RISKS AND CAPITAL ADEQUACY – PILLAR 3

Chapter 5 "Risks and capital adequacy - Pillar 3" of the 2022 Universal Registration Document filed with the AMF on 13 April 2023 under registration number D.23-0268 was published on 31 October 2023 following the ACPR's request to supplement the Pillar 3 ESG report with two regulatory sections relating to social and societal risk and governance risk. As a result, two paragraphs have been added to Chapter 5 of the 2022 Universal Registration Document: 5.18.3 "Qualitative information on social and societal risk" (page 152 et seq.) and 5.18.4 "Qualitative information on governance risk" (page 155 et seq.).

INTRODUCTION

Pursuant to Article 4.1 of CRBF Regulation No. 2000-03 of September 6, 2000 on consolidated prudential supervision and additional supervision, BFCM, which is included in the consolidation scope of Crédit Mutuel Alliance Fédérale, is not subject to management ratios on a sub-consolidated basis.

As a result, all the data presented in this chapter relate to Crédit Mutuel Alliance Fédérale scope.

The purpose of Crédit Mutuel Alliance Fédérale's Pillar 3 report is to provide information supplementary to the minimum regulatory requirements concerning capital and risks called for in Pillars 1 and 2 of the Basel Accords, in the form of additional data concerning capital and risks. These supplements meet the guidelines relating to the publication requirements under section 8 of Regulation (EU) No. 575/2013 of June 26, 2013 and Regulation (EU) No. 2019/876 (CRR2) of May 20, 2019, amending Regulation (EU) No. 575/2013.

Crédit Mutuel Alliance Fédérale, through its Pillar 3, provides relevant, consistent and comparable regulatory information to interested parties. This is done in compliance with the five principles laid down by the Basel Committee: clear, comprehensive, relevant information for users, consistent over time and comparable from one bank to another.

Crédit Mutuel Alliance Fédérale is pursuing its prudential policy by strengthening its shareholders' equity and its ability to withstand any crisis, regardless of its origin: financial, economic, health, etc. This is reflected in the constant reinforcement of the risk measurement and monitoring system, as shown in the information presented in this "Pillar 3" section.

This section includes in particular the disclosures required by IFRS 7 – Financial instrument disclosures on credit risk, Capital Markets and Asset-liability management.

As part of the TRIM (Targeted review of internal models) exercise, the European Central Bank confirmed the approvals obtained using advanced internal rating methods on retail portfolios. With regard to large corporates and banks, in application of the TRIM constraints imposing limits on these portfolios, the Crédit Mutuel group has chosen to switch to the Foundation method as of March 31, 2022, which makes it possible to anticipate the applicable Basel IV rules from January 1, 2025. For all these portfolios, the consideration of the other related recommendations is in progress and the data presented in respect of Pillar 3 as of December 31, 2021 do not take into account the floor constraints related to the return to the IRB Foundation method for portfolios of banks and large corporates.

KEY RISKS INDICATORS AND CAPITAL ADEQUACY

	2020	2021	2022
CET1 ratio	17.8%	18.8%	18.2%
Leverage ratio	6.9%	7.6%	6.6%
LCR ratio[1]	165.2%	181.3%	153.3%
NSFR ratio[2]	n/a	125.6%	116.1%
Conglomerate ratio	176%	181%	175%

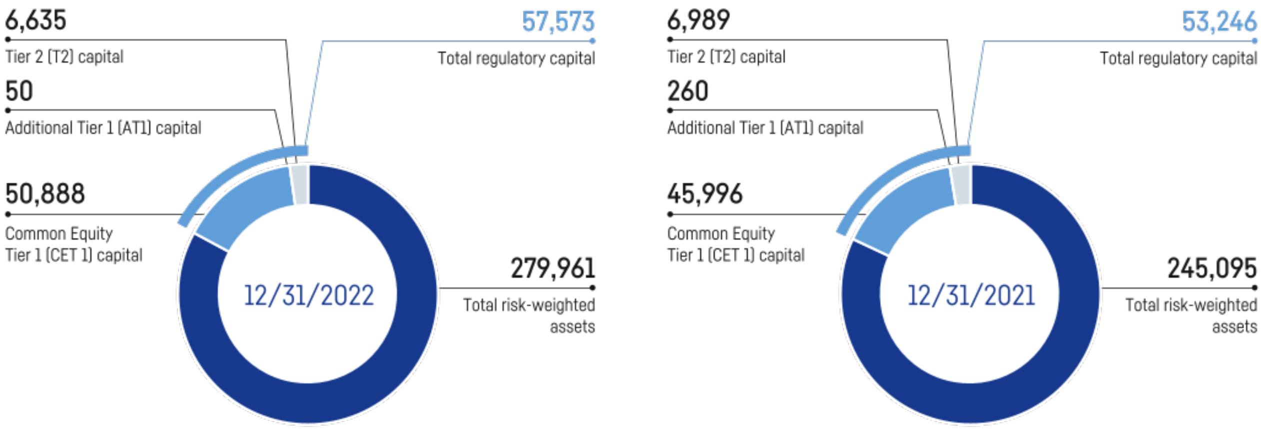
(1) Average LCR.
(2) Ratio applicable since June 30, 2021: data not previously published.

5.1 KEY FIGURES

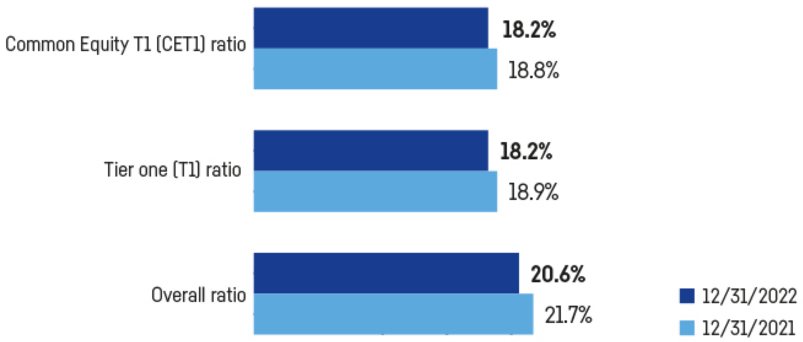
5.1.1 Solvency

Solvency ratio

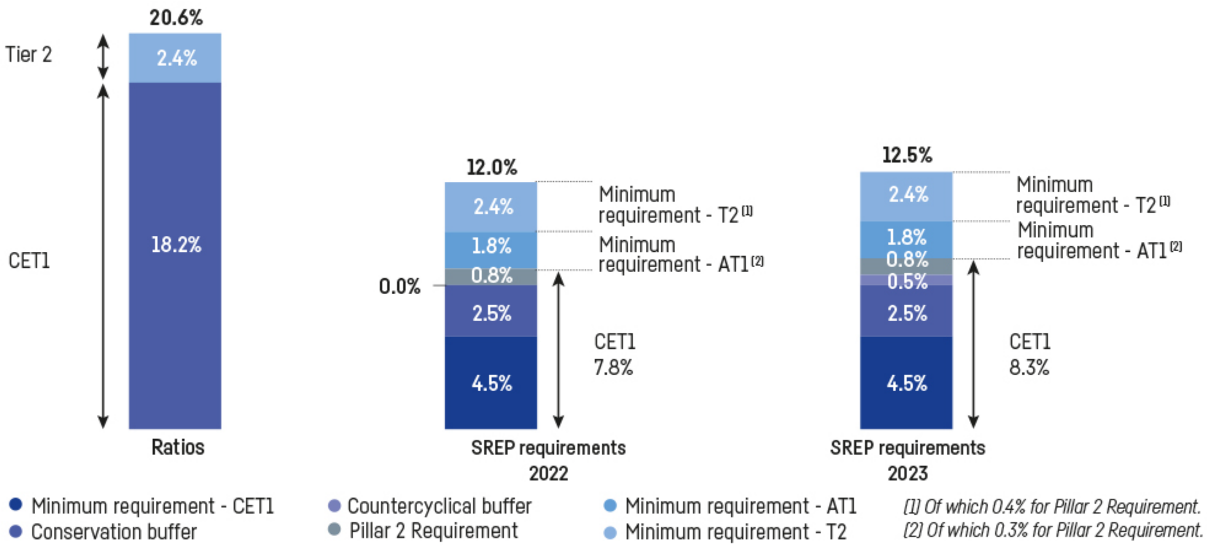
GRAPH 1: REGULATORY CAPITAL AND WEIGHTED RISKS *(IN € MILLIONS)*



GRAPH 2: SOLVENCY RATIOS

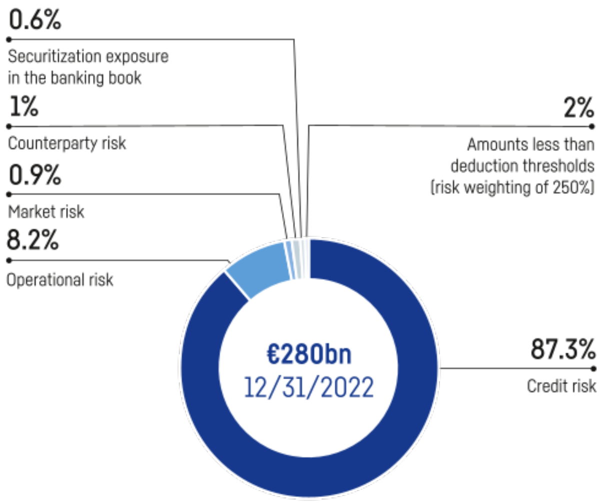


GRAPH 3: REGULATORY REQUIREMENTS AND SOLVENCY RATIOS



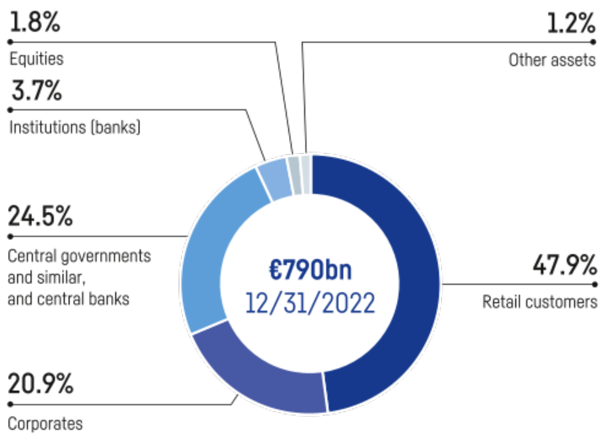
According to the HCSF decision of April 7, 2022, France's countercyclical capital buffer will be 0.5% from April 7, 2023.

GRAPH 4: RISK-WEIGHTED ASSETS (RWAS) BY TYPE OF RISK *(PERCENTAGE)*



Credit risk

GRAPH 5: EXPOSURES AT DEFAULT (EAD) BY CATEGORY *(PERCENTAGE)*



Excluding counterparty risk and securitization exposures in the banking book.

TABLE 1: EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC AREA

(in € millions)	12/31/2022	12/31/2021
Europe zone	**734,843**	**698,722**
France	646,486	606,642
Germany	38,842	38,210
Other countries	49,516	53,870
Rest of World	**54,707**	**31,109**
United States	15,474	12,900
Other countries*	39,233	18,209
TOTAL EAD	789,550	729,831

Excluding counterparty risk and securitization exposures in the banking book.
From December 31, 2022, the Europe zone corresponds to the countries of the European Union.

*FOCUS ON UKRAINE AND RUSSIA

12/31/2022 *(in € millions)*	Ukraine			Russia		
	EAD before substitution	Guarantee received[1]	EAD	EAD before substitution	Guarantee received	EAD
Retail customers	4	0	4	17	0	17
Corporates	0	0	0	0	0	0
Central governments and similar, and central banks	69	66	3	0	0	0
Institutions (banks)	0	0	0	4	0	4
Equities	0	0	0	0	0	0
Other assets	0	0	0	0	0	0
TOTAL EXPOSURES[2]	73	66	7	20	0	20

(1) BPI France counter-guarantee.

(2) Exposures to these two countries are not material to the overall exposure of Crédit Mutuel Alliance Fédérale.

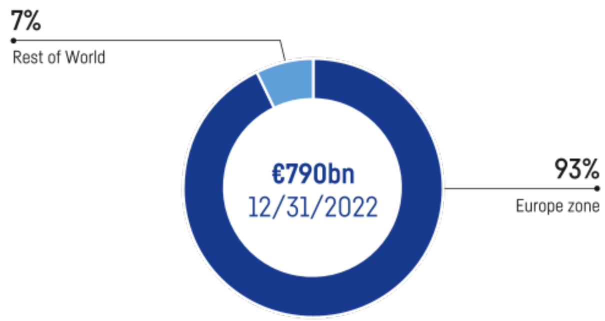
12/31/2021 *(in € millions)*	Ukraine			Russia		
	EAD before substitution	Guarantee received[1]	EAD	EAD before substitution	Guarantee received	EAD
Retail customers	5	0	5	25	0	25
Corporates	0	0	0	11	0	11
Central governments and similar, and central banks	87	51	36	0	0	0
Institutions (banks)	0	0	0	15	0	15
Equities	0	0	0	0	0	0
Other assets	0	0	0	0	0	0
TOTAL EXPOSURES[2]	92	51	42	51	0	51

(1) BPI France counter-guarantee.

(2) Exposures to these two countries represent approximately 0.01% of Crédit Mutuel Alliance Fédérale's total exposures.

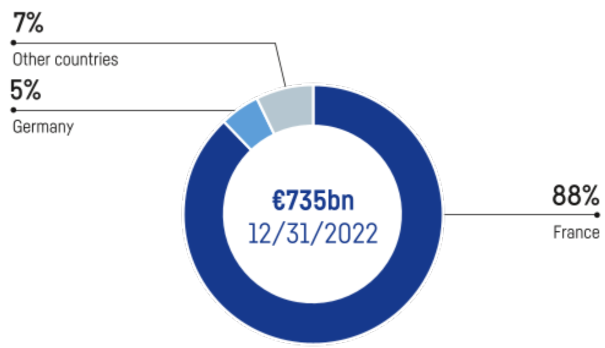
GRAPH 6: EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC AREA *(PERCENTAGE)*

Excluding counterparty risk and securitization exposures in the banking book



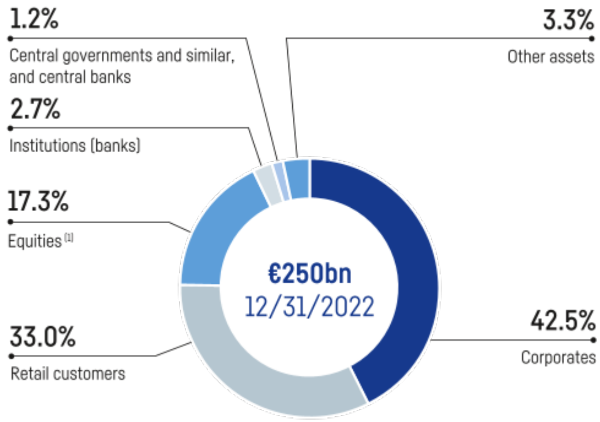
GRAPH 7: EXPOSURE AT DEFAULT (EAD) BY GEOGRAPHIC AREA – EUROPE *(PERCENTAGE)*

Excluding counterparty risk and securitization exposures in the banking book



GRAPH 8: RISK-WEIGHTED ASSETS (RWAS) BY CATEGORY *(PERCENTAGE)*

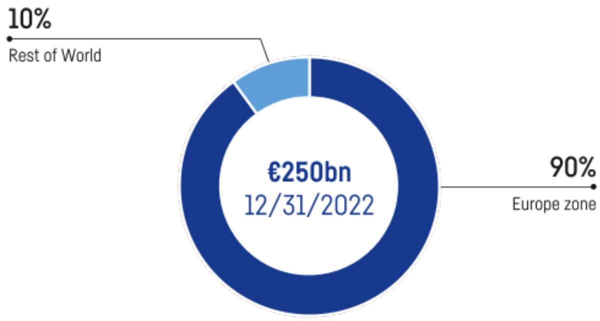
Excluding counterparty risk and securitization exposures in the banking book



(1) Including participations in Crédit Mutuel's Insurance companies.

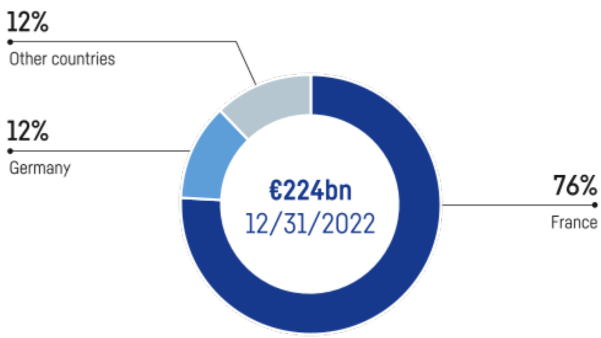
GRAPH 9: RISK-WEIGHTED ASSETS (RWAS) BY GEOGRAPHIC AREA *(PERCENTAGE)*

Excluding counterparty risk and securitization exposures in the banking book



GRAPH 10: RISK-WEIGHTED ASSETS (RWA) BY GEOGRAPHIC AREA – EUROPE *(PERCENTAGE)*

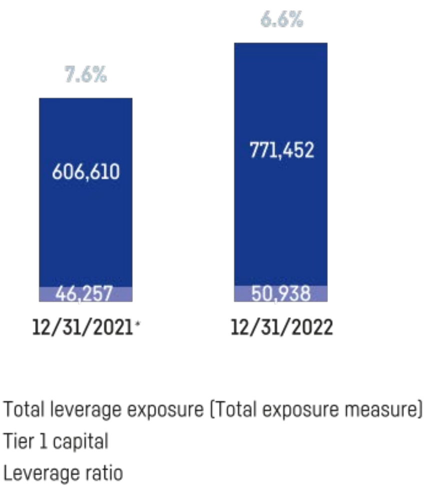
Excluding counterparty risk and securitization exposures in the banking book



Leverage ratio

GRAPH 11: LEVERAGE RATIO

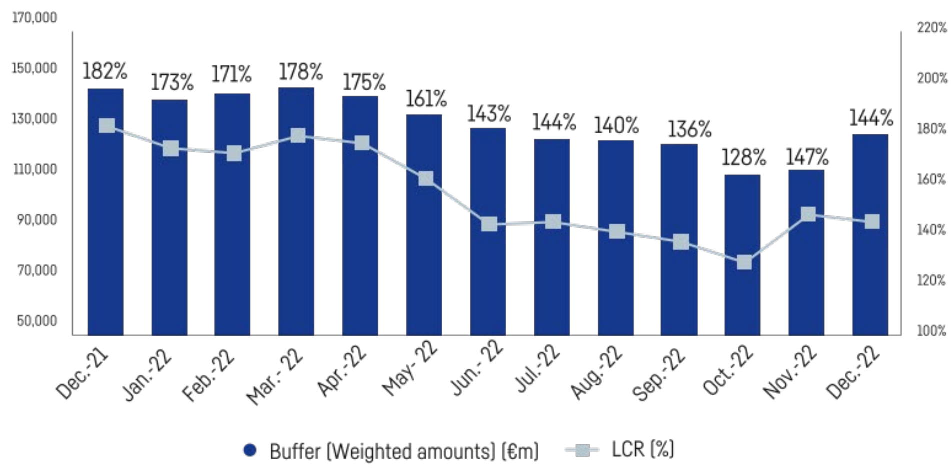
Exposures and shareholders' equity in millions of euros.



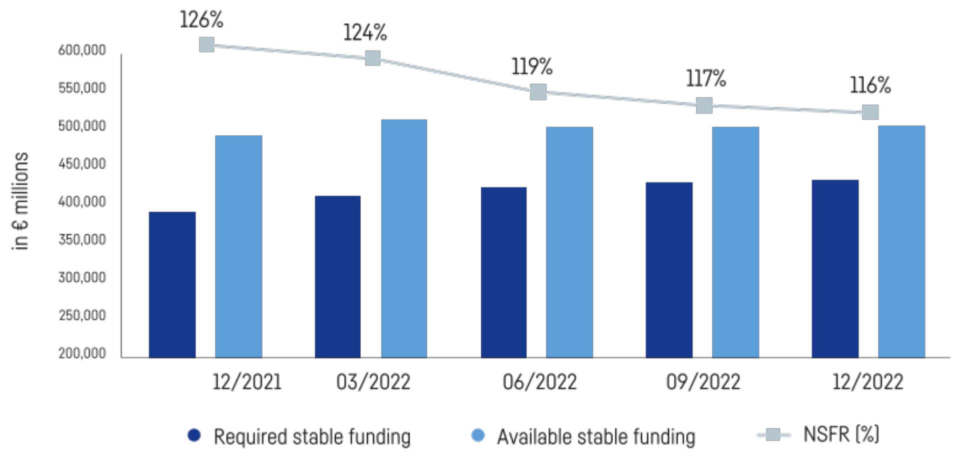
* Includes the temporary exclusion of central bank exposures in view of the COVID-19 epidemic according to Article 429 bis of the CRR2 which ended in June 2022.

5.1.2 Liquidity

GRAPH 12: CHANGE IN LCR AND LIQUIDITY BUFFER IN 2022



GRAPH 13: CHANGE IN THE NSFR OVER 2022



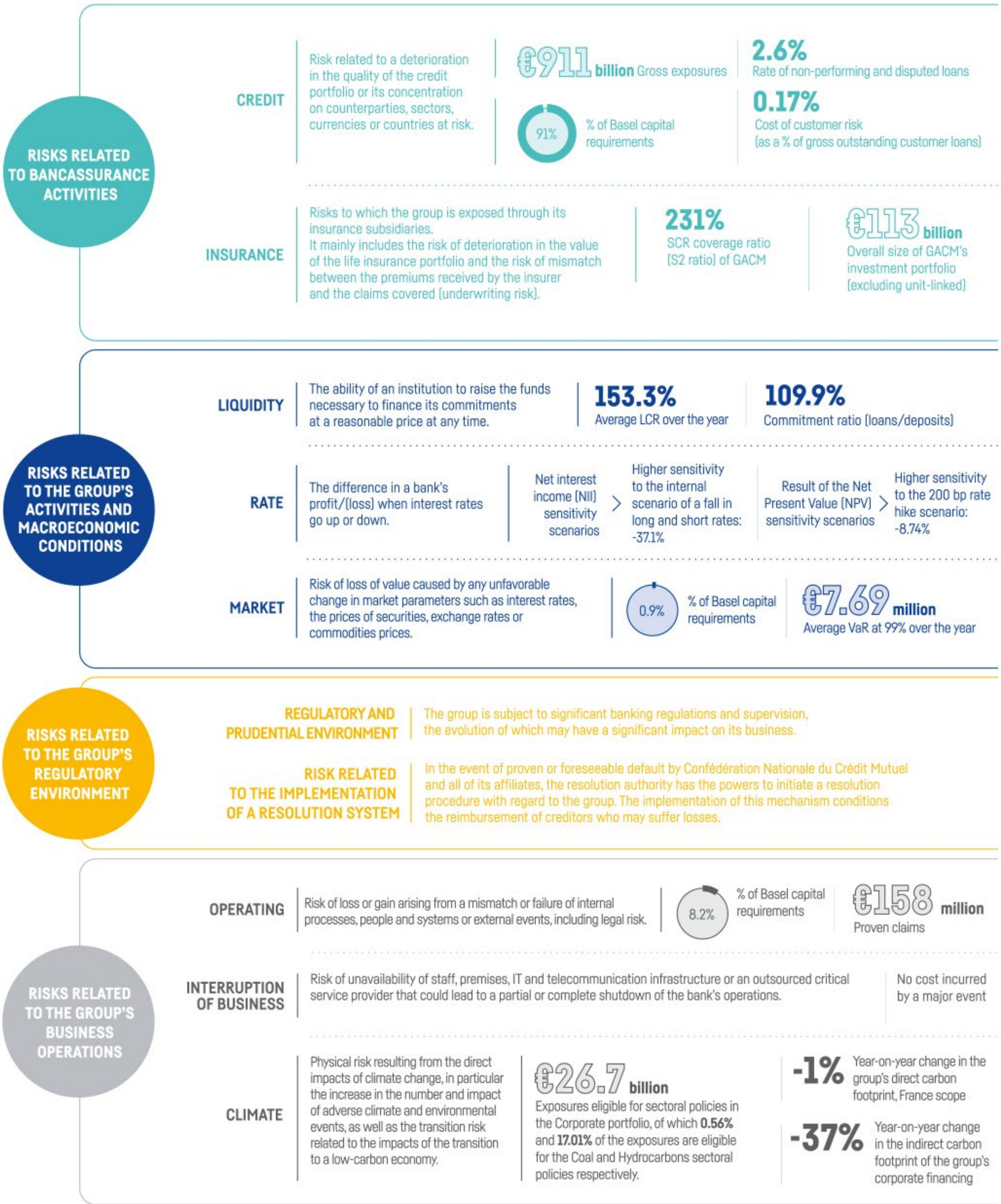
5.1.3 Key indicators (EU KM1)

TABLE 2: KEY INDICATORS OVER THE PAST FIVE QUARTERS

(in € millions or as a percentage)	12/31/2022	09/30/2022	06/30/2022	03/31/2022	12/31/2021
AVAILABLE EQUITY					
1 – Common Equity Tier 1 (CET 1) capital	50,888	48,835	49,467	48,096	45,996
2 – Tier 1 capital	50,938	48,883	49,514	48,142	46,257
3 – Total equity	57,573	56,216	57,041	54,624	53,246
RISK-WEIGHTED ASSETS					
4 – Total amount of risk-weighted assets	279,961	274,581	272,349	268,639	245,095
CAPITAL RATIOS (AS A PERCENTAGE OF THE RISK-WEIGHTED EXPOSURE AMOUNT)					
5 – Common Equity Tier 1 capital ratio	18.2%	17.8%	18.2%	17.9%	18.8%
6 – Tier 1 capital ratio	18.2%	17.8%	18.2%	17.9%	18.9%
7 – Total equity ratio	20.6%	20.5%	20.9%	20.3%	21.7%
ADDITIONAL SREP CAPITAL REQUIREMENTS (PILLAR 2 REQUIREMENTS AS A PERCENTAGE OF RISK-WEIGHTED ASSETS)					
EU 7a – Pillar 2 capital requirements	1.5%	1.5%	1.5%	1.5%	1.5%
EU 7b – of which: to be met with CET1 capital	*0.8%*	*0.8%*	*0.8%*	*0.8%*	*0.8%*
EU 7c – of which: to be met with Tier 1 capital	*1.1%*	*1.1%*	*1.1%*	*1.1%*	*1.1%*
EU 7d – Total SREP capital requirements	9.5%	9.5%	9.5%	9.5%	9.5%
TOTAL BUFFER REQUIREMENT AND TOTAL CAPITAL REQUIREMENT (AS A PERCENTAGE OF THE RISK-WEIGHTED ASSETS)					
8 – Capital conservation buffer	2.5%	2.5%	2.5%	2.5%	2.5%
EU 8a – Conservation buffer resulting from the macroprudential or systemic risk observed at the level of a Member State *(as a%)*	n/a	n/a	n/a	n/a	n/a
9 – Countercyclical capital buffer	0.0%	0.0%	0.0%	0.0%	0.0%
EU 9a – Systemic risk buffer *(as a%)*	n/a	n/a	n/a	n/a	n/a
10 – Buffer for global systemically important institutions *(as a%)*	n/a	n/a	n/a	n/a	n/a
EU 10a – Buffer for other systemically important institutions *(as a%)*	n/a	n/a	n/a	n/a	n/a
11 – Total buffer requirement	2.5%	2.5%	2.5%	2.5%	2.5%
EU 11a – Total capital requirements	12.0%	12.0%	12.0%	12.0%	12.0%
12 – CET1 capital available after compliance with the total SREP capital requirements	6.2%	5.8%	6.1%	5.9%	6.8%
LEVERAGE RATIO					
13 – Total exposure measurement	771,452	763,671	746,720	641,595	606,610
14 – Leverage ratio *(as a%)*	6.6%	6.4%	6.6%	7.5%	7.6%
ADDITIONAL CAPITAL REQUIREMENTS TO ADDRESS THE RISK OF EXCESSIVE LEVERAGE (AS A PERCENTAGE OF THE TOTAL EXPOSURE MEASURE)					
EU 14a – Additional capital requirements to address the risk of excessive leverage	n/a	n/a	n/a	n/a	n/a
EU 14b – of which: to be met with CET1 capital (percentage points)	*n/a*	*n/a*	*n/a*	*n/a*	*n/a*
EU 14c – Total SREP leverage ratio requirements	3.0%	3.0%	3.0%	3.3%	3.3%
LEVERAGE RATIO BUFFER REQUIREMENT AND TOTAL LEVERAGE RATIO REQUIREMENT (AS A PERCENTAGE OF THE TOTAL EXPOSURE MEASURE)					
EU 14d – Leverage ratio buffer requirement	0.0%	0.0%	0.0%	0.0%	0.0%
EU 14e – Total leverage ratio requirement	3.0%	3.0%	3%	3.3%	3.3%
LIQUIDITY COVERAGE RATIO (LCR)[1]					
15 – Total liquid assets (HQLA)	132,770	139,293	144,690	144,303	138,753
EU 16a – Cash outflows	107,926	105,278	101,558	100,090	98,000
EU 16b – Cash inflows	21,035	20,467	20,363	20,553	21,351
16 – Total net cash outflows	86,891	84,811	81,194	79,537	76,649
17 – Liquidity coverage ratio (LCR)	153.3%	165.4%	179.2%	182.0%	181.3%
NET STABLE FUNDING RATIO (NSFR)					
18 – Total available stable funding	505,907	504,223	504,529	514,011	492,874
19 – Total required stable funding	435,899	432,208	425,623	414,247	392,543
20 – Net stable funding ratio (NSFR)	116.1%	116.7%	118.5%	124.1%	125.6%

(1) Number of dates used in the calculation of averages: 12.

5.2 RISK FACTORS (EU OVA)



Crédit Mutuel Alliance Fédérale (hereinafter referred to as "the group") includes all entities in the "regulatory perimeter," comprising the Crédit Mutuel banks, the federations and Caisse Fédérale de Crédit Mutuel, and the "BFCM consolidated scope," consisting of Banque Fédérative du Crédit Mutuel and all its subsidiaries.

Crédit Mutuel Alliance Fédérale is exposed to multiple risks associated with its Retail Banking, Insurance, Corporate Banking, Capital Markets, Asset Management, Private Banking and Private Equity. The group has set up a process to identify and measure risks related to its activities, which enables it, at least once a year, to prepare the map of its most significant risks. The risk mapping is submitted to the group's Board of Directors for validation.

CMNE – Since January 1, 2022, Crédit Mutuel Nord Europe has been affiliated with Crédit Mutuel Alliance Fédérale. Given the business model and the relatively similar risk profiles of CMNE and Crédit Mutuel Alliance Fédérale, this affiliation is not likely to significantly modify the group's risk factors and does not call into question the presentation of Crédit Mutuel Alliance Fédérale's risk factors below.

Below are the main factors that can significantly influence the group's risks. Major risks are addressed first within each category.

5.2.1 Risks related to the group's banking and Insurance

5.2.1.1 Credit risk

Crédit Mutuel Alliance Fédérale's primary risk is credit risk, because of its business model. Gross exposures – balance sheet, off-balance sheet, derivatives and repurchase agreements – which are almost exclusively subject to credit risk, represented €911 billion as of December 31, 2022 and mobilized 91% of the group's Pillar 1 capital requirements pursuant to the Basel III regulations.

In the context of the Covid pandemic, the support measures taken by banks and public authorities have had the effect of anesthetizing the classic indicators of credit risk, with, in particular, a sharp drop in corporate failures in France in 2020 and 2021, even though the pandemic has led to unprecedented drops in activity, or even brought certain sectors of activity to a halt, such as the hotel and restaurant industry, with massive recourse to borrowing, particularly in France *via* state-guaranteed loans.The rebound in activity in 2021 led to bottlenecks in certain sectors, such as the motor sector following the semiconductor chip crisis, and the conflict between Russia and Ukraine has accentuated the upturn in inflation due to commodity costs, particularly in oil and gas.

Details of exposures by type of counterparty are available in Pillar 3, tables 29 Performing and non-performing exposures and related provisions – EU CR1 and 27 Credit quality of loans and advances to non-financial companies by industry – EU CQ5.

Taking the consequences of the 2008 crisis on Crédit Mutuel Alliance Fédérale's financial statements as an example, the current inflationary crisis could have four types of significant impacts on the group's credit risk exposures.

a. The first impact would be related to the **risk of financial loss due to the inability of counterparties to meet their contractual obligations** (risk of default), especially since the Covid crisis generated massive recourse to debt, particularly *via* state-guaranteed loans, of which €13.2 billion remained outstanding at the end of 2022, to cope with the sharp drops in activity and cash flow during periods of lockdown. The counterparties may be banks, financial institutions, industrial or commercial companies, governments, investment funds or natural persons. This risk concerns the financing activities, which appear on Crédit Mutuel Alliance Fédérale's balance sheet, or guarantee activities, which appear off balance sheet, as well as other activities exposing the group to a risk of counterparty default, notably its activities related to the trading and settlement/delivery of financial instruments on the Capital Markets, and to insurance. As of December 31, 2022, Crédit Mutuel Alliance Fédérale's rate of non-performing and disputed loans reached 2.58%, stable compared to the end of 2021, while it was 2.91% at the end of 2020. The cost of risk was €768 million *versus* €699 million in 2021. In relation to gross outstanding loans, the cost of customer risk was 0.163%, compared with 0.154% in 2021. The group has a buffer of provisions on healthy outstandings of €3.3 billion, compared with €3.4 billion in 2021, following a significant allocation effort in 2020 of nearly €1.4 billion in allocations, which could prove insufficient if the cost of proven risk exceeded the group's most pessimistic forecasts. Following the 2008 crisis, the group's NPL ratio rose to 4.68% at December 31, 2009, spiking the cost of risk to 0.77% of gross loans at the time.

b. The second impact would depend on the **method used to calculate the weighted risks in the denominator of the solvency ratio.** Within Crédit Mutuel Alliance Fédérale, 63% of total exposures to credit risk are assigned an internal rating, the quality of which affects the calculation of the credit risk-related capital requirements under Basel III, and therefore the group's solvency ratio. Lower ratings on all or part of the portfolio would result in lower solvency of the group. The current geopolitical crisis could increase this risk, also given the increased indebtedness of economic agents.

c. Due to the size of its portfolio of real estate loans representing 51% of net loans to customers, *i.e.*, €254 billion at December 31, 2022, mainly in France, **the group is exposed to a turnaround in the real estate market**, the likelihood of which could be increased by the geopolitical crisis and the current inflationary context, for example as a result of a drop in demand linked to the deterioration in the financial situation of households or an increase in the unemployment rate. Such scenario would impact the cost of risk due to the increase in defaults but also, in the case of mortgage-backed financing, through a drop in the value of dwellings pledged as collateral if the real estate market was affected for a considerable period of time. Following the 2008 crisis, the cost of risk on the network's portfolio of property loans reached 0.10% of the balance sheet commitments for two years, in 2009 and 2010. In 2022, the cost of risk on the network's home loans was not significant and not very different from 2021 and 2020. Just before the Covid-19 crisis in 2019, this rate reached 0.02%.

d. Crédit Mutuel Alliance Fédérale has a relatively high unitary exposure to certain States, bank counterparties or large groups, mainly French, some of which have benefited from support measures implemented by public authorities (*i.e.*, state guaranteed loans). **The default of one or more of the group's largest customers could degrade its profitability.** Among States and similar entities, *i.e.*, €189 billion of gross exposure as of end-2022, the group is mainly exposed to France for €157 billion, mainly to the Banque de France (nearly €96 billion), which is a member of the Eurosystem, and to the Caisse des dépôts et consignations (nearly €39 billion, which is considered to be a sovereign risk in France due to the centralization mechanism for deposits from regulated savings accounts). Other than States, as of December 31, 2022, single exposures, on- and off-balance sheet exceeding €300 million, *i.e.* less than 10% of net profit, represented nearly €6 billion on banks for seven counterparties and €45 billion on companies for 67 counterparties. The probability of several of these counterparties being downgraded or even defaulting simultaneously cannot be ruled out and would affect the profitability of the group.

5.2.1.2 Risks connected to Insurance

Due to its banking and insurance business, which results from its majority holding of nearly 90%[1] in Groupe des Assurances du Crédit Mutuel (GACM), Crédit Mutuel Alliance Fédérale is subject to additional supervision under Directive 2002/87/EC on financial conglomerates (FICOD). Over recent years, GACM contributed on average to around 25% of Crédit Mutuel Alliance Fédérale's net income and distributes its products mainly through the bank networks to which it pays fees. A major deterioration in GACM's solvency position could require Crédit Mutuel Alliance Fédérale to take action, which could reduce the group's consolidated solvency position. As of December 31, 2022, GACM had a Solvency II ratio (SCR) of 231%, for a regulatory requirement of 100%.

The risks to which the insurance business line is exposed are as follows:

- financial risks, in particular market risks (decline in equity markets, rise and fall in interest rates), credit risk, liquidity risk;
- life underwriting risks: increased mortality, surrenders;
- non-life underwriting risks: undervaluation of claims;
- disaster risk: occurrence of a major climatic event (storm, hail, etc.), pandemic;
- risk of reinsurer default;
- operating risks.

Within this set of risks, the two main ones are market risks and underwriting risks.

a. **Market risk related to Insurance: market risks notably cover interest rate risk connected to savings in euro, equity risk and similar risks, and property risk.**

If there was a sudden hike in rates, GACM's rate for its euro contracts could be below the market, resulting in the probable loss of some customers. This would necessitate the sale of bonds and the recognition of unrealized losses if redemptions became significant. Conversely, a prolonged period of low rates could dilute the rate of return on assets to below the minimum guaranteed rate stipulated in the euro savings contracts, creating an adverse effect on GACM's profitability.

Furthermore, a crash in the equity or real estate market would lead to impairments of these assets. GACM would have to recognize provisions for unrealized losses and would record a decline in financial income.

As of December 31, 2022, market risks accounted for 42% of GACM's SCR.

The total investment portfolio excluding unit-linked funds amounted to €112.6 billion.

b. **Underwriting risk: it concerns GACM's personal protection insurance, borrower insurance, savings, retirement, non-life and health insurance**

The underwriting risk is likely to materialize in the following three situations.

- an unforeseen change in mortality, longevity, disability and invalidity rates would weigh on the personal protection insurance, loan insurance or retirement activities by increasing claims loss and the benefits under these portfolios;
- a massive increase in redemptions or terminations compelling GACM to reimburse borrower insurance policyholders early, or non-life holders changing insurers, resulting in lost earnings. As euro-denominated savings contracts have a capital guarantee, the mass sale of assets at a potentially unfavorable time on the financial markets could result in financial losses;
- the inadequacy of rating or the amount of technical reserves compared to the structure of the losses and costs to be covered could generate a loss of profitability.

At December 31, 2022, life underwriting risks represented 26% of the SCR, health underwriting risks, 14% and non-life underwriting risks 11%.

5.2.2 Risks related to the group's activities and macroeconomic conditions

Financial risks related to the macroeconomic and market environments are defined as risks related to the changes in market conditions and in particular those affecting income, price levels and the macroeconomic environment such as the existing or anticipated economic environment.

(1) Following the integration of Crédit Mutuel Nord Europe into Crédit Mutuel Alliance Fédérale on January 1, 2022.

5.2.2.1 Liquidity risk

Liquidity risk means the capacity for a bank to find the funds necessary for financing its commitments at a reasonable price at any time. Thus, a credit institution which is unable to honor its net outflows of cash because of a scarcity of its financial resources in the short-, medium- and long-term has a liquidity risk.

After the year 2021, which took place in a context of still-low rates and a liquidity environment inherited from the Covid crisis, the year 2022 saw central banks proceed to tighten their monetary policy and initiate the withdrawal of the liquidity injected during the health crisis. The refinancing markets were severely disrupted by the war in Ukraine and the instability of the geopolitical context: the long-term issuance market was completely closed for many days during the first half of the year, leaving only narrow windows of opportunity and accompanied by a general widening of spreads.

Crédit Mutuel Alliance Fédérale's liquidity risk can in particular be assessed through the regulatory short-term LCR ratio (Liquidity Coverage Ratio), which compares highly liquid assets to net liquidity outflows at thirty days in a stress scenario. Crédit Mutuel Alliance Fédérale's average LCR was 153.3% over 2022, representing an average surplus of €45.9 billion over the minimum regulatory requirements. Crédit Mutuel Alliance Fédérale's liquidity reserve consists of deposits with central banks, primarily the European Central Bank, securities and available receivables which are eligible for central bank refinancing. It amounted to €190.0 billion as of December 31, 2022. Illustrating the transformation of an institution at one year, at December 31, 2022, Crédit Mutuel Alliance Fédérale's NSFR (Net Stable Fund Ratio) amounted to 116.1% with a stable surplus of resources of €70 billion.

The loan-to-deposit ratio, or commitment ratio, is an accounting indicator and not a regulatory indicator that complements the series of liquidity indicators. This indicator reached a level of 109.9% as of December 31, 2022.

a. **Crédit Mutuel Alliance Fédérale's access to financing and the costs of this financing could be adversely impacted by sharp downturns in the market, major macroeconomic difficulties, a sudden deterioration in rating or other crisis factors.**

Short-, medium- and long-term market funds are an essential component for financing Crédit Mutuel Alliance Fédérale's business activities. Financing involves the issuance of medium- and long-term debt and short-term negotiable debt instruments (TCN). Guaranteed financing operations such as repurchase agreements are also involved. Thus, if market access and market conditions were to deteriorate significantly, the impacts on the financial sector in general and on Crédit Mutuel Alliance Fédérale in particular could significantly impact the level of its liquidity and the group's financial situation, particularly in terms of profitability.

Although 2022 was marked by volatile and complex markets, Crédit Mutuel Alliance Fédérale completed its entire refinancing program, demonstrating the strength of its credit.

b. **A significant deterioration in BFCM's rating could have a significant impact on Crédit Mutuel Alliance Fédérale's capacity to develop business.**

BFCM is the principal issuer of Crédit Mutuel Alliance Fédérale, and accordingly obtains ratings on behalf of the group. The ratings are based in particular on the review of governance, strategy, quality and diversity of revenue sources, capital adequacy, balance sheet quality and structure, risk management and appetite for risk. BFCM's long-term Senior Preferred ratings at December 31, 2022 are AA- stable for Fitch Ratings, Aa3 stable for Moody's and A+ stable for Standard & Poor's. The latter agency rates the Crédit Mutuel group and its main issuers.

Accordingly, a decrease in these credit ratings could have an impact on the refinancing of Crédit Mutuel Alliance Fédérale. This situation could limit access to refinancing, increase costs through the increase in credit spread, trigger obligations in certain bilateral contracts and collateralized financing agreements, and ultimately diminish the group's ability to expand.

c. **A significant "change/variation" in interest rates could have an adverse impact on customer behavior and affect the level of their bank deposits.**

The low interest rate environment that has prevailed for several years has changed customer behavior and the way customers place their deposits. Thus, in recent years customers have opted to deposit their funds on current accounts rather than deposit accounts (passbook accounts, term deposits, etc.) due to unattractive interest rates. 2022 looks to be pivotal year with the tightening of monetary policies and the return of short-term rates to positive territory.

Accordingly, an increase in interest rates could lead to some volatility in these current account deposits. Customers could decide to invest them or place them in other types of accounts (passbook accounts, term deposits) or in insurance- or asset management-type funds. This potential volatility for deposits could therefore affect the group's liquidity and its loan/deposit ratio. The impact of the rise in interest rates, observed in 2022, is still not very visible on outstanding deposits, particularly in retail banking. The risk remains, even with a time lag.

d. **The increase in the Banque de France's discounts for pledged securities in TRICP- (data processing of private loans, or Traitement Informatique des Créances Privées) – or ACC- (Additional Credit Claims) type refinancing transactions could reduce the level of Crédit Mutuel Alliance Fédérale's liquidity reserve.**

Crédit Mutuel Alliance Fédérale's liquidity reserve is mainly comprised of overnight deposits with central banks, a portfolio of highly liquid securities and eligible collateral with central banks.

This collateral mainly includes loans whose nature, composition and quality allow them to be pledged and to be eligible for financing by the European Central Bank. The Banque de France sets a discount rate for each type of receivable which it can revise upwards or downwards at any time.

The upward change in discounts used for pledged securities in TRICP- (data processing of private loans, or *traitement informatique des créances privées*) – or ACC- (Additional Credit Claims) type refinancing transactions, or a tightening of eligibility criteria, could reduce the level of Crédit Mutuel Alliance Fédérale's liquidity reserve. The announcement in October 2022 of the end of the eligibility of private residential loans, as of June 30, 2023, illustrates this risk perfectly and highlights the need to diversify the liquidity reserve.

5.2.2.2 Interest rate risk

Interest rate risk is defined as the difference in the profit/(loss) of a bank when interest rates vary upwards or downwards. As the value of an institution is directly related to its earnings, changes in interest rates also mean changes in its asset value with an impact on the balance of on- and off balance-sheet items.

After a long period of accommodative policy, accentuated by the exceptional measures related to the Covid pandemic, dominated by the war in Ukraine and the increase in inflation, central banks tightened their monetary policies and scheduled successive increases in their key rates in the 2022 financial year. The yield curves in the United States and the Eurozone also adjusted abruptly to this change in the economic and monetary environment. Recalling that the fight against inflation remains its priority objective, the ECB announced its intention to continue its rate increases in 2023 in view of the published figures (+5.2% inflation in France for the year 2022).

The net present value (NPV) sensitivity of Crédit Mutuel Alliance Fédérale's balance sheet, determined according to six regulatory scenarios, is below the 15% threshold for Common Equity Tier 1 capital. Crédit Mutuel Alliance Fédérale is sensitive to increases in the entire yield curve, with a downward NPV sensitivity of -8.74% relative to Common Equity Tier 1 capital as of December 31, 2022. The sensitivity of net interest income at one and two years is determined according to several scenarios (increase and decrease of rates by 100 bps., increase and decrease of rates by 200 bps. with a floor) and two stress scenarios (flattening/inversion of the yield curve and a stagnation/inflation shock in short and long rates). The "stagflation with alternative backing" scenario is the most unfavorable for Crédit Mutuel Alliance Fédérale with an impact of -37.09% over two years, *i.e.*, -€2,944.69 million as of December 31, 2022.

a. A prolonged low interest rate environment carries risks which could affect Crédit Mutuel Alliance Fédérale's revenues or profitability.

A large portion of Crédit Mutuel Alliance Fédérale's revenues are tied to the net interest margin, which directly impacts the group's profitability. Interest rate fluctuations are caused by a number of factors over which Crédit Mutuel Alliance Fédérale has no control, such as the level of inflation, the monetary policies of Central Banks, including that of the French State, in particular the level of regulated rates (*Livret A, Livret Bleu* passbook savings accounts, etc.). Thus, Crédit Mutuel Alliance Fédérale's revenues and profitability are impacted by the changes in interest rates at different points on the yield curve. The low interest rate environment in the markets for several years has significantly impacted the profitability of banks, including CIC. With the rise in interest rates in 2022, this risk factor is receding.

b. Likewise, a sudden hike in short- and medium/long term interest rates, in particular due to inflation, could have a material adverse effect on Crédit Mutuel Alliance Fédérale's net banking income and its profitability.

The end of a prolonged period of low interest rates, particularly from a tightening of monetary policy, brings risks for the banking sector in general and for Crédit Mutuel Alliance Fédérale in particular. An abrupt rise in these interest rate levels, in particular in relation to an increase in inflation, could have an unfavorable impact on the bank's revenues and profitability. This hike could have a marked impact on the cost of refinancing in the banking sector markets for short- and medium/longterm debt issues. At the same time, Crédit Mutuel Alliance Fédérale may find it difficult to immediately pass on this increase in interest rates to housing loans and other fixed-rate loans granted to individuals and businesses, while the cost of customer deposits would tend to increase more rapidly. Some current non-interest-bearing demand deposits are volatile and might be turned into more costly deposits, term deposits and passbook accounts, for example. A portion of the volatile deposits might also be shifted by investors to off-balance sheet vehicles such as UCITS and life insurance.

The change in interest rates observed in 2022 illustrates this risk, with a squeeze on margins as described. The transfer of deposits to off-balance sheet instruments has not yet been observed, in particular for retail customers.

c. Significant changes in the value of the securities portfolios and derivatives used for hedging purposes may have an adverse impact on Crédit Mutuel Alliance Fédérale's net profit/(loss) and shareholders' equity.

As changes in the value of liquidity portfolio assets are recognized on a fair value basis, either directly in the income statement or through shareholders' equity, any unfavorable change is likely to have a direct or indirect negative impact on shareholders' equity and therefore on profitability, as well as on Crédit Mutuel Alliance Fédérale's prudential ratios.

5.2.2.3 Market risks

This is the risk of loss of value caused by any unfavorable change in market parameters such as interest rates, the prices of securities, exchange rates or commodities prices. Market risk concerns activities of several business lines of the bank, including Capital Markets of CIC Marchés subsidiary, the asset-liability management activity and the asset management business of the group's management companies. The impact of market risk on Insurance is described in risk factor 5.2.1.2, connected to Insurance above.

The potential impact of market risk on the ALM business is described above. The risk associated with asset management is due to the fact that the fees received by this business line vary with the valuation of the funds under management, which is set by markets.

The main risk factors associated with market risks are:

a. **A worsening of economic prospects** would negatively affect the financial markets, which are supposed to reflect the health of issuers of the capital and debt securities that are traded in them.

The valuation of securities would drop and the volatility of the valuations would increase. The effect on the activities of CIC Marchés would therefore be negative.

The volatility of financial markets may have an unfavorable effect and lead to corrections on risky assets and generate losses for the group. In particular, an increase in volatility levels could make it difficult or costly for the group to hedge certain positions.

The investment business line would suffer from adverse financial market conditions to the extent that this business line, in particular with a view to improving the economy, takes a position on increasing stock market valuations and on a better rating quality of debt issuers.

The results of the commercial business line would also be negatively impacted by poor market conditions. Fees from the brokerage business would drop in proportion to the decline in transaction valuations. Similarly, the number of transactions on the primary market (initial public offers, capital increases and debt issues) would drop, which would translate directly into less fees.

b. **Monetary policy**, which has a strong impact on market risks (cf. the section on interest rate risk above). The ECB's accommodative monetary policy *via* its "asset buyback" component supports the valuation of capital instruments (equities) and debt instruments (bonds), which could result in overvaluation.

The market risk to which CIC Marchés division is exposed is weak. The capital allocated to CIC Marchés is €560 million, which represents 1% of Crédit Mutuel Alliance Fédérale's overall regulatory capital, or €57.6 billion. As of December 31, 2022, this amount had been used in the amount of €397.3 million. During the 2022 fiscal year, the historical VaR (one-day, 99%) of the trading book amounted to €7.69 million on average for the group.

After the year 2021, which saw a recovery in equity indices and a tightening of credit spreads in a context of low interest rates, the year 2022, on the other hand, was marked by strong market volatility and macroeconomic uncertainties since the invasion of Ukraine by Russia, leading in particular to a rise in inflation, a widening of spreads, energy prices and a fall in the euro against the dollar. Despite this context, CIC Marchés ended the year with an IFRS NBI of €344.7 million and a profit before tax of €125.9 million (compared with €366.4 million and €135.1 million in 2021 respectively).

5.2.3 Risks related to the group's regulatory environment

5.2.3.1 Risks related to the regulatory and prudential environment

Crédit Mutuel Alliance Fédérale's regulatory environment is described in the dedicated section 2.1.2 Regulatory environment of chapter 2. The group is subject to a a large number of banking regulations, some of which are not reflected in its prudential ratios but could have a significant effect on them. As specified in the risk factor related to credit risk, a large majority of the group's exposures are approved by the supervisor for calculation using the internal risk weighting model. However, the changes in the regulations, known as the Basel III finalisation, will have an unfavourable impact on the calculation of weighted risks and therefore the group's solvency ratio. The probability of this risk occurring is almost certain, but its date of occurrence is still uncertain in the absence, at the end of 2022, of the definitive transposition of the Basel III agreements (CRR 3 – CRDVI). Its impact will depend on the exact methods of transposition of this regulation into national and European law.

a. **A capital floor (also known as the output floor), the purpose of which is to limit the gains in shareholders' equity resulting from internal models**, should be progressively introduced for the calculation of weighted risks in the denominator of the solvency ratio. A large part of the group's exposures are weighted based on internal models, particularly for retail and corporate customers. It is well below the standard weighting for most of them. According to the draft transposition of November 2022, the application of the output floor will be done in progressive steps, starting at 50% of the requirements of the standard model from 2025 and reaching 72.5% in 2030. It will have an unfavorable impact on the solvency ratio. The timetable and the exact methods of application of the output floor will depend on the transposition of this regulatory measure into national and European law.

b. **Finalization of internal model review missions or TRIM** (Targeted Review of Internal Models) conducted by the European Central Bank with European banking institutions **may lead to a deterioration in Crédit Mutuel Alliance Fédérale's CET1 solvency ratio** due to additional requirements on RWAs or additional conservatism on Basel parameters (PD, LGD, CCF). Similarly, the implementation of the ECB's targeted surveys on internal models as part of the implementation of the program IRB Repair of the European Banking Authority may also result in a review of the Basel parameters of the internal models and an increase in risk-weighted assets (RWA). In addition, the new stress test, launched by the EBA starting in 2023, could lead to additional capital requirements under Pillar 2 Guidance.

5.2.3.2 Risks related to the implementation of a resolution system

The regulations give the resolution authority the power to initiate insolvency proceedings in respect of the Crédit Mutuel group if, after applying the measures referred to in Article L.511-31, CNCM, the central body of the group and all its affiliates, is failing, or is likely to fail, with the objective of ensuring critical function continuity, avoiding risks of contagion and recapitalizing or restoring the Crédit Mutuel group's viability. These powers must be implemented in such a way so that losses, subject to certain exceptions, are borne first by the impairment or conversion of capital instruments; then by holders of Additional Tier 1 and Tier 2 capital instruments; holders or subordinated receivables other than those referred to as Additional Tier 1 or Tier 2 capital instruments in paragraph 5 of Article L.613-30-3 of the French Monetary and Financial Code; then by holders of senior non-preferred bonds; and finally by holders of senior preferred bonds, in accordance with the priority order of their claims.

The resolution authority has extensive powers to implement the resolution tools for the Issuer, or the Crédit Mutuel group, which may include the total or partial transfer of business to a third party or to a bridge institution, the separation of the institution's assets, the substitution of the Issuer as debtor in respect of debt instruments, the total or partial impairment of regulatory capital instruments, the dilution of regulatory capital instruments through the issuance of new equity securities, the total or partial impairment or conversion of debt instruments into equity securities, the modification of the terms of debt instruments (including the modification of the maturity and/or the amount of interest payable and/or the temporary suspension of payments), the suspension of the listing and admission to trading of financial instruments, the dismissal of executives or the appointment of a special director.

The Issuer is covered by the Crédit Mutuel group's internal financial solidarity mechanism. Nevertheless, creditors' attention is drawn to the fact that repayment in full of creditors' loans is subject to the risk of the implementation of said financial solidarity mechanism.

Where the emergency plan or the solidarity measures taken are not sufficient to facilitate the recovery of the central body's affiliates, including the Issuer, or if objective evidence suggests in advance that the implementation of any such emergency plan or measures that may be taken by CNCM would prove insufficient to restore compliance with prudential requirements, the resolution of the Crédit Mutuel group will be determined on a collective basis. In fact, the implementation of the solidarity mechanism is accompanied by the merger of Crédit Mutuel group affiliates.

During phases of proven financial difficulty, *i.e.*, when the European Central Bank alerts the Single Resolution Board of the risk of failure ("Failing Or Likely To Fail," or FOLTF principle), of the Crédit Mutuel group determined on a consolidated basis, where the Single Resolution Board declares the Crédit Mutuel group FOLTF, on a consolidated basis, in accordance with Article 18.1 of Regulation (EU) 806/2014, known as the SRMR or, as provided for in the national solidarity mechanism, when the emergency plan or the measures taken by CNCM within the context of this mechanism are not sufficient to facilitate the recovery of a failing group, or if objective evidence suggests in advance that the implementation of any such emergency plan or measures that may be taken by the Confédération would prove insufficient to restore compliance with prudential requirements, CNCM, at the request of the supervisory or resolution authorities, as appropriate, is fully authorized to fulfill the objectives and principles followed by these authorities in relation to solidarity.

During phases of proven financial difficulty or during the resolution phase, there is unlimited solidarity between CNCM affiliates.

The implementation of these means and powers with regard to the Issuer, or the Crédit Mutuel group, may give rise to significant structural modifications.

Should CNCM be required to merge all its affiliates, creditors could find themselves competing with creditors of the same ranking of other CNCM affiliates. After the transfer of all or part of the activities, the creditors, even without any impairment or conversion of their loans, would hold loans in an institution whose remaining businesses or assets may be insufficient to satisfy the claims held by all or some of its creditors.

If CNCM has not merged all its affiliates upon commencement of resolution, the resolution authority may consider other resolution strategies (transfer of business, bridge institution, separation of assets or coordinated "bail-in" of all CNCM affiliates). Should the resolution authority apply a coordinated "bail-in," the liquidity of CNCM affiliates and all capital instruments and eligible liabilities may be used to help offset losses and recapitalize CNCM affiliates. In this event, value reduction measures or the conversion of eligible liabilities would follow the ranking of creditors in a judicial liquidation. The "bail-in" would be based on capital requirements at consolidated level but would be applied on a *pro rata* basis by entity, *i.e.*, the same impairment or conversion rate will be applied to all shareholders and creditors of the same class, irrespective of the issuing legal entity within the network.

Exercising the powers described above may result in losses for investors.

5.2.4 Risks related to the group's business operations

5.2.4.1 Operational risks

In accordance with point 52, Article 4 of Regulation (EU) No. 575/2013, operational risk is defined as the risk of loss or gain resulting from inadequate or failed internal processes, people and systems, or from external events, and includes legal risk. The Order of November 3, 2014 states that operational risk includes risks from events with a low probability of occurrence but a high impact, risks of internal and external fraud as defined in Article 324 of Regulation (EU) No. 575/2013 cited above, and model risks.

The Order of November 3, 2014 describes model risk as the risk of the potential loss an institution may incur as a consequence of decisions that could be principally based on the output of internal models, due to errors in the development, implementation or use of such models.

Operating risk, thus defined, excludes strategic and reputational risks (image).

The main risk factors associated with operational risks are:

a. **Internal and external fraud** organized by people inside and outside the group in order to misappropriate funds or data. External fraud represents the greater risk for the group, notably fraud involving means of payment.

b. **Legal risks** to which the group is exposed and which could have an unfavorable effect on its financial situation and its profit/(loss).

c. **Shortcomings or delays by the group in the full compliance** of its activities with the rules related to financial or banking activities, whether they are of a legislative or regulatory nature, professional and ethical standards, instructions or ethics in professional behavior. The adoption by different countries of multiple and sometimes divergent legal or regulatory requirements exacerbates this risk.

d. **Any failure of, or attack against, the IT systems of the group**, which could cause lost earnings, losses and sporadically weaken the customer protection system.

At the end of 2022, €1.83 billion of shareholders' equity was allocated to cover the losses generated by this risk. Capital requirements amounted to €22.4 billion at the end of December 2022, of which 8.2% in respect of operating risks, *i.e.*, €1,834 million. The main risks of potential claims are (i) external and internal fraud and (ii) risks related to the policy towards customers, products and commercial practices, including legal risk.

The risks with the greatest impact on the proven claims ratio in 2022 were: (i) the policy for customers, products and commercial practices, (ii) fraud (iii) and failures in the processing of transactions or management of relations with commercial counterparties and vendors.

Fraud accounted for 29% of the group's proven claims in 2022, of which 28% for external fraud and 40% of potential claims (the portion relative to capital requirements for operational risks). Crédit Mutuel Alliance Fédérale's overall proven claims experience, excluding any insurance recoveries, where applicable, in 2022 represented about 0.91% of the group's net banking income.

5.2.4.2 Business interruption risk

The unavailability of employees, premises or infrastructure could lead to a partial or complete shutdown of Crédit Mutuel Alliance Fédérale's activity, resulting in a decline in its earnings, depending on the extent of the shutdown. Similarly, the inability of customers to have access to the services offered by Crédit Mutuel Alliance Fédérale would be detrimental to its financial position. Such circumstances would necessarily entail adjustments to the arrangements for continuation of activity, with resulting additional costs.

The highlights of 2022 were as follows:

- in the context of the Covid pandemic, Crédit Mutuel Alliance Fédérale's activities gradually returned to normal and the operational claims have been very low compared to the previous two years;
- in the context of the Russia-Ukraine conflict, the risk of a cyberattack potentially threatening all or part of Crédit Mutuel Alliance Fédérale's activities was continuously monitored and reinforced by dedicated teams. No partial or complete shutdown of activity has been recorded in any area. However, since February 24, 2022, the activities of CIC's representative office in Moscow have ceased;
- In the context of the energy crisis of the winter of 2022-2023, the anticipation of possible load shedding due to insufficient energy supply by energy providers has been taken into account. Without effective implementation.

5.2.4.3 Climate risks

Climate change exposes Crédit Mutuel Alliance Fédérale to:

- physical risks resulting from natural hazards (100-year floods, storms, hurricanes, tornados, typhoons, earthquakes) and/or environmental or accidental risks arising from natural hazards (pollution, dam ruptures, major fires, nuclear catastrophes);
- transition risks that include the risks of transitioning to a low-carbon economy and are sectoral in nature. They are mainly linked to the more or less rapid changes in consumer behavior, business models and the regulatory and tax environment related to climate change.

a. **Crédit Mutuel Alliance Fédérale's business model could be impacted by physical risks resulting in:**

- impairment and destruction of assets, increasing credit risk,
- a drop in the valuation of debt and financial securities increasing market risk,
- an increase in claims and associated insurance damages payments increasing the risk related to insurance activities,
- an increase in claims on the group's infrastructures and/or employees, increasing operational risks.

b. **Crédit Mutuel Alliance Fédérale's business model could be impacted by transition risks resulting in:**

- a loss of customers and drop in profitability of companies with business models which are too carbon-intensive,
- a refinancing cost more dependent on non-financial performance,
- an increase in energy and transportation costs,
- a potential capital surcharge, depending on the carbon taxonomy of the financing and securities in the portfolio.

Crédit Mutuel Alliance Fédérale's sectoral policies make it possible to define a scope of intervention and to set criteria for conducting business in areas where the social and environmental impacts, including climate risks, are the most significant. These policies are applicable CIC-wide and are monitored at Crédit Mutuel Alliance Fédérale level. Monitoring of exposures eligible for sectoral policies, for all corporate, investment and insurance portfolios, provides an initial measurement of the exposures potentially most affected by climate risks. Crédit Mutuel Alliance Fédérale has seven sectoral policies: Coal, Mining, Hydrocarbons, Civilian nuclear energy, Defense and Security, Mobility in the air sector, Maritime and Road sectors and agriculture. As of December 31, 2022, €41.7 billion were eligible for sectoral policies, compared to €36.3 billion as of December 31, 2021, of which €26.7 billion in the corporate portfolio. In this portfolio, the share of exposures related to the Coal & Hydrocarbons sectoral policies amounted to 0.56% and 17.01% respectively. CIC's direct and indirect carbon footprint is included in the data calculated at Crédit Mutuel Alliance Fédérale level. Crédit Mutuel Alliance Fédérale's direct carbon footprint in France, related to the group's energy consumption, refrigerants, vehicle fleet and business travel, decreased by 1% between 2020 and 2021, and the indirect carbon footprint of the financing in the corporate portfolio, measured in tons of CO_2 per million euros lent, decreased by 37% between 2022 and 2021. More information concerning the non-financial performance and climate commitments of Crédit Mutuel Alliance Fédérale and CIC is available in Crédit Mutuel Alliance Fédérale universal registration document in chapter 3 Social and Mutualist Responsibility.

5.3 RISK MANAGEMENT (EU OVA & EU OVB)

5.3.1 Risk profile

Crédit Mutuel Alliance Fédérale is a mutualist bank, not listed for trading, and owned wholly by its members. It is not on the list of Global Systemically Important Financial Institutions (G-SIFIs)[2] as of December 31, 2022. Only the Crédit Mutuel group is listed by the ACPR among the Other Systemically Important Institutions (O-SII)[3] in accordance with Article L.511-41-1 A of the French Monetary and Financial Code.

The Crédit Mutuel Alliance Fédérale's strategy is based on long-term values which promote controlled, sustainable and profitable growth. Retail banking is its core business, as demonstrated by the share of credit risk (90% as of December 31, 2022) in its total capital requirements and the importance of the retail book in its total exposures. Crédit Mutuel Alliance Fédérale operates predominantly in France and in neighboring European countries (Germany, Belgium, Luxembourg, Switzerland and Spain).

The group's approach to risk management is designed around its risk profile, its strategy and the appropriate risk management systems.

(2) The indicators resulting from QISs dedicated to their identification are published in the group's corporate site in a document entitled "Indicateurs de systémicité" (Systemicity Indicators).
(3) The list of O-SII is published on the ACPR site.

5.3.2 Risk appetite

Crédit Mutuel Alliance Fédérale's risk appetite framework evolved from the group's desire to have a general framework setting out its core principles with regard to risk. These result from its mutualist character and its choice of retail bank insurance.

In summary, the aim of Crédit Mutuel Alliance Fédérale's risk tolerance policy is to:

- give Executive Management and the Board of Directors an acceptable level of confidence and comfort as regards the understanding and management of the full range of risks in line with the achievement of the group's objectives;
- be implemented at all levels within the group so as to provide a comprehensive view and enable best practice to be harmonized;
- identify the potential events likely to affect the group and its risk management.

The risk appetite framework provides a coherent framework in which the group's various businesses can develop in accordance with Crédit Mutuel's values. It is intended to promote a strong and proactive culture regarding risk management. It is based on a medium- and long-term view and incorporated into our decision-making processes.

The application of the principles of Crédit Mutuel Alliance Fédérale's risk appetite framework is monitored and overseen by the group risk department, the permanent control and compliance department for the second line of defense and by the general inspection for the third line of defense.

The risk appetite framework policy is taken into account when setting the strategic, financial and marketing objectives to benefit Crédit Mutuel Alliance Fédérale's members and customers.

The risk appetite framework follows from the strategic guidelines set by Executive Management and the Board of Directors. It enables the group to:

- conduct business activities for which it is confident that the risks are adequately understood, controlled and managed;
- aim to achieve a level of profitability within a specified timescale which would not be detrimental to sound risk management;
- present the business lines' and entities' risk profiles with regard to earnings, capital consumption and financing requirements generated;
- identify risks in advance and manage them proactively, always adhering to the company's prudential profile.

Crédit Mutuel Alliance Fédérale has based its risk policy on three main pillars:

- ICAAP (Internal Capital Adequacy Assessment Process): at the conclusion of the risk analysis process, the capital level is deemed to be sufficient to cover the risk exposure. The ICAAP report, prepared in accordance with Confédération Nationale du Crédit Mutuel (CNCM) methodology and the economic capital projections and capital adequacy ratio over a three-year horizon, are updated annually and presented to the Group Risk Committee and the Group Risk Monitoring Committee;
- ILAAP (Internal Liquidity Adequacy Assessment Process): Crédit Mutuel Alliance Fédérale's liquidity risk tolerance policy is extremely cautious, with the aim of guaranteeing the refinancing of its activities over the long term; it is monitored by the control committees, the Monitoring Committees and the operational committees. To identify, measure and manage liquidity risk while meeting the needs of the entities and business lines, the asset-liability management (ALM) and group treasury staff have established management indicators together with warning limits and alert thresholds; the reliability of operating procedures is checked on a regular basis using regulatory and internal stress scenarios;
- a comprehensive limits process: several limits systems cover the majority of activities and all risks, *i.e.*, limits on the following risks: solvency, profitability, interest rate, credit, liquidity, market, operating, IT, non-compliance, climate and environmental.

5.3.3 Risk governance

5.3.3.1 Risk monitoring system

5.3.3.1.1 Risk management function

The risk department of Crédit Mutuel Alliance Fédérale covers the activities of all of its entities, networks, business lines and French and foreign subsidiaries and branches, excluding non-financial activities (press, domotics, etc.). It is responsible for risk management, as defined in the Order of November 3, 2014 concerning the internal control of banking institutions, at the central level of Crédit Mutuel Alliance Fédérale for every organizational unit.

It works closely with the risk department of Confédération Nationale du Crédit Mutuel (CNCM) and with the risk officers appointed in each entity of Crédit Mutuel Alliance Fédérale, pursuant to the procedure defining the role of risk officers.

The risk department is independent of the line managers and is tasked with detecting, measuring and monitoring risks throughout Crédit Mutuel Alliance Fédérale and with reporting to executive governance and supervisory bodies, in particular Executive Management and the

Board of Directors. It forms an integral part of the internal control and risk management system of Crédit Mutuel Alliance Fédérale and relies on the work of the teams from the permanent control and compliance departments, with whom it forms the risk, permanent control and compliance department.

More specifically, the missions and objectives of the risk department are to:

Detect

- Assess the risks, operations, results, level and nature of exposure of Crédit Mutuel Alliance Fédérale and its different components, in order to detect major risks and emerging risks, taken individually and on the global scale.
- Collect and process the risk data concerning all of the activities of Crédit Mutuel Alliance Fédérale in France and abroad.
- Have data collection tools with the level of granularity to measure and analyze the risks of Crédit Mutuel Alliance Fédérale.
- Put in place the information collection and receipt channels required in order to detect Crédit Mutuel Alliance Fédérale's risks, including from stakeholders outside the risk department or even outside the group.
- Identify and analyze emerging risks in respect of the structural or economic contexts of the activities, counterparties, sectors or geographic areas concerned.
- Ensure the good quality of the data produced and disseminated, and the implementation of the regulatory BCBS 239 principles regarding risk data management, aggregation and reporting through the defining and deployment of a data quality management framework.

Measure

- Map all the risks to which Crédit Mutuel Alliance Fédérale is exposed, on the basis of the group's activities and the various risks laid down in the regulations, by coupling this with a system for measuring and assessing the probability and seriousness of risks.
- Produce, in coordination with the risk department of CNCM, a risk map assessing the materiality of each group risk, covering the relevant scope.
- Set up a system to measure risks and track indicators for each category of risks (credit, liquidity, interest rate, market, solvency, operational, non-compliance, IT, Insurance, climate, etc.), in line with the risk appetite of Crédit Mutuel Alliance Fédérale.
- Establish a detection system involving a warning (alert threshold and limit) in the event of a breach of the risk appetite of Crédit Mutuel Alliance Fédérale or one of its entities, and define an associated escalation procedure.

Monitor and control

- Track the activities of Crédit Mutuel Alliance Fédérale involving risk-taking and risk exposures, in respect of the group's risk appetite, the risk limits defined and the ensuing capital or liquidity requirements.
- Monitor Crédit Mutuel Alliance Fédérale's risk appetite and ensure that any overruns of limits are managed in accordance with the escalation procedures in force, including by monitoring the effectiveness of any corrective measures decided to reduce an overrun.
- Ensure that identified risks are effectively monitored, measured and controlled by the operational units and that the risk mitigation measures are properly implemented.
- Ensure that Crédit Mutuel Alliance Fédérale's business is carried out in compliance with the regulations in force in terms of risk management. Where applicable, recommend the necessary changes and monitoring to comply with regulations.

Report and alert

- Produce a risk dashboard at least every three months focused on analyzing the risks that Crédit Mutuel Alliance Fédérale and its different components are exposed to.
- Steer and coordinate the Risk Committees within executive governance (Group Risk Committee) and supervisory (Group Risk Monitoring Committee) bodies.
- Prepare support material, notes and analyses of major or emerging risks for executive governance and supervisory bodies, in particular Executive Management, the Risk Committee and the Board of Directors.
- Notify the executive governance and supervisory bodies, in particular Executive Management, the Risk Committee and the Board of Directors, of all significant risks of which they need to be informed across all Crédit Mutuel Alliance Fédérale entities.
- Alert the executive governance and supervisory bodies, in particular Executive Management, the Risk Committee and the Board of Directors, in the event of malfunctions noted in the context of its risk monitoring mission, in particular when an alert threshold or appetite limit is exceeded or when a major risk or exceptional disaster is identified.
- Advise the executive governance and supervisory bodies, in particular Executive Management, the Risk Committee and the Board of Directors, on the measures to be considered to further manage or reduce the risks of Crédit Mutuel Alliance Fédérale, in line with the group's risk appetite and strategy.

- Take action as often as necessary to guide decisions that may generate significant risks, particularly during the development of a new activity or strategic change, or even call into question decisions that generate excessive risk-taking and that do not comply with the risk appetite defined by Crédit Mutuel Alliance Fédérale.
- Where appropriate, report any risks deemed highly significant to the Board of Directors of CNCM and ultimately to the supervisory authorities.

Governance

- Define and implement, subject to the Board of Directors' scrutiny and approval, the risk governance framework and management policy of Crédit Mutuel Alliance Fédérale, in particular the risk appetite underpinning the group's indicators and risk limits.
- Steer, in conjunction with the CNCM risk department, the annual procedures making up the Supervisory Review and Evaluation Process (SREP) conducted by the ECB, including the risk appetite framework, the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP).
- Draft the various regulatory reports on risks, in particular the risk sections of the annual internal control report (RACI), the risk factors and the Pillar 3 report of the group's universal registration document (URD).
- Manage, in coordination with CNCM's risk department, the operational risk management system, and implement the crisis management system and the appropriate Emergency and Business Continuity Plans (EBCP) for the business activities involved.
- Steer, in coordination with CNCM's risk department, the Crédit Mutuel group's Prevention and Recovery Plan (PRP) and the work concerning the group's resolution in respect of the requests of the Single Resolution Board (SRB).
- Ensure, alongside with the human resources department (HR) and the related governance bodies, that Crédit Mutuel Alliance Fédérale's compensation policy complies with applicable regulations – in particular with regard to the management of compensation for employees known as "risk takers."
- Coordinate the network of risk correspondents responsible, within the various Crédit Mutuel and Alliance Fédérale entities and structures, for measuring, monitoring and controlling risks.
- Ensure, together with the network of risk correspondents, the dissemination of the risk culture throughout Crédit Mutuel Alliance Fédérale, in particular *via* awareness-raising and training on risk topics, as well as the drafting and sharing of best practices in this area.
- Ensure that the risk department has sufficient resources, tools and staff to carry out all of the missions described in the charter. If necessary, issue an alert to the executive governance and supervisory bodies.

Moreover, Executive Management has also tasked the risk department with:

- Handling all relations with supervisory authorities (ECB, ACPR, AMF, BDF, etc.) in France and abroad and coordinating the monitoring of audits, supervisory interviews, questionnaires and specific requests as well as the implementation and fulfilment of the recommendations issued.
- Ensuring an economic and prudential watch over all issues relating to the regulatory environment pertaining to banking and insurance as well as benchmarks concerning the group's positioning in relation to its main competitors' ranking, changes in strategy and results.
- Performing analyses and internal ratings of banks in OECD countries, Covered, Insurance Companies and Local Authorities.
- Defining and implementing Crédit Mutuel Alliance Fédérale's Social and Mutualist Responsibility (SMR) policy, in particular *via* the development of sectoral policies, the drafting of the Non-Financial Performance Statement (NFPS) and the various work on Environmental, Social and Governance (ESG) issues.

5.3.3.1.2 Management of internal control system

Group Risk Monitoring Committee (GRMC)

It is made up of directors representing all the Crédit Mutuel federations that belong to Caisse Fédérale de Crédit Mutuel. In addition to the appointed members, the Chief Executive Officer of Caisse Fédérale de Crédit Mutuel, the Chief Financial Officer of Crédit Mutuel Alliance Fédérale and the head of the risk management function take part on a permanent basis. In agreement with the Chief Executive Officer, the Committee may obtain information from any other Crédit Mutuel Alliance Fédérale employees likely to assist it in the performance of its duties. The Committee, within the limits of its responsibilities, may be assisted by one or more non-voting members and/or advisors, internal or external to the group, and have access to market research.

The GRMC is a specialized committee of the Board of Directors. It assists the supervisory body and issues recommendations aimed at preparing the decisions of the Board of Directors concerning the general risk policy and the risk management thresholds and limits for all entities of Crédit Mutuel Alliance Fédérale. It examines the risks and supervises the work of the risk department and Group Risk Committee (GRC) based on the files and dashboards prepared and presented by the Chief Risk Officer. The Chief Risk Officer prepares the documents, files and performance indicators submitted to the committee for review and leads the meetings. The members of the GRMC have all the sources of information and documentation that they need from the bank auditors, internal and external control staff, the statutory auditors and the finance and risk departments.

The members of the GRMC, assisted by the risk department, report to their respective deliberative bodies on the information and decisions that come out of their meetings. A report detailing the main monitored risk indicators is presented and discussed at each meeting. The summaries of the Risk committee meetings are sent to the secretaries of the Boards of Directors.

The GRMC met eight times in 2022 (January 13, February 3, March 23, April 21, June 22, July 18, September 29 and November 16). These meetings were the subject of minutes and summaries intended for the supervisory bodies of the different federations.

Group Risk Committee (GRC)

It is chaired by the Chief Executive Officer of Crédit Mutuel Alliance Fédérale and is made up of the group's main senior executives and business managers. The GRC helps the executive body to examine the risks associated with all banking and non-banking activities of Crédit Mutuel Alliance Fédérale's consolidated scope.

It issues opinions and recommendations aimed at assisting the executive body concerning the general policy of Crédit Mutuel Alliance Fédérale and its risk management thresholds and limits. It examines the risks to which the group is exposed based on the files and dashboards prepared and presented by the Chief Risk Officer and subsequently examined by the GRMC. This independent oversight is based on standardized, periodic reports (risk dashboard) providing exhaustive information on credit risks, market risks, operational risks, interest rate risks, liquidity risks, non-compliance risks, IT risks, risks related to Social and Mutualist Responsibility and risks related to the group's specialized business lines (insurance, consumer credit, private banking, factoring, etc.).

The GRC met four times in 2022 (March 16, June 16, September 22 and December 16).

5.3.3.2 Risk management and oversight

5.3.3.2.1 Risk management

Credit risk management is organized into two structures: one focusing on the granting of loans and the other on risk measurement and the monitoring of commitments.

A set of commitment guidelines summarizes the internal procedures of the lending arm of Crédit Mutuel Alliance Fédérale in accordance with applicable statutory, organizational and regulatory provisions. In particular, it describes the credit granting system. It contains appendices relating to Capital Markets and the subsidiaries directly concerned.

A set of guidelines for the measurement and monitoring of credit risk summarizes all internal management rules and practices for the proper management of credit risk within the framework of the regulatory, accounting, statutory and organizational requirements applicable within Crédit Mutuel Alliance Fédérale. It particularly describes the procedures for credit risk measurement and monitoring, the management of at-risk items, reporting and communications.

The management of liquidity and interest rate risks of the group's banks is centralized at the level of the BFCM. Hedges are allocated to the entities concerned, in accordance with their needs. They are no longer authorized to make hedging decisions individually.

Overall measurement of market risk is based on the regulatory framework. Capital Markets are monitored in accordance with procedures that are formally recorded and independent in terms of organization and control.

The management of operational risk is performed and controlled in accordance with group procedures, coordinated by dedicated units. In particular, the security of the information systems and the putting in place of business continuity plans form part of the work carried out in this area.

The risk management of the subsidiaries, Crédit Mutuel Alliance Fédérale's business lines, relies on a network of local risk officers within each entity, including internationally. The role of risk officers is to ensure the appropriate risk management for their entity and to disseminate Crédit Mutuel Alliance Fédérale's risk culture to the business units. They report to their management and the risk department as soon as possible on any risks that meet the significance criterion of their entity or that they deem significant in relation to the activities within their scope.

5.3.3.2.2 Risk monitoring

This is carried out by dedicated, independent teams, which have at their disposal tools designed on the one hand to provide a comprehensive aggregate overview of commitments, and on the other, to carry out ongoing monitoring of risk, in particular by means of an advance detection system for anomalies and monitoring of adherence to limits as well as changes in internal ratings.

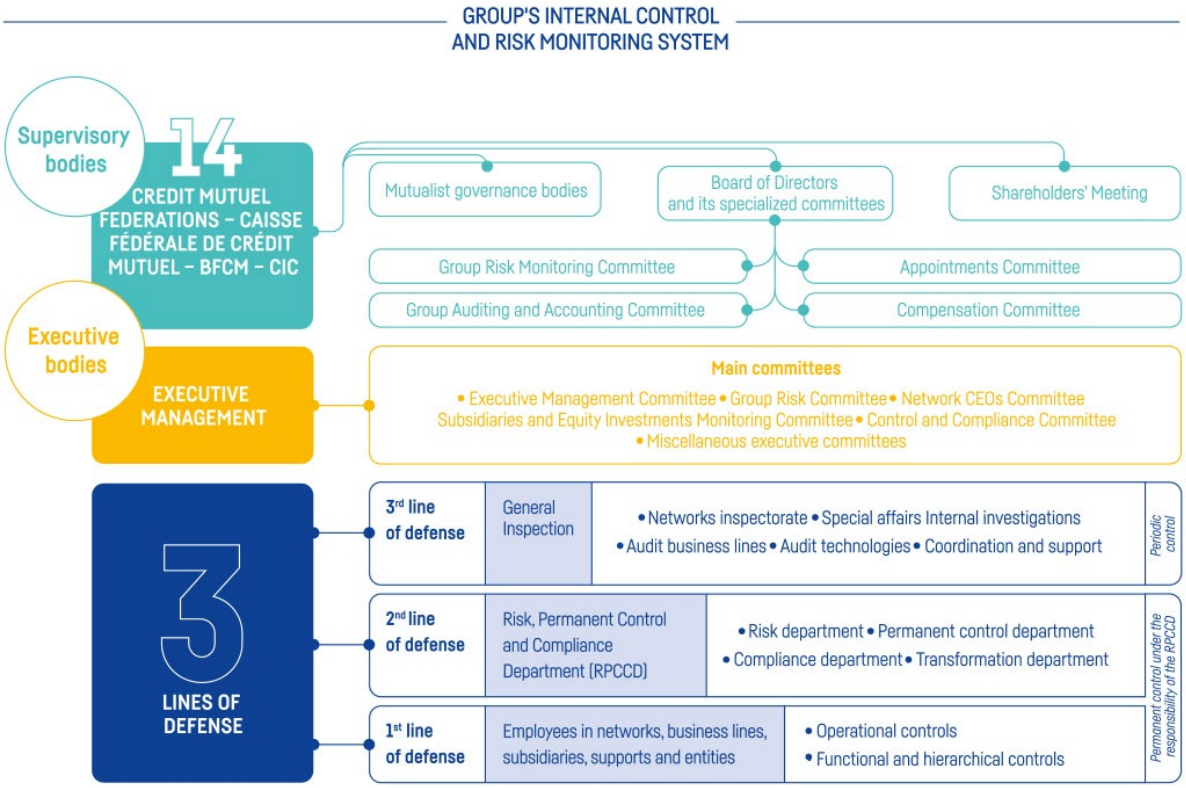
Information for assessing trends in credit, markets, ALM and operational risks is provided regularly to the management bodies and other responsible persons concerned. The risk department is responsible for the general management of the regulatory capital consumed by each activity by reference to the risks incurred and the return obtained.

In this context, it has various regulatory tools used to identify, monitor, control and report on risks: in particular, risk mapping, the risk appetite framework and the system for monitoring alert thresholds and associated limits, the Internal Capital Adequacy Assessment Process (ICAAP) and the Internal Liquidity Adequacy Assessment Process (ILAAP), as well as the preventive recovery plan.

5.3.4 Internal control system

5.3.4.1 General framework

Internal control and risk management are fully integrated into the group's organization with the aim of ensuring compliance with regulatory requirements, proper risk control and operational security, as well as improved performance.



5.3.4.1.1 Regulatory framework

The principles of internal control and risk monitoring and their application methods are governed by various legislative and regulatory provisions, both French and European, supplemented by international professional standards.

In this respect, the main regulatory text applicable to Crédit Mutuel Alliance Fédérale's internal control system is the ministerial Order of November 3, 2014 (amended by the Order of February 25, 2021). This order defines the conditions for the implementation and monitoring of internal control in credit institutions and investment companies and transposes into French regulations the requirements of the European Directive 2013/36/EU dated July 26, 2013 known as the "CRD4 Directive."

5.3.4.1.2 A shared system

In accordance with the provisions of the above-mentioned Order, the group ensures that its internal control system is adapted to its size and operations.

In the same way, it ensures that it is suited to the size of the risks incurred by its activities and that the employees involved in internal control can carry out their work to meet regulatory requirements.

Within the group, the principles governing internal control are reflected in the guidelines issued by Executive Management and rolled out using shared methods and tools that ensure the development of quality standards.

The internal control system is designed in particular to:

- fully cover the full range of the group's banking and insurance operations;
- list, identify, aggregate and track risks on a consolidated basis in a consistent manner;
- communicate clear and reliable information (particularly accounting and financial information), both internally and externally;
- ensure compliance with applicable laws and regulations, internal standards, and instructions and guidelines established by Executive Management;
- ensure the proper operation of internal processes and the safeguarding of assets.

More broadly, the processes in place are aimed at helping to ensure proper control of activities while at the same time improving the effectiveness of processes and organizations.

5.3.4.1.3 A structured system

One of the key purposes of the organization is to ensure the quality and completeness of the internal control system. Both for itself and the businesses it controls, the group ensures that this system is underpinned by a set of procedures and operational limits that match regulatory requirements and applicable internal and professional standards. To ensure the high quality of its internal control system, the group steers a policy of ongoing improvement, which is also designed to adapt it to regulatory developments.

The identification and control of key risks by means of benchmarks, mapping of controls and monitoring of risks using appropriate limits, formal procedures and dedicated tools are constant objectives for the group's internal control and risk management departments. Analytical tools and tracking dashboards make it possible to perform regular reviews of the various risks to which the group is exposed, including counterparty, market, asset-liability management and operational risks. In accordance with regulatory requirements, a report on internal control and on risk measurement and monitoring is prepared each year based on the framework recommended by the *Autorité de contrôle prudentiel et de résolution* (ACPR – French Prudential Supervisory and Resolution Authority) and results from the detailed review of the systems.

5.3.4.1.4 An integrated and independent system

In line with the group's values, the control system put in place is designed to develop a prudent and top-quality risk management culture throughout the group.

Within this framework, the first level of risk management and control is performed by the operational managers, who are responsible for the processes they carry out. As the first level of control, operational management is an integral part of the system with responsibility for preventing risk as well as for putting in place the corrective measures designed to correct and prevent the dysfunctions identified.

The group's entities also have a second level of control, identified within dedicated teams. To ensure the necessary independence of these second-level controls, employees assigned to control tasks have no operational responsibilities and report to the central staff departments, which thereby ensures their independent judgment and assessment.

The central staff departments are responsible for defining, overseeing and coordinating all the local and cross-group systems. They organize and supervise the control work. In addition, they use their expertise and independence to help define standard controls.

5.3.4.2 Organization of the system

The process has a threefold objective:

- to separate the periodic, permanent and compliance controls into distinct functions in accordance with regulatory requirements;
- to standardize internal control work throughout the group by creating an organization based on standardized methods and tools, and on the same principles of complementarity, subsidiarity and independence of controls;
- to have an overall and cross-functional view of risks of all kinds to ensure reliable, regular and comprehensive reporting to Executive Management and to the deliberative body.

5.3.4.2.1 Organization of controls

In accordance with the Order of November 3, 2014 (amended by the Order of February 25, 2021), the system has three functions:

- Periodic control;
- Permanent control;
- Compliance.

The last two functions, which are brought together under a single department (risk, permanent control and compliance department), are subject to control by the former.

The consistency of the overall system is ensured by the Control and Compliance Committee (CCC), chaired by an effective manager. This Committee itself reports to the Group Auditing and Accounting Committee (GAAC), representing the supervisory bodies of Crédit Mutuel Alliance Fédérale.

To perform their functions, the control departments have permanent and unrestricted access to individuals, premises, hardware, software and information of any kind useful to the performance of their work throughout the group.

Breakdown by type of control

Independently of the controls performed by management teams as part of their operating activities, controls are performed by:

- periodic control staff, for audit-based assignments, carried out under an intervention plan over several fiscal years;
- permanent control staff, for all work of a recurring nature using mainly remote applications;

- compliance staff, in particular for the application of regulations and internal and professional standards, including those designed to combat money laundering and financing of terrorism.

The periodic control department is responsible for supervising the overall quality of the internal control system, the effectiveness of risk monitoring and management as well as the sound application of permanent and compliance controls.

Breakdown by business line

The control functions are structured by business line, with teams dedicated to the control of retail banking and other teams dedicated to the control of specialized business lines (corporate banking, Capital Markets, asset management, financial services, cash management, etc.), with managers appointed for both at the Crédit Mutuel Alliance Fédérale level.

A common support unit for the various kinds of control

The periodic control, permanent control and compliance functions are assisted by a common support unit which is responsible for:

- developing the tools and keeping them up to date and in good working order;
- developing the reporting tools required for monitoring control operations and assignments, and centralizing information for the management bodies, at the central and local (regional and subsidiary) levels;
- ensuring that control tools are complementary between the various functions so as to provide optimal cover of group risks.

5.3.4.2.2 Management of internal control system

Group Control and Compliance Committee

The Control and Compliance Committee (CCC) issues opinions, assists and advises the executive body on all matters related to the internal control system comprising the inspectorate and internal audit, permanent control, compliance assurance and risk management functions (in connection with the work of the Group Risk Committee for the latter).

Chaired by the Chief Executive Officer, the Control and Compliance Committee holds regular meetings with the staff responsible for periodic, permanent and compliance controls and risk management, with the following objectives:

- approving the internal audit plans, and any subsequent adjustments to them, and examining the results of the assignments carried out and the critical recommendations issued by the General Inspection department of Crédit Mutuel Alliance Fédérale and Confédération Nationale du Crédit Mutuel;
- reviewing the summaries of the permanent control and compliance works as well as the recommendations and proposed corrective actions;
- analyzing the summary of relations with supervisors, in particular the results of inspections and interviews conducted by the supervisory authorities;
- alerting the executive body of any major failure identified during an internal or external audit, proposing the implementation of corrective measures and ensuring the effective deployment of actions validated by the committee or the executive body;
- monitoring the implementation and closure of recommendations made during internal and external audits;
- ensuring that the actions and missions of the various internal control players complement each other in order to ensure efficiency and overall risk coverage. This complementarity must be implemented through efficient detection, control, monitoring and reporting tools;
- ensuring the adequacy of the internal control system with the regulatory provisions in force, the risk areas identified in the risk mapping and the risk appetite system, as well as with Crédit Mutuel Alliance Fédérale's strategy;
- ensuring the adequacy of the resources and means of the various internal control functions with regard to their missions;
- adopting the changes governing the organization and missions of the internal control functions represented on this committee as well as the associated framework documents;
- validating any new procedure governing the internal control system as well as any major changes made to existing procedures;
- deciding on any action or measure aimed at strengthening the internal control system, in particular seeking external advice;
- more generally, taking note of all the topics put on the agenda by its members in connection with its missions.

The CCC reports on its work to the Group Auditing and Accounting Committee (GAAC).

The Control and Compliance Committee met four times in 2022 (March 1, June 13, September 14 and December 16).

Group Auditing and Accounting Committee

In order to meet regulatory requirements and rules of governance, Crédit Mutuel Alliance Fédérale has an Auditing and Accounting Committee. It is composed of voluntary and independent directors from the mutualist base of the group. Several of its members have particular skills in accounting and finance. Executive Management, the heads of the control departments and the finance department attend meetings. Training seminars help members to keep up to date with new developments.

This committee reviews the internal audit plan:

- is informed of the conclusions of inspections carried out by the periodic control function and of the results of the permanent and compliance controls;

- takes due note of the conclusions of external controls, particularly of any recommendations made by the supervisory authorities;
- is informed of actions carried out to give effect to the main recommendations issued in internal and external control reports;
- assesses the effectiveness of the internal control systems;
- receives up-to-date information on the group's risk position;
- proposes to the various deliberative bodies such improvements as it deems necessary in view of the findings of which it has been made aware.

In the area of financial reports, it:

- is responsible for monitoring the process for preparing financial information;
- examines the annual and consolidated financial statements;
- assesses the manner in which they have been drawn up and satisfies itself as to the appropriateness and consistency of the accounting policies and principles applied;
- participates in the selection of statutory auditors;
- supervises the statutory audit of the accounts.

The Group Auditing and Accounting Committee implements a process of self-assessment of its activities, aimed at improving its operations based on past experiences. The last self-assessment was carried out in November 2022.

The Group Auditing and Accounting Committee met six times in 2022 (February 3, March 24, April 5, July 26, September 26 and December 1). These meetings were the subject of minutes intended for the deliberative bodies of the different federations.

It also examined the annual financial statements for the year ended December 31, 2022 in its meeting of February 2, 2023 and had no major observations to make.

Compensation Committee

In accordance with Articles L.511-89, 102 and 103 of the French Monetary and Financial Code and 104 of the internal control order, Crédit Mutuel Alliance Fédérale has set up a single Compensation Committee, the scope of which extends to all its subsidiaries. It gives its opinions on the proposals made by the Executive Management after consulting the risk, permanent control and compliance department and reviews and approves the compensation policy on an annual basis. This committee also verifies that the principles defined by the deliberative body have been effectively implemented. The Compensation Committee reports regularly on its work to the group's Executive Management.

Group Ethics and Compliance Committee

Created within the scope of consolidation of Crédit Mutuel Alliance Fédérale, this committee has been instrumental in establishing a code of conduct for the group. Each year it draws up a report on the group's implementation of and compliance with ethical principles and the code of conduct.

5.3.4.3 Methods and tools

5.3.4.3.1 Tools

The harmonization of methods and tools for controlling risks was continued. Common tools were developed, which include functionalities dedicated to management.

Periodic control applications

Control assignments are carried out using risk mapping and operational management tools of all kinds, on the basis of common reference systems of control points that are regularly updated. The information required to carry out controls is accessible by consulting the information system applications and decision-making tools.

Software is used for monitoring the implementation of recommendations issued in their audits by the group's various periodic control departments and the supervisory authorities.

Permanent control applications

Permanent controls are performed remotely, essentially by using data from the information system. They supplement the first-level controls which are performed daily by the managers of the operational entities (in particular the managers in the networks of Crédit Mutuel branches and banks) and by regional coordination, support and control functions. They are implemented in the "internal control portals," which structure and plan the various work to be done concerning risk coverage.

The automated detection of cases that raise a "risk alert" according to predetermined malfunction criteria are an essential element in the proper control of credit risk. Other types of controls make it possible to assess the quality of all types of processing. The analysis of the results obtained, carried out during the control reviews ("supervision") also aims to allocate resources or direct the control missions accordingly.

Compliance applications

Work continued on the implementation of systems for legal and regulatory surveillance and monitoring of compliance risk. The compliance function has its own control areas within the "internal control portals" allowing it to check that regulatory requirements are being applied, in particular with regard to business and professional ethics, protecting customers' interests, performing investment services and combating money laundering and the financing of terrorism.

5.3.4.3.2 Procedures

"Framework procedures" have been defined at the level of the group's central control functions in a number of areas. They are posted on the group's intranet and are accessible to all employees on a permanent basis. The control applications refer to them and links have been created to facilitate consultation and use.

5.3.4.4 Accounting data and means of control at the group level

The finance department of Crédit Mutuel Alliance Fédérale is in charge of running the general accounts of the group's main credit institutions and, in this respect, carries out accounting checks.

The preparation of the group's consolidated financial statements and financial communication is also the responsibility of the finance department, which submits them to the Group Auditing and Accounting Committee, then presents them to the deliberative bodies.

5.3.4.4.1 Control of the annual financial statements

The accounting system

The accounting architecture

This is based on an IT platform shared throughout 16 Crédit Mutuel federations and CIC's regional banks, which includes accounting and regulatory functions, in particular for:

- the chart of accounts, the structure of which is identical for all institutions of the same type managed through this platform;
- defining the automated templates and procedures shared by all the banks (means of payment, deposits and credits, day-to-day transactions, etc.);
- reporting tools (RUBA, consolidation software input, etc.) and monitoring tools (management control).

The administration of the common accounting information system is entrusted to the "Accounting Procedures and Systems" division.

The latter is more specifically in charge of:

- managing the shared chart of accounts (creating accounts, defining the characteristics of the accounts, etc.);
- defining shared accounting procedures and systems, in accordance with tax and regulatory requirements; if necessary, the division concerned consults the tax department and the systems are validated by a procedure involving various operational managers.

The "Accounting Procedures and Systems" division is independent, both hierarchically and operationally, from the accounting production services themselves, thus allowing a separation between the functions of design and administration of the accounting architecture and the other operational departments.

Within the group, all accounts are obligatorily allocated to an operational department which is responsible for maintaining and verifying the accounts. The organization and procedures in place make it possible to comply with Article 85 of the Order of November 3, 2014 and to guarantee the existence of the audit trail.

Chart of accounts

This is divided into two broad sections: third-party captions, showing payables and receivables for individual third parties, and the general accounting captions.

Dedicated accounts are used for third party deposits and loans, enabling them to be monitored. For custody of negotiable securities, a "stock" accounting system distinguishes between securities owned by third parties and those owned by the bank.

The chart of accounts for all the credit institutions using the shared IT platform contains unique identifiers and is managed by the "Accounting Procedures and Systems" division.

The chart of accounts defines the following account properties:

- regulatory characteristics (link to the chart of accounts of credit institutions associated with the prudential regulatory statements – PCEC, link to the publishable financial statements item, etc.);
- certain tax aspects (VAT position, etc.);
- management characteristics (whether compulsory or not, link to the consolidated chart of accounts, length of time online transactions are stored, IFRS characteristics, etc.).

Processing tools

Those for the accounting information are essentially based on internal applications prepared by the group's IT services. There are also specialized applications, external or internal, particularly software for producing management reporting, balances or account statements, a utility for processing file requests, software for consolidation, processing regulatory statements and managing capital assets and tax returns.

Procedure for data aggregation

In accordance with the model defined by Crédit Mutuel Alliance Fédérale, accounting data is aggregated for the following entities:

- the group (*e.g.*, CIC);
- the federation made up of one or more banks or other legal entities;
- the bank belonging to a federation. The entire bank (branches and central services) is broken down into counters that constitute the basic unit of the accounting system. It is at this level that accounting entries are recorded.

Accounting consistency of management data

Each branch comprises an external and an internal branch for recording financial accounting data. The first records the general accounts entries and the second records the analytical accounting. At the individual branch level, the figures used for management accounting purposes are obtained by combining the internal and external data. The group result is obtained by adding together the balances of the branches. Links are established between financial accounting captions and the codes attributed to the products marketed by the bank. Cost accounting data are used to determine the results by business segment.

Control methods

Automated controls

A series of automated controls are carried out when accounting records are processed and before transactions are allocated to ensure that records are balanced and valid, and to update the audit trail of the captions affected by the transaction. In-house tools are used to control accounting transactions on a daily basis and to detect any discrepancies.

A dedicated automatic account control application has been in use since 2010 to manage limit amounts for accounting allocation, differentiated by type of account (third party/general accounts), by direction (debit/credit), by IT application code, by entity and by sector of activity within the entity. The tool has two levels of control:

- an alert threshold;
- a maximum amount.

The control applies to real-time or batch processing from all applications which do not require validation of movements according to the "4 eyes" principle. When the alert threshold is exceeded, an Event is sent to the customer relationship manager. When the maximum amount is exceeded, the accounting flow is blocked, which is then diverted to an accrual account and assumes validation according to the "4 eyes" principle before definitive accounts allocation.

In all cases, movements above the alert threshold (automatically when processing files and after forcing for real-time) are logged and archived in the event management system.

Closing process controls

At the time of each closing, the accounting results are compared with the forecast administrative data for validation. The forecast administrative data is prepared by independent divisions of the accounting production departments (management and budgetary control).

This analysis particularly concerns:

- interest margins; for interest rate instruments, including deposits, loans and off-balance-sheet transactions, the management accounting department calculates expected yields and costs based on average historical data. These are then compared with the interest rates actually recognized, for validation business segment by business segment;
- level of fees; based on business volume indicators, the management accounting department estimates the volume of fees received and payable, compared with recognized data;
- general operating expenses (employee benefits expense and other general operating expenses);
- the cost of risk (level of provisioning and recognized losses).

Procedures put in place

Accounting procedures and templates are documented. For the network, procedures are posted on the bank's intranet.

Levels of control

Daily accounting controls are performed by the appropriate employees within each branch.

The accounting control departments also have a general mission covering, in particular, regulatory controls, the monitoring of substantiating documentation for internal accounts and branch identifiers, control of the foreign currency positions, control of NBI per activity, the accounting plans and procedures and the interface between the back offices and the statutory auditors for half-yearly and annual closures.

Furthermore, the control departments (periodic, permanent and compliance) also perform accounting work. A dedicated accounting control portal has been put in place.

Applying controls

Automated accounting controls

An automated daily control procedure based on the bank's daily balance allows the verification of balance sheet and off-balance sheet positions, asset/liability balances by branch and by currency, and the monitoring of technical accounts. This procedure is also applied to the general ledger at the end of each month.

Evidencing the accounts

All the accounts on the balance sheet are justified either by an automated control or by a validation of the account performed by the department responsible for it. Reporting per department ensures that the results of the controls performed are collected.

5.3.4.4.2 Audits of the consolidated financial statements

Accounting policies and principles

Adapting to regulatory developments

The system is periodically updated in line with regulatory developments (IFRS) or to improve the reliability of financial statement preparation.

IFRS compliance

The accounting principles fixed by the IFRS standards have been applied in the group's entities since January 1, 2005. A summary of this is included in the consolidated financial statements.

Foreign subsidiaries apply the principles and methods defined by the group for the transition from local standards to French and international standards in the consolidation packages and their financial reporting.

The annual financial statements prepared in accordance with IFRS are documented in the central information system for the entities using the common information system.

The accounting managers of the various Crédit Mutuel Alliance Fédérale entities meet twice a year to prepare the half-yearly and annual closings.

Annual financial statements in accordance with IFRS are prepared for the relevant entities in the central IT system, using the same organization and team as for those drawn up in accordance with French (CNC) standards.

Reporting and consolidation

Consolidation process

The group uses a consolidation chart of accounts. Within the shared information system, each account in the chart of accounts is linked to the consolidation chart of accounts. This link is unique to each account, with regard to all companies managed under this chart.

The consolidated financial statements are prepared in accordance with a timetable distributed to all the subsidiaries and the statutory auditors, which includes, where applicable, changes in procedures and standards to be incorporated. Each consolidated subsidiary has (i) one person in charge of its closing process and (ii) another in charge of reporting intercompany transactions between fully consolidated companies. In accordance with their professional standards, the statutory auditors for the consolidation also give the statutory auditors of the consolidated companies instructions aimed at ensuring that the subsidiary complies with the various rules.

A dedicated software package, one of the main standard tools on the market, is used to consolidate the accounts. Data input (consolidation packages) is partially automated, using an interface developed on the accounting information system. This system makes it possible to automatically retrieve balances and ensure that company-only and consolidated data are consistent.

Reporting and data control

Companies cannot submit their consolidation package before a number of consistency checks that are programmed into the input software have been carried out. These control checks, established by the consolidation departments, cover a large number of aspects (changes in shareholders' equity, provisions, non-current assets, cash flows, etc.). "Blocking" controls prevent a package from being transmitted by the subsidiary and can only be overridden by the central consolidation departments.

Consistency checks against company-only data are also performed by the consolidation department upon receipt of the consolidation packages (level of results, intermediate balances, etc.). Finally, systematic reconciliation statements between company-only and consolidated data are generated for shareholders' equity and earnings. This process, which ensures consistency in the transition between the statutory and consolidated series, is carried out without using the consolidation software, thus leading to validation of the consolidated data.

Analysis of accounting and financial information

The consolidated financial statements are analyzed compared to the previous fiscal year and compared to the budget and the quarterly accounting and financial reporting. These are organized by themes (cost of risk, progress of outstanding loans and deposits, etc.). The changes observed are corroborated by the departments concerned, such as the lending department and the management control for the various entities.

Each entity's contribution to the consolidated financial statements is also analyzed.

The accounting principles used, which have a significant impact, were first reviewed and validated by the statutory auditors. They are regularly invited to attend meetings of the Board of Directors to approve the financial statements and meetings of the Auditing Committee (see below).

Each time a closing involves the publication of financial data, this information is presented by the finance department to Executive Management and the Board of Directors. This report presents the breakdown of income, the balance sheet position and the current business situation, including the reconciliation of non-accounting data (rates, average capital, etc.).

The accounting work is regularly presented to the Group Auditing and Accounting Committee.

Conclusion

Drawing on common methods and tools, the internal control and risk monitoring mechanism fits into Crédit Mutuel Alliance Fédérale's system of controls, forming a coherent whole, appropriately adapted to the group's different activities in France and internationally. It meets banking and finance regulatory requirements and conforms to the operational principles established by the group. It is our ongoing objective to consolidate and further improve efficiency.

5.4 SCOPE OF REGULATORY FRAMEWORK (EU LIA & EU LIB)

Pursuant to Regulation (EU) No. 575/2013 of the European Parliament and the European Council relative to prudential requirements applicable to credit institutions and investment firms (referred to as the "CRR"), the accounting and prudential entities are the same; only the consolidation method changes.

For Crédit Mutuel Alliance Fédérale, the consolidation method differs primarily for entities involved in the insurance sector, press activities and securitization mutual funds, which are consolidated using the equity method, regardless of the percentage of control.

The differences between Crédit Mutuel Alliance Fédérale's accounting and prudential scopes as of December 31, 2022 are presented in the tables below.

ANC Regulation 2016-09 of December 2, 2016, approved by the Decree of December 26, 2016, requires companies preparing consolidated financial statements under IFRS to publish information on entities not included in the scope of consolidation. Crédit Mutuel Alliance Fédérale excludes certain companies due to their non-material nature. The list of companies is published on the institutional website of Banque Fédérative du Crédit Mutuel (BFCM).

TABLE 3: DIFFERENCES BETWEEN THE ACCOUNTING AND REGULATORY SCOPES OF CONSOLIDATION AND CORRESPONDENCE BETWEEN THE FINANCIAL STATEMENTS AND THE REGULATORY RISK CATEGORIES (EU LI1)

12/31/2022 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Carrying amounts of items: subject to the credit risk framework	subject to the counterparty risk framework[1]	subject to provisions relating to securitization	subject to the market risk framework[1]	not subject to capital requirements or subject to deduction from capital
Assets							
Cash, central banks – Assets	111,929	111,933	111,933	0	0	0	0
Financial assets at fair value through profit or loss	29,264	29,405	6,329	17,449	0	16,032	0
Hedging derivatives – Assets	4,226	4,226	0	4,226	0	0	0
Financial assets at fair value through equity	34,522	34,525	28,305	0	6,200	0	0
Securities at amortized cost	3,436	4,104	3,454	0	0	0	650
Loans and receivables due from credit institutions and similar at amortized cost	57,173	57,209	50,621	5,503	1,085	0	0
Loans and receivables due from customers at amortized cost	502,097	501,830	500,568	1,401	0	0	-139
Revaluation adjustment on rate-hedged books	-6,904	-6,904	0	0	0	0	-6,904
Short-term investments in Insurance and reinsurers' share of technical reserves	122,675	0	0	0	0	0	0
Current tax assets	1,557	1,365	1,365	0	0	0	0
Deferred tax assets	2,237	1,110	1,068	0	0	0	41
Accruals and other assets	9,582	9,596	9,596	0	0	0	0
Non-current assets held for sale	4,986	3,924	3,924	0	0	0	0
Deferred profit-sharing	48	0	0	0	0	0	0
Investments in equity consolidated companies	790	8,042	7,932	0	0	0	110
Investment property	298	298	298	0	0	0	0
Property, plant and equipment and finance leases	4,079	3,818	3,818	0	0	0	0
Intangible assets	740	614	-1	0	0	0	615
Goodwill	2,353	2,226	0	0	0	0	2226
TOTAL ASSETS	**885,087**	**767,321**	**729,210**	**28,580**	**7,304**	**16,032**	**3,400**

(1) Certain items may be subject to capital requirements for counterparty risk and market risk. This concerns derivatives and repurchase agreements.

12/31/2022 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Carrying amounts of items: subject to the credit risk framework	subject to the counterparty risk framework[1]	subject to provisions relating to securitization	subject to the market risk framework[1]	not subject to capital requirements or subject to deduction from capital
Liabilities							
Central banks – Liabilities	44	44	0	0	0	0	44
Financial liabilities at fair value through profit or loss	18,772	18,783	0	16,575	0	18,572	156
Hedging derivatives – Liabilities	2,502	2,502	0	2,502	0	0	0
Liabilities to credit institutions	63,217	63,658	0	7,504	0	0	56,154
Due to customers	456,983	457,192	0	663	0	0	456,529
Debt securities	135,072	140,856	0	0	0	0	140,856
Revaluation adjustment on rate-hedged books	-14	-14	0	0	0	0	-14
Current tax liabilities	684	575	0	0	0	0	575
Deferred tax liabilities	880	508	490	0	0	0	18
Accruals and other liabilities	13,998	12,925	0	0	0	0	12,925
Liabilities on assets held for sale	3,720	3,039	0	0	0	0	3,039
Technical reserves	112,004	0	0	0	0	0	0
Liabilities to credit institutions – JV	6,788	0	0	0	0	0	0
Debt securities – JV	0	0	0	0	0	0	0
Trading derivatives	-6	0	0	0	0	0	0
Liabilities to credit institutions	127	0	0	0	0	0	0
Hedging derivatives – Liabilities	0	0	0	0	0	0	0
Other liabilities	298	0	0	0	0	0	0
Debt securities	0	0	0	0	0	0	0
Subordinated debt issued by insurance companies	911	0	0	0	0	0	0
Provisions for risks and expenses	3,407	2,402	0	0	0	0	2,402
Subordinated debt issued by bank	8,951	8,951	0	0	0	0	8,951
Total shareholders' equity	**56,749**	**55,899**	**0**	**0**	**0**	**0**	**55,899**
Shareholders' equity attributable to the group	55,024	55,024	0	0	0	0	55,024
Share capital and related pay-ins	*8,366*	*8,366*	*0*	*0*	*0*	*0*	*8,366*
Consolidated reserves – Group	*44,002*	*44,001*	*0*	*0*	*0*	*0*	*44,001*
Unrealized gains and (losses) recognized directly in equity – Group	*-672*	*-671*	*0*	*0*	*0*	*0*	*-671*
Net profit/(loss) – Group	*3,329*	*3,229*	*0*	*0*	*0*	*0*	*3,329*
Shareholders' equity – Non-controlling interests	1,725	875	0	0	0	0	875
TOTAL LIABILITIES	885,087	767,321	490	27,244	0	18,272	737,536

(1) Certain items may be subject to capital requirements for counterparty risk and market risk. This concerns derivatives and repos.

The differences between the carrying amounts according to the published financial statements and the carrying amounts on the regulatory scope of consolidation only concern differences in methods between the statutory and regulatory scopes.

TABLE 4: MAIN SOURCES OF DIFFERENCES BETWEEN CARRYING AND REGULATORY AMOUNTS OF EXPOSURE (EU LI2)

12/31/2022 *(in € millions)*	Total	Items subject to: credit risk framework	counterparty risk framework[1]	securitization provision	market risk framework
1 – Carrying amount of assets within the regulatory scope of consolidation	781,206	729,290	28,580	7,304	16,032
2 – Carrying amount of liabilities in the regulatory consolidation (as per Table LI1)	46,306	490	27,244	0	18,572
3 – Net total in the regulatory consolidation	734,900	728,800	1,336	7,304	-2,540
4 – Off-balance sheet commitments	204,989	204,195	-	795	-
– OBO valuation diff	-148,561	-148,561	-	0	-
5 – Valuation diff.	2,449	-	2,449	-	-
6 – Diff. due to differing rules for offsetting other than those already in line 2[2]	17,968	-	9,883	-	8,085
7 – Diff. from the inclusion of provisions	6,941	6,941	-	1	-
8 – Diff. due to prudential filters	0	0	-	-	-
9 – Other	0	0	-	-	-
10 – Differences arising from risk-transferred securitizations	0	0	-	-	-
11 – Other	-1,824	-1823	-	-1	-
12 – REGULATORY AMOUNT OF EXPOSURES	816,862	789,550	13,668	8,099	5,545

(1) The data presented correspond to the net value of the assets and liabilities of derivatives and repurchase agreements.
(2) Net credit balances after offsets are excluded from counterparty risk.

Differences between the net carrying amounts of the regulatory consolidated balance sheet and the regulatory value of exposures relate to off-balance sheet commitments less valuation differences on the carrying amount of off-balance sheet items.

TABLE 5: DESCRIPTION OF THE DIFFERENCES BETWEEN THE SCOPES OF CONSOLIDATION (EU LI3)

Name of the entity/grouping	Accounting consolidation method	Regulatory method: Full consolidation	Proportional consolidation	Equity method	Neither consolidated nor deducted	Deducted	Description of the entity
Groupe des Assurances du Crédit Mutuel[1]	**Full consolidation[2]**			x			**Insurance companies**
Activités de Presse[1]	**Full consolidation[3]**			x			**Other activities**
FCT Crédit Mutuel Factoring	Full consolidation			x			Subsidiaries of the banking network
FCT Factofrance	Full consolidation			x			Subsidiaries of the banking network
LYF SA	Consolidation using the equity method		x				Subsidiaries of the banking network
2SF Société des services fiduciaires	Consolidation using the equity method		x				Other business lines
Euro Automatic Cash	Consolidation using the equity method		x				Other business lines
Euro Protection Surveillance	Full consolidation			x			Other business lines
Lyf SAS	Consolidation using the equity method		x				Other business lines

(1) Detail by entity appears in Appendix 1.
(2) Except ASTREE Assurances, which is equity-accounted.
(3) Except Journal de la Haute-Marne and Lumedia, which are equity-accounted.

Detail by entity of the description of the differences between consolidation scopes is presented in Appendix 1.

TABLE 6: VALUE ADJUSTMENTS FOR CONSERVATIVE VALUATION PURPOSES (EU PV1)

12/31/2022 *(in € millions)* Category AVA	Risk category					Category AVA – Valuation uncertainty			Total Category AVA after diversification	
	Equities	Interest rate	Currency transactions	Credit	Commodities	AVA relating to prepaid credit spreads	AVA relating to investment and financing costs	Total Category AVA after diversification	Of which: Total principal approach in the trading book	Of which: Total principal approach in the banking book
Market price uncertainties	0	3	0	89	0	0	0	46	0	46
Liquidation costs	0	67	1	0	0	32	0	66	0	66
Concentrated positions		0	0	3	0	0	0	3	0	3
Early termination	0	0	0	0	0	0	0	0	0	0
Model-based risk	0		0	0	0	0	0	0	0	0
Operational risk	0	0	0	0	0	0	0	0	0	0
Future administrative expenses	0	0	0	0	0	0	0	0	0	0
TOTAL ADDITIONAL VALUE ADJUSTMENTS (AVA)	0	70	1	92	0	32	0	115	0	115

12/31/2021 *(in € millions)* Category AVA	Risk category					Category AVA – Valuation uncertainty			Total Category AVA after diversification	
	Equities	Interest rate	Currency transactions	Credit	Commodities	AVA relating to prepaid credit spreads	AVA relating to investment and financing costs	Total Category AVA after diversification	Of which: Total principal approach in the trading book	Of which: Total principal approach in the banking book
Market price uncertainties	0	4	0	57	0	0	0	30	0	30
Liquidation costs	0	73	1	0	0	19	0	56	0	56
Concentrated positions		0	0	1	0	0	0	1	0	1
Early termination	0	0	0	0	0	0	0	0	0	0
Model-based risk	0		0	0	0	0	0	0	0	0
Operational risk	0	0	0	0	0	0	0	0	0	0
Future administrative expenses	0	0	0	0	0	0	0	0	0	0
TOTAL ADDITIONAL VALUE ADJUSTMENTS (AVA)	0	77	1	58	0	19	0	88	0	88

5.5 REGULATORY CAPITAL

5.5.1 Composition of regulatory capital

Since January 1, 2014, regulatory capital has been determined in accordance with section 1 of Regulation (EU) No. 575/2013 of the European Parliament and of the Council of June 26, 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 648/2012 (referred to as the “CRR”), supplemented by technical standards (Delegated Regulations and EU implementing regulations of the European Commission).

Capital is the sum of:

- Tier 1 capital: consisting of Common Equity Tier 1 (CET1) capital net of deductions and Additional Tier 1 (AT1) capital net of deductions;
- Tier 2 capital net of deductions.

The European regulations allow credit institutions a transitional period to achieve compliance with these requirements. At December 31, 2022, Crédit Mutuel Alliance Fédérale no longer had any capital items benefiting from transitional clauses.

Tier 1 capital

Common Equity Tier 1 (CET 1) capital consists of share capital instruments and the associated issue premiums, reserves (including those relating to accumulated other comprehensive income) and retained earnings. Total flexibility of the payments is required and the instruments must be perpetual.

Additional Tier 1 (AT1) capital consists of perpetual debt instruments with no incentive or obligation to redeem (in particular step-ups in interest rates).

AT1 instruments are subject to a loss absorption mechanism which is triggered when the CET1 ratio is below a minimum threshold of 5.125%. The instruments can be converted into equity or reduced in nominal value.

Total payment flexibility is required, and coupon payments may be canceled at the issuer’s discretion.

Common Equity Tier 1 capital is determined using the shareholders’ equity carried on the group’s accounting statements, calculated on the regulatory consolidation after applying “prudential filters” and a certain number of regulatory adjustments.

Beginning January 1, 2018, due to the end of the transitional clauses applied to unrealized gains arising from the equity-accounting of investments in associates (excluding securities used as cash flow hedges), those investments are no longer filtered and are now fully incorporated into common equity capital.

Conversely, unrealized gains and losses recognized for accounting purposes directly in equity due to a cash flow hedge and those relating to other financial instruments, including debt instruments, continue to be eliminated.

The other regulatory adjustments to CET1 mainly involve:

- anticipation of dividend distributions;
- deducting goodwill and other intangible assets;
- the negative difference between provisions and expected losses as well as expected losses on equities;
- value adjustments due to requirements for conservative valuation;
- deferred tax assets that rely on future profitability and do not arise from temporary differences net of related tax liabilities;
- gains or losses recorded by the institution on liabilities measured at fair value and that result from changes in the institution’s credit standing;
- gains and losses at fair value on derivatives recognized as liabilities on the institution’s statement of financial position and that result from changes in the institution’s credit standing;
- amounts to be deducted due to insufficient hedging of non-performing exposures;
- the deduction of IPC FRU and FGDR.

At Crédit Mutuel Alliance Fédérale level, we have not applied any transitional measures introduced by the “quick fix” regulations aimed at mitigating the effects of the Covid-19 crisis on IFRS 9 provisions at the closing date of December 2021.

The exemption from the deduction on the net value of intangible assets for software amortized over three years provided for in the CRR2 framework has been applied.

Tier 2 capital

Tier 2 capital consists of subordinated debt instruments with a minimum maturity of five years. Incentives for early redemption are prohibited.

The amount of "eligible capital" is more limited. This concept is used to calculate large exposure thresholds and non-financial investments weighted at 1,250%. This is the sum of:

- Tier 1 capital; and
- Tier 2 capital, capped at 1/3 of Tier 1 capital

TABLE 7: DETAILED INFORMATION ABOUT CAPITAL (EU CC1)

	(in € millions)	12/31/2022	12/31/2021	Source based on reference numbers/ letters of the balance sheet according to the regulatory scope of consolidation (EU CC2)
COMMON EQUITY TIER 1 (CET1) CAPITAL: INSTRUMENTS AND RESERVES				
1	Capital instruments and related issue premium accounts	8,266	6,899	3
	of which: Shares	*8,266*	*6,899*	-
	of which: Issue premiums	*0*	*0*	-
2	Retained earnings	43,348	40,208	4
3	Accumulated other comprehensive income (and other reserves)	-18	-204	-
3a	Funds for general banking risks	-	-	-
4	Amount of qualifying items referred to in Art. 484 (3) and related share premium accounts subject to gradual exclusion from CET1	-	-	-
5	Non-controlling interests eligible for CET1	260	230	5
5a	Intermediate profits, net of any foreseeable expense and distribution of dividends, subject to independent control	3,167	3,177	4
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	**55,023**	**50,310**	**-**
COMMON EQUITY TIER 1 (CET1) CAPITAL: REGULATORY ADJUSTMENTS				
7	Additional value adjustments (negative amount)	-115	-88	-
8	Intangible assets (net of related tax liabilities) (negative amount)	-2,840	-3,630	1
9	Empty value set in the EU	-	-	-
10	Deferred tax assets that rely on future profits, excluding those arising from temporary differences (net of related tax liabilities when the conditions in Art. 38 (3) are met) (negative amount)	-23	-25	-
11	Fair value reserves related to gains and losses on cash flow hedges	-19	-2	-
12	Negative amounts resulting from the calculation of expected losses	-226	-238	-
13	Any increase in equity resulting from securitized assets (negative amount)	-	-	-
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-2	-2	-
15	Defined benefit pension fund assets (negative amount)	-	-	-
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-	-	-
17	Direct, indirect and synthetic holdings of the CET1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to artificially inflate the own funds of the institution (negative amount)	-	-	-
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	-	-	-
19	Direct, indirect and synthetic holdings by the institution of CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	-	-	-
20	Empty value set in the EU	-	-	-
20a	Exposure amount of the following items which qualify for a risk weight of 1,250%, where the institution opts for the deduction alternative	0	0	-
20b	*of which qualifying holdings outside the financial sector (negative amount)*	-	-	-
20c	*of which securitization positions (negative amount)*	*0*	*0*	-
20d	*of which free deliveries (negative amount)*	-	-	-
21	Deferred tax assets arising from temporary differences (amount above the 10% threshold, net of related tax liabilities when the conditions in Art. 38 (3) are met) (negative amount)	-	-	-
22	Amount exceeding the 17.65% threshold (negative amount)	-	-	-
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*	-	-	-
24	Empty value set in the EU	-	-	-
25	*of which deferred tax assets arising from temporary differences*	-	-	-
25a	Losses for the current fiscal year (negative amount)	-	-	-
25b	Foreseeable tax charges relating to CET1 items (negative amount)	-	-	-
26	Empty value set in the EU	-	-	-
27	Qualifying AT1 deductions that exceed the AT1 capital of the institution (negative amount)	-	-	-

27a	Other regulatory adjustments	-910	-329	-
28	**Total regulatory adjustments to Common Equity Tier (CET 1) capital**	**-4,134**	**-4,314**	**-**
29	**Common Equity Tier 1 (CET 1) capital**	**50,888**	**45,996**	**-**
ADDITIONAL TIER 1 (AT1) CAPITAL: INSTRUMENTS				
30	Capital instruments and related issue premium accounts	-	-	2
31	*of which classified as equity under the applicable accounting basis*	-	-	-
32	*of which: classified as liabilities under the applicable accounting basis*	-	-	-
33	Amount of qualifying items referred to in Art. 484 (4) and related issue premium accounts subject to gradual exclusion from AT1	-	216	2
33a	Amount of qualifying items referred to in Art. 494a (1) of the CRR, gradually excluded from AT1	-		-
33b	Amount of qualifying items referred to in Art. 494b (1) of the CRR, gradually excluded from AT1	-		-
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including non-controlling interests not included in line 5) issued by subsidiaries and held by third parties	50	44	-
35	*of which instruments issued by subsidiaries subject to gradual exclusion*	-	-	-
36	**Additional Tier 1 (AT1) capital before regulatory adjustments**	**50**	**260**	**-**
ADDITIONAL TIER 1 (AT1) CAPITAL: REGULATORY ADJUSTMENTS				
37	Direct and indirect holdings by an institution of own AT1 instruments (negative amount)	-	-	-
38	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to artificially inflate the institution's own funds (negative amount)	-	-	-
39	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	-	-	-
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above the 10% threshold and net of eligible short positions) (negative amount)	-	-	-
41	Empty value set in the EU	-	-	-
42	Qualifying T2 deductions that exceed the T2 capital of the institution (negative amount)	-	-	-
43	**Total regulatory adjustments to Additional Tier 1 (AT1) capital**	**-**	**-**	**-**
44	**Additional Tier 1 (AT1) capital**	**50**	**260**	**-**
45	**Tier 1 capital (T1 = CET1 + AT1)**	**50,938**	**46,257**	**-**
ADDITIONAL TIER 2 (T2) CAPITAL: INSTRUMENTS AND PROVISIONS				
46	Capital instruments and related issue premium accounts	6,913	7,019	2
47	Amount of qualifying items referred to in Art. 484 (5) and related issue premium accounts subject to gradual exclusion from T2	-	-	2
47a	Amount of qualifying items referred to in Art. 494a (2) of the CRR, gradually excluded from AT1	-		-
47b	Amount of qualifying items referred to in Art. 494b (2) of the CRR, gradually excluded from AT1	-		-
48	Qualifying capital instruments included in consolidated T2 capital (including non-controlling interests and AT1 instruments not included in line 5) issued by subsidiaries and held by third parties	67	59	-
49	*of which instruments issued by subsidiaries subject to gradual exclusion*	-	-	-
50	Credit risk adjustments	315	653	-
51	Tier 2 capital before regulatory adjustments	7,295	7,731	-
ADDITIONAL TIER 2 (T2) CAPITAL: INSTRUMENTS AND PROVISIONS				
52	Direct and indirect holdings by an institution of T2 own instruments and subordinated loans (negative amount)	-10	-10	-
53	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to artificially inflate the own funds of the institution (negative amount)	-	-	-
54	Direct holdings by the institution 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 the threshold of 10% net of eligible short positions) (negative amount)	-	-	-
54a	*Empty value set in the EU*	-	-	-
55	Direct 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)	-650	-515	-
56	Regulatory adjustments applied to Tier 2 capital in respect of amounts subject to pre-CRR treatment and transitional treatments subject to gradual exclusion as prescribed in Regulation (EU) No. 575/2013 (*i.e.*, CRR residual amounts)	-	-217	-
56a	Acceptable deductions of qualifying liabilities that exceed the institution's qualifying liability items (negative amount)	-	-	-
56b	Other regulatory adjustments to T2 capital	-	-	-
57	Total regulatory adjustments to Tier 2 (T2) capital	-660	-742	-
58	Tier 2 (T2) capital	6,635	6,989	-
59	Total capital (TC = T1 + T2)	57,573	53,246	-
60	Total risk-weighted assets	279,961	245,095	-
CAPITAL RATIOS AND BUFFERS				

61	Common Equity Tier 1 capital (as a percentage of total risk exposure amount)	18.18%	18.77%	-
62	Tier 1 capital (as a percentage of total risk exposure amount)	18.19%	18.87%	-
63	Total capital (as a percentage of total risk exposure amount)	20.56%	21.72%	-
64	Institution-specific buffer requirement (CET1 requirement in accordance with Art. 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus the systemically important institution, expressed as a percentage of risk exposure amount)	2.54%	2.51%	-
65	*of which capital conservation buffer requirement*	*2.50%*	*2.50%*	-
66	*of which countercyclical buffer requirement*	*0.04%*	*0.01%*	-
67	*of which systemic risk buffer requirement*	*0.00%*	*0.00%*	-
67a	*of which global systemically important institution (G-SII) or other systemically important institution (O-SII) buffer*	*0.00%*	*0.00%*	-
67b	*of which additional capital requirements to address risks other than the risk of excessive leverage*	*1.50%*	*1.50%*	-
68	Common Equity Tier 1 capital available to meet buffer requirements (as a percentage of risk exposure amount)	13.68%	14.27%	-
LOWER LIMITS TO THRESHOLDS FOR DEDUCTION (BEFORE WEIGHTING)				
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 the 10% threshold and net of eligible short positions)	319	310	-
73	Direct and indirect holdings of the capital of financial sector entities where the institution has a significant investment in those entities (amount below the 10% threshold and net of eligible short positions)	1,668	1,481	-
75	Deferred tax assets arising from temporary differences (amount below the 10% threshold, net of related tax liabilities when the conditions in Art. 38 (3) are met)	593	785	-
UPPER LIMITS APPLICABLE FOR INCLUSION OF PROVISIONS IN TIER 2 CAPITAL				
76	Credit risk adjustments included in T2 in respect of exposures subject to standardized approach (prior to the application of the cap)	-	-	-
77	Cap on inclusion of credit risk adjustments in T2 under standardized approach	924	736	-
78	Credit risk adjustments included in T2 in respect of exposures subject to the internal ratings approach (prior to the application of the cap)	315	696	-
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	761	653	-
EQUITY INSTRUMENTS SUBJECT TO PROGRESSIVE EXCLUSION (APPLICABLE BETWEEN JANUARY 1, 2014 AND JANUARY 1, 2022 ONLY)				
80	Current cap applicable to CET1 instruments subject to gradual exclusion	-	-	-
81	Amount excluded from CET1 due to cap (cap excess after redemptions and maturities)	-	-	-
82	Current cap applicable to AT1 instruments subject to gradual exclusion	-	216	-
83	Amount excluded from AT1 due to cap (cap excess after redemptions and maturities)	-	-767	-
84	Current cap applicable to AT2 instruments subject to gradual exclusion	-	9	-
85	Amount excluded from AT2 due to cap (cap excess after redemptions and maturities)	-	-	-

The principal characteristics of capital instruments in the format of Appendix 8 to EU Implementing Regulation No. 2021/637 of March 15, 2021 are presented in Appendix 2 (EU CCA).

TABLE 8: RECONCILIATION BETWEEN THE CONSOLIDATED ACCOUNTING BALANCE SHEET AND THE PRUDENTIAL BALANCE SHEET (EU CC2)

12/31/2022 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Reference with the regulatory capital table (EU CC1)
ASSETS			
Cash, central banks – Assets	111,929	111,933	-
Financial assets at fair value through profit or loss	29,264	29,405	-
Hedging derivatives – Assets	4,226	4,226	-
Financial assets at fair value through equity	34,522	34,525	-
Securities at amortized cost	3,436	4,104	-
Loans and receivables due from credit institutions and similar at amortized cost	57,173	57,209	-
Loans and receivables due from customers at amortized cost	502,097	501,830	-
Revaluation difference on rate-hedged books	-6,904	-6,904	-
Short-term investments in Insurance and reinsurers' share of technical reserves	122,675	0	-
Current tax assets	1,557	1,365	-
Deferred tax assets	2,237	1,110	-
Accruals and other assets	9,582	9,596	-
Non-current assets held for sale	4,986	3,924	-
Deferred profit-sharing	48	0	-
Investments in equity consolidated companies	790	8,042	-
Investment property	298	298	-
Property, plant and equipment and finance leases	4,079	3,818	-
Intangible assets	740	614	1
Goodwill	2,353	2,226	1
TOTAL ASSETS	885,087	767,321	-

12/31/2022 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Reference with the regulatory capital table (EU CC1)
LIABILITIES			
Central banks – Liabilities	44	44	-
Financial liabilities at fair value through profit or loss	18,772	18,783	-
Hedging derivatives – Liabilities	2,502	2,502	-
Liabilities to credit institutions	63,217	63,658	-
Due to customers	456,983	457,192	-
Debt securities	135,072	140,856	2
Revaluation difference on rate-hedged books	-14	-14	-
Current tax liabilities	684	575	-
Deferred tax liabilities	880	508	-
Accruals and other liabilities	13,998	12,925	-
Liabilities on assets held for sale	3,720	3,039	-
Technical reserves and other insurance liabilities	112,004	0	-
Provisions for risks and expenses	3,407	2,402	-
Subordinated debt issued by bank	8,951	8,951	2
Total shareholders' equity	**56,749**	**55,899**	**-**
Shareholders' equity attributable to the group	55,024	55,024	-
Share capital and related pay-ins	*8,366*	*8,366*	*3*
Consolidated reserves – Group	*44,002*	*44,001*	*4*
Unrealized gains and (losses) recognized directly in equity – Group	*-672*	*-671*	*-*
Net profit/(loss) – Group	*3,329*	*3,329*	*4*
Shareholders' equity – Non-controlling interests	1,725	875	5
TOTAL LIABILITIES	885,087	767,321	-

12/31/2021 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Reference with the regulatory capital table (EU CC1)
ASSETS			
Cash, central banks – Assets	121,181	121,181	-
Financial assets at fair value through profit or loss	22,356	22,484	-
Hedging derivatives. – Assets	1,293	1,293	-
Financial assets at fair value through equity	32,095	32,098	-
Securities at amortized cost	3,674	3,674	-
Loans and receivables due from credit institutions and similar at amortized cost	60,915	60,946	-
Loans and receivables due from customers at amortized cost	444,825	445,256	-
Revaluation difference on rate-hedged books	1,083	1,083	-
Short-term investments in Insurance and reinsurers' share of technical reserves	135,552	0	-
Current tax assets	1,249	1,099	-
Deferred tax assets	1,774	1,244	-
Accruals and other assets	9,496	9,307	-
Non-current assets held for sale	107	1,077	-
Deferred profit-sharing	-	-	-
Investments in equity consolidated companies	533	8,595	-
Investment property	61	61	-
Property, plant and equipment and finance leases	3,832	3,535	-
Intangible assets	740	604	1
Goodwill	3,140	2,984	1
TOTAL ASSETS	843,906	716,521	-

12/31/2021 *(in € millions)*	Carrying amounts as per the published financial statements	Carrying amounts under the regulatory consolidation	Reference with the regulatory capital table (EU CC1)
LIABILITIES			
Central banks – Liabilities	605	605	-
Financial liabilities at fair value through profit or loss	12,080	12,109	-
Hedging derivatives – Liabilities	1,874	1,874	-
Liabilities to credit institutions	71,755	71,962	-
Due to customers	425,197	425,815	-
Debt securities	121,116	127,596	2
Revaluation difference on rate-hedged books	13	13	-
Current tax liabilities	774	659	-
Deferred tax liabilities	1,126	435	-
Accruals and other liabilities	12,783	12,253	-
Liabilities on assets held for sale	-	970	-
Technical reserves and other insurance liabilities	131,424	-	-
Provisions for risks and expenses	3,894	2,964	-
Subordinated debt issued by bank	8,054	8,054	2
Total shareholders' equity	**53,211**	**51,214**	-
Shareholders' equity attributable to the group	50,152	50,152	-
Share capital and related pay-ins	*6,905*	*6,905*	*3*
Consolidated reserves – Group	*38,904*	*38,904*	*4*
Unrealized gains and (losses) recognized directly in equity – Group	*1,100*	*1,100*	-
Net profit/(loss) – Group	*3,243*	*3,243*	*4*
Shareholders' equity – Non-controlling interests	3,059	1,062	5
TOTAL LIABILITIES	843,906	716,521	-

5.5.2 Capital requirements

TABLE 9: OVERVIEW OF RWAS – MINIMUM CAPITAL REQUIREMENTS (EU OV1)

		RWAs (Risk-weighted assets)		Minimum capital requirements
	(in € millions)	12/31/2022	12/31/2021	12/31/2022
1	**Credit risk (excl. counterparty risk – CCR)**	**244,382**	**211,008**	**19,551**
2	of which standard approach	73,017	60,281	5,841
3	of which IRB simple approach (F-IRB)	54,855	14,380	4,388
4	of which referencing approach	9,259	-	741
5	of which equities under the simple weighting method	36,550	38,334	2,924
6	of which advanced IRB approach (A-IRB)	70,701	98,013	5,656
7	**Counterparty credit risk (CCR)**	**2,896**	**3,084**	**232**
8	of which standard approach	2,021	2,526	162
9	of which internal model method (IMM)	-	-	-
10	of which exposure on a CCP	27	-	2
11	of which credit valuation adjustment – CVA	405	85	32
12	of which other RCCs	443	473	35
13	**Settlement risk**	**0**	**0**	**0**
14	**Securitization exposure in the banking book**	**1,641**	**1,413**	**131**
15	of which SEC-IRBA approach	-	-	-
16	of which SEC-IRBA approach	-	-	-
17	of which standard approach	1,641	1,413	131
18	of which 1,250%/deduction	-	-	-
19	**Market risk**	**2,463**	**3,277**	**197**
20	of which standard approach	2,463	3,277	197
21	of which internal model-based approaches (IMM)	-	-	-
22	**Major risks**	-	-	-
23	**Operational risk**	**22,927**	**20,649**	**1,834**
24	of which base indicator approach	1,904	1,854	152
25	of which standard approach	999	742	80
26	of which advanced measurement approach	20,024	18,053	1,602
27	**Amounts less than deduction thresholds (subject to 250% risk weighting)**	**5,653**	**5,664**	**452**
28	**Floor adjustment**	-	-	-
29	TOTAL	279,961	245,095	22,397

5.6 PRUDENTIAL INDICATORS

5.6.1 Solvency ratio

Crédit Mutuel Alliance Fédérale's solvency ratios as of December 31, 2022, after consolidation of net profit/(loss) after estimated dividend distribution, are presented in the following table.

TABLE 10: SOLVENCY RATIOS

(in € millions)	12/31/2022	12/31/2021
COMMON EQUITY TIER 1 (CET1) CAPITAL	**50,888**	**45,996**
Capital	8,266	6,899
Eligible reserves before adjustments	46,515	43,411
Deductions from Common Equity Tier 1 capital	-3,892	-4,314
ADDITIONAL TIER 1 (AT1) CAPITAL	**50**	**260**
TIER 2 (T2) CAPITAL	**6,635**	**6,989**
TOTAL REGULATORY CAPITAL	57,573	53,246
Risk-weighted assets for credit risk	254,572	220,696
Risk-weighted assets for market risk	2,463	3,750
Risk-weighted assets for operational risk	22,927	20,649
TOTAL RISK-WEIGHTED ASSETS	279,961	245,095
SOLVENCY RATIOS – Transitional method		
Common Equity T1 (CET1) ratio	18.2%	18.8%
Tier 1 ratio	18.2%	18.9%
Overall ratio	20.6%	21.7%

Under the CRR[4], the total capital requirement is set at 8% of Risk-Weighted Assets (or RWAs).

In addition to the minimum CET1 requirement, Crédit Mutuel Alliance Fédérale has since January 1, 2016 gradually become subject to extra capital requirements which take the form of:

- a capital conservation buffer, mandatory for all institutions equal to 2.5% of risk-weighted assets at January 1, 2020;
- a countercyclical capital buffer specific to each institution.

The countercyclical buffer, established in case of excessive credit growth (notably a deviation from the loans-to-NBI ratio), applies nationally when so decided by a designated authority and, because of reciprocity agreements, covers the exposures located in that country regardless of the nationality of the bank. In France, the countercyclical capital buffer rate is set by the French Financial Stability Board (*Haut Conseil de stabilité financière* – HCSF).

As of April 7, 2023, the HSCF has set the countercyclical capital buffer rate at 0.5% for exposures in France. Following the decision of December 27, 2022, HSCF decided to raise the requirement to 1.0% for exposures in France from January 2, 2024.

Note the following changes:

- increase in the German CCC to 0.75% from February 1, 2023;
- increase in the Czech Republic's CCC to 2% from January 1, 2023 then 2.5% on April 1, 2023;
- increase in Slovakia's CCC to 1.5% from August 1, 2023;
- increase in Hungary's CCC to 0.5% from July 1, 2023.

As of January 1, 2019, the mandatory recognition of countercyclical capital buffer rates set in other countries is capped at 2.5%. Any ratios above that must be explicitly recognized by the HSCF.

Some countries have implemented systemic risk buffers (general or sectoral), and these new buffers will have a small impact on the group.

Crédit Mutuel Alliance Fédérale's specific countercyclical capital buffer ratio is calculated as the weighted average of countercyclical buffer ratios applied in the countries where the group's relevant credit exposures are located.

Crédit Mutuel Alliance Fédérale is not subject to the O-SII (Other Systemically Important Institutions) buffer, which applies solely at the national consolidated level.

(4) CRR: part 3/title 1/chapter 1/section 1/Article 92.

TABLE 11: AMOUNT OF COUNTERCYCLICAL CAPITAL BUFFER SPECIFIC TO THE INSTITUTION (EU CCY-B2)

(in € millions)	12/31/2022	12/31/2021
010 Total risk-weighted assets	279,961	245,095
020 Countercyclical buffer ratio specific to the institution	0.0368%	0.0138%
030 Required countercyclical buffer specific to the institution	103	34

TABLE 12: GEOGRAPHICAL BREAKDOWN OF RELEVANT CREDIT EXPOSURES FOR THE CALCULATION OF COUNTERCYCLICAL CAPITAL BUFFER (EU CCY-B1)

	12/31/2022												
	General credit exposures		Relevant credit exposures – market risk				Capital requirements						
(in € millions)	Value at risk using standard approach	Value at risk using IRB approach	Sum of long and short positions of trading book exposures for the standard approach	Value of trading book exposures using internal models	Securitization exposures. Value at risk for the non-trading book	Total exposure value	Relevant credit risk exposures – credit risk	Relevant credit exposures – credit risk	Relevant credit exposures – securitization positions in the trading book	Total	Risk-weighted exposure amounts	Weighting of capital requirements *(in %)*	Countercyclical buffer ratio *(as a %)*
Luxembourg	4,922	2,268	0	0	75	7,265	422	0	1	423	5,286	2.15%	0.5%
United Kingdom	1,475	3,021	0	0	344	4,840	277	0	13	290	3,623	1.47%	1.0%
Hong Kong	27	1,571	0	0	0	1,598	58	0	0	58	731	0.30%	1.0%
Sweden	144	1,089	0	0	0	1,233	58	0	0	58	725	0.30%	1.0%
Norway	72	579	0	0	0	651	11	0	0	11	142	0.06%	2.0%
Czech Republic	334	9	0	0	0	343	23	0	0	23	291	0.12%	1.5%
Slovakia	287	2	0	0	0	289	18	0	0	18	221	0.09%	1.0%
Denmark	125	78	0	0	0	203	13	0	0	13	159	0.06%	2.0%
Romania	94	5	0	0	0	100	7	0	0	7	86	0.03%	0.5%
Bulgaria	11	1	0	0	0	12	1	0	0	1	10	0.00%	1.0%
Estonia	7	0	0	0	0	7	1	0	0	1	7	0.00%	1.0%
Iceland	3	0	0	0	0	4	0	0	0	0	3	0.00%	2.0%

	12/31/2021												
	General credit exposures		Relevant credit exposures – market risk				Capital requirements						
(in € millions)	Value at risk using standard approach	Value at risk using IRB approach	Sum of long and short positions of trading book exposures for the standard approach	Value of trading book exposures using internal models	Securitization exposures. Value at risk for the non-trading book	Total exposure value	Relevant credit risk exposures – credit risk	Relevant credit exposures – credit risk	Relevant credit exposures – securitization positions in the trading book	Total	Risk-weighted exposure amounts	Weighting of capital requirements *(in %)*	Countercyclical buffer ratio *(as a %)*
Luxembourg	4,026	1,893	0	0	11	5,929	312	0	0	312	3,903	1.84%	0.50%
Hong Kong	37	1,082	0	0	0	1,119	49	0	0	49	607	0.29%	1.00%
Norway	40	558	0	0	0	598	9	0	0	9	111	0.05%	1.00%
Czech Republic	266	11	0	0	0	277	18	0	0	18	231	0.11%	0.50%
Slovakia	185	2	0	0	0	186	11	0	0	11	139	0.07%	1.00%
Bulgaria	7	1	0	0	0	8	0	0	0		6	0.00%	0.50%

5.6.2 Major risks

Banks must measure and limit their exposures to a single recipient, customer or group of customers.

Article 395 of Regulation (EU) No. 575/2013 of June 26, 2013 states that net outstandings to a single recipient may not be greater than 25% of the bank's capital.

Article 392 of Regulation (EU) No. 575/2013 of June 26, 2013 states that gross outstandings to a single recipient greater than 10% of the bank's capital must be reported as a major risk.

Crédit Mutuel Alliance Fédérale does not have a large gross outstanding with a single recipient[5] (customer or customer group) reaching the threshold of 10% or 5% of the bank's shareholders' equity.

TABLE 13: MAJOR RISKS

CORPORATES

Customer risk concentration	12/31/2022	12/31/2021
COMMITMENTS IN EXCESS OF €300 MILLION		
Number of counterparty groups	75	59
Total commitments *(in € millions)*, of which	47,201	37,288
Total balance sheet *(in € millions)*	18,851	12,917
Total off-balance sheet guarantee and financing uses *(in € millions)*	28,350	24,371
COMMITMENTS IN EXCESS OF €100 MILLION		
Number of counterparty groups	254	229
Total commitments *(in € millions)*, of which	73,314	63,710
Total balance sheet *(in € millions)*	33,193	26,477
Total off-balance sheet guarantee and financing uses *(in € millions)*	40,121	37,233

Source: "Major Risks" declaration across Crédit Mutuel Alliance Fédérale. Net exposures after exemptions and consideration of credit risk mitigation techniques. Commitments: weighted assets on balance sheet + off-balance sheet guarantees & financing.

Public administrations, central banks and intra-group exposures are not considered to be single "customer" recipients.

BANKS

Customer risk concentration	12/31/2022	12/31/2021
COMMITMENTS IN EXCESS OF €300 MILLION		
Number of counterparty groups	14	8
Total commitments *(in € millions)*, of which	6,816	53,318
Total balance sheet total *(in € millions)*	5,837	50,578
Total off-balance sheet guarantee and financing uses *(in € millions)*	979	2,740
COMMITMENTS IN EXCESS OF €100 MILLION		
Number of counterparty groups	44	23
Total commitments *(in € millions)*, of which	9,714	55,942
Balance sheet total *(in € millions)*	8,160	52,386
Total off-balance sheet guarantees and financing uses *(in € millions)*	1,555	3,556

Source: "Major Risks" declaration across Crédit Mutuel Alliance Fédérale. Net exposures after exemptions and consideration of credit risk mitigation techniques. Commitments: weighted assets on balance sheet + off-balance sheet guarantees & financing.

Public administrations, central banks and intra-group exposures are not considered to be single "customer" recipients.

Article 400 paragraph 2k, published in the OJEU on March 30, 2022, allows the exemption of exposures in the form of a security or guarantee for residential real estate loans, provided by an eligible protection provider.

As a result, the commitments of the Crédit Logement counterparty group are exempt and lead to a significant decrease at December 31, 2022.

5.6.3 Supplementary supervision of financial conglomerates

Crédit Mutuel Alliance Fédérale is one of the financial conglomerates supervised by the SGACPR. The financial conglomerate activity is carried out through Groupe des Assurances du Crédit Mutuel (GACM), a subsidiary of Crédit Mutuel Alliance Fédérale. This subsidiary markets a broad line of life insurance, personal insurance, property & casualty insurance and liability insurance, the great majority of it through the banking networks of the Crédit Mutuel group.

As a dispensation from Articles 36 and 43 of the CRR and in accordance with Article 49 of that regulation, the SGACPR (*Secrétariat général de l'Autorité de contrôle prudentiel et de résolution* – General Secretariat of the French Prudential Supervisory and Resolution Authority) has authorized the group not to deduct capital instruments in insurance industry entities from its Common Equity Tier 1 capital but to adopt the

(5) Public administrations, central banks and intra-group exposures are not considered to be single "customer" recipients.

so-called weighted average exposure method, which consists of weighting the securities held in the group's subsidiary insurance entities in the denominator of the solvency ratio.

Consequently, and in accordance with the Order of November 3, 2014, the group is further subject to an extra requirement in terms of capital adequacy by using so-called accounting consolidation per the IFRS.

Thus, the insurance entities fully consolidated for accounting purposes are also fully consolidated for regulatory purposes in calculating the extra requirement.

This supplementary supervision of the conglomeration has three aspects:

- calculating the extra requirement in terms of capital adequacy;
- tracking the concentration of risks by recipient;
- auditing intra-segment transactions, with detail provided for transactions over a certain threshold.

The first aspect, concerning the extra capital adequacy requirement, makes it possible to check annually the coverage by conglomerate's consolidated accounting equity (including the regulatory adjustments and transitional arrangements found in the CRR) of the solvency requirements for both the banking and insurance segments.

The conglomerate's minimum capital requirement is 100%, calculated as follows:

$$\text{Conglomerate Ratio} = \frac{\text{Total shareholders' equity of the conglomerate}}{\text{Banking requirements + Insurance requirements}}$$

At December 31, 2022, the group's conglomerate had a capital requirement coverage ratio of 175% (181% in 2021) after inclusion of earnings net of dividends.

The second aspect, concerning concentration of risks per recipient on a consolidated basis, consists of reporting the accumulated gross risks on a single recipient greater than 10% of the conglomerate's consolidated equity or than €300 million, with at least the ten largest risks in institutions and the ten largest risks in unregulated financial entities. The banking and insurance segments are kept separate with respect to each recipient.

Crédit Mutuel Alliance Fédérale does not have any gross outstandings with a single recipient[6] (customer or customer group) reaching the threshold of 10% of the conglomerate's capital.

The last aspect, concerning the audit of intra-group transactions, requires a summary plus detail by type of transaction between the conglomerate's banking and insurance segments with respect to refinancing, off-balance sheet commitments and income exchanged.

TABLE 14: NON-DEDUCTIBLE HOLDINGS IN INSURANCE COMPANIES (EU INS1)

(in € millions)	12/31/2022	12/31/2021
Holdings of capital instruments of a financial sector entity where the institution has a significant investment not deducted from own funds (before risk-weighting)	7,329	8,094
TOTAL RWAS	27,118	29,949

TABLE 15: TIER 2 CAPITAL INSTRUMENT ISSUED BY A FINANCIAL SECTOR ENTITY DEDUCTED FROM CAPITAL (EU INS1)

(in € millions)	12/31/2022	12/31/2021
Holdings of capital instruments of a financial sector entity where the institution has a significant investment deducted from own funds	650	500

TABLE 16: FINANCIAL CONGLOMERATES – INFORMATION ON CAPITAL AND EXPOSURES USED FOR THE LEVERAGE RATIO (EU INS 2)

(in € millions and as a percentage)	12/31/2022	12/31/2021
Additional capital requirements for the financial conglomerate *(amount)*	36,286	33,334
Financial conglomerate capital adequacy ratio *(in %)*	174.7%	181.0%

(6) Public administrations, central banks, intra-group exposures and other exempt customers are not considered to be single "customer" recipients.

5.6.4 Leverage ratio (EU LRA)

The procedures for managing excessive leverage risk have been validated by Caisse Fédérale de Crédit Mutuel's Board of Directors and concern the following points:

- the leverage ratio is one of the key indicators of solvency, and monitoring it is the responsibility of the Risk Committees of Crédit Mutuel Alliance Fédérale;
- an internal limit has been defined at Crédit Mutuel Alliance Fédérale level;
- if the limit set by the supervisory body is breached, a specific procedure has been laid out, involving Executive Management of the group in question and the Boards of Directors of the group and of Caisse Fédérale de Crédit Mutuel.

TABLE 17: LEVERAGE RATIO – JOINT STATEMENT (EU LR2-LRCOM)

		Leverage ratio exposures under the CRR	
(in € millions)		12/31/2022	12/31/2021
ON-BALANCE SHEET EXPOSURES (EXCLUDING DERIVATIVES AND SFTS)			
1	Balance sheet items (excluding derivatives, SFTs and fiduciary assets, including collateral)[1]	748,769	697,834
2	Addition of the amount of collateral provided for derivatives, when collateral is deducted from balance sheet assets in accordance with the applicable accounting framework	0	0
3	(Deduction of receivables recognized as assets for cash margin call adjustments provided under derivative transactions)	-407	-1,659
4	(Adjustment for securities received as part of securities financing transactions that are recognized as assets)	0	0
5	(Adjustment for general credit risk of balance sheet items)	0	0
6	(Amounts of assets deducted when determining Tier 1 capital)	-226	-238
7	**Total balance sheet exposures (excluding derivatives, SFTs and fiduciary assets)**	**748,136**	**695,937**
DERIVATIVES EXPOSURES			
8	Replacement cost of all derivative transactions (net of cash margin call adjustments)	1,756	1,441
EU-8a	Derogation for derivatives: contribution of replacement costs under the simplified standardized approach	0	0
9	Mark-up amounts for potential future exposure associated with SA-CCR derivative transactions	2,449	2,988
EU-9a	Derogation for derivatives: contribution of potential future exposure under the simplified standardized approach	0	0
EU-9b	Exposure determined by applying the initial exposure method	148	166
10	(CCP leg exempted from client-cleared trade exposures – SA CCR)	0	0
EU-10a	(CCP leg exempted from client-cleared trade exposures – simplified standardized approach)	0	0
EU-10b	(CCP leg exempted from client-cleared trade exposures – initial exposure method)	0	0
11	Effective notional amount adjusted for credit derivatives sold	6,972	5,428
12	(Adjusted effective notional differences and deductions from mark-ups for credit derivatives sold)	-3,146	-3,212
13	**Total derivative exposures**	**8,179**	**6,811**
SFT EXPOSURES			
14	Gross SFT assets (excluding netting) after adjustment for transactions recognized as sales	14	10
15	(Net value of cash payables and receivables of gross SFT assets)	12,535	8,274
16	Counterparty risk exposure for SFTs	0	0
EU-16a	Derogation for SFTs: exposure to counterparty risk in accordance with Article 429e (5) and Article 222 of the CRR	0	0
17	Exposures when the institution acts as agent	0	0
EU-17a	(CCP leg exempted from client-cleared SFTs)	0	0
18	**Total exposures from securities financing transactions**	**12,549**	**8,284**
OTHER OFF-BALANCE SHEET EXPOSURES			
19	Off-balance sheet exposures in gross notional amount	138,937	127,399
20	(Adjustments for conversion to credit equivalent amounts)	-86,580	-79,953
21	(General provisions deducted when determining Tier 1 capital and specific provisions associated with off-balance sheet exposures)	0	0
22	**Total other off-balance sheet exposures**	**52,357**	**47,445**
EXPOSURES EXEMPTED UNDER ARTICLE 429 (7) AND (14) OF REGULATION (EU) NO. 575/2013 (ON-BALANCE SHEET AND OFF-BALANCE SHEET EXPOSURES)			
EU-22a	(Exposures excluded from the total exposure measure pursuant to Article 429a (1) (c) of the CRR)	-11,518	-17,143
EU-22b	(Exposures exempted under Article 429a (1) (j) of the CRR – on- and off-balance sheet)	-38,252	-134,724
EU-22k	**Total exempted exposures**	**-49,769**	**-151,867**
CAPITAL AND TOTAL EXPOSURE MEASUREMENT			

23	**Tier 1 capital**	**50,938**	**46,257**
24	**Total exposure measurement**	**771,452**	**606,610**
LEVERAGE RATIO			
25	Leverage ratio *(as a %)*	6.6%	7.6%
EU-25a	Leverage ratio *(as a %)* excluding the impact of any applicable temporary exemption of central bank reserves	6.6%	6.5%
26	Minimum leverage ratio regulatory requirement *(as a %)*	3.0%	3.3%
EU-26a	Additional capital requirements to address the risk of excessive leverage *(as a %)*	0.0%	0.0%
EU-26b	Of which: to be constituted with CET1 capital	0.0%	0.0%
27	Leverage ratio buffer requirement *(as a %)*	0.0%	0.0%
EU-27a	Overall leverage ratio requirement *(as a %)*	3.0%	3.3%
CHOICE OF TRANSITIONAL ARRANGEMENTS AND RELEVANT EXPOSURES			
EU-27b	Transitional arrangements chosen to define the measurement of capital	n/a	Yes
PUBLICATION OF AVERAGE VALUES			
28	Average daily values of gross SFT assets, after adjustment for transactions recognized as sales and net of related cash payables and receivables	20,361	15,913
29	Quarterly value of gross SFT assets, adjusted for transactions recognized as sales and net of related cash payables and receivables	12,549	8,283
30	Total exposure measure (including the impact of any applicable temporary exemption from central bank reserves) incorporating the average values of gross SFT assets on line 28 (after adjustment for transactions recognized as sales and net of amounts in cash payables and receivables)	779,264	614,240
30a	Total exposure measure (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating the average values of gross SFT assets on line 28 (after adjustment for transactions recognized as sales and net of amounts in cash payables and receivables)	779,264	716,939
31	Leverage ratio (including the impact of any applicable temporary exemption from central bank reserves) incorporating the average values of gross SFT assets on line 28 (after adjustment for transactions recognized as sales and net of amounts in cash payables and receivables)	6.5%	7.5%
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating the average values of gross SFT assets on line 28 (after adjustment for transactions recognized as sales and net of amounts in cash payables and receivables)	6.5%	6.5%

(1) Repurchase agreements and lending/borrowing securities transactions.

TABLE 18: SUMMARY OF RECONCILIATION BETWEEN ACCOUNTING ASSETS AND EXPOSURES FOR LEVERAGE RATIO PURPOSES (EU LR1-LRSUM)

(in € millions)		12/31/2022	12/31/2021
1	**Total assets under the reported financial statements[1]**	**885,087**	**843,906**
2	Adjustment for entities consolidated from an accounting point of view but not within the scope of prudential consolidation	-117,766	-127,385
3	(Adjustment for securitized exposures that meet significant risk transfer requirements)	0	0
4	(Adjustment for temporary exemption of exposures to central banks)	0	-102,700
5	(Adjustment for fiduciary assets recognized on the balance sheet in accordance with the applicable accounting framework but excluded from the total exposure measure under Article 429a (1) (i) of the CRR)	0	0
6	Adjustment for normalized purchases and sales of financial assets recognized at the trade date	0	0
7	Adjustment for qualifying centralized cash management system transactions	0	0
8	Adjustment for derivative financial instruments	-3,071	1,629
9	Adjustment for securities financing transactions (SFT)	-1,026	8,274
10	Adjustment for off-balance sheet items (resulting from the translation of off-balance sheet exposures into credit equivalent amounts)	52,357	47,445
11	(Adjustment for valuation adjustments for prudent valuation purposes and specific and general provisions deducted from Tier 1 capital)	0	0
EU-11a	(Adjustment for exposures excluded from the total exposure measure pursuant to Article 429a (1) (c) of the CRR)	-11,518	-17,143
EU-11b	(Adjustment for exposures excluded from the total exposure measure pursuant to Article 429a (1) (j) of the CRR)	-38,252	-32,024
12	Other adjustments	5,639	-15,392
13	TOTAL LEVERAGE RATIO EXPOSURE	771,452	606,610

(1) The total amount of the asset is presented in accordance with accounting standards.

TABLE 19: BREAKDOWN OF EXPOSURES ON THE BALANCE SHEET – EXCLUDING DERIVATIVES, SFTS AND EXEMPT EXPOSURES (EU LR3-LRSPL)

(in € millions)	12/31/2022 Leverage ratio exposures under the CRR	12/31/2021 Leverage ratio exposures under the CRR
EU-1 – TOTAL BALANCE SHEET EXPOSURES[1] OF WHICH:	702,129	544,688
EU-2 – Trading book exposures	10,318	9,508
Eu-3 – Banking book exposures, of which:	691,811	535,180
EU-4 – Secured bonds	4,859	4,583
EU-5 – Exposures treated as sovereigns	149,011	55,882
EU-6 – Exposures to regional governments, multilateral development banks, international organizations and public sector entities not treated as sovereign	5,474	4,364
EU-7 – Institutions	15,090	14,803
EU-8 – Secured by real estate property mortgages	218,630	187,084
EU-9 – Retail exposures	156,967	141,866
EU-10 – Corporate exposures	104,108	92,530
EU-11 – Exposures in default	6,657	5,355
EU–12 – Other exposures (equities, securitizations and other assets unrelated to credit exposures)	31,014	28,711

(1) Excluding derivatives, temporary sales of securities and exempt exposures.

5.7 CAPITAL ADEQUACY (EU OVC)

Pillar 2 establishes a prudential supervision process based on a structured dialogue between banking supervisors and financial institutions. As such, it reinforces Pillar 1, encompasses all risks potentially impacting the institution's solvency and helps to strengthen the identification, qualification, aggregation and monitoring of risks.

5.7.1 Governance and approach

The ICAAP is a key component of the solvency robustness analysis carried out by the bank and the European supervision under the second pillar of the Basel regulations. It consists of an assessment by the bank, according to its own methodologies, of the adequacy of the level of its capital with regard to its activity, all its current and future risks and its appetite for these risks. In order to deploy the ICAAP process and ensure its sound governance (in accordance with Principle 1 of the ECB ICAAP Guide), the Crédit Mutuel group has defined a general ICAAP system[7], validated by the CNCM Board of Directors, which applies to all levels of the Crédit Mutuel group and sets out the roles and responsibilities of the parties involved in the system, as well as its relationship with the Crédit Mutuel group's other operational systems.

The ICAAP approach combines two mutually complementary approaches: the normative, or regulatory, approach and the economic approach. The two approaches consider the risks to which a credit institution is exposed and its capital adequacy from different perspectives:

- the normative approach aims to ensure that the bank is able to meet the capital requirements imposed on it at all times under Pillar 1 and Pillar 2. To do this, the group projects its regulatory ratios over a three-year period according to different scenarios (central and adverse) taking into account all the effects of these scenarios on future ratios (effect on the income statement and shareholders' equity, change in RWAs, etc.). Under this approach, the impacts measured therefore relate to accounting and prudential figures and not to the group's economic value. The results are included in the three-year forecasts of regulatory capital and risks, in the central scenario and under stress conditions. The prospective stresses applied to the forecasts are based on severe but plausible macro-economic scenarios, taking into account the group's main vulnerabilities and the current economic context; The results of the implementation of ICAAP stress tests on the key solvency indicators (particularly on earnings, capital, weighted risks, and *in fine*, the three-year solvency ratios) are the main basis of the capital adequacy report for the normative approach view;
- the economic approach is based on the measurement of economic capital, which is the measure, using internal methodologies that take into account economic value considerations, of the capital requirements necessary to meet the risks faced by the group. As indicated in the ECB Guide to the ICAAP, economic capital adequacy requires that the institution's level of internal capital be sufficient to cover its risks and support its strategy at all times. The assessment of the institution should cover all categories of risks that could have a significant impact on its level of capital according to an economic approach. At the level of Crédit Mutuel Alliance Fédérale, the measurement of economic capital requirements to be allocated to risks is based primarily on methods consistent with those used to calculate regulatory capital requirements under Pillar 1, supplemented by approaches based on stress scenarios. The consistency of the methodologies for calculating economic allocations applied within Crédit Mutuel Alliance Fédérale, required by the ECB through principle 6.8 of the ECB Guide on the internal capital adequacy assessment process (ICAAP) is ensured as follows:
- the institution bases the severity of the stress as much as possible on known history (example: the 2008-2009 crisis), or on situations of possible extreme stress on the risk examined,
- it relies on this severity to build forward-looking scenarios in line with the Pillar 1 methodology applied to similar risks (in particular to determine the confidence intervals of the VaRs used, where applicable).

In general, and in keeping with its very low risk appetite, the methodologies developed are robust and based on a high level of conservatism, at least equivalent to that used in Pillar 1 models. The assessment of the economic capital requirements to cover identified risks is thus primarily based on the internal models developed for the calculation of regulatory capital requirements (whether approved or not).

The latter:

- are included identically when they incorporate a stress logic. This is the case for the models developed for operating and market risks,
- when this is not the case, the models for measuring regulatory capital requirements are stressed based on the historical data series available to Crédit Mutuel Alliance Fédérale and *via* methodologies calibrated on the basis of its risk appetite and from a forward-looking perspective: this is the case for the approach adopted for credit risks,
- in all cases, the outstandings measured using internal models are compared with the regulatory capital requirements declared to the supervisor, which may be measured in the standard way if the models used have not been approved.

For risks covered by the Internal Capital Adequacy Assessment Process (ICAAP) and for which there is no specific capital requirement under Pillar 1, the economic capital requirement is assessed either by extending the models used in Pillar 1 beyond the regulatory perimeter (as is the case for CVA, for example), or on the basis of the difference between a stress situation and a central scenario (such is the case for interest rate risks or sovereign spread risks).

(7) General national ICAAP system, CNCM risk department, September 2022.

By analogy with the risk aggregation method in Pillar 1, the results obtained risk by risk are added together (EBA/GL/2016/10, section 6.2, §31.d), without taking into account any mitigating effect (such as diversification) in order to arrive at an overall economic capital requirement, compared to the projected prudential capital stock over the envisaged timeframe. Economic capital requirements are the same as regulatory capital requirements (top quality, since they mainly consist of CET1 and reserves). When the economic assessment of stresses affects the value of the capital, the economic capital is equal to the difference between the regulatory capital and the impact of the stress on the capital, in accordance with Principle 5§68 of the ECB Guide to the internal capital adequacy assessment process (ICAAP). Each year, Crédit Mutuel Alliance Fédérale rolls out its capital adequacy assessment process according to the general national ICAAP system.

This approach is based on:

- firstly, the identification of risks and the associated risk appetite;
- secondly, the assessment of the capacity to absorb these risks on an ongoing basis through regulatory capital requirements;
- and thirdly, the determination of the economic capital to be allocated in order to face these risks;
- in order to ensure an appropriate capital structure at all times.

Following this process, Crédit Mutuel Alliance Fédérale ensures that the regulatory ratio trajectories (in the central and adverse scenarios) are in line with the alert thresholds and limits set by the Board of Directors. The economic trajectory is also compared to the normative trajectory. This comparison serves as a guide to calibrate appetite: the difference between the economic ratio and the normative ratio confirms the relevance of the level of the management buffer used.

The results cover the consolidated scope of Crédit Mutuel Alliance Fédérale, and the subsidiaries adapt them to their own scope. The defining of specific methodologies (particularly for areas with risks which are specific to an entity or a business line) is also requested where justified, in transparency with the national risk management bodies.

5.7.2 Stress scenarios

The stress tests are an integral part of the risk management system put in place by Crédit Mutuel Alliance Fédérale. They consist in simulating severe but plausible forward-looking scenarios (economic, financial, political, regulatory) in order to measure the bank's ability to withstand such situations. In accordance with regulatory requirements, and in line with its risk mapping, the Crédit Mutuel group has built a graduated stress test program (see EBA/GL/2018/04 Art. 48). The first level of stress severity feeds the ICAAP and ILAAP systems. This system is supplemented by stresses of greater severity as part of the recovery plan as well as by reverse stress tests (not plausible to date). The stress tests are deployed in proportion to the nature, size and complexity of the business and the risk. The stress test system is presented in a dedicated governance framework entitled "Operation of the Crédit Mutuel group's stress tests system," which is part of the ICAAP documentary database in which Crédit Mutuel Alliance Fédérale is a member.

The ICAAP normative approach aims to ensure that the bank is able to meet, at all times, all legal requirements and prudential demands concerning capital (Pillar 1 and Pillar 2) and other internal and external constraints in this area. In this context, the bank must define, in addition to the central scenario, adverse scenarios covering a prospective horizon of at least three years. The adverse scenario combines assumed adverse developments of internal and external factors and aims to assess the resilience of the bank's capital adequacy in case of adverse developments in the medium term. The assumed changes in these factors must be combined in a consistent, severe but plausible manner and reflect the risks and vulnerabilities considered to represent the most relevant threats for the bank.

In the context of this ICAAP exercise, taking into account the assessment of its risk profile, its main vulnerabilities and the macroeconomic conditions, Crédit Mutuel Alliance Fédérale has adopted an adverse scenario of the "stagflation" type. This scenario results in stressed macroeconomic forecasts whose severity is assessed on the basis of a comparison with the forecasts of the central scenario. At December 31, 2022, the adverse scenario combines:

- in 2023 and 2024: continued high inflation, recession and increase in unemployment; then from 2025, inflation at the target level of 2%, a return to positive growth and a slow decline in the unemployment rate;
- a rate hike guided by the ECB's need to contain this inflation;
- shocks on the financial markets (equity indices and corporate and sovereign spreads) in response to this economic shock.

This adverse scenario takes into account, on the one hand, the economic and health events observed in 2022, and on the other hand a prospective analysis. The underlying assumption of the scenario is also that governments remain supportive despite everything. The stress scenario applies to the global scope, following a conglomerate approach, and impacts all the material risk factors for Crédit Mutuel Alliance Fédérale detailed below:

- credit risk: deterioration of the macroeconomic situation, directly impacting business investment, household consumption, as well as the quality of loans;
- interest rate risk: flattening of the yield curve;

- market risk: financial market dislocation;
- insurance risk: adjustment of rates paid on policies in euros (life insurance), increase in claims due to one-off weather events (non-life insurance).

This stressed scenario is applied to the interest margin, commissions, other items of NBI, general operating expenses, cost of risk, credit RWAs and Insurance. The stress test methodology is applied taking into account the risk mapping, notably by analyzing the relevance of enriching the common foundation with specific scenarios related to vulnerabilities specific to the subsidiaries. In accordance with the regulatory requirements (EBA/GL/2018/04 Art. 84), Crédit Mutuel Alliance Fédérale also conducts reverse stress tests within its stress test program, sharing the same internal governance as other types of stress tests.

Through these reverse stress tests, Crédit Mutuel Alliance Fédérale measures the bank's distance from a situation placing it beyond its risk appetite, or even under administration, and determines the starting point and circumstance(s) under which the graduated risk management system put in place on the decision of the Board of Directors would require an increasingly detailed action plan in order to return to the risk appetite set by Crédit Mutuel Alliance Fédérale, and the analysis of the adequacy of its stress tests, in particular the ICAAP and ILAAP stress tests, in view of these results.

The results of the implementation of all ICAAP stress tests on the key solvency indicators (particularly on earnings, capital, weighted risks, and *in fine*, the three-year solvency ratios) are the main basis of the capital adequacy report and form an essential tool to determine the economic capital allocations

Finally, the results of the ICAAP are presented on a quarterly basis to the Crédit Mutuel group's key executives, demonstrating that the group has adequate capital to cover its exposure in line with its risk appetite.

5.8 CREDIT RISK

5.8.1 General qualitative information on credit risk (EU CRA)

5.8.1.1 A business model centered on retail customers

Crédit Mutuel Alliance Fédérale's primary risk is credit risk, because of its business model. That model is largely focused on the development of retail banking, with an extension to (primarily French) corporate lending since the acquisition of CIC. Since its consolidation into Crédit Mutuel Alliance Fédérale, CIC has focused its own development on individual customers, as well. The group's retail banking, coupled with the distribution of insurance products to retail customers, account for the great majority of Crédit Mutuel Alliance Fédérale's sources of revenue. 51% of Crédit Mutuel Alliance Fédérale's net outstanding customer loans consist of residential real estate loans to individuals and around 63% of customer exposures involve retail customers.

5.8.1.2 A credit policy aimed at prudent development

The credit risk policy identifies the markets and type of financing with which each network and specialized department of Crédit Mutuel Alliance Fédérale may be involved.

It sets the lending criteria by type of customer or product, based mainly on the solvency of the borrowers and explicitly mentions the possible restrictions on the distribution of credit, either through the general policy (including specific or prohibited markets and products, "unbankable" persons, old disputes, bad ratings, etc.) or through sector policies that match the group's commitment to the environment and to financing energy transition. These policies are reviewed regularly for a further analysis of ESG (Environmental, Social and Governance) risks, primarily by incorporating into the lending process a non-financial scoring of the counterparties being studied.

This risk policy supports several objectives:

- help manage the business by keeping loan commitments within limits and in line with the group's risk appetite;
- reduce the cost of risk over the long term;
- measure capital requirements;
- provide an effective response to Basel III and to the regulations on internal control, and ensure a return on the investment made in regulatory compliance.

The risk policy is worked out within the framework of the group's risk appetite as approved by the Board of Directors of Crédit Mutuel Alliance Fédérale, by means of a system of limits and alert thresholds, particularly as to concentration of loans by borrower, by sector and by geography. These limits use the Crédit Mutuel group rating system described in the "Risk Management" portion of the management report.

The risk policy is circulated through all entities in Crédit Mutuel Alliance Fédérale consolidation by means of an intranet deployed in the group's French and foreign entities.

5.8.1.3 Reinforced risk management system

In accordance with the regulations in effect, the risk management organization separates the following processes:

- granting of loans;
- assessing risks, overseeing loans and managing at-risk items.

These two functions are independent of each other and report to different management lines. The granting of loans comes under the lending department while the assessment of risks, oversight of loans and management of at-risk items comes under the risk, permanent control and compliance department.

5.8.1.3.1 Loan origination system

Loan origination is a sequence based on customer knowledge, risk assessment and the decision to lend.

Customer knowledge

Knowledge of the customer and the targeting of prospects depend on close ties with the local economic environment. The segmentation of customers into different risk categories guides the commercial prospecting. A credit file supports the decision to lend.

Risk assessment

Risk assessment is based on the analyses conducted at several stages, using formalized processes, including:

- customer ratings;
- risk groups;
- weighting of outstandings in line with the type of product and the collateral taken.

Employees receive regularly reviewed training in risk containment.

Customer rating: a single system for the whole group

In accordance with the regulations, the rating is central to the credit risk system: origination, payment, pricing and tracking. Accordingly, all delegations of lending authority rely on rating the counterparty. Generally speaking, the lending arm approves the internal rating of all applications it deals with.

Rating algorithms and expert models have been developed to improve the group's credit risk assessment and to comply with the regulatory requirements concerning internal rating approaches.

This rating system is used throughout the Crédit Mutuel group.

The definition of rating methodologies is done under the responsibility of Confédération Nationale du Crédit Mutuel (CNCM) for all portfolios. Nevertheless, the regional entities are directly involved in carrying out and approving working groups' assignments on specific subjects, the work related to data quality and applications acceptance tests.

The group's counterparties eligible for internal approaches are rated by a single system.

Models (algorithms or matrices) are used to differentiate and correctly classify risk. The value scale reflects the manner in which the risk changes and is broken down into nine non-default positions (A+, A-, B+, B-, C+, C-, D+, D- and E+) and three default positions (E-, E= and F).

The monitoring of the mass rating models focuses on three main aspects: stability assessment, performance assessment and additional analyses. This monitoring is conducted under the aegis of CNCM for each rating model.

Risk groups (counterparties)

A "group of related customers" means the natural persons or legal entities who fit together in terms of risk because one of them holds direct or indirect control over the other(s) or because there are connections between them such that it is likely that if one of them ran into financial difficulty, particularly financing or repayment problems, the others would experience financing or repayment problems.

The risk groups are put together based on a written procedure that includes the provision of sub-paragraph 39 of paragraph 1 of Article 4 of Regulation (EU) No. 575/2013.

Weighting of income and guarantees

To evaluate the counterparty risk, a weighting may apply to the nominal commitment. This combines the type of loan and type of collateral.

The lending decision

The lending decision is principally based on:

- a formal risk analysis of the counterparty;
- a rating of the counterparty or group of counterparties;
- the level of delegations;

- the “four eyes” principle;
- the not-to-exceed rules of the existing authorizations depending on capital;
- the yield suited to the risk profile and the consumption of capital.

The decision making channels are automated and managed in real time: as soon as the investigation phase of a loan request is complete, the electronic application is transmitted to the right decision making level.

Levels of delegation

Customer relationship managers are responsible for the comprehensiveness, quality and reliability of the information collected. In accordance with Article No. 107 of the Order dated November 3, 2014, they prepare credit files intended to formalize all information of a qualitative and quantitative nature on each counterparty. They check the relevance of elements collected either from customers or from external tools (sector-specific reviews, annual reports, legal information, rating agencies) or internal tools made available to them. Each customer relationship manager is responsible for the decisions they make or instruct and has an *intuitu personae* delegation.

For cases for which the amount exceeds the *intuitu personae* delegations, the decision is made by a Commitments Decision Committee, for which the rules of functioning are the subject of procedures.

The delegations are based on flexible lending caps that vary according to:

- the rating;
- the total amount of loans to one counterparty or risk group, possibly weighted by the type of loan involved or by the eligible security;
- exclusions from the delegation.

Role of the lending unit

Each regional bank has a lending team, which reports directly to Executive Management and is independent of the operational departments. Its main mission is ensuring the appropriateness of lending decisions by means of the second review of credit applications and checking that the yield on the loans are in keeping with the risk.

5.8.1.3.2 System for assessing risks, monitoring credit risks and managing at-risk items

In accordance with regulatory requirements, loans are monitored by national and regional organizational units.

Risk assessment

To measure risks, Crédit Mutuel Alliance Fédérale has various tools enabling an aggregate, static and dynamic approach:

- exposure to country, business sector, counterparty or group of counterparties;
- production and outstandings according to key elements tailored to the business lines concerned (rating, market, loan products, business segment, yield).

Each commercial entity uses informational software and so can check on a daily basis that caps allocated to each of its counterparties are being respected.

Monitoring credit risks

The risk unit, along with other interested parties, contributes to the formal quarterly monitoring of the quality of credit risks in each business line.

The risk unit’s monitoring system becomes involved independently from loan origination, as a supplement to and in coordination with other actions taken, primarily by first-tier control and permanent control teams. The objective is to detect at-risk situations as far in advance as possible, based on criteria defined by customer segment, either computer-assisted or through the relevant operating and lending managers.

Under the CRBF 93-05 regulation, Crédit Mutuel Alliance Fédérale’s bank and corporate regulatory limits of are determined according to the regulatory capital and internal ratings of counterparties.

Regulatory limits are monitored according to specific conditions (including frequencies) defined in dedicated procedures.

The monitoring of overruns and account functioning anomalies is done through advanced risk detection tools (management of debtors/sensitive risks/automatic reports in negotiated collection, etc.), based both on external and internal criteria, notably the rating and the functioning of accounts. These indicators aim to identify and deal with credit files as far in advance as possible. This detection is automated, systematic and exhaustive.

Permanent control of credit risks

Network permanent control is independent of lending. It provides second-level control of credit risks. Counterparties that show warning signals are reviewed, and entities accumulating negative indicators are identified. The objective of the control is to see that appropriate risk strategies are applied and that suitable corrective measures are taken.

In this way, extra security is added to the management of credit risk.

Management of at-risk items

A unified definition of default compliant with Basel and accounting requirements.

A unified definition of default has been adopted for the entire Crédit Mutuel group. Based on the alignment of prudential standards on the accounting service (Regulation ANC No. 2014-07 dated November 26, 2014/Regulation (EU) No. 575/2013). It is expressed by the correspondence between the Basel concept of debt in default and the accounting concept of disputed and non-performing loans. The computer software factors in contagion, extending the downgrading to related outstandings.

Detection of at-risk items

The practice consists of comprehensively identifying receivables to be placed under "at-risk items" then assigning them to the category corresponding to their situation: sensitive (non-downgraded), non-performing, irrevocable non-performing or disputed. All receivables are subject to an automated monthly identification process using internal and external indicators that have been configured in the information system. Downgrading, in accordance with the prevailing regulatory criteria, is carried out automatically.

Transition to default, provisioning, reclassification as performing

Processing the transition to default, provisioning and the reclassification as performing comply with prudential rules in force, with automation on a monthly basis, which keeps the process comprehensive. In November 2019, Crédit Mutuel Alliance Fédérale rolled out the EBA's new definition of default for all exposures approved using the internal method.

The deployment was then extended to entities using the standardized method.

Management of customers downgraded to non-performing or disputed

The counterparties concerned are managed differently according to the gravity of the situation: in the branch by the customer relationship manager or by dedicated teams specialized by market, type of counterparty or collection mode.

5.8.1.4 Relationship among the management functions for credit risk, risk monitoring, compliance assurance and internal auditing

Crédit Mutuel Alliance Fédérale is careful to separate loan writing and loan management from operational control and auditing. This separation is ensured primarily by having these functions report to different and independent departments:

- originating and managing loans, located in the group lending department;
- monitoring and controlling the risk and compliance of transactions, located in the risk, control and compliance department;
- the internal audit is located in the general inspection – network auditing division for third-level control of transactions carried out in the networks and in the general inspection – business line auditing division and Audit Technologies for third-level control of loans handled by specialized business lines.

The risk, permanent control and compliance department coordinates the credit monitoring system, mainly through the quarterly meetings of the Commitments Monitoring Committee and the At-Risk Items Committees for the monitoring of sensitive risks in particular and the allocation of the group's main commitments to the proper risk classes. The department, working with the lending department and the business lines concerned, suggests the alert thresholds and internal limits on credit risk and ensures that the credit risk system is operating smoothly and that executive and deliberative bodies are kept informed of risk levels. Its permanent control office performs second-level controls of credit transactions and verifies that the first-level control tasks have been properly performed by the operational staff and by the lending department.

The general inspection division ensures that the entire system is operating correctly, including the second-level system carried out by the risk, permanent control and compliance department, through general or specific inspections of loans.

The credit risk, risk monitoring, compliance assurance and internal auditing management system is described in detail in section 5.3 "Risk management."

5.8.2 Exposures

Crédit Mutuel Alliance Fédérale has focused on the most advanced forms of the Basel III Accord, beginning with its core business, retail customers.

The ACPR has authorized the group to use its internal ratings system to calculate its regulatory capital requirements in respect of credit risk:

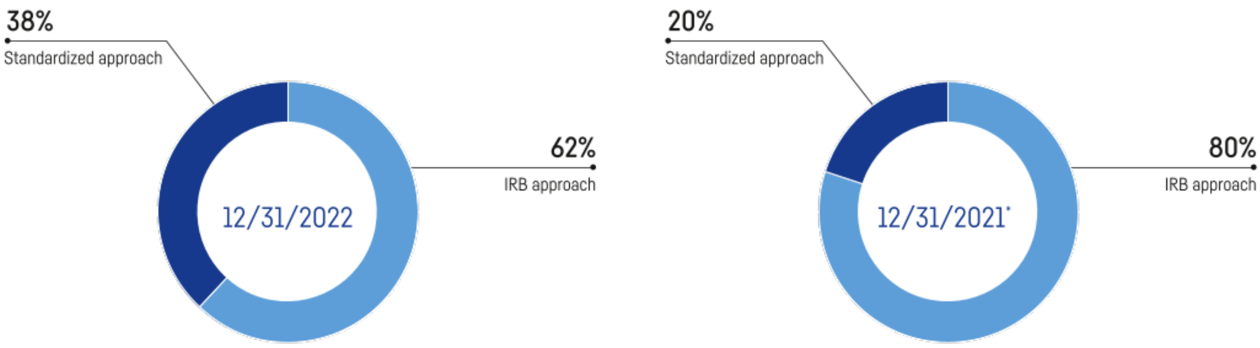
- using the advanced method, as from June 30, 2008, for the retail customer book;
- using the foundation method, as from December 31, 2008, for the banking book;
- using the advanced method, as from December 31, 2012, for the corporate and banking books;
- using the advanced method, as from March 31, 2018, for the real estate development book.

As part of the TRIM (Targeted review of internal models) exercise, the European Central Bank confirmed the authorization given to the Crédit Mutuel group on the retail customer home loan portfolio in 2018, on the retail corporate portfolio in 2019 and on the portfolios of banks and large corporate accounts in 2020. In March 2022, Crédit Mutuel, including its subsidiary CIC, switched back to the IRB-Foundation method for its large corporate portfolios and banks.

As part of the roll-out plan (transitioning to the IR method), the projects of using the advanced method throughout the factoring subsidiaries of the Crédit Mutuel group in France, Cofidis France and TARGOBANK AG are well under way. The latter entities represent 9% of the Institutions, Corporate and Retail Customers regulatory books.

The percentage of exposures approved under the advanced internal rating method for the Institutions, Corporate and Retail Customers regulatory books was 83% as of December 31, 2022.

GRAPH 14: SHARE OF GROSS EXPOSURES UNDER THE ADVANCED AND STANDARDIZED METHODS



* *Measure on the scope of Institutions, Corporate and Retail customers.*

5.8.3 Credit quality of assets

5.8.3.1 Impaired and overdue exposures (EU CRB-a)

A unified definition of default has been adopted for the entire Crédit Mutuel group. Based on the principle of aligning prudential information with accounting information (CRC 2002-03), this definition matches the Basel concept of loans in default and the accounting concept of non-performing loans and loans in litigation. The computer software factors in contagion, extending the downgrading to related outstandings. The controls carried out by internal audit and by the statutory auditors ensure the reliability of the procedures for identifying defaults used to calculate capital requirements.

Since November 2019, Crédit Mutuel Alliance Fédérale has been applying the new definition of regulatory default in accordance with EBA guidelines and the regulations' technical standards on applicable materiality thresholds.

The main developments related to the implementation of this new definition are the following:

- the analysis of the default now focuses on the borrower rather than on the contract;
- the number of days of unpaid or late installments is appraised for each borrower (obligor) or group of borrowers (joint obligors) in the case of a joint commitment;
- the default is triggered after 90 consecutive days of unpaid or late installments on the part of an obligor or joint obligors. The count of the number of days begins at the simultaneous crossing of the absolute materiality threshold (€100 Retail, €500 Corporate) and the relative materiality threshold (more than 1% of balance sheet commitments in arrears). The countdown is reset when this is no longer the case for one of the thresholds;
- the default contagion scope extends to all receivables of the borrower, and all individual commitments of borrowers participating in a joint credit obligation;
- the minimum probation period is three months before the return of non-restructured assets to a performing loan status.

Crédit Mutuel Alliance Fédérale has opted to roll out the new definition of default using the EBA's two-step approach:

- step 1 – This consists in presenting a self-assessment and an authorization request to the supervisor. Crédit Mutuel Alliance Fédérale obtained a deployment agreement in October 2019;
- step 2 – This consists in implementing the new definition of default, and then adjusting the models after an observation period of 12 months for new defaults.

The group deems that the new definition of default, as laid down by the EBA, is representative of an objective proof of impairment in accounting terms. The group has aligned its definitions of accounting (Status 3) and prudential default.

The definitions and financial information concerning payment arrears are provided in the part of the financial report titled "Payment arrears" (EU CRB-B).

5.8.3.2 Impairment for credit risk (EU CRB-c)

IFRS 9 went into mandatory effect on January 1, 2018 and replaced IAS 39 – Financial instruments: Recognition and Measurement. It laid out new rules in terms of:

- classification and measurement of financial instruments (Phase 1);
- impairment of the credit risk of financial assets (Phase 2);
- hedge accounting, apart from macro-hedging transactions (Phase 3).

It should be noted that the group does not apply the transitional arrangements related to IFRS 9 (own funds, capital ratios and leverage ratios that already reflect the total impact of IFRS 9).

Pursuant to IFRS 9, Crédit Mutuel Alliance Fédérale divides all debt instruments measured at amortized cost or at fair value through equity into three categories:

- stage 1: provisioned on the basis of 12-month expected credit losses (resulting from default risks over the following 12 months) as from initial recognition of the financial assets, provided that the credit risk has not increased significantly since initial recognition;
- stage 2: provisioned on the basis of the lifetime expected credit losses (resulting from default risks over the entire remaining life of the instrument) if the credit risk has increased significantly since initial recognition; and
- stage 3: category comprising credit-impaired financial assets for which there is an objective indication of impairment related to an event that has occurred since the loan was granted.

This category is equivalent to the set of outstandings currently impaired individually under IAS 39.

Consequently and in accordance with the position of the EBA, all the group's write-downs for credit risk are the result of specific impairments.

Definition of the boundary between Stage 1 and Stage 2

Crédit Mutuel Alliance Fédérale uses models developed for regulatory purposes and so segregates its outstandings in that manner:

- Low Default Portfolios (LDPs);
- High Default Portfolios (HDPs).

A significant increase in credit risk, which entails transferring a loan out of Stage 1 into Stage 2, is assessed by:

- taking into account all reasonable and justifiable information; and
- comparing the risk of default on the financial instrument at the reporting date with the risk of default at the initial recognition date.

This means measuring the risk at the borrower level since the Crédit Mutuel system for rating its counterparties is the same throughout the group.

All of the group's counterparties eligible for internal approaches are rated by the system. This system is based on:

- statistical algorithms or "mass ratings" based on one or more models, using a selection of representative and predictive risk variables (HDPs); or
- rating grids developed by experts (LDPs).

The change in risk since initial recognition is measured on a contract-by-contract basis.

Unlike Stage 3, transferring a customer's contract into Stage 2 does not entail transferring all of the customer's outstanding loans or those of related parties (absence of contagion).

It should be noted that Crédit Mutuel Alliance Fédérale immediately puts into Stage 1 any performing exposure that no longer meets the criteria for Stage 2 classification (both qualitative and quantitative).

Quantitative criteria

For LDP portfolios, the boundary is based on an allocation matrix that relates the internal ratings at origination and at the reporting date. Thus, the riskier the rating of the loan, the less the relative tolerance of the group toward significant deterioration of the risk.

For HDP portfolios, a continuous and growing boundary curve relates the probability of default at origination and the probability of default at the reporting date. The group does not use the operational simplification offered by the standard, which allows outstanding loans with low risk at the reporting date to be maintained in Stage 1.

Qualitative criteria

To these qualitative criteria, Crédit Mutuel Alliance Fédérale adds qualitative ones such as installments unpaid or late by more than 30 days and the fact that a loan has been restructured.

Methods based exclusively on qualitative criteria are used for entities or small portfolios that are classified for prudential purposes under the standardized approach and do not have a rating system.

Stages 1 and 2 – Calculating expected losses

Expected credit losses are measured by multiplying the outstanding balance present-discounted by the contract rate by its probability of default (PD) and by the loss given default (LGD) ratio. The off-balance-sheet exposure is converted into a balance sheet equivalent based on the probability of a drawdown. The one-year probability of default is used for Stage 1, while the probability of default at termination (one-to-ten year curve) is used for Stage 2.

These parameters are based on the same values as prudential models and adapted to meet IFRS 9 requirements. They are used both for assigning loans to a stage and for calculating expected losses.

Probability of default

For portfolios with a high default rate, they are based on models approved under the IRB-A method, and for portfolios with a low default rate, on an external probability of default scale established on history of more than 30 years.

Loss given default

For portfolios with a high default rate, they are based on recovery flows observed over a long period of time, discounted at the interest rates of the contracts, segmented by type of product and type of guarantee and for portfolios with a low default rate, on flat-rate levels (60% for sovereigns and local authorities and 40% for the remainder).

Conversion factors

For all products, including revolving loans, they are used to convert off-balance-sheet exposure to a balance sheet equivalent and are mainly based on prudential models.

Forward-looking aspect

To calculate expected credit losses, the standard requires taking reasonable and justifiable information into account, including forward-looking information. The development of the forward-looking aspect requires anticipating changes and relating these anticipated changes to the risk parameters. This forward-looking aspect is determined at the group level and applies to all the parameters.

For portfolios with a high default rate, the forward-looking dimension included in the probability of default combines three scenarios – optimistic, neutral and pessimistic – which are weighted to reflect the group's five-year forecast of the business cycle, approved by the Chief Executive Officers of the regional groups and of the Crédit Mutuel group. The group mainly relies on macroeconomic data (GDP, unemployment rate, inflation rate, short-term and long-term interest rates, etc.) available from the OECD. The forward-looking approach is adjusted to include elements that were not captured by the scenarios because:

- they are recent, meaning they occurred a few weeks before the reporting date;
- they cannot be included in a scenario: for example, regulatory changes that will certainly have a significant effect on the risk parameters and whose impact can be measured by making certain assumptions.

The forward-looking dimension over different time horizons other than one year will largely be a function of the one-year dimension.

The forward-looking aspect is also included in the LGD by incorporating information observed over a period close to current conditions.

For portfolios with a low default rate, forward-looking information is incorporated into large corporates/bank models, and not into local governments, sovereigns and specialized financing models. The approach is similar to that used for portfolios with a high default rate.

Stage 3 – Non-performing loans

In Stage 3, impairment is recognized whenever there is objective proof of impairment due to one or more events occurring after a loan or group of loans has been made that might generate a loss. An analysis is done at each closing contract by contract. The impairment is equal to the difference between the carrying amount and the estimated future cash flows, allowing for collateral or other guarantees, present-discounted at the interest rate of the original loan. In the event of a variable rate, it is the most recent contractual rate that is booked.

Post-model adjustment to take into account the effects (direct or indirect) of the context of high macroeconomic uncertainties

To deal with the Covid-19 crisis, an additional depreciation had been estimated, since 2020, to anticipate the increase in claims in the sectors considered to be the most vulnerable to the health crisis[8]. The group methodology, defined at the national level, was based on a step-by-step analysis of the deterioration of credit risk, *i.e.*, first identifying vulnerable sectors and then setting up additional provisions, calibrated according to the risk assessed by the groups. This impairment was reversed in 2022, as the criteria that prevailed at its creation were no longer met.

8 Tourism, games, leisure, hotels, restaurants, motor and aeronautical industries excluding manufacturers, clothing, beverage sales, light vehicle rentals, industrial passenger transportation, air transport.

At the beginning of December 2022, the current and anticipated macroeconomic context was particularly difficult: continuing supply difficulties, anticipation of a significant impact of the energy crisis on many companies, inflation, strong uncertainties and very weak French GDP growth in Q4-2022. In this context of unprecedented crises in terms of their nature and scope, additional provisions (post-model adjustment) are recorded in the December 31, 2022 financial statements to cover the uncertainties related to the changes to come in 2023 concerning the identification of the pessimistic scenario and the forward-looking provisioning methodology.

5.8.3.3 Exposures covered by a State guarantee in the context of the health crisis

As part of the government scheme to support the economy in response to the Covid-19 health crisis, the State guarantee covers a percentage of the amount of the principal, interest and ancillaries remaining due on the receivable until the end of its term, unless it is called beforehand during a credit event. This percentage varies from 70% to 90%.

Given the composition of the portfolio, which is mainly geared toward microenterprises/SMEs, most of the EMPs distributed as of December 31, 2022 benefit from a State guarantee of up to 90%.

TABLE 20: CREDIT QUALITY OF STATE-GUARANTEED LOANS

	Gross carrying amount		Maximum amount of guarantee that may be taken into consideration	Gross carrying amount
12/31/2022 *(in € millions)*		of which: renegotiated	Public guarantees received	Inflows from non-performing exposures
New loans and advances issued subject to public guarantee schemes	**12,860**	**509**	**11,362**	**341**
of which: households	1	-	-	-
of which: secured by residential real estate	-	-	-	-
of which: non-financial corporations	12,847	504	11,350	341
of which: small- and medium-sized enterprises	10,938	-	-	287
of which: secured by commercial real estate	114	-	-	-

	Gross carrying amount		Maximum amount of guarantee that may be taken into consideration	Gross carrying amount
12/31/2021 *(in € millions)*		of which: renegotiated	Public guarantees received	Inflows from non-performing exposures
New loans and advances issued subject to public guarantee schemes	**15,205**	**320**	**13,601**	**529**
of which: households	1	-	-	-
of which: secured by residential real estate	-	-	-	-
of which: non-financial corporations	15,194	315	13,591	529
of which: small- and medium-sized enterprises	12,806	-	-	320
of which: secured by commercial real estate	127	-	-	-

5.8.3.4 Exposures subject to a legal moratorium in the context of the health crisis

Crédit Mutuel Alliance Fédérale applies the EBA guidelines concerning legislative and non-legislative moratoriums on loan repayments applied due to the Covid-19 pandemic (EBA/GL/2020/02).

The guidelines apply from April 2, 2020. This measure was introduced for the first time for three months and then extended to September 2020 and finally renewed from December 2020 until March 2021.

During the first wave of Covid-19, Crédit Mutuel Alliance Fédérale chose to massively support its corporate and professional customers by granting automatic extensions of maturities.

TABLE 21: CREDIT QUALITY OF LOANS AND ADVANCES SUBJECT TO MORATORIUMS ON LOAN REPAYMENTS APPLIED DUE TO THE COVID-19 PANDEMIC

12/31/2022 *(in € millions)*	Gross carrying amount							Accumulated impairment, accumulated negative changes in fair value due to credit risk[1]							Gross carrying amount
		Performing			Non-performing				Performing			Non-performing			
			Of which: exposures subject to renegotiation measures	Of which: Instruments with a significant increase in credit risk since initial recognition but not impaired (step 2)		Of which: exposures subject to renegotiation measures	Of which: unlikely payment, not past due or past due ≤ 90 days			Of which: exposures subject to renegotiation measures	Of which: Instruments with a significant increase in credit risk since initial recognition but not impaired (step 2)		Of which: exposures subject to renegotiation measures	Of which: unlikely payment, not past due or past due ≤ 90 days	Inflows from non-performing exposures
Loans and advances subject to moratoriums[1]	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
of which: households	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
of which: secured by residential real estate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
of which: non-financial corporations	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
of which: small- and medium-sized enterprises	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
of which: secured by commercial real estate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(1) Excluding additional provisions on sensitive sectors related to the Covid-19 crisis.

12/31/2021 *(in € millions)*	Gross carrying amount							Accumulated impairment, accumulated negative changes in fair value due to credit risk[1]							Gross carrying amount
		Performing			Non-performing				Performing			Non-performing			
			Of which: exposures subject to renegotiation measures	Of which: Instruments with a significant increase in credit risk since initial recognition but not impaired (step 2)		Of which: exposures subject to renegotiation measures	Of which: unlikely payment, not past due or past due ≤ 90 days			Of which: exposures subject to renegotiation measures	Of which: Instruments with a significant increase in credit risk since initial recognition but not impaired (step 2)		Of which: exposures subject to renegotiation measures	Of which: unlikely payment, not past due or past due ≤ 90 days	Inflows from non-performing exposures
Loans and advances subject to moratoriums	42	35	33	33	7	7	6	-4	-2	-2	-2	-2	-2	-1	0
of which: households	40	34	33	33	7	6	6	-4	-2	-2	-2	-2	-2	-1	0
of which: secured by residential real estate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
of which: non-financial corporations	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
of which: small- and medium-sized enterprises	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
of which: secured by commercial real estate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(1) Excluding additional provisions on sensitive sectors related to the Covid-19 crisis.

TABLE 22: VOLUME OF LOANS AND ADVANCES SUBJECT TO STATUTORY AND NON-LEGISLATIVE MORATORIUM BY RESIDUAL MATURITY

12/31/2022 *(in € millions)*	Number of debtors	Gross carrying amount							
			Of which: legislative moratoriums	Of which: expired	Residual maturity of moratoriums				
					≤ 3 months	> 3 months ≤ 6 months	> 6 month ≤ 9 months	> 9 month ≤ 12 months	> 1 year
Loans and advances for which a moratorium has been proposed	349,683	33,166	-	-	-	-	-	-	-
Loans and advances subject to moratoriums (granted)	349,652	33,165	886	33,164	1	0	0	0	0
of which: households	-	1,177	877	1,176	0	0	0	0	0
of which: secured by residential real estate	-	*212*	*0*	*212*	*0*	*0*	*0*	*0*	*0*
of which: non-financial corporations	-	31,888	9	31,888	0	0	0	0	0
of which: small- and medium-sized enterprises	-	*28,862*	*9*	*28,861*	*0*	*0*	*0*	*0*	*0*
of which: secured by commercial real estate	-	*645*	*0*	*645*	*0*	*0*	*0*	*0*	*0*

12/31/2021 *(in € millions)*	Number of debtors	Gross carrying amount							
			Of which: legislative moratoriums	Of which: expired	Residual maturity of moratoriums				
					≤ 3 months	> 3 months ≤ 6 months	> 6 month ≤ 9 months	> 9 month ≤ 12 months	> 1 year
Loans and advances for which a moratorium has been proposed	423,121	42,479							
Loans and advances subject to moratoriums (granted)	423,086	42,479	1,055	42,437	2	40	-	-	-
of which: households		1,149	1,042	1,109	1	40	-	-	-
of which: secured by residential real estate		-	-	-	-	-	-	-	-
of which: non-financial corporations		41,214	13	41,213	1	-	-	-	-
of which: small- and medium-sized enterprises		*36,852*	*13*	*36,850*	*1*	-	-	-	-
of which: secured by commercial real estate		*778*	-	*778*	-	-	-	-	-

5.8.3.5 Restructured exposures (EU CRB-d)

An exposure is restructured after a debtor encounters financial difficulties. This takes the form of concessions made to the debtor by the group, *e.g.*, changing the terms of the loan agreement such as the interest rate or the maturity, partial forgiveness or additional financing that would not have been granted in absence of the difficulties. In its information systems Crédit Mutuel Alliance Fédérale has ways to identify the restructured exposures in its performing and non-performing books, as defined by the principles enunciated by the EBA on October 23, 2013. Restructuring does not automatically mean classification in default (Stage 3) but does mean classification in Stage 2, at least.

The tables below show the breakdown of outstanding receivables and related provisions as of December 31, 2022 according to different areas of analysis.

TABLE 23: MATURITY OF NET ON- AND OFF-BALANCE SHEET EXPOSURES (EU CR1-A)

12/31/2022 *(in € millions)*	Net value of exposures					
	Demand	<= 1 year	> 1 year <= 5 years	> 5 years	No maturity stated	Total
Loans and advances	203,536	109,989	228,080	281,244	1,691	824,539
Debt securities	1,042	4,467	13,945	10,363	14,121	43,938
TOTAL	204,578	114,456	242,025	291,607	15,811	868,477

12/31/2021 *(in € millions)*	Net value of exposures					
	Demand	<= 1 year	> 1 year <= 5 years	> 5 years	No maturity stated	Total
Loans and advances	227,309	82,888	197,723	244,244	12,414	764,578
Debt securities	774	3,300	13,310	10,639	14,193	42,217
TOTAL	228,083	86,189	211,033	254,883	26,606	806,795

TABLE 24: CREDIT QUALITY OF FORBORNE EXPOSURES (EU CQ1)

12/31/2022 *(in € millions)*	Gross restructured performing loans				Total write-downs, total changes in fair value of credit risk and provisions		Collateral and financial guarantees received on restructured exposure	
	Gross restructured performing loans	Restructured non-performing loans						
			Of which defaulted	Of which impaired	On performing exposures benefiting from restructuring measures	Total on non-performing loans		Collateral and financial guarantees received on non-performing exposures with restructuring measures
Demand accounts with central banks and other demand deposits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loans and advances	**2,547**	**3,489**	**3,489**	**3,489**	**-196**	**-1,432**	**2,838**	**1,320**
Central banks	0	0	0	0	0	0	0	0
Public administration	2	5	5	5	0	-1	5	4
Credit institutions	2	0	0	0	0	0	0	0
Other financial institutions	67	85	85	85	-6	-68	64	16
Non-financial corporations	1,378	1,672	1,672	1,672	-56	-529	1,962	976
Households	1,098	1,726	1,726	1,726	-133	-834	807	324
Debt instruments	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loan commitments given	**36**	**75**	**75**	**75**	**-1**	**0**	**27**	**0**
TOTAL	2,583	3,564	3,564	3,564	-196	-1,432	2,866	1,320

12/31/2021 *(in € millions)*	Gross carrying amount/ nominal amount of restructured exposure				Accumulated impairment and negative fair value associated with credit risk		Collateral and financial guarantees received on restructured exposure	
		Non-performing loans						
	Performing loans		Of which loans in default	Of which impaired loans	On restructured performing loans	On restructured non-performing loans		Of which collateral and guarantees on restructured exposure
Demand accounts with central banks and other demand deposits	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loans and advances	**2,956**	**3,267**	**3,267**	**3,267**	**-308**	**-1,349**	**2,753**	**1,164**
Central banks	0	0	0	0	0	0	0	0
Public administration	1	5	5	5	0	-1	4	4
Credit institutions	0	0	0	0	0	0	0	0
Other financial institutions	25	96	96	96	-1	-58	50	37
Non-financial corporations	1,693	1,548	1,548	1,548	-154	-483	1,918	854
Households	1,237	1,617	1,617	1,617	-153	-807	780	268
Debt instruments	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loan commitments given	**42**	**11**	**11**	**11**	**0**	**0**	**12**	**0**
TOTAL	2,998	3,278	3,278	3,278	-309	-1,349	2,766	1,164

TABLE EU CQ2: QUALITY OF RENEGOTIATION (FORBEARANCE)

Crédit Mutuel Alliance Fédérale’s NPE rate does not exceed the 5% threshold, so this table has not been produced.

TABLE 25: CREDIT QUALITY OF PERFORMING AND NON-PERFORMING EXPOSURES BY REMAINING MATURITY (EU CQ3)

12/31/2022 *(in € millions)*	Gross carrying amount/nominal amount											
	Performing loans			Non-performing loans								
		No arrears or in arrears ≤ 30 days	In arrears > 30 days ≤ 90 days		Probability of arrears or in arrears ≤ 90 days	In arrears > 90 days ≤ 180 days	In arrears > 180 days ≤ 1 year	In arrears > 1 year	In arrears > 2 years ≤ 5 years	In arrears > 5 years ≤ 7 years	In arrears > 7 years	Of which loans in default
Demand accounts with central banks and other demand deposits	**115,106**	**115,106**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loans and advances	**550,945**	**548,970**	**1,975**	**13,181**	**3,540**	**844**	**1,039**	**3,811**	**2,165**	**470**	**1,312**	**13,181**
Central banks	470	470	0	0	0	0	0	0	0	0	0	0
Public administration	6,876	6,792	84	31	19	1	1	2	7	0	0	31
Credit institutions	51,577	51,567	11	3	1	0	0	1	1	0	0	3
Other financial institutions	11,825	11,815	10	174	21	4	4	60	70	6	9	174
Non-financial corporations	244,831	243,548	1,282	7,334	2,150	357	310	2,706	754	270	786	7,334
Of which: SMEs	*203,877*	*202,982*	*895*	*6,078*	*1,561*	*307*	*283*	*2,331*	*544*	*269*	*782*	*6,078*
Households	235,365	234,778	587	5,639	1,349	482	724	1,041	1,334	193	516	5,639
Debt instruments	**38,681**	**38,679**	**2**	**93**	**93**	**0**	**0**	**0**	**0**	**0**	**0**	**93**
Central banks	1,081	1,081	0	0	0	0	0	0	0	0	0	0
Public administration	16,537	16,537	0	0	0	0	0	0	0	0	0	0
Credit institutions	10,174	10,174	0	1	1	0	0	0	0	0	0	1
Other financial institutions	9,164	9,164	0	2	2	0	0	0	0	0	0	2
Non-financial corporations	1,725	1,723	2	91	91	0	0	0	0	0	0	91
Off-balance sheet commitments	**167,134**	**-**	**-**	**544**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**544**
Central banks	13	-	-	0	-	-	-	-	-	-	-	0
Public administration	3,246	-	-	0	-	-	-	-	-	-	-	0
Credit institutions	55,100	-	-	87	-	-	-	-	-	-	-	87
Other financial institutions	2,775	-	-	3	-	-	-	-	-	-	-	3
Non-financial corporations	76,746	-	-	400	-	-	-	-	-	-	-	400
Households	29,254	-	-	53	-	-	-	-	-	-	-	53
TOTAL	871,866	702,755	1,977	13,818	3,634	844	1,039	3,811	2,165	470	1,312	13,818

12/31/2021 *(in € millions)*	Gross carrying amount/nominal amount											
	Performing loans			Non-performing loans								
		No arrears or in arrears ≤ 30 days	In arrears > 30 days ≤ 90 days		Probability of arrears or in arrears ≤ 90 days	In arrears > 90 days ≤ 180 days	In arrears > 180 days ≤ 1 year	In arrears > 1 year	In arrears > 2 years ≤ 5 years	In arrears > 5 years ≤ 7 years	In arrears > 7 years	Of which loans in default
Demand accounts with central banks and other demand deposits	**124,714**	**124,714**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Loans and advances	**498,826**	**497,312**	**1,514**	**11,723**	**3,061**	**552**	**820**	**3,404**	**2,195**	**489**	**1,202**	**11,723**
Central banks	408	407	0	0	0	0	0	0	0	0	0	0
Public administration	5,662	5,598	65	26	11	0	1	2	11	0	0	26
Credit institutions	53,971	53,964	7	4	1	0	0	1	0	0	1	4
Other financial institutions	11,630	11,623	7	196	23	2	40	44	79	1	7	196
Non-financial corporations	218,435	217,423	1,011	6,516	1,879	171	193	2,467	747	299	762	6,516
Of which: SMEs	*184,972*	*184,260*	*712*	*5,629*	*1,423*	*164*	*186*	*2,185*	*620*	*294*	*757*	*5,629*
Households	208,720	208,295	424	4,981	1,147	379	587	890	1,359	189	431	4,981
Debt instruments	**35,736**	**35,736**	**0**	**110**	**110**	**0**	**0**	**0**	**0**	**0**	**0**	**110**
Central banks	980	980	0	0	0	0	0	0	0	0	0	0
Public administration	16,366	16,366	0	0	0	0	0	0	0	0	0	0
Credit institutions	11,978	11,978	0	1	1	0	0	0	0	0	0	1
Other financial institutions	4,943	4,943	0	2	2	0	0	0	0	0	0	2
Non-financial corporations	1,469	1,469	0	107	107	0	0	0	0	0	0	107
Off-balance sheet commitments	**158,540**	**-**	**-**	**485**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**485**
Central banks	20	-	-	0	-	-	-	-	-	-	-	0
Public administration	1,570	-	-	0	-	-	-	-	-	-	-	0
Credit institutions	59,785	-	-	80	-	-	-	-	-	-	-	80
Other financial institutions	2,859	-	-	3	-	-	-	-	-	-	-	3
Non-financial corporations	67,727	-	-	351	-	-	-	-	-	-	-	351
Households	26,579	-	-	51	-	-	-	-	-	-	-	51
TOTAL	817,817	657,762	1,514	12,318	3,171	552	820	3,404	2,195	489	1,202	12,318

TABLE 26: CREDIT QUALITY OF EXPOSURES BY GEOGRAPHIC AREA (EU CQ4)

12/31/2022 *(in € millions)*	Total outstandings/gross nominal amount	Of which non-performing loans	Of which loans in default	Of which loans subject to impairment	Accumulated impairment	Impairment of off-balance sheet commitments and financial guarantees given	Cumulative negative changes in fair value due to credit risk on non-performing exposures
Balance sheet exposure	**602,900**	**13,274**	**13,274**	**602,116**	**-9,659**	**-**	**0**
France	482,549	9,371	9,371	481,837	-6,130	-	0
Germany	33,949	1,805	1,805	33,949	-1,957	-	0
Belgium	12,692	621	621	12,657	-474	-	0
Switzerland	10,408	293	293	10,408	-99	-	0
United States of America	10,089	50	50	10,085	-54	-	0
Luxembourg	8,899	41	41	8,885	-52	-	0
United Kingdom	4,744	44	44	4,744	-24	-	0
Spain	4,101	272	272	4,101	-311	-	0
Singapore	3,408	0	0	3,408	-1	-	0
Portugal	3,362	290	290	3,362	-281	-	0
Ireland	3,345	22	22	3,345	-7	-	0
Italy	3,339	111	111	3,339	-125	-	0
The Netherlands	2,563	6	6	2,563	-7	-	0
Canada	2,539	6	6	2,524	-6	-	0
Australia	1,974	1	1	1,974	-3	-	0
Japan	1,863	70	70	1,863	-11	-	0
Hong Kong	1,448	0	0	1,448	-1	-	0
Sweden	1,021	1	1	1,021	-2	-	0
Other countries	10,606	271	271	10,602	-115	-	0
Off-balance sheet exposure	**167,677**	**544**	**544**	**0**	**0**	**399**	**0**
France	139,629	521	521	-	-	336	-
Germany	5,402	7	7	-	-	32	-
United States of America	4,105	0	0	-	-	3	-
Switzerland	3,249	2	2	-	-	3	-
Belgium	2,500	8	8	-	-	3	-
Luxembourg	2,294	1	1	-	-	3	-
United Kingdom	1,739	0	0	-	-	6	-
Spain	1,588	3	3	-	-	0	-
The Netherlands	1,387	0	0	-	-	1	-
Other countries	5,784	2	2	-	-	11	-
TOTAL	770,578	13,818	13,818	602,116	-9,659	399	0

Countries with on-balance sheet or off-balance sheet exposures of less than €1 billion are included in the "Other countries" line.

12/31/2021 *(in € millions)*	Total outstandings/gross nominal amount				Accumulated impairment	Impairment of off-balance sheet commitments and financial guarantees given	Cumulative negative changes in fair value due to credit risk on non-performing exposures
		Of which non-performing loans		Of which loans subject to impairment			
			Of which loans in default				
Balance sheet exposures	**546,396**	**11,833**	**11,833**	**545,803**	**-9,298**	**-**	**0**
France	442,734	8,433	8,433	442,223	-6,089	-	0
Germany	30,325	1,659	1,659	30,325	-1,815	-	0
United States of America	7,646	41	41	7,638	-59	-	0
Switzerland	9,561	242	242	9,557	-72	-	0
Luxembourg	10,283	52	52	10,265	-73	-	0
Spain	6,782	449	449	6,782	-474	-	0
United Kingdom	4,648	52	52	4,648	-24	-	0
Belgium	4,448	124	124	4,413	-142	-	0
Portugal	3,148	299	299	3,148	-282	-	0
The Netherlands	2,481	26	26	2,481	-7	-	0
Singapore	2,540	14	14	2,540	-6	-	0
Ireland	2,116	43	43	2,116	-6	-	0
Italy	2,910	64	64	2,910	-79	-	0
Canada	1,566	4	4	1,548	-4	-	0
Australia	1,717	0	0	1,717	-4	-	0
Japan	1,321	34	34	1,321	-10	-	0
Hong Kong	1,123	0	0	1,123	-1	-	0
Other countries	11,048	299	299	11,048	-150	-	0
Off-balance sheet exposures	**159,024**	**485**	**485**	**-**	**-**	**477**	**-**
France	132,973	452	452	-	-	392	-
Germany	4,709	7	7	-	-	35	-
United States of America	4,196	0	0	-	-	4	-
Switzerland	3,603	1	1	-	-	2	-
Luxembourg	2,034	1	1	-	-	4	-
United Kingdom	2,067	12	12	-	-	4	-
Belgium	1,390	0	0	-	-	2	-
The Netherlands	1,408	0	0	-	-	7	-
Spain	1,536	9	9	-	-	10	-
Australia	874	0	0	-	-	1	-
Singapore	492	0	0	-	-	0	-
Hong Kong	395	0	0	-	-	0	-
Italy	365	0	0	-	-	1	-
Ireland	143	0	0	-	-	0	-
Canada	118	0	0	-	-	0	-
Portugal	62	0	0	-	-	0	-
Japan	5	0	0	-	-	0	-
Other countries	2,656	2	2	0	0	13	0
TOTAL	705,420	12,318	12,318	545,803	-9,298	477	0

TABLE 27: CREDIT QUALITY OF LOANS AND ADVANCES GRANTED TO NON-FINANCIAL COMPANIES BY INDUSTRY (EU CQ5)

12/31/2022 *(in € millions)*	Gross carrying amount	Of which non-performing	Of which defaulted	Of which loans and advances subject to impairment	Accumulated impairment	Cumulative negative changes in fair value due to credit risk on non-performing exposures
Agriculture, forestry and fishing	8,872	306	306	8,872	-186	0
Extractive industries	556	2	2	556	-2	0
Manufacturing industry	18,655	839	839	18,655	-378	0
Production and distribution of electricity, gas, steam and air conditioning	2,970	45	45	2,970	-29	0
Water production and distribution	1,085	24	24	1,085	-16	0
Building	13,851	600	600	13,851	-346	0
Retail	22,527	1,098	1,098	22,527	-642	0
Transportation and storage	8,883	261	261	8,881	-119	0
Hospitality and catering	6,228	513	513	6,228	-250	0
Information and communication	3,933	100	100	3,933	-58	0
Financial and insurance activities	14,104	335	335	14,104	-261	0
Real estate activities	79,849	1,338	1,338	79,849	-877	0
Professional, scientific and technical activities	21,950	828	828	21,950	-396	0
Administrative and support service activities	8,285	304	304	8,285	-172	0
Public administration and defense, mandatory social security	140	0	0	140	-1	0
Teaching	1,768	36	36	1,768	-24	0
Human healthcare and social action	10,442	112	112	10,442	-110	0
Arts, shows and entertainment	1,535	74	74	1,535	-43	0
Other services	26,531	517	517	26,531	-367	0
TOTAL	252,164	7,334	7,334	252,162	-4,276	0

12/31/2021 *(in € millions)*	Total outstandings	Of which non-performing loans	Of which non-performing loans in default	Of which total loans subject to impairment	Accumulated impairment	Cumulative negative changes in fair value due to credit risk on non-performing exposures
Agriculture, forestry and fishing	7,341	283	283	7,341	-163	0
Extractive industries	632	27	27	632	-24	0
Manufacturing industry	17,179	748	748	17,179	-392	0
Production and distribution of electricity, gas, steam and air conditioning	2,851	56	56	2,851	-26	0
Water production and distribution	988	20	20	988	-16	0
Building	12,331	492	492	12,331	-308	0
Retail	21,395	1,024	1,024	21,395	-700	0
Transport and storage	7,910	276	276	7,907	-128	0
Hospitality and catering	6,109	463	463	6,109	-568	0
Information and communication	3,654	91	91	3,654	-58	0
Financial and insurance activities	13,123	357	357	13,123	-281	0
Real estate activities	69,355	1,333	1,333	69,355	-831	0
Professional, scientific and technical activities	17,701	451	451	17,701	-301	0
Administrative and support service activities	7,009	281	281	7,004	-196	0
Public administration and defense, mandatory social security	115	0	0	115	0	0
Teaching	1,644	35	35	1,644	-21	0
Human healthcare and social action	9,282	95	95	9,282	-81	0
Arts, shows and entertainment	1,525	68	68	1,525	-95	0
Other services	24,806	416	416	24,806	-278	0
TOTAL	224,951	6,516	6,516	224,942	-4,468	0

TABLE EU CQ6: MEASUREMENT OF COLLATERAL: LOANS AND ADVANCES

Crédit Mutuel Alliance Fédérale’s NPE rate does not exceed the threshold of 5%, so this table has not been produced.

TABLE 28: COLLATERAL OBTAINED BY TAKING POSSESSION AND EXECUTION PROCESSES (EU CQ7)

	12/31/2022		12/31/2021	
	Collateral obtained by taking possession (accumulated)			
(in € millions)	Value at initial recognition	Cumulative negative change	Value at initial recognition	Cumulative negative change
Property, plant and equipment	0	0	0	0
Other than property, plant and equipment	18	-2	54	-17
Residential real estate property	*18*	*-2*	*38*	*-9*
Commercial property	*0*	*0*	*11*	*-5*
Real estate property	*0*	*0*	*0*	*0*
Equity and debt instruments	*0*	*0*	*0*	*0*
Other	*0*	*0*	*5*	*-3*
TOTAL	18	-2	54	-17

TABLE CQ8: COLLATERAL OBTAINED BY TAKING POSSESSION AND EXECUTION: BREAKDOWN BY ISSUE DATE

Crédit Mutuel Alliance Fédérale's NPE rate does not exceed the threshold of 5%, so this table has not been produced.

TABLE 29: PERFORMING AND NON-PERFORMING EXPOSURES AND RELATED PROVISIONS (EU CR1)

	Gross carrying amount/nominal amount						Accumulated impairment and negative adjustment of fair value attributable to credit risk							Collateral and financial guarantees received	
	Performing loans			Non-performing loans			Accumulated impairment and adjustment of fair value on performing loans			Accumulated impairment and adjustment of fair value on non-performing loans					
12/31/2022 *(in € millions)*		Of which Stage 1	Of which Stage 2		Of which Stage 2	Of which Stage 3		Of which Stage 1	Of which Stage 2		Of which Stage 2	Of which Stage 3	Partial cumulative reversals	On performing loans	On non-performing loans
Demand accounts with central banks and other demand deposits	**115,106**	**114,638**	**469**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**
Loans and advances	**550,945**	**516,358**	**34,495**	**13,181**	**0**	**12,844**	**-3,296**	**-1,546**	**-1,745**	**-6,278**	**0**	**-6,214**	**0**	**308,100**	**4,262**
Central banks	470	470	0	0	0	0	0	0	0	0	0	0	0	0	0
Public administration	6,876	6,773	103	31	0	26	-4	-1	-2	-4	0	-4	0	1,229	15
Credit institutions	51,577	51,560	17	3	0	3	-4	-3	-1	-1	0	-1	0	838	1
Other financial institutions	11,825	10,996	817	174	0	172	-43	-24	-19	-105	0	-104	0	7,462	64
Non-financial corporations	244,831	223,655	21,127	7,334	0	7,041	-1,380	-513	-865	-2,896	0	-2,846	0	162,867	3,297
of which: small- and medium-sized enterprises	203,877	185,545	18,287	6,078	0	5,824	-1,123	-389	-732	-2,466	0	-2,420	0	142,457	2,740
Households	235,365	222,904	12,430	5,639	0	5,603	-1,867	-1,005	-858	-3,271	0	-3,259	0	135,704	885
Debt instruments	**38,681**	**37,884**	**27**	**93**	**0**	**93**	**-21**	**-20**	**-1**	**-64**	**0**	**-64**	**0**	**0**	**0**
Central banks	1,081	1,081	0	0	0	0	0	0	0	0	0	0	0	0	0
Public administration	16,537	16,537	0	0	0	0	-5	-5	0	0	0	0	0	0	0
Credit institutions	10,174	10,147	0	1	0	1	-3	-3	0	-1	0	-1	0	0	0
Other financial institutions	9,164	9,150	1	2	0	2	-11	-11	0	-1	0	-1	0	0	0
Non-financial corporations	1,725	969	26	91	0	91	-2	-1	-1	-62	0	-62	0	0	0
Off-balance sheet outstandings	**167,134**	**163,425**	**3,708**	**544**	**0**	**533**	**-244**	**-142**	**-102**	**-156**	**0**	**-156**	**0**	**25,397**	**119**
Central banks	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0
Public administration	3,246	3,244	2	0	0	0	0	0	0	0	0	0	0	696	0
Credit institutions	55,100	54,240	860	87	0	87	-9	-3	-6	-18	0	-18	0	127	3
Other financial institutions	2,775	2,691	84	3	0	3	-9	-7	-2	-2	0	-2	0	529	1
Non-financial corporations	76,746	74,756	1,990	400	0	392	-199	-111	-87	-134	0	-134	0	17,653	96
Households	29,254	28,481	773	53	0	52	-27	-21	-6	-2	0	-2	0	6,392	20
TOTAL	871,866	832,306	38,699	13,818	0	13,471	-3,561	-1,708	-1,847	-6,498	0	-6,434	0	333,503	4,381

The Crédit Mutuel group applies local law and write-offs are only recorded once all rights of recovery have been extinguished.

12/31/2021 *(in € millions)*	Gross carrying amount/nominal amount						Accumulated impairment and negative adjustment of fair value attributable to credit risk						Partial cumulative reversals	Collateral and financial guarantees received	
	Performing loans			Non-performing loans			Accumulated impairment and adjustment of fair value on performing loans			Accumulated impairment and adjustment of fair value on non-performing loans				On performing loans	On non-performing loans
		Of which Stage 1	Of which Stage 2		Of which Stage 2	Of which Stage 3		Of which Stage 1	Of which Stage 2		Of which Stage 2	Of which Stage 3			
Demand accounts with centra banks and other demand deposits	**124,714**	**124,712**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**304**	**0**
Loans and advances	**498,826**	**462,537**	**36,277**	**11,723**	**0**	**11,723**	**-3,248**	**-1,233**	**-2,015**	**-5,949**	**0**	**-5,949**	**-**	**273,109**	**3,513**
Central banks	408	408	0	0	0	0	0	0	0	0	0	0	-	0	0
Public administration	5,662	5,604	59	26	0	26	-2	-1	-1	-3	0	-3	-	1,237	11
Credit institutions	53,971	53,964	7	4	0	4	-2	-2	0	-1	0	-1	-	632	2
Other financial institutions	11,630	10,673	953	196	0	196	-30	-15	-15	-89	0	-89	-	6,170	99
Non-financial corporations	218,435	194,254	24,173	6,516	0	6,516	-1,605	-361	-1,244	-2,862	0	-2,862	-	143,564	2,671
Of which: SMEs	184,972	163,884	21,088	5,629	0	5,629	-1,383	-275	-1,108	-2,552	0	-2,552	-	126,319	2,250
Households	208,720	197,635	11,085	4,981	0	4,981	-1,609	-854	-755	-2,995	0	-2,995	-	121,507	730
Debt instruments	**35,736**	**35,650**	**87**	**110**	**0**	**110**	**-20**	**-15**	**-5**	**-80**	**0**	**-80**	**-**	**0**	**0**
Central banks	980	980	0	0	0	0	0	0	0	0	0	0	-	0	0
Public administration	16,366	16,366	0	0	0	0	-3	-3	0	0	0	0	-	0	0
Credit institutions	11,978	11,979	0	1	0	1	-5	-5	0	-1	0	-1	-	0	0
Other financial institutions	4,943	4,941	2	2	0	2	-5	-5	0	-1	0	-1	-	0	0
Non-financial corporations	1,469	1,384	85	107	0	107	-7	-2	-5	-79	0	-79	-	0	0
Off-balance sheet commitments	**158,540**	**151,215**	**7,325**	**485**	**0**	**485**	**-326**	**-117**	**-209**	**-151**	**0**	**-151**	**-**	**21,433**	**87**
Central banks	20	20	0	0	0	0	0	0	0	0	0	0	-	0	0
Public administration	1,570	1,568	2	0	0	0	0	0	0	0	0	0	-	820	0
Credit institutions	59,785	57,747	2,037	80	0	80	-9	-3	-6	-23	0	-23	-	144	3
Other financial institutions	2,859	2,420	438	3	0	3	-12	-5	-7	-2	0	-2	-	523	0
Non-financial corporations	67,727	63,566	4,161	351	0	351	-280	-90	-190	-123	0	-123	-	14,104	68
Households	26,579	25,893	687	51	0	51	-25	-19	-6	-3	0	-3	-	5,841	15
TOTAL	817,817	774,113	43,690	12,318	0	12,318	-3,594	-1,365	-2,229	-6,181	0	-6,181	-	294,847	3,600

TABLE 30: CHANGES IN THE STOCK OF NON-PERFORMING LOANS AND ADVANCES (EU CR2)

(in € millions)	12/31/2022	12/31/2021
Initial stock of non-performing loans and advances	**11,723**	**12,591**
Additions to non-performing portfolios	6,178	5,420
Exits from non-performing portfolios	-4,720	-6,288
Exits due to losses	*-1,392*	*-1,575*
Exits due to other reasons	*-3,328*	*-4,714*
Final stock of non-performing loans and advances	**13,181**	**11,723**

TABLE EU CR2A: CHANGES IN THE STOCK OF NON-PERFORMING LOANS AND ADVANCES AND ASSOCIATED CUMULATIVE NET RECOVERIES

Crédit Mutuel Alliance Fédérale's NPE rate does not exceed the threshold of 5%, so this table has not been produced.

5.8.4 Standardized approach (EU CRD)

Exposures treated using the standard method are given in the table below.

Crédit Mutuel Alliance Fédérale uses from the evaluations of rating agencies (Standard & Poor's, Moody's and Fitch Ratings) to measure the sovereign risk in its exposures linked to central governments and central banks. If several rating levels derived from external ratings are possible, they are ranked from the most favorable to the least favorable and the second best is used to calculate the weighted risks.

Since September 2017, the group has relied primarily on the estimates provided by the Banque de France with regard to its corporate exposures.

The cross-reference table used to match the credit quality steps to the external ratings adopted is the one required by the regulation.

TABLE 31: BREAKDOWN OF EXPOSURES UNDER THE STANDARDIZED APPROACH (EU CR5)

Category of exposure *(in € millions)* 12/31/2022	Weighting																Total	Of which not rated
	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1,250%	Other	Deducted		
Governments and central banks	141,564	-	-	-	348	-	263	-	-	23	3	593	-	-	-	-	142,795	-
Regional or local authorities	259	-	-	-	5,785	-	-	-	-	0	-	-	-	-	-	-	6,043	-
Public sector (public organizations excluding central governments)	42,583	-	-	-	44	-	-	-	-	-	-	-	-	-	-	-	42,627	-
Multilateral development banks	1,064	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,064	-
International organizations	1,063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,063	-
Institutions (banks)	16	-	-	-	1,881	-	49	-	-	11	-	-	-	-	-	-	1,958	-
Corporates	0	-	-	-	743	-	2,274	-	-	25,684	101	-	-	-	-	-	28,802	-
Retail customers	-	-	-	-	-	-	-	-	44,431	-	-	-	-	-	-	-	44,431	-
Exposures secured by real estate mortgages	-	-	-	-	-	11,547	2,462	-	1,554	906	-	-	-	-	-	-	16,468	-
Exposures in default	13	-	-	-	-	-	-	-	-	2,137	879	-	-	-	-	-	3,028	-
Exposures presenting a particular high risk	-	-	-	-	-	-	-	-	-	-	2,014	-	-	-	-	-	2,014	-
Covered bonds	-	-	-	85	-	-	5	-	-	-	-	-	-	-	-	-	90	-
Exposures from institutions and corporates given a short-term credit evaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exposures in the form of UCIT shares or equities	120	-	-	-	-	-	1	-	-	227	170	-	-	19	-	-	538	-
Equity exposure	-	-	-	-	-	-	-	-	-	450	-	1	-	-	-	-	450	-
Other assets	-	-	-	2	13	-	45	-	-	2,670	-	-	-	-	76	-	2,805	-
TOTAL	186,681	-	-	86	8,815	11,547	5,100	-	45,984	32,107	3,167	593	-	19	76	-	294,176	-

Totals include outstandings weighted at 250%, which are deferred assets.

The exposure to governments and central banks is nearly entirely weighted at 0%. The capital requirements for this book demonstrate a sovereign risk for Crédit Mutuel Alliance Fédérale limited to high-quality counterparties.

Category of exposure *(in € millions)* 12/31/2021	Weighting																Total	Of which not rated
	0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	250%	370%	1,250%	Other	Deducted		
1 – Governments and central banks	151,495	-	-	-	543	-	136	-	-	245	-	785	-	-	-	-	153,205	-
2 – Regional or local authorities	260	-	-	-	4,486	-	-	-	-	0	-	-	-	-	-	-	4,746	-
3 – Public sector (Public organizations excluding central governments)	35,401	-	-	-	22	-	-	-	-	-	-	-	-	-	-	-	35,423	-
4 – Multilateral development banks	1,199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,199	-
5 – International organizations	1,047	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,047	-
6 – Institutions (banks)	9	-	-	-	1,804	-	74	-	-	26	0	-	-	-	-	-	1,913	-
7 – Corporates	-	-	-	-	838	-	1,896	-	-	19,012	79	-	-	-	-	-	21,826	-
8 – Retail customers	-	-	-	-	-	-	-	-	38,013	-	-	-	-	-	-	-	38,013	-
9 – Exposures secured by real estate mortgages	-	-	-	-	-	6,953	2,346	-	244	598	-	-	-	-	-	-	10,141	-
10 – Exposures in default	8	-	-	-	-	-	-	-	-	1,519	579	-	-	-	-	-	2,105	-
11 – Exposures presenting a particular high risk	-	-	-	-	-	-	-	-	-	-	1,495	-	-	-	-	-	1,495	-
12 – Covered bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13 – Exposures from institutions and corporates given a short-term credit evaluation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14 – Exposures in the form of UCIT shares or equities	37	-	-	-	-	-	1	-	-	170	154	-	-	20	-	-	381	-
15 – Equity exposure	-	-	-	-	-	-	-	-	-	425	-	1	-	-	-	-	425	-
16 – Other assets	-	-	-	0	3	-	4	-	-	1,620	-	-	-	-	8	-	1,635	-
17 – TOTAL	189,456	-	-	0	7,696	6,953	4,458	-	38,257	23,616	2,306	786	-	20	8	-	273,555	-

5.8.5 Internal rating systems (EU CRE)

5.8.5.1 Rating system and parameters

Rating algorithms and expert models have been developed to improve the group's credit risk assessment and to comply with the regulatory requirements concerning internal rating approaches.

Confédération Nationale du Crédit Mutuel is responsible for defining the rating methodologies for all portfolios. Nevertheless, the regional entities are directly involved in carrying out and approving working groups' assignments on specific subjects and the work related to data quality and applications acceptance tests. Therefore, in carrying out the accreditation work, the subsidiaries draw support from the expertise of the entity concerned, the staff employed by their parent company (risk and finance) and the Confédération Nationale staff.

The counterparty rating system is common to the entire Crédit Mutuel group.

Probability of default (PD) is the likelihood that a counterparty of the bank will default within a one-year period. The group's counterparties eligible for internal approaches are rated by a single system which is based on:

- statistical algorithms or "mass ratings" reliant on one or more models based on a selection of variables that are representative and predictive of risk;
- rating grids developed by experts.

These models are used to differentiate and correctly classify risk. The value scale reflects the manner in which the risk changes and is broken down into eleven positions, including nine performing positions (A+, A-, B+, B-, C+, C-, D+, D- and E+) and two default positions (E- and F).

In the so-called "mass" corporate and retail scopes, following the internal rating process, each borrower is given a score. Based on this score as well as other characteristics, performing borrowers are grouped into homogeneous risk classes, prior to measuring the regulatory PD parameter. The grouping analyses are performed on the segments defined for the purposes of modeling the algorithms. A risk class's probabilities of default are then estimated on the basis of the historical default rates observed on the exposures belonging to this class, based on a record of more than ten years of observations. Margins of conservatism are added to reflect the uncertainty of estimates.

In the other scopes, too few defaults are available to ensure the relevance and reliability of statistical estimates. The probabilities of default associated with the internal ratings are calibrated on the basis of external data.

Loss Given Default (LGD) is the ratio of the loss on an exposure in the event of a counterparty default to the amount of exposure at the time of default, including also additional drawdowns made after the transfer to non-performing.

Internal models for estimating LGD have been developed by the group and approved for the mass corporate and retail exposure classes.

In the "mass" corporate and retail scopes, LGD is calculated separately for each class, the classes being defined according to the type of loan and nature of the collateral. LGD is estimated based on the updated monthly collections observed for each class.

Margins of conservatism are added to reflect the uncertainty of estimates and the "downturn" nature of LGD. The calculations are based on an internal record of defaults and losses covering more than fifteen years.

The credit conversion factor (CCF) is the ratio of the portion currently undrawn of a credit line that could be drawn down and would therefore be exposed in the event of default and the portion of said credit currently undrawn.

In the case of the wholesale corporate and retail customers books, the Crédit Mutuel group calculates the credit conversion factors (CCFs) using an internal method approved for financing commitments. In the case of secured loans and banking exposures, regulatory values (standardized approach) are applied.

In the corporate and retail scopes, the internal CCFs are estimated based on average historical CCFs weighted by the number of contracts, using a product-focused segmentation. They are calibrated on the basis of internal data.

The parameters used to calculate weighted risks are national and apply to all group entities.

5.8.5.2 Model mapping

Modeled parameter	Category of exposure	Portfolios	Number of models	Methodology
PD	Institutions	Financial institutions	2 models: Banks, Covered Bonds	Expert-type models based on a grid containing qualitative and quantitative variables
	Corporates	Large corporates (LC) (Revenue > €500 million)	6 models depending on the type of counterparty and sector	Expert-type models based on a grid containing qualitative and quantitative variables
		"Mass" corporate (Revenue < €500 million)	3 models	Quantitative-type models with qualitative grids provided by experts
		Large corporates acquisition financing	1 model	Expert-type model based on grid containing qualitative and quantitative variables
		Corporate acquisition financing	1 model	Quantitative-type models combined with qualitative grids provided by experts
		Corporates	Spec. asset lending: 6 models according to the asset type, Spec. project lending: 4 models according to the industry, FS Immobiliers: 1 model	Expert-type models based on a grid containing qualitative and quantitative variables
		Other Corporates	2 models: RE Invest. Cos., Insurance	Expert-type models based on a grid containing qualitative and quantitative variables
	Retail	Individuals	6 models depending on the type of loan (real estate, personal, etc.)	Quantitative-type models
		Legal Entities	4 models depending on type of customer	Quantitative-type models
		Sole traders	3 models depending on type of business (merchants, artisans, etc.)	Quantitative-type models
		Farmers	6 models depending on the condition of the account and type of operation (cyclical or not)	Quantitative-type models
		Non-profit organizations	1 model	Quantitative-type models
		SCIs (RE partnerships)	1 model	Quantitative-type models
LGD	Institutions	Financial institutions	1 model	Expert-type model dependent on the counterparty and the contract, based on qualitative and quantitative information
	Corporates	Large corporates (LCs), Acquisition financing, RE Invest. cos. and Insurance	1 model with sector parameters	Expert-type model dependent on the counterparty and the contract, based on qualitative and quantitative information
		"Mass" corporate	1 model applied to 8 segments according to the type of loan and nature of security	Quantitative-type models based on internal collection flows
	Retail		1 model applied to 10 segments according to the type of loan and nature of security	Quantitative-type models based on internal collection flows
CCF	Corporates	"Mass" corporate	1 model applied to 4 segments according to the type of loan	Quantitative model, calibration of CCFs based on internal data
	Retail		1 model applied to 8 segments according to the type of loan	Quantitative model, calibration of CCFs based on internal data

TABLE 32: IRB APPROACH – CREDIT RISK EXPOSURES BY EXPOSURE CLASS AND PD RANGE (EU CR6) – IRBA

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
GOVERNMENTS AND CENTRAL BANKS					
	Subtotal	-	-	-	-
INSTITUTIONS (BANKS)					
	Subtotal	0	0	0	0
CORPORATES					
	0 to <0.15	0	0	0	0
	of which [0 to <0.10]	0	0	0	0
	of which [0.10 to <0.15]	0	0	0	0
	0.15 to <0.25	0	0	0	0
	0.25 to <0.50	0	0	0	0
	0.50 to <0.75	24,536	6,291	47	26,588
	0.75 to <2.50	21,741	4,564	48	22,150
	of which [0.75 to <1.75]	14,009	2,676	47	13,921
	of which [1.75 to <2.50]	7,732	1,888	49	8,230
	2.50 to <10.00	14,185	2,943	49	14,617
	of which [2.50 to <5.00]	10,749	2,174	48	11,103
	of which [5.00 to <10.00]	3,437	770	51	3,514
	10.00 to <100.00	1,931	268	52	1,814
	of which [10.00 to <20.00]	1,329	204	53	1,286
	of which [20.00 to <30.00]	43	6	45	46
	of which [30.00 to <100.00]	559	58	48	482
	100.00 (default)	2,013	205	83	1,755
	Subtotal	64,406	14,272	48	66,925
Of which: Specialized lending					
	Subtotal	0	0	0	0
Of which: SMEs					
	0 to <0.15	0	0	0	0
	of which [0 to <0.10]	0	0	0	0
	of which [0.10 to <0.15]	0	0	0	0
	0.15 to <0.25	0	0	0	0
	0.25 to <0.50	0	0	0	0
	0.50 to <0.75	14,155	1,879	53	14,657
	0.75 to <2.50	13,097	1,943	52	13,016
	of which [0.75 to <1.75]	8,815	1,327	50	8,648
	of which [1.75 to <2.50]	4,283	615	57	4,368
	2.50 to <10.00	7,068	1,064	56	7,140
	of which [2.50 to <5.00]	5,794	862	55	5,888
	of which [5.00 to <10.00]	1,274	203	58	1,252
	10.00 to <100.00	1,229	141	51	1,152
	of which [10.00 to <20.00]	906	113	52	882
	of which [20.00 to <30.00]	0	0	0	0
	of which [30.00 to <100.00]	323	28	49	270
	100.00 (default)	1,012	85	91	930
	Subtotal	36,561	5,112	54	36,895

Weighted average PD (in %)	Number of debtors	Weighted average LGD (in %)	Weighted average maturity (in years)	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
-	-	-	-	-	-	-	-
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
0.64	14,477	22	3	9,359	35	37	37
1.53	12,584	22	3	10,464	47	74	70
1.21	7,561	21	3	5,894	42	36	36
2.06	5,023	23	3	4,570	56	38	33
4.49	7,410	22	3	10,046	69	148	166
3.46	5,516	22	3	6,950	63	86	85
7.71	1,894	23	3	3,096	88	62	81
19.70	1,339	21	3	1,759	97	77	103
15.03	769	21	3	1,164	90	41	65
24.06	33	27	3	74	161	3	2
31.76	537	21	3	521	108	33	36
100.00	1,850	62	3	1,032	59	1,028	1,027
4.90	37,660	23	3	32,661	49	1,364	1,404
-		-					
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
0.64	9,130	20	3	4,161	28	19	18
1.47	8,799	20	3	4,851	37	39	40
1.21	6,007	20	3	3,051	35	21	22
2.00	2,792	20	3	1,801	41	18	18
4.06	4,692	21	3	3,651	51	60	74
3.34	3,736	21	3	2,862	49	40	49
7.43	956	21	3	789	63	19	25
18.78	932	21	3	954	83	46	65
15.04	588	21	3	703	80	28	43
-	0	0	0	0	0	0	0
30.99	344	21	3	251	93	18	21
100.00	1,230	60	3	607	65	516	464
4.67	24,783	21	3	14,224	39	679	661

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
RETAIL CUSTOMERS					
	0 to <0.15	120,462	15,899	34	125,835
	of which [0 to <0.10]	117,965	12,329	34	122,125
	of which [0.10 to <0.15]	2,498	3,570	34	3,710
	0.15 to <0.25	37,546	3,449	38	38,742
	0.25 to <0.50	51,357	5,209	35	52,535
	0.50 to <0.75	22,994	3,660	34	22,510
	0.75 to <2.50	39,170	5,974	38	39,963
	of which [0.75 to <1.75]	24,854	3,347	38	25,370
	of which [1.75 to <2.50]	14,316	2,627	37	14,594
	2.50 to <10.00	22,626	2,587	39	22,431
	of which [2.50 to <5.00]	11,313	1,320	39	11,380
	of which [5.00 to <10.00]	11,314	1,267	39	11,051
	10.00 to <100.00	6,908	466	39	6,647
	of which [10.00 to <20.00]	2,900	263	39	2,826
	of which [20.00 to <30.00]	2,446	119	42	2,491
	of which [30.00 to <100.00]	1,562	85	37	1,331
	100.00 (default)	4,974	149	62	4,610
	Subtotal	306,037	37,393	36	313,274
Of which: Exposures secured by real estate mortgages					
	0 to < 0.15	68,557	2,280	39	69,453
	of which [0 to <0.10]	68,439	2,246	39	69,322
	of which [0.10 to <0.15]	118	34	40	131
	0.15 to <0.25	25,560	752	39	25,856
	0.25 to <0.50	35,260	964	40	35,644
	0.50 to <0.75	12,459	413	40	12,626
	0.75 to <2.50	23,082	849	40	23,421
	of which [0.75 to <1.75]	14,864	504	40	15,065
	of which [1.75 to <2.50]	8,218	345	40	8,356
	2.50 to <10.00	12,592	378	41	12,745
	of which [2.50 to <5.00]	6,681	215	40	6,768
	of which [5.00 to <10.00]	5,910	163	41	5,977
	10.00 to <100.00	4,074	83	41	4,108
	of which [10.00 to <20.00]	1,634	51	41	1,655
	of which [20.00 to <30.00]	1,719	21	40	1,728
	of which [30.00 to <100.00]	721	11	41	725
	100.00 (default)	2,075	26	40	2,085
	Subtotal	183,660	5,746	40	185,938

Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
0.07	3,352,463	14	0	3,202	3	12	11
0.07	2,146,728	14	0	3,059	3	11	10
0.11	1,205,735	23	0	143	4	1	1
0.20	762,531	15	0	2,280	6	11	14
0.35	955,203	17	0	5,006	10	31	32
0.61	753,402	19	0	3,274	15	27	34
1.42	1,356,531	18	0	8,822	22	103	177
1.02	820,957	18	0	4,743	19	46	70
2.12	535,574	18	0	4,079	28	56	107
5.21	649,746	18	0	9,175	41	217	441
3.50	347,246	18	0	4,102	36	73	143
6.96	302,500	19	0	5,073	46	144	298
20.70	336,689	18	0	4,688	71	251	473
14.57	130,627	19	0	1,817	64	77	145
21.29	171,643	17	0	1,923	77	90	173
32.63	34,419	19	0	948	71	83	154
100.00	164,844	53	0	1,594	35	2,333	2,162
2.62	8,331,409	17	0	38,040	12	2,984	3,344
0.07	493,856	14	0	1,774	3	6	6
0.07	492,438	14	0	1,768	3	6	6
0.11	1,418	17	0	6	5	0	0
0.20	167,866	14	0	1,512	6	7	10
0.36	222,572	16	0	3,406	10	20	21
0.60	58,393	17	0	1,821	14	13	18
1.37	151,090	16	0	5,468	23	51	100
0.96	102,736	15	0	2,851	19	23	41
2.10	48,354	16	0	2,618	31	28	58
4.99	73,669	16	0	6,370	50	101	277
3.44	38,133	16	0	2,848	42	37	94
6.75	35,536	16	0	3,522	59	64	183
20.48	26,170	16	0	3,455	84	131	296
14.48	9,359	16	0	1,325	80	39	88
21.01	12,445	15	0	1,488	86	53	124
32.90	4,366	16	0	642	89	39	84
100.00	17,779	46	0	669	32	898	634
2.25	1,211,395	15	0	24,475	13	1,227	1,361

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
Of which: SMEs					
	0 to <0.15	0	0	0	0
	of which [0 to <0.10]	0	0	0	0
	of which [0.10 to <0.15]	0	0	0	0
	0.15 to <0.25	1,872	53	39	1,893
	0.25 to <0.50	9,555	256	41	9,659
	0.50 to <0.75	7,569	254	41	7,673
	0.75 to <2.50	6,116	280	41	6,231
	of which [0.75 to <1.75]	3,742	160	41	3,807
	of which [1.75 to <2.50]	2,374	120	41	2,424
	2.50 to <10.00	3,946	192	42	4,026
	of which [2.50 to <5.00]	2,129	111	41	2,175
	of which [5.00 to <10.00]	1,817	81	42	1,851
	10.00 to <100.00	1,420	42	42	1,438
	of which [10.00 to <20.00]	827	32	42	840
	of which [20.00 to <30.00]	181	3	41	183
	of which [30.00 to <100.00]	412	7	41	415
	100.00 (default)	567	4	40	569
	Subtotal	31,047	1,082	41	31,489
Of which: Non-SMEs					
	0 to <0.15	68,557	2,280	39	69,453
	of which [0 to <0.10]	68,439	2,246	39	69,322
	of which [0.10 to <0.15]	118	34	40	131
	0.15 to <0.25	23,688	699	39	23,963
	0.25 to <0.50	25,705	709	39	25,985
	0.50 to <0.75	4,890	159	40	4,953
	0.75 to <2.50	16,966	569	39	17,191
	of which [0.75 to <1.75]	11,123	345	39	11,258
	of which [1.75 to <2.50]	5,844	225	39	5,932
	2.50 to <10.00	8,645	186	39	8,718
	of which [2.50 to <5.00]	4,552	104	39	4,593
	of which [5.00 to <10.00]	4,093	82	39	4,126
	10.00 to <100.00	2,653	41	40	2,670
	of which [10.00 to <20.00]	807	19	40	814
	of which [20.00 to <30.00]	1,538	18	39	1,545
	of which [30.00 to <100.00]	308	4	39	310
	100.00 (default)	1,508	22	40	1,517
	Subtotal	152,613	4,665	39	154,449

Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
0.19	12,944	14	0	88	5	1	1
0.34	51,166	18	0	889	9	6	4
0.60	35,882	18	0	1,037	14	8	11
1.62	29,923	19	0	1,644	26	19	30
1.19	18,837	19	0	832	22	8	13
2.29	11,086	19	0	812	33	10	17
5.21	18,985	19	0	2,085	52	40	79
3.51	9,974	19	0	936	43	14	27
7.20	9,011	19	0	1,149	62	25	52
19.97	7,966	18	0	1,138	79	51	113
12.95	4,392	18	0	630	75	20	46
21.96	1,040	18	0	160	88	7	17
33.31	2,534	17	0	348	84	24	50
100.01	4,060	47	0	226	40	250	175
3.97	160,926	19	0	7,107	23	374	411
0.07	493,856	14	0	1,774	3	6	6
0.07	492,438	14	0	1,768	3	6	6
0.11	1,418	17	0	6	5	0	0
0.20	154,922	14	0	1,424	6	7	9
0.36	171,406	15	0	2,518	10	14	17
0.61	22,511	16	0	784	16	5	7
1.28	121,167	14	0	3,824	22	32	70
0.89	83,899	14	0	2,019	18	15	28
2.02	37,268	14	0	1,806	30	17	42
4.89	54,684	14	0	4,285	49	61	199
3.40	28,159	14	0	1,912	42	23	67
6.55	26,525	14	0	2,373	58	38	131
20.75	18,204	14	0	2,317	87	80	183
16.05	4,967	15	0	694	85	19	42
20.90	11,405	14	0	1,328	86	46	107
32.35	1,832	15	0	295	95	15	34
100.00	13,719	45	0	443	29	649	459
1.90	1,050,469	14	0	17,368	11	853	950

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
Of which: Revolving					
	0 to <0.15	2,839	8,309	20	4,509
	of which [0 to <0.10]	1,772	5,824	20	2,942
	of which [0.10 to <0.15]	1,067	2,485	20	1,567
	0.15 to <0.25	651	1,042	20	861
	0.25 to <0.50	1,107	1,596	20	1,428
	0.50 to <0.75	888	1,070	20	1,103
	0.75 to <2.50	1,560	1,317	20	1,824
	of which [0.75 to <1.75]	862	777	20	1,018
	of which [1.75 to <2.50]	698	540	20	807
	2.50 to <10.00	692	369	20	766
	of which [2.50 to <5.00]	425	247	20	475
	of which [5.00 to <10.00]	266	123	20	291
	10.00 to <100.00	350	98	20	370
	of which [10.00 to <20.00]	137	53	20	147
	of which [20.00 to <30.00]	208	43	20	216
	of which [30.00 to <100.00]	6	2	20	6
	100.00 (default)	156	2	20	157
	Subtotal	8,243	13,803	20	11,017
Of which: Other retail customers					
	0 to <0.15	49,066	5,310	53	51,872
	of which [0 to <0.10]	47,754	4,258	49	49,861
	of which [0.10 to <0.15]	1,313	1,052	66	2,012
	0.15 to <0.25	11,335	1,655	48	12,025
	0.25 to <0.50	14,990	2,648	43	15,464
	0.50 to <0.75	9,647	2,176	40	8,782
	0.75 to <2.50	14,528	3,808	44	14,717
	2.50 to <10.00	9,343	1,839	43	8,921
	of which [2.50 to <5.00]	4,206	858	44	4,137
	of which [5.00 to <10.00]	5,137	981	41	4,784
	10.00 to <100.00	2,483	285	46	2,170
	of which [10.00 to <20.00]	1,129	159	45	1,023
	of which [20.00 to <30.00]	519	55	60	547
	of which [30.00 to <100.00]	835	71	37	599
	100.00 (default)	2,742	122	68	2,367
	Subtotal	114,134	17,844	46	116,319

Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
0.09	723,925	31	0	78	2	1	1
0.07	472,524	31	0	45	2	1	0
0.11	251,401	31	0	33	2	1	0
0.20	106,211	31	0	30	3	1	0
0.30	210,011	31	0	70	5	1	1
0.55	182,616	31	0	87	8	2	2
1.56	306,663	31	0	315	17	9	8
1.09	160,691	31	0	135	13	3	3
2.16	145,972	31	0	180	22	5	5
4.84	132,012	31	0	296	39	11	12
3.83	79,460	31	0	158	33	6	5
6.49	52,552	31	0	137	47	6	7
17.51	75,225	31	0	293	79	20	19
11.51	28,994	31	0	96	65	5	4
21.16	45,309	31	0	190	88	14	14
32.23	922	31	0	6	101	1	1
100.02	26,661	54	0	35	22	82	103
2.75	1,763,324	31	0	1,204	11	127	146
0.06	2,134,682	14	0	1,349	3	5	4
0.06	1,181,766	14	0	1,246	2	4	4
0.11	952,916	18	0	103	5	0	0
0.20	488,454	15	0	738	6	4	4
0.35	522,620	18	0	1,530	10	9	10
0.64	512,393	21	0	1,366	16	12	14
1.48	898,778	20	0	3,039	21	43	69
5.54	444,065	21	0	2,509	28	105	152
3.58	229,653	20	0	1,096	26	30	44
7.24	214,412	21	0	1,413	30	75	108
21.67	235,294	21	0	940	43	100	158
15.16	92,274	22	0	396	39	33	53
22.22	113,889	19	0	245	45	23	36
32.31	29,131	22	0	299	50	43	70
100.00	120,404	60	0	890	38	1,352	1,425
3.20	5,356,690	17	0	12,361	11	1,630	1,836

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
Of which: SMEs					
	0 to <0.15	0	0	0	0
	of which [0 to <0.10]	0	0	0	0
	of which [0.10 to <0.15]	0	0	0	0
	0.15 to <0.25	1,482	415	33	1,518
	0.25 to <0.50	6,129	1,422	34	5,953
	0.50 to <0.75	7,498	1,560	33	6,269
	0.75 to <2.50	8,967	1,694	35	8,091
	of which [0.75 to <1.75]	5,208	1,036	35	4,807
	of which [1.75 to <2.50]	3,759	659	35	3,284
	2.50 to <10.00	6,816	1,226	38	6,072
	of which [2.50 to <5.00]	2,723	534	37	2,475
	of which [5.00 to <10.00]	4,093	692	38	3,597
	10.00 to <100.00	1,677	180	36	1,299
	of which [10.00 to <20.00]	807	103	36	667
	of which [20.00 to <30.00]	79	9	32	78
	of which [30.00 to <100.00]	791	68	36	554
	100.00 (default)	2,025	76	81	1,632
	Subtotal	34,594	6,573	35	30,834
Of which: Non-SMEs					
	0 to <0.15	49,066	5,310	53	51,872
	of which [0 to <0.10]	47,754	4,258	49	49,861
	of which [0.10 to <0.15]	1,313	1,052	66	2,012
	0.15 to <0.25	9,853	1,241	53	10,508
	0.25 to <0.50	8,861	1,226	53	9,511
	0.50 to <0.75	2,149	616	59	2,513
	0.75 to <2.50	5,562	2,114	50	6,626
	of which [0.75 to <1.75]	3,920	1,030	54	4,479
	of which [1.75 to <2.50]	1,642	1,084	47	2,147
	2.50 to <10.00	2,527	613	53	2,848
	of which [2.50 to <5.00]	1,483	324	55	1,662
	of which [5.00 to <10.00]	1,044	289	49	1,186
	10.00 to <100.00	806	105	62	871
	of which [10.00 to <20.00]	322	56	61	356
	of which [20.00 to <30.00]	440	45	66	469
	of which [30.00 to <100.00]	44	3	47	46
	100.00 (default)	717	45	46	736
	Subtotal	79,541	11,270	53	85,485
EQUITIES					
	Subtotal	0	0	0	0
TOTAL		370,443	51,665	39	380,198

Central governments and central banks are permanently under the standard approach, specialized lending under the slotting criteria method and equities under the simple weighting method.

Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
-	0	0	0	0	0	0	0
0.19	66,971	20	0	98	6	1	1
0.33	71,236	22	0	631	11	4	4
0.66	126,900	23	0	996	16	9	11
1.60	128,069	23	0	1,841	23	30	36
1.19	73,805	23	0	1,007	21	13	16
2.19	54,264	23	0	834	25	16	21
5.89	115,183	23	0	1,778	29	83	105
3.56	41,517	23	0	681	27	20	25
7.50	73,666	23	0	1,097	31	62	80
23.75	47,652	23	0	572	44	70	111
16.19	20,241	23	0	258	39	25	40
27.65	1,476	22	0	36	47	5	7
32.30	25,935	23	0	277	50	41	65
100.00	43,193	60	0	719	44	925	968
8.08	599,204	25	0	6,634	22	1,122	1,236
0.06	2,134,682	14	0	1,349	3	5	4
0.06	1,181,766	14	0	1,246	2	4	4
0.11	952,916	18	0	103	5	0	0
0.20	421,483	14	0	640	6	3	4
0.35	451,384	15	0	899	9	5	6
0.59	385,493	17	0	370	15	3	3
1.34	770,709	15	0	1,198	18	14	33
0.99	483,725	16	0	750	17	7	10
2.08	286,984	15	0	448	21	7	23
4.79	328,882	16	0	731	26	22	47
3.61	188,136	16	0	415	25	10	19
6.46	140,746	16	0	316	27	12	28
18.58	187,642	19	0	369	42	30	47
13.21	72,033	20	0	138	39	9	13
21.31	112,413	18	0	209	45	18	29
32.47	3,196	17	0	22	48	2	5
100.01	77,211	60	0	171	23	428	457
1.43	4,757,486	15	0	5,727	7	508	600
-	-	-	-	-	-	-	-
-	0	0	0	0	0	0	0
-	8,369,069	-	3	70,701	19	4,348	4,747

12/31/2021 *(in € millions)*	PD range	a Gross exposures initially on balance sheet	b Exposures Pre-CCF off balance sheet	c Average CCF	d Value exposed to post-CRM and post-CCF risk
GOVERNMENTS AND CENTRAL BANKS					
	Subtotal	-	-	-	-
INSTITUTIONS (BANKS)					
	0 to <0.15	33,528	2,810	28	34,252
	0.15 to <0.25	341	171	43	415
	0.25 to <0.50	106	167	31	130
	0.50 to <0.75	-	-	0	-
	0.75 to <2.50	283	208	71	429
	2.50 to <10.00	117	374	65	359
	10.00 to <100.00	33	25	46	44
	100.00 (default)	1	1	32	2
	Subtotal	**34,408**	**3,755**	**35**	**35,632**
CORPORATES					
	0 to <0.15	8,006	13,971	50	15,165
	0.15 to <0.25	-	-	0	-
	0.25 to <0.50	6,659	16,636	46	14,186
	0.50 to <0.75	20,560	5,058	46	22,051
	0.75 to <2.50	28,421	12,652	49	31,792
	2.50 to <10.00	17,401	5,205	49	18,031
	10.00 to <100.00	3,524	640	50	3,156
	100.00 (default)	2,519	338	66	2,308
	Subtotal	**87,090**	**54,500**	**48**	**106,689**
Of which: Specialized lending					
	Subtotal				
Of which: SMEs					
	0 to <0.15	-	-	-	-
	0.15 to <0.25	-	-	-	-
	0.25 to <0.50	-	-	-	-
	0.50 to <0.75	12,032	1,480	51	12,316
	0.75 to <2.50	11,854	1,740	49	11,343
	2.50 to <10.00	7,118	1,222	55	7,011
	10.00 to <100.00	1,203	94	52	1,074
	100.00 (default)	982	79	84	926
	Subtotal	**33,190**	**4,614**	**52**	**32,670**
RETAIL CUSTOMERS					
	0 to <0.15	107,786	14,370	34	112,721
	0.15 to <0.25	34,567	3,329	38	35,704
	0.25 to <0.50	46,042	4,567	36	46,944
	0.50 to <0.75	21,913	3,376	35	20,914
	0.75 to <2.50	37,693	5,976	39	38,188
	2.50 to <10.00	20,020	2,323	39	19,598
	10.00 to <100.00	5,677	380	40	5,435
	100.00 (default)	4,492	129	66	4,338
	Subtotal	**278,190**	**34,450**	**36**	**283,841**

e	f	g	h	i	j	k	l
Average PD	Number of debtors	Average LGD	Average maturity *(in years)*	RWAs	RWA density	EL	Corrected values & provisions
-	-	-	-	-	-	-	-
0.03	169	35	2.5	4,201	12	4	1
0.23	41	42	2.5	272	66	0	0
0.43	35	50	2.6	135	104	0	1
-	-	0	0.0	-	0	-	-
1.11	42	42	2.5	547	127	2	1
3.21	31	43	2.4	609	169	5	1
18.80	45	44	2.5	127	286	4	1
97.88	4	44	2.3	-	0	1	1
0.11	367	35	2.5	5,891	17	17	6
0.10	330	29	2.5	3,115	21	4	11
-	-	0	0.0	-	0	-	-
0.35	320	34	2.5	6,910	49	17	74
0.64	12,762	22	2.5	7,892	36	31	32
1.38	12,709	29	2.5	20,601	65	123	141
4.30	7,520	26	2.5	14,446	80	194	292
18.82	1,524	25	2.5	4,073	129	149	348
100.00	1,892	56	2.5	1,035	45	1,314	1,299
4.05	37,057	28	2.5	58,072	54	1,832	2,197
-		0					
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
0.64	7,988	21	2.5	3,545	29	16	16
1.46	8,673	21	2.5	4,152	37	34	59
4.15	4,753	20	2.5	3,488	50	59	120
18.81	986	21	2.5	856	80	42	87
100.00	1,194	59	2.5	625	68	500	484
5.09	23,594	22	2.5	12,666	39	651	765
0.07	3,051,235	14	0.0	2,872	3	11	13
0.20	727,272	15	0.0	2,099	6	10	14
0.35	881,225	17	0.0	4,455	9	27	31
0.61	697,541	20	0.0	3,032	15	25	54
1.42	1,271,135	17	0.0	8,351	23	96	191
5.06	579,989	18	0.0	7,966	50	181	482
20.39	289,030	18	0.0	3,813	84	200	435
100.00	141,473	55	0.0	1,463	31	2,271	2,070
2.61	7,638,900	17	0.0	34,051	13	2,822	3,289

12/31/2021 *(in € millions)*	PD range	a Gross exposures initially on balance sheet	B Exposures Pre-CCF off balance sheet	c Average CCF	d Value exposed to post-CRM and post-CCF risk
of which: Exposures secured by real estate mortgages					
	0 to <0.15	60,533	1,925	39	61,290
	0.15 to <0.25	23,244	701	39	23,519
	0.25 to <0.50	31,323	793	40	31,637
	0.50 to <0.75	11,256	335	40	11,391
	0.75 to <2.50	21,542	807	40	21,864
	2.50 to <10.00	11,112	327	40	11,244
	10.00 to <100.00	3,328	59	41	3,352
	100.00 (default)	1,996	9	40	2,000
	Subtotal	164,334	4,956	40	166,297
of which: SMEs					
	0 to <0.15	0	0	0	0
	0.15 to <0.25	1,655	46	39	1,673
	0.25 to <0.50	8,069	186	40	8,144
	0.50 to <0.75	6,732	189	41	6,809
	0.75 to <2.50	5,391	217	41	5,480
	2.50 to <10.00	3,373	154	42	3,437
	10.00 to <100.00	1,104	30	41	1,117
	100.00 (default)	549	2	41	550
	Subtotal	26,873	824	41	27,210
of which: Non-SMEs					
	0 to <0.15	60,533	1,925	39	61,290
	0.15 to <0.25	21,589	655	39	21,846
	0.25 to <0.50	23,254	607	39	23,493
	0.50 to <0.75	4,524	146	40	4,582
	0.75 to <2.50	16,151	590	39	16,384
	2.50 to <10.00	7,739	173	40	7,808
	10.00 to <100.00	2,223	29	40	2,235
	100.00 (default)	1,447	8	39	1,450
	Subtotal	137,461	4,132	39	139,088
of which: revolving					
	0 to <0.15	2,659	7,187	20	4,103
	0.15 to <0.25	633	990	20	831
	0.25 to <0.50	1,027	1,431	20	1,315
	0.50 to <0.75	810	963	20	1,004
	0.75 to <2.50	1,373	1,174	20	1,609
	2.50 to <10.00	594	328	20	660
	10.00 to <100.00	284	86	20	301
	100.00 (default)	130	4	20	131
	Subtotal	7,509	12,162	20	9,954

e	f	g	h	i	j	k	l
Average PD	Number of debtors	Average LGD	Average maturity *(in years)*	RWAs	RWA density	EL	Corrected values & provisions
0.07	440,737	14	0.0	1,572	3	6	7
0.20	155,851	14	0.0	1,376	6	6	9
0.36	202,541	16	0.0	3,030	10	17	17
0.60	54,003	17	0.0	1,653	15	12	20
1.37	143,821	15	0.0	5,094	23	47	86
4.93	66,527	16	0.0	5,581	50	87	235
20.28	21,929	16	0.0	2,825	84	105	226
100.00	17,399	48	0.0	621	31	903	655
2.29	1,102,808	15	0.0	21,753	13	1,184	1,255
-	0	0	0.0	0	-	0	0
0.19	11,503	14	0.0	78	5	0	2
0.34	44,398	19	0.0	753	9	5	4
0.60	32,511	18	0.0	918	13	7	15
1.59	27,398	19	0.0	1,422	26	16	31
5.09	16,605	19	0.0	1,743	51	33	80
19.71	6,351	18	0.0	887	79	39	90
100.00	3,946	49	0.0	214	39	251	180
4.06	142,712	19	0.0	6,015	22	352	401
0.07	440,737	14	0.0	1,572	3	6	7
0.20	144,348	14	0.0	1,299	6	6	7
0.36	158,143	15	0.0	2,277	10	12	13
0.61	21,492	16	0.0	735	16	5	5
1.30	116,423	14	0.0	3,673	22	31	55
4.86	49,922	14	0.0	3,838	49	54	155
20.56	15,578	15	0.0	1,938	87	66	136
100.00	13,453	47	0.0	407	28	653	476
1.94	960,096	15	0.0	15,738	11	833	854
0.09	656,071	31	0.0	72	2	1	1
0.20	103,732	31	0.0	29	3	1	0
0.30	191,072	31	0.0	64	5	1	1
0.55	161,840	31	0.0	79	8	2	2
1.56	269,089	31	0.0	278	17	8	8
4.83	113,511	31	0.0	255	39	10	11
17.33	61,095	31	0.0	237	79	16	16
100.02	21,300	56	0.0	28	21	71	90
2.56	1,577,710	31	0.0	1,042	10	109	129

12/31/2021 *(in € millions)*	PD range	a Gross exposures initially on balance sheet	B Exposures Pre-CCF off balance sheet	c Average CCF	d Value exposed to post-CRM and post-CCF risk
of which: Other retail customers					
	0 to <0.15	44,595	5,259	52	47,328
	0.15 to <0.25	10,691	1,639	49	11,353
	0.25 to <0.50	13,692	2,343	44	13,992
	0.50 to <0.75	9,847	2,078	40	8,519
	0.75 to <2.50	14,778	3,994	44	14,715
	2.50 to <10.00	8,314	1,669	43	7,693
	10.00 to <100.00	2,065	235	48	1,782
	100.00 (default)	2,365	116	70	2,207
	Subtotal	106,346	17,332	46	107,590
of which: SMEs					
	0 to <0.15	-	-	0	0
	0.15 to <0.25	1,377	336	35	1,362
	0.25 to <0.50	5,434	1,096	34	5,086
	0.50 to <0.75	7,849	1,428	33	6,153
	0.75 to <2.50	8,854	1,440	35	7,547
	2.50 to <10.00	6,129	974	38	5,161
	10.00 to <100.00	1,417	133	37	1,072
	100.00 (default)	1,700	74	84	1,524
	Subtotal	32,760	5,480	36	27,906
of which: Non-SMEs					
	0 to <0.15	44,595	5,259	52	47,328
	0.15 to <0.25	9,314	1,303	52	9,991
	0.25 to <0.50	8,258	1,247	52	8,906
	0.50 to <0.75	1,999	650	57	2,366
	0.75 to <2.50	5,924	2,554	49	7,168
	2.50 to <10.00	2,184	694	50	2,532
	10.00 to <100.00	648	102	61	710
	100.00 (default)	665	42	45	683
	Subtotal	73,587	11,851	52	79,684
EQUITIES					
	Subtotal				
TOTAL		399,688	92,705	43	426,162

	e	f	g	h	i	j	k	l
	Average PD	Number of debtors	Average LGD	Average maturity *(in years)*	RWAs	RWA density	EL	Corrected values & provisions
	0.06	1,954,427	14	0.0	1,229	3	4	5
	0.20	467,689	15	0.0	694	6	3	5
	0.34	487,612	18	0.0	1,361	10	8	12
	0.62	481,698	21	0.0	1,300	15	11	32
	1.48	858,225	19	0.0	2,979	20	42	97
	5.26	399,951	21	0.0	2,130	28	85	236
	21.12	206,006	21	0.0	751	42	79	193
	100.00	102,774	62	0.0	814	37	1,297	1,325
	3.12	4,958,382	17	0.0	11,256	10	1,529	1,905
	-	0	0	0.0	0	-	0	0
	0.19	62,366	20	0.0	88	6	1	1
	0.33	64,189	22	0.0	529	10	4	8
	0.64	123,959	23	0.0	956	16	9	30
	1.55	125,182	23	0.0	1,697	22	27	76
	5.48	103,758	23	0.0	1,490	29	65	191
	22.74	39,645	23	0.0	464	43	55	157
	100.00	37,255	62	0.0	653	43	901	903
	7.98	556,354	25	0.0	5,877	21	1,061	1,365
	0.06	1,954,427	14	0.0	1,229	3	4	5
	0.20	405,323	14	0.0	606	6	3	3
	0.35	423,423	15	0.0	832	9	5	5
	0.58	357,739	17	0.0	344	15	2	2
	1.41	733,043	15	0.0	1,282	18	15	21
	4.81	296,193	16	0.0	641	25	20	46
	18.66	166,361	18	0.0	286	40	23	36
	100.00	65,519	60	0.0	161	24	396	422
	1.42	4,402,028	15	0.0	5,379	7	467	539
	2.76	7,676,324	21	2.5	98,013	23	4,671	5,492

TABLE 32 BIS : IRB APPROACH – CREDIT RISK EXPOSURES BY EXPOSURE CLASS AND PD RANGE (EU CR6) IRBF

In March 2022, Crédit Mutuel, switched to the IRB-Foundation method for its large corporate portfolios and banks.

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
INSTITUTIONS (BANKS)					
	0 to <0.15	24,782	2,169	26	25,348
	of which [0 to <0.10]	17,312	2,010	26	17,868
	of which [0.10 to <0.15]	7,470	159	19	7,479
	0.15 to <0.25	823	268	34	913
	0.25 to <0.50	45	178	23	64
	0.50 to <0.75	0	0	0	0
	0.75 to <2.50	260	204	70	403
	of which [0.75 to <1.75]	260	204	70	403
	of which [1.75 to <2.50]	0	0	0	0
	2.50 to <10.00	115	39	31	127
	of which [2.50 to <5.00]	115	39	31	127
	of which [5.00 to <10.00]	0	0	0	0
	10.00 to <100.00	19	67	35	42
	of which [10.00 to <20.00]	18	0	0	18
	of which [20.00 to <30.00]	2	67	35	25
	of which [30.00 to <100.00]	0	0	0	0
	100.00 (default)	6	7	50	9
	Subtotal	**26,051**	**2,932**	**30**	**26,907**
CORPORATES					
	0 to <0.15	10,648	20,903	61	23,602
	of which [0 to <0.10]	4,595	10,834	63	11,581
	of which [0.10 to <0.15]	6,052	10,069	59	12,021
	0.15 to <0.25	239	1	21	240
	0.25 to <0.50	7,582	13,549	55	14,753
	0.50 to <0.75	0	0	0	0
	0.75 to <2.50	9,516	7,557	62	13,300
	of which [0.75 to <1.75]	9,516	7,557	62	13,300
	of which [1.75 to <2.50]	0	0	0	0
	2.50 to <10.00	3,152	1,275	57	3,643
	of which [2.50 to <5.00]	3,152	1,275	57	3,643
	of which [5.00 to <10.00]	0	0	0	0
	10.00 to <100.00	1,265	570	56	1,267
	of which [10.00 to <20.00]	1,265	570	56	1,267
	of which [20.00 to <30.00]	0	0	0	0
	of which [30.00 to <100.00]	0	0	0	0
	100.00 (default)	844	178	82	891
	Subtotal	**33,247**	**44,034**	**59**	**57,696**

Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
0.04	221	39	3	4,847	19	4	2
0.02	155	36	3	1,545	9	1	2
0.10	66	45	3	3,302	44	3	0
0.22	48	47	3	644	71	1	0
0.38	29	46	2	58	91	0	1
-	0	0	0	0	0	0	0
0.98	36	45	2	526	130	2	0
0.98	36	45	2	526	130	2	0
-	0	0	0	0	0	0	0
2.67	22	45	3	214	169	2	1
2.67	22	45	3	214	169	2	1
-	0	0	0	0	0	0	0
18.66	38	45	2	125	294	4	2
15.85	1	45	0	50	285	1	0
20.68	37	45	2	74	300	2	2
-	0	0	0	0	0	0	0
99.71	9	45	2	0	0	5	0
0.14	**403**	**39**	**3**	**6,414**	**24**	**17**	**8**
-		-					
0.09	381	44	3	7,256	31	10	7
0.07	185	43	3	2,881	25	3	3
0.12	196	45	3	4,375	36	6	4
0.22	15	45	3	122	51	0	0
0.33	342	45	3	9,279	63	22	112
-	0	0	0	0	0	0	0
1.08	443	44	3	13,512	102	64	22
1.08	443	44	3	13,512	102	64	22
-	0	0	0	0	0	0	0
3.32	223	45	3	5,312	146	54	38
3.32	223	45	3	5,312	146	54	38
-	0	0	0	0	0	0	0
15.86	71	45	3	3,150	249	90	120
15.86	70	45	3	3,150	249	90	120
-	1	0	0	0	265	0	0
-	0	0	2	0	0	0	0
100.00	61	45	2	0	0	302	288
2.48	**1,536**	**44**	**3**	**38,630**	**67**	**542**	**587**

12/31/2022 *(in € millions)*	PD range	Initial gross exposures on balance sheet	Pre-CCF off-balance-sheet exposures	Weighted average CCF	Post-CCF and CRM exposures
EQUITIES					
	0 to <0.15	0	0	0	0
	of which [0 to <0.10]	0	0	0	0
	of which [0.10 to <0.15]	0	0	0	0
	0.15 to <0.25	0	0	0	0
	0.25 to <0.50	0	0	0	0
	0.50 to <0.75	0	0	0	0
	0.75 to <2.50	0	0	0	0
	of which [0.75 to <1.75]	0	0	0	0
	of which [1.75 to <2.50]	0	0	0	0
	2.50 to <10.00	0	0	0	0
	of which [2.50 to <5.00]	0	0	0	0
	of which [5.00 to <10.00]	0	0	0	0
	10.00 to <100.00	0	0	0	0
	of which [10.00 to <20.00]	0	0	0	0
	of which [20.00 to <30.00]	0	0	0	0
	of which [30.00 to <100.00]	0	0	0	0
	100.00 (default)	0	0	0	0
	Subtotal	0	0	0	0
TOTAL		59,298	46,966	57	84,603

	Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Weighted average maturity *(in years)*	Risk-weighted exposure amount after additional factors	Risk-weighted exposure density	Amount of expected losses	Corrected values & provisions
	-		-					
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0
	1.73	1,939	43	3	45,044	88	559	630

5.8.5.3 Backtesting

The quality of the ratings system is monitored using national procedures which specify the topics to be reviewed, the warning thresholds and responsibilities of the personnel involved. These documents are updated by the Confédération Nationale du Crédit Mutuel risk department if necessary as decisions are ratified.

Reporting of the monitoring of the mass rating models focuses on three main aspects:

- stability assessment;
- performance assessment;
- various additional analyses.

These reports are prepared on a quartely basis for each mass rating model and supplemented by reviews and annual and half-yearly audits at a greater level of detail, in that all of the elements making up each model are analyzed.

As regards the expert grids, the approach includes comprehensive annual monitoring based on performance tests, with an analysis of rating concentrations, of transition matrices and of consistency with the external rating system.

The annual review of default probabilities is carried out before new estimates are made of that regulatory parameter. Depending on the portfolio, the annual review is supplemented by an intermediate review, conducted semi-annually.

The procedures for tracking LGD and CCFs are implemented on an annual basis, their main objective being to validate, at the segment level, the values used by these parameters. In the case of loss given default, this validation is carried out mainly by verifying the strength of the calculation methods for the margins of conservatism and by reconciling the LGD estimators with the most recent data and actual figures. As regards the CCF, it is validated by reconciling the estimators with the most recent CCFs observed.

Since a nation-wide procedure has been established for monitoring the parameters, the quantitative elements relating to the backtesting of the parameters and to the change in RWAs under the internal ratings-based approach are presented in the confederal Pillar 3 report.

5.8.5.4 Permanent and periodic control

The Crédit Mutuel group's Basel regulatory permanent control plan comprises two levels. At the national level, permanent control is involved, on the one hand, in validating new models and significant adjustments made to existing models and, on the other, the ongoing monitoring of the internal ratings system, especially its parameters.

At the regional level, the role of CNCM Permanent Control is to lead, coordinate and standardize all the Crédit Mutuel Permanent Control function, group-wide.

It controls the overall appropriation of the internal rating system, the operational aspects related to the production and calculation of ratings, the credit risk management procedures directly linked to the internal rating system and the quality of the data.

As for periodic control, the Crédit Mutuel group's audit unit carries out an annual review of the internal rating system. A framework procedure defines the type of assignments to be carried out on an ongoing basis on the Basel procedures as well as the breakdown of responsibilities between the regional and national audit units.

5.8.5.5 Additional quantitative information

The risk-weighted assets of "Equity" exposures are obtained using the simple risk-weighted approach, which involves applying specific risk weighting to the carrying amounts of the exposures.

The risk-weighted assets of "Specialized Financing" exposures are obtained using the slotting criteria method.

TABLE 33: IRB APPROACH – SCOPE OF USE OF STANDARDIZED AND IRB APPROACHES (EU CR6A)

	Performing loans				
12/31/2022 *(in € millions)*	Within the meaning of Article 166 of the CRR for exposures under the IRB approach	Total exposures under the standardized approach and the IRB approach	Percentage of total value at risk subject to permanent partial utilization of SA *(in %)*	Percentage of total value at risk subject to the IRB approach *(in %)*	Percentage of total value at risk subject to a roll-out plan *(in %)*
Governments and central banks	0	181,564	100	0	0
of which Regional or local authorities	*0*	*5,935*	*100*	*0*	*0*
of which Public sector entities	*0*	*41,798*	*100*	*0*	*0*
Institutions (banks)	26,924	28,872	4	93	2
Corporates	142,168	174,511	5	81	13
of which Corporates – Specialized financing excluding slotting criteria	*0*	*0*	*0*	*0*	*0*
of which Corporates – Specialized slotting criteria	*11,561*	*11,561*	*0*	*100*	*0*
Retail customers	319,354	382,513	7	83	10
of which Retail customers – Real estate – SMEs	*31,489*	*34,967*	*8*	*90*	*2*
of which Retail customers – Real estate – non-SMEs	*154,449*	*167,592*	*5*	*92*	*3*
of which Retail customers – Revolving	*11,017*	*11,341*	*1*	*97*	*2*
of which Retail customers – SMEs	*36,906*	*43,649*	*7*	*85*	*9*
of which Retail customers – Other non-SMEs	*85,493*	*124,965*	*10*	*68*	*22*
Equities	12,542	14,435	12	87	2
Other assets	6,470	9,275	15	70	15
TOTAL	507,459	791,170	28	64	8

	Value at risk				
12/31/2021 *(in € millions)*	Within the meaning of Article 166 of the CRR for exposures under the IRB approach	Total exposures under the standardized approach and the IRB approach	Percentage of total value at risk subject to permanent partial utilization of SA *(in %)*	Percentage of total value at risk subject to the IRB approach *(in %)*	Percentage of total value at risk subject to a roll-out plan *(in %)*
Governments and central banks	-	182,111	100	-	-
of which Regional or local authorities	-	*4,618*	*100*	-	-
of which Public sector entities	-	*34,769*	*100*	-	-
Institutions (banks)	35,723	37,647	4	95	2
Corporates	124,581	148,803	6	84	11
of which Corporates – Specialized financing excluding slotting criteria	-	-	-	-	-
of which Corporates – Specialized slotting criteria	*11,196*	*11,196*	-	*100*	-
Retail customers	290,604	340,675	7	85	8
of which Retail customers – Real estate – SMEs	*27,210*	*29,733*	*8*	*92*	-
of which Retail customers – Real estate – non-SMEs	*139,088*	*146,801*	*5*	*95*	*0*
of which Retail customers – Revolving	*9,954*	*10,278*	*1*	*97*	*2*
of which Retail customers – SMEs	*34,661*	*40,206*	*7*	*86*	*7*
of which Retail customers – Other non-SMEs	*79,692*	*113,656*	*10*	*70*	*20*
Equities	12,778	14,303	9	89	1
Other assets	6,139	7,774	12	79	9
TOTAL	469,826	731,313	30	64	6

TABLE 34: RWA FLOW STATEMENTS OF CREDIT RISK EXPOSURES UNDER THE IRB APPROACH (EU CR8)

(in € millions)	RWAs	Capital requirements
1 – RWAs December 2021	**106,755**	**8,540**
2 – Asset amount	4,239	339
3 – Asset quality	836	67
4 – Model upgrades	0	0
5 – Methodology and policy	0	0
6 – Acquisitions and disposals[1]	2,449	196
7 – Currency movements	0	0
8 – Other[2]	10,662	853
9 – RWAs December 2022	**124,941**	**9,995**

(1) In 2022, Crédit Mutuel Alliance Fédérale joined the Crédit Mutuel Nord Europe federation.

(2) In March 2022, Crédit Mutuel, switched to the IRB-Foundation method for its large corporate and bank portfolios.

TABLE 35: IRB APPROACH – PD BACKTESTING BY EXPOSURE CLASS (EU CR9)

The information associated with this table is treated at the national level in the Crédit Mutuel group's Pillar 3 report.

TABLE 36: IRB APPROACH – PD BACKTESTING BY EXPOSURE CLASS – (ONLY FOR PD ESTIMATION) (EU CR9.1)

Category of exposure *(in € millions)* 12/31/2022	PD range	Equivalent external rating	Number of debtors at the end of the previous year		Average observed default rate *(in %)*	Average PD *(in %)*	Average historical annual default rate *(in %)*
				of which number of debtors who defaulted during the year			
Banks	0.00 to <0.15	1 to 2	321	-	0.03	0.06	0.07
	0.15 to <0.50	3	148	-	0.11	0.32	-
	0.50 to <10	4	137	1	1.21	1.82	0.35
	10.00 to <100.00	5 to 6	39	-	2.91	20.67	1.94
	100.00 (Default)		-	-	100.00	100.00	100.00
Large corporates	0.00 to <0.15	1 to 2	1,208	1	0.46	0.07	0.09
	0.15 to <1.50	3	3,856	19	0.44	0.59	0.21
	1.50 to <10	4	2,717	26	1.27	2.48	0.91
	10.00 to <100.00	5 to 6	314	4	9.86	15.86	5.38
	100.00 (Default)		-	-	100.00	100.00	100.00

Category of exposure *(in € millions)* 12/31/2021	PD range	Equivalent external rating	Number of debtors at the end of the previous year		Average observed default rate *(in %)*	Average PD *(in %)*	Average historical annual default rate *(in %)*
				of which number of debtors who defaulted during the year			
Banks	0.00 to <0.15	1 to 2	312	1	0.00	0.06	0.07
	0.15 to <0.50	3	113	-	0.00	0.34	0.13
	0.50 to <10	4	29	-	0.01	1.91	0.37
	10.00 to <100.00	5 to 6	14	3	0.03	21.61	2.10
	100.00 (Default)		-	-	100.00	100.00	100.00
Large corporates	0.00 to <0.15	1 to 2	1,324	-	0.00	0.07	0.10
	0.15 to <1.50	3	3,711	7	0.00	0.62	0.20
	1.50 to <10	4	2,353	20	0.01	2.60	0.84
	10.00 to <100.00	5 to 6	244	26	0.11	16.58	8.54
	100.00 (Default)		-	-	100.00	100.00	100.00

TABLE 37: IRB – SPECIALIZED FINANCING – PROJECTS (EU CR10.1)

Regulatory categories *(in € millions)* 12/31/2022	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Weighting	Exposure amount	RWAs	Expected losses
Category 1	Less than 2.5 years	133	98	50%	195	101	-
	2.5 years or more	2,211	435	70%	2,522	1,839	10
Category 2	Less than 2.5 years	169	42	70%	196	143	1
	2.5 years or more	965	382	90%	1,233	1,156	10
Category 3	Less than 2.5 years	18	2	115%	18	22	1
	2.5 years or more	421	129	115%	515	618	14
Category 4	Less than 2.5 years	15	5	250%	16	43	1
	2.5 years or more	81	20	250%	95	248	8
Category 5	Less than 2.5 years	4	-	0%	4	-	2
	2.5 years or more	-	-	0%	-	-	-
	LESS THAN 2.5 YEARS	339	147	-	430	309	5
TOTAL	2.5 YEARS OR MORE	3,680	965	-	4,365	3,859	42

Regulatory categories *(in € millions)* 12/31/2021	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Weighting	Exposure amount	RWAs	Expected losses
Category 1	Less than 2.5 years	166	90	50%	220	115	0
	2.5 years or more	2,045	332	70%	2,267	1,654	9
Category 2	Less than 2.5 years	128	82	70%	181	132	1
	2.5 years or more	945	479	90%	1,291	1,210	10
Category 3	Less than 2.5 years	14	2	115%	14	17	0
	2.5 years or more	333	142	115%	440	527	12
Category 4	Less than 2.5 years	0	0	250%	0	0	0
	2.5 years or more	8	0	250%	8	21	1
Category 5	Less than 2.5 years	8	0	0%	12	0	6
	2.5 years or more	5	0	0%	6	0	3
	LESS THAN 2.5 YEARS	316	175	-	427	264	7
TOTAL	2.5 YEARS OR MORE	3,336	953	-	4,012	3,412	36

TABLE 38: IRB – SPECIALIZED LENDING – REAL ESTATE PROPERTY (EU CR10.2)

Regulatory categories *(in € millions)* 12/31/2022	Remaining maturity	Balance sheet exposure	Off-balance sheet exposure	Risk weighting	Value at risk	Risk-weighted exposure amounts	Expected losses
Category 1	Less than 2.5 years	326	24	50%	330	172	
	2.5 years or more	1,568	184	70%	1,692	1,234	7
Category 2	Less than 2.5 years	322	24	70%	334	244	1
	2.5 years or more	541	125	90%	611	573	5
Category 3	Less than 2.5 years	30	1	115%	30	36	1
	2.5 years or more	4		115%	4	5	0
Category 4	Less than 2.5 years	-	-	250%	-	-	-
	2.5 years or more	5		250%	5	14	0
Category 5	Less than 2.5 years	-	-	0%	-	-	-
	2.5 years or more	-	-	0%	-	-	-
	LESS THAN 2.5 YEARS	679	49	-	695	452	2
TOTAL	2.5 YEARS OR MORE	2,118	310	-	2,312	1,826	12

Regulatory categories *(in € millions)* 12/31/2021	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Weighting	Exposure amount	RWAs	Expected losses
Category 1	Less than 2.5 years	338	46	50%	374	195	0
	2.5 years or more	1,621	128	70%	1,703	1,242	7
Category 2	Less than 2.5 years	246	52	70%	263	192	1
	2.5 years or more	638	66	90%	686	644	5
Category 3	Less than 2.5 years	0	0	115%	0	0	0
	2.5 years or more	46	0	115%	46	55	1
Category 4	Less than 2.5 years	0	0	250%	0	0	0
	2.5 years or more	6	0	250%	6	16	0
Category 5	Less than 2.5 years	0	0	0%	0	0	0
	2.5 years or more	0	0	0%	0	0	0
	LESS THAN 2.5 YEARS	584	98	-	637	386	1
TOTAL	2.5 YEARS OR MORE	2,311	194	-	2,441	1,957	14

TABLE 39: IRB – SPECIALIZED LENDING – ASSETS (EU CR10.3)

Regulatory categories *(in € millions)* 12/31/2022	Remaining maturity	Balance sheet exposure	Off-balance sheet exposure	Risk weighting	Value at risk	Risk-weighted exposure amounts	Expected losses
Category 1	Less than 2.5 years	301	17	50%	311	162	
	2.5 years or more	2,906	207	70%	2,931	2,138	12
Category 2	Less than 2.5 years	5	-	70%	5	3	0
	2.5 years or more	91	74	90%	147	138	1
Category 3	Less than 2.5 years	43	-	115%	43	52	1
	2.5 years or more	220	-	115%	202	242	6
Category 4	Less than 2.5 years	-	-	250%	-	-	-
	2.5 years or more	20	-	250%	5	13	0
Category 5	Less than 2.5 years	4	-	0%	4	-	2
	2.5 years or more	29	-	0%	28	-63	56
	LESS THAN 2.5 YEARS	354	17	-	363	218	3
TOTAL	2.5 YEARS OR MORE	3,267	281	-	3,397	2,531	75

Regulatory categories *(in € millions)* 12/31/2021	Remaining maturity	On-balance sheet amount	Off-balance sheet amount	Weighting	Exposure amount	RWAs	Expected losses
Category 1	Less than 2.5 years	248	1	50%	243	127	0
	2.5 years or more	2,732	159	70%	2,785	2,031	11
Category 2	Less than 2.5 years	3	0	70%	3	2	0
	2.5 years or more	362	0	90%	336	315	3
Category 3	Less than 2.5 years	9	0	115%	9	11	0
	2.5 years or more	96	70	115%	148	178	4
Category 4	Less than 2.5 years	13	0	250%	13	33	1
	2.5 years or more	38	0	250%	10	26	1
Category 5	Less than 2.5 years	30	1	0%	41	0	21
	2.5 years or more	79	0	0%	91	0	46
	LESS THAN 2.5 YEARS	302	2	-	309	173	22
TOTAL	2.5 YEARS OR MORE	3,307	228	-	3,371	2,550	64

TABLE 40: IRB – SPECIALIZED FINANCING: COMMODITIES (EU CR10.4)

Crédit Mutuel Alliance Fédérale has no specialized financing exposure to commodities.

TABLE 41: SPECIALIZED LENDING: EQUITIES (EUR CR10.5)

Categories *(in € millions)* 12/31/2022	Balance sheet exposure	Off-balance sheet exposure	Risk weighting	Value at risk	Risk-weighted exposure amounts	Amount of expected losses
Private equity exposures	1,921	0	190%	1,921	3,649	15
Exposures to listed equities	236	0	290%	236	684	2
Other equity exposures[1]	8,707	0	370%	8,707	32,216	209
TOTAL	10,864	0	-	10,864	36,550	226

(1) Including €7,351 million of exposures related to Groupe des Assurances du Crédit Mutuel, treated according to the Danish compromise.

Categories *(in € millions)* 12/31/2021	Balance sheet exposure	Off-balance sheet exposure	Risk weighting	Value at risk	Risk-weighted exposure amounts
Exposures to private equity funds	1,800	0	190%	3,420	274
Exposures to equities traded on regulated exchanges	267	0	290%	775	62
Other equity exposures[1]	9,219	0	370%	34,112	2,729
TOTAL	11,287	0	-	38,307	3,065

(1) Including €8,094 million of exposures related to Groupe des Assurances du Crédit Mutuel, treated according to the Danish compromise.

5.9 COUNTERPARTY RISK (EU CCRA)

Qualitative information disclosure requirements on CCR

Objectives and risk management policies regarding CCR

In terms of Capital Market counterparty risk, the objective in managing it is to estimate the economic loss that the group would suffer in the event of instant default by a counterparty before applying a recovery rate.

Method used to allocate internal capital operating limits for counterparty credit risk exposures

The limits on trading floor credit risk and counterparty risk are internal ratings of the counterparties and of the type of exposure to them, such as money market instruments, investment in equity or debt securities, derivative products and repurchase transactions.

Policies concerning guarantees and other risk mitigation techniques and counterparty risk assessment

In keeping with what is indicated in the EU CCR1 statement, trading floor counterparty transactional risk is calculated (i) using the market price method accompanied by an add-on for exposures through derivatives and (ii) using the general method based on financial collateral for exposures through repurchase transactions. Margin call flows (collateralization) mitigate the risks of these exposures. Hedging through CDSs may also be used to manage credit risk for certain Large Corporate counterparties. Lastly, as regards the mitigation of counterparty risk, the measures applied are:

(i) signing netting contracts with certain counterparties or certain products (see close-out netting in the event of default by a counterparty);

(ii) netting transactions on certain over-the-counter derivatives with a central counterparty.

The policies applied as regards exposure to correlation risk

The risk of unfavorable correlation, known as Wrong Way Risk, is monitored for both of its components, specific risk and general risk. A procedure for monitoring specific correlation risk is in place to detect transactions that might create exposure. General correlation risk is calculated by combining a scenario where the probabilities of default (historical and market) deteriorate and a scenario where the primary risk factors to which the portfolio is sensitive are altered.

TABLE 42: CCR EXPOSURE ANALYSIS BY APPROACH (EU CCR1)

12/31/2022 *(in € millions)*	Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha factor used to calculate regulatory exposure	Value at risk before CRM	Value at risk after CRM	Value at risk	Risk-weighted exposure amount (RWEA)
EU – Initial exposure method (for derivatives)	14	93	-	1.4	148	148	1.4	47
EU – Simplified SA-CCR (for derivatives)	0	0	-	1.4	0	0	1.4	0
SA-CCR (for derivatives)	1,264	1,751	-	1.4	4,383	4,237	1.4	2,036
IMM (for derivatives and SFTs)	-	-	0	0	0	0	0	0
Of which securities financing transactions	-	-	*0*	-	*0*	*0*	*0*	*0*
Of which derivatives and deferred settlement transactions	-	-	*0*	-	*0*	*0*	*0*	*0*
Of which resulting from netting sets of multi-product agreements	-	-	*0*	-	*0*	*0*	*0*	*0*
Simple method based on financial collateral (for SFTs)	-	-	-	-	0	0	0	0
General method based on financial collateral (for SFTs)	-	-	-	-	0	0	0	355
VaR for SFTs	-	-	-	-	0	0	0	0
TOTAL	-	-	-	-	0	0	0	2,438

12/31/2021 *(in € millions)*	Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha factor used to calculate regulatory exposure	Value at risk before CRM	Value at risk after CRM	Value at risk	Risk-weighted exposure amount (RWEA)
EU – Initial exposure method (for derivatives)	10	108	-	1.4	166	166	166	49
EU – Simplified SA-CCR (for derivatives)	0	0	-	1.4	0	0	0	0
SA-CCR (for derivatives)	1,048	2,135	-	1.4	4,472	4,456	430	2,188
IMM (for derivatives and SFTs)	-	-	0	1.2	0	0	0	0
Of which securities financing transactions	-	-	*0*	-	*0*	*0*	*0*	*0*
Of which derivatives and deferred settlement transactions	-	-	*0*	-	*0*	*0*	*0*	*0*
Of which resulting from netting sets of multi-product agreements	-	-	*0*	-	*0*	*0*	*0*	*0*
Simple method based on financial collateral (for SFTs)	-	-	-	-	15,512	15,512	6,588	288
General method based on financial collateral (for SFTs)	-	-	-	-	0	0	0	0
VaR for SFTs	-	-	-	-	0	0	0	0
TOTAL	-	-	-	-	20,150	20,133	11,183	2,526

TABLE 43: CVA CAPITAL REQUIREMENTS (EU CCR2)

12/31/2022 *(in € millions)*	Amount of exposure	RWAs
Total portfolios subject to advanced CVA requirement	0	0
i) VaR component (including x3 multiplier)	-	0
ii) SVaR component under stress (including x3 multiplier)	-	0
Total portfolios subject to standard CVA requirement	1,374	405
Total of method based on original exposure	0	0
Total subject to credit valuation adjustment (CVA) capital requirements	1,374	405

12/31/2021 *(in € millions)*	Amount of exposure	RWAs
Total portfolios subject to advanced CVA requirement	0	0
i) VaR component (including x3 multiplier)	-	0
ii) SVaR component under stress (including x3 multiplier)	-	0
Total portfolios subject to standard CVA requirement	1,787	473
Total of method based on original exposure	0	0
Total subject to credit valuation adjustment (CVA) capital requirements	1,787	473

TABLE 44: STANDARDIZED APPROACH – CCR EXPOSURES BY REGULATORY PORTFOLIO AND RISK WEIGHTING (EU CCR3)

Exposure categories as at 12/31/2022 *(in € millions)*	Weighting											
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other	Total
Governments and central banks	-	-	-	-	-	-	-	-	-	-	-	-
Regional or local authorities	0	-	-	-	-	-	-	-	0	-	-	0
Public sector (public organizations excluding central governments)	27	-	-	-	-	-	-	-	0	-	-	28
Multilateral development banks	16	-	-	-	-	-	-	-	-	-	-	16
International organizations	0	0	0	0	0	0	0	0	0	0	0	0
Institutions (banks)	0	400	0	0	198	14	0	0	3	0	0	615
Corporates	0	0	0	0	0	1	0	0	441	0	0	442
Retail customers	0	0	0	0	0	0	0	2	0	0	0	2
Institutions and corporates given a short-term credit evaluation	0	0	0	0	0	0	0	0	0	0	0	0
Other assets	0	0	0	0	0	0	0	0	5	0	0	5
TOTAL	43	400	0	0	198	15	0	2	449	0	0	1,108

Exposure categories as at 12/31/2021 *(in € millions)*	Weighting											
	0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Other	Total
Governments and central banks	0	0	0	0	0	0	0	0	0	0	0	0
Regional or local authorities	0	0	0	0	0	0	0	0	3	0	0	3
Public sector (public organizations excluding central governments)	1	0	0	0	0	0	0	0	3	0	0	4
Multilateral development banks	0	0	0	0	0	0	0	0	0	0	0	0
International organizations	0	0	0	0	0	0	0	0	0	0	0	0
Institutions (banks)	0	473	0	0	179	24	0	0	4	0	0	679
Corporates	0	0	0	0	0	0	0	0	365	0	0	365
Retail customers	0	0	0	0	0	0	0	3	0	0	0	3
Institutions and corporates given a short-term credit evaluation	0	0	0	0	0	0	0	0	0	0	0	0
Other assets	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	473	0	0	179	24	0	3	375	0	0	1,055

TABLE 45: IRB APPROACH – CCR EXPOSURES BY PORTFOLIO AND PD SCALE (EU CCR4) – IRBA METHOD

12/31/2022 *(in € millions)*	PD range	EAD post-CRM	Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Average maturity *(in years)*	Risk-weighted exposure amount (RWEA)	RWA density
GOVERNMENTS AND CENTRAL BANKS								
	Subtotal	-	-	-	-	-	-	-
INSTITUTIONS (BANKS)								
	Subtotal	-	-	-	-	-	-	-
CORPORATES								
	0 to <0.15	-	-	-	-	-	-	-
	of which [0 to <0.10]	-	-	-	-	-	-	-
	of which [0.10 to <0.15]	-	-	-	-	-	-	-
	0.15 to <0.25	-	-	-	-	-	-	-
	0.25 to <0.50	-	-	-	-	-	-	-
	0.50 to <0.75	85	0.7	855	34	2.5	55	65
	0.75 to <2.50	82	1.4	665	45	2.5	92	112
	of which [0.75 to <1.75]	61	1.2	457	0	2.5	65	108
	of which [1.75 to <2.50]	21	2.0	208	0	2.5	27	125
	2.50 to <10.00	61	4.7	474	45	2.5	97	159
	of which [2.50 to <5.00]	47	3.7	360	0	2.5	69	148
	of which [5.00 to <10.00]	14	7.9	114	0	2.5	28	193
	10.00 to <100.00	7	19.4	52	45	2.5	18	252
	of which [10.00 to <20.00]	5	15.9	32	0	2.5	13	246
	of which [20.00 to <30.00]	-	-	-	-	-	-	-
	of which [30.00 to <100.00]	2	30.8	20	0	2.5	5	271
	100.00 (default)	5	100.0	31	45	2.5		
	Subtotal	241	4.7	2,077	41	2.5	262	109
Of which: Specialized lending								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
Of which: SMEs								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
RETAIL CUSTOMERS								
	0 to <0.15	3	0.1	79	45		0	3
	of which [0 to <0.10]	1	0.1	39	45		0	2
	of which [0.10 to <0.15]	2	0.1	40	45		0	3
	0.15 to <0.25							
	0.25 to <0.50	1	0.3	22	45		0	5
	0.50 to <0.75	0	0.5	13	45		0	8
	0.75 to <2.50	0	1.6	18	45		0	13
	of which [0.75 to <1.75]	0	1.2	14	45		0	12
	of which [1.75 to <2.50]	0	2.2	4	45		0	15
	2.50 to <10.00	0	4.3	3	45		0	16
	of which [2.50 to <5.00]	0	4.3	3	45		0	16
	of which [5.00 to <10.00]							
	10.00 to <100.00	0	10.5	6	45		0	19
	of which [10.00 to <20.00]	0	10.5	6	45		0	19
	of which [20.00 to <30.00]	-	-	-	-	-	-	-
	of which [30.00 to <100.00]	-	-	-	-	-	-	-
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	5	0.8	141	45		0	6
Of which: Exposures secured by real estate mortgages								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
Of which: SMEs								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-

Of which: Non-SMEs								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
Of which: Revolving								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
Of which: Other retail customers								
	0 to <0.15	3	0.1	79	45	-	0	3
	of which [0 to <0.10]	1	0.1	39	45	-	0	2
	of which [0.10 to <0.15]	2	0.1	40	45	-	0	3
	0.15 to <0.25	-	-	-	-	-	-	-
	0.25 to <0.50	1	0.3	22	45	-	0	5
	0.50 to <0.75	0	0.5	13	45	-	0	8
	0.75 to <2.50	0	1.6	18	45	-	0	13
	of which [0.75 to <1.75]	0	1.2	14	45	-	0	12
	of which [1.75 to <2.50]	0	2.2	4	45	-	0	15
	2.50 to <10.00	0	4.3	3	45	-	0	16
	of which [2.50 to <5.00]	0	4.3	3	45	-	0	16
	of which [5.00 to <10.00]	-	-	-	-	-	-	-
	10.00 to <100.00	0	10.5	6	45	-	0	19
	of which [10.00 to <20.00]	0	10.5	6	45	-	0	19
	of which [20.00 to <30.00]	-	-	-	-	-	-	-
	of which [30.00 to <100.00]	-	-	-	-	-	-	-
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	5	0.8	141	45	-	0	6
Of which: SMEs								
	0 to < 0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
Of which: Non-SMEs								
	0 to < 0.15	3	0.1	79	45	-	0	3
	of which [0 to <0.10]	1	0.1	39	45	-	0	2
	of which [0.10 to <0.15]	2	0.1	40	45	-	0	3
	0.15 to <0.25	-	-	-	-	-		
	0.25 to <0.50	1	0.3	22	45	-	0	5
	0.50 to <0.75	0	0.5	13	45	-	0	8
	0.75 to <2.50	0	1.6	18	45	-	0	13
	of which [0.75 to <1.75]	0	1.2	14	45	-	0	12
	of which [1.75 to <2.50]	0	2.2	4	45	-	0	15
	2.50 to <10.00	0	4.3	3	45	-	0	16
	of which [2.50 to <5.00]	0	4.3	3	45	-	0	16
	of which [5.00 to <10.00]	-	-	-	-	-	-	-
	10.00 to <100.00	0	10.5	6	45	-	0	19
	of which [10.00 to <20.00]	0	10.5	6	45	-	0	19
	of which [20.00 to <30.00]	-	-	-	-	-	-	-
	of which [30.00 to <100.00]	-	-	-	-	-	-	-
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	5	0.8	141	45	-	0	6
EQUITIES								
	0 to <0.15	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
TOTAL		246	4.7	2,218	41	2.5	263	107

12/31/2021 *(in € millions)*	PD range	EAD post-CRM	Average PD	Number of debtors	Average LGD	Average maturity *(in years)*	RWAs	RWA density
GOVERNMENTS AND CENTRAL BANKS								
	Subtotal	-	-	-	-	-	-	-
INSTITUTIONS (BANKS)								
	0 to <0.15	4,185	0.06%	136	22%	1.8	415	10%
	0.15 to <0.25	716	0.23%	24	19%	2.2	176	25%
	0.25 to <0.50	31	0.44%	5	8%	1.7	1	3%
	0.50 to <0.75	-	-	-	-	0.0	-	-
	0.75 to <2.50	17	1.02%	2	3%	1.5	2	9%
	2.50 to <10.00	-	-	-	-	-	-	-
	10.00 to <100.00	-	-	-	-	-	-	-
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	4,949	0.09%	167	21%	1.8	593	12%
CORPORATES								
	0 to <0.15	3,701	0.05%	127	13%	2.4	270	7%
	0.15 to <0.25	-	0.00%	-	-	-	-	-
	0.25 to <0.50	342	0.35%	87	23%	2.5	112	33%
	0.50 to <0.75	133	0.65%	1,063	44%	2.5	110	83%
	0.75 to <2.50	260	1.06%	881	43%	2.5	270	104%
	2.50 to <10.00	288	3.74%	544	40%	2.5	371	129%
	10.00 to <100.00	20	18.67%	87	31%	2.5	34	174%
	100.00 (default)	21	100.00%	48	44%	2.5	-	-
	Subtotal	4,765	0.89%	2,837	18%	2.5	1,167	24%
Of which: Specialized lending								
	Subtotal	-	-	-	-	-	-	-
Of which: SMEs								
	Subtotal	-	-	-	-	-	-	-
RETAIL CUSTOMERS								
	0 to < 0.15	2	0.10%	39	45	-	0	3%
	0.15 to <0.25	-	-	-	-	-	-	-
	0.25 to <0.50	2	0.25%	24	45	-	0	5%
	0.50 to <0.75	0	0.54%	8	45	-	0	8%
	0.75 to <2.50	1	1.56%	15	45	-	0	13%
	2.50 to <10.00	0	4.20%	2	44	-	0	16%
	10.00 to <100.00	0	10.52%	6	45	-	0	19%
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	6	0.63%	94	45	-	0	6%
Of which: Exposures secured by real estate mortgages								
	Subtotal	-	-	-	-	-	-	-
Of which: SMEs								
	Subtotal	-	-	-	-	-	-	-
Of which: Non-SMEs								
	Subtotal	-	-	-	-	-	-	-
Of which: Revolving								
	Subtotal	-	-	-	-	-	-	-
Of which: Other retail customers								
	Subtotal	-	-	-	-	-	-	-
Of which: SMEs								
	Subtotal	-	-	-	-	-	-	-
Of which: Non-SMEs								
	Subtotal	-	-	-	-	-	-	-
EQUITIES								
	Subtotal	-	-	-	-	-	-	-
TOTAL		9,720	0.49%	3,098	20%	2.4	1,760	18%

TABLE 45: IRB APPROACH – CCR EXPOSURES BY PORTFOLIO AND PD SCALE (EU CCR4) IRBF METHOD

12/31/2022 *(in € millions)*	PD range	EAD post-CRM	Weighted average PD *(in %)*	Number of debtors	Weighted average LGD *(in %)*	Average maturity *(in years)*	Risk-weighted exposure amount (RWEA)	RWA density
INSTITUTIONS (BANKS)								
	0 to <0.15	6,005	0.1	143	14	1.8	325	5
	of which [0 to <0.10]	5,302	0.1	115	13	1.7	237	4
	of which [0.10 to <0.15]	702	0.1	28	21	2.0	88	12
	0.15 to <0.25	776	0.2	28	14	2.0	145	19
	0.25 to <0.50	58	0.4	5	45	1.4	3	5
	0.50 to <0.75	-	-	-	-	-	-	-
	0.75 to <2.50	18	1.0	2	14	1.5	7	42
	of which [0.75 to <1.75]	18	1.0	2	14	1.5	7	42
	of which [1.75 to <2.50]	-	-	-	-	-	-	-
	2.50 to <10.00	-	-	-	-	-	-	-
	of which [2.50 to <5.00]	-	-	-	-	-	-	-
	of which [5.00 to <10.00]	-	-	-	-	-	-	-
	10.00 to <100.00	-	-	-	-	-	-	-
	of which [10.00 to <20.00]	-	-	-	-	-	-	-
	of which [20.00 to <30.00]	-	-	-	-	-	-	-
	of which [30.00 to <100.00]	-	-	-	-	-	-	-
	100.00 (default)	-	-	-	-	-	-	-
	Subtotal	**6,857**	**0.1**	**178**	**15**	**1.8**	**480**	**7**
CORPORATES								
	0 to <0.15	4,526	0.0	137	14	2.5	405	9
	of which [0 to <0.10]	4,082	0.0	74	11	2.5	248	6
	of which [0.10 to <0.15]	444	0.1	63	44	2.5	156	35
	0.15 to <0.25	-	-	-	-	-	-	-
	0.25 to <0.50	526	0.3	89	45	2.5	327	62
	0.50 to <0.75	-	-	-	-	-	-	-
	0.75 to <2.50	152	1.0	108	45	2.5	154	102
	of which [0.75 to <1.75]	152	1.0	108	45	2.5	154	102
	of which [1.75 to <2.50]	-	-	-	-	-	-	-
	2.50 to <10.00	150	3.3	72	45	2.5	219	146
	of which [2.50 to <5.00]	150	3.3	72	45	2.5	219	146
	of which [5.00 to <10.00]	-	-	-	-	-	-	-
	10.00 to <100.00	10	15.9	19	45	2.5	26	249
	of which [10.00 to <20.00]	10	15.9	19	45	2.5	26	249
	of which [20.00 to <30.00]	-	-	-	-	-	-	-

	of which [30.00 to <100.00]	-	-	-	-	-	-	-
	100.00 (default)	10	100.0	6	45	2.5	-	-
	Subtotal	5,374	0.4	431	19	2.5	1,130	21
TOTAL		12,230	0.2	609	17	2.2	1,610	13

TABLE 46: CREDIT DERIVATIVE EXPOSURES (EU CCR6)

12/31/2022 *(in € millions)*	Credit derivative hedges		Other credit derivatives
	Protection bought	Protection sold	
Notional amounts			
Single-name credit default swaps	6,492	4,526	0
Index credit default swaps	2,295	2,447	0
Total index credit default swaps	0	0	0
Credit options	0	0	0
Other credit derivatives	0	0	0
TOTAL NOTIONAL AMOUNTS	8,786	6,972	0
Fair values			
Positive fair value (asset)	38	76	0
Negative fair value (liability)	-92	-28	0

12/31/2021 *(in € millions)*	Credit derivative hedges		Other credit derivatives
	Protection bought	Protection sold	
Notional amounts			
Single-name credit default swaps	4,606	2,702	-
Index credit default swaps	2,322	2,726	-
Total index credit default swaps	-	-	-
Credit options	-	-	-
Other credit derivatives	-	-	-
TOTAL NOTIONAL AMOUNTS	6,929	5,428	-
Fair values			
Positive fair value (asset)	15	102	-
Negative fair value (liability)	-128	-11	-

TABLE 47: RWA FLOW STATEMENTS OF CCR EXPOSURES UNDER THE INTERNAL MODEL METHOD (EU CCR7)

Crédit Mutuel Alliance Fédérale does not use internal models (IMM) for the treatment of derivatives and repurchase transactions.

TABLE 48: EXPOSURES TO CENTRAL COUNTERPARTIES (EU CCR8)

(in € millions)	2022		2021	
	Value at risk	Risk-weighted exposure amount (RWEA)	Value at risk	Risk-weighted exposure amount (RWEA)
Exposures to eligible central counterparties (total)	0	27	-	21
Trade exposures with QCCPs (excluding initial margin and default fund contributions); of which	438	16	488	12
(i) Over-the-counter derivatives	382	15	384	10
(ii) Trading derivatives	20	0	23	0
(iii) Equity financing transactions	36	1	81	2
(iv) Netting sets in which cross-product netting has been approved	0	0	0	0
Segregated initial margin	2,412	0	1,587	-
Non-segregated initial margin	16	3	6	1
Pre-funded default fund contributions	62	8	54	7
Unfunded default fund contributions	0	0	0	0
Exposures to non-eligible central counterparties (total)	0	0		0
Trade exposures with non-QCCPs (excluding initial margin and default fund contributions); of which	0	0	0	0
(i) Over-the-counter derivatives	0	0	0	0

(ii) Trading derivatives	0	0	0	0
(iii) Equity financing transactions	0	0	0	0
(iv) Netting sets in which cross-product netting has been approved	0	0	0	0
Segregated initial margin	0	0	0	-
Non-segregated initial margin	0	0	0	0
Pre-funded default fund contributions	0	0	0	0
Unfunded default fund contributions	0	0	0	0

5.10 CREDIT RISK MITIGATION TECHNIQUES (EU CRC)

Financial, personal and physical collateral may be used directly to reduce the calculation of capital requirements measured for credit risk and included in the calculation of the group's solvency ratio. The use of guarantees as a risk mitigation technique is, however, subject to compliance with the eligibility and minimum requirement conditions imposed by the regulations.

5.10.1 Netting and collateralization of repurchase transactions and over-the-counter derivatives

When a framework agreement is entered into with a counterparty, the signatory entity nets the latter's exposure.

With credit institution counterparties, the Crédit Mutuel group supplements these agreements with collateralization agreements (CSA). The operational management of these agreements is based on the TriOptima platform.

Regular margin calls significantly reduce the residual net credit risk on over-the-counter derivatives and repurchase transactions.

5.10.2 Description of the main categories of collateral taken into account by the institution

The Crédit Mutuel group uses guarantees in different ways when calculating weighted risks, depending on the type of borrower, the calculation method applied for the exposure covered and the type of guarantee.

For retail banking customer contracts based on an advanced IRB approach, the guarantees are used as an element for segmenting the loss in the event of default, calculated statistically on all the group's non-performing loans and loans in litigation. For this scope, the group therefore does not use risk mitigation techniques in its capital requirements calculation.

For contracts concerning the "Sovereign" and "Institution" books and, to some extent, the "corporate" book, personal collateral and financial collateral are used as risk mitigation techniques, as defined by regulations:

- personal collateral corresponds to the undertaking made by a third party to replace the primary debtor in the event of default by the latter. By extension, credit derivatives (protective calls) fall into this category;
- financial collateral is defined by the group as a right of the institution to liquidate, retain or obtain the transfer or ownership of certain amounts or assets such as pledged cash deposits, debt securities, shares or convertible bonds, gold, UCITS shares, life insurance policies and instruments of any kind issued by a third party and repayable on request. Use of the guarantee is only effective if said guarantee meets the legal and operational criteria laid down by the regulations. Downstream processing to calculate weighted risks taking into account risk mitigation techniques is largely automated. Verification of compliance with the eligibility and minimum requirements conditions imposed by the regulations must be conducted and formalized when the guarantee is processed.

5.10.3 Procedures applied to the valuation and management of instruments constituting physical collateral

The valuation procedures for guarantees vary depending on the type of instrument comprising the physical collateral. Generally speaking, research carried out within the Crédit Mutuel group is based on statistical estimation methodologies, integrated directly into the applications, using external indices with potential discounts applied depending on the type of asset accepted as collateral (for example, the valuation of assets financed under finance leases takes into account the economic obsolescence of the asset). For real estate collateral, the initial valuation is generally calculated using the acquisition cost or construction value of the asset.

On an exceptional basis, specific procedures include expert valuations, particularly in cases where the limits set for outstandings are exceeded. These procedures are drawn up at the national level.

To perform the controls necessary for compliance with the conditions related to the guarantee agreements and the guarantors, the identification of guarantees in the information systems, and compliance with the standards and rules on eligibility in force at the Crédit Mutuel group, the regional groups use common tools and dedicated operational procedures that list the types of guarantees that are deemed eligible, present the IT mechanisms developed in the guarantee management applications to define eligibility and detail the questions the asset manager must answer to determine the eligibility of the guarantee when it is processed. These procedures are regularly updated by CNCM and submitted for validation by the Basel III governance bodies. The permanent control department is involved in second-level controls to verify the eligibility and its justification.

The guarantee is periodically revalued over its lifetime in accordance with the rules set out in the procedure.

5.10.4 Main categories of protection providers

With the exception of intra-group guarantees, the main categories of protection providers taken into account are mutual guarantee companies such as Crédit Logement or CNP.

TABLE 49: CREDIT RISK MITIGATION (CRM) – GENERAL OVERVIEW (EU CR3)

12/31/2022 *(in € millions)*	Unsecured exposures – Carrying amount	Guaranteed exposures – Amount	*Of which collateralized exposures[1]*	*Of which exposures secured by financial guarantees*	*Of which exposures secured by credit derivatives*
1 – Loans and advances	357,296	312,361	267,868	44,493	0
1 – Debt securities	38,690	0	0	0	-
3 – Total	**395,986**	**312,361**	**267,868**	**44,493**	**0**
4 – Of which non-performing exposures	2,671	4,262	2,615	1,646	0
5 – Of which defaulted	2,671	4,262	-	-	-

(1) Column containing secured exposures subject to a credit risk mitigation technique as defined by FINREP reporting. The guaranteed exposure amount includes retail customer contracts that are treated under the advanced IRB method and for which guarantees are used as a basis for segmentation of loss in the event of default.

Under the standardized approach, small discrepancies between exposure amounts pre-and post-CRM show that the impact of the collateral is not material. Potential concentrations resulting from CRM measures (by guarantor and by sector) are monitored as part of credit risk management and included in the quarterly report, in particular the monitoring of compliance with concentration limits (monitoring carried out after guarantors are taken into account). No specific concentration has resulted from implementation of CRM techniques.

12/31/2021 *(in € millions)*	Unsecured exposures – Carrying amount	Guaranteed exposures – Amount	*Of which collateralized exposures[1]*	*Of which exposures secured by financial guarantees*	*Of which exposures secured by credit derivatives*
1 – Loans and advances	349,443	276,623	230,682	45,941	0
1 – Debt securities	35,746	0	0	0	-
3 – Total	**385,189**	**276,623**	**230,682**	**45,941**	**0**
4 – Of which non-performing exposures	2,290	3,513	2,368	1,145	-
5 – Of which defaulted	2,290	3,153	-	-	-

(1) Column containing secured exposures subject to a credit risk mitigation technique as defined by FINREP regulations. The guaranteed exposure amount includes retail customer contracts that are treated under the advanced IRB method and for which guarantees are used as a basis for segmentation of loss given default.

The data for December 31, 2021 are republished following an improvement in the internal methodology.

TABLE 50: STANDARDIZED APPROACH – CREDIT RISK EXPOSURE AND CRM EFFECTS (EU CR4)

Category of exposure as of 12/31/2022 *(in € millions)*	Pre-CCF and CRM exposures		Post-CCF and CRM exposures		RWAs and RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
1 – Governments and central banks	131,323	925	142,629	166	1,712	1%
2 – Regional or local authorities	5,599	783	5,711	332	1,157	19%
3 – Public sector (Public organizations excluding central governments)	41,648	320	42,232	395	9	0%
4 – Multilateral development banks	1,064	0	1,064	0	0	0%
5 – International organizations	1,063	0	1,063		0	0%
6 – Institutions (banks)	1,718	331	1,819	139	412	21%
7 – Corporates	25,483	20,688	24,277	4,526	25,666	89%
8 – Retail customers	43,525	13,811	43,147	1,284	32,183	72%
9 – Exposures secured by real estate mortgages	16,177	598	16,176	292	7,187	44%
10 – Exposures in default	3,039	79	2,979	49	3,454	114%
11 – Exposures presenting a particularly high risk	1,980	158	1,937	77	2,995	149%
12 – Covered bonds	90	0	90	00	11	12%
13 – Exposures from institutions and corporates given a short-term credit evaluation	0	0	0	0	0	0%
14 – Exposures in the form of UCIT shares or equities	538	0	538	0	719	134%
15 – Equity exposure	450	0	450	0	451	100%
16 – Other assets	2,805	0	2,805	0	2,714	97%
17 – TOTAL	**276,501**	**37,692**	**286,917**	**7,259**	**78,670**	**27%**

The Crédit Mutuel group does not use credit derivatives as a credit risk mitigation technique (zero impact on RWA).

Category of exposure as of 12/31/2021 *(in € millions)*	Pre-CCF and CRM exposures		Post-CCF and CRM exposures		RWAs and RWA density	
	On-balance sheet amount	Off-balance sheet amount	On-balance sheet amount	Off-balance sheet amount	RWAs	RWA density
1 – Governments and central banks	140,015	1,013	152,896	309	2,386	2%
2 – Regional or local authorities	4,480	435	4,612	134	897	19%
3 – Public sector (Public organizations excluding central governments)	34,692	308	35,189	234	4	0%
4 – Multilateral development banks	1,199	0	1,199	0	0	0%
5 – International organizations	1,047	0	1,047	0	0	0%
6 – Institutions (banks)	1,788	314	1,777	136	424	22%
7 – Corporates	19,552	17,263	18,522	3,304	19,307	88%
8 – Retail customers	37,646	12,882	37,308	705	27,571	73%
9 – Exposures secured by real estate mortgages	9,954	399	9,954	187	4,344	43%
10 – Exposures in default	2,135	46	2,078	27	2,387	113%
11 – Exposures presenting a particularly high risk	1,427	187	1,401	93	2,226	149%
12 – Covered bonds	0	0	0	0	0	0%
13 – Exposures from institutions and corporates given a short-term credit evaluation	0	0	0	0	0	0%
14 – Exposures in the form of UCIT shares or equities	381	0	381	0	646	169%
15 – Equity exposure	425	0	425	0	426	100%
16 – Other assets	1,635	0	1,635	0	1,625	99%
17 – TOTAL	**256,376**	**32,847**	**268,426**	**5,129**	**62,243**	**23%**

TABLE 51: IRB APPROACH – EFFECT ON THE RWAS OF CREDIT DERIVATIVES USED AS CRM TECHNIQUES (EU CR7)

The effect of credit derivatives as a CRM technique (EU CR7) is not material for Crédit Mutuel Alliance Fédérale.

TABLE 52: GUARANTEED EXPOSURES UNDER THE IRBA APPROACH (EU CCR7-A)

		Credit risk mitigation techniques												
		Funded credit protection[1]									Unfunded credit protection		Credit risk mitigation techniques in the calculation of RWEAs	
			Portion covered by other eligible collateral *(as a %)*				Portion covered by other forms of financed credit protection *(as a %)*							
IRBA exposures at 12/31/2022 *(in € millions)*	Total exposures	Portion covered by financial guarantees *(as a %)*		Portion of exposures hedged by real estate collateral *(as a%)*	Portion of exposures hedged by loans to be recovered *(as a%)*	Portion of exposures hedged by other eligible collateral *(as a%)*		Portion of exposures hedged by cash deposits *(as a%)*	Portion of exposures hedged by life insurance policies *(as a%)*	Portion of exposures hedged by instruments held by third-parties *(as a%)*	Portion covered by guarantees *(as a %)*	Portion hedged by credit derivatives *(as a %)*	RWEA without substitution effects (reduction effects only)	RWEA with substitution effects (reduction and substitution effects)
1 – Governments and central banks	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 – Institutions	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 – Corporates	71,291	0	0	0	0	0	0	0	0	0	6	0	34,355	32,661
3.1 – of which: specialized lending	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.2 of which: SME	39,319	0	0	0	0	0	0	0	0	0	6	0	15,019	14,224
3.3 – of which: other corporates	31,975	0	0	0	0	0	0	0	0	0	6	0	19,336	18,437
4 – Retail customers	319,354	0	0	0	0	0	0	0	0	0	2	0	39,501	38,040
4.1 of which: SME real estate property	31,489	0	0	0	0	0	0	0	0	0	0	0	7,107	7,107
4.2 of which: non-SME real estate property	154,449	0	0	0	0	0	0	0	0	0	0	0	17,368	17,368
4.3 – of which: eligible revolving exposures	11,017		0	0	0	0	0	0	0	0	0	0	1,204	1,204
4.4 – of which: other SMEs	36,906	0	0	0	0	0	0	0	0	0	16	0	8,093	6,634
4.5 – of which: other non-SMEs	85,493	0	0	0	0	0	0	0	0	0	0	0	5,730	5,727
5 – TOTAL	**390,648**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**73,857**	**70,701**

(1) Column only includes secured exposures that are subject to a credit risk mitigation technique in the regulatory sense. The small amount of secured exposures reflects the fact that for retail customer contracts based on an advanced IRB approach the guarantees are used as an element for segmenting the loss in the event of default and, as such, CRM techniques are not used.

		Credit risk mitigation techniques												
		Funded credit protection									Unfunded credit protection		Credit risk mitigation techniques in the calculation of RWEAs	
			Portion covered by other eligible collateral *(as a%)*				Portion covered by other forms of financed credit protection *(as a%)*							
IRBF exposures at 12/31/2022 *(in € millions)*	Total exposures	Portion covered by financial guarantees *(as a%)*		Portion of exposures hedged by real estate collateral *(as a%)*	Portion of exposures hedged by loans to be recovered *(as a%)*	Portion of exposures hedged by other eligible collateral *(as a%)*		Portion of exposures hedged by cash deposits *(as a%)*	Portion of exposures hedged by life insurance policies *(as a%)*	Portion of exposures hedged by instruments held by third-parties *(as a%)*	Portion covered by guarantees *(as a%)*	Portion hedged by credit derivatives *(as a%)*	RWEA without substitution effects (reduction effects only)	RWEA with substitution effects (reduction and substitution effects)
1 – Governments and central banks	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 – Institutions	26,924	0	0	0	0	0	0	0	0	0	0	0	6,443	6,414
3 – Corporates	70,886	2	0	0	0	0	0	0	0	0	4	0	50,449	47,826
3.1 of which: SME	11,561	2	0	0	0	0	0	0	0	0	0	0	9,196	9,196
3.2 – of which: specialized lending	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.3 – of which: corporates - other	59,325	2	0	0	0	0	0	0	0	0	5	0	41,253	38,630
4 – TOTAL	**97,811**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**56,892**	**54,240**

IRBA exposures at 12/31/2021 *(in € millions)*	Total exposures	Credit risk mitigation techniques											Credit risk mitigation techniques in the calculation of RWEAs	
		Funded credit protection[1]									Unfunded credit protection			
				RWEA without substitution effects (reduction effects only)				RWEA without substitution effects (reduction effects only)						
		Portion covered by financial guarantees *(as a%)*		Portion of exposures hedged by real estate collateral *(as a%)*	Portion of exposures hedged by loans to be recovered *(as a%)*	Portion of exposures hedged by other eligible collateral *(as a%)*		Portion of exposures hedged by cash deposits *(as a%)*	Portion of exposures hedged by life insurance policies *(as a%)*	Portion of exposures hedged by instruments held by third-parties *(as a%)*	Portion covered by guarantees *(as a%)*	Portion hedged by credit derivatives *(as a%)*	RWEA without substitution effects (reduction effects only)	RWEA with substitution effects (reduction and substitution effects)
Governments and central banks	0	0	0	0	0	0	0	0	0	0	0	0		0 0
Institutions (banks)	35,723	0	0	0	0	0	0	0	0	0	0.3	0	5,931	5,891
Corporates	124,586	0.1	0	0	0	0	0	0	0	0	5.7	0	70,846	66,814
of which: specialized lending	11,196	1.6	0	0	0	0	0	0	0	0	0	0	8,742	8,742
of which: SMEs	35,594	0	0	0	0	0	0	0	0	0	8.2	0	13,656	12,666
of which: other corporates	77,797	0	0	0	0	0	0	0	0	0	5.5	0	48,448	45,406
Retail customers	290,652	0	0	0	0	0	0	0	0	0	2.3	0	35,529	34,051
of which: SME real estate property	27,210	0	0	0	0	0	0	0	0	0	0	0	6,015	6,015
of which: non-SME real estate property	139,088	0	0	0	0	0	0	0	0	0	0	0	15,738	15,738
of which: revolving loan	9,954	0	0	0	0	0	0	0	0	0	0	0	1,042	1,042
of which: SMEs	34,709	0	0	0	0	0	0	0	0	0	19.5	0	7,353	5,877
of which: other non-SMEs	79,692	0	0	0	0	0	0	0	0	0	0	0	5,382	5,379
TOTAL	450,961	0	0	0	0	0	0	0	0	0	3.12	0	112,306	106,755

(1) Column only includes secured exposures that are subject to a credit risk mitigation technique in the regulatory sense. The small amount of secured exposures reflects the fact that for retail customer contracts based on an advanced IRB approach the guarantees are used as an element for segmenting the loss in the event of default and, as such, CRM techniques are not used.

TABLE 53: COMPOSITION OF COLLATERAL FOR CCR EXPOSURES (EU CCR5)

12/31/2022 *(in € millions)*	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of collateral provided		Fair value of collateral received		Fair value of collateral provided	
	Segregated	Non-segregated	Segregated	Non-segregated	Segregated	No segregated	Segregated	No segregated
Cash – national currency	4	4,384	2,348	1,645	0	425	0	187
Cash – other currencies	9	556	78	2,813	0	193	0	138
National sovereign debt	0	0	0	0	0	5,219	0	5,264
Other sovereign debt	0	0	0	0	0	2,678	0	2,697
Public administration debt	0	0	0	0	0	341	0	510
Corporate bonds	0	0	0	0	0	1,570	0	1,465
Equities	0	0	0	0	0	803	0	42
Other collateral	0	0	0	0	0	4,965	0	7,013
TOTAL	13	4,940	2,425	4,458	0	16,194	0	17,317

Segregated: refers to collateral that is protected from default.

12/31/2021 *(in € millions)*	Collateral used in derivative transactions				Collateral used in SFTs			
	Fair value of collateral received		Fair value of collateral provided		Fair value of collateral received		Fair value of collateral provided	
	Segregated	Non-segregated	Segregated	Non-segregated	Segregated	No segregated	Segregated	No segregated
Cash – domestic currency	38	920	1,152	2,498	0	174	0	206
Cash – other currencies	11	845	138	785	0	107	0	17
Sovereign debt – domestic currency	0	0	0	0	0	3,448	0	4,480
Sovereign debt – other currencies	0	0	0	0	0	2,748	0	2,883
Public administration debt	0	0	0	0	0	0	0	13
Corporate bonds	0	0	0	0	0	1,177	0	1,314
Equities	0	0	0	0	0	1,014	0	7
Other	0	0	0	0	0	3,325		4,055
TOTAL	48	1,765	1,289	3,283	0	11,993	0	12,975

5.11 SECURITIZATION (EU SECA)

5.11.1 Objectives pursued

In connection with its Capital Markets, the group carries out operations on the securitization market by taking up investment positions with three objectives: achieving returns, taking risks and diversifying. The risks primarily concern credit risk on the underlying assets and liquidity risk, particularly with the changes in the European Central Bank's eligibility criteria.

The activity is exclusively an investor activity with senior or mezzanine tranches, which always have external ratings.

For specialized financing facilities, the group supports its customers as a sponsor (arranger or co-arranger) or sometimes as an investor with the securitization of commercial loans. The conduit used is the tool called Satellite, set up in November 2019. It subscribes for senior units in securitization vehicles and issues commercial paper.

Satellite is a securitization company set up in the form of a *société par actions simplifiée* (simplified joint stock company) sponsored by the Crédit Industriel et Commercial bank. The ABCP issuance programs of the Satellite are rated A-1 (sf) by S&P Global Ratings and P-1 (sf) by Moody's France SAS. The ABCP issuance programs of the Satellite conduit will enable Crédit Mutuel Alliance Fédérale to build an alternative source of short-term financing and, in particular, refinance the bank's securitization transactions with its corporate customers.

This conduit benefits from a liquidity line granted by the group which guarantees the placement of its commercial paper. The group is exposed mainly to credit risk on the portfolio of transferred loans and to the risk of the Capital Markets drying up.

5.11.2 Control and monitoring procedures for Capital Markets

Market risks on securitization positions are monitored by the risk and results control (CRR) function, focusing on various areas, with day-to-day procedures making it possible to monitor changes in market risks. The CRR analyzes changes in the results of securitization strategies each day and explains them in relation to the risk factors. It monitors compliance with the limits set by the body of rules and approved by the group lending department. The limits are reviewed at least once a year. The body of rules strictly governs the investment and risk portfolios.

The group also observes the credit quality of the securitization tranches on a daily basis by monitoring the ratings set by the external credit rating agencies Standard & Poor's, Moody's and Fitch Ratings. The actions taken by these agencies (upgrades, downgrades or watches) are analyzed. In addition, a quarterly summary of rating changes is drawn up.

In connection with the procedure for managing counterparty limits, the following work is carried out: in-depth analysis of securitizations that have reached the level of delegation for group commitments, analysis of certain sensitive securitizations (from the Eurozone's peripheral countries or subject to significant downgrades). The purpose of these analyses is notably to assess the position's level of credit and the underlying performances.

In addition, each securitization tranche, irrespective of the delegation level, is covered by a form. These forms incorporate the main characteristics of the tranche held, as well as the structure and the underlying portfolio. For securitizations issued from January 1, 2011, information on the underlying asset's performances has been added. This information is updated once a month. The branches' pre-sales documentation and the issue prospectuses are also recorded and made available with the forms, in addition to the investor reports for securitizations issued from January 1, 2011.

A stress test system is also deployed with the aim of measuring the impact of various scenarios on the tranches held. During 2021, the system was enhanced and entirely revised. The main parameters to which the scenarios apply variations are prepayments, defaults and recovery rates.

Monthly stress tests are also carried out on the portfolios. An asset quality review (AQR) was conducted by the European Central Bank in 2014 and completed by Stress Tests in 2014, 2016, 2018 and once again in 2021, with very satisfactory results.

5.11.3 Quantified data related to Capital Markets

In the 2022 fiscal year, group securitization investments increased by €1,030 million (up +14%) and represented a carrying amount of €8.45 billion as of December 31, 2022. The investments of the Capital Market arm of Crédit Mutuel Alliance Fédérale – called CIC Marchés – account for 81% of its securitization outstandings. The 2022 statistics in the tables presented in this section do not include the tranches sponsored by the American agencies Ginnie-Mae (Government National Mortgage Association), Freddie Mac (Federal Home Loan Mortgage Corporation), Fannie Mae (Federal National Mortgage Association) and SBA (Small Business Administration) for a total of €3.7 billion (€2.3 billion in 2021). These tranches are fully, unconditionally and irrevocably guaranteed by the American government. They are thus treated as sovereign exposures and classed under US government exposures. These investments are thus no longer recognized under the Basel regulatory framework's "Securitization" classification.

Securitization portfolios are managed on a prudent basis and comprise mainly senior securities with high credit ratings. Almost all figures are Investment grade (85%), most of which are rated AAA. All securitization is closely monitored. The portfolios are diversified, both in terms of type of exposure (RMBS, CLO, ABS auto loans, ABS consumer loans, ABS credit cards) and geographical exposure (United States, France, Germany, Italy and Spain).

TABLE 54: BREAKDOWN OF SECURITIZATION OUTSTANDINGS

Breakdown of assets by portfolio *(in € millions)*	12/31/2022	
Banking Book	8,099	6,794
Trading Book	351	626
TOTAL OUTSTANDINGS[1]	8,450	7,420

(1) These outstandings do not include the tranches sponsored by the US branches Ginnie-Mae and SBA.

Investment grade/non-investment grade outstandings *(as a %)*	12/31/2022	12/31/2021
Investment Grade category (of which AAA 78%)	85%	89%
Non-Investment Grade category	0%	0%
Not rated externally equivalent to full consolidation	15%	11%
TOTAL	100%	100%

Geographic breakdown of outstandings	12/31/2022
United States	39%
France	27%
Germany	6%
Italy	4%
Spain	5%
The Netherlands	6%
United Kingdom	4%
Australia	3%
Ireland	3%
Finland	1%
Austria	1%
Portugal	1%
Belgium	2%
Luxembourg	1%
TOTAL	100%

5.11.4 Capital Markets credit risk hedging policies

Capital Markets traditionally involve the purchase of securities. However, purchases of credit default swaps for hedging purposes may be authorized and, as applicable, are governed by Capital Market procedures.

5.11.5 Prudential approaches and methods

Entities included in the scope for approval of the credit risk internal rating approach apply the ratings-based method. Otherwise, the standardized approach is retained.

5.11.6 Accounting policies and principles

Securitization securities are recognized on the basis of their accounting classification in the same way as for other debt securities. The accounting policies and principles are presented in note 1a to the financial statements.

5.11.7 Exposures by type of securitization

Since January 1, 2019, securitization risks are covered by Regulation (EU) 2017/2401, amending Regulation (EU) 575/2013 (CRR).

This regulation revised the existing approaches (internal rating, standardized approach) and introduced a new approach based on external ratings for the calculation of capital requirements, which have been strengthened.

The exposures indicated above are net of provisions and the exposures measured using the internal ratings method and weighted at 1,250% are deducted from capital.

TABLE 55: SECURITIZATION EXPOSURES IN THE NON-TRADING BOOK (EU SEC1)

12/31/2022 *(in € millions)*	The institution acts as investor			
	Classic			
	STS	Non STS	Summarized	Subtotal
Total exposures	**2,328**	**5,771**	**0**	**8,099**
Retail customers (total)	1,795	731	0	2,526
Residential mortgages	625	485	0	1,110
Credit cards	68	0	0	68
Other retail customer exposures	1,102	246	0	1,348
Resecuritization	0	0	0	0
Wholesale customers (total)	533	5,040	0	5,573
Corporate loans	0	3,996	0	3,996
Commercial mortgages	0	0	0	0
Lease payments and receivables	533	1,044	0	1,577
Other wholesale customer exposures	0	0	0	0
Resecuritization	0	0	0	0

Crédit Mutuel Alliance Fédérale does not act as an originator or sponsor.

12/31/2021 *(in € millions)*	The institution acts as investor			
	Classic			
	STS	Non STS	Summarized	Subtotal
Total exposures	**2,430**	**4,364**	**0**	**6,794**
Retail customers (total)	1,837	787	0	2,624
Residential mortgages	627	380	0	1,007
Credit cards	116	10	0	126
Other retail customer exposures	1,094	397	0	1,491
Resecuritization	0	0	0	0
Wholesale customers (total)	593	3,577	0	4,170
Corporate loans	0	3,128	0	3,128
Commercial mortgages	0	0	0	0
Lease payments and receivables	593	450	0	1,042
Other wholesale customer exposures	0	0	0	0
Resecuritization	0	0	0	0

Crédit Mutuel Alliance Fédérale does not act as an originator or sponsor.

TABLE 56: SECURITIZATION EXPOSURES IN THE TRADING BOOK (EU SEC2)

12/31/2022 *(in € millions)*	The institution acts as investor			
	Classic			
	STS	Non STS	Summarized	Subtotal
Total exposures	**271**	**80**	**459**	**810**
Retail customers (total)	271	30	0	301
Residential mortgages	115	30	0	145
Credit cards	0	0	0	0
Other retail customer exposures	156	0	0	156
Resecuritization	0	0	0	0
Wholesale customers (total)	0	50	0	50
Corporate loans	0	0	0	0
Commercial mortgages	0	0	0	0
Lease payments and receivables	0	50	0	50
Other wholesale customer exposures	0	0	0	0
Resecuritization	0	0	0	0

Crédit Mutuel Alliance Fédérale is not acting as an originator or sponsor.

12/31/2021 *(in € millions)*	The institution acts as investor			
	Classic			
	STS	Non STS	Summarized	Subtotal
Total exposures	**498**	**137**	**823**	**1,458**
Retail customers (total)	466	128	0	594
Residential mortgages	124	128	0	253
Credit cards	0	0	0	0
Other retail customer exposures	341	0	0	341
Resecuritization	0	0	0	0
Wholesale customers (total)	32	9	0	41
Corporate loans	0	9	0	9
Commercial mortgages	0	0	0	0
Lease payments and receivables	32	0	0	32
Other wholesale customer exposures	0	0	0	0
Resecuritization	0	0	0	0

Crédit Mutuel Alliance Fédérale does not act as an originator or sponsor.

TABLE 57: SECURITIZATION POSITIONS AND RISK-WEIGHTED ASSETS – ORIGINATOR AND SPONSOR (EU SEC3)

Crédit Mutuel Alliance Fédérale does not have any securitization exposures as an initiator or sponsor.

TABLE 58: SECURITIZATION POSITIONS AND RISK-WEIGHTED ASSETS – INVESTORS (EU SEC4)

12/31/2022 *(in € millions)*	Securities at risk (by weighting range/deductions)					Value at risk (by regulatory approach)				Weighted exposure amount (by regulatory approach)				Capital requirement after application of the cap			
	Weighting ≤ 20%	Weighting > 20% and ≤ 50%	Weighting > 50% and ≤ 100%	Weighting > 100% and < 1,250%	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions
	7,662	**138**	**54**	**246**	**0**	**0**	**6,861**	**1,237**	**0**	**0**	**1,459**	**182**	**0**	**0**	**117**	**15**	**0**
Classic securitization	7,662	138	54	246	0	0	6,861	1,237	0	0	1,459	182	0	0	117	15	0
Securitization	7,662	138	54	246	0	0	6,861	1,237	0	0	1,459	182	0	0	117	15	0
Retail underlying	2,441	66	15	3	0	0	2,525	0	0	0	364	0	0	0	29	0	0
Of which STS	1,775	13	7	0	0	0	1,795	0	0	0	211	0	0	0	17	0	0
Wholesale customers	5,220	72	39	243	0	0	4,336	1,237	0	0	1,095	182	0	0	88	15	0
Of which STS	2,839	16	0	0	0	0	2,461	200	0	0	35	20	0	0	3	2	0
Resecuritization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synthetic securitization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Securitization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Retail underlying	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wholesale customers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Resecuritization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

12/31/2021 *(in € millions)*	Securities at risk (by weighting range/deductions)					Value at risk (by regulatory approach)				Weighted exposure amount (by regulatory approach)				Capital requirement after application of the cap			
	Weighting ≤ 20%	Weighting > 20% and ≤ 50%	Weighting > 50% and ≤ 100%	Weighting > 100% and < 1,250%	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	Weighting 1,250%/ deductions
Total exposures	**6,310**	**229**	**29**	**226**	**0**	**0**	**5,976**	**818**	**0**	**0**	**1,309**	**104**	**0**	**0**	**105**	**8**	**0**
Classic securitization	6,310	229	29	226	0	0	5,976	818	0	0	1,309	104	0	0	105	8	0
Securitization	6,310	229	29	226	0	0	5,976	818	0	0	1,309	104	0	0	105	8	0
Retail underlying	2,378	227	18	1	0	0	2,624	0	0	0	398	00	0	0	32	0	0
Of which STS	1,784	51	2	0	0	0	1,837	0	0	0	215		0	0	17	0	0
Wholesale customers	3,931	2	11	225	0	0	3,352	818	0	0	911	104	0	0	73	8	0
Of which STS	590	2	0	0	0	0	218	375	0	0	24	38	0	0	2	3	0
Resecuritization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Synthetic securitization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Securitization	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0
Retail underlying	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wholesale customers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Resecuritization	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 59: EXPOSURES SECURITIZED BY THE INSTITUTION – EXPOSURES IN DEFAULT AND SPECIFIC CREDIT RISK ADJUSTMENTS (EU SEC5)

Crédit Mutuel Alliance Fédérale does not act as an originator or sponsor.

5.12 RISK OF CAPITAL MARKETS (EU MRA)

5.12.1 General organization

The group's Capital Markets activities are organized around three business lines: group treasury (transactions which are mainly recognized in BFCM's balance sheet), commercial, and fixed-income, equity and credit products (recognized on CIC's balance sheet), with the last two business lines constituting CIC Marchés. The management of these three business lines is "sound and prudent."

Activities are carried out in France and in branches in London (group treasury and investment), New York (investment) and Singapore (investment and commercial).

Group treasury

This business line is organized into three teams, one of which is dedicated to cash and liquidity management. It centralizes all of Crédit Mutuel Alliance Fédérale's refinancing activities and ensures the regulatory management of its liquidity assets. It seeks to diversify its investor base in Paris and London, as well as in the United States (US 144A format), Asia (Samurai format) and in Australia (Kangaroo format), and its refinancing tools, including Crédit Mutuel – Home Loan SFH. A second team is dedicated to collateral management and monitoring and a third to the bank's settlement activities (including the various risks which are integrated into the business line risks).

Most of these products are monetary or debt instruments (money market and bonds) and futures used to hedge interest rates and exchange rates.

In addition to pure refinancing positions, this business line also includes a portfolio of available-for-sale securities which are held mainly for use in the event of a liquidity crisis.

Commercial

CIC Market Solutions is the division in charge of commercial activities within CIC Marchés. It is a comprehensive platform of market solutions for customers on all primary and secondary markets that also offer depository solutions (UCI depository and securities account keeping). In particular, it enables the group to better assist customers with their market financing.

The sales teams have access to a unified range of tools and products. They are organized into five activities.

The Secondary Market Solutions team, which comprises the Global Fixed-income/Currency/Commodity Execution Solutions and operates from Paris or within the regional banks, is responsible for the marketing of OTC hedging products (interest rate, currency, equity, commodity). It aims to optimize prices, preserve commercial margins and reverse positions on exchange rate and interest rate instruments.

The Global Execution Solutions offering also markets underlying equities, bonds and derivatives. In parallel, the Execution teams are assisted by the Solution Sales teams.

The Equity Sales activity, carried out in Paris, is also carried out through the subsidiary CIC Market Solutions Inc., a broker-dealer regulated by FINRA, wholly owned by CIC, whose operational headquarters are located at CIC NY with a clientele of professional investors in the United States and Canada.

The Investment Solutions (IS) team uses CIC's issue programs to market investment products such as CIC and Stork Acceptance EMTN, resulting directly from the expertise of the investment business and aimed at the customers of Crédit Mutuel's and CIC's different networks, as well as institutional, corporate and retail customers. In the event of partial marketing or early exit by customers, the IS team may have to temporarily carry capital-consuming securities.

The other three commercial activities do not present any market or credit risk. These include Global Research, Primary Market Solutions and Custody Solutions.

Regarding CIC Market Solution scope, agricultural commodities present no market risk as these operations involve pure back-to-back transactions.

These are carried out at the request of the customer on over-the-counter derivative instruments. CIC Market Solutions has no influence over commodity prices.

Fixed-Income-Equities-Credit Investments

This business line, also included in CIC Marchés, is organized around desks specialized in investments in equities/hybrid instruments, credit spreads and fixed income. These activities mainly involve purchases and sales of financial securities acquired with the view to holding them for a long period of time, as well as for trading in related financial instruments. These activities must create value in a disciplined risk environment in order to drive commercial development and provide expertise or services to other group entities.

5.12.2 Internal control system

The control mechanism is underpinned by a reference framework and a dedicated organizational structure.

The reference framework integrates a unified system of limits that structure Capital Markets, including those applied by CIC branches. This reference framework is formalized in two “bodies of rules.”

A CIC Marchés body of rules for the Commercial and Investment business lines and a group treasury body of rules. Regular updates are carried out throughout the year to include the introduction of new products and risk-measurement monitoring improvements, and a complete formal validation conducted at least once a year.

The group has adopted a trading policy that describes the rules governing the assignment of market transactions to one of the two prudential books, the banking book and the trading book.

This policy covers both the investment and commercial business lines (CIC Marchés) and the transactions carried out by group treasury. For the investment business line, an appendix to the policy provides a granular definition – by investment specialty – of the holding period for positions, the prudential classification and the justification for the classification.

Both the reference framework and the application of the trading policy are subject to specific controls within the context of the first-level permanent control process.

The organizational structure is underpinned by the players, functions and a comitology procedure dedicated to Capital Markets.

The front office units that execute transactions are separated from those responsible for monitoring risks and results (control function) and from those in charge of transaction validation, settlement and recording (back office function).

The internal control teams operate under the responsibility of the group risk department, which compiles scorecards summarizing risk exposures and presents the levels of capital allocated/consumed to be approved by the Board of Directors of CIC.

The permanent control system is based on first-level controls performed by three post-market teams: (i) the risks and results control team which validates production, monitors results on a daily basis and ensures compliance with limits, (ii) the post-market accounting and regulatory team responsible for reconciling accounting and economic results, as well as regulatory matters, and (iii) the legal and tax team in charge of first-level legal and tax compliance.

Second-level controls are organized around (i) the group Capital Market permanent control function, which reports to the permanent controls function, supervises first-level permanent controls carried out by CIC Marchés and conducts its own direct controls on activities, (ii) the group lending department, which monitors at-risk outstandings for each counterparty group, (iii) the group legal and tax department, which works with CIC Marchés' legal and tax teams, and (iv) CIC's finance department, which supervises accounting procedures and templates and is responsible for accounting and regulatory controls.

Third level of controls are organized around (i) periodic controls of Crédit Mutuel Alliance Fédérale performed retrospectively by a team of specialist auditors who carry out audits, controls and compliance checks in respect of Capital Markets, and (ii) the General Inspectorate of Confédération Nationale du Crédit Mutuel (CNCM), which supplements the audits performed by periodic business-line controls.

A Market Risk Committee that meets monthly and a Group Treasury Risk Committee that meets quarterly monitor the strategy, results and risks of CIC Marchés (in France and in the branches) and group treasury, respectively, within the limits set by the Board of Directors of CIC.

The Market Risk Committee is chaired by the Deputy Chief Executive Officer in charge of CIC Marchés and includes the Chief Executive Officers of CIC and BFCM, the Deputy Chief Executive Officer of BFCM, who is in charge of Crédit Mutuel Alliance Fédérale's Finance division, and the Deputy Chief Executive Officer of BFCM, who is in charge of the group's liquidity and treasury department, the heads of the front office and post-market teams, who are also members of CIC Marchés Management Committee, the heads of the group's risk and lending departments, the group's head of compliance and the head of the permanent control department. It approves the operational limits established as part of the general limits set by the Boards of Directors of CIC and BFCM, which are kept regularly informed on the risks and results of these activities.

The Group Treasury Risk Committee is chaired by the Chief Executive Officer of CIC and BFCM; it includes the Deputy Chief Executive Officer of BFCM in charge of Crédit Mutuel Alliance Fédérale's finance division and of group liquidity and treasury, the heads of the group treasury front office group, the head of the group ALM, the heads of the post-market teams and the head of the group risk department. The committee analyzes transactions related to market refinancing, refinancing of group entities and liquidity assets.

The Group Risk Committee (executive level) and the Group Risk Monitoring Committee (specialized committee of the deliberative body), both of which are supervised by the group risk department, conduct quarterly analyses of all the risks to which the group is exposed, including market risks. They review outstandings, risks, results, consumption of capital (regulatory and internal), regulatory developments and ongoing projects and audits (internal and external) for Capital Markets.

TABLE 60: MARKET RISK UNDER THE STANDARDIZED APPROACH (EU MR1)

	12/31/2022		12/31/2021	
(in € millions)	Risk-weighted assets	Capital Requirements	Risk-weighted assets	Capital Requirements
Outright products				
1 – Interest rate risk (general and specific)	992	79	1,106	88
2 – Equity risk (general and specific)	787	63	1,278	102
3 – Foreign exchange risk	505	40	588	47
4 – Commodity risk	1	0	-	-
Options				
5 – Simplified approach	-	-	-	-
6 – Delta-plus method	13	1	64	5
7 – Scenario approach	4	0	4	-
8 – Securitization (specific risk)	161	13	238	19
9 – TOTAL	2,463	197	3,277	262

5.12.3 Risk management

The system used to set exposure limits for market risk is based on:

- a global limit for regulatory capital (CAD/European capital adequacy) based on a standard internal measurement close to the regulatory value, broken down by desk, and by VaR (or stressed VaR);
- internal rules and scenarios (CAD risks, historical VaR and stress tests) which convert exposures into potential losses.

The limit system covers various types of market risk (interest rate, currency, equity and counterparty risks). The aggregate limit is broken down into sub-limits for each type of risk for each activity.

If the overall limit and/or the limit assigned to each business line is exceeded, the group risk department is responsible for monitoring and managing the excess exposure.

Risks are monitored on the basis of first-tier indicators, such as sensitivity to various market risk factors (mainly for traders), and second-tier indicators, such as potential losses, to give decision-makers an overview of Capital Market exposures.

The capital allocated in 2022 for the fixed income-equity-credit and commercial investment business lines was slightly up compared to 2021 after integration of the investment activities (CLO) of London in July 2022. It should be noted that for the investment business line, calculations are subject to a slightly more stringent methodology, since the use of internal LGDs is no longer authorized. For 2023, the limits have been revised upwards to take into account the calculation of regulatory measures and no longer of internal standard measures. The capital allocated for the CVA expense is also calculated for the risk monitoring system.

Crédit Mutuel Alliance Fédérale's VaR was €8.9 million at the end of 2022. A general stress test policy and a stress mechanism also help to manage risk, and there is an escalation procedure if limits are exceeded. In addition, a stressed VaR limit is monitored, including by desk for the Investment business line.

The most strategic indicators and limits are included in the Risk Appetite Framework of Crédit Mutuel Alliance Fédérale and CIC, overseen by the group risk department.

Capital Market activities carried out in the New York, Singapore and London branches since July 2022 are subject to limits under the supervision of CIC Marchés.

The day-to-day treasury position of CIC and BFCM must not exceed a limit of €1 billion for 2022, with an intermediate alert level defined by management and validated by the Boards of Directors of CIC and BFCM. The refinancing period for portfolio assets is also subject to monitoring and limits.

The principal CIC Marchés and group treasury trading floor risks are as follows:

Hybrids

Capital consumption was €67.4 million on average in 2022 and €73 million at the end of the year. The stock of convertible bonds was stable at €2 billion at the end of 2021.

Credit

The positions correspond to securities in corporate or financial entities or securities/CDS arbitrage (credit default swap), as well as to secured paper (securitization, covered bonds).

On the corporate and financial loan portfolio, capital consumption started the year at €73.9 million and gradually increased throughout the year until April, when it reached €80.3 million, finishing at €71 million at the end of 2022. The changes in activity are mainly due to the increase in the relative share of the positions in the Banking Book during the year. For the secured paper portfolio, risk consumption was relatively stable, with a very large proportion of securities with a very good external rating (AAA), and fluctuated around €58.8 million (€58.3 million at the end of the year).

M&A and other activities

Capital consumption averaged €50 million in 2022, reaching a high of €61 million in April. These movements follow the evolution of M&A outstandings.

The outstanding amount of the latter amounted to €430 million in April 2022, up by €77 million compared to January. It ended the year at €163 million, its lowest level of the year, with the pool of transactions being very limited, particularly in Europe.

Fixed income

These positions mainly concern directional investments and yield-curve arbitrage, typically with European underlying government securities.

Positions on peripheral countries are very limited. In Italy, outstandings ended the year at around €56 million and remained low throughout the year. Total outstanding government securities amounted to €1.5 billion at the end of 2022 compared to €1.2 billion at the end of 2021, of which €0.7 billion in France.

Refinancing

BFCM's capital consumption mainly relates to the HQLA portfolio. It is calculated based on the CAD and the European capital adequacy ratio (very close to regulatory definitions).

During the year 2022, capital consumption at CNC increased overall from €112 million to €117 million at the end of the year, following a high of €125 million reached in October.

The changes over the year mainly relate to the RES balance sheet and are explained by the purchase of securities during the period.

5.12.4 Model-based risk

CIC Marchés' risks and results control (CRR) team is in charge of developing the specific models used for valuing its positions.

In 2022, there were four of these models (unchanged from the previous year). These models are governed by a general policy validated annually by the Market Risk Committee.

The policy provides for development and documentation by the CRR, monitoring of model performance also produced by the CRR and reviewed by the group permanent control and the group risk department, for presentation to the Market Risk Committee. These models are also included in the audit program undertaken by the General Inspectorate – Audit business line.

5.12.5 Credit derivatives

These products are used by CIC Marchés and recognized in its trading book.

CIC Marchés monitors risk limits by issuer or counterparty for all types of products. Outstandings are tracked daily and governed by limits periodically reviewed by the bodies designated for that purpose (commitments committees, Market Risk Committees).

5.13 ASSET-LIABILITY MANAGEMENT (ALM) RISK

5.13.1 General organization

For Crédit Mutuel Alliance Fédérale, asset-liability management (ALM) mainly involves the management of liquidity and interest rate risks. This management is centralized.

The decision making committees of Crédit Mutuel Alliance Fédérale and CIC or matters concerning liquidity and interest rate risk management comprise the following decision making levels:

- technical committees focused on the analysis of risks, in particular liquidity and interest rate risks, as well as coordination among business lines for optimized management to support decision making;
- Monitoring Committees who conduct regular reviews of the technical committees' decisions and set alert thresholds and limits. They provide important support in the global management of risks, in keeping with the group's risk profile;
- control committees tasked with overseeing the procedures and reporting to the governance bodies.

Hedging decisions are made to maintain the risk indicators (NII and NPV sensitivity and gaps) within the limits and alert thresholds set at the global level for CIC and its subsidiaries of Crédit Mutuel Alliance Fédérale and the group's banks. The hedges are assigned to the banks concerned, in accordance with their needs.

Analyses concerning liquidity and interest rate risks are presented quarterly to the Group Risk Committee.

Interest rate risk and liquidity risk are also reviewed every six months by the Boards of Directors of CIC, CFdeCM and the other entities of Crédit Mutuel Alliance Fédérale (CIC regional banks, BECM, etc.).

5.13.2 Managing interest rate risk (EU IRRBBA)

5.13.2.1 Interest rate risk governance and management

The system in place within Crédit Mutuel Alliance Fédérale concerning the interest rate risk are in line with the recommendations of the Order of November 3, 2014 on internal control of companies in the banking, payment services and investment sector, those of the European Banking Authority relating to the Supervisory Review and Evaluation Process (SREP) of December 2014 (2014/13), the recommendations of the Basel Committee on interest rate risk in the banking book (BCBS368 – April 2016) as well as the EBA guidelines (2018/02) on the management of interest rate risk inherent in non-trading book activities.

Interest rate risk is governed and monitored by the asset-liability management (ALM) function of Crédit Mutuel Alliance Fédérale.

The role and principles governing asset-liability management are defined as follows:

- asset-liability management is a distinct function from that of the trading floor and has its own resources;
- the primary objective of asset-liability management is to shield commercial margins from the effects of interest and exchange rate fluctuations and to ensure that the bank has sufficient liquidity to meet its obligations and protect it from a liquidity crisis;
- asset-liability management does not operate as a profit center but as a function that serves the bank's profitability and development strategy, as well as the management of liquidity risk and interest rate risk arising from network activity.

The interest rate risk is managed by the ALM Technical Committee, which meets on a quarterly basis. The committee manages this risk in accordance with the risk limits applied within Crédit Mutuel Alliance Fédérale and for CIC.

The ALM Monitoring Committee, which meets semi-annually, examines changes in asset-liability management risks and validates the risk limits and alert thresholds.

5.13.2.2 Measurement and monitoring systems and hedging mechanism

Interest rate risk arising from the group's commercial activities stems from interest rate differentials and differences in benchmark lending and borrowing rates.

The analysis of this risk also takes into account the volatility of outstandings on products with no contractual maturity date and embedded options (early repayment and roll-over options for loans and confirmed credit line draw-downs, etc.).

The interest rate risk situation for all transactions resulting from the network's activities is analyzed and hedged globally for the residual balance sheet position by so-called macro-hedging transactions.

Transactions of a high amount or specific structure may be hedged in specific ways. The ALM Technical Committee, which is in charge of deciding, decides which hedges to put in place and allocates them pro rata to the needs of each entity.

These hedges are designed to keep risk indicators (NII and NPV sensitivity and gaps) within the limits and/or alert thresholds set at the overall level of Crédit Mutuel Alliance Fédérale and the group's banks.

Risk limits and alert thresholds are set in relation to the global level of Crédit Mutuel Alliance Fédérale.

Like CIC, certain entities have a specific set of limits and alert thresholds within the scope of their Risk Appetite Framework (RAF). For the other entities, the alert thresholds are of the same level as the global limits of Crédit Mutuel Alliance Fédérale.

The interest rate risk analysis is based on the following indicators, which are updated quarterly:

1. the fixed-rate static gap, which corresponds to the on- and off-balance-sheet items whose flows are considered certain over a period of 1 month to 20 years, as governed by limits or alert thresholds of 3 to 7 years and measured by an NBI ratio;

2. the "passbook and inflation rate" static gap over a period of 1 month to 20 years;

3. the sensitivity of the net interest margin calculated for domestic scenarios and governed by limits or alert thresholds. It is measured in annual steps over a two-year period and is expressed as a percentage of the average of the last three prudential NBIs of each entity's NNI as of December 31, 2022.

Several interest rate scenarios are analyzed. The central scenario used for the calculation of ALM indicators rests on the interest rate forecasts used by the management control unit for earnings forecasts.

These forecasts are made quarterly under the aegis of CNCM.

The other interest rate scenarios are the following:

Normalized interest rate shocks

- S1 reference scenario: A 100-bp. increase in the yield curve (used for limits/alert thresholds);
- S2 reference scenario: A 100-bp. decrease in the yield curve, with no floor rate (used for limits/alert thresholds);
- S3 scenario: A 200-bp. increase in the yield curve;
- S4 scenario: A 200-bp. decrease in the yield curve, with a tiered floor rate ranging between a spot rate of -1% to a 20-year rate of 0%.

Stress scenarios

- S5 scenario: Flattening/inversion of the yield curve due to a 50-bp. increase in short-term rates every six months over two years (cumulative shock of 200 bps.);
- S6 scenario: Stagflation scenario: a strong inflation shock in the short term and a gradual rise in long-term interest rates.

Two scenarios are examined relative to funding the liquidity gap:

- 100% Euribor three-month hedge;
- alternative funding applicable to relevant scenarios (non-linear and non-progressive evolution of interest rate scenarios), based on a distinct indexation of positions in stock (indexation at short-term rates maintained), and of positions resulting from new business (based on the intrinsic characteristics of the underlying positions).

Under scenario S2, as of December 31, 2022, the net interest income of Crédit Mutuel Alliance Fédérale's and the BFCM consolidated scope's banking book had one-year and two-year exposures, according to the reference scenario (Scenario 2), to a drop in interest rates.

For these two scopes of consolidation, interest sensitivities were as follows:

- for Crédit Mutuel Alliance Fédérale, the sensitivity to a drop in interest rates is -3.62% over one year (-€288 million in absolute value) and -5.63% over two years (-€447 million), in compliance with risk limits;
- for BFCM, sensitivity is -€280 million over one year and -€297 million over two years, -4.46% and -4.73% respectively as a percentage of NBI.

TABLE 61: NBI SENSITIVITY INDICATORS

NORMALIZED INTEREST RATE SHOCKS

	12/31/2022		12/31/2021	
	Sensitivity as a% of NBI		Sensitivity as a% of NBI	
	1 year	2 years	1 year	2 years
Scenario S1	3.65%	5.65%	1.87%	3.17%
Scenario S2	-3.62%	-5.63%	0.02%	-1.39%
Scenario S3	5.51%	10.07%	5.03%	7.12%
Scenario S4	-1.36%	-4.08%	0.17%	-1.40%
Scenario S1 constant balance sheet	4.07%	6.08%	1.62%	2.71%
Scenario S2 constant balance sheet	-4.11%	-6.15%	0.28%	-0.93%

STRESS SCENARIOS

	12/31/2022		12/31/2021	
	Sensitivity as a% of NBI		Sensitivity as a% of NBI	
	1 year	2 years	1 year	2 years
Scenario S5	-0.16%	-4.37%	-1.46%	-1.29%
Scenario S5 a[1]	-3.33%	-0.95%	-3.29%	1.46%
Scenario S6	-1.62%	-31.79%	-4.40%	-4.67%
Scenario S6 a[1]	-0.92%	-37.09%	-4.01%	-7.11%

(1) Alternate hedging rule.

4. The basis risk, associated with correlated assets and liabilities on different indices, corresponds to the risk of a change in relations between the different market rates (financial assets at variable rate financed by resources at variable rate but not linked to the same index). The basis risk is covered by a limit on the average one-year outstandings at the Euribor three-month rate financed by Eonia €STR resources.

5.13.2.3 Regulatory indicators

The sensitivity of the net present value (NPV) is calculated in accordance with the EBA's recommendations:

- exclusion of capital and maturity of non-current assets on D+1;
- discounting of flows using a swap rate curve (with no liquidity spread and no credit spread);
- application of an incremental floor ranging between a spot rate of -1% to a 20-year rate of 0% for market rates;
- since the average duration of non-maturity deposits is less than five years, the five-year cap required by regulations is not applicable;
- 50% cross-currency risk offset.

NPV sensitivities are determined using six EBA interest rate scenarios:

- parallel upward shift;
- parallel downward shift;
- steepening of the yield curve;
- flattening of the yield curve;
- rise in short-term rates;
- fall in short-term rates.

Overall, Crédit Mutuel Alliance Fédérale's NPV sensitivity is below the limit of 20% of Tier 1 and Tier 2 capital, at:

- a 200-bp. drop in interest rates makes for an increase of +3.71% in Tier 1 and Tier 2 capital (+€2,085 million);
- a 200-bp. rise in interest rates makes for -7.60% (-€4,275 million).

TABLE 62: NPV SENSITIVITY TO TOTAL CAPITAL

	12/31/2022	12/31/2021
NPV sensitivity	In % of Tier 1 capital	In % of Tier 1 capital
Decrease of 200 bps.	3.71%	-3.44%
Increase of 200 bps.	-7.60%	0.36%

TABLE 63: SENSITIVITY OF NPV TO TIER 1 CAPITAL

	12/31/2022
NPV sensitivity	In % of Tier 1 capital
Decrease of 200 bps.	4.27%
Increase of 200 bps.	-8.74%
Reduction in short-term rates	1.90%
Increase in short-term rates	-3.73%
Sloping	-0.48%
Flattening	-1.15%

TABLE 64: INTEREST RATE RISK IN THE BANKING BOOK (EU IRRBB1)

	EVE		NII	
(in € millions)	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Downward parallel shift (-200 bps)	2,085	180	-108	22
Upward parallel shift (+200 bps)	-4,275	-1,734	438	661
Reduction in short-term rates	929	430	-	-
Increase in short-term rates	-1,825	-1,307	-	-
Steepening of the yield curve	-235	400	-	-
Flattening of the yield curve	-562	-1,134	-	-

	12/31/2022	12/31/2021
Common Equity Tier 1 Capital	**48,883**	**46,257**

5.13.2.4 Statement

Crédit Mutuel Alliance Fédérale certifies that its interest rate risk management arrangements are appropriate to the risk profile of the commercial activities and the risk appetite defined by the governance bodies.

The interest risk management, measurement, oversight, control and monitoring arrangements have been approved by the management body.

These are consistent with the group's risk profile and were approved by Executive Management and the governing bodies. It is tailored to the risk profile, nature and size of the group's activities.

The interest rate risk and the liquidity risk are reviewed every six months by the Boards of Directors of Caisse Fédérale de Crédit Mutuel and the other entities of Crédit Mutuel Alliance Fédérale (regional banks, BECM, etc.)

5.13.3 Liquidity risk management (EU LIQA)

5.13.3.1 Liquidity risk management and strategy

Protecting customers, preserving its mutualist culture and organization and financing and supporting economic activity in the regions are central to Crédit Mutuel Alliance Fédérale's strategy.

To manage liquidity risk, the group refers to the Internal Liquidity Adequacy Assessment Processes (ILAAP) as defined by the general recommendations of the Basel Committee (09-2008), as well as the recommendations of the European Banking Authority relative to the Supervisory Review and Evaluation Process (SREP) dated December 2014 (2014/13), the Order of November 3, 2014 relative to internal controls of companies in the banking, payment and investment services sector, the EBA guidelines (2016/10) and the ECB guidelines of November 2018 relative to ILAAP.

The group has adopted a two-fold risk appetite policy comprising a risk tolerance policy for general risks and a specific risk aversion policy for risk attached to liquidity and refinancing. This is in line with a sound and prudent management approach as required by law No. 2013-672 of July 26, 2013 on the separation and regulation of banking activities, Title 1, Article 2, which gives priority to long-term sustainability, with a sole medium-/long-term debt issuer, Banque Fédérative du Crédit Mutuel ("BFCM"). Its aim is to shield the operating accounts of the cooperative banks and branches from liquidity and interest rate risks, disseminate the market prices necessary for appropriate customer pricing and guarantee commercial network margins.

Crédit Mutuel Alliance Fédérale liquidity risk monitoring mechanism is based on the following procedures:

- liquidity risk governance that ensures its centralized monitoring and decision making in technical monitoring and control committee;
- determining liquidity gaps that are subject to limits and alert thresholds to secure and optimize the refinancing policy;
- monitoring the Liquidity Coverage Ratio (LCR), which is representative of the group's short-term liquidity situation;
- management and monitoring of Net Stable Funding Ratio (NSFR), representative of the group's medium-term liquidity position;
- steering and monitoring the commitment coefficient (loan-to-deposit ratio);
- determining and monitoring liquidity needs under normal circumstances and under stress.

5.13.3.2 Governance and structure of the liquidity management function – Centralization of liquidity management and interactions between the group's units

5.13.3.2.1 Governance and structure of the liquidity management function

Liquidity is governed by technical and Monitoring Committees and is supervised by the control committees.

At the operational level, liquidity management is shared between the group treasury, whose central treasury and liquidity function ensures the interface between the entities of the centralized scope, and the asset-liability management (ALM), which, throughout the centralized management scope, measures requirements and implements hedges for commercial activities. Group ALM and group treasury report to the Executive Management of Crédit Mutuel Alliance Fédérale and act in accordance with the decisions of the *ad hoc* committees (ALM Technical Committee, Group Treasury Risk Committee, Central Treasury and Liquidity Committee, Emergency Plan Management Committee).

Neither the ALM nor the group treasury are profit centers or managed as such. The group's financing needs identified by ALM, through the ALM Technical Committee, are communicated to the central treasury, which is responsible for borrowing the necessary funds on the markets.

From a control standpoint, the group risk department performs the risk management function for every type of risk for all group entities. It reports to the Chief Executive Officer and submits reports to the decision-making and executive-governance bodies.

Group treasury

The group's treasury management approach meets two closely related objectives to secure and refinance the group's needs under the best possible terms and to monitor the group's reputation on the market.

On the markets, the dedicated group treasury team manages and coordinates the issue programs, supervises listings and carries out interest-rate and foreign-exchange risk hedging transactions.

Because of its direct relationship with investors, it has a thorough understanding of all the components of access to the markets, a continuous presence through its listings, centralized portfolio management and the immediate ability to issue liquidity and refinancing instruments to diversify its vehicles, currencies and source countries.

BFCM is the sole issuer of medium-/long-term debt on the Capital Markets; secured debt is issued through Crédit Mutuel – CIC Home Loan SFH. BFCM ensures that Crédit Mutuel Alliance Fédérale is able to meet its refinancing needs, manage its development challenges and safeguard its solvency.

Asset-liability management (ALM)

The purpose of the ALM function is to protect the sales margins of local entities and specialized business lines from risk. The mechanism in place ensures the management of risk through annual revisions of the alert thresholds/limits in compliance with prudential constraints.

Liquidity risk for Commercial Banking is stringently managed through the systematic hedging through resources of the transformation generated on maturities ranging from three months to seven years, for assets and liabilities whose estimated future cash flows are close to the LCR and NSFR weightings, with restrictive alert thresholds for liquidity gaps in a "Basel III stress scenario."

The risk department (RD)

The RD implements liquidity risk control and supervision. It reports regularly to the governing bodies (quarterly reports) and coordinates and participates in the various control committees (Group Risk Monitoring Committee, Group Risk Committee, Auditing and Accounting Committee and Control and Compliance Committee), as well as in the Monitoring Committees, technical committees concerned with liquidity risk and meetings of the Boards of Directors. It coordinates the network of risk officers from the group's various business lines and entities. The risk department is the first point of contact for the ECB and the national central banks. It also coordinates the monitoring of the implementation of supervisory authority inspection recommendations.

5.13.3.2.2 Centralization of liquidity management and interaction between the group's units

Crédit Mutuel Alliance Fédérale centralizes liquidity management and monitoring at both the asset-liability management (ALM) and group treasury levels, with a common set of uniform rules for the business lines regarding risk measures and allocations across all group entities without exception.

This centralization allows the Group to optimize the management of treasury exposures and the decisions taken by the technical, monitoring and control committees.

ALM does not allow entities to lend to each other but administers available liquidity by maturity to entities in need, thereby pooling the positions and optimizing recourse to group treasury and the market.

The scope administered by asset-liability management (ALM) covers 100% of customer loans, 100% of customer deposits for the consolidated group and 100% of group treasury market liabilities.

This scope is relevant for certifying liquidity and interest rate risk measures and hedges for Crédit Mutuel Alliance Fédérale, excluding insurance companies and asset management.

The Insurance and Asset Management entities, which benefit from autonomy for measuring and managing their liquidity, have a robust liquidity risk monitoring system. They regularly report to the group on the results of their liquidity stress tests adapted to their activity.

5.13.3.3 Risk monitoring and measurement systems

The systems for measuring and monitoring liquidity risks are comprehensive and cover the entire scope of the group. Non-financial entities are excluded.

ALM indicators are compiled at the consolidated level and by entity. These indicators include:

- the static liquidity gap based on contractual and agreed maturities and incorporating off-balance sheet commitments.

  Transformation ratios (sources/applications of funds) are calculated on maturities ranging from three months to five years and are subject to limits;
- the dynamic liquidity gap over five years, incorporating new loans granted, thus facilitating the measurement of future financing needs related to the development of commercial activity;
- the liquidity gap in a Basel III stress scenario, whose estimated future cash flows are based on Net Stable Funding Ratio (NSFR) weightings, subject to limits and alert thresholds, in order to secure and optimize the refinancing policy.

Transformation ratios (sources/applications of funds) are calculated at maturities ranging from three months to seven years and are subject to limits and alert thresholds in order to secure and optimize the refinancing policy.

The ALM Technical Committee decides on the liquidity hedges to be put in place in light of all these indicators. These hedges are allocated *pro rata* to the cumulative needs.

The limit system is comprehensive and, where applicable, is broken down and applied to each entity or business line in a granular way (LCR, Basel III liquidity gaps).

These rules limit liquidity exposures across the cash curve to prevent excessive transformation.

5.13.3.4 Treasury management and concentration of resources

The prudent rules and the effective system to access market resources are described in chapter 2 of the URD, in the paragraph on "Liquidity and refinancing."

5.13.3.5 Regulatory indicators and liquidity reserve

Since March 2014, credit institutions in the Eurozone have been required to report their liquidity levels to their supervisory body as defined by the EBA (European Banking Authority), which takes into account:

- the short-term liquidity ratio, or LCR (Liquidity Coverage Ratio), on a monthly basis; and
- and the long-term structural liquidity ratio, or NSFR (Net Stable Funding Ratio), on a quarterly basis.

The LCR is designed to ensure the resilience of banks' liquidity risk profile in the short term by requiring that they maintain sufficient unencumbered high-quality liquid assets (HQLAs) that can be easily and immediately converted to cash on private markets in the event of a liquidity crisis lasting up to 30 calendar days.

The LCR liquidity reserve is funded through short-term debt (maturing in up to one year).

The purpose of the NSFR ratio is to limit the transformation of a banking institution by ensuring that assets at more than one year are covered by stable refinancing. It entered into force on June 30, 2021.

TABLE 65: SHORT-TERM LIQUIDITY COVERAGE RATIO – LCR (EU LIQ1)

12/31/2022 *(in € millions)*		Total unweighted value				Total weighted value			
		3/31/2022	06/30/2022	09/30/2022	12/31/2022	3/31/2022	06/30/2022	09/30/2022	12/31/2022
HIGH-QUALITY ASSETS									
1	**TOTAL HIGH-QUALITY LIQUID ASSETS (HQLAs)**	-	-	-	-	**144,303**	**144,690**	**139,293**	**132,770**
CASH OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	272,528	273,431	276,205	283,581	19,053	19,401	19,766	20,258
3	*Stable deposits*	*186,996*	*184,846*	*185,027*	*190,742*	*9,350*	*9,242*	*9,251*	*9,537*
4	*Less stable deposits*	*79,925*	*83,532*	*86,253*	*87,639*	*9,680*	*10,137*	*10,491*	*10,677*
5	Unsecured Wholesale financing	130,255	131,270	133,788	134,103	70,037	70,792	73,523	75,022
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*	*22,306*	*22,655*	*22,462*	*22,482*	*5,419*	*5,491*	*5,428*	*5,415*
7	*Non-operational deposits (all counterparties)*	*99,452*	*100,610*	*102,727*	*102,464*	*56,121*	*57,295*	*59,496*	*60,451*
8	*Unsecured debt*	*8,497*	*8,006*	*8,599*	*9,156*	*8,497*	*8,006*	*8,599*	*9,156*
9	Secured wholesale funding	0	0	0	0	1,867	1,948	2,097	2,275
10	Additional requirements	82,488	85,146	88,246	90,436	8,682	8,937	9,416	9,858
11	*Outflows related to derivative exposures and other collateral requirements*	*1,090*	*1,186*	*1,446*	*1,727*	*1,090*	*1,186*	*1,446*	*1,727*
12	*Outflows related to loss of funding on debt products*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
13	*Credit and liquidity facilities*	*81,398*	*83,960*	*86,800*	*88,709*	*7,592*	*7,751*	*7,969*	*8,132*
14	Other contractual funding obligations	83	105	118	146	66	70	64	73
15	Other contingent funding obligations	5,655	5,681	5,712	5,783	385	410	430	440
16	TOTAL CASH OUTFLOWS	-	-	-	-	100,090	101,558	105,297	107,926
CASH INFLOWS									
17	Secured lending (such as reverse repurchase agreements)	10,643	10,476	10,138	10,333	4,347	4,445	4,364	4,503
18	Inflows from fully performing exposures	23,495	23,976	24,707	25,154	13,617	13,891	14,368	14,719
19	Other cash inflows	2,595	2,096	1,884	2,032	2,589	2,027	1,742	1,819
EU-19a	(Difference between total weighted cash inflows and total weighted cash outflows resulting from transactions in third countries where transfer restrictions apply or transactions are denominated in a non-convertible currency)	0	0	0	0	0	0	0	0
EU-19b	(Excess cash inflows from a related specialized credit institution)	0	0	0	0	0	0	0	0
20	**TOTAL CASH INFLOWS**	**36,733**	**36,548**	**36,729**	**37,519**	**20,553**	**20,363**	**20,473**	**21,041**
EU-20a	*Fully exempt cash inflows*	-	-	-	-	-	-	-	-
EU-20b	*Cash inflows subject to 90% cap*	-	-	-	-	-	-	-	-
EU-20c	*Cash inflows subject to 75% cap*	36,733	36,548	36,729	37,519	20,553	20,363	20,473	21,041
21	**LIQUIDITY BUFFERS**	-	-	-	-	**144,303**	**144,690**	**139,293**	**132,770**
22	**TOTAL NET CASH OUTFLOWS**	-	-	-	-	**79,537**	**81,194**	**84,824**	**86,885**
23	**LIQUIDITY COVERAGE RATIO** *(in %)*[1]	-	-	-	-	**182%**	**179%**	**165%**	**153%**

(1) For each reference date, the ratio displayed corresponds to the average of the ratios for the 12 months preceding the date in question and not to the ratio of the average components of the previous 12 months.

12/31/2021 *(in € millions)*		Total unweighted value				Total weighted value			
		3/31/2021	12/31/2021	9/30/2021	12/31/2021	3/31/2021	12/31/2021	9/30/2021	12/31/2021
HIGH-QUALITY ASSETS									
1	**TOTAL HIGH-QUALITY LIQUID ASSETS (HQLAs)**	-	-	-	-	**122,962**	**126,796**	**133,584**	**138,753**
CASH OUTFLOWS									
2	Retail deposits and deposits from small business customers, of which:	260,704	267,528	271,236	269,145	17,535	18,050	18,439	18,555
3	Stable deposits	183,799	188,859	191,006	187,146	9,190	9,443	9,550	9,357
4	Less stable deposits	68,885	70,951	73,181	75,652	8,323	8,584	8,865	9,174
5	Unsecured Wholesale financing	121,498	125,053	126,465	128,309	65,089	66,844	67,400	68,420
6	Operational deposits (all counterparties) and deposits in networks of cooperative banks	22,588	22,030	21,928	21,977	5,464	5,343	5,334	5,352
7	Non-operational deposits (all counterparties)	90,100	94,014	95,993	98,006	50,814	52,492	53,522	54,742
8	Unsecured debt	8,811	9,009	8,544	8,326	8,811	9,009	8,544	8,326
9	Secured wholesale funding					3,401	2,747	2,249	2,057
10	Additional requirements	77,450	78,782	79,485	80,456	8,457	8,600	8,517	8,558
11	Outflows related to derivative exposures and other collateral requirements	1,145	1,139	1,111	1,081	1,145	1,139	1,111	1,081
12	Outflows related to loss of funding on debt products	0	0	0	0	0	0	0	0
13	Credit and liquidity facilities	76,305	77,642	78,374	79,376	7,312	7,461	7,406	7,477
14	Other contractual funding obligations	49	42	56	56	49	42	56	56
15	Other contingent funding obligations	5,549	5,570	5,606	5,613	312	325	341	354
16	TOTAL CASH OUTFLOWS	-	-	-	-	94,843	96,607	97,003	98,000
CASH INFLOWS									
17	Secured lending (such as reverse repurchase agreements)	10,101	10,172	10,444	10,716	5,152	5,001	4,766	4,557
18	Inflows from fully performing exposures	22,481	22,918	23,083	23,682	13,220	13,382	13,435	13,749
19	Other cash inflows	3,687	3,875	3,470	3,046	3,684	3,872	3,467	3,046

EU-19a	(Difference between total weighted cash inflows and total weighted cash outflows resulting from transactions in third countries where transfer restrictions apply or transactions are denominated in a non-convertible currency)				-	0	0	0	0
EU-19b	(Excess cash inflows from a related specialized credit institution)				-	0	0	0	0
20	**TOTAL CASH INFLOWS**	**36,269**	**36,965**	**36,997**	**37,444**	**22,057**	**22,255**	**21,668**	**21,351**
EU-20a	Fully exempt cash inflows	-	-	-	-	-	-	-	-
EU-20b	Cash inflows subject to 90% cap	-	-	-	-	-	-	-	-
EU-20c	Cash inflows subject to 75% cap	36,269	36,965	36,997	37,444	22,057	22,255	21,668	21,351
21	**LIQUIDITY BUFFERS**	-	-	-	-	**122,962**	**126,796**	**133,584**	**138,753**
22	**TOTAL NET CASH OUTFLOWS**	-	-	-	-	**72,786**	**74,352**	**75,335**	**76,649**
23	**LIQUIDITY COVERAGE RATIO** *(in %)*[1]	-	-	-	-	**169.01%**	**170.72%**	**177.53%**	**181.28%**

(1) For each reference date, the average ratio is equal to the ratio of the average liquidity buffers the average net cash outflows over the 12 months preceding the considered date.

Crédit Mutuel Alliance Fédérale's LCR stood at 153.3% on a monthly average year-on-year, representing a liquidity surplus of €45.9 billion compared to the regulatory requirement. The ratio is managed above 110%.

The average LCR gradually increased from 173.0% in January 2022 to 144.3% in December 2022, following a partial repayment on a TLTRO line and the deterioration of the commercial impasse.

Average liquid assets are composed of 81% central bank deposits and 14.9% highly liquid Tier 1 securities.

Stressed 30-day average cash outflows consist of 43.6% corporate and retail deposits. Financing from banks and financial customers represented 44.8%.

Stressed 30-day average cash inflows consist of 49.6% corporate and retail loan repayments. Repayments of advances and loans granted to banks and financial customers represented 22.6%. Repayments of repos represented 21.4%.

TABLE 66 DETAILS OF LIQUIDITY BUFFER – LCR

Amount after ECB weighting *(in € millions)*	12/31/2022	12/31/2021
Tier 1	**126,611**	**143,246**
Cash deposited in central banks	103,691	120,854
HQLAs	21,571	21,062
Cash deposits	1,349	1,329
Tier 2a	**1,504**	**1,671**
Tier 2b	**1,880**	**2,745**
TOTAL BUFFER	129,995	147,661

Crédit Mutuel Alliance Fédérale consolidated statement of financial position by residual maturity of future contractual cash flows breaks down as follows:

TABLE 67: BREAKDOWN OF CRÉDIT MUTUEL ALLIANCE FÉDÉRALE'S CONSOLIDATED STATEMENT OF FINANCIAL POSITION BY RESIDUAL MATURITY OF FUTURE CONTRACTUAL CASH FLOWS (PRINCIPAL AND INTEREST)

2022 *(in € millions)*	≤ 1 month[1]	> 1 month ≤ 3 months	> 3 months ≤ 1 year	> 1 year ≤ 2 years	> 2 years ≤ 5 years	> 5 years	No fixed maturity[2]	Total
ASSETS								
Cash – Central banks	111,933	-	-	-	-	-	-	111,933
Demand deposits, credit institutions	4,502	-	-	-	-	-	-	4,502
Financial assets held for trading	2,024	3,581	5,463	2,366	5,861	3,152	629	23,076
Financial assets at fair value through profit or loss	38	6	29	27	107	353	173	734
Financial assets at fair value through shareholders' equity	1,258	1,278	2,764	3,926	11,892	12,696	0	33,816
Securities at amortized cost	1,444	56	274	303	1,163	797	67	4,104
Loans and receivables due from credit institutions	9,489	1,372	1,925	1,842	726	37,353	0	52,707
Customer loans and receivables	49,655	17,404	42,128	49,663	120,933	221,739	309	501,830
LIABILITIES								
Central bank deposits	44	0	0	0	0	0	0	44
Financial liabilities held for trading	1,197	4,511	4,758	1,656	4,156	2,338	11	18,627
Financial liabilities at fair value through profit or loss	0	0	156	0	0	0	0	156
Derivatives used for hedging purposes (liabilities)	16	12	25	4	2,368	78	0	2,502
Financial liabilities carried at amortized cost	**422,672**	**35,353**	**75,049**	**41,401**	**57,119**	**39,848**	**114**	**671,554**
Deposits, central bank	*0*	*3,150*	*11,200*	*17,825*	*0*	*0*	*0*	*32,175*
Deposits, public administration	*2,273*	*1,046*	*1,354*	*178*	*244*	*1*	*0*	*5,095*

Deposits, credit institutions	*18,350*	*5,375*	*3,775*	*622*	*603*	*1,019*	*0*	*29,744*
Deposits, other financial corporations	*34,482*	*1,666*	*2,226*	*822*	*950*	*200*	*0*	*40,346*
Deposits, non-financial corporations	*148,880*	*6,161*	*9,879*	*5,862*	*6,086*	*631*	*0*	*177,500*
Deposits, individuals	*205,153*	*5,983*	*7,606*	*5,097*	*8,476*	*2,100*	*0*	*234,416*
of which Debt securities, including bonds	*12,344*	*11,407*	*38,470*	*9,889*	*37,030*	*31,716*	*0*	*140,856*
of which Subordinated liabilities	*0*	*3*	*0*	*1,060*	*3,679*	*4,107*	*103*	*8,951*

Excludes Insurance.

(1) Including receivables and related debt, securities given and received with repurchase transactions.

(2) Including perpetual debt securities, equities, non-performing loans, loans in litigation and impairment losses. For marked-to-market financial instruments the differences between fair value and redemption value

When it is impossible to provide an accurate maturity, the carrying amount is stated in the "no fixed maturity" column.

2021 *(in € millions)*	≤ 1 month[1]	> 1 month ≤ 3 months	> 3 months ≤ 1 year	> 1 year ≤ 2 years	> 2 years ≤ 5 years	> 5 years	No fixed maturity[2]	Total
ASSETS								
Cash – Central banks	-	-	-	-	-	-	-	-
Demand deposits, credit institutions	-	-	-	-	-	-	-	-
Financial assets held for trading	5,817	602	2,107	1,426	3,354	2,847	670	16,824
Financial assets at fair value through profit or loss	5	4	27	34	183	339	5,067	5,660
Financial assets at fair value through shareholders' equity	745	1,303	1,857	3,498	13,094	10,994	607	32,098
Securities at amortized cost	264	54	192	1,239	785	1,078	63	3,674
Loans and receivables due from credit institutions	-	-	-	-	-	-	-	-
Customer loans and receivables	-	-	-	-	-	-	-	-
LIABILITIES								
Central bank deposits	603	2	0	0	0	0	0	605
Financial liabilities held for trading	4,318	1,478	1,333	264	2,653	1,919	19	11,985
Financial liabilities at fair value through profit or loss	0	0	124	0	0	0	0	124
Derivatives used for hedging purposes (liabilities)	3	6	7	107	1,675	75	0	1,874
Financial liabilities carried at amortized cost	**385,237**	**34,326**	**61,619**	**37,683**	**80,090**	**34,021**	**1,293**	**634,268**
Deposits, central bank	-	-	-	-	-	-	-	-
Deposits, public administration	-	-	-	-	-	-	-	-
Deposits, credit institutions	-	-	-	-	-	-	-	-
Deposits, other financial corporations	-	-	-	-	-	-	-	-
Deposits, non-financial corporations	-	-	-	-	-	-	-	-
Deposits, individuals	-	-	-	-	-	-	-	-
of which Debt securities, including bonds	*7,699*	*16,929*	*32,660*	*13,016*	*31,282*	*26,010*	*0*	*127,596*
of which Subordinated liabilities	*0*	*0*	*1*	*0*	*3,748*	*3,282*	*1,022*	*8,054*

Excludes Insurance.

(1) Including receivables and related debt, securities given and received with repurchase transactions.

(2) Including perpetual debt securities, equities, non-performing loans, loans in litigation and impairment losses. For marked-to-market financial instruments the differences between fair value and redemption value

When it is impossible to provide an accurate maturity, the carrying amount is stated in the "no fixed maturity" column.

Comments:

The tables above present the carrying amounts in IFRS based on the prudential scope. The maturity rules used concern:

- the contractual principal repayment terms;
- equities with an unspecified duration, as for perpetual loans and securities;
- payables and related receivables broken down according to their actual contractual duration and entered in the "< 1 month" column by default;
- provisions broken down in line with the assets concerned;
- non-performing loans broken down according to their contractual date, when it has not expired and are entered under the "no fixed maturity" column when it has expired, similar to loans in litigation;
- derivatives: their market value is entered under the corresponding flow on the contract expiry date.

When it is impossible to provide an accurate maturity, the carrying amount is stated in the "no fixed maturity" column.

TABLE 68: NET STABLE FUNDING RATIO – NSFR (EU LIQ2)

12/31/2022 *(in € millions)*		Unweighted value by residual maturity: No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
STABLE FUNDING AVAILABLE						
1	Capital items and instruments	53,802	0	0	6,634	60,436
2	*Shareholders' equity*	*53,802*	*0*	*0*	*6,634*	*60,436*
3	*Other capital instruments*	-	*0*	*0*	*0*	*0*
4	Retail customer deposits	-	282,948	1,278	1,298	266,886
5	*Stable deposits*	-	*195,466*	*230*	*770*	*186,681*
6	*Less stable deposits*	-	*87,482*	*1,048*	*528*	*80,205*
7	Wholesale financing	-	232,757	24,116	104,276	174,392
8	*Operational deposits*	-	*23,677*	*0*	*0*	*11,839*
9	*Other wholesale financing*	-	*209,080*	*24,116*	*104,276*	*162,554*
10	Interdependent commitments	-	38,251	0	0	0
11	Other commitments:	3,779	12,758	1,716	3,334	4,192
12	*Derivative commitments affecting the NSFR*	*3,779*	-	-	-	*0*
13	*All other capital commitments and instruments not included in the above categories*	-	*12,758*	*1,716*	*3,334*	*4,192*
14	**TOTAL AVAILABLE STABLE FUNDING**	-	-	-	-	**505,907**
STABLE FUNDING REQUIREMENTS						
15	Total High-Quality Liquid Assets (HQLA)	-	-	-	-	1,803
EU-15a	Assets encumbered with a residual maturity of one year or more in a cover pool	-	1,273	1,288	30,908	28,449
16	Deposits held with other financial institutions for operational purposes	-	0	0	0	0
17	Performing loans and securities:	-	83,442	34,259	397,858	371,567
18	*Financing transactions on performing securities with financial clients secured by high-quality liquid assets of level 1 subject to a haircut of 0%*	-	*5,312*	*2,371*	*1,012*	*2,741*
19	*Financing transactions on performing securities with financial clients secured by other assets and loans and advances to financial institutions*	-	*19,722*	*1,740*	*11,206*	*14,641*
20	*Performing loans to non-financial corporations, performing loans to retail customers and small businesses, and performing loans to sovereigns and public sector entities of which:*	-	*34,204*	*20,862*	*159,730*	*328,129*
21	*With a risk weighting lower or equal to 35% under the standardized Basel II approach for credit risk*	-	*1,376*	*2,400*	*812*	*90,479*
22	*Performing residential mortgages, of which:*	-	*8,794*	*8,771*	*200,505*	*0*
23	*With a risk weighting lower or equal to 35% under the standardized Basel II approach for credit risk*	-	*5,393*	*5,313*	*122,010*	*0*
24	*Other loans and securities that are not in default and are not considered high-quality liquid assets, including equities traded on exchanges and on-balance sheet commercial credit products*	-	*15,410*	*515*	*25,405*	*26,056*
25	Interdependent assets	-	38,252	0	0	0
26	Other assets	7,133	13,981	726	19,881	29,323
27	*Raw materials physically exchanged*	-	*0*	*0*	*0*	*0*
28	*Assets provided as initial margin in derivative contracts and as contributions to CCP default funds*	-			*2,549*	*2,167*
29	*Derivative assets affecting the NSFR*	-			*2,015*	*2,015*
30	*Derivative commitments affecting the NSFR before deduction of the variation margin provided*	-			*2,569*	*128*
31	*All other assets not falling within the above categories*	-	*13,981*	*726*	*19,881*	*25,013*
32	Off-balance sheet items	-	91,011	58	5	4,757
33	**TOTAL REQUIRED STABLE FUNDING**	-	-	-	-	**435,899**
34	**NET STABLE FUNDING RATIO** *(AS A%)*	-	-	-	-	**116.06%**

CMNE's stable funding ratio at 12/31/2021 was 131.4%.

12/31/2021 *(in € millions)*		Unweighted value by residual maturity				
		No maturity	< 6 months	6 months to < 1 year	≥ 1 year	Weighted value
STABLE FUNDING AVAILABLE						
1	Capital items and instruments	49,912	0	0	6,989	56,901
2	*Shareholders' equity*	*49,912*	*0*	*0*	*6,989*	*56,901*
3	*Other capital instruments*	-	*0*	*0*	*0*	*0*
4	Retail customer deposits	-	255,257	220	1,321	239,974
5	*Stable deposits*	-	*174,310*	*176*	*1,249*	*167,010*
6	*Less stable deposits*	-	*80,947*	*45*	*72*	*72,964*
7	Wholesale financing	-	206,458	24,975	118,746	190,832
8	*Operational deposits*	-	*22,137*	*0*	*0*	*11,068*
9	*Other wholesale financing*	-	*184,321*	*24,975*	*118,746*	*201,900*
10	Interdependent commitments	-	32,024	0	0	0
11	Other commitments:	909	12,003	1,706	4,314	5,167
12	*Derivative commitments affecting the NSFR*	*909*	-	-	-	-
13	*All other capital commitments and instruments not included in the above categories*	-	*12,003*	*1,706*	*4,314*	*5,167*
14	TOTAL AVAILABLE STABLE FUNDING	-	-	-	-	492,874
STABLE FUNDING REQUIREMENTS						
15	Total High-Quality Liquid Assets (HQLA)	-	-	-	-	2,069
EU-15a	Assets encumbered with a residual maturity of one year or more in a cover pool	-	1,489	1,509	29,040	27,232
16	Deposits held with other financial institutions for operational purposes	-	0	0	0	0
17	Performing loans and securities:	-	79,609	30,813	354,303	390,924
18	*Financing transactions on performing securities with financial clients secured by high-quality liquid assets of level 1 subject to a haircut of 0%*	-	*3,920*	*2,501*	*0*	*2,082*
19	*Financing transactions on performing securities with financial clients secured by other assets and loans and advances to financial institutions*	-	*16,160*	*1,737*	*12,758*	*15,940*
20	*Performing loans to non-financial corporations, performing loans to retail customers and small businesses, and performing loans to sovereigns and public sector entities of which:*	-	*36,356*	*17,698*	*129,519*	*146,653*
21	*With a risk weighting lower or equal to 35% under the standardized Basel II approach for credit risk*	-	*1,993*	*1,623*	*3,605*	*9,170*
22	*Performing residential mortgages, of which:*	-	*9,156*	*8,220*	*181,847*	*140,911*
23	*With a risk weighting lower or equal to 35% under the standardized Basel II approach for credit risk*	-	*6,131*	*5,154*	*111,735*	*78,270*
24	*Other loans and securities that are not in default and are not considered high-quality liquid assets, including equities traded on exchanges and on-balance sheet commercial credit products*	-	*14,016*	*656*	*30,179*	*30,874*
25	Interdependent assets	-	32,024	0	0	0
26	Other assets:	-	-	-	-	-
27	*Raw materials physically exchanged*	-	-	-	*0*	*0*
28	*Assets provided as initial margin in derivative contracts and as contributions to CCP default funds*	-			*1,273*	*1,082*
29	*Derivative assets affecting the NSFR*	-			*393*	*393*
30	*Derivative commitments affecting the NSFR before deduction of the variation margin provided*	-			*2,861*	*143*
31	*All other assets not falling within the above categories*	-	*20,481*	*1,122*	*14,932*	*20,809*
32	Off-balance sheet items	-	83,134	95	48	4,355
33	TOTAL REQUIRED STABLE FUNDING	-	-	-	-	392,543
34	NET STABLE FUNDING RATIO *(AS A %)*	-	-	-	-	125.6%

CMNE's stable funding ratio at 12/31/2021 was 131.4%.

5.13.3.6 Exposures to derivatives and collateral calls

Crédit Mutuel Alliance Fédérale's approach to interest rate and liquidity risk management includes appropriate hedging arrangements.

The group tracks the collateral calls of the various existing contracts to monitor its LCR flows. It also calculates additional cash outflows corresponding to the collateral needs that may result from an adverse market scenario.

5.13.3.7 Concentration of liquidity sources – Currency mismatches in the RCL

Given its commercial activities and the domestic markets on which it operates, Crédit Mutuel Alliance Fédérale is highly concentrated in the euro. The US dollar is the only foreign currency that exceeds the 5% representation threshold for the total consolidated balance sheet.

5.13.3.8 Statement

Crédit Mutuel Alliance Fédérale certifies that its liquidity risk management arrangements are appropriate to the risk profile of its commercial activities and the risk appetite defined by the governance bodies.

Liquidity risk management, measurement, oversight, control and monitoring arrangements have been approved by the management body.

These are consistent with the group's risk profile and were approved by Executive Management and the governing bodies. Arrangements are also tailored to the risk profile, nature and size of the group's activities and take into account economic and market conditions.

Liquidity risk is subject to at least one review per year by the Boards of Directors of CFdeCM, BFCM, CIC and other Crédit Mutuel Alliance Fédérale entities (regional banks, BECM, etc.).

5.13.4 Currency risk management

The currency risk exposure of Crédit Mutuel Alliance Fédérale is low since it conducts most of its activities in euros (87.6% of total liabilities). The only other significant currency is the American dollar (6.9% of total liabilities).

For the geographical diversification of its sources of financing, Crédit Mutuel Alliance Fédérale raises a significant portion of its short-term and medium-term refinancing on the American and British markets.

On the short term, this currency risk is systematically managed through swaps of the funding raised. On the medium term, part of the refinancing is kept in the original currency in order to cover the currency gaps of the group's entities.

The balance is systematically converted into euros through currency swaps.

The foreign currency positions of each group entity are centralized automatically at BFCM and the holding company CIC.

This centralization is carried out on a daily basis for commercial transfers and for the receipt and disbursement of income and expenses in foreign currencies.

All unrealized foreign currency gains and losses are translated into euros at the end of every month and the resulting foreign currency position is also centralized.

With rare exceptions, the group's entities do not bear any currency risk at their own level.

BFCM and CIC are responsible for clearing foreign currency positions on a daily and monthly basis on the market.

The structural foreign currency positions resulting from CIC's foreign currency allowances to foreign branches are not hedged.

Foreign exchange gains or losses are recorded in the asset or liability translation accounts and are not booked in the income statement.

The profits or losses of the foreign branches are retained in the foreign branches and thus add to the structural foreign currency position.

5.14 OPERATING RISK (EU ORA)

In the context of the Basel II capital adequacy regulations, Crédit Mutuel Alliance Fédérale has implemented a comprehensive operating risk management mechanism that is under the responsibility of the management bodies and governed by a single set of risk standards and shared quantitative evaluation methods.

The group has an overall operational risk management function that is clearly identified and split in practice between the national function and the regional functions. This function covers operational risks, emergency and business continuity plans (EBCPs) and insurance policies taken out to cover these risks.

The system used to measure and monitor operational risk is based on a common platform that is applied across the group and uses an approach for identifying and modeling risks so as to calculate the level of capital required to be held for operational risk.

Since January 1, 2010, Crédit Mutuel has been authorized to use its advanced measurement approach to calculate its regulatory capital requirements related to operational risk, with the exception of expected losses on capital requirements, for the consolidated scope excluding foreign subsidiaries, Cofidis group and Crédit Mutuel Factoring.

Approval was extended to Crédit Mutuel Factoring, taking effect as of the reporting period ended March 31, 2012, as well as to the Banque de Luxembourg, as of the reporting period ended September 30, 2013, to Cofidis France as of the reporting period ended September 30, 2014 and to TARGOBANK in Germany, as of the reporting period ended June 30, 2018.

5.14.1 Main objectives

The implementation of the operational risk management policy has the following objectives:

- contribute to group management through the control of risks and their costs;
- from a human perspective, to protect staff, develop responsibility, autonomy and control, and capitalize on expertise across the group;
- from an economic standpoint, to protect margins by effectively managing risk across all activities and adapt insurance policies to the risks identified;
- from a regulatory standpoint, to meet the requirements of Basel II and the supervisory authorities, draw on the internal control system (Order of November 3, 2014), optimize emergency and business continuity plans for essential activities and adapt financial reporting (Pillar 3 of Basel III).

5.14.2 Measurement and control procedure

The system used to measure and monitor operational risk is based on a common platform applied across Crédit Mutuel Alliance Fédérale and uses an approach for identifying and modeling risks so as to calculate the level of capital required to cover this risk.

5.14.2.1 Description of the advanced measurement approach (AMA)

Regarding the implementation of the advanced measurement approach (AMA) used to assess capital requirements for operational risks, a dedicated service within the risk department is tasked with managing the operational risk.

The operational risk control and measurement mechanism is underpinned by a risk mapping carried out by business line, purpose and risk type, in close liaison with the functional departments and day-to-day risk management procedures. In particular, these mappings define a standard framework for analyzing the claims experience and serve for risk modeling based on expert opinions which are compared with scenario-based probabilistic estimates.

For modeling purposes, the group relies mainly on the national internal loss database. This database is populated in accordance with the rules defined in the national data collection procedure. Each loss above the uniform threshold of €1,000 must be recorded. Reconciliations are carried out between the loss database and the accounting information.

Moreover, the Crédit Mutuel group subscribes to an external database, the analysis of which helps to enhance risk mapping and the operational risk measurement system as a whole.

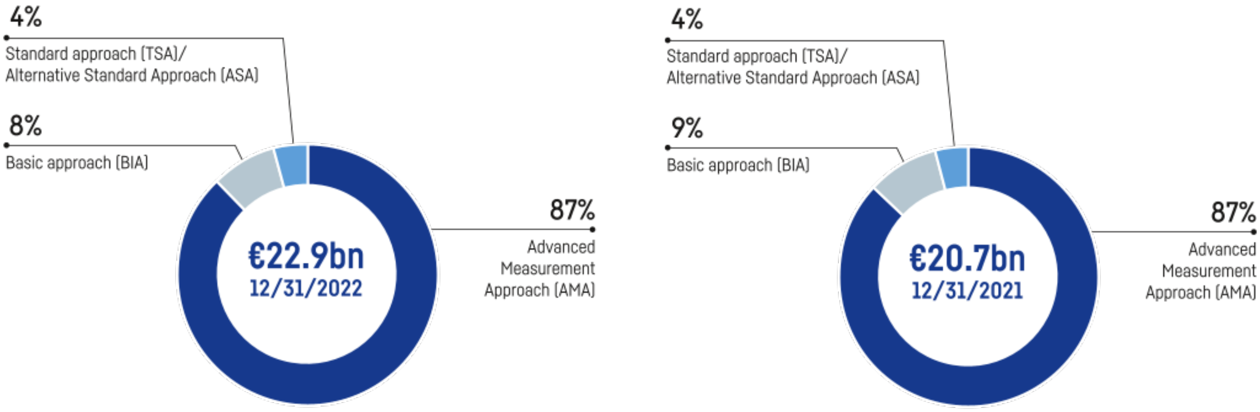
5.14.2.2 Authorized scope for AMA method

Crédit Mutuel Alliance Fédérale is authorized to use its advanced measurement approach (internal models) to calculate its regulatory capital requirements in respect of operational risk (87.3% of the scope as of December 31, 2021).

This authorization took effect on January 1, 2010 for the group's consolidated scope, excluding foreign subsidiaries and the Cofidis group, then extended to:

- Crédit Mutuel Factoring as of the reporting period ended March 31, 2012;
- Banque de Luxembourg as of the reporting period ended September 30, 2013;
- Cofidis France as of the reporting period ended September 30, 2014;
- TARGOBANK in Germany as of the reporting period ended June 30, 2018.

GRAPH 15: BREAKDOWN OF OPERATING RISK RWAS BY APPROACH AS OF DECEMBER 31, 2022 (EU OR2)



5.14.2.3 Operational risk mitigation and hedging policy

The general guidelines for reducing operational risks include:

- effective preventive actions identified during the mapping process and implemented directly by operational staff or permanent control;
- safeguard initiatives primarily focused on the implementation of emergency and business continuity plans for the business lines, logistics and IT so as to limit the extent of the loss in the event of a crisis.

A consistent crisis management process implemented across the group, in line with the market system for interbank operations, covers crisis communication and the three stages of emergency and business continuity plans: namely, the rescue, continuity and recovery plans.

5.14.3 Reporting and general management

The application of the operational risk management policy and the risk profile are monitored with key indicators, thresholds and alerts that cover the assessment of potential risks, changes in claims, the effectiveness of reduction measures and financing decided. The relevant senior executives and supervisory bodies are regularly informed on these issues, including the requirements of the Order dated November 3, 2014.

5.14.4 Documentation and procedures

The group consistently applies a set of procedures that are approved by the managing bodies and regularly updated. These cover:

- governance: procedures dealing with the roles and responsibilities of the various managing, decision making and supervisory bodies, the national function, report frequency and recipients, the monitoring scope for group entities and the methodology for subsidiary consolidation;
- collection of claims: procedures setting out rules for the collection and audit of internal losses;
- measurement system: procedures concerning, in particular, probabilistic modeling and modeling based on the work of experts, the rules for gathering Key Risk Indicators (KRIs), the basis for allocating capital adequacy requirements and COREP reports.

These procedures are subject to regular verification procedures.

5.14.5 Business Continuity Management (EBCP) and crisis management

The business continuity system implemented within the group has a dual objective:

- guarantee the continuation of activities following a disaster or an event that seriously disrupts the operation of the group or one of its entities;
- comply with legal and regulatory obligations.

It is intended for all of the group’s banking, non-banking and financial activities.

5.14.5.1 The EBCPs

EBCPs cover protection actions set up by the group to limit the severity of a disaster as part of its operational risk management program.

Placed in the context of crisis management that the group has set for itself, and in relation to the regulations in force, an EBCP can be defined as the description of the actions to be taken to ensure the continuity of the business processes considered essential and of the appropriate means that are necessary to be implemented in the event of an incident resulting in the unavailability or serious disruption of human resources, premises, information technology and telecommunications, and FCIs (critical or important functions, outsourced essential service providers and critical functions as defined by the Single Resolution Board).

The methodology for drawing up an EBCP, a registration document for Crédit Mutuel Alliance Fédérale, is accessible to all the teams concerned and is applied operationally at the level of all group entities.

The EBCPs center around three phases:

- the emergency response plan: rolled out immediately, it consists of actions intended to deal with emergencies and to implement a degraded treatment solution;
- business continuity plan: corresponds to the resumption of activity in a degraded environment according to the methods adopted before the occurrence of the crisis;
- the recovery plan: is prepared shortly after the start of the business continuity plan with an implementation time that depends on the extent of the damage.

5.14.5.2 Organization of crisis management

The crisis management system set up by Crédit Mutuel Alliance Fédérale covers the most effective communication and organization to deal with the three phases: emergency, business continuity and recovery plans.

It is based on:

- a crisis committee, chaired in the regions by the bank's Chief Executive Officer and at the national level by the group's Chief Executive Officer. In times of crisis, this committee makes substantive decisions, prioritizes actions and ensures internal and external communication;
- a crisis unit which pools information, implements decisions and provides follow-up;
- one crisis point per business line that coordinates field operations in relation with the crisis cell, specifically the activation of EBCPs until normalcy is restored.

5.14.5.3 Management of the system at group level

The entire system is managed centrally by the crisis management-business continuity department of Crédit Mutuel Alliance Fédérale's risk department. The mission of this department is to coordinate, organize and manage the governance of business continuity and crisis management at Crédit Mutuel Alliance Fédérale and to coordinate the crisis management and business continuity correspondents of all business lines/subsidiaries that have an EBCP.

Coordination committees are set up under the aegis of this department with the group's main logistics and IT subsidiaries, as well as with the HR department, in order to contribute to and ensure the effectiveness of Crédit Mutuel Alliance Fédérale's crisis management and business continuity arrangements. Their work should make it possible to anticipate and better control the risk scenarios and the related crisis management plans.

The Group Crisis Committee validates the entire system, which is presented to it at least once a year.

5.14.6 Use of insurance techniques

The ACPR authorized the Crédit Mutuel group to take into account the impact of insurance as a mitigation factor for the calculation of capital requirements in respect of operational risk under the advanced measurement approach (AMA) as of the reporting period ended June 30, 2012.

The principles applied for financing operational risks within the Crédit Mutuel group depend on the frequency and severity of each potential risk. These involve:

- setting up insurance cover or financing by withholding amounts on the operating account for non-severe frequency risks (expected loss);
- insuring major risks *via* external insurers and reinsurers;
- developing self-insurance for losses below insurers' deductible thresholds;
- allocating reserves of regulatory capital or writing provisions financed by underlying assets for serious risks that cannot be insured.

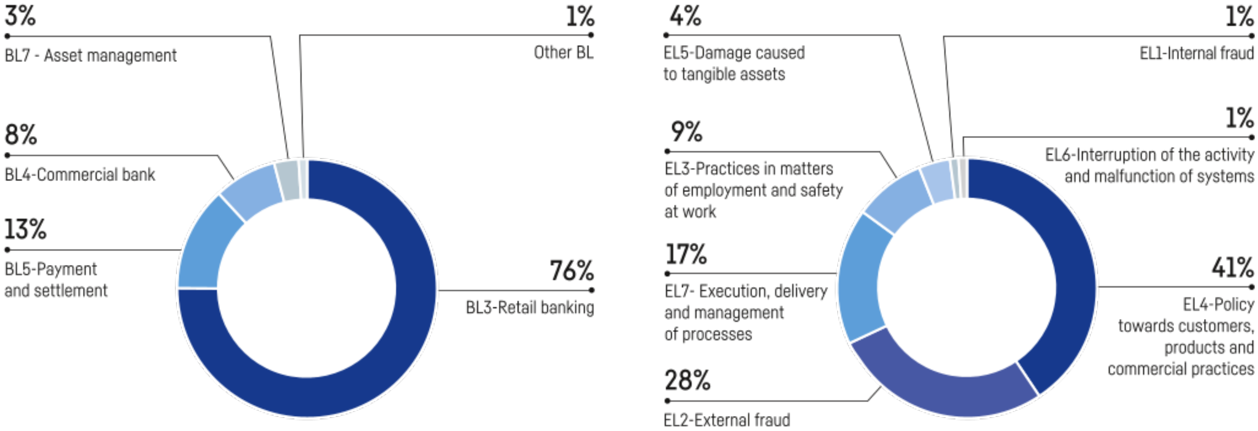
Crédit Mutuel group's insurance programs comply with the provisions of Articles 323 of Regulation (EU) No. 575/2013 of the European Parliament and Council of June 26, 2013 concerning the deduction of insurance under the advanced method approach (AMA).

Insurance cover included in the deduction process covers damage to real and personal property (multi-risk) and fraud (overall insurance for banking risks), as well as professional third-party liability and cyber-risks (cyber policy).

5.14.7 Inventory of Crédit Mutuel Alliance Fédérale claims

Total claims of Crédit Mutuel Alliance Fédérale amounted to €157.6 million in 2022, €163.3 million in losses, €368.7 million in provisions and €374.5 million in reversals of provisions. They are broken down as follows:

GRAPH 16: ANNUAL LOSS EXPERIENCE BY BUSINESS LINE AND BY RISK EVENT (EU OR1)



5.14.8 Specific operating risks

Legal risks

Incorporated into operational risks, these include,but are not limited to, exposure to fines, penalties and damages for fault attributable to the company with respect to its operations.

Industrial and environmental risks

Included into operational risks, these are analyzed from the perspective of system malfunctions and the occurrence of natural disasters (100-year floodplains, floods, earthquakes, pollution, etc.), their impact on the business and the means of prevention and protection to be put in place, notably crisis management and EBCPs.

Concerning the management of social and environmental risks, the approach undertaken is described in the societal section of the CSR section.

5.15 INFORMATION ON ENCUMBERED AND UNENCUMBERED ASSETS (EU AE4)

Since December 31, 2014, and pursuant to Article 100 of the CRR, Crédit Mutuel Alliance Fédérale has reported to the competent authorities on the quantity of unencumbered assets at its disposal and their principal characteristics. These assets may serve as collateral to obtain other financing on the secondary markets or from the central bank, and hence constitute additional sources of liquidity.

An asset is considered to be “encumbered” if it serves as a guarantee, or can be contractually used, to secure, collateralize or enhance a transaction from which it cannot be separated. In contrast, an asset is “unencumbered” if it is free of any legal, regulatory, contractual or other limitations to its possible liquidation, sale, transmission or disposal.

For illustrative purposes, the following types of contracts satisfy the definition of encumbered assets:

- secured financial transactions, including repurchase agreements, securities lending and other forms of loans;
- collateralization agreements;
- collateralized financial guarantees;
- collateral placed in clearing systems, clearing houses and other institutions as a condition for accessing the service. This includes initial margins and funds against the risk of insolvency;
- facilities given to central banks. Assets already in position should not be considered encumbered unless the central bank does not authorize the withdrawal of these assets without its prior agreement;

- underlying assets of securitization entities when these assets have not been derecognized by the entity. Underlying assets of retained securities are not recognized as being encumbered unless the securities in question are used to pledge or guarantee a transaction in some way;
- collateral pools put together to issue secured bonds. These assets are recognized as encumbered assets except in certain situations where the entity holds the secured bonds (self-issued bonds).

Assets placed in financing mechanisms that are unused and can be easily withdrawn are not recognized as being encumbered.

As of December 31, 2022, the level and characteristics of encumbered and unencumbered assets for Crédit Mutuel Alliance Fédérale were as follows:

TABLE 69: ENCUMBERED AND UNENCUMBERED ASSETS[9] (EU AE1)

12/31/2022 *(in € millions)*		Carrying amount of encumbered assets	o/w HQLA and EHQLA	Fair value of encumbered assets	o/w HQLA and EHQLA	Carrying amount of unencumbered assets	o/w HQLA and EHQLA	Fair value of unencumbered assets	o/w HQLA and EHQLA
010	**Institution assets**	**93,355**	**5,575**	-	-	**667,576**	**28,645**	-	-
030	Equity instruments	6	5	6	5	6,998	100	6,998	100
040	Debt securities	11,189	5,428	11,655	5,964	34,345	22,692	33,124	23,030
050	Of which secured bonds	288	288	288	288	4,293	4,282	4,293	4,282
060	Of which asset-backed securities	2,036	842	2,277	904	715	87	503	87
070	Of which issued by public administrations	3,808	3,463	3,805	3,460	14,180	14,347	14,063	14,596
080	Of which issued by financial institutions	5,895	1,240	5,891	1,341	16,225	6,959	15,083	7,008
090	Of which issued by non-financial corporations	1,617	761	1,617	761	2,892	172	2,840	172
120	Other assets[1]	82,461	125	-	-	625,362	5,610	-	-

(1) Of which loans and advances.

12/31/2021 *(in € millions)*		Carrying amount of encumbered assets	of which HQLA and EHQLA	Fair value of encumbered assets	of which HQLA and EHQLA	Carrying amount of unencumbered assets	of which HQLA and EHQLA	Fair value of unencumbered assets	of which HQLA and EHQLA
010	**Institution assets**	**92,500**	**6,840**	-	-	**621,774**	**28,878**	-	-
030	Equity instruments	4	0	4	0	6,466	1	6,480	0
040	Debt securities	10,657	6,727	11,203	6,739	32,809	24,032	32,245	24,032
050	Of which secured bonds	338	338	338	338	4,323	4,310	4,323	4,310
060	Of which asset-backed securities	2,138	1,214	2,415	1,225	1,304	521	901	521
070	Of which issued by public administrations	4,372	4,171	4,372	4,171	13,631	14,479	13,587	14,479
080	Of which issued by financial institutions	4,142	1,485	5,248	1,496	14,111	8,343	12,621	8,343
090	Of which issued by non-financial corporations	1,836	1,092	1,836	1,092	5,220	322	5,209	322
120	Other assets[1]	82,588	114	-	-	580,732	6,295	-	-

(1) Of which loans and advances.

The carrying amount of financial liabilities and guaranteed assets received from CMNE as of 12/31/2021 represents approximately 2% of similar amounts from Crédit Mutuel Alliance Fédérale.

(9) All the figures presented are calculated based on median values of end-of-quarter data for the elapsed year.

TABLE 70: COLLATERAL RECEIVED[10] (EU AE2)

12/31/2022 *(in € millions)*		Fair value of the encumbered guarantee received or of encumbered own-debt securities issued	of which HQLA and EHQLA	Fair value of the guarantee received or of own-debt securities issued available for pledging	of which HQLA and EHQLA
130	**Collateral received**	13,334	9,370	8,217	3,056
140	Loans on demand	0	0	0	0
150	Equity instruments	944	446	356	104
160	Debt securities	12,390	8,792	6,703	2,929
170	Of which secured bonds	91	64	70	70
180	Of which asset-backed securities	2,176	1,318	3,137	1,691
190	Of which issued by public administrations	6,795	6,595	935	930
200	Of which issued by financial institutions	4,596	1,538	4,418	1,773
210	Of which issued by non-financial corporations	778	457	1,238	102
220	Loans and advances other than loans on demand	0	0	573	0
230	Other collateral received	0	0	847	0
240	**Own debt securities issued other than own secured bonds or asset-backed securities**	0	0	0	0
241	**Own covered bonds and asset-backed securities issued and not yet pledged**	-	-	0	0
250	TOTAL ASSETS, COLLATERAL RECEIVED AND OWN-DEBT SECURITIES ISSUED	107,241	14,935	-	-

12/31/2021 *(in € millions)*		Fair value of the encumbered guarantee received or of encumbered own-debt securities issued	of which HQLA and EHQLA	Fair value of the guarantee received or of own-debt securities issued available for pledging	of which HQLA and EHQLA
130	**Collateral received**	13,459	7,980	8,793	2,344
140	Loans on demand	0	0	0	0
150	Equity instruments	1,062	425	627	86
160	Debt securities	12,202	7,407	5,420	1,926
170	Of which secured bonds	63	21	49	49
180	Of which asset-backed securities	1,806	284	2,452	1,072
190	Of which issued by public administrations	8,495	6,255	810	636
200	Of which issued by financial institutions	2,874	306	3,586	1,142
210	Of which issued by non-financial corporations	893	473	1,075	116
220	Loans and advances other than loans on demand	0	0	361	0
230	Other collateral received	0	0	2,715	0
240	**Own debt securities issued other than own secured bonds or asset-backed securities**	0	0	0	0
241	**Own covered bonds and asset-backed securities issued and not yet pledged**	-	-	0	-
250	TOTAL ASSETS, COLLATERAL RECEIVED AND OWN-DEBT SECURITIES ISSUED	104,041	14,673	-	-

The carrying amount of financial liabilities and guaranteed assets received from CMNE as of December 31, 2021 represents approximately 2% of similar amounts from Crédit Mutuel Alliance Fédérale.

(10) All the figures presented are calculated based on median values of end-of-quarter data for the elapsed year.

TABLE 71: CARRYING AMOUNT OF ENCUMBERED ASSETS/COLLATERAL RECEIVED AND LIABILITIES BACKED (EU[11] AE3)

12/31/2022 *(in € millions)*		Associated liabilities, contingent liabilities or securities loaned	Assets, guarantees received and own-debt securities issued other than guaranteed bonds and securities backed by encumbered assets
010	Carrying amount of the financial liabilities selected	83,847	102,548

12/31/2021 *(in € millions)*		Associated liabilities, contingent liabilities or securities loaned	Assets, guarantees received and own-debt securities issued other than guaranteed bonds and securities backed by encumbered assets
010	Carrying amount of the financial liabilities selected	83,068	89,842

The carrying amount of financial liabilities and guaranteed assets received from CMNE as of December 31, 2021 represents approximately 2% of similar amounts from Crédit Mutuel Alliance Fédérale.

5.16 EQUITY RISK

The equity securities risk run by Crédit Mutuel Alliance Fédérale is of different kinds.

5.16.1 Financial assets at fair value through profit or loss

Equity portfolios held for trading amounted to €731 million as of December 31, 2022 compared to €732 million as of December 31, 2021 and were related exclusively to CIC Capital Markets (see note 5a to the consolidated financial statements). Equities recognized as other fair value through profit or loss mainly related to the private equity business line, with €4,129 million (see note 5a to the consolidated financial statements). Long-term investments recognized as "other fair value through profit or loss" amounted to €909 million as of December 31, 2022, of which €371 million in equity investments and €166 million in other long-term investments.

5.16.2 Financial assets at fair value through shareholders' equity

Outstanding equities and long-term investments classified as assets at fair value through shareholders' equity amounted to €216 million and €491 million, respectively. Long-term investments included:

- equity investments for €91 million;
- other long-term investments for €342 million.

5.17 PRIVATE EQUITY

This activity is carried out through entities dedicated to the business line with a portfolio fully valued at fair value through options.

TABLE 72: RISKS RELATED TO PRIVATE EQUITY

	12/31/2022	12/31/2021
Number of listed lines	15	20
Number of unlisted lines	289	291
Number of funds	25	24
Portfolio revalued for proprietary trading *(in € millions)*	3,545	3,226
Capital managed on behalf of third parties *(in € millions)*	190	200
Source: Crédit Mutuel Equity.		

Proprietary trading investments were spread over approximately 304 lines (excluding investments in funds), primarily covering small- and medium-sized enterprises.

(11) All the figures presented are calculated based on median values of end-of-quarter data for the elapsed year.

5.18 ENVIRONMENTAL, SOCIAL AND GOVERNANCE RISKS

Application of implementing technical standards (ITS) relating to prudential information on ESG risks in accordance with Article 449a of the CRR

Environmental, social and governance (ESG) risks are gradually increasing in importance. They are factors that determine the other risks to which Crédit Mutuel Alliance Fédérale is exposed, in particular credit risk, operating risk and financial risks. In particular, they are likely to affect, directly or indirectly, the ability of companies/individuals to repay their receivables and thus profitability and sustainability of the group's business model. This is why ESG factors and risks are integrated into Crédit Mutuel Alliance Fédérale's strategy and overall risk management.

5.18.1 Qualitative information on environmental and climate risk

Business strategy and processes

a) The institution's business strategy for integrating environmental factors and risks by considering the impact of environmental factors and risks on the institution's business environment, busines model, strategy and financial planning

As a responsible player, Crédit Mutuel Alliance Fédérale is committed to builing a more sustainable world and takes into account the impact of environmental factors and risks on its business environment, its business model and its strategy.

This is reflected in the following commitments:

At the end of a participatory discussion with its elected members and employees, Crédit Mutuel Alliance Fédérale adopted a raison d'être at the end of 2020, *"Ensemble, écouter et agir"* ("Listening and acting together") and the status of a benefit corporation. This raison d'être is intended to guide strategic and operational decisions. Five missions have been defined, resulting in 14 concrete commitments to be achieved by the end of 2022. Two of these commitments are linked to the group's climate strategy and its environmental ambition to align its activities with the trajectory of the Paris Agreement.

They reinforce the SMR (Social and Mutualist Responsibility) approach, centered around five ambitions broken down into 15 commitments and highlighting in particular the environmental priorities of reducing the group's environmental impact, reinforcing quality solutions and offers, and responsible services.

Crédit Mutuel Alliance Fédérale has included three ambitious ecological and climate transition objectives in its 2019-2023 strategic plan.

A cross-reference table between the commitments of the benefit corporation, the objectives of the 2019-2023 strategic plan and those of the SMR policy can be found in Chapter 3.3 of the NFPS.

At the national level, Crédit Mutuel Alliance Fédérale participates in the Crédit Mutuel group's 2020-2023 action plan, which aims to jointly capitalize on the initiatives undertaken and to manage the common challenges related to climate and environmental risks and CSR.

Crédit Mutuel Alliance Fédérale is a member of the Crédit Mutuel "Climate Risks & CSR" Steering Committee made up of Chief Risk Officers and/or directors in charge of CSR from each regional group and information systems representatives.

b) Objectives, targets and limits for assessing and addressing environmental risks in the short, medium and long terms, and evaluation of performance against these objectives, targets and limits, including forward-looking information in the design of strategy and business processes

The group considers the impact of environmental factors and risks in its business model and SMR strategy.

This translates into:

- the integration of the monitoring of environmental and climate risks, as well as their transmission mechanisms to other risks (particularly credit), into the group's risk management system;
- the implementation of dedicated tools to identify, measure, manage and monitor all of these risks (both physical and transition);
- the deployment of measures to mitigate the impact of environmental risks and measures to adapt to climate change;
- the desire to support members and customers in their transition to more sustainable lifestyles that are compatible with the challenges of the ecological and social transition.

In addition, sectoral policies (coal, hydrocarbons, transportation) provide a framework for possible operations with companies operating in sectors that emit large quantities of greenhouse gases or have environmental impacts. They also include exclusions and restrictions in the granting of loans.

Assets eligible for these policies are monitored on a quarterly basis.

Objectives have been defined as part of commitments #12 and #13 of mission number 5 "As a responsible company, actively work for a fairer and more sustainable society":

- reduction of the group's carbon emissions by 20% (France scope – office life – energy items – refrigerants – motor fleet – business travel) between end 2018 and end 2020;
- stop financing new oil and gas projects from 2021.

Crédit Mutuel Alliance Fédérale is also pursuing the ecological and climate transition objectives of its revised 2019-2023 strategic plan *"Plus vite! plus loin!"* ("Faster! further!"):

- reduction of internal carbon emissions by 30% and of the carbon footprint of the corporate finance and equity portfolio by 15%;
- acceleration of financing for renewable energy projects (+30%).

All of these objectives are monitored annually.

Crédit Mutuel Alliance Fédérale endorses the commitments of the Confédération Nationale du Crédit Mutuel (CNCM), a signatory of:

- the UNEP-FI (United Nations Sustainable Finance Initiative) Principles for Responsible Banking (PRB);
- the United Nations Global Compact;
- the Net Zero Banking Alliance (NZBA) organized by the United Nations.

Thus, as part of its membership of the Net Zero Banking Alliance (NZBA), Crédit Mutuel Alliance Fédérale has published its commitments, in a separate publication, on the first two economic sectors identified as emissive. These first two sectors are:

- hydrocarbons;
- electricity production.

By 2030, Crédit Mutuel Alliance Fédérale is committed to reducing its carbon footprint (scopes 1, 2 and 3) by 30% compared to 2018 in the hydrocarbon sector. For the electricity production sector, the commitment is to have more than 90% of its electricity production exposure in projects or counterparties with CO_2 emissions below 100 gCO_2/kWh.

Commitments are also made at the level of Crédit Mutuel Alliance Fédérale subsidiaries:

- CIC signed the Poseidon Principles in 2019 with the objective of being below the curve of the International Maritime Organization by 2025, as part of its maritime transportation policy, a policy which also excludes the financing of all vessels carrying oil and dedicated to the transportation of unconventional gas;
- Crédit Mutuel Asset Management and Groupe La Française are signatories of the Finance for Biodiversity Pledge.

c) Current investment activities and (future) investment targets towards environmental objectives and activities aligned with EU taxonomy

In application of the European Parliament's regulation (EU) 2020/852, known as the taxonomy regulation, and of the delegated regulation (EU) 2021/2139, Crédit Mutuel Alliance Fédérale has been working since 2021, in coordination with the CNCM, to identify the proportion of its assets eligible for the European taxonomy in its customer portfolio. In accordance with the regulations, only assets eligible for two environmental objectives (mitigation and adaptation to climate change) have been taken into account for the first two publications. The Crédit Mutuel group has published in its NFPS (section 8.4 of chapter 3) the arbitration carried out and the eligibility indicators for its assets (excluding investments and insurance).

The eligibility indicators of Assurances du Crédit Mutuel and the methodology used are also provided in the paragraph indicated. Those of Crédit Mutuel Alliance Fédérale were published as part of the Article 29 report of the energy-climate law.

In order to develop investments in sustainable activities, Crédit Mutuel Alliance Fédérale has committed in its 2019-2023 strategic plan to increase the financing of renewable energy projects by 30%.

The group is also developing corporate financing through impact loans that may include environmental objectives. Energy transition loans are also offered. They are intended to finance investments dedicated to energy saving in order to reduce energy bills.

Crédit Mutuel Alliance Fédérale has strengthened its commitment to the world of agriculture and winegrowing, with financing solutions to promote efficient, sustainable and low-carbon agriculture (financing of the non-government-subsidized part of the "Bon Diagnostic Carbone" for eligible customers, payment of a subsidy of €500[12] to finance the "High Environmental Quality" or "Organic Farming" certification process for farmers who want to certify their farms, and the launch of a subsidized Agricultural Transition Loan to facilitate the transformation of farms).

The asset management activities also aim to become significant players in sustainable finance. Crédit Mutuel Asset Management's objective is to classify 100% of the funds open for active management (excluding index funds or formula funds whose objective is to replicate or be invested in a given index, regardless of any consideration of sustainability risk) in Article 8 or Article 9.

In addition, Groupe La Française, a financial and real estate asset manager, is determined to be an active and influential player in the field of sustainable finance, in particular through its approach to transition and support for the companies and assets in which it invests. In 2022, the group actively pursued its ESG approach, the main challenge of which is the reduction of CO_2 emissions according to a decarbonization

(12) First budget envelope of more than €2 million.

trajectory in line with the Paris Agreement, and set the objective of reaching 100% of sustainable funds open for marketing in line with sustainable development objectives.

At the end of 2022, Assurances du Crédit Mutuel held €3.8 billion in green bonds, €0.9 billion in so-called social bonds and had nearly €1.3 billion invested in vehicles such as sustainable bonds or sustainability loans.

The Siloé Infrastructures investment fund, managed by Crédit Mutuel Capital Privé, a subsidiary of Crédit Mutuel Equity, plans to invest at least 50% of its capital in renewable energy.

d) Policies and procedures related to direct and indirect engagement with new or existing counterparties on their environmental risk mitigation and reduction strategies

Since 2016, Crédit Mutuel Alliance Fédérale has chosen to strictly supervise transactions involving sectors with social and environmental risks. To ensure that these issues are taken into account in a responsible manner, it undertook to define sectoral policies (coal, mining, hydrocarbons, mobility, agriculture) that aim to determine a scope of intervention and to set criteria and principles for the exercise of its activities, and thus contribute to the ecological transformation and social progress.

The group has also implemented a system for integrating ESG criteria in lending: analysis grids for all business sectors, including those not subject to a sectoral policy. These grids integrate the ESG study of the counterparties analyzed as well as the consideration of controversies in the decisions to grant banking and financial operations. Non-financial data is also provided by a non-financial rating agency.

This system for integrating ESG criteria into the lending decision was initially deployed at the level of corporate banking and at the level of the network dedicated to large- and medium-sized corporate customers.

Governance

e) Responsibilities of the management body for defining the risk management framework, overseeing and managing the implementation of objectives, strategy and policies in the context of environmental risk management covering the relevant transmission channels

The environmental risk governance system is part of the overall risk governance system, which includes:

- the governing bodies, which are the Board of Directors (management body in its supervisory function) and Executive Management (management body in its executive function); and
- the three lines of defense involved in the group's risk management: the operational departments (first line), the Risk, Compliance and Permanent Control division of Crédit Mutuel Alliance Fédérale (DRCC) (second line) and periodic control (third line).

The effective implementation of the group's risk appetite is based on the coordination of the management bodies with the various technical and specialized committees and the meetings of the Board of Directors, which are attended by Crédit Mutuel Alliance Fédérale's effective managers and Chief Risk Officer.

This articulation is described in the NFPS in section 2 of chapter 3.

Crédit Mutuel Alliance Fédérale's SMR policy is based on responsible and committed governance. Its volunteer directors actively contribute to the life of the group in accordance with the rules of independence, ethics and integrity. The SMR action plan is validated by a dedicated working group of the Chambre syndicale et interfédérale, a mutualist parliament that brings together the elected chairpersons of the local and regional banks and federations, and the managing directors at least twice a year. This working group is presided over by the Chairman of Crédit Mutuel Alliance Fédérale.

The SMR Governance Committee, coordinated by the group risk department, is made up of the group's main effective managers and business managers. It is presided over by the Chief Executive Officer of Crédit Mutuel Alliance Fédérale and the Chairman participates as a guest.

This committee recommends strategic orientations, approves the roadmap and ensures its proper execution.

f) Integration by the management body of the short-, medium- and long-term effects of environmental factors and risks – Organizational structure within the business lines and internal control functions

The group risk department is made up of several divisions, including the SMR division.

Its main tasks are:

- defining and implementing Crédit Mutuel Alliance Fédérale's SMR policy for all Crédit Mutuel Alliance Fédérale entities and business lines;
- steering Crédit Mutuel Alliance Fédérale's ESG risk management system together with Confédération Nationale du Crédit Mutuel's (CNCM) risk department, in order to meet the prudential regulations and requirements in force, in particular by implementing appropriate procedures for the decision making and reporting tools and reporting used by group entities (sectoral policies in particular);
- coordinating and ensuring the proper execution of SMR projects alongside of business line experts (HR, logistics, IT, sales, compliance, etc.);

- reporting on the actions carried out to the SMR Governance Committee and to the executive (group Risk Committee) and supervisory (group Risk Monitoring Committee) bodies of Crédit Mutuel Alliance Fédérale;
- participating in various specialized committees, including the corporate banking SMR Committee;
- coordinating the network of SMR contacts responsible, within the various Crédit Mutuel and Alliance Fédérale entities and structures, for disseminating the group's SMR policy among employees and elected members;
- communicating and training group employees to improve the appropriation of policies and action plans related to ESG issues.

One of the SMR division's activities is dedicated to the management of Crédit Mutuel Alliance Fédérale's environmental and climate risks. Its main functions are:

- the implementation of regulatory obligations relating to climate risks (Pillar 3 ESG, taxonomy, etc.);
- the calculation of the carbon footprint of credit portfolios;
- the creation and updating of a physical and transition risk materiality matrix;
- the management of stress tests;
- the production of a dashboard for monitoring exposures eligible for sectoral policies;
- The definition of carbon trajectories as part of the NZBA commitment and Crédit Mutuel Alliance Fédérale strategic plan.

This articulation is described in the NFPS in section 2.3 of chapter 3.

Internal control structure

The organizational structure by business line of the internal control functions is being organized. In line with the ECB's expectations, the group has set several objectives for 2024:

- definition of the roles and responsibilities of the lines of defense in terms of risk management and control;
- compliance and permanent control: Definition of a minimum common base of controls concerning climate risks;
- periodic control: inclusion of climate risks as an auditable item in the five-year audit plan.

Checks are already carried out on the presence and completeness of an application grid for sectors eligible for a sectoral policy or a general analysis grid for other sectors in the corporate banking credit files when the latter are sent to the corporate banking SMR Committee for an opinion. This committee is a collegial body made up of the 1st and 2nd line of defense of corporate banking, Crédit Mutuel Alliance Fédérale lending department and the risk department – SMR division. Its mission is to issue opinions on projects that are likely to raise social, environmental or governance issues when granting financing or during the annual renewal of corporate banking projects. It also aims to advance the methods of project analysis within the business lines. Once per quarter, the corporate banking Internal Control Coordination Committee will be informed of the projects examined and the opinions issued by the SMR Committee during the previous quarter. This procedure is adapted in the large/medium-sized companies network.

g) Integration of the management of environmental factors and risks into internal governance arrangements, including the role of committees, segregation of duties and responsibilities, and the feedback loop from risk management to the management body covering relevant transmission channels

The relationship between Crédit Mutuel Alliance Fédérale's management bodies and the various risk management lines, including environmental and climate risks, is based on:

- communication to the executive body:
- directly by the teams involved in risk management located in the second and third lines of defense. The risk, permanent control and compliance department, as well as periodic control, report to the Chief Executive Officer,
- through executive, technical and operational committees such as the Group Risk Committee (CRG) and the SMR Governance Committee;
- communication to the supervisory body:
- directly by the teams involved in risk management located in the second and third lines of defense,
- through specialized committees such as the Group Risk Monitoring Committee (GRMC).

The group risk department is responsible for the organization and secretariat of the GRC, the GRMC and the SMR Governance Committee.

The role of the GRC and the GRMC is described in the Risk Management chapter of the universal registration document. Sectoral policies, and their changes, developed by the SMR division are thus subject to the approval of the Boards of Directors of Caisse Fédérale de Crédit Mutuel, BFCM and CIC. The RSM division also monitors exposures eligible for sectoral policies, which are included in the risk dashboard (see paragraph below).

h) Reporting lines and frequency of reporting on environmental risks

Crédit Mutuel Alliance Fédérale's risk appetite framework, including climate and environmental risks, is reviewed annually. It is presented to the GRC and GRMC and adopted by the Board of Directors of Caisse Fédérale de Crédit Mutuel.

For the risk appetite framework that will be applicable from 2023, two indicators dedicated to monitoring climate and environmental risk have been included.

In addition, specific presentations on SMR topics were made in the aforementioned bodies.

The quarterly risk dashboard is prepared by the risk department. This is the main report analyzing all the risks of Crédit Mutuel Alliance Fédérale. In particular, it includes the monitoring of financing and investment exposures in sectors eligible for a sectoral policy. It is presented to the Group Risk Committee and the Group Risk Monitoring Committee.

i) Alignment of the compensation policy with the institution's environmental risk objectives

Crédit Mutuel Alliance Fédérale has decided to prioritize fixed compensation, in line with its mutualist values and its responsibilities toward its customers and members.

Risk management

j) Integration of short-, medium- and long-term effects of environmental factors and risks into the risk management framework

Climate and environmental risks are taken into account in Crédit Mutuel Alliance Fédérale's risk appetite framework. Work to assess the level of risk also made it possible in 2021 to integrate climate and environmental risks (physical risk and transition risk) into the overall Crédit Mutuel Alliance Fédérale risk mapping, the internal capital adequacy assessment process (ICAAP) and the annual internal control report (RACI). In 2022, this work was supplemented by the integration of climate risk into the risk appetite framework by the integration of two dedicated indicators and by the integration of liability risk as the third sub-category of climate risks and environmental risks in the overall risk mapping.

Global risk mapping is the process used to initiate the work carried out to identify, assess and prioritize the group's ESG issues in a mapping of the significant ESG risks of Crédit Mutuel Alliance Fédérale. It also presents the risk prevention and mitigation measures as well as the main performance indicators. It is approved by the Crédit Mutuel Alliance Fédérale's Risk Committee (executive body) and the Risk Monitoring Committee (deliberative body).

The mapping of significant ESG risks concerning environmental risks and the objectives selected are presented in the non-financial performance statement in section 3 of chapter 3.

In order to refine the assessment of the significance of Crédit Mutuel's climate risks, Crédit Mutuel Alliance Fédérale took part in a working group in 2022 to develop a national materiality matrix. Crédit Mutuel Alliance Fédérale then applied it to its own scope.

This materiality matrix aims to propose an appropriate detection and measurement process to assess the materiality of the climate-related and environmental risks that weigh on its business. The study of the significance of climate risks is carried out in light of Crédit Mutuel Alliance Fédérale's risk appetite and the relative nature of its risk exposures.

Thus, an assessment of the impact of physical and transition risks was established on:

- three time horizons (short-term, medium-term, long-term);
- all risk categories in the global risk mapping;
- a three-tiered scale (low, medium, high).

In addition to this work, Crédit Mutuel Alliance Fédérale updated the risk factors weighing on each of the risk families studied and the associated risk mitigation measures.

k) Definitions, methodologies and international standards underlying the environmental risk management framework

The identification, measurement and monitoring of activities and exposures sensitive to environmental risks are carried out within Crédit Mutuel Alliance Fédérale through:

- the monitoring of several metrics in the overall risk mapping/risk dashboard (monitoring of our exposures to the sectors covered by sectoral policies, etc.);
- the enhancement of our materiality matrix to more accurately assess the impact of physical and transition risks on the traditional risk categories;
- participation in a working group led by CNCM to assess the exposure of our credit portfolios to physical risks and monitor claims indicators for the group's buildings;
- the storage of ISS OEKOM's ESG ratings in the information system and the creation of a historical database;
- the implementation of the EBA guidelines on credit granting and loan monitoring.

Crédit Mutuel Alliance Fédérale is organizing itself to meet the expectations expressed by the EBA, the ECB and the ACPR in their supervision exercises and published guidelines.

The group is committed to joining the trajectory of the Paris Climate Agreement. The group is also involved in the commitments signed by CNCM to the Net Zero Banking Alliance, the United Nations Global Compact and the Principles for Responsible Banking (PRB-UNEP FI).

The asset management companies Crédit Mutuel Asset Management, La Française, Banque de Luxembourg Investments SA, Dubly Transatlantique Gestion and CIC Private Debt are, for their part, committed to respecting the Principles for Responsible Investment (PRI).

l) Processes to identify, measure and monitor activities and exposures (and collateral, if any) sensitive to environmental risks, covering relevant transmission channels

The identification, measurement and monitoring of environmentally sensitive activities and exposures within Crédit Mutuel Alliance Fédérale involves:

- the integration of ESG criteria into the lending procedure and the adaptation of tools to collect the data necessary to take these criteria into account;
- monitoring of exposures eligible for sectoral policies (dashboard) and limits by country integrating the ND-GAIN (Notre Dame Global Adaptation Index) in the risk dashboard, monitoring of the carbon footprint of the corporate finance portfolio (indicator present in the mapping of the main ESG risks) and investment;
- the development of a materiality matrix;
- participation in studies of the impact of various transition scenarios on credit risk *via* two stress test exercises at national level;
- the creation of a joint system with the finance department and the risk department (SMR division) to meet the regulatory requirements of the taxonomy, Pillar 3 ESG and the expectations of regulators.

m) Activities, commitments and exposures contributing to mitigating environmental risks

Through its sectoral policies, Crédit Mutuel Alliance Fédérale set up a coal phase-out plan in 2030, stopping the financing all new oil and gas exploration, production and infrastructure projects. Crédit Mutuel Alliance Fédérale will, moreover, refrain from providing banking and financial services to companies listed in the NGO Urgewald's Global Oil & Gas Exit List (GOGEL) whose share of unconventional hydrocarbon production exceeds 25% from January 1, 2023.

In its strategic plan, Crédit Mutuel Alliance Fédérale has set a target of reducing the carbon footprint of its corporate, asset management and insurance portfolios by 15% between 2019 and 2023. The group is committed to joining the trajectory of the Paris Climate Agreements and has adopted the commitments signed by CNCM as part of the Net Zero Banking Alliance and the PRBs.

Crédit Mutuel Alliance Fédérale has chosen an ambitious climate strategy to support its customers through:

- products and services for eco-mobility and transition;
- financing dedicated to large- and medium-sized companies: impact loans and Sustainability Linked Loans;
- accelerating the granting of financing to projects with a strong climate impact.

The RBM is presented in the NFPS in section 8.4 of chapter 3.

n) Implementation of tools to identify, measure and manage environmental risks

Crédit Mutuel Alliance Fédérale aims to implement actions on credit granting and monitoring procedures (in accordance with EBA guidelines) by taking into account the impact of risks associated with ESG factors on the financial situation of creditors, and in particular the potential effects of environmental factors and climate change. This implementation results in:

- application of sectoral policies *via* analysis grids including non-financial ratings of counterparties and controversies by ISS OEKOM (integrated into the information system). A grid has also been developed for activities not eligible for a sectoral policy. This procedure was initially implemented for corporate banking with the possibility of recourse to an SMR Committee for advice;
- the development of ESG scoring tools for the GMEnetwork of large and medium-sized companies;
- the adaptation of tools to collect and store in the information system the data of the energy performance diagnoses in the framework of the financing of real estate property and the collateralization of real estate property in connection with the taxonomy regulation and the creation of a Repository of Real Estate Property;
- work to assess the exposure of credit portfolios to physical risks;
- work carried out in 2022 to identify and analyze the group's financing and investments with regard to taxonomy regulations.

Crédit Mutuel Alliance Fédérale has also set up a map of the main ESG risks with annual monitoring of defined indicators and has enriched its materiality matrix in line with the work detailed in paragraph "j" of this chapter.

The group was also involved in the regulatory stress test exercises for climate risks in which the Crédit Mutuel group participated.

These exercises make it possible to better identify and quantify the contribution of portfolios as well as their vulnerability to the effects of climate change. The Crédit Mutuel group took part in two market exercises:

- a first exercise organized by the ACPR in 2020, focusing on the impact of transition risk on the credit and market portfolios;

- then a second exercise conducted in 2022 by the ECB, focusing on the impacts of short-term physical risks and long-term transition risks;

o) Results of the risk management tools implemented and estimated impact of the environmental risk on the capital and liquidity risk profile

Qualitative criteria were included in Crédit Mutuel Alliance Fédérale's ICAAP in 2021. In 2022, these qualitative criteria were developed and supplemented by an analysis of the group's results in the climate stress test organized by the ECB in 2022.

These elements made it possible to demonstrate that a system to control these risks is in place to ensure that they are managed and monitored in accordance with the Crédit Mutuel group's consolidated roadmap for actions to promote CSR and climate change. On the other hand, in the context of the ECB stress test on credit risk, it appears that climate risks do not cause a significant increase in short-term risks (provisions, transfer of buckets), either in terms of physical risk (one-year horizon) or transition (three-year horizon).

At this stage, Crédit Mutuel Alliance Fédérale does not allocate shareholders' equity for climate and environmental risks.

Climate risks were also analyzed in the ILAAP. Crédit Mutuel Alliance Fédérale's risk department, in coordination with CNCM's risk department, has drawn up an action plan to study the potential impacts of climate and environmental risks (through their two components: physical risks and transition risks) on the group's liquidity.

Following a study of historical claims, it appeared that the extreme weather events that occurred in metropolitan France did not result in significant customer outflows.

Nevertheless, as a precautionary measure, the emergency plan has been adapted accordingly, taking into account the climatic risk. With regard to the transition risk, the exposure of the securities portfolio of Crédit Mutuel Alliance Fédérale's liquidity reserve was analyzed.

p) Availability, quality and accuracy of data, and efforts to improve these aspects

The collection of climate related data on customers and on the group's scope is essential for the proper conduct of prudential and strategic work.

The use of data suppliers and, as a last resort, the use of approximations on a defined scope make it possible to compensate for the current lack of data. The methodological notes accompanying these approximations reflect the choices made and uncertainties related to the models used. In addition, many efforts are underway to improve these aspects, including the inclusion of climate data in the BCBS 239 project[13] and participation in place-based work.

This is also reflected operationally in IT projects aimed, for example, at including clients' ESG ratings in the information system or at collecting all data on the real estate property financed or received as collateral.

q) Description of the limits on environmental risks (as drivers of prudential risks) that are set, and triggering of escalation and exclusion in the event of non-compliance with these limits

Exclusions or restrictions exist linked to sectoral policies and indicators are monitored through the risk dashboard. However, within the prudential framework, there are currently no thresholds and limits for environmental risks.

r) Description of the link (transmission channels) between environmental risks and credit risk, liquidity and funding risk, market risk, operating risk and reputational risk in the context of risk management

As indicated in paragraph j, in 2022, and in order to enrich the work carried out in 2021, Crédit Mutuel Alliance Fédérale took part in a working group coordinated by CNCM in order to develop a national materiality matrix. Crédit Mutuel Alliance Fédérale then applied it to its own scope. It made it possible to identify risk factors, to qualify the corresponding risks according to their impacts (financial, solvency, credit, market, liquidity, operating, reputation, strategic, insurance risk), and to measure the impact of each risk according to its intensity and time horizon, and to identify mitigation measures.

This is included in Crédit Mutuel Alliance Fédérale's Statement of Non-Financial Performance.

(13) Basel Committee on Banking Supervision's standard number 239: Principles for effective risk data aggregation and risk reporting practices.

5.18.2 Quantitative information on environmental and climate risk

TABLE 73: MODEL 1: BANKING PORTFOLIO – INDICATORS OF TRANSITION RISK POTENTIALLY LINKED TO CLIMATE CHANGE: CREDIT QUALITY OF EXPOSURES BY SECTOR, EMISSIONS AND RESIDUAL MATURITY

	a	b	c	d	e
	Gross carrying amount *(in € millions)*				
Sector/Sub-sector		Of which exposures to companies excluded from the Union's "Paris Agreement" benchmarks in accordance with Article 12 (1) (d) to (g) and Article 12 (2) of Regulation (EU) 2020/1818	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures
1 – Exposures to sectors that contribute significantly to climate change[1]	**164,147**	**908**	**-**	**11,124**	**5,031**
2 – A – Agriculture, forestry and fishing	8,876	0	-	645	306
3 – B – Other extractive industries	561	179	-	10	2
4 – B.05 – Coal and lignite extraction	*1*	*0*	-	*0*	*0*
5 – B.06 – Extraction of hydrocarbons	*100*	*89*	-	*0*	*0*
6 – B.07 – Extraction of metal ores	*4*	*0*	-	*0*	*0*
7 – B.08 – Other extractive industries	*213*	*0*	-	*10*	*2*
8 – B.09 – Support services to Extractive industries	*244*	*90*	-	*0*	*0*
9 – C – Other manufacturing industries	18,919	229	-	824	839
10 – C.10 – Motor industry	*2,257*	*0*	-	*198*	*123*
11 – C.11 – Manufacture of beverages	*422*	*0*	-	*34*	*11*
12 – C.12 – Manufacture of tobacco products	*20*	*0*	-	*0*	*0*
13 – C.13 – Manufacture of textiles	*159*	*0*	-	*18*	*6*
14 – C.14 – Clothing industry	*168*	*0*	-	*19*	*26*
15 – C.15 – Leather and footwear industry	*112*	*0*	-	*5*	*11*
16 – C.16 – Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	*413*	*0*	-	*25*	*20*
17 – C.17 – Paper and cardboard industry	*213*	*0*	-	*10*	*8*
18 – C.18 – Printing and reproduction of recordings	*318*	*0*	-	*19*	*23*
19 – C.19 – Coking and refining	*242*	*209*	-	*0*	*0*
20 – C.20 – Chemical industry	*938*	*0*	-	*42*	*11*
21 – C.21 – Pharmaceutical industry	*327*	*0*	-	*5*	*4*
22 – C.22 – Manufacture of rubber products	*699*	*0*	-	*35*	*13*
23 – C.23 – Manufacture of other non-metallic mineral products	*623*	*0*	-	*18*	*14*
24 – C.24 – Metallurgy	*209*	*0*	-	*10*	*13*
25 – C.25 – Manufacture of fabricated metal products, except machinery and equipment	*1,311*	*1*	-	*101*	*84*
26 – C.26 – Manufacture of computer, electronic and optical products	*481*	*0*	-	*20*	*16*
27 – C.27 – Manufacture of electrical equipment	*311*	*19*	-	*14*	*12*
28 – C.28 – Manufacture of machinery and equipment n.e.c.	*887*	*0*	-	*30*	*44*
29 – C.29 – Motor industry	*861*	*0*	-	*19*	*24*
30 – C.30 – Manufacture of other transportation equipment	*283*	*0*	-	*65*	*23*
31 – C.31 – Manufacture of furniture	*188*	*0*	-	*19*	*14*

f	g	h	i	j	k	l	m	n	o	p
Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			GHG emissions financed (emissions of categories 1, 2 and 3 of the counterparty) *(in tons of CO_2 equivalent)*		GHG emissions (column i): percentage of the gross carrying amount of the portfolio based on company-specific declarations					
	Of which Stage 2 exposures	Of which non-performing exposures		GHG emissions financed (emissions of categories 1, 2 and 3 of the counterparty) *(in tons of CO_2 equivalent)*		≤ 5 years	> 5 years ≤ 10 years	> 10 years ≤ 20 years	> 20 years	Weighted average maturity
-2,849	**-530**	**-1,992**	**-**	**-**	**-**	**54,309**	**55,351**	**46,177**	**8,310**	**8.9**
-186	-36	-132	-	-	-	2,669	3,873	2,051	284	7.9
-2	0	-1	-	-	-	217	318	18	9	5.5
0	*0*	*0*	-	-	-	*1*	*0*	*0*	*0*	*0.4*
0	*0*	*0*	-	-	-	*33*	*62*	*5*	*0*	*6.9*
0	*0*	*0*	-	-	-	*3*	*0*	*0*	*0*	*3.2*
-2	*0*	*-1*	-	-	-	*118*	*74*	*13*	*8*	*5.6*
0	*0*	*0*	-	-	-	*61*	*181*	*0*	*1*	*5.8*
-378	-31	-306	-	-	-	10,490	6,818	663	949	5.0
-106	*-12*	*-88*	-	-	-	*1,201*	*544*	*153*	*359*	*7.1*
-8	*-1*	*-6*	-	-	-	*293*	*78*	*33*	*18*	*5.2*
0	*0*	*0*	-	-	-	*20*	*0*	*0*	*0*	*2.1*
-5	*-1*	*-4*	-	-	-	*85*	*30*	*30*	*14*	*7.1*
-17	*0*	*-17*	-	-	-	*106*	*10*	*22*	*30*	*8.9*
-3	*0*	*-2*	-	-	-	*79*	*14*	*13*	*5*	*5.2*
-16	*-1*	*-13*	-	-	-	*250*	*75*	*43*	*45*	*6.5*
-7	*0*	*-6*	-	-	-	*158*	*30*	*8*	*17*	*3.7*
-13	*-1*	*-11*	-	-	-	*190*	*76*	*25*	*27*	*6.3*
0	*0*	*0*	-	-	-	*180*	*62*	*0*	*0*	*1.8*
-8	*-1*	*-4*	-	-	-	*759*	*135*	*13*	*30*	*3.7*
-2	*0*	*0*	-	-	-	*267*	*50*	*1*	*9*	*3.9*
-11	*-1*	*-7*	-	-	-	*530*	*128*	*20*	*22*	*4.3*
-11	*-1*	*-8*	-	-	-	*456*	*86*	*28*	*54*	*5.7*
-7	*0*	*-6*	-	-	-	*165*	*32*	*3*	*9*	*3.9*
-55	*-4*	*-46*	-	-	-	*978*	*223*	*57*	*53*	*4.4*
-7	*0*	*-6*	-	-	-	*434*	*34*	*6*	*7*	*4.4*
-4	*-1*	*-2*	-	-	-	*247*	*31*	*13*	*20*	*4.6*
-20	*-1*	*-17*	-	-	-	*651*	*130*	*12*	*93*	*5.5*
-12	*-1*	*-10*	-	-	-	*783*	*59*	*6*	*13*	*1.9*
-22	*-2*	*-19*	-	-	-	*202*	*22*	*48*	*10*	*5.0*
-8	*-1*	*-7*	-	-	-	*87*	*59*	*26*	*16*	*7.1*

Sector/Sub-sector	a	b	c	d	e
	Gross carrying amount *(in € millions)*				
		Of which exposures to companies excluded from the Union's "Paris Agreement" benchmarks in accordance with Article 12 (1) (d) to (g) and Article 12 (2) of Regulation (EU) 2020/1818	Of which environmentally sustainable (CCM)	Of which Stage 2 exposures	Of which non-performing exposures
32 – C.32 – Other manufacturing industries	*6,903*	*0*	-	*74*	*310*
33 – C.33 – Repair and installation of machinery and equipment	*574*	*0*	-	*43*	*29*
34 – D – Production and distribution of electricity, gas, steam and air conditioning	3,015	427	-	92	45
35 – D35.1 – Production, transmission and distribution of electricity	*2,224*	*345*	-	*91*	*42*
36 – D35.11 – Electricity production	*2,046*	*345*	-	*90*	*42*
37 – D35.2 – Manufacture of gas; distribution by pipeline of gaseous fuels	*762*	*82*	-	*1*	*3*
38 – D35.3 – Production and distribution of steam and air conditioning	*29*	*0*	-	*1*	*0*
39 – E – Water production and distribution; sanitation, waste management and decontamination	1,085	0	-	41	24
40 – F – Building and public works services	13,880	25	-	1,080	600
41 – F.41 – Construction of buildings	*3,682*	*0*	-	*275*	*154*
42 – F.42 – Civil engineering	*4,077*	*25*	-	*32*	*128*
43 – F.43 – Specialized construction work	*6,120*	*0*	-	*772*	*319*
44 – G – Wholesale and retail trade; motor and motorcycle repair	22,603	12	-	1,438	1,098
45 – H – Transportation and warehousing	8,949	36	-	603	265
46 – H.49 – Land transportation and transportation via pipelines	*3,700*	*0*	-	*305*	*103*
47 – H.50 – Water transportation	*1,293*	*25*	-	*122*	*25*
48 – H.51 – Air transportation	*1,229*	*0*	-	*120*	*44*
49 – H.52 – Warehousing and support activities for transportation	*2,550*	*11*	-	*50*	*91*
50 – H.53 – Postal and courier activities	*177*	*0*	-	*5*	*2*
51 – I – Hospitality and catering	6,231	0	-	876	513
52 – L – Real estate activities	80,028	0	-	5,515	1,338
53 – Exposures to sectors other than those contributing significantly to climate change[1]	**94,002**	**23**	**-**	**10,075**	**2,394**
4 – K – Financial and insurance activities	14,659	0	-	871	338
55 – Exposures to other sectors (NACE codes J, M to U)	79,343	23	-	9,204	2,055
56 – TOTAL	258,149	931	-	21,199	7,424

(1) According to Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 with minimum standards for the Union Climate Transition Benchmarks and the Union Paris Agreement Benchmarks – Climate Benchmarks Regulation – Recital 6: the sectors listed in Annex I, Sections A to H and Section L of Regulation (EC) No 1893/2006

f	g	h	i	j	k	l	m	n	o	p
Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			GHG emissions financed (emissions of categories 1, 2 and 3 of the counterparty) *(in tons of CO_2 equivalent)*		GHG emissions (column i): percentage of the gross carrying amount of the portfolio based on company-specific declarations					
	Of which Stage 2 exposures	Of which non-performing exposures		GHG emissions financed (emissions of categories 1, 2 and 3 of the counterparty) *(in tons of CO_2 equivalent)*		≤ 5 years	> 5 years ≤ 10 years	> 10 years ≤ 20 years	> 20 years	Weighted average maturity
-24	-2	-14	-	-	-	1,922	4,860	52	68	6.6
-15	*-1*	*-12*	-	-	-	*447*	*49*	*51*	*26*	*5.6*
-29	-7	-16	-	-	-	759	883	1,173	200	9.1
-27	*-7*	*-16*	-	-	-	*494*	*534*	*999*	*197*	*8.6*
-27	*-7*	*-16*	-	-	-	*414*	*469*	*994*	*170*	*9.3*
-2	*0*	*0*	-	-	-	*255*	*346*	*158*	*3*	*9.3*
0	*0*	*0*	-	-	-	*9*	*4*	*16*	*0*	*8.2*
-16	-2	-12	-	-	-	475	427	154	29	5.9
-346	-41	-261	-	-	-	6,916	3,710	1,764	1,489	7.7
-124	*-10*	*-104*	-	-	-	*2,206*	*289*	*519*	*668*	*8.7*
-31	*-1*	*-12*	-	-	-	*1,106*	*2,726*	*108*	*138*	*5.5*
-191	*-30*	*-145*	-	-	-	*3,605*	*696*	*1,137*	*683*	*7.6*
-642	-61	-525	-	-	-	11,237	8,127	1,622	1,616	6.1
-122	-26	-72	-	-	-	5,242	2,779	714	215	6.1
-71	*-15*	*-44*	-	-	-	*2,604*	*695*	*276*	*124*	*4.9*
-14	*-4*	*-5*	-	-	-	*901*	*301*	*89*	*2*	*5.5*
-7	*-3*	*-4*	-	-	-	*671*	*375*	*182*	*1*	*5.3*
-28	*-4*	*-18*	-	-	-	*923*	*1,388*	*160*	*79*	*6.5*
-2	*0*	*-1*	-	-	-	*143*	*20*	*6*	*7*	*3.3*
-254	-45	-190	-	-	-	2,764	2,345	933	188	6.8
-877	-280	-478	-	-	-	13,540	26,071	37,086	3,332	11.2
-1,491	**-337**	**-967**	**-**	**-**	**-**	**30,055**	**30,931**	**19,076**	**13,940**	**1.5**
-264	-36	-180	-	-	-	6,286	6,042	1,471	860	6.3
-1,227	-301	-787	-	-	-	23,769	24,888	17,605	13,081	1.3
-4,340	**-867**	**-2,959**	**-**	**-**	**-**	**84,364**	**86,281**	**65,253**	**22,251**	**4.0**

Crédit Mutuel Alliance Fédérale has chosen to rely on data provided by the NGO URGEWALD, which compiles and maintains two separate lists:

- the Global Coal Exit List (GCEL);
- the Global Oil & Gas Exit List (GOGEL).

On the basis of the revenue data from these lists, Crédit Mutuel Alliance Fédérale identifies the companies excluded from the "Paris Agreement" benchmarks according to Delegated Regulation (EU) 2020/1818.

For companies that derive at least 50% of their revenues from electricity production activities with a greenhouse gas emission intensity greater than 100 gCO_2/kWh, exposures under NACE code D35.11 Electricity production were analyzed to determine the source of energy produced. Companies producing electricity from carbon sources (*i.e.*, other than renewable energy or nuclear energy) are considered excluded from the Paris Agreement benchmarks.

Crédit Mutuel Alliance Fédérale considers that it has no reliable information on which to identify exposures that would harm one of the environmental objectives of the taxonomy regulations. This point will be taken into account from 2023, when the European Taxonomy comes into force, within Pillar 3.

In accordance with Implementing Regulation (EU) 2022/2453, exposures considered to be environmentally sustainable have not been reported. This information, established on the basis of the European green taxonomy, will be included from the Pillar 3 report as of December 31, 2023.

The Crédit Mutuel group did not wish to disclose the greenhouse gas emissions (scopes 1 to 3) of its counterparties. In accordance with regulatory requirements, the Crédit Mutuel group will begin to disclose this information no later than June 30, 2024.

TABLE 74: MODEL 2: BANKING PORTFOLIO – INDICATORS OF TRANSITION RISK POTENTIALLY LINKED TO CLIMATE CHANGE: LOANS SECURED BY REAL ESTATE PROPERTY ASSETS – ENERGY EFFICIENCY OF COLLATERAL

	a	b	c	d	e	f	g
	Total gross carrying amount *(in € millions)*						
		Energy efficiency level *(energy performance in kWh/m² of collateral)*					
Counterparty sector		0; <= 100	> 100; <= 200	> 200 <= 300	> 300; <= 400	> 400; <= 500	> 500
1 – Total EU	**218,664**	**11,246**	**110,241**	**49,524**	**20,736**	**1,967**	**12,800**
2 – Of which secured by commercial real estate property	38,415	1,709	18,782	8,412	3,963	239	2,751
3 – Of which secured by residential real estate property	180,231	9,537	91,459	41,113	16,773	1,727	10,049
4 – Of which collateral obtained by seizure: residential and commercial real estate property	18	0	0	0	0	0	0
5 – Of which estimated energy efficiency level (energy performance in kWh/m² of collateral)	170,452	8,096	97,695	37,732	15,724	43	11,163
6 – Non-EU total	**6,101**	**0**	**0**	**0**	**0**	**0**	**0**
7 – Of which secured by commercial real estate property	2,650	0	0	0	0	0	0
8 – Of which secured by residential real estate property	3,451	0	0	0	0	0	0
9 – Of which collateral obtained by seizure: residential and commercial real estate property	0	0	0	0	0	0	0
10 – Of which estimated energy efficiency level *(energy performance in kWh/m² of collateral)*	0	0	0	0	0	0	0

h	i	j	k	l	m	n	o	p
Total gross carrying amount *(in € millions)*								
Energy efficiency level (label of the energy performance certificate of collateral)							Without the collateral energy performance certificate label	
A	B	C	D	E	F	G		Of which estimated energy efficiency level *(energy performance in kWh/m² of collateral)*
1,610	**3,052**	**15,357**	**33,457**	**19,157**	**7,073**	**5,582**	**133,376**	**90%**
112	137	785	1,527	1,200	531	648	33,474	92%
1,498	2,916	14,572	31,930	17,956	6,542	4,934	99,883	89%
0	0	0	0	0	0	0	18	0%
-	-	-	-	-	-	-	120,048	100%
0	**0**	**0**	**0**	**0**	**0**	**0**	**6,100**	**0%**
0	0	0	0	0	0	0	2,650	0%
0	0	0	0	0	0	0	3,450	0%
0	0	0	0	0	0	0	0	0%
-	-	-	-	-	-	-	0	0%

As of December 31, 2022, energy performance assessments (DPEs) were not systematically collected for loans secured by residential real estate property, for loans secured by commercial real estate property and for collateral obtained by taking possession. This data collection was supplemented by the French Environment and Energy Management Agency (ADEME) database, which records the DPEs carried out by diagnostic experts in France.

For the exhibitions for which only the DPE label was collected, Crédit Mutuel Alliance Fédérale has established a correspondence scale in order to determine the associated energy consumption level, based on the consumption scales per label, or on the average consumption observed on the properties for which the data is complete (DPE label + energy consumption expressed in kWh/m²).

For exposures for which no DPE data is available, Crédit Mutuel Alliance Fédérale has carried out internal calculations to estimate the level of energy consumption (in kWh/m²). These calculations are based on an extrapolation to apply the distribution obtained on exposures without ECD data, distinguishing between loans secured by residential real estate property and loans secured by commercial real estate property.

Template 3: Banking portfolio – Indicators of transition risk potentially linked to climate change: Alignment parameters

In order to measure the alignment of our portfolios with the Net Zero objective in 2050, Crédit Mutuel Alliance Fédérale joined, through the signature by the Confédération Nationale du Crédit Mutuel of the NZBA (Net Zero Banking Alliance) on May 25, 2021.

To date, targets have been set on two first sectors of activity:

- hydrocarbons;
- electricity production.

These are detailed in the URD, in the section dedicated to climate and environmental risks.

Crédit Mutuel Alliance Fédérale aims to complete the sectors monitored through the NZBA initiative no later than the first half of 2024.

TABLE 75: TEMPLATE 4: BANKING PORTFOLIO – INDICATOR OF TRANSITION RISK POTENTIALLY LINKED TO CLIMATE CHANGE: EXPOSURES ON THE 20 LARGEST CARBON-INTENSIVE COMPANIES

a	B	d	E
Gross carrying amount (aggregate)	Gross carrying amount of counterparty exposure to total gross carrying amount (aggregate)[1]	Weighted average maturity	Number of companies in the top 20 polluting companies included
310	0.04%	2.4	3

(1) For counterparties among the 20 companies that emit the most carbon in the world.

To identify the 20 most carbon-intensive companies, Crédit Mutuel Alliance Fédérale relies on the Carbon Majors list drawn up by the Climate Accountability Institute, published in 2020 on the basis of data for the 2018 fiscal year (latest available data). This public list includes the emissions estimated by this initiative on scopes 1, 2 and 3.

In accordance with Implementing Regulation (EU) 2022/2453, exposures considered to be environmentally sustainable have not been reported. This information, established on the basis of the European green taxonomy, will be included from the Pillar 3 report as of December 31, 2023.

TABLE 76: TEMPLATE 5: BANKING PORTFOLIO – INDICATORS OF PHYSICAL RISK POTENTIALLY LINKED TO CLIMATE CHANGE: EXPOSURES SUBJECT TO PHYSICAL RISK

a	b	c	d	e	f	g
	Gross carrying amount *(in € millions)*					
		of which exposures sensitive to the effects of physical events related to climate change				
		Breakdown by maturity tranche				
Variable: Geographic area subject to a physical risk related to climate change – acute and chronic events		≤ 5 years	> 5 years ≤ 10 years	> 10 years ≤ 20 years	> 20 years	Weighted average maturity
1 – A – Agriculture, forestry and fishing	8,876	144	108	124	27	8.7
2 – B – Extractive industries	561	12	3	2	0	5.2
3 – C – Manufacturing industry	18,919	587	153	63	60	5.4
4 – D – Production and distribution of electricity, gas, steam and air conditioning	3,015	16	24	27	0	10.3
5 – E – Water production and distribution; sanitation, waste management and decontamination	1,085	16	8	2	1	5.5
6 – F – Building and public works services	13,880	415	71	183	150	9.2
7 – G – Wholesale and retail trade; automotive and motorcycle repair	22,603	609	266	141	109	7.0
8 – H – Transportation and warehousing	8,949	179	51	36	7	5.8
9 – L – Real estate activities	80,028	462	944	2,809	221	12.2
10 – Of which secured by residential real estate property	183,682	739	2,355	9,260	5,118	10.7
11 – Of which secured by commercial real estate property	41,065	317	621	1,360	30	16.1
12 – Collateral seized	18	0	0	0	0	0.0
13 – Other relevant sectors (breakdown below, if applicable)	0	0	0	0	0	0.0

h	i	j	k	l	m	n	o
Gross carrying amount *(in € millions)*							
of which exposures sensitive to the effects of physical events related to climate change							
of which exposures sensitive to the effects of chronic climate change events	of which exposures sensitive to the effects of acute climate change events	of which exposures sensitive to the effects of both chronic and acute climate change events	of which Stage 2 exposures	of which non-performing exposures	Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		
						of which Stage 2 exposures	of which non-performing exposures
272	131	0	39	17	-11	-2	-8
13	4	0	1	0	0	0	0
557	304	2	49	47	-34	-2	-30
33	34	0	2	0	0	0	0
17	10	0	3	0	-1	0	0
602	215	1	117	28	-24	-5	-17
717	405	3	81	46	-31	-4	-25
147	126	0	25	15	-7	-1	-5
3,340	1,075	20	365	79	-60	-20	-31
14,624	2,809	39	7,333	979	-78	-33	-38
1,718	600	10	198	54	-38	-11	-21
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

Crédit Mutuel Alliance Fédérale has identified three chronic risks (rise in sea level, rise in temperature, variation in rainfall) and three acute risks (flood, drought, storm/hail/snow).

To date, the assessment of a counterparty's exposure to these risks is carried out at the level of its postal code. Postal codes are associated with physical risk levels ranging from 0 (very low risk) to 4 (very high risk).

This scale was constructed by applying the following methodological principles:

- use of historical data for acute risks;
- use of forward-looking data for chronic risks, aligned with the IPCC RCP 8.5 scenario;
- risk weighting to obtain consolidated acute and physical risk exposure scores.

Outstandings exposed to level 4 are reported as "climate change sensitive" in model 5.

TABLE 77: TEMPLATE 10 – OTHER CLIMATE CHANGE MITIGATION MEASURES NOT COVERED IN REGULATION (EU) 2020/852

a	b	c	d	e	f
Type of financial instrument	Counterparty category	Gross carrying amount *(in € millions)*	Type of risk mitigated (transition risk related to climate change)	Type of risk mitigated (physical risk related to climate change)	Qualitative information on the nature of mitigation measures
Bonds (*e.g.*, green, sustainable, sustainability-linked under non-EU standards)	1 – Financial companies	778	Yes	-	12 See comments
	2 – Non-financial corporations	148	Yes	-	
	3 – of which secured by commercial real estate property	0	-	-	
	4 – Other counterparties	342	Yes	-	
Loans (*e.g.*, green, sustainable, sustainability-linked under non-EU standards)	5 – Financial companies	2,079	Yes	-	12 See comments
	6 – Non-financial corporations	2,744	Yes	-	
	7 – of which secured by commercial real estate property	0	-	-	
	8 – Households	915	Yes	-	
	9 – of which secured by residential real estate property	0	-	-	
	10 – of which loans for building renovation	0	-	-	
	11 – Other counterparties	0	-	-	

Crédit Mutuel Alliance Fédérale presents in this table the gross outstanding loans and bonds held by the group, which, according to the bank's assessment, contribute to mitigating the risks of climate change. The products listed in this table concern:

- impact financing whose characteristics depend on the achievement of environmental objectives;
- project financing for climate risk mitigation measures;
- investments in green bonds;
- financing whose purpose contributes to the mitigation of climate risk.

5.18.3. Qualitative information on social and societal risk

Business strategy and processes

a) Integration of social factors into the institution's business model and strategy

Crédit Mutuel Alliance Fédérale is aware of the social and societal issues at stake and takes a long-term view when developing its activities, taking into account any risks that may arise. This translates into:

- the integration of social and societal risks in the mapping of the main ESG risks;
- the implementation and monitoring of dedicated indicators to identify, measure, manage and monitor all these risks;
- the deployment of measures to mitigate the impact of social and societal risks;
- the desire to develop a relationship of trust and meet the expectations of its employees, customers, members, suppliers and other stakeholders in the regions where it operates.

Crédit Mutuel Alliance Fédérale is a benefit corporation The potential risks arising from social and societal factors are fully integrated into the missions that the Group has set itself: combating discrimination, protecting our customers' digital privacy, acting for the development of territories, and contributing to making civil society fairer and more sustainable (see Section 3.2.3 of the Non-Financial Performance Statement or NFPS).

These commitments are supplemented by social and environmental ambitions in the SMR policy and integrated into the strategic plan (see Section 3.2.4.2 of the NFPS).

The mapping of significant ESG risks, described above, also identifies social and societal risks, particularly those relating to the fight against corruption and respect for human rights. It presents the mitigation measures and monitoring indicators described in Section 3.3 of the NFPS.

b) Short-, medium- and long-term social risk assessment: objectives, targets and limits

As part of its status as a benefit corporation, a Mission Committee, made up of members representing customer members, members representing employees and independent members, presents its thoughts and proposals to the Strategic Council and the *Chambre syndicale et interfédérale*. In particular, it is responsible for monitoring commitments. It informs the Board of Directors of Caisse Fédérale de Crédit Mutuel of work in progress (see Section 3.15 of the NFPS).

The ambitions of the SMR policy and the objectives of the strategic plan are set by the *Chambre syndicale et interfédérale* and validated by the Board of Directors of the Caisse Fédérale.

Within the framework of Law no. 2017-399 of March 27, 2017 on the duty of care of parent companies and ordering companies, Crédit Mutuel Alliance Fédérale draws up and implements a vigilance plan (see Section 3.11 of the NFPS), designed to prevent serious human rights abuses in the context of its activities and those of subcontractors and suppliers with whom it has a long-term business relationship. It is fully in line with the social mutualist responsibility approach. This vigilance plan covers human rights and fundamental freedoms, health and safety of individuals, and the environment. For example, Crédit Mutuel Alliance Fédérale has adapted its tools and guidelines to incorporate the regulatory changes arising from the GDPR and has adopted a security charter concerning the management of personal data, distributed on its website (see Section 3.11.3.3 of the NFPS).

Crédit Mutuel Alliance Fédérale endorses the Crédit Mutuel group's membership of the United Nations Global Compact. Thus, it ensures compliance with and application of the ten principles of the Global Compact, in particular respect for human rights, international labor standards and the fight against corruption. Each year, it takes part in a Group-level summary of progress made on these ten principles, which identifies areas for improvement.

c) Counterparty engagement policies and procedures

In order to mitigate the risks associated with social factors, Crédit Mutuel Alliance Fédérale has established a dialogue with its customers to assess the social performance of its counterparties.

At the corporate banking level, it uses an ESG (environmental, social and governance) criteria evaluation grid to identify and assess, among other things, potential controversies linked to human rights, labor law or the fight against corruption. The analysts and teams in charge of granting financing have access to ESG data provided by the non-financial rating agency ISS-OEKOM. The evaluation grid is also a source of dialogue with customers to better support them in their sustainable growth projects.

Another ESG grid, specific to the banking networks' "corporate and SME" market, includes an analysis of the company's social commitment.

Governance

d) Responsibilities of the management body for the establishment of the risk management framework; overseeing and managing the implementation of objectives, strategy and policies

As with the monitoring and management of environmental and climate risks, the participation of management bodies in the monitoring and management of social and societal risks is part of the general governance framework for managing non-financial risks described in the Section e) of Chapter 5.18.1. This framework covers the management of the counterparty's social and societal risks.

e) Integration of social factor and risk management measures into internal governance arrangements, including the role of committees, the allocation of tasks and responsibilities, and the feedback loop between risk management and the management body

Crédit Mutuel's cooperative and mutualist values are a solid foundation on which Crédit Mutuel Alliance Fédérale has built its strategy and practices. These values are reflected in our Code of conduct, as well as in our sector-specific and third-party policies. They are also reflected in the existence of *ad hoc* committees such as the fragile or vulnerable customer committee, the customer claims committee, the new products committee and the Corporate Banking SMR Committee (see diagram in Section 3.2.4.1 of the NFPS).

f) Reporting and frequency of reporting on social risk

Crédit Mutuel Alliance Fédérale analyzes and measures social and societal risks on an annual basis. Performance indicators are included in the NFPS, particularly in the mapping of the main ESG risks (see Section 3.3 of the NFPS) and in the implementation of its vigilance plan (see Section 3.11.4 of the NFPS).

The bank's mission commitments and the ambitions set out in the strategic plan are also monitored annually (see Section 3.2.4.2 of the NFPS).

Lastly, four non-financial rating agencies rate Crédit Mutuel Alliance Fédérale.

g) Consideration of social risks in the compensation policy; criteria and parameters used to determine the impact of social risk considerations on variable compensation

Variable compensation within Crédit Mutuel Alliance Fédérale is limited to certain specialized business lines. No criteria linked to social risks have been set in the variable compensation of the regulated population. Further information on the compensation policy is provided in Section 5.19 of this Universal Registration Document.

Risk management

h) Methodologies, definitions and standards used to identify and manage social factors and risks and the framework on which these standards, definitions and methodologies are based

Social and societal risks are identified on the basis of risk factors and assessed according to the impact of the risk and existing means of prevention and mitigation (procedures, organizations and resources). Risks are then rated by appraisers according to their severity in terms of impact, probability of occurrence and possibility of non-detection, in order to determine priorities for action, prevention and mitigation. Policies to prevent and mitigate these risks are then defined and deployed, together with objectives and monitoring indicators. The main social, societal, anti-corruption and human rights risks identified are set out in Section 3.3 of the NFPS.

i) Identification and monitoring of activities and exposures sensitive and vulnerable to social risks (e.g. via their counterparties, investment or asset management activities) including the real and personal property associated with these activities and exposures

During the credit appraisal process, the social risks of the corporate banking counterparties are analyzed using an ESG grid and assessed through the study of ESG data provided by ISS-OEKOM, which provides a rating and mentions controversies relating to human rights, labor law and anti-corruption (see above, §. c).

For project financing, an internal assessment is carried out using the Equator Principles classification scale. The objective of the assessment process is to analyze the environmental and social impacts and risks associated with the proposed project, and to propose measures to minimize, mitigate and compensate the risks and adverse impacts in a manner that is relevant and appropriate to the nature and scale of the proposed project. Projects are selected on the basis of a set of criteria including social, environmental and mutualist criteria, depending on the business segments and countries selected. Much attention is paid to criteria of social utility (for example, the more or less strategic nature of the project for a country, the alignment of the interests of the various stakeholders, the overall economic rationality), local acceptability (for example, known opposition from environmental groups or the local population, noise pollution, impact on the landscape, etc.) and compliance with environmental standards (conformity with current and foreseeable standards).

With regard to the banking networks' "corporate and SME" market[14], the ESG questionnaire takes into account the way in which these networks promote gender equality and diversity, and improve the health, safety and well-being of their employees.

In the private equity business, portfolio companies are asked to complete a questionnaire assessing their policy on corporate social responsibility. This questionnaire is used for all new investment projects.

For asset management companies, responsible investment is progressively covering all activities, through ESG integration for most funds and an SRI approach for a range of funds targeted at customers. The new SFDR regulations require management companies to take non-financial criteria into account in their investment policies. Crédit Mutuel Asset Management's ambition is to classify 100% of open-ended funds under active management in Article 8 or in Article 9.

Lastly, with regard to insurance activities, GACM has an ESG policy that takes into account the sustainability risks on its assets as well as the environmental or social impacts of its investments.

As active shareholders, asset management and insurance companies attach particular importance to shareholder dialogue and the exercise of shareholders' rights in the companies in which they invest. In this way, they encourage companies in their approach to environmental and social responsibility and good governance.

j) Activities, commitments and assets put in place to mitigate social risks

Crédit Mutuel Alliance Fédérale deploys various measures to mitigate social and societal risks, in particular by applying ambitious sectoral policies to the sectors most at risk in terms of societal issues.

At the same time, in line with SFDR regulations, Group entities subject to these obligations have developed their ESG approach and published their policies for integrating sustainability risks into decision-making processes.

Crédit Mutuel Alliance Fédérale has also developed specific products aimed at mitigating social and societal impact, notably the CSR transition loan and the new impact loan designed to finance investments that companies wish to implement to improve their exposure to non-financial risks, including social risk, for example by improving working conditions or implementing a team training plan.

k) Tools to identify and manage social risks

The implementation tools used by Crédit Mutuel Alliance Fédérale to mitigate social risks at the exposure, portfolio, counterparty or sector level are those described in section i) above.

l) Description of how social risk limits are set and when escalation and exclusion are triggered if these limits are exceeded

To date, Crédit Mutuel Alliance Fédérale has not set limits in terms of social and societal risks. There are no quantitative indicators for social risks in the risk appetite framework.

m) Description of the link (transmission channels) between social risks and credit risk, liquidity and funding risk, market risk, operating risk and reputational risk in the context of risk management

(14) Whose revenue exceeds €100 million.

As regards the social and societal risks of counterparties, no work has yet been carried out to measure the balance between these risks and the other risk categories.

5.18.4- Qualitative information on governance risk

Governance

a) Integration by the institution of the counterparty's governance performance (decision-making, supervision and management processes of the counterparty at all levels: committees of the highest governance body and committees responsible for decision-making on economic, environmental and social issues) into its governance arrangements

Crédit Mutuel Alliance Fédérale pays increasing attention to environmental, social and governance issues. Its approach is in line with that of the Group and its main international commitments (notably the Global Compact, of which CNCM has been a signatory since 2003) to develop a framework for analyzing the governance performance of its counterparties. It ensures that the ten principles of the Compact are respected and applied, in particular human rights, international labor standards and the fight against corruption.
The governance performance of Crédit Mutuel Alliance Fédérale's counterparties is part of the ESG risk management system described in sections e) and f) of Chapter 5.18.1.

b) Role of the counterparty's highest governance body in terms of non-financial reporting

As part of its document review, Crédit Mutuel Alliance Fédérale updates its knowledge of corporate banking customers with the sustainable development report (non-financial performance statement for France) of its counterparties. In the sustainability report, it is requested that the counterparty be subject to NFRD regulations in Europe (whether or not audited by an independent third party in France).

c) Integration of counterparty governance performance into internal governance systems

Crédit Mutuel Alliance Fédérale, as part of its mapping of the main non-financial risks, has identified the governance risks that affect relations with its counterparties: the risk of corruption and the risk of failure to respect human rights. Key management systems and indicators are defined to monitor and manage these risks. They are adapted to the risks generated by the various activities carried out at home and abroad. The same applies to ethics, the fight against money laundering and the financing of terrorism, the fight against tax evasion, and customer relations with clients from so-called "sensitive" countries. These measures are based on a set of internal procedures, detection and monitoring tools, and specific actions that go beyond monitoring compliance with regulations, and are described in Section 3.4.3 of the NFPS.

In addition, the following elements complete the system for assessing the governance performance of counterparties:
- integration of non-financial ratings with a section on counterparty governance;
- consideration of controversies that may arise from a governance risk;
- the use of analysis grids;
- possible recourse to the Corporate Banking SMR Committee upon granting.

This system, deployed at corporate banking level, is extended to the "corporate and SME" customers of banking networks with revenue exceeding €100 million.

Risk management

d) Integration of counterparty governance performance into the institution's risk management systems

Before entering into any relationship, Crédit Mutuel Alliance Fédérale applies the applicable regulatory obligations in terms of "knowing your customer" from the moment a contact with a clearly and previously identified natural person or legal entity may lead to entering into a relationship. The due diligence required by these obligations is carried out before any transaction or advice is given. Crédit Mutuel Alliance Fédérale collects all the customer information it needs to draw up a money laundering and terrorist financing risk profile (ML-TF) for each of its business relationships.
The completeness and conformity of the collection of customer information is verified. Their analysis leads to the establishment of a risk profile for the business relationship, and an assessment of how the relationship will function in the future. This will be used, where necessary, to detect unusual transactions or those inconsistent with the risk profile presented by the business relationship and (if necessary, depending on risk assessment), the origin and destination of the funds involved in the transactions. Failure to obtain the information required to ascertain the nature and scope of the business relationship will result in the business relationship not being entered into.

Throughout the business relationship, Crédit Mutuel Alliance Fédérale updates and analyzes the information required to maintain appropriate and up-to-date knowledge of the business relationship, in particular with a view to periodically reassessing the customer's level of ML-TF risk.

5.19 COMPENSATION (EU OVB & EU REMA)

5.19.1 Management functions

Number of positions held by members of the management body

Name	Status	Term of office in the Group	Non-group offices
BOARD OF DIRECTORS			
Nicolas Théry	Chairman of the Board of Directors	15 non-executive offices	2 non-executive offices
Hélène Dumas	Vice-Chairwoman of the Board of Directors	4 non-executive offices	
Marie-Jean Boog	Director	3 non-executive offices	
Gérard Cormoreche	Director	15 non-executive offices	1 executive office
Bernard Dalbiez	Director	12 non-executive offices	
Nicolas Habert	Director	8 non-executive offices	
Marie Josso	Director	6 non-executive offices	1 executive office 4 non-executive offices
Christine Leenders	Director	5 non-executive offices	1 executive office
Jean-Louis Maître	Director	7 non-executive offices	
Elia Martins	Director	5 non-executive offices	
Laurence Miras	Director	4 non-executive offices	
Frédéric Ranchon	Director	5 non-executive offices	5 executive offices 1 non-executive office
Agnès Rouxel	Director	3 non-executive offices	1 non-executive office 2 executive offices
Daniel Schoepf	Director	6 non-executive offices	
Jacques Simon	Director	5 non-executive offices	1 non-executive office
Annie Virot	Director	5 non-executive offices	
Alex Weimert	Director	7 non-executive offices	2 executive offices
Luc Wynant	Director	5 non-executive offices	1 executive office 2 non-executive offices
Audrey Hammerer	Director representing the employees	2 non-executive offices	
Laurent Torre	Director representing the employees	1 non-executive office	
EFFECTIVE MANAGEMENT			
Daniel Baal	Chief Executive Officer – effective manager	4 non-executive offices 5 executive offices	
Eric Petitgand	Deputy Chief Executive Officer – effective manager	4 non-executive offices 5 executive offices	

Information concerning the recruitment policy for the selection of members of the management body as well as their knowledge, skills and expertise

Pursuant to Article L.511-91 of the French Monetary and Financial Code, since January 1, 2018, the Appointments Committee covers the entities of Crédit Mutuel Alliance Fédérale that have delegated their appointment prerogatives to it, in France and abroad. In accordance with the appendix on the Appointments Committee to the internal rules of the Board of Directors of Caisse Fédérale de Crédit Mutuel and in compliance with the provisions of the French Monetary and Financial Code, the Appointments Committee examines the training, experience, skills, availability and good repute of the candidates for the positions of director or executive and then ensures that they always have the necessary aptitude to carry out their duties. In addition, the Appointments Committee periodically, and at least once a year for Caisse Fédérale de Crédit Mutuel, assesses: the structure, size, composition and effectiveness of the Board of Directors with respect to its missions, as well as the knowledge, skills and experience of the members of the Board of Directors, both individually and collectively.

Diversity of the Board of Directors

Gender balance

The Copé-Zimmermann law (law No. 2011-103 of January 27, 2011, as amended in 2014) is applicable to Caisse Fédérale de Crédit Mutuel and has been implemented *via* the appointment of eight female directors in 2017 and 2018.

In 2022, the representation of women on the Board of Directors of Caisse Fédérale de Crédit Mutuel was 44%.

Regional representation

The directors of Caisse Fédérale de Crédit Mutuel come from all of the federations throughout the territory within the scope of Crédit Mutuel Alliance Fédérale.

Representation of society

The diversity of the directors of Caisse Fédérale de Crédit Mutuel in terms of sociology, age, origin and gender tends to result in a Board of Directors that is representative of its customers and society.

Strategic plan

Work launched as part of Crédit Mutuel Alliance Fédérale's strategic plan *"Ensemble#nouveaumonde, plus vite, plus loin!"* ("Together#today's world, faster, further!") reaffirmed the group's ambition to strengthen diversity in the composition of its governance, with the aim of achieving equal representation between men and women in management and governance positions.

On December 2, 2022, the Board of Directors of Caisse Fédérale de Crédit Mutuel adopted a charter on the diversity policy for the members of the supervisory bodies.

Information on the diversity policy applicable to the selection of members of the management body

In line with its status as a benefit corporation and its strategic plan, Crédit Mutuel Alliance Fédérale attaches great importance to the women's careers. Today, the network's school of directors does not commence courses without gender balance in the classroom. For all appointments to senior management and executive positions, women are nominated, with the aim of achieving parity quickly. In one year, 50% of women joined the group's Management Committees.

Lastly, in 2022, Crédit Mutuel Alliance Fédérale corrected the collective pay gap between women and men. In addition to these measures, substantive medium- and long-term actions will continue with the training of all employees and elected members to combat all forms of discrimination.

In 2022, Crédit Mutuel Alliance Fédérale had 43% women managers in France, 39% women Chief Executive Officers in the network banks and 31% women members of an Executive Committee.

As part of its 2023 strategic plan, Crédit Mutuel Alliance Fédérale has set itself the goal of achieving gender equality in management and governance positions.

In addition to the actions carried out to promote and support women at all levels of the company, an approach aimed at working on diversity in all its forms has been initiated: integration of people with disabilities, implementation of a generational pact: young people, work-study programs, senior citizens, disadvantaged neighborhoods, etc.

Through all of these actions, Crédit Mutuel Alliance Fédérale wishes to embody a group whose governance refuses all forms of discrimination by acting on a daily basis to build an inclusive, fairer and more sustainable society: proof of mutual action.

Information on whether or not the institution has set up a separate Risk Committee, and the frequency of its meetings

Caisse Fédérale de Crédit Mutuel has set up a risk committee called the Group Risk Monitoring Committee (GRMC).

The GRMC covers the Crédit Mutuel Alliance Fédérale entities consolidated by Caisse Fédérale de Crédit Mutuel (bank code 10278) taken as the parent company of Crédit Mutuel Alliance Fédérale consolidated group, which by virtue of their size, internal organization and the nature, scale, complexity and cross-border nature of their activity fall within the scope of consolidation by decision of the Board of Directors.

The Risk Monitoring Committee issues opinions and advice in preparation for decisions made by the Board of Directors on general policy, thresholds and limits in matters of risk management. It meets at least four times a year and as many times as necessary in any case.

The Committee is composed of three to eight members of the Board of Directors of Caisse Fédérale de Crédit Mutuel and its main subsidiaries, BFCM, BECM and CIC, selected in particular for their expertise and skills in the areas covered by the Committee, and an employee director as a mandatory requirement.

In addition to these members, associate members may be non-voting directors of Caisse Fédérale du Crédit Mutuel, non-voting directors of Banque Fédérative du Crédit Mutuel, non-voting directors of BECM, or directors of the federations of Crédit Mutuel Alliance Fédérale. For the GRMC, these associate members, from the federations that are members of Caisse Fédérale de Crédit Mutuel and form Crédit Mutuel Alliance Fédérale, allow all federations to be represented. These associate members may also qualify as invited members.

In addition to the appointed members, the Chief Executive Officer of Caisse Fédérale de Crédit Mutuel, the Chief Financial Officer of Crédit Mutuel Alliance Fédérale and the head of the risk management function take part on a permanent basis.

Description of information flows on risks to the management body

Interaction with the Board of Directors of Caisse Fédérale de Crédit Mutuel is achieved through the participation of the Chairman of the GRMC in Board meetings, during which he presents a summary of the work and decisions of the GRMC.

The members and associate members serving as directors of a federation who are members of Crédit Mutuel Alliance Fédérale must, as part of their duties, provide a summary of the discussions and opinions delivered by the committees to the federation of which they are respectively directors.

5.19.2 Compensation supervisory bodies

The Crédit Mutuel Alliance Fédérale, which is subject to supervision by the ACPR on a consolidated basis, decided at its Board of Directors meeting on February 27, 2015 to set up a Compensation Committee in accordance with Article L.511-89 of the French Monetary and Financial Code.

At its meeting on November 17, 2017, the Board of Directors of Caisse Fédérale de Crédit Mutuel decided to set up an umbrella committee at the level of Caisse Fédérale de Crédit Mutuel for the entire scope of Crédit Mutuel Alliance Fédérale.

Consequently, since that date, the committee has had the following scope of competence:

- all credit institutions and finance companies;
- Crédit Mutuel Alliance Fédérale entities consolidated by Caisse Fédérale de Crédit Mutuel (CIB 10278) taken as the parent company of the consolidated Crédit Mutuel Alliance Fédérale, which, by virtue of their size, internal organization and the nature, scale, complexity and cross-border nature of their activity, fall within the scope of consolidation by decision of the Board of Directors;
- with the exception of entities which, because of their activity, size or specific nature, have a committee that complies with legal and regulatory provisions. In this case, this individual committee reports to the Compensation Committee of Caisse Fédérale de Crédit Mutuel on the work carried out and the information communicated;
- asset management companies and insurance and reinsurance companies.

From January 1, 2021 to December 31, 2022, the Compensation Committee was composed of:

- Ms. Annie Virot, Chairperson;
- Mr. Philippe Galienne;
- Ms. Audrey Hammerer;
- Mr. Jean-François Jouffray;
- Ms. Christine Leenders (member until April 8, 2022);
- Mr. Gérard Oliger;
- Ms. Brigitee Stein, member since December 2, 2022.

The committee is composed of three to eight members of the Board of Directors of Caisse Fédérale de Crédit Mutuel and its main subsidiaries, in particular BFCM, BECM and CIC, selected for their expertise and skills in the areas covered by the committee, and one employee director.

In addition to these members, associate members may be non-voting directors of Caisse Fédérale du Crédit Mutuel, non-voting directors of Banque Fédérative du Crédit Mutuel, non-voting directors of BECM or directors of the federations of Crédit Mutuel Alliance Fédérale.

The members of the Committee shall at all times possess the good character, knowledge, skills and experience necessary to understand the activities of Crédit Mutuel Alliance Fédérale, including the main risks to which it is exposed.

The members are appointed by the Board of Directors on the proposal of its Chairperson for the duration of their term of office as director.

Crédit Mutuel Alliance Fédérale commissioned an external study in 2021 on the compensation of management and Management Committee members in retail banking in France. The conclusions were presented at the meeting of July 27, 2021.

In 2022, the Compensation Committee met four times, on February 4, April 6, July 25 and November 21.

The agenda of the meetings is set by the Chairperson of the Committee or by the Chairperson of the Board of Directors, when the latter is the originator of the convocation. It is sent to Committee members in advance of their meeting, along with a file containing highlights of banking and financial news on compensation and useful information for their discussions.

Crédit Mutuel Alliance Fédérale has decided to prioritize fixed compensation in keeping with its mutualist values and its responsibilities toward its customers and members. It incorporates its constant concern for sustainable development and employee career advancement into its policy.

For the majority of the group's employees, particularly those working for the networks, the group has chosen (with a few rare exceptions) not to set individual sales targets for customers that may generate variable compensation.

Generally speaking, the components of additional compensation (benefits in kind, variable compensation, etc.) are subject to restrictions and concern only specific situations in certain business lines or functions when justified by particular considerations. The variable compensation practices for specialized business lines within the group are therefore generally consistent with those of other banking groups: trading floor, specialized financing, asset management, private equity, private banking and consumer credit.

If applicable, this compensation requires documentation on the rules for the allocation and determination of the amounts awarded.

The total compensation of Crédit Mutuel Alliance Fédérale employees is made up of various elements:

- fixed compensation;
- annual variable compensation;
- collective compensation in the form of incentives and profit-sharing and shareholding in France;
- the supplementary pension plan and health insurance plan;
- benefits in kind (company car, etc.).

Depending on the business line, the responsibilities exercised and the performance achieved, employees benefit from all or some of these elements.

Thus, variable compensation may be granted for certain business lines only and under certain strictly-defined conditions. This variable portion takes into account a specific contribution to the development and results of Crédit Mutuel Alliance Fédérale as well as compliance with ethical rules. The variable compensation base includes financial and non-financial targets assigned to employees and teams. In the calculation of the amount to be distributed and to better control risk factors, the costs attributable to the activities are deducted, in particular the costs of risk and liquidity.

Crédit Mutuel Alliance Fédérale's 2022 compensation policy provides for specific compensation conditions for employees identified as risk takers.

Thus, in 2022, the amount of variable compensation amounted to nearly 5% of total compensation within the regional group Crédit Mutuel Alliance Fédérale.

Crédit Mutuel Alliance Fédérale applies all regulatory provisions for managing compensation.

Employees falling within the "risk takers" category at Crédit Mutuel Alliance Fédérale level in 2022 have been identified in accordance with the regulations in force. The identification was carried out on an individual and consolidated basis.

Thus, in accordance with Article 199 of the Order of November 3, 2014 (as amended by the order of December 22, 2020), as long as they are not large within the meaning of point 146 of paragraph 1 of Article 4 of Regulation (EU) No. 575/2013 of the European Parliament and of the Council of June 26, 2013, credit institutions, finance companies, investment firms as well as the groups mentioned in III of Article L.511-57 of the French Monetary and Financial Code are not subject to the provisions of Articles L.511-81 and L.511-82 and of the second paragraph of Article L.511-84 of the French Monetary and Financial Code on an individual basis and, where applicable, on a consolidated basis when they are in one or other of the following situations:

a) their balance sheet total is less than or equal to an average of €5 billion over the four-year period immediately preceding the current fiscal year;

b) their balance sheet total is less than or equal to an average of €10 billion over the four-year period immediately preceding the current fiscal year and they cumulatively meet the criteria set out in points c, d and e of Article 4(1), point 145 of Regulation (EU) No. 575/2013 of the European Parliament and of the Council of June 26, 2013.

Given the size of Crédit Mutuel Alliance Fédérale and some of its constituent entities, risk takers are identified not only at the consolidated level but also at the individual level.

Crédit Mutuel Alliance Fédérale's human resources department, in conjunction with the risk and compliance department, submits a list to Executive Management which is validated by the Compensation Committee and the Board of Directors.

At the consolidated level

The scope therefore concerns Caisse Fédérale de Crédit Mutuel, Banque Fédérative du Crédit Mutuel, CIC, Cofidis and TARGOBANK AG.

In terms of qualitative criteria, the list of MRTs therefore includes:

- the members of Chairmanship and Executive Management;
- the directors and all members of the specialized committees of the umbrella structures;
- the heads of Compliance, Periodic Control, Permanent Control and Risk Management, at group level;
- the directors of a function in charge of legal affairs, finance (including tax and budget), human resources, compensation policy, anti-money laundering and combating the financing of terrorism, information technology, business analysis or the outsourcing of essential functions, at group level;
- the risk managers and managers of major business units (*i.e.*, operational units to which at least 2% of the group's internal capital has been allocated), given that the managers of Crédit Mutuel Alliance Fédérale include the managers and employees that report directly to them;
- employees with power to make proposals or commit the group, individually or collectively as a committee, up to the regulatory threshold of 0.5% of Tier 1 capital, *i.e.*, either through loan origination or through equity investments;
- employees who may expose the credit institution to a market risk equal to or greater than 0.5% of CET1 or 5% of the internal limit in risk value;

- employees managing a group of people who, cumulatively, may meet the thresholds for credit or market risk commitments;
- the members of the committees responsible for managing a specific risk: ALM Committee, Group Risk Committee, Operational Risk/Permanent Control Committee, Control/Compliance Committee, New Products Committee.

With regard to quantitative criteria, employees should be considered as risk takers:

- with a total compensation greater than or equal to €750,000;
- with compensation of €500,000 or more as well as the average compensation of members of the management body and Executive Management, in order to identify personnel whose activities have a significant impact on the risk profile of a major business unit.

For the application of quantitative criteria, compensation is based on a gross and full-time equivalent basis (reconstitution of full-time compensation over the full year for a part-time employee or an employee hired during the year), awarded during the fiscal year N-1.

In addition to the group's effective managers and the managers of credit institutions, finance companies and investment firms identified on an individual basis (see below), Crédit Mutuel Alliance Fédérale has decided to consider as risk takers all the effective managers of its subsidiaries and all staff members whose compensation exceeds the threshold of €500,000.

At the individual level

An identification of risk takers is also carried out at the level of credit institutions, finance companies and investment firms that meet the criteria for application on an individual basis set out in Delegated Regulation No. 604/2014 (amended by the Order of December 22, 2020, Articles 198, 199 and 200).

Each year, the list of institutions concerned within the scope of Crédit Mutuel Alliance Fédérale is drawn up by the group human resources department and the Compensation Committee is informed.

In terms of qualitative criteria, the list therefore includes:

- the members of Chairmanship and Executive Management;
- directors;
- the heads of Compliance, Periodic Control, Permanent Control and Risk Management, at the individual level and in the major operational units identified;
- the directors of a function in charge of legal affairs, finance (including tax and budget), human resources, compensation policy, anti-money laundering and combating the financing of terrorism, information technology, business analysis or outsourcing of key functions, at the institutional level and at the level of the major business unit where these activities are delegated locally;
- the managers of the major business units not previously identified (*i.e.*, operational units to which at least 2% of the group's internal capital has been allocated), bearing in mind that the managers for Crédit Mutuel Alliance Fédérale include the managers and the employees reporting directly to it;
- employees with power to make proposals or commit the group, individually or collectively as a committee, up to the regulatory threshold of 0.5% of Tier 1 capital, *i.e.*, either through loan origination or through equity investments;
- employees who may expose the credit institution to a market risk equal to or greater than 0.5% of CET1 or 5% of the internal limit in risk value;
- employees managing a group of people who, cumulatively, may meet the thresholds for credit or market risk commitments;
- the members of the committees responsible for managing a specific risk: ALM Committee, Group Risk Committee, Operational Risk/Permanent Control Committee, Control/Compliance Committee, New Products Committee.

In terms of quantitative criteria, the list includes:

- employees with total compensation greater than or equal to €750,000;
- employees with fixed compensation of €500,000 or more, as well as the average compensation of members of the management body and Executive Management in order to identify employees whose activities have a significant impact on the risk profile of a major business unit;
- where the institution has more than 1,000 employees, they are among the 0.3% of employees (rounded up to the nearest whole number) who received the highest total compensation within the institution during the previous year or for the previous year on an individual basis.

5.19.3 Design and structure of compensation processes

Given the specific features of its business lines, its legal entities and the national and international legislation in which it operates, Crédit Mutuel Alliance Fédérale has set up a compensation system in line with its values while ensuring that its employees receive compensation in line with reference markets in order to attract and retain the talent it needs.

The Executive Management of Crédit Mutuel Alliance Fédérale defines the strategic guidelines for compensation (for example, the choice to favor fixed compensation, except for limited exceptions in some specialized activities) or operational guidelines (for example in the context of annual negotiations) and then examines the compensation policy prepared by Crédit Mutuel Alliance Fédérale HR department together with the heads of Crédit Mutuel Alliance Fédérale business lines and entities.

The risk, permanent control and compliance department of Crédit Mutuel Alliance Fédérale checks that the proposed policy:

- is in line with Crédit Mutuel Alliance Fédérale's business strategy, objectives, values and long-term interests;
- takes into account measures to avoid conflicts of interest;
- is designed to promote sound and effective risk management;
- complies with regulations;
- is applied in an appropriate manner within Crédit Mutuel Alliance Fédérale and reports non-compliance issues to the effective managers and the supervisory body.

The Board of Directors adopts and regularly reviews the general principles of the compensation policy and monitors their implementation.

The total compensation of Crédit Mutuel Alliance Fédérale employees includes several components:

- fixed compensation, which remunerates the employee's skills, experience, level of qualification and commitment. It is set according to the market and a principle of internal consistency at Crédit Mutuel Alliance Fédérale in line with the group agreement implemented on January 1, 2018 for France;
- variable compensation for certain categories of employees: for certain business lines and under certain conditions, a variable portion may be granted. It takes into account a specific contribution to the development and results of Crédit Mutuel Alliance Fédérale. The variable compensation base includes financial and non-financial targets explicitly assigned to employees and teams. For certain activities, in the calculation of the amount to be distributed and to better control risk factors, the costs attributable to the activities are deducted, in particular the costs of risk and liquidity. Variable compensation does not constitute a right and is set each year in accordance with the compensation policy applied by Crédit Mutuel Alliance Fédérale for the year in question and the governance principles in force;
- collective compensation in the form of incentives and profit-sharing in France: such compensation will be possible, where applicable, depending on the size and agreements in place within each entity;
- a supplementary pension plan and health insurance;
- benefits in kind (company car, etc.).

Depending on the entities, business lines and responsibilities incurred and according to the performance achieved, employees benefit from all or part of these components.

The operational procedures implementing Crédit Mutuel Alliance Fédérale's compensation policy are documented so as to ensure, through permanent or periodic control, the understanding of the system and the traceability of decisions in relation to the principles and procedures in force.

As part of the regular review of the implementation of the principles of Crédit Mutuel Alliance Fédérale's compensation policy, on November 25, 2022 the Compensation Committee proposed to the Board of Directors to update the compensation policy based on the following elements:

- taking into account the changes related to the confederal framework with, in particular, the addition of a reminder to the law of 1947 and details on the sums paid in the event of termination of employment;
- intrinsic changes to Crédit Mutuel Alliance Fédérale's scope on the following topics: discretionary repurchase agreements, job retention bonuses and conflicts of interest;
- the modification of the proportionality threshold on deferrals applied to risk takers on asset management. The threshold is raised to €100 thousand in line with market practices.

At its first annual meeting, the Compensation Committee of Crédit Mutuel Alliance Fédérale reviewed the compensation of senior executives in the risk, compliance, permanent control and periodic control functions.

The employees concerned have not received variable compensation linked to individual performance for many years.

This compensation is under the supervision and decision of the group human resources department.

Crédit Mutuel Alliance Fédérale's compensation policy uses the standards described in Credit Mutuel's confederal framework on compensation - Identified population, in particular with regard to the rules in terms of guaranteed variable compensation and severance payments.

5.19.4 Consideration of risks in the compensation process

The compensation policy implemented by Crédit Mutuel Alliance Fédérale is intended above all to be reasonable and responsible and seeks to align the interests of Crédit Mutuel Alliance Fédérale with those of its employees. Crédit Mutuel Alliance Fédérale believes that a company's compensation policy is an important aspect of consistency in its strategy and risk management. In this context, Crédit Mutuel Alliance Fédérale, in keeping with its mutualist values, has defined a policy that complies with regulatory requirements with the aim of:

- promoting its mutualist values with respect for all stakeholders: members, customers and employees;
- promoting career advancement through internal training and encouraging employees' long-term commitment;
- not encouraging excessive risk-taking, avoiding the introduction of incentives that could lead to conflicts of interest and not encouraging or inducing unauthorized activities;
- ensuring consistency between employee behavior and Crédit Mutuel Alliance Fédérale's long-term objectives, in particular with respect to risk management control;
- ensuring fair remuneration and retaining talented employees by offering them appropriate compensation that takes into consideration the competitive environment and is based on their level of seniority, expertise and professional experience;
- respecting gender equality in terms of pay based on classification, and more broadly, fighting all forms of discrimination;
- making sure that the capital base is regularly strengthened.

Thus, in 2022, the amount of variable compensation amounted to almost 5% of total compensation within the regional group Crédit Mutuel Alliance Fédérale, 1.7% of general operating expenses and 0.33% of CET1 capital.

5.19.5 Performance-based compensation

The variable compensation package for each business line is subject to a proposal by the management of these business lines to the human resources department and the Executive Management of Crédit Mutuel Alliance Fédérale, clearly stating:

- the consistency of the change in the package with the quantitative performance of the unit (sales performance, financial performance, etc.);
- the compliance with internal control rules (compliance with control rules, limits, ethics, conflicts of interest, etc.);
- the consistency of the package with the financial fundamentals of the unit: the package does not reduce the financial fundamentals of the institution and preserves long-term interests (weighting of general operating expenses, weighting of net income, etc.);
- the consistency with risk and prior adjustment: the budget is also set taking into account risk-adjusted performance criteria: return on assets, consumption of capital required for business risks, liquidity risk, etc. The level of the package is not the result of excessive risk-taking;
- the comparison with market practices, where necessary.

The packages set for each of the entities/units are distributed among the various activities according to criteria specific to each business or team. The distribution of bonuses takes into account various aspects such as:

- performance measurement;
- risk measurement;
- behavior in terms of team spirit and responsiveness;
- professional behavior in relation to the values, ethics and procedures of Crédit Mutuel Alliance Fédérale.

5.19.6 Variable and deferred compensation

As indicated in its compensation policy, variable compensation is limited to certain specialized business lines in France and abroad. When the system is in place, the forms of allocation are standardized and deferral methods are governed by the group's policy for identified personnel.

Until 2021, Crédit Mutuel Alliance Fédérale did not use payment in the form of financial instruments for deferred variable compensation. This practice is correlated to the mutualist status of the group, which is made up of members. As a result, there is no share capital held by shareholders. There is therefore no variable compensation indexed to Crédit Mutuel Alliance Fédérale shares or securities, all of which is paid in cash.

At its meeting on November 23, 2021, the Compensation Committee reviewed the changes to the compensation policy and, in particular taking into account of the confederal framework on compensation for the risk-takers population established at the beginning of 2021 at the request of the JST.

As a result, changes have been made to the rules governing the payment of variable compensation to risk takers from 2021 onwards. The variable compensation of risk takers must comply with the following criteria, provided that the variable compensation exceeds €50,000 or represents more than one-third of their total annual compensation:

- 50% of the variable compensation is deferred when the amount awarded is less than €500,000, and 60% when the amount awarded is higher;
- 50% of the variable compensation is paid in the form of financial instruments. For Crédit Mutuel Alliance Fédérale, the financial instrument-based payment obligation cannot be applied as-is and involves the use of non-cash instruments equivalent to ownership rights. These instruments consist of the allocation of blocked cash, indexed to a composite indicator reflecting the performance of the entities to which the beneficiary belongs. Crédit Mutuel Alliance Fédérale has chosen to use a common indicator for the entire regional group, based on a moving average over the last three years of the RORWA (return on risk-weighted assets). This indicator meets the following objectives:
- integrating a long-term approach with a consideration of solvency over time,
- integrating a performance approach linked to changes in the regional group's net profit/(loss),
- take into account the principles of the compensation policy, which above all advocates the strength of the group, by limiting variable compensation to specialized business lines.

These conditions are applied to all of the group's risk takers, regardless of their parent entity.

The activities concerned by the request to exceed the 100% threshold are the trading floor activities (investment business) in France and New York.

The activity is composed of 56 operators, including 7 abroad. Almost two-thirds can benefit from a ratio above 100%.

The individual distribution to employees is decided by line managers on the basis of an overall assessment of individual and collective performance, including quantitative and qualitative criteria. There is no direct and automatic link between the level of an employee's commercial and financial results and their level of variable compensation in order to prevent any risk of conflict of interest or failure to take into account Crédit Mutuel Alliance Fédérale's interests and those of its customers.

Individual allocations are carried out and decided by management based on:

- the performance of the team to which the person concerned belongs;
- individual performance measured according to the result-risk ratio;
- individual assessments taking into account the qualitative achievements in relation to the objectives set.

For example, for market operators, the overall allocation is made according to the following quantitative and qualitative performance criteria:

- economic results of the activity to which the operators are attached;
- risks taken;
- compliance with limits and delegations;
- behavior within teams;
- initiatives with a positive impact on the success of operations;
- team management (according to hierarchical position);
- in addition, the actual payment of the deferred portion is conditional and subject to a penalty clause related to the results of the activity. The deferred compensation may therefore be substantially reduced or even not be paid in the event of failure to control risks resulting in losses. This clause makes it possible to hold employees accountable for the medium-term risks they may impose on the institution. In addition, the payment of these amounts is subject to a continued employment condition.

Guaranteed variable compensation is prohibited, except in the context of the hiring of financial market professionals, excluding intra-group transfers. In this case, the guarantee is limited to one year.

In the event of forced departure due to serious misconduct or gross negligence, these "post-departure" compensation components may be reduced or eliminated, in particular by applying the provisions provided for by the company and in particular in France under Articles L.511-84 and L.511-84-1 of the French Monetary and Financial Code.

TABLE 78: SUMMARY OF COMPENSATION AWARDED DURING THE FISCAL YEAR (EU REM1)

(in € millions) At 12/31/2022		Management body – Supervisory function	Management body – Management function	Other Executive Management members	Other members of the identified population
		Management			
Fixed compensation awarded during the year	Number of members of the identified population (who received fixed compensation)	139	148	198	313
	Total fixed compensation	5	47	38	55
	Of which: compensation in cash	5	44	35	50
	Of which: shares and equivalent ownership rights	-	-	-	-
	Of which: other instruments linked to shares and other equivalent non-cash instruments	-	-	-	-
	Of which: other instruments	-	-	-	-
	Of which: other types of compensation	0	3	4	5
Variable compensation awarded during the year	Number of members of the identified population (who received variable compensation)	0	61	54	118
	Total variable compensation	-	9	7	16
	Of which: compensation in cash	-	6	4	10
	Of which: deferred compensation included in this compensation in cash	-	2	2	4
	Of which: shares and equivalent ownership rights	-	-	-	-
	Of which: deferred compensation included in this compensation in shares and equivalent ownership rights	-	-	-	-
	Of which: other instruments linked to shares and other equivalent non-cash instruments	-	3	3	7
	Of which: deferred compensation included in this compensation in instruments linked to shares and other equivalent non-cash instruments	-	1	2	4
	Of which: other instruments	-	-	-	-
	Of which: deferred compensation included this compensation in other instruments	-	-	-	-
	Of which: other types of compensation	-	-	-	-
	Of which: deferred compensation included in these other forms of compensation	-	-	-	-
	TOTAL COMPENSATION ALLOCATED DURING THE FISCAL YEAR	5	56	45	71

TABLE 79: SPECIAL PAYMENTS DURING THE FISCAL YEAR (EU REM2)

(in € millions) At 12/31/2022		Management body – Supervisory function	Management body – Management function	Other Executive Management members	Other members of the identified population
		Management			
Guaranteed variable compensation awarded during the year	Number of members of the identified population	0	0	0	0
	Total amount	-	-	-	-
Including arrival bonuses, guaranteed variable compensation following the arrival of an employee, etc.	Of which paid during the year and which are not included in the capping of bonuses	-	-	-	-
Severance payments paid during the fiscal year, awarded in previous periods	Number of members of the identified population	0	0	0	0
	Total amount	-	-	-	-
Severance payments awarded during the fiscal year	Number of members of the identified population	0	1	0	0
	Total amount	-	1	1	1
	Of which paid during the year	-	1	1	1
	Of which paid during the year and which are not included in the capping of bonuses	-	-	-	-
	Of which deferred	-	-	-	-
	Of which the highest indemnities awarded to a single person	-	1	-	-

TABLE 80: DEFERRED COMPENSATION SUBJECT TO A LOCK-UP PERIOD (EU REM3)

(in € millions) At 12/31/2022	Deferred compensation vested in respect of previous fiscal years Y-1 and prior			Operations that took place in year Y (including compensation that will not be paid in Y+1)			Compensation vested in Y g = paid immediately in Y+1 h = subject to retention	
	Total amount of deferred compensation granted in respect of previous performance periods	Of which: vesting during/ the fiscal year	Of which: vesting during/ at the end of the following fiscal years	Amount of the performance adjustment applied during the fiscal year to deferred compensation that were to vest during the fiscal year	Amount of the performance adjustment applied during the fiscal year to deferred compensation that were to vest in future performance years	Total amount of adjustment during the fiscal year due to implicit ex-post adjustments	Total amount of deferred compensation granted before the fiscal year actually paid during the fiscal year	Total amount of deferred compensation granted in respect of previous performance periods that have vested but are subject to retention periods
MANAGEMENT BODY – SUPERVISORY FUNCTION	-	-	-	-	-	-	-	-
Cash	-	-	-	-	-	-	-	-
Shares and equivalent ownership rights	-	-	-	-	-	-	-	-
Other instruments linked to shares and other equivalent non-cash instruments	-	-	-	-	-	-	-	-
Other instruments	-	-	-	-	-	-	-	-
Other types	-	-	-	-	-	-	-	-
MANAGEMENT BODY – MANAGEMENT FUNCTION	6	2	4	-	-	-	2	-
Cash	5	2	3	-	-	-	2	-
Shares and equivalent ownership rights	-	-	-	-	-	-	-	-
Other instruments linked to shares and other equivalent non-cash instruments	2	1	1	-	-	-	1	-
Other instruments	-	-	-	-	-	-	-	-
Other types	-	-	-	-	-	-	-	-
OTHER EXECUTIVE MANAGEMENT MEMBERS	4	2	3	-	-	-	2	-
Cash	3	1	2	-	-	-	1	-
Shares and equivalent ownership rights	-	-	-	-	-	-	-	-
Other instruments linked to shares and other equivalent non-cash instruments	2	-	1	-	-	-	-	-
Other instruments	-	-	-	-	-	-	-	-
Other types	-	-	-	-	-	-	-	-
OTHER MEMBERS OF THE IDENTIFIED POPULATION	12	5	7	-	-	-	5	-
Cash	8	4	4	-	-	-	4	-
Shares and equivalent ownership rights	-	-	-	-	-	-	-	-
Other instruments linked to shares and other equivalent non-cash instruments	4	1	3	-	-	-	1	-
Other instruments	-	-	-	-	-	-	-	-
Other types	-	-	-	-	-	-	-	-
TOTAL	23	9	13	-	-	-	9	-

TABLE 81: HIGH LEVELS OF COMPENSATION (EU REM4)

(in number of people) At 12/31/2022	Members of the identified population who received a high level of compensation within Article 450 (i) CRR
Between 1 million and 1.5 million not included	6
Between 1.5 million and 2 million not included	2
Between 2 million and 2.5 million not included	-
Between 2.5 million and 3 million not included	-
Between 3 million and 3.5 million not included	-
Between 3.5 million and 4 million not included	-
Between 4 million and 4.5 million not included	-
Between 4.5 million and 5 million not included	-
Between 5 million and 6 million not included	-
Between 6 million and 7 million not included	-
Between 7 million and 8 million not included	-

TABLE 82: BREAKDOWN OF THE IDENTIFIED POPULATION BY AREA OF ACTIVITY (EU REM5)

	Management			Area of activity					
(in € millions) At 12/31/2021	Management body – Supervisory function	Management body – Management function	Management body as a whole	Investment banking	Retail banking	Asset management	Independent internal control functions	Cross-functional functions	Other
TOTAL NUMBER OF MEMBERS FROM THE IDENTIFIED POPULATION	798								
Including members of management:									
▪ management body	139	148	287						
▪ Executive Management				16	95	7	1	56	23
Including other members of the identified population				61	71	2	117	56	6
TOTAL COMPENSATION OF THE IDENTIFIED POPULATION	5	56	61	38	33	2	20	20	4
Of which variable compensation	0	9	9	16	3	1	2	1	0
Of which fixed compensation	5	47	52	22	29	1	18	18	4

APPENDICES

MAIN FEATURES OF EQUITY INSTRUMENTS (CET1)

Issuer	Crédit Mutuel Alliance Fédérale – Caisse Fédérale de Crédit Mutuel	Crédit Mutuel Alliance Fédérale – Caisse Fédérale de Crédit Mutuel
Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	969500LFTDNMONT2EP08	969500LFTDNMONT2EP08
Law governing the instrument	Law No. 47-1775 of September 10, 1947 on the constitution of cooperatives and Article L.512-1 of the French Monetary and Financial Code	Law No. 47-1775 of September 10, 1947 on the constitution of cooperatives and Article L.512-1 of the French Monetary and Financial Code
Regulatory treatment		
CRR transitional rules	Common Equity Tier 1 capital	Common Equity Tier 1 capital
Post-transition CRR rules	Common Equity Tier 1 capital	Common Equity Tier 1 capital
Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Individual and (sub-)consolidated	Individual and (sub-)consolidated
Type of instrument (to be specified for each jurisdiction)	Type A shares – list published by the EBA (Article 26, paragraph 3 of the CRR)	Type B shares – list published by the EBA (Article 26, paragraph 3 of the CRR)
Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€259.91 million	€8,005.85 million
Nominal value of the instrument	€15	€1
Issue price	€15	€1
Redemption amount	€15	€1
Accounting classification	Shareholders' equity	Shareholders' equity
Initial issue date	Variable	Variable
Perpetual or fixed term	Perpetual	Perpetual
Initial maturity	N/A	N/A
Issuer call option subject to prior approval by the supervisory authority	No	No
Optional call option exercise date, conditional call option exercise date and call price	N/A	N/A
Subsequent dates of exercise of the call option, if applicable	N/A	N/A
Coupons/dividends		
Fixed or floating dividend/coupon	N/A	Floating
Coupon rate and any associated index	N/A	N/A
Existence of a dividend suspension mechanism (dividend stopper)	No	No
Full discretion, partial discretion or mandatory (in terms of timing)	Full discretion	Full discretion
Full discretion, partial discretion or mandatory (in terms of amount)	Full discretion	Full discretion
Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
Cumulative or non-cumulative	Non-cumulative	Non-cumulative
Convertible or non-convertible	Non-convertible	Non-convertible
if convertible, conversion trigger	N/A	N/A
if convertible, fully or partially	N/A	N/A
if convertible, conversion rate	N/A	N/A
if convertible, mandatory or optional conversion	N/Aeol	N/A
if convertible, type of instrument to be converted into	N/A	N/A
if convertible, issuer of the instrument to which the conversion takes place	N/A	N/A
Capital reduction characteristics	Yes	Yes
if reduction, reduction trigger	By decision of the Shareholders' Meeting or, in case of resolution, by decision of the Resolution College of the *Autorité de contrôle prudentiel et de résolution* (ACPR – French Prudential Supervisory and Resolution Authority) pursuant to its powers	By decision of the Shareholders' Meeting or, in case of resolution, by decision of the Resolution College of the *Autorité de contrôle prudentiel et de résolution* (ACPR – French Prudential Supervisory and Resolution Authority) pursuant to its powers

	under Article L.613-31-16 of the French Monetary and Financial Code	under Article L.613-31-16 of the French Monetary and Financial Code
if reduction, total or partial	Full or partial write-down	Full or partial write-down
if reduction, permanent or temporary	Permanent	Permanent
if provisional capital reduction, description of the capital increase mechanism	N/A	N/A
Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Lower rank than all other claims	Lower rank than all other claims
Existence of non-compliant characteristics	No	No
if yes, specify non-compliant characteristics	N/A	N/A
N/A: not applicable.		

MAIN FEATURES OF EQUITY INSTRUMENTS (AT1)

Since the transition to CRR2 on January 1, 2022, Crédit Mutuel Alliance Fédérale no longer has any AT1-eligible instrument or AT1 instrument benefiting from a grandfather clause allowing it to be downgraded to Tier 2.

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Crédit Industriel et Commercial	Crédit Industriel et Commercial
2		FR0000584377	FR0000165847
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated and sub-consolidated	Consolidated and sub-consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Perpetual subordinated notes ▪ art. 62 et seq. of the CRR	▪ Perpetual progressive-interest subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€17.80m	€0.69m
9	Nominal value of the instrument	€18.96m	€7.25m
9a	Issue price	€18.96m	€7.25m
9b	Redemption amount	€18.96m	€7.25m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	07/20/1987	12/26/1990
12	Perpetual or fixed term	Perpetual	Perpetual
13	Initial maturity	Without maturity	Without maturity
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Partial or total call option at the issuer's request: for a period of 45 days from 07/20/1994 at 101% of the nominal value + accrued interest	▪ Partial or total call option at the issuer's request: on December 26, 1999 at par
16	Subsequent dates of exercise of the call option, if applicable	For a period of 45 days from each interest payment date after 07/20/1994	On each interest payment date after 12/26/1999

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Crédit Industriel et Commercial	Crédit Industriel et Commercial
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Floating	Floating
18	Coupon rate and any associated index	Average of the last 12 TMEs +0.25%	P1C +1.75% for interest payable each year since 2006
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Partial discretion	Partial discretion
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	Cumulative	Cumulative
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	XS1069549761	XS1288858548
3	Law governing the instrument	English unless subordination	English unless subordination
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€275.01m	€539.73m
9	Nominal value of the instrument	€1,000.00m	€1,000.00m
9a	Issue price	€991.43m	€990.84m
9b	Redemption amount	€1,000.00m	€1,000.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	05/21/2014	09/11/2015
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	05/21/2024	09/11/2025

14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Call option for the entire issue in the event of tax events (withholding tax event or tax deduction event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par ▪ Call option for the entire issue in the event of gross-up event: at any time at par	▪ Call option for the entire issue in the event of tax events (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any associated index	3.00%	3.00%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	n/a	n/a
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	XS1385945131	XS1512677003
3	Law governing the instrument	English unless subordination	English unless subordination
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€646.03m	€538.52m
9	Nominal value of the instrument	€1,000.00m	€700.00m
9a	Issue price	€990.98m	€695.09m
9b	Redemption amount	€1,000.00m	€700.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	03/24/2016	11/04/2016
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	03/24/2026	11/04/2026
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Call option for the entire issue in the event of tax (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par	▪ Call option for the entire issue in the event of tax events (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any associated index	2.375%	1.875%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	n/a	n/a
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a

35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	XS1587911451	XS1717355561
3	Law governing the instrument	English unless subordination	English unless subordination
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€424.93m	€487.67m
9	Nominal value of the instrument	€500.00m	€500.00m
9a	Issue price	€497.62m	€495.72m
9b	Redemption amount	€500.00m	€500.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	3/31/2017	11/15/2017
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	3/31/2027	11/15/2027
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any associated index	2.625%	1.625%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	n/a	n/a
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a

29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	XS1824240136	FR0013425162
3	Law governing the instrument	English unless subordination	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€500.00m	€1,000.00m
9	Nominal value of the instrument	€500.00m	€1,000.00m
9a	Issue price	€499.43m	€996.84m
9b	Redemption amount	€500.00m	€1,000.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	05/25/2018	06/18/2019
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	05/25/2028	06/18/2029
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			

17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any associated index	2,500%	1.875%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	n/a	n/a
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0014006KD4	FR0011828235
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€750.00m	€1.28m
9	Nominal value of the instrument	€750.00m	€5.00m
9a	Issue price	€744.66m	€5.00m
9b	Redemption amount	€750.00m	€5.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	11/19/2021	04/10/2014
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	11/19/2031	04/10/2024
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par	At any time in the event of the occurrence of an equity event, withholding tax or gross-up.

		▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par	From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed to floating
18	Coupon rate and any associated index	1.125%	4% then Min (4.5%; Max (3%; CMS10years)
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	n/a	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0011927037	FR0012046860
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€1.99m	€0.63m
9	Nominal value of the instrument	€7.00m	€2.00m
9a	Issue price	€7.00m	€2.00m
9b	Redemption amount	€7.00m	€2.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	06/03/2014	07/29/2014
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	06/03/2024	07/29/2024
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up.

		From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed to floating	Floating
18	Coupon rate and any associated index	3.15% then Min (6%; Max (3.15%; CMS10years)	130%* CMS10years
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012033926	FR0012112605
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€3.56m	€1.00m
9	Nominal value of the instrument	€11.1m	€3.00m
9a	Issue price	€12.1m	€3.00m
9b	Redemption amount	€12.1m	€3.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	08/06/2014	09/03/2014

12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	08/06/2024	09/03/2024
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed to floating
18	Coupon rate and any associated index	3.10% then Min (5%; Max (3.10%; CMS10years)	3.10% then Min (5%; Max (3.10%; CMS10years)
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012187078	FR0012187086
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR

8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€1.80m	€1.25m
9	Nominal value of the instrument	€5.00m	€3.50m
9a	Issue price	€5.00m	€3.50m
9b	Redemption amount	€5.00m	€3.50m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	10/15/2014	10/15/2014
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	10/15/2024	10/15/2024
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed to floating
18	Coupon rate and any associated index	3% then Min (4.5%; Max (3%; CMS10years)	3% then Min (4.5%; Max (3%; CMS10years)
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012303246	FR0011781061
3	Law governing the instrument	French	French
REGULATORY TREATMENT			

4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€1.53m	€83.77m
9	Nominal value of the instrument	€4.00m	€120.00m
9a	Issue price	€4.00m	€118.51m
9b	Redemption amount	€4.00m	€120.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	11/28/2014	03/10/2014
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	11/28/2024	06/27/2026
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed
18	Coupon rate and any associated index	2.6% then Min (4%; Max (2.6%; CMS10years)	4.25%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012304442	FR0012618320
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€43.76m	€9.92m
9	Nominal value of the instrument	€55.00m	€22.00m
9a	Issue price	€55.00m	€22.00m
9b	Redemption amount	€55.00m	€22.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	12/22/2014	04/02/2015
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	12/22/2026	04/02/2025
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed to floating
18	Coupon rate and any associated index	3.40%	1.9% then Min (3.75%; Max (1.90%; CMS10years)
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No

31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012632495	FR0012616894
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€1.35m	€34.58m
9	Nominal value of the instrument	€3.00m	€40.00m
9a	Issue price	€3.00m	€40.00m
9b	Redemption amount	€3.00m	€40.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	04/02/2015	04/27/2015
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	04/02/2025	04/27/2027
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed
18	Coupon rate and any associated index	1.9% then Min (3.75%; Max (1.80%; CMS10years)	2.75%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No

24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0012767267	FR0013073764
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€14.53m	€50.00m
9	Nominal value of the instrument	€30.00m	€50.00m
9a	Issue price	€30.00m	€50.00m
9b	Redemption amount	€30.00m	€50.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	06/01/2015	12/23/2015
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	06/02/2025	12/23/2030
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed to floating	Fixed to floating
18	Coupon rate and any associated index	1.35% then Min (3.10%; Max (1.35%; CMS10years)	4% then EURIBOR6M +1.78%

19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	No
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

1	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
2	Unique identifier (*e.g.*, CUSIP, ISIN or Bloomberg for private placement)	FR0013201431	FR001400AY79
3	Law governing the instrument	French	French
REGULATORY TREATMENT			
4	Transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
5	Post-transitional CRR rules (including additional CRR2)	Tier 2 capital	Tier 2 capital
6	Eligible at individual (sub-) consolidated/ individual and (sub-) consolidated level	Consolidated	Consolidated
7	Type of instrument (to be specified for each jurisdiction)	▪ Subordinated notes ▪ art. 62 et seq. of the CRR	▪ Subordinated notes ▪ art. 62 et seq. of the CRR
8	Amount recognized in regulatory capital (currency in millions, at the last reporting date)	€222.08m	€1,250.00m
9	Nominal value of the instrument	€300.00m	€1,250.00m
9a	Issue price	€295.79m	€1,249.55m
9b	Redemption amount	€300.00m	€1,250.00m
10	Accounting classification	Liabilities – Amortized cost	Liabilities – Amortized cost
11	Initial issue date	09/12/2016	June 2022
12	Perpetual or fixed term	Fixed term	Fixed term
13	Initial maturity	09/12/2026	June 2032
14	Issuer call option subject to prior approval by the supervisory authority	Yes	Yes
15	Optional call option exercise date, conditional call option exercise date and call price	At any time in the event of the occurrence of an equity event, withholding tax or gross-up. From a date 5 years after the issue, the issuer may repurchase the subordinated notes.	▪ Call for the entire issue in case of tax events impacting the coupon payment (withholding tax event, tax deduction event or tax gross-up event): at any time at par ▪ Call option for the entire issue in the event of downgrading of Tier 2 capital (capital event): at any time at par
16	Subsequent dates of exercise of the call option, if applicable	n/a	n/a

MAIN FEATURES OF EQUITY INSTRUMENTS (T2)

	Issuer	Banque Fédérative du Crédit Mutuel	Banque Fédérative du Crédit Mutuel
COUPONS/DIVIDENDS			
17	Fixed or floating dividend/coupon	Fixed	Fixed
18	Coupon rate and any associated index	2.125%	3.875%
19	Existence of a dividend suspension mechanism (dividend stopper)	No	No
20a	Full discretion, partial discretion or mandatory (in terms of timing)	Mandatory	Mandatory
20b	Full discretion, partial discretion or mandatory (in terms of amount)	Mandatory	Mandatory
21	Existence of a compensation increase mechanism (step up) or another redemption incentive	No	No
22	Cumulative or non-cumulative	No	n/a
23	Convertible or non-convertible	No	No
24	if convertible, conversion trigger	n/a	n/a
25	if convertible, fully or partially	n/a	n/a
26	if convertible, conversion rate	n/a	n/a
27	if convertible, mandatory or optional conversion	n/a	n/a
28	if convertible, type of instrument to be converted into	n/a	n/a
29	if convertible, issuer of the instrument to which the conversion takes place	n/a	n/a
30	Capital reduction characteristics	No	No
31	if reduction, reduction trigger	n/a	n/a
32	if reduction, total or partial	n/a	n/a
33	if reduction, permanent or temporary	n/a	n/a
34	if provisional capital reduction, description of the capital increase mechanism	n/a	n/a
35	Ranking of the instrument in the event of liquidation (indicate the type of instrument of next higher ranking)	Non-Preferred Senior Debt	Non-Preferred Senior Debt
36	Existence of non-compliant characteristics	No	No
37	if yes, specify non-compliant characteristics	n/a	n/a

INDEX OF TABLES AND GRAPHS

Table number	Regulatory code	Title	Report page number
		5.1 Key figures	4
Graph 1		Regulatory capital and risk-weighted assets	4
Graph 2		Solvency ratio	4
Graph 3		Regulatory requirements and solvency ratios	4
Graph 4		Risk-weighted assets (RWA) by type of risk (percentage)	5
Graph 5		Exposures at default (EAD) by category (percentage)	5
Table 1		Exposures at default (EAD) by geographic area	5
Graph 6		Exposures at default (EAD) by geographic area (percentage)	6
Graph 7		Exposures at default (EAD) by geographic area – Europe (percentage)	6
Graph 8		Risk-weighted assets (RWA) by category (percentage)	7
Graph 9		Risk-weighted assets (RWA) by geographic area (percentage)	7
Graph 10		Risk-weighted assets (RWA) by geographic area – Europe (percentage)	7
Graph 11		Leverage ratios	8
Graph 12		Change in LCR and Liquidity Buffer in 2022	8
Graph 13		Change in the NSFR over 2022	8
Table 2	EU KM1	Key indicators over the past five quarters	9
	EU OVA	5.2 Risk factors	10
	EU OVA EU OVB	5.3 Risk management	18
	EU LIA EU LIB	5.4 Scope of regulatory framework	30

Table 3	EU LI1	Differences between the accounting and regulatory consolidations and correspondence between the financial statements and the regulatory risk categories	30
Table 4	EU LI2	Main sources of differences between carrying and regulatory exposure values	32
Table 5	EU LI3	Description of the differences between the scopes of consolidation	32
Table 6	EU PV1	Value adjustments for conservative valuation purposes	33
		5.5 Regulatory capital	34
Table 7	EU CC1	Detailed information about capital	35
Table 8	EU CC2	Reconciliation between the consolidated accounting balance sheet and the prudential balance sheet	38
Table 9	EU OV1	Overview of RWAs - Minimum capital requirements	40
		5.6 Prudential indicators	41
Table 10		Solvency ratio	41
Table 11	EU CCY-B2	Amount of countercyclical capital buffer specific to the institution	42
Table 12	EU CCY-B1	Geographical breakdown of relevant credit exposures for the calculation of countercyclical capital buffer	42
Table 13		Major risks	43
Table 14	EU INS1	Non-deductible holdings in insurance companies	45
Table 15	EU INS1	T2 capital instruments issued by a financial sector entity not deducted from own funds	45
Table 16	EU INS2	Financial Conglomerates – Information on capital and capital adequacy ratio	45
	EU LRA	5.6.4 Leverage ratio	46
Table 17	EU LR2-LRCOM	Leverage ratio - joint reporting	46
Table 18	EU LR1-LRSUM	Summary of reconciliation between accounting assets and exposures for leverage ratio purposes	47
Table 19	EU LR3-LRSPL	Breakdown of exposures on the balance sheet exposures - excluding derivatives, SFTs and exempt exposures	48
	EU OVC	5.7 Capital adequacy	49
		5.8 Credit risk	51

	EU CRA	5.8.1 General qualitative information on credit risk	51
Graph 14		Share of gross exposures under the advanced and standardized methods	55
	EU CRB-a	5.8.3.1 Impaired and overdue exposures	55
	EU CRB-c	5.8.3.2 Impairment for credit risk	56
Table 20		Credit quality of state-guaranteed loans	58
Table 21		Credit quality of loans and advances subject to moratoriums on loan repayments applied due to the Covid-19 pandemic	59
Table 22		Volume of loans and advances subject to statutory and non-legislative moratorium by residual maturity	60
	EU CRB-d	5.8.3.5 Restructured exposures	60
Table 23	EU CR1-A	Maturity of net on- and off-balance sheet exposures	60
Table 24	EU CQ1	Credit quality of forborne exposures	61
	EU CQ2	Quality of renegotiation (Forbearance)	61
Table 25	EU CQ3	Credit quality of performing and non-performing exposures by remaining maturity	62
Table 26	EU CQ4	Credit quality of non-performing exposures by geographic area	64
Table 27	EU CQ5	Credit quality of loans and advances granted to non-financial companies by industry	66
	EU CQ6	Measurement of collateral - loans and advances	66
Table 28	EU CQ7	Collateral obtained by taking possession and execution proceedings	67
	EU CQ8	Collateral obtained by taking possession and execution - breakdown by issue date	67
Table 29	EU CR1	Performing and non-performing exposures and related provisions	67
Table 30	EU CR2	Changes in the stock of non-performing loans and advances	68
	EU CR2A	Changes in the stock of non-performing loans and advances and associated cumulative net recoveries	68
Table 31	EU CR5	Breakdown of exposures under the standardized approach	69
	EU CRE	5.8.5 Internal rating system	70
Table 32	EU CR6	IRB approach - Credit risk exposure by exposure class and PD range - IRBA	72
Table 32 bis	EU CR6	IRB approach - Credit risk exposure by exposure class and PD range - IRBF	88
Table 33	EU CR6A	IRB approach - Scope of use of standardized and IRB approaches	92
Table 34	EU CR8	RWA flow statements of credit risk exposures under the IRB approach	93
Table 35	EU CR9	IRB approach - PD backtesting by exposure class	93
Table 36	EU CR9-1	IRB approach – PD backtesting by exposure class – only for PD estimation	93
Table 37	EU CR10-1	IRB - Specialized financing - projects	94
Table 38	EU CR10-2	IRB - Specialized financing - real estate	94
Table 39	EU CR10-3	IRB - Specialized financing - assets	95

Table 40	EU CR10-4	IRB - Specialized financing - commodities	95
Table 41	EU CR10-5	Specialized financing - equities	96
	EU CCRA	5.9 Counterparty risk	96
Table 42	EU CCR1	Analysis of CCR exposure by approach	97
Table 43	EU CCR2	CVA capital requirement	98
Table 44	EU CCR3	Standardized approach - CCR exposures by regulatory portfolio and risk weighting	98
Table 45	EU CCR4	IRB approach - CCR exposures by portfolio and PD scale - IRBA	98
Table 45 bis	EU CCR4	IRB approach - CCR exposures by portfolio and PD scale - IRBF	102
Table 46	EU CCR6	Credit derivative exposures	103
Table 47	EU CCR7	RWA flow statements of CCR exposures under the internal model method	103
Table 48	EU CCR8	Exposures to central counterparties	103
	EU CRC	5.10 Credit risk mitigation techniques	104
Table 49	EU CR3	Credit risk mitigation (CRM) techniques - General overview	105
Table 50	EU CR4	Standardized approach - Credit risk exposure and CRM effects	106
Table 51	EU CR7	IRB approach - Effect of on the RWAs of credit derivatives used as CRM techniques	107
Table 52	EU CR7-A	Guaranteed exposures under the IRBA approach	107
Table 53	EU CCR5	Composition of collateral for CCR exposures	108
	EU SECA	5.11 Securitization	109
Table 54		Breakdown of securitization outstandings	110
Table 55	EU SEC1	Securitization exposures in the non-trading book	111
Table 56	EU SEC2	Securitization exposures in the trading book	111
Table 57	EU SEC3	Securitization positions and risk-weighted assets - originator and sponsor	112
Table 58	EU SEC4	Securitization positions and risk-weighted assets - investors	112
Table 59	EU SEC5	Exposures securitized by the institution - exposures in default and specific credit risk adjustments	113
	EU MRA	5.12 Risk of Capital Markets	114
Table 60	EU MR1	Market risk under the standardized approach	116
		5.13 Asset-Liability Management (ALM) risk	118
	EU IRRBBA	5.13.2 Currency risk management	118
Table 61		NBI sensitivity indicators	119
Table 62		NPV sensitivity to total capital	120
Table 63		Sensitivity of NPV to Tier 1 capital	120
Table 64	EU IRRBB1	Interest rate risk in the banking book	121
	EU LIQA	5.13.3 Liquidity risk management	122
Table 65	EU LIQ1	Short-term Liquidity Coverage Ratio – LCR	124
Table 66		Details of liquidity buffer – LCR	125
Table 67		Breakdown of Crédit Mutuel Alliance Fédérale's consolidated balance sheet according to the residual maturity of future contractual cash flows (principal and interest)	125
Table 68	EU LIQ2	Net stable funding ratio - NSFR	127
	EU ORA	5.14 Operational risks	129
Graph 15	EU OR2	Breakdown of operational risk RWAs by approach	131
Graph 16	EU OR1	Annual claims by business line and risk event	133
	EU AE4	5.15 Information on encumbered and unencumbered assets	423
Table 69	EU AE1	Encumbered and unencumbered assets	134
Table 70	EU AE2	Collateral received	135
Table 71	EU AE3	Carrying amount of encumbered assets/collateral received and liabilities backed	136
		5.16 Equity risk	136
		5.17 Private equity	136
Table 72		Risks related to private equity	136
		5.18 Environmental, social and governance risks	137
Table 73		Model 1. Banking portfolio - Indicators of transition risk potentially linked to climate change: Credit quality of exposures by sector, issues and residual maturity	144
Table 74		Model 2. Banking portfolio - Indicators of transition risk potentially linked to climate change: Loans secured by real estate property assets - Energy efficiency of collateral	148
Table 75		Model 4. Banking portfolio - Indicator of transition risk potentially linked to climate change: Exposures on the 20 largest carbon-intensive companies	149

Table 76		Model 5. Banking portfolio - Indicators of transition risk potentially linked to climate change: Exposures subject to physical risk	150
Table 77		Model 10. Other climate change mitigation measures not covered in Regulation (EU) 2020/852	151
	EU OVB EU REMA	5.19 Compensation	156
Table 78	EU REM1	Summary of compensation awarded during the fiscal year	164
Table 79	EU REM2	Special payments during the fiscal year	164
Table 80	EU REM3	Deferred compensation subject to a lock-up period	165
Table 81	EU REM4	High levels of compensation	165
Table 82	EU REM5	Breakdown of identified population by area of activity	166