 capital before regulatory adjustments	0
<b>Additional Tier 1 capital: regulatory adjustments (€' 000)</b>		
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	0
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)	0
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)	0
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)	0
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0
43	Total regulatory adjustments to additional Tier 1 capital	0
44	Additional Tier 1 capital (AT1)	0
45	Tier 1 capital (T1 = CET1 + AT1)	749,813
<b>Tier 2 capital: Instruments and provisions (€' 000)</b>		
46	Capital instruments and the related share premium account	0
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	0
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	0
49	of which: instruments issued by subsidiaries subject to phase out	0
50	Credit risk adjustments	0
51	Tier 2 capital before regulatory adjustments (T2)	0
<b>Tier 2 capital: regulatory adjustments (€' 000)</b>		
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	0
53	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)	0
54	Direct and indirect 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)	0
55	Direct and indirect 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)	0
57	Total regulatory adjustments to Tier 2 (T2) capital	0
58	Tier 2 capital (T2)	0
59	Total capital (TC = T1 + T2)	749,813
60	Total risk weighted assets	1,303,000
<b>Capital ratios and buffers (%)</b>		
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	57.6%
62	Tier 1 (as a percentage of total risk exposure amount)	57.6%
63	Total capital (as a percentage of total risk exposure amount)	57.6%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer expressed as a percentage of risk exposure amount)	7.00%
65	of which: capital conservation buffer requirement	2.50%
66	of which: countercyclical buffer requirement	0.00%
67	of which: systemic risk buffer requirement	0
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	0

<b>Amounts below the thresholds for deduction (before risk weighting) (€' 000)</b>		
72	Direct and indirect holdings of the capital 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)	0
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 10% threshold and net of eligible short positions)	0
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	0
<b>Applicable caps on the inclusion of provisions in Tier 2 (€' 000)</b>		
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	0
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	2,540
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	0
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	0
<b>Capital instruments subject to phase-out arrangement (€' 000)</b>		
80	Current cap on CET1 instruments subject to phase out arrangements	0
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0
82	Current cap on AT1 instruments subject to phase out arrangements	0
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0
84	Current cap on T2 instruments subject to phase out arrangements	0
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0

Table 1. Composition of regulatory capital

## 2.1.2. Reconciliation of own funds items to audited financial statements

A full reconciliation of own funds to the audited financial statements pursuant to point (a) of Article 437 paragraph 1 CRR must be disclosed by institutions as laid out in the Implementing Regulation (EU) No 1423/2013. The balance sheet reconciliation for ECAG is shown in the below Table 2.

<b>Own Funds elements in annual financial statements</b>	<b>31 December 2020 (€' 000)</b>	<b>31 December 2019 (€' 000)</b>
Subscribed capital	25,000	25,000
Share premium	0	0
Capital reserve	715,313	580,313
Legal reserve	2,500	2,500
Other reserves and retained earnings	7,001	7,001
<b>Total Own Funds Elements in audited financial statements</b>	<b>749,813</b>	<b>614,813</b>
Profits allocated to legal or other reserves with the approval of financial statements (i.e. after reporting of Own Funds)		0
<b>Eligible Capital (CET1) before regulatory adjustments</b>	<b>749,813</b>	<b>614,813</b>
<b>Common Equity Tier 1 Capital/Total Eligible Own Funds</b>	<b>749,813</b>	<b>614,813</b>

Table 2. Balance Sheet Reconciliation

Based on the profit transfer agreement with Eurex Frankfurt, the profit for the fiscal year 2020 of an amount of €12.041 million (previous year: €8.509 million) was transferred.

## 2.1.3. Description of the main features of capital instruments

Disclosures under point (b) of Article 437 CRR are shown in the below Table 3 in line with the disclosure templates set out in the Implementing Regulation (EU) No 1423/2013.

Features		Instrument
1	Issuer	Eurex Clearing AG
2	Unique identifier (e.g. ISIN, etc.)	N/A
3	Governing law(s) of the instrument	German Stock Corporation Act (AktG)
Regulatory treatment		
4	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 (currency in million, as of most recent reporting date)	€ 25
9	Nominal amount of instrument (in million, in currency of issuance)	€ 25
9a	Issue price	€ 25
9b	Redemption price	N/A
10	Accounting classification	Shareholders' equity
11	Original date of issuance	09/03/1998
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	N/A
18	Coupon rate and any related index	N/A
19	Existence of a dividend stopper	N/A
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	N/A
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	N/A
21	Existence of step up or other incentive to redeem	No
22	Noncumulative or cumulative	Noncumulative
23	Convertible or non-convertible	Nonconvertible
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
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

N/A' inserted if the question is not applicable

*Table 3. Capital Instruments*

## 2.2. Capital levels

The following subsections disclose the information as required by Article 438 CRR and details set out in Commission Implementing Regulation (EU) No 1423/2013.

Common Equity Tier 1 capital: instruments and reserves (€' 000)		31 December 2020	31 December 2019	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
1	Directly issued qualifying common share (and equivalent for non-joint stock companies) capital plus related stock surplus	25,000	25,000	26 (1), 27, 28, 29, EBA Art. 26 (3)
2	Retained earnings	9,501	9,501	26 (1) c)
3	Accumulated other comprehensive income (and other reserves)	715,313	580,313	26 (1)
4	Directly issued capital subject to phase-out from CET1 (only applicable to non-joint stock companies)	0	0	486 (2)
5	Common share capital issued by subsidiaries and held by third parties (amount allowed in group CET1)	0	0	84, 26 (2)
6	Common Equity Tier 1 capital before regulatory adjustments	749,813	614,813	Sum of lines 1 to 5
<b>Common Equity Tier 1 capital: regulatory adjustments (€' 000)</b>				<b>34, 105</b>
7	Additional value adjustments (negative amount)	0	0	
8	Intangible assets (net of related tax liability) (negative amount)	0	0	
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) are met) (negative amount)	0	0	
11	Fair value reserves related to gains or losses on cash flow hedges	0	0	
12	Negative amounts resulting from the calculation of expected loss amounts	0	0	
13	Any increase in equity that results from securitised assets (negative amount)	0	0	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	0	0	
15	Defined benefit pension fund net assets (negative amount)	0	0	
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	0	0	
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)	0	0	
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)	0	0	
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)	0	0	
20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	0	0	
20b	of which: qualifying holdings outside the financial sector (negative amount)	0	0	
20c	of which: securitisation positions (negative amount)	0	0	
20d	of which: free deliveries (negative amount)	0	0	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	0	0	
22	Amount exceeding the 17.65% threshold (negative amount)	0	0	48 (1)
23	of which: 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	0	0	
25	of which: deferred tax assets arising from temporary differences	0	0	
25a	Losses for the current financial year (negative amount)	0	0	
25b	Foreseeable tax charges relating to CET1 items (negative amount)	0	0	
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	0	0	
28	Total regulatory adjustments to Common Equity Tier 1	0	0	
29	Common Equity Tier 1 capital (CET1)	749,813	614,813	36 (1) (j)

<b>Additional Tier 1 capital: instruments (€' 000)</b>			
30	Capital instruments and the related share premium accounts	0	0
31	of which: classified as equity under applicable accounting standards	0	0
32	of which: classified as liabilities under applicable accounting standards	0	0
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1	0	0
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	0	0
35	of which: instruments issued by subsidiaries subject to phase out	0	0
36	Additional Tier 1 capital before regulatory adjustments	0	0
<b>Additional Tier 1 capital: regulatory adjustments (€' 000)</b>			
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	0	0
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)	0	0
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)	0	0
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)	0	0
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	0	0
43	Total regulatory adjustments to additional Tier 1 capital	0	0
44	Additional Tier 1 capital (AT1)	0	0
45	Tier 1 capital (T1 = CET1 + AT1)	749,813	614,813
			Sum of lines 29 and 44
<b>Tier 2 capital: Instruments and provisions (€' 000)</b>			
46	Capital instruments and the related share premium account	0	0
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2	0	0
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	0	0
49	of which: instruments issued by subsidiaries subject to phase out	0	0
50	Credit risk adjustments	0	0
51	Tier 2 capital before regulatory adjustments (T2)	0	0
<b>Tier 2 capital: regulatory adjustments (€' 000)</b>			
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	0	0
53	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)	0	0
54	Direct and indirect 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)	0	0
55	Direct and indirect 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)	0	0
57	Total regulatory adjustments to Tier 2 (T2) capital	0	0
58	Tier 2 capital (T2)	0	0
59	Total capital (TC = T1 + T2)	749,813	614,813
60	Total risk weighted assets	1,303,000	1,210,237
			Sum of lines 45 and 58
<b>Capital ratios and buffers (%)</b>			
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	57.6%	50.8%
62	Tier 1 (as a percentage of total risk exposure amount)	57.6%	50.8%
63	Total capital (as a percentage of total risk exposure amount)	57.6%	50.8%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer expressed as a percentage of risk exposure amount)	7.00%	7.03%
65	of which: capital conservation buffer requirement	2.50%	2.50%
66	of which: countercyclical buffer requirement	0.00%	0.03%
67	of which: systemic risk buffer requirement	0	0
67a	of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer	0	0
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	0	0

<b>Amounts below the thresholds for deduction (before risk weighting) (€' 000)</b>			
72	Direct and indirect holdings of the capital 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)	0	0
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 10% threshold and net of eligible short positions)	0	75
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	0	0
			36 (1) (c), 38, 48
<b>Applicable caps on the inclusion of provisions in Tier 2 (€' 000)</b>			
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	0	0
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	2,540	2,490
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	0	0
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	0	0
<b>Capital instruments subject to phase-out arrangement (€' 000)</b>			
80	Current cap on CET1 instruments subject to phase out arrangements	0	0
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	0	0
82	Current cap on AT1 instruments subject to phase out arrangements	0	0
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	0	0
84	Current cap on T2 instruments subject to phase out arrangements	0	0
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	0	0

Table 4. Own Funds details

## 2.2.1. Regulatory capital levels

### Risk weighted assets and capital requirements for credit risk positions

The below Table 5 shows risk weighted assets and capital requirements for credit risk exposures. ECAG uses the Standardized Approach to calculate its capital requirements for credit risk.

Exposure class	31 December 2020 (€' 000)		31 December 2019 (€' 000)	
	Risk weighted assets	Capital requirements	Risk weighted assets	Capital requirements
Institutions	141,547	11,324	185,701	14,856
Corporates	2,494	200	2,774	222
Other (including equity holding)	59,151	4,732	10,733	859
<b>Total</b>	<b>203,192</b>	<b>16,255</b>	<b>199,208</b>	<b>15,937</b>

Table 5. Capital requirements for credit risk

### Risk weighted assets and capital requirements for market risk positions

The below Table 6 shows risk weighted assets and capital requirements for market risk exposures. ECAG uses the Standardized Approach in accordance with Article 325 et seq. CRR to calculate its capital requirements for market risk. ECAG does not maintain a trading book. Accordingly, the transactions of ECAG are exclusively subject to the own funds requirements for the foreign currency risk of the banking book. Since the reporting date 31 December 2020, ECAG has applied the de minimis threshold according to Article 351 CRR. Previously the de minimis threshold was not applied. As of 31 December 2020, the sum of ECAG's overall net foreign-exchange position

was below the de minimis threshold of 2% of its total own funds, hence no calculation of own funds requirements for foreign exchange risk was required.

Exposure class	31 December 2020 (€' 000)		31 December 2019 (€' 000)	
	Risk weighted assets	Capital requirement	Risk weighted assets	Capital requirement
Foreign exchange risk (total)	-	-	3,478	278
<b>Total</b>	-	-	<b>3,478</b>	<b>278</b>

*Table 6. Capital requirements for market risk*

## Risk indicators and capital requirements for operational risk positions

The below [Table 7](#) shows risk weighted assets and capital requirements for operational risk exposures. ECAG uses the basic indicator approach in accordance with Article 317 et seq. CRR to calculate its capital requirements for operational risk. The capital requirements are calculated based on the relevant risk indicator that is calculated as the average of ECAG's gross income based on the last three years of audited financial statements plus an additional amount of the collected fees. As such, the average income of 2017 – 2019 is relevant for the capital requirement as of 31 December 2020, whereas the average income of 2016 – 2018 was relevant for the capital requirement as of 31 December 2019.

	31 December 2020 (€' 000)		31 December 2019 (€' 000)	
	Risk indicator <sup>(1)</sup>	Capital requirement	Risk indicator <sup>(1)</sup>	Capital requirement
<b>Total</b>	<b>586,564</b>	<b>87,985</b>	<b>537,360</b>	<b>80,604</b>

Calculated as avg. of last three years

*Table 7. Capital requirements for operational risk*

The total capital requirements, risk weighted assets and risk indicators related to credit, market and operational risk are summarised in the below [Table 8](#).

	31 December 2020 (€' 000)			Total
	Credit risk	Market risk	Operational risk	
Risk weighted assets	203,192	-	1,099,808	<b>1,303,000</b>
Risk indicator	N/A	N/A	586,564	<b>586,564</b>
Capital requirements	16,255	-	87,985	<b>104,240</b>

*Table 8. Summary information on RWA, risk indicators and capital requirements*

## 2.2.2. Capital Ratio

On the basis of the tables displayed above, the capital ratio for ECAG is computed and the results are displayed in the table below. Note that the capital of ECAG consists exclusively of Common Equity Tier 1 capital, and thus the CET1 ratio is the same as the total capital ratio.



Calculation parameters	31 December 2020 (€' 000)	31 December 2019 (€' 000)
Total capital	749,813	614,813
Total risk weighted assets	1,303,000	1,210,237
Total capital requirement	104,240	96,819
<b>Capital ratio</b>		
<b>Total capital ratio (%)</b>	<b>57.55%</b>	<b>50.80%</b>
<b>Capital requirement</b>	<b>8.00%</b>	

*Table 9. Total capital ratio*

## 2.3. Countercyclical capital buffer

The countercyclical capital buffer aims to ensure that banking sector capital requirements reflect the macro-financial environment in which banks operate. According to Commission Delegated Regulation (EU) 2015/1555 on the disclosure of information in relation to the compliance of institutions with the requirement for a countercyclical buffer,

31 December 2020	General credit exposures (€'000)		Trading book exposure (€'000)		Securitisation exposure (€'000)		Own funds requirements (€'000)		(€'000)		Own funds requirement weights	Countercyclical capital buffer rate, (%)
	Exposure value for SA	Exposure value for IRB	Sum of long and short position of trading book	Value of trading book exposure for internal models	Exposure value for SA	Exposure value for IRB	Of which: General credit exposures	Of which: Trading book exposures	Of which: Securitisation exposures	Total		
<b>Breakdown by country</b>												
Germany	60,495	0	0	0	0	0	4,932	0	0	4,932	0.982	0,00%
France	950	0	0	0	0	0	76	0	0	76	0.015	0,00%
Great Britain	98	0	0	0	0	0	8	0	0	8	0.002	0,00%
South Korea	21	0	0	0	0	0	2	0	0	2	0.000	0,00%
Schwitzerland	54	0	0	0	0	0	4	0	0	4	0.001	0,00%
Belgien	0	0	0	0	0	0	0	0	0	0	0.000	0,00%
USA	29	0	0	0	0	0	2	0	0	2	0.000	0,00%
<b>Total</b>	<b>61,647</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,024</b>	<b>0</b>	<b>0</b>	<b>5,024</b>	<b>1.000</b>	<b>n.a.</b>

Table 10. Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

Calculation parameters	31 December 2020
Total risk exposure (€'000)	1,303,000
Institution specific countercyclical buffer rate (%)	0,00%
<b>Institution specific countercyclical buffer requirement (€'000)</b>	<b>0</b>

Table 11. Amount of institution-specific countercyclical capital buffer

## 2.4. Leverage Ratio

According to Article 429 (2) CRR, the leverage ratio (a capital requirement which is not risk-based) is defined as the capital parameter of an institution divided by that institution's total exposure parameter and is expressed as a percentage. The disclosure requirements concerning the leverage ratio are laid out in Article 451 of the CRR and specified in the Commission Implementing Regulation (EU) No 2016/200 of 15 February 2016.

Since the CRR II became applicable in June 2021, a binding leverage ratio requirement is set at 3% of Tier 1 capital. However, CCPs will be exempted from this requirement (Art. 6 (5) CRR II). Nevertheless, Delegated Regulation on disclosure of the Leverage Ratio (EU) No 1423/2013 requires disclosure of detailed information, which is shown in the following tables:

		31 December 2020 (€' 000)	31 December 2019 (€' 000)
1	Total consolidated assets as per published financial	33,339,283	26,319,624
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	0	0
3	Adjustment for fiduciary assets recognised on the balance sheet pursuant to the operative accounting framework but excluded from the Leverage Ratio exposure measure	-95,431	-101,064
4	Adjustments for derivative financial instruments	0	0
5	Adjustment for securities financing transactions (ie repos and similar secured lending)	0	0
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	2,000	2,000
EU-6a	(Adjustment for intragroup exposures excluded from the Leverage Ratio total exposure measure in accordance with Article 429 (7) CRR)	0	0
EU-6b	(Adjustment for exposures excluded from the Leverage Ratio total exposure measure in accordance with Article 429 (14) CRR)	0	0
7	Other adjustments	12,661	857,787
<b>8</b>	<b>Leverage Ratio exposure</b>	<b>33,258,513</b>	<b>27,078,347</b>

*Table 12. Summary comparison of accounting assets vs leverage ratio exposure measure (LR1)*

<b>On-balance sheet exposures (€' 000)</b>	<b>31 December 2020</b>	<b>31 December 2019</b>
On-balance sheet items (excluding derivatives, STFs and fiduciary assets, but including collateral)	32,680,315	26,984,802
(Asset amounts deducted in determining Tier 1 capital)	0	0
<b>Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)</b>	<b>32,680,315</b>	<b>26,984,802</b>
<b>Derivative exposures (€' 000)</b>		
Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	0	0
Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	0	0
Exposure determined under Original Exposure Method	0	0
Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	0	0
(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	0	0
(Exempted CCP leg of client-cleared trade exposures)	0	0
Adjusted effective notional amount of written credit derivatives	0	0
(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	0	0
<b>Total derivative exposures</b>	<b>0</b>	<b>0</b>
<b>Securities financing transaction exposures (€' 000)</b>		
<b>Gross SFT assets (with no recognition of netting), after adjusting for sale accounting transactions</b>	<b>576,198</b>	<b>91,544</b>
(Netted amounts of cash payables and cash receivables of gross SFT assets)	0	0
Counterparty credit risk exposure for SFT assets	0	0
Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429b (4) and 222 CRR	0	0
Agent transaction exposures	0	0
(Exempted CCP leg of client-cleared SFT exposure)	0	0
<b>Total securities financing transaction exposures</b>	<b>576,198</b>	<b>91,544</b>
<b>Other off-balance sheet exposures (€' 000)</b>		
Off-balance sheet exposure at gross notional amount	2,000	2,000
(Adjustments for conversion to credit equivalent amounts)	0	0
<b>Total off-balance sheet exposures</b>	<b>2,000</b>	<b>2,000</b>
<b>Exempted exposures in acc. with Art. 429 (7) and (14) CRR (€' 000)</b>		
(Intragroup exposures (solo basis) exempted in accordance with Article 429 (7) CRR (on and off balance sheet))	0	0
(Exposures exempted in accordance with Article 429 (14) CRR (on and off balance sheet))	0	0
<b>Capital and total exposures (€' 000)</b>		
Tier 1 capital	749,813	614,813
<b>Total exposures (sum of on-balance, derivative, SFT and of</b>	<b>33,258,513</b>	<b>27,078,346</b>
<b>Leverage Ratio (%)</b>		
Basel III leverage ratio	2.25%	2.27%
<b>Choice on transitional arrangements and amount of derecognised fiduciary items (€' 000)</b>		
Choice on transitional arrangements for the definition of the capital measure	Fully phased-in acc. to Article 499 (1)(a) CRR	Fully phased-in acc. to Article 499 (1)(a) CRR
Amount of derecognised fiduciary items in accordance with Article 429 (11) of Regulation (EU) No 575/2013	-95,431	-101,064

*Table 13. Leverage Ratio common disclosure template (LRCom)*

31 December 2020  
(€' 000)

<b>Total on-balance sheet exposures (excluding derivatives, SFTs, and exempted exposures), of which:</b>	<b>32,680,315</b>
<b>Trading book exposures</b>	<b>0</b>
<b>Banking book exposures, of which:</b>	<b>32,680,315</b>
Exposures treated as sovereigns	31,915,413
Institutions	704,256
Retail exposures	0
Corporate	1,494
Other exposures (eg equity, securitisations, and other non-credit obligation assets)	59,151

*Table 14. Split-up of on balance sheet exposures (excluding derivatives, SFTs and exempted exposures; LRSpl)*

<p><b>Description of process used to manage the risk of excessive leverage</b></p>	<p>ECAG as CCP has a highly volatile balance sheet volume depending on the clients' cash behaviour. The balance sheet varies sharply within short timeframes depending on the cash collateral supply. The cash received is reinvested in line with EMIR. Although this investment restriction leads to a short term investment tenor with low levels of credit and market risk this portfolio affects the Leverage Ratio exposure measure to a high degree. Thus, a direct management of leverage is only feasible to a limited extend.</p>
<p><b>Description of the factors that had an impact on the Leverage Ratio during the period to which the disclosed Leverage Ratio refers</b></p>	<p>Compared with the end of 2019, the leverage ratio for ECAG as of 31 December 2020 was stable at 2.25% (31 December 2019: 2.27%). The increase of the total exposure by 6.180.167 k€ negatively impacted the leverage ratio, however this was offset by an increase in Tier 1 capital by an amount of 135.000 k€. Tier 1 capital as of 31 December 2020 amounts to 749.813 k€ (31 December 2019: 614.813 k€), the total leverage exposure is 33.258.513 k€ (31 December 2019: 27.078.346 k€).</p>

*Table 15. Description of qualitative items (LRQua)*

Due to ECAG's dedicated status authorized as CCP under EMIR the standard calculation rules for Leverage Ratio do not lead to useful information. If at all, a more adequate ratio can be calculated by (a) deducting ECAG's own contribution to the CCP default fund from Tier 1 capital and (b) deducting cash collaterals placed by clearing members (member cash deposits) from the Leverage Ratio exposure measure. The modified Leverage Ratio on this basis is derived as follows:

31 December 2020 (€' 000)	Standard calculation	Modified calculation
Tier 1 capital	749,813	749,813
(a) contribution to the CCP default fund	0	-200,000
<b>Adjusted Tier 1 capital</b>	<b>749,813</b>	<b>549,813</b>
Leverage Ratio exposure	33,258,513	33,258,513
(b) member cash deposits	0	-32,305,171
Adjusted Leverage Ratio exposure	33,258,513	953,341
<b>Leverage Ratio / Adjusted Leverage Ratio</b>	<b>2.25%</b>	<b>57.67%</b>

*Table 16 Leverage Ratio standard calculation and CCP modified calculation*

### 3. Governance and organizational framework

#### 3.1. Governance arrangements

##### 3.1.1. General arrangements (Article 435 (2) CRR)

Eurex Clearing 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).

ECAG maintains a comprehensive *Suitability Assessment Policy* and a corresponding side-letter defining specific job descriptions of Executive Board and Supervisory Board members. The objective of this policy is to ensure that members of the Executive Board, the members of the Supervisory Board and key function holders of ECAG 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) and BaFin guidance notes regarding the members of the Executive Board and the Supervisory Board in accordance with the German Banking Act as amended.

In the *Suitability Assessment Policy*, ECAG 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.

- Eurex Clearing aims to achieve a balanced representation of women and men.
- The age structure of the Boards should be of an appropriately broad range.
- An appropriately broad range of educational and professional backgrounds should be present in the Boards.
- The composition of the Boards should reflect Eurex Clearing AG’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 worktime, 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.

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 2020 all members of the Executive Board and Supervisory Board of ECAG 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 2020.

### 3.1.2. Executive Board

According to ECAG's Articles of Incorporation, the Executive Board shall be composed of at least two members who are appointed by the Supervisory Board of ECAG. The Executive Board is chaired by the CEO.

The recruitment process of members of the Executive Board starts with the Nomination Committee to prepare and the Supervisory Board to resolve on a job description and candidate profile for a specific position. The Nomination Committee identifies and recommends suitable members for the approval of the Supervisory Board. The appointment of new members of the Executive Board of ECAG requires to retrieve a statement of non-objection by the BaFin.

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Significant business principles as well as risk management standards are defined by the ECAG Executive Board in the form of business and risk strategies. Furthermore, the ECAG Executive Board bears the overall responsibility for the formation and effectiveness of the Internal Control System.

The members of the Executive Board must be professionally suitable and reliable for the management of ECAG and must be able to devote sufficient time to fulfil their tasks. Further, sufficient theoretical and practical knowledge of the business of a CCP/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;
- 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).

The ECAG Executive Board, in general, holds meetings every second week, whereby, according to the Rules of Procedure for the Executive Board, every ECAG Executive Board member can request the convening of a meeting, at any time.

As of 31 December 2020, the Executive Board consisted of the persons displayed in [Table 17](#), which also discloses the number of directorships held by each member, as required by Article 435 (2) (a) CRR.

Name / Position	Number of directorships
Erik Tim Müller - Chief Executive Officer	3 (thereof 2 within Deutsche Börse Group)
Heike Eckert - Deputy Chief Executive Officer (until 30.06.2020)	4 (thereof 4 within Deutsche Börse Group)
Matthias Graulich	3 (thereof 3 within Deutsche Börse Group)
Jens Janka (since 01.07.2020)	1 (thereof 1 within Deutsche Börse Group)
Manfred Matusza	1 (thereof 1 within Deutsche Börse Group)
Dmitrij Senko	2 (thereof 1 within Deutsche Börse Group)

*Table 17. Number of directorships held per Executive Board Member*

### 3.1.3. Supervisory Board

The ECAG Supervisory Board is the central control and supervisory body. Its key tasks consist of overseeing the work of the ECAG Executive Board, appointing its members and approving important corporate decisions and corporate planning. Moreover, the Supervisory Board monitors the effectiveness of risk management systems and evaluates the risk strategy. The members of the ECAG Supervisory Board are elected for a term not exceeding five years.

ECAG's Supervisory Board is composed according to the following criteria:

- Twelve members in total
- At least one member (i.e. the chairman of the audit committee) with specific knowledge and expertise in the area of accounting and auditing
- At least one member (i.e. one member of the compensation review committee) with sufficient knowledge and professional expertise in the area of risk management and risk controlling. In particular, the member should have knowledge of designing remuneration schemes coherent with a given risk appetite, risk strategy and capital situation
- In each of the following areas, at least two members of the Supervisory Board should have sound knowledge:
  - Accounting, finance, and audit
  - Risk management and compliance
  - Information technology and security
  - Clearing business
  - Regulatory requirements
- At least one third, but no less than two, of the members must be independent in the meaning of Article 2 paragraph 28 EMIR.

As of 31 December 2020, the Supervisory Board consisted of the persons displayed in [Table 18](#), which also discloses the number of directorships held by each member as required by Article 435 (2) (a) CRR.

Name / Position	Number of directorships
Jeffrey Tessler – Chairman	3 (thereof 2 within Deutsche Börse Group)
Gregor Pottmeyer – Vice-Chairman	5 (thereof 5 within Deutsche Börse Group)
Peter Barrowcliff	2
Charles Bristow	1
Tamo Diemer (since 24.06.2020)	3
Jutta Dönges (until 08.04.2020)	4
David Feldmann (since 24.06.2020)	1
Nikolaus Giesbert	2
Wim den Hartog	2
Stefan Hoops (until 24.06.2020)	1
Tong Lee (since 24.06.2020)	1
Clifford Lewis	1
Raphaël Masgnaux (until 24.06.2020)	1
Roselyne Renel	1
Thilo Roßberg	1

*Table 18. Number of directorships held per Supervisory Board Member*

The ECAG Supervisory Board meets at least four times a year. In these meetings, it is informed about normal business activities as well as all substantial business events. In case of extraordinary incidents, the ECAG Supervisory Board is informed immediately.

### 3.1.4. Committees

In 2020, the ECAG Supervisory Board Committees comprised the Audit & Risk Committee, the Compensation Review Committee and the Nomination Committee that are each composed of at least three members. In addition, the EMIR Risk Committee was established pursuant to Art. 28 Regulation (EU) 648/2012 (EMIR) and Chapter I Part 1 Number 1.5 of the clearing conditions of Eurex Clearing AG (the “Clearing Conditions”). The EMIR Risk Committee is chaired by an independent member of the ECAG Supervisory Board and reports to the ECAG Supervisory Board.

#### Audit & Risk Committee

Members	Tasks and responsibilities
<ul style="list-style-type: none"> <li>▪ Peter Barrowcliff (Chairman)</li> <li>▪ Wim den Hartog</li> <li>▪ Jeffrey Tessler</li> </ul>	<ul style="list-style-type: none"> <li>▪ Deals with audit matters particularly related to the preparation of annual budget, accounting processes,</li> </ul>

Members	Tasks and responsibilities
	<p>internal and external audits, compliance and control systems.</p> <ul style="list-style-type: none"> <li>▪ Discusses and examines the annual financial statements and the auditor's report on the annual financial statements in detail, reports the results to the Supervisory Board and recommends e.g. that the Supervisory Board approves the annual financial statements.</li> <li>▪ Addresses risk matters, inter alia advises the Supervisory Board on the institution's current and future risk appetite and risk strategy and examines whether the incentives provided by the remuneration system take into account the risk, capital and liquidity structure of Eurex Clearing.</li> </ul>

In 2020, the Audit & Risk Committee met 4 times (information disclosed as required by Article 435 (2) (d) CRR).

## Compensation Review Committee

Members	Tasks and responsibilities
<ul style="list-style-type: none"> <li>▪ Jeffrey Tessler (Chairman)</li> <li>▪ Clifford Lewis</li> <li>▪ Gregor Pottmeyer</li> </ul>	<ul style="list-style-type: none"> <li>▪ Supervises the reasonableness of the remuneration system of the Executive Board including the design and further development of the Remuneration Policy.</li> <li>▪ Oversees the compensation for selected senior control functions and risk takers as well as the determination of the aggregate remuneration of the members of the Executive Board.</li> <li>▪ Supports the Supervisory Board in the monitoring of the reasonableness of the remuneration system regarding employees below the Executive Board.</li> </ul>

## Nomination Committee

Members	Tasks and responsibilities
<ul style="list-style-type: none"> <li>▪ Jeffrey Tessler (Chairman)</li> <li>▪ Peter Barrowcliff</li> <li>▪ Gregor Pottmeyer</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identifies candidates to fill vacancies in the Executive Board.</li> <li>▪ Prepares the proposals for the election of members of the Supervisory Board.</li> <li>▪ Assesses the composition and performance of the Executive Board and the Supervisory Board in their entirety.</li> <li>▪ Assesses the knowledge, skills and experience of individual members of the Executive Board and the Supervisory Board periodically, at least annually.</li> </ul>

## EMIR Risk Committee

Members	Tasks and responsibilities
<ul style="list-style-type: none"> <li>▪ Roselyne Renel (Chairwoman)</li> <li>▪ Wim den Hartog (Vice Chairman)</li> <li>▪ ABN Amro Group NV Willem-Jan Aalbers</li> <li>▪ APG Asset Management Jan-Mark van Mill</li> <li>▪ Barclays Bank Plc Gary Saunders</li> <li>▪ BlackRock Vicky Hsu</li> <li>▪ BNP Paribas Sylvain Labroche</li> <li>▪ Brevan Howard Investment Products Ltd Alexandre Assouline</li> <li>▪ Credit Suisse Stuart Begg</li> <li>▪ DRW Mark Wendland</li> <li>▪ Goldman Sachs International Matteo Farina</li> <li>▪ J.P. Morgan Securities Plc Rogier van Kempen</li> <li>▪ Morgan Stanley Sebastien Renard</li> <li>▪ Optiver V.O.F. Robert van Gulik</li> <li>▪ Societe Generale Newedge UK Ltd. Nicolas Meyer</li> <li>▪ Susquehanna International Group Michael Phelan</li> <li>▪ Swiss Life Damian Imboden</li> <li>▪ Union Investment Christoph Hock</li> </ul>	<ul style="list-style-type: none"> <li>▪ Advises the Supervisory Board and the Executive Board on any EMIR and other relevant matters, i.e. arrangements that may impact the risk management of the CCP, such as a significant change in its risk model, the default procedures, the criteria for accepting clearing members, the clearing of new classes of instruments or the outsourcing of functions.</li> </ul>

## 3.2. Risk management overview

### 3.2.1. Risk management framework

Risk management is a fundamental component of ECAG's management and control framework. Effective and efficient risk management is vital to protect ECAG's interests and simultaneously enables ECAG to achieve its corporate goals. ECAG has therefore established a risk management system comprising roles, processes, and responsibilities

applicable to all employees and organisational units of ECAG. This ensures that emerging risks are identified and managed as early as possible.

### 3.2.2. Risk strategy

ECAG has developed two risk strategy statements, which are linked to the defined strategic objectives.

1. Risk limitation – protecting and ensuring continuity of operations
2. Supporting growth in the various business divisions

ECAG'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 ECAG are ultimately responsible for the risk strategy, which reflects ECAG's risk appetite defining the maximum loss the Executive Board is willing to assume in one year, the risk tolerance as well as desired performance levels. It is ECAG'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.

### 3.2.3. Risk appetite

The risk strategy includes statements concerning risk appetite and sets limits. The following concepts are calculated:

- **Required Economic Capital – Economic perspective:**  
The Required Economic Capital is the economic perspective (former Liquidation principle) according to the ICAAP. It is defined as the Value at Risk (VaR) based on 99.980% percent confidence level (as of 1.1.2021, until then 99.98%). A correlation of 1 is used between different risk types, as this is the most conservative approach.  
Required Economic Capital is compared with the Available Risk-Bearing Capacity ("ARBC"), which is defined as regulatory own funds (eligible regulatory capital).

Available Risk-Bearing Capacity is updated according to the respective regulatory reporting frequency. Due to reporting deadline discrepancy between risk reporting and regulatory reporting, regular risk reports usually use ARBC based on the regulatory own funds from the previous regulatory reporting period.

- **Earnings at Risk – for information purposes:**  
The Earnings at Risk is defined as the VaR based on a 99.00% percent confidence level.  
It This VaR is used for information purposes as a going concern risk measure on ECAG level. I and it is not expected to have impact on capital and therefore it is not used for capital management.

Earnings at Risk are compared with the budgeted EBITDA.

The RBC 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 ECAG is taken into account.

### 3.2.4. Risk profile

Eurex Clearing distinguishes between financial and operational risks. Financial risks are divided into credit, market and liquidity risks. Operational, credit and liquidity risks are classified as material risks.

The risk profile did not change significantly in financial year 2020. As of 31 December 2020, the REC of Eurex Clearing AG amounted to €495 million, with the REC composition for the individual risk types as follows: For operational and financial risk the REC was €291 million and €204 million. Financial risk was made up of credit risk with REC of €200 million and market risk with REC of €4 million. The EaR amounted to €44 million as of 31 December 2020, with €41 million accounted for by operational risk and €3 million accounted for by financial risk.

The overall risk profile as defined, adopted and approved via the risk strategy links to the business strategy as outlined above.

The risk strategy was approved by the Executive Board of ECAG in October 2020.

### 3.2.5. 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, ECAG'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.

### 3.3. Risk management process

ECAG's risk management process is based on the three lines of defence model, see [Figure 3](#). 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 processes 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.

Controlling risks is performed in the decentralised business areas, that is, where the risks occur. Risk control in the ECAG operational units is ensured by nominating "Operational Risk Representatives" who are responsible for identifying, notifying and

controlling any risk in their area. Eurex Clearing Enterprise Risk Management (“ERM”), a central risk controlling function within ECAG, assesses all existing and potential new risks and reports on a quarterly basis, and if necessary ad hoc, to the Executive Board.



Figure 3. Five-level risk management system with central and decentralized responsibilities

### 3.3.1. 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 one hand proactive, based on regular reviews of processes in order to identify weak areas and points of failure (e.g. manual processes, 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 investigating potential risks for Eurex Clearing a risk inventory process has been established. The inventory process is carried out at least once a year by ERM. On the other hand, the risk identification process is also reactive as a consequence of 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.

### 3.3.2. 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 ERM in a timely manner of the risks that they have identified and quantified.

### 3.3.3. Risk assessment

Eurex Clearing assesses material risks on an ongoing basis applying both concepts (a) economic perspective (using REC) and (b) for additional information purposes Earnings at Risk to aggregate risks at company level. The main instrument that ECAG 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 ECAG could face if certain independent loss events materialise over a specific time horizon for a given probability.

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

#### 3.3.4. 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.

#### 3.3.5. Risk monitoring and reporting

Enterprise Risk Management is the independent risk controlling function of Eurex Clearing, responsible for monitoring and reporting risks.

A detailed risk report is submitted to the Executive Board of Eurex Clearing at least once a quarter. The Supervisory Board, the EMIR Risk Committee and the Audit & Risk Committee also receive quarterly risk reports.

Limit breaches are explained in detail and reported to the Executive Board before the 10<sup>th</sup> 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 3<sup>rd</sup> line of defence and provides further assurance of the risk management process by conducting independent audits.

In the Executive Board meeting on 21 October 2020 the Executive Board concluded that the Risk Management System is effective.

## 4. Management of credit risk

ECAG defines credit risk as the risk of a counterparty not being able to fulfil a contractual obligation causing a financial loss to ECAG.

For the purpose of its own credit risk management, ECAG divides credit risk, based on relationship that the counterparty has with ECAG, into:

- Credit risk related to core CCP business;
- Credit risk arising from cash investments.

### Credit risk related to core CCP business

Within the core CCP business, ECAG acts as a principal from a legal perspective. However, ECAG is not economically involved in the transactions and their related risks. As such, the positions are not recognised in the balance sheet and thus do not fall under the Pillar 1 risk positions. Associate collateral, in the form of securities, is also not considered for Pillar 1 purposes.

The credit risk stemming from the core CCP business is dealt with under Pillar 2 and complies with EMIR requirements.

The framework to manage all credit risks, which are related to the core CCP business, is laid out in the *CCP Credit Risk Management Policy* and will not be detailed further in the Pillar 3 report since it is not considered for Pillar 1 purposes. Further information can be found on the following internet site: <https://www.eurex.com/ec-en/services/risk-management/default-waterfall>

### Credit risk related to cash investments

Credit risk can also arise from cash investments. The cash balances which are invested by the CCP mainly consist of Eurex Clearing's own funds and Member Cash Deposits. The framework to manage credit risk, which is related to cash investments, is laid out in the ECAG Treasury Policy and the ECAG Credit Policy for Treasury Activities.

#### 4.1. Strategy and process

Credit risk is classified as a material risk in ECAG's risk strategy and as of 31 December 2020 the share of credit risk in the REC of ECAG was 40%.

The risk management process for credit risk follows the overall risk management process as presented in chapter 3.3.

## 4.2. Structure and organisation

Within ECAG, the credit risk management function is performed by dedicated organizational units and governing bodies. 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 ECAG is assessed by credit specialists.
- The creditworthiness of existing counterparts is regularly reviewed and continuously monitored. The monitoring is accompanied by maintaining a credit watch list for counterparts whose credit worthiness is in doubt.
- Treasury counterpart credit limits are approved by an internal Credit Committee comprised out of two Executive Board members and senior risk personnel.
- Comprehensive and timely credit reports are compiled regularly and provided to internal (e.g. Executive Board and Enterprise Risk Management) and to external (e.g. regulators) stakeholders by dedicated middle office functions.

## 4.3. Assessment

### 4.3.1. Limits

For the credit risk arising from cash investments, ECAG defines limits per counterparty and depending on the exposure type, secured exposure and unsecured exposure, on the basis of at least annual credit checks and using ad hoc analyses, as necessary.

### 4.3.2. Stress testing

ECAG performs stress tests and reverse stress test to ensure the adequacy of its financial resources. The term “stress test” comprises the entirety of qualitative and quantitative analysis methods of rare but plausible events. The following stress tests are performed for credit risk:

- The “Default of the Largest Counterparty Group Stress Test”, where the default of the counterparty group with the largest unsecured exposure is simulated 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 ECAG is simulated. To capture the worsening of the economy, certain credit risk model parameters are stressed 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 that are defined as a fraction of the available Risk Bearing Capacity.

In addition, a credit stress test is performed on a daily basis to check whether the current default fund is sufficient to cover a default of the two largest counterparties under market stress. If the tests show a potential consumption of the default fund that is greater than a predefined threshold, ECAG’s Executive Board is informed and decides on risk mitigating actions. Risk mitigating actions include member-specific actions, e.g. extra margin requirements, or member-wide actions, e.g. an increase of the size of the default fund by increasing the default fund contribution by all.

In addition to the stress tests defined above, a “Reverse Credit Stress Test” is also performed aiming at analysing how many clearing members could default before ECAG becomes insolvent.

In the year under review, the stress tests did not reveal any risks that endanger the going concern ECAG’s the business.

#### 4.4. Mitigation and control

##### For cash investments

ECAG follows a restrictive investment policy in order to safeguard the clearing house and its participants.

As a principle, clearing members’ cash collateral and the CCPs own funds are placed with counterparties of adequate creditworthiness, preferably on a secured basis, or through direct investments in debt instruments, such as Floating Rate Notes and Fixed Coupon Bonds. Uninvested cash is deposited with the central bank of issue, if access has been granted. Furthermore, investments are distributed across multiple counterparties, each provided with a predefined limit.

Repo transactions are governed by a framework agreement (Global Master Repurchase Agreement or “Deutscher Rahmenvertrag für Finanzgeschäfte”) and are, in accordance with EMIR, settled via operators of a securities settlement system that ensures the full protection of those instruments.

Securities accepted as collateral need to fulfil all of the strict conditions of highly liquid financial instruments as required by EMIR. In particular, securities accepted as collateral need to be:

- Debt instruments issued or guaranteed by high quality obligors (mainly 0% risk-weight);
- Issued or guaranteed by governments, central banks, multilateral development banks, the European Financial Stability Facility (EFSF) or the European Stability Mechanism (ESM);

- Freely transferable and without any regulatory constraint or third-party claims that impair liquidation; in addition, subordinated securities are not eligible;
- Have an active outright sale or repurchase agreement market and reliable price data on these instruments must be published on a regular basis.

Transactions in which the securities given as collateral are issued by the counterparty or an affiliate of the counterparty are not allowed.

Furthermore, ECAG applies haircuts on the securities accepted as collateral. According to the underlying repurchase agreement, ECAG may also issue a margin call that requires the counterparty to post additional collateral in case the market value of the collateral initially provided decreases to predefined levels. Cross currency collateralisation is, in principle, possible but would require additional haircuts.

#### 4.5. Monitoring and reporting

Credit risk information is integrated into the regular overall risk management reporting.

New credit lines on treasury counterparties and changes of existing credit lines (increases as well as reductions), changes of the internal rating for counterparties and credit exposures are reported to the internal "Credit Committee". Besides that, limit breaches, if any, are reported to the Executive Management and to Enterprise Risk Management.

#### 4.6. Disclosure on credit risk exposures

As described in the introduction above, the credit risk disclosed in the below tables does not include the core CCP business of ECAG.

ECAG uses the standardised approach according to Article 111 et seq. CRR to determine the own funds requirement for credit risk under Pillar 1.

For the central governments and central banks exposure class, ECAG uses the credit assessments by OECD<sup>1</sup>. In addition, ECAG nominated the External Credit Assessment Institution (ECAI) Standard & Poor's for the same exposure class as OECD ceased to assess so-called "high income countries" in 2013. For regional governments or local authorities, 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 residence. The German supervisors have been notified of the use of credit

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<sup>1</sup> Country Risk Classification: <http://www.oecd.org/tad/xcred/crc.htm>

assessments by OECD and Standard & Poor's.

The risk weights of the remaining exposure classes are mainly derived from unrated positions meaning that no ECAI has been nominated.

ECAG complies with the risk weighting as defined in Section 2 of Chapter 2 of Part Three, Title II of the CRR.

ECAG applies credit risk mitigation ("CRM") techniques.

ECAG uses the comprehensive method for financial collateral according to Article 223 CRR for the purposes of credit risk mitigation.

For capital requirements purposes, according to Article 227 CRR the application of zero volatility adjustments is possible. Where the conditions of the regulation stated above are not met, supervisory haircuts according to Article 224 CRR apply. In cases of FX mismatch, further cross-currency haircuts are applied.

The following [Table 19](#) shows the total credit risk exposure values per exposure class and risk weight before and after applying credit risk mitigation techniques (CRM) and credit conversion factor (CCF).

31 December 2020 (€' 000)			
Exposure class	Risk weight	Exposure value before CRM* and CCF**	Exposure value after CRM* and CCF**
Central governments and central banks	0%	31,904,261	31,904,261
	<b>Total</b>	<b>31,904,262</b>	<b>31,904,262</b>
Regional governments, local authorities and other public bodies	0%	11,144	11,144
	<b>Total</b>	<b>11,144</b>	<b>11,144</b>
Institutions	20%	1,280,454	707,733
	<b>Total</b>	<b>1,280,454</b>	<b>707,733</b>
Corporates	100%	3,494	2,494
	<b>Total</b>	<b>3,494</b>	<b>2,494</b>
Public sector entities	0%	7	7
	<b>Total</b>	<b>7</b>	<b>7</b>
Other	100%	59,151	59,151
	<b>Total</b>	<b>59,151</b>	<b>59,151</b>
<b>Total 2020</b>		<b>33,258,513</b>	<b>32,684,792</b>
<b>Total 2019</b>		<b>27,078,346</b>	<b>26,986,768</b>

\* CRM (Credit Risk Mitigation techniques)

\*\* CCF (Credit Conversion Factor)

*Table 19. Total exposure by asset classes and risk weights*

Most of ECAG's exposures are towards central governments and central banks as well as institutions. As per year end 2020 (and also year-end 2019) all exposures to central governments and central banks are risk-weighted with 0%. The exposures to institutions have only a short maturity of less than or equal to three months, thus, pursuant to Article 120 paragraph 2 CRR a risk weight of 20% is applied.

Counterparty	31 December 2020 (€' 000)	31 December 2019 (€' 000)
Exposure - book value	1,280,454	1,019,085
Collateral - market value	-572,720	-90,579
Collateral - adjusted market	-3,645	-8,373
Exposure - value after CRM	707,733	928,507
RWA	141,547	185,701

Table 20. Placements from Eurex Clearing

## Detailed information and distribution of credit risk exposures

### Distribution of credit risk exposures

The following tables illustrate the distribution of the credit risk exposures, broken down by exposure classes, geographical areas, and residual maturity according to Article 442 CRR.

As of 31 December 2020, the geographical distribution of credit risk exposures is as shown in Table 21.

Exposure class	31 December 2020 (€'000)				Total
	European Union	Rest of Europe	North America	Rest of World	
Central governments and central banks	29,889,209	2,015,052	0	0	31,904,262
Regional governments, local authorities and other public bodies	11,152	0	0	0	11,152
Institutions	977,884	134,787	167,492	290	1,280,454
Corporates	3,299	146	29	21	3,494
Other (including equity holding)	59,146	5	0	0	59,151
<b>Total 2020</b>	<b>30,940,690</b>	<b>2,149,991</b>	<b>167,521</b>	<b>310</b>	<b>33,258,513</b>
Total 2019	20,879,180	6,164,613	211	5,312	27,049,317

Table 21. Geographical breakdown of exposures

Table 22 below provides information about the residual contract maturity, broken down by exposure classes. Most exposures are short-term with a significant part being overnight exposures.

Exposure class	31 December 2020 (€'000)			Total
	No more than three months	Up to one year	Over one year	
Central governments and central banks	31,904,262	0	0	31,904,262
Regional governments, local authorities and other public bodies	0	0	11,152	11,152
Institutions	1,280,454	0	0	1,280,454
Corporates	1,494	0	2,000	3,494
Other (including equity holding)	59,151	0	0	59,151
<b>Total 2020</b>	<b>33,245,358</b>	<b>0</b>	<b>6,265</b>	<b>33,258,513</b>
Total 2019	27,071,765	5,785	4,475	25,851,264

Table 22. Maturity of exposures

### Value adjustments and provisions

In accordance with German GAAP, ECAG assesses, at each balance sheet date, whether there is objective evidence that a financial asset is impaired. Only indications of impairment incurred at the balance sheet date resulting from past events and current

economic conditions can be considered. Losses expected as a result of future events, independent of the probability of occurrence, are not recognised. According to the policies of ECAG and in line with sound banking practices and regulations, ECAG makes value adjustments and provisions, when necessary and due to individual decisions.

ECAG does not have any value adjustments and provisions for credit risk exposures at present, because it does not have any impaired assets.

### **Past due items and default or non-performing exposures**

Pursuant to the below stated definitions, ECAG had no past due items or defaults or non-performing exposures in its books at the reporting date or during the year under review.

#### **Definition of past due**

An exposure is classified as “past due” in case a counterparty has failed to make a payment when contractually due, when the debtor has exceeded an external limit communicated to him as well as when the debtor has utilised credit without prior consent. This definition is used likewise for regulatory and accounting purposes.

#### **Definition of default or non-performing**

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

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

The definition of “impairment” used for accounting purposes is compliant with the definition of “default” outlined in Article 178 CRR.

## **4.7. Disclosure of exposures to counterparty credit risk (CCR)**

As of 31 December 2020, ECAG did not have any outstanding derivatives instruments exposure.

## **4.8. Disclosure of exposures in equities not included in the trading book**

In general Equities held in the non-trading book concern strategic participations in companies with business related to the business of Eurex Clearing. Due to the strategic alignment, no participation is held in order to make short-term profits (no

trading intent).

Unlike to prior year, there were no shares in affiliated companies as at the reporting date. The prior year 100% participation in Eurex Clearing Security Trustee GmbH was merged into Eurex Clearing AG in the 2020 financial year.

In general equity participations are disclosed under investment in subsidiaries and valued considering the provisions of the Handelsgesetzbuch (HGB, German Commercial Code). According to § 340e HGB in connection with §§ 252 and 253 HGB, such assets may not be recognised at an amount higher than their purchase price, reduced by depreciation, amortisation, and write-downs in accordance with particular requirements for fixed assets. Items of fixed assets may be written down in order to carry them at the lower of cost or market value at the balance-sheet date. Impairment losses shall be recognised if impairment is expected to be permanent.

The following [Table 23](#) discloses the information required by Article 447 CRR with regards to the fair value, the balance sheet value and the total unrealised gains. As of 31 December 2020 the participation was not deducted from the own funds.

	31 December 2020 (€' 000)	31 December 2019 (€' 000)
Fair value	0	81
Balance sheet value	0	75
Total unrealised gains	0	6
Thereof total revaluation gains (losses)	0	6
Amounts included in the original or additional own funds	0	0

[Table 23. Equities in the non-trading book](#)

## 4.9. Asset encumbrance

The disclosure of information on asset encumbrance pursuant to Article 443 CRR and further detailed in the Commission Delegated Regulation (EU) 2017/2295 of 4 September 2017 supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for disclosure of encumbered and unencumbered assets.

The disclosed figures are median values based on the reported quarter-end figures as required.

As shown in the table below [Table 24](#), the overall level of encumbrance is very low. The encumbered assets relate to assets held in trust. This item concerns receivables from clearing members arising from turnover related to remuneration that is ultimately collected via Eurex Frankfurt AG for Deutsche Börse and Eurex Global Derivatives AG, Zug, Switzerland, on a fiduciary basis.

31 December 2020 (€' 000)	Carrying amount of encumbered assets	Fair value of encumbered assets	Carrying amount of unencumbered assets	Fair value of unencumbered assets
<b>Assets of the reporting institution*</b>	<b>105,073</b>	<b>0</b>	<b>40,025,167</b>	<b>0</b>
Equity instruments*	0	0	0	0
Debt securities*	0	0	6,613	6,592
Other assets*	105,073	0	40,004,336	0

\* Figures are median values based on reported quarter-end figures.

*Table 24. Encumbered and unencumbered assets*

The fair-value of non-encumbered collaterals from collateralised placings is shown in [Table 25](#) below:

31 December 2020 (€' 000)	Fair value of encumbered collateral received or own debt securities issued	Fair value of collateral received or own debt securities issued available for encumbrance
<b>Collateral received by the reporting institution*</b>	<b>0</b>	<b>390,647</b>
Equity instruments*	0	0
Debt securities*	0	390,647
Other collateral received*	0	0
<b>Own debt securities issued other than own covered bonds or ABSs</b>	<b>0</b>	<b>0</b>

\* Figures are median values based on the reported quarter-end figures.

*Table 25. Collateral received*

As there were no matching liabilities to the only source of encumbrance, no sources can be shown in the below [Table 26](#).

31 December 2020 (€' 000)	Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
<b>Carrying amount of selected financial liabilities*</b>	<b>0</b>	<b>0</b>
<b>Other sources of encumbrance*</b>	<b>106,297,551</b>	<b>106,297,551</b>

\* Figures are median values based on the reported quarter-end figures.

*Table 26. Encumbered assets/collateral received and associated liabilities*

## 5. Management of operational risk

Operational risk is defined as the risk of loss resulting from inadequate or defective systems and internal processes, human or technical failure, from inadequate or defective external processes, from damage to physical assets and 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, ECAG distinguishes between the following operational risk classes:

- Availability (technical infrastructure, facilities, staff);
- Service deficiency (errors & omissions, supplier deficiencies, product flaws);
- Damage to physical assets (accidents, natural hazards, terrorism, sabotage);
- Legal offences & business (non-respect of laws & legal practice, contract, corporate governance)

### 5.1. Strategy and process

Operational risk is classified as a material risk in ECAG's risk strategy and as of 31 December 2020 the share of operational risk in the REC of ECAG was 59%.

The risk management process for operational risk follows the overall risk management process as presented in chapter 5. The operational risk scenarios are specified internally and the required economic capital for operational risks is calculated based on a Value-at-Risk approach.

### 5.2. Structure and organisation

Operational risk management is performed by ERM. Operational risk representatives and owners play a crucial role in identifying, assessing, and monitoring operational risks.

### 5.3. Assessment

Operational risks are estimated and quantified using a Value-at-Risk concept. A key component of ECAG's operational risk assessment is its internally developed operational risk model. The operational risk model combines a frequency distribution, that models the likelihood of the occurrence of loss events, with a severity distribution, that describes the size of operational losses, yielding in a loss distribution. The loss distribution allows ECAG to estimate potential operational risks at different confidence levels. The input data for the model are internal and external loss data and the results of a structured scenario analysis.

The operational risk model serves the purpose to determine the required economic capital for operational risk based on a 99.98% confidence level for a one-year holding period. The required economic capital is compared with the available risk bearing capacity for operational risk that in turn is specified in ECAG's risk strategy.

The loss-, frequency-, severity distributions, the input data for the model as well as the stress tests performed are described in the following sections.

### 5.3.1. The loss distribution

The aggregated loss distribution models the complete spectrum of operational risks that ECAG faces in terms of frequency and severity. Applying an actuarial technique by modelling the likelihood of the occurrence of an event (i.e. the frequency) independently from the impact of such an event (i.e. the severity) and then combining these two distributions by Monte Carlo simulations gives the required aggregated loss distribution. From the aggregated loss distribution, the required risk figures are derived:

- Expected loss: The expected loss as the actual statistical mean of the aggregated loss distribution.
- Value-at-Risk: The amount that is not exceeded in q% cases of all years.

### 5.3.2. The frequency distribution

Due to the discrete nature of the occurrence of loss events, the frequency is modelled using a discrete probability distribution. ECAG uses a Poisson distribution for the purpose of modelling the frequency of loss events. Two criteria that must be fulfilled in order to use the Poisson distribution to model the frequency of loss events are that the loss events arising from operational risks are 1) rare and 2) independent. As it is deemed reasonable to assume both criteria are fulfilled it is also deemed reasonable to model the frequency of loss events with the Poisson distribution. Furthermore, the Poisson distribution has the characteristic that is additive thus allowing to easily aggregate several events to one cumulated event.

### 5.3.3. The severity distribution

The severity distributions describe the size of the losses. The severity is modelled by the uniform distribution with two parameters: minimum and maximum loss. The parameters are estimated by experts in a structured way supported by statistical analysis and additional information to the extent it is possible.

### 5.3.4. The input data

The input data consists of internal and external loss data and the outcome of a structured scenario analysis.

The structured scenario analysis is the result of annual workshops between ERM and operational risk representatives. A key outcome of the workshops is estimates regarding the probability and the degree of financial loss arising from operational risks. The assessment incorporates various types of information such as the number of claims for damages asserted by customers against Eurex Clearing, the share of transactions processed fully automatically (straight-through processing), faults and interruptions in the system infrastructure as well as audit results from Internal Audit. As such, the workshops serve as a key process for identifying and assessing operational risks.

### 5.3.5. Stress Testing

In order to achieve a better understanding of the largest risks, help gauge the potential vulnerability to exceptional but plausible events and assess the impact on the capital, ERM runs stress tests. The stress tests focus on plausible events considering the respective frequency of occurrence per risk scenario.

## 5.4. Mitigation and control

ECAG gives considerable attention to its operational risk mitigation process with the aim to reduce the frequency and severity of potential operational risk events. ECAG's operational risk mitigation process has two cornerstones that are described in turn in the following sections:

- Business continuity planning
- An insurance programme

ECAG's operational risk mitigation process comprises several quality and control initiatives that aims at ensuring that ECAG's operations have sufficient controls to prevent any fraud or operational service deficiency. If an event of this kind nonetheless occurs a thorough analysis is performed in order to be able to define measures that will reduce the probability of recurrence.

### 5.4.1. Business continuity management

Because the unavailability of core processes and resources represents a substantial operational risk for ECAG a comprehensive Business Continuity Management ("BCM") approach has been implemented to act as a key mitigating factor for availability risk. The BCM organisation and key operational risks addressed by BCM processes are described in the following paragraphs.

#### BCM organisation at Eurex Clearing

The business continuity function is responsible for the overall monitoring of ECAG's readiness to deal with incidents, emergencies and crises. Organisational roles, responsibilities and guiding principles are all documented in a formal *Business Continuity Management Policy*. Business continuity plans are developed by the individual organisational units as each unit is responsible for its continuity and operational resilience.

#### BCM arrangements

The implemented BCM arrangements aim to minimise the impact of the unavailability of key resources, addressing not only 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.

#### Systems unavailability

Data centres in the main operating locations are 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 at the time of a disruption.

#### **Workspace unavailability**

Dedicated backup facilities provide office space for mission critical staff in the event that an office location becomes unavailable. These backup facilities are always fully equipped and connected to the distributed data centres and operational. In addition, business transfer plans between ECAG's different operations locations can be used to mitigate workspace unavailability.

#### **Staff unavailability**

Business continuity measures address the loss of significant numbers of staff, covering emergency scenarios and potential pandemics. 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 ECAG's different operations locations are employed such that, if one of these locations is impacted, mission critical activities can be continued by staff in other locations.

#### **Supplier unavailability**

ECAG assures itself of the continuous provision of critical supplier services by a number of means, such as regular due diligence review of suppliers' BCM arrangements, provision of services by alternative suppliers if possible and service level agreements, describing the minimum service levels expected from suppliers, and contingency procedure requirements.

#### **Incident and crisis management process**

ECAG has implemented an incident and crisis management process that can facilitate a coordinated response and rapid reaction to an incident or crisis in a controlled and effective manner. The process aims to minimise business and market impact, as well as enable the speedy return to regular business activity. Incident Managers have been appointed in their respective business areas in case of incidents, emergencies, and crises. They will also ensure the appropriate escalation to the Executive Management and notification to customers.

#### **“Real-life” simulation testing**

ECAG 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.

### **5.4.2. The insurance programme**

The second cornerstone of ECAG operational risk mitigation process is the transfer of risks above a certain threshold to third parties through a comprehensive insurance programme.

In order to achieve the optimum risk/benefit versus premium ratio, insurance policies are negotiated either through insurance brokers or directly with the insurers to purchase tailor-made policies reflecting the specificities of our business.

Each major insurance cover is reviewed annually taking into consideration the evolution of ECAG's risk profile.

## 5.5. Monitoring and reporting

Operational risk information is integrated into the regular overall risk management reporting. In addition, the results of the annual operational risk review are presented to the Executive Board. The report includes summary statistics and trend analyses of operational risk events and a summary of major changes to the operational risk model, concept, methodology and general quality improvements of operational risk management processes.

Thresholds are defined for key risk indicators ("KRI") and risk indicators ("RI"). If the observed value exceeds the threshold, an escalation process is initiated, i.e. an analysis/investigation is carried out by the operational risk representative or the risk owner.

## 5.6. Disclosure on operational risk

To determine the own funds requirement for operational risk under Pillar 1, ECAG uses the Basic Indicator Approach as defined in Art. 315 CRR.

## 6. Management of market risk including interest rate risk of exposures on positions not included in the trading book

Market risk may result from currency or interest rate fluctuations.

### 6.1. Strategy and process

With regards to market risk, risk control measures are applied to protect the clearing house from financial risks. The risk strategy is translated into a limit system, which is monitored on a daily basis.

Eurex Clearing Treasury activities are governed by the *Treasury Policy* which clearly defines the investment guidelines, specifies the risk limits and outlines the responsibilities in line with segregation of duties.

In accordance with applicable regulations, Eurex Clearing assigns the highest priority to the principles of capital preservation, i.e. minimising credit and market risk, and maximising liquidity to ensure the CCP's ability to satisfy its payment obligations at all times.

Eurex Clearing does not conduct proprietary trading activities. All Eurex Clearing's investment activities are related to the placement of clearing members' cash collateral and the investment of Eurex Clearing's own liquidity. Thus, all investments are allocated to the non-trading book in accordance with the CRR.

### 6.2. Structure and organisation

Eurex Clearing follows a restrictive investment policy in order to safeguard the clearing house and its participants. As a principle, clearing members' cash collateral is placed with counterparties of adequate creditworthiness, preferably on a secured basis via reverse repo, or through direct investments in debt instruments. Uninvested cash is deposited with the central bank of issue if access has been granted.

In secured transactions and in direct investments eligible securities must meet very high eligibility criteria. Only highly liquid financial instruments issued or guaranteed by a government, a central bank, a multilateral development bank, the EFSF or the ESM are eligible. Investments are subject to a strict limit system. This includes strict mismatch limits restricting term transformation for secured investments.

## 6.3. Assessment

### 6.3.1. Interest Rate Risk

Eurex Clearing only engages in limited term transformation, assets and liabilities mainly have matching terms. Changes in interest rates may impact ECAG's P&L. Hence, the interest rate risk (IRR) between interest-earning assets and interest-bearing liabilities shall be limited. Interest rate sensitive assets include ECAG's money market and investment portfolios, while interest rate sensitive liabilities mainly consist of customer assets in form of cash collateral, for which ECAG grants its clearing members interest.

Such interest rates are in principle calculated based on a pre-defined benchmark rate per currency, complemented by a cash handling fee, while ECAG obtains the realised interest rate from the investment of the cash collateral.

#### 6.3.1.1. Interest Rate Risk Limits

Strict IRR limits are established constraining the maximum market risk from potential adverse changes in market interest rates. IRR is calculated based on the net present value (NPV) of a predefined yield change calculated for the remaining days to maturity or coupon reset.

When calculating IRR, Eurex Clearing applies a parallel shift of the yield curve of minimum 1% (or higher depending on remaining days to maturity) and assesses the resulting effect on the NPV of the portfolio on a daily basis (see 6.4.2 for details). An IRR limit defines the maximum acceptable loss which can be caused by an adverse shift in the yield curve.

#### 6.3.1.2. Stop-Loss Limits

To identify unfavourable changes in market conditions a Stop-Loss limit has been established. The Stop-Loss limit defines the amount up to which the fair value of a portfolio can decline upon which a prompt review of the portfolio shall be conducted, and actions shall be implemented to reduce the interest rate risk sensitive position to cut further losses. The unrealised loss is calculated daily based on the yield difference between position yield and market yield over the remaining life to maturity.

### 6.3.2. Foreign exchange risk

Eurex Clearing places cash in general in the same currency in which clearing members cash contributions are denominated. Hence, FX risks are restricted to the net interest earned and fees collected in foreign currencies. Such exposures are monitored on a regular basis and managed by Treasury.

Due to the limited amounts, no active foreign exchange management is conducted. Consequently, no specific foreign exchange risk limits are implemented for ECAG,

however, market risk (which includes risk arising from FX) is monitored monthly by the Risk Management unit.

Besides this, Eurex Clearing may enter into FX transactions to hedge or close out open positions stemming from its CCP business, to reduce FX exposure or to cover liquidity needs in particular currencies.

### 6.3.3. Others

In addition to interest rate and currency risk, equity price risk arises to a limited extent from the CTA investments in futures.

## 6.4. Mitigation and control

If IRR or stop-loss limits are exceeded, relevant positions may be sold or closed out to reduce respective risk position immediately.

In order to limit essential IRR arising from the benchmark related compensation system, in exceptional cases such as, but not limited to, market disruptions, Eurex Clearing reserves the right to calculate customer interest rates on the basis of interest earned through the placement of funds instead of predefined benchmark rates if necessary.

## 6.5. Monitoring and reporting

Treasury Middle Office monitors compliance with all limits stipulated in the Treasury Policy on a daily basis and issues monthly reports to the Executive Board and to Enterprise Risk Management. Identified limit excesses reported immediately to Senior Management incl. the ECAG Executive Board Members responsible for Treasury and Risk.

## 6.6. Disclosure exposures for market risk

In order to determine the own funds requirement for market risk under Pillar 1, ECAG uses the Standard Approach as defined in Article 325 et seq. CRR. ECAG does not maintain a trading book. Accordingly, the transactions of ECAG are exclusively subject to the own funds requirements for the foreign currency risk of the banking book. ECAG is neither subject to settlement risk nor commodities risk as defined in the CRR. Since the reporting date 31 December 2020 ECAG has applied the de minimis threshold according to Article 351 CRR. Previously the de minimis threshold was not applied. As of 31 December 2020 the sum of ECAG's overall net foreign-exchange position was below the de minimis threshold of 2% of its total own funds, hence no calculation of own funds requirements for foreign exchange risk was required.

## 6.7. Disclosure exposures on interest rate risk on positions not included in the trading book

Eurex Clearing identifies and measures interest rate risk on a regular basis.

Quarterly, in accordance with the BaFin circular 06/2019 (BA)<sup>3</sup> Eurex Clearing computes and reports to BaFin the level of interest rate risk in its banking book (IRRBB) and demonstrates that its regulatory capital is sufficient to withstand an unexpected parallel shift in the interest rate yield curve of  $\pm 200$  basis points (supervisory standard test). Additionally, ECAG reports to BaFin six early warning indicators in accordance with the BaFin circular 06/2019.

If the standard shock results in a potential decline of the net present value of its interest rate sensitive positions by more than 20% of the regulatory capital, the Supervisory Authority will take appropriate actions. As of 31 December 2020, Eurex Clearing was far from reaching this threshold.

The following table shows the change in net present value of its interest rate sensitive positions in the event of shifts in the rate structure curves within the supervisory standard test ( $\pm 200$  basis points) as well as within the six further interest rate scenarios (early warning indicators) specified in accordance with the BaFin circular 06/2019.

Supervisory interest rate scenarios	31 December 2020 (€' 000)	31 December 2019 (€' 000)
	Present value change	Present value change
<b>Supervisory standard test</b>		
(a) Standard shock: +200bps shift up	2,840	2,406
(b) Standard shock: -200bps shift down	45	-1,709
<b>Early warning indicator</b>		
(c) Scenario 1: Parallel shift up	2,840	2,412
(d) Scenario 2: Parallel shift down	45	-1,709
(e) Scenario 3: Steepened curve	1,596	1,275
(f) Scenario 4: Flattened curve	-348	-1,966
(g) Scenario 5: Short rate up	-421	-201
(h) Scenario 6: Short rate down	45	13
Eligible own funds	749,813	614,813
(a) IRRBB standard shock (+200bps) as percentage of own funds	0.38%	0.39%
(b) IRRBB standard shock (-200bps) as percentage of own funds	0.01%	-0.28%

Table 27. Interest rate risk on positions in the banking book

<sup>3</sup> BaFin Circular (BA) -Interest rate risk in the Banking book:

[https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Rundschreiben/2019/rs\\_06-2019\\_ZAER.html](https://www.bafin.de/SharedDocs/Veroeffentlichungen/DE/Rundschreiben/2019/rs_06-2019_ZAER.html)

## 7. Management of liquidity risk

As a central counterparty, Eurex Clearing plays a substantial role for the integrity of European financial markets. Measures are taken to detect potential liquidity risk exposure and ensure the availability of sufficient financial resources in the daily business as well as in a stress event.

### 7.1. Strategy and processes

Liquidity risk is the risk arising from the inability to meet short-term and/or long-term payment obligations in case of mismatches between liquidity needs and liquidity sources. Eurex Clearing pursues the following objectives in its liquidity risk management:

- Fulfilment of all demands for repayment of Member Cash Deposits (“MCDs”).
- Fulfilment of all settlement obligations, while ensuring settlement efficiency, by pre-financing purchases and late payments of customers resulting from CCP transactions.
- Coverage of financing needs in case of one or multiple clearing members (“CMs”) defaulting.

Eurex Clearing’s Liquidity Risk Management Framework is designed to optimise the management of available financial resources while reducing liquidity risk to the greatest possible extent.

Eurex Clearing measures, monitors and manages liquidity risk in accordance and compliance with Articles 43 (Other financial resources) and 44 (Liquidity risk controls) Regulation (EU) No 648/2012 (EMIR) and Articles 32 to 34 (Liquidity risk controls) of Delegated Regulation (EU) No 153/2013 as well as Article 411 and subsequent of Regulation (EU) No 575/2013 (CRR) and Commission Delegated Regulation (EU) 2018/1620. Eurex Clearing has implemented aforementioned regulatory standards in its Liquidity Risk Management Framework.

The Framework is documented in Eurex Clearing’s *Liquidity Risk Management Policy*. The *Liquidity Risk Management Policy* is revised on a regular basis, at least annually and has been approved by the Executive Board and the Supervisory Board, after consultation with the EMIR Risk Committee.

### 7.2. Structure and organisation

Within Eurex Clearing, Treasury is responsible for liquidity risk management. This includes the continuous (incl. intraday) monitoring of liquidity as well as the

implementation of mitigating measures in a contingency situation.

In this context, all key liquidity indicators outlined below are monitored by Treasury on a daily basis.

## 7.3. Assessment

### 7.3.1. Key Liquidity Indicators

In line with regulatory standards, Eurex Clearing 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.

In order to identify potential liquidity shortfalls in advance, Eurex Clearing implemented early warning triggers as well as recovery triggers for all Key Liquidity Indicators.

#### 7.3.1.1. Excess Clearing Liquidity

In compliance with Article 44 of Regulation (EU) 648/2012, Eurex Clearing needs to maintain sufficient financial resources taking into account the liquidity risk generated by the default of the two CMs (including all affiliates) to which it has the largest exposures (“Cover-2”). The “Excess Clearing Liquidity” is defined as a liquidity indicator to measure all available liquidity exceeding the ‘Cover-2’ requirements.

#### 7.3.1.2. Liquidity Coverage Ratio (LCR)

The LCR focusses on the short-term resilience of the liquidity risk profile and requires Eurex Clearing 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) for a 30 calendar day liquidity stress scenario. Regulation (EU) No 575/2013 (CRR) 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. More detailed information regarding the LCR is disclosed in chapter 7.6.

#### 7.3.1.3. Liquidity buffer in the daily business

The indicator “Liquidity buffer in the daily business” is based on Eurex Clearing’s daily pre-financing activities to ensure sufficient liquidity for the management of settlement processes at all times.

#### 7.3.1.4. Own Liquidity

Own Liquidity is defined as Eurex Clearing’s own funds plus intra-group funding. This indicator shall ensure that sufficient own liquidity is available to cover Eurex Clearing’s own operational risks and ensure the ability to maintain the operational functionality of Eurex Clearing’s corporate business.

### 7.3.2. Stress Testing

In order to analyse the liquidity risk of Eurex Clearing and to ensure that sufficient liquid financial resources are maintained at all times, comprehensive daily stress test calculations are carried out. Eurex Clearing has implemented various scenarios including market disruption as well as idiosyncratic components. In accordance with regulatory requirements, Eurex Clearing calculates, on a daily basis, the liquidity needed in the event its two largest clearing members default. Consequently, Eurex Clearing maintains sufficient liquidity at all times to meet the calculated requirements of the different scenarios.

## 7.4. Mitigation and control

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

Treasury is responsible for designing and monitoring a Funding Plan which includes a Contingency Funding Plan. In addition, the Recovery Plan includes 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 its liquidity profile. Such measures include inter alia:

- Intragroup funding;
- Increase of committed standby facilities;
- Change in margin composition;
- Mobilisation of securities.

## 7.5. Monitoring and reporting

Treasury is responsible for the monitoring of all liquid resources as well as the liquidity stress test results and the development of the liquidity indicators.

All parameters are monitored by Treasury on a daily basis.

The Executive Board is informed on a monthly basis about liquidity indicators as defined in the Recovery Plan. On a quarterly basis, the Executive Board receives a comprehensive liquidity risk reporting.

If an early warning limit for one of the key liquidity indicators is triggered, a contingency procedure is initiated including more frequent and comprehensive reporting obligations to

senior management.

In the year under review, Eurex Clearing had held sufficient liquidity at all times to pass the stress testing and to keep the liquidity indicators above the early warning limits.

## 7.6. Disclosure on Liquidity Coverage Ratio (LCR)

Institutions need to hold a liquidity buffer of high-quality liquid assets (“HQLA”) to cover their net cash outflows in stressed conditions over a thirty-day period. The Liquidity Coverage Ratio is set at a minimum ratio of 100%.

The following Table 28 details the composition and level of the LCR as of 31 December 2020:

31 December 2020			
	High quality liquid assets (€' 000)	Total unweighted value	Total weighted value
1	Total HQLA		32,120,087
<b>Cash outflows (€' 000)</b>			
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	11,134,266	2,783,567
7	Non-operational deposits (all counterparties)	21,238,663	21,238,063
13	Credit and liquidity facilities	2,000	800
<b>16</b>	<b>Total cash outflows</b>		<b>24,022,430</b>
<b>Cash inflows (€' 000)</b>			
17	Secured lending (eg reverse repos)	543,479	0
18	Inflows from fully performing exposures	893,257	893,189
<b>20</b>	<b>Total cash inflows</b>	<b>1,436,737</b>	<b>893,189</b>
<b>Summary parameters</b>			<b>Total adjusted value</b>
<b>21</b>	<b>Total HQLA (€' 000)</b>		<b>32,120,087</b>
<b>22</b>	<b>Total net cash outflows (€' 000)</b>		<b>23,129,240</b>
<b>23</b>	<b>Liquidity Coverage Ratio (%)</b>		<b>138.87%</b>

Table 28. Level and components of the Liquidity Coverage Ratio

The HQLA at Eurex Clearing mainly consists of deposits held with central banks, securities received in reverse repo transactions and the investment portfolio. As of 31 December 2020, the LCR of Eurex Clearing AG amounted to 138.87% (2019: 155.77%). Since 2019, Eurex Clearing considers operational deposits in the calculation of the LCR which improves the rate significantly.

## Appendix A. Abbreviations used in this document

AktG	Aktiengesetz
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht (Federal Financial Supervisory Authority)
BCBS	Basel Committee on Banking Supervision
BCM	Business Continuity Management
CCP	Central Counterparty
CM	Clearing Members
CRD	Capital Requirements Directive
CRD IV	Capital Requirements Directive IV
CRM	Credit Risk Mitigation
CRR	Capital Requirements Regulation
CFTC	Commodity Futures Trading Commission
DCO	Derivative Clearing Organisation
EaR	Earnings at Risk
EBA	European Banking Authority
ECAI	External Credit Assessment Institution
ECAG	Eurex Clearing AG
EFSF	European Financial Stability Facility
EMIR	European Market Infrastructure Regulation
ERM	Enterprise Risk Management
ESM	European Stability Mechanism
EU	European Union
FINMA	Financial Market Supervisory Authority
FX	Foreign Exchange
HGB	Handelsgesetzbuch (German Commercial Code)
HQLA	High Quality Liquid Assets
ICM	Individual Clearing Model
IRR	Interest Rate Risk
KRI	Key Risk Indicators
KWG	Gesetz über das Kreditwesen (German Banking Act)
LCR	Liquidity Coverage Ratio
LR	Leverage Ratio
MCD	Member Cash Deposits
NPV	Net Present Value
OECD	Organisation for Economic Cooperation and Development
PD	Probability of Default
QCCP	Qualifying Central Counterparty
RBC	Risk Bearing Capacity
RI	Risk Indicators
RoA	Return on Assets
RWA	Risk-weighted Asset
SA	Standardised Approach (in connection with operational risk)
SI	Significant Institution
SSM	Single Supervisory Mechanism
STA	Standardised approach (in connection with credit risk)
VaR	Value-at-Risk



## Contact

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