Pillar 3 Disclosure

Update as at
31 December 2022

MONTE DEI PASCHI DI SIENA
BANK SINCE 1472

Pillar 3 Disclosure

Update as at
31 December 2022

Banca Monte dei Paschi di Siena SpA
Company Head Office in Siena, Piazza Salimbeni 3, www.mps.it
Recorded in the Arezzo-Siena Company Register – Registration no. and tax code 00884060526
MPS VAT Group – VAT no. 01483500524
Member of the Italian Interbank Deposit Protection Fund. Bank Register no. 5274
Parent Company of the Monte dei Paschi di Siena Banking Group, registered with the Banking Groups Register

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Introduction

The new Pillar 3 disclosure framework, that aims to foster the role of institutions' disclosures in promoting market discipline, entered into force as of 30 June 2021.

Pillar 3 was designed on the notion that Market Discipline can be harnessed to reinforce capital regulation to promote stability and soundness in banks and financial systems.

It thus incorporates the minimum capital requirements (Pillar I) and the prudential control process (Pillar II).

In particular, the **new Pillar 3 disclosure framework, in force since 30 June 2021**, seeks to:

- improve clarity for users of information, by provide a single comprehensive package;
- ensure consistency and comparability among the intermediaries;
- facilitate access by users of information to institutions' key prudential data by introducing the new key metrics templates;
- facilitate technical implementation for the retrieval of information;
- increase the efficiency of disclosures and reduce costs through synergies and integration of quantitative information with supervisory reporting.

The regulatory sources of reference are:

- the new EU Regulation 2019/876 (CRR2) amending EU Regulation no. 575/2013 (CRR), which, in Article 434a, mandated the EBA to develop implementing technical standards (ITS) specifying the uniform disclosure formats required under Titles II and III of Part 8 of the CRR.

The standardisation process pursued by the EBA through subsequent ITS releases (EBA/ITS/2020/04 and EBA/ITS/2021/07 – IRRBB) is not applied in the following cases, which continue to be governed by the previous guidelines:

- disclosure requirements of the IFRS 9 transitional arrangement (EBA/GL/2020/12);
- temporary information on exposures subject to measures applied due to the COVID 19 crisis (EBA/GL/2020/07).

Pillar 3 Disclosure is prepared at consolidated level by the Parent Company.

Further information on the Group's risk profile, pursuant to Art. 434 of the CRR, is also published in the the Consolidated Financial Report as at 31 December 2022, the Report on Corporate Governance and the Remuneration Report.

Unless otherwise indicated, all the amounts in this report are stated in thousand Euros.

The Montepaschi Group regularly publishes its Pillar 3 disclosures on its website at: english.mps.it/investors.

As an aid to understanding and better

clarifying certain terms and/or abbreviations used in this report, please refer to the Glossary provided at the end of this document.

Executive Summary

Key Metrics as of 31-12-2022

CET 1 ratio	**Tier 1 ratio**	**Total Capital ratio**
16.64% *410 bp* *Dec-21: 12.54%*	16.64% *410 bp* *Dec-21: 12.54%*	20.52% *440 bp* *Dec-21: 16.12%*
Overall Capital Requirement		
CET1 ratio: *8.81%*	*Tier 1 ratio:* *10.82%*	*Total Capital ratio:* *13.51%*
Total RWA	**Credit Risk EAD**	**Leverage Ratio**
€ 45.69 mld *-2.10 €/mld* *Dec-21: € 47.79 mld*	€ 116.57 mld *-12.67 €/mld* *Dec-21: € 129.24 mld*	5.77% *+105 bp* *Dec-21: 4.72%*
LCR	**NSFR**	
192.3% *+19,6 pp* *Dec-21: 172.7%*	134.1% *+4,5 pp* *Dec-21: 129.6%*	
Gross NPL ratio	**ROE**	
3.56% *-27 bp* *Dec-21: 3.83%*	-2.93% *-8.1 pp* *Dec-21: 5.18%*	

In 2022, the Montepaschi Group continued to implement the activities provided for by the 2022-2024 Business Plan and, internally, by the 2022 Risk Appetite Statement approved by the Board, with the aim of consolidating a path of normality and sustainable growth.

The Montepaschi Group was able to benefit from the overall improved macroeconomic environment and the easing of the COVID-19 pandemic, although the year was marked by the unexpected deterioration of the international geopolitical situation triggered by the Russian invasion of Ukraine and the resulting inflationary pressures on commodity prices.

From an internal management point of view, the defining event was the completion of the EUR 2.5 billion Capital Increase and the voluntary early retirement of more than 4,000 resources, which lays the foundations for a new path of structural revival and development for the Group, also in view of the improvements in current and projected profitability linked to the progressive increase in interest rates registered, especially as of the second half of 2022.

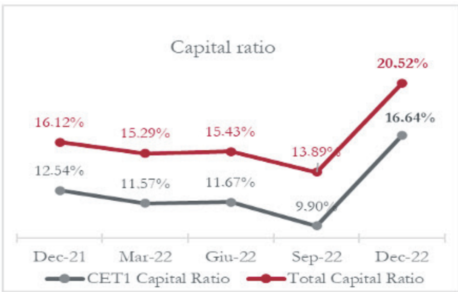
The Group manages its capital by ensuring that the capital base and correlated ratios are consistent with the risk profile assumed and compliant with regulatory requirements. The assessment of regulatory capital adequacy is based on the constant monitoring of own funds and risk weighted assets (RWAs) as well as on a comparison with the minimum regulatory requirements, including the additional requirements to be maintained over time and communicated to the Group following the SREP and the additional capital reserves introduced by the new regulatory framework. As of 31 December 2022, the Group's CET1 ratio stood at 16.64%, higher than the minimum requirements set forth in Article 92 of the CRR and higher than the Total SREP Capital Requirement set by ECB (including an additional Pillar 2 or "P2R" requirement) and the Overall Capital Requirement (OCR) for 2022. It should also be noted that, as of 31 December 2022, the Group is also compliant with the Pillar2 Guidance (P2G).

Likewise, the Tier 1 ratio and Total capital ratio were higher than the Overall Capital Requirement and P2G requirement.

Capital Adequacy Indicators At 31 December 2022	CET 1 Ratio	Tier 1 Ratio	Total Capital Ratio
Pillar I minimum Requirements (art. 92 CRR)	*4.50%*	*6.00%*	*8.00%*
TSCR (P1R+P2R)	6.05%	8.06%	10.75%
Combined Buffer Requirement (CBR)	*2.76%*	*2.76%*	*2.76%*
OCR (TSCR+CBR)	**8.81%**	**10.82%**	**13.51%**
Capital ratio as at 31-12-2022	**16.64%**	**16.64%**	**20.52%**

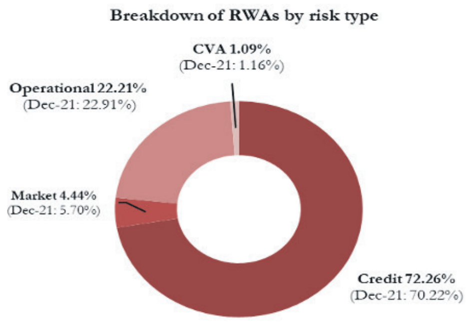
TSCR - Total SREP Capital Requirement
P2R - Pillar 2 Requirement
CBR - Combined Buffer Requirement
OCR - Overall Capital Requirement

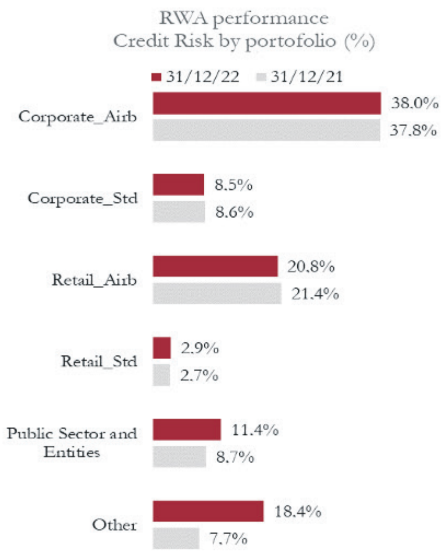
The Group's capital ratios improved compared to 31-12-2021, largely due to the recognition of the capital increase and a reduction in regulatory RWAs.



The Group's overall capital adequacy at the end of 2022 was also assessed against all other Group capital ratios (Leverage Ratio, MREL, large exposures). Compared to 31 December 2021, regulatory RWAs show an overall decrease of EUR 2.1 billion. In particular, there is a reduction in RWAs relating to operational risk and market risk, and, to a lesser extent, a reduction in credit and counterparty risk.

The breakdown of RWAs by risk type is concentrated mainly on Credit Risk (72%) and are focused mainly on corporate and retail exposures subject to AIRB approach (38% and 20.8%, respectively).





In terms of liquidity adequacy, the Montepaschi Group did not show any particular signs of strain during 2022. The Liquidity Coverage Ratio (LCR) as at 31 December 2022 stood at 192%, an increase from the end of 2021 (173%), thus stronger and well above the minimum regulatory requirement applicable (which is 100%).

The Net Stable Funding Ratio (NSFR) stood at 134% as at 31 December 2022, registering an increase compared to 31 December 2021 (130%) and, once again, without showing any critical aspects with respect to the minimum regulatory requirement of 100% which entered into force as of June 2021.

The Group also determined its internal Risk Appetite Framework (RAF) for 2022.

The objective of the RAF is to ensure alignment between the Group's actual risk profile and the risk appetite defined ex-ante by the Board of Directors, taking into account pre-established risk tolerance levels and in any event within the maximum admissible limits (risk capacity) deriving from regulatory requirements or other restrictions imposed by the Supervisory Authorities (e.g. the ECB's SREP Decisions).

The Annual RAF was formalized in a Risk Appetite Statement (RAS) approved by the BoD and designed along a set of Key Risk Indicators (KRI) defined by Group, Legal Entity and Business Units, in accordance with the processes internally approved by the Board itself.

With regard to Group indicators, the following were identified in 2022: Capital Adequacy, Liquidity Adequacy, Leverage, Asset Quality, Performance, Macroeconomic and Market-based, Operating, Internal Controls and Related Party and, for the first time, specific ESG indicators regarding Climate & Environmental Risk. The indicators used to monitor the different areas were defined and updated for each category.

Within the RAS framework, the risk management and measurement systems implemented by the Montepaschi Group allow for continuous monitoring of the risk profile and regular reporting to the Corporate Bodies, with the activation of appropriate escalation and remediation procedures if the relevant thresholds are exceeded.

The RAS risk tolerance and risk capacity thresholds are calibrated to ensure consistency with the applicable minimum regulatory thresholds and also take account of additional prudential buffers.

At the end of 2022, all the internal RAS obligations for capital & liquidity adequacy KRIs had been complied with and, as mentioned above, so had the regulatory limits.

As for the Montepaschi Group's exposures to Related Parties and Connected Persons according to national regulations, as at 31 December 2022 all regulatory and more prudential internal limits defined within the RAS had been complied with.

In conclusion, the Montepaschi Group's overall risk profile in 2022 was therefore in line with the internal objectives and corporate strategy adopted, and the risk management and measurement systems proved adequate for monitoring the risk profile.

Annex I – Disclosure of key metrics and overview of risk-weighted exposure amounts

EU OV1 – Overview of total risk exposure amounts

		RWA		Capital requirements
		Dec-22	Sep-22	Dec-22
1	**Credit risk (excluding CCR)**	**31,541,256**	**31,001,381**	**2,523,301**
2	Of which the standardised approach	12,370,078	11,245,706	989,606
3	Of which the foundation IRB (FIRB) approach	-	-	-
4	Of which: slotting approach	883,836	909,608	70,707
EU 4a	Of which: equities under the simple riskweighted approach	-	-	
5	Of which the advanced IRB (AIRB) approach	18,287,343	18,846,067	1,462,987
6	**Counterparty credit risk - CCR**	**1,383,243**	**1,386,564**	**110,659**
7	Of which the standardised approach	722,178	756,717	57,774
8	Of which internal model method (IMM)	-	-	-
EU 8a	Of which exposures to a CCP	36,594	43,452	2,928
EU 8b	Of which credit valuation adjustment - CVA	497,140	465,693	39,771
9	Of which other CCR	127,331	120,703	10,186
15	**Settlement risk**	**-**	**-**	**-**
16	**Securitisation exposures in the non-trading book (after the cap)[(*)]**	**586,531**	**951,201**	**46,922**
17	Of which SEC-IRBA approach	562,170	923,917	44,974
18	Of which SEC-ERBA (including IAA)	16,606	19,025	1,328
19	Of which SEC-SA approach	7,755	8,259	620
EU 19a	Of which 1250%/ deduction	-	-	-
20	**Position, foreign exchange and commodities risks (Market risk)**	**2,026,758**	**2,335,696**	**162,141**
21	Of which the standardised approach	2,026,758	2,335,696	162,141
22	Of which IMA	-	-	-
EU 22a	**Large exposures**	**-**	**-**	**-**
23	**Operational risk**	**10,148,405**	**10,684,883**	**811,872**
EU 23a	Of which basic indicator approach	90,290	81,212	7,223
EU 23b	Of which standardised approach	-	-	-
EU 23c	Of which advanced measurement approach	10,058,116	10,603,671	804,649
24	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	**2,737,424**	**1,624,906**	**218,994**
29	**TOTAL**	**45,686,193**	**46,359,725**	**3,654,895**

[(*)] *The amount shown does not include equivalent deducted securitisations. The amount as at 31.12.2022 would still be zero as RWA and, of course, as a requirement.*

A substantial decrease in the main risks (credit, market and operational) is observed in the quarter. The variation is due to the Operational Risk component (-536 €/mln, as a result of the exit of significant internal fraud events) and the Market Risk Pillar 1 component (-309 €/mln) due to reduced commodity and debt securities trading operations.

EU KM1 – Key metrics template

		a	b	c	d	e
		Dec-22	Sep-22	Jun-22	Mar-22	Dec-21
	Available own funds (amounts)					
1	Common Equity Tier 1 (CET1) capital	7,601,176	4,633,535	5,575,701	5,551,618	5,991,778
2	Tier 1 capital	7,601,176	4,633,535	5,575,701	5,551,618	5,991,778
3	Total capital	9,373,413	6,438,667	7,371,018	7,335,639	7,705,129
	Risk-weighted exposure (amounts)					
4	Total risk-weighted exposure amount	45,686,193	46,359,725	47,780,464	47,962,809	47,786,902
	Capital ratios (as a percentage of risk-weighted exposure amount)					
5	Common Equity Tier 1 ratio (%)	16.6380%	9.9950%	11.6690%	11.5748%	12.5385%
6	Tier 1 ratio (%)	16.6380%	9.9950%	11.6690%	11.5748%	12.5385%
7	Total capital ratio (%)	20.5170%	13.8880%	15.4270%	15.2944%	16.1239%
	Additional own funds requirements based on SREP (as a percentage of risk-weighted exposure amount)					
EU 7a	Additional own funds requirements to address risks other than the risk of excessive leverage (%)	2.7500%	2.7500%	2.7500%	2.7500%	2.7500%
EU 7b	of which: to be made up of CET1 capital (percentage points)	1.5469%	1.5469%	1.5469%	1.5469%	1.5469%
EU 7c	of which: to be made up of Tier 1 capital (percentage points)	2.0625%	2.0625%	2.0625%	2.0625%	2.0625%
EU 7d	Total SREP own funds requirements (%)	10.7500%	10.7500%	10.7500%	10.7500%	10.7500%
	Combined buffer requirement (as a percentage of risk-weighted exposure amount)					
8	Capital conservation buffer (%)	2.5000%	2.5000%	2.5000%	2.5000%	2.5000%
EU 8a	Conservation buffer due to macro-prudential or systemic risk identified at the level of a Member State (%)					
9	Institution specific countercyclical capital buffer (%)	0.0080%	0.0030%	0.0020%	0.0020%	0.0030%
EU 9a	Systemic risk buffer (%)					
10	Global Systemically Important Institution buffer (%)					
EU 10a	Other Systemically Important Institution buffer	0.2500%	0.2500%	0.2500%	0.2500%	0.1900%
11	Combined buffer requirement (%)	2.7580%	2.7530%	2.7520%	2.7520%	2.6930%
EU 11a	Overall capital requirements (%)	13.5080%	13.5030%	13.5020%	13.5020%	13.4430%
12	CET1 available after meeting the total SREP own funds requirements (%)	8.5753%	1.9322%	3.6069%	3.5123%	4.4760%
	Leverage ratio					
13	Leverage ratio total exposure measure	131,823,310	140,558,343	141,162,158	127,019,222	126,834,475
14	Leverage ratio	5.7662%	3.2970%	3.9500%	4.3710%	4.7240%
	Additional own funds requirements to address risks of excessive leverage (as a percentage of leverage ratio total exposure amount)					
EU 14a	Additional own funds requirements to address the risk of excessive leverage (%)					
EU 14b	*of which: to be made up of CET1 capital (percentage points)*					
EU 14c	Total SREP leverage ratio requirements (%)	3.0000%	3.0000%	3.0000%	3.0972%	3.0972%
	Leverage ratio buffer and overall leverage ratio requirement (as a percentage of total exposure measure)					
EU 14d	Leverage ratio buffer requirement (%)					
EU 14e	Overall leverage ratio requirement (%)	3.0000%	3.0000%	3.0000%	3.0972%	3.0972%
	Liquidity Coverage Ratio					
15	Total high-quality liquid assets (HQLA) (Weighted value - average)	25,215,509	24,926,939	25,290,454	26,362,267	27,968,567
EU 16a	Cash outflows - Total weighted value	15,587,705	15,671,135	15,695,476	16,110,572	16,816,392
EU 16b	Cash inflows - Total weighted value	1,863,889	1,801,669	1,781,533	1,734,317	1,736,233
16	Total net cash outflows (adjusted value)	13,723,817	13,869,466	13,913,943	14,376,254	15,080,159
17	Liquidity coverage ratio (%) (*)	183.95%	179.88%	181.79%	183.19%	185.23%
	Net Stable Funding Ratio					
18	Total available stable funding	86,919,862	95,466,850	97,240,975	107,120,874	107,399,740
19	Total required stable funding	64,795,074	68,927,872	70,967,710	79,069,242	82,883,030
20	NSFR ratio (%)	134.15%	138.50%	137.02%	135.48%	129.58%

(*) The values shown are calculated as simple averages of month-end observations in the twelve months preceding the end of each quarter, consistent with the representation provided in the EU LIQ1 table.

EU INS1: Insurance participations

	Dec-22	
	Exposure value	Risk exposure amount
Own fund instruments held in insurance or re-insurance undertakings or insurance holding company not deducted from own funds	510,367	1,275,918

EU OVC – ICAAP information

The Montepaschi Group assesses capital adequacy through both a regulatory and an economic perspective, in accordance with ECB guidelines (ECB Guide to the Internal Capital Adequacy Assessment Process).

In the regulatory perspective, the Pillar 1 regulatory requirements and the available resources (regulatory capital) are compared with the minimum levels defined by the supervisory regulations and with the additional requirements defined by the ECB in the SREP Decision, both in an expected macroeconomic context (baseline) and adverse (stress) in a three-year perspective.

In the economic perspective, the Total Internal Capital calculated with reference to all quantifiable Pillar I and II risks and the total available resources defined internally, are compared with specific internal capital adequacy thresholds, both in an expected (baseline) and adverse scenario.

In addition to the inherent risk aspects, the capital adequacy assessment is completed with an assessment of internal processes.

Internal Capital Analysis

Total Internal Capital (or Total Absorbed Internal Capital) is intended as the management amount of minimum capital resources necessary to cover economic losses due to the occurrence of unexpected events generated by simultaneous exposure to different types of risk.

The main types of risk to which the Montepaschi Group is exposed in the course of its normal operations may be summarised as follows:

- Credit risk;
- Market Risk;
- Operational Risk;
- Banking Book Interest Rate Risk;
- Counterparty Risk;
- Real Estate Risk;

- Issuer Risk;
- Concentration Risk;
- Equity Portfolio Risk;
- Business/Strategic Risk;
- Model Risk
- Liquidity Risk;
- Reputational Risk.

All the above types of risk contribute to the quantification of the Total Internal Capital, with the exception of liquidity risk and reputational risk, which are mitigated through organisational policies and processes.

Risks inherent in investment products/ services for Group customers are also monitored with a view to both protecting customers and preventing potential reputational impacts.

The Risk Management Department regularly quantifies the Internal Capital related to each type of risk and periodically reports to the Risk Management Committee and to the Top Management as part of the flows prepared by the Chief Risk Officer Department.

The approach used for the quantification and integration of risks-to-capital, to which the Group is exposed, is called Pillar 1 Plus.

The Total Internal Capital is calculated without considering inter-risk diversification, therefore directly adding up the internal capital contributions for the individual risks (Building Block approach).

Template IFRS 9/Article 468-FL: Comparison of institutions' own funds and capital and leverage ratios with and without the application of transitional arrangements for IFRS 9 or analogous ECLs, and with and without the application of the temporary treatment in accordance with Article 468 of the CRR

		a Dec-22	b Sep-22	c Jun-22	d Mar-22
Available capital (amounts)					
1	Common Equity Tier 1 (CET1) capital	7,601,176	4,633,535	5,575,701	5,551,618
2	Common Equity Tier 1 (CET1) capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	7,202,405	4,235,239	5,182,698	5,160,423
2a	CET1 capital as if the temporary treatment of unrealised gains and losses measured at fair value through OCI (other comprehensive income) in accordance with Article 468 of the CRR had not been applied	7,527,900	4,555,913	5,531,044	5,541,712
3	Tier 1 capital	7,601,176	4,633,535	5,575,701	5,551,618
4	Tier 1 capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	7,202,405	4,235,239	5,182,698	5,160,423
4a	Tier 1 capital as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	7,527,900	4,555,913	5,531,044	5,541,712
5	Total capital	9,373,413	6,438,667	7,371,018	7,335,639
6	Total capital as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	8,974,642	6,040,371	6,978,015	6,944,444
6a	Total capital as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	9,300,137	6,361,045	7,326,361	7,325,734
Risk-weighted assets (amounts)					
7	Total risk-weighted assets	45,686,193	46,359,725	47,780,464	47,962,809
8	Total risk-weighted assets as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	45,619,863	46,293,253	47,725,030	47,909,681
Capital Ratios					
9	Common Equity Tier 1 (as a percentage of risk exposure amount)	16.64%	9.99%	11.67%	11.57%
10	Common Equity Tier 1 (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	15.79%	9.15%	10.86%	10.77%
10a	CET1 (as a percentage of risk exposure amount) as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	16.49%	9.83%	11.58%	11.56%
11	Tier 1 (as a percentage of risk exposure amount)	16.64%	9.99%	11.67%	11.57%
12	Tier 1 (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	15.79%	9.15%	10.86%	10.77%
12a	Tier 1 (as a percentage of risk exposure amount) as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	16.49%	9.83%	11.58%	11.56%
13	Total capital (as a percentage of risk exposure amount)	20.52%	13.89%	15.43%	15.29%
14	Total capital (as a percentage of risk exposure amount) as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	19.67%	13.05%	14.62%	14.49%
14a	Total capital (as a percentage of risk exposure amount) as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	20.37%	13.73%	15.34%	15.27%
Leverage ratio					
15	Leverage ratio total exposure measure	131,822,945	140,558,343	141,162,158	127,019,222
16	Leverage ratio	5.77%	3.30%	3.95%	4.37%
17	Leverage ratio as if IFRS 9 or analogous ECLs transitional arrangements had not been applied	5.48%	3.02%	3.68%	4.08%
17a	Leverage ratio as if the temporary treatment of unrealised gains and losses measured at fair value through OCI in accordance with Article 468 of the CRR had not been applied	5.71%	3.24%	3.92%	4.36%

The application of the IFRS 9 fully loaded without taking into account the impact deriving from the cohesion with he transitional regime expected from 2018, would have entailed a reduction of 85 and 84 bp, respectively of CET1 ratio and total capital ratio. Such coefficients would have resulted in 15.79% (instead of 16.64% transitional arrangements) and 19.67% (instead of 20.52%) respectively of CET1 ratio and total capital ratio. IFRS 9 fullyloaded application would have entailed a total CET1 decrease of about 0.4 bn euro linked to major provisions implemented during FTA on IRB credit exposure.

Annex III – Disclosure of risk management policies and objectives

EU OVA: Institution risk management approach

EU OVA: Risk Management approach

Risk management objectives and policies are defined in line with the Group business model, medium-term Restructuring Plan objectives and external regulatory and legal requirements.

Policies relating to the assumption, management, coverage, monitoring and control of risks are defined by the Board of Directors of the Parent Company. Specifically, the Board of Directors periodically defines and approves strategic risk management guidelines and quantitatively expresses the Group's overall risk appetite, in accordance with both the annual Budget and multiannual projections.

The Parent Company's Board of Directors defines the overall *Risk Appetite Framework* (RAF) for the Group and approves the "*Group Risk Appetite Statement*" (RAS) at least once per year.

The RAS represents an essential element in defining the Group's risk strategy. Risk objectives/restrictions are identified in line with missions assigned to the Business Lines and the Legal Entities' Business Model (known as, "cascading down" of the Risk Appetite). The overall process, approved by the Parent Company's Board of Directors, is expressed through and articulated system of *Key Risk Indicators* (KRI), which reflect the defined Risk Appetite and Risk Tolerance limits in compliance with the regulatory requirements (*risk capacity*) imposed by the Supervisory Authority or internally by the Board of Directors.

Subsequently, the spaces of autonomy between the defined Risk Appetite and the Risk Tolerance determined by the Board of Directors are further subjected to a process of allocation, through specific delegations, approved by the Chief Executive Officer/General Manager, in terms of operational limits (Risk Limits) on the various business segments and formalized in governance policies and management processes on the various business risks.

Equal attention is paid to the monitoring and controlling of transactions with related parties, which may have a significant impact on the Group's risk profile.

The *Risk Appetite* Process is structured so as to ensure consistency with the ICAAP and ILAAP as well as with Planning and Budget and Recovery processes, in terms of governance, roles, responsibilities, metrics, stress testing methods and monitoring of key risk indicators.

The overall internal capital and liquidity adequacy assessment takes place periodically as part of the strategic ICAAP (*Internal Capital Adequacy Assessment Process*) and ILAAP (*Internal Liquidity Adequacy Assessment Process*) process consisting mainly of:

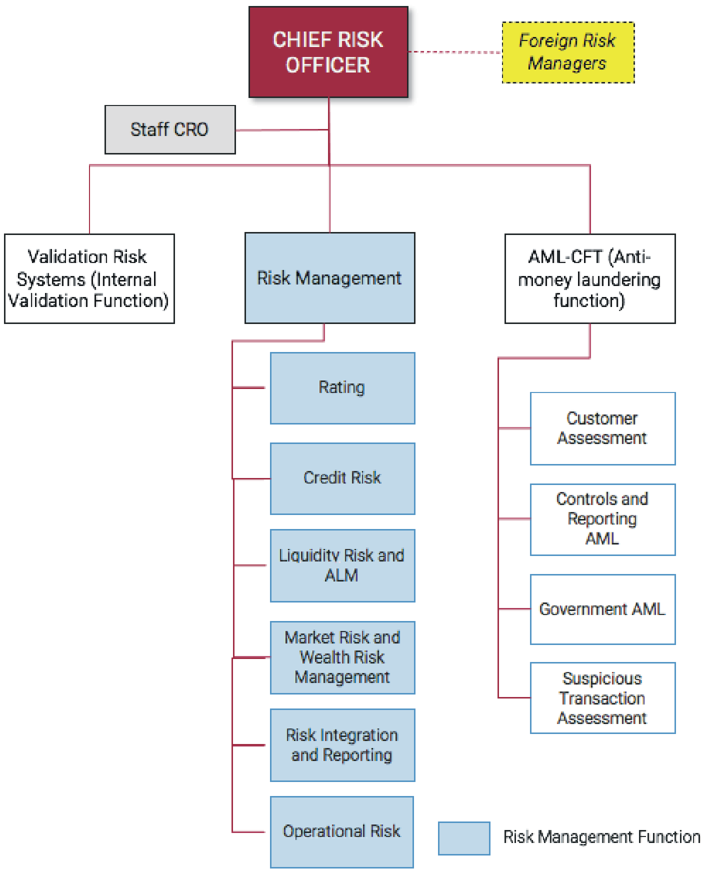
- ICAAP/ILAAP *Outcomes*, or quantitative (*inherent risk*) and qualitative (*risk management and controls*) assessments on risk positioning prepared by the Risk Control function for the Board of Directors.
- *Capital/Liquidity Adequacy Statement* (CAS/LAS), i.e. a summary declaration prepared by the Board of Directors where it expresses its vision and awareness regarding the management of the liquidity adequacy.
- ICAAP/ILAAP ongoing, which consists substantially of periodical analyses of liquidity adequacy which are described in reports to the corporate bodies.

The Annual report on activities carried out concerning *Risk Management*, approved annually by the Board of Directors, highlights checks carried out, findings and weaknesses that were found, suggesting any necessary corrective actions to be taken.

EU OVA: Institution risk management approach

The Chief Risk Officer (CRO) Division of the Parent Company performs activities related to Risk Control, Anti-money laundering and Counter-terrorist financing (AML) and Internal Approval functions.

The Head of the Chief Risk Officer (CRO) Department, in addition to being responsible for the risk control function, has also been responsible for the AML function. Moreover, the Internal Validation function reports to the CRO, as set forth in the Supervisory regulations and as internally transposed in the Group policy regarding the internal control system. Risk Manager of the Parent Company's Foreign branch of Shangai as well as the Risk Manager of Monte Paschi Banque also report to the CRO.



The Division's autonomy and independence are ensured as it reports directly to the Corporate Body (CdA), with strategic supervisory functions and only functionally to the Management Body (AD/DG). It has direct access to the Body with control functions (Collegio Sindacale) and may communicate continuously with no restriction or intermediation. The CRO is also entitled at his or her discretion to participate in Risk and Sustainability Committee meetings to intervene or propose discussions on specific topics. In particular, the Board of Directors appoints and removes the Chief Risk Officer, upon proposal by the Risk and Sustainability Committee, with the assistance of the Appointments Committee, having consulted the Board of Statutory Auditors.

The remuneration of the Parent Company's Chief Risk Officer is determined and approved by the Board of Directors upon proposal by the Remuneration Committee, having heard the opinion of the Risk Committee.

Within the Chief Risk Officer Division specifically, the structure of the Risk Control Function includes a single first-level Risk Management organizational unit and 6 second-level organizational units (Risk Integration and Reporting, Credit Risk, Rating, Operational Risk, Market Risk and Wealth Risk Management, Liquidity Risk and ALM).

As a second-level control function, the Risk Management Function is part of the Group's overall control structure, which is governed internally by the Internal Control System Policy, which defines the set of rules, functions, structures, resources, processes and procedures aimed at ensuring the sound and prudent management of the company.

For a more thorough account of the Group's Internal Control System, Corporate Governance, as well as Risk Culture, please refer to the Corporate Governance Report available on the Group's website at:

(https://www.gruppomps.it/corporate-governance/relazioni-corporate-governance.html)

This document can also be referred to for information on Risk Culture, to which the Risk Management Function contributes not only by formulating the Risk Appetite Statement (RAS) and "cascading it down" to the organizational units relevant to the pursuit of risk appetite objectives, but also through training initiatives for both Corporate Bodies (board induction cycles on specific issues) and employees (including online courses).

EU OVA: Risk Reporting Flows: main features

The Board of Directors:

- approves the guidelines and organisational framework on Integrated Risk Reporting (Risk Reporting Framework);
- ensures that an accurate, complete, effective and timely Risk Reporting system is set up;
- evaluates periodic management Risk Reporting for the Corporate Bodies and the Top Management;
- assesses and approves, at least on an annual basis, any modification or integration in the management Risk Reporting for the Corporate Bodies and the Top Management (content, format and frequency of the information) that allows them to fulfil their roles, relative to the risks the Group is or could be exposed to;
- ensures that management risk reporting for the Corporate Bodies and the Top Management supports decision-making by Top Management and that information is disseminated to support decision-making by employees in day-to-day activities and their impact on risks the Group assumes (Risk Culture promotion).

The Integrated Risk Reporting process is structured so as to ensure consistency with the strategic risk management processes (Risk Appetite, Major Relief Operations ManagementICAAP-ILAAP, Recovery Plan, Remuneration policies). The Integrated Risk Reporting regulates the ways in which risk information is represented to corporate bodies and functions with strategic, decision-making and control responsibilities, promoting the enhancement of the different levels of responsibility by fostering the effectiveness of decision-making and governance processes.

Risk Reporting can be divided in External Risk Reporting and External Risk Reporting, depending on the recipients.

The **External Risk Reporting** is prepared and addressed to parties external to the Group, such as *Supervisors*, Investors, analysts and rating agencies.

The Basel 3 Pillar 3 disclosure, as part of the External Risk Reporting, is governed by the Group's Regulation n.1 and a proper Group's Directive.

The **Internal Risk Reporting** is prepared and addressed so as to support the business management by the Corporate Bodies and Management (even if a possible forwarding to the Supervisors is envisaged), and is in turn divided into three levels:

- 1° level – Reporting to the Group's strategic supervision body; these reports communicate information in a concise manner, useful to verify, for instances, compliances with the RAS threhsolds – *Risk Appetite Statement* and *Recovery*, in line also with the ICAAP/ILAAP;
- 2° level – Reporting to the Parent Company's Management Body (CEO/GM) – including reporting to management committee – as well as reporting to the bodies of the subsidiaries. The level of

detail, greater than that of 1° level, is consistent with the purpose of supporting the direction, coordination and control of the Group's operational and risk management strategies, also in situations of crisis, within the risk appetite covered by the RAS;

- 3° level – Operational Reporting to Business Units and risk takers (of the Parent Company and its subsidiaries) for risk management purposes.

The first two levels jointly define the scope of Management Risk Reporting, while the third level defines the scope of Operational Risk Reporting.

The structure and contents of the Risk Reporting are periodically updated so as to meet the needs of direction, coordination and corporate governance.

EU OVA: characteristics and measurement of risks

Please refer to the individual Annexes below for information on the different types of risks covered by the Pillar 3 Disclosures (liquidity, credit, counterparty, market, operational and interest rate risks).

The Group has also identified and monitors the following risks.

Real Estate Risk

Real Estate Risk is defined as the risk of incurring potential losses from unexpected changes in the value of the real estate portfolio as a result of real estate market performance in general as well as and inadequate property management and/or maintenance.

As part of its operations, the Group is exposed to risk in the real estate sector, both as a result of the investments directly held in real estate owned by the Group and as a result of the loans granted to companies operating in the real estate sector, whose cash-flows are mainly generated from the rental or sale of real estate (so-called *commercial real estate*).

Internal Capital for Real Estate Risk is represented by regulatory capital.

The Internal Capital is quantified by the Risk Management of the Parent company.

Strategic Risk

Business/Strategic Risk is defined as the current and/or prospective risk of unexpected losses due to high business volatility (business risk), adverse strategic decisions and/or poor responsiveness to changes in the competitive environment (strategic risk).

A Value/Earnings-at-Risk model is used to determine the Internal Capital requirement against Business/Strategic Risk based on an "earnings volatility" evaluation.

The model adopted estimates the business margin's historical volatility, or "earnings volatility", calculated for the Group and the main Legal Entities, taking into account the following income statement items: net interest income, net fees & commissions, other administrative expenses, personnel costs.

Risk inherent in investment products/ services

The Group pays particular attention to the governance of risks regarding investment services that are directly or indirectly reflective of the risks incurred by customers in the provision of investment services and activities.

The governance of these risks is aimed at protecting customers and preventing any potential repercussions on the Group in terms of operational and reputational risk.

Organizational responsibility at Group level for supervising financial risk measurement, monitoring and control activities and for mapping investment products/services for the purposes of MiFID adequacy is an integral part of the Group's integrated risk management responsibilities and is centralized to the Market Risk and Wealth Risk Management Department within the Parent Company's Chief Risk Officer Division. This is to ensure centralized governance of the direct and indirect risks which the Group incurs during its operations.

Wealth Risk Management focuses on the comprehensive set of operational and management processes as well as measurement and monitoring tools/methods used to ensure overall consistency between customers' risk profiles and the risk of investment products and portfolios offered to -or in any case held by- customers.

In addition, in the more general context of Product Governance of financial products for customers, the wealth risk management activity includes the oversight and control of certain specific aspects, such as product testing, review, and monitoring of the products Target Market.

Through its responses to the MiFID profiling questionnaire, the Customer provides the Bank with information on their characteristics and needs (including their knowledge, experience, investment objective, time horizon and sustainability preferences) which helps determine the customer's general risk profile.

The investment products (of the Group and of third parties), whether or not included in the overall offering to the Group's customers, are mapped for risk on the basis of quantitative measurements of market and credit risk factors; liquidity, complexity and sustainability rating assessments are also conducted on these products. Product mapping is one of the guiding criteria for carrying out investment adequacy checks as part of the consulting service offered.

For the sake of simplicity, investment product risk mapping, performed with reference to individual risk macro-factors, is grouped under specific risk categories.

A special focus is given by the Bank to the monitoring and prevention of potential financial and reputational risks which investment services, particularly within the context of financial crisis, may generate as a consequence of increased market volatility. The fast-moving and not always predictable market trends may result in rapid changes in product risks and generate potential financial losses, as well as prompting a changing attitude by customers towards their own financial investments.

Customers are regularly informed of changes in the risk of financial instruments held, so as to ensure timely informational transparency and facilitate possible decisions aimed at rebalancing the risk profile of their investments.

The strategic choice of the Banca MPS is to combine the placement of financial products with advisory to ensure the highest level of protection for the investor and, at the same time, enhance the role played by relationship managers. Again, with a view to protecting customers, the obligation to verify appropriateness has also been extended to the trading activities on the secondary market of the certificates issued by the Group.

Banca MPS offers two types of advisory services:

- "Basic" advisory is aimed at verifying the suitability of the individual investments recommended in relation to the risk of the customer's investment portfolio as a whole. As part of this, the adequacy model adopts a multivariate control logic on the individual risk factors, based on the customer's portfolio risk, including the investment product that is being recommended.
- "Advanced" advisory, aimed at verifying the suitability of the overall set of transactions recommended, in relation to a set of investment/disinvestment transactions aimed at building one or more advanced advisory portfolios, in accordance with the respective investment objectives, with regard to optimum asset allocation to maximize prospective returns, with respect to the risk of the customer's investment profile as a whole. In this regard, the adequacy model adopts a multivariate control approach to the individual risk factors, taking the risk of the customer's portfolio, including the recommended investment product(s), as a reference.

Wealth risk management activities cover the entire distribution scope of the branch network of MPS Group and investment services operated by Banca Widiba and MPS Capital Services.

Risk Reputational

Reputational risk can be defined as the current and potential risk of a decline in earnings, capital or liquidity resulting from a negative perception of the bank's image by its customers, counterparties, shareholders, investors, and regulators. This is a "second level" risk, which triggers on other types of risk typical of banking activities, mainly operational, strategic, legal and *compliance* risks, or which is generated by external events, negative news on the bank or on the sector banking or an inappropriate management of external communications.

The Group has a Code of Ethics which

points out the references and guiding principles which must guide expected conduct, consistently and in continuity with its core values: the ethics of responsibility, customer focus, attention to change, a pro-active and entrepreneurial approach, a passion for professional know-how, team spirit and cooperation.

The governance model for the Group's Reputational Risks, consistent with the overall risk governance process, assigns the strategic supervisory function to the Board of Directors and responsibility for governing the Reputational Risk processes to the CRO Division.

The Reputational Risk is managed by a specific *framework* aimed at monitoring, safeguarding, and consolidating the relationship with all *stakeholders*. The *framework* devotes attention to sustainability and it is based on institution-wide risk culture, management the Group's reputation and primary risks (credit risk, operational risk, market risk, legal risk, risk of investment products, strategic risk, and *compliance*), the development of organizational and communication controls.

It provides for ordinary management, aimed at overseeing and increasing reputation in the day-to-day activities and extraordinary management, in the event of a reputational crisis, aimed at minimizing reputational damage through extraordinary and timely response to events.

Each business Function with reference to the activities for which it is responsible, given the pervasive and transversal nature of this risk, is involved in the process of protecting the image and safeguarding the corporate reputation, for the purpose of identifying reputational risks and related organizational controls.

In the event of new product launches, commercial initiatives and any unilateral actions, preliminary assessments are conducted to mitigate this risk and no business activities are financed that are not consistent with the socio-ethical-environmental objectives of the Code of Ethics.

Specific processes are provided for managing internal and external communication and structured authorization processes that certify the quality and accuracy of information to the outside according to their nature and relevance.

In the event of a reputational crisis (extraordinary management), an *escalation* process is envisaged so as to contain the impacts and to quickly manage the messages to be conveyed externally and internally to all *stakeholders*.

Within the framework, there are special reputational indicators that "measure" the strength of the relationship with key stakeholders (Customers, Employees, Institutions/Communities, Regulators, Shareholders/Investors), and identify potential "future reputational damage" resulting from climate-related and environmental-related activities in which the Bank is involved; these indicators are monitored periodically. The indicators are fed by internal and external data, also deriving from internal employee climate surveys, as well as external customer and non-customer surveys, to monitor the level of satisfaction with services provided to customers, perception of brand image, and monitoring of sentiment expressed in online media. Some of these indicators were included in the 2023 RAS and monitored on a quarterly basis.

Since the risks, as well as the tools to identify and monitor them, are constantly evolving, the Group is active in promoting the spread of risk culture within the institution through specific training courses for employees designed on the main banking risks.

ESG Risk (*Environmental, Social and Governance*)

In view of the growing importance of ESG risk factors in regulation, in government policies, in the sensitivity of stakeholders and also following specific initiatives promoted by the ECB, in particular on Climate-related and Environmental Risks - C&E Risks (see. Guidelines on climate and environmental risks, launch of Climate Stress Test in early 2022), in 2021 the Montepaschi Group initiated a multi-year program of activities aimed at identifying areas of improvement in the policies and methods that manages these types of risk.

In particular, the risk identification process - in the context of emerging risks - explicitly examined C&E Risks as a further dimension of analysis (transmission channels) across all traditional "core" financial risks. The approach implemented led to the identification of the areas of Credit Risks and Operational Risk as priorities in 2022.

A number of new ESG-specific Key Risk Indicators (KRIs) have been identified within the Group's Risk Appetite Framework, with particular reference to C&E Risks (physical and transition risks).

The new Credit Strategies are being released, also based on ESG criteria, in line with the strategic guidelines of the Group, which will make it possible to start the grounding in the ordinary management and on the commercial network of the sustainability practices outlined.

For more information on sustainability policies, please refer to following Annex XXXIX of this document and the Consolidated Non-Financial Statement (https://www.gruppomps.it/en/sustainability/report.html).

EU OVA: Stress Test: scenarios and methodologies

The Group regularly conducts stress tests on *Risks-to-Capital and Risks-to-Liquidity*, put in place for both individual stand- alone risks and joint risks.

In terms of *Risk-to-Capital*, the Group adopts the *Capital Stress Test Framework* (CSTF), which is part of the Capital Adequacy Framework that analyses vulnerabilities in exceptional but plausible events.

The Capital Stress Test Framework consists in a set of methodological approaches and processes that evaluate exposure to various risks in situations of market turmoil or stress, for regulatory or management purposes.

In terms of *Risk-to-Liquidity*, the Group adopts the Liquidity Stress Test Framework (LSTF), which is the part of the *Liquidity Risk Framework* that analyses vulnerabilities in the liquidity position across the different risk segments. The LSTF consists in a set of methodological approaches and processes that evaluate exposure to liquidity risk in situations of market turmoil or stress.

Stress tests assess the Group's ability to absorb large potential losses or liquidity outflows in the event of severe but plausible extreme or idiosyncratic market events, so that measures can be identified to reduce the risk profile and preserve the capital and liquidity position.

Regarding regulatory stress tests, in 2022 the Montepaschi Group participated in the 2022 Climate Stress Test conducted by the ECB in order to assess banks' management and resilience to climate and environmental risk drivers. The exercise, which was conducted mainly for informational purposes, as stated by the Supervisor, did not in itself result in capital impacts on the regulatory ratios of the participating banks.

EU OVA: Risk Management strategies and policies

Each risk factor corresponds to a model that has been developed and is used internally for operational or regulatory purposes. For an account of strategies, processes and management models for the various risks, please refer to the paragraphs below.

From a regulatory standpoint, in accordance with the principles contained in the New accord on capital adequacy (Basel 2) in relation to First Pillar risks, the Montepaschi Group's internal credit and operational risk models were already authorised in the first half of 2008. Pursuant to circular letter 263/2006 of the bank of Italy, on 12 June 2008 the Montepaschi Group was officially authorised under regulation no. 647555 to use the advanced models for the measurement and management of credit risk (AIRB - *Advanced Internal Rating Based*) and operational risk (AMA – *Advanced Measurement Approach*) as of the first consolidated report at 30-06-2008.

Over time, these models have been further developed and their scope of application extended to Group entities not originally included in the initial scope of validation. As at 31-12-2022, the following portfolios/entities/parameters of the Montepaschi Group had been validated for regulatory purposes:

Credit Risk: regulatory treatment

Legal Entity	Corporate AIRB	Retail AIRB
Banca MPS	PD, LGD	PD, LGD
MPS CS	PD, LGD	PD, LGD
MPS L&F	PD, LGD	PD, LGD

To calculate capital requirements for Specialized Lending transactions (identified by a threshold of EUR 1 mln the Group to adopt the "*Slotting Criteria*" AIRB method.

The Group has adopted the standard approach for the remaining credit risk exposures/entities for regulatory purposes.

Operational Risk: regulatory treatment

Legal Entity	Method AMA	Method BIA
Banca MPS	✓	-
MPS CS	✓	-
MPS L&F	✓	-
other entities	-	✓

The Group has adopted the standard approach to calculate capital requirements relative to market risk.

Instead, capital requirements relating to counterparty risk are calculated using the current market value for OTC derivatives and long settlement transactions (LST) as well as the comprehensive method for securities financing transactions (SFT).

EU OVB: Disclosure on governance arrangements

For a more thorough account of the Group's corporate governance structure and detailed information, please refer to the Corporate Governance Report available on the Group's website at:

(https://www.gruppomps.it/corporate-governance/relazioni-corporate-governance.html)

For further details on Risk Reporting Flows (Risk Reporting) to the Board of Directors and how the Board is involved in defining its content, please refer to previous section which describes the Group's Integrated Risk Reporting system.

Annex V – Disclosure of the scope of application

EU LI1: Differences between accounting and regulatory scopes of consolidation and mapping of financial statement categories with regulatory risk categories

	Dec-22						
	a	b	c	d	e	f	g
			Carrying values of items				
	Carrying values as reported in published financial statements	Carrying values under scope of regulatory consolidation	Subject to the credit risk framework	Subject to the CCR framework	Subject to the securitisation framework	Subject to the market risk framework	Not subject to capital requirements or subject to deduction from capital
Assets							
10. Cash and cash equivalent	12,538,578	13,062,727	13,062,727				
20. Financial assets designated at fair value through profit or loss	6,756,687	6,756,687	142,534	2,336,477	86,323	6,296,021	318,132
a) Financial assets held for trading	6,299,394	6,299,394		2,336,477	-	6,296,021	3,373
of which derivatives	*2,336,477*	*2,336,477*		*2,336,477*		*2,336,477*	
of which Equity instruments	137,114	137,114			-		
of which Debt securities	*3,825,802*	*3,825,802*			-		
of which Loans and advances	-	-			-		
b) Other financial assets mandatorily measured at fair value	*457,293*	*457,293*	*142,534*	-	*86,323*	-	*314,759*
of which Equity instruments	*201,345*	*201,345*			-		
of which Debt securities	*113,415*	*113,415*			*86,323*		
of which Loans and advances	*142,534*	*142,534*	*142,534*		-		
30. Financial assets at fair value through other comprehensive income	4,352,328	4,352,328	4,097,640		10,838		
of which Equity instruments	*254,688*	*254,688*			-		
of which Debt securities	*4,097,640*	*4,097,640*	*4,097,640*		*10,838*		
of which Loans and advances	-	-			-		
40. Financial assets at amortized cost	88,464,613	87,940,466	87,878,015	4,010,479	447,958	-	62,451
of which Loans to banks	*3,255,657*	*2,731,507*	*2,731,507*	*527,539*	-		
of which Loans to customers	*85,208,956*	*85,208,958*	*85,146,508*	*3,482,940*	*447,958*		*62,451*
50. Hedging derivatives	1,077,095	1,077,095		1,077,095			
60. Change in value of macro-hedged financial assets (+/-)	-908,737	-908,737	-908,737				
70. Equity investments	688,292	747,290	616,617				130,673
90. Property, plant and equipment	2,375,926	2,303,496	2,303,496				
100. Intangible assets	162,649	162,645					162,645
110. Tax assets	2,216,377	2,215,135	1,894,727				320,409
120. Non-current assets and groups of assets held for sale and discontinued operations	65,497	65,497	65,497				
130. Other assets	2,383,613	2,408,917	2,408,917				
Total assets	**120,172,918**	**120,183,546**	**111,561,433**	**7,424,051**	**545,119**	**6,296,021**	**994,310**
Liabilities							
10. Financial liabilities measured at amortized cost	103,283,390	103,298,102	-	1,186,300	-	-	102,111,803
of which due to banks	*21,382,759*	*21,380,370*		*626,869*			*20,753,500*
of which due to customers	*73,349,626*	*73,366,728*		*559,430*			*72,807,298*
of which Securities issued	*8,551,005*	*8,551,005*					*8,551,005*
20. Financial liabilities held for trading	3,988,517	3,988,517		1,421,333		3,988,517	
of which derivatives	*1,421,333*	*1,421,333*		*1,421,333*			
30. Financial liabilities designated at fair value through profit or loss	97,027	97,027					97,027
40. Hedging derivatives	301,568	301,568		301,568			
50. Change in value of macro-hedged financial liabilities (+/-)	-77,363	-77,363					-77,363
60. Tax liabilities	6,634	3,111	3,111				
70. Liabilities included in disposal groups classified as held for sale	-	-					-
80/90 Other liabilities and TFR	3,259,111	3,188,443					3,188,443
100. Provisions for risks and charges	1,515,490	1,585,596					1,585,596
120. Valuation reserves	-235,747	-235,747					-235,747
150. Reserves	784,604	784,604					784,604
170. Share capital	7,453,451	7,453,451					7,453,451
180. Treasury shares (-)	-	-					-
190. Minority shareholders' equity (+/-)	936	936					936
200. Profit (Loss) for the period (+/-)	-204,700	-204,700					-204,700
Total liabilities	**120,172,918**	**120,183,546**	**3,111**	**2,909,200**	**-**	**3,988,517**	**114,704,050**

The significant differences between the two aggregates (a) and (b) shown in Table EU LI1, are due to the different representation of the deposits to Central Banks due to the Reserve Requirement.

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

		Dec-22				
		a	b	c	d	e
				Items subject to		
		Total	Credit risk framework	Securitisation framework	CCR framework	Market risk framework
1	**Assets carrying value amount under the scope of regulatory consolidation (as per template LI1)**	119,530,603	111,561,433	545,119	7,424,051	6,296,021
2	**Liabilities carrying value amount under the regulatory scope of consolidation (as per template LI1)**	2,912,311	3,111	-	2,909,200	3,988,517
3	**Total net amount under the regulatory scope of consolidation**	116,618,292	111,558,322	545,119	4,514,851	2,307,504
4	**Off-balance-sheet amounts**	31,767,118	31,767,118			
5	*Differences in valuations*	*-33,166*	*-33,166*			
6	*Differences due to different netting rules, other than those already included in row 2*	-				
7	*Differences due to consideration of provisions*	*1,969,415*	*1,969,291*		*123*	
8	*Differences due to the use of credit risk mitigation techniques (CRMs)*	*-3,511,933*			*-3,511,933*	
9	*Differences due to credit conversion factors*	*-27,367,070*	*-27,367,070*			
10	*Differences due to Securitisation with risk transfer*	-				
11	*Other differences*	*-2,876,989*	*-5,765,438*	*935,241*	*1,953,208*	
12	**Exposure amounts considered for regulatory purposes**	116,565,667	112,129,058	1,480,360	2,956,249	

Table EU LI2 shows the reconciliation between the carrying amounts determined under regulatory consolidation and the amounts considered for regulatory purposes, for each type of risk.

With regard to credit risk, the main differences between the carrying amounts determined under regulatory consolidation and the amounts of exposures determined for regulatory purposes can be attributed to the following phenomena:

- differences due to the treatment of value adjustments for loans treated using the IRB approach;
- differences due to the use of risk mitigation techniques eligible under the CRR regulation with respect to financial collateral;
- differences due to the application of the credit conversion factor (CCF) on off-balance sheet positions.

As regards counterparty risk, the differences can be attributed to the different approaches to determining EAD under the CRR, including:

- the application of PFE (Potential Future Exposure) to derivative financial instruments;
- the application of regulatory haircuts on SFTs;
- “default funds” to operate in markets managed by central counterparties.

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

	Registered Office	Sector	Shareholding %	Type of relationship (a)	Voting rights % (b)	Treatment in the Balance Sheet	Treatment for Supervisory Purposes: Full consolidation	Proportional consolidation	Neither consolidated nor deducted	Deducted
BANCA MONTE DEI PASCHI DI SIENA S.p.a.	Siena	Banking				Full	x			
MPS LEASING E FACTORING S.p.a.	Siena	Leasing and factoring	100.00	1	100.00	Full	x			
MONTE PASCHI BANQUE S.A.	Parigi	Banking	100.00	1	100.00	Full	x			
MPS CAPITAL SERVICES - BANCA PER LE IMPRESE S.p.a	Firenze	Banking	100.00	1	100.00	Full	x			
WISE DIALOG BANK S.p.a. - WIDIBA	Milano	Banking	100.00	1	100.00	Full	x			
MONTE PASCHI FIDUCIARIA S.p.a	Siena	Trust company	100.00	1	100.00	Full	x			
MPS TENIMENTI POGGIO BONELLI e CHIGI SARACINI SOCIETÀ AGRICOLA S.p.a.	Siena	Wine industry	100.00	1	100.00	Full			x	
MONTE PASCHI CONSEIL FRANCE SOCIETE PAR ACTIONS SEMPLIFIEE	Parigi	Financial intermediary	100.00	1	100.00	Full	x			
CIRENE FINANCE S.r.l	Conegliano	Special purpose vehicle	60.00	1	60.00	Full	x			
MAGAZZINI GENERALI FIDUCIARI MANTOVA S.p.a	Mantova	Deposit and custody warehouses (for third parties)	100.00	1	100.00	Full	x			
MPS COVERED BOND S.r.l	Conegliano	Special purpose vehicle	90.00	1	90.00	Full	x			
MPS COVERED BOND 2 S.r.l	Conegliano	Special purpose vehicle	90.00	1	90.00	Full	x			
G.IMM.ASTOR S.r.l	Lecce	Real estate renting	52.00	1	52.00	Full	x			
IMMOBILIARE VICTOR HUGO S.C.I.	Parigi	Real estate	100.00	1	100.00	Full	x			
AIACE REOCO S.r.l. under liquidation	Siena	Real estate	100.00	1	100.00	Full	x			
SIENA MORTGAGES 07-5 S.p.a.	Conegliano	Special purpose vehicle	7.00	4	7.00	Full	x			
SIENA MORTGAGES 09-6 S.r.l.	Conegliano	Special purpose vehicle	7.00	4	7.00	Full	x			
SIENA MORTGAGES 10-7 S.r.l.	Conegliano	Special purpose vehicle	7.00	4	7.00	Full	x			
SIENA LEASE 2016 2 S.r.l.	Conegliano	Special purpose vehicle	10.00	4	10.00	Full	x			
SIENA PMI 2016 S.r.l.	Conegliano	Special purpose vehicle	10.00	4	10.00	Full	x			

EU LIB – Other qualitative information on the scope of application

The disclosure contained in this document refers solely to the Monte dei Paschi di Siena "Banking Group" as defined by Supervisory provisions. The "prudential" scope of consolidation is determined according to prudential regulations and differs from the scope of the consolidated financial statements, determined under IAS/IFRS. For the calculation of regulatory capital and prudential requirements it identifies the prudential scope of consolidation and this can create mismatches between the data disclosed in this document and that included in the Consolidated Financial Statements.

These differences are mainly attributable to consolidation of companies non included in the Register of Banking Group using the line-by-line method in the IAS/IFRS financial statement and the equity method for prudential supervision. It should be further noted that there are no non-consolidated companies within the Montepaschi Group.

No restrictions or other impediments exist that may prevent a prompt transfer of regulatory capital or funds within the Group.

EU PV1: Prudent valuation adjustments (PVA)

		a	b	c	d	e	EU e1	EU e2	f	g	h
		Risk category					Category level AVA - Valuation uncertainty		Total core approach		
	Category level AVA	Equity	Interest Rates	Foreign exchange	Credit	Commodities	Unearned credit spreads AVA	Investment and funding costs AVA		Of which: in the trading book	Of which: in the banking book
1	Market price uncertainty	346	3,828	0	6,788	848	-	45	5,928	2,261	3,667
3	Close-out cost	651	5,237	8	9,870	3	-	32	7,900	3,020	4,880
4	Concentrated positions	1,213	-	-	7,819	-			9,032	3,419	5,613
5	Early termination	-	-	-	-	-			-	-	-
6	Model risk	82	7,201	75	-	-	2,536	-	9,894	9,894	-
7	Operational risk	-	-	-	-	-			-	-	-
10	Future administrative costs	-	32	308	-	72			412	412	-
12	**Total Additional Valuation Adjustments (AVAs) as at 31/12/2022**								**33,166**	**19,007**	**14,159**

Annex VII – Disclosure of own funds

EU CC1 – Composition of regulatory own funds (Part 1)

		(A) Dec-22	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Common Equity Tier 1: instruments and reserves		
1	Capital instruments and the related share premium accounts	7,453,451	160. Share premium reserve 170. Equity
	of which: Paid up capital instruments	*7,453,451*	
2	Retained earnings	912,268	
3	Accumulated other comprehensive income (and other reserves)	-363,411	120. Valuation reserves 150. Reserves
EU-3a	Funds for general banking risk	-	
4	Amount of qualifying items referred to in Article 484 (3) and the related share premium accounts subject to phase out from CET1	-	
5	Minority interests (amount allowed in consolidated CET1)	-	
EU-5a	Independently reviewed interim profits net of any foreseeable charge or dividend	-	200. Profit / loss for the period
6	**COMMON EQUITY TIER 1 (CET1) CAPITAL BEFORE REGULATORY ADJUSTMENTS**	**8,002,308**	
	Common Equity Tier 1 (CET1) capital: regulatory adjustments		
7	Additional value adjustments (negative amount)	-33,166	Value adjustments for supervisory purposes (Prudent Valuation)
8	Intangible assets (net of related tax liability) (negative amount)	-115,187	100. Intangible assets
10	Deferred tax assets that rely on future profitability excluding those arising from temporary differences (net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-215,937	110. Tax assets
11	Fair value reserves related to gains or losses on cash flow hedges of financial instruments that are not valued at fair value	-	120. Valuation reserves 150. Reserves
12	Negative amounts resulting from the calculation of expected loss amounts	-	Surplus of expected losses compared to total value adjustments (IRB models)
13	Any increase in equity that results from securitised assets (negative amount)	-	
14	Gains or losses on liabilities valued at fair value resulting from changes in own credit standing	-11,130	Profit or loss of fair value deriving from the entity's own credit risk related to derivative liabilities
15	Defined-benefit pension fund assets (negative amount)	-	
16	Direct and indirect holdings by an institution of own CET1 instruments (negative amount)	-	180. Own shares
17	Direct, indirect and synthetic holdings of the CET 1 instruments of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
18	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	70. Holdings
19	Direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	70. Holdings
EU-20a	Exposure amount of the following items which qualify for a RW of 1250%, where the institution opts for the deduction alternative	-8,456	
EU-20b	*of which: qualifying holdings outside the financial sector (negative amount)*	-	
EU-20c	*of which: securitisation positions (negative amount)*	*-8,456*	
EU-20d	*of which: free deliveries (negative amount)*	-	
21	Deferred tax assets arising from temporary differences (amount above 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met) (negative amount)	-	110. Tax assets
22	Amount exceeding the 17,65% threshold (negative amount)	-186,033	
23	*of which: direct, indirect and synthetic holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities*	*-81,562*	*70. Holdings*
25	*of which: deferred tax assets arising from temporary differences*	*-104,471*	*110. Tax assets*
EU-25a	Losses for the current financial year (negative amount)	-204,700	200. Profit /loss for the period
EU-25b	Foreseeable tax charges relating to CET1 items except where the institution suitably adjusts the amount of CET1 items insofar as such tax charges reduce the amount up to which those items may be used to cover risks or losses (negative amount)	-	
27	Qualifying AT1 deductions that exceed the AT1 items of the institution (negative amount)	-	
27a	Other regulatory adjustments (including IFRS 9 transitional adjustments when relevant)	373,477	
28	**TOTAL REGULATORY ADJUSTMENTS TO COMMON EQUITY TIER 1 (CET1)**	**-401,132**	
29	**COMMON EQUITY TIER 1 (CET1) CAPITAL**	**7,601,176**	

EU CC1 – Composition of regulatory own funds (Part 2)

		(A) Dec-22	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Additional Tier 1 (AT1) capital: instruments		
30	Capital instruments and the related share premium accounts	-	
31	*of which: classified as equity under applicable accounting standards*	-	
32	*of which: classified as liabilities under applicable accounting standards*	-	*10. Financial liabilities valued at amortized cost -c) securities issued*
33	Amount of qualifying items referred to in Article 484 (4) and the related share premium accounts subject to phase out from AT1 as described in Article 486(3) of CRR	-	10. Financial liabilities valued at amortized cost -c) securities issued
EU-33a	Amount of qualifying items referred to in Article 494a(1) subject to phase out from AT1	-	
EU-33b	Amount of qualifying items referred to in Article 494b(1) subject to phase out from AT1	-	
34	Qualifying Tier 1 capital included in consolidated AT1 capital (including minority interests not included in row 5) issued by subsidiaries and held by third parties	-	
35	*of which: instruments issued by subsidiaries subject to phase out*	-	
36	**ADDITIONAL TIER 1 (AT1) CAPITAL BEFORE REGULATORY ADJUSTMENTS**	**-**	
	Additional Tier 1 (AT1) capital: regulatory adjustments		
37	Direct 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 inflate artificially the own funds of the institution (negative amount)	-	
39	Direct, indirect and synthetic holdings of the AT1 instruments of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	Additional capital instruments of class 1 of financial sector entities held by the entity, directly, indirectly or synthetically, when the entity does not have a significant investment in such entities
40	Direct, indirect and synthetic holdings by the institution of the AT1 instruments of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-	
42	Qualifying T2 deductions that exceed the T2 items of the institution (negative amount)	-	
42a	Other regulatory adjustments to AT1 capital	-	
43	**TOTAL REGULATORY ADJUSTMENTS TO ADDITIONAL TIER 1 (AT1) CAPITAL**	**-**	
44	**ADDITIONAL TIER 1 (AT1) CAPITAL**	**-**	
45	**TIER 1 CAPITAL (T1 = CET1 + AT1)**	**7,601,176**	

EU CC1 – Composition of regulatory own funds (Part 3)

		(A) Dec-22	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Tier 2 (T2) capital: instruments		
46	Capital instruments and the related share premium accounts	1,750,000	10. Financial liabilities valued at amortized cost -c) securities issued
47	Amount of qualifying items referred to in Article 484 (5) and the related share premium accounts subject to phase out from T2 as described in Article 486 (4) CRR	-	
EU-47a	Amount of qualifying items referred to in Article 494a (2) subject to phase out from T2	-	
EU-47b	Amount of qualifying items referred to in Article 494b (2) subject to phase out from T2	-	
48	Qualifying own funds instruments included in consolidated T2 capital (including minority interests and AT1 instruments not included in rows 5 or 34) issued by subsidiaries and held by third parties	-	
49	*of which: instruments issued by subsidiaries subject to phase out*	-	
50	Credit risk adjustments	88,060	Surplus of provisions compared to total value adjustments (IRB models)
51	**TIER 2 (T2) CAPITAL BEFORE REGULATORY ADJUSTMENTS**	**1,838,060**	
	Tier 2 (T2) capital: regulatory adjustments		
52	Direct and indirect holdings by an institution of own T2 instruments and subordinated loans (negative amount)	-	10. Financial liabilities valued at amortized cost -c) securities issued
53	Direct, indirect and synthetic holdings of the T2 instruments and subordinated loans of financial sector entities where those entities have reciprocal cross holdings with the institution designed to inflate artificially the own funds of the institution (negative amount)	-	
54	Direct and indirect holdings of the T2 instruments and subordinated loans of financial sector entities where the institution does not have a significant investment in those entities (amount above 10% threshold and net of eligible short positions) (negative amount)	-	Tier 2 capital instruments and subordinated loans of financial sector entities held directly or indirectly, when the institution has a significant investment in such entities
55	Direct and indirect holdings by the institution of the T2 instruments and subordinated loans of financial sector entities where the institution has a significant investment in those entities (net of eligible short positions) (negative amount)	-65,823	Tier 2 capital instruments and subordinated loans of financial sector entities held directly or indirectly, when the institution has a significant investment in such entities
EU-56a	Qualifying eligible liabilities deductions that exceed the eligible liabilities items of the institution (negative amount)	-	
56b	Other regulatory adjusments to T2 capital	-	
57	**TOTAL REGULATORY ADJUSTMENTS TO TIER 2 (T2) CAPITAL**	**-65,823**	
58	**TIER 2 (T2) CAPITAL**	**1,772,237**	
59	**TOTAL CAPITAL (TC = T1 + T2)**	**9,373,413**	
60	**TOTAL RISK EXPOSURE AMOUNT**	**45,686,193**	

EU CC1 – Composition of regulatory own funds (Part 4)

		(A) Dec-22	Source based on reference numbers/letters of the balance sheet under the regulatory scope of consolidation
	Capital ratios and buffers		
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	16.6380%	
62	Tier 1 (as a percentage of total risk exposure amount)	16.6380%	
63	Total capital (as a percentage of total risk exposure amount)	20.5170%	
64	Institution CET1 overall capital requirements	8.8049%	
65	*of which: capital conservation buffer requirement*	*2.5000%*	
66	*of which: countercyclical buffer requirement*	*0.0080%*	
67	*of which: systemic risk buffer requirement*	*0.0000%*	
EU-67a	*of which: Global Systemically Important Institution (G-SII) or Other Systemically Important Institution (O-SII) buffer*	*0.2500%*	
EU-67b	*of which: additional own funds requirements to address the risks other than the risk of excessive leverage*	*6.0469%*	
68	**COMMON EQUITY TIER 1 AVAILABLE TO MEET BUFFER (AS A PERCENTAGE OF RISK EXPOSURE AMOUNT)**	**8.5753%**	
	Amounts below the thresholds for deduction (before risk weighting)		
72	Direct and indirect holdings of own funds and eligible liabilities of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	110,595	
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 17.65% thresholds and net of eligible short positions)	473,341	
75	Deferred tax assets arising from temporary differences (amount below 17,65% threshold, net of related tax liability where the conditions in Article 38 (3) CRR are met)	589,314	
	Applicable caps on the inclusion of provisions in Tier 2		
76	Credit risk adjustments included in T2 in respect of exposures subject to standardised approach (prior to the application of the cap)	-	
77	Cap on inclusion of credit risk adjustments in T2 under standardised approach	-	
78	Credit risk adjustments included in T2 in respect of exposures subject to internal ratings-based approach (prior to the application of the cap)	88,060	
79	Cap for inclusion of credit risk adjustments in T2 under internal ratings-based approach	116,470	
	Capital instruments subject to phase-out arrangements (only applicable between 1 Jan 2014 and 1 Jan 2022)		
80	Current cap on CET1 instruments subject to phase out arrangements	-	
81	Amount excluded from CET1 due to cap (excess over cap after redemptions and maturities)	-	
82	Current cap on AT1 instruments subject to phase out arrangements	-	
83	Amount excluded from AT1 due to cap (excess over cap after redemptions and maturities)	-	
84	Current cap on T2 instruments subject to phase out arrangements	-	
85	Amount excluded from T2 due to cap (excess over cap after redemptions and maturities)	-	

The calculation of own funds is made in accordance with CRR and no restrictions are applied.

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

	Items	Dec-22 Statutory financial statements	Regulatory financial statements	Source
	ASSET			
70	Holdings	688,292	747,290	18,19,23
	of which implicit goodwill	*49,112*	*49,112*	
100	Intangible assets	162,649	162,645	8
	of which goodwill	*7,900*	*7,900*	*8*
	of which other intangible	*154,749*	*154,745*	*8*
110	Tax assets	2,216,377	2,215,135	10, 21, 25
	of which based on future profitability but not deriving from temporary differences	*-215,937*	*-215,937*	*10*
	LIABILITY			
10	Financial liabilities valued at amortized cost -c) securities in issue	8,551,005	8,551,005	32,33,46,52
30	Financial liabilities valued at FV	97,027	97,027	
120	Valuation reserves	-235,747	-235,747	3,11
	of which FVOCI	*-348,144*	*-348,144*	*3*
	of which CFH	-	-	*11*
	of which special revaluation laws	*6,478*	*6,478*	*3*
	of which others	*105,919*	*105,919*	*3*
150	Reserves	784,604	784,604	3
160	Share premium reserve	-	-	1
170	Equity	7,453,451	7,453,451	1
180	Own shares	-	-	16
200	Profit / loss for the period	-204,700	-204,700	5a,25a

EU CCA: Main features of regulatory own funds instruments and eligible liabilities instruments (part 1)

1	Issuer	Banca Monte dei Paschi di Siena S.p.A.
2	Unique identifier (e.g., CUSIP, ISIN or Bloomberg identifier for private placement)	**XS1752894292**
3	Governing law(s) of the instrument	English law except for subordination and “Statutory Loss Absorption Powers” conditions which are governed by Italian law
	Regulatory treatment	
4	Current treatment taking into account, where applicable, transitional CRR rules	Tier 2 capital
5	Post-transitional CRR rules	Tier 2 capital
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Individual entity and consolidated
7	Instrument type	Tier 2 instrument pursuant to Art. 63 CRR
8	Amount recognised in regulatory capital or eligible liabilities (currency in million)	750
9	Nominal amount of instrument (currency in million)	750
9a	Issue price	100.00
9b	Redemption price	100.00
10	Accounting classification	Liability - amortised cost
11	Original date of issuance	18/01/18
12	Perpetual or dated	On maturity
13	Original maturity date	18/01/28
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption amount	Issuer’s optional call on 18/01/2023 (the “Issuer Call Date”) at par, plus accrued interests. Upon occurrence of a “Capital Event” or for tax reasons at par, plus accrued interests.
16	Subsequent call dates, if applicable	N/A
	Coupons / dividends	
17	Fixed or floating dividend/coupon	Fixed rate p.a. with reset after 5 years
18	Coupon rate and any related index	5.375% till 18/01/2023, thereafter 5y eur mid swap rate +5.005%
19	Existence of a dividend stopper	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory
21	Existence of step up or other incentive to redeem	No
22	Cumulative or Noncumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down features	No
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Senior
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	N/A

“N/A” if the question is not applicable

EU CCA: Main features of regulatory own funds instruments and eligible liabilities instruments (part 2)

1	Issuer	Banca Monte dei Paschi di Siena S.p.A.
2	Unique identifier (e.g., CUSIP, ISIN or Bloomberg identifier for private placement)	**XS2031926731**
3	Governing law(s) of the instrument	English law except for subordination and "Statutory Loss Absorption Powers" conditions which are governed by Italian law
	Regulatory treatment	
4	Current treatment taking into account, where applicable, transitional CRR rules	Tier 2 capital
5	Post-transitional CRR rules	Tier 2 capital
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Individual entity and consolidated
7	Instrument type	Tier 2 instrument pursuant to Art. 63 CRR
8	Amount recognised in regulatory capital or eligible liabilities (currency in million)	300
9	Nominal amount of instrument (currency in million)	300
9a	Issue price	100.00
9b	Redemption price	100.00
10	Accounting classification	Liability - amortised cost
11	Original date of issuance	23/07/19
12	Perpetual or dated	On maturity
13	Original maturity date	23/07/29
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption amount	Upon occurrence of a "Capital Event" or for tax reasons at par, plus accrued interests.
16	Subsequent call dates, if applicable	N/A
	Coupons / dividends	
17	Fixed or floating dividend/coupon	Fixed rate p.a.
18	Coupon rate and any related index	10.500%
19	Existence of a dividend stopper	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory
21	Existence of step up or other incentive to redeem	No
22	Cumulative or Noncumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down features	No
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Senior
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	N/A

"N/A" if the question is not applicable

EU CCA: Main features of regulatory own funds instruments and eligible liabilities instruments (part 3)

1	Issuer	Banca Monte dei Paschi di Siena S.p.A.
2	Unique identifier (e.g., CUSIP, ISIN or Bloomberg identifier for private placement)	**XS2106849727**
3	Governing law(s) of the instrument	English law except for subordination and “Statutory Loss Absorption Powers” conditions which are governed by Italian law
	Regulatory treatment	
4	Current treatment taking into account, where applicable, transitional CRR rules	Tier 2 capital
5	Post-transitional CRR rules	Tier 2 capital
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Individual entity and consolidated
7	Instrument type	Tier 2 instrument pursuant to Art. 63 CRR
8	Amount recognised in regulatory capital or eligible liabilities (currency in million)	400
9	Nominal amount of instrument (currency in million)	400
9a	Issue price	100.00
9b	Redemption price	100.00
10	Accounting classification	Liability - amortised cost
11	Original date of issuance	22/01/20
12	Perpetual or dated	On maturity
13	Original maturity date	22/01/30
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption amount	Issuer’s optional call on 22/01/2025 (the “Issuer Call Date”) at par, plus accrued interests. Upon occurrence of a “Capital Event” or for tax reasons at par, plus accrued interests.
16	Subsequent call dates, if applicable	N/A
	Coupons / dividends	
17	Fixed or floating dividend/coupon	Fixed rate p.a. with reset after 5 years
18	Coupon rate and any related index	8.000% till 22/01/2025, thereafter 5y eur mid swap rate +8.149%
19	Existence of a dividend stopper	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory
21	Existence of step up or other incentive to redeem	No
22	Cumulative or Noncumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down features	No
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Senior
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	N/A

“N/A” if the question is not applicable

EU CCA: Main features of regulatory own funds instruments and eligible liabilities instruments (part 4)

1	Issuer	Banca Monte dei Paschi di Siena S.p.A.
2	Unique identifier (e.g., CUSIP, ISIN or Bloomberg identifier for private placement)	**XS2228919739**
3	Governing law(s) of the instrument	Italian law
	Regulatory treatment	
4	Current treatment taking into account, where applicable, transitional CRR rules	Tier 2 capital
5	Post-transitional CRR rules	Tier 2 capital
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Individual entity and consolidated
7	Instrument type	Tier 2 instrument pursuant to Art. 63 CRR
8	Amount recognised in regulatory capital or eligible liabilities (currency in million)	300
9	Nominal amount of instrument (currency in million)	300
9a	Issue price	100.00
9b	Redemption price	100.00
10	Accounting classification	Liability - amortised cost
11	Original date of issuance	10/09/20
12	Perpetual or dated	On maturity
13	Original maturity date	10/09/30
14	Issuer call subject to prior supervisory approval	Yes
15	Optional call date, contingent call dates and redemption amount	Issuer's optional call on 10/09/2025 (the "Issuer Call Date") at par, plus accrued interests. Upon occurrence of a "Capital Event" or for tax reasons at par, plus accrued interests.
16	Subsequent call dates, if applicable	N/A
	Coupons / dividends	
17	Fixed or floating dividend/coupon	Fixed rate p.a. with reset after 5 years
18	Coupon rate and any related index	8.500% till 10/09/2025, thereafter 5y eur mid swap rate +8.917%
19	Existence of a dividend stopper	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Mandatory
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Mandatory
21	Existence of step up or other incentive to redeem	No
22	Cumulative or Noncumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A
25	If convertible, fully or partially	N/A
26	If convertible, conversion rate	N/A
27	If convertible, mandatory or optional conversion	N/A
28	If convertible, specify instrument type convertible into	N/A
29	If convertible, specify issuer of instrument it converts into	N/A
30	Write-down features	No
31	If write-down, write-down trigger(s)	N/A
32	If write-down, full or partial	N/A
33	If write-down, permanent or temporary	N/A
34	If temporary write-down, description of write-up mechanism	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Senior
36	Non-compliant transitioned features	No
37	If yes, specify non-compliant features	N/A

"N/A" if the question is not applicable

Annex IX – Disclosure of countercyclical capital buffers

EU CCYB1 – Geographical distribution of credit exposures relevant for the calculation of the countercyclical capital buffer

	a	b	c	d	e	f	g	h	i	j	k	l	m
	Exposures in the banking book		Exposures in the trading book			Total exposure value	Own funds requirement				Risk-weighted exposure amounts	Weighting factors of own fund requirement	Countercyclical coefficient
Breakdown by country	Exposure value under SA approach	Exposure value under AIRB approach	Sum of long and short positions	Exposure value under internal models			Exposure value under AIRB approach	of which: generic credit exposures	of which: credit exposures of the trading book	of which: securi-tisation positions in the banking book			
Italy	10,347,020	69,548,000	1,665,096	-	2,987,096	84,547,211	2,193,387	17,866	46,922	2,258,176	28,227,195	94.9080%	0.000%
United Kindom	220,026	9,934	6,412	-	-	236,372	10,775	513	-	11,288	141,095	0.4744%	1.000%
Luxemburg	173,774	14,878	43,095	-	-	231,747	6,407	3,274	-	9,681	121,013	0.4069%	0.500%
Romania	18,969	573	-	-	-	19,542	811	-	-	811	10,137	0.0341%	0.500%
Norway	7,406	250	30	-	-	7,687	248	2	-	250	3,124	0.0105%	2.000%
Sweden	6,330	309	385	-	-	7,025	180	31	-	211	2,637	0.0089%	1.000%
Czech Republic	5,747	101	-	-	-	5,848	359	-	-	359	4,483	0.0151%	1.500%
Denmark	5	482	2,049	-	-	2,535	11	164	-	175	2,184	0.0073%	2.000%
Slovakia	1,547	167	-	-	-	1,714	55	-	-	55	687	0.0023%	1.000%
Hong Kong	357	272	24	-	-	653	10	2	-	12	153	0.0005%	1.000%
Bulgaria	579	31	-	-	-	610	6	-	-	6	81	0.0003%	1.000%
Iceland	219	-	-	-	-	219	18	-	-	18	219	0.0007%	2.000%
Estonia	35	-	-	-	-	35	1	-	-	1	10	0.0000%	1.000%
Other	1,904,328	72,631	612,368	-	-	2,589,327	82,857	15,433	-	98,290	1,228,622	4.1310%	
Total	**12,686,342**	**69,647,629**	**2,329,458**	**-**	**2,987,096**	**87,650,525**	**2,295,124**	**37,285**	**46,922**	**2,379,331**	**29,741,641**	**100.0000%**	

EU CCYB2 – Amount of institution specific countercyclical capital buffer

		Dec-22
1	Total risk exposure amount (RWA)	45,686,193
2	Specific countercyclical coefficient of the institution	0.0080%
3	Specific countercyclical capital buffer requirement of the institution	3,654.90

Annex XI – Disclosure of the leverage ratio

EU LR1 – LR Sum: Summary reconciliation of accounting assets and leverage ratio exposures

		Dec-22 a Applicable amount
1	Total assets as per published financial statements	120,172,918
2	Adjustment for entities which are consolidated for accounting purposes but are outside the scope of regulatory consolidation	10,628
3	(Adjustment for securitised exposures that meet the operational requirements for the recognition of risk transference)	-
4	(Adjustment for temporary exemption of exposures to central bank (if applicable))	-
5	(Adjustment for fiduciary assets recognised on the balance sheet pursuant to the applicable accounting framework but excluded from the leverage ratio total exposure measure in accordance with point (i) of Article 429a(1) CRR)	-
6	Adjustment for regular-way purchases and sales of financial assets subject to trade date accounting	-
7	Adjustment for eligible cash pooling transactions	-
8	Adjustments for derivative financial instruments	-5,730,687
9	Adjustment for securities financing transactions (SFTs)	-2,486,586
10	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	6,799,982
11	(Adjustment for prudent valuation adjustments and specific and general provisions which have reduced Tier 1 capital)	-
EU-11a	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-
EU-11b	(Adjustment for exposures excluded from the leverage ratio total exposure measure in accordance with point (j) of Article 429a(1) CRR)	-
12	Other adjustments	13,057,057
13	**LEVERAGE RATIO TOTAL EXPOSURE MEASURE**	**131,823,310**

EU LR2 – LRCom: Leverage ratio common disclosure

		CRR leverage ratio exposures	
		a	a
		Dec- 22	Jun-22
	On-balance sheet exposures (excluding derivatives and SFTs)		
1	On-balance sheet items (excluding derivatives, SFTs, but including collateral)	113,602,933	124,739,755
2	Gross-up for derivatives collateral provided where deducted from the balance sheet assets pursuant to the applicable accounting framework	-	-
3	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	-441,901	-387,507
4	(Adjustment for securities received under securities financing transactions that are recognised as an asset)	-	0
5	(General credit risk adjustments to on-balance sheet items)	-	0
6	(Asset amounts deducted in determining Tier 1 capital)	-195,987	-209,035
7	**'TOTAL ON-BALANCE SHEET EXPOSURES (EXCLUDING DERIVATIVES AND SFTS)**	**112,965,044**	**124,143,212**
	Derivative exposures		
8	Replacement cost associated with SA-CCR derivatives transactions (ie net of eligible cash variation margin)	3,746,112	1,854,086
EU-8a	Derogation for derivatives: replacement costs contribution under the simplified standardised approach	-	-
9	Add-on amounts for potential future exposure associated with SA-CCR derivatives transactions	974,436	1,039,964
EU-9a	Derogation for derivatives: Potential future exposure contribution under the simplified standardised approach	-	-
EU-9b	Exposure determined under Original Exposure Method	-	-
10	(Exempted CCP leg of client-cleared trade exposures) (SA-CCR)	-	-
EU-10a	(Exempted CCP leg of client-cleared trade exposures) (simplified standardised approach)	-	-
EU-10b	(Exempted CCP leg of client-cleared trade exposures) (original exposure method)	-	-
11	Adjusted effective notional amount of written credit derivatives	3,363,053	3,340,049
12	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	-70,885	-10,000
13	**TOTAL DERIVATIVES EXPOSURES**	**8,012,716**	**6,224,099**
	Securities financing transaction (SFT) exposures		
14	Gross SFT assets (with no recognition of netting), after adjustment for sales accounting transactions	6,561,683	3,356,568
15	(Netted amounts of cash payables and cash receivables of gross SFT assets)	-2,830,532	-0
16	Counterparty credit risk exposure for SFT assets	343,946	367,280
EU-16a	Derogation for SFTs: Counterparty credit risk exposure in accordance with Articles 429e(5) and 222 CRR	-	-
17	Agent transaction exposures	-	-
EU-17a	(Exempted CCP leg of client-cleared SFT exposure)	-	-
18	**TOTAL SECURITIES FINANCING TRANSACTION EXPOSURES**	**4,075,096**	**3,723,849**
	Other off-balance sheet exposures		
19	Off-balance sheet exposures at gross notional amount	31,767,300	32,219,662
20	(Adjustments for conversion to credit equivalent amounts)	-24,967,889	-25,117,743
21	(General provisions associated with off-balance sheet exposures deducted in determining Tier 1 capital)	-	-
22	**OFF-BALANCE SHEET EXPOSURES**	**6,799,411**	**7,101,918**
	Excluded exposures		
EU-22a	(Exposures excluded from the leverage ratio total exposure measure in accordance with point (c) of Article 429a(1) CRR)	-	-
EU-22b	(Exposures exempted in accordance with point (j) of Article 429a (1) CRR (on and off balance sheet))	-	-
EU-22c	(-) Excluded exposures of public development banks - Public sector investments	-	-
EU-22d	(Excluded promotional loans of public development banks: - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-	-
EU-22e	(Excluded passing-through promotional loan exposures by non-public development banks (or units): - Promotional loans granted by a public development credit institution - Promotional loans granted by an entity directly set up by the central government, regional governments or local authorities of a Member State - Promotional loans granted by an entity set up by the central government, regional governments or local authorities of a Member State through an intermediate credit institution)	-	-
EU-22f	(Excluded guaranteed parts of exposures arising from export credits)	-28,957	-30,920
EU-22g	(Excluded excess collateral deposited at triparty agents)	-	-
EU-22h	(Excluded CSD related services of CSD/institutions in accordance with point (o) of Article 429a(1) CRR)	-	-
EU-22i	(Excluded CSD related services of designated institutions in accordance with point (p) of Article 429a(1) CRR)	-	-
EU-22j	(Reduction of the exposure value of pre-financing or intermediate loans)	-	-
EU-22k	**(TOTAL EXEMPTED EXPOSURES)**	**-28,957**	**-30,920**

EU LR2 – LRCom: Leverage ratio common disclosure

		CRR leverage ratio exposures	
		a	a
		Dec- 22	Jun-22
	Capital and total exposure measure		
23	**TIER 1 CAPITAL**	**7,601,176**	**5,575,701**
24	**LEVERAGE RATIO TOTAL EXPOSURE MEASURE**	**131,823,310**	**141,162,158**
	Leverage ratio		
25	Leverage ratio	5.7662%	3.9499%
EU-25	Leverage ratio (without the adjustment due to excluded exposures of public development banks - Public sector investments) (%)	5.7662%	3.9499%
25a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves)	5.7662%	3.9499%
26	Regulatory minimum leverage ratio requirement (%)	3.0000%	3.0000%
EU-26a	Additional own funds requirements to address the risk of excessive leverage (%)	0.0000%	0.0000%
EU-26b	*of which: to be made up of CET1 capital*	*0.0000%*	*0.0000%*
27	Required leverage buffer (%)	0.0000%	0.0000%
EU-27a	Overall leverage ratio requirement (%)	3.0000%	3.0000%
	Choice on transitional arrangements and relevant exposures		
EU-27b	Choice on transitional arrangements for the definition of the capital measure	Transitional	Transitional
	Disclosure of mean values		
28	Mean value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivable	3,518,787	3,693,979
29	Quarter-end value of gross SFT assets, after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables	3,731,150	3,356,568
30	Total exposures (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	131,610,947	141,499,569
30a	Total exposures (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	131,610,947	141,499,569
31	Leverage ratio (including the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.7755%	3.9404%
31a	Leverage ratio (excluding the impact of any applicable temporary exemption of central bank reserves) incorporating mean values from row 28 of gross SFT assets (after adjustment for sale accounting transactions and netted of amounts of associated cash payables and cash receivables)	5.7755%	3.9404%

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

		a Dec-22 CRR leverage ratio exposures
EU-1	**TOTAL ON-BALANCE SHEET EXPOSURES (EXCLUDING DERIVATIVES, SFTS, AND EXEMPTED EXPOSURES), OF WHICH:**	**113,132,074**
EU-2	Trading book exposures	3,963,143
EU-3	Banking book exposures, of which:	109,168,931
EU-4	*Covered bonds*	*618,333*
EU-5	*Exposures treated as sovereigns*	*25,206,366*
EU-6	*Exposures to regional governments, MDB, international organisations and PSE not treated as sovereigns*	*1,510,048*
EU-7	*Institutions*	*3,381,012*
EU-8	*Secured by mortgages of immovable properties*	*36,456,495*
EU-9	*Retail exposures*	*9,583,178*
EU-10	*Corporate*	*21,375,232*
EU-11	*Exposures in default*	*1,705,586*
EU-12	*Other exposures (eg equity, securitisations, and other non-credit obligation assets)*	*9,332,680*

EU LRA: Disclosure of LR qualitative information

The Group's Risk Appetite Framework (RAF) constitutes the basic risk management framework in the Montepaschi Group. The RAF is governed at Group level by a regulatory framework that establishes a system of governance, processes, tools and procedures for fully managing the Group's risk. Leverage risk is included in the RAF and is therefore subject to the control procedures contained therein. The Leverage Ratio is one of the Key Risk Indicators monitored within the RAF for 2022.

While still above the mandatory minimum level, the financial leverage index in 2022 was periodically decreasing until the completion of the planned capital increase that brought the level to the range of almost double the required minimum. The half-year 182 bp increase from the previous 3.95% was due to the decrease in total exposure by Euro 9,339 mln and the increase in CET1 by 2,025 mln. The decrease in the denominator is registered in other assets (-11,124 mln) mainly due to lower reserves in the ECB following the repayment of the first tranche of TLTRO for approximately Euro 10 bn, a decrease which was partially offset by the higher prices on derivatives and variation margins due to lower collateralisation.

In 2022, the Montepaschi Group adopted internal regulations regarding the roles, responsibilities and process for managing Excessive Leverage Risk, supplementing the "Group Directive on managing the Internal Capital Adequacy Assessment Process (ICAAP)", which includes and governs the management of this type of risk.

Annex XIII – Disclosure of liquidity requirements

EU LIQA – Liquidity risk management

The Group has used a **Liquidity Risk Framework** for many years now, intended as the set of tools, methodologies, organisational and *governance* setups which ensures both *compliance* with national and international regulations and adequate liquidity risk governance in the short (Operating Liquidity) and medium/long term (Structural Liquidity), under business-as-usual and stress conditions.

The reference Liquidity Risk model for the Montepaschi Group is "centralised" and calls for the management of short-term liquidity reserves and medium/long-term financial balance at Parent Company level, guaranteeing solvency on a consolidated and individual basis for the Subsidiaries.

The management of operational and structural liquidity is governed by the Parent Company's Liquidity Management Function, which is responsible for defining and implementing funding strategies in the short and medium-long term.

With regard to operational liquidity management, the Liquidity Management Function manages the Group's "liquidity reserves" in order to ensure the Bank's ability to cope with expected and unforeseen outflows, making use of the various tools of the interbank market (unsecured deposits, collateralised deposits, repos), as well as transactions with the Central Bank.

With regard to the management of structural liquidity, the Liquidity Management Function pursues the objectives detailed in the annual Funding Plan, which operationally sets out the medium/long-term strategies defined in the "Liquidity and Funding Strategy". The Group's "Liquidity and Funding Strategy" establishes the guidelines for the MPS Group's funding activities in terms of risk appetite, with a three-year time horizon, in compliance with the multi-year risk tolerance thresholds on operational and structural liquidity indicators – both internal and regulatory – defined in the Group's Risk Appetite Statement (RAS).

The management of the Group's **Operating Liquidity** is aimed at ensuring the Group's ability to meet its cash payment commitments in the short term. The essential condition for day-to-day banking business continuity is the maintenance of a sustainable imbalance between liquidity inflows and outflows in the short term. From an operational point of view, the benchmark metric in this respect is the difference between net cumulative cash flows and Counterbalancing Capacity, i.e.

the liquidity reserve that enables the Bank to cope with short-term stress conditions in addition to the regulatory measure of the Liquidity Coverage Ratio (LCR) Delegated Regulation. From the extremely short-term perspective, the Group adopts a system for the analysis and monitoring of intraday liquidity, with the goal of ensuring normal development during the bank's treasury day and its ability to meet its intraday payment commitments.

The management of the Group's **Structural Liquidity** aims instead at ensuring the structural financial balance by maturity buckets over a time horizon of more than one year, at both Group and individual Company level. Maintaining an adequate dynamic ratio between medium/long-term liabilities and assets is aimed at avoiding pressure on current and prospective short-term funding sources. The benchmark metrics include gap ratios that measure both the ratio between total funding and loans with maturities of more than 1 year and more than 5 years, and the ratio between funding and commercial loans, as well as the regulatory measure of the Net Stable Funding Ratio (NSFR) according to the CRR2 definition, in force from 30 June 2021.

The Group also defined and formalised an Asset Encumbrance management and monitoring framework with the aim of analysing:

- the overall degree of encumbrance of total assets;
- the existence of a sufficient quantity of assets that may be encumbered but which are free;
- the Group's ability to transform banking assets into eligible assets (or equivalently, to encumber non-eligible assets in bilateral transactions);
- a framework for monitoring Concentration Risk, with the aim of analysing:
- the concentration of funding sources, both by counterparty and by type of channel;
- the concentration of assets that make up the Group's liquidity reserves.

In addition, to complete the Funding Plan, the Liquidity Management Function prepares the Contingency Funding Plan, which represents the operational tool for liquidity risk management aimed at defining intervention strategies in the event of extreme liquidity tension, providing procedures and actions that can be promptly activated to obtain sources of funding in the event of an emergency. The strategies to be applied are defined on a case-by-case basis by the Management Committee at its Liquidity Stress/Crisis session considering the type, duration and intensity of the crisis and the reference context at the time the crisis occurs.

The internal assessment of liquidity adequacy (*Internal Liquidity Adequacy Statement* - ILAAP) is a process that is part of the more general Risk Management macro-process, in direct connection with the *Risk Appetite Framework* (RAF) through the annual formulation of the *Risk Appetite Statement* (RAS).

EU LIQ 1: Quantitative information of LCR

	Currency and units (EUR million)	Total unweighted value (average)				Total weighted value (average)			
EU 1a	Quarter ending on (DD Month YYY)	Dec-22	Sep-22	Jun-22	Mar-22	Dec-22	Sep-22	Jun-22	Mar-22
EU 1b	Number of data points used in the calculation of averages	12	12	12	12	12	12	12	12
1	**Total high-quality liquid assets (HQLA)**					**25,216**	**24,925**	**25,289**	**26,361**
2	Retail deposits and deposits from small business customers, of which:	53,111	53,338	53,372	53,232	3,440	3,455	3,451	3,433
3	*Stable deposits*	*41,763*	*41,940*	*42,026*	*42,020*	*2,088*	*2,097*	*2,101*	*2,101*
4	*Less stable deposits*	*11,348*	*11,398*	*11,346*	*11,212*	*1,352*	*1,358*	*1,350*	*1,332*
5	**Unsecured wholesale funding**	**19,080**	**19,381**	**19,694**	**20,679**	**8,864**	**9,023**	**9,130**	**9,550**
6	*Operational deposits (all counterparties) and deposits in networks of cooperative banks*	-	-	-	-	-	-	-	-
7	Non-operational deposits (all counterparties)	19,020	19,321	19,634	20,657	8,804	8,963	9,070	9,528
8	Unsecured debt	60	60	60	22	60	60	60	22
9	Secured wholesale funding					183	197	295	335
10	Additional requirements	3,441	3,507	3,430	3,473	1,173	1,141	1,046	1,069
11	Outflows related to derivative exposures and other collateral requirements	850	722	613	634	850	722	613	634
12	Outflows related to loss of funding on debt products	21	88	97	102	21	88	97	102
13	Credit and liquidity facilities	2,570	2,697	2,720	2,737	302	331	336	334
14	Other contractual funding	1,312	1,444	1,619	1,615	9	13	8	8
15	Other contingent funding obligations	29,487	28,764	28,062	27,306	1,919	1,842	1,765	1,716
16	TOTAL CASH OUTFLOWS					15,588	15,671	15,695	16,111
	CASH – INFLOWS								
17	Secured lending (e.g. reverse repos)	2,383	2,779	3,520	4,346	92	99	108	109
18	Inflows from fully performing exposures	2,022	1,910	1,818	1,713	1,102	1,041	1,000	952
19	Other cash inflows	3,147	3,094	3,071	3,061	669	661	674	674
EU-19a	(Difference between total weighted inflows and total weighted outflows arising from transactions in third countries where there are transfer restrictions or which are denominated in non-convertible currencies)					-	-	-	-
EU-19b	(Excess inflows from a related specialised credit institution)					-	-	-	-
20	TOTAL CASH INFLOWS	7,552	7,783	8,409	9,120	1,864	1,802	1,782	1,735
EU-20a	*Fully exempt inflows*	-	-	-	-	-	-	-	-
EU-20b	*Inflows subject to 90% cap*	-	-	-	-	-	-	-	-
EU-20c	*Inflows subject to 75% cap*	*7,552*	*7,783*	*8,409*	*9,120*	*1,864*	*1,802*	*1,782*	*1,735*
EU-21	LIQUIDITY BUFFER					25,216	24,925	25,289	26,361
22	TOTAL NET CASH OUTFLOWS					13,724	13,869	13,914	14,376
23	LIQUIDITY COVERAGE RATIO (%)					183.95%	179.86%	181.78%	183.18%

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

The Liquidity Coverage Ratio (LCR) is the regulatory index used to monitor short-term liquidity risk. In the second quarter of 2022, the Group liquidity was characterized by the absence of any signs of strain in the short term, with the LCR (calculated according to Delegated Regulation (EU) 2015/61) remaining stable at over 170%, well above the regulatory limit of 100%, with an adequate safety buffer. The indicator was up compared to the previous quarter (+7.6%, with LCR rising from 184.7% at end-September 2022 to 192.3% at end-December 2022) mainly due to the benefit generated from the completion of the capital increase (approximately Euro +2.5 bn), partially mitigated by the negative effects mainly resulting from the reimbursement of TLTROs for a total of Euro 10 bn (the impact on the indicator is generated from approximately Euro 1.5 bn collateralized through Non-HQLA instruments) and the reduction in commercial funding with wholesale counterparties by about Euro -1.3 bn (the negative impact on the indicator, in this case, is partially offset by the benefit resulting from the reduction in corresponding outflows of about Euro -0.9 bn).

It should be noted that no methodological changes were made to the indicator in Q4 2022.

On a monthly basis, the Group monitors the risk of concentration of sources of financial and commercial funding, with a particular focus on the details of the main non-retail counterparties. At the end of December 2022, in accordance with what is monitored through the Additional Liquidity Monitoring Metrics (ALMM) regulatory reporting, funding through unsecured channels amounts to roughly 75% of the total, of which 8% relating to financial non-retail counterparties and 17% relating to non-financial non-retail counterparties.

In December 2022, the Liquidity buffer shows a strong prevalence of available liquidity deriving from the Italian and European government bonds (56% pf the aggregate), the reserve held with the ECB (41% of the total Liquidity Buffer of which Deposit Facility accounting for 39% of the section), and other remaining items (3%), all of which are listed on the main regulated markets and easily liquidated in the short term.

It should be noted that outflows relating to derivative positions and potential requests for collateral have an impact on the reference aggregate of less than 6%. It should also be noted that the liquidity reserves in currencies other than the Euro, as well as the outflows and inflows in currencies other than the Euro – all of which account for less than 1% each – are marginal for the MPS Group and do not cause currency misalignments in the calculation of the LCR.

Finally, it should be noted that all elements considered relevant to the institution's liquidity profile are included in the calculation of the LCR indicator.

EU LIQ2: Net Stable Funding Ratio - NSFR as at 31.12.2022

		Dec-22				
		a	b	c	d	e
		Unweighted value by residual maturity				
	(in currency amount)	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
	Available stable funding (ASF) Items					
1	Capital items and instruments	7,797,608	-	-	1,838,060	9,635,668
2	*Own funds*	*7,797,608*	-	-	*1,838,060*	*9,635,668*
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		52,578,820	1,963	25,429	49,419,404
5	*Stable deposits*		*41,424,701*	*697*	*1,417*	*39,355,544*
6	*Less stable deposits*		*11,154,120*	*1,267*	*24,013*	*10,063,860*
7	Wholesale funding:		30,333,314	3,250,197	14,249,024	23,108,208
8	*Operational deposits*		-	-	-	-
9	*Other wholesale funding*		*30,333,314*	*3,250,197*	*14,249,024*	*23,108,208*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	323,391	2,595,906	952	4,756,105	4,756,581
12	*NSFR derivative liabilities*	*323,391*				
13	*All other liabilities and capital instruments not included in the above categories*		*2,595,906*	*952*	*4,756,105*	*4,756,581*
14	**Total available stable funding (ASF)**					**86,919,862**
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					34,078
EU-15a	Assets encumbered for more than 12m in cover pool		96,667	116,103	6,128,430	5,390,020
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		19,904,287	4,671,046	49,477,315	47,046,821
18	*Performing securities financing transactions with financial customer-scollateralised by Level 1 HQLA subject to 0% haircut*		*3,481,046*	*200,769*	*204,419*	*304,804*
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*2,579,217*	*86,117*	*391,555*	*693,210*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*11,701,713*	*3,324,371*	*22,630,230*	*42,766,741*
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*1,337,506*	*1,500,975*	*10,336,944*	*25,061,448*
22	*Performing residential mortgages, of which:*		*648,422*	*788,289*	*22,963,908*	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*627,576*	*763,656*	*22,157,554*	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*1,493,888*	*271,499*	*3,287,203*	*3,282,067*
25	Interdependent assets		-	-	-	-
26	Other assets:	-	1,879,463	161,245	10,637,845	11,377,900
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*807,401*	*686,291*
29	*NSFR derivative assets*		*251,947*			*251,947*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*1,114,898*			*55,745*
31	*All other assets not included in the above categories*		*512,618*	*161,245*	*9,830,444*	*10,383,918*
32	Off-balance sheet items		3,232,043	2,888,593	5,180,557	946,255
33	**Total RSF**					**64,795,074**
34	**Net Stable Funding Ratio (%)**					**134.1458%**

EU LIQ2: Net Stable Funding Ratio - NSFR as at 30.09.2022

		a	b	c	d	e
		Sep-22				
		Unweighted value by residual maturity				
	(in currency amount)	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
	Available stable funding (ASF) Items					
1	Capital items and instruments	5,304,105	-	-	1,870,401	7,174,506
2	*Own funds*	*5,304,105*	-	-	*1,870,401*	*7,174,506*
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		52,614,380	3,093	27,171	49,473,605
5	*Stable deposits*		*41,813,281*	*872*	*1,879*	*39,725,325*
6	*Less stable deposits*		*10,801,099*	*2,221*	*25,292*	*9,748,281*
7	Wholesale funding:		25,009,139	20,321,889	14,356,568	31,763,109
8	*Operational deposits*		-	-	-	-
9	*Other wholesale funding*		*25,009,139*	*20,321,889*	*14,356,568*	*31,763,109*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	401,093	2,403,396	945	7,055,158	7,055,630
12	*NSFR derivative liabilities*	*401,093*				
13	*All other liabilities and capital instruments not included in the above categories*		*2,403,396*	*945*	*7,055,158*	*7,055,630*
14	**Finanziamento stabile disponibile (ASF) totale**					**95,466,850**
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					2,130,103
EU-15a	Assets encumbered for more than 12m in cover pool		89,495	107,200	5,839,036	5,130,371
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		20,933,237	4,411,772	50,743,353	48,809,276
18	*Performing securities financing transactions with financial customer-scollateralised by Level 1 HQLA subject to 0% haircut*		*3,126,711*	*152,367*	*405,188*	*594,182*
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*2,597,011*	*47,582*	*321,504*	*610,971*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*13,164,493*	*3,023,756*	*23,093,841*	*43,976,497*
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*1,437,948*	*1,465,478*	*10,844,069*	*25,731,846*
22	*Performing residential mortgages, of which:*		*715,514*	*813,416*	*23,304,304*	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*690,526*	*784,474*	*22,479,376*	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*1,329,508*	*374,652*	*3,618,516*	*3,627,626*
25	Interdependent assets		-	-	-	-
26	Other assets:	-	2,113,971	143,519	10,925,583	11,858,807
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*953,496*	*810,471*
29	*NSFR derivative assets*		*348,838*			*348,838*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*1,159,496*			*57,975*
31	*All other assets not included in the above categories*		*605,637*	*143,519*	*9,972,088*	*10,641,523*
32	Off-balance sheet items		3,297,233	2,548,398	5,925,850	999,314
33	**Total RSF**					**68,927,872**
34	**Net Stable Funding Ratio (%)**					**138.5025%**

EU LIQ2: Net Stable Funding Ratio - NSFR as at 30.06.2022

		Jun-22				
		a	b	c	d	e
		Unweighted value by residual maturity				
	(in currency amount)	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
	Available stable funding (ASF) Items					
1	Capital items and instruments	5,809,529	-	-	1,869,641	7,679,171
2	*Own funds*	*5,809,529*	-	-	*1,869,641*	*7,679,171*
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		52,683,714	2,941	28,224	49,542,396
5	*Stable deposits*		*41,922,625*	*1,010*	*2,179*	*39,829,633*
6	*Less stable deposits*		*10,761,089*	*1,931*	*26,045*	*9,712,763*
7	Wholesale funding:		24,925,737	17,951,766	17,472,502	33,829,696
8	*Operational deposits*		-	-	-	-
9	*Other wholesale funding*		*24,925,737*	*17,951,766*	*17,472,502*	*33,829,696*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	309,436	2,696,821	238	6,189,593	6,189,712
12	*NSFR derivative liabilities*	*309,436*				
13	*All other liabilities and capital instruments not included in the above categories*		*2,696,821*	*238*	*6,189,593*	*6,189,712*
14	**Finanziamento stabile disponibile (ASF) totale**					**97,240,975**
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					2,404,146
EU-15a	Assets encumbered for more than 12m in cover pool		88,187	105,893	5,862,093	5,147,747
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		20,330,998	4,747,363	51,914,963	50,964,540
18	*Performing securities financing transactions with financial customerscollateralised by Level 1 HQLA subject to 0% haircut*		*3,118,881*	*467,753*	*204,419*	*524,560*
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*2,278,078*	*22,968*	*347,195*	*588,086*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*12,731,812*	*2,933,083*	*24,286,364*	*46,063,500*
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*1,200,136*	*1,352,731*	*11,626,649*	*26,787,307*
22	*Performing residential mortgages, of which:*		*673,674*	*821,321*	*23,350,743*	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*650,537*	*791,194*	*22,474,475*	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*1,528,554*	*502,238*	*3,726,243*	*3,788,394*
25	Interdependent assets		-	-	-	-
26	Other assets:	-	1,930,086	136,901	10,602,027	11,424,053
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*968,912*	*823,575*
29	*NSFR derivative assets*		*279,238*			*279,238*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*1,109,828*			*55,491*
31	*All other assets not included in the above categories*		*541,020*	*136,901*	*9,633,115*	*10,265,749*
32	Off-balance sheet items		1,681,217	4,065,091	6,392,145	1,027,224
33	**Total RSF**					**70,967,710**
34	**Net Stable Funding Ratio (%)**					**137.0214%**

EU LIQ2: Net Stable Funding Ratio - NSFR as at 31.03.2022

		Mar-22				
		a	b	c	d	e
			Unweighted value by residual maturity			
	(in currency amount)	No maturity	< 6 months	6 months to < 1yr	≥ 1yr	Weighted value
	Available stable funding (ASF) Items					
1	Capital items and instruments	5,996,470	-	-	1,868,636	7,865,106
2	*Own funds*	*5,996,470*	-	-	*1,868,636*	*7,865,106*
3	*Other capital instruments*		-	-	-	-
4	Retail deposits		52,744,821	2,218	29,680	49,608,472
5	*Stable deposits*		*42,127,892*	*1,242*	*2,818*	*40,025,495*
6	*Less stable deposits*		*10,616,929*	*976*	*26,862*	*9,582,977*
7	Wholesale funding:		21,218,036	5,070,825	34,554,689	44,196,045
8	*Operational deposits*		-	-	-	-
9	*Other wholesale funding*		*21,218,036*	*5,070,825*	*34,554,689*	*44,196,045*
10	Interdependent liabilities		-	-	-	-
11	Other liabilities:	233,894	3,209,798	29	5,451,236	5,451,251
12	*NSFR derivative liabilities*	*233,894*				
13	*All other liabilities and capital instruments not included in the above categories*		*3,209,798*	*29*	*5,451,236*	*5,451,251*
14	**Finanziamento stabile disponibile (ASF) totale**					**107,120,874**
	Required stable funding (RSF) Items					
15	Total high-quality liquid assets (HQLA)					6,338,837
EU-15a	Assets encumbered for more than 12m in cover pool		453,494	516,154	18,036,388	16,155,130
16	Deposits held at other financial institutions for operational purposes		-	-	-	-
17	Performing loans and securities:		21,006,988	4,392,629	39,931,670	43,895,866
18	*Performing securities financing transactions with financial customer-scollateralised by Level 1 HQLA subject to 0% haircut*		*3,853,738*	*319,562*	*204,419*	*608,469*
19	*Performing securities financing transactions with financial customer collateralised by other assets and loans and advances to financial institutions*		*2,793,041*	*24,025*	*371,908*	*675,531*
20	*Performing loans to non- financial corporate clients, loans to retail and small business customers, and loans to sovereigns, and PSEs, of which:*		*12,526,749*	*2,981,014*	*22,737,340*	*38,458,663*
21	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*1,213,425*	*1,263,493*	*11,735,116*	*20,302,053*
22	*Performing residential mortgages, of which:*		*480,564*	*537,660*	*12,674,131*	-
23	*With a risk weight of less than or equal to 35% under the Basel II Standardised Approach for credit risk*		*468,607*	*524,150*	*12,121,725*	-
24	*Other loans and securities that are not in default and do not qualify as HQLA, including exchange-traded equities and trade finance on-balance sheet products*		*1,352,895*	*530,369*	*3,943,872*	*4,153,202*
25	Interdependent assets		-	-	-	-
26	Other assets:	-	2,198,510	152,208	10,818,798	11,690,970
27	*Physical traded commodities*				-	-
28	*Assets posted as initial margin for derivative contracts and contributions to default funds of CCPs*		-	-	*1,142,644*	*971,248*
29	*NSFR derivative assets*		*282,805*			*282,805*
30	*NSFR derivative liabilities before deduction of variation margin posted*		*1,334,249*			*66,712*
31	*All other assets not included in the above categories*		*581,456*	*152,208*	*9,676,154*	*10,370,206*
32	Off-balance sheet items		2,399,715	3,561,042	5,810,375	988,438
33	**Total RSF**					**79,069,242**
34	**Net Stable Funding Ratio (%)**					**135.4773%**

The Net Stable Funding Ratio (NSFR) is a structural 12-month liquidity indicator. In the second quarter of 2022, the Group liquidity was characterized by the lack of signs of strain in the medium- and long-term, with the NSFR stable, exceeding 120%, significantly above the regulatory limit of 100%. The indicator showed a decrease compared to the end of June 2022 (-2.9%, from 137.0% of June 2022 to 134.1% in December 2022), due to the reduction in the remaining life of the TLTRO III maturing in June 2023, partially offset by the benefit generated by the completion of the capital increase.

It should also be noted that no interdependent assets or liabilities are reported within the NSFR.

Annex XV – Disclosure of credit risk quality

EU CRA: General qualitative information about credit risk

The *Budgeting*, Planning, *Capital* and *Risk Management* processes of the Montepaschi Group are based on the "*Risk Adjusted Performance Management*" (RAPM) logic. In the development of these management processes, the definition of adequate credit policies – under the responsibility of the Parent company's Chief Risk Officer Division– plays a relevant role which finds its operational expression in the implementation of the strategies, in termini di credit portfolio quality objectives, to be applied to the credit processes.

The Montepaschi Group's strategies in risk management mainly aim at limiting the economic impact of default on the loan book, exploiting, in particular, the full potential of the internal rating models and loss given default estimates. Strategies are defined on a yearly basis, together with the definition of Risk Appetite, except as otherwise provided under exceptional circumstances due to external conditions.

It is possible identified for two main areas:

- loan disbursement strategies (definition of quality targets for access to credit);
- credit monitoring strategies (definition of minimum quality targets for maintenance of the loan disbursed).

The definition of customer acceptance *policies* plays a major role in loan disbursement strategies.

Only after having identified the customer with the required creditworthiness are other credit risk mitigation factors (guarantees) taken into account. Information on client quality and transaction risk is essential in identifying the decision-making body for loan granting.

The follow-up strategies are based on systems used on a daily/monthly basis to detect changes in the customer's risk profile. The identification of events likely to affect credit risk triggers a set of obligations for the distribution network, who is assigned the key task of keeping communication channels with the customer open and obtaining all useful information needed to verify the changes in the credit risk profile. If changes are confirmed, the client account manager is supported by personnel specialised in credit quality management and legal matter to define the credit risk management procedures required.

The quantitative identification of credit risk is mainly applied, at operational level, to the measurement of the risk-adjusted return of each individual operating unit. This process is carried out with operational control instruments. The credit risk identification and quantification instruments allow the Montepaschi Group to define hedging policies mainly consisting in defining "*risk-adjusted pricing*" which includes risk coverage and planned 'return on capital'.

Risk mitigation policies are defined as part of the *Credit Risk Mitigation* (CRM) process, whereby the legal, operational and organisational conditions necessary to use collateral guarantees for credit risk-mitigation purposes are identified and met. Four sets of guarantees complying with mitigation requirements are defined in the process: Personal securities, Financial collaterals and mortgage collaterals and other collateral (cash deposits held by third parties and life insurance as a guarantee for the Bank). Other types of credit protection guarantees do not mitigate credit risk. With specific regard to collaterals, a system has been developed to monitor the value of the collateralised asset, based on the measurement of market value (daily for securities and annual for real estate).

Within the credit-granting process, the Montepaschi Group has adopted a *risk adjusted* system for borrower identification, which is sensitive to the customer's rating and to the presence of collaterals. Should the value of the collateralised asset be subject to market or foreign exchange rate risk, a "safety margin" is used, i.e. a percentage of the end-of-period value of the collateral pledged, which is a function of the volatility of the collateralised asset. The only portion of the loan covered by the value of the assets net of the differential is considered as guaranteed during the approval phase. In the monitoring stages, an adjustment is required on guarantees for which the market value results as being lower than the authorized value net of the safety margin; notification of this step is channeled into the implementation process of the credit monitoring strategies. For further insight into risk mitigation techniques, see Annex XVII.

Credit Risk Management *policies* and disbursement processes are governed by specific Group directives. Credit risk analysis is performed internally for operational purposes using the Credit Portfolio Model, developed within the Parent Company, which produces detailed *outputs* in the form of traditional risk measures such as Expected and Unexpected Loss, both operational (intra-risk diversified with a time horizon of one year and a confidence interval calibrated to the target rating of the Group itself) and regulatory. There are several inputs: probability of default (PD), obtained through validated and non-validated models, LGD rates (operational and regulatory), number and types of guarantees supporting the individual credit facilities, regulatory and operational CCFs on the basis of which regulatory and operational EAD are estimated.

In accordance with the provisions of the Second Pillar of Basel 2, the Montepaschi Group is committed to the continuing development of methodologies and models in order to assess the impact on the loan book of stress conditions produced using *sensitivity* analyses with respect to individual risk factors or through scenario analyses.

Results from the analyses performed on this category of risk are regularly included in the more general flow of risk reporting produced by the Chief Risk Officer Division and submitted to the Parent Company's Risk Committee, Top Management and Corporate Governing Bodies.

For further information, especially regarding the Internal AIRB Model, please refer to Annex XXI.

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

At each reporting date, according to IFRS 9, all financial assets not measured in the financial statements at *fair value* through profit and loss, represented by debt securities and loans, and off-balance sheet exposures (commitments and guarantees given) must use the new *impairment* model based on expected losses (ECL - *Expected Credit Losses*).

In particular, the following are included in the scope of *impairment* testing:

- "Financial assets measured at amortised cost";
- "Financial assets measured at *fair value* through other comprehensive income" other than equity securities;
- Commitments to disburse provisions and guarantees given that are not measured at fair value through P&L;
- Trade receivables or assets deriving from contracts that result from transactions falling under the scope of IFRS 15.

The losses must be recorded not only with reference to objective evidence of losses in value that are already apparent at the measurement date, but also based on expectations of future losses of value that have not yet occurred.

In particular, the ECL model requires the above financial assets to be classified into three distinct "stages", according to their credit quality in absolute terms or relative to that at initial disbursement, to which different measurement criteria for expected losses are applied. More specifically:

- Stage 1: includes *performing* financial assets for which there has been no significant increase in credit risk with respect to the initial recognition date; the value adjustments correspond to the expected losses related to the verification of default in the 12 months following the reporting date;
- Stage 2: includes *performing* exposures that have incurred a significant increase in credit risk with respect to the initial recognition date. Adjustments are calculated considering the l*ifetime* loss of the instrument;
- Stage 3: includes financial assets that are considered *non-performing* that present objective evidence of deterioration and which must be adjusted by using the *lifetime* expected loss concept.

An exception to the above is made for purchased or originated credit-impaired (POCI) financial assets, the treatment of which is described in the previous paragraph.

For the MPS Group, the perimeter of the exposures classified in stage 3 corresponds to non-performing exposures, identified according to the definitions established by supervisory regulations (Bank of Italy Circular No. 272 "Accounts Matrix") and referred to in Bank of Italy Circular No. 262 "Bank financial statements: formats and rules for preparation", since they are considered in line with IAS/IFRS accounting regulations, in terms of objective evidence of impairment. On the basis of the aforementioned circulars, the perimeter of impaired exposures corresponds to the aggregate "Non-performing Exposure", defined by EU Regulation 2015/227 with which the EBA's "Implementing Technical Standards (ITS) on Supervisory reporting on Forbearance and Non-Performing exposures" (EBA/ITS/2013/03/rev124/7/2014) was implemented.

In detail, the circulars identify the following categories of impaired assets:

- Bad Loans: the set of on- and off-balance sheet exposures in relation to a customer in a state of insolvency (even if not legally ascertained) or in substantially equivalent situations, irrespective of any loss forecasts formulated by the Bank;
- Unlikely to pay exposures: these represent on- and off-balance-sheet exposures, for which the conditions are not fulfilled for classification of the borrower among bad loans and for which it is considered unlikely that, without recourse to actions such as enforcement of the guarantees, the borrower will comply fully (in principal and/or interest) with their loan obligations. This assessment is made irrespectively of the presence of any amounts (or instalments) past-due and unpaid. The classification among unlikely. Classification among unlikely to pay is not necessarily linked to the explicit presence of anomalies, such as a missed repayment, but is linked to the existence of elements indicating a situation of risk that the borrower may default (e.g., a crisis of the industrial sector in which the borrower operates);
- Past due and/or over-the-limit exposures: on-balance-sheet exposures, other than those classified under bad or unlikely-to-pay loans, which, at the reporting date, have been past due and/or in arrears for more than 90 days, according to the materiality thresholds set out in the aforementioned regulations. For the MPS Group, impaired past due and/or over-the-limit exposures are determined in reference to the position of an individual borrower.

In addition, the Bank of Italy regulations, in line with EBA standards, introduced the definition of "Forborne Exposures". These in particular are exposures that benefit from forbearance measures, which consist of concessions granted to a borrower, in terms of modification and/or refinancing of a pre-existing loan, exclusively owing to, or to prevent, a condition of financial difficult that could adversely affect their ability to fulfil the contractual commitments originally assumed and which would not have been granted to another borrower with a similar risk profile not in financial difficulty. These concessions must be identified at the level of the single credit line and may regard exposures of debtors classified both in performing status and in non-performing (impaired) status. For exposures with forbearance measures classified as unlikely to pay, return among performing exposures can only occur after at least one year has elapsed from the time the concession was granted of origination (the "cure period") and all the other conditions provided for in paragraph 157 of the EBA's ITS are met.

In any case, renegotiated exposures should not be considered forborne when the borrower is not in a situation of financial difficulty (renegotiations carried out for commercial reasons).

In addition, the definition of restructured exposure used by the institution for the purposes of implementing Article 178(3)(d) of the CRR specified by the EBA guidelines on default under Article 178 of the CRR has been introduced. This involves the operational coding of positions for which – following the negotiation phase – firstly, a plan is approved by the lending banks, then an Agreement is signed and finally the Agreement becomes effective.

When the Agreement becomes effective, the MPS Group's lending banks provide for the operational coding of the "restructured position". The periodic reporting of forborne exposures (which include "restructured positions") to the Central Credit Register and the classification of the position is performed according to the regulations of Bank of Italy Circular no. 272 and the ITS issued by the EBA.

With regard to the classification and assessment of moratoria in accordance with the EBA guidelines and similar initiatives introduced independently by the banks in the context of the COVID-19 pandemic, please refer to the paragraphs "Forborne classification of loans affected by moratoria" and "Performing / non-performing classification of loans affected by moratoria" contained in "Part A - Accounting policies relevant to the preparation of consolidated financial statements in the context of the COVID-19 pandemic" of the Consolidated financial statements. Lastly, it should be noted that, as of 1 January 2021, the Group has adopted the new definition of default, resulting from the implementation of the "RTS on the materiality threshold for credit obligations past due under Article 178 of the CRR (EU Delegated Regulation 2018/171)" and the related "EBA Guidelines on the application of the definition of default under Article 178 of the CRR". The new regulations, while confirming the basis of default in the concepts of late payment and the unlikeliness to pay of the debtor, introduce some significant changes relating to materiality thresholds, netting rules and the criteria for returning to performing status. For further details, please refer to Part E "Information on risks and hedging policies", Credit Risk, Section 3 – Non-Performing Loans of the Notes to the Consolidated Financial Statements as at 31 December 2022.

Impairment of performing financial assets

For performing financial assets, that is for assets not considered impaired, it is necessary to assess, at the level of the individual position, if there is a significant deterioration in credit risk, by comparing the credit risk associated with the financial instrument at the time of the valuation and that at the moment of initial disbursement or acquisition. This comparison is made using both quantitative and qualitative criteria. The results of the assessment, in terms of classification (or, more appropriately, staging) and measurement, are as follows:

- if these indicators are present, the financial asset is placed in stage 2. In this case, in accordance with international accounting standards and in the absence of a manifest impairment loss, the valuation requires the recognition of value adjustments equal to the expected losses over the entire residual life of the financial instrument. These adjustments are reviewed at each subsequent reporting date both to periodically check their appropriateness with respect to the constantly updated loss estimates, and to take into account - in the event that the indicators of a "significantly increased" credit risk cease to exist - the changed forecast horizon for calculating the expected loss;
- if these indicators are not present, the financial asset is placed in stage 1. In this case, the assessment requires the recognition expected losses on the specific the specific financial instrument over the next twelve months, in accordance with international accounting standards and even in there is no impairment loss. These adjustments are reviewed at each subsequent reporting date to verify that they are consistent with the constantly updated loss estimates and to take account of the changed forecast horizon for calculating the expected loss, should there be indicators of a "significantly increased" credit risk.

As regards the measurement of financial assets and, in particular, the identification of a "significant increase" in credit risk (a necessary and sufficient condition for classification of the asset being assessed in stage 2), the elements that constitute the main determinants to be taken into consideration, according to the standard and its operating procedure implemented by MPS Group, are the following:

- a relative quantitative criterion that is the "primary" driver, based on a change (above specified thresholds) in the lifetime probability of default with respect to the initial recognition of the financial instrument;
- absolute qualitative criteria represented by the identification of trigger events or exceeding absolute thresholds as part of the credit monitoring process. They include:
    - · all exposures affected by forbearance measures and for which these measures are still active, regardless of whether the probation period underway is regular;
    - · exposures classified in the High-Risk management portfolio;
- backstop indicators, i.e. credit delinquency factors, whose manifestation suggest that

there has been a significant increase in credit risk, unless there is evidence to the contrary. For purposes of assumption, the MPS group believes that the credit risk of the exposure must be considered significantly increased if there is an exposure that is past due for a period longer than 30 days, without prejudice to the application of the significance thresholds required by supervisory regulations for the purposes of classification under impaired exposures.

With particular reference to the qualitative criterion applicable to credit exposures with customers, the MPS Group has determined as a reference the change between the lifetime forward-looking cumulative probability of default (PD), calculated at the beginning of the contractual relationship, and the probability of default recorded at the measurement date. The revision of the model adopted as of June 2021 involved the identification of specific internal thresholds of variation between the PD measured at the beginning of the contractual relationship and the PD recognised at the measurement date, broken down by segment, product, initial rating class, vintage, geographical area and legal form. In the previous model, the counterparty, initial rating class and vintage drivers were the only ones used to estimate the thresholds. Exceeding these thresholds indicates a significant increase in credit risk and entails the consequent transfer of the individual credit line from stage 1 to stage 2. The comparison is based on homogeneous residual maturities and homogeneous PD models, e.g. if the definition of default changes over time, the original lifetime forward-looking cumulative PD is recalculated to take account of the new definition of default. The cumulative PDs subject to comparison are based on the same model used for ECL purposes (e.g. definition of PIT (Point in Time) PD, macroeconomic scenarios, expected life/contractual life). To obtain an unequivocal classification result, a cumulative PD – resulting from the weighted average of the cumulative PDs calculated for the individual prospective scenarios using the probabilities of the scenarios as weights – is used. Materiality thresholds are determined using quantile regression analysis by clusters to measure the historical level of the ratio between cumulative lifetime forward-looking PD at the reporting date and that at the origination date, which can be considered predictive of the transition to NPE. The thresholds are determined so as to minimise so-called false positives and false negatives and maximise true positives and true negatives.

For debt securities that do not have rated investment grade or higher, the relative quantitative criterion is based on the variation in lifetime forward-looking cumulative PD between the reporting date and the origination date compared to a given threshold. For corporate issuers, the multi-year PD curve is the one for vintage 1 of the Corporate segment, estimated entirely by the Group; for government issues, the multi-year

PD curve is the one developed on the basis of the Moody's, Standard & Poor's and Fitch one-year migration matrices for government bonds; the Standard & Poor's migration matrices corresponding to the Europe area were used to estimate the multi-year PDs for credit exposures to banks and NBFIs. The cumulative PDs compared are based on the same model used for ECL purposes and macroeconomic scenarios. In order to obtain an unequivocal classification result, a cumulative PD - resulting from the weighted average of the cumulative PDs calculated for the individual prospective scenarios using the probabilities of the scenarios as weights – is used. Exposures are classified into stage 2 if the ratio between the lifetime forward-looking cumulative PD at the reporting date and that of the origination date exceeds a given materiality threshold equal, for both corporate and government bonds, to that used for corporate exposures in the form of loans.

Debt securities that, at the reporting date, have an investment grade rating, mainly relating to government bonds, are classified in stage 1 since the MPS Group has taken advantage of the "Low Credit Risk Exemption" for this type of security. This exemption consists of the practical expedient of not conducting the test for significant deterioration of credit risk on exposures whose credit risk is considered low. This exemption applies to securities with an investment grade rating at the measurement date, in full compliance with IFRS 9. In addition, given the presence of several purchase transactions against the same fungible asset (ISIN), it was necessary to identify a method to identify the tranches sold in order to determine the residual quantities to which credit quality at the initial recognition date can be associated, in order to compare it with credit quality at the measurement date. In this regard, the "first-in-first-out" or "FIFO" method was deemed appropriate, as it allows more transparent portfolio management, including from an operational point of view (front office), while at the same time allowing for a continuous update of the credit assessment on the basis of new purchases.

In general, the transfer criterion between stages is symmetric. Specifically, an improvement in credit risk such that the conditions that led to the significant increase in credit risk no longer exist, results in the financial instrument being reallocated from Stage 2 to Stage 1. In this case, the entity recalculates the impairment loss over a twelve-month time horizon rather than the previously recognised lifetime losses, and consequently recognises a reversal in profit or loss.

Once the allocation of exposures to the various stages of credit risk has been defined, the expected losses (ECL) are calculated at the level of individual transactions or tranches of securities, starting from IRB/management models, based on the Probability of Default (PD), Loss Given Default (LGD) and Exposure at Default (EAD) parameters, to which specific adjustments are made in order to ensure compliance with the specific requirements of IFRS 9, given the different requirements and purposes of accounting rules compared to prudential regulations.

For PD, LGD and EAD the following definitions apply:

- PD (Probability of Default): probability of migrating from performing to non-performing status over a time horizon of one year. In the models consistent with supervisory provisions, the PD factor is typically quantified through the rating. In the MPS Group, PD values derive from internal rating models, if available, supplemented by external assessments or by average segment/portfolio data;
- LGD (Loss Given Default): percentage of loss in the event of default. In the models consistent with the supervisory provisions, this is quantified using historical data on discounted recoveries on loans transferred to non-performing status;
- EAD (Exposure At Default) or credit equivalent: amount of exposure at the time of default.

As already noted above, to be able to observe the provisions of IFRS 9, it became necessary to make specific adjustments to the above factors, including the:

- adoption of a Point in Time (PIT) PD against the Through the Cycle (TTC) PD used for regulatory purposes;
- elimination from LGD of a number of additional components, namely indirect costs (non-recurring costs), additional conservative margins specifically introduced for regulatory models and the downturn component; and to reflect the most current recovery rates (PIT), the expectations on the forward-looking trends and the inclusion of any recovery fees in the case of recovery entrusted to third parties;
- use of multi-year PDs and, if necessary, LGDs, in order to determine the expected loss for the entire residual life of the financial instrument (stage 2 and 3);
- use of the effective interest rate of the individual transaction in the discounting of expected future cash flows, as opposed to the regulatory models, in which individual cash flows are discounted using the discounting rates determined in accordance with prudential regulations.

In relation to the multi-year EAD, in line with IFRS 9, the MPS Group refers to plans at amortised cost, regardless of the related measurement methods (amortised cost or fair value through other comprehensive income). For commitments to disburse funds and guarantees given (off-balance sheet exposures), the EAD is instead taken at nominal value weighted for a specific credit conversion factor (CCF).

IFRS 9 establishes that, at each reporting date, an entity must measure the impairment of an asset based on expected credit loss, considering all information which is available, reasonable and consistent, without incurring excessive costs or efforts. The forward-looking approach established under IFRS 9 to determine expected loss therefore represents a central aspect of the measurement model.

That being established, the MPS Group uses the forward-looking approach to estimate expected losses, in both analytical and collective measurements. The forward-looking approach is applied to the following statistical parameters:

- PD: Probability of default, used for performing positions;
- LGD/EAD: Loss Given Default (LGD), used for both performing and non-performing positions subject to statistical assessment; Credit Conversion Factor (CCF) used to estimate the Exposure At Default (EAD) of performing positions;
- Cure/Danger rate: used for unlikely to pay exposures other than restructured positions and positions subject to statistical assessment as they fall below a certain threshold;
- haircuts for real estate collateral, used, when applicable, for analytical measurement of bad loans and unlikely to pay exposures other than restructured positions.

Given that the expected loss is estimated at the weighted average of a range of possible results, the above cited parameters are determined on the basis of historical data and then adjusted to take into account at least three economic scenarios covering a future time horizon of at least three years: baseline, improving and deteriorating.

The forward-looking macroeconomic indicators, provided by a leading, external consultant and internally re-formulated by the Research Function, are quantified on the basis of three possible future scenarios, which consider the economic variables deemed relevant (Italian GDP, interest rates, unemployment rate, commercial and residential real estate prices, inflation, equity indices), with a future time horizon of three years to which the respective probabilities of occurrence, determined internally by the Group, are assigned. More specifically, in addition to the "baseline" scenario considered most likely – i.e., the forward-looking macroeconomic scenario on the basis of which the MPS Group develops its projections of P&L/balance sheet and risk data over a short and medium-term time horizon – an alternative best-case scenario (decidedly favourable) and a worst-case scenario (unfavourable) are developed.

The sensitivity of the statistical parameters to macroeconomic variables is estimated. The associations between the statistical parameter and macroeconomic variable are shown below:

- PD: Italy's GDP, unemployment rate, interest rates, inflation, commercial and residential property prices and stock indices;
- LGD/EAD: Italy's GDP, unemployment rate, commercial and residential property prices;
- cure/danger rates: Italy's GDP;
- haircut: commercial and residential

property prices.

For those statistical parameters (e.g. PD) for which there is no linear relationship with the macroeconomic variable, the parameter measure is not calculated on the basis of the weighted average of the macroeconomic variables and using the respective probabilities as weights, but on the basis of certain separate parameter measures. In these cases, the weighted average is obtained at the level of expected loss.

Lastly, for the estimate of expected losses over the life of the instrument, the time horizon of reference is represented by the contractual maturity date; for instruments without maturity, the estimate of expected losses uses a time horizon estimated through a behavioural model for on-demand products and set to one year from the reporting date in other cases.

For further details on the model used to calculate expected losses in the context of the COVID-19 pandemic, please refer to the paragraphs “Update of macroeconomic scenarios”, and “Measurement of the significant increase in credit risk (SICR) for IFRS 9 purposes” contained in “Part A - Accounting policies relative to the preparation of the Consolidated financial statements in the context of the COVID-19 pandemic” of the Consolidated financial statements.

Impairment of non-performing financial assets

As illustrated above, for impaired financial assets, to which a 100% probability of default is associated, the expected impairment loss amount for each loan is equal to the difference between the book value at the time of measurement (amortised cost) and the current value of the expected future cash flows, the latter calculated using the original effective interest rate (or a proxy of it if not available). Cash flows are estimated on the basis of the expected recovery over the lifetime of the loan, taking into account the estimated realisable value net of any collateral and any costs associated with obtaining the guarantee through sale. In this regard, if the Group uses an outsourcer for the recovery of impaired loans, the fees paid to the outsourcer for activities strictly related to debt collection are considered in the estimation of impairment losses. These costs are considered for both performing and non-performing exposures, if for the latter it is likely that in the event of a transfer to bad loan status, the collection activities will be entrusted to a third party.

Fees paid to outsourcers are considered in LGD estimates used for statistical measurements of all administrative categories, in collection plans for bad loans, and in analytical measurements of unlikely to pay positions.

In order to estimate future cash flows and collection times, the non-performing loans of a significant amount are subject to an analytical measurement process. For certain similar categories of non-performing loans of insignificant amounts, the measurement processes allow loss forecasts based on lump-sum/statistical measurement methods, to be analytically assigned to each individual position. The perimeter of exposures subject to a lump-sum/statistical measurement process, i.e. based on statistical LGD grids, differentiated according to segment and length of time in the risk status ("vintage") and suitably integrated to take account of forward-looking information, is composed of:

- bad loans and unlikely-to-pay positions with exposures less than or equal to an established materiality threshold of EUR 1 million;
- the total of non-performing past due exposures regardless of the exposure's materiality threshold. In particular, these are loans with continuous past due or late payments, automatically identified by the BMPS Group's IT procedures, according to the aforementioned rules of the Supervisory Authority.

The analytical-statistical measurement carried out for bad loans and unlikely-to-pay positions of less than EUR 1 million and for all past due loans, presents specific characteristics depending on the type of exposure concerned.

With reference to non-performing loans, the analytical-statistical measurement is based on non-performing LGD grids, where the LGD model is mainly characterised by the differentiation of loss rates according to the type of customer and length of time in risk status ("vintage"). The grids are also differentiated by other significant axes of analysis used to estimate the model (e.g. technical form, type of guarantee, geographical area, exposure band, etc.). The grids of recovery times are mainly broken down by regulatory segment and by other significant axes of analysis used to estimate the model (e.g. recovery procedures, exposure band, technical form).

With regard to unlikely-to-pay and non-performing past due exposures, the valuation is performed by applying statistical LGD grids estimated specifically for positions classified in these administrative categories, in line with the LGD grids estimated for bad loans. The LGD for unlikely-to-pay and non-performing past due exposures is obtained by recalibrating the bad loan LGD through the danger rate module. The danger rate is a corrective multiplicative factor designed to recalibrate the bad loan LGD with the information available on other default events in order to obtain an LGD that is representative of all possible default events and their evolution.

The analytical-specific valuation of bad loans and unlikely-to-pay positions exceeding EUR 1 million is an assessment made by managers on the individual position based on a qualitative and quantitative analysis of the borrower's economic and financial situation, the riskiness of the credit position, the NPL reduction targets and strategies set out in the "NPL Plan", any mitigating factors (guarantees). The financial impact of the estimated debt recovery time is also taken into account.

For bad loans in particular, a variety of factors are deemed relevant depending on the characteristics of the positions and must be assessed with the utmost accuracy and prudence. These include the:

- nature of the credit, whether or unsecured;
- net assets of obligors/third parties providing collateral;
- complexity of existing or potential disputes and/or underlying legal issues;
- obligors' exposure to the banking system and other creditors;
- most recent financial statements available;
- legal status of obligors and any pending bankruptcy and/or individual proceedings.

To determine the estimated realisable value of real-estate backed loans and take into account both the historical recovery data and forward-looking considerations, in line with IFRS 9, the approach adopted is focused on the valuation of real estate assets based on the expected average auction and the corresponding reduction in the observed price, calculating the average haircuts differentiated by type of real estate collateral (residential and non-residential).

Regarding the bad real estate loans deriving from leasing agreements, in view of the specific characteristics of the product (absence of auctions), the haircut is estimated as the loss of value of the asset between the last available appraisal value and the expected sale price, determined on the basis of the evidence emerging from the recovery process.

Moreover, with regard to unlikely-to-pay positions, the measurement is based on a qualitative and quantitative analysis of the debtor's economic and financial situation and on an accurate assessment of the risk situation. In the case of unlikely-to-pay loans secured by real-estate, the haircut is applied not to the entire market value of the collateral (as is the case for bad loans) but only to the portion of the loan exposure that is expected to move to bad loan status; i.e. the cure rate of the related exposures is taken into account.

The calculation of the impairment loss requires an assessment of the future cash flows that the debtor is expected to be able to generate and that will also be used to service the financial debt. This estimate should be made based on two alternative approaches:

- the Going Concern Approach: the borrower's operating cash flows (or that of the actual guarantor) continue to be generated and are used to repay borrowings on the basis of the scheduled repayment plans. The going concern assumption does not exclude the possible realisation of collateral, but only to the extent that this can occur without jeopardising the borrower's ability to generate future cash flows. The going concern approach also applies to cases where the recoverability of the exposure is based on the possible disposal of assets by the borrower or extraordinary transactions;

- the Gone Concern Approach: applicable in cases where it is believed that the borrower's cash flows will cease. This is a scenario that may apply to positions that are expected to be classified to bad loan status. Within this context, assuming that shareholder intervention and/or extraordinary debt restructuring transactions in a turnaround situation are not reasonably feasible, the recovery of the debt is essentially based on the value of the collateral securing the loan and, alternatively, on the realisable value of the assets, taking into account liabilities and any rights of pre-emption.

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

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
	Gross carrying amount/nominal amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions*							Collateral and financial guarantees received	
	Performing exposures			Non-performing exposures			Performing exposures – accumulated impairment and provisions			Non-performing exposures – accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions			Accumulated partial write-off	On performing exposures	On non-performing exposures
		of which STAGE 1	of which STAGE 2		of which STAGE 2	of which STAGE 3		of which STAGE 1	of which STAGE 2		of which STAGE 2	of which STAGE 3			
Cash balances at central banks and other demand deposits	**12,366,916**	**12,366,559**	**357**	**-**	**-**	**-**	**-122**	**-98**	**-24**	**-**	**-**	**-**		**24**	**-**
Loans and advances	**77,049,612**	**65,424,069**	**11,483,146**	**3,299,176**	**-**	**3,285,924**	**-441,579**	**-87,581**	**-353,978**	**-1,587,826**	**-**	**-1,576,975**	**-32,196**	**60,473,899**	**1,520,470**
Central banks	*104,020*	*104,020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*78,748*	*-*
General governments	*1,775,358*	*1,758,383*	*16,976*	*40,319*	*-*	*40,319*	*-2,542*	*-1,923*	*-619*	*-8,778*	*-*	*-8,778*	*-7*	*156,058*	*21,648*
Credit institutions	*1,951,508*	*1,937,306*	*14,202*	*-*	*-*	*-*	*-1,441*	*-789*	*-652*	*-*	*-*	*-*	*-*	*519,096*	*-*
Other financial corporations	*4,971,390*	*4,871,214*	*100,176*	*18,579*	*-*	*18,579*	*-6,225*	*-4,628*	*-1,597*	*-6,718*	*-*	*-6,718*	*-*	*3,509,165*	*11,243*
Non-financial corporations	*33,363,407*	*25,389,444*	*7,850,476*	*2,266,970*	*-*	*2,254,372*	*-302,867*	*-46,158*	*-256,688*	*-1,202,786*	*-*	*-1,192,191*	*-29,853*	*23,093,240*	*930,316*
Of which SMEs	*22,271,842*	*16,195,291*	*6,042,915*	*1,932,093*	*-*	*1,919,495*	*-242,015*	*-29,311*	*-212,686*	*-1,034,841*	*-*	*-1,024,246*	*-23,134*	*17,938,059*	*803,496*
Households	*34,883,928*	*31,363,704*	*3,501,316*	*973,309*	*-*	*972,655*	*-128,505*	*-34,083*	*-94,422*	*-369,544*	*-*	*-369,287*	*-2,336*	*33,117,592*	*557,263*
Debt securities	**13,986,208**	**13,850,056**	**23,497**	**19,460**	**-**	**-**	**-12,296**	**-11,835**	**-461**	**-18,700**	**-**	**-**	**-**	**-**	**-**
Central banks	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
General governments	*11,042,907*	*11,042,907*	*-*	*-*	*-*	*-*	*-9,467*	*-9,467*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Credit institutions	*1,178,347*	*1,166,984*	*11,364*	*-*	*-*	*-*	*-658*	*-623*	*-35*	*-*	*-*	*-*	*-*	*-*	*-*
Other financial corporations	*1,509,516*	*1,411,866*	*6,112*	*18,700*	*-*	*-*	*-1,264*	*-1,205*	*-60*	*-18,700*	*-*	*-*	*-*	*-*	*-*
Non-financial corporations	*255,438*	*228,299*	*6,021*	*760*	*-*	*-*	*-906*	*-540*	*-366*	*-*	*-*	*-*	*-*	*-*	*-*
Off-balance-sheet exposures	**33,781,769**	**32,014,112**	**1,228,877**	**544,167**	**-**	**532,208**	**32,621**	**14,330**	**14,740**	**109,853**	**-**	**102,201**		**3,355,067**	**13,785**
Central banks	*60*	*60*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*		*-*	*-*
General governments	*668,946*	*667,932*	*953*	*60*	*-*	*60*	*52*	*43*	*10*	*-*	*-*	*-*		*15,000*	*-*
Credit institutions	*2,094,394*	*2,074,852*	*250*	*-*	*-*	*-*	*425*	*410*	*14*	*-*	*-*	*-*		*9,962*	*-*
Other financial corporations	*3,672,945*	*3,653,994*	*10,830*	*10,445*	*-*	*10,445*	*374*	*172*	*202*	*381*	*-*	*381*		*2,507,494*	*3*
Non-financial corporations	*25,052,520*	*23,436,109*	*1,107,528*	*517,460*	*-*	*505,501*	*29,389*	*12,752*	*13,087*	*108,087*	*-*	*100,435*		*715,459*	*12,581*
Households	*2,292,903*	*2,181,165*	*109,316*	*16,203*	*-*	*16,203*	*2,381*	*954*	*1,427*	*1,385*	*-*	*1,385*		*107,152*	*1,201*
Total	**137,184,505**	**123,654,797**	**12,735,877**	**3,862,804**	**-**	**3,818,132**	**-486,496**	**-113,746**	**-369,178**	**-1,716,379**	**-**	**-1,679,176**	**-32,196**	**63,828,990**	**1,534,255**

it should be noted that for columns (g) to (l), the total does not include adjustments related to Cash balances at central banks and other demand deposits.

The year was marked by a decrease in volumes of performing loans, as a result of a decline in the subsidiary MPSCS's repo transactions (both on-balance sheet and off-balance sheet exposures) with institutional counterparties and financial companies. The decrease in volumes on the non-performing perimeter is due to the accounting of the sale of loans called 'Jockey' that took place in Q4 2022.

EU CR1-A – Maturity of exposures

		a	b	c	d	e	f
		Net exposure value					
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Loans and advances	6,630,698	12,300,058	15,248,449	42,829,657		77,008,863
2	Debt securities	-	1,957,349	3,842,710	8,126,944		13,927,004
3	**Total**	**6,630,698**	**14,257,407**	**19,091,159**	**50,956,601**	**-**	**90,935,866**

Loans and Advances does not include loans and advances classified as held for sale, central bank holdings and other demand deposits.

The supervisory reporting for template EU CR2 'Changes in the stock of non-performing loans and advances' does not apply to Montepaschi Group since, as of 31 December 2022, the NPL ratio is below the 5% threshold.

As at 31 December 2022, gross nonperforming loans were less than 5%, therefore the information reported below is limited to the tables required when this parameter is not exceeded. In addition, Table CQ4 is not applicable because the international originating exposures are less than 10% of the total.

EU CQ1: Credit quality of forborne exposures)

	a	b	c	d	e	f	g	h
	Gross carrying amount/nominal amount of exposures with forbearance measures				Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions		Collateral received and financial guarantees received on forborne exposures	
	Performing forborne	Non-performing forborne			On performing forborne exposures	On non-performing forborne exposures		Of which collateral and financial guarantees received on non-performing exposures with forbearance measures
			Of which defaulted	Of which impaired				
Cash balances at central banks and other demand deposits	-	-	-	-	-	-	-	-
Loans and advances	**1,914,523**	**1,124,661**	**1,124,661**	**1,115,819**	**-118,193**	**-445,949**	**2,145,387**	**635,040**
Central banks	-	-	-	-	-	-	-	-
General governments	*7,751*	-	-	-	*-63*	-	-	-
Credit institutions	-	-	-	-	-	-	-	-
Other financial corporations	*10,180*	*1,365*	*1,365*	*1,365*	*-109*	*-608*	*10,398*	*593*
Non-financial corporations	*1,313,451*	*716,925*	*716,925*	*708,274*	*-85,753*	*-322,820*	*1,331,063*	*363,492*
Households	*583,141*	*406,371*	*406,371*	*406,180*	*-32,268*	*-122,522*	*803,926*	*270,954*
Debt securities	**21,118**	**760**	**760**	-	-	-	-	-
Loan commitments given	**20,657**	**11,135**	**11,135**	**11,135**	**97**	-	**1,848**	**43**
Total	**1,956,298**	**1,136,556**	**1,136,556**	**1,126,954**	**-118,290**	**-445,949**	**2,147,234**	**635,083**

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

	Gross carrying amount/nominal amount											
	Performing exposures			Non-performing exposures								
		Not past due or past due ≤ 30 days	Past due > 30 days ≤ 90 days		Unlikely to pay that are not past due or are past due ≤ 90 days	Past due > 90 days ≤ 180 days	Past due > 180 days ≤ 1 year	Past due > 1 year ≤ 2 years	Past due > 2 years ≤ 5 years	Past due > 5 years ≤ 7 years	Past due > 7 years	Of which defaulted
Cash balances at central banks and other demand deposits	**12,366,916**	**12,366,916**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Loans and advances	**77,049,612**	**76,971,718**	**77,894**	**3,299,176**	**1,360,364**	**215,065**	**294,066**	**245,790**	**407,124**	**275,174**	**501,593**	**3,299,176**
Central banks	*104,020*	*104,020*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
General governments	*1,775,358*	*1,772,106*	*3,253*	*40,319*	*36,087*	*266*	*134*	*133*	*2,870*	*254*	*574*	*40,319*
Credit institutions	*1,951,508*	*1,950,630*	*879*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Other financial corporations	*4,971,390*	*4,970,316*	*1,074*	*18,579*	*14,613*	*588*	*142*	*101*	*2,421*	*461*	*253*	*18,579*
Non-financial corporations	*33,363,407*	*33,341,956*	*21,452*	*2,266,970*	*914,618*	*130,246*	*198,983*	*152,471*	*281,589*	*186,457*	*402,608*	*2,266,970*
Of which SMEs	*22,271,842*	*22,253,685*	*18,157*	*1,932,093*	*685,841*	*123,983*	*170,504*	*116,281*	*260,108*	*182,652*	*392,723*	*1,932,093*
Households	*34,883,928*	*34,832,691*	*51,237*	*973,309*	*395,047*	*83,965*	*94,807*	*93,085*	*120,244*	*88,003*	*98,159*	*973,309*
Debt securities	**13,986,208**	**13,986,208**	**-**	**19,460**	**760**	**-**	**-**	**-**	**18,700**	**-**	**-**	**19,460**
Central banks	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
General governments	*11,042,907*	*11,042,907*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Credit institutions	*1,178,347*	*1,178,347*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*
Other financial corporations	*1,509,516*	*1,509,516*	*-*	*18,700*	*-*	*-*	*-*	*-*	*18,700*	*-*	*-*	*18,700*
Non-financial corporations	*255,438*	*255,438*	*-*	*760*	*760*	*-*	*-*	*-*	*-*	*-*	*-*	*760*
Off-balance-sheet exposures	**33,781,769**			**544,167**								**544,167**
Central banks	*60*			*-*								*-*
General governments	*668,946*			*60*								*60*
Credit institutions	*2,094,394*			*-*								*-*
Other financial corporations	*3,672,945*			*10,445*								*10,445*
Non-financial corporations	*25,052,520*			*517,460*								*517,460*
Households	*2,292,903*			*16,203*								*16,203*
Total	**137,184,505**	**103,324,842**	**77,894**	**3,862,804**	**1,361,124**	**215,065**	**294,066**	**245,790**	**425,824**	**275,174**	**501,593**	**3,862,804**

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

		a	b	c	d	e	f
		Gross carrying amount					
			Of which: non-performing		Of which: loans and advances subject to impairment	Accumulated impairment	Accumulated negative changes in fair value due to credit risk on non-performing exposures
				Of which: defaulted			
1	Agriculture, forestry and fishing	1,308,234	72,469	72,469	1,305,318	-41,185	-
2	Mining and quarrying	80,156	3,121	3,121	80,156	-2,829	-
3	Manufacturing	10,851,932	529,666	529,666	10,742,557	-340,338	-1,851
4	Electricity, gas, steam and air conditioning supply	880,632	73,179	73,179	880,632	-51,329	-
5	Water supply	845,283	20,500	20,500	845,283	-17,020	-
6	Construction	3,020,996	314,211	314,211	3,020,996	-236,935	-
7	Wholesale and retail trade	6,763,811	307,053	307,053	6,751,641	-215,654	-
8	Transport and storage	1,620,344	81,845	81,845	1,620,344	-60,275	-
9	Accommodation and food service activities	1,908,253	170,405	170,405	1,907,844	-96,716	-
10	Information and communication	608,498	50,323	50,323	608,498	-28,786	-
11	Financial and insurance activities	80,956	89	89	80,956	-633	-
12	Real estate activities	4,029,435	368,832	368,832	4,029,085	-233,760	-233
13	Professional, scientific and technical activities	1,093,901	57,115	57,115	1,093,901	-46,567	-
14	Administrative and support service activities	936,920	73,510	73,510	930,148	-32,086	-6,501
15	Public administration and defence, compulsory social security	7,697	-	-	7,697	-78	-
16	Education	42,642	1,490	1,490	42,642	-849	-
17	Human health services and social work activities	531,468	37,552	37,552	531,468	-17,468	-
18	Arts, entertainment and recreation	257,029	20,299	20,299	257,029	-13,808	-
19	Other services	762,190	85,310	85,310	762,190	-60,752	-
20	**Total**	**35,630,378**	**2,266,970**	**2,266,970**	**35,498,386**	**-1,497,067**	**-8,585**

EU CQ7: Collateral obtained by taking possession and execution processes

		a	b
		Collateral obtained by taking possession	
		Value at initial recognition	Accumulated negative changes
1	Property, plant and equipment (PP&E)	-	-
2	Other than PP&E	98,816	-60,715
3	*Residential immovable property*	-	-
4	*Commercial Immovable property*	*50,708*	*-20,955*
5	*Movable property (auto, shipping, etc.)*	-	-
6	*Equity and debt instruments*	*48,108*	*-39,760*
7	*Other*	-	-
8	**Total**	**98,816**	**-60,715**

On 2 June 2020, the EBA published its Guidelines on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis (EBA/GL/2020/07). These guidelines require that information be provided on:

- loans and advances subject to moratoria on loan repayments applied in the light of the COVID-19 crisis, in accordance with EBA/GL/2020/02;
- loans and advances subject to forbereance measures applied in the light of the COVID crisis;
- newly originated loans and advances subject to public guarantee schemes introduced in response to COVID-19 crisis.

This document has been taken into account in the preparation of the following tables.

Template 1 – Information on loans and advances subject to legislative and non-legislative moratoria (EBA/GL 2020/07) as at 31 December 2022

		Gross carrying amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk							Gross carrying amount
			Performing		Non performing				Performing			Non performing			
			Of which: exposures with forbearance measures	Of which: Instruments with significant increase in credit risk since initial recognition but not credit-impaired (Stage 2)		Of which: exposures with forbearance measures	Of which: Unlikely to pay that are not past-due or past-due <= 90 days			Of which: exposures with forbearance measures	Of which: Instruments with significant increase in credit risk since initial recognition but not credit-impaired (Stage 2)		Of which: exposures with forbearance measures	Of which: Unlikely to pay that are not past-due or past-due <= 90 days	Inflows to non-performing exposures
1	**Loans and advances subject to moratorium**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	of which: Households	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	*of which: Collateralised by residential immovable property*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	of which: Non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	*of which: Small and Medium-sized Enterprises*	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	*of which: Collateralised by commercial immovable property*	-	-	-	-	-	-	-	-	-	-	-	-	-	-

The measures applied are rescheduling of payments following total suspensions, for the most part, or only the principal.

As at 31 December 2022, all moratoria compliant with *Eba Guidelines On Covid Moratoria* – whether legislative or non-legistlative – had expired and normal repayment schedules had been resumed.

The residual exposure related to the above portfolio after resumption of payments amounts to EUR 4 billion, of which 2.2% is classified as non-performing.

Counterparties classified as performing have arrears or delayed payments accounting for approximately 3% of the total.

Template 2 – Breakdown of loans and advances subject to legislative and non-legislative moratoria by residual maturity of moratoria (EBA/GL 2020/07) as at 31 December 2022

		a	b	c	d	e	f	g	h	i
			Gross carrying amount							
						Residual maturity of moratoria				
		Number of obligors		Of which: legislative moratoria	Of which: expired	≤ 3 months	> 3 months ≤ 6 months	> 6 months ≤ 9 months	> 9 months ≤ 12 months	> 1 year
1	**Loans and advances for which moratorium was offered**	**36,530**	**4,137,636**							
2	**Loans and advances subject to moratorium (granted)**	**36,010**	**4,015,268**	**1,896,333**	**4,015,268**	**-**	**-**	**-**	**-**	**-**
3	of which: Households		2,925,631	1,538,659	2,925,631	-	-	-	-	-
4	*of which: Collateralised by residential immovable property*		*2,836,657*	*1,501,372*	*2,836,657*	-	-	-	-	-
5	of which: Non-financial corporations		608,310	308,717	608,310	-	-	-	-	-
6	*of which: Small and Medium-sized Enterprises*		*479,680*	*290,111*	*479,680*	-	-	-	-	-
7	*of which: Collateralised by commercial immovable property*		*363,558*	*202,428*	*363,558*	-	-	-	-	-

During 2022 and until 30 June, which was the expiry date of the Temporary Framework introduced by the EBA to regulate support measures for customers affected by Covid-19, support continued to be provided to companies through disbursements guaranteed by the Central Guarantee Fund, Ismea and Sace.

Approximately 76% of the relationships resulting from the above-mentioned legislative measures, referred to in the Liquidity Decree of 8 April 2020, have completed their pre-amortisation period, so that the outstanding amount at 31 December 2022, net of repayments made, is approximately EUR 9.8 billion, of which 3.2% classified as non-performing for an amount of approximately EUR 317 million; of the NPE counterparties, about 46% had no past due amounts, although a forward-looking analysis of cash flows revealed potential criticalities that would warrant a downgrade to a worse-case status.

The counterparties with the highest default rates were Small Businesses and SMEs at around 4.5% in terms of headcount and 3% in terms of exposure, as well as family businesses at around 2%.

26% of performing exposures are classified as Stage 2, while the coverage ratio of pledged collateral to outstanding loans is around 87%, essentially unchanged from 2021.

Template 3 – Information on newly originated loans and advances provided under newly applicable public guarantee schemes introduced in response to COVID-19 crisis (EBA/GL 2020/07) as at 31 December 2022

		a	b	c	d
		Gross carrying amount		*Maximum amount of the guarantee that can be considered*	*Gross carrying amount*
			of which: forborne	*Public guarantees received*	*Inflows to non-performing exposures*
1	**Newly originated loans and advances subject to public guarantee schemes**	**9,770,242**	**245,216**	**8,492,966**	**140,313**
2	of which: Households	1,040,411			15,420
3	*of which: Collateralised by residential immovable property*	*959,557*			-
4	of which: Non-financial corporations	8,688,357	239,991	7,488,988	123,416
5	*of which: Small and Medium-sized Enterprises*	*6,618,854*			*80,977*
6	*of which: Collateralised by commercial immovable property*	*83,620*			-

Annex XVII – Disclosure of the use of credit risk mitigation techniques

EU CRC – Qualitative disclosure requirements related to CRM techniques

Compensation Policies

With reference to the retail and corporate loan portfolio, the Montepaschi Group does not apply any netting processes to the credit risk exposures with on- or off-balance sheet items with opposite sign. The Montepaschi Group adopts policies reducing counterparty risk with institutional counterparties, by entering into *netting agreements* according to the international ISDA and ISMA standards and related *collateral agreements* in relation to derivatives.

Management of collateral

The Montepaschi Group has fulfilled the obligations set out by EU Regulations (CRR 575/2013) for the purpose of recognition of risk mitigation effects produced by any existing collaterals securing the loan.

The disbursement of loans secured by collaterals is subject to specific control measures, differentiated by type of guarantee pledged, which are applied during the phase of disbursement and monitoring. Two main types of guarantees, subject to different regulations, can be identified by volumes of loans granted and number of customers, namely Mortgages and Pledges (cash and Securities).

With reference to compliance with the main organisation requirements for the mitigation of risk, the Group ensured:

- the presence of an IT system in support of the life cycle phases of the guarantees (acquisition, valuation, management, revaluation and enforcement);
- regulated policies for the management of guarantees (principles, practices, processes), available to the users;
- the presence of regulated, documented procedures for the management of guarantees (principles, practices, processes), available to the users;
- independence of the customers' insolvency risk (internal rating) from any existing collaterals.

For the purpose of limiting residual risks (termination or non-existence of the value of protection), the Montepaschi Group requires that:

- in the case of a mortgage guarantee, the acquisition of the right be flanked by the underwriting of insurance policies (catastrophic events) in relation to the assets covered by the guarantee, and a report prepared by reliable experts;
- in the case of a pledge, the original value should be reinstated (ensuring the continuity of the guarantee through papers amending the original guarantee) in view

of the depreciation of goods pledged in the case of redemption of the pledge, the repayment should be made at the bank (collection).

The Montepaschi Group identified a set of technical forms (by purpose of the loan/type of customer) providing for the admissibility of mortgage guarantees. Within the IT system, the proposal of financing one of these types of loans triggers a request for detailed information on the characteristics of the real estate subject to guarantee (valuation) which, after loan approval, will make the acquisition steps compulsory.

In the specific case of mortgage loans to retail customers, the loan is disbursed according to specific disbursement processes, characterized by a standardised valuation/ inquiry process, which gather all information necessary for the proper management of real estate guarantees.

The Montepaschi Group has developed one single process for the acquisition of collaterals which is at the same time a working instrument and the expression of the Group's management policies. The instrument can activate different paths on the basis of the type of guarantee. The management of guarantees starts after loan disbursement approval, the process of which is broken down into different stages:

- acquisition (also multiple acquisition); the controls of (formal and amount) consistency with the guarantees proposed during the authorisation phase are performed in this stage;
- adjustment/change/amendment; useful to amend the characteristics of a guarantee without interrupting loan protection;
- query; gives information about the present data and the historical trend of guarantees received;
- repayment/cancellation.

A system monitoring the value of collaterals on the basis of market values is in place. If the measures for monitoring collaterals on loans show operational irregularities during the acquisition phase or any inadequacies/ losses of the values received as a pledge, events falling within the scope of credit monitoring *policies* are put in place, which trigger operational obligations of credit risk assessment. Monitoring of pledge transactions is carried out on a daily basis for listed securities deposited with the bank, whilst for mortgages the Group conducts half-yearly monitoring of the property value based on statistical methods.

The value of the property is estimated again:

- if monitoring activities point to a significant reduction in general market prices;
- in case of events of a managerial/accounting nature with greater prudence than the regulatory criteria, defined in the Group's internal policy;
- at least every three years for loans with exposures exceeding € 3 million or 5% of the Bank's own funds.

In this respect, it is important to underline that an assessment is made on the assets pledged as collateral during the mortgage loan approval stage. In the specific case of Retail mortgage loans, a dedicated disbursement process subordinates disbursement to the submission of a technical survey on the asset pledged, thus ensuring the fulfillment of obligations and compliance with relevant validity requirements upon acquisition of the guarantee.

If the value of the property pledged as a guarantee is subject to market or foreign exchange risks, the Montepaschi Group uses the concept of guarantee differential, which is understood as a percentage of the value of the guarantee offered, determined as a function of asset value volatility. The only portion of the loan covered by the value of the assets net of the differential is considered as guaranteed during the approval phase. The monitoring phase requires the adjustment of the guarantees with a market value lower than the value approved, net of the differential. This is notified through a process of daily credit monitoring which alerts the Network with events which may modify risk perception.

The availability of collaterals does not alter the valuation of the insolvency risk of a customer. However, it has an impact on the approval process since loan disbursements with mitigated risk are subject to different discretionary powers (this difference at Banca MPS is even more marked due to the introduction of authorization levels dedicated only to Land and Building credit).

Collaterals accepted by the Montepaschi Group

The Montepaschi Group accepts different instruments to protect loans which can be summarised in the following categories:

- Pledge of sums deposited with the bank;
- Pledge of securities and mutual funds deposited with the bank;
- mortgages on immovables (real estate);
- mortgages on movables;
- Pledge of sums deposited with other banks;
- Pledge of securities deposited with other banks;
- Pledge on other entitlements (insurance policies not intermediated by Companies of the Group and Portfolios under management);
- Pledge on loans;
- Pledge on commodities;
- Other forms of collaterals (Insurance, Guarantee funds).

As at today, the pledge of sums and the pledge of securities and mutual funds deposited with the Parent Company and mortgages on properties account for essentially all of the nominal amount of collateral received and all of them ensure full compliance with regulatory/legal/organisational requirements set out by the Supervisory Regulations for the enforcement of *Credit Risk Mitigation* standards (Regulation EU no.575/2013, CRR). All types that may be received by the Montepaschi Group are entered into a structured collateral management process, under which all sub-steps are operationally shared.

Management of personal guarantees

The Montepaschi Group has fulfilled the obligations set out by EU Regulations (CRR 575/2013) for the purpose of recognition of credit risk mitigation effects produced by any personal collaterals securing the loan.

Personal credit protection consists of personal collaterals, personal collaterals issued by third parties and credit derivatives. At Group level, personal collateral - as highlighted in the quantitative disclosure - covers a limited portion of the overall credit exposure. The main type of personal collateral consists of Guarantees (including omnibus guarantees and personal collateral issued by third parties) provided they are issued by the parties listed below:

- Sovereign governments and central banks;
- Public sector and local agencies;
- Multilateral development banks;
- Regulated intermediaries;
- Businesses that have a creditworthiness rating by an ECAI (External Credit Assessment Institution) of not less than 2 on the creditworthiness rating scale;
- Public sector entities;
- Credit institutions or investment firms subject to supervision and prudential requirements comparable to those applied to credit institutions or investment firms in the European Union;
- Other companies for which a credit rating from an ECAI is available or companies which the Group assesses internally using the IRB method;
- Central counterparty;
- A counterparty internally assessed by the Bank, based on its own validated model.

The activities that the MPS Group puts in place for compliance with the main organisational requirements are attributable to the similar activities envisaged for collateral other than real estate.

Under current regulations, banks which adopt the “advanced IRB” model may use the collateral as credit risk mitigation through personal guarantee adjusting PD or LGD estimates.

In both cases, mitigation is allowed, in addition to compliance with the personal guarantee eligibility constraint, provided that guaranteed exposures are not assigned adjusted PD or LGD values such that the post-adjustment risk weight (RW) is lower than that of a comparable direct exposure to the guarantor.

Based on Group internal regulations on CRM, the MPS Group has introduced two different policies for treatment of the exposures backed by personal guarantees, which fall within the AIRB scope. The first approach concerns exposures backed by guarantees issued by counterparties treated according to the Standard approach. The guarantees granted by these entities are treated by applying the weighting (RW) of the guarantor to the guaranteed portion of the exposure (substitution method). The second approach concerns all those exposures that fall within the AIRB perimeter assisted by personal guarantees issued by counterparties that also fall within the AIRB perimeter. In this case, a modelling approach is applied to the guaranteed exposure based on internal estimates (personal LGD) instead of the LGD for unsecured positions (unsecured LGD).

The substitution approach is also used for exposures to counterparties within the Standard scope.

Personal guarantees accepted by the Montepaschi Group

The Montepaschi Group accepts different instruments to protect loans which can be summarised in the following categories:

- Guarantees (including omnibus guarantees and personal guarantees issued by third parties);
- Endorsement;
- Guarantee policy;
- Credit mandate;
- Strong/binding patronage letters;
- Negotiable instruments;
- Performance bond agreement;
- Debt delegation;
- Expromission;
- Assumption of debt;
- Personal Collateral governed by foreign law;
- Credit derivatives:
  - *credit default swap;*
  - *total return swaps;*
  - *credit linked notes.*

Credit derivatives are not used for CRM purposes, while other instruments are used where the eligibility requirements of the relevant regulatory framework are applicable. The main parties issuing the above credit-protection instruments are:

- Sovereign governments and central banks,
- Public sector and local agencies,
- Multilateral development banks,
- Regulated intermediaries,
- Guarantee institutions (Confidi),
- Companies and individuals.

Concentration of collaterals

The main concentration of collaterals is linked with Retail mortgage loans. However, it cannot be referred to as risk concentration by virtue of the principle of risk fragmentation which is implicit in this type of customer.

For the phase of monitoring the assets pledged, the Group has a policy establishing the amounts of the secured exposure and the age of the appraisal, beyond which the properties are appraised again. For exposures lower than the thresholds defined, the Group in any event conducts half-yearly monitoring of the property value based on market data.

EU CR3: CRM techniques overview: disclosure of the use of credit risk mitigation techniques

		a	b	c	d	e
		Unsecured carrying amount	Secured carrying amount	Of which secured by collateral	Of which secured by financial guarantees	Of which secured by credit derivatives
1	**Loans and advances**	**28,691,807**	**61,994,370**	**46,853,984**	**15,140,386**	**-**
2	Debt securities	13,974,672	-	-	-	
3	**Total Debt securities**	**42,666,479**	**61,994,370**	**46,853,984**	**15,140,386**	**-**
4	Of which non-performing exposures	191,640	1,520,470	1,082,728	437,742	-
EU-5	*Of which defaulted*	*191,640*	*1,520,470*	*1,082,728*	*437,742*	-

At the end of December 2022, more than 68% of loans and advances were secured. Of these, over 75% were secured by collateral (real estate or financial). The amount of exposures secured by personal guarantees decreased by 3% compared to 12/31/2021, mainly due to exposures subject to state guarantees.

Annex XIX – Disclosure of the use of the standardised approach (excluding counterparty risk and positions to securitization)

EU CRD: Qualitative disclosure requirements related to standardised model

In 2022, the Montepaschi Group uses the following official rating agencies for legal entities not subject to AIRB validation as well as for statutory portfolios, for which the advanced internal rating system to calculate capital absorption on credit risk is not used, to measure the level of reliability of different borrowers:

- S&P Global Ratings Europe Limited;
- Moody's Investor Service;
- Fitch Rating.

When determining capital requirements, it should be noted that if there are two evaluations of the same customer, the more conservative one is adopted. In the case of three evaluations, the intermediate is used.

Regarding the disclosure on information on association of external rating of each nominated ECAI (External Credit Assessment Institutions) or ECA (Export Credit Agencies), please note that the Group uses the tables provided by the Commission Implementing Regulation (EU) 2016/1799 of 7 October 2016 as amended, and by the Commission Implementing Regulation (EU) 2016/1801 of 11 October 2016, amending Reg. (EU) 2022/2365.

At present the standard approach is applied to all portfolios and entities of the Group with the exception of the portfolios, exposures to corporates and retail exposures, belonging to the following entities:

- Banca Monte dei Paschi di Siena
- MPS Capital Services Banca per le Imprese
- MPS Leasing & Factoring

for which the advanced IRB model is adopted, details of which are described in Annex XXI.

The table below summarises the list of ECAIs and ECAs used in the standardised approach as well as the portfolios of exposures in which the ratings of the exposures themselves have been applied.

Portfolio	ECA/ECAI	Rating characteristics
Exposures to governments and central banks	✓ S&P Global Ratings Europe Limited ✓ Moody's Investor Services ✓ Fitch Ratings	*Solicited and Unsolicited*
Exposures to regional governments or local authorities		
Exposures to public sector entities		
Exposures to multilateral development banks		
Exposures to institutions		
Exposures to corporates		
Exposures in the form of units or shares in collective investment undertakings ('CIUs')		
Items representing securitization positions		
Exposures in the form of covered bonds		

- ***solicited rating**: a rating assigned for a fee following a request from the entity evaluated. Ratings assigned without such a request shall be treated as equivalent to solicited ratings if the entity had previously obtained a solicited rating from the same ECAI;*
- ***unsolicited rating**: a rating assigned without a request from the entity evaluated and without payment of a fee.*

Extension of issuer and issue credit assessment to comparable assets not included in the regulatory trading portfolio.

In accordance with EU Regulation 575/2013 (CRR)[1] in order to assess the risk weight to be assigned to the exposures (in general for all regulatory portfolios), the rules provide for the priority use of the issue rating.

Where the issue rating does not exist and where the conditions laid down by the Regulation are met, the issuer rating is used.

[1] as amended by Reg, (EU) 2019/876 (CRR2).

The table below shows the details of the banking Group's exposures subject to credit risk – standard approach, determined according to the rules of Prudential Supervision and including the effects from risk mitigation techniques (netting agreements, guarantees, etc.).

The pre-CRM exposure refers to the amount of on- and off-balance sheet exposures "without" risk mitigation and does not factor in the reduction in exposure resulting from the application of collateral and personal guarantees. The post-CRM exposure shows the value of the same exposures "with" the risk mitigation effect, i.e. net of the guarantees mentioned above. In the case of personal guarantees, which result in the transfer of risk, the portion of the exposure that is guaranteed is based on the guarantor's regulatory portfolios and risk weightings, while the residual portion of the exposure is based on the guaranteed party's information, thus the difference between the "pre" and "post" credit risk mitigation exposure represents the amount of collateral allowed.

EU CR4: Credit risk exposure and CRM effects

		a	b	c	d	e	f
		Exposures before CCF and CRM		Exposures before CCF and CRM		RWAs and RWA density	
	Exposures class	On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
1	Central governments or central banks	25,094,304	161,608	40,136,033	242,775	2,074,571	5.1378%
2	Regional governments or local authorities	1,007,290	335,919	1,020,439	106,778	224,897	19.9515%
3	Public sector entities	502,758	291,722	500,975	57,258	448,849	80.4052%
4	Multilateral development banks	41,730	15,000	41,730	-	-	0.0000%
5	International organisations	22,485	-	22,485	-	-	0.0000%
6	Institutions	2,706,752	1,461,238	2,724,540	181,818	817,900	28.1417%
7	Corporates	3,013,192	2,390,981	2,626,124	431,903	2,339,818	76.5140%
8	Retail	801,686	712,756	655,408	42,406	479,568	68.7243%
9	Secured by mortgages on immovable property	1,324,815	14,139	1,312,496	1,841	485,866	36.9666%
10	Exposures in default	95,504	37,511	61,485	2,619	70,685	110.2662%
11	Higher-risk categories	20,135	39,313	20,135	5,331	38,200	150.0000%
12	Covered bonds	618,333	-	618,333	-	74,215	12.0025%
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	0.0000%
14	collective investments undertakings	294,018	-	294,018	-	351,829	119.6620%
15	Equity	839,282	-	839,282	-	1,597,764	190.3728%
16	Other items	4,747,767	-	4,747,767	-	3,365,916	70.8947%
17	**Total as at 31/12/2022**	**41,130,052**	**5,460,187**	**55,621,250**	**1,072,730**	**12,370,078**	**21.8190%**
17	**Total as exposure**	**46,590,239**		**56,693,980**		**12,370,078**	**21.8190%**

EU CR5: Standardised approach

	Exposures classes	Classes of credit worthiness (Weighting Factors)															Total	Without rating
		0%	2%	4%	10%	20%	35%	50%	70%	75%	100%	150%	225 - 250%	370%	1250%	Others		
1	Central governments or central banks	39,175,394	-	-	-	-	-	25,256	-	-	588,843	-	589,314	-	-	-	**40,378,807**	**16,327,681**
2	Regional governments or local authorities	-	-	-	-	1,127,217	-	-	-	-	-	-	-	-	-	-	**1,127,217**	**1,127,217**
3	Public sector entities	-	-	-	-	114,865	-	34,986	-	-	408,383	-	-	-	-	-	**558,234**	**478,260**
4	Multilateral development banks	41,730	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**41,730**	**41,730**
5	International organisations	22,485	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**22,485**	**22,485**
6	Institutions	36,909	495,448	-	-	1,695,699	-	416,917	-	-	261,385	-	-	-	-	-	**2,906,358**	**808,596**
7	Corporates	1,178	-	-	-	676,040	-	174,934	-	-	2,119,605	86,270	-	-	-	-	**3,058,027**	**1,873,506**
8	Retail	-	-	-	-	-	276	-	-	697,538	-	-	-	-	-	-	**697,815**	**561,524**
9	Secured by mortgages on immovable property	-	-	-	-	-	978,469	335,867	-	-	-	-	-	-	-	-	**1,314,336**	**1,218,943**
10	Exposures in default	-	-	-	-	-	-	-	-	-	50,942	13,162	-	-	-	-	**64,104**	**43,882**
11	Higher-risk categories	-	-	-	-	-	-	-	-	-	-	25,466	-	-	-	-	**25,466**	**25,466**
12	Covered bonds	-	-	-	494,513	123,820	-	-	-	-	-	-	-	-	-	-	**618,333**	**-**
13	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	**-**
14	Collective investment undertakings	155	-	-	-	11,473	-	2,763	-	-	146,299	133,159	-	-	169	-	**294,018**	**293,952**
15	Equity	-	-	-	-	-	-	-	-	-	333,627	-	505,655	-	-	-	**839,282**	**811,924**
16	Other items	764,619	-	-	-	774,255	-	20	-	-	3,204,511	4,363	-	-	-	-	**4,747,767**	**4,706,593**
17	**Total**	**40,042,470**	**495,448**	**-**	**494,513**	**4,523,369**	**978,746**	**990,742**	**-**	**697,538**	**7,113,594**	**262,420**	**1,094,969**	**-**	**169**	**-**	**56,693,980**	**28,341,760**

Annex XXI – Disclosure of the use of the IRB approach to credit risk

EU CRE – Qualitative disclosure requirements related to IRB approach

With decree no. 647555 of 12 June 2008, the bank of Italy authorised the Montepaschi Group to use *Advanced Internal Rating Based* (AIRB) systems to calculate the capital requirements for credit and operational risk. Under AIRB approach the following regulatory values are estimated internally:

- PD (*Probability of Default*): Likelihood of transferring from a performing status to that of nonperforming over a one-year time horizon.
- LGD (*Loss Given Default):* Percentage of loss in the event of default.
- EAD (*Exposure at default*): Amount of exposure at the time of default.

In particular, whereas the Montepaschi Group uses the standard approach ratios for Exposure at default (EAD), the Group is instead authorised to use:

- Internal Probability of Default (PD) estimates, for the portfolio of exposures to corporates and retail exposures;
- internal *Loss Given Default* (LGD) estimates for the portfolio of exposures to corporates and retail exposures.
- Slotting Criteria for Specialised Lending exposures.

For portfolios other than those mentioned above, the standard approach is used.

As for legal entities, the scope of application of the authorised approaches shall be the following:

- AIRB: Banca Monte dei Paschi di Siena, MPS Capital Services, MPS Leasing & Factoring;
- the remaining legal entities of the Montepaschi Group use the standard approach.

The organization of the Parent Company provides that the structure responsible for the development of models (Risk Management Function) is included within the Chief Risk Officer (CRO) Department. These functions, however, remain separate from the structures responsible for approving loans (Commercial Departments). The Lending Risk Area operates independently from the Internal Validation Function. The autonomy and independence validation function, organisationally separate from the credit risk control unit is, in accordance with the regulatory technical standards (EBA/RTS/2016/03) ensured by the Internal Audit Function as part of the annual review on Internal Validation function.

The organizational structure follows a three-level approach: the credit risk control unit is responsible for defining the rules and methodologies for determining the risk measures; the Internal Validation function is responsible for verifying the alignment of the risk measurement systems with the company policies and the regulations of the Supervisory Authority; the Internal Audit Function evaluates the reliability and effectiveness of the credit risk measurement process, the model's outputs as well as verifies the validation process of the rating system.

The management of relations between the control functions is the responsibility of the Committee for the Coordination of Functions with Control Responsibilities, which is responsible for coordinating the various projects connected with the Internal Control System, discussing operational and methodological aspects, identifying measures for improvement, impacts and strategies, and monitoring the anomaly resolution process.

Internal rating system architecture

The Montepaschi Group began using internal rating systems for the measurement of credit risk in 2002. The first Probability of default (PD) models were developed for the small and medium-sized enterprises (SMEs) and *Small businesses* (SB); subsequently, rating models were also estimated for other types of exposure and a *Loss Given Default* (LGD) estimation model was implemented.

Finally, an Exposure at Default (EAD) estimation model was implemented and subsequently updated, as with other internal models pending validation by the Supervisory Authorities. The rating system has thus become, over time, one of the main elements of assessment for all units involved in the credit industry, both at Head Office level (risk management, Chief Financial Officer, General management, Risk Management committee, board of directors) and at outer level (credit management area, rating units and relationship managers).

Thanks to the experience accumulated, the Montepaschi Group has decided to further invest in internal rating systems, starting, at the beginning of 2006, with the Basel II Project aimed at improving the existing internal procedures by adjusting them to the new prudential supervisory regulations for banks which came into force on January 1, 2007 with legislative decree no. 297 dated 27 December 2006. This project ended in 2008 with the authorisation from the bank of Italy to use advanced internal rating systems (AIRB) for PD and LGD with a view to calculating capital requirements for portfolios of "non-financial companies" and "retail exposures" for Banca Monte dei Paschi di Siena and MPS Capital Services. Over the following years, in line with an internal overall 'advancement plan' and from a standpoint of roll-out, the MPS Group continued the process of refinement/ revision of its rating models for Corporate and Retail clients, leading it to obtain authorization by the Supervisory body (with decree of 25/08/2010) to use advanced internal rating based systems for the Group's new entity, "Banca Antonveneta" (acquired in 2008 and merged into Banca MPS in April 2013) and for Montepaschi Leasing & Factoring and BiverBanca by ruling of 06.07.2012. The latter was subsequently sold by the Group to Cassa di Risparmio di Asti and as of the end of 2012 is no longer part of the MPS Group.

Internal rating system description

The development of the internal rating systems involved the adoption of strict and advanced statistical methodologies in compliance with the requirements set out in the regulations; at the same time, models were selected in such a way as to make results consistent with the historical experience of the bank in credit management. Lastly, in order to optimise the proper use of these new instruments, the rating models were shared with a *top-down* approach – from risk management down to individual client managers by means of intense training.

Estimation of the LGD model was based on internal data relative to capital flows, recoveries and expenses actually incurred on positions transferred to the non-performing portfolio. Results obtained from model application were then compared with data observed by the Workout Area, which is dedicated to the management and recovery of non-performing loans.

The introduction of advanced rating systems in the credit process was an important cultural step forward which is now becoming a well-established practice for all Business Units of the Group.

The main characteristics of the advanced rating systems are as follows:

- for all regulatory portfolios subject to validation, the rating is calculated with a counterparty-based approach for each individual borrower, in line with the accepted management practice which provides for the assessment of credit risk, both in the disbursement and monitoring phases;
- ratings are based upon a Group logic: each individual counterparty is assigned a single rating at banking Group level, based on the data set pertaining to all lending banks within the AIRB scope; there is one LGD reference definition for retail banks while there are different reference definitions for product companies;
- LGD reflects the economic (and not only the accounting) loss incurred; for this reason, LGD estimates must also include the costs incurred for the recovery process and a time factor;
- the rating model segmentation, validated through statistical rules, is defined in such a way as to make the individual model clusters consistent with business objectives, credit process logics and regulatory portfolios set out in the regulations;

- loss given default is differentiated by type of loans and an LGD value is assigned at the level of each individual transaction;
- customer segmentation for LGD estimation and assignment follows the same logics as with the rating models; for clusters to acquire significance, segments were aggregated together under “Retail” for retail exposures and “Corporate” for exposures to non-financial corporates;
- the loss rate is differentiated by geographical area since historical and current recovery rates are different among Northern Italy, central Italy and Southern Italy and islands;
- loss on defaulted positions other than non-performing loans is estimated with a *Danger Rate* approach, i.e., by estimating the migration and loss rates for both counterparties with UtP and past due NPL status and for counterparties that have slipped to bad loan status. These percentages are then combined in order to obtain an LGD rate to be allocated to counterparties with a Default status other than a Bad Loan status;
- changes in exposure after the first transition to default are included in the *Danger Rate* estimate;
- calculation of the final rating is differentiated by type of counterparty. The credit process envisages a level of in-depth analysis proportional to counterparty risk: the assessment of loan disbursements is based on a complex multi-level structure for medium-large Corporate counterparties (SME and Large Corporate (LC) segments), whose exposure and concentration risks are higher, and a simplified structure for Small SMEs (companies with a turnover of up to EUR 50M) and retail clients;
- in line with this process, the final rating for SMEs and LC is the result of a number of different factors: statistical rating, qualitative rating, overrides and valuation of the ‘economic group’ which businesses belong to; for Small SMEs, SB and retail counterparties the rating is calculated only on the basis of statistical factors, (except for reasoned requests for Statistical Rating Modified by Override);
- the rating has a 12-month internal validity period and is usually reviewed on a yearly basis, except for rating reviews following well-structured codified practices or that are brought forward on client managers’ request or following serious counterparty deterioration.

The Montepaschi Group has adopted one master Scale for all types of exposures: this enables all units involved in credit management to immediately compare the risk level associated with different counterparties or portfolios; furthermore, the probabilities of default of internal rating classes were mapped against Standard & Poor’s external rating scale so as to make internal risk measurements comparable to those available on the financial market.

The table shows a breakdown by PD band - with related central PDs - identified by the MPS Group in order to allow for a significant differentiation of credit risk.

<table>
<tr><th>Rating class</th><th>PD</th><th>PD Class</th><th>PD range of subclasses</th></tr>
<tr><td>AAA</td><td>0.01%</td><td rowspan="5">0.00 to < 0.15</td><td rowspan="4">0.00 to < 0.10</td></tr>
<tr><td>AA1</td><td>0.03%</td></tr>
<tr><td>AA2</td><td>0.05%</td></tr>
<tr><td>AA3</td><td>0.09%</td></tr>
<tr><td>A1</td><td>0.13%</td><td>0.10 to < 0.15</td></tr>
<tr><td>A2</td><td>0.20%</td><td>0.15 to < 0.25</td><td></td></tr>
<tr><td>A3</td><td>0.30%</td><td rowspan="2">0.25 to < 0.50</td><td></td></tr>
<tr><td>B1</td><td>0.46%</td><td></td></tr>
<tr><td>B2</td><td>0.69%</td><td>0.50 to < 0.75</td><td></td></tr>
<tr><td>B3</td><td>1.05%</td><td rowspan="3">0.75 to < 2.50</td><td rowspan="2">0.75 to < 1.75</td></tr>
<tr><td>C1</td><td>1.59%</td></tr>
<tr><td>C2</td><td>2.42%</td><td>1.75 to < 2.50</td></tr>
<tr><td>C3</td><td>3.99%</td><td rowspan="3">2.50 to < 10.00</td><td>2.50 to < 5.00</td></tr>
<tr><td>D1</td><td>6.31%</td><td rowspan="2">5 to < 10.00</td></tr>
<tr><td>D2</td><td>9.95%</td></tr>
<tr><td>D3</td><td>16.03%</td><td rowspan="4">10.00 to < 100.00</td><td>10 to < 20.00</td></tr>
<tr><td>E1</td><td>22.12%</td><td>20 to < 30.00</td></tr>
<tr><td>E2</td><td>31.63%</td><td rowspan="2">30 to < 100.00</td></tr>
<tr><td>E3</td><td>45.00%</td></tr>
<tr><td>Default</td><td>100.00%</td><td>100.00% (default)</td><td></td></tr>
</table>

Under prudential standards, the PD for the Corporate segment cannot be below 0.03% whilst for Retail, the MPS Group has decided to assign a PD of at least 0.13% for prudential purposes.

The rating system development and monitoring activities are functionally assigned to Risk Management. The estimation procedure is carried out according to an internal development protocol to make sure that estimation activities are transparent and visible for the internal controls functions and the Supervisory Authority.

Risk Management and Internal Validation Function periodically carry out monitoring/*backtesting* analyses on the internal models to verify their performance stability over time. Should significant vulnerabilities emerge from the analyses, model *fine-tuning* or 'reestimation' procedures are put in place.

The Montepaschi Group currently has 16 rating models (14 validated and two pending validation) and 3 LGD model (MPS, MPSCS e MPSL&F) for the measurement of risk in validated regulatory portfolios.

For the calculation of capital absorption against credit risk, the Montepaschi Group uses **internal rating systems** for the following regulatory classes:

- Corporates,
- Retail exposures.

Internal rating model for Corporates

PD models

For the estimation of PD models, the Montepaschi Group adopted a *default-based* methodology. Among the statistical techniques used in the estimation of models with dichotomous *bad/good* target variables, a logistic regression was selected, characterized by the optimal *trade-off* between statistical soundness and interpretability of results.

The "non-financial businesses" portfolio includes all balance-sheet and unsecured exposures to companies relating to the banks, Monte dei Paschi, MPS Capital Services and MPS Leasing and Factoring.

The data source observation period for PD calibration is 11 years.

Model segmentation

Corporate customers were segmented beforehand in order to obtain consistent clusters by risk profile. To this end, a size logic was used (based on the legal form of a company and its turnover) which appears to be consistent from both the statistical and operational point of view. Any information on turnover is obtained from the company balance sheet prepared in accordance with the Fourth EEC directive in relation to the last available annual report. The segment of Small businesses (one-man businesses and partnerships) consists of companies which are not subject to the obligation of preparing balance sheets for legal purposes; tax data are not currently used in the segmentation.

Development stages of the rating models

Two main stages of development are envisaged for each rating model: score model estimate and calibration.

- **Score model estimate**

All information sources available are taken into account for the estimate of each rating model. A modular approach was adopted to maximise the prediction power of each information source, i.e. a (financial, internal trend, industry trend) standard module was estimated for each information source with the following determination of the final model as a combination of all modules.

The information sources used for Corporate models are the following:

- balance sheet reports,
- internal trend data,
- industry data (Central Credit Registers of the Bank of Italy).

As far as the balance sheet is concerned, a set of indicators covering all areas of inquiry contemplated by corporate financial analysis was determined, including: debt coverage, financial structure, liquidity, profitability, productivity, development.

With reference to lending trend components, the variables normally used by the account managers for risk valuation were restated: types of use of loan forms, account movements, number of irregularities found. The variables are calculated for each type of loan (callable, self-liquidating, upon maturity etc.) and are determined at the Group level over a time horizon of 12/6/3 months. As for the internal practice, the stage of development follows all procedures contemplated by a statistical inquiry: determination of a development sample (70%) and a test sample (30%), fact-finding analyses and preliminary data treatment, univariate analyses, correlation analyses and short list determination, multivariate analyses, model selection and review of out of sample performances.

- **Calibration**

Calibration is a process for estimating the function which transforms the score models output into default probability, i.e. the probability that a counterparty is in default within one year. The approach used by the MPS Group was based on two main steps:

- estimate of the *anchor point*. The *anchor point* determines the average PD used by the model;
- calculation of the calibration function for adjustment of the *scoring* model parameters. The calibration function essentially defines how expected PD will vary according to the model score.

Calibration in fact envisages a new default rate (*anchor point*) and is therefore inseparable from the need to adjust the parameters of the *scoring* algorithm so as to enable this latter value to be calculated instead of the estimated value. The default rate of the sample should therefore be adjusted in order to take account of the present target rate (*anchor point*).

To this end, the MPS Group has identified a methodology, substantially based on the use of a 'calibration' function, whose final output is an intercept and *slope* value to be applied to the initial *scoring* algorithm.

The *anchor point* represents the level of risk traditionally associated with the specific segment which the model is calibrated on.

It is calculated on the basis of the long-term default rate. The estimated calibration function is used to calculate the point-in-time PD which is subsequently mapped on the Montepaschi Group *Master Scale*; each counterparty is assigned a PD level corresponding to its rating class.

- **Definition of default**

In 2020, the MPS Group took the necessary steps to implement the new definition of default (NEWDOD) provided for by the relevant regulations EBA/GL/2016/07 and EBA/RTS/2016/06. In particular, the new definition of default was introduced into the Group's processes as of 01 January 2021 and was incorporated into the internal IRB models during 2021 during the calibration of the models.

While confirming the definition of default in its macro aggregates of delayed payment and unlikeliness to pay of an obligor, the new regulations establish a more prudential framework, introducing a number of changes mainly in relation to:

- "absolute" and "relative" materiality thresholds for the identification of default:
  - absolute threshold:
    - ✓EUR 100 euro for Retail and EUR 500 for non- Retail, to be compared with the total amount past due and/or overrun by the debtor.
  - relative threshold:
    - ✓1% of the exposure, to be compared with the ratio between the total amount past due and/or overrun and the total amount of all on-balance

sheet exposures towards the same obligor.

The default is triggered if the two thresholds are exceeded jointly for 90 continuous days. The above thresholds are calculated at Group level (i.e. past due/overrun at Group level and total exposure at Group level); for the above identification of the default, the compensatory effect from any margins available on other credit lines (e.g. loans still available loans) are not considered.

Additional rules for all categories of default have also been introduced:

- the alignment of a client's default classification across all companies of the banking Group (a customer cannot be classified as defaulting in one group company and not in another);
- new rules for the propagation/contagion of the default status (e.g. joint credit obligation (or "co-obligation"):
  - ✓ if the joint credit obligation is in default, then the contagion effect is applied to the exposures of each co-obligor;
  - ✓ if all co-obligors are in default, the contagion effect automatically applies to the co-obligation exposures;
- the possibility of exiting the default only if a minimum of three months has elapsed since the conditions for classifying the position as default no longer exist.

LGD models

As required by regulations, the loss rate estimate is the long-term average of realised losses, weighted by the number of counterparties and not by exposure broken down by Legal Entity (Banca MPS, Banca MPSCS e Banca MPS L&F).

The Group uses a two-component model: the Bad Loans LGD and the LGD of default statuses other than Bad Loans. The relevant variables for the estimates include the geographic area, type of customers, loans, exposures transitioning to a default state, guarantees and their percentage of coverage, and, for non-performing statuses, the vintage.

The relevant regulations (EBA/GL/2017/16) have highlighted the importance of having appropriate LGD estimates for default exposures. The MPS Group has adopted the approach of indirectly estimating the in-default LGD as the sum of the Expected Loss Best Estimate plus an unexpected loss component obtained by inserting the Add-On of the downturn, to account for additional unexpected losses in the event of a recession in which there are lower recovery rates compared with the Long run LGD.

- **Loss Rate for non-Performing Positions**

The estimation of the LGD of Bad Loans is based on a workout approach, i.e. based on the historical evidence of sets of defaulting transactions that have similar characteristics.

The database used to estimate the parameter includes all balance sheet and unsecured exposures relating to banks in the validation perimeter, which migrated to bad loan status from 01/01/1999 to 31/12/2019. Once the time horizon of the analysis has been established, the RDS (Reference Data Set) of the LGS estimate include:

- CLOSED Bad Loan positions;
- Bad Loan Positions defined as essentially CLOSED, i.e. positions that have been under Bad Loan status for a period exceeding the maximum workout period or that no longer have residual exposure;
- the OPEN Bad Loan positions;
- (Incomplete Workout) are included with an assessment of future recovery at the date of analysis.
- Bad loan positions subject to bulk disposals are included with assessment of future recovery based on the disposal price or residual exposure.

As per the ECB's letter of 02/08/2018, the positions that fall within the Waiver perimeter, i.e. those that fall under the Valentine disposal and the Morgana and Merlino disposals excluding the 2017 flow, are not included in the estimated RDS. The disposals excluded from the Waiver have been incorporated into the estimation of Bad Loans-Incomplete Workout with a specific treatment of future recoveries.

Realised collections minus the costs incurred with respect to defaulting exposures are compared to calculate the LGD rate actually observed on non-performing positions. Considering that reference is made to the registered economic loss, and not only to the accounting loss, all movements are discounted as of the date the loan is classified as non-performing.

The interest rate used for discounting is the Average Lending Rate, which represents the average value on the commercial customer portfolio calculated as the ratio between the gross interest for the year and the value of average volumes for the same year.

As provided for by the regulations, a lower limit of 0% is set since the average LGD cannot be negative.

- **LGD for categories other than Bad Loans**

For the estimation of LGD for categories other than Bad Loans the starting point is the Danger Rate, i.e. the loss rate based on the calculation of the probability of transition from a performing status or from a non-performing status other than Bad Loan to Bad Loan status. Therefore, in order to estimate the Danger Rate, the probability of closure in an absorbing status conditional on the initial state of default is calculated, so as to associate each absorbing status to the observed write-off rate and, for new Bad Loan inflows, the estimated loss rate; for the performing status, the average is calculated of the LGDs of the default statuses weighted by the probability of first-time entry into each status. All positions included in the rating model calibration population that became defaulted within the period of analysis, i.e. from January 2009 to January 2018 with analysis of default observed until January 2020, were selected for this purpose.

- **Definition of default**

During the development of the LGD model, the definition of default used coincides with the one used in the calibration of the rating models: defaulting counterparties have been defined as a subset of customers with an exposure (credit line granted or drawn) which, in an ordinary condition in a given month of the year, shows at least one default event within the following twelve months (default event defined according to the new reference standard EBA/GL/2016/07 taking into account the management of multiple defaults in nine months.

- **LGD Downturn**

A downturn multiplier is estimated in order to incorporate any deterioration resulting from recessions in the business cycle in LGD estimates. The approach involves identifying recessionary periods by studying the time series of certain macroeconomic indices: the downturn impact is obtained from this analysis and applied to the LGD rate.

- **Margins of conservatism**

Finally, as required by the regulations, Margins of Conservativism (MOC) have been estimated and applied to the final LGDs. In particular, the regulations provide for the estimation of 3 categories of MOC according to their nature:

1. Category A (deficiencies in data and estimation methods);
2. Category B (changes in recovery processes);
3. Category C (general estimation errors)

Internal rating model for Retail exposures

PD models

A *default-based* methodology has also been adopted for "retail exposures". The portfolio includes all balance-sheet and unsecured exposures relating to loans granted by the banks, Monte dei Paschi, MPS Capital Services and MPS Leasing & Factoring to retail customers (natural persons or joint co-obligations of natural persons).

The data source observation period for the estimation of PD is 5 years.

- **Definition of default**

The Group used the definition of default adopted for the corporate models also in relation to the PD models applied to the portfolio of Retail exposures.

- **Development stages of the rating models**

Following on from what was previously reported, only the specific features are shown for Retail models, which have been developed and calibrated using the same methods applied for Corporate models.

For the Retail segment, the main sets of information regarding developments are those relating to loans granted by the Group (overdraft facilities, mortgages and small loans) and to the personal data available on the Customer and related parties.

Main changes to the internal rating system in recent years

Following are the main actions implemented over recent years to the MPS Group's internal rating system.

In 2012, the MPS Group performed a full re-assessment of its corporate and retail models with a view to developing the segmentation of corporate models and aligning all models with the new regulatory definition of default which, as of 1 January 2012, provides for the application of a 90-day limit in place of the prior 180-day limit for the reporting of "non-performing" past due and/ or overdue exposures on loans to businesses and retail loans.

In 2013 the Montepaschi Group the Corporate and Retail models were calibrated by including data from the last few years (most representative of the current economic recession) in the time series.

In 2014, the MPS Group continued to update and revise its internal rating system in order to implement the several events which marked 2014 and which, either directly or indirectly, impacted the loan portfolio's risk parameters:

- firstly, regulatory provisions profoundly changed the framework of prudential supervision in order to strengthen capital requirements and incorporate the new Basel III standards;
- the economic cycle continued to be very severe, with further significant impacts on the level of risk at both system-wide level and on the MPS portfolio. The impact affected risk in the *performing* portfolio which continued to show very high default rates and a decline in its ability to recover non-performing positions;
- the regulatory exercise known as the «*Comprehensive Assessment*» and, in particular, the *Asset Quality Review* (AQR) revealed a significant impact for the Montepaschi Group;
- finally, there was a reduction in the closure of non-performing positions, which contributed to increasing the vintage of loans.

The combination of these events led to the need for maintenance actions to be implemented on risk parameters to incorporate a fuller and more up-to-date set of information, as per regulatory requirements.

In the light of these events, the MPS Group decided to adjust all its rating models so that the first AQR results (from the *Credit File Review* – CFR) could already be included in the 2014 estimates and the LGD model could be re-estimated in line with internal protocol and Group practice which, over the last few years, have always provided for the annual re-estimation/calibration of all models as a result of the persisting economic cycle.

As for LGD, in order to incorporate the most recent findings, a stock of significant positions not yet closed – but for which the recovery process can essentially be considered as closed - was included in the estimation sample (so-called incomplete *work-outs*). To this end, the percentage of adjustments of operational positions was identified, assuming that the recovery process was essentially concluded for over a certain percentage of coverage. In this connection, a level of coverage in excess of or equal to 99% was identified as significant.

In 2015, as soon as the *default detection* actions were concluded, the MPS Group recalibrated all of its Corporate and Retail rating models and re-estimated all LGD models in order to fully incorporate the AQR impacts. In particular, the time series used for PD and LGD estimations were shifted by one year so as to include the actual data relating to 2014; given the timing of activities (first quarter), it was not necessary to assess prospective TDs as it was for calibrations in the second half of the year, where they were not available.

The operation at the end of 2014 (incorporated in the recalibration of PD models and re-estimation of LGD models) involved the reclassification of a high number of counterparties from *performing* to *non-performing* status and within the *non-performing* categories, which significantly affected the default rate for 2014 as well as the *cure rates*. The shift in the time series meant that the effects of the operation were fully included in the new calibration.

Moreover, in the course of 2015, the supervisory *slotting criteria* approach was used to determine capital requirements for *Specialized Lending* transactions of more than 5 €/mln. Finally, as provided for in the *roll-out* plan, the Montepaschi Group went ahead with the estimation of Rating models for the "Banks" segment.

In 2016, in line with the provisions of the regulatory framework (in particular with CRR regulation no. 575/2013, art. 179) on the basis of which 'institutions review their estimates whenever new information becomes available and in any case basis', the MPS Group continued to update and revise its internal rating system in order to reflect the events of 2015 and, in particular, it fully recalibrated all PD models, updating the *Anchor Points* (AP) and implementing the 2015 default rates. Finally, it should be noted that regulatory legislation is profoundly changing the framework of prudential supervisory rules in order to reinforce capital requirements and implement the new Basel III standards. In particular, in addition to the RTSs published by the EBA in 2016 relating to the definition of default to be adopted within estimates, in 2017 the '*Guidelines on PD estimation, LGD estimation and treatment of defaulted assets (EBAGL)*' were published, which call for a number of changes in the previously authorised AIRB models. In order to launch AIRB model updating activities in due time and clearly understand the *compliance* objectives scheduled by the Supervisory Authority for the coming years, the MPS Group has already begun its dialogue with the Supervisory Authority, proposing the new model for the calculation relating to the new definition of default. In addition, in the course of 2017, 2018 and 2019, the MPS Group, along with the other large European banks authorised to use internal models to calculate the capital requirement for credit risk, continued its activities concerning the TRIM (*Targeted Review of Internal Models*). The TRIM is a multi-year project launched by the ECB in 2016 to evaluate compliance with regulatory requirements of the internal models currently used by banks, as well as their reliability and comparability. It can be expected that the final result of the TRIM will likely result in further methodological changes in the current internal models.

Furthermore, in 2019 a re-estimation and recalibration of PD and LGD models was carried out, which provided for a time series update as well as the implementation of the first implementation of recommendations communicated by the Supervisory Authority as part of the TRIM 2017 with respect to which GMPS has initiated the authorization process for discussion with the supervisory authority.

In the same year, the application of the AIRB's Slotting Criteria was extended to all specialised lending transactions (identified with a threshold of EUR 1 million) in order to determine capital requirements.

In 2020, the Group had already taken the steps required to adopt the New Definition of Default provided for by EBA/GL/2016/07 and EBA/RTS /2016/06. The new definition of default was then included in the Group's processes as of January 01, 2021 and has been incorporated into the internal IRB models as of the September 2021 reports (after supervisory approval, received in July 2021

In Q4 2021, the MPS Group took steps to bring the PD and LGD models into line with the EBA/GL/2017/16 regulation in force from January 2022 (IRB repair programme) and resolve the findings that emerged from the previous TRIM and IMI inspections on the PD and/or LGD parameters, by submitting a request to the ECB for the authorisation of a material model change involving the complete resetting of all the models.

Following the above request for authorization, the ECB conducted the IMI-

2022-ITMPS-0197502 inspection in the first half of 2022.

In January 2023, the Parent Company obtained supervisory approval for the entry into production of the new models, which will be implemented in Q1 2023, including the roll-out of the EAD parameter.

Use of Internal Models

Prior to authorisation from the bank of Italy enabling the Montepaschi Group to calculate capital absorptions according to the rules set out for the advanced internal rating systems, the Group used the parameters underlying the calculation of *Risk Weighted Assets* also for other operational and internal management purposes. The basic principle called for the use of Basel 2 input factors –as much in line with operating requirements as possible- even though, for obvious reasons, operational practices naturally diverge from supervisory standards, with some methodological fine-tunings and adjustments required for internal purposes and calculation systems. in particular, “across-the board” parameters used for both “supervisory reporting” and “operational” practices are in relation to the Probabilities of default (PD) resulting from internal rating systems and the loss rates on the “impaired” portfolio (LGD). The latter provide the basis of calculation for different systems of measurement and monitoring, and specifically for:

- **Measurement of economic capital for credit risk.** Among the inputs used for the credit model and related VaR output to be operational, the same PD and LGD variables are applied as those that are also used for regulatory purposes. It is clear that certain adjustments have been necessary, such as the use of probabilities of default “not subject” to validation for portfolios other than “corporate” and “retail”, resulting from internal rating systems not yet subject to validation or from main rating agencies, appropriately re-mapped to the internal *master scale*. With regard to LGD, the Group uses parameters estimated on the basis of portfolios subject to validation according to provisions set out by supervisory authorities, although excluding the economic down-turn effect that is contemplated only for regulatory purposes; out-of-validation portfolios use parameters estimated on the basis of medium-long term recovery rates, if any, or LGD rates in line with those set out by internal provisions under the FIRB approach. Although EAD for supervisory reporting currently follows the standardised methodology, pending the inclusion of the AIRB parameter authorised in 2023 by the ECB, it is calculated as the sum of drawn amounts plus undrawn balance (committed amount – drawn amount) multiplied by a Credit Conversion Factor (CCF) if this margin is higher than 5% of the committed amount, whilst for margins below this threshold, the EAD is determined as the drawn amount multiplied by a factor (K). Both types of ratios distinguish between Legal Entity, Segment, Type of Exposure, size class and rating class. For Financial and Commercial Signature loans, the EAD is multiplied by a factor (RC), which expresses the probability that the committed amount does not become a balance sheet exposure upon default of the counterparty.

- For **the calculation of risk-adjusted performance and measurement of value creation**, the Group follows the same calculation logic as used in the loan portfolio model both for legal entities subject to validation and for those that are excluded from the scope. Furthermore, whenever new estimates or re-adjustments are made to the internal rating systems subject to validation, adjustment results are incorporated in the Vbm procedures which ensure continuous output alignment with the latest updates.
- The parameters which feed the calculation model for the **risk-adjusted pricing process** are the same as those used for the loan portfolio model, even though with some extensions implicit in the pricing model. The pricing model which price-marks different types of loans with different maturities, requires input not only from the annual Probability of default but also from marginal, *forward* and multi-period Pds. For these reasons, the Montepaschi Group has developed specific calculation methodologies for these default probabilities, all in compliance with the annual PD resulting from the validated rating systems. Similarly, LGD calculation is based on the same criteria as those used and mentioned above for the loan Portfolio model, though not taking account of economic downturns.
- In relation to **credit process monitoring**, the following should be noted:
  - processes of loan disbursement to customers included in the AIRB scope of application have been completely 'reengineered' with the Electronic Credit Facility record software. The Montepaschi Group's counterparty rating is the result of a process which evaluates - in a transparent, structured and consistent manner - all the economic financial, 'behavioural' and qualitative information relative to customers who generate credit risk exposures. The Official rating thus determined has ordinary validity up to the twelfth following month and shall be reviewed by the end of that month. However, the rating review in the monitoring process may be prompted at an earlier date during the validity period if ongoing, major monthly statistical Pd variations – exceeding specific *cut-offs* – are intercepted. The loan disbursement system is organised into several 'paths', depending on

the type of customer and transaction requested, which envisage the possibility of executing the process of assigning a rating to each counterparty and do not allow for any decision-making powers to be exercised in the absence of a valid rating;

- credit is monitored by using an *early management* system which uses a binding and non-binding *early detection* trigger as well as a "performance risk indicator", known as IRA (it.: "Indicatore di Rischio Andamentale") which is based on internal and external information regarding the customer's trends and behaviours. When given IRA thresholds are exceeded, the position is intercepted within a process whereby the operator is required to comply with certain activities in order to address the irregularities identified. In 2022, this process was coupled with a new performance score, an early warning system (EWS), aimed at outperforming and replacing the IRA as it was developed to detect weak and early signs of impairment that are not generally recognised by traditional performance scores. In fact, during the second half of the year, the aforementioned score was integrated into the processes for identifying and managing the riskiest positions governed by the CLO's monitoring units. Integration into the front-end IT procedures for position monitoring is scheduled to take place during 2023;
- the Simplified renewal process is used for low-risk situations and lower amounts. This process is applied to all counterparties with credit facilities subject to revision, which have matured or will mature in the month of reference;
- the principle underlying decision-making powers provides for levels to be assigned on the basis of individual counterparty ratings, the amount of the credit facility requested, the level of risk measured for the Group to which the counterparty belongs, the type of credit facility requested or guarantees required and, finally, the nature of the borrower;
- on the basis of these levels, the system for assigning powers identifies a nominal amount for each risk aggregate: power of approval is assigned to the decision-making bodies, making reference to the combination of rating class and type of loan granted according to the principle of delegating the decision-making powers for the worst ratings to the uppermost levels. Exception to this rule is made for the board of directors, which has the highest level of decision-making powers, and for the levels of approval assigned to corporate decision-making bodies.

The importance of internal ratings for management purposes made it necessary to create a unit to control and validate the rating systems within the Montepaschi Group. This unit has an independent organizational structure and separate management reporting flows from the unit responsible for developing, updating and reviewing the systems themselves. This structure meets the requirements set by regulatory legislation to carry out validation controls.

The policies for recognition of credit risk mitigation guarantees are implemented through a dedicated IT process which is applied for reporting purposes and does not overlap with the rules for managing guarantees and collaterals applicable to the loan disbursement process.

The IT application manages all rules for the admissibility of guarantees. The process is based on a first step registry of all guarantees, which outlines the Group operational framework. at a later stage, the data of each individual guarantee is assessed through an analysis of its specific characteristics. In particular, the following general requirements are verified:

- legal certainty;
- enforceability of Guarantee against third parties;
- timely liquidation;
- compliance with organisational requirements.

Control Management model on Internal Rating System

An advanced internal rating system, according to current regulations in force should provide for appropriate forms of review and inspection at all levels of control activities.

The AIRB system used by the Montepaschi Group provides for the execution of automatic controls, i.e. controls regulated by specific operational protocols (e.g. hierarchical controls), within the operating units involved in the process of rating assignment. These controls are aimed at making sure that activities preliminary to rating assignment are properly performed (i.e. selection of a model suitable for customer or transaction assessment, identification of economic or legal relations between customers, compliance with internal procedures oriented to obtaining the information necessary for the assignment and updating of the rating).

The first set of *Data Quality* controls relating to the Internal Rating System was created in 2008, with the definition and set-up of the AIRB models.

In 2016, the Group launched a specific long-term Business Plan project - the Data Governance project - under the responsibility of the Chief Data Officer, within the scope of which it:

- selected a Distributed type Target

organisational model which, under the guidance of a central function, calls for the significant involvement of the Business and IT functions;

- defined and published the reference regulations;
- made the Business functions (*Data Owners*) for the scope identified accountable for the identification of the Data Dictionary components and the definition of controls over the monitoring phase;
- prepared a complete operating machine for the Montepaschi Group for the management of the *Business Glossary, Data Quality* and *remediation*; for *data quality*, the application is capable of managing the execution of controls, their monitoring (up to the level of individual counterparty) and directing the anomaly *remediation* process.

In 2017, the Rating Service, which merged into the Lending Risk Officer Area, participated in the Data Governance project as a "pilot" on the Rating System, migrating the set of existing controls, recording new controls on the new official Data Governance platform and taking responsibility for first-level control maintenance and monitoring.

Currently, the Credit Risk function is responsible for the maintenance and monitoring of 1st level controls for PD/ RATING/LGD/EAD.

The Validation and Risk System Service (Function Internal Validation) within the Credit Risk Officer Division, shall be responsible for the following levels of review contemplated by the regulations. The Validation and Risk Systems Service Unit steadily evaluates whether the estimates of all important risk components are accurate in relation to internal rating System (hereinafter IRS). Starting in 2016 this unit was assigned the operational validation activities outsourced to the Parent Company by the Subsidiary Companies MPS Capital Services and MPS Leasing & Factoring, while starting from 2018 it is responsible for the provision of Model Risk Management Function.

The Internal Validation Function prepares the Montepaschi Group's "Annual internal rating System Validation report" on a yearly basis, expressing an opinion regarding the positioning of the Group's SRI with respect to the regulatory requirements as well as its orderly functioning, predictive capacity and the overall performance of the system itself. The opinion expressed by the Internal Validation Function is then examined by the Corporate Control Functions Coordination Committee, also for the purpose of sharing and agreeing on any remedial actions required. The "Annual Validation Report" is subsequently submitted for approval by the Parent Company's Board of Directors once submitted for examination of the Risk Committee and having heard the opinion of the Board of Statutory Auditors. Moreover, the Chief Audit Executive Division (hereinafter also CAED) is assigned with the task of assessing the efficiency of the overall structure of controls for the rating system (responsible for review controls).

The methods adopted by the above operating units in relation to the operational procedures of validation and *review* are briefly illustrated below.

Internal Rating System Validation Process

Responsibility for validating the SRI is assigned to the head of the Internal Validation Function identified as of 27 June 2021 as the head pro tempore of the Validation and Risk Systems Service (VRSS) in carrying out operational activities that are required for validation.

Following the reorganisation of the Parent Company which came into force on that date, this unit took over the functions of the former Risk Systems Validation Service, which had been set up in February 2014 with the specific task of validating certain risk measurement models – regulatory and non-regulatory – by constantly verifying the reliability of results obtained and maintaining alignment with regulatory requirements.

The results of these controls are documented, formalised and transmitted directly to the structures concerned as well as to the Chief Audit Executive Division. Once a year these results are included in the “Annual Validation Report”. The validation process, within which the abovementioned controls are carried out with a view to finally validating the rating System, consists of the following formal validations:

- validation of **processes**: checks compliance of the internal rating assignment process with the minimum organisational requirements of CRR and circular no. 285 of the Bank of Italy, with a specific focus on the following aspects:
  - design of rating allocation processes and regulatory assessments concerning *Specialized Lending* transactions and, where possible, the *backtesting* of process results while checks on the efficiency of the processes themselves are performed by the Internal Audit Function;
  - analysis of consistency between the changes in ratings made by an operator and the guidelines issued by the units responsible for the assignment of ratings;
  - verifying the actual use of the rating system within the company, identifying the players and processes involved with a particular focus on the loan disbursement and renewal process;
  - validation of models: checks that the statistical models for the calculation of the risk parameters (PD ed LGD) used by the Group MPS maintain specific

performance levels and comply with the minimum organisational and quantitative requirements provided for by the rules. These analyses also include the use of challenging models, to test the resilience of certain methodological assumptions of the models and assess the resulting differences in performance with reference to the estimation and calibration phases, while in the backtesting phase; the main areas analysed are:

- representativeness: checks the consistency between the application population's characteristics in the production of models and the sample used for the estimation e/o calibrazione;
- performance: assesses the prediction power of the model and, therefore, its ability to separate good (low-risk) customers from riskier ones;
- concentration: assesses the level of concentration - as determined by the application of models - of counterparties and/or exposures within individual rating classes, or observations within individual pools included in the LGD models;
- monotonicity: assesses the monotonicity of observed default rates by rating classes and loss rates by deciles of increasing assigned LGD;
- heterogeneity: checks whether each class's default rates or loss rates by decile of increasing assigned LGD are statistically different from those for the next best class;
- homogeneity: checks that default rates for each class are homogeneous by relevant drivers and that observed loss rates are homogeneous within individual LGD pools;
- conservatism: checks the conservativeness of the estimated parameters both by rating class or LGD pool, and at the overall level, compared to the actually observed default and loss rates;
- accuracy: checks the accuracy of the estimated parameters by rating class or by deciles of increasing assigned LGD, compared to the actually observed default and loss rates;
- benchmarking: check consistency of ratings assigned internally with those assigned by outside structures;
- dynamic properties: assessment of the stability of the assigned ratings over time;

• **data** validation: monitoring of the process of identifying and resolving *data quality* anomalies identified by the controls conducted by the Business Functions concerning the quality of the data used by the SRI.

The process of validation involves the

preparation of questionnaires for each scope of action identified, with the objective of checking compliance of each aspect of the IRS with regulatory requirements. The detailed positions on each requirement are collated in an overarching opinion of validation through a system of scoring replies and weighting questions, which is part of the framework that has been established and formalized. This judgment represents the quantitative prerequisite for the formulation of the validation opinion both on the three areas in which the Validation Framework is set in, and on the SRI as a whole.

The methods chosen meet the requirement of making the process of validation transparent and objective, not only with respect to the Supervisory authorities but especially to each operating unit which develops the IRS and is informed of any faults in the system, for correction. This ensures easier action on the gaps and consequently a better control of the proper operations of the IRS by the Function Internal Validation.

Some of the analyses and tools of the Internal Validation Function are shared with the Model Risk Management Function as part of model risk assessment and oversight over the Model Change process.

Process of Internal Review of the Internal Rating System

In line with the existing regulations, the Chief Audit Executive Division of the Montepaschi Group adopts the professional Standards and guidelines of the main domestic and international entities, through an independent and objective activity of *assurance* and advice aimed at controlling, also through onsite inspections, the regular operations and risk trend and assessing the functional efficiency and compliance of the Internal Control Systems in order to improve the effectiveness and efficiency of the organisation.

The introduction of advanced systems of risk measurement and management determined an extension of activities mandated to the internal audit unit and related responsibilities.

The overall review approach focuses on the objective of providing a coherent assessment of adequacy, in terms of both effectiveness and efficiency, of the control systems of the rating-based process of governance and management of credit risk.

In particular, the responsibilities assigned to the internal audit unit by the Supervisory regulations, with reference to the *review* of the advanced models for credit risk assessment and management can be summarised in three following points:

1) assessment of the overall functional efficiency of the control system of the AIRB approach;
2) assessment of the functional efficiency

and regularity of the internal validation process;

3) review of system compliance with the requirements for regulatory use of risk estimates.

However, the main operating components attributable to the adoption of an internal rating system require that the review of that process be considered as part of a larger analysis and assessment of the whole loan management process. The objective is to ensure the materialisation of important synergies from the point of view of the actual cost of implementation and, above all, the overall and coherent observation of the events analysed which share different audit *findings* on the rating process stemming from the reviews carried out in the distribution network and Group companies. The audit controls to be carried out for an assessment of the above-mentioned aspects are guided by efficiency and compliance checks. As a result of the different kinds of control, the internal audit unit performs its responsibilities which consist in reviewing the validity of the whole IRS and the validation process, as well as compliance of the system with regulatory requirements.

EU CR6-A: Scope of the use of IRB and SA approaches

		Exposure value as defined in Article 166 CRR for exposures subject to IRB approach	Total exposure value for exposures subject to the Standardised approach and to the IRB approach	Percentage of total exposure value subject to the permanent partial use of the SA (%)	Percentage of total exposure value subject to a roll-out plan (%)	Percentage of total exposure value subject to IRB Approach (%)
		a	b	c	d	e
1	Central governments or central banks	24,659,450	24,619,419	100.0000%	0.0000%	0.0000%
1,1	*Of which Regional governments or local authorities*		-	*0.0000%*	*0.0000%*	*0.0000%*
1,2	*Of which Public sector entities*		-	*0.0000%*	*0.0000%*	*0.0000%*
2	Institutions	5,358,512	5,474,453	100.0000%	0.0000%	0.0000%
3	Corporates	29,523,366	30,190,119	10.2400%	2.4570%	87.3030%
3,1	*Of which Corporates - Specialised lending, excluding slotting approach*		-	*0.0000%*	*0.0000%*	*0.0000%*
3,2	*Of which Corporates - Specialised lending under slotting approach*		*1,197,067*	*0.0000%*	*0.0000%*	*100.0000%*
4	Retail	43,893,271	43,450,678	0.2850%	1.4650%	98.2500%
4,1	*of which Retail – Secured by real estate SMEs*		*3,742,240*	*0.0000%*	*1.3540%*	*98.6460%*
4,2	*of which Retail – Secured by real estate non-SMEs*		*28,934,354*	*0.0150%*	*0.1450%*	*99.8400%*
4,3	*of which Retail – Qualifying revolving*		*387,368*	*22.7180%*	*54.8200%*	*22.4620%*
4,4	*of which Retail – Other SMEs*		*9,165,387*	*0.2190%*	*2.3340%*	*97.4470%*
4,5	*of which Retail – Other non-SMEs*		*1,221,328*	*0.9310%*	*9.6570%*	*89.4110%*
5	Equity	815,494	815,494	100.0000%	0.0000%	0.0000%
6	Other non-credit obligation assets	4,686,500	4,684,132	100.0000%	0.0000%	0.0000%
7	**Total**	**108,936,593**	**109,234,294**	**44.3550%**	**1.1160%**	**54.5290%**

The comparison between the exposure value as defined in Article 166 for IRB exposures and the exposure value for the same exposures according to Article 429(4) of the CRR does not show any significant differences. It is noted that the GMPS has effectively completed its roll-out plan (less than 1% of the portfolio is still to be authorised to use the internal models). The portfolio of retail exposures is almost fully covered by the IRB models, and coverage will be practically complete with the extension of the IRB system to the WIDIBA subsidiary. On the Corporate side, companies with foreign registered offices and non-banking financial institutions that fall within the scope of the Permanent Partial Use portfolio are not covered by the IRB models).

EU CR6: IRB Approach: Exposures to or secured by corporates - SMEs

Corporates - SME AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	81,024	447,118	0.01	109,960	0.12%	488	36.91%	2	16,084	14.63%	47	-216
	0.00 to <0.10	17,804	169,476	0.01	31,493	0.08%	153	36.15%	2	3,978	12.63%	9	-95
	0.10 to <0.15	63,221	277,642	0.01	78,467	0.13%	335	37.22%	1	12,106	15.43%	38	-121
	0.15 to <0.25	218,771	492,539	0.01	245,543	0.20%	648	32.40%	2	51,975	21.17%	159	-265
	0.25 to <0.50	1,085,893	1,630,417	0.01	1,218,012	0.40%	2,657	32.33%	2	361,164	29.65%	1,544	-1,639
	0.50 to <0.75	811,466	752,555	0.01	882,291	0.69%	1,616	33.12%	2	343,230	38.90%	2,016	-2,000
	0.75 to <2.50	3,088,169	1,564,324	0.02	3,266,459	1.68%	5,211	31.14%	2	1,617,931	49.53%	16,956	-12,007
	0.75 to <1.75	2,092,836	1,164,574	0.01	2,216,139	1.33%	3,510	31.48%	2	1,039,975	46.93%	9,224	-6,744
	1.75 to <2.5	995,333	399,750	0.01	1,050,320	2.42%	1,701	30.42%	3	577,956	55.03%	7,732	-5,262
	2.50 to <10.00	2,261,482	665,956	0.04	2,376,275	6.31%	3,517	29.41%	3	1,682,556	70.81%	43,290	-55,137
	2.5 to <5	966,606	337,530	0.02	1,020,454	3.99%	1,610	30.23%	3	643,736	63.08%	12,309	-8,828
	5 to <10	1,294,876	328,425	0.02	1,355,822	8.06%	1,907	28.80%	3	1,038,820	76.62%	30,981	-46,309
	10.00 to <100.00	675,234	70,186	0.08	693,320	19.85%	562	24.10%	4	624,640	90.09%	33,217	-55,745
	10 to <20	436,037	52,171	0.02	447,786	16.03%	381	23.54%	4	379,992	84.86%	16,896	-30,861
	20 to <30	176,234	14,213	0.04	181,656	22.12%	125	25.64%	4	185,488	102.11%	10,301	-19,121
	30.00 to <100.00	62,963	3,803	0.02	63,878	40.19%	56	23.63%	4	59,160	92.61%	6,021	-5,763
	100.00 (Default)	1,032,061	122,014	0.03	1,066,474	100.00%	952	58.94%	2	697,825	65.43%	582,570	-605,932
Total		**9,254,101**	**5,745,111**	**0.21**	**9,858,334**	**14.41%**	**15,651**	**33.65%**	**2**	**5,395,404**	**54.73%**	**679,798**	**-732,940**

EU CR6: IRB approach: Exposures to or secured by corporates – Other companies

Corporates - Other AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	205,686	1,137,072	0.02	377,719	0.13%	195	39.14%	2	100,017	26.48%	186	-1,900
	0.00 to <0.10	26,340	316,671	0.00	33,210	0.09%	70	39.02%	2	6,973	21.00%	11	-71
	0.10 to <0.15	179,346	820,402	0.02	344,509	0.13%	125	39.15%	2	93,043	27.01%	175	-1,829
	0.15 to <0.25	249,567	1,071,795	0.01	319,411	0.20%	252	37.36%	1	101,937	31.91%	239	-874
	0.25 to <0.50	1,580,652	4,238,417	0.01	2,066,987	0.39%	980	38.58%	2	980,659	47.44%	3,098	-5,395
	0.50 to <0.75	1,087,075	2,522,581	0.02	1,542,394	0.69%	587	38.70%	2	990,035	64.19%	4,119	-4,845
	0.75 to <2.50	2,431,344	3,533,599	0.03	2,969,455	1.47%	1,350	38.69%	1	2,427,624	81.75%	16,869	-17,275
	0.75 to <1.75	1,917,502	2,962,108	0.02	2,395,988	1.24%	1,065	38.57%	1	1,866,823	77.91%	11,434	-12,968
	1.75 to <2.5	513,842	571,491	0.01	573,467	2.42%	285	39.16%	1	560,801	97.79%	5,435	-4,307
	2.50 to <10.00	753,384	716,008	0.05	935,582	5.40%	474	38.01%	1	1,169,878	125.04%	19,290	-18,484
	2.5 to <5	427,639	374,171	0.02	515,724	3.99%	278	37.60%	1	573,223	111.15%	7,738	-4,297
	5 to <10	325,745	341,837	0.03	419,857	7.13%	196	38.51%	1	596,655	142.11%	11,552	-14,187
	10.00 to <100.00	88,275	32,544	0.06	96,241	19.99%	74	37.91%	2	189,722	197.13%	7,256	-4,469
	10 to <20	62,695	21,575	0.02	67,594	16.03%	56	38.47%	2	131,221	194.13%	4,169	-2,952
	20 to <30	7,411	2,243	0.00	7,482	22.12%	7	35.23%	2	13,908	185.88%	583	-297
	30.00 to <100.00	18,168	8,725	0.04	21,165	31.90%	11	37.05%	2	44,593	210.70%	2,504	-1,221
	100.00 (Default)	160,348	273,176	0.03	252,118	100.00%	193	63.99%	1	78,724	31.23%	155,457	-157,190
Total		**6,556,331**	**13,525,192**	**0.23**	**8,559,906**	**4.50%**	**4,105**	**39.30%**	**1**	**6,038,596**	**70.55%**	**206,513**	**-210,432**

The following table shows a breakdown by PD band with quantitative details for the advanced IRB approach of the Portfolio "Retail Exposures" divided by regulatory asset class:

- *Secured by real estate - SMEs,*
- *Secured by real estate - Individuals,*
- *Qualifying revolving,*
- *Other retail exposures - SMEs,*
- *Other retail exposures – Individuals*

EU CR6: IRB Approach: Retail exposures secured by real estate - SMEs

Retail - Secured by immovable property SME - AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	13,392	-	-	13,392	0.12%	89	17.95%	-	547	4.08%	3	-11
	0.00 to <0.10	1,924	-	-	1,924	0.09%	22	13.85%	-	46	2.38%	0	-2
	0.10 to <0.15	11,468	-	-	11,468	0.13%	67	18.64%	-	501	4.37%	3	-10
	0.15 to <0.25	25,824	0	0.05	25,824	0.20%	160	16.66%	-	1,395	5.40%	9	-16
	0.25 to <0.50	204,546	986	0.05	205,039	0.40%	1,451	15.60%	-	17,284	8.43%	130	-169
	0.50 to <0.75	239,595	1,185	0.05	240,158	0.69%	2,037	15.58%	-	29,476	12.27%	258	-232
	0.75 to <2.50	1,461,551	8,703	0.06	1,464,037	1.77%	11,053	16.18%	-	341,652	23.34%	4,201	-3,985
	0.75 to <1.75	898,376	5,278	0.03	899,985	1.36%	6,616	16.00%	-	177,165	19.69%	1,956	-1,820
	1.75 to <2.5	563,175	3,426	0.03	564,052	2.42%	4,437	16.45%	-	164,486	29.16%	2,246	-2,166
	2.50 to <10.00	1,292,208	6,078	0.09	1,295,152	6.00%	9,808	17.60%	-	649,959	50.18%	13,737	-26,694
	2.5 to <5	620,696	5,427	0.05	623,365	3.99%	4,963	17.10%	-	251,817	40.40%	4,253	-5,250
	5 to <10	671,513	651	0.04	671,787	7.87%	4,845	18.06%	-	398,142	59.27%	9,484	-21,444
	10.00 to <100.00	223,246	121	0.15	223,307	21.08%	1,354	18.44%	-	182,512	81.73%	8,657	-16,695
	10 to <20	131,293	70	0.05	131,328	16.03%	832	18.40%	-	104,423	79.51%	3,874	-8,492
	20 to <30	56,443	52	0.05	56,469	22.12%	294	18.45%	-	48,199	85.35%	2,305	-4,697
	30.00 to <100.00	35,511	0	0.05	35,511	38.07%	228	18.58%	-	29,891	84.17%	2,479	-3,506
	100.00 (Default)	331,797	25	0.01	331,798	100.00%	1,588	43.19%	-	150,146	45.25%	137,663	-163,328
Total		**3,792,159**	**17,099**	**0.45**	**3,798,706**	**12.77%**	**27,540**	**19.09%**	**-**	**1,372,971**	**36.14%**	**164,657**	**-211,131**

EU CR6: IRB Approach: Retail exposures secured by real estate - Individuals

Retail - Secured by immovable property non-SME - AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	300,323	270	0.05	300,458	0.13%	3,392	10.19%	-	9,418	3.13%	40	-156
	0.00 to <0.10	-	-	-	-	0.00%	-	0.00%	-	-	0.00%	-	-
	0.10 to <0.15	300,323	270	0.05	300,458	0.13%	3,392	10.19%	-	9,418	3.13%	40	-156
	0.15 to <0.25	2,054,638	3,217	0.05	2,056,246	0.20%	22,332	11.11%	-	97,169	4.73%	457	-1,031
	0.25 to <0.50	10,012,469	6,651	0.05	10,015,795	0.39%	128,480	10.52%	-	727,151	7.26%	4,118	-5,730
	0.50 to <0.75	4,016,170	3,446	0.05	4,017,747	0.69%	55,174	10.49%	-	435,817	10.85%	2,909	-3,815
	0.75 to <2.50	8,504,990	4,702	0.09	8,507,237	1.53%	119,081	9.93%	-	1,452,560	17.07%	12,798	-24,611
	0.75 to <1.75	7,278,564	4,213	0.05	7,280,623	1.37%	98,850	9.97%	-	1,176,547	16.16%	9,926	-15,530
	1.75 to <2.5	1,226,426	489	0.04	1,226,614	2.42%	20,231	9.68%	-	276,013	22.50%	2,873	-9,081
	2.50 to <10.00	946,310	761	0.09	946,637	5.56%	14,503	10.06%	-	341,968	36.12%	5,316	-25,332
	2.5 to <5	560,173	380	0.04	560,311	3.99%	8,834	9.96%	-	172,739	30.83%	2,226	-10,612
	5 to <10	386,137	380	0.05	386,327	7.83%	5,669	10.20%	-	169,229	43.80%	3,090	-14,720
	10.00 to <100.00	186,837	58	-	186,837	20.45%	2,372	10.33%	-	111,802	59.84%	3,955	-9,517
	10 to <20	120,918	10	-	120,918	16.03%	1,553	10.28%	-	70,337	58.17%	1,992	-6,025
	20 to <30	36,631	-	-	36,631	22.12%	456	10.38%	-	23,071	62.98%	841	-1,873
	30.00 to <100.00	29,287	49	-	29,287	36.63%	363	10.49%	-	18,394	62.81%	1,121	-1,620
	100.00 (Default)	569,391	726	-	569,391	100.00%	7,025	31.66%	-	184,130	32.34%	169,465	-154,137
Total		**26,591,127**	**19,829**	**0.37**	**26,600,348**	**3.24%**	**352,359**	**10.80%**	**-**	**3,360,016**	**12.63%**	**199,059**	**-224,329**

EU CR6: IRB Approach: Retail Exposures - Qualifying revolving

Retail - Qualifying revolving - AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	13,234	5,893	-	13,234	0.13%	18,264	39.15%	-	411	3.11%	7	-13
	0.00 to <0.10	-	-	-	-	0.00%	-	0.00%	-	-	0.00%	-	-
	0.10 to <0.15	13,234	5,893	-	13,234	0.13%	18,264	39.15%	-	411	3.11%	7	-13
	0.15 to <0.25	617	1,232	-	617	0.20%	630	26.75%	-	19	3.03%	0	-0
	0.25 to <0.50	17,846	15,075	-	17,846	0.42%	25,541	27.29%	-	1,001	5.61%	20	-8
	0.50 to <0.75	12,747	11,093	-	12,747	0.69%	16,765	31.55%	-	1,225	9.61%	28	-14
	0.75 to <2.50	23,923	17,398	-	23,923	1.68%	26,883	34.05%	-	4,881	20.40%	140	-91
	0.75 to <1.75	15,389	13,144	-	15,389	1.27%	18,020	32.69%	-	2,445	15.89%	64	-42
	1.75 to <2.5	8,534	4,254	-	8,534	2.42%	8,863	36.50%	-	2,436	28.54%	75	-49
	2.50 to <10.00	12,889	3,131	-	12,889	5.84%	13,943	37.36%	-	6,778	52.59%	283	-245
	2.5 to <5	5,318	1,849	-	5,318	3.99%	5,537	36.05%	-	2,126	39.98%	77	-59
	5 to <10	7,570	1,282	-	7,570	7.14%	8,406	38.28%	-	4,652	61.45%	207	-187
	10.00 to <100.00	578	291	-	578	19.81%	719	36.38%	-	562	97.28%	42	-41
	10 to <20	397	112	-	397	16.03%	443	36.55%	-	366	92.30%	23	-25
	20 to <30	113	110	-	113	22.12%	172	36.00%	-	118	103.94%	9	-10
	30.00 to <100.00	68	69	-	68	37.98%	104	36.02%	-	78	115.20%	9	-6
	100.00 (Default)	309	193	-	309	100.00%	422	71.41%	-	507	163.85%	180	-150
Total		**82,143**	**54,306**	**-**	**82,143**	**2.14%**	**103,167**	**33.64%**	**-**	**15,384**	**18.73%**	**700**	**-563**

EU CR6: IRB Approach: Retail Exposures - SMEs

Retail - Other SME - AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	37,275	176,715	0.01	46,251	0.12%	1,200	40.02%	-	4,161	9.00%	22	-70
	0.00 to <0.10	8,602	46,717	0.01	12,658	0.09%	363	40.53%	-	919	7.26%	4	-24
	0.10 to <0.15	28,674	129,998	0.00	33,593	0.13%	837	39.83%	-	3,242	9.65%	17	-46
	0.15 to <0.25	60,768	238,322	0.01	73,330	0.20%	2,048	39.74%	-	9,534	13.00%	58	-87
	0.25 to <0.50	349,476	1,383,515	0.00	399,223	0.40%	21,584	40.14%	-	80,639	20.20%	635	-726
	0.50 to <0.75	300,086	534,376	0.01	328,486	0.69%	11,677	40.33%	-	91,462	27.84%	914	-579
	0.75 to <2.50	1,290,756	1,343,877	0.02	1,397,821	1.75%	52,262	40.34%	-	551,685	39.47%	9,876	-5,549
	0.75 to <1.75	792,919	911,623	0.01	862,276	1.34%	31,290	40.27%	-	316,357	36.69%	4,633	-2,651
	1.75 to <2.5	497,837	432,254	0.01	535,545	2.42%	20,972	40.45%	-	235,328	43.94%	5,243	-2,898
	2.50 to <10.00	1,158,489	739,640	0.02	1,236,295	5.90%	48,301	40.52%	-	612,557	49.55%	29,511	-24,062
	2.5 to <5	542,505	405,310	0.01	587,252	3.99%	22,692	40.60%	-	279,000	47.51%	9,513	-5,692
	5 to <10	615,984	334,330	0.01	649,043	7.62%	25,609	40.45%	-	333,557	51.39%	19,998	-18,370
	10.00 to <100.00	168,817	52,334	0.04	175,702	20.07%	11,781	40.05%	-	123,311	70.18%	14,157	-12,618
	10 to <20	108,532	38,817	0.01	114,142	16.03%	8,369	39.79%	-	74,400	65.18%	7,281	-6,985
	20 to <30	37,812	9,054	0.01	38,498	22.12%	1,697	40.52%	-	29,218	75.89%	3,450	-3,001
	30.00 to <100.00	22,473	4,463	0.01	23,061	36.68%	1,715	40.56%	-	19,693	85.39%	3,425	-2,632
	100.00 (Default)	540,427	83,170	0.04	571,972	100.00%	16,411	78.48%	-	248,292	43.41%	436,400	-408,525
Total		**3,906,094**	**4,551,950**	**0.14**	**4,229,080**	**16.76%**	**165,264**	**45.5040%**	**-**	**1,721,642**	**40.71%**	**491,572**	**-452,216**

EU CR6: IRB Approach: Retail Exposures - Individuals

Retail - Other non-SME - AIRB	PD scale	On-balance sheet exposures	Off-balance-sheet exposures pre-CCF	Exposure weighted average CCF	Exposure post CCF and post CRM	Exposure weighted average PD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity (years)	Risk weighted exposure amount after supporting factors	Density of risk weighted exposure amount	Expected loss amount	Value adjust-ments and provisions
	a	b	c	d	e	f	g	h	i	j	h	l	m
	0.00 to <0.15	4,564	355,274	0.00	8,757	0.13%	69,823	22,50%	-	626	7.15%	3	-49
	0.00 to <0.10	-	-	-	-	0.00%	-	0,00%	-	-	0.00%	-	-
	0.10 to <0.15	4,564	355,274	0.00	8,757	0.13%	69,823	22,50%	-	626	7.15%	3	-49
	0.15 to <0.25	41,664	48,135	0.02	50,647	0.20%	3,783	20,78%	-	4,518	8.92%	21	-91
	0.25 to <0.50	115,404	179,669	0.01	138,196	0.40%	21,920	22,72%	-	20,769	15.03%	125	-147
	0.50 to <0.75	99,367	135,583	0.01	113,854	0.69%	19,947	24,76%	-	25,542	22.43%	195	-172
	0.75 to <2.50	361,489	340,931	0.02	397,791	1.69%	61,160	26,15%	-	132,595	33.33%	1,784	-1,677
	0.75 to <1.75	237,712	231,286	0.01	265,134	1.32%	39,278	25,09%	-	79,160	29.86%	876	-812
	1.75 to <2.5	123,777	109,645	0.01	132,657	2.42%	21,882	28,26%	-	53,435	40.28%	907	-865
	2.50 to <10.00	220,053	108,554	0.01	225,270	5.66%	64,457	29,77%	-	106,990	47.49%	3,825	-6,825
	2.5 to <5	117,746	70,940	0.01	121,307	3.99%	17,571	29,05%	-	53,945	44.47%	1,406	-1,940
	5 to <10	102,307	37,614	0.00	103,962	7.60%	46,886	30,62%	-	53,045	51.02%	2,419	-4,886
	10.00 to <100.00	22,012	2,232	0.03	22,233	22.28%	4,937	31,84%	-	16,733	75.26%	1,582	-2,096
	10 to <20	11,676	1,526	0.01	11,855	16.03%	2,489	31,64%	-	8,060	67.99%	601	-974
	20 to <30	5,410	397	0.00	5,425	22.12%	1,127	31,86%	-	4,248	78.32%	382	-535
	30.00 to <100.00	4,926	309	0.01	4,953	37.43%	1,321	32,30%	-	4,424	89.33%	598	-587
	100.00 (Default)	108,133	3,679	0.03	109,278	100.00%	23,203	75,96%	-	79,003	72.30%	77,182	-76,682
Total		**972,686**	**1,174,056**	**0.13**	**1,066,026**	**12.68%**	**269,230**	**31,26%**	**-**	**386,777**	**36.2821%**	**84,716**	**-87,740**

EU CR7-A: IRB approach – Disclosure of the extent of the use of CRM techniques

	A-IRB	Total exposures	Credit risk Mitigation techniques											Credit risk Mitigation methods in the calculation of RWEAs	
			Funded credit Protection (FCP)									Unfunded credit Protection (UFCP)			
			Part of exposures covered by Financial Collaterals (%)	Part of exposures covered by Other eligible collaterals (%)	Part of e xposures covered by Immovable property Collaterals (%)	Part of exposures covered by Receivables (%)	Part of exposures covered by Other physical collateral (%)	Part of exposures covered by Other funded credit protection (%)	Part of exposures covered by Cash on deposit (%)	Part of exposures covered by Life insurance policies (%)	Part of exposures covered by Instruments held by a third party (%)	Part of exposures covered by Guarantees (%)	Part of exposures covered by Credit Derivatives (%)	RWEA without substitution effects (reduction effects only)	RWEA with substitution effects (both reduction and sustitution effects)
		a	b	c	d	e	f	g	h	i	j	k	l	m	n
1	Central governments and central banks	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-
2	Institutions	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	-	-
3	Corporates	19,658,775	0.47%	18.36%	18.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	11.85%	0.00%	12,326,947	12,314,390
3,1	*Of which Corporates – SMEs*	*9,858,334*	*0.69%*	*32.42%*	*32.42%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*11.30%*	*0.00%*	*5,397,909*	*5,395,404*
3,2	*Of which Corporates – Specialised lending*	*1,236,339*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*880,390*	*880,390*
3,3	*Of which Corporates – Other*	*8,564,101*	*0.28%*	*4.84%*	*4.84%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.20%*	*0.00%*	*6,048,649*	*6,038,596*
4	Retail	35,776,303	0.39%	83.62%	83.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.92%	0.00%	6,857,520	6,856,789
4,1	*Of which Retail – Immovable property SMEs*	*3,798,706*	*0.05%*	*86.49%*	*86.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.75%*	*0.00%*	*1,372,971*	*1,372,971*
4,2	*Of which Retail – Immovable property non-SMEs*	*26,600,348*	*0.01%*	*99.89%*	*99.89%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*3,360,016*	*3,360,016*
4,3	*Of which Retail – Qualifying revolving*	*82,143*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15,384*	*15,384*
4,4	*Of which Retail – Other SMEs*	*4,229,080*	*2.15%*	*0.90%*	*0.90%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*23.53%*	*0.00%*	*1,722,373*	*1,721,642*
4,5	*Of which Retail – Other non-SMEs*	*1,066,026*	*4.04%*	*2.06%*	*2.06%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.96%*	*0.00%*	*386,777*	*386,777*
5	**Total**	**55,435,078**	**0.42%**	**60.48%**	**60.48%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**6.09%**	**0.00%**	**19,184,467**	**19,171,179**

EU CR8: RWEA flow statements of credit risk exposures under the IRB approach

		Risk weighted exposure amount
1	**Risk weighted exposure amount as at the end of the previous reporting period**	**20,066,874**
2	Asset size	-802,392
3	Asset quality	148,787
4	Model updates	-
5	Methodology and policy	245,010
6	Acquisitions and disposals	-246,646
7	Foreign exchange movements	-
8	Other	-
9	**Risk weighted exposure amount as at the end of the reporting period**	**19,411,633**

The information in this template includes counterparty credit risk (CCR) exposures and specialised lending.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Corporate - PMI

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Corporate - PMI							
	0.00 to <0.15	984	-	0.0000%	0.1160%	0.1152%	0.1878%
	0.00 to <0.10	532	-	0.0000%	0.0820%	0.0844%	0.5030%
	0.10 to <0.15	452	-	0.0000%	0.1300%	0.1300%	0.0000%
	0.15 to <0.25	700	-	0.0000%	0.2000%	0.2000%	0.1661%
	0.25 to <0.50	2,293	2	0.0872%	0.3980%	0.3799%	0.2702%
	0.50 to <0.75	1,431	3	0.2096%	0.6900%	0.6900%	0.3750%
	0.75 to <2.50	4,150	35	0.8434%	1.6800%	1.6764%	0.9844%
	0.75 to <1.75	2,950	22	0.7458%	1.3280%	1.3120%	0.8408%
	1.75 to <2.5	1,200	13	1.0833%	2.4200%	2.4200%	1.2427%
	2.50 to <10.00	2,680	94	3.5075%	6.3110%	6.0699%	3.3661%
	2.5 to <5	1,280	28	2.1875%	3.9900%	3.9900%	2.0960%
	5 to <10	1,400	66	4.7143%	8.0580%	7.8161%	4.3162%
	10.00 to <100.00	459	51	11.1111%	19.8520%	19.2988%	14.6227%
	10 to <20	301	22	7.3090%	16.0300%	16.0300%	9.5409%
	20 to <30	92	18	19.5652%	22.1200%	22.1200%	18.8413%
	30.00 to <100.00	66	11	16.6667%	40.1900%	36.5711%	27.9544%
	100.00 (Default)	974	-	0.0000%	100.0000%	0.0000%	0.0000%

The number of borrowers subject to short-term contracts (less than 12 months) accounts for 9% of the total number of customers; about 60% of which are concentrated on rating classes with a risk level between 0.5% and 2.5%.

The analysis of long-term average rates is conducted on the basis of the default rates observed on non-overlapping annual cohorts, which therefore excludes any distortionary effects on the indicator arising from the repeated use of the same information on multiple cohorts. The comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Corporate - Other

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Corporates - Other							
	0.00 to <0.15	307	-	0.0000%	0.1260%	0.1125%	0.0000%
	0.00 to <0.10	172	-	0.0000%	0.0860%	0.0824%	0.0000%
	0.10 to <0.15	135	-	0.0000%	0.1300%	0.1300%	0.0000%
	0.15 to <0.25	192	-	0.0000%	0.2000%	0.2000%	0.0000%
	0.25 to <0.50	783	-	0.0000%	0.3890%	0.3793%	0.3692%
	0.50 to <0.75	414	1	0.2415%	0.6900%	0.6900%	0.4609%
	0.75 to <2.50	978	4	0.4090%	1.4680%	1.5048%	0.9171%
	0.75 to <1.75	753	3	0.3984%	1.2400%	1.2631%	0.6418%
	1.75 to <2.5	225	1	0.4444%	2.4200%	2.4200%	1.4880%
	2.50 to <10.00	304	17	5.5921%	5.3990%	5.4338%	3.7268%
	2.5 to <5	156	5	3.2051%	3.9900%	3.9900%	2.2744%
	5 to <10	148	12	8.1081%	7.1290%	7.3933%	5.0358%
	10.00 to <100.00	51	6	11.7647%	19.9930%	20.0575%	10.7648%
	10 to <20	31	1	3.2258%	16.0300%	16.0300%	6.9991%
	20 to <30	9	1	11.1111%	22.1200%	22.1200%	10.6139%
	30.00 to <100.00	11	4	36.3636%	31.8970%	34.9725%	25.7693%
	100.00 (Default)	204	-	0.0000%	100.0000%	0.0000%	0.0000%

The number of borrowers subject to short-term contracts (less than 12 months) accounts for approximately 14% of the total number of customers; about 70% of which are concentrated on rating classes with a risk level between approximately 0.5% and 2.5%.

The analysis of long-term average rates is conducted on the basis of the default rates observed on non-overlapping annual cohorts, which therefore excludes any distortionary effects on the indicator arising from the repeated use of the same information on multiple cohorts.

The comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Retail - Secured by immovable property SME

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Retail - Secured by immovable property SME							
	0.00 to <0.15	253	1	0.3953%	0.1230%	0.1188%	0.5235%
	0.00 to <0.10	104	1	0.9615%	0.0850%	0.0840%	0.1923%
	0.10 to <0.15	149	-	0.0000%	0.1300%	0.1300%	0.6250%
	0.15 to <0.25	341	-	0.0000%	0.2000%	0.2000%	0.2151%
	0.25 to <0.50	2,086	10	0.4794%	0.4040%	0.4047%	0.4333%
	0.50 to <0.75	2,481	14	0.5643%	0.6900%	0.6900%	0.8174%
	0.75 to <2.50	10,095	67	0.6637%	1.7660%	1.7805%	1.0202%
	0.75 to <1.75	6,413	34	0.5302%	1.3570%	1.3529%	0.7861%
	1.75 to <2.5	3,682	33	0.8963%	2.4200%	2.4200%	1.3070%
	2.50 to <10.00	9,388	164	1.7469%	6.0000%	5.9554%	2.7179%
	2.5 to <5	4,717	52	1.1024%	3.9900%	3.9900%	1.7788%
	5 to <10	4,671	112	2.3978%	7.8650%	7.9801%	3.5207%
	10.00 to <100.00	1,198	91	7.5960%	21.0750%	21.0306%	14.0156%
	10 to <20	684	40	5.8480%	16.0300%	16.0300%	10.3626%
	20 to <30	306	25	8.1699%	22.1200%	22.1200%	13.7926%
	30.00 to <100.00	208	26	12.5000%	38.0670%	37.8817%	25.0951%
	100.00 (Default)	1,752	-	0.0000%	100.0000%	0.0000%	0.0000%

The number of borrowers subject to short-term contracts (but not only) accounts for about 1%of the total number of customers; about 70% are concentrated in the rating classes with a risk level between 0.5% and 4%.

For the SME Immovable Property portfolio, the comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models across all the proposed PD ranges.

The number of short-term contracts included within this segment is, by definition, immaterial.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Retail - Secured by immovable property non-SME

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Retail - Secured by immovable property non-SME							
	0.00 to <0.15	36,079	19	0.0527%	0.1300%	0.1300%	0.0500%
	0.00 to <0.10	-	-	0.0000%	0.0000%	0.0000%	0.0000%
	0.10 to <0.15	36,079	19	0.0527%	0.1300%	0.1300%	0.0500%
	0.15 to <0.25	42,357	41	0.0968%	0.2000%	0.2000%	0.0950%
	0.25 to <0.50	97,242	115	0.1183%	0.3930%	0.3954%	0.1602%
	0.50 to <0.75	48,096	148	0.3077%	0.6900%	0.6900%	0.3628%
	0.75 to <2.50	99,763	622	0.6235%	1.5250%	1.5536%	0.8784%
	0.75 to <1.75	83,654	415	0.4961%	1.3740%	1.3765%	0.6794%
	1.75 to <2.5	16,109	207	1.2850%	2.4200%	2.4200%	1.6407%
	2.50 to <10.00	15,679	532	3.3931%	5.5560%	5.4486%	4.7528%
	2.5 to <5	9,105	221	2.4272%	3.9900%	3.9900%	3.4398%
	5 to <10	6,574	311	4.7308%	7.8300%	7.7201%	6.3483%
	10.00 to <100.00	3,639	332	9.1234%	20.4520%	20.3862%	15.9049%
	10 to <20	2,122	150	7.0688%	16.0300%	16.0300%	11.7251%
	20 to <30	818	93	11.3692%	22.1200%	22.1200%	16.1706%
	30.00 to <100.00	699	89	12.7325%	36.6250%	36.8377%	23.0231%
	100.00 (Default)	7,965	-	0.0000%	100.0000%	0.0000%	0.0000%

For the non-SME Immovable Property portfolio, the comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models across all the proposed PD ranges.

The number of short-term contracts included within this segment is, by definition, immaterial.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Retail - Qualifying revolving

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Retail - Qualifying revolving							
	0.00 to <0.15	18,138	6	0.0331%	0.1300%	0.1300%	0.0700%
	0.00 to <0.10	-	-	0.0000%	0.0000%	0.0000%	0.0000%
	0.10 to <0.15	18,138	6	0.0331%	0.1300%	0.1300%	0.0700%
	0.15 to <0.25	795	1	0.1258%	0.2000%	0.2000%	0.1767%
	0.25 to <0.50	3,898	8	0.2052%	0.4210%	0.4183%	0.1999%
	0.50 to <0.75	5,018	7	0.1395%	0.6900%	0.6900%	0.2334%
	0.75 to <2.50	11,080	32	0.2888%	1.6820%	1.6984%	0.4296%
	0.75 to <1.75	7,706	11	0.1427%	1.2730%	1.2555%	0.3444%
	1.75 to <2.5	3,374	21	0.6224%	2.4200%	2.4200%	0.5625%
	2.50 to <10.00	7,080	164	2.3164%	5.8410%	5.9190%	3.2579%
	2.5 to <5	2,579	28	1.0857%	3.9900%	3.9900%	1.3477%
	5 to <10	4,501	136	3.0216%	7.1410%	6.8192%	4.0414%
	10.00 to <100.00	159	13	8.1761%	19.8090%	20.4740%	12.2964%
	10 to <20	90	3	3.3333%	16.0300%	16.0300%	6.0474%
	20 to <30	52	7	13.4615%	22.1200%	22.1200%	13.6365%
	30.00 to <100.00	17	3	17.6471%	37.9750%	36.0867%	17.2019%
	100.00 (Default)	134	-	0.0000%	100.0000%	0.0000%	0.0000%

For the Retail Qualifying Revolving portfolio, the comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models across all the proposed PD ranges.

All contracts included within this segment are effectively short-term.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Retail - Other SME

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Retail - Other SME							
	0.00 to <0.15	2,769	4	0.1445%	0.1180%	0.1157%	0.2444%
	0.00 to <0.10	1,348	3	0.2226%	0.0860%	0.0840%	0.2699%
	0.10 to <0.15	1,421	1	0.0704%	0.1300%	0.1300%	0.2227%
	0.15 to <0.25	3,012	1	0.0332%	0.2000%	0.2000%	0.2599%
	0.25 to <0.50	21,441	46	0.2145%	0.3960%	0.3506%	0.2908%
	0.50 to <0.75	11,354	52	0.4580%	0.6900%	0.6900%	0.5940%
	0.75 to <2.50	41,976	484	1.1530%	1.7500%	1.7847%	1.3486%
	0.75 to <1.75	27,152	245	0.9023%	1.3350%	1.3454%	1.0907%
	1.75 to <2.5	14,824	239	1.6123%	2.4200%	2.4200%	1.6993%
	2.50 to <10.00	42,233	1.509	3.5730%	5.8970%	5.9561%	3.8789%
	2.5 to <5	20,761	455	2.1916%	3.9900%	3.9900%	2.4409%
	5 to <10	21,472	1.054	4.9087%	7.6230%	7.6366%	4.8279%
	10.00 to <100.00	10,102	2.294	22.7084%	20.0740%	20.0901%	24.1024%
	10 to <20	7,327	1.396	19.0528%	16.0300%	16.0300%	12.8286%
	20 to <30	1,361	249	18.2954%	22.1200%	22.1200%	19.0208%
	30.00 to <100.00	1,414	649	45.8982%	36.6790%	38.2893%	42.6308%
	100.00 (Default)	15,763	-	0.0000%	100.0000%	0.0000%	0.0000%

The number of borrowers subject to short-term contracts (but not only) account for just over 10% of the total number of customers, which is essentially stable across all rating classes.

For the Retail Other SME portfolio, the comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models.

EU CR9: IRB approach – Back-testing of PD per exposure class (fixed PD scale) – Retail - Other non-SME

Exposure class	PD scale	Number of obligors at the end of the year	of which: number of obligors which defaulted during the year	Observed average default rate (%)	Exposures weighted average PD (%)	Average PD (%)	Average historical annual default rate (%)
a	b	c	d	e	f	g	h
Retail - Other non-SME							
	0.00 to <0.15	50,956	61	0.1197%	0.1300%	0.1300%	0.2288%
	0.00 to <0.10	-	-	0.0000%	0.0000%	0.0000%	0.0000%
	0.10 to <0.15	50,956	61	0.1197%	0.1300%	0.1300%	0.2288%
	0.15 to <0.25	2,551	3	0.1176%	0.2000%	0.2000%	0.4139%
	0.25 to <0.50	11,499	9	0.0783%	0.3960%	0.3860%	0.1877%
	0.50 to <0.75	10,495	23	0.2192%	0.6900%	0.6900%	0.3760%
	0.75 to <2.50	37,425	185	0.4943%	1.6860%	1.7403%	0.8130%
	0.75 to <1.75	24,411	89	0.3646%	1.3190%	1.2924%	0.5961%
	1.75 to <2.5	13,014	96	0.7377%	2.4200%	2.4200%	1.0792%
	2.50 to <10.00	65,669	8,364	12.7366%	5.6550%	6.0716%	5.5803%
	2.5 to <5	16,726	363	2.1703%	3.9900%	3.9900%	2.0519%
	5 to <10	48,943	8,001	16.3476%	7.5960%	6.7358%	7.0677%
	10.00 to <100.00	5,597	1,812	32.3745%	22.2840%	23.1800%	24.7386%
	10 to <20	2,154	176	8.1708%	16.0300%	16.0300%	10.9465%
	20 to <30	1,352	380	28.1065%	22.1200%	22.1200%	15.1032%
	30.00 to <100.00	2,091	1,256	60.0670%	37.4310%	36.6609%	33.1933%
	100.00 (Default)	20,634	-	0.0000%	100.0000%	0.0000%	0.0000%

The number of borrowers subject to short-term contracts is immaterial. The analysis of long-term average rates is conducted on the basis of the default rates observed on non-overlapping annual cohorts, which therefore excludes any distortionary effects on the indicator arising from the repeated use of the same information on multiple cohorts. The comparison between both the historical (column h) and observed (column e) default rates and the default probabilities confirms the conservatism of the rating models across all the proposed PD ranges.

Annex XXIII – Disclosure of specialised lending

EU CR10.1 – Specialised lending and equity exposures under the simple riskweighted approach: Project finance (Slotting approach)

		Specialised lending : Project finance (Slotting approach)					
Regulatory categories	Remaining maturity	On-balancesheet exposure	Off-balancesheet exposure	Risk weight	Exposure value	Risk weighted exposure amount	Expected loss amount
		a	b	c	d	e	f
Category 1	Less than 2.5 years	24,564	1,504	50%	25,416	12,251	-
	Equal to or more than 2.5 years	192,472	86,296	70%	236,792	156,507	947
Category 2	Less than 2.5 years	3,598	8,559	70%	7,877	4,654	32
	Equal to or more than 2.5 years	77,138	114,388	90%	90,557	71,603	724
Category 3	Less than 2.5 years	21	-	115%	21	20	1
	Equal to or more than 2.5 years	15,892	52,824	115%	43,003	42,144	1,204
Category 4	Less than 2.5 years	-	-	250%	-	-	-
	Equal to or more than 2.5 years	-	-	250%	-	-	-
Category 5	Less than 2.5 years	1,261	-	-	1,261	-	630
	Equal to or more than 2.5 years	40,875	-	-	40,875	-	20,438
Total	Less than 2.5 years	29,443	10,063		34,575	16,925	662
	Equal to or more than 2.5 years	326,377	253,508		411,228	270,254	23,313

EU CR10.2 – Specialised lending and equity exposures under the simple riskweighted approach: Income-producing real estate and high volatility commercial real estate (Slotting approach)

		Specialised lending : Income-producing real estate and high volatility commercial real estate (Slotting approach)					
Regulatory categories	Remaining maturity	On-balancesheet exposure	Off-balancesheet exposure	Risk weight	Exposure value	Risk weighted exposure amount	Expected loss amount
		a	b	c	d	e	f
Category 1	Less than 2.5 years	-	-	50%	-	-	-
	Equal to or more than 2.5 years	-	-	70%	-	-	-
Category 2	Less than 2.5 years	157,733	64,069	70%	186,737	120,356	747
	Equal to or more than 2.5 years	336,954	194,769	90%	434,338	330,703	3,475
Category 3	Less than 2.5 years	5,210	9,085	115%	8,458	9,311	237
	Equal to or more than 2.5 years	99,991	46,857	115%	123,420	116,591	3,456
Category 4	Less than 2.5 years	1,710	-	250%	1,710	3,485	137
	Equal to or more than 2.5 years	7,188	2,160	250%	8,268	16,211	661
Category 5	Less than 2.5 years	5,225	300	-	5,375	-	2,888
	Equal to or more than 2.5 years	19,098	1,427	-	19,811	-	9,906
Total	Less than 2.5 years	169,879	73,454		202,280	133,152	4,009
	Equal to or more than 2.5 years	463,230	245,213		585,837	463,505	17,498

EU CR10.3 – Specialised lending and equity exposures under the simple riskweighted approach: Object finance (Slotting approach)

		Specialised lending : Object finance (Slotting approach)					
Regulatory categories	Remaining maturity	On-balancesheet exposure	Off-balancesheet exposure	Risk weight	Exposure value	Risk weighted exposure amount	Expected loss amount
		a	b	c	d	e	f
Category 1	Less than 2.5 years	-	-	50%	-	-	-
	Equal to or more than 2.5 years	-	-	70%	-	-	-
Category 2	Less than 2.5 years	-	-	70%	-	-	-
	Equal to or more than 2.5 years	-	-	90%	-	-	-
Category 3	Less than 2.5 years	-	-	115%	-	-	-
	Equal to or more than 2.5 years	-	-	115%	-	-	-
Category 4	Less than 2.5 years	-	-	250%	-	-	-
	Equal to or more than 2.5 years	-	-	250%	-	-	-
Category 5	Less than 2.5 years	510	-	-	510	-	255
	Equal to or more than 2.5 years	8,126	-	-	8,126	-	4,063
Total	Less than 2.5 years	510	-		510	-	255
	Equal to or more than 2.5 years	8,126	-		8,126	-	4,063

Tables EU CR10.4 and EU CR10.5 are not shown, as the Group as at 31.12.2022 does not have the cases.

Annex XXV – Disclosure of exposures to counterparty credit risk

EU CCRA: Qualitative disclosure related to CCR

The Montepaschi Group is committed to monitoring counterparty risk which, in accordance with the Regulatory provisions, is a specific type of credit risk and represents the risk of a counterparty in a transaction defaulting before the final settlement of the cash flows involved in the transaction. The regulations lay down specific rules for the quantification of the amount of the EAD - Exposure At Default, while referring to those governing credit risk for the determination of risk weightings.

In accordance with these regulations, counterparty risk is calculated for the following categories of transactions:

– financial and credit derivatives (Over The Counter (OTC) derivative and derivatives listed Exchange Traded derivative (ETD);

– SFTs – Securities Financial Transactions (repurchase agreements and securities lending);

– Long Settlement Transactions with medium to long-term settlement.

In accordance with regulatory requirements, the Montepaschi Group uses the Standardized Approach for Counterparty Credit Risk (SA CCR) to calculate the value of exposures for derivatives and long-term settlement transactions with the application of regulatory netting where applicable. The calculation is performed using the new rules introduced by Articles 271 et seq. of CRR2 instead of the previous Current Exposure Method (CEM).

For SFTs (securities financing transactions), the comprehensive method with supervisory volatility adjustments is used.

The Group makes extensive use of netting and agreements to substantially mitigate the exposure to counterparties, subject to compliance with statutory requirements.

In order for risk to be managed effectively within the Bank, the counterparty risk measurement system, is integrated into decision-making processes. Risk exposure levels are subject to daily monitoring and reporting by the first and second level of control, based on proprietary systems.

Annually, in accordance with the Risk Appetite Framework, the Parent Company has defined and approved operational limits for counterparty credit exposures in terms of EAD for derivatives and SFTs transactions.

Such limits are expressed by level of delegated authority and subject to daily monitoring by the second level of control (the Parent Company's Risk Management Unit). The management reporting flow on counterparty risk is periodically transmitted to the Risk Management Committee, the Group's Top

Management and the Parent Company's Board of Directors in a Risk Management Report, which keeps Top Management and governing bodies up to date on the overall risk profile of the Group.

From an operational point of view, activities relevant for the purpose of counterparty risk may be broken down into two macro segments on the basis of both counterparty characteristics (ordinary clients and institutional counterparties) and the operational and monitoring methods put in place by the Group.

With regard to transactions with financial institutions, daily monitoring of the counterparty risk exposure is carried out on the single credit lines defined by Business Control Units.

In short, the process involves:

- credit facilities to counterparties for which requests were received from the Business Units, with a regular review of the maximum exposure levels defined;
- inclusion of the maximum exposure levels in the management systems;
- inclusion of deals and supporting contracts in the systems, taking account of regulatory requirements and Group policies; ISDA/ ISMA contracts are registered with their related Credit Support Annex (CSA) and Global Master Repurchase Agreement (GMRA) or Global Master Securities Lending Agreement (GMSLA), underwritten with each counterparty;
- daily activities to monitor and exchange collaterals with counterparties in relation to the market value of outstanding positions (Collateral Management);
- daily checks on the maximum level of exposure achieved, as well as its comparison with the maximum level of exposures envisaged for single counterparty, also in "real time" mode and evidence the overrunning of credit lines, taking into account the guarantees given or received;
- periodical checks by the legal function to determine whether the netting clauses and collaterals set out in the bilateral agreements signed with the counterparties are judicially and administratively valid in the event of their default, according to the case law of their respective countries. It should be noted that a downgrading of the Montepaschi Group does not impact the amount of guarantees to be provided since all minimum rating grades within the contractually agreed terms have already been achieved with immediate effects on the collateralization method (e.g. daily frequencies, null thresholds and very low minimum transfer amounts);
- verifying the eligibility of collateral against counterparty risk falls under the broader management of Credit Risk Mitigation described in the specific section.

With regard to liquidity risk, assessments are carried out on any additions to the guarantees required by institutional counterparties should the Montepaschi Group be downgraded as a result of signed ISDA, CSA and GMRA agreements.

The process for derivative transactions with ordinary clients is based on the distinction of roles and responsibilities among the different entities within the Group. Trading in derivatives with customers provides for centralization of product factors and market risk monitoring within MPS Capital Services, with allocation, management and monitoring of counterparty credit risk for customers in the bank's networks.

To this end, Retail Banks:

- authorise the credit facilities granted to customers;
- manage each transaction in their books;
- take care of the related documents and regulatory requirements;
- review the amounts drawn with respect to the credit facilities granted.

With regard to products offered to customers, from a general point of view, a series of common elements are typical of most operations. Specifically, the products traded are:

- not of a speculative nature;
- are for the exclusive purpose of covering
- risk;
- are associated with an underlying
- position, even if they are contractually
- and administratively separate from it;
- show limited elements of complexity;
- on the overall position covered, they hold
- no financial leverage.

In order to reduce counterparty risk and in accordance with the EMIR regulations in force, the Montepaschi Group indirectly joined the swap clearing service managed by the central counterparty, LCH.Clearnet London and EUREX CLEARING AG for activities with OTC derivatives on interest rates. With regard to credit derivatives, it indirectly joined the credit derivative clearing service managed by the central counterparty ICE Clear Europe and LCH SA. while for SFT transactions, the Group has directly joined the service managed by *Cassa compensazione e garanzia*.

The centralisation of a part of trading in OTC derivatives to the clearing companies makes it possible to considerably reduce the risk of default since the clearing companies are the guarantors and direct administrators of flows from contracts. Any default of a direct member of the service is covered by the guarantee funds and backup systems.

An analysis of the Wrong-Way Risk, i.e. the risk of a positive correlation between the future exposure to a counterparty and that counterparty's probability of default, revealed difficulties in integrating a systematic treatment of this risk, similar to the risk factors already identified and measured, due to multifaceted nature of the risk itself. A heuristic approach has therefore been established, which consists of an initial analysis by the Business Function of whether there is a correlation between the size of the exposure to a counterparty and the deterioration of that counterparty's creditworthiness due to counterparty-specific factors (e.g. legal or economic links between the counterparty and the company issuing the collateral securities) or general market risk factors (e.g. links by Country/Industry/ product).Subsequent to this activity, the Risk Management Function performs due diligence by keeping track of the exposures subject to this risk.

EU CCR1 – Analysis of CCR exposure by approach

		a	b	c	d	e	f	g	h
		Replacement cost (RC)	Potential future exposure (PFE)	EEPE	Alpha used for computing regulatory exposure value	Exposure value pre-CRM	Exposure value post-CRM	Exposure value	RWEA
EU-1	EU - Original Exposure Method (for derivatives)	-	-		1.4	-	-	-	-
EU-2	EU - Simplified SA-CCR (for derivatives)	-	-		1.4	-	-	-	-
1	SA-CCR (for derivatives)	221,511	515,277		1.4	2,826,534	1,031,503	1,026,914	722,178
2	IMM (for derivatives and SFTs)			-	-	-	-	-	-
2a	*Of which securities financing transactions netting sets*			-		-	-	-	-
2b	*Of which derivatives and long settlement transactions netting sets*			-		-	-	-	-
2c	*Of which from contractual cross-product netting sets*			-		-	-	-	-
3	Financial collateral simple method (for SFTs)					-	-	-	-
4	Financial collateral comprehensive method (for SFTs)					1,792,609	559,502	559,491	132,628
5	VaR for SFTs					-	-	-	-
6	**Total**					**4,619,144**	**1,591,005**	**1,586,404**	**854,806**

As indicated previously, the MPS Group calculates at consolidated level the total EAD volume related to financial and credit derivatives according to the Standardised Approach for Counterparty Credit Risk (SA CCR) for all outstanding positions, as of the reporting date of 30 June 2021. The model takes into account the mitigation effects of the ISDA netting agreements as well as the collateral received to mitigate credit exposure and any collateral overpaid under the Credit Support Annex (CSA) agreements.

All SFTs are reported using the comprehensive method for the treatment of financial collateral.

EU CCR2 – Transactions subject to own funds requirements for CVA risk

		Exposure value	RWAs
1	**Total portfolios subject to the advanced method**	**-**	**-**
2	(i) VaR component (including the 3× multiplier)		-
3	(ii) SVaR component (including the 3× multiplier)		-
4	**All portfolios subject to the standardised method**	**828,672**	**497,140**
EU4	Based on the original exposure method	-	-
5	**Total subject to the CVA capital charge**	**828,672**	**497,140**

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

	Exposures classes	Classes of credit worthiness (Weighting Factors)											
		a	b	c	d	e	f	g	h	i	j	k	l
		0%	2%	4%	10%	20%	50%	70%	75%	100%	150%	Others	Total exposure value
1	Central governments or central banks	-	-	-	-	-	-	-	-	957	-	-	957
2	Regional governments or local authorities	-	-	-	-	3,661	-	-	-	-	-	-	3,661
3	Public sector entities	-	-	-	-	1,921	-	-	-	1,320	-	-	3,241
4	Multilateral development banks	-	-	-	-	-	-	-	-	-	-	-	-
5	International organisations	-	-	-	-	-	-	-	-	-	-	-	-
6	Institutions	0	1,369,845	-	-	186,356	191,979	-	-	20,030	-	-	1,768,210
7	Corporates	-	-	-	-	21,412	48,132	-	-	430,528	-	-	500,072
8	Retail	-	-	-	-	-	-	-	-	-	-	-	-
9	Institutions and corporates with a short-term credit assessment	-	-	-	-	-	-	-	-	-	-	-	-
10	Other items	-	-	-	-	-	-	-	-	-	-	-	-
11	**Total**	**-**	**1,369,845**	**-**	**-**	**213,349**	**240,111**	**-**	**-**	**452,836**	**-**	**-**	**2,276,140**

EU CCR4.1 – IRB approach – CCR exposures by exposure class and PD scale: corporate

		a	b	c	d	e	f	g
Rating class	PD scale	Exposure value	Exposure weighted average LGD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity	RWA	Density of risk weighted exposure amount
Class 01	0.00 to <0.15	6,081	0.1259%	50	41.9353%	1	1,177	19.35%
Class 02	0.15 to <0.25	6,018	0.2000%	51	41.5432%	3	2,210	36.73%
Class 03	0.25 to <0.50	263,401	0.4481%	253	17.7575%	3	72,988	27.71%
Class 04	0.50 to <0.75	71,029	0.6900%	162	33.0961%	1	36,427	51.28%
Class 05	0.75 to <2.50	122,215	1.3369%	424	23.6956%	1	58,257	47.67%
Class 06	2.50 to <10.00	191,572	5.6631%	207	9.4228%	0	56,714	29.60%
Class 07	10.00 to <100.00	3,506	17.0384%	20	38.0237%	5	5,453	155.55%
Class 08	100.00 (Default)	1,482	100%	31	68.8322%	1	216	14.55%
Total		**670,688**	**2.2995%**	**1,235**	**18.5070%**	**2**	**236,888**	**35.32%**

The total amount for columns (a), (c), (f), and (g) includes the slotting criteria

EU CCR4.2 – IRB approach – CCR exposures by exposure class and PD scale: retail

		a	b	c	d	e	f	g
Rating class	PD scale	Exposure value	Exposure weighted average LGD (%)	Number of obligors	Exposure weighted average LGD (%)	Exposure weighted average maturity	RWA	Density of risk weighted exposure amount
Class 01	0.00 to <0.15	257	0.1260%	17	41.6110%	-	25	9.86%
Class 02	0.15 to <0.25	395	0.2000%	11	41.0880%	-	53	13.44%
Class 03	0.25 to <0.50	1,211	0.3940%	104	41.5320%	-	252	20.81%
Class 04	0.50 to <0.75	854	0.6900%	63	41.3690%	-	244	28.56%
Class 05	0.75 to <2.50	4,035	1.7320%	308	41.1550%	-	1,618	40.11%
Class 06	2.50 to <10.00	2,183	5.6380%	221	41.5650%	-	1,102	50.48%
Class 07	10.00 to <100.00	281	20.3750%	29	41.8560%	-	206	73.39%
Class 08	100.00 (Default)	204	100.0000%	29	65.2570%	-	65	32.08%
Total		**9,421**	**4.9480%**	**782**	**41.8710%**	**-**	**3,567**	**37.86%**

EU CCR5 – Composition of collateral for CCR exposures

		a	b	c	d	e	f	g	h
		Collateral used in derivative transactions				Collateral used in SFTs			
	Collateral type	Fair value of collateral received		Fair value of posted collateral		Fair value of collateral received		Fair value of posted collateral	
		Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated	Segregated	Unsegregated
1	Cash – domestic currency	-	1,693,653	-	1,287,220	-	-	-	-
2	Cash – other currencies	-	84,975	-	3,496	-	-	-	-
3	Domestic sovereign debt	-	943,638	-	21,605	-	6,198,567	-	9,616,787
4	Other sovereign debt	-	-	-	-	-	-	-	-
5	Government agency debt	-	-	-	-	-	-	-	-
6	Corporate bonds	-	-	-	-	-	42,162	-	391,946
7	Equity securities	-	3,147	-	-	-	54,269	-	6,827
8	Other collateral	-	-	-	-	-	44,186	-	249,361
9	**Total**	**-**	**2,725,413**	**-**	**1,312,321**	**-**	**6,339,184**	**-**	**10,264,922**

EU CCR6 – Credit derivatives exposures

		Dec-22	
		a	b
		Protection bought	Protection sold
Notionals			
1	Single-name credit default swaps	-	-
2	Index credit default swaps	51,000	5,000
3	Total return swaps	-	-
4	Credit options	-	-
5	Other credit derivatives	96,564	3,358,056
6	**Totale notionals**	**147,564**	**3,363,056**
Fair values			
7	Positive fair value (asset)	-	3
8	Negative fair value (liability)	-11,237	-

EU CCR8 – Exposures to CCPs

		Dec-22	
		a	b
		Exposure value	RWEA
1	**Exposures to QCCPs (total)** [1]		**36,594**
2	Exposures for trades at QCCPs (excluding initial margin and default fund contributions); of which	1,369,845	27,397
3	*(i) OTC derivatives*	*885,083*	*17,702*
4	*(ii) Exchange-traded derivatives*	*9,316*	*186*
5	*(iii) SFTs*	*475,445*	*9,509*
6	*(iv) Netting sets where cross-product netting has been approved*	-	-
7	Segregated initial margin	-	
8	Non-segregated initial margin	795,971	5,298
9	Prefunded default fund contributions	194,962	3,899
10	Unfunded default fund contributions	-	-
11	**Exposures to non-QCCPs (total)**		-
12	Exposures for trades at non-QCCPs (excluding initial margin and default fund contributions); of which	-	-
13	*(i) OTC derivatives*	-	-
14	*(ii) Exchange-traded derivatives*	-	-
15	*(iii) SFTs*	-	-
16	*(iv) Netting sets where cross-product netting has been approved*	-	-
17	Segregated initial margin	-	
18	Non-segregated initial margin	-	-
19	Prefunded default fund contributions	-	-
20	Unfunded default fund contributions	-	-

[1]QCCP: Qualifying Central Counterparty

Annex XXVII – Disclosure of exposures to securitisation positions

EU SECA: Qualitative disclosure requirements related to securitisation exposures

The Group operates in the securitisation market both as an originator, through the issue of notes from originated securitisations, and as an investor through subscription of securities from third-party securitisations.

As at today, the Montepaschi Group has not sponsored any securitisation transactions.

Originated securitisations include:

- securitisation transactions structured with the aim of deriving economic advantages regarding the optimisation of the loan portfolio, the diversification of sources of funding and the reduction of the cost of funding and the alignment of the natural maturities of assets and liabilities (securitisation transactions in the strict sense). To date the Group have two securitizations transactions that substantially transfer all the risk and return of the portfolio transferred (securitization with derecognition) and a securitization transaction which retained in substance all the risks and benefits associated with ownership of the disposed receivables (securitization without derecognition).
- securitisations aimed at strengthening the available funding sources, through the conversion of the loans sold into securities that can be refinanced (self-securitisations). Self-securitisation transactions are part of the more general policy of strengthening the group's liquidity position and are not included in securitisations of a stricter sense since they do not transfer risk outside the Group.

The Montepaschi Group has also completed 4 synthetic securitizations in order to transfer credit risk to the underlying portfolios. These securitizations are an efficient tool for generating and optimising capital.

Securitizations in the strict sense of the term

In general, this type of transaction involves the spin-off of a package of assets (generally loans) recognised in the balance sheet of Group Banks and its subsequent transfer to a *Special Purpose Vehicle*. The SPV, in turn, finances the purchase through the issue and placement of securities exclusively guaranteed by the assets received (ABS – *Asset-Backed Securities*). Resources raised in this way are returned to the Montepaschi Group (the seller), whereas commitments to subscribers are met using the cash flows generated by the loans sold. Following is an outline of the Group's main securitisation transactions outstanding at 31 December 2022 - broken down into quality/type of underlying and vehicle company.

For all structured securitisation transactions, the Group, as the *Originator,* retained a minimum economic interest of at least 5%, in compliance with the *retention* rule.

Securitisation of performing loans:

• Siena Mortgages 10-7 Srl (2010, BMPS);

Securitisation of non-performing loans:

• Norma Srl 2017 (2017, Multioriginator)

• Siena NPL 2018 Srl (2017, BMPS, MPSCS, MPSLF).

Siena Mortgages 10-7 S.r.l

This securitisation transaction was carried out on 30 September 2010. Its portfolio contained 34,971 BMPS performing, real estate backed loans for a total outstanding debt of approx. Euro 3.5 bn. The special-purpose vehicle Siena Mortgages 10–7 is 93% owned by Stichting Canova, a foundation incorporated under Dutch law, and the remaining part is owned by the Parent Company.

The remaining debt balance amounted to EUR 851.1 mln as at 31/12/2022 (13,249 outstanding mortgages).

To finance the acquisition of the transferred portfolio, the Vehicle issued ABS notes in the classes hereinafter indicated (in parenthesis is the rating attributed by the agencies Moody's and Fitch as at 31 December 2022):

• Class A1 notes for an original nominal amount of EUR 595 mln, fully redeemed;

• Class A2 notes for an original nominal amount of EUR 400 mln, fully redeemed;

• Class A3 notes (Aa3 and AA) for a nominal amount of EUR 54 mln as at 31 December 2022;

• Class B notes (A1) for a nominal amount of EUR 817.6 mln as at 31 December 2022;

• Class C notes (NR) for a nominal amount of EUR 57.1 mln as at 31 December 2022.

Classes A1 and A2 were placed with market investors, whereas the remaining classes of notes issued by the vehicle were initially underwritten by the Parent Company and a part of them (from Class 3) were sold on the market. The deal has not entailed the *derecognition* of the underlying assets from the balance sheet of the Parent Company (transferor), which has substantially retained all risks and rewards associated with the property of the assets sold.

Norma SPV Srl

On 1 July 2017, as part of a securitisation of *non-performing* loans originated by MPS Group banks as well as banks outside the MPS Group, Banca MPS and MPS Capital Services completed the disposal of a portfolio of *non-performing* loans in the *real estate* and *shipping sectors*.

At the disposal date, the total portfolio acquired by the vehicle consisted of 54 loans for a value of EUR 495.49 mln, of which 12 loans disbursed by Banca MPS for a value of EUR 24 mln for "*real estate*" and EUR 145.3 mln for "shipping", and 7 loans disbursed by MPS Capital Services for a value of EUR 28.8 mln for "real estate" and USD 86.8 mln for "*shipping*".

To fund the acquisition of this portfolio, on 21 July 2017 the Vehicle issued Class A1, B, C and D ABS securities (the "securities") for the real estate sector and Class A1, B, C1, C2 and D ABS securities for the shipping sector. The senior classes of both the real estate and shipping transactions were placed with institutional investors, while the mezzanine and junior classes were subscribed by each transferring bank in proportion with the transferred loans. In particular, the MPS Group subscribed the following classes:

– Real Estate: Class B for a nominal amount of EUR 31.2 mln; Class C for a nominal amount of EUR 4.2 mln; Class D for a nominal amount of EUR 15.8 mln.

– Shipping: Class B for a nominal amount of EUR 75.5 mln; Class C1 for a nominal amount of EUR 32.7 mln; Class C2 for a nominal amount of EUR 10.4 mln; Class D for a nominal amount of EUR 105.6 mln.

In January 2020, the derecognition of the underlying assets from the balance sheet of the Parent Company (transferor) was completed

At 31 December 2022, the amortized nominal value of the classes subscribed by the MPS Group is as follows:

– Real Estate: Class B 10.63 €/mln; Class C 4.21 €/mln; Class D 15.83 €/mln.

– Shipping: Class B 81.3 €/mln; Class C1 35.2 €/mln; Class C2 11.2 €/mln; Class D 113.8 €/mln.

Siena NPL 2018 Srl

This is the Securitisation transaction included in the 2017-2021 Restructuring Plan for the disposal of the bad loans portfolio as at 31 December 2016, with a gross book value of approximately €24.58BN as at 31 December 2016, through the Italian Recovery Fund.

The Securitisation transaction, regulated pursuant to Law no. 130/1999 and concerning the purchase without recourse of a portfolio of loans which, as at 31 December 2016, were classified under bad loan status by Banca Monte dei Paschi di Siena S.p.A., MPS Capital Services Banca per le Imprese S.p.A. and Monte dei Paschi di Siena Leasing & Factoring, Banca per i Servizi Finanziari alle Imprese S.p.A., was completed on 28 December 2017. The total sale price of the receivables included in the Portfolio is approximately Euro 5.06BN (20.58% of the GBV as at 31 December 2016). The portfolio's GBV as at 31 December 2020 was € 21.61 bn.

The vehicle financed acquisition of the portfolio through issuance of the following asset-backed securities (the “Securities”), with limited recourse:

(i) Senior A1 notes for EUR 2,683.5 mln;

(ii) Senior A2 notes for EUR 412.1 mln;

(iii) Mezzanine notes for EUR 847.6 mln;

(iv) Junior notes for EUR 565.0 mln centralised in dematerialised form at Monte Titoli S.p.A. and initially not listed on any Italian and/or foreign regulated market.

The transaction complied with the timeline of the 2017-2021 Restructuring Plan and the agreements with Quaestio Capital SGR S.p.A. On 9 January 2018, the transfer was completed of 95% of the mezzanine notes to Quaestio Capital SGR on behalf of *Italian Recovery Fund* (Fondo Atlante II). In May 2018, at the end of the rating assignment process, the *Senior notes* were restructured into a single class, obtaining an *investment grade* rating from the 3 ratings agencies involved. The securities issued by the vehicle following the restructuring were the following:

(i) Senior A notes for EUR 2,918 mln, rating A3/BBB+/BBB (Moody's/Scope Ratings/DBRS). The outstanding amount as at 31 December 2022 was EUR 1,253 mln. As of 31 December 2022, the rating was Baa2/BBB+/BB high (Moody's/Scope Ratings/DBRS);

(ii) Mezzanine B notes for EUR 847.6 mln, without rating and transferred to the Italian Recovery Fund managed by Quaestio Capital SGR. The *outstanding* amount as at 31 December 2022, due to the capitalisation of the interest, was about EUR 883.3 mln;

(iii) Junior notes for EUR 565.0 mln, without rating.

In June 2018, the sale of 95% of the junior notes to *Italian Recovery Fund* made it possible to achieve, in addition to the sale of the mezzanine notes, the deconsolidation of the entire securitised portfolio.

Lastly, in July 2018, the MEF granted, with its decree, the government guarantee (GACS) on the senior tranche of the securitisation. Obtainment of the GACS completed the entire securitisation process.

For all the securitisation transactions described above (and described subsequently), during the period under review the Parent Company and its subsidiaries have not provided any financial or other support without being obliged under the contract. There are no cases of financial or other support to a previously non-consolidated structured entity as a result of which the structured entity was controlled by the Group.

The Group also does not intend to provide financial or other support to consolidated securitisation vehicles, nor to assist entities in obtaining financial support.

Self-Securitisations

These transactions involve the transfer of a portfolio of loans originated by Group Banks to a Special Purpose Entity which, in turn, finances the purchase through the issue of *Asset Backed Securities (ABS)*. All *Asset Backed Securities* (ABS) issued are underwritten by the Parent Company. The Group's full underwriting still provided the Group with securities that could be used for ECB refinancing (limited to *senior traches* as ECB *eligible*) and repo transactions by increasing the availability of disposable assets, thus improving the MPS's safety margin against the MPS Group's liquidity risk position *(counterbalancing capacity)*.

Here follows a list of the self-securitisations as at 31 December 2022:

- Siena Mortgages 07 -5 Srl (2007);
- Siena Mortgages 07 -5/Serie 2 Srl (2008);
- Siena Mortgages 09 -6 (2009);
- Siena PMI 2016 Serie 2 Srl (2019)
- Siena Lease 2016-2 (2016).

The first two transactions, involving performing residential mortgage loans were carried out in December 2007 (Euro 5.2 bn) and March 2008 (Euro 3.4 bn) for an overall amount of Euro 8.6 bn, through the vehicle, Siena mortgages 07-5 Srl.

In 2009, two new transactions were added (Euro 4.4 bn as at February 2009 and Euro 4.1 bn as at June 2009 and closed at 2016), involving performing loans through the vehicle, Siena mortgages 09 – 6 Srl.

During 2019, the Group completed a securitization transaction through the vehicle named Siena PMI 2016 Srl on a portfolio of performing loan contracts provided to Italian SME, amounting to 2.3 €/bn.

The Siena Lease 2016-2 transaction, whose securities were issued in January 2016, was structured on a portfolio of performing loans disbursed by the subsidiary MPS Leasing & Factoring Banca per i Servizi Finanziari alle Imprese in the amount of € 1,619.8 mln.

Self-securitization transactions do not contribute to the numerical data included in the following tables of quantitative information, since - as already mentioned - the transactions in question do not constitute securitizations in the strict sense.

Synthetic securitization transactions

The prudential regulation on synthetic securitizations is governed by the CRR, as amended by Regulation (EU) No.2017/2401, in particular in Part Three, Title II, Chapter 5 - Securitizations and in Part Five - Transferred credit risk exposures.

In general, it is envisaged, through the stipulation of guarantee contracts, the purchase of protection of the credit risk underlying a loan portfolio, of which the Originator retains full ownership and the relative servicing management. These transactions are therefore aimed at transferring the credit risk from the originator to an external counterparty. This transfer does not entail the derecognition of assets and, therefore, assets remain in the *Originator*'s financial statements.

The Group has carried out four synthetic securitisation transactions, the main features of which are described below.

Siena 2021 - RegCap-1

The "Siena 2021 - RegCap-1" transaction was completed in July 2021 on a portfolio consisting largely of "Stage 2" loans disbursed to companies classified as Corporate, SME Corporate and SME Retail, with a residual debt of approximately EUR 755.4 billion, of which 5% is held by BMPS in compliance with the retention rule.

Three tranches were identified as part of the transaction:

– Senior: for a nominal amount of EUR 650.2 mln;

– Mezzanine: for a nominal amount of EUR 51.3 mln;

– Junior: for a nominal amount of EUR 16.1 mln.

The risk relating to the Senior and Junior tranches was retained by BMPS, while the Mezzanine tranche is guaranteed by a market counterparty. The financial guarantee is funded and requires the guarantor of the Mezzanine tranche to deposit the entire amount of the guarantee in an escrow account opened with Banca Monte dei Paschi.

Siena 2021 - Specialised Lending

The "Siena 2021 - Specialised Lending" transaction was completed in July 2021 on a portfolio of "Specialised Lending" loans disbursed by Monte dei Paschi Capital Services to companies classified as Corporate, with a residual debt of approximately 602.7 billion euros, of which 5% is held by BMPS in compliance with the retention rule.

Three tranches were identified as part of the transaction:

– Senior: for a nominal amount of EUR 481.0 mln;

– Mezzanine: for a nominal amount of EUR 31.5 mln;

– Junior: for a nominal amount of EUR 60.1 mln.

The risk relating to the Senior tranche was retained by BMPS, while the Mezzanine and Junior tranches are guaranteed by a market counterparty. The financial guarantee is funded and requires the guarantor of the Mezzanine and Junior tranches to deposit the entire amount of the guarantee in an escrow account opened with Banca Monte dei Paschi.

Siena 2020 – FEI transaction

Siena 2020 - FEI transaction was carried out by participating in the "SME Initiative Italy" launched by the European Investment Fund (EIF).

Given an initiative co-financed by the European Union, with the contribution of various Member States and by the EIF itself, its objective is to allow member banks to reduce RWAs generated by the portfolio and, at the same time, provide support to companies located in the eight Southern Italian Regions (Abruzzo, Basilicata, Calabria, Campania, Molise, Puglia, Sardinia and Sicily), through the disbursement of loans under subsidised financial terms. The following tranches have been identified:

– Senior tranche: for a nominal value of 1,389.9 €/mln;

– Mezzanine tranches: for a nominal value of 55.7 €/mln;

– Junior tranche: for a nominal value 40.8 €/mln.

The Senior tranche is retained by BMPS, the three Mezzanine tranches, and 50% of the Junior tranche have been guaranteed by European Investment Fund (EIF). The financial guarantee provided by EIF is an unfunded personal guarantee.

Siena 2020 - RegCap-1

"Siena 2020 - RegCap-1" transaction was completed in December 2020 and involved a portfolio of loans to Corporate and SME Corporate, with a remaining debt balance of approx. 1.9 €/bn.

The following tranches have been identified:

– Senior: for a nominal value of 1,642 €/mln;

– Junior: for a nominal value 123.6 €/mln.

The risk relating to the Senior tranche was retained by BMPS, while the Junior tranche is guaranteed by a market counterparty. The financial guarantee is funded and requires the guarantor of the Junior tranche to deposit the entire amount of the guarantee in an escrow account opened with Banca Monte dei Paschi.

Third-party securitizations

The Group allocates a part of its capital to stock market investments, with the objective to:

- attain a risk-adjusted return that is significantly higher than the cost of allocated capital so as to create value for the shareholders;
- diversify risks with respect to other risks that are typical of its business;
- maintain in-depth and up-to-date knowledge of financial market trends which additionally and inevitably condition the domestic markets in which the Group mainly operates.

Activities are overseen by the Finance, Treasury and Capital Management Area and are carried out within a broad and varied range of potential financial market areas so as to draw maximum benefit from risk diversification and reduced exposure to individual sectors: from investment activities in the government bonds, securities and forex markets to activities in the corporate bond and *credit derivative* markets.

Third-party securitisations are compliant with the above-mentioned process of diversification and with the support of a specialised desk within the subsidiary, Mps Capital Services. The investment process starts with the analyses carried out by the traders in a bottom-up logic and is included in the overall monitoring of portfolio risks. As with all operations in securities markets, these investments are subject to risk limits set by the Board of Directors that are monitored daily by the *Business Control Units* and Risk Management; *Stop loss*, risk and nominal limits are defined for maximum exposure for major issuer categories broken down by rating.

Methods for calculating risk weighted exposures

With reference to the regulatory treatment of securitization transactions the Group applies the following three methods, according to a sequential approach:

– Securitisation IRB Approach (SEC-IRBA);

– Securitisation Standardised Approach (SEC-SA);

– Securitisation External Ratings Based Approach (SEC-ERBA).

For rated positions or positions in respect of which an inferred rating may be used, the Group uses the SEC-ERBA instead of the SEC-SA in each of the following cases:

1. where the application of the SEC-SA would result in a risk weight higher than 25% for positions qualifying as positions in an STS (*Simple, Transparent and Standardised*) securitization, pursuant to Regulation (EU) 2017/2402;
2. where the application of the SEC-SA would result in a risk weight higher than 25 % or the application of the SEC-ERBA would result in a risk weight higher than 75 % for positions not qualifying as positions in an STS securitisation;
3. for securitisation transactions backed by pools of auto loans, auto leases and equipment leases.

Starting from 1 January 2020, the Group uses, pursuant to Regulation (EU) 2017/2401, the SEC-ERBA for rated positions. Under the SEC-ERBA approach, risk-weighted exposure is calculated by applying a 'weight' depending on the ratings assigned by an External Credit Assessment Institution (ECAI) to the securitised exposures (in the banking book and trading book). The ECAIs used by the group for positions in short-term rated securitisations and securitisations other than those with a short-term rating, include:

- *Fitch Rating Ltd,*
- *Moody's Investors Service Ltd,*
- *Standard & Poor's Rating Services.*

Rating Agencies for securitizations

Type[a]	Rating Agencies
CREDITI PERFORMING	
SIENA MORTGAGES 07-5 SERIE 1	Fitch Ratings Ltd Moody's Investors Service Ltd
SIENA MORTGAGES 07-5 SERIE 2	Fitch Ratings Ltd Moody's Investors Service Ltd
SIENA MORTGAGES 09-6 SERIE 1	Fitch Ratings Ltd Moody's Investors Service Ltd
SIENA MORTGAGES 10-7	Fitch Ratings Ltd Moody's Investors Service Ltd
SIENA LEASE 2016-2 (MPS Leasing & Factoring)	Fitch Ratings Ltd Moody's Investors Service Ltd
SIENA PMI 2016 SERIE 2	Fitch Italia SpA DBRS Ratings GmbH

[a] *Originator in brackets.*

Accounting policies

The *Servizio Bilancio* (Budgeting Department) oversees the correct application of international accounting standards in the treatment of securitization transactions.

The Montepaschi Group has traditional securitisations (a distinction can be made between transactions with derecognition and without derecognition, including the subset of "self-securitisations") and synthetic securitisations as of 2020.

For the classification of traditional securitisations, the effective transfer of risks and benefits is assessed, in accordance with the provisions of IFRS 9 at § 3.2.7, by comparing the exposure of the originator (before and after the transfer) with the variability, in amount and timing, of the net cash flows of the financial asset transferred.

The originator essentially retains all the risks and benefits, when its exposure to the variability of the present value of the future net cash flows of the financial asset does not change significantly following the transfer; in this case, despite the formal transfer of the legal ownership of the receivables, these are not removed from the financial statements of the originator (securitisation without derecognition).

For notes not retained by the originator but placed on the market, a liability is recorded with the vehicle company. In the case where all the liabilities issued by the vehicle company are subscribed by the originator, this is known as "self-securitization".

It is instead considered that the originator transfers the risks and benefits when its exposure to fluctuations in the present value of the expected cash flows is not significant in relation to the variability linked to the instrument, prior to its transfer. In this case, the notes issued by the vehicle are placed on the market and not retained by the originator (or only to a very small extent); in this case the receivables sold are removed from the balance sheet (securitization with derecognition) while any notes withheld are recorded.

For accounting purposes, in the case of securitisations with derecognition, the Group calculates the profit or loss as the difference between the consideration received and the gross exposure of the assets sold, while in the case of the disposal of assets without derecognition, there is no additional accounting impact beyond the ordinary management of the underlying receivables not derecognised.

No gains/losses on disposals under securitisation transactions were realised in 2022.

In relation to the securitizations carried out, the Parent Company has set up provisions, amounting to 104.41 million euros as of 31 December 2022, recorded in the Financial Statements as a credit position with the vehicles.

For all the securitisation transactions, during the period under review the Parent Company and its subsidiaries have not provided any financial or other support without being obliged under the contract.

If the Group had agreements that could require the provision of financial support for securitised assets, they would be accounted according to IAS 37 “Provisions, Contingent Liabilities and Contingent Assets”.

With regard to **synthetic** securitisations, there is no impact on the balance sheet, whereas, from an economic point of view, the following are recorded: i) commission expenses paid to the protection seller for the guarantee received on the portfolio of receivables underlying the securitisation and ii) value readjustments for credit risk on the securitised portfolio as a benefit for the Group deriving from the guarantee.

Financial assets awaiting securitisation (to be realised within one year) are classified among non-current assets and assets held for sale, according to IFRS 5, if the securitisation meets the derecognition requirements envisaged by IFRS 9, otherwise the assets sold, legally but not for accounting purposes, remain recorded in the original accounting portfolio: financial assets at amortised cost or other assets compulsorily valued at fair value following the related accounting rules envisaged by IFRS 9.

Control System and Top Management Reporting

The securitisation management process is defined by a specific internal regulation which assigns roles and responsibilities to the various organisational units involved in the individual phases of the process.

The Parent Company’s Structural Liquidity Service establishes general practices and coordinates activities in relation to securitisation transactions. The Montepaschi Group has set up a specific organisational unit within the Parent Company’s Specialised Processes and Services Unit, responsible for the management of *performing* securitisations. More specifically, the Credit Guarantees Function within this unit looks after the aspects and obligations associated with *servicing* activities.

The trend of the transactions is steadily monitored through the periodical (monthly and quarterly) recording of remaining principal repayment flows, default and bad debt positions generated by these securitisations.

In agreement with the Group’s other originator banks, the Credit Guarantees function prepares the summary statements containing the data of the transferred portfolio (Servicer Report). As part of the management of critical issues, the Parent Company’s Structural Liquidity function reports cases that may pose potential risks for noteholders to the relevant functions.

In its capacity as third-level control body, the Risk Audit Function uses sampling procedures to periodically validate:

- whether the degree of recoverability of loans sold is accurate and, as a result, whether the *fair value* of securities issued is appropriate;
- whether line checks assigned to the various units have been carried out and roles and responsibilities properly identified;
- it also verifies the compliance of reporting/accounting procedures with current regulations in collaboration with other units, as necessary;
- the existence of any conflicts of interest with respect to noteholders; and compliance, on a sampling basis, with the obligations of law 197/91, as amended.

Non-performing securitisations, on the other hand, are handled by the Non Performing function Sector, while all activities connected with the securitisation of loans originated by other subsidiaries (in particular MPS Leasing&Factoring) are managed by the subsidiaries themselves.

Risk-hedging policies

With regard to monitoring procedures for risks inherent in own securitisations, the Bank uses the control tools already in place for portfolio risks. Pursuant to the provisions set out in the Supervisory Instructions Issued by the Bank of Italy on this subject, the Bank makes sure that the overall transactions are managed in compliance with the law and the prospectuses.

When transactions are structured, it is the responsibility of the Structural Liquidity Unit in collaboration with the *Arranger* and liaising with the asset-holding unit, the and Risk Management, to submit to the approval of the Finance Committee the definition of the *hedging* strategy as well as the potential recourse to a back-to-back swap as a way to hedge against the risks of fluctuations in the interest rates of securitised assets.

With regard to procedures aimed at monitoring the risks of third party securitisations, the Bank uses the control tools and internal models implemented for the measurement and management of market risks in line with the qualitative and quantitative requirements set out by the regulatory authorities. In detail, the BoD-defined limits of the following are monitored: *Stop loss, Value at Risk (VaR)* and nominal limits of maximum exposure by issuer's product categories, broken down by rating classes. Finally, the appropriateness and quality of the market settings applied to *Front Office* and market risk management are monitored, as are the frequency and quality of upgrades.

Traditional securitisations and self-securitisations originated by the Group are also relevant for liquidity risk monitoring and management. Securitisations have been used by the Group in recent years primarily with a view to 'certificate' commercial assets, using hem for ECB refinancing transactions and collateralised securities lending. In order to maximise the efficiency and economic advantageousness of these transactions, some of the structuring roles required are generally carried out by the *originator bank* itself. In particular, the roles that are particularly relevant for the purpose of liquidity management include the following:

- *Servicer*: the originating entity, which manages the cash flows and usually maintains a direct relationship with its own customers, avoiding disclosure of the list of debtors sold to a third party entrusted with the collection of payments for -and daily management of- the portfolio in question;
- *Account Bank***:** the entity that acts as a custodian of the securitisation liquidity, i.e. the depository bank for the collections that the *servicer* deposits on a daily basis;
- Interest rate hedging contract counterparty**:** the direct counterparty for swaps/caps hedging interest rate risk of vehicles.

To fulfil the above roles, the entity is required to comply with specific credit market requirements for the entire period in which the transaction is in place. To maintain the rating of its transactions, if the creditworthiness of the *originator* is downgraded to a rating below the minimum levels set out by the Rating Agencies, the originator will be required to put in place remedies which may expose it to liquidity risk.

More specifically:

- in order to maintain the role of *Servicer*, if the bank's rating is downgraded to below the levels set out by the rating agencies, it will be required to fund a reserve, known as the *commingling* reserve which, should a default occur, will provide hedging against the risk that the amounts collected on behalf of the vehicle and not yet credited to the vehicle's accounts may fall into the funds available for the general body of creditors of the bankrupt bank;
- for the role of *Account Bank,* Rating Agencies may require a third bank to be entrusted with the custody of the vehicles' financial assets;
- for the role of Counterparty hedge against interest rate risk, if credit scoring is below a certain level, Agencies may require either replacement of (or a guarantee from) the counterparty or specific collateralization. Externalisation or derivative guarantee may instead be imposed by the agencies if creditworthiness is below a certain limit threshold.

Covered Bond Transactions

The MPS Group currently has two Covered Bond programmes for a total plafond of Euro 40 bn. In the course of 2010, the Montepaschi Group launched a first programme for the issuance of Covered Bonds for an amount of Euro 10 bn, increased at the end of 2017 to Euro 20 bn.

In light of the developments in the financial markets, the programme should be considered as part of a wider strategy, aimed at:

- curbing the costs of funding: covered bonds are widely preferred, inasmuch as they are issued directly by the bank and their repayment is guaranteed by a segregated pool of assets (in this case, residential mortgage loans); in the event of issuer bankruptcy, covered bond holders enjoy a right of recourse on a portfolio of segregated high-quality assets and are, therefore, willing to accept a lower yield than the one offered by similar uncovered bonds;
- diversifying the bank's funding sources on the international market too;
- lengthening its average debt maturity profile.

On 26 June 2015, the meeting of *covered bond* holders approved the proposed amendments to the Programme which made it possible to:

(i) amend the Programme, to obtain a rating from DBRS (in addition to Moody's and Fitch) for the covered bonds issued and to be issued as part of the Programme;

(ii) activate, if specific cases of default take place pursuant to the Programme, a "*conditional pass through*" type mechanism for the repayment of the bonds issued.

With a view to improving the efficiency and stability of the Group's *counterbalancing capacity*, in 2012 a second issuance programme was authorised for a maximum of Euro 20 bn. The covered bonds were not explicitly rated when launched but, in the course of 2013, were assigned a rating (A) by the agency DBRS. The second programme is not intended for the market but for transactions eligible as collateral in refinancing transactions through the European Central Bank.

These transactions are structured into the following stages:

a) the Parent Company, or other Group Company, transfers*, without recourse*, a pool of assets having certain characteristics to the vehicle (MPS Covered Bond S.r.l. and MPS Covered Bond 2 S.r.l), thus forming a segregated *Cover Pool*;

b) the Transferor grants a subordinated loan to the vehicle, for the purpose of financing payment of the assets' purchase price by the vehicle;

c) the Parent Company issues covered bonds secured by an autonomous, irrevocable and unconditional first demand guarantee issued by the vehicle for the only benefit of the bond-holding investors and senior debtors involved in the transaction; the guarantee involves limited recourse to the assets of the Cover Pool owned by the vehicle (*guarantor*).

The structure of the deal is such that the Parent Company is the transferor (a), lender (b) and issuer (c) in the transaction.

The programmes, in both cases, were structured in compliance with applicable rules and regulations which authorise the issuance of covered bonds only if the transferring and issuing banks meet certain capital requirements.

The structure of the debt issuance programmes of the Parent Company (transferor and servicer) is subject to stringent regulatory requirements and calls for continuous actions by the Specialised Credit Processes and Services Area; Finance, Treasury & Capital Management and Risk Management Areas, as well as supervision by an external auditor (Deloitte & Touche) as asset monitors. These actions include:

- assessment of capital requirements mandated by Supervisory Instructions when it comes to covered bond issuance programmes;
- assessment of the quality and integrity of assets transferred with regard, in particular, to the estimated value of properties, both residential and non-residential, on which a mortgage in relation with the asset-backed loans is placed; this assessment may result in repurchases, integrations and additional transfers of supplemental assets;
- assessment of an appropriate ratio being maintained between bonds issued and assets transferred as collateral (Cover Pool -mortgage and residential assets; commercial assets for the second programme);
- assessment of transfer limits and integration practices;
- assessment on whether risks are effectively and adequately hedged by derivative contracts in relation to the transaction.

In order to allow the transferee to meet the obligations of the collateral pledged, the Parent Company uses appropriate Asset & Liability Management techniques to secure a trend of substantial balance between the maturities of cash flows arising from the assets sold and maturities of payments due in relation with the covered bonds issued and other costs of the transaction.

With regard to the first program, in particular, an interest rate risk mitigation strategy has been implemented over the years aimed at hedging the net exposure of the vehicle against interest rate risk. As of

31 December 2022, there are two Covered Bond Swaps in place for a total amount of € 1 billion.

The paragraphs below provide information on the nature of the risks associated with the interest in the MPS Covered Bond S.r.l. vehicle, whose *assets* are pledged as collateral of bond issues of the Parent Company partly placed with the market.

In particular, the terms of the agreements that could require the Group to provide financial support to the vehicle MPS Covered Bond S.r.l. are as follows:

- the Parent Company undertakes, in accordance with the programme's terms, to ensure compliance over time with the regulatory and contractual tests determined according to the methodologies set by the rating agencies from time to time
- if the Parent Company's rating decreases below "BBB(low)" (DBRS), "BBB" (Fitch) and "Baa3" (Moody's), the repayment, even partial anche parziale, of each subordinated loan will be delayed by 6 months after the original expiry, (unless early loan repayment is necessary to allow for compliance with the maximum limit of cash that may be accumulated by the Vehicle, established by regulation as 15% of the total of the cover pool, to the extent to which it is not possible for the Vehicle to acquire new suitable assets to replace cash, pursuant to the Framework Transfer Agreement);
- in accordance with the Master Definition Agreement, the Parent Company shall allocate and change the amount of the variable liquidity reserve according to criteria agreed upon with the rating agencies.

During the period under review the Parent Company and its subsidiaries did not provide any financial or other support without being obliged under the contract.

There are no cases of financial or other support to a previously non-consolidated structured entity as a result of which the structured entity was controlled by the Group.

The Group does not intend to provide financial or other support to the vehicle, nor to assist the entity in obtaining financial support.

Description of individual issuances

In order to support the issuances of Covered Bonds in the first programme, the Parent Company transferred a portfolio of approximately 258,352 thousand mortgages for a total value of Euro 26.7 bn, consisting in *performing* residential mortgages in real estate and building secured by 1st mortgages and with all instalments regularly paid as at the date of valuation of the portfolio.

Here follows a summary of the main characteristics regarding transfers in the first

Programme:

Date of sale	Portfolio	Loans Number	Amount (€/bln)
25/05/10	BMPS mortgages	36,711	4.42
19/11/10	BMPS mortgages	19,058	2.41
25/02/11	BMPS mortgages	40,627	3.89
25/05/11	BMPS (ex BAV) mortgages	26,804	2.35
16/09/11	BMPS mortgages	27,973	2.33
14/06/13	BMPS mortgages	4,259	0.42
18/09/15	BMPS mortgages	15,080	1.53
31/10/16	BMPS mortgages	7,630	0.78
22/12/16	BMPS mortgages	1,903	0.24
03/05/18	BMPS mortgages	12,401	1.32
27/02/19	BMPS mortgages	16,880	1.81
16/10/19	BMPS mortgages	12,008	1.27
15/06/20	BMPS mortgages	13,107	1.43
18/05/21	BMPS mortgages	15,074	1.67
	Total	**258,352**	**26.78**

As part of the first issuance Programme, the Parent Company completed a total of 33 issuances, 12 of which had not yet matured or been repaid early for a total, as at 31 December 2022, of € 8,200 mln, of which € 4,515.5 mln were placed on the market, while € 3,684.5 mln were repurchased by the Parent Company and by the Subsidiary Companies MPS Capital Services e Monte Paschi Banque S.A..

The remaining debt balance on the portfolio as at 31 December 2022 amounted to € 11,711.4 mln for 151,077 mortgages.

In 2022 the following securities were issued as part of the first Programme:

Issuer Date	Amount (€/bln)	Coupon	Legal Final Maturity
04/02/22	0.75	3mE + 0.23%	01/03/25
05/07/22	0.75	3mE + 0.50%	01/12/26

With regard to the second Program, the transferred portfolio consists of residential and commercial land and mortgage loans, for a residual debt as at 31 December 2022 of 10,409.6 mln € for 109,274 loans.

A portfolio of 7,363 residential and commercial mortgages was sold for € 1 bn on 18 July 2022.

Date of sale	Portfolio	Amount (€/bln)	Loans number
30/04/12	Residential Mortgages	2.38	27,047
26/06/12	Commercial Mortgages	2.47	13,993
28/08/12	Residential and Commercial Mortgages	1.40	17,353
24/09/12	Residential and Commercial Mortgages	2.47	9,870
18/02/13	Residential and Commercial Mortgages	1.29	9,033
24/06/13	Residential and Commercial Mortgages	2.15	12,771
25/03/14	Residential and Commercial Mortgages	1.46	5,645
20/10/15	Residential and Commercial Mortgages	0.98	5,671
18/07/16	Residential and Commercial Mortgages	2.01	24,162
26/08/16	Residential and Commercial Mortgages	0.81	7,211
24/03/17	Residential and Commercial Mortgages	0.79	5,799
08/05/18	Residential and Commercial Mortgages	0.69	4,718
09/11/18	Residential and Commercial Mortgages	0.47	3,002
27/09/19	Residential and Commercial Mortgages	0.73	4,549
21/02/20	Residential and Commercial Mortgages	1.03	8,625
19/04/21	Residential and Commercial Mortgages	1.52	12,916
30/11/21	Residential and Commercial Mortgages	1.75	14,646
18/07/22	Residential and Commercial Mortgages	1.00	7,363
Total		**25.41**	**194,374**

Management of the new Covered Bond

Programme follows the proven processes and controls already adopted for management of. As part of the second programme, the Parent Company completed forty-six issuances (of which 13 not yet matured or redeemed early), which were not intended for the market but repurchased by the Parent Company and used as collateral for refinancing transactions in the Eurosystem, for a total as at 31 December 2022 of € 8,650 mln.

The following issues were made in 2022:

Issuer Date	Amount (€/bln)	Coupon	Legal Final Maturity
17/02/22	0.750	3mE+0.27%	29/10/25
13/06/22	1.00	2%	29/10/25
Total	**1.75**		

From an accounting viewpoint, both covered bond transactions did not involve the derecognition of assets sold and consequent recognition in the balance sheet of swaps connected with the transaction. It should be noted that:

- transferred loans continue to be reported in the Parent Company's balance sheet since the Parent Company retains the risks and rewards of ownership of the loans transferred;
- the loan disbursed by the Parent to the Vehicle is not classified as a separate item in the balance sheet, since it is offset with the amount due to the Vehicle in which the initial transfer price was recognised. The loan, therefore, is not subject to credit risk assessment, because this risk is entirely reflected in the assessment of transferred loans, which continue to be reported in the Parent Company's balance sheet;
- loans are subject to movements based on own events (figures and assessment);
- instalments collected by the Parent (which also acts as a servicer) are reallocated daily to the Vehicle's "collection account" and accounted for by the Parent as follows:
  - collection of principal from borrower is recognised as an offsetting entry to the reduction in the loan to the borrower;
  - reallocation of principal to the Vehicle is recognised as an offsetting entry to the recognition of a loan to the Vehicle; this loan is paid off upon repayment of the subordinated loan;
  - interest received by borrower is recognized as an offsetting entry to account 10 "Interest income: loans to customers" (interest on loans continues to be recognised on an accrual basis);
  - reallocation of interest to the Vehicle is recognised as an offsetting entry to the recognition of a loan to the Vehicle;
  - this loan is paid off upon collection of the interest flow on the subordinated loan;
- the Vehicle "MPS Covered Bond S.r.l." is invested in by the Parent Company for a control stake of 90%, recognised

under account 100 "Equity investments" and included in the Group's consolidated financial statements under the comprehensive approach;

- the vehicle "MPS Covered Bond 2 S.r.l." is invested in by the Parent company for a control stake of 90%, recognised under Account 100 "Equity investments" and included in the Group's consolidated financial statements under the comprehensive approach;
- bonds issued are posted to Account 10 "Financial liabilities measured at amortised cost - c) debts securities issued", and related interest expense is recognized on an accrual basis.

The following tables report the Group's overall exposures in securitisations.

EU SEC1 – Securitisation exposures in the non-trading book

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
		Institution acts as originator							Institution acts as sponsor				Institution acts as investor			
		Traditional				Synthetic		Sub-total	Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total
		STS		Non-STS			of which SRT		STS	Non-STS			STS	Non-STS		
			of which SRT		of which SRT											
1	**Total exposures**	**-**	**-**	**3,705,128**	**86,323**	**1,437,368**	**1,383,199**	**5,142,496**	**-**	**-**	**-**	**-**	**-**	**10,838**	**-**	**10,838**
2	Retail (total)	-	-	3,219,709	-	23,312	-	3,243,021	-	-	-	-	-	10,838	-	10,838
3	residential mortgage	-	-	2,794,385	-	-	-	2,794,385	-	-	-	-	-	10,838	-	10,838
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	other retail exposures	-	-	425,324	-	23,312	-	448,636	-	-	-	-	-	-	-	-
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Wholesale (total)	-	-	485,418	86,323	1,414,056	1,383,199	1,899,475	-	-	-	-	-	-	-	-
8	loans to corporates	-	-	34,626	34,626	1,414,056	1,383,199	1,448,683	-	-	-	-	-	-	-	-
9	commercial mortgage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	lease and receivables	-	-	399,095	-	-	-	399,095	-	-	-	-	-	-	-	-
11	other wholesale	-	-	51,697	51,697	-	-	51,697	-	-	-	-	-	-	-	-
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MPS Group does not have within their traditional securitisations, ABCP programmes.

EU SEC2 – Securitisation exposures in the trading book

		a	b	c	d	e	f	g	h	i	j	k	l
		Institution acts as Originator				Institution acts as Sponsor				Institution acts as Investor			
		Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total	Traditional		Synthetic	Sub-total
		STS	Non-STS			STS	Non-STS			STS	Non-STS		
1	**Total exposures**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**49,980**	**114,924**	**-**	**164,904**
2	Retail (total)	-	-	-	-	-	-	-	-	31,931	63,871	-	95,802
3	residential mortgage	-	-	-	-	-	-	-	-	6,260	60,928	-	67,188
4	credit card	-	-	-	-	-	-	-	-	-	-	-	-
5	other retail exposures	-	-	-	-	-	-	-	-	25,672	2,943	-	28,615
6	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-
7	Wholesale (total)	-	-	-	-	-	-	-	-	18,049	51,053	-	69,102
8	loans to corporates	-	-	-	-	-	-	-	-	-	-	-	-
9	commercial mortgage	-	-	-	-	-	-	-	-	-	44,908	-	44,908
10	lease and receivables	-	-	-	-	-	-	-	-	18,049	-	-	18,049
11	other wholesale	-	-	-	-	-	-	-	-	-	6,145	-	6,145
12	re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-

EU SEC3 – Securitisation exposures in the non-trading book and associated regulatory capital requirements – institution acting as originator or as sponsor

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	EU-p	EU-q
		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWEA (by regulatory approach)				Capital charge after cap			
		RW ≤20 %	RW >20% to 50%	RW >50% to 100%	RW >100% to <1250%	RW 1250% / deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deduc-tions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deductions
1	**Total exposures**	**1,434,896**	**-**	**-**	**34,626**	**-**	**1,417,825**	**-**	**51,697**	**-**	**562,170**	**-**	**7,755**	**-**	**44,974**	**-**	**620**	**-**
2	Traditional transactions	51,697	-	-	34,626	-	34,626	-	51,697	-	354,690	-	7,755	-	28,375	-	620	-
3	Securitisation	51,697	-	-	34,626	-	34,626	-	51,697	-	354,690	-	7,755	-	28,375	-	620	-
4	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	*Of which STS*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	51,697	-	-	34,626	-	34,626	-	51,697	-	354,690	-	7,755	-	28,375	-	620	-
7	*Of which STS*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	1,383,199	-	-	-	-	1,383,199	-	-	-	207,480	-	-	-	16,598	-	-	-
10	Securitisation	1,383,199	-	-	-	-	1,383,199	-	-	-	207,480	-	-	-	16,598	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	1,383,199	-	-	-	-	1,383,199	-	-	-	207,480	-	-	-	16,598	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EU SEC4: securitisation exposures in the non-trading book and associated regulatory capital requirements - institution acting as investor

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	EU-p	EU-q
		Exposure values (by RW bands/deductions)					Exposure values (by regulatory approach)				RWEA (by regulatory approach)				Capital charge after cap			
		RW ≤20 %	RW >20% to 50%	RW >50% to 100%	RW >100% to <1250%	RW 1250% / deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deductions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deduc-tions	SEC-IRBA	SEC-ERBA (including IAA)	SEC-SA	1250% /deductions
1	**Total exposures**	**2,313**	**-**	**-**	**8,525**	**-**	**-**	**10,838**	**-**	**-**	**-**	**16,606**	**-**	**-**	**-**	**1,328**	**-**	**-**
2	Traditional transactions	2,313	-	-	8,525	-	-	10,838	-	-	-	16,606	-	-	-	1,328	-	-
3	Securitisation	2,313	-	-	8,525	-	-	10,838	-	-	-	16,606	-	-	-	1,328	-	-
4	Retail underlying	2,313	-	-	8,525	-	-	10,838	-	-	-	16,606	-	-	-	1,328	-	-
5	*Of which STS*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	*Of which STS*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Synthetic transactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Retail underlying	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Wholesale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Re-securitisation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

EU SEC5 – Exposures securitised by the institution - Exposures in default and specific credit risk adjustments

		a	b	c
		Exposures securitised by the institution - Institution acts as originator or as sponsor		
		Total outstanding nominal amount		Total amount of specific credit risk adjustments made during the period
			Of which exposures in default	
1	**Total exposures**	**25,975,379**	***20,243,079***	**-319,502**
2	Retail (total)	3,308,428	*206,837*	7,158
3	residential mortgage	2,847,313	*189,129*	10,309
4	credit card	-	-	-
5	other retail exposures	461,115	*17,708*	-3,150
6	re-securitisation	-	-	-
7	Wholesale (total)	22,666,951	*20,036,242*	-326,660
8	loans to corporates	22,220,602	*19,984,771*	-325,902
9	commercial mortgage	-	-	-
10	lease and receivables	399,095	*51,470*	-758
11	other wholesale	47,254	-	-
12	re-securitisation	-	-	-

Annex XXIX – Disclosure of use of standardized approach and internal model for market risk

EU MRA: Qualitative disclosure requirements related to market risk

The Group's Regulatory Trading Portfolio (RTP), or Trading Book, is made up of all the Regulatory Trading Books managed by the Parent Company (BMPS) and MPS Capital Services (MPSCS). The Trading Portfolios of the other subsidiaries are immune to market risk. Trading in derivatives, which are brokered on behalf of customers, calls for risk to be centralised at, and managed by, MPSC.

For the Parent Bank, the use of Trading Portfolios is essential for treasury hedging activities for customer service transactions and for the yield enhancement, protection and support of the Banking Book's profitability. The subsidiary MPSCS uses the Trading Books for: liquidity providing/market making activities in markets involved in operations with customers; the offer of products and services for corporate and institutional customers (bancassurance products, hedging derivatives, structured bonds and certificates) with active risk management through risk warehousing; proprietary trading represented by typically short/medium-term strategies, limited to liquid instruments with low transaction costs.

The market risks in the trading book of both the Parent Company and the other Group entities (which are relevant as independent *market risk taking centres*), are monitored in terms of *Value-at-Risk* (VaR) for operational purposes. The Group's Finance and Liquidity Committee is responsible for directing and coordinating the overall process of managing the Group's proprietary finance thereby ensuring that the management strategies of the various business units are consistent.

The Group's Trading Book is subject to daily monitoring and reporting by the Risk Management Unit of the Parent Company on the basis of proprietary systems. VaR for management purposes is calculated separately from the operating units, using the internal risk measurement model implemented by the Risk Management function in keeping with international *best practices*. However, the Group uses the standardised methodology in the area of market risks solely for reporting purposes.

Operating limits for trading activities, defined and approved by the Parent Company in accordance with the *Risk Appetite Framework*, are expressed by level of delegated authority in terms of VaR, which is diversified by risk factors and portfolios, monthly and annual *stop losses* and Stress. Furthermore, the *trading book*'s credit risk, in addition to being included in VaR computations and in the respective limits for the *credit spread* risk component, is also subject to specific operating limits for issuer and bond concentration risk which specify maximum notional amounts by type of *guarantor* and rating class.

VaR is calculated with a 99% confidence interval and a *holding period* of 1 business day. The Group adopts the method of historical simulation with daily *full revaluation* of all basic positions, out of 500 historical entries of risk factors (*lookback period*) with daily scrolling. The VaR calculated in this manner takes account of all diversification effects of risk factors, portfolios and types of instruments traded. It is not necessary to assume, *a priori*, any functional form in the distribution of asset returns, and the correlations of different financial instruments are implicitly captured by the VaR model based on the combined time trend of risk factors.

The trend-based scenarios used in the model are constructed as the daily change, in terms of the ratio, of the individual risk factors; the shock is applied to the current market level, making the VaR measure reactive to changes in market conditions.

The management reporting flow on market risks is periodically transmitted to the Management Risk Committee, the Group's Top Management and the Board of Directors of the Parent Company in a Risk Management Report, which keeps Executive Management and governing bodies up to date on the overall risk profile of the Group.

The macro-categories of risk factors covered by the Internal Market Risk Model are IR, EQ, CO, FX and CS as described below:

- IR: interest rates on all relevant curves, inflation curves and related volatilities;
- EQ: share prices, indexes and relative volatilities;
- CO: commodity prices and indexes;
- FX: exchange rates and related volatilities;
- CS: credit spread levels.

VaR (or diversified or net VaR) is calculated and broken down daily for internal management purposes, even with respect to other dimensions of analysis:

- organisational/management analysis of portfolios,
- analysis by financial instrument,
- analysis by risk family.

It is then possible to assess VaR along each combination of these dimensions in order to facilitate highly detailed analyses of events characterising the portfolios.

In particular, with reference to *risk factors* the following are identified: Interest Rate VaR (IR VaR), Equity VaR (EQ VaR), Commodity VaR (CO VaR), Forex VaR (FX VaR) and Credit Spread VaR (CS VaR). The algebraic sum of these items gives the so-called Gross VaR (or non-diversified VaR), which, when compared with diversified VaR, makes it possible to quantify the benefit of diversifying risk factors resulting from holding portfolios on *asset class* and *risk factor* allocations which are not perfectly correlated. This information can also be analysed along all the dimensions referenced above.

The model enables the production of diversified VaR metrics for the entire Group in order to get an integrated overview of all the effects of diversification that can be generated among the banks of the Group on account of the specific joint positioning of the various *business units*.

Moreover, scenario and stress-test analyses are regularly conducted on various risk factors with different degrees of granularity across the entire tree structure of the Group's portfolios and for all categories of instruments analysed.

Stress tests are used to assess the bank's capacity to absorb large potential losses in extreme market situations, so as to identify the measures necessary to reduce the risk profile and preserve assets.

Stress tests are developed on the basis of discretionary and trend-based scenarios. Trend-based scenarios are defined on the basis of previously-registered real situations of market disruption. Such scenarios are identified based on a time frame in which risk factors were subjected to stress. No particular assumptions are required with regard to the correlation among risk factors since trend-based data for the stress period identified has been measured.

Stress tests based upon discretionary scenarios assume extreme changes occurring to specific market parameters (interest rates, exchange rates, stock indices, credit spreads and volatility) and measure the corresponding impact on the value of portfolios, regardless of their actual occurrence in the past. Simple discretionary scenarios are currently being developed (variation of a single risk factor) as are multiple ones (variation of several risk factors simultaneously). Simple discretionary scenarios are calibrated to independently deal with one category of risk factors at a time, assuming shocks do not spread to the other factors. Multiple discretionary scenarios, on the other hand, aim to assess the impact of global shocks that simultaneously affect all types of risk factors.

It should be noted that the VaR methodology described above is, for operational purposes, also applied to the portion of the Banking Book consisting of financial instruments that are similar to trading instruments (e.g. Equity instruments/Bonds held in portfolios, measured at fair value, for "financial assets necessarily measured at fair value", "financial assets measured at fair value through comprehensive income" and in portfolios for "financial assets measured at amortised cost"). The Group has implemented a backtesting procedure *compliant* with current regulations governing Market Risk as part of its own risk management system.

Backtesting refers to a series of tests conducted on VaR model results against day-to-day changes in the trading book value, with a view to assessing the model's forecasting capacity as regards the accuracy of risk metrics generated. If the model is robust, by periodically comparing the estimated daily VaR against daily trading losses from the previous day, the result should be that actual losses greater than the VaR occur with a frequency consistent with that defined by the confidence level.

Based on applicable regulatory provisions, the Financial Risk Officer Area has considered it appropriate to perform the test using actual backtesting methods and integrate these into the Group's management reporting system.

The **Actual backtesting** meets the need for verifying the VaR model's forecasting reliability in reference to actual Bank operations (daily trading P&L) less the effect of any interest accrued between trading days t-1 and t on the securities and less the effect of fees and commissions.

These "clean" P&L results (the "actual P&L") are compared with the previous trading day VaR. If the losses are greater than those forecast by the model an "exception" is recorded.

Each bank of the MPS Group which is relevant as a *market risk-taking centre* contributes to the generation of interest rate risk and price risk in the overall Trading Book.

With reference specifically to the Parent Company, the Finance, Treasury & Capital Management Unit within the CFO division is the Business area in charge of trading. The Global Markets Division carries out trading activities for MPSCS.

MPSCS and, to a lesser extent, the Finance, Treasury & Capital Management Area (FTCMA hereinafter) manage a proprietary portfolio which takes trading positions on interest rates and credit. In general, interest rate positions are taken by purchasing or selling bonds, and by creating positions in listed derivatives (futures) and OTCs (IRS, swaptions). The FTCMA operates in the short-term portion of the main interest rate curves, mostly through bonds and listed derivatives.

With regard to credit risk in the trading book, the equity positions are generally managed through the purchase or sale of bonds issued by companies or by creating synthetic positions in derivatives. The activity is oriented to achieve a long or short position on individual issuers, or a long or short exposure on specific commodities. The activity is carried out solely on the Bank's own behalf with objectives of absolute return and in compliance with other specific issuer and concentration risk limits.

The Business Area in charge of the Parent Company's trading activity with respect to price risk is the FTCMA which manages a proprietary portfolio and takes trading positions on equities, Stock Exchange indexes and commodities. In general, positions on equity securities are taken both through the purchase/sale of equities and through the positions created in listed derivatives (e.g. futures) and OTC (e.g. options). Trading is carried out exclusively on the Bank's own behalf, with objectives of absolute return, in compliance with the delegated limits of monthly and yearly VaR and stop loss.

For further information, please refer to the **Notes to the Consolidated Financial Statements**, *Part E – Information on risks and hedging policies – Section 2.1 – Interest Rate Risk and Price Risk – Regulatory Trading Book*.

In 2022, the market risks of the Group's Regulatory Trading Book showed, in terms of VaR, a performance essemtially determined by the subsidiary MPS Capital Services, mainly for own trading activities in the CS-IR segment (transactions in Italian government bonds ed *hedge* mediante *Swap* e *Long Futures*) and, to a lesser extent, for client-driven activities in the EQ segment (options and equity futures on the main market indices) linked to the structuring of bancassurance products. The Parent Company's portfolio contribution to total VaR was negligible.

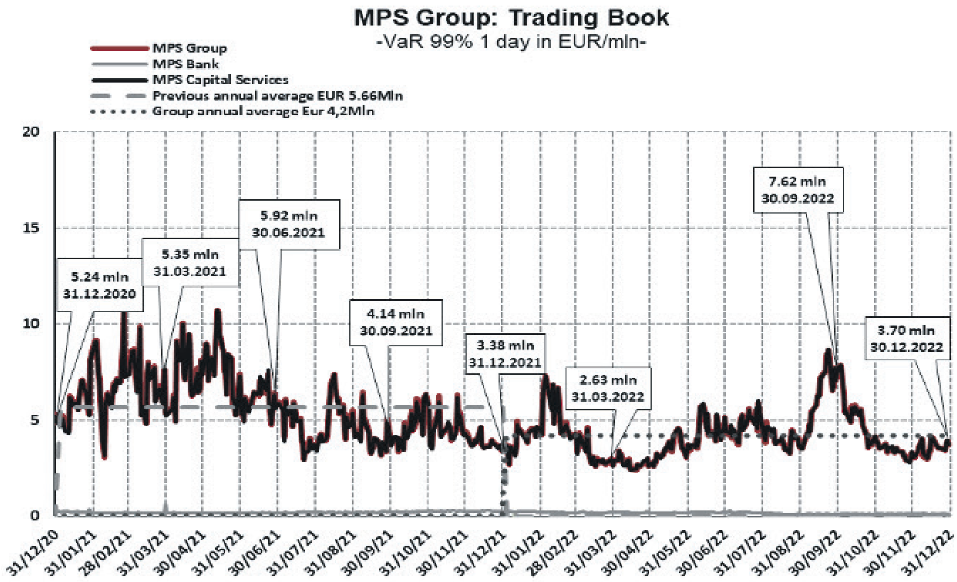
In the first part of the year, as in the previous year, markets continued to benefit from the central banks' accommodating policies and plans to support the economy in response to the COVID-19 pandemic. With the outbreak of the conflict in Ukraine and the resulting energy crisis, an inflationary process intensified, in the face of which sudden restrictive monetary policies triggered increasing volatility in the risk factors underlying the VaR model, particularly for the IR and CS segments- (significant growth in interest rates and yields of around 300 basis points on average over the year).

Despite the market environment, the Group's average VaR remained at a lower level than in the previous year due to a general process of risk containment, particularly in the second half of the year. In this context, with a general rise in interest rate curves, the IR segment, which is characterised by the risk of the curve steepening, recorded significant growth, confirming itself as the new driver of overall VaR from the first quarter onwards, coinciding with the end of the crisis-related tail scenarios on the markets for the March 2020 pandemic phase, particularly in the Credit Spread (CS VaR) segment, due to the shift in the model's underlying time window.

The volatility of VaR was affected not only by the dynamics of market parameters, but also by the Italian government bond auctions conducted by the subsidiary MPS Capital Services as primary dealer, with temporary fluctuations in the CS Italy risk exposure, mainly in the short term.

The temporary increase in VaR in September was mainly affected by issues related to the models (resolved at the beginning of October) concerning the representation of swaps indexed to the average rate on ESTR curves in the internal model, with overestimation of the metric being exacerbated by the context of a sudden rise in rates (excluding this modelling effect, VaR in September would have been substantially in line with the levels reported in the second half of the year).

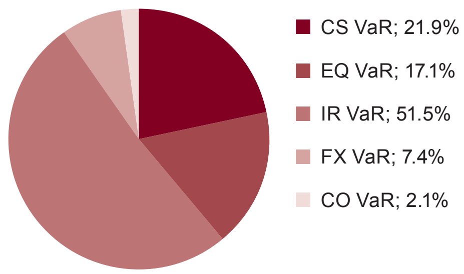
Despite some temporary increases in exposure related to the primary dealer auctions mentioned above, the average holdings of Italian sovereign bonds in the Group's trading portfolios remained substantially stable during the first two quarters of the year, with a gradual decline to much lower levels in December (annual average of EUR 3.7 bn in nominal terms compared to an average of EUR 1.4 bn in the last quarter), with a consequent reduction in the contribution of the CS factor to the overall VaR, which settled at its lowest level of the year at the end of 2022. The chart below shows the VaR performance of the Group Regulatory Trading Portfolio.



VaR breakdown

A breakdown of VaR by risk factors shows that 21.9% of the Group's portfolio was allocated to credit-spread risk factors (CS VaR), 51.5% was absorbed by interest rate risk factors (IR VaR), 17.1 % by equity risk factors (EQ VaR), 7.4% by foreign exchange risk factors (FX VaR), and the remaining 2.1% by commodity risk factors (CO VaR). With regard to the legal entities, MPS Capital Services accounted for 97.9 % and the Parent Company for 2.1 % of overall risk as at 31 December 2022.

MPS Group: Trading Book
VaR by Risk Factor: 31/12/2022

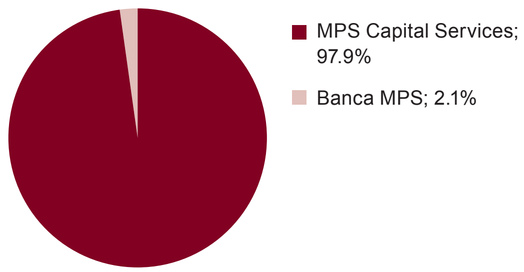


Group VaR

In 2022, the Group's VaR in the RegulatoryTrading Book ranged between a low of EUR 2.39 mln recorded on 19 April 2022 and a high of EUR 8.66 mln on 23 September 2022 with an average value registered of EUR 4.20 mln.

The Regulatory Trading Book VaR as at 31 December 2022 amounted to EUR 3.70 mln.

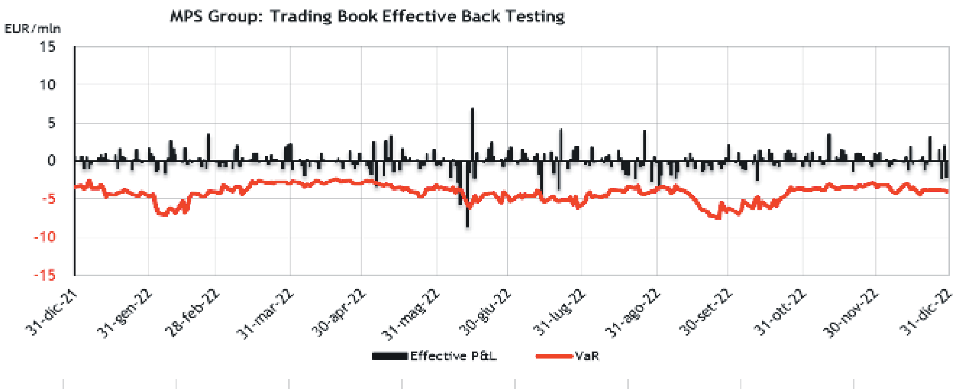
MPS Group: Trading Book
VaR by Legal Entity: 31/12/2022



Gruppo Montepaschi
VaR PNV 99% 1 day in EUR/mln

	VaR	Data
End of period	3.70	31/12/2022
Minimum	2.39	19/04/2022
Maximum	8.66	23/09/2022
Average	4.20	

The following chart shows the data Effective Backtesting of the internal model for Market Risk, related to the Supervisory Trading Portfolio of the group during 2022.



Retrospective testing have shown the following four exceptions during the year: three recorded in the second quarter, relates entirely to the risk exposure of the subsidiary MPSCS. These exceptions were recorded on May 6, June 10 and 13 due to the sudden increase in interest rates, with additional pressure in terms of P&L on positions in Italian government bonds in the two June sessions (temporary widening of the short-term credit spread term, which returned in the following sessions).

The remaining exception refers to the September 1 session, recorded as a result of consequence of similar dynamics.

EU MR1 – Market risk under the standardised approach

		Dec-22	
		a	b
		RWA	Capital requirements
	Outright products		
1	Interest rate risk (generic and specific)	961,528	76,922
2	Equity risk (generic and specific)	501,824	40,146
3	Exchange risk	102,477	8,198
4	Commodity risk	164,427	13,154
	Options		
5	Simplified Method	-	-
6	Delta-Plus Method	88,155	7,052
7	Scenario Method	-	-
8	**Securitisation (specific risk)**	208,348	16,668
9	**Total**	**2,026,758**	**162,141**

Annex XXXI – Disclosure of operational risk

EU ORA: Qualitative information on operational risk

The Montepaschi Group has implemented an integrated risk management system on the basis of a governance model which involves all the companies of the Montepaschi Group included in the scope of application. The approach defines the standards, methods and instruments that make it possible to measure risk exposure and the effects of mitigation by business area.

The Montepaschi Group was authorized by the Bank of Italy on 12 June 2008 to use the internal advanced measurement approach (AMA) for the calculation of capital requirements for operational risks. The advanced model officially started operating on 1 January 2008. The first consolidated regulatory reporting on the basis of the model was prepared in relation to the results as at 30 June 2008.

All the domestic banking and financial components are incorporated in the scope of advanced measurement approach (AMA).

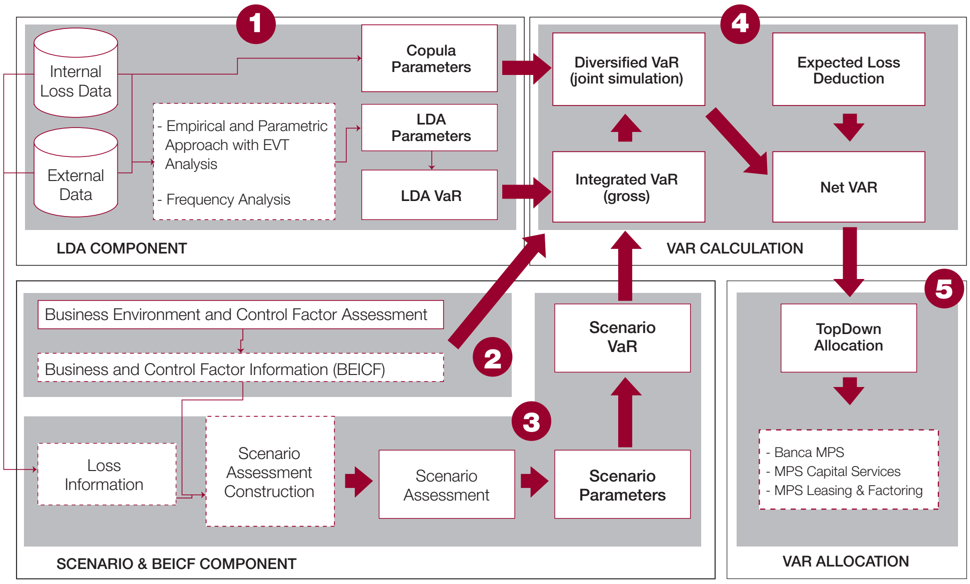
For remaining components and foreign companies, the foundation model has been adopted. Today's internal model coverage in terms of total banking income exceeds 95%.

The advanced approach adopted by the Montepaschi Group is designed so as to homogeneously combine all the main qualitative and quantitative information (or data) sources (mixed LDA-Scenario model).

The quantitative *Loss Distribution Approach* component is based on the statistical collection, analysis and modelling of internal and external historical loss data (Italian Database of Operational Losses, DIPO). The model includes calculation in relation to the 7 categories of events established by Basel 2 used as risk classes, with the adoption of *Extreme Value Theory* techniques. The estimated frequency of occurrence is based exclusively on internal data.

The qualitative component focuses on the evaluation of the risk profile of each unit and is based on the identification of relevant scenarios. In this framework, the companies are involved in process and risk identification, risk evaluation by process managers, identification of possible mitigation plans, discussion (in scenario-sharing sessions) of priorities and technical-economic feasibility of mitigation actions with the H.O. units.

Despite having insurance coverage to mitigate operational risk, the MPS Group does not use insurance for the mitigation of risk in the calculation of capital requirements since this has not yet been authorized by the supervisor. As of 30 June 2017, the Advanced Measurement Model was changed to increase the historical depth of internal loss data from 5 to 10 years and to introduce the scaling of external data in order to discourage unexpected requirement fluctuations.



Finally, the percentage breakdown of events and operational losses recorded in 2022 is reported, divided into the following risk classes:

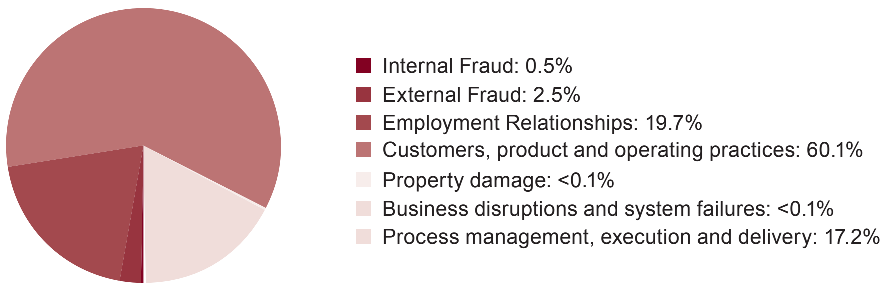
- Internal fraud: losses arising from unauthorised activities, fraud, embezzlement or violation of laws, regulations or corporate directives that involve at least one internal resource of the Group;
- External fraud: losses due to fraud, embezzlement or violation of laws by subjects external to the Group;
- Employment relationships and Occupational safety: losses arising from actions in breach of employment, occupational health and safety laws and agreements, payment of compensation for personal injury or episodes of discrimination or failure to apply equal treatment;
- Customers, products and operating practices: losses arising from non-fulfilment of professional obligations with customers or from the nature and characteristics of the product or service provided;
- Property damage: losses arising from external events, including natural disasters, acts of terrorism or vandalism;
- Business disruptions and system failures: losses due to business disruption or system failures or interruption;
- Process management, execution and delivery: losses arising from operational and process management shortfalls, as well from transactions with business counterparties, vendors and suppliers.

As at 31 December 2022 the number of operational risk events and the losses are in decrease compared to December 2021.

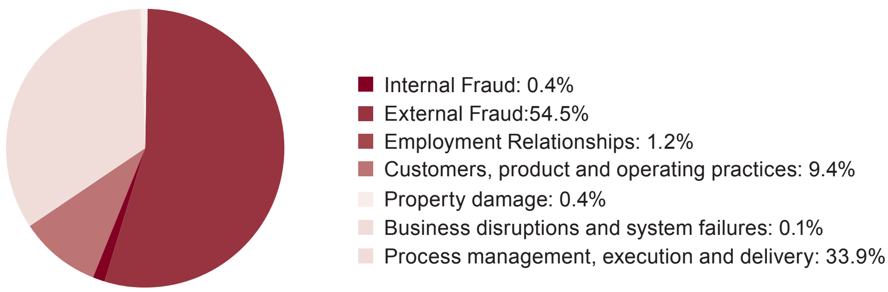
The type of events with the greatest P&L impact refer to the violation of professional obligations towards customers (category "Customers, products and operating practices”: approximately 60% of the total) and to shortcomings in the completion of operations or process management (category “Execution, delivery and process management”: 20% of the total).

As far as the violation of professional obligations towards customers is concerned, the events mainly refer to disputes over the application of compound interest rates and to disputes pending in relation to the share capital increases made in the previous years. For further information, please refer to the **Notes to the Consolidated Financial Statements** - *Part E – Information on risks and hedging policies – Section 2 – Risk of prudential consolidation, 1.5 – Operational Risks*.

Losses breakdown
Montepaschi Group - 31/12/2022

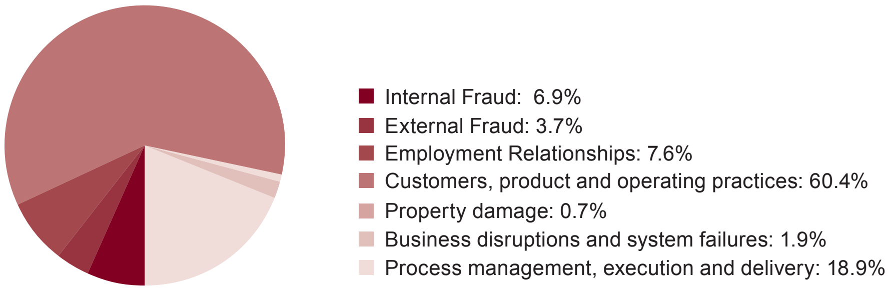


Events breakdown
Montepaschi Group - 31/12/2022



The graph below shows the breakdown of regulatory requirements by class of risk:

Regular Capital Requirements
Montepaschi Group - 31/12/2022



The Regulatory Requirement as at 31 December 2022 decreased slightly compared to December 2021, following the updating of the historical series of internal losses, which entailed the exit of tow significant loss events related to Internal Frode as well as the reduction of operational losses recognized in 2022 compared to the previous year. The breakdown of operational losses differs from the breakdown of requirement in that the latter is calculated using a 10-year time series of internal losses and the incidence of the unexpected loss component prevails.

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

	Banking activities	a	b	c	d	e
		Relevant indicator			Own funds requirements	Risk weighted exposure amount
		Year-3	Year-2	Last year		
1	**Banking activities subject to basic indicator approach (BIA)**	39,967	46,077	58,420	7,223	90,290
2	**Banking activities subject to standardised (TSA) / alternative standardised (ASA) approaches**	-	-	-	-	-
3	*Subject to TSA:*	-	-	-		
4	*Subject to ASA:*	-	-	-		
5	**Banking activities subject to advanced measurement approaches AMA**	2,751,234	2,744,259	2,910,733	804,649	10,058,116

The basic method is used to calculate own funds for smaller domestic subsidiaries and the foreign company. The relevant indicator is determined from the consolidated balance sheet data. No extraordinary corporate structure transactions have been reported during the last three years.

Annex XXXIII – Disclosure of remuneration Policy

For information regarding the Remuneration Policy, please refer to the Remuneration Report at https://www.gruppomps.it/corporate-governance/remunerazione.html

Annex XXXV – Disclosure of encumbered and unencumbered assets

The MPS Group adopts a diversified *business* model, based on traditional retail & commercial banking services, and also covering, via specialized companies, business areas such as *leasing, factoring*, corporate finance and *investment banking*.

Business financing strategies are based on the principle of diversification and are aimed at establishing an optimum *funding mix* in terms of supply channels, costs, maturities, stability of sources.

As part of the Group's funding strategies, the use of collateral, i.e. the pledging of *assets* (balance sheet or off-balance sheet assets) as collateral for liabilities – according to the guidelines set by the *encumbrance policies* and in accordance with the system of limits adopted by the Group – has a central role in achieving the objectives of reducing the average cost of *funding* and extending the maturities of liabilities. In fact, *secured* funding typically has a lower cost compared to *unsecured funding* makes it possible to meet maturities that are not easily achievable.

Encumbered assets, securing the Group's liabilities, include both marketable assets, consisting in securities (e.g. the bank's portfolio, retained ABS/ Covered Bonds, securities from *securities lending* transactions with customers) and non-marketable assets, mainly receivables meeting certain eligibility requirements in terms of contractual arrangements, standardization of clauses and creditworthiness.

These *assets* are mainly used for the following:

- Eurosystem refinancing operations (both TLTRO and MRO), in accordance with the applicable regulatory framework and secured by a pool of eligible securities and loans pledged by the Group;
- Securitisation transactions, carried out pursuant to Law no. 130/1999 and typically having residential mortgages, corporate loans to small and medium-sized enterprises, consumer credit and leasing contracts as underlying assets;
- Issuances of *Covered Bonds*, carried out pursuant to Law no. 130/1999 and the Supervisory framework (Bank of Italy 17.05.2007 as amended), based on two specific issuance programmes. The *pool* of collateral underlying the two programmes exclusively includes residential mortgage loans in one case (CB1), whilst it also includes commercial mortgages in the other case (CB2).
- *Securities Repurchase Transactions* ("Repo"), in bilateral form, pursuant to the standard contractual framework (GMRA) and any specific *confirmations* supplementing/ derogating from the terms and conditions of the framework agreement;
- *Triparty Repo*, bilateral financing operations

backed by marketable assets, in which operating and administrative collateral management activities are assigned to specialized entities, generally already acting as central custodians;

- Margin lending (in securities) for repurchase agreements or derivative transactions, if required by the contract governing the underlying operations.

Information on the Group's encumbered and unencumbered assets was prepared on the basis of guidelines and templates issued by the EBA on 27 June 2014 in accordance with the provisions of Part eight, Title II of EU Regulations n. 575/2013 (CRR), as supplemented by the Delegated Regulation (EU) 637/2021 of 15 march 2021. To this end, an asset is considered as encumbered if it has been pledged or if it is subject to any form of arrangement to secure, collateralise or credit-enhance any on-balance-sheet or off-balance-sheet transaction from which it cannot be freely withdrawn. Assets pledged that are subject to any restrictions in withdrawal, such as assets that require prior approval before withdrawal or replacement by other assets, should be considered encumbered. Generally, the following types of contracts are considered encumbered:

a. secured financing transactions, including repurchase contracts and agreements, securities lending and other forms of secured lending;

b. collateral agreements, for instance, collateral placed for the market value of derivative transactions;

c. financial guarantees that are collateralised;

d. collateral placed in clearing systems, with central counterparties (CCPs) and with other infrastructure institutions as a condition for access to service; this includes default funds and initial margins;

e. *central bank facilities; pre-positioned assets* should be considered unencumbered only if the central bank allows withdrawal of assets placed without prior approval;

f. underlying assets from securitisation structures, where the financial assets have not been derecognised from the institution's financial assets; assets that are underlying fully retained securities do not count as encumbered, unless these securities are pledged or collateralised in any way to secure a transaction;

g. assets in *cover pools* used for covered bond issuance; assets that are underlying covered bonds count as encumbered, except in certain situations where the institution holds the corresponding covered bonds as referred to in Article 33 of the CRR.

There are no differences in the scope of regulatory consolidation used for the purposes of this disclosure and the scope used for the application of liquidity requirements on a consolidated basis (in accordance with CRR Part Two, Title I, Chapter 2) for the purposes of defining the eligibility of EHQLAs and HQLAs.

Banca Monte dei Paschi di Siena and MPS Capital Services are the main contributors to the entire structure of encumbrances at consolidated level, and the most significant intra-group encumbrances also exist between them.

The table below reports the amount of encumbered and unencumbered assets by asset type in compliance with Regulation 637/2021 of 15 March 2021 and based on the median values of the quarterly data[1]. The encumbered assets are: on-balance sheet assets that have been either pledged or transferred without derecognition or otherwise encumbered; collateral received that meets the conditions for recognition in the balance sheet of the transferee in accordance with the applicable accounting framework.

[1] It should be noted that there are no sources of encumbrance in any other significant currency other than the currency used for reporting, pursuant to Article 415(2) of the CRR.

EU AE1: Disclosure of encumbered and unencumbered assets

		Dec-22							
		Carrying amount of encumbered assets		Fair value of encumbered assets		Carrying amount of unencumbered assets		Fair value of unencumbered assets	
			of which notionally eligible EHQLA and HQLA		of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA		of which EHQLA and HQLA
		010	030	040	050	060	080	090	100
010	**Assets of the reporting institution**	**48,586,511**	**9,357,407**			**83,065,348**	**8,584,494**		
030	Equity instruments	635	-	635	-	576,797	-	576,823	-
040	Debt securities	11,216,315	9,357,407	10,550,627	8,802,163	11,044,839	8,174,567	10,914,890	8,085,657
050	of which: covered bonds	498,325	-	448,367	-	139,726	-	122,904	-
060	of which: asset-backed securities	16,060	-	16,086	-	1,656,417	-	1,663,922	-
070	of which: issued by general governments	9,905,943	9,336,384	9,303,193	8,786,687	8,301,196	8,148,146	8,222,462	8,059,546
080	of which: issued by financial corporations	1,145,966	-	1,096,413	-	2,364,032	7,422	2,311,544	7,215
090	of which: issued by non-financial corporations	147,418	15,569	126,790	15,476	186,656	18,944	166,746	18,836
120	Other assets	37,360,685	-			71,496,369	811,365		

Line 120 includes demand financing, non-demand financing and other assets. Restricted assets consist solely of non-discounted loans used primarily for Eurosystem refinancing operations, covered bond issues and securitisations

EU AE2: Collateral received and own debt securities issued

		Dec-22			
		Fair value of encumbered collateral received or own debt securities issued		Unencumbered	
				Fair value of collateral received or own debt securities issued available for encumbrance	
			of which notionally eligible EHQLA and HQLA		of which EHQLA and HQLA
		010	030	040	060
130	**Collateral received by the reporting institution**	**3,214,540**	**3,116,733**	**1,570,481**	**1,466,805**
140	Loans on demand	-	-	-	-
150	Equity instruments	24,319	-	28,897	-
160	Debt securities	3,190,221	3,116,733	1,541,584	1,466,805
170	*of which: covered bonds*	*891*	-	*946*	-
180	*of which: asset-backed securities*	-	-	*1,511*	-
190	*of which: issued by general governments*	*3,122,018*	*3,114,463*	*1,450,273*	*1,450,273*
200	*of which: issued by financial corporations*	*82,913*	-	*71,103*	*1,384*
210	*of which: issued by non-financial corporations*	*10,009*	*2,979*	*4,294*	*1,675*
220	Loans and advances other than loans on demand	-	-	-	-
230	Other collateral received	-	-	-	-
240	**Own debt securities issued other than own covered bonds or asset-backed securities**	**-**	**-**	**-**	**-**
241	**Own covered bonds and asset-backed s ecurities issued and not yet pledged**			**3,029,447**	**-**
250	**TOTAL ASSETS, COLLATERAL RECEI-VED AND OWN DEBT SECURITIES ISSUED**	**52,107,130**	**12,488,899**		

EU AE3: Sources of encumbrance

		Dec-22	
		Matching liabilities, contingent liabilities or securities lent	Assets, collateral received and own debt securities issued other than covered bonds and ABSs encumbered
		010	030
010	**Carrying amount of selected financial liabilities**	**37,463,291**	**47,990,203**

EU AE4: Accompanying narrative information

The MPS Group adopts a diversified *business* model, based on traditional retail & commercial banking services, and also covering, via specialized companies, business areas such as *leasing, factoring*, corporate finance and *investment banking*.

Business financing strategies are based on the principle of diversification and are aimed at establishing an optimum *funding mix* in terms of supply channels, costs, maturities, stability of sources.

As part of the Group's funding strategies, the use of collateral, i.e. the pledging of *assets* (balance sheet or off-balance sheet assets) as collateral for liabilities – according to the guidelines set by the *encumbrance policies* and in accordance with the system of limits adopted by the Group – has a central role in achieving the objectives of reducing the average cost of *funding* and extending the maturities of liabilities. In fact, *secured* funding typically has a lower cost compared to *unsecured funding* makes it possible to meet maturities that are not easily achievable.

Encumbered assets, securing the Group's liabilities, include both marketable assets, consisting in securities (e.g. the bank's portfolio, retained ABS/ Covered Bonds, securities from *securities lending* transactions with customers) and non-marketable assets, mainly receivables meeting certain eligibility requirements in terms of contractual arrangements, standardization of clauses and creditworthiness.

These *assets* are mainly used for the following:

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- Securitisation transactions, carried out pursuant to Law no. 130/1999 and typically having residential mortgages, corporate loans to small and medium-sized enterprises and leasing contracts as underlying assets;
- Issuances of *Covered Bonds*, carried out pursuant to Law no. 130/1999 and the Supervisory framework (Bank of Italy 17.05.2007 as amended), based on two specific issuance programmes. The *pool* of collateral underlying the two programmes exclusively includes residential mortgage loans in one case (CB1), whilst it also includes commercial mortgages in the other case (CB2).
- *Securities Repurchase Transactions* ("Repo"), in bilateral form, pursuant to the standard contractual framework (GMRA) and any specific *confirmations* supplementing/ derogating from the terms and conditions of the framework agreement;
- *Triparty Repo*, bilateral financing operations backed by marketable assets, in which operating and administrative collateral

management activities are assigned to specialized entities, generally already acting as central custodians;

- Margin lending (in securities) for repurchase agreements or derivative transactions, if required by the contract governing the underlying operations.

Annex XXXVII – Disclosure on exposures to interest rate risk on positions not held in the trading book (EBA/ITS/2021/07)

EU IRRBBA – Qualitative information on interest rate risk of non-trading book activities.

The Group adopts an interest rate risk governance and management system known as the 'IRRBB Framework' which uses of:

- a quantitative model, which provides the basis for monthly calculation of the exposure of the Group and the individual companies to interest rate risk in terms of risk indicators;
- risk monitoring processes, aimed at periodically verifying compliance with the operational limits assigned to the Group overall and to the individual legal entities;
- risk control and management processes finalized to adequate initiatives for optimising the risk profile and activating any necessary corrective actions.

Within the above system, definition of policies for managing the Group's Banking Book and controlling its interest rate risk are centralised in the Parent Company: The Banking Book consists of all exposures not included in the Trading Book and, in accordance with international best practices, identifies the set of the Group's commercial trades connected to the transformation of maturities in the assets and liabilities and ALM financial activities (treasury and risk hedging derivatives).

The strategic objectives for the management of interest rate risk in the Banking Book, based on interest rate measures (express in terms of variation in both economic value and in net interest income) in compliance with the operational limits and strategic KRIs, are set, at least once a year, in the IRRBB Strategy document submitted by the Finance Function – subject to the prior opinion of the Finance and Liquidity Committee – for the approval of the Board of Directors of the Parent Company, as established by corporate regulations. The pursuit of the objectives is operationally managed by the Finance Function, which reports monthly to the Finance and Liquidity Committee on any changes in the metrics, the market situation, any transactions performed as well as the situation regarding existing hedges. Risk Appetite and Risk Tolerance thresholds on IRRBB metrics are set within the Risk Appetite Statement. Operational limits are then defined in terms of internal capital and IRRBB metrics (Delta EVE, Delta NII, and Basis Risk). Specific limits are also set at individual level. A formalized escalation process ensures verification of compliance with the delegated limits and adequate information to top management in the event of any breach.

The Bank also defines strategic KRIs for the management of IRRBB, expressed in terms of “appetite” and approved by the Board of Directors, to monitor the proper pursuit of the strategy.

The metrics and limits are monitored monthly and, together with ongoing monitoring of the market situation, represent the main tool for defining operational asset and liability management choices.

Moreover, the IRRBB framework is periodically and regularly subjected to internal audits and validation checks, to guarantee the continuous pursuit of correctness of the processes, calculation methods and estimation of the behavioural models.

The periodicity of calculation of internal metrics is monthly, while for regulatory metrics it is quarterly (STE). In both cases, the discounting curve is the EUR6M curve, while the specific curves for each benchmark are used for the forecasting process. In the Group’s IRRBB framework, the economic value sensitivity measures are processed by clearing the origination of the cash flows of the components not directly relating to interest rate risk. Non-performing loans entries are considered net of their credit impairment.

In the development of internal metrics, the Montepaschi Group applies a predefined set of interest rate scenarios to capture a wide range of curve dynamics, including both parallel shift of different magnitudes and changes in the shape of the yield curve.

With reference to the regulatory measures, the scenarios are constructed in accordance with the provisions of the EBA Guidelines (EBA/GL/2018/02). In particular, for the sensitivity measures of the economic value, six scenarios of Parallel up, Parallel down, Steepener, Flattener, Short rates up and Short rates down are used.

Also, with reference to the calculation of internal metrics, an additional set of scenarios constructed from historical rate data is used. The internal scenarios differ from the regulatory scenarios in terms of different magnitudes and minimum rate levels.

The analysis of net interest income, given that the measure focuses on the short term, exclusively involves the application of parallel scenarios with reference to both the regulatory and internal measures.

Regarding the differences between internal and regulatory measures, it should be noted that, with reference to the economic value, the sensitivity of the various currencies (moreover, the concentration is almost exclusively on euros), produced within the scope of internal metrics, are aggregated without applying any weighting.

IRRBB is managed through the hedging of asset and liability items.

Hedges are carried out on fixed-rate mortgages, the optional components of floating-rate mortgages, bonds on the assets side, fixed-rate paper funding and fixed-rate deposit accounts at maturity. By managing these hedges, the Finance department pursues the risk objective (in terms of delta EVE, delta NII, Basis Risk) established by the IRRBB strategy approved by the Board of Directors. The hedges are linked by hedge accounting to the items covered: the approach is of a macro type for commercial items and of a micro type for paper liabilities and securities in the assets.

Risk metrics are calculated by using a model for the valuation of demand items (Non-Maturity Deposits, NMDs) whose characteristics of stability and partial insensitivity to interest rate changes are described in the systems with a statistical approach based on the time series of customer behaviours.

The methodology is divided into two profiles to which correspond two distinct and integrated analyses:

- Rate Analysis: To describe the relationship between the remuneration rates of the on-demand items with respect to a short-term market parameter (elasticity)
- Volume analysis: To represent the behavioural maturity of the on-demand items, highlighting the high degree of persistence of the aggregates (stability). The volume analysis translates the amount of on-demand items into a portfolio of amortising items at maturity.

The model for on-demand items is developed through econometric analyses relating to individual customer clusters defined through an appropriate segmentation analysis. The average duration of repricing aggregated for total on-demand deposits (for retail and wholesale non-financial counterparties) is 1.85 years (4.52 years considering only the inelastic core component).

Modelled on-demand funding has a maximum maturity of 16 years.

The Montepaschi Group also uses:

– a scenario-dependent behavioural model based on survival analysis for the cluster of Banca MPS fixed-rate performing retail residential mortgages and a simplified CPR (Constant Prepayment Rate);

– a beheavioural model based on TDRR (Time Deposits Redemption Rate) survival analysis to factor the phenomenon of early repayment on the Parent Company's fixed-rate deposits;

– as of December 2022, a statistical methodology to estimate future drawdowns of margins available for credit lines granted and not yet drawn (loan commitments).

Starting last July, in internal metrics, changes in fair value per interest rate component of instruments accounted for in FVOCI and FVTPL are also added to NII sensitivities.

It should be noted that the Group:

- continuously and carefully monitors the various characteristics of the overall risk profile, partly due to the presence of contractual optionality, which makes the risk profile more dependent on market trends and on interest rates and the related volatility,

- is committed to the constant updating of risk measurement methods, through the progressive refinement of estimation models, to capture the main phenomena that gradually modify the interest rate risk profile of the banking book.

Based on the foregoing and reiterating that the Group's exposure is almost entirely allocated to the euro, below is the Group's position (in euros) at December 2022 compared with the position at June 2022.

With reference to changes in *sensitivity*, compared to June 2022 we highlight how the Montepaschi Group, following the ECB decision of October 27, 2022, adjusted the modelling of ECB auction drawdowns (i.e., TLTRO III) to capture the total indexation that characterizes the *last interest rate period*. The significant movement of market parameters is the other factor explaining the change in sensitivities.

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

	Supervisory shock scenarios	a	b	c	d
		Changes of the economic value of equity (*)		Changes of the net interest income	
		Dec-22	Jun-22	Dec-22	Jun-22
1	Parallel up	-294,311	112,622	155,690	402,275
2	Parallel down	44,238	-560,134	-201,684	-441,675
3	Steepener	73,207	-52,522		
4	Flattener	-212,046	20,247		
5	Short rates up	-268,291	73,644		
6	Short rates down	122,605	-269,583		

(*) *It should be noted that the value shown in columns A and B (Changes of the economic value) uses the currency aggregation rules provided for in the STE template. In internal metrics, this weighting is not applied.*

Annex XXXIX – Prudential disclosures on ESG risks

The purpose of this Annex is to describe – in accordance with Article 449*bis* of CRR2 – the state of the art with respect to the identification, management and mitigation of risks related to environmental, social and governance (ESG) issues according to the guidance provided by the EBA in the "Implementing Technical Standards (ITS) on Pillar-3 disclosures on environmental, social and governance (ESG) risks", as implemented and amended by the "Implementing Regulation (EU) 2021/637". The disclosure is divided, as required by the aforementioned Regulation, into a first part of qualitative information on environmental risks, social risk, and those related to aspects of Governance. It then provides quantitative tables on exposures to the Climate Change risks, which constitute a subset of Environmental risks that are particularly urgent for financial intermediaries to address and mitigate, due to relevance they may assume in the risks related to their respective activities, as well as the role that intermediaries themselves are called upon to play in the economic system in order to support and stimulate stakeholders towards the so-called transition to a zero-emission economy, in accordance with the international agreements on the reduction of greenhouse gas (GHG) emissions and the consequent containment of the rise in temperature to a level that is sustainable for the planet. For the publication of the quantitative tables, the EBA ITS provides for a phase-in approach, with five tables being considered mandatory from the first publication and the remaining five by 30 June 2024, since their completion is linked to the availability of more complex information in terms of data collection and measurement methodology, in particular, those related to GHG emissions reporting, alignment metrics or disclosure on the Green Asset Ratio (GAR) and the Banking Book Taxonomy Alignment Ratio (BTAR).

For further information on climate risk management, please refer to the 2022 Non-Financial Statement, available on the Group's corporate website under Sustainability/ Reports - Banca MPS (gruppomps.it), section 3.2 Sustainable Finance Climate Change.

Qualitative Information on Environmental Risks

Environmental Risks - *Business Strategy and processes* *[ref. ITS qualitative table 1 – (a-d)]*

The MPS Group, which has always been committed to conducting its business in such a way as to limit its direct impact on the environment, is focusing on a broader and more structured approach based on the assessment of all direct and indirect impacts on the environment resulting from the objectives set by the international community in terms of climate change mitigation/adaptation and other environmental protection targets, as set out in the European Taxonomy of Sustainability. In particular, with regard to the decarbonisation of economic activity, MPS embraces the role assigned by the European Community to financial intermediaries to support and guide all stakeholders (clients, employees, counterparties in any capacity involved in their supply chain) in the transition to a low-carbon economy. In terms of strategic, medium and long-term action, the Bank has already introduced a series of direct emission reduction targets in its 2022-2026 Business Plan, which include:

- a 60 per cent reduction in its direct Scope 1 emissions compared to 2017, through thermal efficiency initiatives and the purchase of carbon offset credits to offset emissions from the use of natural gas;
- the use of 100% renewable energy and energy efficiency measures to reduce electricity consumption;
- a reduction in Scope 3 emissions, mainly related to digitisation initiatives.

For more details on the approach already adopted and the strategies to reduce direct environmental impacts, please refer to the dedicated section 3.2.2 within the 2022 Non-Financial Statement.

With regard to the decarbonisation objectives to be achieved by supporting the transition of its financial customers, the Bank has joined the **Net-Zero Banking Alliance**, a voluntary initiative of the banking system aimed at directing loans granted directly or through financial instruments to counterparties and/or projects with reduced greenhouse gas (GHG) emissions. As part of this initiative, BMPS is in the process of defining the profile of its “financed emissions” (see the section on transition risk below), from which it will set emission reduction targets (mainly for counterparties in higher climate impact sectors) leading to zero emissions in 2050. The sustainable GHG emission reduction pathway will be announced by July 2023.

Alongside the definition of GHG emission reduction targets, the Bank has launched an “ESG Programme” with a specific project structure sponsored by the CFO and the CRO, divided into specific project strands covering the five pillars of the ESG framework that the Group intends to develop (Strategy, Governance, Business Model, Risk & Regulation and Reporting & Communication). Among the tools to guide activities towards transition, particular importance is given to the adoption of credit policies and processes that take into account the ESG profile of the customer, collected through questionnaires completed by the customer or through information obtained independently by the Bank from public databases or specialised data providers.

The Plan includes targets of at least 20% of new disbursements for ESG purposes (special purpose loans or loans with environmental impact reduction covenants) by 2026 (10% by 2024) and the placement of ESG-related investment products (with a target of 40% of AuM of the total placed).

The issuance of EUR 2.5 billion of **Green and Social Bonds**, another target of the Plan, further strengthens the Group's commitment to sustainability through the definition of a "Green, Social and Sustainability Bond Framework" (GSS), which will establish rules and procedures for identifying and monitoring eligible funded projects.

Environmental Risks - *Governance* *[ref. ITS qualitative table 1 – (e-i)]*

With regard to the Group's sustainability governance on all ESG issues, the By-Laws of Banca MPS have been amended to include a specific reference to environmental, social and governance sustainability profiles.

The "Group Sustainability and ESG Directive" defines the organisational model adopted by the Group in the area of ESG and identifies the areas of commitment on which the development of the Group's Sustainable Business model is based. The areas are defined in accordance with the Group's Code of Ethics, external regulations, Italian and international guidelines as well as the standards and initiatives to which the Group has voluntarily subscribed in the area of Sustainability. Further details and documents on sustainability governance can also be found on the MPS website: https://www.gruppomps.it/sostenibilita/index.html

The **Board of Directors** is responsible for incorporating sustainable objectives into the business plan, the internal control and risk management system and the remuneration policy.

The Board of Directors approves the sustainability strategies and policies, the Sustainability Plan, the policy and coordination of non-financial disclosure, the Group Sustainability and ESG Policy, the Materiality Matrix and the Non-Financial Statement (NFS). It also determines compliance with national and supranational sustainability initiatives.

The Board of Directors defines the Risk Appetite Framework (RAF) and approves the Risk Appetite Statement (RAS) at least once a year, including the risk appetite and KRI limits defined for ESG risks.

The Risk and Sustainability Committee

(RSC), which is part of the Board of Directors, is specifically focused on the monitoring of sustainability issues, with assessment, proposal-making and advisory functions, in the context of assessments and decisions relating to the Group's positioning, policies and macro-objectives on ESG topics, and monitors their implementation over time. The RSC also makes a significant contribution to the definition of strategic guidelines and ESG risk management policies, with particular reference to the impact of climate and environmental risks on the business model and corporate strategy. In particular, the RSC is responsible for assessing the adequacy of the Risk Appetite Framework, including ESG risk appetite levels and relative risk tolerance thresholds, monitoring the overall effectiveness of the controls in place and the Group's positioning on sustainability.

With particular reference to communication, monitoring and reporting on sustainability, the **Board of Statutory Auditors** supervises compliance with the provisions of Legislative Decree No. 254 of 30 December 2016 on the preparation of Non-Financial Statements.

The Chief Executive Officer oversees the activities related to sustainability and the actions to be implemented, monitoring and ensuring the achievement of the objectives set.

Through the ESG and Sustainability sessions of its meetings, the **Management Committee** ("Comitato Direttivo") supports the CEO in defining strategic guidelines and sustainability policies and in finalising the Sustainability Plan initiatives. The Committee also monitors the development of the Sustainability Plan initiatives, ensuring appropriate sponsorship of the initiatives and addressing critical issues in order to achieve the Group's strategic objectives.

The **Chief Financial Officer**, as head of the Sustainability and ESG function, and the **Sustainability and ESG Staff Unit**, which reports to the CFO, formulate ESG strategy proposals by gathering and integrating the input from all business functions into the Group Sustainability Plan, which they then edit and update. The CFO and the Sustainability Staff Unit then ensure the consistent implementation of all the Group's ESG initiatives and assess their positioning in relation to international best practice. They are also responsible for coordinating the non-financial disclosure and reporting activities that result from compliance with sustainability principles and standards, with the support of the **Permanent Sustainability Work Group**, an inter-functional group with representatives from all business and control functions, with the aim of facilitating dialogue between business functions and reporting on the policies implemented and results achieved.

The **Chief Risk Officer** and the **Risk Management Function** are tasked with integrating ESG risk factors into the risk management framework and defining methodologies to measure the impact of ESG risks, with a particular focus on climate and environmental (C&E) risks. The Risk Management Function supports the definition of the risk appetite in the Group's Risk Appetite Statement (RAS) and regularly prepares and executes specific reports aimed at quantifying the Montepaschi Group's exposure to ESG risks, which are submitted to the corporate bodies.

The **Compliance function** monitors the consistency of ESG developments (both in terms of strategic initiatives and controls) with external national and European regulations, in particular the ECB, EBA and ESMA guidelines on ESG risks. It also assesses the potential impact of changes in the legal and regulatory environment in the area of sustainability on the Group's activities and compliance framework, and monitors/supervises the correct application of internal and external regulations in the area of sustainability.

The **Audit Function** is responsible for assessing the adequacy of the internal controls system, in particular the models used to measure ESG risks and, more generally, the controls put in place to manage sustainability issues.

The **Permanent Sustainability Work Group**, made up of representatives from all corporate functions, is the point of reference between the Sustainability and ESG functions and the representatives' respective functions, with the aim of promoting dialogue with the corporate structures, identifying, managing and monitoring initiatives to achieve the corporate sustainability objectives, and gathering useful information for reporting on the policies implemented and results achieved in the area of sustainability.

Of particular importance is the Group Sustainability Plan, which sets out the medium- and long-term objectives that the Bank intends to set itself in relation to all ESG issues, both in terms of supporting the environmental transition, not only in terms of climate, but also in relation to all the other objectives of the European Environmental Sustainability Taxonomy.

With regard to the remuneration policy, no variable incentive systems have been activated for the Group's banking employees for 2022. From 2023, the Group has planned to use specific ESG objectives to determine variable remuneration, as further described in the Remuneration Report published on the Group's website at https://www.gruppomps.it/corporate-governance/remuneration.html, which should be referred to for further details.

Environmental Risks - *Risk Management* *[ref. ITS qualitative table 1 – (j-r)]*

Risks related to the environment are defined as "generated" when they arise from the Bank's own activities, while they are "suffered" when they result from the characteristics or actions of parties that have some kind of relationship with the Bank (customers, employees, suppliers, etc.), or even from exogenous events, such as physical events, that arise from particular environmental stress conditions, for example as a result of climate change, or from stresses on other relevant factors as indicated in the EU Taxonomy of Sustainable Activities (2020/852), which, in addition to Climate Change Mitigation / Adaptation, also identifies the protection of water and marine resources, the transition to a circular economy and waste treatment, pollution reduction and the protection of biodiversity.

The Bank's approach, based on the aforementioned Taxonomy and its ongoing specification, has been to map the risks associated with the different items of the taxonomy in order to clearly define the next steps of analysis and treatment applicable to each risk. The table below shows the mapping that has been introduced.

MAP OF ENVIRONMENTAL THEMES AND ENVIRONMENTAL RISKS

<table>
<tr><th>Main Topics</th><th>Potential Risks</th><th>Financial / Not Financial</th><th>Treatment Status</th></tr>
<tr><td>> Climate Change Mitigation & Adaptation</td><td rowspan="6">> RISK INCURRED: transition and physical risks on core risks
> GENERATED: Direct Impacts of Bank's activities on Environment</td><td rowspan="5">> FINANCIAL (credit, operational, liquidity and market risk)
> NON-FINANCIAL (reputational and business risk)</td><td>> RISK IDENTIFICATION
> EXPOSURE: MEASURED
> RISK IMPACT: IN PROGRESS</td></tr>
<tr><td>> Sustainable use and protection of water and marine resources</td><td rowspan="5">> IDENTIFICATION: IN PROGRESS</td></tr>
<tr><td>> Circular economy</td></tr>
<tr><td>> Pollution prevention and control</td></tr>
<tr><td>> Protection and restoration of biodiversity and ecosystems</td></tr>
<tr><td>> All objectives</td><td>> NON-FINANCIAL</td></tr>
</table>

Given the urgency of the issue, climate-related Environmental risks (or C&E risks) have been addressed in a set of guidelines for financial intermediaries (Guide on Climate-related and Environmental Risks, ECB November 2022), which aim to:

– introduce a process for identifying, measuring, managing and mitigating risks that is coherent to those already known and managed;
– identify the impact on the so-called core financial risks (credit, operational, market, liquidity).

The aim is to enable banks to view and manage climate risks holistically at corporate level. This will allow them to monitor ongoing risks and to develop medium- to long-term strategic responses that will make banks and their business environment resilient to possible changes in the climate situation.

As part of the multifunctional ESG programme, which was formally launched at the end of 2022, the Montepaschi Group is pursuing a series of activities related to the integration of C&E risk factors into the Group's risk management framework and governance and strategic processes. In particular, the "ESG Risk Action" project launched in 2022 aims to identify, measure and manage ESG risks (with priority given to climate and environmental risks).

The process of identifying and verifying the materiality and priority of C&E risks in preparation for the definition of the Risk Appetite Statement – which was initially carried out on a purely qualitative basis at the end of 2021 and later resumed and completed on a quantitative basis during 2022 – examined climate-related risk factors from the perspective of analysing the so-called "transmission channels", according to which such risks become relevant when they impact on traditional financial risks (credit, operational, market and liquidity risks), which are already known and managed within the Group's risk management framework.

The approach adopted has led to the identification of the C&E risks for the Montepaschi Group as material in the areas of credit and operational risks (including reputational risks), in line with what had already emerged from the initial qualitative analyses carried out in 2021. The credit risks, on the basis of the plausible exposure based on the analysis of the possible transmission channels, as shown in the table below, were also considered to be "very high" (transition risk) and "high" (physical risk), depending on the potential exposure associated with each C&E risk factor.

Since C&E risks associated with credit risk are material and high priority, they are subject to exposure monitoring as RAS KRIs (in 2022 in the case of the Retail physical risk and non-financial Corporate transition risk components) or as managerial monitoring indicators (aka KRIS – Strategic Key Risk Indicators - from the end of 2022 in the case of the Retail transition risk and

Corporate physical risk components, which still need to be developed in terms of the model and/or data required to make them full risk measures).

C&E risks associated with credit risk (transitional and physical) are also subject to stress testing to measure the impact of adverse scenarios for RAS and ICAAP purposes (including features and scenarios derived from the ECB 2022 Climate Stress Test).

The transmission of the analysed C&E risk factors to other "core" risks (market, liquidity and some operational risks) was based on what-if analyses, each aimed at stress testing:

- for liquidity risk, the liquidity buffers provided by the deposits of retail customers and non-financial companies, based on the occurrence of physical risk events concentrated in very short periods of time and on geographical impact zones (the entire geographical area "provincia" for flood risk, a single municipality or "comune" for landslide risk); deposit outflows were considered both on a crash hypothesis (withdrawal of 100% of deposits in the affected area) and on the basis of similar events actually occurred (e.g. the floods in Marche area in September 2022);
- for market risk, the market value of non-financial corporate bond and equity portfolios and the exposure to non-financial and uncollateralised counterparties related to derivative positions;
- For operational risk, business continuity based on a number of scenario drivers such as customers' inconvenience (based on deposit pools), employees' inconvenience (based on the number of non-operational employees in the scenario), operational inconvenience (based on the number of branches closed), economic loss (based on the loss of profitability of the bank at risk in the scenario), physical value loss (based on the loss of value of owned properties).

These risks, which were not considered to be material at the time of the initial review, will be subject to periodic materiality reviews based on indicators and thresholds capable of incorporating changes in the structure of the positions and activities involved, with consequent implementation of risk management methodologies and processes and possible activation of relative operating limits.

The analysis of the transmission channels of climate risks, their potential impact on traditional banking risks, their relevance to the Group and the main management and mitigation measures are summarised in the tables below for transition risks and physical risks.

		risk factor	transmission channel	traditional risks involved	potential impacts	materiality for GMPS	relevance for GMPS	mitigation actions
transition	**direct**	> Changes in environmental regulations and environmental standards adopted by the Group	> Unexpected adaptation and compliance additional costs > Sanctions due to noncompliance	> Business risk > Operational risk	> Economic effects due to higher costs > Operational losses due to sanctions"	NO	low	> Monitoring of regulatory changes with prompt adaptation to new requirements
	indirect	> Transition policies that accelerate, interrupt or abruptly change the sustainability path of corporate customers	> Unexpected additional transition costs for a borrower with effects on solvency	> Credit risk	> Deterioration in credit quality > Losses from impairment of credit in adverse transition scenarios	YES	high	> Measurement of outstanding exposures through KRI RAS and other risk indicators > Operational limits on exposures > In progress: definition of impact models and integration into stress test programmes > In progress: integration of commercial-credit processes based on the individual customer's C&E risk profile (where possible) on sector- related classifications
		> Transition policies (on energy performance) that impose interventions and/or reduce the value of the real estate assets	> Poor energy performance of immovable property used as collateral for mortgages (residential and commercial) which has an impact on the value of the collateral	> Credit risk	> Loss of collateral value > Losses from impairment of credit in adverse transition scenarios	YES	high	
		> High transition risk or environmentally controversial activities of issuers of securities in customer portfolios	> Material ESG inadequacies in existing portfolios > Ineffective ESG screening of new portfolios > Presence in customers' portfolios of securities of controversial issuers or with high transition risk > Impairment of customers' portfolios due to to transition risk of issuers	> Operational risk > Reputational risk	> Loss of market share and profitability in investment services > Losses due to complaints and disputes	YES	medium	> ESG component in the reputational risk indicators monitored in RAS > Integration of ESG variables into the advisory process for the provision of investment services by collecting Customer preferences > Mapping investment products based on ESG variables and verifying the alignment of portfolios to preferences.
		> High transition risk or environmentally controversial activities of issuers of financial instruments in the portfolios	> Impairment of Proprietary portfolios related to issuers transition risk	> Market risk and counterparty risk	> Economic losses due to losses on financial instruments	NO	low	> Periodic materiality assessment based on the size of the portfolio component potentially subject to risk (in terms of securities/issuers)
		> High transition risk or environmentally controversial activities of issuers of financial instruments used as a liquidity buffer	> Reduced capacity to meet sudden liquidity needs	> Liquidity	> Liquidity stress with effect on operations > Economic losses due to higher costs of funding	NO	medium-low	> Periodic materiality assessment based on liquidity buffer potentially subject to impairment due to transition risk

		risk factor	transmission channel	traditional risks involved	potential impacts	materiality for GMPS	relevance for GMPS	mitigation actions
physical	direct	> Acute physical risks events(climate-related)	> Possible damage to the Bank's infrastructure > Business interruptions	> Operational risk (business continuity)	> Losses due to damage to property structures and their restoration > Economic losses related to business interruption	NO	medium-low	> Periodic materiality assessment based on aggregates subject to impact in the event of business interruption due to physical risk. > C&E risk strengthening (where necessary) of Business Continuity Plans and of actions for reducing physical damage to facilities > Preventive assessment of the hydrogeological risk of buildings with related mitigation plans
		> Chronic physical risk (climate-related) such as changes in weather conditions or increased frequency of atmospheric events	> Higher costs for heating/cooling the premises in use > Decrease in productivity due to Climate Change	> Operational risk > Business risk	> Impact on profitability of higher operating costs and/or lower productivity	NO	low	> Energy efficiency actions for heating/cooling buildings in use > Increase in use of energy from renewable sources, revision of supply policy > Pooled mobility policies, awareness-raising initiatives, environmental education"
	indirect	> Acute physical risks events(climate-related)	> Damage to collaterals (residentials and commercials immovable properties)	> Credit risk	> Loss of collateral value > Impairment losses on loans in acute physical risk scenarios	YES	medium-high	> Measurement of outstanding exposures through KRI RAS and other risk indicators > Operational limits on exposures > In progress: definition of impact models and integration in stress test programmes > In progress: integration of commercial and credit processes based on the individual C&E customer risk profile (where possible) or on sector-related classifications
		> Acute and chronic physical risks events(climate-related)	> Damage to capital goods and production facilities of customer companies (acute physical risk) > Impacts of (chronic) climate change on productive activities	> Credit risk	> Deterioration in credit quality > Impairment losses on loans in acute and chronic physical risk scenarios	YES	medium-high	
		> Acute physical risks events(climate-related)	> Damage to real estate (acute physical risk) that trigger claims for reimbursement of deposits	> Liquidity risk	> Impact on operating liquidity > Economic losses due to higher costs of funding compared to customer deposits	NO	low	> Periodic materiality assessment based on deposits potentially subject to massive reduction due to physical risk events
		> Acute and chronic physical risks events(climate-related)	> Damage to capital goods and production plants of issuers which impact on their value and productivity	> Market risk	> Economic losses due to losses of financial instruments	NO	low	> The outcome of the verification was "non material". No models or studies on the transmission of the physical risk to the market value of the financial instruments readily applicable to the specific context (Italy) were identified

Key Risk Indicators (KRIs) are monitored within the Group's Risk Appetite Framework for material risk exposures (credit and operational/reputational):

– Physical risk KRI, currently focused on the perimeter of residential mortgages secured by immovable (residential) properties. The KRI consists of the proportion of mortgages secured by real estate located in "HIGH" or "VERY HIGH" flood or landslide risk areas based on ISPRA ("Istituto Superiore Protezione e Ricerca Ambientale") data.

– Transition risk KRI, currently focused on the perimeter of non-financial corporate credit counterparties. The KRI consists of the share of lending that is eligible according to the EU Taxonomy and "aligned", i.e. considered sustainable according to the EU Taxonomy.

Starting with end-2022 analysis, the physical risk model has evolved:

- by taking into account the precise location of the properties securing the mortgages (where possible and for some risk factors down to the "census unit", otherwise to the municipality);
- by expanding the range of risk factors considered for mortgages secured by real estate, adding not only the main landslide and flood risks, but also other acute physical risk factors (fire, extreme wind and waves) and chronic physical risk factors (sea level rise and coastal erosion);
- For the physical risk of corporate counterpaties, the model has been enriched with the location of the physical risk for large companies, based on the precise location of production facilities; for corporate counterpaties, the following were added to the risk factors already listed for mortgages: Heat Waves and Frost for physical risk; Heat, Drought, and Soil Erosion for chronic risk.

The data for the extension of the physical risk model, which is also used for the analyses in this report (Template 5), was acquired from a specialised data provider and integrated according to an internally developed model (see the quantitative section of Template 5 for more details on the model).

With respect to transition risk ("the financial loss that a company may directly or indirectly incur as a result of the process of transitioning to a low-carbon and more environmentally sustainable economy"), the MPS Group quantifies risk exposure for corporate clients based on the "distance to sustainability" of counterparties (or individual credit exposures), expressed in a Taxonomy Alignment Coefficient, or TAC. The higher the alignment, the closer an asset and its financing are to full environmental sustainability, and the lower the associated transition risk. The part of a loan that is not (yet) aligned, i.e. still considered to be not fully sustainable, is considered to be 'exposed' to transition risk.

In order to quantify financed GHG emissions (reported in Template 1 of this report), data from non-financial Statements or estimated Scope 1, 2 and 3 were obtained from an external provider for the companies, resulting in estimated emissions covering approximately 86% of the loans to non-financial counterparties. Financed emissions, despite unavoidable approximations due to the lack of reported and/or certified data, represent key information for the assessment of transition risk related to climate change in the narrow sense, i.e. with respect to the first item of the EU taxonomy.

Finally, the environmental sustainability of each credit exposure will be analysed on the basis of all the variables collected both at the client level – through an ESG questionnaire – and at the sector level, as well as specific but independent variables identified by the Bank through proprietary analysis, mining of public information or acquisition from specialised data providers. The environmental risk profile thus defined will be used to guide the type of services and products offered to support the transition with respect to each item of the Taxonomy and, more generally, for sustainability with respect to all ESG issues. The ESG variables collected in the profile will also act as drivers (where relevant) for the determination of credit risk parameters according to their ability to affect the economic soundness and solvency of the client.

Already in 2023, BMPS will test the statistical significance of some ESG variables in determining the PD, LGD of counterparties in order to model a first component of the impact of environmental drivers on credit risk.

Qualitative information on Social Risks

Social Risks - *Business Strategy and processes* *[ref. ITS qualitative table 2 – (a-c)]*

The Group aims to implement social risk analysis within its business, while continuing to play a proactive role in the areas in which it operates, encouraging the development of business models based on inclusion and the protection and development of human resources, employment protection, resource protection, community support initiatives, the enhancement of artistic and cultural heritage, as well as financial education and professional guidance.

Internally, the Group is currently focusing on developing initiatives aimed at improving the working environment by making it more inclusive, with the publication of the Rules on Inclusion and the objective of continuing the Diversity & Inclusion programme, which aims to have 40% of positions of responsibility held by women and to obtain pre-certification on gender equality.

The main initiatives in the area of social factors also include the adoption of an agile working method to reconcile personal and professional needs, the implementation of an attractive benefits system that responds to emerging needs, and the dissemination of an "ESG culture" through the promotion of corporate awareness and training programmes.

Social Risks - *Governance* *[ref. ITS qualitative table 2 – (d)-(g)]*

Please refer to the previous section: **Qualitative Information on Environmental Risks - \ Environmental Risks – Governance**, for the governance aspects of Social Risks. In that section, these aspects are presented for all ESG topics as a whole.

Social Risks - *Risk Management* *[ref. ITS qualitative table 2– (h-m)]*

The analysis of potential risks related to social factors is carried out in the same way as for the other risks related to ESG themes, with an initial "mapping" between social issues and potential vulnerabilities that could arise from them, highlighting the cases where these vulnerabilities, through specific "transmission channels", could materialise into quantifiable and manageable risks (financial or non-financial). Due to the nature of social issues, which are not "new" compared to the past, but have been implicit in the Bank's activities for a long time, the risks associated with them often consist in insufficient or incorrect attention to the social "issue", with repercussions on the communities – both internal to the company and external – such as those of the customers or of the area in which the Bank operates ("generated" risk), and on the Bank, as a risk "suffered" as a result of operational risks related to penalties for non-compliance with external regulations and legislation, or as a reputational risk. Social risks are seen by BMPS as those related to the possible impact of the Bank's management of social issues, while those related to the social behaviour of its counterparties are included in the category of governance risks.

Unlike environmental risks, social risks are difficult to quantify in monetary terms, but are more amenable to monitoring through processes and mechanisms designed to avoid behaviours that may be detrimental to the communities with which the Bank works, and therefore directly aimed at mitigating such potential impacts.

To mitigate the risks “generated” on internal and external communities, the Bank engages in initiatives, both related to its own activities and more generally community-focused, that promote the well-being and growth of communities, their financial culture, and the digitisation and simplification of its services and products.

The potential risks ‘suffered’ by the Bank arise mainly from the impact on operational risks and the impact on reputational risks. With regard to operational risks, the possibility of incurring losses as a result of penalties or disputes relating to labour or customer issues are potential risks that have always been taken into account in the management and mitigation measures have been already implemented by the Bank, but they are now being reviewed, taxonomically mapped and mitigated or reinforced. With regard to reputational risks, they may arise from the impact on the Bank’s reputation of any controversial conduct that may have been adopted towards the internal or external communities relative to the corporate perimeter.

Ongoing refinements and in-depth studies are planned in relation to developments in ESG themes (including the development of a ‘social taxonomy’ and the availability of specific related data).

With regard to social aspects, the table below maps the potential vulnerabilities identified, the associated envisaged risks, the impact on traditional, financial and non-financial risks, and the safeguards currently in place to manage and mitigate them.

MAP OF SOCIAL THEMES AND SOCIAL RISKS

Subject	Main Topics	Potential Vulnerabilities	Risk Type	Management and Mitigation Principles
> Diversity & Inclusion	> Inclusive work environment, capable of valuing diversity > Equal treatment of employees with respect to characteristics of different gender, age, orientation of thought, religion, sexual orientation	> Unequal treatment > Anomalous distribution of resources on roles/responsibilities based on gender or other elements of diversity > Disputes > Damage to corporate reputation	OPERATIONAL REPUTATIONAL	> Corporate strategy designed to enhance the value of all employees, drawing inspiration from the principles of transparency, fairness and inclusion throughout all company processes - from selection to career development, succession plans, access to training and remuneration policies > Fair distribution of applications and career development across genders and any other element of diversity > Increased support to ensure appropriate and inclusive development of employees with disabilities
> Protection of human resources	> Health and safety of employees, compliance with relevant standards and requirements	> Accidents in the workplace > Increase in absences due to illness > Disputes	OPERATIONAL REPUTATIONAL	> Mapping all possible dangers to workers' health and safety > Planning measures and actions to eliminate or reduce the risks detected (ex.: measures for prevention, contrast and containment of Covid-19 in the workplace)
> Relations with Customers and Environmental commitment	> Attention to customers' needs > Commercial practices and communication in the offer of products/services > Social effects on the reference communities	> Loss of market share and competitiveness > Economic and reputational losses > Complaints and disputes > Fines and sanctions	OPERATIONAL BUSINESS RISK REPUTATIONAL	> Customer satisfaction surveys, to monitor satisfaction with products and services, multi-channel delivery methods and relations customers-bank > Media monitoring activities > Assessment of reputational risk before releasing new projects and products > Monitoring disputes with customers > Monitoring customers' portfolios to ensure consistency between the risk profile of customers and the risk characteristics of the products and portfolio offered/held, for the purpose of preventing potential negative impacts in terms of operational and reputational risks > Analysing security and control measures for the protection of personal data in implementation of the GDPR regulation and Data Protection Authority provisions > Actions to support households and businesses with extraordinary actions both on the basis of government provisions and following specific Bank initiatives (e.g. due to the COVID19 health emergency; due to the Russia-Ukraine crisis: loan products adapted to the new eligible MCC/SACE guarantees temporary aid schemes authorized by the European Commission, respectively Temporary Framework and Temporary Crisis Framework) > Enhance the offer of protection soltions dedicated to corporate health and welfare > Developing products and services with environmental benefits (e.g. "Building Bonus" structured offer) > Financial inclusion solutions by enriching the commercial offer with products in favor of the weaker segments of the population (eg Basic Current Account, Pension Account, ISEE Account…) also through the activity of Solidarity Microcredit.
> Support for the Community	> Provide fair support to the development of the reference communities, promoting the themes of sustainable growth, digitalization and financial culture.	> Unfair initiatives in the definition of accessibility and usability by the reference communities > Adherence to initiatives that prove to be controversial for purposes, entities and/or actors involved	OPERATIONAL REPUTATIONAL	> Participation in cultural initiatives > Sponsorships and local events > Training orientation initiatives open to young people
> Digitalization and IT security	> Expectations of customers regarding the digitalization of banking and financial services > Direct contact with customers > Privacy and IT security related to the offer of digitised product and services	> Disintermediation in favor of new digital players (open banking) and consequent loss of market share > Loss of customers less inclined to use digitalization > Disputes and complaint > IT malfunctions, loss or leak of data > Fines and sanctions	OPERATIONAL BUSINESS REPUTATIONAL	> Improving customer experience by investing in new digital technologies and offering sustainable products and services in the interest and for the well-being of customers > Promoting the digitalization of payments and e-commerce by encouraging the process, especially for micro-merchants > Designing, developing and implementing inclusive solutions, with special focus on use and access for customers with visual impairments and limited digital literacy > Intercepting and fighting cyber attacks through specific prevention and protection systems, which allow digital services to be used in a secure manner and cyber crime insurance coverage > Implementing security measures on digital payments envisaged by the PSD2 directive > Issuing awareness-raising campaigns for customers on the dangers of certain viral phenomena such as spamming and phishing, and how to defend themselves"

Qualitative information on Governance Risks

Governance Risks - *Governance* *[ref. ITS qualitative table 3 – (a)-(c)]*

Please refer to the previous section: **Qualitative Information on Environmental Risks - \ Environmental Risks – Governance**, for the governance aspects. In that section, these aspects are presented for all ESG issues as a whole.

Governance Risks - *Risk Management* *[ref. ITS qualitative table 3 – (d)]]*

The management of governance-related risks comprises two priority areas, one relating to the Group's internal governance and the other relating to the social and governance aspects of the counterparties with which the Group operates. As mentioned above in the Social Risk Management section, the MPS Group has chosen to address the risks associated with the "non-social" behaviour of its customers and counterparties in general (e.g. suppliers) by addressing the issues and related risks of its own governance in its relationships with such counterparties. The table below shows the mapping of governance risks to the material ESG themes that the Bank has prioritised.

MAP OF GOVERNANCE THEMES AND GOVERNANCE RISKS

Subject	Main topics	Potential Vulnerabilities	Risk Type	Management and Mitigation Principles
> Performance and Economic Soundness	> Ability to generate value on an ongoing basis and sufficient to support the business model and its future development > Maintain capital strength sufficient to be resilient against adverse scenarios of the business environment"	> Reduced ability to withstand adverse scenarios due to exogenous contingencies > Reduced ability to modify/ adapt the business model according to changes in the reference context > Stock price performance worse than the sector average, loss of investors and customers	BUSINESS REPUTATIONAL	> Medium-long term strategic planning > Stress test programs (institutional and internal) to verify and possibly adjust the Bank's resilience in adverse scenarios, with scenarios used in internal assessments (ICAAP ILAAP) and in the context of the RAS > Risk Appetite Statement and Framework > The MPS Group draws up and constantly updates Recovery Plan and a Resolution Plan programmes, as well as having adopted the Code of Self-Regulation on Corporate Governance > The Sustainability plan bases the evolution of the business model on the present and prospective reference context, with particular attention to ESG issues.
> Human resource development	> Maintenance and growth of the level and breadth of internal skills in a context of profound changes > Ability to attract and retain talent and key figures	> Difficulties in guaranteeing business continuity following reorganisations, outsourcing or staff reductions > Dissatisfaction, degradation of internal climate and motivation > Disputes > Difficulties in suitably filling certain roles > High turnover, loss of key resources	OPERATIONAL REPUTATIONAL	> Managing risks preventively through preliminary impact analyses, procedures for discussions with trade unions > Management continuity plans > Training activities based on the taxonomy of business risks and processes > "tailor-made" training based on role risk rating and the results of the annual individual skill gaps carried out by all employees > Actively listening to people, with a constant and structured approach, also through issue-specific questionnaires and other forms of contact > Specific retraining programs for resources affected by professional mobility with training calibrated on the basis of the characteristics of the positions to be filled and the skills already acquired > Using risk-adjusted performance indicators in staff remuneration and incentive policies > Training campaigns on risk culture through targeted initiatives on specific risks and disseminated to all personnel > Internal selections to enhance existing professional levels, onboarding and listening activities dedicated to new hires
> Integrity in business conduct	> Compliance with external regulations, agreements, standards and self-regulatory codes	> Fines and sanctions > Damage to corporate reputation	OPERATIONAL REPUTATIONAL	> Code of Ethics > Adoption of an updated 231-Model with indication of risk mitigation measures and controls > Adoption of an Anti-Corruption Policy and Whistleblowing tools > Planned training activities on 231-Model, Code of Ethics and Anti-Corruption delivered to all Group employees.
> Responsible supply chain management	> Suppliers' conduct compliant with applicable external legislation > Supplier conduct compliant with the Group's ethical, ESG principles	> Damage to corporate reputation due to suppliers' conduct	REPUTATIONAL	> Selection of suppliers through an evaluation process which, in the pre-selection, awarding and contracting phases of the supply, explicitly takes into account compliance with labour legislation, application of the national collective labour agreement as well as regular payment of contributions (DURC certificate) through specific scores.
		> Damages due to disputes with supplier	OPERATIONAL REPUTATIONAL	> Acquisition, during the tender phase, of 231 Statement (with references to anti-corruption and anti-mafia legislation) with specific questions regarding the certifications held.
> Relations with Customers and Environmental commitment	> Characteristics or conduct of customers compliant with the Group's Social and Governance principles towards the reference communities	> Organizational structure, internal relationships of non-compliant or controversial counterparties (Customer Governance)	OPERATIONAL REPUTATIONAL	> The Group already adopts adequate anti-money laundering and countering the financing of terrorism (AML & CFT) safeguards > Definition of a ""social"" and ""governance"" profile of the customer through specific questionnaires, independent analyzes and certifications, scores and ratings provided by third parties
		> Negative impacts of customer activities on the community or reference communities > Damage to corporate image	REPUTATIONAL	> Offer products with conditions (pricing) and other characteristics (purposes, covenants) linked to compliance with principles or social objectives towards the community, the reference communities, the stakeholders.

The first three material topics and related controls listed in the table ("Performance and Economic Soundness", "Human Resources Development" and "Integrity of Business Conduct") are core governance issues to which the Bank has always been sensitive, both on a voluntary basis and in terms of compliance with internal and external regulations. With regard to the two additional topics listed in the table ("Supply Chain Management" and "Customer Relations and Relations with the Territory"), we would like to highlight some new elements linked to the increased awareness that recent developments in ESG issues and related risks have led to a more precise and specific focus than in the past. We could combine both topics, as far as related risks are concerned, in a single topic related to the governance aspects of the "bank's supply chain", including all actors with which the bank has relationships in order to carry out its activities:

– *downstream:* customers (especially of credit, customers of other fiduciary services such as depositors and investors, customers of investment services, etc.

– *upstream:* suppliers of all types of productive factors used by the bank to carry out its activities, such as product factories, consultants, etc.

Relationships with credit counterparties are of particular importance, as any inappropriate corporate governance and social behaviour on the part of these counterparties may have an impact on the reliability and solvency of the counterparties themselves. In this case, the impact on the Bank relates both to credit risk towards such counterparties and to the reputational and business risk that such conduct may entail for other parties that have relations with the Bank.

One example is the risk of financing projects of counterparties with potentially controversial social or governance practices (discriminatory practices, poor governance, use of child labour, involvement in illegal activities such as drug trafficking, etc.) and the impact this could have on the Bank. A first step towards managing this type of risk is the development of an ESG profile of the client, which, in addition to aspects of environmental impact (which fall under "indirect" environmental risks), identifies issues, even if only potential ones, relating to the activities or modus operandi of its counterparties. At present, the Bank collects, through an ESG questionnaire limited to corporate counterparties, specific information relating to governance, the client and the sector to which it belongs, its attitude to environmental issues and the history of any sanctions for non-compliance.

Specific safeguards are then put in place in the supplier selection process to verify, through statements and market references, that suppliers' conduct is in line with both external regulations and the Group's ethical and ESG principles. The selection of partners and counterparties for offering new products and services is always subject to a review of the reputation profile and compliance with the code of ethics of the candidates, as part of the risk assessment of the product approval processes.

Quantitative information on Transition Risks

Templates 1, 2 and 4 of this chapter on ESG disclosure present complementary aspects of transition risk exposure, broken down into the credit risk transmission channels identified as priority by banking industry best practice and designated as such by the EBA and the ECB. Template 1 focuses on exposures to **non-financial corporate counterparties** directly (loans and advances) and through debt and equity instruments according to the SAE classification used for FINREP purposes, with the addition of some counterparties belonging to the group of financial holding companies if their predominant activity is attributable to NACE sectors of production activities included in the scope of Template 1. The perimeter in question, as presented in Template 1 – as at 31.12.2022 – amounted to EUR 35,404 million in Total GCA (Gross Carrying Amount), the type of figure required by ITS and corresponding to the cash credit drawn, with approximately 119,000 different counterparties (this would be EUR 40,596 million in terms of cash and endorsement drawn credits, the figure used to monitor exposure for risk management purposes). The Group decided to proceed with the determination of financed GHG emissions in relation to the perimeter required by Template 1, ahead of the expected deadline of the phase-in process related to the compilation of Pillar 3 disclosures, covering approximately 83.6% of the perimeter of non-financial companies with a step-by-step approach (declared / estimated / estimated by intensity). Given the scarcity of reported or certified information on GHG emissions (especially for small and medium-sized companies, which are particularly relevant to the Group's business model), the presentation must be understood as a best effort and may be subject to significant adjustments in the future. The analysis of the "participation" of the Bank's lending activity in direct and indirect emissions is considered, despite the difficulties, an essential step towards a realistic assessment of the impact of the Bank's activities on climate change mitigation (CCM). The presentation of the financed emissions of the most carbon-intensive sectors (see specific focus below) will be the basis for the definition of strategic objectives, in particular those envisaged in the Net Zero Banking Alliance initiative, which the Bank will publish by July 2023.

Template 2 represents another form of transition risk exposure that is inherent in credit risk, as the transmission channel is through **loans secured by real estate** and the related **energy performance** as a proxy for related consumption and emissions. The positions shown in Template 2, mainly split between loans secured by residential and commercial property, amount to a total of EUR 37,579 million, all of which are in EU Area.

Template 4 requires the disclosure of any exposure to the top 20 GHG-intensive companies worldwide. For the MPS Group, this analysis, carried out with the support of an external provider specialising in corporate financial data, showed **no exposure to the top 20 global companies** and therefore Template 4 was not completed.

Template 1 reports Banking Book exposures (including loans and advances, debt securities and equity instruments) to non-financial corporations engaged in economic activities with a higher impact on climate change. The exposure to transition risk is reflected not only by the classification of the loans according to the economic activity of the counterparty, but also by the "exclusion from the Paris Aligned Benchmarks" (PAB) figure and the information on GHG emissions financed. The required information on the quality of the loans themselves (composition of GCAs in stage 1, 2 and non-performing, relative provisions) and, finally, a breakdown of loans by maturity is also reported.

Template 1: Banking book- Climate Change transition risk: Credit quality of exposures by sector, emissions and residual maturity (€ mln) (part 1)

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
		Gross carrying amount					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (Mln EUR)			GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)		GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
	Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions						
1	**Exposures towards sectors that highly contribute to climate change***	**31,266.8**	**609.3**		**6,921.0**	**1,913.8**	**-1,273.6**	**-225.9**	**-1,006.8**	**18,584,534**	**14,499,740**	**7.2%**	**21,251.8**	**6,533.2**	**3,150.8**	**330.9**	**4.5**
2	A - Agriculture, forestry and fishing	1,245.5	0.0		318.7	63.3	-37.8	-10.7	-25.1	444,278	313,965	0.0	570.6	335.5	300.0	39.4	7.3
3	B - Mining and quarrying	115.9	29.2		18.6	3.1	-2.8	-1.1	-1.7	101,679	83,001	0.2	88.6	7.6	19.7	0.1	4.6
4	B.05 - Mining of coal and lignite	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
5	B.06 - Extraction of crude petroleum and natural gas	20.3	20.3		0.5	0.0	0.0	0.0	0.0	26,360	20,378	1.0	0.8	0.0	19.5	0.0	11.3
6	B.07 - Mining of metal ores	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
7	B.08 - Other mining and quarrying	86.7	0.0		17.8	3.1	-2.8	-1.1	-1.7	67,140	55,678	0.0	78.9	7.6	0.2	0.1	3.2
8	B.09 - Mining support service activities	8.9	8.9		0.2	0.0	0.0	0.0	0.0	8,180	6,945	0.0	8.9	0.0	0.0	0.0	2.9
9	C - Manufacturing	10,976.5	81.3		1,947.6	513.8	-328.8	-36.2	-278.7	11,343,568	9,025,123	0.1	9,180.3	1,539.5	254.9	1.9	2.8
10	C.10 - Manufacture of food products	1,627.6	0.0		293.8	66.9	-43.5	-5.9	-35.0	1,625,554	1,517,029	0.1	1,357.9	237.7	31.2	0.8	2.6
11	C.11 - Manufacture of beverages	182.5	0.0		50.4	8.3	-4.6	-0.8	-3.6	140,445	133,101	0.0	133.2	42.6	6.8	0.0	3.6
12	C.12 - Manufacture of tobacco products	42.3	0.0		0.0	1.1	-0.3	0.0	-0.3	19,402	18,413	0.0	41.5	0.8	0.0	0.0	1.9
13	C.13 - Manufacture of textiles	338.5	0.0		43.9	17.9	-10.3	-1.0	-8.6	63,038	58,805	0.0	284.3	36.5	17.7	0.0	3.2
14	C.14 - Manufacture of wearing apparel	459.5	0.0		66.9	41.2	-23.8	-1.5	-21.9	85,881	81,099	0.0	402.0	41.1	16.1	0.2	2.8
15	C.15 - Manufacture of leather and related products	406.8	0.0		57.3	22.8	-13.5	-1.0	-12.1	77,744	73,250	0.0	352.8	48.8	5.2	0.0	2.9
16	C.16 - Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	203.9	0.0		28.1	20.8	-12.2	-0.7	-11.3	97,719	88,875	0.1	171.5	27.0	5.1	0.3	3.0
17	C.17 - Manufacture of pulp, paper and paperboard	433.5	0.0		121.4	18.0	-11.3	-1.8	-9.0	325,527	241,204	0.3	307.2	105.5	20.8	0.0	3.2
18	C.18 - Printing and service activities related to printing	138.3	0.0		29.2	7.1	-5.4	-0.6	-4.7	99,971	92,869	0.0	108.9	25.0	4.4	0.0	3.3
19	C.19 - Manufacture of coke oven products	81.3	81.3		2.8	0.6	-0.4	0.0	-0.3	366,610	342,962	0.5	37.8	42.6	0.9	0.0	3.3
20	C.20 - Production of chemicals	366.6	0.0		40.3	4.7	-5.2	-1.1	-3.6	822,636	634,611	0.0	326.4	33.2	7.0	0.0	2.1
21	C.21 - Manufacture of pharmaceutical preparations	98.9	0.0		28.9	1.3	-1.6	-0.8	-0.7	26,620	22,206	0.2	92.9	6.0	0.0	0.0	2.6
22	C.22 - Manufacture of rubber products	581.8	0.0		95.1	11.8	-8.3	-1.8	-5.6	240,868	219,576	0.0	517.4	52.7	11.7	0.0	2.7
23	C.23 - Manufacture of other non-metallic mineral products	568.3	0.0		118.2	23.7	-16.8	-2.2	-14.1	929,152	430,465	0.1	434.9	120.9	12.5	0.0	3.1
24	C.24 - Manufacture of basic metals	787.4	0.0		80.7	4.8	-5.7	-1.9	-2.1	2,777,518	1,975,076	0.1	713.0	69.7	4.7	0.0	2.2
25	C.25 - Manufacture of fabricated metal products, except machinery and equipment	1,441.8	0.0		283.1	82.5	-44.7	-5.4	-37.7	1,769,113	1,373,299	0.0	1,190.1	201.0	50.4	0.3	3.2
26	C.26 - Manufacture of computer, electronic and optical products	227.3	0.0		44.7	16.9	-11.7	-0.7	-10.8	140,514	136,172	0.1	202.3	22.5	2.5	0.0	2.7
27	C.27 - Manufacture of electrical equipment	370.4	0.0		67.1	16.4	-10.6	-1.4	-8.8	295,106	243,148	0.1	313.7	53.0	3.7	0.0	2.9
28	C.28 - Manufacture of machinery and equipment n.e.c.	1,271.9	0.0		207.6	64.6	-49.3	-3.2	-44.9	747,564	688,110	0.1	1,115.0	138.1	18.8	0.0	2.6
29	C.29 - Manufacture of motor vehicles, trailers and semi-trailers	229.0	0.0		90.4	20.0	-10.0	-1.1	-8.8	92,864	72,557	0.0	197.8	21.5	9.7	0.0	3.3

Template 1: Banking book- Climate Change transition risk: Credit quality of exposures by sector, emissions and residual maturity (€ mln) (part 2)

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
		Gross carrying amount					Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions (Mln EUR)			GHG financed emissions (scope 1, scope 2 and scope 3 emissions of the counterparty) (in tons of CO2 equivalent)		GHG emissions (column i): gross carrying amount percentage of the portfolio derived from company-specific reporting	<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity
	Sector/subsector		Of which exposures towards companies excluded from EU Paris-aligned Benchmarks in accordance with points (d) to (g) of Article 12.1 and in accordance with Article 12.2 of Climate Benchmark Standards Regulation	Of which environmentally sustainable (CCM)	Of which stage 2 exposures	Of which non-performing exposures		Of which Stage 2 exposures	Of which non-performing exposures		Of which Scope 3 financed emissions						
30	C.30 - Manufacture of other transport equipment	409.7	0.0		78.8	21.2	-16.9	-1.3	-15.1	240,876	236,538	0.3	310.8	97.2	1.7	0.0	2.4
31	C.31 - Manufacture of furniture	334.1	0.0		49.7	21.3	-10.8	-1.0	-9.4	110,604	108,429	0.0%	268.6	54.5	11.0	0.0	3.5
32	C.32 - Other manufacturing	225.7	0.0		45.7	5.1	-3.5	-0.7	-2.6	86,858	85,112	2.9%	184.5	32.9	8.2	0.0	3.0
33	C.33 - Repair and installation of machinery and equipment	149.6	0.0		23.7	14.6	-8.2	-0.4	-7.6	161,386	152,216	5.2%	115.8	28.8	4.8	0.2	3.6
34	D - Electricity, gas, steam and air conditioning supply	924.9	177.5		147.1	66.6	-48.4	-7.9	-39.0	668,503	511,276	23.0%	569.4	257.0	98.5	0.0	4.8
35	D35.1 - Electric power generation, transmission and distribution	738.1	16.2		142.2	59.8	-43.5	-7.9	-34.6	533,410	397,688	17.8%	410.1	238.2	89.9	0.0	5.1
36	D35.11 - Production of electricity	460.2	13.3		77.8	36.8	-25.3	-2.6	-22.0	132,905	91,513	0.0%	162.9	209.5	87.9	0.0	6.8
37	D35.2 - Manufacture of gas; distribution of gaseous fuels through mains	170.1	161.3		1.7	6.6	-4.6	0.0	-4.3	114,053	110,056	47.4%	155.8	11.5	2.8	0.0	3.0
38	D35.3 - Steam and air conditioning supply	16.7	0.0		3.1	0.1	-0.2	0.0	-0.1	21,040	3,533	0.0%	3.5	7.4	5.8	0.0	9.6
39	E - Water supply; sewerage, waste management and remediation activities	842.8	0.0		126.0	18.0	-15.6	-3.1	-11.1	1,099,187	746,215	19.9%	505.7	266.3	70.0	0.8	4.8
40	F - Construction	2,966.1	0.0		1,126.8	263.6	-205.7	-52.9	-148.7	735,520	690,078	4.2%	1,729.7	704.1	346.7	185.6	6.0
41	F.41 - Construction of buildings	1,812.4	0.0		795.7	167.1	-140.5	-44.0	-93.6	320,385	301,755	0.2%	774.9	580.9	272.2	184.4	7.6
42	F.42 - Civil engineering	547.8	0.0		185.4	22.7	-24.9	-5.7	-18.6	165,730	153,635	21.9%	477.8	19.0	50.9	0.1	3.3
43	F.43 - Specialised construction activities	605.8	0.0		145.7	73.7	-40.3	-3.2	-36.5	249,404	234,688	0.0%	476.9	104.2	23.6	1.1	3.6
44	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	6,768.2	308.3		1,178.8	318.5	-216.5	-29.4	-177.9	2,398,180	2,325,931	3.0%	5,451.7	1,020.7	293.4	2.5	3.0
45	H - Transportation and storage	1,759.8	13.0		310.5	128.9	-88.1	-15.2	-70.3	1,421,090	449,218	23.8%	1,221.3	299.1	239.0	0.4	4.6
46	H.49 - Land transport and transport via pipelines	552.3	13.0		103.0	53.1	-33.7	-2.0	-30.4	357,947	212,670	0.3%	388.0	101.4	62.5	0.4	4.7
47	H.50 - Water transport	175.9	0.0		64.5	12.2	-11.8	-6.6	-5.0	867,885	61,955	1.4%	87.7	84.1	4.1	0.0	5.1
48	H.51 - Air transport	18.4	0.0		4.9	6.4	-2.5	-0.3	-2.2	6,092	3,008	0.0%	3.6	14.8	0.0	0.0	6.5
49	H.52 - Warehousing and support activities for transportation	601.9	0.0		136.8	56.5	-39.7	-6.2	-32.5	180,793	163,730	1.9%	331.4	98.0	172.5	0.0	6.3
50	H.53 - Postal and courier activities	411.4	0.0		1.3	0.7	-0.4	0.0	-0.2	8,373	7,855	98.0%	410.6	0.7	0.0	0.0	1.7
51	I - Accommodation and food service activities	1,936.8	0.0		650.4	156.5	-91.7	-21.0	-69.1	361,718	344,985	1.6%	788.6	724.8	407.6	15.8	7.2
52	L - Real estate activities	3,730.2	0.0		1,096.6	381.4	-238.2	-48.5	-185.2	10,811	9,948	3.2%	1,146.0	1,378.6	1,121.0	84.5	8.1
53	**Exposures towards sectors other than those that highly contribute to climate change***	**4,137.2**	**2.4**		**906.6**	**263.0**	**-158.5**	**-31.0**	**-119.7**	**610,910**	**554,600**	**9.3%**	**2,647.0**	**1,138.0**	**344.2**	**8.0**	**4.5**
54	K - Financial and insurance activities	98.3	0.0		5.9	1.7	-1.4	-0.2	-0.8	0	0	0.0%	37.1	56.9	4.3	0.1	5.6
55	Exposures to other sectors (NACE codes J, M - U)	4,038.9	2.4		900.7	261.2	-157.1	-30.8	-118.9	610,910	554,600	9.5%	2,609.9	1,081.0	340.0	8.0	4.4
56	**TOTAL**	**35,404.0**	**611.7**		**7,827.6**	**2,176.7**	**-1,432.1**	**-256.9**	**-1,126.5**	**19,195,443**	**15,054,340**	**7.5%**	**23,898.8**	**7,671.1**	**3,495.1**	**339.0**	**4.5**

In accordance with Commission Delegated Regulation (EU) 2020/1818 supplementing Regulation (EU) 2016/1011 as regards minimum standards for EU Climate Transmission Bencmarks and EU Paris-aligned Benchmarks – "Climate Benchmark Standards Regulation - Recital 6": sectors listed in sections A to H and section L of Annex 1 of Regulation (EC) 1893/2006.

The scope of the template consists of loans and advances, bonds and equity in the banking book (not held for trading and not held for sale) to non-financial corporations according to FINREP, with the addition of some counterparties (49, for a GCA of about €95 million) financial holding companies with predominant activity either related to NACE sectors of production activities included in the scope of template 1. The total in scope amounts to EUR 35,404 million GCA (Total Gross Carrying Amount) for about 119,000 individual counterparties (EUR 40,596 million in terms of utilised cash loans and unsecured lines of credit).

Column 'c' is not filled as the EU taxonomy data on exposed loans is not yet available (information required from December 2023 for exposures included in the numerator of the GAR and from December 2024 for exposures included in the numerator of the BTAR).

Column (k) includes exposures of counterparties reporting Scope 1 or 2 or 3 exposures).

Positions of the French subsidiary Monte Paschi Banque are not reported due to lack of specific information.

Excluded from the Paris-Aligned Benchmarks (PAB)

In order to determine the counterparties to be considered as excluded from the EU Paris Agreement aligned benchmarks, the provisions of Article 12, paragraph 1, letters from d) to g), and Article 12, paragraph 2, of Delegated Regulation (EU) 2020/1818 were followed. This Regulation established the categories of exclusions from the EU Paris Aligned Benchmarks for the companies described in points (d) to (g) below:

- Companies deriving 1% or more of their revenues from the exploration, extraction, mining, distribution or refining of anthracite and lignite;
- Companies deriving 10% or more of their revenues from the exploration, extraction, distribution or refining of petroleum-derived fuels;
- Companies deriving 50% or more of their revenues from the exploration, extraction, production or distribution of gaseous fuels;
- Companies that obtain 50 per cent or more of their revenues from electricity production with a greenhouse gas intensity of more than 100 g CO2 e/kWh.

In order to identify these counterparties, the relevant information published directly by the companies in the Non-Financial Statement was used, where available, and in the absence of such information, the activities of the counterparties were mapped – on the basis of their NACE/Ateco codes and relevance in terms of share in total revenue – to the activities set out in the Delegated Regulation.

Methodological note on the estimation approach used by the data provider

For Scope 1 emissions, the estimation procedure is based on official public source data (Eurostat) on emission intensity expressed in tonnes of CO2/€ of added value per NACE code, further refined using, where available, more granular emission data for more detailed NACE/Ateco codes (source: Ispra/EU Emissions Trading Registry). This coefficient is then reconverted to revenue through a recalibration procedure, which involves first calculating the ratio between the sectoral value added provided by Eurostat and the sectoral value added calculated by the provider by aggregating the individual balance sheets for each sector, and finally applying the ratio between value added and revenues, again at sector level. The figure thus obtained is then further refined by comparison with the similar indicator calculated on the basis of the average data of the sample of enterprises operating in the same sector from point data, where homogeneous and statistically significant samples are available.

Scope 2 emissions data have been estimated using electricity consumption data (in MW/h) at the 2-digit NACE code level (source: Terna) and applying a conversion coefficient to convert electricity consumption into CO_2 emissions (in tonnes CO_2 eq/ Gw/h) (source: Enel). Scope 3 emissions are estimated using the methodology of a data provider, borrowed from Eurostat's consumption-based accounting tool, which estimates the (total) emissions of the entire supply chain of a given product, adjusted to take into account the emissions related to intermediate (unfinished) products. Scope 3 emissions are then calculated by subtracting the Scope 1-2 emissions from the total emissions.

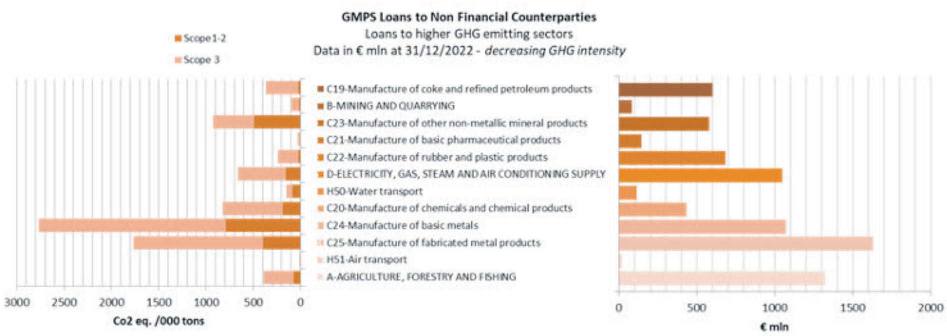
GHG-intensive sectors

Focusing on the financed emissions of the most emission-intensive business sectors (according to the aggregated results of the ECB 2022 Climate Stress Test) showed a concentration of 42.81% of financed emissions on 19.1% of credit exposure (calculated here on the basis of drawn cash loans and unsecured credit lines and not on GCA) and 96.8% of emissions on 88% of exposures to sectors that "highly contribute to climate change" in the scope of Template 1. The results in terms of loan composition and associated emissions are shown in the table and graph below.

GMPS - Financed Emissions to Non Financial Corporates

$Co_2eq.$ / 000 tons as of 31/12/2022

	Financed Emissions			Credit Exposure	
	Scope 1-2-3		*of which Scope 3*		
	$Co_2eq.$ / 000 tons	*% of total*	*$Co_2eq.$ / 000 tons*	*€ mln*	*% of total*
High intensity CST Sectors	8,218	42.8%	5,971	7,749	19.1%
Highly Contrib. Other	10,367	54.0%	8,528	27,973	68.9%
Highly Contribute Total	18,585	96.8%	14,500	35,722	88.0%
Other Sectors "not relevant"	611	3.2%	555	4,874	12.0%
Total Non-Fin Corporate	19,195		15,054	40,596	



Template 2 shows the exposures related to commercial and residential real estate secured loans and the value of the real estate collateral repossessed by the bank, with an indication of the energy consumption (Energy Performance or EP score) and the associated energy performance certification (EPC label), which are considered to be among the main indicators of climate change transition risk for real estate secured loans.

Template 2: Banking book – Climate change transition risk: Loans collateralised by immovable property - Energy efficiency of the collateral (€ mln)

		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p
		Total gross carrying amount amount (in MEUR)	Level of energy efficiency (EP score in kWh/m² of collateral)						Level of energy efficiency (EPC label of collateral)							Without EPC label of collateral	
	Counterparty sector		0; <= 100	> 100; <= 200	> 200; <= 300	> 300; <= 400	> 400; <= 500	> 500	A	B	C	D	E	F	G		Of which level of energy efficiency (EP score in kWh/m² of collateral) estimated
1	**Total EU area**	**37,579.4**	**7,760.2**	**19,094.2**	**3,923.0**	**3,471.9**	**262,0**	**187,9**	**797,6**	**409,9**	**545,2**	**942,2**	**1,493.2**	**2,332.8**	**3,752.8**	**27,305.6**	**89.0%**
2	Of which Loans collateralised by commercial immovable property	6,455.3	2,065.5	1,584.9	176,2	169,1	10,9	25,1	113,4	29,4	48,9	71,5	56,0	60,6	116,7	5,958.8	59.6%
3	Of which Loans collateralised by residential immovable property	31,099.8	5,694.7	17,509.3	3,746.8	3,302.8	251,0	162,8	684,3	380,5	496,3	870,7	1,437.2	2,272.3	3,636.1	21,322.4	97.3%
4	Of which Collateral obtained by taking possession: residential and commercial immovable properties	24,4	-	-	-	-	-	-	-	-	-	-	-	-	-	24,4	0.0%
5	Of which Level of energy efficiency (EP score in kWh/m² of collateral) estimated	27,605.9	6,344.8	16,367.3	2,169.2	2,724.6	-	-								24,302.9	100.0%
6	**Total non-EU area**																
7	Of which Loans collateralised by commercial immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Of which Loans collateralised by residential immovable property	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Of which Collateral obtained by taking possession: residential and commercial immovable properties	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Of which Level of energy efficiency (EP score in kWh/m² of collateral) estimated	-	-	-	-	-	-	-								-	-

· *Exposures by EPC label and energy efficiency score (EP score class, based on the specific energy consumption of the collateral in kWh/m2) identified on the actual EPC labels of the collateral, where available, have been reported.*

· *In the absence of actual energy certification data, estimated energy consumption data provided by specialised external providers and calculated on the basis of individual property characteristics have been used for row "5".*

Template 4: Banking book - Climate change transition risk: Exposures to top 20 carbon-intensive firms

The MPS Group currently has no exposure to the world's 20 most carbon-intensive companies. The analysis was carried out using a specialised external data provider to compile a list of the "top 20 global polluters" against which individual MPS counterparties were screened. None of the counterparties in the Group's credit portfolio were found to be on this list. For this reason, the form in Template 4 has not been compiled and is omitted.

Quantitative information on Physical Risk

Table 5 provides information on exposures in the banking book (including loans and advances, debt securities and equity instruments not held for trading and not held for sale) to non-financial corporations, loans secured by real estate and repossessed real estate collateral that are considered exposed to chronic and acute climate risks.

Template 5: Banking book – Climate change physical risk: Exposures subject to physical risk (€ mln)

	a	b	c	d	e	f	g	i	j	k	l	m	n	o	
							Gross carrying amount (Mln EUR) of which exposures sensitive to impact from climate change physical events								
								of which exposures sensitive to impact from chronic climate change events	of which exposures sensitive to impact from acute climate change events	of which exposures sensitive to impact both from 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	
				Breakdown by maturity bucket											
	Variable: Geographical area subject to climate change physical risk - acute and chronic events		<= 5 years	> 5 year <= 10 years	> 10 year <= 20 years	> 20 years	Average weighted maturity						of which Stage 2 exposures	Of which non-performing exposures	
1	A - Agriculture, forestry and fishing	1,245.5	328.3	180.8	215.0	29.6	7.8	588.1	322.9	157.2	210.9	35.4	-21.4	-7.7	-12.7
2	B - Mining and quarrying	115.9	16.5	0.7	19.7	0.0	7.5	19.5	17.4	0.0	8.1	1.6	-1.5	-0.6	-0.9
3	C - Manufacturing	10,976.5	2,154.4	415.6	61.8	1.2	2.8	1,175.1	1,667.4	209.5	490.3	166.5	-103.8	-9.2	-91.0
4	D - Electricity, gas, steam and air conditioning supply	924.9	78.0	30.6	18.8	0.0	4.7	50.3	81.1	3.9	43.3	17.6	-11.3	-0.4	-10.7
5	E - Water supply; sewerage, waste management and remediation activities	842.8	139.4	33.1	2.7	0.5	3.4	15.6	162.7	2.6	27.1	8.3	-7.0	-0.6	-6.2
6	F - Construction	2,966.1	402.3	203.6	60.6	25.5	5.4	89.6	652.2	49.8	272.1	62.6	-46.9	-12.4	-33.9
7	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	6,768.2	1,014.4	274.3	103.5	1.2	3.6	318.6	1,204.0	129.3	263.3	96.1	-64.1	-7.7	-54.4
8	H - Transportation and storage	1,759.8	218.1	100.5	107.2	0.1	6.3	108.1	352.5	34.7	141.1	51.0	-35.8	-5.5	-29.7
9	L - Real estate activities	3,730.2	324.5	355.0	323.7	34.2	8.3	58.0	1,005.6	26.3	246.5	112.4	-51.1	-8.8	-41.1
10	Loans collateralised by residential immovable property	31,099.8	227.7	639.1	2,715.4	3,149.4	19.2	1,229.0	5,858.4	355.7	601.5	95.5	-39.2	-16.2	-17.6
11	Loans collateralised by commercial immovable property	6,455.3	154.8	294.1	366.0	44.1	10.4	130.3	774.4	45.6	202.9	44.9	-25.0	-9.4	-14.3
12	Repossessed colalterals	24.4	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
13	Other relevant sectors (breakdown below where relevant)	4,180.4	535.8	381.5	199.2	7.7	6.4	121.4	1,079.1	76.3	245.2	58.3	-36.2	-8.3	-26.6

· *The positions of the French subsidiary Monte Paschi Banque are not shown due to a lack of specific information.*
· *Loans secured by commercial real estate are included both in the specific item (line 11) and in loans to non-financial corporations in the reported sectors (lines 1-9-13).*

"Other relevant sectors" (line 13) include the following NACE groupings:
- *I – Accomodation and food service activities*
- *K – Financial and insurance activities*
- *M – Professional, scientific and technical activities*
- *N – Administrative and support service activities*
- *P – Education*
- *Q – Human health and social work activities*

Methodological note on the physical risk exposure model

In order to present loans on the basis of their exposure to acute and chronic physical risks, the MPS Group has used a model based on geo-localised risk data provided by a specialised external provider and has integrated it with an internally-defined methodology that classifies individual risk factors into categories of acute and chronic physical risk.

Risk is determined on a geographical basis with the most precise reference possible for the different types of exposure considered, as shown in the table below.

Physical risks /	Risk factors description	Raw Data precision			Corporate activity (limitation)
		Collateral	Loans to Large Corporate	Loans to SME	
ACUTE					
FLOOD	Risk of flood events, related to waterways and heavy rain events, predictive model	census cell			-
LANDSLIDE	Risk of landslide events, long historical data	census cell			-
WIND	Probability of extreme wind events based on storm footprint, measured on Bedfort scale, return period 50y	grid 1.22Km (H3)			-
EXTREME WAVES	Probability of having storm surges and high energy waves	grid 25km		Municipality	-
FIRE	Risk classes depending on days with high fire risk subject to the type environmental where the company is located, RCP 4.5 scenario	grid 4km			-
HEAT WAVES	Probability of Heat Waves (extreme hot event > 3 days), historical data	Not applic.	grid 10km		only outdoor / *labour-intensive activities*
FROST OCCURENCES	Probability of cold events (frost, even of short duration), predictive model	Not applic.	grid 10km		only *agricoltural activities*
CHRONIC					
Heat & soil					
RAINFALL SOIL EROSION	Severity of soil erosion due Rainfall, scenario RCP 4.5	Not applic.	grid 174 m(H3)		only outdoor / *labour-intensive activities*
ARIDITY	Probability of aridity phenomena (ratio precipitation/evaporation), predictive model	Not applic.	grid 0.5km	Municipality	
HEAT OCCURENCES	Probability of hot events (even of short duration), predictive model	Not applic.	grid 10km		only outdoor / *labour-intensive activities*
Coastal					
SEA LEVEL RISE	Estimates the sea level with various meteorological models	grid 25km	grid 25km	Municipality	-
SHORELINE EROSION	Score representing the erosion with respect to the present, RCP 4.5	grid 0.2km	grid 0.2km		-

For each entity analysed (loans of any type to corporates or loans secured by real estate), the entity is considered to be exposed to an acute or chronic physical risk if at least one of the applicable exposure factors is at a “high” or “very high” level (e.g. the risk factors related to heat, drought or frost, which only apply to certain labour-intensive or open-air economic activities, do not apply to loans secured by real estate).

With regard to other climate change mitigation measures not covered by Regulation (EU) 2020/852, which are required in Table 10, the Group currently has no Green Bonds or Sustainable Linked Loans in its portfolio that were issued under rules other than those of the European Union.

Loans that are considered to mitigate transition climate risk include:

Loans that meet the requirements of an internal framework that provides for the use of environmental scoring, which contributes to the definition of the risk profile assigned to the counterparty and the definition of KPIs/covenants shared between the parties with the aim of reducing environmental impact (new flows in 2022 for EUR 146.5 million), and loans to renewable energy projects (biogas, biomass, energy efficiency, wind, photovoltaic, waste to energy) (new flows in 2022 for EUR 40.4 million).

Template 10 – Other climate change mitigating actions that are not covered in the EU Taxonomy

	a Type of financial instrument	b Type of counterparty	c Gross carrying amount (million EUR)	d Type of risk mitigated (Climate change transition risk)	e Type of risk mitigated (Climate change physical risk)	f Qualitative information on the nature of the mitigating actions
1						
2		Non-financial corporations				
3		Of which Loans collateralised by commercial immovable property				
4		Households				
5		Of which Loans collateralised by residential immovable property				
6		Of which building renovation loans				
7		Other counterparties				
8		Financial corporations				
9		Non-financial corporations	440.4	transition risk linked to climate change		Defined on the basis of an internal framework that includes the use of environmental scoring to help define the risk profile assigned to counterparties and the definition of common KPIs between the parties aimed at reducing environmental impact. Financing in support of renewable energy projects is also included.
10	Loans (e.g. green, sustainable, sustainability-linked under standards other than the EU standards)	Of which Loans collateralised by commercial immovable property				
11		Households				
12		Of which Loans collateralised by residential immovable property				
13		Of which building renovation loans				
14		Other counterparties				

Statement of the Chief Executive Officer pursuant to art. 435, e) and f) and Art. 431, paragraph 3, paragraph 1 of Regulation (EU) no. 2019/876 of 20-05-2019

By mandate of the Board of Directors of Banca Monte dei Paschi di Siena S.p.A and pursuant to art. 435, e) and f) and Art. 431, paragraph 3, paragraph 1 of Regulation (EU) no. 575/2013 of 26-06-2013, the Chief Executive Officer, Luigi Lovaglio, declares that:

a) the risk management systems, including liquidity risk, put in place by the Parent Company and described in the document "Pillar 3 Disclosure: update as at 31 December 2022" are in line with the Banking institution's profile and strategy;

b) the section, "Executive Summary", of the same document provides a summary description of the Montepaschi Group's overall risk profile, including liquidity risk, in relation to the company strategy adopted;

c) the process of preparing and auditing the Pillar 3 public disclosure complies with the internal control procedures and processes approved by the Board of Directors.

Siena, 30 March 2023

Luigi Lovaglio

Chief Executive Officer

Declaration of the Financial Reporting Officer

Pursuant to para. 2, article 154-bis of the Consolidated Law on Banking, the Financial Reporting Officer, Mr. Nicola Massimo Clarelli, declares that the accounting information contained in this document corresponds to the underlying documentary evidence and accounting records.

Siena, 30 March 2023

Nicola Massimo Clarelli

Financial Reporting Officer

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Appendix 1 – Details of Information provided in compliance with EBA/ ITS/2020/04

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EU INS2 [1]	Financial conglomerates information on own funds and capital adequacy ratio		
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(1) Not applicable for the Group as it is not included in the list of financial conglomerates as at 31 December 2022.

Appendix 1 – Details of Information provided in compliance with EBA/ ITS/2020/04

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(2) Not applicable for the Group as the NPL ratio < 5% as at 31 December 2022.

(3) Not applicable for the Group as international originating exposures in all countries in all exposure classes are less than 10 % of total originating exposures (domestic and international)

Appendix 1 – Details of Information provided in compliance with EBA/ ITS/2020/04

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(4) Not significant as the Group does not use derivatives as part of CRM techniques or for insignificant amounts

(5) Not applicable

(6) Not reported as the Group as at 31 December 2022 does not present the case

(7) Not applicable as the Group does not use internal models to calculate the requirements for market and counterparty risks

Appendix 1 – Details of Information provided in compliance with EBA/ ITS/2020/04

		Pillar 3 disclosure - 31 December 2022	*Annex*
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(7) Not applicable as the Group does not use internal models to calculate the requirements for market and counterparty risks

8 See Remuneration Policies

Appendix 2 – Details of Information provided in compliance with EBA GL/2020/12

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[9] All institutions shall start disclosing information in columns i to k of the template by 30 June 2024.

[10] This template shall start to apply as of end 2023 first disclosure reference date

[11] All institutions shall start disclosing the information included in this template as of 30 June 2024 first disclosure reference date.

Glossary

ABS (Asset Backed Securities): Financial Securities whose coupon yield and redemption are guaranteed by a pool of assets (collateral) of the issuer (usually a Special Purpose Vehicle), exclusively intended to ensure satisfaction of the rights attached to said financial securities. Typically, thy are broken down into RMBS and CMBS.

Amortised Cost (AC): Differs from "cost" in that it provides for the progressive amortisation of the differential between the book value and nominal value of an asset or liability on the basis of the effective rate of return .

AIRB (Advanced Internal Rating Based): advanced internal models used to calculate capital requirements for credit and counterparty risk within the Basel 2 and Basel 3international framework. They differ from the FIRB models since with the AIRB approach, the banks uses its own internal estimates for all inputs. See also PD, LGD, EAD.

ALM (Asset & Liability Management): the set of risk management models and techniques applied to the Banking Book for the purpose of measuring interest rate risk and liquidity risk. See also Banking Book, Interest Rate Sensitivity, Shift Sensitivity, Economic Value Approach.

AMA (Advanced Measurement Approach): advanced internal models used to calculate capital requirements for operational risk within the Basel 2 and Basel 3 international framework. The approach involves the measurement of capital requirements by the bank through calculation models based on operational loss data and other valuation elements the bank collects and processes.

AT1 (Additional Tier 1): Additional Tier 1 Capital consists of equity instruments other than ordinary shares (calculated in CET1) that meet the conditions for inclusion in Tier 1 capital net of deductions of class 1 items. The latter mainly relate to instruments held in financial entities with significant investments and not to cross-shareholdings.

Backtesting: Retrospective analyses performed to verify the reliability of the measurement of risk sources associated with different asset portfolios.

Banking Book: in accordance with International best practices, the term "banking book" refers to all of the non-trading operations of the Bank in relation to the transformation of maturities with respect to balance-sheet assets and liabilities, Treasury, foreign branches and hedging derivatives. The interest rate, liquidity and forex risk of the Banking Book are typically measured trough Asset & Liability

Management (ALM) models. See Regulatory Banking Book.

Basel 1: the regulations relating to the application of Minimum Capital Requirements issued by the Basel Committee in 1988.

Basel 2: the regulations relating to the application of the New Capital Accord issued by the Basel Committee in 2006.

Basel 3: a set of reforms that has been introduced by the Basel Committee as of 2010 to strengthen regulations concerning capital and liquidity and thereby increase the resilience of the banking sector. The reforms are aimed at increasing the banking system's capacity to absorb shocks arising from financial and economic stress, whatever their origin, and reduce the risk of contagion from the financial sector to the real economy. Implemented within the Community by the "CRR", Regulation (EU) No 575/2013 and "CRD IV", Directive 2013/36/EU.

BCU: Business Control Unit. Local, first-level risk management functions, located within the areas / business units (BUs).

Best practices: It generally identifies conduct in line with state-of-art skills and techniques in a given technical/professional area

BP (basis point): one hundredth of a percentage point, ie. 1bp = 0.01% = 0.0001.

Capital convervation buffer: It is aimed at conserving the minimum level of regulatory capital during difficult periods in the market, through the allocation of high quality capital in periods in which there are no market tensions. All banks have to hold a capital conservation buffer of the highest quality of their capital (CET1 capital) equal to 2.5 % of a bank's total risk exposure.

Capital Requirements: the sum of capital, calculated according to supervisory regulations, destined to cover the single risks of the First Pillar in compliance with the supervisory framework.

Cash Flow Hedge: Coverage against exposure to variability in cash flows associated with a particular risk

Overall Internal Capital: (or Overall Absorbed Capital) is the minimum amount of capital resources required to cover economic losses resulting from unforeseen events caused by the simultaneous exposure to different types of risk. In addition to Pillar 1 regulatory requirements for Credit and Counterparty Risk (which already include those relating to Issuer Risk in the Banking Book, Equity Investment Risk and Real Estate Risk) and for Operational Risk, internal operational models relating to Market Risk, Interest Rate Risk in the Banking Book, Concentration Risk and Strategic Risk are also added. Overall Internal Capital is calculated without considering inter-risk diversification and includes the input from each individual risk.

CCF: Credit Conversion Factor.

CDS (Credit Default Swap): An agreement whereby, upon payment of a premium, one party transfers to another party the credit risk attached to a loan or security, in the event of a loan default by the debtor.

CDO (Collateralized Debt Obligation): Securities issued based on differentiated risk classes with various tranches following the securitisation of a portfolio of debt instruments embedding a credit risk. Typically characterised by financial leverage.

ABS CDO: CDOs whose underlying asset portfolio primarily consists of Asset-Backed Securities.

Combined buffer requirement: It means the total Common Equity Tier 1 capital required to meet the requirement for the capital conservation buffer extended by the following, as applicable:

(a) an institution-specific countercyclical capital buffer;

(b) a G-SII buffer;

(c) an O-SII buffer;

(d) a systemic risk buffer;

Corporate customers: customer segment consisting of medium- and large-sized companies (mid corporate, large corporate).

Countercyclical capital buffer: It is aimed at protecting the banking sector in phases of excessive growth in loans. The buffer provides for the accumulation of CET1 capital during phases of rapid growth in the credit cycle, which can then be used to absorb losses in the downward phase of the cycle.

Retail customers: customer segment primarily consisting of consumers, professionals, shop-keepers and artisans.

CMBS: Commercial Mortgage Backed Securities.

Prudential Ratios: Regulatory ratios which relate different types of capital to risk-weighted assets (RWAs). *See also* CET1 capital ratio, Tier 1 Capital Ratio, Total Capital Ratio.

Common Equity Tier 1 (CET1) Capital Ratio: the ratio between CET1 and total RWA.

Confidence level: level of probability linked to a risk measurements (e.g. VaR).

Counterparty Risk: Counterparty risk is the risk that the counterparty in a specific financial transaction is in default prior to settlement. Counterparty Risk is associated with certain, specifically-identified types of transactions, which: 1) generate an exposure that is equal to their positive fair value; 2) have a market value which evolves over time depending on underlying market variables; 3) generate an exchange of payments or an exchange of financial instruments or goods against payment. The categories of transactions subject to counterparty risk are:

- credit and financial derivative instruments traded Over the Counter (OTC);
- Securities Financing Transactions (SFT);
- Long Settlement Transactions (LST).

Covered bond: Special bank bond that, in addition to the guarantee of the issuing bank, is also backed by a portfolio of mortgage loans or ther high-quality loans sold to a special purpose vehicle.

CRD IV (Capital Requirements Directive IV): Directive 2013/36/EU of the European Parliament and of the Council of the 26 June 2013, on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

CRR (Capital Requirements Regulation): Regulation (EU) No 575/2013 of the European Parliament and of the Council of the 26 June 2013, on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012.

Credit derivatives: Derivative contracts for the transfer of credit risks. These products allow investors to perform arbitrage and/or hedging on the credit market, , to acquire credit exposures of varying maturities and intensities, to modify the risk profile of a portfolio and to separate credit risks from other market risks.

Credit Risk: the risk that a debtor may default on his obligations, either at maturity or subsequently. Credit Risk is associated with an unexpected change in creditworthiness of a responsable party – towards whom there is an exposure – which generates a corresponding unexpected change in the value of the credit position.

CRM (Credit Risk Mitigation): set of credit risk mitigation techniques recognised for supervisory purposes (e.g., compensation of accounts in balance sheet, personal guarantees, credit derivatives, financial collaterals), for which the following eligibility requirements apply - legal, economic and organisational - for the purpose of reducing risk.

Cure Rate: the rate with which impaired loan positions return to performing status.

Default, credit exposures: these include nonperforming loans, watchlist loans, restructured loans and past-due.

Default status: state of insolvency or delinquency of a debtor. Declared inability to honour one's debt and/or make the relevant interest payments.

Deferred Tax Assets (DTA): the amounts of income taxes payable in future periods in respect of taxable temporary differences between the carrying amount of an asset or liability and its tax base.

Deferred Tax Assets (DTA) that rely on future profitability: deferred tax assets, the future value of which may be realised in the event the institution generates taxable profit in the future. They are divided between DTAs arising from temporary differences and DTAs not arising from temporary differences (eg. Tax losses).

Delta EL: *see* Surplus of expected loss value over the value of net provisions.

DIPO: Database Italiano Perdite Operative. The Italian Database of Operational Losses. Database used for operational risk.

Diversification: benefit arising from the simultaneous holding of financial instruments which depend upon risk factors not perfectly matched. In the case of VaR, this corresponds to the correlation effect among risk factors on the overall VaR value.

EAD: *see* Exposure-at-Default.

ECA: Export Credit Agency.

ECAI (External Credit Assessment Institution): External Credit Assessment Institution (Rating Agencies).

Economic Capital: the capital needed to deal with any loss in value generated by unexpected changes in conditions, internal or external, as a consequence of risk. It is calculated on the basis of risk measurement models developed by the Risk Management area. In general, it is obtained on the basis of a consistent transformation in terms of holding period and confidence interval of VaR measurements calculated for individual risk factors and appropriately diversified. The confidence interval is a function of the bank's objective rating. The Economic Capital is the internal estimation of capital needed to deal with risk that is the necessary operational equivalent of Capital Requirements (Regulatory Capital).

Economic Value approach: measure of the changes in the Banking Book overall net current value (defined as the difference between the current value of assets, the current value of liabilities and the value of hedging derivatives) in the presence of different alternative interest rate scenarios. The focus is placed on the changes in the net current economic value of the Bank and takes account of all maturities of assets, liabilities and off-balance-sheet items existing at the time of each valuation. It is typically measured with shift sensitivity assumptions. See also AL M, Banking Book, Interest Rate Sensitivity, Shift Sensitivity.

ESG: Environmental, Social and Governance.

Expected Loss (EL): the total amount of net losses which, on average, the bank can expect (estimate) to incur in the 12 month period following the date of reference on the total amount of performing loans in the portfolio upon measurement. Estimated ex-ante as the "cost of doing business", it ought to be directly included, in terms of spread, in the pricing conditions applied to the customer and covered using an appropriate accounting provision policy. It is defined as the product of the probability of default (PD) and loss given default (LGD):

EL = PD x LGD

The Expected Loss amount is defined as the product between EL and Exposure at Default (EAD):

EL amount = EL x EAD

Exposure at Default (EAD): estimated future value of an exposure upon default of a client. EAD, for the purposes of calculating capital requirements, includes both the cash exposure and the expected usage of the endorsment exposure. Value required in the advanced model for credit risk measurement (AIRB - "Advanced Internal Rating Base Approach") as set out by Basel framework.

Fair Value (FV): the amount at which an asset could be bought or sold or a liability incurred or settled, in an arm's length transaction between willing, independent parties.

FIRB (Foundation Internal Rating Based): the internal models used to calculate capital requirements for credit and counterparty risk within the international Basel 2 Accord. It differs from the AIR B approaches because, in this case, only the PD parameters are estimated by the bank.

FVTOCI: Method of recognition of changes in the fair value of financial assets through other comprehensive income (therefore in shareholders' equity) and not through profit or loss.

FVTPL: Method of recognition of changes in the fair value of financial assets through profit or loss.

Grandfathering: Provision to safeguard capital adequacy, whereby an old rule continues to apply to some existing situations while a new rule will apply to all future situations.

G-SII buffer: Mandatory capital buffer for banks that are identified by the relevant authority as globally systemically important institutions (G-SIIs) to compensate for the higher risk they pose to the global financial system and for potential impact of their failure.

HFT (Held For Trading): IAS category used to classify trading assets and liabilities.

Holding period (hp): forward-looking length of time for which a position is held.

IAS/IFRS: the International Accounting

Standards are issued by the International Accounting Standards Board (IASB). The standards issued after July 2002 are called IFRS (International Financial Reporting Standards).

ICAAP (Internal Capital Adequacy Assessment Process): it is the "Second Pillar" of Basel framework. Banks are required to adopt processes and instruments for determining the level of internal capital needed to cover any type of risk, including risks different from those covered by the total capital requirement ("First Pillar"), when assessing current and future exposure, taking into account business strategies and developments in the economic and business environment.

ILAAP (Internal Liquidity Adequacy Assessment Process): is the internal process for assessing the overall liquidity profile of an institution. The equivalent ICAAP for liquidity risk within SREP.

IMA (Internal Models Approach): method of VaR internal models for the calculation of capital requirements for market risk.

Impairment: when referred to a financial asset, a situation of impairment is identified when the book value of an asset exceeds its estimated recoverable amount.

Risk Adjusted Indicators: see Risk Adjusted Performance Measurement.

Interest Rate Sensitivity (Economic Value approach): measurement of the impact an unexpected shift (parallel or not) in the yield curves by maturity generates on the bank's economic value. It is typically used to measure the interest rate risk of the Banking Book within the Asset & Liability Management (ALM) systems. The value is obtained from calculating the variation in the current value of the real and notional cash flows of sheet assets, liabilities and off-balance items existing at a certain date when there is a variation in the yield curve (eg. +25 bp) with respect to the values of the baseline.

Investment grade: issuers or issues with a rating between AAA and BBB-.

Issuer Risk: connected to the issuer's official rating, this is the risk of decreasing portfolio value due to the unfavourable change in the issuer's credit standing up to the extreme case of default, in the buying and selling of plain vanilla or credit structured bonds, ie. purchase/selling of protection through credit derivatives.

Junior tranche: in a securitisation transaction it is the lowest-ranking tranche of the securities issued (Equity tranche), being the fi rst to bear losses that may occur in the course of the recovery of the underlying assets.

LCR (Liquidity Coverage Ratio): Liquidity regulatory ratio. It aims to strengthen the short-term resilience of the liquidity profile of the bank.

LDA (Loss Distribution Approach): model used to assess exposure to operational risk. It makes it possible to estimate the amount of expected and unexpected loss for any event/loss combination and any business line.

Leverage Ratio: indicator given by the ratio between Tier 1 and total assets introduced by Basel regulations with the objective to limit the growth of leverage in the banking sector and strengthen the risk-based requirements using a different measure based on balance sheet aggregates.

LGD (Loss-Given-Default): Tasso di perdita in caso di insolvenza (default) determinato come il rapporto tra la perdita subita su un'esposizione a causa del default di una controparte e l'importo residuo al momento del default. LGD is estimated in the form of a coefficient ranging from 0 to 1 (or in percentages) based on the following drivers: type of borrower, type of guarantee pledged, technical form of lending. This value is required within the framework of the Advanced Internal Ratings-Based Approach (AIRB) for credit risk under Basel framework. When conditioned on adverse macro-economic scenarios (or downturns), the LGD parameter is defined as "downturn LGD".

Liquidity Risk: the risk that a company will be unable to meet its payment obligations due to its inability to liquidate assets or obtain adequate funding from the market (funding liquidity risk) or due to the difficulty/impossibility of rapidly converting financial assets into cash without negatively and significantly affecting their price due to inadequate market depth or temporary market disruptions (market liquidity risk).

L&R (Loans & Receivables): IAS category used to classify credit.

LST (Long Settlement Transactions): long settlement transactions (in which a counterparty commits to delivering (receiving) a security, commodity or foreign currency against receipt (delivery) of cash payment, other financial instruments or goods with settlement upon a pre-established contractual date, later than the one determined by market practice for these types of transaction, namely five days from the transaction stipulation date.

M (Maturity): the residual life of an exposure, calculated according to prudential requirements for credit risk. For banks authorised to use internal ratings, it is explicitly considered if the advanced approach is adopted, while it is predetermined by legislation if the FIR B approach is adopted.

Margin Sensitivity: measurement of the impact which an unexpected shift (parallel or not) in the yield curve by maturity generates on the Bank's estimated one year net interest income. It is typically used to measure interest rate risk in the banking book within Asset & Liability Management (ALM) systems along with Interest Rate Sensitivity.

Mark-to-market: valuation of a position at market value, usually from the trading book. For instruments officially traded on organised markets, it corresponds daily to the market closure price. For unlisted instruments, it results from the development and the application of specifically- developed pricing functions which determine the valuation starting from the market parameters relating to the respective risk factors. It is at the basis of the calculation of P&L in the trading book.

Mark-to-model: Valuation of financial instruments on the basis of internal valuation models since publicly observable market prices or comparable approaches are not available.

Market Risk: the risk of value loss on a financial instrument or a portfolio of financial instruments, resulting from an unfavourable and unexpected change in market risk factors (interest rates, share prices, exchange rates, price of goods, indices,…). A typical risk of the trading book.

Market Value Method (former Current Value method): supervisory method used to determine counterparty risk in derivatives and the capital requirement to cover it. The current value is calculated adding the replacement cost (or intrinsic value, determined on the basis of the "mark-to-market" value of the derivative, if positive) to the future credit exposure (approximating the time value of then derivative, i.e. the probability that, in the future, the intrinsic value will increase, if positive, or convert into a credit exposure if negative); the future credit exposure is determined for all contracts, independently of the positive value of the replacement cost, multiplying the nominal value of each derivative contract by coefficients differentiated by residual maturity and type of contract.

Mezzanine tranche: in a securitisation transaction, it is the tranche ranking between junior and senior tranche. As a rule, the mezzanine tranche is broken down into 2 or more tranches with different levels of risk, subordinated one to the other. They are typically characterised by an investment grade rating.

NFIs: New Financial Instruments, issued pursuant to art. 23-sexies of Legislative Decree no. 95 of 6 July 2012, containing "Urgent measures for reviewing public spending with unchanged services for citizens and measures to strengthen the capital of undertakings in the banking sector" converted, as amended, by law no. 135 of 7 August 2012, n.135 as subsequently amended.

NSFR (Net Stable Funding Ratio): Liquidity regulatory ratio. It is defined as the ratio between the available amount of stable funding and the required amount of stable funding. The time horizon considered for evaluating stable funding is one year. The minimum requirements of the NSFR is being defined by the EBA.

Non performing: term generally referring to loans for which payments are overdue.

Operational Risk: the risk of incurring losses due to inadequacy or failure of processes, human resources or internal systems, or as a result of external events, including legal risk. These include, among other , loss deriving from fraud, human error, business disruption, system failure, breach of contract, natural disasters. Operational Risk includes legal risk while it does not include strategic or reputational risk (included in Pillar II of Basel).

O-SII buffer: Mandatory capital buffer for banks that are identified by the relevant authority as other (at domestic level) systemically important institutions (O-SIIs) to compensate for the higher risk they pose to the domestic financial system and for potential impact of their failure.

Overall Capital Requirement (or Regulatory Capital): the sum of the capital requirements for the individual risk types (Credit, Counterparty, Market and Operational).

OTC Derivatives (Over the Counter): financial and credit derivatives traded over the counter (e.g.: swaps, forward rate agreements).

Own Funds: sum of Tier 1 (T1) and Tier 2 (T2) Capital.

Past due: *see* Default.

PD: *see* Probability of Default.

Performing: term generally referring to loans characterised by regular performance.

Pillar 2 Guidance (P2G): Pillar 2 capital guidance is a supervisory tool setting non-legally binding Pillar 2 capital expectations at a level over and above overall capital requirements based on the supervisory review and evaluation process findings, in particular (i) an assessment of the adequacy of an institution's own funds (quality and quantity), eg the ability to meet the applicable own funds requirements in stressed conditions; or (ii) supervisory concerns over the (excessive) sensitivity of an institution to scenarios assumed in supervisory stress testing. As P2G is positioned above the combined buffer requirement and is non-legally binding guidance, it is not relevant for the purpose of the calculations of maximum distributable amount.

Pillar 2 Requirement (P2R): Binding capital requirements for risks underestimated or not covered by Pillar 1, which can have direct legal consequences for banks.

Regulatory Banking Book: comprises all positions that are not assigned to the Regulatory Trading Book; its definition is therefore 'residual' in nature, even though most of a retail bank's exposures are assigned to this portfolio; in general, the rules for determining the capital requirements for Credit Risk are applied to the Regulatory Banking Book. See also Banking Book.

Regulatory Trading Book: positions intentionally held for trading purposes and destined to be disposed of in the short term and/or assumed with the aim of benefitting, in the short term, from the differences between purchase and sale price, or other price or interest rate variations. It consists in a set of positions in financial instruments and commodities held for trading or to cover risk inherent in other constituent of the same portfolio. For eligibility to be included under the trading book prudential treatment, the financial instruments must be exempt from any clause which would limit their trade ability or, in alternative, fully covered. Furthermore, the positions must be frequently and accurately assessed. The trading book must be actively managed.

Private equity: activity aimed at the acquisition of equity investments and their subsequent sale to specific counterparties, without public offerings.

Preference shares: are innovative capital instruments that enjoy preferential rights in relation both to dividends (which may be cumulative or non-cumulative) and rights clearance and whose administrative rights are, as a rule, limited or subject to certain conditions of use.

Probability of Default (PD): the probability that a customer/counterparty will default within the space of 1 year. Each PD derives from an internal ratings system and thus falls within a specific range of values corresponding to those used by the official rating agencies (masterscale) so as to obtain standardised data processing between internal and external rating systems.

Profit & Loss (P&L): operational profit or loss indicator of the Trading book which expresses the difference in value of an instrument or a portfolio in a given timeframe, calculated on the basis of market values and directly validated/listed ("mark-to-market") or determined on the basis of internally-adopted pricing models ("mark-to-model").

RAPM: cfr. Risk Adjusted Performance Measurement.

Rating: the degree of risk of non-compliance regarding a specific debtor (counterparty or issuer rating) or a single loan (issuance rating). It is typically expressed through a qualitative assessment belonging to a calibration scale. If determined by a rating agency it becomes an "official" rating. If it is based upon internally-developed models it is called an "internal" rating. It expresses the likelihood of default or insolvency.

Risk: can be defined as an unexpected potential economic loss. Risk is an economic loss in the sense that, against the commercial initiatives undertaken, if risk emerges it always results in a loss of value in the books of the Bank. Risk is an unexpected loss and implies the need to set aside a corresponding sum of capital in order to guarantee the bank's stability and solvency over a long period. Risk is a potential loss in the sense that there may or may not be a certain confidence level (probability) in the future (forward looking) estimate and it is therefore an estimate, not a known value. Since risk is potential, it is always prospective or forward-looking. It is not the measurement of an economic effect that has already materialised.

Risk Adjusted Performance Measurement (RAPM): measurement of performance adjusted by risk. Method of measurement of profitability, which is defined as "risk adjusted" in that – on the one hand - it includes a new P&L negative component under Profit for the Year, that rises as the expected risk component increases (Expected Loss), and - on the other - replaces the "book value" capital used in the transaction with the Economic Capital.

Risk factor: the driver/variable which determines the variation in value of a financial instrument.

RMBS (Residential Mortgage Backed Securities): ABS backed by mortgages.

RWA (Risk Weighted Assets): it results from the application of certain risk weights to exposures as determined by supervisory regulations.

Securitisation A transaction in which the risk associated with financial or real assets is transferred to a SPV by selling the underlying assets or using derivative contracts

Securitisation Cap Test: the test undergone by all securitisation transactions recognised for prudential purposes, according to which the risk-RWAs of securitisation positions are compared with those of securitized exposures (calculated as though the latter were not securitised). If the RWAs of the former are greater than those of the latter (cap) then the latter are taken into consideration.

Scoring: a company's customer analysis system which consists in an indicator resulting from both an analysis of book data and an assessment of the performance forecast for the sector, on the basis of statistic-based methodologies.

Senior/Super Senior tranche: it represents the tranche with the highest credit enhancement, or rather the highest level of privilege in terms of priority of remuneration and reimbursement. It has a high rating and is higher than the mezzanine tranche.

Seniority: Level of subordination regarding the repayment of notes, generally broken down (in decreasing order) into SuperSenior, Senior, Mezzanine, Junior.

Servicer: in securitisation transactions it is the subject that - on the basis of a specific servicing contract - continues to manage the securitized loans or assets after they have been transferred to the special purpose vehicle responsible for issuing the securities.

Settlement Risk: the risk that arises in transactions on securities when, after expiry of a contract, the counterparty is in default with regard to delivery of securities or payment of amounts due.

SFT (Security Financing Transactions): repos and reverse repos on securities or commodities, securities or commodities lending or borrowing transactions and margin lending transactions.

Shift Sensitivity: measurement of the impact of an unexpected and parallel shift in the yield curve upon the bank's economic value. See ALM, Banking Book, Interest Rate Sensitivity, Economic Value Approach.

SMEs: Small and Medium Enterprises.

Speculative grade: issuers or issues with a rating below BBB-.

SPE/SPV (Special Purpose Entities o Special Purpose Vehicles): established in pursuit of specific objectives, mainly to isolate financial risk. The assets consist in a portfolio, the proceeds of which are used for the servicing of bond loans issued. Typically used in asset securitisation transactions.

SREP (Supervisory Review and Evaluation Process): a supervisory review and evaluation process put in place by the Regulatory Authority. It is composed of three main elements:

- A Risk Assessment System (RAS), which assesses the level of risk and control activities of credit institutions;
- a comprehensive review of the ICAAP and ILAAP processes;
- a methodology for quantifying capital and liquidity on the basis of risk assessment results.

Stress test: a set of quantitative and qualitative techniques used by banks to assess their vulnerability to exceptional, though plausible, events.

Surplus Expected Losses on Net Provisions ("Delta PA"): the difference between expected losses and overall net value adjustments, limited to the exposures subject to internal models for credit risk; it is a component of the Own Funds.

Systemic risk buffer Member states have the right to require the banks to hold a systemic risk buffer of common equity tier 1 capital. The requirement may be applied to the entire financial sector or its separate parts. The aim is to prevent and mitigate long-term non-cyclical systemic or macro-prudential risks which may have serious negative consequences for the real economy.

Consolidated Banking Act (CBA): Legislative Decree no. 385 of 1 September 1993 and subsequent amendments and additions.

T1 (Tier 1): Tier 1 capital. It is the sum of CET1 and AT1.

T2 (Tier 2): Tier 2 capital. It is mainly composed of computable subordinated liabilities computable and any excess value adjustments with respect to expected losses for exposures weighted according to the AIRB approach.

Tier 1 Capital Ratio: ratio between T1 and total RWAs.

Tier Total (see Own Funds, former Regulatory Capital): sum of Tier 1 (T1) and Tier 2 (T2) capital.

Total Capital Ratio: ratio between Tier Total (Own Funds) and total RWAs.

Total SREP Capital Requirement (TSCR) It is the sum of the bank's P2R and the capital requirements set out in Article 92 of the CRR ("Pillar 1 Requirements")

TTC (Through-the-cycle): a rating system which uses a long-term time series and better reflects the risks relating to a borrower's specific situation. The impact of macroeconomic trends on this kind of model are limited. A "Point-in-time" rating system uses a short-term or one year time series and not only reflects information regarding the individual borrower. It produces ratings that change on the basis of systemic factors. Most internal rating models estimated by banks do not perfectly correspond to one rating system or the other but fall somewhere between the two models. They are defined as "Hybrid".

UCITS: Undertakings for Collective Investments in Transferable Securities.

Unlikely-to-Pay (UTP) exposures Represent the on- and off-balance sheet exposures for which the borrower does not meet the conditions for classification under bad loans and for which it is considered unlikely that the borrower will be able to fully satisfy the credit obligations in terms of principal and/or interest without recourse to actions such as the enforcement of collateral

Value-at-Risk (VaR): probability measure of a portfolio's market risk. It is defined as the maximum potential loss in value of an asset or portfolio over a defined period *(holding period)* for a given *confidence interval* (with the *confidence level* expressing probability). As an example, with regard to the trading book, the VaR model estimates the maximum decrease (loss) that a portfolio is expected to incur with a specified probability (for ex. 99%), over a defined time horizon (for ex. 1 day). In this example, a 1 day VaR with a 99% confidence implies that there is only a 1% chance of the Bank losing more than the VaR amount in one single working day.

Volatility: measure of the exposure to fluctuations of a risk factor (e.g. rates, prices, foreign exchange,…) over a set period of time.

Contacts

Head Office

Banca Monte dei Paschi di Siena S.p.A.

Piazza Salimbeni, 3

53100 Siena

Tel: 0577.294111

Investor Relations

Piazza Salimbeni, 3

53100 Siena

Email: investor.relations@mps.it

Press Realations

Piazza Salimbeni, 3

53100 Siena

Email: ufficio.stampa@mps.it

Internet

www.mps.it

MONTE
DEI PASCHI
DI SIENA
BANK SINCE 1472