# PART E – INFORMATION ON RISKS AND RELATED HEDGING POLICIES

This Part E provides information on the Group's risk profiles, relating to the management and hedging policies for risk (credit, market, liquidity and operational) implemented by the Group, and operations in derivative financial instruments.
For more information on the monitoring and management of risk of Banco BPM Group (capital adequacy, exposure to risk and the general characteristics of the systems set in place to manage and control them) refer to the document "Disclosure to the Public by Entities - Pillar III", drawn up in accordance with the provisions of the Bank of Italy Circular no. 285 of 17 December 2013, which transposed the provisions contained in Regulation EU no. 575/2013 (CRR), as amended by Regulation EU no. 876/2019 (CRR II), as well as in accordance with other applicable external directives, and made available, within the terms provided by the regulations, in the Investor Relations section of the website www.gruppo.bancobpm.it.

## Section 1 - Risks of the consolidated book

QUANTITATIVE INFORMATION

## A. Credit quality

### A.1 Non-performing and performing credit exposures: outstanding amounts, value adjustments, changes and economic distribution

*A.1.1 Distribution of financial assets by portfolio and by credit quality (book values)*

| Portfolio/quality | Bad loans | Unlikely to pay | Non-performing past-due exposures | Performing past-due exposures | Performing exposures | Total |
|---|---|---|---|---|---|---|
| 1. Financial assets at amortised cost | 720,583 | 1,574,841 | 60,084 | 1,207,966 | 135,576,292 | 139,139,766 |
| 2. Financial assets measured at fair value through other comprehensive income | - | - | - | - | 12,540,843 | 12,540,843 |
| 3. Financial assets designated at fair value | - | - | - | - | - | - |
| 4. Other financial assets mandatorily measured at fair value | 745 | 53,502 | 13 | 70 | 540,309 | 594,639 |
| 5. Financial assets held for sale | - | - | - | - | 51,860 | 51,860 |
| **Total 31/12/2022** | **721,328** | **1,628,343** | **60,097** | **1,208,036** | **148,709,304** | **152,327,108** |
| **Total 31/12/2021** | **906,674** | **2,414,770** | **50,221** | **577,272** | **147,367,263** | **151,316,200** |

Performing exposures in the portfolio of "Other financial assets mandatorily measured at fair value" include 219 million of restructured exposures as part of the Wolf transaction described in the section "Other significant aspects relating to Group accounting policies", contained in section 5 - Other aspects in Part A of these Notes. In fact, it was deemed that the transaction is not attributable to an ordinary concession to the customer, given the extraordinary elements that substantially determine the change in the ownership and control structures of the initiative and that are considered an improvement of the overall situation of the customer. It should be noted that this interpretation is at the date of this Report under discussion with the Supervisory Authority exclusively with reference to the classification methods for prudential purposes, without prejudice to the valuation of exposures in the financial statements as at 31 December 2022 as the prudential classification has no impact on the determination of their fair value.

*Information on the portfolio to which forborne credit exposures belong*

As at 31 December 2022, net forborne exposures amounted to 3,994.4 million (of which 1,250.7 million non-performing and 2,743.7 million performing) and were mainly attributable to the portfolio of "Financial assets at amortised cost - loans to customers"; for further information on these exposures, reference should be made to table A.1.5 below.

*A.1.2 Distribution of financial assets by portfolio and by credit quality (gross and net values)*

| Portfolio/quality | Non-performing | | | | Performing | | | Total (net exposure) |
|---|---|---|---|---|---|---|---|---|
| | Gross exposure | Total value adjustments | Net exposure | Total partial write-offs* | Gross exposure | Total value adjustments | Net exposure | |
| 1. Financial assets at amortised cost | 4,768,673 | (2,413,165) | 2,355,508 | 379,862 | 137,213,083 | (428,825) | 136,784,258 | 139,139,766 |
| 2. Financial assets measured at fair value through other comprehensive income | - | - | - | - | 12,545,507 | (4,664) | 12,540,843 | 12,540,843 |
| 3. Financial assets designated at fair value | - | - | - | - | X | X | - | - |
| 4. Other financial assets mandatorily measured at fair value | 124,222 | (69,962) | 54,260 | - | X | X | 540,379 | 594,639 |
| 5. Financial assets held for sale | - | - | - | - | 51,860 | - | 51,860 | 51,860 |
| **Total 31/12/2022** | **4,892,895** | **(2,483,127)** | **2,409,768** | **379,862** | **149,810,450** | **(433,489)** | **149,917,340** | **152,327,108** |
| **Total 31/12/2021** | **6,581,030** | **(3,209,365)** | **3,371,665** | **427,545** | **148,104,062** | **(463,034)** | **147,944,535** | **151,316,200** |

*(*) Value to be shown for disclosure purposes*

*Portfolio held for trading and derivatives*

The following table shows the credit quality of credit exposures classified as financial assets held for trading (securities and derivatives) and hedging derivatives (not shown in the table above):

| Portfolio/quality | Assets of evident poor credit quality | | Other assets |
|---|---|---|---|
| | Cumulative capital losses | Net exposure | Net exposure |
| 1. Financial assets held for trading | (1,329) | 154 | 3,141,274 |
| 2. Hedging derivatives | - | - | 1,717,211 |
| **Total 31/12/2022** | **(1,329)** | **154** | **4,858,485** |
| **Total 31/12/2021** | **(1,725)** | **1,439** | **3,374,977** |

## B. Disclosure of structured entities (other than the companies for securitisation)

### B.1 Consolidated structured entities

As at 31 December 2022, there were no structured entities consolidated in the accounts other than the securitisation entities, included in the scope of Banco BPM Group.

### B.2 Unconsolidated structured entities

*B.2.1 Prudentially consolidated structured entities*

As at 31 December 2022, there were no structured entities prudentially consolidated in the accounts, included in the scope of Banco BPM Group.

*B.2.2 Other structured entities*

The Group holds interests in UCITs (funds and SICAVs), primarily in order to meet its investment needs. These also include fund units held following sales of multi-originator non-performing credit exposures of the Group.
Total exposure to these investments amounted to 3,530.8 million (1,091.6 million as at 31 December 2021).
For further details please refer to:
- the information provided in the tables breaking down items 20 a) and 20 c) of the balance sheet assets, contained in Part B of these Notes;
- the Section "Risks of prudential consolidation - D.3 Sale transactions - Financial assets sold and fully derecognised" below.

Additional involvement in structured entities, which goes beyond the mere holding of units, is represented by the activity of placing UCIT units.
The Group's net revenues deriving from the placement of Investment funds in 2022 amounted to 499.7 million (592.2 million in 2021).

## Section 2 - Risks of prudential consolidation

### Group Risk Appetite Framework (RAF)

During the first quarter of 2022, the Board of Directors of the Parent Company Banco BPM approved the new Risk Appetite Framework (hereinafter, also "RAF"), both at consolidated level and at the level of the most important individual Legal Entity, through which the Body with strategic supervision functions approves the level of risk that the Group is willing to accept in pursuing its strategic objectives. Subsequently, with the finalisation of the acquisition of control of Bipiemme Vita and Bipiemme Assicurazioni, in the third quarter of 2022, the Group's RAF was integrated with the RAF referring to the Insurance Companies. In particular, the Parent Company's Risk Function together with the Company's Risk Function completed the revision of the RAF of the Companies, in order to bring it into line with the Group's RAF.

The new framework comprises the following basic elements:

1. Governance, which defines the roles and responsibilities of the parties involved and the information flows between them;
2. the system of metrics, which summarises risk exposure;
3. the system of thresholds, which defines the risk appetite;
4. the escalation process, activated with different levels of intensity and parties involved when the various thresholds defined are exceeded;
5. the Risk Appetite Statement (RAS), in which the metrics and methods for calculating the thresholds are analysed;
6. the instruments and procedures, which support the representation and operational management of the RAF, including "Most Significant Transactions (MST)" and "Significant Transactions (ST)".

The RAF is the tool that makes it possible to establish, formalise, communicate, approve and monitor the risk objectives that the Group and the individual relevant Legal Entities intend to assume. To this end, it is divided into thresholds and risk areas that make it possible to identify in advance the levels and types of risk that the Group intends to assume, stating the roles and responsibilities of the Corporate bodies and functions involved in the process of managing these risks. More specifically, the Risk Function has strengthened the overall structure of the Framework, by envisaging, for certain indicators:

- the breakdown by hierarchical levels and risk area (cascading down);
- horizontal cascading at Legal Entity and business line/portfolio level.

The Group must ensure that the RAF, in its operational version, is used and internalised and constitutes an element of guidance for the preparation of processes such as, for example, the Strategic Plan and the Budget, as well as the internal processes of self-assessment of capital adequacy (ICAAP) and liquidity adequacy (ILAAP). The framework is also used as an operational tool within the Recovery Plan and when defining Remuneration Policies.
The general principles that guide the Group's risk assumption process can be summarised as follows:

- the activities carried out take into account the risks assumed and the measures set in place to mitigate them over the short and medium-long term;
- particular attention is paid to capital and liquidity adequacy and to the credit quality of the portfolio, also in the light of the introduction of new legislation and regulatory restrictions imposed by the Supervisory Authority.

In 2022, the ESG (Environmental, Social and Governance) area was reinforced further through the introduction, for each risk area, of new RAF indicators, consistent with the ESG project defined by the Group. Given the importance of the issue, specific ESG indicators referring to Insurance Companies were also introduced.
The RAF's set of indicators leverages the Risk Identification process and takes into account recent legislative provisions relating to Risk Governance. All significant risks identified at the end of this process are considered when the Risk Appetite Framework is drawn up and specific indicators to monitor them are identified. In particular, the Group's RAF has identified a set of indicators for the main risk areas: Pillar I and Pillar II Capital Adequacy, Adequacy of Liquidity/Funding & IRRBB, Credit Quality, Profitability, Operational/Conduct, Other Significant Issues and areas of specific financial risks for Insurance Companies.
The indicators that summarise the Group's risk profile in these areas have been divided into 3 levels, differentiating them between strategic indicators, which allow the Board of Directors to guide the Group's strategic choices, operational indicators, in order to integrate and anticipate the dynamics - where possible - of the strategic indicators, and Early Warning indicators (hereinafter also EWI), which cover the risk areas of the Operational RAF perimeter enabling the dynamics of the indicators belonging to the Strategic and Operational RAF to be anticipated. Specifically:

- the Strategic RAF is a set of metrics and thresholds that enable the Group's risk strategy to be defined and monitored. It includes a limited and exhaustive number of indicators, which express the risk appetite approved by the Board of Directors and represent the summary performance of the overall risk profile;
- the Operational RAF is a set of metrics that enables the strategic indicators to be integrated and broken down and the evolution of the risk profile to be anticipated. These metrics enable specific aspects of the main business processes to be encompassed and are usually monitored with greater frequency in line with their task of anticipating critical situations;
- the Early Warning Indicators are a set of metrics useful for predicting signs of deterioration of the indicators included in the Strategic and Operational RAF. These metrics enable specific aspects of the main

business processes to be encompassed and are usually monitored with greater frequency in line with their task of anticipating critical situations.

The system of thresholds for the Strategic indicators envisages the definition of the following limits:

- *Risk Target* (Medium to Long Term Objective): normally the risk objective defined in the Industrial Plan at Group level. It indicates the level of risk (overall and by type) to which the Group is willing to be exposed to pursue its strategic objectives;
- *Risk Trigger*: this is the threshold, differentiated by indicator, the exceeding of which activates the various escalation processes envisaged by the Framework. The Risk Trigger is also determined with stress tests. The system of limits used for operational purposes (Risk Limits) is defined in accordance with the Trigger values;
- *Risk Alert*: this is the threshold for Early Warning Indicators, the exceeding of which does not activate the various escalation processes envisaged by the Framework, but an information flow to the Committees and Corporate Bodies. The Risk Alert is also determined by the use of stress tests, and in line with the Trigger values of the operational or strategic indicators, which anticipate their trends;
- *Risk Tolerance*: this is the maximum permitted deviation from the Risk Appetite; the tolerance threshold is set in such a way so as to ensure that the Group has sufficient margins to operate, even in conditions of stress, within the maximum risk that may be assumed;
- *Risk Capacity*: this is the maximum level of risk that the Group is able to assume without infringing regulatory requirements or other restrictions imposed by the shareholders or by the Supervisory Authority.

As regards the operational indicators, only the Risk Trigger is established: exceeding the risk limits triggers the prompt activation of specific escalation processes.

On the other hand, as regards the Early Warning indicators, only the Alert threshold is established, and exceeding the risk limits does not trigger the activation of specific escalation processes, but a prompt information flow is prepared for the Committees and Corporate Bodies.

The Risk Function, in collaboration with the Planning and Control Function and the other relevant Functions, develops the RAF, providing support to the Management Body (MB), from a legislative and operating perspective, consistent with strategy, business plans and capital allocation in ordinary conditions and in stressed situations. The RAF is updated at least once a year, also in the event of changes in the internal and external conditions in which the Group operates.

From an operating perspective, ex ante risk management activities are also found in the process to manage the Most Significant Transactions (relating to credit, finance, disposal of loans, etc.), which primarily involve the Risk Function, which must express a prior and non-binding opinion on all transactions categorised as such based on criteria established and regulated internally. In the credit area, the scope of application of the ex-ante opinions of the Risk Function envisages the issue of a prior opinion also for transactions defined as Significant, allowing the preventive assessment of a significantly higher number of loan transactions, both in the disbursement phase - with reference also to the SME portfolio - and in the phase of classification from higher to lower risk, and vice versa. The scope of MST and ST in the credit sector was expanded in 2022, including assessments relating to "Real Estate Finance" transactions (in particular Real Estate Development - RED - and Income Producing Real Estate - IPRE), which were implemented in the second half of 2022.

The Group also provides specific and dedicated training activities and courses with a view to disseminating and promoting a solid and robust risk culture within the Bank.

As part of the "Advanced Analytics" project, Banco BPM organised "Common Understanding" training sessions and a course to develop Data Science skills, which involved several Managers and colleagues of the Risk Function. The courses also continued in 2022, with training sessions dedicated to the SAS and Python programming languages.

In continuity with the "ESG Action Plan" launched in 2021, in 2022 a training programme was defined aimed at encouraging the development of a corporate culture in the Credit sector, and raising the awareness of the functions concerned, with specific indicators, given the integration of climate and environmental (ESG) aspects in the RAF and in Credit Policies.

Jointly, training initiatives were carried out to support the EBA-LOM (Guidelines on Loan Origination and Monitoring) Programme with a view to strengthening lending skills as a whole and to supporting the application of methodologies and tools for the assessment and monitoring of credit risk.

In the second half of 2022, Banco BPM activated a training plan to strengthen insurance skills in support of the Bancassurance Insourcing project. The training concerned core aspects such as: characteristics of the insurance business (life and non-life segments), reference regulatory framework, governance and operating model, accounting and financial statement standards, Solvency II.

Specifically, the Risk Function was involved in all cross-functional training initiatives and in the training deriving from the ESG and EBA LOM Programmes.

### Monitoring and reporting activities

The risk monitoring and control activities performed by the Risk Function seek to ensure, at Group and individual Legal Entity level, the harmonised supervision of risks, by guaranteeing appropriate and timely information to the Corporate Bodies and Organisational Units involved in managing said risks, ensuring the development and continuous improvement of the methods and models adopted for their measurement.

To this end, the Parent Company prepares periodic reports for the Corporate Bodies in line with the Group's internal policies. As part of integrated risk reporting prepared at Group and individual Legal Entities level, the Risk Function analyses the main risks to which the Group and the individual Legal Entities are exposed, and conducts a periodic assessment of the risk profile of the RAF indicators by comparing it with the thresholds defined in the framework, providing historic and detailed analyses that explain the trends, the areas that need attention and the areas for improvement. It should be noted that, at Insurance Company level, monitoring is carried out directly by the Company's Risk Function; the Parent Company's Risk Function integrates this information in its periodic reporting in order to provide complete information on the Group's performance. Furthermore, at least on a quarterly basis an update is provided in integrated reporting on Recovery Plan indicator trends; this analysis is prepared by the "Recovery & Resolution Plans" Function, with the support of the Risk Function.
Positioning analyses (benchmarks) provide the Corporate Bodies of the Parent Company and top management with an at least six-monthly update on the Group's positioning, representing different comparisons on the main indicators with respect to the banking system identified by the EBA Risk Dashboard, or a significant European sample comparable with Banco BPM Group, making use of the main findings and the risk metrics reported in the EBA Risk Dashboards and in the information contained in the Market Disclosure (Pillar 3) documents, therefore enabling any opportunities for improving risk management to be identified.
A verification of current and forward-looking capital adequacy, both from a Pillar I (regulatory) perspective and from a Pillar II (economic) perspective, in accordance with the provisions of the ECB ICAAP Guidelines, is also reported periodically to the Committees and Corporate Bodies.

### Pillar I and Pillar II capital adequacy

To provide its management team and the Supervisory Authority with a complete and informed disclosure, which confirms the adequacy of its own funds, the first defence against the risks assumed, Banco BPM Group assesses its capital situation from a current and forward-looking perspective, both as regards Pillar I and Pillar II, based on Basel III rules (which are applied through CRR/CRD IV) and the specific guidelines that the banks receive from the Supervisory Authority.

As regards Pillar I, the Group's capital adequacy entails continuously monitoring and managing the capital ratios, calculated on the basis of the information provided by the Administration and Budget Function through the application of the rules established by Supervisory Regulations, in order to verify compliance with regulatory limits and to ensure that the minimum capitalisation levels required are maintained. These ratios are also estimated during the Budget or Strategic Plan preparation process, and their consistency with the thresholds established in the Risk Appetite Framework (RAF) and the estimates made in the Capital Plan is verified.
As regards Pillar II, the Risk Function is tasked with coordinating the internal process to determine the Group's capital adequacy, in accordance with regulatory provisions, and with making the current and forward-looking estimates, in both a baseline and stressed scenario, reported to the Corporate Bodies and included annually in the ICAAP (Internal Capital Adequacy Assessment Process) package submitted to the Supervisory Authorities.

Within ICAAP, capital adequacy is assessed by verifying compliance with both Pillar I and Pillar II capital constraints (capital reserve calculated as the ratio between Available Financial Resources - AFR and capital requirements - ECAP, calculated using advanced methods developed internally and validated by the competent corporate function), using the Risk Appetite Framework, as well as qualitative elements.
The outcome of the internal assessment of capital adequacy, conducted on a multi-year basis, takes into consideration both the simulations made from a regulatory perspective and via the application of internal management methods (economic perspective). The simulations are conducted under normal operating conditions and also consider the results of the application of stress scenarios.
In accordance with the ICAAP Guidelines issued by the European Central Bank, at least on a six-monthly basis, Banco BPM Group also updates analyses to verify its regulatory and economic capital adequacy.
The above guarantees that the self-assessment required by the Supervisory Authority is performed on a continuous basis. The main results emerging from this specific monitoring exercise are reported to the Bank's Corporate Bodies.
The updating of capital adequacy analyses also enables changes in the external macroeconomic scenario to be taken into account, and any vulnerable areas and/or elements relating to the Group to be identified, at the same time defining the potential actions deemed most appropriate, with a view to maintaining adequate capital buffers, to guarantee that the medium/long-term company strategies and objectives can be pursued.

### Outcomes of internal validation activities

The Internal Validation Function conducts qualitative and quantitative analyses to assess the soundness and accuracy of Pillar I and Pillar II risk estimates.
Furthermore, as regards ICAAP, the Function expresses an opinion on the regular functioning, on the predictive capacity, on the performance and on the prudence of the internal risk measurement methods.
From the analyses conducted in 2022, no significant gaps in risk measurement emerged.

### Pillar I and Pillar II liquidity adequacy

Banco BPM Group manages the adequacy of the liquidity profile both from a current and forward-looking perspective, with regard to Pillar I and Pillar II, on the basis of the regulatory framework of Basel 3 and the guidelines of the Supervisory Authority.

As regards Pillar I, the Group's liquidity adequacy is continuously monitored by two indicators: (i) the Liquidity Coverage Ratio (LCR), which seeks to enhance the short-term resilience of the Bank's liquidity risk profile by ensuring that it has sufficient high quality liquid resources to overcome an acute situation of stress that lasts for one month; (ii) the Net Stable Funding Ratio (NSFR), which seeks to improve longer term resilience by providing the Bank with greater incentives to fund its own activities by drawing from more stable sources of funding on a structural basis. This structural indicator has a timeline of one year and has been drawn up to guarantee that assets and liabilities have a sustainable structure by maturity. As part of Pillar II, these indicators are supplemented by metrics developed internally, complementary to the regulatory liquidity indicators, and by stress tests.
The Group has also set in place an Internal Liquidity Adequacy Assessment Process (ILAAP) and strategy. In fact, the ILAAP is the internal process through which Banco BPM Group manages and monitors liquidity risk at Group level and assesses liquidity adequacy in both the short and medium-long term. The ILAAP also includes an annual internal self-assessment of its overall liquidity risk management framework, aimed at continuous improvement of the same.

### Other risks considered by the Group

The process of identifying risks (Risk Identification) represents the starting point for all the Group's strategic processes. This process represents a structured and dynamic process that is carried out annually at Group level by the Risk Function, with the involvement of the top management of the Bank and of the main Group companies and makes it possible to identify the main risk factors and emerging risks to which it is or could be exposed, ensuring that the process itself is actually acted upon and known within the Group. The output of the process takes the form of a Risk Inventory, which is a list of all the risks identified by the Group, including those against which an economic capital has been calculated, for which suitable organisational controls are defined for their prevention and mitigation, and a Risk Map, which comprises a list of risks only considered significant for Banco BPM Group quantified using internal models. The latter represents the basis for defining the RAF indicators and the risks contained in it must be considered in the ICAAP.

The Parent Company, Banco BPM, guarantees the measurement, monitoring and management of the capital requirements for each type of significant risk and guarantees the supervision and quantification of the capital resources available to the Group to cover risk exposure, in order to fulfil the regulatory obligations of the First and Second Pillar. More specifically, the centralised management of Group capital adequacy, which entails a comparison between the amount of available capital resources and the capital requirements resulting from the risks to which the Group is exposed, from a current and forward-looking perspective, in normal and stressed conditions, is performed by implementing the internal capital adequacy assessment process (ICAAP).
In addition to Pillar I risks (credit risk, counterparty risk, market risk, operational risk) the risks identified by Banco BPM Group following implementation of the Risk Identification process (Risk Inventory) are listed below:

| | |
|---|---|
| SECURITISATION | This is the risk that the economic substance of a securitisation transaction performed by a Group company is not fully reflected in risk assessment and management decisions. |
| CREDIT CONCENTRATION | Risk that derives from credit exposures to counterparties, groups of counterparties that are connected to one another or belong to the same economic sector or carry out the same business or belong to the same geographical area. |
| COMMERCIAL | This is the current and future risk associated with a potential decline of net interest income with respect to the objectives established due to low customer satisfaction with the products and services offered by the Group due to adverse market conditions. |
| CONCENTRATION OF RISKS | This represents the risk that the exposure towards a single counterparty may lead to different types of risk at the same time. |
| CONDUCT | This risk is included in operational risk. This is defined as the current and future risk of losses caused by the inadequacy of the financial services provided, including the risk of misconduct and incorrect treatment of customers. |
| OUTSOURCING | This is the risk that derives from outsourcing/service contracts with partners outside the Group. |
| EXECUTION | Losses due to shortcomings in the settlement of transactions or in process management, as well as losses due to relations with commercial counterparties, sales agents and suppliers. |
| ICT | This is the risk of financial, reputational and market share losses due to the use of information and communication technology (ICT). |
| PROPERTY | Current and future risk resulting from changes in the value of the property held by the Group caused by fluctuations in the Italian property market. |
| EXCESSIVE FINANCIAL LEVERAGE | This is the risk that a particularly high level of debt with respect to own funds could make the Bank vulnerable, requiring it to take corrective measures in its business plan, including selling assets at a loss, which could require recognising value adjustments on other assets as well. |
| MARKET RISK IN THE BANKING BOOK | This is the risk of loss due to transactions on the market of financial assets classified in the banking book. |
| MODEL | This is the risk that the model used in a measurement process or which strategic decisions are based on gives an erroneous output due to an erroneous specification, flawed processing or the improper use of the model. |
| COMPLIANCE | The risk of incurring legal or administrative sanctions, significant financial losses or reputational damage as a result of the violation of binding rules (laws, regulations) or self-regulatory systems (e.g., Articles of Association, codes of conduct, corporate governance codes). This includes the risk of money laundering and financing terrorism. |
| COUNTRY | This is the risk of losses caused by events taking place outside Italy. The concept of country risk is wider than that of sovereign risk as it refers to all exposures regardless of the nature of the counterparties, which may be natural persons, enterprises, banks or the public administration. |
| EQUITY INTEREST | This is the risk resulting from changes in the value of interests in associates and joint ventures held in the banking book due to market volatility or the status of the issuer. |
| REGULATORY | The risk resulting from current regulatory developments which could influence the pursuit of the strategies identified by the Group. |
| REPUTATIONAL | This is the risk associated with a negative perception of the Bank's image by its customers, shareholders, investors, financial analysts and the Supervisory Authorities, which could have a negative influence on the Bank's ability to maintain or develop new business opportunities or to continue to have access to funding. |
| RESIDUAL | This is the risk that generally accepted techniques to mitigate credit risk used by the Group may be less effective than expected. To quantify it, the significance of the various types of Credit Risk Mitigation (CRM) tools is assessed in terms of reducing the capital requirement resulting from their use. |
| STRATEGIC | This is the current and future risk associated with a potential fluctuation of profits or of capital due to an inadequate market positioning or flawed managerial decision making. More specifically, it represents the risk that the competitive/strategic positioning choices do not produce the expected results, penalising the achievement of short and medium to long-term economic and capital objectives, or even provoking unwanted decreases in profitability levels and capital soundness. In this view, strategic risk related to the possibility of failure of company projects, which results in disruption to Bank management and inertia when faced with unforeseen market dynamics. |
| INTEREST RATE IN THE BANKING BOOK | Risk of changes in the net interest income (Funding Cost Risk) and the economic value of Banco BPM Group as a result of unexpected changes in interest rates which affect positions classified in the banking book for regulatory purposes. The risk arises mainly from acting as intermediary in the process |

| | |
|---|---|
| | of transforming maturities. In particular, the fair value of issued fixed-rate securities, the disbursement of fixed-rate commercial credit lines and loans, and collection via current accounts presents a source of interest rate risk. Cash flows from assets and liabilities subject to floating rates also represent a source of interest rate risk. Said risk includes the Basic risk component. |
| TRANSFER | This is the risk that a Bank exposed to a party that obtains funding in a currency other than the currency of its main revenue sources may incur losses due to the debtor's difficulty in converting its currency into the currency in which the exposure is denominated. |
| LIQUIDITY | The risk that the Group is unable to meet its payment commitments, which are certain or envisaged with reasonable certainty due to the inability: i) to raise funds without compromising its core business activities and/or its financial situation (funding and liquidity risk); ii) to liquidate specific assets without incurring losses on the capital account due to the poor depth of the reference market and/or due to the timing with which the transaction must be performed (market liquidity risk). |
| CLIMATE RISK | Direct and indirect risks related to climate change issues |

## ESG risk factors

As part of the update of the Risk Identification process, carried out in 2022, the Group defined the specific risk factors for ESG issues, dividing them between those related to climate and those relating to governance, social sustainability, and for the insurance business.

Risk management is one of the fundamental components of Banco BPM Group's operating activities. The approach to risk management has evolved considerably in recent years, when the risk related to the effects of climate change was fully integrated as a driver for the development of medium/long-term business strategy, stimulating the various interested parties, including Banco BPM, to take proactive steps to meet the growing interest of the various stakeholders in this issue. This need emerged in particular following the international commitment stated with the 2015 Paris Climate Agreement and with the European Climate Law (EEC/EU Regulation no. 1119 of 30 June 2021), which sets out a binding objective of climate neutrality in the European Union by 2050 and an intermediate target for reduction of greenhouse gas emissions by at least 55% by 2030 with respect to the levels recorded in 1990.

In addition to all of the other projects undertaken as regards the analysis, management and mitigation of the risks relating to climate change, Banco BPM's decision to join the Task Force on Climate-Related Financial Disclosures (TCFD) further confirms the Group's awareness of playing a prominent role in action taken against climate change. For further details on the management and mitigation of climate and environmental risks, please refer to the Group's specific disclosure documentation: 2022 Non-Financial Statement, and 2022 Annual Pillar 3 Disclosure.

*Recent development concerning the ECB*

The European Central Bank has a prominent role in guiding the players in the banking and credit sector towards the disclosure of risks related to climate change. In November 2020, the ECB published the final version of the "Guide on climate-related and environmental risks" for banks, which contains the Regulator's expectations as regards the management of these risks, followed by the communication of the Chair of the ECB Supervisory Board in January 2021, concerning "Supervisory Expectations on climate-related and environmental risk: request for self-assessment and implementation plans", through which Banks were asked to conduct a self-assessment of the variances found with respect to the expectations contained in the ECB Guide (Questionnaire A, sent to the Supervisory Authority on 28 February 2021) and to provide action plans with a view to monitoring the impact of climate and environmental changes (Questionnaire B, transmitted in May 2021).
With reference to the latter document, the main actions envisaged were divided into the following macro-areas, the main elements of which are summarised below:

1. Business Model and Strategy: to take strategic decisions that are consistent with and respect the context in which it operates, Banco BPM needs to understand the impact of climate-related and environmental risks. To this end, in the Strategic Plan presented in November 2021, the main strategic objectives as regards the management of climate-related and environmental risks were indicated, as well as the ways they can be integrated into the business and operations, also through Banco BPM's ESG Programme, which involves the company at all levels.
2. Governance and Risk Appetite: when drawing up business strategy and when establishing business objectives, Banco BPM intends to consider the impact of climate-related and environmental risks, by including specific indicators that summarise the exposure to the risk in these areas in its Risk Appetite

Framework (RAF), to allow the Board of Directors and the company functions involved to take decisions relating to the management of these risks.

3. Risk Management: to be able to consider climate-related and environmental risks as key drivers for the other categories of risk included in the risk management framework, the physical and transition risks that the loan portfolio of Banco BPM Group is exposed to have to be identified, making it possible to integrate such factors also within the definition and assessment of customer creditworthiness and in loan origination, monitoring and pricing processes. The environmental and climate-related risk components must also be adequately considered in processes for defining business continuity plans and in the implementation of operational, reputational, market and liquidity risk management frameworks.
4. Disclosure: Banco BPM is required to publish the information and results related to climate-related and environmental risks deemed relevant by developing reporting in line with the expectations established by specific legislation on the subject.

As illustrated in detail in the Report on Operations, during 2022, the Group was engaged in carrying out the Climate Risk Stress Test 2022, performed by the ECB on the entire European banking sector. This test, the first on climate issues, represents a "learning exercise" for both banks and the Regulator, and aims to collect qualitative and quantitative information from banks, to assess the sector's degree of preparation in the management of climate risk and gather best practices to address it. The aggregated results for the year were published by the ECB on 8 July 2022.

*The main initiatives implemented in 2022*

In 2022, Banco BPM continued the development and implementation activities of the many project initiatives aimed at analysing and managing climate and environmental risks, both with regard to the specific ESG Programme and in response to the expectations of the ECB Guide on the subject, in line with the detailed operational plans defined by the Group and recently updated as part of the overall thematic review process (Thematic Review).

More specifically, the activities launched by Banco BPM mainly concern the following Workstreams of the ESG Programme:

- Governance: with a view to strengthening the organisational model that encompasses the various ESG dimensions, by better specifying appropriate roles and responsibilities, as well as reinforcing the reporting flows towards Corporate Bodies and updating/extending ESG KPIs to remuneration policies for top/middle management. This area is fully completed as at today's date;
- Risk & Credit: with the aim, inter alia, of incorporating ESG factors and the associated risks in the Risk Appetite Framework, as well as in Lending policies, adopting an approach to optimise the risk-return ratio, which also takes the potential impact of environmental and climate change factors into account.

A summary of several of the main activities carried out in 2022, with a particular focus on the Risk & Credit Area, is provided below. For more details on the overall ESG Project and the initiatives already finalised by the Group, please refer to the above-mentioned Group disclosure documents.

As part of the specific "Climate Transparency" initiative, Banco BPM further analysed potential physical and transition risks by completing a materiality definition and analysis through the scoring (of transition, physical and environmental risks) in its current loan portfolio, mapping all of its exposures and the relative real estate guarantees with a view to precisely assessing such risk factors (exposure to controversial sectors, transitional sectors etc.), as the most appropriate benchmark climate scenarios have already been defined since 2021, and the various methodological frameworks have been set in place, which must be implemented over time, in order to fully integrate climate risk into the Bank's decision-making processes. This allowed the Bank to carry out a sensitivity analysis for the initial integration, and therefore as the impact included in the estimates of economic capital, through a first stress test on risk parameters (in particular PD and LGD) resulting from these risk factors within the Group's internal capital adequacy assessment process (ICAAP) by leveraging, specifically with reference to credit risk, the methodology defined by the ECB as part of the "climate stress test 2022".

With regard to the "RAF" initiative, in line with the specific projects followed by the Group and with the main targets set out in the 2021-24 Strategic Plan, Banco BPM's overall 2022 Risk Appetite Framework was significantly strengthened in the ESG area with the introduction of adequate KPIs defined on three different levels of analysis (strategic, operational and early warning) that range over the different risk areas under examination. With a view to continuously developing the framework, a specific assessment was also completed relating to future implementations that the Group will carry out with regard to this area.

With regard to the Market risk initiative, the assessment and selection of an adequate supporting data provider (ESG rating and score) was concluded and the materiality analysis - including the analysis of ESG ratings - of climate-related risks on the Group's proprietary portfolios (both trading and banking book) was completed. In accordance with the Group's independent assessment of liquidity and funding adequacy (ILAAP), the Group also completed the assessment of risk factors and potential impacts of climate and environmental factors on these risks.

At the same time, Banco BPM Group has taken steps to strengthen the methodology currently used for the quantification of reputational risk in order to also include, in the economic capital estimates, the possible deterioration of its image, perceived by its various stakeholders, due to the potential emergence of specific ESG risk factors. In particular, the marginal contribution of the various climate and environmental risk factors was estimated with respect to the overall measure of economic capital able to manage this specific type of risk. A what if analysis tool was also developed to assess potential reputational impacts observed in the banking system as a whole.

In addition, Banco BPM completed all the preparatory activities useful for the formalisation of the first Pillar 3 ESG disclosure. Finally, a complete analysis was carried out of all ESG reporting for the Corporate Bodies and the main Management Committees.

With regard to the Group's lending policies, the Bank has gone into further detail on the analyses quantifying environmental risk, aimed at fully defining the reference policies for the controversial sectors (Credit Strategies "lending policies" initiative). The project activities planned as part of the future implementation of the "EU Taxonomy" also continued, with the aim of measuring the eligibility and alignment of financed counterparties with this regulation.

*Investment services control ESG framework*

During 2022, Banco BPM Group launched a project for the integration of the ESG framework within MiFID II, both in terms of defining the questionnaire to collect customer sustainability preferences and with reference to the classification of sustainable products, defining a methodology and relative model calibration processes.
In addition, the Group:

- strengthened the monitoring processes of derivatives, in particular by working on a project dedicated to verifying the indicators for monitoring margins;
- introduced the weekly monitoring of the market risk measures of the individual product;
- conducted detailed analyses of individual Portfolios to introduce a more effective model for measuring the duration of inflation-linked bonds;
- introduced periodic analyses for the recalibration of the adequacy model that led to the revision of the materiality thresholds of the adequacy model for market and credit risk and the thresholds for the measurement of concentration.

Lastly, standard measurement and monitoring analyses were conducted on the Advisory, Product Governance, Pricing, and Best Execution macro-processes.

### IT Risk and CyberRisk

Starting from the first months of 2021, with the preparation of the 2021-2024 Strategic Plan, Banco BPM Group focused its attention on the evolution of the IT architecture, on the development of cloud adoption and on data reliability, through the review of IT Governance processes and tools, modernisation of the infrastructure, development of the IT operating model and digitalisation.
Banco BPM's Information Technology Department continued to guarantee the highest levels of IT system security and continued its transformation and evolution plan in line with the objectives set, also in terms of performance optimisation and scalability.
The new IT risk methodology, approved in 2020 and applied to a first perimeter of critical applications, was extended to 2021 and continued in 2022.
The residual risk assessment of individual applications also incorporated aspects linked to strategic and reputational risk into the calculation methodology.

The overall assessment under way is confirming a low residual risk.
The process of rationalisation and consolidation of the supplier base, launched in 2020, continued, which, on the one hand, led to a reduction in suppliers considered non-essential and, on the other hand, made it possible to take advantage of new partnerships in the areas of digital innovation and cybersecurity.
Over the same period of time, controls on outsourced services were also strengthened, both within and outside the Group, to ensure adequate control over the stability and quality of services offered by suppliers.
In this regard and in order to continue with efforts to combat and maintain the security levels acquired, the cybersecurity strategy continued, in line with the multi-year plan, through cross-functional interventions to develop security measures.
Various initiatives were implemented to develop the tools to support the IT risk analysis model, including the definition of an integrated IT and security control model.
With a view to the development of human capital and the skills of IT resources, and in consideration of process and technological innovation, a development programme is underway to support IT transformation and strengthen the role of Data Quality and IT Security of the Group with a view to up-skilling and re-skilling professional and cross-functional skills.
The Key Risk Indicators presented in the Risk Appetite Statement 2021 did not exceed the pre-established thresholds.
The 2021 IT Risk Questionnaire, whose completion is required by the ECB, showed that Banco BPM made several improvements compared to 2020, both in terms of reducing exposure to risk and increasing maturity in various areas subject to monitoring.
For the period in question, pending the completion of the assessment process, the first indicators point to a confirmation of these results also for 2022.
Banco BPM Group continued the project with the objective of evolving the methodological framework for the management of IT Risk, in order to align it with sector regulations and strengthen the effectiveness of the mitigation of this type of risk, in line with the indications received from the Supervisory Authority.
On the basis of this methodology, all Group applications including those of Banca Akros were included in the valuation scope. In relation to the contribution to reputational and strategic risks, the analysis also highlighted a limited impact, in terms of economic capital.

## Lease risk

With regard to the risks associated with finance lease transactions, save for that more generally referred to on the management of credit risk by the Group, it is important to note that, considering the run-off situation of the lease segment, the risks associated with the underlying assets are moderately significant and gradually decreasing.
As regards credit risk management and hedging/provisioning policies, it should be noted that the assessment of expected credit losses is conducted on the basis of the classification status and of the total exposure vis-à-vis the customer.
Among other aspects, as numerous years have now passed since the last contracts were entered into, the portfolio is almost exclusively comprised of “finished property” lease transactions, which typically have longer terms, but which are nearing their terms.
In relation to the mitigation of risks attributable to the assets, and specifically properties, the Group pays specific attention to verifying appropriate insurance coverage of the properties, in relation to both amortising contracts, providing for secondary cover that protects the Bank also in the event that the tenant has not contracted his/her own cover, and in relation to contracts terminated due to breach, also where the Bank has repossessed the property.

Regardless of the ordinary protections provided by contract, which assign liability regarding the compliance with and safety of the leased assets to the tenants, the Group significantly focuses on issues regarding the safety of properties, especially those that it once again takes possession of, with the resulting greater direct liability.
In particular, specific works are carried out on properties in order to minimise the risks and damages deriving from external factors, such as pollution, natural events or acts of vandalism, and internal factors, such as precarious stability, lack of security systems or the presence of parts made of asbestos.

Based on the organisational model adopted by the Group, the specialised oversight of those issues is guaranteed by the "Leases - run off" unit, which reports to the Chief Lending Officer, coordinating with the "Real Estate management and support services" unit as regards the management of properties that are once again available to the Group.

### Risks consequent to the reform of benchmark rates

In the light of the changes in legislation, the Group analysed the risks related to the reform of benchmark rates, with particular regard to the risk related to the cessation of the Euribor rate, which represents the main benchmark rate used by the Group to index loan contracts and for the assets underlying interest rate derivative contracts.

For further details, please refer to the content of "Section 5 - Other Aspects" in Part A of the Notes, which, inter alia, illustrates the legislative development of the Interest rate benchmark reform (so-called IBOR), Banco BPM's projects as regards the "IBOR transition" and the qualitative and quantitative disclosure of the so-called Phase 2.

With reference to the other types of risk identified by the Group, in 2022 the calculation methods were fine-tuned as specified below:

- Reputational risk: in 2022, the Risk Function took steps to fine tune the methodology currently used for the quantification of reputational risk in order to also include, in the economic capital estimates, the possible deterioration of the Group's image, perceived by its various stakeholders, due to the potential emergence of specific ESG risk factors. In particular, the marginal contribution of the various climate and environmental risk factors was estimated with respect to the overall measure of economic capital able to manage this specific type of risk. A what if analysis tool was also developed to assess potential reputational impacts observed in the banking system as a whole;
- Strategic Risk: revision of the main methodological assumptions to further strengthen assessments of short-term commercial objectives with the Business Plan targets, more oriented to a medium and long-term time horizon, at the same time strengthening the strategic controls relating to the impacts of ESG factors and the overall evolution of digitalisation processes;
- Equity risk: fine-tuning of the estimation methodology in order to include an assessment of ESG factors, highlighting in particular the impact of transition risk on the analysis portfolio and on the relative economic sectors;
- Real estate risk: extension of the estimation methodology in order to also consider the impacts of environmental and climate risk factors (physical risk) on the potential expected value of the real estate portfolio owned by the Group;
- Risk-based incentive system: the 2022 Incentive System of the Group and of the individual companies was defined on the basis of the new Supervisory provisions concerning "Remuneration and incentive policies and practices" issued by the Bank of Italy (Circular 285/2013 and subsequent updates). In this regard, the conditions for activating the incentive system are aligned with the Group's RAF framework and, more generally, with the risk appetite approved by the Parent Company's Board of Directors. In general, during 2022, work continued to strengthen the link between the Remuneration Policies and the RAF.

### Stress testing

Banco BPM Group has implemented a detailed stress testing framework, meaning the set of quantitative and qualitative techniques used by the Bank to assess its vulnerability to exceptional, but plausible events. As part of the framework, guidelines have also been established regarding the application of stress scenarios as well as the roles and responsibilities of the company functions and the Corporate Bodies. The framework for long-term forecasting and for stress testing adopted by Banco BPM therefore represents a coordinated set of methods, processes, controls and procedures that establish the main variables to use for forecasting purposes for estimates in ordinary and adverse conditions, with a view to both planning and risk management purposes and regulatory and operational purposes.
Stress tests seek to verify the effects on the Bank's risks due to specific events (sensitivity analysis) or joint changes in a series of economic-financial variables in cases of adverse scenarios (scenario analysis), with reference to individual risks (specific stress tests) or in an integrated manner on several risks (joint stress tests).
The process of analysis is based on quantifying the impacts relating to firm-wide stress tests, which enables a global assessment of the Bank's risk profile to be made.
These tests allow identification of the risk factors that contribute more than others to this negative result and consequently allow loss-limiting strategies to be implemented when these scenarios occur.
The Scenario Council, set up in 2019, is tasked with confirming or proposing a review of the scenarios used in Group processes, in light of external events or the Bank's specific vulnerabilities, also taking account of any considerations from top management deriving, for example, from substantial changes in the risk and profitability estimates, changes in the market or reference context, the introduction of new regulatory standards or specific

indications of the Supervisory Authority, also identifying the related processes impacted and assessing their potential update. The updates of macroeconomic scenarios made by different external providers are examined continuously, assessing on each occasion whether to transpose them into the related strategic processes.
To better enhance and structure the activity performed by the Scenario Council, from 2021, the Bank has defined a framework to update the macroeconomic scenarios, also supported by the definition of a method to identify materiality triggers for scenario changes, which if surpassed require the Scenario Council to be convened for an in-depth analysis of the scenarios that originated said overruns and a technical assessment of their adoption in the Bank’s strategic processes.
In 2022, the Scenario Council met 16 times (15 since the beginning of the Russia/Ukraine conflict) to continuously assess the changes in the external macroeconomic scenario and the impacts on the Bank's strategic and management processes.

Consistent with the aims of analysis and the principle of proportionality, the Group periodically performs stress tests with specific objectives associated with the main company processes, specifically:

- Risk Identification, as regards defining the materiality of risks, which is verified under ordinary and stressed conditions;
- Drafting the Risk Appetite Framework (RAF);
- Strategic and operational planning;
- Quantifying operational limits in stress scenarios (where envisaged);
- Calculation of IFRS 9 ECL;
- Internal Capital Adequacy Assessment Process (ICAAP);
- Internal Liquidity Adequacy Assessment Process (ILAAP);
- Liquidity Contingency Plan;
- Recovery Plan.

Vertical stress tests are also included in these tests and conducted at the portfolio and individual risk level, based on sensitivity or scenario analyses, also aimed at identifying potential concentrations of risks.

Specific stress tests are also conducted for management and regulatory purposes. Known as Supervisory Stress Tests, they are conducted in accordance with the timescales dictated regularly by the Supervisory Authority.

The Group uses these tools to support other risk management and measurement techniques, with a view to:

- providing a forward-looking vision of risk, of the relative economic and financial impacts, evaluating the overall solidity of the Bank in the event that adverse scenarios or alternative ones with respect to those of reference occur, therefore providing support to the preparation of the budget and of the business plan;
- contributing to the most important planning and risk management processes, as regards setting RAF thresholds and establishing the Group’s risk/return objectives;
- assessing the development of risk mitigation and recovery plans in certain stressed situations. In fact, the stress tests are used to establish specific internal trigger thresholds, which once reached trigger the resolution plans as envisaged by the BRRD (Bank Recovery and Resolution Directive) regarding the prevention and management of banking and investment company crises.

During the first half of 2022, the Group was also engaged in carrying out the Climate Risk Stress Test 2022, performed by the ECB on the entire European banking sector. This test, the first on climate issues, represents a “learning exercise” for both banks and the Regulator, and aims to collect qualitative and quantitative information from banks, to assess the sector’s degree of preparation in the management of climate risk and gather best practices to address it. The aggregated results for the year were published by the ECB on 8 July 2022.
During the first half of 2023, the Group will also be involved in the EU-wide Stress Test 2023 exercise led by EBA/ECB aimed at testing the business model and the resilience of banks on the basis of 2 scenarios, baseline and adverse, developed by the Regulator. The exercise, launched on 31 January 2023, will end on 31 July of the same year with the publication of the results by the EBA.

### The internal risk control system

The following paragraphs contain a description of the structure and the duties of the internal control functions of Banco BPM Group. The main corporate functions of the Parent Company, Banco BPM, responsible for controlling risk, are as follows:

- Audit Function;
- Risk Function;
- Compliance Function;
- Anti-Money Laundering Function.

The Audit Function reports directly to the Board of Directors, it performs the Internal Auditing activities envisaged by Supervisory Provisions by conducting auditing and monitoring exercises - on site and remotely - at the Group Banks and Product Companies, under a specific outsourcing agreement, namely as Parent Company. The head of the Audit Function has direct access to the Body in charge of the control function and enjoys unrestricted communication with the same, without the need for mediation.

On the one hand, the Audit Function of the Parent Company is responsible for monitoring the regular performance of operations and the evolution of risks, with a view to third-level controls, including on-site and off-site checks, and, on the other hand, it strives to assess the completeness, adequacy, functionality and reliability of the organisational unit and other components of the internal control system, presenting possible improvements in the risk management, measurement and control process to the corporate bodies and taking an active part in their implementation.

The Audit Function is responsible for the internal audit activities of all the central and peripheral structures of the Italian companies of the banking Group; furthermore, for the only foreign entity belonging to the Group (Banca Aletti Suisse), it conducts its own audits in addition to those conducted by the local structure assigned audit activities and coordinates with the same where necessary.

With effect from 22 July 2022, following the acquisition by Banco BPM of the entire interest in Banco BPM Vita S.p.A., and indirectly in Banco BPM Assicurazioni S.p.A. (a wholly-owned subsidiary of Banco BPM Vita), the Audit Function of Banco BPM took over the guidance, coordination and control of the Internal Audit Function of the Insurance companies, which reports to the respective Boards of Directors, reporting functionally to the Audit Function of Banco BPM.

When performing its duties, the Audit Function takes the provisions of the widely accepted professional standards into account.

In addition to the usual internal audit activity, the Audit Function also provided advisory services, offering its experience mostly by participating in projects and working groups.

The Risk Function reports directly to the Chief Executive Officer of Banco BPM S.p.A.; the head of the function has direct access to the Body with strategic supervision functions and the Body in charge of the control function and communicates with them without restrictions or intermediaries.

The Parent Company's Risk Function is assigned the role of control function pursuant to Circular 285/2013 of the Bank of Italy, it guarantees the functional coordination of risk control measures of Group Companies and oversees - at Group level and in an integrated manner - the governance and control (Enterprise Risk Management), development and risk management (Risk Models) processes and the validation process of internal risk measurement models (Internal Validation).

The Risk Function and its internal structures are independent from operational functions and activities. In particular, they are responsible for:

- proposing and developing guidelines and policies regarding the management of the relevant risks, in accordance with the company's strategies and objectives;
- coordinating the implementation of the guidelines and the policies regarding the management of the relevant risks by the units assigned by the Group, also in different corporate areas;
- guaranteeing the measurement and control of the Group's exposure to the different types of risk and of the relative capital absorption, verifying the implementation of the guidelines and the policies established for the management of the relevant risks and the compliance with the thresholds established within the Group's Risk Appetite Framework;
- guaranteeing the development and continuous improvement of the models and metrics for the measurement of risk - of the First and Second Pillar in base and stressed conditions - also through projects to implement and enact advanced models, to align with the standards that are gaining recognition at international level over time, to implement supervisory regulations and directives, and to develop increasingly effective controls;

- overseeing the validation process of the internal models used to calculate capital requirements;
- overseeing the process to verify, through second level controls, that the trends of individual exposures are being correctly monitored, as well as to assess the consistency of the classifications, the appropriateness of provisions and the adequacy of the recovery process;
- ensuring that the information used for measurement, monitoring and reporting of the risks under their responsibility were subject to a robust Data Quality and Aggregation framework;
- formulating mitigation proposals, specifically through the use of insurance or financial cover, in order to externalise the risk, assigning the assessment and execution thereof to the functions in charge, monitoring the performance;
- with reference to the Covid-19 pandemic, ensuring adequate monitoring and support to the Corporate Bodies in the understanding and implementation of corrective measures by providing a risk opinion on the robustness and appropriateness of the processes and the choices of method made, particularly by the credit functions, and in general when making long-term forecasts.

The head of the Risk Function is also responsible for assisting the Corporate Bodies in performing their respective duties in terms of the Internal Control System, by:

- intercepting all the relevant information required to quantify and manage risk promptly and in a coordinated manner;
- ensuring a more integrated ability to process, organise and contextualise the information acquired and to make assessments (both in terms of risk and asset value) separately from other cases;
- drawing up a summarised (integrated) report on company risks and, therefore, enabling the Corporate Bodies to gain a better understanding of the main problems identified by the second-level internal control system;
- promptly implementing corrective measures, in accordance with the problems and the relative priorities indicated by the second-level Internal Control Functions.

The Internal Validation Function, which reports directly to the Risk Function, independently oversees the internal validation processes of the risk measurement and management systems. The Function assesses the model risk implicit in the methods used to measure risk and conducts tests to validate the calculation of capital requirements with reference to the application of internal validated models.
In December 2022, as part of a broader renewal of the organisational and governance model, the risk control function was strengthened through the establishment of the position of CRO (Chief Risk Officer) reporting directly to the Chief Executive Officer.
The Group's Compliance Function carries out its activities, reporting directly to the Chief Executive Officer, both for the Parent Company and for the Group companies that have outsourced the service, and has direct access to the Corporate Bodies, communicating with them without any restrictions or intermediation.
The Function oversees, according to a risk-based approach, the management of compliance risk with regard to all company activities, verifying - during both the start-up and operating phases - that internal procedures are adequate to prevent that risk.
For rules relating to the exercise of banking and brokerage activities, the management of conflicts of interest, transparency towards customers and, more generally, regulations for consumer protection, the Compliance Function - as required by the Supervisory Provisions - is directly responsible for managing the risk of non-compliance.
With reference to other regulations that provide for specific forms of specialised oversight, the duties of the Compliance Function, based on an assessment of the adequacy of the specialised controls to manage the non-compliance risk profiles, are tiered and the Compliance Function itself is, in any case, responsible (in collaboration with the delegated specialised departments) for: i) defining the methodologies for assessing the risk of non-compliance; ii) identifying the relative procedures; iii) verifying the adequacy of the procedures themselves to prevent the risk of non-compliance.
For the areas directly supervised by other second-level control functions, the compliance risk management model is implemented by these functions, limited to the aspects falling under their specific responsibilities.
The Compliance Manager has also been given the role of Data Protection Officer (DPO) in accordance with European Regulation 2016/679 (GDPR) concerning personal data protection.

The Group's Anti-Money Laundering Function carries out its activities, reporting directly to the Chief Executive Officer, both for the Parent Company and for the Group companies that have outsourced the service, with full autonomy to oversee the risk of money laundering and terrorist financing, as well as reports of suspicious transactions, and has direct access to the Corporate Bodies, communicating with them without any restrictions or

intermediation. Furthermore, the function carries out the activities required under the regulations assigned to the Anti-Money Laundering Function Manager and the Suspicious Transaction Reporting Officer (SOS).
The activities are performed according to a risk-based approach, conducting audits and checks in order to assess exposure to the risk of money laundering and terrorist financing, the effectiveness of the organisational and control oversight measures, when setting them in motion and when established, and any corrective measures to be implemented to remedy the vulnerabilities found.

### Improvement activities for the risk control and management system

Over time, Banco BPM Group has launched numerous projects to improve its risk management and control system. Specifically, to date the Group has been authorised to use its internal models to calculate regulatory capital absorption with regard to the following Pillar I risks:

- credit risk (starting with the measurement at 30 June 2012): the scope concerns advanced internal ratings-based models (PD, for both monitoring and acceptance, and LGD) relating to loans to businesses and retail of Banco BPM. The standard regulatory approach will continue to be adopted, for prudential reasons, for loans portfolios that are not included in the scope of first validation A-IRB. In 2017, Banco BPM Group submitted a request to the European Central Bank for the extension of the advanced internal models (A-IRB) to the Corporate and Retail portfolio of BPM S.p.A. and the use of the EAD model limited to the Retail scope, for the relative calculation of the capital requirement for credit risk, together with a model change for the definition of default and updating of historical series. In this context, the Group was authorised by the ECB to use these templates for reporting purposes in the first quarter of 2018, starting from January 2018.
  From March 2021, the Regulator authorised the Bank to use a more updated IRB framework with the introduction within the various areas of application (regulatory and operational) of new PD, LGD and EAD parameters for retail customers and corporate customers. The effects of these new parameters incorporate the new regulatory definition of default (EBA/GL/2016/07) and anticipate a range of aspects regarding the EBA guidelines on the estimation of PD, LGD and downturn (respectively EBA/GL/2017/16 and EBA/GL/2019/03).
  In 2021, the Bank launched an important project to review the A-IRB system, with the aim of completing the process to align the current credit risk models with the regulatory requirements originating from the EBA Guidelines on the development of PD and LGD models (EBA/GL/2017/16), estimation of downturn (EBA/GL/2019/03, as well as EBA/RTS/2018/04) and Credit Risk Mitigation techniques (EBA/GL/2020/05). The projects to review credit risk models, the assessment criteria of the same (backtesting framework) and the adaptation of the various Bank processes, led to the submission of an A-IRB model change application to the Regulator in the first quarter of 2022; the Final Decision on the application should be received by the first quarter of 2023;
- market risk: on 11 January 2023, the Final Decision was received from the ECB, approving the implementation of the relative change in the IRC calculation method, following the resolution of obligation 18 (IMI 4145) requested in January 2022. The new method guarantees a more accurate estimate of the P&Ls associated with rating migration events through a greater number of financial instruments used to calibrate the spread levels of the worst rating classes. A forward structure with different maturities (1, 3, 5, 7, 10 years) for the different rating classes and sectors was also introduced in the Asset Swap Spread matrix and a CDS spread matrix was created to calculate the P&L associated with the shock spreads of the CDS, with the same forward structure (1, 3, 5, 7, 10 years). Therefore, the new methodology is used to calculate capital absorption/RWA starting from the first quarter of 2023. The ECB decision in question also provides for the removal of the 10% IRC add-on. As regards the latter metric, a limitation was actually in place with a 10% add-on on an individual and consolidated basis, until several relative methodological findings were resolved.

## 1.1 CREDIT RISK

QUALITATIVE INFORMATION

## 1. General aspects

Banco BPM Group pursues lending policy objectives that seek to:

- support the growth of business activities in the areas it operates in, with the goal of overseeing and managing the development of the Group's positioning, in line with RAF policies and budget and business plan objectives, focusing on the support and development of customer relationships;
- diversify its portfolio, limiting loan concentration on single counterparties/groups and on single sectors of economic activity or geographical areas;
- adopt a uniform and unique credit management model based on rules, methods, processes, IT procedures and internal regulations harmonised and standardised for all Group banks and companies.

To optimise credit quality and minimise the global cost of credit risk for the Group and the individual companies, under the organisational model the Parent Company's Loans Function is in charge of lending policy guidelines for both the banks and companies of the Group.
Guidelines have also been set at Group level, defining conduct with respect to assuming credit risk, to avoid excessive concentrations, limit potential losses and guarantee credit quality. In particular, in the loan approval phase, the Parent Company exercises the role of management, direction and support for the Group.
The above Function monitors the loan portfolio, and focuses on analysing the risk profile performance of economic sectors, geographical areas, customer segments and types of credit lines granted, as well as on other dimensions of analysis, which enable any corrective actions to be defined at central level.
The role of the Parent Company's Risk Function is to support Top Management in planning and controlling the risk of exposure and capital absorption, in order to maintain the stability of the Group, verifying forward-looking capital adequacy and under stressed conditions, as well as compliance with the RAF thresholds, the Group's risk limits and its risk appetite. In particular, the Function's task is to develop, manage and optimise internal rating models (Pillar I), the loan portfolio model (Pillar II) over time, and to supervise - as part of second level controls - the calculation of risk-weighted assets using advanced methods.
Portfolio risk monitoring is based on a default model that is applied on a monthly basis to credit exposures of Banco BPM Group.
Banco BPM Group has also implemented the EBA Guidelines (EBA/GL/2020/07) on reporting and disclosure of exposures subject to measures applied in response to the Covid-19 crisis (legislative and non-legislative moratoria as well as new loans guaranteed by the State or other Public entity).
For further details and information, please refer to the content of the specific paragraph entitled "Information on exposures subject to legislative and non-legislative moratoria on newly originated exposures subject to public guarantee schemes" contained in the document "Disclosure to the Public by Entities (Pillar III)" of Banco BPM, available on the website www.gruppo.bancobpm.it.

### Impacts deriving from the Covid-19 pandemic and the Russia-Ukraine conflict

During 2022, in response to the complexity of the situation generated by the outbreak of the war between Russia and Ukraine, Banco BPM implemented customer contact initiatives (contact and support campaigns) to gain an updated view on the impacts deriving from the crisis situation and to activate prompt reaction measures. On the basis of the macro and microeconomic analyses obtained from the main providers and the evidence resulting from the analyses of the Scenario Council, the most vulnerable sectors with respect to the market context created were identified and all the counterparties operating in those sectors were analysed. Within this scope, companies with potential vulnerability risks were selected on the basis of a risk-based criterion - current risk and stress test conducted on the prospective margins of these companies.
The vulnerable sectors include all the so-called "energy-intensive" ones, which have suffered heavy repercussions from the increase in the prices of energy and raw materials and their procurement. These were joined by the energy sectors, particularly energy trading.
In line with the lending processes, the Bank's strategy is based on four pillars:

- careful monitoring of the loan portfolio and identification of vulnerable exposures by the Credit Department (Credit Policies);

- timely activation of engagement campaigns and collection of feedback through questionnaires prepared ad hoc by the Corporate and Retail Sales Department and the Credit Department (Credit Governance);
- periodic first-level ex-post controls, aimed at assessing the correct classification of borrowers with potential financial difficulties as a result of the interaction with customers by Credit Governance/Monitoring;
- Controls on second-level activities: ex-ante assessment of the questionnaire and of the perimeter (through the assessment of the credit policy) and ex-post controls (Credit file Review) on the quality of the feedback and on the first-level controls by the Risk-Enterprise Risk Management Function.

Lastly, as regards the monitoring of the portfolio relating to support measures for households and businesses resulting from the Covid-19 crisis, granted by the Group in previous years, both by virtue of the provisions of government interventions and on the basis of bilateral initiatives, it should be noted that in 2022 it was not necessary to implement additional specific initiatives with respect to the provisions of the ordinary monitoring processes, applicable without exception to the exposures in question.

## 2. Credit risk management policies

### 2.1 Organisational aspects

The Group governs credit risk by assigning specific responsibilities to the Bodies, functions and Committees of the Parent Company and its Subsidiaries, in line with its Internal Control System and on the basis of an organisational model that provides for the centralised control within the Parent Company to convey a consistent policy and governance when managing the risks.
The credit risk management policies represent the reference framework for the operations of the structures allocated with risk management, they are updated annually as part of the RAF and they guide credit policies in terms of the evolution of the company’s activities, the expected risk profile and the external scenario.
As required by supervisory regulations, the Group has drawn up an internal ex-ante management process for Most Significant Transactions (MST) and for the supervision of large exposures, controlled by specific company regulations in this regard.
The Parent Company draws up Group credit policies, in parallel with the budget process and in line with the strategies, the risk appetite and the economic objectives approved by the Board of Directors.

To measure the different aspects and components of credit risk, the Group adopts models and metrics developed in accordance with supervisory regulations, with a view to guaranteeing the sound and prudent management of the risk positions assumed and to comply with regulatory requirements, also assessing the effect of changes in the scenario to which the credit portfolio is exposed.
These models must periodically undergo backtesting and stress testing in order to guarantee their statistical and prudential robustness, validated by an operational unit that is independent to the function responsible for developing them, reviewed at least annually by the Audit Function.

From a regulatory perspective, risk-weighted assets (RWA) are calculated by a method based on internal ratings (A-IRB Approach), risk segments/parameters validated by the Supervisory Authorities and using the Standard Approach for the other exposures, in accordance with the Group’s roll-out plan. As regards the scope of Banca Akros and Banca Aletti, the standardised regulatory approach is applied.

The risk parameters of the models are periodically calibrated.
The development and updating “model change” process for the rating models entails a series of activities and procedures, the aim of which is to define, initially or when updated, the rating models applicable to credit exposures, namely statistical or empirical models to confirm the credit assessments made by the Companies of the Banking Group and to enable the capital requirements of the same against the risk of unexpected losses to be calculated.

With regard to the segments validated, these include:
- five rating models (4 for Business customers, 1 for Private customers), which use financial statement, performance and qualitative information (Business) and sociological/performance (Private), calibrated adopting a long-term approach (Through-the-Cycle), in order to neutralise the possible impacts of an expansive or recessive phase of the economic cycle;

- two LGD performing models (1 for Business, 1 for Private customers);
- two LGD non performing ELBE (Expected Loss Best Estimate) and Defaulted Asset models, separate for Business and Private customers;
- two EAD models for Corporate customers and for the Private customer portfolio respectively.

From an operational perspective, the unexpected loss on credit risk is measured by quantifying the economic capital through the application of a Credit VaR portfolio model.

The key component of the credit risk measurement models is the Rating System, namely a structured and documented set of methods, organisational and control processes and procedures to organise databases, which enables the relevant information to be collected and processed, to reach summary assessments of the risk level of a counterparty and of individual credit transactions.
The rating system is incorporated in the decision-making processes and in the management of the company's operations, playing an important role in the following Group processes:

- Lending policies;
- Business planning;
- Capital planning;
- Risk Appetite Framework;
- Product pricing;
- Granting loans;
- Monitoring and managing loans;
- Provisioning;
- Risk measurement and control;
- ICAAP and ILAAP;
- Management of the bonus system;
- A.Ba.Co. (other funding instruments).

The procedures for the operational use of the rating system in the various company processes are regulated by regulations issued over time in the above-mentioned areas. The regulatory framework set in place to oversee credit risk, developed in accordance with company standards, is based on specific Regulations and Process Rules, specifically the Regulations on counterparty credit risk and the Regulations for Limits of Autonomy and powers in the granting and management of loans.
The principles established in the Regulations issued have been applied and included in the wording of the regulations, for the processes included in company taxonomy.
The processes for the granting of loans guarantee an adequate, objective and harmonised assessment of creditworthiness and of risk, through the use of the rating system to guide the decision-making steps.
More specifically, the ratings are used to define the scope of decision-making, by means of a weighting method based on an assessment of the creditworthiness of each counterparty, summarised by the rating, as well as on the measures to mitigate the risk assumed.
An assessment of the risks already assumed or to be assumed is conducted for each individual customer and Risk Group, namely the set of parties related through the ties considered for the registration of Economic Groups, as well as joint account holders and those with a joint-obligation, as regards the entire Banking Group.
The criteria for the allocation of responsibilities to the various parties/organisational units that take part in the loan granting process are based on principles of separation in order to guarantee independence of judgement and prudence in the assumption of risk.
To this end, with regard to the activities envisaged in the loan granting process, the roles of "Proponent", of "Decision-maker" and of any "Intermediate body that gives an opinion" are clearly separated.
In the case of "non-resident" customers, compliance with the authorised maximum limit for "Country Risk" must first be checked, before the assumption of "Credit Risk", "Delivery Risk", "Placement Risk" and "Evidence Risk".
The "Authorisation, monitoring and management of overdrafts and/or past due loans" Rules establish the continuous monitoring activities that the Manager must perform when managing the account, with regard to overdrafts, past due instalments not paid and drawdowns on expired or reduced loans.
The management of overdrafts is accompanied by a specific procedure that has made access to data regarding positions classified as "becoming past due" more efficient, enabling both current and historical information available to be consulted, right down to the details of an individual account, as well as obtaining lists based on selection criteria entered by the user.

Forborne exposures are identified as part of the loan granting process and, therefore, through the ELA (Electronic Loan Application) function.
The identification of forborne exposures is carried out for both performing loan positions included in the watchlist, and for those classified as non-performing loans, for which a status of financial difficulty has been found (said status is objective for the positions classified as non-performing) and the granting of a tolerance.
The Account Manager, in the role of "Proponent", is responsible for:

- assessing the customer's situation of financial difficulty. To reach an opinion, all of the information from the preliminary check used to analyse creditworthiness in the ELA, including a specific additional checklist that differentiates between Business and Private customers;
- assessing the proposed award of forbearance measures;
- entering the Account Manager's assessment of the customer's situation of financial difficulty or otherwise in the information system and identifying award or otherwise of the proposed forbearance measures.

The Intermediate Body that gives an opinion is required to share the Proponent's assessments.
The Decision-making Bodies are responsible for ascertaining the consistency or otherwise of the assessment made by the Proponent.

The evidence expressed at the time of the decision on the individual line of credit automatically identifies all accounts related to it as "forborne".
Once classified as forborne, the exposures are managed in accordance with the relevant processes ("Monitoring and managing non-performing loans" for "Forborne non-performing exposures" and "Monitoring and managing loans: watch list" for "Other forborne exposures").
Decisions regarding situations in which the exposure is no longer forborne, or the reclassification of "Forborne non-performing exposures" as "performing" are assisted by the information system.
In this regard, all positions that surpass the objective parameters established by EBA regulations are automatically highlighted and the proposals are subject to a structured process which enables all of the available assessment elements to be examined and historicised.
The reclassification of a "performing" exposure, already the subject of forbearance measures, to a higher risk category, is automatic if the events established by EBA regulations occur.

Country Risk, which identifies the risk factors relating to the political, macroeconomic, institutional and legal situation of a foreign country, is considered, with regard to all business and financial transactions, if the counterparty is resident or has registered offices in a foreign country. Country risk is based on two main elements:

- political risk, namely the set of factors regarding the political and institutional system that may influence the country's willingness to honour its commitments;
- transfer risk, namely the set of economic factors that can influence the possibility that a certain country may establish, as an element of its economic policy, limits to the transfer of capital, dividends, interest, commission or royalties to foreign creditors and/or investors.

In the case of "non-resident" customers, compliance with the authorised maximum limit for "Country Risk" must first be checked, before the assumption of "Credit Risk", "Delivery Risk", "Placement Risk" and "Evidence Risk".
With regard to Transfer Risk, note that this risk is included in the credit portfolios that use ECAI ratings (exposures towards Governments and Central Administrations, Supervised Intermediaries and non-resident Corporate customers). The residual limited scope (non-resident customers without ECAI), is monitored periodically by the Parent Company's Risk Function.
The organisational structures of the Loans Function and of Loans of the Territorial Departments are defined in accordance with the credit granting, monitoring and management processes.
Furthermore, the Head of the Loans structure of the Territorial Departments reports functionally to the Head of the Loans Function and the Head of Loans for the Business Area, who, in turn, reports functionally to the Head of the Loans structure of the Territorial Department.
In terms of procedures and tools to support the processes, attention is drawn to the following:

- in "Loan Granting" processes, the Electronic Loan Application (ELA) procedure provides support to the Network in the preliminary examination, proposal, approval and finalisation stages and automatically calculates decision-making scope;
- the web-based Electronic Loan Application provides support to the loan granting process through a specific work flow based on parameters and enables each step of the process of preliminary examination -

proposal - forwarding to higher Bodies and approval to be traced, as well as automatically checking the documents required and the validity of the assessment elements;
- as regards measures to assist "Private", "Small Business" and "Small Business Operator" customers, decision-making engines are used (ScoPri, Transact), to establish the financial feasibility of the proposed transaction, which make a summary assessment of the increasing risk;
- the process of monitoring and managing performing loans is assisted by a special procedure on a web platform that also permits the automatic interception of positions and classification on the watchlist, as well as the following of their management and verification of compliance with the decisions made. Positions are intercepted both when the thresholds for specific parameters are exceeded and via the use of an automatic indicator, which is calculated monthly, capable of producing a summary assessment of the performance of the account. This indicator can be searched both with reference to the month of processing and as an average indicator for the period (last six months) and can be integrated within credit processes as a parameter of evidence;
- to support the monitoring and management processes of non-performing loans, broken down by status (Past Due and Substandard; Restructured; Bad Loans) a new procedure "Electronic Management Procedure - EMP" has been created;
- the credit assessment processes are conducted using the "IFRS 9 SUITE" IT procedure.

The Loans Function prepares a quarterly report—in conjunction with the publication of the quarterly financial statements data—which includes a series of summary views on the main dimensions of loans. Specifically, the report focuses on the national scenario, the distribution of Group loans, the distribution of loans by sector, the distribution by rating classes, the development of loans and mortgages to Private customers – Consumer households.
The Risk Function produces monthly reports on "Credit Risk – Portfolio Model", which include evidence with group, company, economic sector and geographical area views.
In addition, a summary document has been introduced, with a monthly frequency, relating to the overall Pillar I and Pillar II risk trend, to support the periodic integrated Group risk report, with a view to monitoring the evolution of economic capital and to report the appropriate figures to the Corporate Bodies.

### 2.2 Management, measurement and control systems

Banco BPM Group uses an elaborate set of instruments to grant and manage credit and to monitor portfolio quality.
Rating plays a key role in loan granting, credit product disbursement, monitoring and performance management processes. In particular, it plays a role in defining guidelines for credit policies, in deciding which bodies are competent to approve loans, as well as on the mechanism for the automatic renewal of uncommitted credit facilities, and it contributes to determining automatic interception of the monitoring and management process (Watchlist).
To proactively manage counterparties that show signs of a deterioration of credit risk, the Group utilises a specific platform to intercept, monitor and manage anomalous exposures, as well as a performance scoring model to intercept the first signs of deterioration of the counterparty, before the default event. Considering the new EBA guidelines on the definition of default, applied by the Group from 1 January 2021, the above-cited monitoring platform incorporates the new rules relating to overdue exposures, making provision, from the first few days in which the overdue event materialises, for intervention processes differentiated by counterparty type and level of exposure, according to a management approach which is as business-oriented as possible, to prevent deterioration in credit risk and the consequent restoration of the ordinary management of the relationship. More specifically, the process currently in place envisages the interception of overdue positions on a daily basis, and their subsequent management according to a structured procedure, which entails clustering the portfolio with anomalies and the subsequent definition of interventions according to a defined scale of priorities.

The methodologies underlying the risk parameters PD (Probability of Default), LGD (Loss Given Default) and EAD (Exposure at Default), are used not only to assess the counterparty when granting, monitoring and renewing credit lines, but also to collectively write down receivables in the financial statements, in compliance with IFRS 9.
The credit assessment to calculate the amount of expected losses of non-performing loans differs according to the status and size of the exposure. The expected credit losses valued analytically by the manager are periodically reviewed.
For prudential purposes, credit risk monitoring at portfolio level is also based on a default model that is applied on a monthly basis to credit exposures of Banco BPM Group. For more information on the general features of this model, please refer to the following paragraph "E. Prudential consolidation - Credit risk measurement models".
For other exposures - other than performing loans with ordinary and financial resident customers - risk is controlled through the use of supervisory regulatory metrics (Standard).

*Information on the inclusion of ESG factors in credit processes*

The main objective of the credit policies of Banco BPM Group is to guide the growth of volumes, with a view to optimising the risk-return ratio and to containing the future cost of credit risk, by already incorporating various clear ESG-related aspects from 2021, particularly as regards the Real Estate and Agrifood sectors. These aspects have been implemented in the loan application process through dedicated tools, which envisage acquiring information also relating to factors more linked to the environment and the climate during the proposal and approval stage.

In 2022, the credit policy framework was fully revised, with a view to the extensive integration of the ESG assessment layer, developed in accordance with the guidelines of the same name stated in the 2021-2024 Strategic Plan. More specifically, the framework - which already envisaged the adoption of different strategies depending on the rating, the assessment of the company's positioning (in relation to sector averages and to the outlook for the sector) and on an analysis of financial sustainability - was integrated with a new assessment profile, the "ESG Score". This indicator represents a summary measurement of the information acquired regarding the environmental factors indicated below, using differentiated application/calibration approaches depending on the type of counterparty.
More specifically, the assessment of the ESG profile is based on four components:

- sector-based analysis to understand the potential transition risks relating to the micro-sector of reference;
- questionnaire to assess the counterparty (strategies and approach taken in terms of ESG) and the transaction;
- verification that the financed transaction is consistent with the European taxonomy.

The first component of the ESG analysis is used to provide an indication of the transition risk associated with the sector to which the counterparty belongs (identification of high risk sectors, which are more exposed in view of a transition towards an economy with low carbon emissions and that is more environmentally sustainable).
Transition risk is expressed on a scale of 5 classes (Very High, High, Medium; Negligible, Green), with a specific treatment for the Construction and Real Estate sectors. The sector-related details are provided by the 4-digit ATECO code, and the elements analysed to identify the classification are European regulation (Taxonomy, the Emission Trading Scheme), emissions, soil/water pollution, technology and market development.
The main objectives of the ESG layer integrated into the 2022 reference framework for credit policies, consistent with the ESG guidelines already presented by Banco BPM in the Strategic Plan, regard:

- the application of a negative screening on sectors with a Very High transition risk (coal mining, manufacture of products using coal-fired blast furnaces, production of energy from coal) with a run-off target;
- the introduction of incentive/disincentive mechanisms based on the reference sector (and therefore on the transition risk) and of the assessment of the counterparty and of green operations (new lending target towards green sectors or operations >65% by 2024).

Considering the sound distribution quality of the Banco BPM portfolio and the highly innovative scope of the topics under analysis, a gradual approach for the introduction of the ESG layer has been defined.
This approach envisages releases over time, which enable the new tools to be tried out in the field and to progressively monitor the impacts on the portfolio.
In the stage activated in 2022, the following steps were implemented:

- the inclusion of negative screening for sectors related to coal mining and to the production of energy from coal;
- the integration of Transition Risk as regards micro-sectors and counterparties;
- the introduction of the ESG questionnaire on specific segments/sectors and certification for so-called Green operations.

The ESG questionnaire is comprised, in turn, by two macro-sections:

- the "counterparty" section enables the Bank to assess to what extent the company analysed has defined policies and strategies (forward-looking perspective) to mitigate the main ESG risks in the sector it operates in, through qualitative questions (ESG strategy, industry specific) in the Environment, Social and Governance spheres, with variables differentiated depending on the sector-related risk and quantitative KPIs in ESG dimensions (for example, greenhouse gas emissions in the Environment dimension), also with a view to reporting and risk assessment;

- the aim of the "transaction" section is to assess whether the loan is directly related to an ESG objective and is therefore virtuous, regardless of the counterparty's business activity.

This approach enables the Bank to increasingly acquire in-depth information on its customers as regards these topics, by gradually including the changes that will be made to the EU taxonomy over time, and by integrating the layer of ESG financial sustainability also with the assistance of market tools that the Bank obtained at the end of 2022 incorporating the forward-looking valuation also as regards ESG in the Financial Forecast Studio tool (platform to calculate financial stability).
To facilitate the process of acquiring these new approaches, specific training courses were organised during the year for managers and other professional staff involved, with a view to spreading an ESG culture, as well as using the new products and tools made available by the Bank. In parallel, thematic workshops were held for customers, addressed in particular to SMEs (important target for the Bank), as well as customers that represent Italy's manufacturing base.

Starting from December 2022, in the estimate of expected credit losses (ECL) on performing credit exposures, the Group introduced a specific adjustment to factor the risks deriving from the exposure of debtor counterparties to climate and environmental factors. In particular, the impacts on the PD and LGD risk parameters of the counterparties were estimated, assuming a transition risk and a physical risk developed on the basis of the scenarios illustrated below.
With reference to transition risk, the Orderly Transition scenario prepared by the EBA for the 2022 Climate Stress Test was considered, based on the assumptions of the Net Zero 2050 scenario of the Network for Greening the Financial System (NGFS). With respect to the possible alternative scenarios (Disorderly Transition and Hot House World), the selection of the Orderly Transition scenario was the most prudent with reference to the time horizon of the credit exposures to be assessed, as it assumes an immediate and stringent intervention of climate policies, as described in more detail below.
This scenario was incorporated in the PD parameters by assessing its impact on the financial statement items of corporate customers, which are then used as input for financial models developed internally by the Group. These models deliver prospective PD values.
On the basis of the changes in PD obtained, the effects of the ecological transition are then transmitted, with a special mathematical function, also to the LGD parameter. A specific physical risk shock was also applied to the latter parameter, to consider the possible impact on mortgage collateral following a possible write-down of properties based on flood risk, as per the NGFS 2022 Flood scenario.
For further details on the methodology for calculating the adjustments in question and the relative impacts, please refer to paragraph "2.3 Measurement methods for expected losses", and in particular the information on "Use of post-model adjustment and management overlays".
For a better understanding of the assumptions underlying the transition scenario considered by the Group with respect to the alternative scenarios, an illustration of the main assumptions of each scenario is provided below.
The Orderly Transition scenario is based on the NGFS Net Zero 2050 scenario, which envisages a maximum increase in global temperature of 1.5 °C, achieved through the immediate and gradually more stringent introduction of policies to reduce carbon dioxide emissions, which are considered zero in 2050. In this type of scenario, the transition risk and the physical risk are limited: in fact, the gradual transition ensures that the necessary costs and investments in innovation are minimised. At the same time, the increase in the maximum global temperature of 1.5 °C reduces the risk of extreme events.
The Disorderly Transition scenario, which is instead based on the NGFS Delayed Transition scenario, assumes a delayed and net introduction of climate policies starting from 2030, in order to limit the increase in global temperature to below 2 °C; carbon dioxide emissions are therefore higher than in the previous scenario to comply with the objectives of the Paris agreement. The scenario therefore entails a higher transition risk, due to the higher costs required by the delayed introduction of climate policies, while the increase in global temperature increases physical risk in terms of greater frequency and importance of extreme events.
Lastly, the Hot House World scenario is calibrated on the NGFS Current Policies scenario, which captures the long-term impact of physical risk on the economic and financial system resulting from the failure to introduce emission reduction measures. Although emissions at European level are gradually decreasing, global emissions continue to grow until 2080 with an increase in global temperature of around 3 °C. This will lead to greater and more significant natural catastrophes, with a considerable increase in insurance and reconstruction costs linked to these events. In this scenario, there is therefore no transition risk, but the transition costs that would have occurred in previous scenarios are more than offset by the strong impact of extreme physical risk in the economy.

During the second half of 2022, the aforementioned Financial Forecast Studio was also implemented, a modular platform to support the forward-looking assessment of a company by the manager. The instrument works on the platform supplied by the provider Cerved.
The elements characterising this instrument are:

1) accurate data sets:
   - At least every six months, Cerved prepares forecasts for approximately 400 sectors, which can be used as a standard basis for the prospective simulation of the financial statement figures of the individual company;
   - the historical financial statements of the last few years are made available;
   - the CeBi reclassification scheme of Cerved's Financial Reporting Office was adopted;
2) assumptions and business simulations:
   - starting from the standard simulations proposed by the provider, an infinite number of alternative scenarios can be replicated by changing the initial assumptions;
   - more than 20 parameters (financial statement items) are available that can be used as modifiable assumptions of the model;
   - through simple data-entry, start-ups/financial statements of partnerships can also be evaluated;
   - an additional ESG module is included for the accurate estimate of the impacts on credit risk of the variables linked to environmental, social and governance risks;
   - the tool provides a wide range of forecast outputs to support the manager and the decision-maker in the evaluation and granting phase, and also makes it possible to compare multiple scenarios relating to the same company or to different companies (for example, a "best in class" or specific competitor).

The paragraphs below illustrate the changes that will be introduced in 2023.
The Credit Policies framework for 2023 envisages additions and updates mainly in three areas:

A) ESG:
   - evolution of the transition risk classification methodology based more on emissions;
   - introduction of physical risk;
   - extension to the large corporate segment;
   - management of priority sectors with high emission risk;
   - introduction of ESG credit policies;
B) Real Estate:
   - KRI (Key Risk Indicator) integration for the assessment of sustainability in the CRE (Commercial Real Estate) sector;
   - alignment of the requirements for the classification of green real estate investments in line with the requirements of the taxonomy;
C) Evolution of the current framework:
   - credit policies as part of the "withdrawal" strategy;
   - fine-tuning of policies for the retail sectors, in particular for decision-making engines.

### 2.3 Measurement methods for expected losses

*Impacts relating to Covid-19, the situation of international political instability and the energy crisis*

With regard to the calculation of expected credit losses (ECL), in 2022, the process of revising and fine-tuning the current models, which started in 2020, continued, with a view to more accurately reflecting the expected losses of performing exposures, also as a consequence of the economic disruption caused by the Covid-19 crisis, the situation of international political instability and the energy crisis, created by the Russia-Ukraine conflict. This process moreover envisaged a series of post model managerial adjustments, in order to factor in certain measurement elements not adequately intercepted by current models.

The paragraphs below provide an illustration of the changes introduced to models and to the criteria to calculate expected credit losses following Covid-19, as well as the changes introduced in 2022 as part of the continuous process of revising models, depending on the type of intervention (assessment of the SICR, estimating forward-looking information, other changes to the model, and the use of any management overlays).
Note that, given the complexity and the pervasiveness of the changes made to the estimation models, it was not possible to isolate the impacts that the same generated in terms of quantifying the expected credit losses, with respect to the estimation models used previously.

*Measurement of expected credit losses*

According to IFRS 9, all financial assets not measured at fair value through profit and loss, represented by debt securities and loans, and off-balance sheet exposures (commitments and guarantees given) must be subject to the impairment model based on expected credit losses (ECL – Expected Credit Losses).

Specifically, the IFRS 9 impairment model is based on the concept of forward-looking valuation, i.e. on the concept of Expected Credit Loss, whether calculated at 12 months (Stage 1) or for the entire residual lifetime of the instrument (lifetime loss for Stage 2 and Stage 3). In particular, the model establishes that financial assets should be classified into three separate stages, corresponding to different measurement criteria:

- Stage 1: to be measured on the basis of expected credit loss over a time horizon of one year. Stage 1 includes performing financial assets for which no significant impairment of credit risk has been observed with respect to the date of initial recognition;
- Stage 2: to be measured on the basis of expected credit loss over the entire residual life of the financial asset. Stage 2 includes financial assets that have undergone significant impairment of credit risk with respect to initial recognition;
- Stage 3: to be measured on the basis of an estimate of expected forward-looking loss, based on a 100% probability of default. Stage 3 includes financial assets considered non-performing.

According to the Expected Credit Loss calculation model, losses must be recorded not only with reference to objective evidence of impairment losses that had already occurred at the reporting date, but also on the basis of expectations of future impairment that is not clear yet, which must reflect:

- the likelihood of different scenarios occurring;
- the effect of discounting using the effective interest rate;
- historical experience and current and future valuations.

Detailed information is provided below on the model used by the Group to verify whether there is a significant deterioration of credit risk (known as "Framework Stage Assignment") and to calculate the forward-looking expected credit loss.

*Framework stage assignment*

*Amendments introduced in 2022 for the SICR assessment*

With regard to the stage assignment framework, to draw up the 2022 consolidated financial statements, some changes were made to the criteria used to assess any Significant Increase in Credit Risk (SICR), with respect to those used last year, which consequently conditioned the classification of performing exposures into stages (Stage 1 and Stage 2).

In greater detail, during 2022, the model for estimating the SICR thresholds was completely re-developed, to implement a recommendation contained in the follow-up letter received from the ECB in June 2021 as a result of the audits conducted on the activities that Banco BPM performed in relation to the communication received from the ECB on 4 December 2020. Specifically, compared to the previous version, on the one hand the new model is more sensitive to changes in PD and therefore to the macroeconomic scenario, on the other hand it allows to better anticipate, with a classification to Stage 2 - signs of risk represented not only by default, but also by other elements that denote a high level of risk (the presence of a number of days of past due/continuous overdraft exceeding the threshold of 30 days, the granting of a forbearance measure, the presence of the counterparty in exposures subject to strict monitoring).

Lastly, note that, at the same time as the introduction of the new SICR model, the quantitative criterion for classification to Stage 2 based on the so-called "Threefold increase" was discontinued. In fact, this rule envisaged the automatic classification as Stage 2 of all loans granted to counterparties that between the date of disbursement and the date of reference recorded an increase in the annualised probability of default of 300%, with the exception of cases in which the PD on the reference date was in any event lower than 0.30%, namely than the threshold considered to represent low credit risk. The introduction of this criterion in 2021, after receiving further instructions on the identification and measurement of credit risk in the context of the pandemic, contained in the ECB letter dated 4 December 2020, had been linked to the need to implement, at SICR model level, the other instructions contained in the above-mentioned communication. Following the re-development of the new SICR model, with the simultaneous implementation of the ECB's instructions, there has no longer been any need to use the "Threefold increase" rule as it was assessed that it would not improve the performance of the staging model, as not connected to actual risk elements for the Bank's portfolio.

*Illustration of the staging model*

In order to allocate exposures to the various stages, Banco BPM Group has classified them as follows:

- performing loans in Stages 1 and 2;
- non-performing loans in Stage 3. The analyses conducted led to the conclusion that the relative scope is aligned to that of non-performing exposures, determined in accordance with the definitions contained in current supervisory provisions[1] (bad loans, unlikely to pay, past due exposures), as they are deemed to be consistent with accounting regulations in terms of objective evidence of impairment. For further details on this scope, please refer to Part "A.2 – Key financial statement items" of these Notes to the consolidated financial statements.

With regard to the loans, an illustration of the quantitative and qualitative criteria defined by the Group in order to classify a performing exposure in Stage 1 or Stage 2 are illustrated below.
With reference to quantitative criteria, the model developed by the Group uses as reference the parameter of lifetime probability of default (LPD), measured at the reference date, and the same parameter measured at the origination date. The ratio between said parameters is defined as the "Lifetime PD Ratio" (LPDR). More specifically, the chosen metric is based on the "Forward" PD concept. This approach entails identifying the forward PD curve on the Lifetime PD curve observed at the origination date, with the reference date as a node and the residual duration as holding period.
The development of the model has also led to the identification of specific internal thresholds of variation between the two aforementioned probabilities, which are differentiated by the following drivers:

- risk segment;
- rating class;
- residual life;
- ageing of the position (distance between the origination date and the reporting date).

Thus, the change in credit risk is measured for all loans by comparing the parameter defined as a logarithm of the "Lifetime PD Ratio - LPDR" of individual exposures, as defined above, and the specific estimated internal thresholds. Exceeding the above thresholds, with the exception of cases in which the annualised PD observed at the reference date is lower than the threshold of 0.30% (threshold considered to express a low credit risk - Low Credit Risk Exemption), represents a significant increase in credit risk and the consequent transfer of the individual credit line from Stage 1 to Stage 2. That methodology is thus based on a relative approach, as the allocation between Stage 1 and Stage 2 is guided by the change in credit risk since the origination date.
In developing its operating model, after calculating the logarithm of the LPDR for each position included in the estimate sample, the Group selected the optimal threshold for each cluster (given by the intersection of the risk driver methods considered relevant) that would allow it to optimise the model's performance measured using the Matthews correlation coefficient (MCC). The performance aims to describe the ability of the model to correctly anticipate, with a Stage 2 classification, the positions that, within 12 months from the reference date, show signs of risk represented not only by default but also by additional elements that denote a high level of risk (the presence of a number of consecutive days past-due/overdue exceeding the 30-day threshold, the granting of a forbearance measure, the presence of the counterparty within exposures subject to strict monitoring).
Following the changes introduced, as illustrated previously, it should be noted that exceeding of the SICR threshold - which determines a Stage 2 classification - is observed on positions that show, with respect to the origination date, a relative increase in PD Lifetime included on average in a range from +100% to +200% depending on the risk segment.

In addition to the quantitative criterion illustrated above, the stage allocation model adopted by the Group is also founded on qualitative, quantitative criteria and backstops. In greater detail, the following entails classification in Stage 2:

- the presence of a number of consecutive days past-due/overdue exceeding the 30-day threshold;
- the granting of forbearance measures. In greater detail, this includes all exposures affected by forbearance measures which have this attribute still active, regardless of whether the current probation period is regular;

[1] Definitions contained in the Bank of Italy Circular no. 272 of 30 July 2008 and subsequent updates, on the basis of which the scope of non-performing loans corresponds to that of the Non-Performing Exposures of Implementing Regulation (EU) no. 680/2014, with which the EBA's ITS was incorporated (EBA/ITS/2013/rev1 of 24/07/2014).

- the inclusion of the counterparty in watchlist exposures subject to strict monitoring, in the presence of situations that suggest high risk (e.g. synthetic judgement of the degree of risk of the individual customer above a certain threshold, prejudicial events);
- the classification of the counterparty in the "High" risk band[1], save for the option of override by the competent company functions, which must be suitably justified;
- lack of rating at the origination date, save for the case where the counterparty was assigned a rating on the measurement date that classifies in the exposure in the "Low", "Medium-low" or "Medium" risk band[2].

With regard to the functioning of the model, Banco BPM Group has decided to adopt a symmetrical model of reclassification from Stage 2 to Stage 1: in cases in which the conditions triggering the significant deterioration of credit risk cease to exist on a later valuation date, the financial instrument returns to being measured on the basis of the expected credit loss measured on a time horizon of twelve months. It should also be noted that in the event of a return from Stage 3 to performing exposure status, there is no mandatory transfer of the counterparty's relationships to Stage 2. The classification of performing exposures into stages (Stage 1 or Stage 2) will depend on the automatic application of the stage assignment framework.
In the case of forborne exposures, any return to the calculation of the expected credit loss at one year is made in accordance with the probation period, in line with the time frames set out in the supervisory provisions.

The stage allocation methodology described above is applied to all exposures to customers, excluding debt securities.

Regarding debt securities, the Group applies the Low Credit Risk Exemption, i.e. the practical expedient of assuming that credit risk has not increased significantly compared to the initial recognition of the instrument, classifying it at Stage 1. This exemption applies to securities rated as investment grade at the valuation date, in compliance with IFRS 9.
If on the valuation date, the securities have a rating level that is lower than investment grade - and therefore the "Low Credit Risk Exemption" is not applicable - the method developed by the Group is also based on the calculation of the LPDR[3]. More specifically, the SICR threshold values identified for this specific scope were retrieved through a distributive approach and correspond to the 95th percentile of the LPDR distribution observed in the portfolio of December 2022.
Considering the presence of several purchase transactions occurring on different dates for the same fungible security (ISIN), for the purposes of the SICR, the risk at the origin is measured separately for each tranche purchased. It was thus necessary to specify a method for identifying the tranches sold and, as a result, the remaining quantities to which to assign the credit quality at the date of initial recognition, to be compared with that at the measurement date: that movement methodology is based on the FIFO method (First In - First Out).
With reference to exposures to banks and those belonging to the scope of the so-called "Structured Finance Operations - SFO" (Income Producing Real Estate, Real Estate Development, Project Financing and Leveraged & Acquisition Finance), the methodology developed is also based on the calculation of the LPDR parameter using the same thresholds developed for the Business segment.

[1] Note that, for loan granting processes, the rating classes envisaged by the internal model are grouped into 5 homogeneous risk bands ("Low", "Medium-low", "Medium", "Medium-high" and "High").
[2] See previous note.
[3] Data from the CreditEdge platform of the Moody's rating agency.

The table below shows the percentage breakdown of exposures allocated to Stage 2 on the basis of various classification triggers, which shows that the breakdown of the exposures classified therein is influenced by both quantitative criteria based on the change in the probability of default, and on qualitative criteria. Exposures classified as Stage 2 solely due to the presence of more than 30 past-due days represent a negligible percentage.

| Type[1] | Stage 2 | of which: Large Corporate | of which: Mid Corp.Plus | of which: Mid Corporate | of which: Small Businesses | of which: SFO | of which: Private Individuals | of which: Banks | of which: unrated counterparties |
|---|---|---|---|---|---|---|---|---|---|
| Quantitative criteria | 66.28% | 79.54% | 83.95% | 68.90% | 60.40% | 68.53% | 21.73% | 84.64% | 8.75% |
| Qualitative criteria | 33.45% | 20.46% | 16.01% | 31.04% | 39.24% | 31.47% | 77.77% | 15.36% | 86.01% |
| Exposures over 30 days past due | 0.27% | 0.00% | 0.04% | 0.06% | 0.36% | 0.00% | 0.50% | 0.00% | 5.24% |
| **Total Stage 2** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** | **100.00%** |

*Expected Credit Loss - Stage 1 and Stage 2*

The model for calculating Expected Credit Loss (ECL) to measure the impairment of performing instruments, differentiated based on the classification of the exposure in Stage 1 or Stage 2, is based on the following formula:

$$ECL = \sum_{t=1}^{T} PD_t * EAD_t * LGD_t * (1+r)^{-t}$$

Where:

| | |
|---|---|
| PDt | represents the probability of default at each cash flow date. This is the probability of moving from performing status to non-performing status over the course of a year (1-year PD) or over the entire lifetime of the exposure (lifetime PD) |
| EADt | represents the counterparty's exposure at each cash flow date |
| LGDt | represents the associated loss by counterparty at each cash flow date. This is the percentage of loss in the event of default on the basis of historical experience over a given observation period, as well as the forward-looking evolution over the entire lifetime of the exposure |
| r | represents the discount rate |
| t | represents the number of cash flows |
| T | represents the total number of cash flows, limited to the following 12 months for accounts in Stage 1, and referring to the entire residual life for those in Stage 2 |

The models used to estimate said parameters leverage the equivalent ones used for capital requirements for credit risk, making specific adaptations to take account of the different requirements and purposes of the IFRS 9 impairment model and the prudential impairment model.

The definition of said parameters, compared to the regulatory parameters, considered the following objectives:

- removal of the downturn component considered in calculating the regulatory LGD to take account of the adverse economic cycle;
- removal of the MoC (Margin of Conservatism) component considered in the regulatory LGD calculation to take further margins of conservatism into account as requested by the EBA Guidelines;
- adjustment of loss rates to manage the difference between the discount rate used for the regulatory LGD estimate[2] and the Effective Interest Rate (EIR) used to calculate losses at amortised cost;
- inclusion of the conditions of the current economic cycle (Point-in-Time risk measures) instead of the measurement of the parameters through the economic cycle (TTC - Through the cycle), which is required for regulatory purposes;
- introduction of forecast information regarding future trends in macroeconomic factors (forward-looking risk) considered potentially capable of influencing the debtor's situation;
- extend risk parameters to a long-term perspective, accounting for the lifetime of the credit exposure to be assessed.

[1] In the case in which a position is classified as stage 2 due to different types of criteria, its exposure has been allocated to the first cluster according to the order in which the classification criteria were presented.

[2] The discount rate used for regulatory LGD estimates, in compliance with EBA Guidelines (*EBA/GL/2017/16*), corresponds to the 3-month Euribor with a prudential add-on of 5%.

As noted, the definition of default adopted is in line with that used for regulatory purposes.

In response to the health crisis, to mitigate its impact, the Government implemented substantial policies to sustain the economy (e.g. Heal Italy decree, Relaunch decree, Liquidity decree, etc.). In this context, the competent authorities (ECB, EBA, ESMA, BIS) invited the banks to take into consideration the mitigation measures set in place by the public authorities and to limit the impact of the macroeconomic shock when calculating provisioning containing the elements of procyclicality implied in IFRS 9.
To this end, Banco BPM included the government measure in its ECL calculation. The method adopted therefore enabled the share of exposure covered by these guarantees with relation to the total exposure of the transaction to be identified. The LGD associated with the transaction was therefore eliminated on said share and a "Stato Italia" (Italian State) average coverage assigned.
The provisions are therefore calculated as the sum of the expected credit loss on the share of the exposure not guaranteed by the State, plus an ECL calculated through the application of the "Stato Italia" coverage to the share of the exposure guaranteed by the State.

More detailed information on the way in which the Group has determined the aforementioned IFRS 9 compliant risk parameters, with specific reference to forward-looking factors, is provided below.
In that regard, it must be noted that the update of the time series of the parameters and, as a result, their recalibration, is carried out on an annual basis. In particular, in December 2022, in line with the provisions of internal processes, the risk parameters were updated to incorporate the effect of updating the time series on the PD, LGD, EAD risk parameters and on the thresholds in their estimation to identify the SICR.

<u>Estimating the PD parameter</u>

The PD values are obtained on the basis of regulatory ones, which are anchored to the average level of risk observed in the long term, suitably calibrated to reflect the current conditions of the economic cycle (Point in Time approach). Subsequently, the PD values are adjusted, from a Forward Looking perspective, through the application of the sector satellite models developed by the Group. Said values must be estimated not only with reference to the time horizon of the twelve months following the reporting date, but also in the future years, for the purpose of calculating lifetime provisions. The lifetime PD curves were constructed by multiplying, using a Markov approach, the migration matrices of the rating at 12 months, separately by risk segment (Large Corporate, Mid Corporate, Mid Corporate Plus, Small Business, Private) impacted by the forward-looking macroeconomic scenarios. Each rating class assigned to the counterparties using the A-IRB internal models is associated with its related lifetime PD curve.
The main methodological steps used to estimate the lifetime PD parameter are provided below:

- the construction of historical Point in Time (PiT) migration matrices for each risk segment defined by the rating models and on the basis of the average of these matrices and the attainment of the long-term Through The Cycle (TTC) migration matrices for each risk segment;
- the determination of future PiT matrices for the first three years following the reporting date, obtained on the basis of PiT migration matrices conditioned on the basis of macroeconomic scenarios, through the application of shocks resulting from internal satellite models of PDs differentiated by sector; the latter are able to express the sensitivity of the PD levels to changes in the main income statement items;
- obtaining cumulative PDs by rating class and scenario, via a matrix product (Markov chain techniques) of the future PiT migration matrices for the first three years, as previously calculated, while from the fourth year onwards so-called smoothed matrices are used, which allow for the gradual smoothing with the TTC migration matrix;
- the generation of the cumulative lifetime PD curve as the average of the cumulative PD curves of each selected macroeconomic scenario weighted by the respective probability of occurrence.

It should be noted that the matrices underlying the determination of the PD values were updated in December 2022 to incorporate the update of the time series, removing, however, the 2020 and 2021, in order to remove the distorting effects of the support measures set in place by the government in response to the pandemic crisis, through a special overlay. For further details, please refer to the following paragraph "Use of post-model adjustment and management overlay".

As regards the so-called "Structured Finance operations - SFO" (Income Producing Real Estate, Real Estate Development, Project Financing and Leveraged & Acquisition Finance), the PD Lifetime values are obtained through the use of the internal model developed for management purposes. The dedicated model provides for the calculation of the risk parameters related to the individual transaction to better exploit the specific characteristics deriving, for the most part, from the related business plans. The values thus obtained are then conditioned to the economic cycle in a forward-looking perspective through the use of internal PD satellite models.

Refer to the paragraph "Inclusion of forward-looking factors", below, for more details on the method of constructing the PD.

Estimating the LGD parameter

LGD values are assumed to be equal to the regulatory recovery rates calculated through the economic cycle (TTC) and suitably adjusted in order to remove some of the prudential elements established by the regulatory models, which are represented by indirect costs, the MoC (Margin of Conservatism) and the component associated with the adverse economic cycle (the downturn component), as well as to reflect the most current recovery rates (PiT), the difference between the discount rate used to estimate the regulatory parameters[1] and the Effective Interest Rate (EIR), and expectations concerning future (forward-looking) trends. In detail, the forward-looking estimate of the parameter takes account of the impact on the economic cycle of the components represented by the probability of non-performance (Psoff) and the Loss Given Non-Performance (LGNP) using specific forward-looking scaling factors to obtain point in time and forward looking LGDs. More specifically, the forward-looking effects are channelled to LGD estimates through the application of specific satellite models for the main components of the LGD model (Psoff and LGNP), which compare the changes in macro factors with the residual estimations of the two above-cited parameters on the historical horizon. It should be noted that in December 2022, under IFRS 9, the LGD models were calibrated to incorporate the update of the time series.

As regards the so-called "Structured Finance operations - SFO" (*Income Producing Real Estate, Real Estate Development, Project Financing and Leveraged & Acquisition Finance*) the LGD values are obtained through the use of the internal model developed for management purposes. The dedicated model provides for the calculation of the risk parameters related to the individual transaction to better exploit the specific characteristics deriving, for the most part, from the related business plans. The values thus obtained are then conditioned by the economic cycle in a forward-looking perspective through the use of internal LGD satellite models.

EAD Estimation

For on-balance sheet exposures, the EAD is represented, at each future payment date, by the remaining payable based on the repayment plan, plus any unpaid and/or past due instalments.
For off-balance sheet exposures, represented by guarantees and irrevocable or revocable commitments to disburse funds, the EAD is equal to the nominal value weighted by a specific credit conversion factor (CCF), determined in compliance with the previously validated internal models and using the standardised approach for the remaining exposures. With regard to the exposures covered by internal models as at December 2022 with regard to IFRS 9, the CCF (Credit Conversion Factor) models have been calibrated to reflect the update of the time series.

Inclusion of forward-looking factors

In accordance with IFRS 9, when estimating expected credit losses it is necessary to take forward-looking information[2] into account, conditioning the risk parameters according to the different macroeconomic scenarios in which it is expected to operate.
With a view to overcoming potential inconsistencies in the results determined by the satellite models ordinarily used before the impact of the Covid-19 emergency, sector satellite models were adopted from 2020, with a view to evaluate the highly diverse consequences of the pandemic on the different sectors of the Italian economy.
More specifically, note that in 2020, the Bank had utilised non-proprietary sector satellite models, supplied by a leading provider, as the models previously adopted did not have a sufficient level of granularity by economic sector of the borrower customer, and therefore would not have been able to reflect the significantly differentiated impacts of the crisis due to Covid-19 on the different economic sectors.

[1] The discount rate used for regulatory LGD estimates, in compliance with EBA Guidelines (EBA/GL/2017/16), corresponds to the 3-month Euribor with a prudential add-on of 5%.
[2] Conditioning of credit risk parameters (PD and LGD) calculated at a Point-in-Time, to estimate the future change based on the expected evolution of the main macroeconomic variables (e.g. GDP, rate of unemployment etc.).

Subsequently, in FY 2021, new proprietary sector satellite models were developed, which gradually replaced - limited to the sectors least impacted by the granting of moratoria introduced by the Italian Government following the pandemic crisis[1] - the sector satellite model acquired from third parties, as previously illustrated.

Starting from 30 September 2022, the use of proprietary sector satellite models, developed internally by the Bank, was extended to all sectors of the performing loan portfolio.

Lastly, to calculate the ECL as at 31 December 2022, the macroeconomic scenarios and the relative probabilities of occurrence were updated, based on the analyses conducted by the Scenario Council[2], in line with the processes already in use last year. To this end, the macroeconomic forecasts supplied by the leading provider, available in October 2022, were considered with reference to three different scenarios: "baseline", "adverse" and "favourable". To attribute the probabilities of occurrence of the aforementioned scenarios, given the uncertainty in the overall economic scenario deriving particularly from the negative effects of the energy crisis and inflationary dynamics related to the latter, in addition to these benchmarks, the provider developed an additional "adverse custom" scenario that was further stressed compared to the above-cited "adverse" scenario. The probabilities of occurrence of the three macroeconomic scenarios considered are indicated below:

- "Baseline": 50%;
- "Adverse" ("adverse custom"): 30%;
- "Favourable": 20%.

[1] In particular, this regards sectors in which the percentage of moratoria was higher than a threshold corresponding to the average value of the Group portfolio of non-financial corporations at the beginning of 2021.

[2] The Scenario Council consists of a team responsible for defining and updating or confirming the macroeconomic scenarios adopted in the Group's strategic processes in light of external events or specific vulnerabilities of the Bank. It is also responsible for identifying the processes impacted and their potential updating. The team is comprised by the Chief Financial Officer and the heads of the Planning and Control, Risk and Administration and Budget Functions, with the participation of the Head of the Audit Function as auditor.

The following table shows the values (expressed in terms of average annual percentage changes/absolute values for rates of return) of the main macroeconomic indicators for the period 2022-2025 for each of the three scenarios considered in the satellite models for the conditioning of the risk parameters to be used to calculate ECL:

| Scenario | Macroeconomic indicators | 2022 (*) | 2023 | 2024 | 2025 |
|---|---|---|---|---|---|
| adverse | GDP Italy | 3.3 | -1.2 | 0.1 | 0.9 |
| **baseline** | **GDP Italy** | **3.4** | **0.1** | **1.0** | **1.4** |
| favourable | GDP Italy | 3.6 | 1.4 | 1.6 | 1.7 |
| adverse | Unemployment rate | 8.17 | 8.79 | 9.64 | 10.43 |
| **baseline** | **Unemployment rate** | **8.16** | **8.36** | **8.34** | **8.26** |
| favourable | Unemployment rate | 8.13 | 7.89 | 6.98 | 5.97 |
| adverse | Index of residential property prices | 4.72 | 1.85 | 0.75 | 0.57 |
| **baseline** | **Index of residential property prices** | **4.71** | **2.18** | **1.62** | **1.81** |
| favourable | Index of residential property prices | 4.68 | 2.60 | 1.56 | 2.14 |
| adverse | Household consumption | 4.2 | -0.9 | 0.3 | 0.9 |
| **baseline** | **Household consumption** | **4.3** | **0.2** | **1.3** | **1.5** |
| favourable | Household consumption | 4.4 | 1.7 | 2.2 | 2.0 |
| adverse | Construction investments | 12.2 | -3.2 | -3.0 | -1.6 |
| **baseline** | **Construction investments** | **12.6** | **0.9** | **-0.3** | **0.3** |
| favourable | Construction investments | 13.0 | 3.5 | 0.5 | 1.2 |
| adverse | 3-month Euribor | 0.32 | 2.10 | 2.09 | 1.81 |
| **baseline** | **3-month Euribor** | **0.34** | **2.11** | **2.12** | **1.83** |
| favourable | 3-month Euribor | 0.33 | 2.12 | 2.13 | 1.84 |
| adverse | ECB rate | 0.87 | 2.50 | 2.50 | 2.06 |
| **baseline** | **ECB rate** | **0.87** | **2.50** | **2.50** | **2.06** |
| favourable | ECB rate | 0.87 | 2.50 | 2.50 | 2.06 |
| adverse | Return on Italian 10-year government bonds | 3.15 | 4.96 | 5.07 | 5.29 |
| **baseline** | **Return on Italian 10-year government bonds** | **3.16** | **4.55** | **4.32** | **4.32** |
| favourable | Return on Italian 10-year government bonds | 3.14 | 4.26 | 3.82 | 3.82 |
| adverse | BTP/Bund Spread | 2.03 | 2.85 | 2.99 | 3.15 |
| **baseline** | **BTP/Bund Spread** | **2.02** | **2.33** | **2.07** | **2.03** |
| favourable | BTP/Bund Spread | 2.00 | 2.03 | 1.56 | 1.51 |
| adverse | Italian consumer price index | 7.4 | 4.9 | 1.9 | 1.2 |
| **baseline** | **Italian consumer price index** | **7.3** | **4.4** | **1.8** | **1.5** |
| favourable | Italian consumer price index | 7.3 | 3.8 | 1.1 | 1.9 |
| adverse | Imports | 14.6 | -0.5 | 0.5 | 2.3 |
| **baseline** | **Imports** | **14.8** | **2.0** | **3.6** | **4.0** |
| favourable | Imports | 15.2 | 5.3 | 5.5 | 4.6 |
| adverse | Exports | 10.6 | 0.7 | 0.8 | 2.7 |
| **baseline** | **Exports** | **10.8** | **2.2** | **2.6** | **3.3** |
| favourable | Exports | 11.2 | 4.4 | 3.7 | 3.2 |
| adverse | Public administration expenditure | 0.1 | 0.1 | 0.1 | 0.0 |
| **baseline** | **Public administration expenditure** | **0.1** | **0.25** | **0.07** | **-0.03** |
| favourable | Public administration expenditure | 0.1 | 0.2 | 0.1 | -0.1 |

*(*) the figures for 2022 encompass, for the fourth quarter, the last estimate available at the time, and cannot therefore be considered final.*

In 2022, the global economic cycle weakened: on the one hand, there was the hoped-for and gradual abolition of Covid-19 restrictions, but at the same time the outbreak of the war in Ukraine caused a deep global energy crisis. Inflation exploded, with the consequent erosion of the purchasing power of households and widespread increases in costs for businesses, which led to a consequent tightening of monetary policies.

In this context, the "Baseline" scenario envisages that the tensions associated with the war, which are assumed to remain confined to the territories currently involved, will continue throughout the current year, continuing to sustain the prices of raw materials, maintaining a high level of uncertainty and also slowing down international trade. Energy supplies will not be a serious problem, thanks to the adequate level reached by stocks. The inflationary trend, albeit declining, will continue to have a negative impact on real household income and therefore on consumption.

Consequently, monetary policy will remain restrictive, despite the widespread slowdown in economic activity. The expected development of the main macroeconomic figures in the reference context is briefly described below:

- Italy's GDP will be stagnant for 2023, returning to moderate growth from 2024;
- the unemployment rate will rise to 8.4% and remain stable until 2024 and then decrease by around 10 basis points in 2025;
- inflation will explode at 7.3% and return to below the target rate of the ECB only from 2024;
- the uncertainty of this period will also affect household consumption, which in 2023 will be stagnant, but will show a modest recovery in 2024;
- exports will slow down significantly: +2.2% in 2023 and +2.6% in 2024;
- the yield of Italian government bonds will rise slightly above 4.5% and then fall to around 4.3% in subsequent years. The BTP-Bund spread will exceed 200 bps, also driven by the end of the ECB's accommodative policies.

As regards the "Adverse" scenario, a more critical development of the conflict in Ukraine is assumed. In this scenario, it is assumed that the war hostilities will intensify with some acute episodes that would increase the uncertainty of households and businesses. Moreover, the difficulty in reducing the dependence of the Eurozone and of Italy on supplies from Russia of Russian gas and oil would keep tensions high on supplies and prices: the average for the year Brent is assumed to remain above 100 USD in 2023. Monetary policies would remain forcibly restrictive, as a result of the persistence of inflationary tensions, reinforced by the trend in commodity prices. The Italian economy is assumed to experience a recessionary phase in 2023 that would touch on a condition of stagflation, which, however, would not materialise: from 2024 there would be a recovery of the economy and a reduction in inflation, which would continue in the following year. However, business failures would increase, with moderate repercussions on the credit quality of banks. Italy would also suffer from the consequences of high sovereign debt, exacerbated by low growth prospects, higher interest rates and lower ECB purchases.
More specifically, the following is expected:

- the Italian GDP will show a -1.2% in 2023, which will partially mitigate the recovery of 2022. After a stagnant 2024, GDP will return to modest growth in 2025;
- unemployment will steadily rise, reaching 10.4% in 2025;
- a substantial reversal of the trend of private investments is expected, both for machinery and for construction. In particular, in the case of the latter, it will fall from +12.2% in 2022 to -3% in 2023 and throughout 2024, a value heavily impacted by the end of the "Superbonus 110%" tax relief;
- the yield of 10-year Italian government bonds will sharply increase, reaching 5% in 2023 and exceeding it in the following 2 years. The increase will be due to both an increasingly wider BTP Bund spread, which will fluctuate around 300 bps, and a general increase in interest rates.

Lastly, the "Favourable" scenario assumes a gradual resolution of the conflict in Ukraine and a parallel recovery of the energy crisis. Already in the second quarter of 2023, there will be a decisive recovery of consumption and investments, which will stave off the prospects of stagnation in the economy. The more relaxed climate within the EU will encourage the definition of a new "Fiscal Compact" agreement that will facilitate the tax policy of the Member states, creating an optimal context to face the numerous challenges, from climate to demographic transition. In Italy, the implementation of the NRRP will regain momentum, significantly stimulating business investments. The more favourable trend of the economy and the reduction by investors of risk aversion will facilitate the management of Italian public debt, which will allow a moderate return to the scenario horizon, despite higher interest rates compared to 2022. Credit quality will improve and at the end of 2025 the stock of bad loans will be lower than the level at the end of 2021.
Specifically:

- annual growth of Italian GDP, which will be around 1.5% for 2023 and for the following two years;
- household consumption (+1.7% in 2023) will remain strong over the forecast horizon and will sustain the GDP trend;
- investments in construction will also be positive, although in 2024 growth will stop at 0.5%;
- the unemployment rate will fall to 7.9% in 2023, and will then improve further to levels below 6% in 2025;
- the yield of Italian 10-year government bonds will initially rise to 4.3% in 2023, and then fall to 3.8% in subsequent years, benefiting from an improvement in the BTP Bund spread;
- industrial production will be moderately affected by the negative aftermath of 2022, managing to record a modest growth of 0.7% for 2023, which will become more sustained both in 2024 and in 2025.

*Use of post model adjustments and management overlays*

In addition to the amendments illustrated (so-called in-model adjustments), at the time of preparation of the 2022 financial statements, confirmation of the application of further top-down interventions "post model adjustments/management overlays" was deemed necessary. These management overlays, which in fact significantly reduce the positive economic impacts that would otherwise have been recorded by applying the models in use, are mainly justified by the fact that the aforementioned models may not capture all the phenomena considered relevant for the purpose of determining the expected losses on performing credit exposures to customers (cash loans and unsecured loans).
In greater detail, for the above-mentioned exposures, the application of the overlays in question entailed the recognition of higher value adjustments for a total of 162.1 million, compared to the expected credit losses quantified on the basis of the models in use, which amount to 299.8 million. More specifically, adjustments from overlays refer for 89.5 million to exposures classified in Stage 2 and the remainder to exposures classified in Stage 1.
The quantification of these amounts was determined by conducting specific analyses, in a laboratory environment, based on the following interventions:

1) removal of the potential distorting effects on the risk parameters deriving from the Covid-19 pandemic and the consequent government measures to support household and business liquidity[1], which in 2020 and 2021 led to a break in the historical relationship between economic conditions and levels of risk of borrowers:
   - in 2020, against a marked reduction in Italy's GDP, default rates continued to decline, benefiting from government support measures;
   - in 2021, given the substantial rebound in economic conditions in our country, default rates showed a further but slight reduction.

   To remove the distorting effects deriving from the pandemic and the consequent government support measures from the PD Point in Time estimate, in line with previous adjustments, it was deemed appropriate to eliminate the data relating to the defaults observed in 2020 and 2021 (so-called "Covid year removal") from the historical series. Unlike the quantification of the same post model adjustment in the half-yearly report of June 2022, the last year (2022) was considered in addition to the last two pre-Covid years (2018 and 2019) to converge to a situation of ordinary application of the models. The sterilisation of the Covid years contributed to increasing the level of risk with an impact in terms of ECL of +109.5 million;
2) consideration of the foreseeable impacts that will result from the revision of the internal A-IRB models (and in particular the LGD, parameter mainly affected) for the calculation of the regulatory risk parameters, currently being validated by the ECB, which are used as a starting point to determine the point-in-time, lifetime and forward-looking parameters needed to calculate ECLs in full compliance with IFRS 9. Note that the new A-IRB models have been re-developed to achieve full compliance with EBA guidelines (EBA/GL/2017/16). The main effects of the new model framework as regards LGD IFRS 9 are linked to the changes made to the discounting methodology of the recovery flows that entail particular increases on mortgage and products paid by instalments. The impact recorded was +32.2 million;
3) assessment of the possible ESG effects deriving from the inclusion of physical and transition risk on the PD and LGD parameters, in compliance with the ESG operating plans communicated by the Group to the Regulator as part of the Targeted Review on Climate-related and Environmental Risks (known as the "Inclusion of ESG effects"), obtaining an impact in terms of higher ECL of +20.4 million. In greater detail, for transition risk, the Orderly Transition scenario prepared by the EBA for the 2022 Climate Stress Test was considered, based on the assumptions of the Net Zero 2050 scenario of the Network for Greening the Financial System (NGFS); for physical risk, the impact on mortgage collateral was assessed following a possible write-down of properties based on flood risk, as per the NGFS Flood 2022 scenario. For further details on the scenarios used and how they are incorporated for the purposes of calculating the PD and LGD risk parameters, please refer to the previous paragraph "Information on the inclusion of ESG factors in credit processes".

Compared to the process of preparing the half-yearly financial report as at 30 June 2022, following the application of the post-model adjustments illustrated above, no additional margin of conservatism was applied, as it was considered that the most significant uncertainties had been adequately factored, from a prudential perspective, within the above-mentioned overlays.

[1] The decision had been based on the EBA guidelines published at the end of June through which banks are asked to remove the distorting effects on risk parameters deriving from the pandemic and the ensuing government measures to support household and business liquidity.

Without prejudice to the transitory nature of the post-model adjustments linked to the adoption in IFRS 9 of the new model framework currently being validated in the regulatory sphere, to the progressive rejuvenation of the estimated time series with the gradual exclusion of the data impacted by Covid-19, in addition to the consideration that the results deriving from the models to calculate expected credit losses are influenced by macroeconomic scenarios largely dependent on phenomena not fully consolidated and in any case still subject to extreme variability and uncertainty.

*Sensitivity analysis of expected credit losses*

In accordance with the provisions of paragraphs 1 and 125 of IAS 1, the Notes must provide information on the key factors of uncertainty that characterise financial statement estimates. Paragraph 129 envisages that this disclosure must be provided in a manner that helps users of financial statements to understand the judgements that management makes about the future and the relative impacts. The examples mentioned to pursue this objective include sensitivity analyses, through which the reader is able to appreciate the impacts on financial statement estimates of alternative calculation models, reasonably foreseeable changes in inputs and assumptions underlying said estimates.
The adjusting provisions of performing credit exposures (ECL) are an example of financial statements values whose estimation process is characterised by the presence of substantial factors of uncertainty.
As described in the paragraph entitled "Significant accounting policies and uncertainties regarding the use of estimates in the preparation of consolidated financial statements" contained in “Section A.1 - General Part" in Part A of these Notes, the inclusion of forward-looking factors for the measurement of expected credit losses is a particularly complex exercise, insofar as it requires macroeconomic forecasts to be made, scenarios and relative probabilities of occurrence to be selected, as well as defining a model able to represent the relationship between the cited macroeconomic factors and the default rates of the exposures measured.
For this reason, to be able to appreciate the impacts on expected credit losses resulting from the selection of different macroeconomic scenarios and in compliance with ESMA recommendations, most recently set forth in the document of 13 May 2022, specific sensitivity analyses are provided below in terms of ECL as well as stage allocation. These analyses were performed by attributing 100% weighting to each individual macroeconomic scenario (“baseline”, “adverse”, “favourable”) with respect to the multi-scenario approach adopted for the preparation of these financial statements which, as described above, consider three different alternative scenarios. Alongside the “baseline” scenario, retained the most likely - 50% is the relative probability of occurrence - an “adverse” scenario was considered, which was attributed a 30% probability of occurrence, and a “favourable” scenario with a 20% probability of occurrence.

The selection of a multi-factor sensitivity, obtained by varying more than one parameter simultaneously and implicit in the decision to consider alternative macroeconomic scenarios, is justified by the fact that there are numerous interrelations between the different macroeconomic factors so as to render a sensitivity analysis based on a single factor less representative (by way of example, a change in GDP would effectively be related to changes in many other macroeconomic variables).

The reference basis for the sensitivity analyses is represented by the ECL provision, before the application of management overlays and determined by the models in use, which amounts to approximately 300 million, referring to credit exposures to the Group's customers (cash loans and unsecured loans). However, it is believed that these adjustments have the same sensitivity to changes in the scenario and, for this reason, the results shown below can be extended to the total of the ECL including post model adjustment/management overlays.

In light of what has been described, the main results of the sensitivity analyses are summarised below:

- assignment of a 100% probability of occurrence to the adverse scenario: in this case, the ECL would increase by +106.1 million with respect to that calculated by adopting the multi-scenario approach (around +35% in percentage terms), against an increase in the percentage of exposures classified in Stage 2 of +2.57%. In this scenario, the average percentage coverage of performing credit exposures would increase by 9 bps;
- assignment of a 100% probability of occurrence to the baseline scenario: in this case, the ECL amount would decrease by -21.9 million with respect to the amount of ECLs calculated by adopting the multi-scenario approach (around -7% in percentage terms), against a decrease in the percentage of exposures classified in Stage 2 of -0.73%. In this scenario, the average percentage coverage of performing credit exposures would decrease by -2 bps;
- assignment of a 100% probability of occurrence to the favourable scenario: in this case, the ECL amount would decrease by -88.0 million with respect to the amount of ECLs calculated by adopting the multi-

scenario approach (around -29% in percentage terms), against a decrease in the percentage of exposures classified in Stage 2 of -2.31%. In this scenario, the average percentage coverage of performing credit exposures would decrease by -7 bps.

*Expected Credit Loss - Stage 3*

With regard to the models used to determine the expected losses on exposures classified under Stage 3, i.e. non-performing exposures, reference should be made to the section “Methods for determining impairment losses on IFRS 9 Financial Instruments” contained in Section "A.2 - Key financial statement items” in Part A of these Notes. As illustrated in detail in the cited paragraph, the quantification of the expected losses of the aforementioned exposures, in addition to the recovery expected through ordinary operations (internal workout), considered the flows retained recoverable from sales scenarios, in line with the disposal objectives established on each occasion by the Board of Directors.

As stated in the paragraph “Significant accounting policies and uncertainties regarding the use of estimates in the preparation of consolidated financial statements”, contained in “Section A.1 - General Part" in Part A of these Notes, the determination of the expected losses on non-performing loans entails significant judgements, with specific reference to the estimate of flows deemed recoverable and the related timing of recovery.

In greater detail, the expected losses on non-performing loans were determined analytically, based on the recovery forecasts formulated by the manager or resulting from the application of the “collecting provisioning” calculation method, discounted based on the original effective interest rates and the relating timing of recovery. Considering that the recovery forecasts use the debtor’s specific situation as reference, it is deemed impossible to prove any reasonable sensitivity analysis of the expected credit losses.
However, it cannot be ruled out that a deterioration in the debtor’s credit situation, also as a result of possible negative effects on the economy relating to Covid-19 and the effects of the international geopolitical situation, may result in the recognition of additional, even significant, losses, in relation to those considered based on the conditions existing at the reporting date.

### 2.4 Credit risk mitigation techniques

The Group has always kept a watchful eye on the acquisition of loan collaterals and securities, i.e. the use of applications and techniques that mitigate credit risk. When deemed necessary, the typical bank guarantees are acquired, namely mortgages on properties, collaterals on securities in addition to personal guarantees issued by the guarantors.
In general, the decision on the acquisition of a guarantee is based on the customer’s creditworthiness and on the characteristics of the transaction. Following this analysis, it may be deemed appropriate to obtain additional guarantees to mitigate credit risk, considering the estimated recoverable value offered by the collateral.
The system for the recording of collateral property used to guarantee lending transactions enables an automatic periodic assessment of the property’s value and identifies which properties require updated appraisals, in line with the criteria established by current legislation.
The value of the financial collaterals is constantly and automatically monitored, enabling a comparison between the present value of the collateral and the initial one, and to allow the manager to act promptly in the event that the collateral incurs a significant impairment loss.
As regards collateral represented by a pledge on securities, an automatic warning system is in place, which is triggered when impairment goes beyond a certain threshold value, reporting the same to the customer relationship manager so that the same may take prompt action.
With regard to derivative transactions with market counterparties, we favour entities with which we have entered into agreements requiring the provision of collateral, especially ISDA - Credit Support Annex, to obtain a significant credit risk mitigation.

## 3. Non-performing credit exposures

### 3.1 Management strategies and policies

The classification of non-performing exposures is conducted in line with the criteria established by the EBA. More specifically, the classification as non-performing is made:

- automatically, for exposures that reach the thresholds envisaged by the provisions of the Supervisory Authority as regards Past Due;
- by means of a decision taken by an authorised Body (i) on a proposal generated automatically by the IT system, for exposures that reach the envisaged thresholds, on each occasion, by internal credit monitoring and management processes, or (ii) on the proposal of a proponent Body, for exposures that indicate the occurrence of events that may prejudice the "performing" status of the same.

The management of non-performing loans in Banco BPM Group is based, to a great extent, on a model that assigns the management of a specific set of loans (portfolio) to specialist resources. During 2022, the project to reorganise the management of the Group's non-performing loans continued for the fourth consecutive year, which in 2019 had seen the completion of the transfer of a business segment focused on bad loan collection to a specialised partner, with the subsequent assignment of a management mandate for most of the new flows of bad loans for the following ten years. From the finalisation of this agreement, the management of bad loans has mainly been conducted by a leading player in the sector, while the management of the remaining non-performing exposures has been handled by specialised internal personnel. Following the transfer of the business segment mentioned above, it was also agreed that the management of all the non-performing exposures would be unified within the unit reporting to the Chief Lending Officer (CLO).
Management responsibility changes depending on the classification status of the exposure:

- the management of exposures classified as Past Due and Unlikely to Pay is assigned, with the sole exception of exposures under a certain threshold, to specialist managers located in the CLO area. For these exposures, the managers of non-performing loans are responsible for the operating decisions relating to the loans assigned to the respective portfolios, in accordance with their decision making authority, and are assisted, as regards the administrative part, by (business) managers from the Network, where the portfolio containing the exposure is placed;
- management of exposures classified as Bad Loans is conducted by the specialised internal structures of the CLO, assisted (as part of the agreement mentioned above) for most of this, by Gardant Liberty Servicing coordinating with the structures of the CLO.

In addition to the recovery process, the managers are responsible for assessing loans with a view to calculating the amount of expected losses for individual positions that have an overall exposure exceeding the threshold defined for collective provisioning. Since 2019, this threshold has been raised from the previous 300 thousand euro to 1 million euro. When making said assessment, the manager must take the following into account:

- overall risk of the customer and of related accounts, as well as any Economic Group it belongs to;
- situation in the Italian Central Credit Register, with specific attention to any loans guaranteeing third parties;
- equity standing of the borrower and of any guarantors;
- value of the asset used as collateral;
- time needed to recover the debt.

To support the activities relating to the last two points, the Bank has estimated Haircut parameters on a statistical basis, defined as the difference to apply to the market value of the assets used as collateral, to align them to the amount that the Bank is likely to collect after their forced sale, and the timeframe that the manager has to consider in order to make an analytical assessment of the single position. The expected credit losses obtained in this way are periodically reviewed and continuously monitored.
The process described above is not applied to exposures classified as Unlikely to pay (UTP) and bad loans with a total exposure equal to or less than the materiality threshold of 1 million euro, and for all Past-due positions regardless of the exposure, for which the automatic valuation model is used, aimed at replicating the methodology applied by managers above the materiality threshold. This model, developed and maintained by the Credit Governance structure, is subject to validation by the Risk Function.

The expected credit losses valued analytically by the manager are periodically reviewed.

*Strategy for disposal of non-performing credit exposures*

The strategy to manage non-performing loans - in addition to the recovery activities carried out by the specific departments (known as internal work-out) as illustrated above - may envisage large-scale disposals to Group third-party counterparties, with a view to achieving specific derisking objectives, as resolved by the Board of Directors.
Given the forward-looking nature of the impairment model envisaged by IFRS 9, the presence of approved disposal targets must be adequately factored into the models that calculate expected credit losses, as illustrated in more detail in the paragraph entitled "Methods for determining impairment losses on IFRS 9 Financial Instruments" in "Section A.2 - Key financial statement items" in Part A of these Notes.

With regard to the derisking exercise undertaken by the Group in 2022, and in particular the objectives of the large-scale disposal of non-performing loans outstanding as at 31 December 2022, please refer to that illustrated in "Derisking activities" contained in the significant events during the year in the Report on operations.

## Derisking activities

*System of controls for credit processes*

The structure of the control system relating to credit processes is based on:
- 1st level controls (or line controls), addressed to ensuring that the processes are correctly carried out. First level controls include so-called "automatic" controls, namely performed directly by applications procedures, controls performed directly by operating structures and hierarchical controls, performed within the same chain of responsibility. Second level controls are also implemented, through the CLO structures of Monitoring and Control and Credit Governance;
- 2nd level controls (or controls on risks and compliance), under the "Second-Level Controls" structure located within the Risk - Enterprise Risk Management Function. The controls are conducted constantly via immense analysis of the Group's credit portfolios and through the review of individual positions - statistically sampled or based on the specific risk profile, independent of the functions responsible for carrying out the activities subject to verification - are aimed at ensuring the correct implementation of the risk management process (set up by the operating structures) by verifying performance monitoring for individual exposures, especially non-performing loans, and the assessment of the consistency of classifications, the congruity of provisions and the adequacy of the recovery process, in line with internal and external regulations. The structure also provides opinions on MST in the credit area: proposals to i) grant new financing (extended in 2022 to Real Estate transactions); ii) change provisions; iii) assign forbearance measures, and iv) increase or decrease the risk of the administrative classification status.

### 3.2 Write-offs

For all positions classified as bad loans, the Group assesses whether it is appropriate to continue to maintain the non-performing loan because the out-of-court or judicial actions underway allow a reasonable expectation of recovery, even partial, or whether it is appropriate to proceed with a derecognition or write-off, total or partial, by virtue, respectively, of the conclusion of the recovery process or the circumstance that there is no reasonable prospect of recovery.
The write-off, in compliance with IFRS 9, and the "Guidelines for Banks on Non-Performing Loans (NPL)" issued by the ECB, is the reduction in the gross book value of the loan following the acknowledgement that there are no reasonable expectations of its recovery for amounts exceeding those considered collectable or already received.
It does not imply a waiver by the Bank of its legal right to recover the debt and must be carried out if all the information available indicates that the debtor is unable to repay all or part of the amount of the debt.
For further details on the definition of write-off, please refer to that illustrated in "Section A.2 – Key financial statement items" in Part A of these Notes.
The Group's credit monitoring processes envisage that, to supplement and support the decisions adopted by management, positions that require attention for write-off purposes are identified on a quarterly basis, with a view to making an operational assessment of the single positions and deciding whether or not to pursue the necessary approval procedures to finalise the write-off. Said list relates to exposures whose adjusting provisions are equal to or higher than a specific threshold and which have been classified as bad loans for longer than a certain number of years, differentiated by the type of guarantee and by the presence or otherwise of insolvency proceedings.

### 3.3 Acquired or originated impaired financial assets

With regard to the accounting treatment of these assets and the related presentation methods, reference should be made to that illustrated in "Section A.2 - Key financial statement items - Other information" in Part A of these Notes.

## 4. Financial assets subject to commercial renegotiations and forborne exposures

An analysis of forborne exposures is provided below, on the basis of seniority, distinguishing between non-performing and performing exposures.

| Year of last forbearance | Performing exposures | Non-performing exposures | Total |
|---|---|---|---|
| 2022 | 628,716 | 350,515 | 979,231 |
| 2021 | 1,629,353 | 641,147 | 2,270,500 |
| 2020 | 237,606 | 227,953 | 465,559 |
| 2019 | 135,619 | 332,651 | 468,270 |
| 2018 | 49,009 | 234,654 | 283,663 |
| 2017 | 76,164 | 112,445 | 188,609 |
| 2016 | 46,502 | 113,328 | 159,830 |
| 2015 | 9,691 | 86,586 | 96,277 |
| 2014 | 18,747 | 69,987 | 88,734 |
| 2013 | 2,502 | 29,606 | 32,108 |
| 2012 | 916 | 1,655 | 2,571 |
| 2011 | 857 | 645 | 1,502 |
| previous years | 3,466 | 4,497 | 7,963 |
| **Total** | **2,839,148** | **2,205,669** | **5,044,817** |

The above exposures, related to the scope of prudential consolidation, are broken down in the following table according to the number of forbearance measures granted to the counterparty (one measure, two measures, more than two measures).

| Number of forbearance measures | Performing exposures | Non-performing exposures | Total |
|---|---|---|---|
| 1 | 2,024,862 | 1,278,072 | 3,302,934 |
| 2 | 471,079 | 421,788 | 892,867 |
| >2 | 343,207 | 505,809 | 849,016 |
| **Total** | **2,839,148** | **2,205,669** | **5,044,817** |

QUANTITATIVE INFORMATION

## A. Credit quality

In this part, for the purposes of quantitative information on credit quality, the term "on-balance sheet credit exposures" means all financial assets held on-balance sheet with banks or customers, regardless of their portfolio of accounting allocations (at fair value through profit and loss, at fair value through other comprehensive income, at amortised cost, financial assets held for sale), but excludes equity instruments and UCIT units.

### A.1 Non-performing and performing credit exposures: outstanding amounts, value adjustments, changes and economic distribution

*A.1.1 Prudential consolidation – Distribution of financial assets by past due bands (book values)*

| Portfolios/risk stages | Stage 1 | | | Stage 2 | | | Stage 3 | | | Acquired or originated impaired | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | From 1 day to 30 days | From more than 30 days to 90 days | Over 90 days | From 1 day to 30 days | From more than 30 days to 90 days | Over 90 days | From 1 day to 30 days | From more than 30 days to 90 days | Over 90 days | From 1 day to 30 days | From more than 30 days to 90 days | Over 90 days |
| 1. Financial assets at amortised cost | 710,357 | 43,709 | 4,452 | 275,829 | 154,216 | 18,321 | 48,690 | 114,339 | 1,253,463 | 104 | 2,195 | 17,186 |
| 2. Financial assets measured at fair value through other comprehensive income | - | - | - | - | - | - | - | - | - | - | - | - |
| 3. Financial assets held for sale | - | - | - | - | - | - | - | - | - | - | - | - |
| **Total 31/12/2022** | **710,357** | **43,709** | **4,452** | **275,829** | **154,216** | **18,321** | **48,690** | **114,339** | **1,253,463** | **104** | **2,195** | **17,186** |
| **Total 31/12/2021** | **306,822** | **23,041** | **1,901** | **130,913** | **93,672** | **17,428** | **32,622** | **89,041** | **1,971,266** | **301** | **2,451** | **80,639** |

*A.1.2 Prudential consolidation - Financial assets, commitments to disburse funds and financial guarantees given: changes in total value adjustments and total provisions*

| Causes/risk stages | Total value adjustments | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Stage 1 assets | | | | | | Stage 2 assets | | | | | |
| | Demand loans to banks and Central Banks | Financial assets at amortised cost | Financial assets measured at fair value through other comprehensive income | Financial assets held for sale | of which: individual write-downs | of which: collective write-downs | Demand loans to banks and Central Banks | Financial assets at amortised cost | Financial assets measured at fair value through other comprehensive income | Financial assets held for sale | of which: individual write-downs | of which: collective write-downs |
| **Total value adjustments - opening balance** | **21** | **127,662** | **2,745** | **772** | **-** | **131,200** | **-** | **322,278** | **382** | **124** | **-** | **322,785** |
| Increases in financial assets acquired or originated | - | - | - | - | - | - | - | - | - | - | - | - |
| Derecognitions other than write-offs | - | (390) | (468) | (772) | - | (1,630) | - | (940) | (118) | (124) | - | (1,182) |
| Net credit impairment losses/recoveries (+/-) | 1 | 42,703 | 1,537 | - | - | 44,241 | - | (46,242) | 586 | - | - | (45,656) |
| Contractual modification without derecognition | - | (184) | - | - | - | (184) | - | (2,311) | - | - | - | (2,311) |
| Changes in estimation methodology | - | - | - | - | - | - | - | - | - | - | - | - |
| Write-offs not recognised directly in the income statement | - | (9,600) | - | - | - | (9,600) | - | (16,285) | - | - | - | (16,285) |
| Other changes | - | 184 | - | - | - | 87 | - | 2,312 | - | - | - | 2,311 |
| **Total value adjustments - closing balance** | **22** | **160,375** | **3,814** | **-** | **-** | **164,114** | **-** | **258,812** | **850** | **-** | **-** | **259,662** |
| Recoveries from collections on financial assets subject to write-off | - | - | - | - | - | - | - | - | - | - | - | - |
| Write-offs recorded directly in the income statement | - | - | - | - | - | - | - | (1,599) | - | - | - | (1,599) |

| Causes/risk stages | Total value adjustments | | | | | | | | | | Total provisions for commitments to disburse funds and financial guarantees given | | | | Tot. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Stage 3 assets | | | | | | Acquired or originated impaired financial assets | | | | | | | | |
| | Demand loans to banks and Central Banks | Financial assets at amortised cost | Financial assets measured at fair value through other comprehensive income | Financial assets held for sale | of which: individual write-downs | of which: collective write-downs | Financial assets at amortised cost | Financial assets measured at fair value through other comprehensive income | Financial assets held for sale | of which: individual write-downs | of which: collective write-downs | Stage 1 | Stage 2 | Stage 3 | Commitments to disburse funds and financial guarantees given acquired and/or originated impaired | |
| **Total value adjustments - opening balance** | **-** | **2,896,223** | **-** | **1,818** | **2,860,985** | **37,053** | **260,052** | **-** | **-** | **290,490** | **(30,438)** | **13,564** | **7,546** | **20,971** | **314** | **3,654,472** |
| Increases in financial assets acquired or originated | - | - | - | - | - | - | X | X | X | X | X | - | - | - | - | **-** |
| Derecognitions other than write-offs | - | (576,319) | - | - | (576,319) | - | (99,887) | - | - | (99,887) | - | - | - | - | - | **(679,018)** |
| Net credit impairment losses/recoveries (+/-) | - | 375,301 | - | (1,818) | 373,483 | - | 11,282 | - | - | 11,270 | 12 | 9,001 | 3,639 | 2,317 | (15) | **398,292** |
| Contractual modification without derecognition | - | 783 | - | - | 783 | - | - | - | - | - | - | - | - | - | - | **(1,712)** |
| Changes in estimation methodology | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | **-** |
| Write-offs not recognised directly in the income statement | - | (370,795) | - | - | (370,795) | - | (32,525) | - | - | (32,525) | - | - | - | - | - | **(429,205)** |
| Other changes | - | (7,439) | - | - | 29,617 | (37,053) | (109) | - | - | (40,498) | 40,389 | - | - | (1,396) | - | **(6,448)** |
| **Total value adjustments - closing balance** | **-** | **2,317,754** | **-** | **-** | **2,317,754** | **-** | **138,813** | **-** | **-** | **128,850** | **9,963** | **22,565** | **11,185** | **21,892** | **299** | **2,936,381** |
| Recoveries from collections on financial assets subject to write-off | - | 5,834 | - | - | 5,834 | - | - | - | - | - | - | - | - | - | - | **5,834** |
| Write-offs recorded directly in the income statement | - | (58,546) | - | (104) | (58,650) | - | (26,683) | - | - | (26,683) | - | - | - | - | - | **(86,932)** |

*A.1.3 Prudential consolidation - Financial assets, commitments to disburse funds and financial guarantees given: transfers between the different credit risk stages (gross and nominal values)*

| Portfolios/risk stages | Gross amounts/nominal value | | | | | |
|---|---|---|---|---|---|---|
| | Transfers between Stage 1 and Stage 2 | | Transfers between Stage 2 and Stage 3 | | Transfers between Stage 1 and Stage 3 | |
| | From Stage 1 to Stage 2 | From Stage 2 to Stage 1 | From Stage 2 to Stage 3 | From Stage 3 to Stage 2 | From Stage 1 to Stage 3 | From Stage 3 to Stage 1 |
| 1. Financial assets at amortised cost | 4,028,033 | 3,362,984 | 475,723 | 109,963 | 321,607 | 28,440 |
| 2. Financial assets measured at fair value through other comprehensive income | 20,419 | 8,218 | - | - | - | - |
| 3. Financial assets held for sale | - | - | - | - | - | - |
| 4. Commitments to disburse funds and financial guarantees given | 1,344,034 | 1,540,729 | 48,879 | 17,892 | 31,372 | 3,752 |
| **Total 31/12/2022** | **5,392,486** | **4,911,931** | **524,602** | **127,855** | **352,979** | **32,192** |
| **Total 31/12/2021** | **8,010,231** | **2,134,675** | **724,441** | **98,331** | **219,328** | **24,534** |

*A.1.3a Loans subject to Covid-19 support measures: transfers between the different credit risk stages (gross values)*

| Portfolios/risk stages | Gross values | | | | | |
|---|---|---|---|---|---|---|
| | Transfers between Stage 1 and Stage 2 | | Transfers between Stage 2 and Stage 3 | | Transfers between Stage 1 and Stage 3 | |
| | From Stage 1 to Stage 2 | From Stage 2 to Stage 1 | From Stage 2 to Stage 3 | From Stage 3 to Stage 2 | From Stage 1 to Stage 3 | From Stage 3 to Stage 1 |
| **A. Loans measured at amortised cost** | **918,573** | **406,133** | **97,940** | **1,783** | **130,571** | **1,303** |
| A.1 subject to forbearance measures compliant with GL | 2,004 | 413 | 334 | - | 259 | - |
| A.2 subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - |
| A.3 subject to other forbearance measures | 8,853 | - | 19,161 | 1,428 | 508 | - |
| A.4 new loans | 907,716 | 405,720 | 78,445 | 355 | 129,804 | 1,303 |
| **B. Loans measured at fair value through other comprehensive income** | **-** | **-** | **-** | **-** | **-** | **-** |
| B.1 subject to forbearance measures compliant with GL | - | - | - | - | - | - |
| B.2 subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - |
| B.3 subject to other forbearance measures | - | - | - | - | - | - |
| B.4 new loans | - | - | - | - | - | - |
| **Total 31/12/2022** | **918,573** | **406,133** | **97,940** | **1,783** | **130,571** | **1,303** |
| **Total 31/12/2021** | **2,214,210** | **246,405** | **164,007** | **895** | **49,073** | **192** |

The table in question envisaged by the Bank of Italy Communication of 21 December 2021, shows the transfers between the three stages of risk of exposures subject to Covid-19 support measures, if the risk stage at year-end is different to the risk stage that the exposures were classified as at the beginning of the year or on the date of initial recognition (if after the beginning of the year).

*A.1.4 Prudential consolidation - On-balance sheet and off-balance sheet credit exposures to banks: gross and net values*

| Type of exposure/value | Gross exposure | | | | | Total value adjustments and total provisions | | | | | Net Exposure | Total partial write-offs* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | |
| **A. On-balance sheet credit exposures** | | | | | | | | | | | | |
| **A.1 On demand** | **12,291,452** | **12,285,404** | **6,048** | **-** | **-** | **(9)** | **(9)** | **-** | **-** | **-** | **12,291,443** | **-** |
| a) Non-performing | - | X | - | - | - | - | X | - | - | - | - | - |
| b) Performing | 12,291,452 | 12,285,404 | 6,048 | X | - | (9) | (9) | - | X | - | 12,291,443 | - |
| **A.2 Other** | **6,878,731** | **6,513,051** | **64,740** | **-** | **-** | **(19,932)** | **(4,037)** | **(601)** | **-** | **-** | **6,858,799** | **-** |
| a) Bad loans | - | X | - | - | - | - | X | - | - | - | - | - |
| - of which: forborne exposures | - | X | - | - | - | - | X | - | - | - | - | - |
| b) Unlikely to pay | 15,294 | X | - | - | - | (15,294) | X | - | - | - | - | - |
| - of which: forborne exposures | - | X | - | - | - | - | X | - | - | - | - | - |
| c) Non-performing past-due exposures | - | X | - | - | - | - | X | - | - | - | - | - |
| - of which: forborne exposures | - | X | - | - | - | - | X | - | - | - | - | - |
| d) Performing past-due exposures | - | - | - | X | - | - | - | - | X | - | - | - |
| - of which: forborne exposures | - | - | - | X | - | - | - | - | X | - | - | - |
| e) Other performing exposures | 6,863,437 | 6,513,051 | 64,740 | X | - | (4,638) | (4,037) | (601) | X | - | 6,858,799 | - |
| - of which: forborne exposures | - | - | - | X | - | - | - | - | X | - | - | - |
| **Total (A)** | **19,170,183** | **18,798,455** | **70,788** | **-** | **-** | **(19,941)** | **(4,046)** | **(601)** | **-** | **-** | **19,150,242** | **-** |
| **B. Off-balance sheet credit exposures** | | | | | | | | | | | | |
| a) Non-performing | - | X | - | - | - | - | X | - | - | - | - | - |
| b) Performing | 5,577,798 | 1,751,390 | 177,688 | X | - | (426) | (127) | (164) | X | - | 5,577,372 | - |
| **Total (B)** | **5,577,798** | **1,751,390** | **177,688** | **-** | **-** | **(426)** | **(127)** | **(164)** | **-** | **-** | **5,577,372** | **-** |
| **Total (A+B)** | **24,747,981** | **20,549,845** | **248,476** | **-** | **-** | **(20,367)** | **(4,173)** | **(765)** | **-** | **-** | **24,727,614** | **-** |

*(*) Value to be shown for disclosure purposes*

*A.1.5 Prudential consolidation - On-balance sheet and off-balance sheet credit exposures to customers: gross and net values*

| Type of exposure/value | Gross exposure | | | | | Total value adjustments and total provisions | | | | | Net Exposure | Total partial write-offs* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | |
| **A. On-balance sheet credit exposures** | | | | | | | | | | | | |
| a) Bad loans | 2,053,276 | X | - | 1,990,456 | 56,545 | (1,331,948) | X | - | (1,279,671) | (46,748) | 721,328 | 379,862 |
| - of which: forborne exposures | 381,740 | X | - | 367,668 | 13,440 | (222,762) | X | - | (210,252) | (12,305) | 158,978 | 27,888 |
| b) Unlikely to pay | 2,777,201 | X | - | 2,507,454 | 167,110 | (1,147,214) | X | - | (1,015,977) | (82,102) | 1,629,987 | - |
| - of which: forborne exposures | 1,809,030 | X | - | 1,559,115 | 153,176 | (728,950) | X | - | (613,738) | (70,157) | 1,080,080 | - |
| c) Non-performing past-due exposures | 82,205 | X | - | 82,190 | 1 | (22,108) | X | - | (22,105) | (1) | 60,097 | - |
| - of which: forborne exposures | 14,899 | X | - | 14,899 | - | (3,275) | X | - | (3,275) | - | 11,624 | - |
| d) Performing past-due exposures | 1,227,202 | 759,996 | 466,002 | X | 1,133 | (19,166) | (1,477) | (17,637) | X | (51) | 1,208,036 | - |
| - of which: forborne exposures | 165,020 | 13 | 164,165 | X | 842 | (5,668) | (4) | (5,627) | X | (37) | 159,352 | - |
| e) Other performing exposures | 139,339,756 | 128,126,702 | 10,400,852 | X | 142,327 | (410,009) | (158,674) | (241,423) | X | (9,912) | 138,929,747 | - |
| - of which: forborne exposures | 2,674,128 | 32 | 2,613,050 | X | 37,590 | (89,795) | (4) | (88,447) | X | (1,344) | 2,584,333 | - |
| **Total (A)** | **145,479,640** | **128,886,698** | **10,866,854** | **4,580,100** | **367,116** | **(2,930,445)** | **(160,151)** | **(259,060)** | **(2,317,753)** | **(138,814)** | **142,549,195** | **379,862** |
| **B. Off-balance sheet credit exposures** | | | | | | | | | | | | |
| a) Non-performing | 664,896 | X | - | 335,197 | 3,794 | (96,286) | X | - | (21,893) | (209) | 568,610 | - |
| b) Performing | 56,944,040 | 40,760,125 | 3,220,379 | X | 9,619 | (47,448) | (22,424) | (11,021) | X | (89) | 56,896,592 | - |
| **Total (B)** | **57,608,936** | **40,760,125** | **3,220,379** | **335,197** | **13,413** | **(143,734)** | **(22,424)** | **(11,021)** | **(21,893)** | **(298)** | **57,465,202** | **-** |
| **Total (A+B)** | **203,088,576** | **169,646,823** | **14,087,233** | **4,915,297** | **380,529** | **(3,074,179)** | **(182,575)** | **(270,081)** | **(2,339,646)** | **(139,112)** | **200,014,397** | **379,862** |

*(*) Value to be shown for disclosure purposes*

*A.1.5a Loans subject to Covid-19 support measures: gross and net values*

| Type of exposure/value | Gross exposure | | | | | Total value adjustments | | | | | Net exposure | Total partial write-offs* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | Stage 1 | Stage 2 | Stage 3 | Acquired or originated impaired | | |
| **A. Bad loans:** | **87,745** | **-** | **-** | **87,745** | **-** | **(25,642)** | **-** | **-** | **(25,642)** | **-** | **62,103** | **-** |
| a) Subject to forbearance measures compliant with GL | 131 | - | - | 131 | - | (48) | - | - | (48) | - | 83 | - |
| b) Subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - | - | - | - | - | - | - |
| c) Subject to other forbearance measures | 6,335 | - | - | 6,335 | - | (2,053) | - | - | (2,053) | - | 4,282 | - |
| d) New loans | 81,279 | - | - | 81,279 | - | (23,541) | - | - | (23,541) | - | 57,738 | - |
| **B. Unlikely to pay loans:** | **222,238** | **-** | **-** | **222,119** | **118** | **(54,487)** | **-** | **-** | **(54,439)** | **(47)** | **167,751** | **-** |
| a) Subject to forbearance measures compliant with GL | 1,131 | - | - | 1,013 | 118 | (183) | - | - | (136) | (47) | 948 | - |
| b) Subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - | - | - | - | - | - | - |
| c) Subject to other forbearance measures | 26,852 | - | - | 26,851 | - | (8,768) | - | - | (8,768) | - | 18,084 | - |
| d) New loans | 194,255 | - | - | 194,255 | - | (45,536) | - | - | (45,535) | - | 148,719 | - |
| **C. Non-performing past-due loans:** | **17,258** | **-** | **-** | **17,258** | **-** | **(2,233)** | **-** | **-** | **(2,233)** | **-** | **15,025** | **-** |
| a) Subject to forbearance measures compliant with GL | - | - | - | - | - | - | - | - | - | - | - | - |
| b) Subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - | - | - | - | - | - | - |
| c) Subject to other forbearance measures | 1,262 | - | - | 1,262 | - | (252) | - | - | (252) | - | 1,010 | - |
| d) New loans | 15,996 | - | - | 15,996 | - | (1,981) | - | - | (1,981) | - | 14,015 | - |
| **D. Other performing past-due loans:** | **106,490** | **49,349** | **57,142** | **-** | **-** | **(566)** | **(61)** | **(505)** | **-** | **-** | **105,924** | **-** |
| a) Subject to forbearance measures compliant with GL | 78 | - | 78 | - | - | (4) | - | (4) | - | - | 74 | - |
| b) Subject to current moratorium measures no longer compliant with GL and not assessed as forborne | - | - | - | - | - | - | - | - | - | - | - | - |
| c) Subject to other forbearance measures | 4,339 | - | 4,339 | - | - | (92) | - | (92) | - | - | 4,247 | - |
| d) New loans | 102,073 | 49,349 | 52,725 | - | - | (470) | (61) | (409) | - | - | 101,603 | - |
| **E. Other performing loans:** | **16,026,772** | **14,110,679** | **1,916,061** | **-** | **30** | **(13,688)** | **(5,953)** | **(7,735)** | **-** | **-** | **16,013,084** | **-** |
| a) Subject to forbearance measures compliant with GL | 8,672 | 3,532 | 5,140 | - | - | (207) | (4) | (203) | - | - | 8,465 | - |
| b) Subject to current moratorium measures no longer compliant with GL and not assessed as forborne | 309 | - | 309 | - | - | (14) | - | (14) | - | - | 295 | - |
| c) Subject to other forbearance measures | 100,851 | - | 100,850 | - | - | (772) | - | (772) | - | - | 100,079 | - |
| d) New loans | 15,916,940 | 14,107,147 | 1,809,762 | - | 30 | (12,695) | (5,949) | (6,746) | - | - | 15,904,245 | - |
| **Total (A+B+C+D+E)** | **16,460,503** | **14,160,028** | **1,973,203** | **327,122** | **148** | **(96,616)** | **(6,014)** | **(8,240)** | **(82,314)** | **(47)** | **16,363,887** | **-** |

*(*) Value to be shown for disclosure purposes*

Based on the communication of the Bank of Italy dated 21 December 2021, the table shows the credit quality of the exposures subject to Covid-19 support measures, represented by loans for which moratoria have been granted or other forbearance measures not yet expired as at the reporting date of the financial statements, or by new loans disbursed through public guarantee mechanisms.

For an illustration of the content of the different types of moratoria envisaged in the table, along with the moratoria granted by the Bank, and of the relative credit quality of those still active, please refer to the content of the paragraph entitled "Most significant aspects for 2022 financial statement valuations" in "Section 5 - Other aspects" in Part A of these Notes.

For further quantitative information on the measures that meet the criteria contained in the EBA Guidelines (EBA/GL/2020/02), refer instead to the content of the document "Disclosure to the public by entities (Pillar III)" of Banco BPM, available on the website www.gruppo.bancobpm.it.

*A.1.6 Prudential consolidation - On-balance sheet credit exposures to banks: changes in gross non-performing exposures*

| Causes/Categories | Bad loans | Unlikely to pay | Non-performing past-due exposures |
|---|---|---|---|
| **A. Gross exposure: opening balance** | **-** | **-** | **-** |
| - of which: exposures transferred but not derecognised | - | - | - |
| **B. Increases** | **-** | **15,294** | **-** |
| B.1 entries from performing exposures | - | - | - |
| B.2 entries from acquired or originated impaired financial assets | - | - | - |
| B.3 transfers from other categories of non-performing loans | - | - | - |
| B.4 contractual modification without derecognition | - | - | - |
| B.5 other increases | - | 15,294 | - |
| **C. Decreases** | **-** | **-** | **-** |
| C.1 exits to performing exposures | - | - | - |
| C.2 write-offs | - | - | - |
| C.3 collections | - | - | - |
| C.4 gains on disposal | - | - | - |
| C.5 losses on disposal | - | - | - |
| C.6 transfers to other categories of non-performing loans | - | - | - |
| C.7 contractual modification without derecognition | - | - | - |
| C.8 other decreases | - | - | - |
| **D. Gross exposure: closing balance** | **-** | **15,294** | **-** |
| - of which: exposures transferred but not derecognised | - | - | - |

*A.1.6 bis Prudential consolidation - On-balance sheet credit exposures to banks: changes in gross forborne exposures, broken down by credit quality*

As at 31 December 2022, as in the previous year, there were no forborne exposures to banks. The related table is therefore omitted.

*A.1.7 Prudential consolidation - On-balance sheet credit exposures to customers: changes in gross non-performing exposures*

| Causes/Categories | Bad loans | Unlikely to pay | Non-performing past-due exposures |
|---|---|---|---|
| **A. Gross exposure: opening balance** | **2,196,291** | **4,353,819** | **65,890** |
| - of which: exposures transferred but not derecognised | 18,968 | 9,141 | 622 |
| **B. Increases** | **618,152** | **1,029,057** | **85,999** |
| B.1 entries from performing exposures | 166,430 | 733,353 | 78,753 |
| B.2 entries from acquired or originated impaired financial assets | - | - | - |
| B.3 transfers from other categories of non-performing loans | 424,776 | 27,609 | 568 |
| B.4 contractual modification without derecognition | - | 1,144 | 13 |
| B.5 other increases | 26,946 | 266,951 | 6,665 |
| **C. Decreases** | **(761,167)** | **(2,605,675)** | **(69,684)** |
| C.1 exits to performing exposures | (626) | (137,169) | (10,047) |
| C.2 write-offs | (119,693) | (384,212) | (714) |
| C.3 collections | (181,974) | (557,374) | (16,875) |
| C.4 gains on disposal | (97,541) | (254,830) | (5,479) |
| C.5 losses on disposal | (137,236) | (172,043) | (41) |
| C.6 transfers to other categories of non-performing loans | - | (417,147) | (35,806) |
| C.7 contractual modification without derecognition | - | (1,940) | - |
| C.8 other decreases | (224,097) | (680,960) | (722) |
| **D. Gross exposure: closing balance** | **2,053,276** | **2,777,201** | **82,205** |
| - of which: exposures transferred but not derecognised | 14,383 | 5,985 | 259 |

The trend of non-performing exposures and in particular those classified as unlikely to pay is influenced by the derisking strategy pursued by the Group, which carried out two important transactions (Argo and Wolf) as illustrated in the Report on operations of the Group and in the paragraph entitled "Other significant aspects relating to Group accounting policies" in "Section 5 - Other aspects" in Part A of these Notes.

With reference to the restructuring of non-performing loans, the item “other decreases” includes the gross amount of the exposures sold exceeding the sum of the realisable value and any loss on disposal; for the loans underlying the Wolf transaction, which as at 31 December 2021 had an exposure of 458.0 million, the aforementioned item includes the amount converted into participating financial instruments of 177.0 million and the residual exposure classified under “Other financial assets mandatorily measured at fair value” for 263.7 million.

*A.1.7 bis Prudential consolidation - On-balance sheet credit exposures to customers: changes in gross forborne exposures broken down by credit quality*

| Causes/Quality | Forborne exposures: non-performing | Forborne exposures: performing |
|---|---|---|
| **A. Gross exposure: opening balance** | **3,449,524** | **3,245,180** |
| - of which: exposures transferred but not derecognised | 7,307 | 6,666 |
| **B. Increases** | **630,413** | **854,228** |
| B.1 entries from non-forborne performing exposures | 54,921 | 721,376 |
| B.2 entries from forborne performing exposures | 262,776 | X |
| B.3 entries from forborne non-performing exposures | X | 113,305 |
| B.4 entries from non-forborne non-performing exposures | - | - |
| B.5 other increases | 312,716 | 19,547 |
| **C. Decreases** | **(1,874,268)** | **(1,260,260)** |
| C.1 exits to non-forborne performing exposures | X | (705,490) |
| C.2 exits to forborne performing exposures | (113,305) | X |
| C.3 exits to forborne non-performing exposures | X | (262,776) |
| C.4 write-offs | (227,751) | - |
| C.5 collections | (312,885) | (291,629) |
| C.6 gains on disposal | (233,334) | - |
| C.7 losses on disposal | (185,851) | - |
| C.8 other decreases | (801,142) | (365) |
| **D. Gross exposure: closing balance** | **2,205,669** | **2,839,148** |
| - of which: exposures transferred but not derecognised | 4,680 | 6,478 |

*A.1.8 Prudential consolidation - Non-performing on-balance sheet credit exposures to banks: changes in total value adjustments*

| Causes/Categories | Bad loans | | Unlikely to pay | | Non-performing past-due exposures | |
|---|---|---|---|---|---|---|
| | Total | of which: forborne exposures | Total | of which: forborne exposures | Total | of which: forborne exposures |
| **A. Total value adjustments - opening balance** | **-** | **-** | **-** | **-** | **-** | **-** |
| - of which: exposures transferred but not derecognised | - | - | - | - | - | - |
| **B. Increases** | **-** | **-** | **15,294** | **-** | **-** | **-** |
| B.1 value adjustments of acquired or originated impaired financial assets | - | X | - | X | - | X |
| B.2 other value adjustments | - | - | - | - | - | - |
| B.3 losses on disposal | - | - | - | - | - | - |
| B.4 transfers from other categories of non-performing exposures | - | - | - | - | - | - |
| B.5 contractual modification without derecognition | - | - | - | - | - | - |
| B.6 other increases | - | - | 15,294 | - | - | - |
| **C. Decreases** | **-** | **-** | **-** | **-** | **-** | **-** |
| C.1 recoveries from valuation | - | - | - | - | - | - |
| C.2 recoveries from collection | - | - | - | - | - | - |
| C.3 gains on disposal | - | - | - | - | - | - |
| C.4 write-offs | - | - | - | - | - | - |
| C.5 transfers to other categories of non-performing exposures | - | - | - | - | - | - |
| C.6 contractual modification without derecognition | - | - | - | - | - | - |
| C.7 other decreases | - | - | - | - | - | - |
| **D. Total value adjustments - closing balance** | **-** | **-** | **15,294** | **-** | **-** | **-** |
| - of which: exposures transferred but not derecognised | - | - | - | - | - | - |

*A.1.9 Prudential consolidation - Non-performing on-balance sheet credit exposures to customers: changes in total value adjustments*

| Causes/Categories | Bad loans | | Unlikely to pay | | Non-performing past-due exposures | |
|---|---|---|---|---|---|---|
| | Total | of which: forborne exposures | Total | of which: forborne exposures | Total | of which: forborne exposures |
| **A. Total value adjustments - opening balance** | **1,289,617** | **298,817** | **1,934,756** | **1,255,384** | **15,669** | **1,613** |
| - of which: exposures transferred but not derecognised | 4,998 | 335 | 713 | 406 | 45 | 25 |
| **B. Increases** | **678,822** | **123,792** | **823,134** | **554,125** | **16,858** | **3,254** |
| B.1 value adjustments from acquired or originated impaired financial assets | - | X | - | X | - | X |
| B.2 other value adjustments | 294,869 | 42,334 | 623,904 | 375,484 | 16,386 | 3,085 |
| B.3 losses on disposal | 137,236 | 52,784 | 172,043 | 133,068 | 41 | - |
| B.4 transfers from other categories of non-performing exposures | 225,697 | 27,769 | 3,398 | 796 | 119 | - |
| B.5 contractual modification without derecognition | - | - | 1,940 | 1,940 | - | - |
| B.6 other increases | 21,020 | 905 | 21,849 | 42,837 | 312 | 169 |
| **C. Decreases** | **(636,491)** | **(199,847)** | **(1,610,676)** | **(1,080,559)** | **(10,419)** | **(1,592)** |
| C.1 recoveries from valuation | (47,301) | (10,483) | (297,157) | (178,837) | (2,090) | (412) |
| C.2 recoveries from collection | (40,027) | (8,642) | (43,514) | (30,100) | (32) | - |
| C.3 gains on disposal | (31,811) | (8,982) | (67,207) | (57,243) | - | - |
| C.4 write-offs | (119,693) | (17,628) | (384,212) | (210,123) | (714) | - |
| C.5 transfers to other categories of non-performing exposures | - | - | (222,231) | (27,668) | (6,983) | (897) |
| C.6 contractual modification without derecognition | - | - | (1,144) | (1,144) | (13) | (13) |
| C.7 other decreases | (397,659) | (154,112) | (595,211) | (575,444) | (587) | (270) |
| **D. Total value adjustments - closing balance** | **1,331,948** | **222,762** | **1,147,214** | **728,950** | **22,108** | **3,275** |
| - of which: exposures transferred but not derecognised | 5,598 | 485 | 858 | 445 | 51 | - |

With regard to sales of non-performing loans, the item "Other decreases" includes the total amount of derecognitions other than accounting write-offs (i.e. for the amount equal to the difference between the gross credit exposure and the amount of the transfer).

## A.2 Classification of exposures according to external and internal ratings

*A.2.1 Prudential consolidation - Distribution of financial assets, commitments to disburse funds and financial guarantees given by external rating classes (gross values)*

| Exposures | External rating classes | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | AAA/AA- | A+/A- | BBB+/BBB- | BB+/BB- | B+/B- | below B- | Unrated | |
| **A. Financial assets at amortised cost** | **10,287,529** | **7,587,084** | **11,449,674** | **2,482,205** | **661,709** | **113,651** | **109,597,384** | **142,179,236** |
| - Stage 1 | 10,287,529 | 7,564,363 | 11,269,503 | 2,080,759 | 412,385 | 12,089 | 94,721,273 | 126,347,901 |
| - Stage 2 | - | 22,721 | 180,171 | 400,534 | 239,921 | 28,389 | 10,012,383 | 10,884,119 |
| - Stage 3 | - | - | - | 912 | 9,403 | 13,790 | 4,555,995 | 4,580,100 |
| - Acquired or originated impaired | - | - | - | - | - | 59,383 | 307,733 | 367,116 |
| **B. Financial assets measured at fair value through other comprehensive income** | **4,085,448** | **2,081,937** | **2,544,275** | **63,605** | **70,570** | **-** | **253,501** | **9,099,336** |
| - Stage 1 | 4,082,851 | 2,073,006 | 2,525,630 | 55,043 | 61,828 | - | 253,501 | 9,051,859 |
| - Stage 2 | 2,597 | 8,931 | 18,645 | 8,562 | 8,742 | - | - | 47,477 |
| - Stage 3 | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - |
| **C. Financial assets held for sale** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| - Stage 1 | - | - | - | - | - | - | - | - |
| - Stage 2 | - | - | - | - | - | - | - | - |
| - Stage 3 | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - |
| **Total (A+B+C)** | **14,372,977** | **9,669,021** | **13,993,949** | **2,545,810** | **732,279** | **113,651** | **109,850,885** | **151,278,572** |
| **D. Commitments to disburse funds and financial guarantees given** | **122,752** | **920,616** | **2,847,763** | **1,547,841** | **488,450** | **5,435** | **40,405,705** | **46,338,562** |
| - Stage 1 | 122,752 | 905,077 | 2,775,012 | 1,161,719 | 420,422 | 3,102 | 37,203,803 | 42,591,887 |
| - Stage 2 | - | 15,539 | 72,751 | 386,122 | 68,028 | 542 | 2,855,084 | 3,398,066 |
| - Stage 3 | - | - | - | - | - | - | 335,196 | 335,196 |
| - Acquired or originated impaired | - | - | - | - | - | 1,791 | 11,622 | 13,413 |
| **Total (D)** | **122,752** | **920,616** | **2,847,763** | **1,547,841** | **488,450** | **5,435** | **40,405,705** | **46,338,562** |
| **Total (A+B+C+D)** | **14,495,729** | **10,589,637** | **16,841,712** | **4,093,651** | **1,220,729** | **119,086** | **150,256,590** | **197,617,134** |

Banco BPM Group adopts the credit risk assessments issued by the following external credit assessment agencies (ECAIs): Standard & Poor's ratings Services, Moody's Investors Service, Fitch Ratings and Cerved Rating Agency S.p.A..

These agencies apply to all banks belonging to the Group. On the perimeter of securitisations, credit risk assessments can also be issued by the following external agencies: DBRS and Scope. Within this scope, the valuation of the individual transaction is requested by Banco BPM from one of the previous agencies. It should be noted that, where there are two assessments of the same customer, the most prudent one is adopted; in the presence of more than one assessment, the two assessments corresponding to the two

lowest weight factors are selected. If the two lowest weight factors are different, the highest factor is applied. If the two lowest weight factors are identical, said factor is applied (Art. 138 of Regulation (EU) no. 575/2013).
The table below shows the reconciliation between the risk classes and ratings of the agencies used.

| CLASS | Fitch Ratings | Moody's | Standard & Poor's | Cerved Rating Agency SpA |
|---|---|---|---|---|
| **AAA/AA-** | *AAA to AA-* | *Aaa to Aa3* | *AAA to AA-* | *A1.1 to A1.3* |
| **A+/A-** | *A+ to A-* | *A1 to A3* | *A+ to A-* | *A2.1 to A3.1* |
| **BBB+/BBB-** | *BBB+ to BBB-* | *Baa1 to Baa3* | *BBB+ to BBB-* | *B1.1 to B1.2* |
| **BB+/BB-** | *BB+ to BB-* | *Ba1 to Ba3* | *BB+ to BB-* | *B2.1 to B2.2* |
| **B+/B-** | *B+ to B-* | *B1 to B3* | *B+ to B-* | *C1.1* |
| **Below B-** | *CCC+ and below* | *Caa1 and below* | *CCC+ and below* | *C1.2 and below* |

*A.2.2 Prudential consolidation - Distribution of financial assets, commitments to disburse funds and financial guarantees given by internal rating classes (gross values)*

With the exception of the bank prospectus, the exposures shown in tables A.2.2 are associated with ratings also used to determine capital requirements for credit risks, limited to what can be traced back to the Business and Retail regulatory portfolios.
In particular, with regard to business customers, four separate rating models have been developed, based on the following customer segments: Large Corporate, Mid Corporate Plus, Mid Corporate and Small Business – and one for private customers. The counterparty rating system provides, at the level of each segment, twelve rating classes (eleven performing and one default) grouped below by risk category.

| Exposures to banks | Internal rating classes | | | | | | | | Unrated | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | AAA | AA | A | BBB | BB | B | CCC | Default | | |
| **A. Financial assets at amortised cost** | **-** | **739,302** | **1,372,826** | **1,434,405** | **116,149** | **94** | **-** | **-** | **1,832,248** | **5,495,024** |
| - Stage 1 | - | 739,302 | 1,372,826 | 1,391,372 | 110,300 | - | - | - | 1,832,048 | 5,445,848 |
| - Stage 2 | - | - | - | 43,033 | 5,849 | 94 | - | - | 200 | 49,176 |
| - Stage 3 | - | - | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - | - | - |
| **B. Financial assets measured at fair value through other comprehensive income** | **4,847** | **130,468** | **397,354** | **540,627** | **-** | **-** | **-** | **-** | **9,470** | **1,082,766** |
| - Stage 1 | 2,440 | 130,468 | 392,758 | 532,066 | - | - | - | - | 9,470 | 1,067,202 |
| - Stage 2 | 2,407 | - | 4,596 | 8,561 | - | - | - | - | - | 15,564 |
| - Stage 3 | - | - | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - | - | - |
| **C. Financial assets held for sale** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| - Stage 1 | - | - | - | - | - | - | - | - | - | - |
| - Stage 2 | - | - | - | - | - | - | - | - | - | - |
| - Stage 3 | - | - | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - | - | - |
| **Total Financial assets** | **4,847** | **869,770** | **1,770,180** | **1,975,032** | **116,149** | **94** | **-** | **-** | **1,841,718** | **6,577,790** |
| **D. Commitments to disburse funds and financial guarantees given** | | | | | | | | | | |
| - Stage 1 | 2,000 | 255,157 | 623,475 | 656,040 | 121,665 | 3,600 | - | - | 120,076 | 1,782,013 |
| - Stage 2 | - | - | - | 83,117 | 86,527 | 1,049 | - | - | 6,995 | 177,688 |
| - Stage 3 | - | - | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - | - | - |
| **Total commitments to disburse funds and financial guarantees given** | **2,000** | **255,157** | **623,475** | **739,157** | **208,192** | **4,649** | **-** | **-** | **127,071** | **1,959,701** |
| **Total** | **6,847** | **1,124,927** | **2,393,655** | **2,714,189** | **324,341** | **4,743** | **-** | **-** | **1,968,789** | **8,537,491** |

| Exposures to customers | Internal rating classes | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | LOW | MEDIUM-LOW | MEDIUM | MEDIUM-HIGH | HIGH | Default | Unrated | |
| **A. Financial assets at amortised cost** | **30,862,869** | **33,876,763** | **18,425,936** | **4,973,103** | **2,070,940** | **4,063,383** | **335,371** | **94,608,365** |
| - Stage 1 | 30,254,117 | 31,937,070 | 14,939,721 | 2,740,564 | 348,188 | - | 322,005 | 80,541,665 |
| - Stage 2 | 606,402 | 1,927,915 | 3,464,007 | 2,194,043 | 1,713,525 | - | 13,366 | 9,919,258 |
| - Stage 3 | - | - | - | - | 44 | 3,846,689 | - | 3,846,733 |
| - Acquired or originated impaired | 2,350 | 11,778 | 22,208 | 38,496 | 9,183 | 216,694 | - | 300,709 |
| **B. Financial assets measured at fair value through other comprehensive income** | **155,835** | **19,884** | **-** | **-** | **-** | **-** | **-** | **175,719** |
| - Stage 1 | 150,122 | 11,142 | - | - | - | - | - | 161,264 |
| - Stage 2 | 5,713 | 8,742 | - | - | - | - | - | 14,455 |
| - Stage 3 | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - |
| **C. Financial assets held for sale** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| - Stage 1 | - | - | - | - | - | - | - | - |
| - Stage 2 | - | - | - | - | - | - | - | - |
| - Stage 3 | - | - | - | - | - | - | - | - |
| - Acquired or originated impaired | - | - | - | - | - | - | - | - |
| **Total (A + B + C)** | **31,018,704** | **33,896,647** | **18,425,936** | **4,973,103** | **2,070,940** | **4,063,383** | **335,371** | **94,784,084** |
| **D. Commitments to disburse funds and financial guarantees given** | | | | | | | | |
| - Stage 1 | 21,803,340 | 8,782,271 | 4,338,414 | 522,823 | 54,795 | - | 84,228 | 35,585,871 |
| - Stage 2 | 478,311 | 659,539 | 1,486,329 | 304,736 | 110,896 | - | 628 | 3,040,439 |
| - Stage 3 | - | - | - | - | - | 330,260 | - | 330,260 |
| - Acquired or originated impaired | 55 | 70 | 674 | 6,997 | - | 3,794 | - | 11,590 |
| **Total (D)** | **22,281,706** | **9,441,880** | **5,825,417** | **834,556** | **165,691** | **334,054** | **84,856** | **38,968,160** |
| **Total (A+B+C+D) by segment** | **53,300,410** | **43,338,527** | **24,251,353** | **5,807,659** | **2,236,631** | **4,397,437** | **420,227** | **133,752,244** |
| **Grand total** | **-** | **-** | **-** | **-** | **-** | **745,232** | **54,582,167** | **55,327,399** |
| **Total** | **53,300,410** | **43,338,527** | **24,251,353** | **5,807,659** | **2,236,631** | **5,142,669** | **55,002,394** | **189,079,643** |

| Exposures | Internal rating classes | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|
| | LOW | MEDIUM-LOW | MEDIUM | MEDIUM-HIGH | HIGH | Default | Unrated | |
| Large Corporate | 12,136,347 | 3,758,910 | 3,889,858 | 379,904 | 19,666 | 125,306 | 5,646 | 20,315,637 |
| Mid Corporate Plus | 9,970,641 | 8,042,346 | 4,441,857 | 787,278 | 127,732 | 763,691 | 81,119 | 24,214,664 |
| Mid Corporate | 13,286,710 | 8,449,261 | 4,911,667 | 2,024,879 | 690,139 | 930,759 | 27,321 | 30,320,736 |
| Small Businesses | 7,898,365 | 6,512,508 | 8,452,680 | 2,004,261 | 602,462 | 1,857,467 | 258,567 | 27,586,310 |
| Private | 10,008,347 | 16,575,502 | 2,555,291 | 611,337 | 796,632 | 720,214 | 47,574 | 31,314,897 |
| **Total Exposures by segment** | **53,300,410** | **43,338,527** | **24,251,353** | **5,807,659** | **2,236,631** | **4,397,437** | **420,227** | **133,752,244** |

## A.3 Distribution of secured credit exposures by type of guarantee

### *A.3.1 Prudential consolidation - On-balance sheet and off-balance sheet secured credit exposures to banks*

| | Gross exposure | Net exposure | Collateral (1) | | | | Personal guarantees (2) | | | | | | | | | | Total (1)+(2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Credit derivatives | | | | | Unsecured loans | | | | | |
| | | | | | | | | Other derivatives | | | | | | | | | |
| | | | Real estate - Mortgages | Real estate - Loans for leases | Securities | Other collateral | CLN | Central counterparties | Banks | Other financial companies | Other entities | Public Administrations | Banks | Other financial companies | Other entities | | |
| **1. Secured on-balance sheet credit exposures:** | **919,753** | **919,751** | **-** | **372** | **911,997** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **838** | **420** | | **913,627** |
| 1.1. fully secured | 919,753 | 919,751 | - | 372 | 911,997 | - | - | - | - | - | - | - | - | 838 | 420 | | 913,627 |
| - of which non-performing | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - |
| 1.2. partially secured | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - |
| - of which non-performing | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - |
| **2. Secured off-balance sheet credit exposures:** | **168,244** | **168,233** | **-** | **-** | **136,420** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **5,569** | **11,025** | | **153,014** |
| 2.1. fully secured | 146,195 | 146,193 | - | - | 136,420 | - | - | - | - | - | - | - | - | 2,710 | 7,063 | | 146,193 |
| - of which non-performing | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - |
| 2.2. partially secured | 22,049 | 22,040 | - | - | - | - | - | - | - | - | - | - | - | 2,859 | 3,962 | | 6,821 |
| - of which non-performing | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - |

*A.3.2 Prudential consolidation - On-balance sheet and off-balance sheet secured credit exposures to customers*

| | Gross exposure | Net exposure | Collateral (1) | | | | Personal guarantees (2) | | | | | | | | | | Total (1)+(2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Credit derivatives | | | | | Unsecured loans | | | | | |
| | | | | | | | | Other derivatives | | | | | | | | | |
| | | | Real estate - Mortgages | Real estate - Finance leases | Securities | Other collateral | CLN | Central counterparties | Banks | Other financial companies | Other entities | Public Administrations | Banks | Other financial companies | Other entities | | |
| **1. Secured on-balance sheet credit exposures:** | **83,235,834** | **81,053,492** | **42,061,190** | **618,917** | **3,308,403** | **1,583,298** | **204,860** | **-** | **-** | **43,718** | **12,996** | **18,223,577** | **38,409** | **397,777** | **6,877,347** | | **73,370,492** |
| 1.1. fully secured | 65,530,993 | 63,620,785 | 42,037,293 | 618,917 | 3,128,817 | 1,507,021 | 31,014 | - | - | 12,917 | 2,598 | 8,523,813 | 10,278 | 358,325 | 6,535,355 | | 62,766,348 |
| - of which non-performing | 3,630,523 | 2,007,735 | 1,402,325 | 98,746 | 4,534 | 152,879 | - | - | - | 44 | - | 189,086 | 476 | 6,646 | 118,676 | | 1,973,412 |
| 1.2. partially secured | 17,704,841 | 17,432,707 | 23,897 | - | 179,586 | 76,277 | 173,846 | - | - | 30,801 | 10,398 | 9,699,764 | 28,131 | 39,452 | 341,992 | | 10,604,144 |
| - of which non-performing | 435,346 | 200,739 | 1,644 | - | 332 | 510 | - | - | - | 301 | - | 138,358 | 714 | 858 | 15,585 | | 158,302 |
| **2. Secured off-balance sheet credit exposures:** | **12,459,711** | **12,421,928** | **663,409** | **1,089** | **784,263** | **1,540,076** | **-** | **-** | **-** | **-** | **-** | **932,603** | **209,923** | **476,217** | **6,043,933** | | **10,651,513** |
| 2.1. fully secured | 8,500,643 | 8,472,785 | 661,419 | 1,089 | 653,518 | 537,159 | - | - | - | - | - | 357,806 | 127,001 | 326,094 | 5,404,996 | | 8,069,082 |
| - of which non-performing | 74,426 | 62,480 | 4,602 | 1,071 | 3,441 | 1,547 | - | - | - | - | - | 3,558 | - | 170 | 47,347 | | 61,736 |
| 2.2. partially secured | 3,959,068 | 3,949,143 | 1,990 | - | 130,745 | 1,002,917 | - | - | - | - | - | 574,797 | 82,922 | 150,123 | 638,937 | | 2,582,431 |
| - of which non-performing | 46,546 | 39,581 | - | - | 1,195 | 3,246 | - | - | - | - | - | 3,872 | - | 7 | 18,142 | | 26,462 |

Note that this table does not show the risk mitigations represented by CSA contracts on derivative instruments, as well as forms of support relating to synthetic securitisation transactions.

## A.4 Prudential consolidation - Financial and non-financial assets obtained through the enforcement of guarantees received

| | Derecognised credit exposure | Gross value | Total value adjustments | Book value | |
|---|---|---|---|---|---|
| | | | | | of which obtained during the year |
| **A. Property, plant and equipment** | **890,803** | **937,368** | **(441,006)** | **496,362** | **35,716** |
| A.1. Used in operations | 53,587 | 62,604 | (42,219) | 20,385 | - |
| A.2. For investment purposes | 837,216 | 874,764 | (398,787) | 475,977 | 35,716 |
| A.3. Inventories | - | - | - | - | - |
| **B. Equity instruments and debt securities** | **15,554** | **15,554** | **(6,601)** | **8,953** | **-** |
| **C. Other assets** | **-** | **-** | **-** | **-** | **-** |
| **D. Non-current assets and disposal groups held for sale** | **161,390** | **188,566** | **(110,294)** | **78,272** | **-** |
| D.1. Property, plant and equipment | 161,390 | 188,566 | (110,294) | 78,272 | - |
| D.2. Other assets | - | - | - | - | - |
| **Total 31/12/2022** | **1,067,747** | **1,141,488** | **(557,901)** | **583,587** | **35,716** |
| **Total 31/12/2021** | **1,012,294** | **1,113,045** | **(467,856)** | **645,189** | **37,551** |

## B. Breakdown and concentration of exposures

### B.1 Prudential consolidation - Breakdown by sector of on- and off-balance-sheet credit exposures to customers

| Exposures/Counterparties | Public Administrations | | Financial companies | | Financial companies (of which: insurance companies) | | Non-financial companies | | Households | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments |
| **A. On-balance sheet credit exposures** | | | | | | | | | | |
| A.1 Bad loans | - | - | 5,933 | (6,853) | - | - | 509,229 | (1,091,046) | 206,166 | (234,049) |
| - of which: forborne exposures | - | - | 677 | (947) | - | - | 118,714 | (192,535) | 39,587 | (29,280) |
| A.2 Unlikely to pay | 360 | (838) | 74,286 | (49,715) | - | - | 1,143,245 | (932,985) | 412,096 | (163,676) |
| - of which: forborne exposures | - | - | 7,033 | (6,944) | - | - | 823,018 | (645,583) | 250,029 | (76,423) |
| A.3 Non-performing past-due exposures | - | - | 10 | (2) | - | - | 21,159 | (6,629) | 38,928 | (15,477) |
| - of which: forborne exposures | - | - | - | - | - | - | 6,274 | (1,827) | 5,350 | (1,448) |
| A.4 Performing exposures | 31,755,828 | (7,269) | 14,381,154 | (25,039) | 175,243 | (157) | 59,687,064 | (291,351) | 34,313,737 | (105,516) |
| - of which: forborne exposures | 1,731 | (31) | 21,938 | (1,005) | - | - | 2,032,032 | (66,162) | 687,984 | (28,265) |
| **Total (A)** | **31,756,188** | **(8,107)** | **14,461,383** | **(81,609)** | **175,243** | **(157)** | **61,360,697** | **(2,322,011)** | **34,970,927** | **(518,718)** |
| **B. Off-balance sheet credit exposures** | | | | | | | | | | |
| B.1 Non-performing exposures | 825 | (50) | 3,088 | (835) | - | - | 554,445 | (93,975) | 10,252 | (1,426) |
| B.2 Performing exposures | 2,883,651 | (123) | 5,018,365 | (2,143) | 208,894 | (31) | 44,498,493 | (38,460) | 4,453,730 | (6,722) |
| **Total (B)** | **2,884,476** | **(173)** | **5,021,453** | **(2,978)** | **208,894** | **(31)** | **45,052,938** | **(132,435)** | **4,463,982** | **(8,148)** |
| **Total (A+B) 31/12/2022** | **34,640,664** | **(8,280)** | **19,482,836** | **(84,587)** | **384,137** | **(188)** | **106,413,635** | **(2,454,446)** | **39,434,909** | **(526,866)** |
| **Total (A+B) 31/12/2021** | **35,103,610** | **(10,227)** | **20,531,920** | **(162,696)** | **364,004** | **(297)** | **103,596,299** | **(3,165,708)** | **39,026,355** | **(493,546)** |

## B.2 Prudential consolidation - Breakdown by geographic area of on- and off-balance sheet credit exposures to customers

| Exposures/Geographic areas | Italy | | Other European countries | | America | | Asia | | Rest of the world | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments |
| **A. On-balance sheet credit exposures** | | | | | | | | | | |
| A.1 Bad loans | 717,836 | (1,316,629) | 2,964 | (11,679) | 1 | (632) | 387 | (2,712) | 140 | (296) |
| A.2 Unlikely to pay | 1,614,680 | (1,122,604) | 14,440 | (23,703) | 866 | (902) | 1 | (4) | - | (1) |
| A.3 Non-performing past-due exposures | 60,033 | (22,097) | 64 | (11) | - | - | - | - | - | - |
| A.4 Performing exposures | 117,823,888 | (424,484) | 16,950,449 | (2,453) | 4,727,967 | (1,860) | 508,519 | (358) | 126,960 | (20) |
| **Total (A)** | **120,216,437** | **(2,885,814)** | **16,967,917** | **(37,846)** | **4,728,834** | **(3,394)** | **508,907** | **(3,074)** | **127,100** | **(317)** |
| **B. Off-balance sheet credit exposures** | - | - | - | - | - | - | - | - | - | - |
| B.1 Non-performing exposures | 567,738 | (95,924) | 79 | (4) | - | - | 793 | (358) | - | - |
| B.2 Performing exposures | 53,133,242 | (47,312) | 3,300,394 | (100) | 115,086 | (16) | 51,737 | (14) | 253,780 | (6) |
| **Total (B)** | **53,700,980** | **(143,236)** | **3,300,473** | **(104)** | **115,086** | **(16)** | **52,530** | **(372)** | **253,780** | **(6)** |
| **Total (A+B) 31/12/2022** | **173,917,417** | **(3,029,050)** | **20,268,390** | **(37,950)** | **4,843,920** | **(3,410)** | **561,437** | **(3,446)** | **380,880** | **(323)** |
| **Total (A+B) 31/12/2021** | **176,878,745** | **(3,776,859)** | **14,978,584** | **(49,833)** | **5,563,031** | **(1,849)** | **459,799** | **(3,398)** | **378,025** | **(238)** |

In greater detail the exposures of Italy are broken down by geographic area as shown in the following table:

| Exposures/Geographic areas | North West Italy | | North East Italy | | Central Italy | | South Italy and Islands | |
|---|---|---|---|---|---|---|---|---|
| | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments |
| **A. On-balance sheet credit exposures** | | | | | | | | |
| A.1 Bad loans | 311,350 | (524,787) | 118,862 | (197,166) | 179,726 | (401,088) | 107,898 | (193,588) |
| A.2 Unlikely to pay | 811,372 | (606,008) | 255,173 | (203,521) | 357,436 | (188,553) | 190,699 | (124,522) |
| A.3 Non-performing past-due exposures | 25,815 | (10,410) | 11,549 | (3,751) | 12,122 | (4,254) | 10,547 | (3,682) |
| A.4 Performing exposures | 55,662,484 | (223,319) | 24,974,930 | (92,031) | 31,126,884 | (81,951) | 6,059,590 | (27,183) |
| **Total (A)** | **56,811,021** | **(1,364,524)** | **25,360,514** | **(496,469)** | **31,676,168** | **(675,846)** | **6,368,734** | **(348,975)** |
| **B. Off-balance sheet credit exposures** | | | | | | | | |
| B.1 Non-performing exposures | 268,887 | (55,623) | 131,536 | (18,107) | 149,069 | (19,910) | 18,246 | (2,284) |
| B.2 Performing exposures | 27,323,036 | (24,200) | 13,574,102 | (11,387) | 10,131,914 | (8,815) | 2,104,190 | (2,910) |
| **Total (B)** | 27,591,923 | (79,823) | 13,705,638 | (29,494) | 10,280,983 | (28,725) | 2,122,436 | (5,194) |
| **Total (A+B) 31/12/2022** | **84,402,944** | **(1,444,347)** | **39,066,152** | **(525,963)** | **41,957,151** | **(704,571)** | **8,491,170** | **(354,169)** |
| **Total (A+B) 31/12/2021** | **82,856,543** | **(1,957,689)** | **37,753,724** | **(694,316)** | **47,814,949** | **(787,373)** | **8,453,529** | **(337,481)** |

### B.3 Prudential consolidation - Breakdown by geographic area of on- and off-balance sheet credit exposures to banks

| Exposures/Geographic areas | Italy | | Other European countries | | America | | Asia | | Rest of the world | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments | Net exposure | Total value adjustments |
| **A. On-balance sheet credit exposures** | | | | | | | | | | |
| A.1 Bad loans | - | - | - | - | - | - | - | - | - | - |
| A.2 Unlikely to pay | - | (15,294) | - | - | - | - | - | - | - | - |
| A.3 Non-performing past-due exposures | - | - | - | - | - | - | - | - | - | - |
| A.4 Performing exposures | 15,751,923 | (2,542) | 3,064,538 | (1,649) | 223,165 | (237) | 29,055 | (61) | 81,561 | (158) |
| **Total (A)** | **15,751,923** | **(17,836)** | **3,064,538** | **(1,649)** | **223,165** | **(237)** | **29,055** | **(61)** | **81,561** | **(158)** |
| **B. Off-balance sheet credit exposures** | | | | | | | | | | |
| B.1 Non-performing exposures | - | - | - | - | - | - | - | - | - | - |
| B.2 Performing exposures | 837,166 | (64) | 3,750,706 | (98) | 146,892 | (95) | 558,502 | (93) | 231,851 | (76) |
| **Total (B)** | **837,166** | **(64)** | **3,750,706** | **(98)** | **146,892** | **(95)** | **558,502** | **(93)** | **231,851** | **(76)** |
| **Total (A+B) 31/12/2022** | **16,589,089** | **(17,900)** | **6,815,244** | **(1,747)** | **370,057** | **(332)** | **587,557** | **(154)** | **313,412** | **(234)** |
| **Total (A+B) 31/12/2021** | **41,766,871** | **(1,806)** | **4,166,523** | **(793)** | **273,130** | **(82)** | **543,375** | **(86)** | **249,333** | **(166)** |

### B.4 Large exposures

From 30 June 2021, the prudential requirements for banks and investment firms contained in Regulation (EU) no. 575/2013, as updated by Regulation (EU) no. 876/2019 (CRR 2), later amended by Regulation (EU) no. 873/2020 and in Directive no. 2013/36/EU, as updated by Regulation (EU) 878/2019 (CRD V) came into force. These transpose the standards defined by the Basel Committee on Banking Supervision.
In July 2022, Delegated Regulation no. 1011/2022, which regulates the recognition of indirect exposures in derivatives for contracts which, even if not directly entered into with a customer, are in any case traced back to the customer as the issuer of the underlying debt or equity instrument. Where the multi-underlying instruments are involved and it is not possible or excessively burdensome to identify the individual underlying instruments, the exposure must be attributed to the unknown client.
This item shows the amount ("non-weighted value" and "weighted value") and the number of the "risk positions" that represent a "large exposure" according to the provisions of Art. 14 of Implementing Regulation (EU) no. 451/2021, laying down implementing technical standards with regard to supervisory reporting of institutions.

An entity's exposure to a customer or a group of related customers is considered a large exposure if the value is equal to or more than 10% of the entity's eligible capital ("CRR 2", Art. 392). In any event, customers or groups of customers with an exposure exceeding 300 million, even if not considered large exposures must be disclosed in the consolidated financial statements.
Taking into account the effect of the exemptions and the credit risk mitigation, large exposures must, in any case, individually respect the limit of 25% of the entity's eligible capital: said limit is set at 150 million if the 25% of the eligible capital is lower.
As at 31 December 2022, the eligible capital coincides with the amount of Tier 1 capital.

In addition to the implementing technical standards for the supervisory reporting of entities, the reporting of Large Exposures was produced, applying the EBA Guidelines (EBA/GL/2017/15) on connected clients, limited to the alternative approach to Central Governments.

On the basis of the new combined provisions, at said date there were 33 risk positions classified as "large exposures" for a total ("non-weighted") amount of 724,285.7 million corresponding to a net ("weighted") exposure of 25,593.4 million.

The main Groups identified as "large exposures" have the following risk assets:

- the Ministry of Economy and Finance for 35,381.9 million (820.5 million considering the weight factors and the exemptions pursuant to Art. 400 of the CRR), mainly consisting of the government bonds in the portfolio, the guarantees issued and tax assets. The exposures of this Central Government are in turn included in each group of connected clients, identified separately for directly-controlled or directly-related legal entities, as better specified in paragraph 5 (Alternative approach for exposures to central governments) of the previously-cited EBA guidelines;
- Euronext for 21,315.9 million (23.8 million considering the weight factors and the exemptions pursuant to Art. 400 of the CRR), mainly consisting of repurchase agreements with Cassa Compensazione e Garanzia;
- four Central Governments of foreign countries for a total of 19,099.7 million (0 million considering the weight factors and the exemptions pursuant to Art. 400 of the CRR), consisting exclusively of the government bonds in the portfolio;
- the Bank of Italy for 13,508.5 million (139.1 million considering the weight factors and the exemptions pursuant to Art. 400 of the CRR), mainly consisting of demand deposits and for the minimum reserve.

The remaining 26 positions are those of leading banking, financial and industrial groups, both national and foreign.
Each of the positions reported respects the limit of 25% of the eligible capital.

| | 31/12/2022 | 31/12/2021 |
|---|---|---|
| a) Amount (book value) (*) | 724,285,739 | 689,746,479 |
| b) Amount (weighted value) (*) | **25,593,425** | **20,804,227** |
| c) Number | 33 | 32 |

*(*) figures in thousands of euro*

In 2022, the Group monitored the levels of exposure to Related Parties and Large Exposures at consolidated level and to individual legal entities, verifying compliance with regulatory and management limits, the latter seeks to anticipate and prevent the possible exceeding of the former. Based on quarterly Supervisory Reporting, the report transposes the recent legislative updates (specifically, the 34th update of Circular 285/2013) with a view to rendering them more consistent with the rules for Supervisory Reporting on Exposure to Related Parties, in line with the principles of Basel III. To this end, the Risk Function has extended its scope of reporting as regards the monitoring of Related Parties which, starting from 2022, also includes the monitoring of Large Exposures and of the relative limits.
During the year, the Group set up a working group that includes, in addition to the CLO and the Risk function units, the pertinent corporate functions of the CFO, Commercial and Banca Akros areas, in order to periodically monitor the future evolution of limits, in terms of both exposures and capital, also considering changes in the reference scenario to be able to proactively manage Related Parties and Large Exposures.

## C. Securitisation transactions

This section illustrates the Group’s exposure in terms of securitisations, both those in which the Group acts as the Originator of the receivables, and those in which the Group acts as an investor.

## Traditional securitisations acting as originator

The completion of the transactions in question, with underlying assets sold by the Group as originator, seeks mainly to diversify the sources of funding and reduce the cost of funding for the Group, rather than carrying out derisking actions on non-performing credit exposures (bad loans and unlikely to pay).

In greater detail, for securitisations used for funding purposes, for which the Group also acts as Servicer, the structuring is followed by a Finance function of Banco BPM, which also monitors the transaction, through specific monthly and quarterly reports containing the trend in principal and interest collections and the status of receivables.

For securitisations used for derisking purposes, the structuring is carried out by a function belonging to the Chief Lending Officer area of Banco BPM, which conducts monitoring on the basis of monthly and quarterly reports provided by the Servicers outside the Group.

Information is provided below on the main events that took place during the year and on transactions in progress. In line with the instructions of the Bank of Italy Circular no. 262, for “self-securitisation” transactions in which the Group has fully subscribed the securities issued by the SPE, please refer to paragraph “1.4 - Liquidity risk”, contained in “Section 2 - Risks of prudential consolidation” of Part E of these Notes to the consolidated financial statements.

QUALITATIVE INFORMATION

The following table lists the securitisation transactions in place as at 31 December 2022, showing the relative accounting treatment - derecognition or not from the financial statements of the assets sold to the SPE - depending on the significant transfer of the risks and benefits, as illustrated in the Part A - Accounting policies of these Notes.

| SPE | Originator | Securities issue date | Transaction | Type of securitisation |
|---|---|---|---|---|
| **Securitisations not derecognised from the financial statements** | | | | |
| BP Mortgages S.r.l. | Banco BPM | June 2007 | BP Mortgages 2 | Performing residential mortgage loans |
| Lilium SPV S.r.l. | Banco BPM | December 2022 | Wolf Project | Performing loans |
| **Securitisations fully derecognised from the financial statements** | | | | |
| Red Sea SPV S.r.l. | Banco BPM | June 2018 | Project Exodus | Bad loans |
| Leviticus SPV S.r.l. | Banco BPM | February 2019 | Project Ace | Bad loans |
| Tiberina SPV S.r.l. | Banco BPM | December 2020 | Project Django | UTP and Bad loans |
| Titan SPV S.r.l. | Banco BPM and Release | December 2020 | Project Titan | Bad loans |
| Aurelia SPV S.r.l. | Banco BPM | June 2021 | Project Rockets | Bad loans |
| Tevere SPV S.r.l. | Banco BPM | June 2022 | Project Argo | UTP and Bad loans |

The new transactions not completed during the period and those closed are illustrated below.

## New transactions of the period

*Tevere SPV S.r.l (Project Argo)*

On 16 June 2022, the sale without recourse, against payment and en bloc of a portfolio of loans classified as UTP (unlikely to pay) and bad loans, originated by Banco BPM S.p.A. (hereinafter also the "Transferor" or "Originator") was finalised for a total gross value of 656.0 million.
More specifically, the transaction was finalised through the sale of the loans to Tevere SPV S.r.l., the securitisation SPE specifically established and not belonging to Banco BPM Group, pursuant to Italian Law 130/99.

The purchase of the loans by the SPE was settled in part in cash for 24 million and in part through the issue, on 22 June 2022, of 4 tranches of securities (Senior, Mezzanine, Mezzanine Lower and Junior), which were subscribed by the Originator and by third-party investors belonging to the Elliott Fund, for a nominal value effectively subscribed and paid of 149.5 million. The Senior, Mezzanine and Lower Mezzanine securities were fully subscribed. Only the Junior security was partly paid with respect to the nominal value at the time of issue, as illustrated in the table below.

In compliance with the regulations on the retention rule, the Bank originally subscribed 100% of the Senior notes and 5% of the other categories of notes subscribed and paid.
The companies of the Elliott fund directly subscribed 95% of the Mezzanine and Junior securities.

| Class | Partly paid | Nominal issue value | Nominal value subscribed | % Retention Banco BPM |
|---|---|---|---|---|
| A - Senior | No | 104,658 | 104,658 | 100% |
| B1 - Mezzanine | No | 22,427 | 22,427 | 5% |
| B2 - Lower Mezzanine | No | 11,214 | 11,214 | 5% |
| J - Junior | Yes | 18,684 | 11,214 | 5% |
| **Total** | | **156,983** | **149,513** | |

The finalisation of this sale resulted in the significant transfer of the risks and rewards of the loans sold, which were, therefore, derecognised from the financial statements, based on the regulations set out in the accounting standard IFRS 9.

The situation at the date of the subscription and as at 31 December 2022, of the securities subscribed by the Parent Company is summed up below:

| Class | Type | Nominal value | Nominal amount subscribed by Banco BPM | Initial recognition value | Value as at 31/12/2022 | Maturity | Rating | Interest rate |
|---|---|---|---|---|---|---|---|---|
| Class A Asset-Backed Fixed Rate Notes due December 2041 | Senior | 104,658 | 104,658 | 104,658 | 96,023 | 05/12/2041 | Unrated | Fixed @ 2% |
| Class B1 Asset-Backed Floating Rate Notes due December 2041 | Mezzanine | 22,427 | 1,122 | 1,122 | 1,054 | 05/12/2041 | Unrated | Euribor 3M (floor 0%) + 6% + Detachable coupon @3% |
| Class B2 Asset-Backed Floating Rate Notes due December 2041 | Mezzanine | 11,214 | 561 | 561 | 567 | 05/12/2041 | Unrated | Euribor 3M (floor 0%) + 9% + Detachable coupon @3% |
| Class J Partly Paid Asset-Backed Variable Return Notes due December 2041 | Junior | 18,684 | 935 | 561 | 561 | 05/12/2041 | Unrated | n.a. |
| **Total** | | **156,983** | **107,276** | **106,902** | **98,205** | | | |

For further details on the transaction and its accounting treatment, refer to the paragraph entitled "Other significant aspects relating to Group accounting policies" contained in Part A - "Accounting policies" of these Notes.

Lastly, it should be noted that in January 2023, the sale to the SPE Tevere SPV of a further three revolving credit facilities was completed, which concerned a total amount of approximately 0.7 million.
The sale was financed by the reserves that the SPE had already set up and there was no need to revise the structure of the notes.

*Lilium SPV S.r.l (Project Wolf)*

In December 2022, the Group completed a complex transaction for the restructuring of credit exposures classified as unlikely to pay for a nominal value of 495.8 million (including default interest), carried out through the sale without recourse to a securitisation vehicle (Lilium SPV S.r.l.). For details on the transaction and its accounting treatment, refer to the paragraph entitled "Other significant aspects relating to Group accounting policies" contained in Part A of these Notes.

The following table shows the securities issued by the SPE Lilium SPV S.r.l. and the share held by the Group as at 31 December 2022.

| Class | Partly paid | Nominal value | Notes subscribed and retained by BBPM as at 31 December 2022 | Notes initially subscribed by BBPM, and then transferred to third parties | Notes subscribed by third parties |
|---|---|---|---|---|---|
| AS - Senior | Yes | 142,500 | | | 11,829 |
| AJ – Mezzanine | Yes | 7,125 | | | 591 |
| AX – Mezzanine | Yes | 375 | | | 31 |
| B1 – Mezzanine | Yes | 17,680 | 17,680 | | |
| B2 – Mezzanine | No | 3,120 | | 3,120 | |
| C1 – Mezzanine | No | 31,790 | 31,790 | | |
| C2– Mezzanine | No | 5,610 | | 5,610 | |
| D1 – Mezzanine | No | 24,735 | 24,735 | | |
| D2 – Mezzanine | No | 4,365 | | 4,365 | |
| E1 - Junior | No | 326,804 | 326,804 | | |
| E2 - Junior | No | 81,701 | | 81,701 | |
| **Total** | | **645,805** | **401,009** | **94,796** | **12,452** |

In greater detail, on 12 December 2022, Banco BPM fully subscribed the notes of the B, C, D and E classes, for a total nominal value equal to that of the loans sold; the relative payment obligation for Banco BPM was offset against the payment obligations of the SPE for the loans purchased.
As a result of the agreement for the restructuring of the credit exposures sold to the SPE, effective on 28 December 2022, with value date 29 December 2022, the sub-classes B2, C2, D2, E2 were sold to third-party investors; the payment of the consideration is expected to take place on a deferred basis during 2023.
The transaction also envisages the issue of Class A notes to finance work on properties to guarantee credit exposures (so-called capex), in execution of the provisions of the restructuring agreements. As at 31 December 2022, these notes, issued in the "partly paid" form, were partially subscribed by third-party investors, for a value of 12.5 million.

The following table shows the nominal value of the notes held by the Group as at 31 December 2022, the relative remuneration and the recognition value (fair value) on the basis of the recoverable cash flows expected as a result of the restructuring agreement:

| Class | Type | Nominal value | Fair value as at 31/12/2022 | Maturity | Rating | Interest rate |
|---|---|---|---|---|---|---|
| Class B1 Asset-Backed Floating Rate Notes due December 2032 | Mezzanine | 17,680 | 17,680 | 31/12/2032 | Unrated | Fixed @3.00% |
| Class C1 Asset-Backed Floating Rate Notes due December 2032 | Mezzanine | 31,790 | 31,790 | 31/12/2032 | Unrated | Fixed @6.00% |
| Class D1 Asset-Backed Floating Rate Notes due December 2032 | Mezzanine | 24,735 | 24,735 | 31/12/2032 | Unrated | Fixed @7.50% |
| Class E1 Asset-Backed Floating Rate Notes due December 2032 | Junior | 326,804 | 126,500 | 31/12/2032 | Unrated | n.a. |
| **Total** | | **401,009** | **200,705** | | | |

Since this is a transaction without derecognition, note that the aforementioned securities are not included in the assets, but are shown as a reduction of the liability recorded against the loans sold and not derecognised. For the transaction in question, in fact, it was deemed that the Group should substantially retain the risks and benefits of the assets transferred, as illustrated in the aforementioned paragraph "Other significant aspects relating to Group accounting policies" contained in Part A of these Notes, to which reference is made for further details.

Lastly, the transaction also envisaged the release by Banco BPM of a credit line of 10 million to the SPE, the repayment of which must precede the more senior tranches; as at 31 December 2022, the value drawn down was 4.8 million, repaid at an annual fixed interest rate of 4.5%.

### Transactions closed during the year

*Italfinance Securitization Vehicle S.r.l. in liquidation*

In March 2022, following the liquidation process, Italfinance Securitization Vehicle S.r.l in liquidation was removed from the relevant Companies' Register. It should be recalled that, following the early closure of the last outstanding securitisation, in July 2021 the early dissolution and liquidation of the SPE was resolved.

## Existing and significant securitisation transactions during 2022

*BP Mortgages 2 (June 2007)*

On 22 June 2007, Banca Popolare di Novara and Credito Bergamasco, both now Banco BPM sold a portfolio of residential landed mortgage loans and residential mortgage loans backed by a voluntary mortgage on the property to the SPE BP Mortgages S.r.l. The portfolio sold amounted to 1,610 million; on 29 June 2007, the SPE issued four classes of rated securities that were placed with institutional investors and two classes of unrated junior securities subscribed by the Originators; all of the classes of securities were listed on the Irish Stock Exchange.
The Originator Banks, now only Banco BPM, acted as Servicers and managed the loan collection.

Loans portfolio

| Bank | Value 31/12/2022 | Value 31/12/2021 |
|---|---|---|
| Banco BPM | 145,709 | 180,251 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

Issue characteristics

| Class | Type | Issue value | Value as at 31/12/2022 | Interest rate | Maturity | Rating Moody's/S&P/ Fitch (4) |
|---|---|---|---|---|---|---|
| A1 | Senior | 147,300 | - | 3-month Euribor + 0.07% | | |
| A2 | Senior (1) | 1,382,000 | 20,515 | 3-month Euribor + 0.13% | July 2044 | Aa3/AA/AA |
| B | Mezzanine | 28,200 | 28,200 | 3-month Euribor + 0.25% | July 2044 | Aa3/AA/AA |
| C | Mezzanine (1) | 36,200 | 36,200 | 3-month Euribor + 0.66% | July 2044 | Aa3/AA/AA |
| M1 | Junior (2) | 8,639 | 8,639 | 3-month Euribor + 2% + Additional return | July 2044 | unrated |
| M2 | Junior (3) | 7,479 | 7,479 | 3-month Euribor + 2% + Additional return | July 2044 | unrated |
| **Total** | | **1,609,818** | **101,033** | | | |

*(1) Following their placement on the market, Banco BPM (former Banco Popolare) purchased Senior securities amounting to a nominal value of 685.8 million and mezzanine securities for a nominal value of 11.4 million.*
*(2) The class M1 junior security was subscribed by the former Banca Popolare di Novara, now Banco BPM.*
*(3) The M2 class junior security was subscribed to by the former Credito Bergamasco, now Banco BPM.*
*(4) Rating as at 31 December 2022.*

Accessory financial transactions
To immunise the interest rate risk to which the SPE is exposed owing to the mismatch between the securitised mortgage rates and the yield of the issued bonds, the Originator Banks, now Banco BPM, a market counterparty and the SPE entered into an interest rate swap agreement with Banca Akros as intermediary.

Contractual agreements with an obligation to provide financial support to the SPE (IFRS 12, par. 14)
In June 2012, following the loss of the minimum rating needed for the issue of the guarantee relating to the agreement called "First Demand Guarantee", Banco BPM (formerly Banco Popolare), set up a collateral account, segregated with respect to the company's separate equity, the amount of which is reviewed annually on the Interest Payment Date in July, to take into account the amortisation of the portfolio assigned. As at 31 December 2022, the amount of collateral paid in was 8.4 million.

Financial support provided to the entity (IFRS 12, par. 15)
During the year no financial support other than that envisaged under the agreement was given.

*Aurelia SPV S.r.l. (Project Rockets)*

On 3 June 2021, the sale without recourse, against payment and en bloc of a portfolio of loans classified as bad loans, originated by Banco BPM S.p.A. (hereinafter also the "Transferor" or "Originator") had been finalised for a total gross value of 1,509.5 million.
More specifically, the transaction was finalised through the sale of the loans to Aurelia SPV S.r.l., the securitisation SPE specifically established and not belonging to Banco BPM Group, pursuant to Italian Law 130/99.

The purchase of the loans by the SPE was funded through the issue, on 22 June 2021, of three tranches of securities (Senior, Mezzanine and Junior), which were fully subscribed pro-rata by the Originator, for a total nominal amount of 394 million, as illustrated in the following table.

| Class - Type | Issue value |
|---|---|
| Class A - Senior, for which the State Guarantee on the Securitisation of Bad Loans ("GACS") has been obtained | 342,000 |
| Class B - Mezzanine | 40,000 |
| Class J - Junior | 12,000 |
| **Total** | **394,000** |

The structure also envisaged the establishment of a Cash Reserve corresponding to 4.5% of the nominal value of the Senior (Class A) securities outstanding on each payment date, corresponding to 13.1 million as at 31 December 2022.
Said reserve was established by means of a Limited Recourse Loan disbursed by Banco BPM to the special purpose entity Aurelia SPV, for an initial value of 15.6 million, remunerated on the basis of a fixed annual interest rate of 1.75%, antedated with respect to the Senior securities.

The securities fully subscribed by Banco BPM, were subsequently sold, specifically a share of 95% of the Mezzanine and Junior securities, to a third-party investor.
The finalisation of this sale resulted in the significant transfer of the risks and rewards of the loans sold, which were, therefore, derecognised from the financial statements, based on the regulations set out in the accounting standard IFRS 9.

The situation at the date of the subscription and as at 31 December 2022, of the securities subscribed by the Parent Company is summed up below:

| Type | Type | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31 December 2022 | Value as at 31/12/2022 | Maturity | Rating | Interest rate |
|---|---|---|---|---|---|---|---|
| Class A Asset Backed Floating Rate Notes due July 2047 | Senior | 342,000 | 342,000 | 266,554 | 30/07/2047 | DBRS: BBB Scope: BBB | Euribor 6M + 0.5% |
| Class B1 Asset Backed Floating Rate Notes due July 2047 | Mezzanine | 2,000 | 2,000 | 643 | 30/07/2047 | Unrated | Euribor 6M + 8% |
| Class J Asset Backed Floating Rate and Variable Return Notes due July 2047 | Junior | 600 | 600 | - | 30/07/2047 | Unrated | Euribor 6M + 10% |
| **Total** | | **344,600** | **344,600** | **267,197** | | | |

*Tiberina SPV S.r.l (Project Django)*

On 11 December 2020, the contract for the sale of loans between Banco BPM and Tiberina SPV was signed, as part of the securitisation transaction, pursuant to Italian Law 130/99. The sale regarded a portfolio of 40 positions classified as Unlikely to Pay and 1 position classified as Bad Loan, for a total gross value of 288 million.
On 22 December 2020, the purchase of the loans portfolio was funded by the SPV through the issue of the following asset backed securities for a total nominal value of 120.0 million:
- Class A Senior for a nominal value of 84.0 million;
- Class B1 Mezzanine for a nominal value of 18.0 million;
- Class B1 Mezzanine for a nominal value of 9.0 million;
- Class J Junior for a nominal value of 9.0 million.

The Senior tranche was entirely subscribed by Banco BPM, together with 5% of the Mezzanine tranche and of the Junior tranche - in accordance with the retention rule envisaged by regulatory provisions - for a total nominal value of 85.8 million.
The remaining 95% of the Mezzanine and Junior tranches was instead subscribed by Credito Fondiario.
The finalisation of this sale resulted in the significant transfer of the risks and rewards of the loans sold, which were, therefore, derecognised from the financial statements, based on the regulations set out in the accounting standard IFRS 9.

The situation of the securities subscribed by the Parent Company as at 31 December 2022, is summarised below:

| Type | Type | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31 December 2022 | Value as at 31/12/2022 | Maturity | Rating | Interest rate |
|---|---|---|---|---|---|---|---|
| Class A Asset Backed Floating Rate Notes due October 2040 | Senior | 84,037 | 41,900 | 42,171 | 01/10/2040 | Unrated | Euribor (floor @0%) +2% |
| Class B1 Asset Backed Floating Rate Notes due October 2040 | Mezzanine | 901 | 529 | 542 | 01/10/2040 | Unrated | Euribor (floor @0%) +9% |
| Class B2 Asset Backed Floating Rate Notes due October 2040 | Mezzanine | 451 | 451 | 466 | 01/10/2040 | Unrated | Euribor (floor @0%) +12% |
| Class J Asset Backed Variable Return Notes due October 2040 | Junior | 451 | 451 | 451 | 01/10/2040 | Unrated | n.a. |
| **Total** | | **85,840** | **43,331** | **43,630** | | | |

*Titan SPV S.r.l. (Project Titan)*

On 12 December 2020, a multi-originator securitisation transaction was stipulated (Banco BPM S.p.A., Release S.p.A. and Alba Leasing S.p.A.), where the underlying was a portfolio of Lease NPL with a gross contractual value totalling 335.4 million (value referred to the valuation date, which under the contract was 31 December 2019).

On 28 December 2020, the purchase of the portfolio sold was funded by the SPE through the issue of the following asset backed securities for a nominal value of 115.6 million, including the issue to fund Alba Leasing:
- Class A Senior for a nominal value of 90.5 million, for which the State Guarantee on the Securitisation of Bad Loans ("GACS") has been obtained;
- Class B Mezzanine for a nominal value of 15.0 million;
- Class J Junior for a nominal value of 10.1 million. The issue of the tranche in question, in addition to funding the purchase of the loans, also covered the 6.5 million initial expenses of the securitisation.

On the issue date, the securities were entirely subscribed pro-rata by the originators; more specifically, the share of the securities issued to fund the Group's portfolio amounted to 41.7 million (22.3 million relating to the Parent Company and 19.4 million to Release). Subsequently, 95% of the Group's Mezzanine and Junior tranches was placed with a third-party investor and Release sold the Parent Company the tranches of the securities it had subscribed.

The finalisation of this sale resulted in the significant transfer of the risks and rewards of the loans sold, which were, therefore, derecognised from the financial statements, based on the regulations set out in the accounting standard IFRS 9.

The situation of the securities subscribed by the Parent Company as at 31 December 2022, is summarised below:

| Type | Type | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31 December 2022 | Value as at 31/12/2022 | Maturity | Rating as at 31 December 2022 | Interest rate |
|---|---|---|---|---|---|---|---|
| Class A Asset Backed Floating Rate Notes due January 2041 | Senior | 32,343 | 24,176 | 24,261 | 01/01/2041 | DBRS: BBB Scope: BBB | Euribor 6M + 0.5% |
| Class B1 Asset Backed Floating Rate Notes due January 2041 | Mezzanine | 269 | 269 | 82 | 01/01/2041 | Unrated | Euribor 6M + 8% |
| Class J Asset Backed Variable Return Notes due January 2041 | Junior | 200 | 200 | - | 01/01/2041 | Unrated | n.a. |
| **Total** | | **32,812** | **24,645** | **24,343** | | | |

*Leviticus SPV S.r.l. (Project Ace)*

In December 2018, a transaction to sell a portfolio of bad loans was set in motion, pursuant to the law on securitisation (Italian Law no. 130/99). On the sale date, the gross value of the portfolio sold amounted to around 6 billion, net of write-offs of around 1.1 billion (the nominal value was 7.4 billion, before write-offs, related to the date of accrual established in the contract as at 30 June 2018).

The transaction was finalised on 6 February 2019 through the issue, by Leviticus SPV S.r.l., of the following classes of securities, fully subscribed by Banco BPM:

- Class A Senior corresponding to 1,440.0 million, for which the guarantee from the Italian State was obtained pursuant to Italian Decree Law 18/2016 ("GACS");
- Class B - Mezzanine for 221.5 million;
- Class J - Junior for around 248.8 million.

Subsequently, the sale to a third party of 95% of the Mezzanine tranche and 95% of the junior tranche was completed. In compliance with the retention rule set out in the supervisory regulations, Banco BPM retained ownership of 5% of those securities. Banco BPM also retained ownership of 100% of the senior securities.

The finalisation of this sale resulted in the significant transfer of the risks and rewards of the loans sold, which were, therefore, derecognised from the financial statements, based on the regulations set out in the accounting standard IFRS 9.

The situation of the securities subscribed by the Parent Company as at 31 December 2022, is summarised below:

| Type | Type | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31 December 2022 | Value as at 31/12/2022 | Maturity | Rating as at 31 December 2022 | Interest rate |
|---|---|---|---|---|---|---|---|
| Class A Asset Backed Floating Rate Notes due July 2040 | Senior | 1,440,033 | 740,711 | 743,629 | 31/07/2040 | DBRS: BB; Scope: BB+ | 6M Euribor +0.6% |
| Class B Asset Backed Floating Rate Notes due July 2040 | Mezzanine | 11,078 | 11,078 | 4,485 | 31/07/2040 | Unrated | 6M Euribor +8% |
| Class J Asset Backed Variable Return Notes due July 2040 | Junior | 12,443 | 12,443 | - | 31/07/2040 | Unrated | n.a. |
| **Total** | | **1,463,554** | **764,232** | **748,114** | | | |

*Red Sea SPV S.r.l. (Project Exodus)*

In June 2018, Banco BPM finalised the sale of a portfolio of bad loans for a gross nominal value of around 5.1 billion to Red Sea SPV S.r.l..

The transaction was carried out through the issue, by the special purpose entity, of securities totalling around 1.9 billion, broken down as follows:

- Class A Senior corresponding to 1,656.5 million, for which the guarantee from the Italian State was obtained pursuant to Italian Decree Law 18/2016 ("GACS");
- Class B Mezzanine for 152.9 million;
- Class J Junior for 51 million.

The securities fully subscribed by Banco BPM, were subsequently sold, specifically a share of 95% of the mezzanine and junior securities, to a third-party investor. With the placement of the mezzanine and junior securities, the requirements were met for the derecognition of the bad loans sold to the SPE.

The situation of the securities subscribed by the Parent Company as at 31 December 2022, is summarised below:

| Type | Type | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31 December 2022 | Value as at 31/12/2022 | Maturity | Rating as at 31 December 2022 | Interest rate |
|---|---|---|---|---|---|---|---|
| Class B Asset Backed Floating Rate Notes due October 2038 | Senior | 1,656,504 | 760,614 | 761,090 | 29/10/2038 | Moody's: Baa2; Scope: BBB- | 6M Euribor +0.6% |
| Class B Asset Backed Floating Rate Notes due October 2038 | Mezzanine | 7,646 | 7,646 | 2,969 | 29/10/2038 | Unrated | 6M Euribor +6% |
| Class J Asset Backed Variable Return Notes due October 2038 | Junior | 2,549 | 2,549 | - | 29/10/2038 | Unrated | n.a. |
| | | **1,666,699** | **770,809** | **764,059** | | | |

## Synthetic securitisations acting as originator

Synthetic securitisations envisage, through the contracting of collateral arrangements, the purchase of protection from the credit risk underlying a portfolio of loans, of which the Originator retains full ownership. Thus, the purpose of those transactions is to transfer the credit risk from the Originator to an external counterparty, without derecognising the assets, which are therefore kept in the Originator's financial statements.
The characteristics of these transactions allow regulatory and economic capital to be freed up due to the reduction in the level of risk of the underlying portfolio ("Significant Risk Transfer" pursuant to prudential regulations), thereby contributing to creating value by optimising the use of capital.
The reference regulation for those transactions is EU Regulation no. 575/2013 (Capital Requirements Regulation, "CRR"). Art. 245 of the CRR establishes the conditions at which the Significant Risk Transfer (SRT) criterion is met, i.e. the significant transfer of risk to third parties using collateral or personal guarantees as credit protection. Those conditions must be constantly monitored for the entire duration of the transaction.

QUALITATIVE INFORMATION

The following table shows synthetic securitisation transactions in place as at 31 December 2022.

| Guarantor | Originator | Transaction date | Type of securitisation |
|---|---|---|---|
| European Investment Fund | Banco BPM | December 2020 | Performing loans |
| European Investment Fund | Banco BPM | December 2021 | Performing loans |
| Market investor | Banco BPM | December 2021 | Performing loans |
| Market investors and insurance company | Banco BPM | December 2022 | Performing loans |
| Market investor | Banco BPM | December 2022 | Performing loans |

## New synthetic securitisation transactions in the year

*Specialised Lending synthetic securitisation 2022 - Project Sofia*

In December 2022, Banco BPM concluded a synthetic securitisation transaction with specialised investors and an insurance company.
The securitised portfolio consists of approximately 1.5 billion in Project Finance and Real Estate loans.
The structure of the transaction envisages, net of retention, the risk of which remains with the Bank in order to meet the requirement of maintaining a net economic interest of at least 5% (retention rule), the subdivision of the portfolio into three tranches with an increasing level of risk, with the junior risk hedged by market investors and the mezzanine risk by an insurance policy.
As at 31 December 2022 , the portfolio involved in the transaction, including retention, amounted to 1.4 billion and the net exposure of Banco BPM was 1.2 billion.

*Synthetic securitisation SME 2022 - Project Greta*

In December 2022, Banco BPM concluded a synthetic securitisation transaction with the involvement of a market investor.
The securitised portfolio consists of approximately 1.7 billion in performing loans granted to 3,500 Mid Corporate Plus, Mid Corporate and SME Retail companies.
The structure of the transaction envisages, net of retention, the risk of which remains with the Bank in order to meet the requirement of maintaining a net economic interest of at least 5% (retention rule), the subdivision of the portfolio into three tranches with an increasing level of risk, with the mezzanine risk hedged by a market investor.
As at 31 December 2022, the portfolio involved in the transaction, including retention, amounted to 1.6 billion euro and the net exposure of Banco BPM was 1.6 billion.

## Outstanding synthetic securitisation transactions

The synthetic securitisation transactions in place as at December 2022 are shown below:

- European Investment Fund 2020: transaction concluded in December 2020 that provides for the hedging of the mezzanine tranche by the European Investment Fund. Against the guarantee, the Bank disbursed a portfolio of new loans to support investments and working capital for an amount of approximately 462 million. As at 31 December 2022, the portfolio involved in the transaction, including retention, amounted to approximately 626 million in loans to SMEs and Corporate customers and the net exposure of Banco BPM was 604 million;
- European Investment Fund 2021 - Project Audrey: transaction completed in December 2021 that provides for the hedging of junior risk by the European Investment Fund. Against the guarantee, the Bank committed to disbursing a portfolio of new loans to support investments and working capital for an amount of approximately 954 million. The disbursement of these loans began in the first quarter of 2022. As at 31 December 2022, the portfolio involved in the transaction, including retention, amounted to approximately 1.1 billion in loans to SMEs and Corporate customers and the net exposure of Banco BPM was 1.1 billion;
- Large Corporate 2021- Project Brigitte: in December 2021, Banco BPM finalised the first transaction concluded with the involvement of a market investor for the hedging of the junior tranche. As at 31 December 2022, the portfolio involved in the transaction, including retention, amounted to approximately 1.5 billion in loans to Corporate customers and the net exposure of Banco BPM was 1.4 billion.

### Investments in traditional securitisations acting as sponsor

The Group is also active in the market of financing the receivables of its corporate customers through the securitisation of trade receivables in which the Group acts as sponsor, pursuant to Art. 6, paragraph 3 (a) of Regulation (EU) no. 2017/2402, and as senior investor.
As at 31 December 2022, there is one transaction in place.

QUALITATIVE INFORMATION

*Securitisations in the energy sector - Sun Spv*

The securitisation programme regards performing trade receivables for a maximum revolving amount of around 50 million, increased to a total of 80 million during 2022, originated by a Group customer, operating in the energy distribution sector, and resulting from the provision of natural gas and electricity.
The Group acts as senior noteholder, sponsor and account bank.

The revolving purchase by SUN SPV S.r.l was financed through the issue of three tranches of unrated ABS (Senior, Mezzanine and Junior classes).

The table below shows the total securities issued by the SPE and the part subscribed by Banco BPM.

| Class – Type | Nominal issue value | BANCO BPM | | |
|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31/12/2022 | Value as at 31/12/2022 |
| Senior security (*) | 66,304 | 66,304 | 66,304 | 62,275 |
| Mezzanine security (*) | 10,860 | 545 | 545 | 513 |
| Junior security | 2,400 | 120 | 120 | 124 |
| **Total** | **79,564** | **66,969** | **62,917** | **62,912** |

*(*) The Senior and the Mezzanine Securities are classified as partly paid variable funding.*

### Investments in traditional securitisations

QUALITATIVE INFORMATION

In 2022, the Group held ABS securities relating to three securitisation transactions of loans structured in 2021, for which Banca Akros acted as Arranger. In 2022, Senior securities of two securitisation transactions of trade receivables were also subscribed.

The transactions envisaged the issue of different classes of ABS (Asset-Backed Securities) by several SPEs established pursuant to Italian Law 130/99.
Banco BPM intervened by purchasing all or part of the Senior tranche alone.

### New transactions of the period

*Securitisation of the Steel Sector - SPV Project 2104*

The securitisation programme concerns the sale without recourse of trade receivables originated by a company operating in the steel sector.
Banco BPM Group acted as senior noteholder.

The table below shows the total securities issued by the SPE and the share subscribed by Banco BPM: 44.6% of class A1, 23.5% of class A2 and 8.7% of class A3. The transaction is currently in the revolving phase (revolving period in which subsequent portfolios are sold on a monthly basis).

| Class – Type | Nominal issue value | BANCO BPM | | |
|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31/12/2022 | Value as at 31/12/2022 |
| Senior Security - Class A1(*) | 102,012 | 45,508 | 45,508 | 44,366 |
| Senior Security - Class A2(*) | 150,000 | 35,300 | 11,247 | 10,965 |
| Senior Security - Class A3(*) | 150,000 | 13,053 | 3,245 | 3,163 |
| Junior security(**) | 133,603 | - | - | - |
| **Total** | **535,615** | **93,861** | **60,000** | **58,494** |

(*) The Senior Security is classified as partly paid crystallised.
(**) The structure benefits from credit support provided by a Deferred Purchase Price corresponding to 17.5% of the nominal value of the loans sold.

*General SPV securitisation*

The securitisation programme concerns the sale without recourse of loans deriving from factoring contracts originated by Generalfinance S.p.A. as part of the factoring activity, to General SPV S.r.l.
Banco BPM acts as senior noteholder together with a pool of banks.

The General SPV transaction envisages the issue of three different tranches of ABS securities based on the degree of subordination in absorbing losses: Senior securities classified as variable funding, Mezzanine securities and Junior securities, both of which classified as partly paid.

In December 2022, Banco BPM subscribed 100% of the class of newly issued Senior A3 Securities.
The table below shows the total securities issued by the SPE and the share subscribed by Banco BPM. The transaction is currently in the revolving phase (revolving period in which subsequent portfolios are sold on a weekly basis).

| Class – Type | Nominal issue value | BANCO BPM | | | |
|---|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | *of which: Committed Credit Line* | Outstanding nominal value as at 31/12/2022 | Value as at 31/12/2022 |
| Senior Security - Class A1, A2(*) | 200,000 | - | - | - | - |
| Senior Security - Class A3(*) | 100,000 | 100,000 | *50,000* | 6,003 | 5,758 |
| Mezzanine Security - Class B1, B2, B3 | 26,500 | - | - | - | - |
| Junior Security(**) | 18,500 | - | - | - | - |
| **Total** | **295,000** | **50,000** | ***50,000*** | **6,003** | **5,758** |

*(*) The Senior Security is classified as partly paid variable funding.*
*(**) The structure also benefits from a Deferred Purchase Price of 52.1 million.*

## Outstanding transactions

*SPV Project 2011 S.r.l.*

The transaction regarded several Project Finance loans disbursed to companies operating in the wind power and photovoltaic sector. The transaction is currently being amortised and the Senior security held by Banco BPM has been partially repaid.

The table below shows the total securities issued by the SPE and the part subscribed by Banco BPM.

| Class – Type | Nominal issue value | BANCO BPM | | |
|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31/12/2022 | Value as at 31/12/2022 |
| *Senior security* | 16,500 | 15,675 | 4,128 | 4,141 |
| Junior security | 9,068 | - | - | - |
| **Total** | **25,568** | **15,675** | **4,128** | **4,141** |

*Perseveranza SPV S.r.l.*

The transaction regards a portfolio of loans granted to SMEs secured by a guarantee of the Central Guarantee Fund for SMEs, as envisaged by the provisions of the law issued following the Covid-19 emergency.

In 2022, the amount issued was increased for all classes of securities.
This is an ABS classified as partly paid and envisages the payment by the investor of the amount subscribed in different tranches, on the request of the issuer. Banco BPM invested exclusively in Class A - Senior, which concluded the progressive investment phase in 2022 (the so-called ramp-up phase).

The table below shows the total securities issued by the SPE and the part subscribed by Banco BPM.

| Class – Type | Nominal issue value | BANCO BPM | | |
|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value Banco BPM as at 31/12/2022 | Value as at 31/12/2022 |
| Class A - *Senior (*)* | 285,000 | 51,600 | 51,204 | 51,399 |
| Class B - *Mezzanine (*)* | 28,000 | - | - | |
| Class C - Junior | 35,000 | - | - | - |
| **Total** | **348,000** | **51,600** | **51,204** | **51,399** |

*(*) The Senior and the Mezzanine securities are classified as partly paid.*

*Igloo SPV S.r.l.*

The transaction regards a portfolio of loans granted to SMEs and Mid-Caps, secured by a guarantee of the Central Guarantee Fund for SMEs or by SACE, as envisaged by the provisions of the law issued following the Covid-19 emergency.

This is a partly paid bond and envisages the payment by the investor of the amount subscribed in different tranches, on the request of the issuer. During 2022, the gradual investment phase (ramp-up phase) continued, which had not yet been completed at the end of the year.

The table below shows the total securities issued by the SPE and the part subscribed by Banco BPM.

| Class – Type | Nominal issue value | BANCO BPM | | |
|---|---|---|---|---|
| | | Nominal value subscribed by Banco BPM on the issue date | Outstanding nominal value of Banco BPM as at 31/12/2022 | Value as at 31/12/2022 |
| Class A1, A2 – Senior | 134,700 | 35,000 | 15,949 | 15,924 |
| Class B – Upper Mezzanine | 23,300 | - | - | |
| Class Y – Lower Mezzanine | 7,800 | - | - | |
| Class J – Junior | 4,200 | - | - | - |
| **Total** | **170,000** | **35,000** | **15,949** | **15,924** |

*(*) The Senior and the Mezzanine securities are classified as partly paid.*

QUANTITATIVE INFORMATION

### C.1 Prudential consolidation - Exposures deriving from the main "own" securitisation transactions broken down by type of securitised asset and by type of exposure

*On-balance sheet exposures:*

| Type of securitised assets/Exposures | On-balance sheet exposures | | | | | |
|---|---|---|---|---|---|---|
| | Senior | | Mezzanine | | Junior | |
| | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries |
| **A. Fully derecognised** | **2,036,069** | **(4,199)** | **10,808** | **-** | **1,012** | **-** |
| Non-performing assets: | | | | | | |
| A.1 Bad loans | 2,036,069 | (4,199) | 10,808 | - | 1,012 | - |
| Performing assets: | | | | | | |
| A.2 Leases | - | - | - | - | - | - |
| **B. Partially derecognised** | | | | | | |
| **C. Not derecognised** | **4,712,152** | **(6,333)** | **104,177** | **-** | **222,598** | **(214)** |
| Performing assets: | | | | | | |
| C.1 Residential mortgage loans | 18,230 | - | 29,745 | - | 67,657 | - |
| C.2 Loans | 4,848 | - | 74,432 | - | 126,500 | - |
| C.3 Loans to businesses (*) | 4,689,074 | (6,333) | - | - | 28,441 | (214) |

*(*) The sub-item "Loans to businesses" relates to the synthetic securitisation transaction. As at 31 December 2022, the value of the retention withheld by Banco BPM is equal to 1,155.6 million.*

*Credit lines*

| Type of securitised assets/Exposures | Credit lines | | | | | |
|---|---|---|---|---|---|---|
| | Senior | | Mezzanine | | Junior | |
| | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries |
| **A. Fully derecognised** | **-** | **-** | **-** | **-** | **-** | **-** |
| Non-performing assets: | | | | | | |
| A.1 Bad loans | - | - | - | - | - | - |
| Performing assets: | | | | | | |
| A.2 Leases | - | - | - | - | - | - |
| **B. Partially derecognised** | - | - | - | - | - | - |
| **C. Not derecognised** | **5,162** | **-** | **-** | **-** | **-** | **-** |
| Performing assets: | | | | | | |
| C.1 Residential mortgage loans | - | - | - | - | - | - |
| C.2 Loans | 5,162 | - | - | - | - | - |
| C.3 Loans to businesses (*) | - | - | - | - | - | - |

The part of the table relative to the guarantees issued is omitted inasmuch as there are none.

### C.2 Prudential consolidation - Exposures deriving from the main "third party" securitisation transactions broken down by type of securitised asset and by type of exposure

| Type of securitised assets/Exposures | On-balance sheet exposures | | | | | |
|---|---|---|---|---|---|---|
| | Senior | | Mezzanine | | Junior | |
| | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries | Book value | Losses/ Recoveries |
| A.1 BNT PORT 14-42 TV | | | | | 23,961 | |
| *Mortgage loans FV* | | | | | | |
| A.2 PHARMA FIN.SR3 TV 28 | 858 | | | | | |
| *Other FV* | | | | | | |
| A.3 PHARMA FIN.SRL TV 28 | | | 350 | | | |
| *Other FV* | | | | | | |
| A.4 PHARMA FIN.EUR TV 28 | | | 3,164 | | | |
| *Other FV* | | | | | | |
| A.5 *FAW3 SPV 23 A-1-S 2% (*)* | 8,009 | (5) | | | | |
| *Loans* | | | | | | |
| A.6 SUN SPV 21-28 TV A | 62,275 | (21) | | | | |
| *Loans* | | | | | | |
| A.7 GENER. SPV TV 22-31A3 | 5,758 | (254) | | | | |
| *Loans* | | | | | | |
| A.8 SUN SPV 21-28 TV B | | | 513 | | | |
| *Other FV* | | | | | | |
| A.9 SUN SPV 21-28 TV J | | | | | 124 | |
| *Other FV* | | | | | | |
| A.10 PERSEVER. 21-31 TV A | 51,399 | (152) | | | | |
| *Loans* | | | | | | |
| A.11 IGLOO 21-31 TV A1 | 15,924 | (29) | | | | |
| *Loans* | | | | | | |
| A.12 SPV PROJ 21-28 TV A | 4,141 | (24) | | | | |
| *Loans* | | | | | | |
| A.13 SPV PROJ ZC A1 22-23 TV A | 44,366 | (660) | | | | |
| *Loans* | | | | | | |
| A.14 SPV PROJ ZC A2 22-23 TV A | 10,965 | (163) | | | | |
| *Loans* | | | | | | |
| A.15 SPV PROJ ZC A3 22-23 TV A | 3,163 | (47) | | | | |
| *Loans* | | | | | | |

*(*) This was a single tranche, typically indicated as a Senior security.*

The part of the table relative to the guarantees issued and the credit facilities is omitted inasmuch as there are none.

Exposures deriving from third party securitisation transactions amounted to 235.0 million, of which 29.0 million is classified in the portfolio of "Financial assets at fair value through profit and loss c) other financial assets mandatorily measured at fair value", and the remaining 206.0 million in the portfolio of "Financial assets at amortised cost". For the main exposures, please refer to the previous paragraphs "Investments in traditional securitisations acting as sponsor" and "Investments in traditional securitisations".

The exposure relative to "BNT Port 14-42 TV", classified under "Financial assets at fair value through profit and loss: c) other financial assets mandatorily measured at fair value" is referred to instead in the following paragraph.

### C.3 Prudential consolidation - Shareholdings in securitisation SPEs

The SPEs in which the Banking Group companies have been involved in the structuring activity and in which a shareholding is held are illustrated below.
They are, in particular, SPEs created to finalise their own securitisation transactions, as described in "Part A – Accounting policies", "3. Scope of consolidation and methods", the separate capital is consolidated inasmuch as the Group holds contractual rights for the management of the entity's relevant assets and is exposed to the variable returns of the same, regardless of the voting rights.
In addition, the shareholding in the company "BNT Portfolio SPV" is worth mentioning. This is an SPE established in 2014 for the securitisation of agricultural loans of Banca della Nuova Terra, financed by the issue of a single tranche of securities for a nominal value of 397.8 million subscribed by the member banks of Banca della Nuova Terra, including the former Banco Popolare. Under the agreements entered into, the former Banco Popolare had subscribed the said security for a nominal value of 84.6 million; as at 31 December 2022, the fair value of the security, posted under the "Financial assets at fair value through profit and loss: c) other financial assets mandatorily measured at fair value" came to 24.0 million net of collections.

The following table shows all the assets and liabilities of the separate capital of the SPE.

| Name of Securitisation/ Name of SPE | Registered office | Consolidation | Assets | | | Liabilities | | |
|---|---|---|---|---|---|---|---|---|
| | | | Loans | Debt securities | Other | Senior | Mezzanine | Junior |
| BNT Portfolio SPV S.r.l. | Milan | no | 131,859 | - | 14,342 | - | - | 236,846 |
| BP Mortgages Jun 2007 | Milan | accounting | 146,892 | - | 36,624 | 20,580 | 64,649 | 16,229 |

### C.4 Prudential consolidation - Non-consolidated SPEs for securitisation

Non-consolidated SPEs for securitisation are those in which the Group does not hold any equity interest. For each of these SPEs, used for transactions in which the Group acts as originator, the table below shows the Group's assets and liabilities due to and from those SPEs, mainly attributable to the senior securities subscribed by the Group, classified in the portfolio of "Loans to customers".

In this regard, it is noted that these companies have no off-balance sheet exposures, non-revocable credit facilities or financial guarantees, therefore the maximum exposure to the risk of loss corresponds to the difference between the assets and liabilities held in respect of the SPE. The only exception was the SPE Lilium, to which a credit line of 10 million was granted, of which 4.8 million had been drawn down as at 31 December.

| *(thousands of euro)* | Red Sea SPV | Leviticus SPV | Tiberina SPV | Titan SPV | Aurelia SPV | Tevere SPV | Lilium SPV (*) |
|---|---|---|---|---|---|---|---|
| **Total assets** | **804,931** | **790,614** | **43,630** | **31,345** | **280,533** | **98,205** | **4,848** |
| Other financial assets mandatorily measured at fair value | 2,969 | 4,485 | 1,459 | 82 | 643 | 2,182 | - |
| Loans to customers | 800,925 | 786,077 | 42,171 | 31,263 | 279,608 | 96,023 | 4,848 |
| Other assets | 1,038 | 52 | - | | 281 | - | - |
| **Total liabilities** | **7,693** | **-** | **-** | **3,374** | **27** | **-** | **18,295** |
| **Guarantees given and commitments** | **-** | **-** | **-** | **-** | **-** | **-** | **5,162** |

| *(thousands of euro)* | Red Sea SPV | Leviticus SPV | Tiberina SPV | Titan SPV | Aurelia SPV | Tevere SPV | Lilium SPV * |
|---|---|---|---|---|---|---|---|
| Net interest income | 6,449 | 5,907 | 1,275 | 465 | 1,592 | 1,235 | 10 |

*(*) The liability towards Lilium SPV of 18.3 million is represented by the payable recognised against the loans sold to the SPE but not derecognised from the financial statements to substantially maintain the risks and benefits, net of the securities held by Banco BPM as at 31 December 2022. In light of the above, there is no exposure in securities to the SPE in the asset portfolio. For more details, please see the paragraph entitled "Other significant aspects relating to Group accounting policies", contained in section 5 - Other aspects in Part A of these Notes.*

### C.5 Prudential consolidation - Servicer activities – own securitisations: collections of securitised loans and redemptions of securities issued by the SPE for the securitisation

In 2022, the Group did not act as a servicer for its own securitisation transactions in which the assets sold were derecognised from the financial statements.

### C.6 Prudential consolidation - Consolidated SPEs for securitisation

There are no SPEs for securitisation that are part of the Banking Group.

## D. Sale transactions

### A. Financial assets sold and not fully derecognised

QUALITATIVE INFORMATION

As at 31 December 2022, the following sale transactions did not involve the derecognition from the financial statements of the underlying financial assets:

- securitisation transactions of credit exposures to customers (364.7 million);
- repurchase agreements payable on treasury securities mainly classified in the portfolio of "Financial assets measured at fair value through other comprehensive income" and "Financial assets at amortised cost".

For repurchase agreements, the non-derecognition of the security of the repurchase agreement derives from the fact that the Bank substantially holds the risks and rewards linked to the security, having the obligation of the forward repurchase at a contractually established price. Therefore the securities transferred continue to be represented in the relative accounting portfolio; the payment for the sale is posted under the "Financial liabilities at amortised cost: a) due to banks or b) due to customers", according to the type of counterparty. To this regard, it must be noted that the following table does not include the repurchase agreements payable on securities not posted in the financial statements if its availability is consequent to reverse repurchase agreements (see the paragraph "Other information" in Part B of these Notes).

The securitisation transactions described in the preceding paragraph "C. Securitisation transactions" are not derecognised due to the Group's subscription of the tranches of junior securities or similar exposures which involve the first loss risk for the Group and, similarly, the reward linked to the yield of the portfolio of the transferred assets. The payment collected for the transfer is posted as a balancing entry of a payable due to the SPE, net of the tranches of the underlying securities subscribed or the use of forms of liquidity support for the SPE for the payment of the principal. The loan to the SPE, thus posted, will decrease by effect of the sums collected from the originator in its capacity as servicer and transferred to said SPE.
With regard to the consolidated SPE (BP Mortgage), by effect of the consolidation of its equity, the latter liability is not posted in the consolidated financial statements. Otherwise, the securities issued by the SPE not subscribed by companies of the Group will be posted under liabilities.

QUANTITATIVE INFORMATION

## D.1 Prudential consolidation - Fully recognised financial assets sold and associated financial liabilities: book values

| | Fully recognised financial assets sold | | | | Associated financial liabilities | | |
|---|---|---|---|---|---|---|---|
| | Book value | of which: subject to securitisation transactions | of which: subject to repurchase agreements | of which non-performing | Book value | of which: subject to securitisation transactions | of which: subject to repurchase agreements |
| **A. Financial assets held for trading** | **248,063** | **-** | **248,063** | **X** | **256,994** | **-** | **256,994** |
| 1. Debt securities | 632 | - | 632 | X | 637 | - | 637 |
| 2. Equity instruments | 247,431 | - | 247,431 | X | 256,357 | - | 256,357 |
| 3. Loans | - | - | - | X | - | - | - |
| 4. Derivatives | - | - | - | X | - | - | - |
| **B. Other financial assets mandatorily measured at fair value** | **222,219** | **222,219** | **-** | **188** | **18,295** | **18,295** | **-** |
| 1. Debt securities | - | - | - | - | - | - | - |
| 2. Equity instruments | - | - | - | X | - | - | - |
| 3. Loans | 222,219 | 222,219 | - | 188 | 18,295 | 18,295 | - |
| **C. Financial assets designated at fair value** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| 1. Debt securities | - | - | - | - | - | - | - |
| 2. Loans | - | - | - | - | - | - | - |
| **D. Financial assets measured at fair value through other comprehensive income** | **3,055,179** | **-** | **3,055,179** | **-** | **3,104,518** | **-** | **3,104,518** |
| 1. Debt securities | 3,055,179 | - | 3,055,179 | - | 3,104,518 | - | 3,104,518 |
| 2. Equity instruments | - | - | - | X | - | - | - |
| 3. Loans | - | - | - | - | - | - | - |
| **E. Financial assets at amortised cost** | **6,886,836** | **142,490** | **6,744,346** | **13,932** | **6,517,849** | **31,259** | **6,486,590** |
| 1. Debt securities | 6,744,346 | - | 6,744,346 | - | 6,486,590 | - | 6,486,590 |
| 2. Loans | 142,490 | 142,490 | - | 13,932 | 31,259 | 31,259 | - |
| **Total 31/12/2022** | **10,412,297** | **364,709** | **10,047,588** | **14,120** | **9,897,656** | **49,554** | **9,848,102** |
| **Total 31/12/2021** | **12,269,558** | **180,251** | **12,089,307** | **22,975** | **12,241,962** | **45,482** | **12,196,480** |

### D.2 Prudential consolidation - Partly recognised financial assets sold and associated financial liabilities: book values

As at 31 December 2022 there were no partly recognised financial assets sold or associated financial liabilities.

### D.3 Prudential consolidation - Sale transactions with liabilities with recourse only against the assets sold and not fully derecognised: fair value

This table shows the fair value of assets and related liabilities resulting exclusively from securitisation transactions, inasmuch as they are considered the only types existing for the Group in which the transferor, i.e. the SPE, has exclusive recourse against the transferred assets, being in fact the only cash flows available for the payment of the securities issued.

| | Fully recognised | Partly recognised | Total | |
|---|---|---|---|---|
| | | | 31/12/2022 | 31/12/2021 |
| **A. Financial assets held for trading** | **-** | **-** | **-** | **-** |
| 1. Debt securities | - | - | - | - |
| 2. Equity instruments | - | - | - | - |
| 3. Loans | - | - | - | - |
| 4. Derivatives | - | - | - | - |
| **B. Other financial assets mandatorily measured at fair value** | **222,219** | **-** | **222,219** | **-** |
| 1. Debt securities | - | - | - | - |
| 2. Equity instruments | - | - | - | - |
| 3. Loans | 222,219 | - | 222,219 | - |
| **C. Financial assets designated at fair value** | **-** | **-** | **-** | **3,932** |
| 1. Debt securities | - | - | - | - |
| 2. Loans | - | - | - | 3,932 |
| **D. Financial assets measured at fair value through other comprehensive income** | **-** | **-** | **-** | **-** |
| 1. Debt securities | - | - | - | - |
| 2. Equity instruments | - | - | - | - |
| 3. Loans | - | - | - | - |
| **E. Financial assets at amortised cost (fair value)** | **135,631** | **-** | **135,631** | **187,050** |
| 1. Debt securities | - | - | - | - |
| 2. Loans | 135,631 | - | 135,631 | 187,050 |
| **Total financial assets** | **357,850** | **-** | **357,850** | **190,982** |
| **Total associated financial liabilities** | **49,554** | **-** | **X** | **X** |
| **Net value as at 31/12/2022** | **308,296** | **-** | **357,850** | **X** |
| **Net value as at 31/12/2021** | **145,500** | **-** | **X** | **190,982** |

### B. Financial assets sold and fully derecognised with recognition of continuous involvement

The Group has none of this type at the reporting date.

### D.3 Prudential consolidation - financial assets sold and fully derecognised

*Multi-originator sales of loans to mutual investment funds*

This Section provides the qualitative and quantitative information relating to multi-originator sales of loan portfolios attributable to the scheme of sale to a mutual investment fund with allocation of the relative units to the originators.

During the year and in previous years, Banco BPM Group concluded several sales of classified exposures to mutual investment funds in exchange for units issued by the same funds.

QUALITATIVE INFORMATION

General objectives of the loan sale transactions carried out through the mutual investment fund scheme
In general, the business and strategic objective in this case is to assign the management of several exposures classified as high risk to specialist, independent operators (i.e. represented by asset management companies, hereinafter also "SGR"), which, through changes in management, should enable more effective company turnaround than what the Bank could achieve by continuing to manage its own exposure. The strategies pursued by the asset management company specifically focus on managerial leverage that is difficult for single banks to activate, such as, merely by way of example: converting the loans into equity, joining the management bodies of the companies to carry out effective operational turnaround, developing distressed M&A operations to safeguard the value of the companies through business partnerships, directly repossessing the property in the case of real estate operators and, lastly, third party investors contributing new financing to relaunch the companies.
In that view, the intervention of an asset management company enables the creation of suitable mechanisms to safeguard the rights of the contributing banks, through the powers assigned to specific investor committees. In addition, in order to align the interests of the asset management company with those of the contributing banks, the structure of fees to the asset management company generally entails management fees consistent with the net assets of the fund, as well as performance fees or a carried interest on the extra yield of the transaction.

Accounting treatment
In accounting terms, pursuant to the accounting standard IFRS 9, the above sale transactions resulted in the derecognition of the loans sold, as the Group did not substantially retain the risks or rewards of the transferred assets, and also did not retain any substantial control over the assets, as the control was instead assumed by the fund management company. In particular, the risks and rewards that the Group may obtain from the units held in exchange for the loans are not anchored to the occurrence, amount or timing of the events that involve the loans sold, given that the economic and financial dynamics linked to the single loans will not automatically or directly influence the returns of individual unitholders (including Banco BPM) which, instead, will depend on the general performance of the fund managed by the asset management company. In that regard, it must be noted that, as these are multi-originator transactions, the loans contributed by the single participants may differ from those contributed by other participants and, where these concern the same debtor, may also change the percentage of exposure contributed by each participant.
In relation to said derecognition, the fund units obtained as a conversion from the sale were recognised in the accounting portfolio of "Other financial assets mandatorily measured at fair value". The difference between these derecognised loans and the recognition value of the fund units was recognised in the income statement as an effect of the loans, based on the regulations set out in paragraph 3.2.12 of the accounting standard IFRS 9.
With regard to the need to consolidate the mutual funds subscribed - in line with that illustrated in "Part A – Accounting policies" with regard to the requirements of the accounting standard IFRS 10 for holding control over an entity - no funds were identified that required consolidation. Based on the powers assigned to the bodies establishing the fund (Board of Directors, Investors Committee, Investors' Meeting) and the majorities required to pass the related resolutions, no funds were identified in which the Group is deemed to hold the power to manage significant activities.

## New transactions of the period

*Credit & Corporate Turnaround Fund (Illimity SGR)*

Objectives and main characteristics of the fund

The multi-originator transaction called Credit & Corporate Turnaround Fund (hereinafter "iCCT") was completed on 3 October 2022, through the sale of loans to the iCCT Fund managed by Illimity SGR - the first Fund launched by Illimity SGR that invests in UTP exposures and in general in loans to companies in financial distress with turnaround and relaunch prospects - and the simultaneous subscription of the Fund units. The iCCT Fund is a single-segment fund with two classes of units (Credit Units and Finance Units), in addition to a special category (C Units) reserved to the SGR and the management team, which give them the right to receive the carried interest.
The Fund has a duration of 8 years (extendable by one year) while the Finance Units, according to the Fund's Regulations, may fluctuate between 10% and 50% of the Credit Units.

More specifically, the transaction in question regards the sale of a portfolio of Corporate Large & Medium Size loans classified as Unlikely to Pay (hereinafter also UTP), resulting from loans granted to companies in financial distress, with different risk profiles in terms of territorial distribution, intended use and lifecycle of the underlying assets.
The purpose of the transaction is to ensure a more proactive and effective management of secured loans, through i) the disbursement of new loans where deemed necessary to develop the business and/or rebalance the corporate debt, ii) the possibility of intervening directly in the equity of the target companies, changing their governance and guiding restructuring processes, and iii) a better and more effective restructuring of the company, exploiting the specific skills of the Group of the assignee SGR.

Amount of loans sold and Banco BPM's stake

The participants in the Wave sold their credit exposures to the fund for a total gross value of 50 million; the total loans managed therefore exceed 250 million.
Banco BPM sold 8 exposures classified as UTP to the SPE, for a gross value of 49.2 million, corresponding to an initial assignment value of 31.7 million. Against the cited transaction, Banco BPM received 32,006,366 units of the iCCT Fund. More specifically, this assignment involved several counterparties from which Illimity SGR had already purchased portions of loans from other banks: the aim of Banco BPM's assignment was therefore, inter alia, to increase iCCT's share of wallet vis-à-vis the counterparties sold, thus increasing its negotiating power at restructuring tables, with a view to boosting the recovery for the shareholders.

Accounting treatment

On 3 October 2022, the loans sold were derecognised from the financial statements, as a balancing entry to the recognition of the units of the iCCT fund.
The fair value of the iCCT fund, based on the Discounted Cash Flow method (DCF) illustrated in the paragraph below, was 29.3 million, showing a decrease of around 7.8% with respect to the contribution value indicated by the SGR at the time of the contribution (31.7 million).
Considering the recognition value of the loans and the collections to be repaid, the sale transaction entailed the recognition of a negative economic effect, attributable to the loans sold, of 4.4 million.

As at 31 December 2022, the total fair value of the fund was 26.5 million euro.

Methodologies for determining fair value and sensitivity analysis of fair value

Based on the Discounted Cash Flow method, the fair value is obtained by analysing the expected cash flows from the recovery of the overall exposures held by the fund at a discount rate determined using the Weighted Average Cost of Capital ("WACC") method.
In detail, the WACC is the calculation procedure that identifies the rate representing the weighted average cost of capital, and expresses the remuneration requested by investors for a purchase at normal market conditions of a similar asset to the one being valued.

In particular, the WACC was calculated by applying the following formula:

$$\mathbf{WACC = Ke * (E/(D+E)) + Kd * (1-t) * (D/(D+E))}$$

where:
**Ke = β*(Mrp)+Rf**: represents the cost of capital, calculated using the Capital Asset Pricing Model (CAPM), based on which the return on a risk asset is equal to the sum of a risk-free rate (Rf) and an adequate risk premium, determined based on the indicator β, as illustrated in greater detail below.
**β**: Beta ratio, which indicates the risk of a specific equity instrument out of the stock market as a whole. To that end, the unlevered adjusted β for the sector in which the single companies subject to sale operate was considered, weighting the result obtained based on the weight of each credit exposure out of the total.
**Mrp**: represents the premium, i.e. the differential yield requested by investors for an investment in equity securities with respect to a risk-free investment. To that end, the implied equity risk premium is considered (source: Damodaran)
**Rf**: represents the risk-free rate, i.e. the yield on risk-free assets identified based on the yield of 10-year Italian government securities (source: Bloomberg)

**Kd**: represents the cost of debt, determined based on the rate of the new financing envisaged in the individual transactions. Where there are numerous rates, an average weighted rate was calculated
**t**: represents the tax rate;
**(E/(D+E) and (D/(D+E)**: represents the financial structure of each operation, in terms of the combination of capital (E: *Equity*) and debt (D: *Debt*).

The fair value determined this way is classified in level 3 of the fair value hierarchy envisaged by the accounting standard IFRS 13, as it is significantly influenced by discretionary parameters not observable on the market.

Based on the DCF method, the table below sets out a sensitivity analysis of the fair value of the iCCT Fund in relation to changes in the most significant non-observable input, which, in this case, is represented by cash flows of the fund from recovery (a positive or negative change of 5% was considered) and the cost of capital Ke (a positive or negative change of 1% was considered).

| **iCCT Fund<br>Change in fair value in absolute value (and percentage) as a result of changes of +1%/-1% and of +5%/-5%, respectively, in expected cash flows** | | | | |
|---|---|---|---|---|
| | | **Ke -1%** | **Ke%** | **Ke +1%** |
| **Change in cash flows** | **+5%** | +2.28 (+8.58%) | +1.33 million (+5%) | +420k (+1.58%) |
| | **0** | +905k (+3.4%) | - | -863k (-3.25%) |
| | **-5%** | -466k (-1.76%) | -1.33 million (-5%) | -2.15 million (-8.09%) |

*Efesto (Finint SGR - Waves 8 and 10)*

Objectives and main characteristics of the fund

The multi-originator transaction called Efesto Fund (hereinafter "Efesto") was finalised in two different Waves on 6 July 2022 and 16 November 2022, through the sale of loans to the Efesto Fund - a fund launched by Finint SGR that invests in UTP and NPL exposures and in general loans to companies in financial distress with prospects of turnaround or liquidation - and the simultaneous subscription of the Fund units at values corresponding to the sale price of the loans. Italfondiario acts as servicer of the asset management company and collects and manages the loans sold to the Fund. The Efesto Fund is a single-segment fund with two classes of units (Credit Units and Finance Units), in addition to a special category (C Units) reserved to the SGR and the management team, which give them the right to receive the *carried interest*.
The Fund has a duration of 10 years (extendable for a further two years) while the Finance Units, according to the Fund's Regulations, may fluctuate between 10% and 50% of the Credit Units.
More specifically, the transaction in question regards the sale of a portfolio of Corporate Large & Medium Size loans classified as Unlikely to Pay (hereinafter also UTP), resulting from loans granted to companies in financial distress, with different risk profiles in terms of territorial distribution, intended use and lifecycle of the underlying assets.
The purpose of the transaction is to ensure a more proactive and effective management of secured loans, through i) turn-around activities and extraordinary distressed M&A transactions, disbursement of new finance and private equity-style management, ii) settlement activities out-of-court and in the structuring of composition procedures.

Amount of loans sold and Banco BPM's stake

The participants in the Wave sold their credit exposures to the fund for a total gross value of approximately 800 million referring to more than 150 Italian companies.
Banco BPM sold 17 exposures classified as UTP or NPL to the SPE, for a gross value of 21.4 million in Wave 8 and 71.6 million in Wave 10, corresponding to an initial assignment value of 16.9 million. Against the cited transaction, Banco BPM received 20,962,668 units of the iCCT Fund. More specifically, this assignment involved several counterparties from which Finint SGR had already purchased portions of loans from other banks: the aim of Banco BPM's assignment was therefore, inter alia, to increase the Efesto Fund's share of wallet vis-à-vis the counterparties sold, thus increasing its negotiating power at restructuring tables, with a view to boosting the recovery for the shareholders.

Accounting treatment

On 6 July 2022, for Wave 8, and on 16 November 2022 for Wave 10, the loans sold were derecognised from the financial statements, as a balancing entry to the recognition of the units of the Efesto Fund.
The fair value of the Efesto Fund, based on the Discounted Cash Flow method (DCF) illustrated in the paragraph below, was 16.8 million, showing a decrease of around -5.0% with respect to the value contributed by the Fund at the time of the contribution (17.7 million).
Considering the recognition value of the loans and the collections to be repaid, the sale transaction entailed the recognition of a negative economic effect, attributable to the loans sold, of 1.9 million in total at the time of recognition of the shares.

As at 31 December 2022, the total fair value of the fund was 17.5 million euro.

Fair value sensitivity analysis

Based on the DCF method, illustrated in the previous paragraph, the table below sets out a sensitivity analysis of the fair value of the Efesto Fund in relation to changes in the most significant non-observable input, which, in this case, is represented by cash flows of the fund from recovery (a positive or negative change of 5% was considered) and the cost of capital Ke (a positive or negative change of 1% was considered).

| **Efesto Fund<br>Change in fair value in absolute value (and percentage) as a result of changes of +1%/-1% and of +5%/-5%, respectively, in expected cash flows** | | | | |
|---|---|---|---|---|
| | | **Ke -1%** | **Ke%** | **Ke +1%** |
| **Change in cash flows** | **+5%** | +1.06 (+6.03%) | +1.03 million (+5.88%) | +367k (+2.09%) |
| | **0** | +172k (+1.0%) | - | -486k (-2.77%) |
| | **-5%** | -713k (-4.07%) | -1.03 million (-5.88%) | -1.34 million (-7.63%) |

*UTP Italia (Sagitta SGR - Wave 1)*

Objectives and main characteristics of the fund

The multi-originator transaction called UTP Italia (hereinafter "UTP Italia") was completed on 11 November 2022, through the sale of loans to the UTP Italia Fund managed by Sagitta SGR - the first Fund launched by Sagitta SGR to invest in small ticket UTPs and, in general, in loans to individuals and SMEs in financial distress - and the simultaneous subscription of Fund units. The iCCT Fund is a single-segment fund with two classes of units (Credit Units and Finance Units).
The Fund has a duration of 8 years (extendable by two years) while the New Finance Units, according to the Fund Regulations, may reach a maximum of 50% of the total nominal value of the Fund.
More specifically, the transaction in question regards the sale of a portfolio of Corporate Small-Medium Size loans classified as Unlikely to Pay (hereinafter also UTP), resulting from loans granted to retail entities and SMEs in financial distress, with different risk profiles in terms of territorial distribution, intended use and lifecycle of the underlying assets.
The aim of the transaction is to ensure a more proactive and effective management of secured loans, through i) the disbursement of new loans where deemed necessary to develop the business and/or rebalance the counterparty's indebtedness, ii) a better and more effective restructuring of the borrower, taking advantage of the specific skills of the Group of the assignee SGR and iii) proactive management of the loan portfolio according to the principles of ethical management of exposures inspired by the ESG framework.

Amount of loans sold and Banco BPM's stake

The first Wave involved 4 of the main Italian banks, which sold their credit exposures to the fund for a total gross value of approximately 160 million.
Banco BPM sold 170 exposures classified as UTP to the SPE, for a gross value of 70 million, corresponding to an initial assignment value of 40.6 million. Against the cited transaction, Banco BPM received 40,591,705 units of the UTP Italia Fund.

Accounting treatment

On 21 November 2022, the loans sold were derecognised from the financial statements, as a balancing entry to the recognition of the units of the UTP Italia Fund.
The fair value of the UTP Italia Fund, based on the Discounted Cash Flow method (DCF) illustrated in the paragraph below, was 37.7 million, showing a decrease of around 7.1% with respect to the contribution value indicated by the SGR at the time of the contribution (40.6 million).
Considering the recognition value of the loans and the collections to be repaid, the sale transaction entailed the recognition of a negative economic effect, attributable to the loans sold, of 19.6 million.

As at 31 December 2022, the total fair value of the fund was 35.4 million.

Fair value sensitivity analysis

Based on the DCF method, illustrated in the previous paragraph, the table below sets out a sensitivity analysis of the fair value of the UTP Italia Fund in relation to changes in the most significant non-observable input, which, in this case, is represented by cash flows of the fund from recovery (a positive or negative change of 5% was considered) and the cost of capital Ke (a positive or negative change of 1% was considered).

**UTP Italia Fund**
**Change in fair value in absolute value (and percentage) as a result of changes of +1%/-1% and of +5%/-5%, respectively, in expected cash flows**

| | | Ke -1% | Ke% | Ke +1% |
|---|---|---|---|---|
| **Change in cash flows** | **+5%** | +3.63 (+10.25%) | +1.77 million (+ 5%) | +38k (+0.11%) |
| | **0** | +1.77 million (+ 5.0%) | - | -1.64 million (-4.66%) |
| | **-5%** | -89k (-0.25%) | -1.77 million (-5%) | -3.34 million (-9.43%) |

QUANTITATIVE INFORMATION

*Breakdown of units of mutual investment funds held as at 31 December 2022*

As at 31 December 2022, the value of mutual investment funds in the financial statements deriving from the transactions in question totalled 211.4 million (180.5 million as at 31 December 2021), fully referring to the Parent Company. The table below provides the breakdown of funds held, indicating the fund management company, the first closing date and the subsequent contributions, as well as the investment policy followed by the fund.

| Fund name | Total book value as at 31/12/2022(*) | Asset Management Company | First closing date/subsequent contributions | Fund investment policy |
|---|---|---|---|---|
| IDeA Corporate Credit Recovery I | 1,385 | Dea Capital Alternative Funds SGR | 23 June 2016<br>27 June 2017<br>4 July 2019 | Past due loans, unlikely to pay or corresponding or similar categories of loans and/or loans subject to restructuring disbursed to target companies, participating financial instruments or shares issued by the above and, possibly, short-term loans deriving from self-liquidating credit lines granted to said target companies |
| IDeA Corporate Credit Recovery II | 14,688 | Dea Capital Alternative Funds SGR | 28 December 2017<br>18 February 2019 | Past due loans, unlikely to pay or corresponding or similar categories of loans and/or loans subject to restructuring disbursed to target companies, from participating financial instruments or shares issued by the above and, possibly, short-term loans deriving from self-liquidating credit lines granted to said target companies |
| IDeA Corporate Credit Recovery II – USD Shipping segment | 35,791 | Dea Capital Alternative Funds SGR | 21 December 2018 | Past due loans, unlikely to pay or corresponding or similar categories of loans and/or loans subject to restructuring disbursed to target companies operating in the field of shipping and maritime transport, without specific sector restrictions, from participating financial instruments or shares issued by the above and, possibly, short-term loans deriving from self-liquidating credit lines granted to said target companies |
| Clessidra Restructuring Fund | 25,937 | Clessidra SGR | 25 September 2019 | Past due loans, unlikely to pay, forborne performing and non-performing loans, performing high risk loans disbursed to target companies, from participating financial instruments/shares/convertible bonds issued by said companies, loans disbursed in the form of debtor in possession financing transactions to support the target companies in restructuring the debt disbursed |
| Back2bonis | 54,103 | Prelios SGR | 23 December 2019<br>20 December 2021 | Untranched asset backed securities issued as part of securitisation transactions carried out pursuant to Law 130/99, whose underlying is represented by receivables mainly classifiable as "unlikely to pay" loans, not due from consumer debtors, as well as loans disbursed to those debtors as part of debt restructuring transactions, recovery and/or turnaround and/or similar operations or as part of repossessions and similar actions on collateral |
| iCCT Fund | 26,532 | Illimity SGR | 3 October 2022 | Unlikely to Pay loans disbursed to "Corporate Large & Medium Size" customers deriving from loans granted to companies in financial distress. The purpose of the transaction is to ensure a more proactive and effective management of secured loans, through i) the disbursement of new loans where deemed necessary to develop the business and/or rebalance the corporate debt, ii) the possibility of intervening directly in the equity of the target companies, changing their governance and guiding restructuring processes, and iii) a better and more effective restructuring of the company, exploiting the specific skills of the Group of the assignee SGR. |
| Efesto Fund | 17,544 | FinInt SGR | 6 July 2022<br>16 November 2022 | Unlikely to Pay and non-performing loans disbursed to "Corporate Large & Medium Size" customers deriving from loans granted to companies in financial distress.<br>The purpose of the transaction is to ensure a more proactive and effective management of secured loans, through i) turn-around activities and extraordinary distressed M&A transactions, disbursement of new finance and private equity-style management, ii) settlement activities out-of-court and in the structuring of composition procedures. |
| UTP Italia Fund | 35,401 | Sagitta SGR | 11 November 2022 | Unlikely to Pay and, to a lesser extent, non-performing loans disbursed to "Small-Medium" customers deriving from loans granted to retail entities and SMEs in financial distress. The aim of the transaction is to ensure a more proactive and effective management of secured loans, through i) the disbursement of new loans where deemed necessary to develop the business and/or rebalance the counterparty's indebtedness, ii) a better and more effective restructuring of the borrower, taking advantage of the specific skills of the Group of the assignee SGR and iii) proactive management of the loan portfolio according to the principles of ethical management of exposures inspired by the ESG framework. |

*(*) Assets included in the financial statement item "20 c. Financial assets at fair value through profit and loss - other financial assets mandatorily measured at fair value".*

The negative change in the year, totalling 30.8 million, is attributable to the increase of UTP Italia units due to the sale on 11 November 2022 (+37.7 million), in Efesto due to sales on 6 July 2022 and 16 November 2022 (+16.8 million), in iCCT for the sale on 3 October 2022 (+29.2 million), to distributions received from the SGRs (-55.4 million), to the valuation losses during the year (-3.6 million), as well as to the effects of the conversion of the investment into dollars held in the "IDeA Corporate Credit Recovery II - Shipping segment" fund (+6.1 million).

The fair value measurement of the above funds is made through a valuation technique based on the discounting of the expected recovery flows based on a discount rate that is considered to reflect the remuneration requested by the market for a similar asset.

It is also specified that the fund units held represent the Group's maximum exposure to risk; with regard to the above transactions, there are no guarantees or irrevocable credit lines issued to the fund, nor are there commitments to subscribe additional units of the fund.

For the transactions carried out through the scheme of the sale of loans to a securitisation SPE pursuant to Law 130/99 and the concurrent subscription of ABS by the assigning intermediaries, refer to that illustrated in "C. Securitisation transactions" above.

## D.4 Prudential consolidation - covered bond transactions

### Covered bond issue programmes

QUALITATIVE INFORMATION

*Strategic goals*

The Covered Bonds ("CB") issue is part of Banco BPM Group's strategic plan, and represents a tool to diversify sources of funding, to reduce the relative cost and to extend the maturities of liabilities.

Banco BPM Group has three Covered Bond issue programmes in place: specifically, the "BP CB1", "BPM CB1" and "BPM CB2" programmes.

For the former Banco Popolare Group, during 2010 the first programme of CB issues concerning residential mortgages ("Residential CB" or "BP CB1") was launched. The maximum amount of CB that may be issued under the programme was extended from the initial 5 billion to 10 billion in February 2011.
At the former BPM Group level, on 13 November 2007, the Board of Directors of Banca Popolare di Milano authorised a CB issue programme ("BPM CB1"), for a maximum amount of 10 billion, relative to only residential landed and mortgage loans, structured, however, to also include commercial mortgages. Subsequently, on 10 March 2015, the Board of Directors of the former BPM Group approved a second CB programme ("BPM CB2") structured to only include the assignment of residential landed and mortgage loans for a maximum amount of 10 billion.

*Structure of the Programmes*

Following the merger by incorporation of BPM S.p.A. into Banco BPM, which was completed in November 2018, Banco BPM acted as sole Originator Bank for the assets pursuant to Art. 7-bis of Italian Law no. 130 of 30 April 1999, as well as Issuer Bank for the Group's CB programmes.

With reference to the "BP CB1" Programme, Banco BPM provided for without-recourse transfers to the SPE BP Covered Bond S.r.l. (60%-owned by Banco BPM), the related monetary receivables deriving mortgage loans having the characteristics set forth in Art. 2, paragraph 1, letter a) of the MEF Decree (Mortgage Loans).

With reference to the "BPM CB1" and "BPM CB2" Programmes, the pecuniary claims deriving from residential landed and mortgage loans with the features set out in Art. 2 of the MEF Decree (Mortgage Loans), and the commercial loans of only the BPM CB1 Programme, were transferred to the SPE BPM Covered Bond S.r.l. (of which Banco BPM holds 80%) within the sphere of the "BPM CB1" Programme and to the SPE BPM Covered Bond 2 S.r.l. (of which Banco BPM holds 80%) within the sphere of the "BPM CB2" Programme.

*Subordinated loan*

For all Banco BPM Group's CB programmes, the Originator Banks (now only Banco BPM) granted a Subordinated Loan to the SPEs on the sale of assets to provide them with the financial resources required to acquire the related

receivables (except when the SPE provided for the direct payment of the assets purchased). The SPEs must repay the subordinated loans on the final repayment date, also taking into account the extension of the deferral of the repayment date in the event of the Issuer's default, in accordance with the applicable priority of payments and within the limits of the funds available. In any event, at each interest payment date, there is an option to repay the subordinate loans in advance provided that the residual principal amount of the loans is equal to or higher than the residual debt of the Covered Bonds outstanding and that the tests contemplated by the regulations and by contract are complied with. Interest is paid on subordinated loans at a fixed rate or at a rate equal to the average interest rate of the CB Series issued, plus any excess spread generated by the structure.
The "BPM CB2" Issue Programme has one derivative contract in place called "Covered Bond Swap" subscribed by the SPE and a market counterparty; said swap is an interest rate swap that hedges, at consolidated level and also in the case of the Issuer's default, the interest rate risk deriving from the misalignment between the interest flows of the portfolio of assets sold to the SPE and the interest flows on the CBs issued.

Instead, no "Covered Bond Swap" contracts are in place for the "BPM CB1" and "BP CB1" Programmes.

Lastly, there are no longer any Mortgage Pool Swap contracts in place for any of the three CB Programmes of the Group.

*Guarantees*

In order to guarantee the repayment of the Covered Bonds should the Issuer not fulfil its obligations to pay, the SPEs have issued an unconditional and irrevocable primary guarantee valid for separate assets for the benefit of the investors that will subscribe the Covered Bonds. The guaranteed amount is equal to total interest and principal that must be paid to the investors on each class of Covered Bond. The regulations require that the integrity of the guarantee should be ensured during the life of the Covered Bonds and to this end, specific tests are envisaged that take the amount and the characteristics of both the assets assigned and the CB issued into account. The tests are carried out quarterly by the Group's Finance Organisational Structure and are checked by the Risk Management Organisational Structure. The accuracy of the tests carried out when the individual CB series are issued and then on a quarterly basis is also checked by an external party, the Asset Monitor, which, in accordance with the Supervisory Regulations, must be an audit firm other than that assigned to audit the financial statements. The Asset Monitor must also check the quality and integrity of the assets sold and draw up an annual report containing the results of the checks carried out. The control system also avails of the Internal Audit department, which verifies the adequacy of the internal checks, also on the basis of the annual report drawn up by the Asset Monitor.

*Regulatory and contractual tests*

Regulatory tests, conducted quarterly on the portfolios of each of the issue programmes, are as follows:

- the Nominal Value Test, which verifies that the nominal value of the residual loans in the portfolio sold is higher than the nominal value of the outstanding CB;
- the NPV Test, which checks that the present value of the residual credit portfolio is greater than the present value of the outstanding CBs;
- the Interest Coverage Test, which verifies that the interest collected and to be collected, net of the costs of the SPE, is higher than the interest to be paid to the holders of CB.

If the requirements of all of the tests are met, payments may be made in accordance with the "order of payment". In accordance with the contractual documentation of the programmes, the Asset Coverage Test on the portfolio should also be respected, which checks that the nominal value of the loans, weighted on the basis of any delays in the payment of the latter and the level of over-collateralisation envisaged by the contracts, is higher than the nominal value of the outstanding CBs. The infringement of the regulatory and contractual tests leads to an obligation for the originator banks to add to the portfolio.

*Collection and administrative management services*

For each BP Programme of the Group, the collection and management of transferred receivables is carried out by Banco BPM, which acts in the capacity of the sole Servicer.

In particular, with reference to each CB Programme of the Group, the amounts collected are paid into the accounts held in the name of the respective SPEs (BP Covered Bond S.r.l. for the "BP CB1" Programme, BPM Covered Bond S.r.l. for the "BPM CB1" Programme and BPM Covered Bond 2 S.r.l. for the "BPM CB2" Programme) opened at Banco BPM and, on a daily basis, are transferred to the accounts of the respective SPEs opened at Banco BPM. Banco BPM also acts as Administrative Servicer, namely it provides administrative services and fulfils tax-related requirements on behalf of all three SPEs.

QUANTITATIVE INFORMATION

## Existing and significant programmes during 2022

### Banco Residential CB Programme ("BP CB1")

During previous years, Banco BPM, in its capacity as the Originator Bank, sold a total of twelve mortgage portfolios to the SPE BP Covered Bond S.r.l. for a total residual debt of 16.8 billion; the SPE paid the purchase prices of the various portfolios using the revolving Subordinated Loan granted by the same originator bank and the available liquidity deriving from the amortisation of the loan portfolio deposited in its current accounts held at Banco BPM. Banco BPM acted as Servicer, managing the collection of the receivables.

The table below shows the overall value of the loans sold to the SPE as at 31 December 2022:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 2,960,175 | 3,426,788 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

The table below shows non-performing loans:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 102,496 | 129,767 |

In 2022, the mortgage loans portfolio generated collections totalling 510.1 million, of which 448 million represented principal and 62.1 million represented interest.

*Bonds issued by Banco BPM*

As part of the BP CB1 Programme, Banco BPM issued twelve series of CBs, listed on the Luxembourg Stock Exchange, and an unlisted Registered Covered Bond. These securities were subscribed to by institutional investors or by Banco BPM.

Overall, the securities issued by Banco BPM amounted to 14,950 million, of which 12,700 million was redeemed. Therefore, as at 31 December 2022, the securities issued and outstanding amounted to 2,250 million, and break down as follows:

| Date of issue | Series/Tranche | Notional value | Coupon | Maturity | Issue Price (flat quotation) | Moody's/ DBRS Rating (***) |
|---|---|---|---|---|---|---|
| 24/01/2011 | Registered CB (1) | 100,000 | 5.250% | 03/04/2029 | 96.590 | Aa3/A high |
| 05/04/2013 | 6th Series 1st tranche (2) | 150,000 | 4.000% | 31/03/2023 | 99.482 | Aa3/A high |
| 08/01/2014 | 7th Series 1st tranche (3) (4) | 1,000,000 | Eur 3M + 100 bps | 31/03/2023(*) | 100.000 | Aa3/A high |
| 28/03/2018 | 12th Series 1st Tranche (3) | 1,000,000 | Eur 1M + 30 bps | 30/06/2025 (**) | 100.000 | Aa3/A high |
| | | **2,250,000** | | | | |

*(1) The securities were placed in the form of a private placement with market investors.*
*(2) The securities were subscribed by Banca Generali S.p.A.*
*(3) The securities were fully subscribed by Banco BPM and used as collateral in monetary policy operations with the Eurosystem.*
*(4) On 27 March 2019 partial early redemption was carried out for 500 million.*
*(*) In March 2016, the Maturity Date was extended from 31 March 2016 to 31 March 2019. In March 2019, the Maturity Date was extended from 31 March 2019 to 31 March 2023.*
*(**) In April 2021, the maturity date was extended from 30 June 2021 to 30 June 2025.*
*(***) Rating as at 31 December 2022.*

*Other information*

The Ninth Series of CB for a nominal value of 1,000 million was fully redeemed by Banco BPM at the maturity of the security on 31 March 2022; on the same date, the Covered Bond Swap agreement in place between the SPE BP Covered Bond S.r.l. and the market counterparty was closed.
In March 2022, Banco BPM repurchased the positions classified as bad loans as at 28 February 2022 "en bloc" and the relative price was paid to the SPE in March 2022.
In November 2022, Banco BPM arranged for (i) the repurchase "en bloc" of the positions classified as bad loans as at 31 October 2022 and (ii) the repurchase of a portion of mortgages previously sold to the SPE and no longer classifiable as eligible. The considerations for these repurchases were paid to the SPE in November 2022.
During the year, the SPE redeemed part of the subordinated loan granted by Banco BPM for a total amount of 730 million in advance (of which 500 million on the Guarantor Payment Date of 31 March 2022 and 230 million on the Guarantor Payment Date of 30 September 2022).
In October 2022, the rating agency DBRS increased the rating of the Securities from "A" to "A high".

**BPM Covered Bond Programme ("BPM CB1")**

In previous years, a total of ten portfolios of eligible assets were sold to the SPE BPM Covered Bond S.r.l., with total residual debt of 12.6 billion.

In March 2022, by signing the related contracts, Banco BPM sold a new portfolio of residential mortgage loans, including disbursements to employees of the Group, and commercial mortgage loans, for a total residual debt of approximately 419 million to the SPE BPM Covered Bond S.r.l. ("Fourth Banco BPM Portfolio", eleventh sale to the SPE).

The SPE paid the purchase prices of the various portfolios using the Subordinated Loans granted by the Originator Banks, now Banco BPM, and the available liquidity deriving from the amortisation of the loan portfolio deposited in its current accounts held at Banco BPM. The Originator Banks, now Banco BPM, acted as Servicer, managing the collection of the receivables.

The table below shows the overall value of the loans sold to the SPE as at 31 December 2022:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 4,675,223 | 5,158,058 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

The table below shows non-performing loans:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 90,281 | 115,868 |

In 2022, the mortgage loans portfolio generated collections totalling 866.8 million, of which 776.6 million represented principal and 90.2 million represented interest.

### *Bonds issued by Banco BPM*

As part of the "BPM CB1" Programme, Banco BPM issued eleven CB Series, listed on the Luxembourg Stock Exchange, for a total of 11,150 million, originally subscribed by institutional investors or by Banco BPM itself. These have been redeemed for a total of 6,700 million.

As at 31 December 2022, there are four Series of covered bonds outstanding, fully repurchased by Banco BPM, and used for refinancing operations with the ECB or for Repo transactions with market counterparties, for a total of 4,450 million, broken down as follows:

| Date of issue | Series/Tranche | Notional value | Coupon | Maturity | Issue Price (flat quotation) | Moody's Rating (*) |
|---|---|---|---|---|---|---|
| 19/11/2015 | 7th Series | 900,000 | 3-month Euribor + 60 bps | 19/11/2027 (1) | 100.00 | Aa3 |
| 07/11/2016 | 8th Series | 1,000,000 | 3-month Euribor + 30 bps | 07/11/2025 (2) | 100.00 | Aa3 |
| 26/04/2018 | 9th Series | 1,900,000 | 3-month Euribor + 30 bps | 26/04/2025 (3) | 100.00 | Aa3 |
| 25/09/2019 | 11th Series | 650,000 | 3-month Euribor + 80 bps | 25/03/2025 | 100.00 | Aa3 |
| **Total** | | **4,450,000** | | | | |

*(1) In November 2022, the maturity date was extended from 19 November 2022 to 19 November 2027.*
*(2) In October 2021, the maturity date was extended from 7 November 2021 to 7 November 2025.*
*(3) In April 2021, the maturity date was extended from 26 April 2021 to 26 April 2025.*
*(*) Rating as at 31 December 2022.*

### *Other information*

In March 2022, inter alia, Banco BPM repurchased the positions classified as bad loans as at 28 February 2022 "en bloc" and the relative price was paid to the SPE in March 2022.
In November 2022, Banco BPM arranged, inter alia, (i) the repurchase "en bloc" of the positions that as at 31 October 2022 were classified as bad loans and (ii) the repurchase of a portion of mortgages previously sold to the SPE and no longer be classifiable as "eligible". The considerations for these repurchases were paid to the SPE in November 2022.
In November 2022, the Final Terms of the retained Seventh Series were amended in order to extend the maturity from 19 November 2022 to 19 November 2027. At the maturity date of 23 November 2022, Banco BPM fully redeemed the Tenth Series of Covered Bonds for a nominal value of 600 million.
On the Guarantor Payment Dates of 17 January, 15 April, 15 July and 17 October 2022, the subordinated loan granted by Banco BPM to the SPE was repaid for a total of 835 million.

### *Events occurring after the end of the year*

The subordinated loan granted by Banco BPM to the SPE was repaid for 490 million on the Guarantor Payment Date of 16 January 2023.

### BPM Covered Bond 2 Programme ("BPM CB2")

During previous years, eleven residential and landed mortgage loan portfolios were sold to the SPE BPM Covered Bond 2 S.r.l. for a total value of approximately 11.7 billion.

In March 2022, by signing the relative contracts, Banco BPM sold a new portfolio of residential mortgage loans, excluding disbursements to Group employees, for a total residual debt of 1,754 million to the SPE BPM Covered Bond 2 S.r.l. ("Seventh Banco BPM Portfolio", twelfth sale to the SPE).

To pay the purchase price of the portfolios, the SPE used a subordinated credit facility granted by the Originator Banks. The Originator Banks, now Banco BPM, acted as Servicer, managing the collection of the receivables.

The table below shows the overall value of the loans sold to the SPE as at 31 December 2022:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 8,154,742 | 7,280,076 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

The table below shows non-performing loans:

| Bank | Value as at 31/12/2022 | Value as at 31/12/2021 |
|---|---|---|
| Banco BPM | 58,790 | 65,447 |

In 2022, the mortgage loans portfolio generated collections totalling 990 million, of which 855.7 million represented principal and 134.3 million represented interest.

*Bonds issued by Banco BPM*

As part of the "BPM CB2" Programme, Banco BPM issued seven CB Series, which are listed on the Luxembourg Stock Exchange, for a total nominal value of 5,000 million, of which 1,000 million was redeemed. All bonds issued by the programme have been placed on the capital market.

As at 31 December 2022, there are six Series of covered bonds in place for a total of 4,000 million, broken down as follows:

| Date of issue | Series/Tranche | Notional value | Coupon | Maturity | Issue Price (flat quotation) | Moody's Rating (*) |
|---|---|---|---|---|---|---|
| 02/12/2015 | 2nd Series | 750,000 | 1.500% | 02/12/2025 | 98.946 | Aa3 |
| 08/06/2016 | 3rd Series | 750,000 | 0.625% | 08/06/2023 | 99.761 | Aa3 |
| 23/01/2018 | 4th Series | 750,000 | 1.000% | 23/01/2025 | 99.792 | Aa3 |
| 25/07/2018 | 5th Series | 500,000 | 1.125% | 25/09/2023 | 99.446 | Aa3 |
| 05/12/2019 | 6th Series | 500,000 | 0.500% | 05/12/2025 | 100.000 | Aa3 |
| 15/03/2022 | 7th Green Series | 750,000 | 0.750% | 15/03/2027 | 99.868 | Aa3 |
| **Total** | | **4,000,000** | | | | |

*(*) Rating as at 31 December 2022.*

*Other information*

In March 2022, Banco BPM repurchased the positions classified as bad loans as at 28 February 2022 "en bloc" and the relative price was paid to the SPE in March 2022.
On 15 March 2022, Banco BPM issued the Seventh Series of CBs for a nominal value of 750 million euro (first issue of Green Covered Bonds). On the maturity date of 14 September 2022, Banco BPM arranged for the full repayment, by natural settlement, of the First Series of CBs issued for a nominal value of 1,000 million and at the

same time the Covered Bond Swap contracts in place between the SPE Covered Bond 2 S.r.l. and the market counterparties were extinguished.
In November 2022, Banco BPM arranged for (i) the repurchase "en bloc" of the positions that as at 31 October 2022 were classified as bad loans and (ii) the repurchase of a portion of mortgages previously sold to the SPE and no longer classifiable as "eligible". The considerations for these repurchases were paid to the SPE in November 2022.
On the Guarantor Payment Dates of 18 January, 19 April, 18 July and 18 October 2022, the subordinated loan granted by Banco BPM to the SPE was repaid for a total of 890 million.

*Events occurring after the end of the year*

The subordinated loan granted by Banco BPM to the SPE was repaid for 220 million on the Guarantor Payment Date of 18 January 2023.

**Accounting representation**

On the consolidated financial statements of Banco BPM S.p.A. (as Issuer Parent Company and originator bank) the SPE belong to the Group and are included in the consolidation on a line-by-line basis.
The main balance sheet items linked to the issue of CB are shown below:

- loans sold by the originator banks to the SPEs continue to be posted under the balance sheet assets under item "40 b) - Loans to customers", and the relative interest is posted under item 10 of the income statement "Interest and similar income". As at 31 December 2022 the book value of the mortgages is (i) 2,962 million for the BP CB1 programme, (ii) 4,673 million for the BPM CB1 programme and (iii) 8,151 million for the BPM CB2 programme. Said value is specifically indicated under the "Assets pledged to secure own liabilities and commitments" in the Section "Other information" in "Part B – Information on the Balance sheet" of these Notes;
- the CBs issued are posted under debt securities in issue (item 10 c) of the Liabilities) and valued according to the fair value hedge accounting rules, hedged by the interest rate hedging derivative stipulated by the SPE ("Covered Bond Swap"). The securities issued also include funding transactions by means of repurchase agreements on the series of CB repurchased, in line with the clarifications to this regard set out by the Supervisory Authority. The book value of the CBs as at 31 December 2022 amounts to (i) 272 million relative to the BP CB programme, (ii) 2,558 million relative to the BPM CB1 programme and (iii) 3,979 million relative to the BPM CB2 programme. Note that the issues of part of the BPM CB1 programme and part of the BP CB1 programme are not posted inasmuch as used as collateral for monetary policy operations with the Eurosystem, as described previously;
- the Covered Bond Swap contracts, between the SPEs and the market counterparties outside the Group, are classified under item 50 "Hedging derivatives" in assets and/or under item 40 "Hedging derivatives" in liabilities.

The consolidated income statement has the following components:

- interests on the loans sold (cover pool), as mentioned above, posted under the item "Interest and similar income";
- interest on the Covered Bonds issued, posted under the item "Interest and similar expense";
- the differentials relative to the hedging derivatives (which transform the Covered Bond rate from fixed to floating) which are posted under the "Interest and similar income" or "Interest and similar expense" according to the balance;
- the fair value delta of the hedging contracts and of the items covered, posted under item 90 "Fair value gains/losses on hedging derivatives".

## E. Prudential consolidation - Credit risk measurement models

When measuring the credit risk of portfolios, the Bank uses an econometric model for management purposes, supported by an extensive set of data and risk variables, known as the Portfolio Model.
The model allows for, through the use of Credit-VaR metrics, the definition of the probability distribution of losses in the loan portfolio. This distribution is used to measure the maximum potential loss over a yearly time period and with a specific level of confidence.

More specifically, in order to obtain this distribution, the model's processing engine uses a Monte Carlo simulation approach, which simulates a sufficiently high number of scenarios so as to provide a good empirical approximation of the theoretical distribution of loan portfolio losses.
The calculation of the maximum potential loss, which can be broken down into the classic measures of Expected Loss and Unexpected Loss (Economic Capital), is affected by concentration risk and systematic risk, respectively.
Concentration risk derives from large exposures to single counterparties – name concentration – or types of peer counterparties in terms of industries, whose credit risk depends on one or more systematic factors (industry concentration).
On the other hand, systematic risk derives from the impact of unexpected changes in macroeconomic factors on risk parameters (PD and LGD) of the single accounts, using the elasticity estimated using satellite models capable of linking PD and LGD of peer counterparties and accounts and a set of (international and domestic) economic-financial factors.
Lastly, the portfolio model periodically undergoes stress testing to evaluate the credit risk sensitivity of the Group's portfolio to extreme changes in economic and financial factors.

As at 31 December 2022, the expected loss, calculated on the Basel III validation perimeter (for which Banco BPM was authorised by the Regulator to use internal rating systems to calculate the capital requirements on credit risks), was 0.41% of the exposure to default, while the overall loss (expected and unexpected loss measured by the C-VaR method with a 99.9% confidence level within the A-IRB perimeter) amounted to 2.07% of the exposure to default.

The internal models for estimating PD, LGD and EAD are subject to an internal validation process by the Risk Function and to a third-tier control by the Audit Function. The outcome of these processes is outlined in special reports submitted to the Corporate Bodies and sent to the European Central Bank/Bank of Italy.

Lastly, please note that the changes made starting from June 2020 to the risk parameter stress testing methodologies, particularly with reference to the PD satellite models based on sector default rate projections, already cited with reference to the impacts resulting from the Covid-19 pandemic, were accordingly incorporated within the methodological framework of operational measures through the portfolio model.
In 2022, further refinements were also made to the methodology applied.

### Outcome of backtesting of rating systems

In order to calculate capital requirements against Credit Risk and only on the scope of the Parent Company, Banco BPM Group adopts internal estimates of PD, LGD and EAD for Business and Private customer portfolios.
The comparison between estimates and empirical data is made separately for PD, LGD and CCF, by means of backtesting conducted by the Internal Validation function.

With reference to the PD models, Banco BPM Group adopts performance measurements to check the accuracy ratio (AR) of the estimates and calibration tests ("classical" binomial tests on a multi-period and single period basis) to compare the default rates (DRs) recorded over an annual time horizon with the estimated PD values.
Regarding the Business customer segment, the latest backtesting showed a good discriminatory power of models, both in terms of single modules and final integrated scores, which produced values comparable and at times superior to those obtained during the development phase. With regard to the calibration, satisfactory values were found for all models.
Overall, the model performed well for the Private customer segment. In several modules, the performance recorded was in line with that obtained in the development phase. With regard to calibration, the results of the binomial tests were satisfactory.

With regard to the LGD parameter, testing was conducted on both the performing and in default components. Internal Validation did not detect significant problems with the estimates generated for the private and business models. However, there are elements for further improvements of the portfolios guaranteed by real estate that still need to be studied, especially for the private segment.

Testing was conducted in relation to retail CCF. Internal Validation did not detect significant problems with the estimates generated for both the retail and corporate models.

In general, the models were fine-tuned, mainly with a view to making the model more compliant with legislative requirements.

## 1.2 MARKET RISKS

### Impacts resulting from the Russia-Ukraine war

The conflict in Ukraine has generated greater market volatility across all asset classes (equities, interest rates, credit spreads, foreign exchange and commodities), and therefore amplified daily variations in market parameters. As a result, risk measures in general have become more volatile, although, with appropriate derisking by the trading desks, a limited risk profile was maintained. However, there was an increase in backtesting overruns, for the Parent Company in particular, for which reference should be made to the paragraph below entitled "Regulatory trading book: internal models and other sensitivity analysis methods".

### Impacts resulting from the Covid-19 pandemic

With regard to the impacts of the Covid-19 pandemic, the risk measurement methods and processes, with a view to continuity, did not change. In fact, the Group continued with its daily monitoring, guaranteeing the reliability of the risk assessments and the fair value measurements of the financial instruments in the portfolio.

## 1.2.1 Interest rate risk and price risk - regulatory trading book

QUALITATIVE INFORMATION

## A. General aspects

Market risk is the risk that the Bank may generate less revenues than expected, or suffer from the impairment of balance sheet items or capital losses from financial positions held, due to sharp and adverse changes in market conditions, in particular interest rates, share prices, exchange rates, commodities and the associated volatilities and correlations (generic risk), or due to events that may impair the issuer's redemption capability (default risk) or which in any event result in a change in the solvency of the issuer (credit spread risk). Market risks can materialize both with regard to the trading book, which includes trading instruments and the associated derivative instruments, and with regard to the banking book, which includes financial assets and liabilities that are accounted for differently than those included in the trading book.
The organisational model adopted by Banco BPM Group for the trading books exposed to interest rate risk and price risk requires:

- the centralisation of the management of treasury and of proprietary portfolio positions in the Parent Company Finance function;
- the centralisation in the subsidiary Banca Akros of the risk positions and the operating flows associated with trading of securities, currency, OTC derivatives and other financial assets.

With reference to the internal model for the calculation of capital absorption against market risk, it should be noted that, starting from 31 December 2020, Banco BPM Group has used the extended model to calculate the Market Risk capital requirement. Said requirement is therefore calculated on the basis of VaR and Stressed VaR, including the specific risk of debt securities, and of IRC.
On 11 January 2023, Banco BPM received the Final Decision from the ECB that approved the implementation of the relative change in the IRC calculation method requested in January 2022. The new method guarantees a more accurate estimate of the P&Ls associated with rating migration events through a greater number of financial instruments used to calibrate the spread levels of the worst rating classes. A forward structure with different maturities (1, 3, 5, 7, 10 years) for the different rating classes and sectors was also introduced in the Asset Swap Spread matrix and a CDS spread matrix was created to calculate the P&L associated with the shock spreads of the CDS, with the same forward structure (1, 3, 5, 7, 10 years). Therefore, the new method has been used to calculate capital absorption/RWA starting from the first quarter of 2023. The ECB decision in question also provides for the removal of the 10% IRC add-on. As regards the latter metric, a limitation was actually in place with a 10% add-on on an individual and consolidated basis, until several relative methodological findings were resolved.

*Parent Company's Portfolio*

Two main types of trading operations can be identified within the Parent Company:

- the investment portfolio, which represents the main source of interest rate risk and equity risk, that are recorded in the accounting category Trading. The bond portfolio was radically derisked in the second half of the year. At the end of 2022, the Parent Company's bond portfolio amounted to a nominal value of only 9 million, almost entirely comprised by foreign government securities. The sensitivity to the overall interest rate risk at the end of the financial year, calculated assuming a parallel change in the interest rate curve of 1 basis point, was approximately +11 thousand euro per b.p., deriving from a net prevalence of short-term exposure on the Euro rate curve. This portfolio also presents a negligible overall exposure to credit spread risk of around -3 thousand euro, considering a 1 basis point shock. In addition to the bond portfolio, there is the price risk component of the equity trading portfolio, which has a small exposure of approximately 7 million;
- the Treasury portfolio contained no securities at the date of the financial statements.

The above-cited risk exposures of the Parent Company are monitored on a daily basis to verify their compliance with the operating thresholds, on the entire portfolio and on the single underlying assets, set by the Board of Directors.

*Trading book of Banca Akros, held as part of its Investment Banking activities*

Banca Akros holds a trading book, the main interest rate risk exposures of which concern transactions on both money markets and the associated hedging derivatives, as well as those on the markets for OTC derivatives and structured products and listed derivatives.
Transactions in both plain vanilla and structured instruments and listed and unlisted derivatives, including trades on the secondary market of structured products issued or sold by the banks of the Group. The destructuring of complex transactions based on the underlying enables the centralised management of the interest rate, exchange rate and price risks within the specific offices of the Bank's Global Markets Department, which use sophisticated position keeping systems.
Trading in interest rate derivatives mainly consists of optimising the flows generated by the need to hedge interest rate risk by institutional customers (for example, Banks, Funds and Insurance companies), and corporate customers of Banca Akros and the Parent Company, taking on the risk as its own and managing it using dynamic hedging strategies. Banca Akros operates as a market maker on OTC derivatives, mainly on the Euro interest rate curves. The process of rebalancing risks on an ongoing basis entails, also based on market liquidity, the use of trading in regulated futures and the related options on short and medium/long-term interest rates.
Trading in bonds issued by financial companies or corporates, traded on the secondary market (Eurobonds) derives from the need to meet customer requests, mainly from institutional customers. On the secondary market, the Bank operates as a market maker on bonds from corporate, financial and supranational issuers, primarily denominated in Euro, through trading on multilateral trading facilities or OTC.
More specifically, at year-end, net bond exposure, excluding Banco BPM issues, amounted to a nominal value of around 142 million, represented by 136 million in Italian financial securities, 59 million in Corporate bonds, 11 million in Supranational bonds, and a short position in German government bonds (-40 million) and foreign financial bonds (-26 million), the latter mainly comprised by financial CDS Itraxx to hedge the positions in financial securities.
The exposure to credit spread risk totalled approximately -22 thousand euro (net of Banco BPM issues), considering a shock of 1 basis point, deriving mainly from financial securities (credit spread sensitivity: approximately -26 thousand euro), most of which Italian. Instead, the exposure to Italian government bonds at the end of the year was substantially nil, equal to a credit spread sensitivity of around -0.5 thousand euro, considering a shock of 1 basis point.
The sensitivity (delta) to the overall interest rate risk at the end of the year, net of long and short exposures on the various currencies and yield curve nodes, was +104 thousand euro, assuming a parallel change in the interest rate curve of 1 b.p.. The greatest exposure to interest rate risk was recorded on the Euro and USD curves.

The main exposures to equity risk are related to trading on cash markets and associated listed or plain vanilla derivatives, on the derivatives and OTC structured products market and the listed derivatives market.
Specifically, the scope includes portfolios of equities and related listed derivatives, held for trading purposes, for market making transactions on individual stock futures and options and for activities related to specialist services (continuous exposure of proposals to buy/sell), as well as transactions in structured instruments and listed derivatives.
The destructuring of complex operations based on the underlying enables the centralised management of the interest

rate, exchange rate and price risks within the specific offices, which use a sophisticated position keeping system specialised in both interest rate and credit spread sectors as well as in price/exchange rate ones. The system is integrated with pricing models and risk measurement (Greeks) developed in-house by the Financial Engineering function and validated by the Parent Company's Risk Function.
At the end of the year, the overall exposure to the price risk of the equity portfolio is equivalent to a delta equivalent long position of about +3 million, concentrated in the Eurozone (+14 million), USA (-12 million) and Asia (+1 million). With regard to the indicator Vega (sensitivity to changes in the implicit volatility of the underlying), relating to the equity risk class, at the end of 2022 the exposure was a positive +600 thousand euro, considering a parallel shock of 1% on volatility levels. That exposure mainly originates from liquid share indices and Large Cap single stocks.
Lastly, the sensitivity to the dividend risk factor, considering a parallel shock of 10% on the levels of this parameter, was approximately +700 thousand euro at the end of the year, concentrated mainly in the Oil&Gas and Utilities sectors.

Banca Akros' risk to the aforementioned exposures are monitored daily to ensure that the operating limits set by the Board of Directors are complied with for the entire portfolio and for the individual underlying assets.

## B. Interest-rate risk and price risk management processes and measurement methods

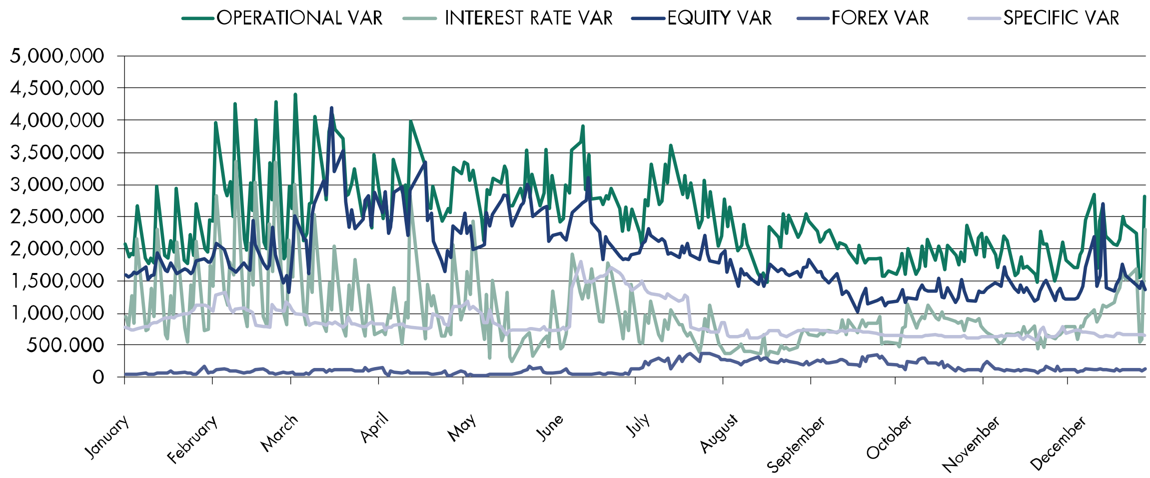
The task of controlling the financial risk management, with a view to identifying the different types of risk, defining the methods to measure the same, to controlling limits at strategic level and verifying the consistency between the operations of the same and the risk/return targets assigned, is centralised in the Parent Company under the responsibility of the Risk Function for all Group banks.
Risk analyses of the Trading book are carried out by means of indicators, both deterministic, such as the sensitivity to market risk factors, and probabilistic, such as VaR (Value at Risk), which measures the maximum potential loss of the portfolio over a certain time horizon and with a given level of confidence.
With respect to the scope of Banco BPM and Banca Akros, risk capital estimates under the VaR approach are made using the historical simulation method, considering a time horizon of one working day and a statistical confidence interval of 99%. VaR is calculated by applying a Lambda coefficient (decay factor) of 0.99, so as to render the estimate more reactive to the most recent changes in market parameters, and by equal-weighting historic observations. The latter coefficient is used, if higher than the VaR calculated with the cited decay factor, in order to estimate the risk.
In addition to the Regulatory VaR calculated under current conditions, a Regulatory VaR under stressed conditions (Stressed VaR) is calculated, which adopts the period between June 2011 and June 2012 for Banca Akros (February 2020 - February 2021 for the Parent Company) as the most severe scenario. The period of stress is monitored with a frequency and a method defined by internal regulations, which enable it to be promptly identified when changes in the composition of the portfolio occur, at the same time guaranteeing a certain degree of stability.
As envisaged by prudential requirements, that model is used to calculate the capital requirement for market risk, as well as for operational purposes.
The operational Value at Risk (VaR) measurement considers the interest rate risk, equity risk, foreign exchange risk and credit spread risk, as well as the benefit of correlation between the risks. Correlation risk and dividend risk are also considered, measured through stress testing techniques, with the benefit of diversification with respect to the first risk group cited.
The capital requirement for supervisory purposes is measured with an internal validated model, for equity risk, exchange rate risk, general interest rate risk and specific credit risk (from November 2020), while it is measured with the standard method for other risk factors (exchange risk of the banking book and commodity risk).

QUANTITATIVE INFORMATION

### Regulatory trading book: internal models and other sensitivity analysis methods

The Value at Risk (VaR) measurement considers interest rate risk, equity risk, exchange rate risk and credit spread risk, as well as the benefit of correlation between risks. Correlation risk and dividend risk are also considered, measured through stress testing techniques, with the benefit of diversification with respect to the first risk group cited.
The performance graph and a table containing the operational VaR figures are shown below for 2022, referring to the regulatory trading book of Banco BPM Group.

**Daily VaR and VAR by risk factor**
**BANCO BPM GROUP: TRADING Book**



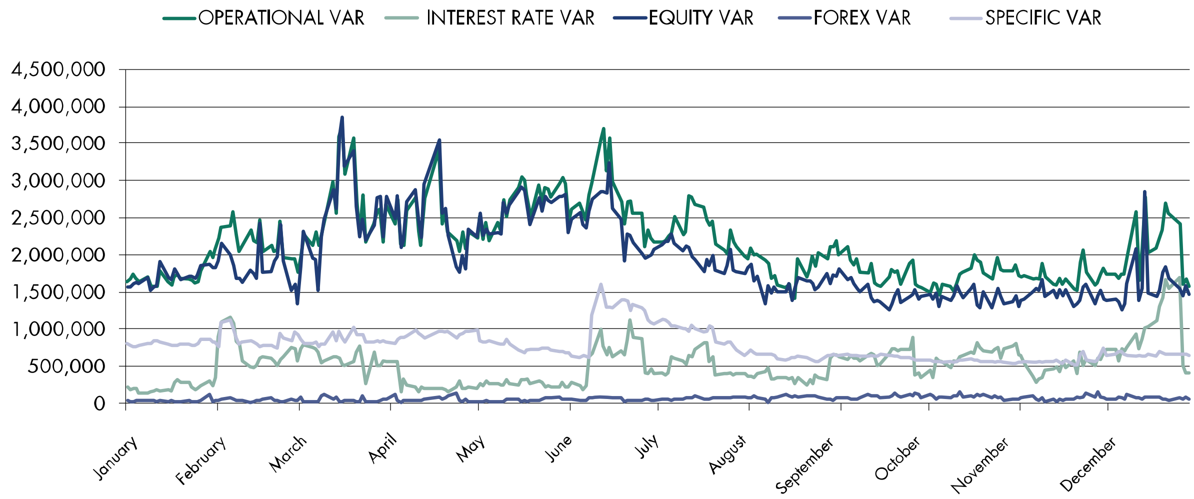

| **Regulatory trading book** *(in millions of euro)* | **2022** | | | |
|---|---|---|---|---|
| | **30 December** | **average** | **maximum** | **minimum** |
| Interest Rate Risk | 2.298 | 0.976 | 3.360 | 0.251 |
| Exchange Rate Risk | 0.135 | 0.139 | 0.379 | 0.023 |
| Equity Risk | 1.370 | 1.882 | 4.196 | 1.027 |
| Dividend and Correlation Risk | 0.543 | 0.745 | 1.237 | 0.379 |
| Specific Debt Securities Risk | 0.653 | 0.858 | 1.804 | 0.576 |
| **Total uncorrelated** | 4.999 | | | |
| Diversification effect | -2.185 | | | |
| **Combined Risk(*)** | 2.815 | 2.458 | 4.394 | 1.472 |

*(*) Overall operational VAR.*

Looking at the graph and the table shown above, it can be noted that the prevailing risk component identified in 2022 was that related to equity risk (with the exception of the peak of interest rate risk at the end of the year due to a technical change of the repo curves at year-end) most of which due to positions of Banca Akros.

The performance graph and a table containing the operational VaR figures are shown below for 2022, referring to the regulatory trading book of Banca Akros.

**Daily VaR and VAR by risk factor**
**BANCA AKROS: TRADING Book**




| **Regulatory trading book** *(in millions of euro)* | **2022** | | | |
|---|---|---|---|---|
| | **30 December** | **average** | **maximum** | **minimum** |
| Interest Rate Risk | 0.411 | 0.519 | 1.704 | 0.135 |
| Exchange Rate Risk | 0.061 | 0.065 | 0.157 | 0.010 |
| Equity Risk | 1.469 | 1.923 | 3.862 | 1.256 |
| Dividend and Correlation Risk | 0.595 | 0.769 | 1.178 | 0.480 |
| Specific Debt Securities Risk | 0.652 | 0.778 | 1.613 | 0.515 |
| Total uncorrelated | 3.187 | | | |
| Diversification effect | -1.615 | | | |
| **Combined Risk(*)** | 1.572 | 2.145 | 3.741 | 1.418 |

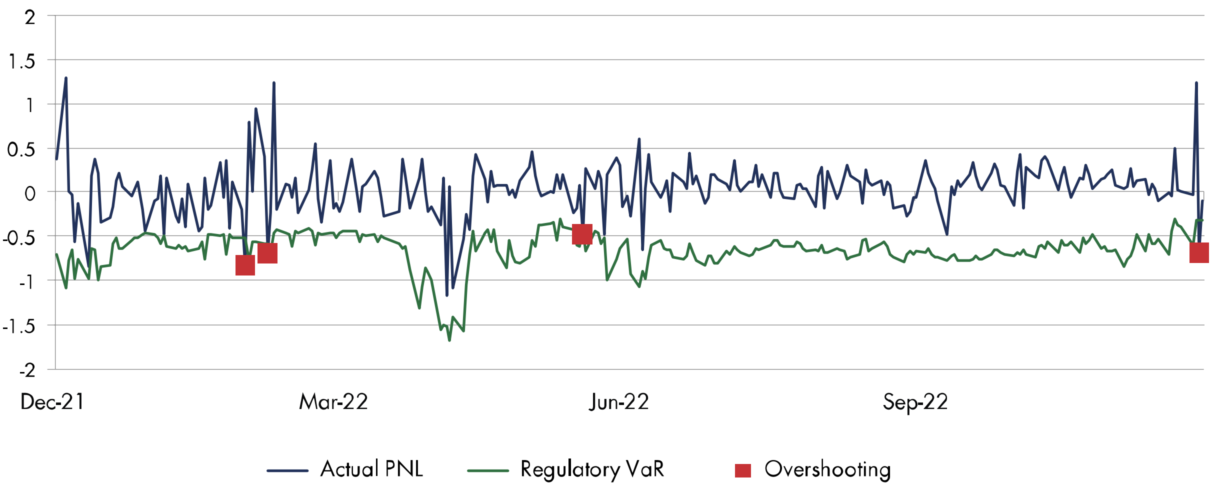
*(*) Overall operational VaR.*

From the analysis of the graph, the preponderance of equity risk can be noted (with reference to both the delta component and the vega component), deriving from positions in equity instruments, both derivatives and cash. In the second half of the year, the specific risk component on debt securities decreased further.

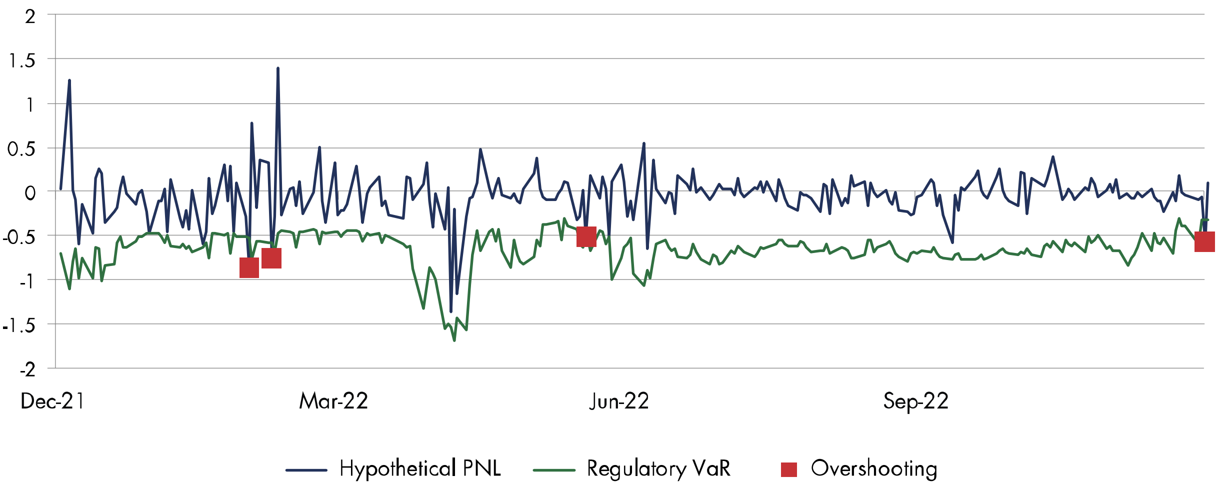
In line with the validation of the internal model for the calculation of the capital requirement relating to market risks, backtesting is conducted on a daily basis, with a view to verifying the solidity of the VaR model adopted. These tests are conducted on the regulatory trading book of Banco BPM and of Banca Akros.
The graphs below show the backtesting relating to the VaR method, calculated on the generic and specific risk components of debt securities and equity securities, interest rate risk and exchange rate risk.
For backtesting purposes, as envisaged by supervisory regulations in force, we used the equally-weighted VaR measurement instead of applying a decay factor used in operational approaches.

## Banco BPM backtesting

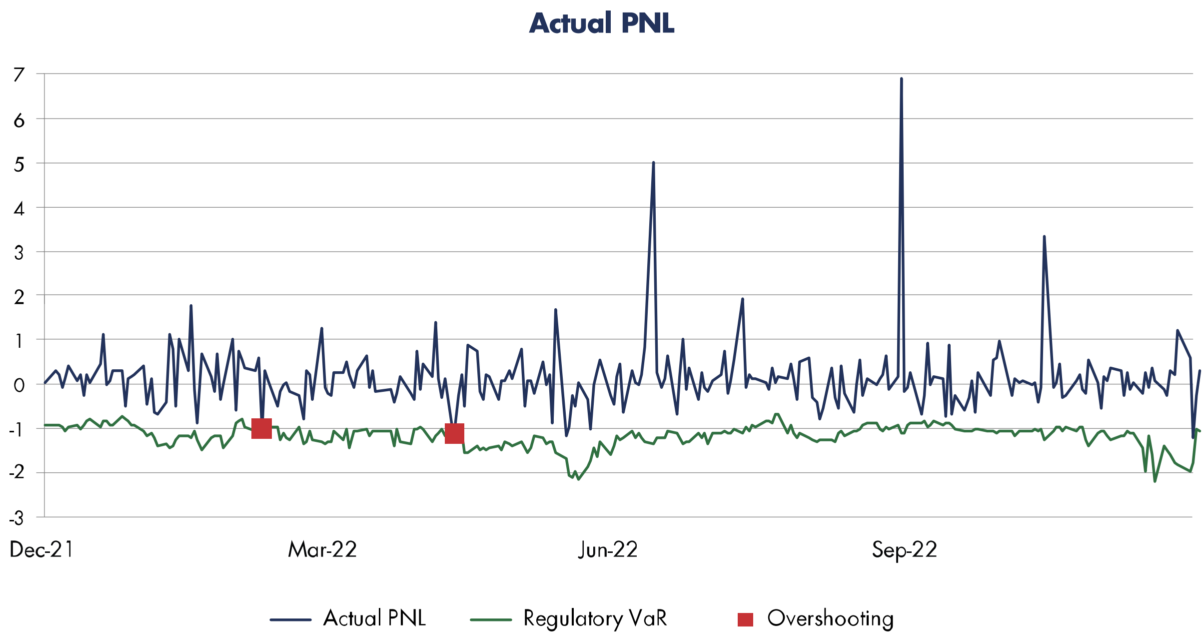
### Actual PNL

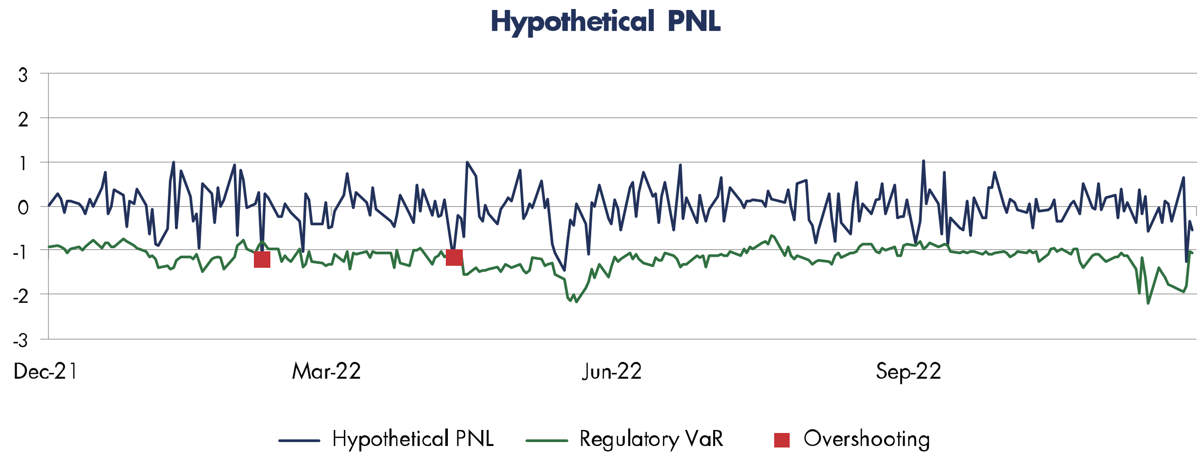



### Hypothetical PNL



**Banca Akros backtesting**




*FRTB (Fundamental Review of the Trading Book)*

In recent years, bank regulations regarding the assessment of market risk are undergoing a thorough review. In this regard, in 2012, the Basel Committee launched a consultation process to review the risk framework of the trading book (Fundamental Review of the Trading Book - FRTB). The consultation ended with the adoption by the Basel Committee on Banking Supervision (BCBS), of the "Minimum capital requirements for market risk" (January 2019). On 7 June 2019, the Banking Package was published in the Official Journal of the European Union, represented by the CRR2, CRD5, BRRD2 and SRMR2, which, inter alia, incorporate the initial rules for the implementation of the FRTB defined by the Basel Committee. The package entered into force on 27 June 2019. On 27 October 2021, the European Commission published the package of legislation for implementing Basel 3 Reforms, also known as Basel 4, which marks the last step in the process of implementation of the changes to capital standards through the Capital Requirements Regulation (CRR3) and the Capital Requirements Directive (CRD6). With this package, the European Union has set two main objectives: to implement the proposals of the Basel Committee on Banking Supervision (BCBS) with a view to strengthening the financial stability of the system and to supporting the European Union to ensure that banks are able to continue to finance the economy.
On 8 November 2022, the European Council published a proposal to amend the text of CRR2, making methodological changes to the calculation of the capital requirement for market risk. To date, the proposed amendment is at the second reading of the European Parliament, which, once examined, may approve it or propose

amendments to the Council for a second reading. Reporting on the Standardised Approach continues to be transmitted to the Regulator according to the current reference legislation (CRR2 2019/876) until the date of application of CRR3, expected for 1 January 2025, unless subsequent amendments are made. The publication of CRR3 will also provide information on the start date of the calculation of Pillar I absorption with FRTB requirements.
To guarantee an adequate level of capitalisation of banks against market risk and to take a structured approach to resolving several shortcomings of current legislation that emerged during the crisis, the FRTB Framework has set out the following objectives:

- clear definition of the distinction between the prudential portfolios (trading and banking book) with more stringent restrictions on movement between portfolios;
- radical change of the metrics to measure the capital requirement for market risk according to a more prudent and risk-sensitive approach, distinguishing, inter alia, between the Standardised Approach - SA and the Internal Model Approach - IMA, subject to the approval of the Regulator. Note that the banks authorised to adopt the IMA are required, in any event, to calculate the capital requirement using the SA model; therefore the IMA should be considered complementary to the SA and not an alternative;
- at regulatory level, boosting the monitoring and the management of market risk at trading desk level.

Lastly, from September 2021, the Regulator has envisaged the calculation of market risk according to the SA, before the calculation of the SA capital requirement according to that envisaged by the new FRTB regulation. Since 2020, Banco BPM Group therefore has launched a project on the Fundamental Review of the Trading Book (FRTB), with the assistance of an external consulting company. The organisation of the project, established at Group level, (the project manager is the head of the Risk Models function) with representatives from Banca Akros, envisages 4 main areas of focus (Standardised Model, Internal Model, Operating Model, Reporting) as well as some across-the-board activities (IT implementations and activities that fall within the scope of the Internal Validation and Audit functions). Activities continued in 2021 and 2022 and the main bodies involved in the exchange of information are represented by the Steering Committee (members include the CFO, Heads of Risks, Finance, Organisation, IT, CEO of Banca Akros, other first-line managers, and the external consulting company), which is tasked with identifying strategic decisions, as well as Project/Focus Area and internal alignment Committees, the purpose of which is to report on the state of progress of the project/work and to address priorities at various levels. The aim of this project organisation is to ensure robust governance, which guarantees continuous monitoring and alignment between the functions involved and an activity plan with clear allocation of ownership. The regulatory timeline for FRTB implementation covers a time horizon that is likely to end in 2025 (Pillar 1 absorption with FRTB requirements from January 2025, as per the CRR3 proposal of 27 October 2021), with the first important regulatory deadline for reporting obligations according to the standardised approach, defined in the third quarter of 2021. For said deadline and therefore also for the subsequent quarters, the reports on FRTB-SA requirements were sent.
As regards the Standard model, note that the Supervisory Authority has asked Banco BPM Group to submit a formal application to request authorisation to use its own method to calculate sensitivities, insofar as different to that envisaged by the law, even though it is more accurate (it considers changes in parameters, both downwards and upwards). Banco BPM Group therefore submitted the formal application for authorisation to use its own method to calculate operational sensitivities. The process of submitting the application, which started on 31 May 2021, was finalised when the report of the control functions was sent in November. The documentation sent met the requirements and was considered complete, in fact, in a letter received from the European Central Bank on 7 October 2021, the application was approved.

*Outcomes of internal validation activities*

Banco BPM Group adopts internal models to quantify capital requirements for Market Risk, on which the Internal Validation function conducts qualitative and quantitative analyses to assess their soundness and the accuracy of the estimates for all significant risk components. Furthermore, it expresses an opinion on the regular functioning, on the predictive capacity, on the performance of internal risk measurement methods and on the adequacy of operating processes to ensure, on a continuous basis, the compliance of internal methods with company needs and the evolution of the reference market.
With reference to backtesting, the data produced to support overruns is analysed, as well as specific statistical tests (Proportion of Failures test, Time Until First Failure test, Christoffersen Interval Forecast test, Mixed Kupiec test and Conditional Coverage test) that are conducted in regard to different portfolio hierarchical levels and time horizons for Banca Akros and the Parent Company. The results of the analyses showed that the model has a good ability to predict the number of backtesting overruns, also taking into account market trends and, in particular, the international tensions that emerged in 2022.

Additionally, the adequacy of the scaling method used to quantify the capital requirement, as required by regulations, was reviewed. The activities conducted did not reveal any underestimation of the risk with respect to the methods used.
To verify the severity of the stressed period used in the Stressed VaR risk measurement, appropriate analyses are carried out to assess any alternative periods that are more conservative than the one currently used to quantify the risk. The analyses showed the adequacy of the stressed period used in the quantification of risk.
On a periodic basis Internal Validation also verifies the robustness of the non-modelled risk framework (RNIME), as required by supervisory regulations. In this area, a general strengthening of the framework should be noted.
As regards MiFiD 2 regulations, the Internal Validation function coordinated the working group created specifically to produce the Annual Validation Report on the Trading Algorithm to be sent to CONSOB (after the assessment of the Audit and Compliance functions), relating to 2022, with an overall result of the self-assessment process considered adequate.
In 2022, tests were also conducted to validate the new standardised approach requested by the Fundamental Review of the Trading Book and the evolutions of the model proposed by the development function and aimed at strengthening the methodological framework for the quantification of risk.

## 1.2.2 Interest rate risk and price risk - banking book

QUALITATIVE INFORMATION

### A. General aspects, management procedures and measurement methods for interest rate risk and price risk

The interest rate risk relating to the banking book is mainly associated with the core activity performed by the bank acting as an intermediary in the process of transformation of maturities. In particular, the issue of fixed-rate bonds, the granting of fixed-rate commercial and mortgage loans, and funding from demand current accounts represent a fair value interest rate risk, while floating-rate financial assets and liabilities represent a cash flow interest rate risk.
The Asset & Liability Management unit of the Parent Company's Finance Function is responsible for managing interest rate risk and operates in compliance with the limits for exposure to interest rate risk defined by the RAF and the indications of the Finance Committee.
The Parent Company's Risk Function is in charge of monitoring and controlling the interest rate risk of the banking book, also for the financial subsidiaries. This activity is performed on a monthly basis to verify that the limits in terms of changes in net interest income or the economic value of the banking book are complied with.
During 2022, the usual periodic maintenance and updating activities were carried out on the internal models, with the transition to the measurement of economic value without a spread in the RAF (previously monitored monthly for management purposes).
In particular, as part of the monitoring of interest rate risk, the risk measures used internally and subject to the RAF limit are:

- the change in expected net interest income (over a twelve-month time horizon in accordance with both a dynamic and a static financial statement perspective) following a parallel shock to the spot interest rate curves that during the year varied from a shock of +/- 40 bps to +/- 80 bps, as envisaged in the RAF 2022, as a result of exceeding the average monthly level of the Euribor with monthly tenors;
- the change in economic value following a parallel shock to spot interest rate curves of +/- 200 bps with relation to Own Funds (capital perspective); furthermore, the value at risk of the banking book based on the VaR (Value at Risk) method over 12 months and with a confidence interval of 99.9% is also monitored as an early warning RAF indicator.

In accordance with normal management practice and internal regulations, Banco BPM Group conducts periodic stress tests, applying instant shocks, both parallel and non-parallel, to the interest rate curves of the currencies in which the banking book items are denominated. Additionally, during the ICAAP exercise, the impact of extreme yet plausible changes in risk factors on VaR is assessed from a capital adequacy perspective.

In 2022, in these analyses, the TLTRO III take-ups, which are technically one-coupon, were initially modelled as structured transactions, partially at a floating rate, indexed to ECB deposit rates partially already established and including a cap, valid until June 2022, on the overall rate of -1%. Subsequently, as a result of the monetary policy decision of 27 October 2022, these transactions were fully structured at a floating rate. Following this monetary policy decision and the consequent change in the relative duration, during the second half of 2022, the exposure to interest rate risk from a capital perspective rose. At the same time, for the same reasons, there was a reduction in risk exposure from an income perspective.

QUANTITATIVE INFORMATION

### 1. Banking book: distribution of financial assets and liabilities by residual duration (by repricing date)

*Currency of denomination: Euro*

| Type/Residual duration | On demand | Up to 3 months | From over 3 months to 6 months | From over 6 months to 1 year | From over 1 year to 5 years | From over 5 years to 10 years | Over 10 years | Unlimited duration |
|---|---|---|---|---|---|---|---|---|
| **1. On-balance sheet assets** | **43,394,618** | **47,049,300** | **7,412,170** | **5,223,091** | **23,851,937** | **19,002,888** | **10,051,763** | **1,295** |
| 1.1 Debt securities | 115,016 | 3,190,567 | 2,423,691 | 2,448,740 | 10,594,895 | 13,056,483 | 629,946 | - |
| - with early redemption option | 13,581 | 1,192,927 | 70,560 | 19,966 | 612,579 | 216,909 | 125,579 | - |
| - other | 101,435 | 1,997,640 | 2,353,131 | 2,428,774 | 9,982,316 | 12,839,574 | 504,367 | - |
| 1.2 Loans to banks | 13,361,041 | 2,913,344 | 26,216 | 15,038 | 10,740 | - | - | - |
| 1.3 Loans to customers | 29,918,561 | 40,945,389 | 4,962,263 | 2,759,313 | 13,246,302 | 5,946,405 | 9,421,817 | 1,295 |
| - current accounts | 8,145,260 | 282,021 | 14,948 | 8,522 | 122,344 | 1,317 | - | - |
| - other loans | 21,773,301 | 40,663,368 | 4,947,315 | 2,750,791 | 13,123,958 | 5,945,088 | 9,421,817 | 1,295 |
| - with early redemption option | 14,974,252 | 36,624,720 | 4,624,469 | 2,502,179 | 12,193,669 | 5,869,127 | 9,356,880 | - |
| - other | 6,799,049 | 4,038,648 | 322,846 | 248,612 | 930,289 | 75,961 | 64,937 | 1,295 |
| **2. On-balance sheet liabilities** | **105,560,309** | **3,387,803** | **12,007,950** | **3,038,360** | **25,475,719** | **1,058,273** | **288,262** | **-** |
| 2.1 Due to customers | 104,074,659 | 1,028,654 | 115,889 | 136,143 | 402,827 | 300,913 | 271,035 | - |
| - current accounts | 100,450,760 | 28,829 | 14 | 2 | - | 18 | - | - |
| - other payables | 3,623,899 | 999,825 | 115,875 | 136,141 | 402,827 | 300,895 | 271,035 | - |
| - with early redemption option | - | - | - | - | - | - | - | - |
| - other | 3,623,899 | 999,825 | 115,875 | 136,141 | 402,827 | 300,895 | 271,035 | - |
| 2.2 Due to banks | 1,353,319 | 1,406,581 | 8,830,548 | 1,982,919 | 15,563,481 | 2,871 | 1,547 | - |
| - current accounts | 80,294 | - | - | - | - | - | - | - |
| - other payables | 1,273,025 | 1,406,581 | 8,830,548 | 1,982,919 | 15,563,481 | 2,871 | 1,547 | - |
| 2.3 Debt securities | 132,316 | 952,568 | 3,061,513 | 919,298 | 9,509,411 | 754,489 | 15,680 | - |
| - with early redemption option | 50,168 | 801,878 | 1,748,984 | 72 | 1,630,035 | 691,664 | 199 | - |
| - other | 82,148 | 150,690 | 1,312,529 | 919,226 | 7,879,376 | 62,825 | 15,481 | - |
| 2.4 Other liabilities | 15 | - | - | - | - | - | - | - |
| - with early redemption option | - | - | - | - | - | - | - | - |
| - other | 15 | - | - | - | - | - | - | - |
| **3. Financial derivatives** | **7,018,101** | **26,345,853** | **2,277,411** | **5,177,645** | **20,080,731** | **11,858,417** | **3,900,491** | **-** |
| 3.1 With underlying security | 3,228,980 | - | 6,088 | 63,463 | - | - | - | - |
| - Options | - | - | 6,088 | 63,463 | - | - | - | - |
| + Long positions | - | - | 3,088 | 32,497 | - | - | - | - |
| + Short positions | - | - | 3,000 | 30,966 | - | - | - | - |
| - Other derivatives | 3,228,980 | - | - | - | - | - | - | - |
| + Long positions | 1,628,980 | - | - | - | - | - | - | - |
| + Short positions | 1,600,000 | - | - | - | - | - | - | - |
| 3.2 Without underlying security | 3,789,121 | 26,345,853 | 2,271,323 | 5,114,182 | 20,080,731 | 11,858,417 | 3,900,491 | - |
| - Options | 175 | 45,903 | 20,198 | 604 | 39,540 | 19,109 | 7,657 | - |
| + Long positions | 175 | 45,141 | 20,122 | 445 | 114 | 57 | 538 | - |
| + Short positions | - | 762 | 76 | 159 | 39,426 | 19,052 | 7,119 | - |
| - Other derivatives | 3,788,946 | 26,299,950 | 2,251,125 | 5,113,578 | 20,041,191 | 11,839,308 | 3,892,834 | - |
| + Long positions | 667,000 | 11,550,335 | 2,250,500 | 5,035,300 | 13,619,946 | 2,340,385 | 1,150,000 | - |
| + Short positions | 3,121,946 | 14,749,615 | 625 | 78,278 | 6,421,245 | 9,498,923 | 2,742,834 | - |
| **4. Other off-balance sheet transactions** | **27,906,593** | **27,906,593** | **-** | **-** | **-** | **-** | **-** | **-** |
| + Long positions | 27,690,591 | 216,002 | - | - | - | - | - | - |
| + Short positions | 216,002 | 27,690,591 | - | - | - | - | - | - |

*Currency of denomination: other currencies*

| Type/Residual duration | On demand | Up to 3 months | From over 3 months to 6 months | From over 6 months to 1 year | From over 1 year to 5 years | From over 5 years to 10 years | Over 10 years | Unlimited duration |
|---|---|---|---|---|---|---|---|---|
| **1. On-balance sheet assets** | **246,186** | **658,605** | **279,000** | **67,885** | **1,842,215** | **2,149,443** | **-** | **-** |
| 1.1 Debt securities | 15,742 | 128,006 | 5,629 | 51,219 | 1,805,016 | 2,149,441 | - | - |
| - with early redemption option | 454 | 11,229 | - | - | 25,687 | 17,336 | - | - |
| - other | 15,288 | 116,777 | 5,629 | 51,219 | 1,779,329 | 2,132,105 | - | - |
| 1.2 Loans to banks | 86,653 | 4,649 | - | - | - | - | - | - |
| 1.3 Loans to customers | 143,791 | 525,950 | 273,371 | 16,666 | 37,199 | 2 | - | - |
| - current accounts | 25,931 | - | - | - | - | 2 | - | - |
| - other loans | 117,860 | 525,950 | 273,371 | 16,666 | 37,199 | - | - | - |
| - with early redemption option | 113,790 | 225,866 | 235,768 | 13,732 | 34,539 | - | - | - |
| - other | 4,070 | 300,084 | 37,603 | 2,934 | 2,660 | - | - | - |
| **2. On-balance sheet liabilities** | **1,148,390** | **4,033,540** | **299** | **2,573** | **-** | **-** | **-** | **-** |
| 2.1 Due to customers | 1,012,422 | 676,161 | 299 | 698 | - | - | - | - |
| - current accounts | 807,725 | 2,850 | 299 | 698 | - | - | - | - |
| - other payables | 204,697 | 673,311 | - | - | - | - | - | - |
| - with early redemption option | - | - | - | - | - | - | - | - |
| - other | 204,697 | 673,311 | - | - | - | - | - | - |
| 2.2 Due to banks | 135,968 | 3,357,379 | - | 1,875 | - | - | - | - |
| - current accounts | 1,465 | - | - | - | - | - | - | - |
| - other payables | 134,503 | 3,357,379 | - | 1,875 | - | - | - | - |
| 2.3 Debt securities | - | - | - | - | - | - | - | - |
| - with early redemption option | - | - | - | - | - | - | - | - |
| - other | - | - | - | - | - | - | - | - |
| 2.4 Other liabilities | - | - | - | - | - | - | - | - |
| - with early redemption option | - | - | - | - | - | - | - | - |
| - other | - | - | - | - | - | - | - | - |
| **3. Financial derivatives** | **140,634** | **1,373,524** | **210,951** | **924,853** | **1,010,920** | **888,993** | **-** | **-** |
| 3.1 With underlying security | - | - | - | - | - | - | - | - |
| - Options | - | - | - | - | - | - | - | - |
| + Long positions | - | - | - | - | - | - | - | - |
| + Short positions | - | - | - | - | - | - | - | - |
| - Other derivatives | - | - | - | - | - | - | - | - |
| + Long positions | - | - | - | - | - | - | - | - |
| + Short positions | - | - | - | - | - | - | - | - |
| 3.2 Without underlying security | 140,634 | 1,373,524 | 210,951 | 924,853 | 1,010,920 | 888,993 | - | - |
| - Options | - | - | - | - | - | - | - | - |
| + Long positions | - | - | - | - | - | - | - | - |
| + Short positions | - | - | - | - | - | - | - | - |
| - Other derivatives | 140,634 | 1,373,524 | 210,951 | 924,853 | 1,010,920 | 888,993 | - | - |
| + Long positions | 140,634 | 1,232,890 | 70,317 | 831,097 | - | - | - | - |
| + Short positions | - | 140,634 | 140,634 | 93,756 | 1,010,920 | 888,993 | - | - |
| **4. Other off-balance sheet transactions** | **442,557** | **452,968** | **150** | **-** | **-** | **-** | **-** | **-** |
| + Long positions | 442,557 | 5,131 | 150 | - | - | - | - | - |
| + Short positions | - | 447,837 | - | - | - | - | - | - |

## 2. Banking book: internal models and other sensitivity analysis methods

The Group makes use of an Asset & Liability Management procedure to measure on a monthly basis the impact ("sensitivity") from changes in the interest rate structure on the economic value of capital related to the banking book. With regard to the expected financial margin, the ALM system estimates its changes on a one-year horizon in the assumption of deterministic shocks of the interest rate curves (bps increases/decreases applied to all the interest rate curves as if it were a sudden, single and parallel change), and shocks to adjust to the forward rates implied in money market rates, and again shocks from projections that reflect alternative scenarios. Estimates are based on the assumption that the capital structure remains unchanged in terms of aggregate assets and liabilities, as well as in terms of financial characteristics (rates, spreads, duration).

With regard to the economic value of capital, the same assumptions on the interest rate curve changes are applied, measuring the change in present value of all transactions and comparing it with the value of Own Funds.
For the purposes of sensitivity analyses, risk measurement metrics are monitored by applying a floor to the development of rates which, however, is currently not relevant in the face of a market scenario characterised by a sudden increase in risk-free rates after years of negative interest rates.

The table below shows exposure to interest rate risk at the end of 2022, in accordance with operational risk measurements.

| Risk ratios (%) | 2022 | | | | 2021 | |
|---|---|---|---|---|---|---|
| | 31 December | average | maximum | minimum | 31 December | average |
| **For shift + 100 bps** | | | | | | |
| Financial margin at risk/Financial margin | 4.8% | 16.6% | 26.0% | 4.8% | 22.7% | 23.3% |
| **For shift - 100 bps (EBA floor)** | | | | | | |
| Financial margin at risk/Financial margin | -6.4% | -14.9% | -6.4% | -24.4% | -8.5% | -6.4% |
| **For shift + 100 bps** | | | | | | |
| Economic value at risk/Economic value of capital | -5.4% | -3.5% | -1.4% | -6.2% | -0.2% | -0.2% |
| **For shift - 100 bps (EBA floor)** | | | | | | |
| Economic value at risk/Economic value of capital | 1.1% | 0.2% | 3.1% | -2.5% | 0.4% | 0.6% |

With reference to the banking book, the Group also assesses the exposure to default and migration risk of the rating classes of the debt securities classified as HTCS and HTC using a method which involves calculating the VaR spread and the Incremental Default Risk (IDR), to take into consideration the Default component of the HTCS portfolio and the Incremental Risk Charge to capture the Rating Migration component of the HTC portfolio.

*Outcomes of internal validation activities*

Banco BPM Group adopts behavioural models in order to capture idiosyncratic elements of customer segments and produce rate risk estimates that are more appropriate to the characteristics of the banking book. In this context, Internal Validation carries out reperforming, benchmarking and backtesting analyses in order to verify the robustness of rate risk estimates. The analyses carried out in 2022 did not highlight any particular aspects of improvement.

## 1.2.3 Exchange rate risk

QUALITATIVE INFORMATION

### General aspects, management procedures and measurement methods for exchange rate risk

As the Group's Corporate & Investment Bank, Banca Akros, given its specific business model and, in particular, as regards the exchange risk generated by the trading book, has centralised the management of the same with the Forex & Commodities Unit.
The total exposure for Banca Akros as at 31 December 2022, adding all the exchange rate positions against the Euro, was around +7.6 million euro (long foreign currency, short euro), concentrated mainly in the USD (US Dollar, exposure: +9.8 million euro), CHF (Swiss Franc, exposure: -660 thousand euro), GBP (British Pound, exposure: -590 thousand euro) and HKD (Hong King Dollar, exposure: -530 thousand euro).
Regarding the methods for measuring and controlling the exchange rate risk generated by the trading book, please refer to the method described in the "Interest rate risk and price risk - Regulatory trading book" section.
With regard to calculation of capital requirements, note that, with the Final Decision on 16 November 2020, the Supervisory Authority made the authorisation to extend the exchange rate risk of the banking book subject to a condition (therefore it will take effect only after fulfilling several relative obligations, following certification by the company control functions and the Supervisory Authority in question). However, as at 31 December 2022, the Banking Book of Banca Akros had no exposure to exchange rate risk.

## B. Exchange rate risk hedging

Exchange rate risk exposures are monitored on a daily basis and are hedged by the various desks so as to meet the risk limits defined by the Group.
The Money Market & Forex Unit, where the management of the Parent Company's exchange rate risk is centralised, hedges currency exposures both relating to other desks and to its own market making activities, with a view to the unitary and dynamic management of exchange rate risk and exchange rate volatility "on the book", thus with the possibility to carry out hedging "upstream" and to assume risks within the preset limits defined by the internal policies.

QUANTITATIVE INFORMATION

The table below shows the distribution, by currency, of the assets, liabilities and derivatives of the Group, based on the rules for preparation envisaged by Bank of Italy Circular no. 262.

In this regard, note that the imbalance resulting from the above-mentioned distribution does not necessarily represent the Group's actual foreign exchange position, as can be inferred from operational risk results. This mainly results from the fact that the table includes certain instruments in foreign currency, operationally related to other instruments which, however, are not subject to exposure as they are denominated in euro, although a part of the cash flows depends on exchange rate risk.

### 1. Breakdown by currency of assets and liabilities and of derivatives

| Items | Currencies | | | | | |
|---|---|---|---|---|---|---|
| | USD | JPY | GBP | CHF | CNY | OTHER |
| **A. Financial assets** | **5,756,144** | **166,610** | **40,713** | **97,840** | **18,998** | **177,883** |
| A.1 Debt securities | 4,108,888 | - | - | 43,165 | - | 9,330 |
| A.2 Equity instruments | 627,475 | 161,907 | 34,032 | 39,226 | 3,710 | 139,144 |
| A.3 Loans to banks | 45,906 | 3,037 | 4,910 | 4,092 | 10,104 | 24,993 |
| A.4 Loans to customers | 973,875 | 1,666 | 1,771 | 11,357 | 5,184 | 4,416 |
| A.5 Other financial assets | - | - | - | - | - | - |
| **B. Other assets** | **45,879** | **5,170** | **17,726** | **14,084** | **9** | **15,290** |
| **C. Financial liabilities** | **4,941,582** | **31,461** | **92,867** | **32,307** | **6,072** | **81,609** |
| C.1 Due to banks | 3,444,258 | 12,441 | 483 | 96 | - | 38,579 |
| C.2 Due to customers | 1,497,324 | 19,020 | 92,384 | 31,978 | 6,072 | 43,030 |
| C.3 Debt securities | - | - | - | - | - | - |
| C.4 Other financial liabilities | - | - | - | 233 | - | - |
| **D. Other liabilities** | **27,241** | **26** | **2,370** | **-1,061** | **897** | **3,633** |
| **E. Financial derivatives** | | | | | | |
| - Options | | | | | | |
| + Long positions | 147,417 | - | 304 | 5,368 | - | 1,156 |
| + Short positions | 212,298 | 4,906 | 1,342 | 1,346 | 5,423 | 585 |
| - Other derivatives | | | | | | |
| + Long positions | 20,373,582 | 314,940 | 327,870 | 13,206 | 44,149 | 103,035 |
| + Short positions | 20,975,477 | 285,412 | 275,190 | 86,450 | 46,559 | 82,687 |
| **Total assets** | **26,323,022** | **486,720** | **386,613** | **130,498** | **63,156** | **297,364** |
| **Total liabilities** | **26,156,598** | **321,805** | **371,769** | **121,164** | **58,951** | **168,514** |
| **Imbalance (+/-)** | **166,424** | **164,915** | **14,844** | **9,334** | **4,205** | **128,850** |

### 2. Internal models and other sensitivity analysis methods

The exchange rate risks generated by the trading book and the banking book are monitored through an internal VaR model illustrated in the "Interest rate risk and price risk - Regulatory trading book" section, where the values assumed by this indicator are shown.

## 1.3 Derivative instruments and hedging policies

## Derivative instruments

With regard to derivative transactions, Banco BPM Group has introduced specific and robust validation and control processes of the pricing models and related market parameters.

### Validation and control process of Market Parameters

Banco BPM Group adopted a Fair Value Policy defining the accounting rules to be used to value market parameters. To comply with this Policy, a strict process was put in place to count, validate and control the market parameters used to measure the market value and to estimate the risk of derivative positions. This process is implemented by the Parent Company’s Risk Function and envisages, in particular:

- the constant update of the Parameter Manual, containing the main parameters used and their most significant features, and the definition of the source;
- the constant update of parameter control methods;
- the daily validation and control of the listed parameters, automatically fed by external infoproviders;
- the daily validation and control of illiquid parameters, from an accounting and operational perspective.

In order to support control activities, the Group introduced an advanced application system (fed by the front office system and, for benchmarking purposes, by alternative and highly specialised infoproviders) to monitor the performance of the parameters over time, featuring the statistical analysis of variations and operating warnings.

### Validation and control process of Pricing Models of OTC derivative products

Banco BPM Group works with OTC derivative instruments using, for the purposes of their valuation, quantitative pricing models in line with market best practices, which are already included in the Front Office application or, for special structures, models developed by the financial engineering department of the Investment Bank.
In order to ensure a precise and strict control over the adoption of new pricing models - be they market or in-house developed models - a validation process is in place, with the following features:

- the validation of the models carried out by the Market Risk Unit of the Risk Function;
- model validation based on strict consistency and robustness tests, conducted with the support of academic experts;
- the official validation of the new pricing models by the Parent Company's Risk Committee and, when this involves a new product, also by the Product Innovation Committee with the involvement of the main members of corporate management.

Note that, based on the current prudential policy pursued by the Group, innovative financial instruments can be entered only after a thorough analysis of the reliability and accuracy of their pricing models.

The table below gives the fair value amount of Banca Akros’ positions in derivative financial instruments (with the exclusion of forward exchange contracts), in relation to the type of pricing model used. Note that Banca Akros, in its role as the investment bank of Banco BPM Group, manages the market risk that derives from its overall transactions in derivative financial instruments.

| Aggregate *(fair value in thousands of euro)* | | Number of contracts/lots (in units) | Fair Value | Positive Fair Value | Negative Fair Value |
|---|---|---|---|---|---|
| **Total** | | **228,660** | **787,030,441** | **1,689,533,937** | **(902,503,496)** |
| of which: | Listed/Quoted Derivatives | 225,010 | 22,755,877 | 132,752,377 | (109,996,500) |
| of which: | Certificates valued using internal models developed by the financial engineering department of Banca Akros | 91 | (143,018,179) | - | (143,018,179) |
| of which: | OTC derivatives valued using the proprietary models of the Front Office system | 568 | 27,568,657 | 36,293,113 | (8,724,456) |
| of which: | OTC derivatives valued using internal models developed by the financial engineering department of Banca Akros | 2,989 | 879,296,732 | 1,520,061,093 | (640,764,361) |
| of which: | OTC derivatives valued using external contributors | 2 | 427,354 | 427,354 | - |

### OTC financial and credit derivatives: counterparty risk/financial risk – Internal models

With regard to counterparty risk, defined as the risk that the counterparty in a transaction defaults before the final settlement of the cash flows of such transaction (Regulation (EU) no. 575/2013), for supervisory reporting purposes, the Group uses standard methods to calculate exposures on the entire reference scope (derivatives, repurchase agreements, securities lending and medium- and long-term loans).

From June 2021 the new standard SA-CCR methodology entered into force for calculating exposure to counterparty risk on transactions in derivatives (Ref. Regulation (EU) 2019/876).
The new standard method replaces the previous Market Value approach, and makes it possible to calculate capital requirements which better reflect the risks linked to transactions in derivatives.
Membership of Clearing Houses for operations in OTC Derivatives and Credit Derivatives has enabled the mitigation of risks.

In accordance with the Basel III Framework Regulation, additional capital requirements regarding the following are to be calculated:

- own funds for the CVA Risk through the adoption of the standardised method, as established by (EU) Regulation no. 575/2013 for banks that are not authorised to use the internal model method (IMM) for counterparty risk or the IMM for Incremental Risk Charge (IRC);
- exposures relating to operations with Qualifying Central Counterparties (QCCP) by adopting the methods envisaged by Arts. 306-308 of Regulation (EU) no. 575/2013.

As regards this type of risk, for management purposes and to provide support for capital adequacy assessment processes (ICAAP process), the Parent Company and Banca Akros also use an internal method to estimate exposures to the risk of possible default of counterparties in OTC derivative transactions subject to Collateral Agreements (CSA).
The above-mentioned simplified simulative method, called the “Shortcut Method” estimates exposures on the basis of possible changes of the Mark to Market of the individual contracts underlying the same reference CSA, on a time horizon given by the “risk margin period” that characterises each contract. The measurement is also implemented in the Parent Company and Banca Akros lending process chain, together with a daily monitoring and reporting system.
For the remainder of the exposures to derivatives, the exposure is estimated with the standard methodology which is also used for Supervisory reporting purposes.

Furthermore, the Group has met the obligation envisaged by European Legislation (Delegated Regulation (EU) no. 2016/2251), by exchanging, based on the relative contracts (CTA - Collateral Transfer Agreement), the initial margins of OTC derivatives not cleared by a central counterparty, which provide additional protection in the event that one of the two counterparties is not able to meet its commitments over the life of the contract.
Banco BPM Group uses the SIMM method, whose calculation is mostly risk-sensitive, and is based on aggregate sensitivities by risk and product category.

## 1.3.1 Trading derivative instruments

## A. FINANCIAL DERIVATIVES

### A.1 Trading financial derivatives: year-end notional values

| Underlying assets/Derivative types | Total 31/12/2022 | | | | Total 31/12/2021 | | | |
|---|---|---|---|---|---|---|---|---|
| | Over the Counter | | | Organised markets | Over the Counter | | | Organised markets |
| | Central counterparties | Without central counterparties | | | Central counterparties | Without central counterparties | | |
| | | With netting arrangements | Without netting arrangements | | | With netting arrangements | Without netting arrangements | |
| 1. Debt securities and interest rates | 42,389,484 | 39,099,959 | 14,606,813 | 16,251 | 37,085,821 | 37,208,379 | 15,243,424 | 1,425,919 |
| a) Options | - | 25,743,058 | 1,826,404 | - | - | 22,849,540 | 2,268,340 | 14,324 |
| b) Swaps | 42,389,484 | 13,356,901 | 10,694,509 | - | 37,085,821 | 14,358,839 | 11,097,296 | - |
| c) Forwards | - | - | 165,000 | - | - | - | 78,000 | - |
| d) Futures | - | - | 1,920,900 | 16,251 | - | - | 1,799,788 | 1,411,595 |
| e) Other | - | - | - | - | - | - | - | - |
| 2. Equity instruments and share indices | - | 9,574,472 | 1,312,282 | 750,897 | - | 10,882,157 | 1,409,667 | 1,134,792 |
| a) Options | - | 9,574,472 | 939,533 | 693,371 | - | 10,882,157 | 968,990 | 1,102,154 |
| b) Swaps | - | - | - | - | - | - | - | - |
| c) Forwards | - | - | - | - | - | - | - | - |
| d) Futures | - | - | 372,749 | 57,526 | - | - | 440,677 | 32,638 |
| e) Other | - | - | - | - | - | - | - | - |
| 3. Currencies and gold | - | 40,551,085 | 1,150,304 | - | - | 28,279,994 | 1,380,863 | - |
| a) Options | - | 254,749 | 318,959 | - | - | 57,793 | 316,632 | - |
| b) Swaps | - | - | - | - | - | 3,890 | 16,267 | - |
| c) Forwards | - | 40,296,336 | 826,419 | - | - | 28,218,311 | 1,032,915 | - |
| d) Futures | - | - | - | - | - | - | - | - |
| e) Other | - | - | 4,926 | - | - | - | 15,049 | - |
| 4. Commodities | - | 138,478 | 9,404 | - | - | 80,511 | 14,262 | - |
| 5. Other | - | - | - | - | - | - | - | - |
| **Total** | **42,389,484** | **89,363,994** | **17,078,803** | **767,148** | **37,085,821** | **76,451,041** | **18,048,216** | **2,560,711** |

### A.2 Trading financial derivatives: gross positive and negative fair value - breakdown by products

| Derivative types | Total 31/12/2022 | | | | Total 31/12/2021 | | | |
|---|---|---|---|---|---|---|---|---|
| | Over the Counter | | | Organised markets | Over the Counter | | | Organised markets |
| | Central counterparties | Without central counterparties | | | Central counterparties | Without central counterparties | | |
| | | With netting arrangements | Without netting arrangements | | | With netting arrangements | Without netting arrangements | |
| **1. Positive fair value** | | | | | | | | |
| a) Options | - | 711,589 | 16,165 | 32,482 | - | 861,792 | 25,514 | 59,666 |
| b) Interest rate swaps | 1,469,731 | 511,515 | 3,392 | - | 344,233 | 273,266 | 119,470 | - |
| c) Cross currency swaps | - | - | - | - | - | - | - | - |
| d) Equity swaps | - | - | - | - | - | - | - | - |
| e) Forwards | - | 807,593 | 27,537 | - | - | 604,711 | 8,082 | - |
| f) Futures | - | - | - | - | - | - | - | - |
| g) Other | - | 2,507 | 331 | - | - | 31,620 | 8,279 | - |
| **Total** | **1,469,731** | **2,033,204** | **47,425** | **32,482** | **344,233** | **1,771,389** | **161,345** | **59,666** |
| **2. Negative fair value** | | | | | | | | |
| a) Options | - | 663,441 | 214,999 | 26,021 | - | 636,046 | 193,276 | 29,350 |
| b) Interest rate swaps | 870,745 | 338,121 | 733,265 | - | 417,310 | 361,161 | 34,845 | - |
| c) Cross currency swaps | - | - | - | - | - | - | - | - |
| d) Equity swaps | - | - | - | - | - | - | - | - |
| e) Forwards | - | 772,678 | 11,634 | - | - | 577,384 | 9,963 | - |
| f) Futures | - | - | - | - | - | - | - | - |
| g) Other | - | 3,284 | 105 | - | - | 35,553 | 3,848 | - |
| **Total** | **870,745** | **1,777,524** | **960,003** | **26,021** | **417,310** | **1,610,144** | **241,932** | **29,350** |

### A.3 OTC trading financial derivatives: notional values, gross positive and negative fair value by counterparties

| Underlying assets | Central counterparties | Banks | Other financial companies | Other entities |
|---|---|---|---|---|
| **Contracts not included in netting arrangements** | | | | |
| **1) Debt securities and interest rates** | | | | |
| - notional value | X | 2,095,900 | 423,202 | 12,087,711 |
| - positive fair value | X | - | 309 | 8,944 |
| - negative fair value | X | - | 19,805 | 770,166 |
| **2) Equity instruments and share indices** | | | | |
| - notional value | X | 372,749 | 30,992 | 908,541 |
| - positive fair value | X | - | 3,116 | 3,824 |
| - negative fair value | X | - | 148 | 155,703 |
| **3) Currencies and gold** | | | | |
| - notional value | X | 319,765 | 4,926 | 825,613 |
| - positive fair value | X | 14,395 | 14 | 16,507 |
| - negative fair value | X | 3,345 | 92 | 10,732 |
| **4) Commodities** | | | | |
| - notional value | X | 2,542 | - | 6,862 |
| - positive fair value | X | - | - | 316 |
| - negative fair value | X | - | - | 12 |
| **5) Other** | | | | |
| - notional value | X | - | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | - | - | - |
| **Contracts included in netting arrangements** | | | | |
| **1) Debt securities and interest rates** | | | | |
| - notional value | 42,389,484 | 25,942,340 | 10,558,201 | 2,599,418 |
| - positive fair value | 1,469,731 | 417,816 | 371,290 | 40 |
| - negative fair value | 870,745 | 187,006 | 92,724 | 156,537 |
| **2) Equity instruments and share indices** | | | | |
| - notional value | - | 5,898,096 | 3,676,376 | - |
| - positive fair value | - | 291,291 | 136,516 | - |
| - negative fair value | - | 240,560 | 318,962 | - |
| **3) Currencies and gold** | | | | |
| - notional value | - | 36,537,429 | 3,718,529 | 295,127 |
| - positive fair value | - | 714,243 | 93,340 | 3,375 |
| - negative fair value | - | 697,122 | 74,698 | 3,648 |
| **4) Commodities** | | | | |
| - notional value | - | 45,101 | 32,316 | 61,061 |
| - positive fair value | - | 2,075 | 1,105 | 2,113 |
| - negative fair value | - | 1,732 | 1,290 | 3,245 |
| **5) Other** | | | | |
| - notional value | - | - | - | - |
| - positive fair value | - | - | - | - |
| - negative fair value | - | - | - | - |

### A.4 Residual life of OTC financial derivatives: notional values

| Underlying/Residual life | Up to 1 year | From over 1 year to 5 years | Over 5 years | Total |
|---|---|---|---|---|
| A.1 Financial derivatives on debt securities and interest rates | 37,108,093 | 48,913,914 | 10,074,249 | 96,096,256 |
| A.2 Financial derivatives on equity instruments and share indices | 3,836,936 | 6,830,820 | 218,998 | 10,886,754 |
| A.3 Financial derivatives on currencies and gold | 41,563,390 | 137,999 | - | 41,701,389 |
| A.4 Financial derivatives on commodities | 147,743 | 139 | - | 147,882 |
| A.5 Other financial derivatives | - | - | - | - |
| **Total 31/12/2022** | **82,656,162** | **55,882,872** | **10,293,247** | **148,832,281** |
| **Total 31/12/2021** | **62,951,591** | **56,827,761** | **11,805,726** | **131,585,078** |

## B. CREDIT DERIVATIVES

### B.1 Trading credit derivatives: year-end notional values

| Transaction categories | Trading derivatives | |
|---|---|---|
| | on a single party | on several parties (basket) |
| **1. Protection bought** | | |
| a) Credit default products | - | 70,000 |
| b) Credit spread products | - | - |
| c) Total rate of return swaps | - | - |
| d) Other | - | - |
| **Total 31/12/2022** | **-** | **70,000** |
| **Total 31/12/2021** | **-** | **84,000** |
| **2. Protection sold** | | |
| a) Credit default products | - | - |
| b) Credit spread products | - | - |
| c) Total rate of return swaps | - | - |
| d) Other | - | - |
| **Total 31/12/2022** | **-** | **-** |
| **Total 31/12/2021** | **-** | **-** |

### B.2 Trading credit derivatives: gross positive and negative fair value - breakdown by products

| Derivative types | Total 31/12/2022 | Total 31/12/2021 |
|---|---|---|
| **1. Positive fair value** | | |
| a) Credit default products | 411 | 139 |
| b) Credit spread products | - | - |
| c) Total rate of return swaps | - | - |
| d) Other | - | - |
| **Total** | **411** | **139** |
| **2. Negative fair value** | | |
| a) Credit default products | 142 | 2,151 |
| b) Credit spread products | - | - |
| c) Total rate of return swaps | - | - |
| d) Other | - | - |
| **Total** | **142** | **2,151** |

### B.3 OTC trading credit derivatives: notional values, gross (positive and negative) fair value by counterparty

| | Central counterparties | Banks | Other financial companies | Other entities |
|---|---|---|---|---|
| **Contracts not included in netting arrangements** | | | | |
| **1) Protection bought** | | | | |
| – notional value | X | - | - | - |
| – positive fair value | X | - | - | - |
| – negative fair value | X | - | - | - |
| **2) Protection sold** | | | | |
| – notional value | X | - | - | - |
| – positive fair value | X | - | - | - |
| – negative fair value | X | - | - | - |
| **Contracts included in netting arrangements** | | | | |
| **1) Protection bought** | | | | |
| – notional value | 40,000 | 30,000 | - | - |
| – gross positive fair value | 318 | 93 | - | - |
| – gross negative fair value | 117 | 25 | - | - |
| **2) Protection sold** | | | | |
| – notional value | - | - | - | - |
| – gross positive fair value | - | - | - | - |
| – gross negative fair value | - | - | - | - |

### B.4 Residual life of OTC trading credit derivatives: notional values

| Underlying/Residual life | Up to 1 year | From over 1 year to 5 years | Over 5 years | Total |
|---|---|---|---|---|
| 1 Protection sold | - | - | - | - |
| 2 Protection bought | - | 70,000 | - | 70,000 |
| **Total 31/12/2022** | **-** | **70,000** | **-** | **70,000** |
| **Total 31/12/2021** | **-** | **84,000** | **-** | **84,000** |

### B.5 Credit derivatives connected with the fair value option: annual changes

This case is not present for the Group; thus the relevant table has been omitted.

## 1.3.2 Hedge accounting

QUALITATIVE INFORMATION

### A. Fair value hedging

The management of interest rate risk in the Banking Book is carried out centrally by the Parent Company within a specific delegated department, and the primary objective of management decisions is to mitigate the rebalancing of the dynamics of economic value volatility with the volatility of net interest income as the market rate curve changes, in accordance with the provisions of specific regulations (BCBS, EBA and the Bank of Italy).
The Group utilises an integrated Asset Liability Management (ALM) system with the aim of calculating the risk measurements that also include the use of behavioural models and measures, and management tends to pursue a natural compensation for the risks generated by the gaps in liabilities and assets. The items for which hedges are present are above all on-demand items, bond issues, mortgage loans and the securities portfolio.
In regard to the accounting of these hedging relationships:

- demand items are hedged through fair value hedges;

- bonds placed with ordinary customers are hedged via the fair value option, while fair value hedging is used for bonds placed with institutional investors;
- the securities portfolio is usually hedged through fair value hedges (or, in some specific cases, cash flow hedges);
- loans are hedged through fair value hedges.

For further details, please refer to "Section A.2 – Key financial statement items" in Part A of these Notes to the consolidated financial statements.

The price risk of the alternative asset portfolio is monitored on a daily basis and is not hedged.

**B. Cash flow hedging**

Cash flow hedges are extremely limited and only concern certain securities on the balance sheet (these are mainly inflation-linked securities).

**C. Foreign investment hedging**

The only foreign investment hedges made by the Group concern the interest held by Banca Aletti in the subsidiary Banca Aletti & C. (Suisse) S.A., in which the book value is expressed in a currency other than euro (Swiss francs). In the separate financial statements, the hedge directly refers to the interest recorded in Banca Aletti's financial statements, while at the consolidated financial statement level, following on from a process of consolidation, the hedge regards the assets and liabilities of the aforementioned subsidiary.

**D. Hedging instruments**

The main sources of ineffectiveness that could change the hedging relationship during the period of validity are as follows:

- misalignment of the derivative and the hedged underlying recorded on initial designation or subsequently generated, as in the case of repurchases of bond loans;
- inclusion in the effectiveness test of the value of the variable leg of the hedging derivative, in the case of fair value hedges.

During the year, no conditions arose that determined hedge ineffectiveness.

During the year, the Group did not implement any dynamic hedging, as defined by IFRS 7, paragraph 23C.

**E. Hedged items**

Regarding the hedged risks and the relative hedging instruments used, please refer to previous points A and B.
As outlined in Part A of these Notes to the Consolidated Financial Statements, the derivatives can be designated as hedges, provided that the hedging relationship between the hedged instrument and the hedging instruments is formally documented and it is effective at the time the hedge is originated and prospectively throughout its entire life.
The hedge effectiveness depends on the extent to which the changes in the fair value or in the expected cash flows of the hedged instrument are actually offset by those of the hedging instrument. Therefore, effectiveness is measured by comparing said changes, while considering the aim pursued by the entity when the hedge was established.
A hedge is effective (within the limits established as a range of 80% to 125%) when changes in the fair value (or in the cash flows) of the hedging instrument neutralise almost completely the changes in the hedged instrument attributable to the hedged risk.
Subsequent to initial recognition with reference to the partial or total ineffectiveness of the hedging relationships:

- for fair value hedges, the changes in fair value of the hedged element are offset by the changes in fair value of the hedging instrument. Said offset is recognised by charging the changes in value to the income statement, in item "90. Fair value gains/losses on hedging derivatives", referring both to the hedged element (referring to the changes generated by the underlying risk factor), as well as to the hedging instrument. Any resulting difference, which represents the partial ineffectiveness of the hedge, represents the net effect on the income statement. If the hedging relationship ends, the hedged instrument reacquires the measurement approach of the class to which it originally belonged; for instruments measured at amortised cost, the cumulative revaluations/write-downs recognised as a result of changes in fair value of the hedged risk are recognised in the income statement under interest income and expense throughout the residual life of the hedged item, on the basis of the effective interest rate. If the hedged item is sold or repaid, the share of fair value not yet amortised is recognised immediately in the income statement;

- for cash flow hedges, the portion of changes in the fair value of the derivative that is determined to be an effective hedge is recognised in shareholders' equity (item "120. Valuation reserves"), while it is recognised in the income statement only when changes in cash flows to be offset arise in the hedged item. The portion of gains or losses of the hedging instrument that is considered ineffective is charged to the income statement (item "90. Fair value gains/losses on hedging derivatives"). Said portion is equal to any difference between the cumulative fair value of the hedging instrument and the cumulative fair value of the hedged instrument. In any event, the fluctuations in fair value of the hedged item and the related hedge must lie within the 80%-125% range. If the cash flow hedge is no longer considered effective or the hedging relationship is terminated, the total amount of profits or losses on the hedging instrument, previously recognised in "Valuation reserves", is recognised in the income statement only when the hedged transaction will take place or when it is no longer deemed possible that the transaction will take place. In this last circumstance, the profits or losses are transferred from the shareholders' equity item to the income statement item "90. Fair value gains/losses on hedging derivatives".

QUANTITATIVE INFORMATION

# A. FINANCIAL HEDGING DERIVATIVES

## A.1 Financial hedging derivatives: year-end notional values

| Underlying assets/ Derivative types | Total 31/12/2022 | | | | Total 31/12/2021 | | | |
|---|---|---|---|---|---|---|---|---|
| | Over the Counter | | | Organised markets | Over the Counter | | | Organised markets |
| | Central counterparties | Without central counterparties | | | Central counterparties | Without central counterparties | | |
| | | With netting arrangements | Without netting arrangements | | | With netting arrangements | Without netting arrangements | |
| **1. Debt securities and interest rates** | **13,250,704** | **24,201,791** | **500,000** | **-** | **15,909,028** | **13,421,874** | **2,100,000** | **-** |
| a) Options | - | 205,000 | - | - | - | 205,000 | - | - |
| b) Swaps | 13,250,704 | 23,975,753 | 500,000 | - | 15,909,028 | 10,373,833 | 2,100,000 | - |
| c) Forwards | - | 21,038 | - | - | - | 2,843,041 | - | - |
| d) Futures | - | - | - | - | - | - | - | - |
| e) Other | - | - | - | - | - | - | - | - |
| **2. Equity instruments and share indices** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| a) Options | - | - | - | - | - | - | - | - |
| b) Swaps | - | - | - | - | - | - | - | - |
| c) Forwards | - | - | - | - | - | - | - | - |
| d) Futures | - | - | - | - | - | - | - | - |
| e) Other | - | - | - | - | - | - | - | - |
| **3. Currencies and gold** | **-** | **-** | **28,980** | **-** | **-** | **-** | **28,659** | **-** |
| a) Options | - | - | - | - | - | - | - | - |
| b) Swaps | - | - | - | - | - | - | - | - |
| c) Forwards | - | - | 28,980 | - | - | - | 28,659 | - |
| d) Futures | - | - | - | - | - | - | - | - |
| e) Other | - | - | - | - | - | - | - | - |
| **4. Commodities** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **5. Other** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **Total** | **13,250,704** | **24,201,791** | **528,980** | **-** | **15,909,028** | **13,421,874** | **2,128,659** | **-** |

### A.2 Financial hedging derivatives: gross positive and negative fair value - breakdown by products

| Derivative types | Positive and negative fair value | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total 31/12/2022 | | | | Total 31/12/2021 | | | |
| | Over the Counter | | | Organised markets | Over the Counter | | | Organised markets |
| | Central counterparties | Without central counterparties | | | Central counterparties | Without central counterparties | | |
| | | With netting arrangements | Without netting arrangements | | | With netting arrangements | Without netting arrangements | |
| **Positive Fair Value** | | | | | | | | |
| a) Options | - | - | - | - | - | - | - | - |
| b) Interest rate swaps | 855,500 | 1,399,366 | - | - | 91,581 | 104,390 | 6,858 | - |
| c) Cross currency swaps | - | - | - | - | - | - | - | - |
| d) Equity swaps | - | - | - | - | - | - | - | - |
| e) Forwards | - | 696 | - | - | - | 15,756 | - | - |
| f) Futures | - | - | - | - | - | - | - | - |
| g) Other | - | - | - | - | - | - | - | - |
| **Total** | **855,500** | **1,400,062** | **-** | **-** | **91,581** | **120,146** | **6,858** | **-** |
| **Negative Fair Value** | | | | | | | | |
| a) Options | - | - | - | - | - | 33 | - | - |
| b) Interest rate swaps | 538,986 | 946,433 | 536 | - | 171,765 | 146,606 | - | - |
| c) Cross currency swaps | - | - | - | - | - | - | - | - |
| d) Equity swaps | - | - | - | - | - | - | - | - |
| e) Forwards | - | - | 1,455 | - | - | 19 | 1,131 | - |
| f) Futures | - | - | - | - | - | - | - | - |
| g) Other | - | - | - | - | - | - | - | - |
| **Total** | **538,986** | **946,433** | **1,991** | **-** | **171,765** | **146,658** | **1,131** | **-** |

### A.3 OTC financial hedging derivatives: notional values, gross positive and negative fair value by counterparty

| Underlying assets | Central counterparties | Banks | Other financial companies | Other entities |
|---|---|---|---|---|
| **Contracts not included in netting arrangements** | | | | |
| **1) Debt securities and interest rates** | | | | |
| - notional value | X | 500,000 | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | 536 | - | - |
| **2) Equity instruments and share indices** | | | | |
| - notional value | X | - | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | - | - | - |
| **3) Currencies and gold** | | | | |
| - notional value | X | 28,980 | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | 1,455 | - | - |
| **4) Commodities** | | | | |
| - notional value | X | - | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | - | - | - |
| **5) Other** | | | | |
| - notional value | X | - | - | - |
| - positive fair value | X | - | - | - |
| - negative fair value | X | - | - | - |
| **Contracts included in netting arrangements** | | | | |
| **1) Debt securities and interest rates** | | | | |
| - notional value | 13,250,704 | 22,080,071 | 2,121,720 | - |
| - positive fair value | 855,500 | 1,435,786 | (35,724) | - |
| - negative fair value | 538,986 | 892,671 | 53,762 | - |
| **2) Equity instruments and share indices** | | | | |
| - notional value | - | - | - | - |
| - positive fair value | - | - | - | - |
| - negative fair value | - | - | - | - |
| **3) Currencies and gold** | | | | |
| - notional value | - | - | - | - |
| - positive fair value | - | - | - | - |
| - negative fair value | - | - | - | - |
| **4) Commodities** | | | | |
| - notional value | - | - | - | - |
| - positive fair value | - | - | - | - |
| - negative fair value | - | - | - | - |
| **5) Other** | - | - | - | - |
| - notional value | - | - | - | - |
| - positive fair value | - | - | - | - |
| - negative fair value | - | - | - | - |

### A.4 Residual life of OTC financial hedging derivatives: notional values

| Underlying/Residual life | Up to 1 year | From over 1 year to 5 years | Over 5 years | Total |
|---|---|---|---|---|
| A.1 Financial derivatives on debt securities and interest rates | 1,418,061 | 19,968,421 | 16,566,013 | 37,952,495 |
| A.2 Financial derivatives on equity instruments and share indices | - | - | - | - |
| A.3 Financial derivatives on currencies and gold | 28,980 | - | - | 28,980 |
| A.4 Financial derivatives on commodities | - | - | - | - |
| A.5 Other financial derivatives | - | - | - | - |
| **Total 31/12/2022** | **1,447,041** | **19,968,421** | **16,566,013** | **37,981,475** |
| **Total 31/12/2021** | **5,626,813** | **14,114,208** | **11,718,540** | **31,459,561** |

## B. CREDIT HEDGING DERIVATIVES

### B.1 Credit hedging derivatives: year-end notional values

This case is not present for the Group; thus the relevant table has been omitted.

### B.2 Credit hedging derivatives: gross positive and negative fair value - breakdown by products

This case is not present for the Group; thus the relevant table has been omitted.

### B.3 OTC credit hedging derivatives: notional values, gross positive and negative fair value by counterparty

This case is not present for the Group; thus the relevant table has been omitted.

### B.4 Residual life of OTC credit hedging derivatives: notional values

This case is not present for the Group; thus the relevant table has been omitted.

## C. NON-DERIVATIVE HEDGING INSTRUMENTS

### C.1 Hedging instruments other than derivatives: breakdown by accounting portfolio and hedge type

This case is not present for the Group; thus the relevant table has been omitted.

# D. HEDGED INSTRUMENTS

## D.1 Fair value hedges

| | Micro hedges: book value | Micro hedges - net positions: book value of assets or liabilities (before netting) | Micro hedges | | | Macro hedges: Book value |
|---|---|---|---|---|---|---|
| | | | Accumulated changes in the fair value of the hedged instrument | Termination of the hedge: residual accumulated changes in fair value | Changes in value used to calculate hedge ineffectiveness | |
| **A. Assets** | | | | | | |
| **1. Financial assets measured at fair value through other comprehensive income – hedging of:** | **5,351,269** | **-** | **(749,501)** | **-** | **-** | **-** |
| 1.1 Debt securities and interest rates | 5,351,269 | - | (749,501) | - | - | X |
| 1.2 Equity instruments and share indices | - | - | - | - | - | X |
| 1.3 Currencies and gold | - | - | - | - | - | X |
| 1.4 Loans | - | - | - | - | - | X |
| 1.5 Other | - | - | - | - | - | X |
| **2. Financial assets at amortised cost - hedging of:** | **8,636,413** | **-** | **(1,010,672)** | **-** | **-** | **5,476,138** |
| 1.1 Debt securities and interest rates | 8,636,413 | - | (1,010,672) | - | - | X |
| 1.2 Equity instruments and share indices | - | - | - | - | - | X |
| 1.3 Currencies and gold | - | - | - | - | - | X |
| 1.4 Loans | - | - | - | - | - | X |
| 1.5 Other | - | - | - | - | - | X |
| **Total 31/12/2022** | **13,987,682** | **-** | **(1,760,173)** | **-** | **-** | **5,476,138** |
| **Total 31/12/2021** | **16,327,178** | **-** | **(55,707)** | **-** | **-** | **2,875** |
| **B. Liabilities** | | | | | | |
| **1. Financial liabilities at amortised cost - hedging of:** | **2,913,218** | **-** | **(258,001)** | **-** | **-** | **11,386,000** |
| 1.1 Debt securities and interest rates | 2,913,218 | - | (258,001) | - | - | X |
| 1.2 Currencies and gold | - | - | - | - | - | X |
| 1.3 Other | - | - | - | - | - | X |
| **Total 31/12/2022** | **2,913,218** | **-** | **(258,001)** | **-** | **-** | **11,386,000** |
| **Total 31/12/2021** | **1,538,986** | **-** | **(6,694)** | **-** | **-** | **(47,812)** |

### D.2 Cash flow hedges and foreign investment hedges

| | Changes in value used to calculate hedge ineffectiveness | Hedging reserves | Termination of the hedge: residual value of the hedging reserves |
|---|---|---|---|
| **A. Cash flow hedges** | | | |
| **1. Assets** | **-** | **27,655** | **-** |
| 1.1 Debt securities and interest rates | - | 27,655 | - |
| 1.2 Equity instruments and share indices | - | - | - |
| 1.3 Currencies and gold | - | - | - |
| 1.4 Loans | - | - | - |
| 1.5 Other | - | - | - |
| **2. Liabilities** | **-** | **-** | **-** |
| 1.1 Debt securities and interest rates | - | - | - |
| 1.2 Currencies and gold | - | - | - |
| 1.3 Other | - | - | - |
| **Total (A) 31/12/2022** | **-** | **(27,655)** | **-** |
| **Total (A) 31/12/2021** | **-** | **(16,416)** | **-** |
| **B. Foreign investment hedges** | **X** | **(1,475)** | **-** |
| **Total (A+B) 31/12/2022** | **-** | **(29,130)** | **-** |
| **Total (A+B) 31/12/2021** | **-** | **(17,019)** | **-** |

## E. EFFECTS OF HEDGING TRANSACTIONS ON SHAREHOLDERS' EQUITY

### E.1 Reconciliation of shareholders' equity components

| | Cash flow hedging reserve | | | | | Foreign investment hedging reserve | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Debt securities and interest rates | Equity instruments and share indices | Currencies and gold | Loans | Other | Debt securities and interest rates | Equity instruments and share indices | Currencies and gold | Loans | Other |
| **Opening balance** | **(16,416)** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| Fair value changes (effective portion) | (16,789) | - | - | - | - | - | - | - | - | - |
| Reclassifications to income statement | - | - | - | - | - | - | - | - | - | - |
| of which: future transactions no longer expected | - | - | - | - | - | X | X | X | X | X |
| Other changes | 5,550 | - | - | - | - | - | - | - | - | - |
| of which: transfers at the initial book value of hedged instruments | - | - | - | - | - | X | X | X | X | X |
| **Closing balance** | **(27,655)** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |

The table relating to Hedging instruments (non-designated items) is omitted as the category is not present for the Group.

### F. Disclosure envisaged by IFRS 7 relating to the reform of benchmark rates

### Information on risks and related hedging policies - derivative instruments and hedging policies

*Hedge accounting*

Paragraph 24H of standard IFRS 7, introduced by Regulation no. 34 of 15 January 2020, requires a specific disclosure on the uncertainties resulting from the reform of benchmark rates relating to the calculation of interest rates on hedges and the notional value of the hedging instruments potentially impacted by the reform of benchmark rates to be provided. In this regard, note that during the year, all contracts indexed to EONIA interest rates (Euro

OverNight Index Average), including those designated in hedge accounting relationships stipulated with the central counterparty London Clearing House (LCH).
The notional value of the remaining hedging contracts potentially impacted amounted to 1,360 million USD (equal to 1,275.1 million euro) and refers to hedging derivatives index-linked to the "3-month USD LIBOR (London Interbank Offered Rate)".
Specifically, these are interest rate swaps designated as specific fair value hedges of government bonds classified in the portfolio "Financial assets at amortised cost" for a nominal value of 1,350 million USD (1,265.7 million euro) and in the "Financial assets measured at fair value through other comprehensive income" portfolio for a nominal value of 10 million USD (9.4 million euro).
For further details on the disclosure related to the evolution of the reform, please refer to the paragraph entitled "Interest Rate Benchmark Reform ("IBOR Reform")", reported in "Section 5 - Other Aspects" in Part "A - Accounting Policies" of these Notes.

### 1.3.3 Other information on derivatives (trading and hedging)

## A. FINANCIAL AND CREDIT DERIVATIVES

### A.1 OTC financial and credit derivatives: net fair value by counterparty

| | Central counterparties | Banks | Other financial companies | Other entities |
|---|---|---|---|---|
| **A. Financial derivatives** | | | | |
| **1) Debt securities and interest rates** | | | | |
| - notional value | 55,328,688 | - | - | - |
| - net positive fair value | 912,203 | - | - | - |
| - net negative fair value | - | - | - | - |
| **2) Equity instruments and share indices** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |
| **3) Currencies and gold** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |
| **4) Commodities** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |
| **5) Other** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |
| **B. Credit derivatives** | | | | |
| **1) Protection bought** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |
| **2) Protection sold** | | | | |
| - notional value | - | - | - | - |
| - net positive fair value | - | - | - | - |
| - net negative fair value | - | - | - | - |

## 1.4 LIQUIDITY RISK

QUALITATIVE INFORMATION

### Impacts resulting from the Russia - Ukraine war

The Group's liquidity and funding risk profile did not record any impacts directly attributable to the Russia-Ukraine conflict, and remains at levels well above both regulatory and internal thresholds (Risk Appetite Framework and operational limits), showing extensive availability of liquidity reserves and stable funding.

### Impacts resulting from the Covid-19 pandemic

Right from the initial outbreak of the Covid-19 pandemic, with regard to liquidity and funding risks, Banco BPM Group increased the level of monitoring by implementing specific reports on the trends of the major risk factors (e.g. market spreads and customer funding and loan trends). Even faced with these circumstances, from a risk profile perspective, there are no negative impacts of note; both the liquidity and funding risk profiles benefited from the positive trend in customer funding.

### Challenges and impacts related from the current macroeconomic context

Although the macroeconomic scenario has been characterised recently by increasing levels of inflation and interest rates, the Group's risk profile showed robust levels of liquidity and funding, well above the regulatory thresholds and internal limits. In addition, the scenario and the relative impacts on the Group's liquidity and funding position are constantly monitored and reported to the competent corporate bodies.

### A. General aspects, management processes and measurement methods for liquidity risk

Liquidity risk means the risk that the Group is not able to meet its payment commitments, which are certain or envisaged with reasonable certainty. Liquidity risk is usually broken down into two types of risk: (i) liquidity and funding risk, namely the risk that the Group is unable, in the short-term (liquidity) and in the long-term (funding) to meet its payment commitments and its obligations in an efficient manner; (ii) market liquidity risk, namely the risk that the Group is not able to liquidate an asset without incurring losses on the capital account due to the poor depth of the reference market and/or due to the timing with which the transaction must be performed.
In Banco BPM Group, liquidity and funding risk is governed by the "Liquidity, funding risk and ILAAP regulation", which establishes: the roles and responsibilities of the corporate bodies and the corporate functions, the metrics used for risk measurement, the guidelines for conducting stress tests, the Liquidity Contingency Plan and the overall reporting framework related to the Group's liquidity and funding risk.
Liquidity risk is managed and monitored as part of the Internal Liquidity Adequacy Assessment Process (ILAAP), which is the process the Group uses to identify, measure, monitor, mitigate and report its Liquidity risk profile. As part of said process, the Group makes an annual self-assessment regarding the adequacy of the overall liquidity risk management and measurement framework, which also covers governance, methodologies, IT systems, measurement tools and reporting. The results of the risk profile adequacy assessment and the overall self-assessment are reported to the Corporate Bodies and submitted for the attention of the Supervisory Authority.
Liquidity governance is centralised within the Parent Company. Liquidity risk monitoring and control is conducted on a daily (short-term liquidity) and a monthly basis (structural liquidity); its objective is to monitor the evolution of the risk profile by verifying its adequacy with respect to the Risk Appetite Framework and the operating limits envisaged. More specifically, the Group uses a monitoring system that includes short-term liquidity indicators (with a time horizon from intra-day to twelve months) and long-term ones (beyond twelve months). To this end, both regulatory metrics (LCR, NSFR, ALMM) and metrics processed internally, which include the use of estimation models of behavioural and/or optional parameters, are adopted. In addition, stress tests are conducted on a monthly basis, in order to test the Group's ability to withstand unfavourable scenarios, and, on a quarterly basis, the estimates of the liquidity that can be generated with the countermeasures (so-called action plan, an integral part of the Liquidity Contingency Plan) that can be activated when a stress scenario occurs, are updated.
In 2022, the liquidity and funding profile of Banco BPM Group was found to be adequate, complying with both internal and regulatory risk limits.

The monitoring of all ordinary activities related to the measurement, monitoring and reporting of the Group's exposure to liquidity and funding risks was maintained, including Supervisory Reporting and periodic dialogue with the JST. In addition, activities related to the implementation of the improvement actions envisaged by the ILAAP 2022 Action Plan were carried out, including the set-up of periodic simulations of the SSM Liquidity Exercise and of periodic reporting of ESG impacts on liquidity and funding risk, the extension of Data Quality controls and the closure of critical issues opened by the control functions.
Lastly, during the third quarter, the Group participated in the SSM Liquidity Exercise, with positive results in terms of punctuality, completeness and accuracy of the information provided.

### Outcomes of internal validation activities

The Internal Validation Function conducts qualitative and quantitative analyses to assess the soundness and accuracy of liquidity risk estimates. Furthermore, as regards ILAAP, the Function expresses an opinion on the regular functioning, on the predictive capacity, on the performance and on the prudence of the internal methodologies for measuring liquidity and funding risks. The latest analyses carried out in 2022 did not highlight any particular aspects of improvement.

QUANTITATIVE INFORMATION

## 1. Distribution of financial assets and liabilities by residual duration of the contracts. Currency of denomination: Euro

| Items/Time bands | On demand | From over 1 day to 7 days | From over 7 days to 15 days | From over 15 days to 1 month | Over 1 month to 3 months | From over 3 months to 6 months | From over 6 months to 1 year | From over 1 year to 5 years | Over 5 years | Unlimited duration |
|---|---|---|---|---|---|---|---|---|---|---|
| **On-balance sheet assets** | **18,723,700** | **2,035,025** | **790,389** | **2,271,884** | **4,602,109** | **5,724,145** | **10,718,573** | **56,343,791** | **48,885,937** | **1,417,618** |
| A.1 Government securities | 73,915 | - | - | - | 900,000 | 450,000 | 2,260,904 | 9,894,525 | 15,020,508 | - |
| A.2 Other debt securities | 45,046 | - | 10,525 | 40,316 | 94,735 | 108,694 | 143,639 | 2,834,936 | 3,877,771 | 2,768 |
| A.3 UCIT units | 1,118,148 | - | - | - | - | - | - | - | - | - |
| A.4 Loans | 17,486,591 | 2,035,025 | 779,864 | 2,231,568 | 3,607,374 | 5,165,451 | 8,314,030 | 43,614,330 | 29,987,658 | 1,414,850 |
| - Banks | 595,464 | 252,130 | 592,488 | 811,880 | 89,935 | 135,378 | 27,859 | 671,291 | - | 1,315,805 |
| - Customers | 16,891,127 | 1,782,895 | 187,376 | 1,419,688 | 3,517,439 | 5,030,073 | 8,286,171 | 42,943,039 | 29,987,658 | 99,045 |
| **On-balance sheet liabilities** | **105,777,153** | **7,699,456** | **39,765** | **26,103** | **316,264** | **10,554,132** | **3,433,116** | **28,399,318** | **3,153,022** | **-** |
| B.1 Deposits and current accounts | 102,813,397 | 21,364 | 11,697 | 21,814 | 99,288 | 68,344 | 64,366 | 37,006 | 3,541 | - |
| - Banks | 134,682 | 12,001 | - | - | - | 7,025 | 13,149 | - | - | - |
| - Customers | 102,678,715 | 9,363 | 11,697 | 21,814 | 99,288 | 61,319 | 51,217 | 37,006 | 3,541 | - |
| B.2 Debt securities | 132,388 | 69 | 64 | 87 | 154,463 | 1,503,403 | 1,211,561 | 12,329,654 | 2,500,338 | - |
| B.3 Other liabilities | 2,831,368 | 7,678,023 | 28,004 | 4,202 | 62,513 | 8,982,385 | 2,157,189 | 16,032,658 | 649,143 | - |
| **Off-balance sheet transactions** | | | | | | | | | | |
| C.1 Financial derivatives with exchange of capital | | | | | | | | | | |
| - Long positions | - | 1,537,126 | 1,034,198 | 2,203,690 | 5,104,558 | 5,957,756 | 6,035,169 | 233,576 | 48,298 | - |
| - Short positions | 155,000 | 1,148,124 | 970,265 | 1,947,317 | 5,286,389 | 5,776,058 | 5,921,318 | 171,610 | 61,111 | - |
| C.2 Financial derivatives without exchange of capital | | | | | | | | | | |
| - Long positions | 2,574,324 | 663 | 3,431 | 9,375 | 49,610 | 92,087 | 281,534 | - | - | - |
| - Short positions | 2,726,411 | 556 | 384 | 5,189 | 36,326 | 62,725 | 233,154 | - | - | - |
| C.3 Deposits and loans to be received | | | | | | | | | | |
| - Long positions | 27,690,591 | - | - | - | - | - | - | - | - | - |
| - Short positions | - | 27,690,591 | - | - | - | - | - | - | - | - |
| C.4 Irrevocable commitments to disburse funds | | | | | | | | | | |
| - Long positions | - | 216,002 | - | - | - | - | - | - | - | - |
| - Short positions | 216,002 | - | - | - | - | - | - | - | - | - |
| C.5 Financial guarantees given | 123,713 | 89 | 158 | 1,039 | 6,288 | 13,077 | 51,828 | 209,368 | 86,992 | - |
| C.6 Financial guarantees received | - | - | - | - | - | - | - | - | - | - |
| C.7 Credit derivatives with exchange of capital | | | | | | | | | | |
| - Long positions | - | - | - | - | - | - | - | - | - | - |
| - Short positions | - | - | - | - | - | - | - | - | - | - |
| C.8 Credit derivatives without exchange of capital | | | | | | | | | | |
| - Long positions | 411 | - | - | - | - | - | - | - | - | - |
| - Short positions | 142 | - | - | - | - | - | - | - | - | - |

## 2. Distribution of financial assets and liabilities by residual duration of the contracts. Currency of denomination: other currencies

| Items/Time bands | On demand | From over 1 day to 7 days | From over 7 days to 15 days | From over 15 days to 1 month | Over 1 month to 3 months | From over 3 months to 6 months | From over 6 months to 1 year | From over 1 year to 5 years | Over 5 years | Unlimited duration |
|---|---|---|---|---|---|---|---|---|---|---|
| **On-balance sheet assets** | **245,872** | **21,638** | **38,082** | **142,996** | **219,503** | **97,952** | **125,609** | **2,309,275** | **2,807,750** | **1,472** |
| A.1 Government securities | 12,997 | - | - | - | - | - | 47,043 | 1,736,392 | 2,615,167 | - |
| A.2 Other debt securities | 2,791 | - | 9,376 | 153 | 93,889 | 10,807 | 4,589 | 169,350 | 42,429 | - |
| A.3 UCIT units | 102,074 | - | - | - | - | - | - | - | - | - |
| A.4 Loans | 128,010 | 21,638 | 28,706 | 142,843 | 125,614 | 87,145 | 73,977 | 403,533 | 150,154 | 1,472 |
| - Banks | 86,663 | 1,155 | 2,348 | 149 | 998 | - | - | - | - | - |
| - Customers | 41,347 | 20,483 | 26,358 | 142,694 | 124,616 | 87,145 | 73,977 | 403,533 | 150,154 | 1,472 |
| **On-balance sheet liabilities** | **1,148,225** | **1,052,605** | **1,603,070** | **1,372,758** | **5,439** | **303** | **2,677** | **-** | **774** | **-** |
| B.1 Deposits and current accounts | 923,714 | 189,744 | 43,799 | 9,919 | 5,439 | 303 | 2,677 | - | - | - |
| - Banks | 116,059 | 189,744 | 43,323 | 9,162 | 3,801 | - | 1,961 | - | - | - |
| - Customers | 807,655 | - | 476 | 757 | 1,638 | 303 | 716 | - | - | - |
| B.2 Debt securities | - | - | - | - | - | - | - | - | - | - |
| B.3 Other liabilities | 224,511 | 862,861 | 1,559,271 | 1,362,839 | - | - | - | - | 774 | - |
| **Off-balance sheet transactions** | | | | | | | | | | |
| C.1 Financial derivatives with exchange of capital | | | | | | | | | | |
| - Long positions | - | 1,229,763 | 1,018,489 | 2,045,527 | 5,546,609 | 5,704,836 | 5,702,939 | 83,484 | 31 | - |
| - Short positions | - | 1,626,481 | 1,045,312 | 2,289,221 | 5,309,221 | 5,863,552 | 5,791,366 | 54,802 | 31 | - |
| C.2 Financial derivatives without exchange of capital | | | | | | | | | | |
| - Long positions | 34,663 | - | 545 | 126 | 136 | 28 | 59 | - | - | - |
| - Short positions | 36,565 | - | - | 1,265 | 11,561 | 7,595 | 46,366 | - | - | - |
| C.3 Deposits and loans to be received | | | | | | | | | | |
| - Long positions | 442,557 | - | - | - | - | - | - | - | - | - |
| - Short positions | - | 442,557 | - | - | - | - | - | - | - | - |
| C.4 Irrevocable commitments to disburse funds | | | | | | | | | | |
| - Long positions | - | 138 | 2,991 | 258 | 1,744 | 150 | - | - | - | - |
| - Short positions | - | 5,280 | - | - | - | - | - | - | - | - |
| C.5 Financial guarantees given | 26 | - | - | - | 2,344 | 3,545 | 2,861 | 2,813 | - | - |
| C.6 Financial guarantees received | - | - | - | - | - | - | - | - | - | - |
| C.7 Credit derivatives with exchange of capital | | | | | | | | | | |
| - Long positions | - | - | - | - | - | - | - | - | - | - |
| - Short positions | - | - | - | - | - | - | - | - | - | - |
| C.8 Credit derivatives without exchange of capital | | | | | | | | | | |
| - Long positions | - | - | - | - | - | - | - | - | - | - |
| - Short positions | - | - | - | - | - | - | - | - | - | - |

As outlined in "Part E – Section 2 – Risks of Prudential Consolidation – 1.1 Credit risk – C. Securitisation transactions", Banco BPM has subscribed to securities that can be used for refinancing transactions with the ECB or for repurchase agreements with market counterparties, against "self-securitisation" transactions generated by Group companies or banks. The "self-securitisation transactions" outstanding as at 31 December 2022 are shown below.

## Self-securitisation transactions

| SPE | Originator | Issue Date securities | Transaction | Type of securitisation |
|---|---|---|---|---|
| **Self-securitisation transactions not derecognised from the financial statements** | | | | |
| BPL Mortgages S.r.l. | Banco BPM | December 2012 | BPL Mortgages 5 | Performing residential mortgage loans |
| ProFamily SPV S.r.l. | Banco BPM (former ProFamily) | February 2021 | ProFamily | Consumer credit |
| BPL Mortgages S.r.l. | Banco BPM | April 2022 | BPL Mortgages 8 | Mortgage, landed, agricultural and other loans granted to performing SMEs |

### New transactions of the period

### Securitisation of mortgage, landed, agricultural and other loans granted to small and medium-sized enterprises – BPL Mortgages 8 (April 2022)

On 29 March 2022, with the signature of the relative contracts, Banco BPM sold to the SPE BPL Mortgages S.r.l. a portfolio of mortgage, landed, agricultural and other loans, disbursed in favour of small and medium-sized enterprises for a sale value (including accruals) of 2,459.5 million, carrying out a new securitisation called "BPL Mortgages 8". On 27 April 2022, to fund the purchase of the loans, the SPE issued two classes of securities: (i) Class A (Senior Notes), rated, listed on the ExtraMOT PRO segment of Borsa Italiana and (ii) Class J (Junior Notes), unrated and unlisted. Both classes of securities were subscribed by Banco BPM and the Senior Securities are currently used by Banco BPM as collateral for Eurosystem monetary policy transactions.

As part of this transaction, the Originator, Banco BPM, took on the role of Servicer, managing the collection of receivables and also acts as Interim Account Bank and Transaction Bank.

*Loans portfolio*

| Bank | Value 31/12/2022 | Value 13/03/2022 (*) |
|---|---|---|
| Banco BPM | 1,764,993 | 2,459,487 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*
*(*) Economic effects of the sale from the valuation date of 14 March 2022 included (first day of the SPE), legal effects from the date of signature of the sale agreement (29 March 2022).*

*Issue characteristics*

| Class | Type | Issue value | Value 31/12/2022 | Interest rate | Maturity | Rating Moody's/DBRS (*) |
|---|---|---|---|---|---|---|
| A | Senior | 1,800,000 | 1,299,499 | 3-month Euribor + 0.7%(1) | October 2064 | A2/A |
| J | Junior (2) | 656,397 | 656,397 | Additional Return | October 2064 | unrated |
| | **Total** | **2,456,397** | **1,955,896** | | | |

*(1) In any event, this interest rate cannot be higher than 1.7%.*
*(2) Unlisted Junior Securities.*
*(*) Rating as at 31 December 2022.*

*Accessory financial transactions*

The structure of the transaction envisaged the establishment of an initial Cash Reserve of 72 million, constituted at the date of issue of the securities mainly through the disbursement of a subordinated loan totalling 67 million by Banco BPM. Subsequent to the issue date, the Target Cash Reserve Amount was 4% of the outstanding amount of the Class A notes (with a minimum amount of 7.2 million). On the Interest Payment Date of 25 October 2022, in compliance with the order of priority of payments and within the limits of the available funds, the SPE, inter alia, repaid the principal of the subordinated loan of 6.9 million, partly paid the interest on the subordinated loan of 390 thousand euro. As at 31 December 2022, the subordinated loan amounted to 60.1 million and the residual interest accrued and unpaid by the SPE was 407 thousand euro.

### Existing and significant self-securitisation transactions during 2022

### Securitisation of residential mortgage and landed loans – BPL Mortgages 5 (December 2012)

The securitisation transaction was originated by Banco Popolare and Credito Bergamasco, now both Banco BPM, and was finalised in a number of phases. On 7 December 2012, with the signature of the relative contracts, the Originator Banks sold an initial portfolio of performing residential landed and mortgage loans to the SPE BPL Mortgages S.r.l. for a sale value (including accruals) of 2,505.2 million and on 21 December 2012, the SPE issued two classes of bonds.
Subsequently, portfolio restructuring was carried out, which resulted in the sale/repurchase of loans and the issue of additional notes.
The Senior Securities are listed on the Irish Stock Exchange. All Classes of Securities are subscribed by Banco BPM and the Senior Securities are used by Banco BPM as collateral for Eurosystem monetary policy transactions.
As part of this transaction, the Originator Banks, now Banco BPM, took on the role of Servicer, managing the collection of receivables; Banco BPM also has the role of Interim Account Bank and Transaction Bank.

*Loans portfolio*

| Bank | Value 31/12/2022 | Value 31/12/2021 |
|---|---|---|
| Banco BPM | 2,320,169 | 2,633,424 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

*Issue characteristics*

| Class | Type | Issue value | Value 31/12/2022 | Interest rate | Maturity | Rating Moody's/DBRS (*) |
|---|---|---|---|---|---|---|
| A1 | Senior | 2,440,400 | 372,796 | 1-month Euribor + 0.3% | October 2058 | Aa3/AA |
| B1 | Junior (1) | 1,148,455 | 392,765 | Additional Return | October 2058 | unrated |
| A2 | Senior | 995,100 | 323,671 | 1-month Euribor + 0.25% | October 2058 | Aa3/AA |
| A3 | Senior | 1,504,300 | 723,447 | 1-month Euribor + 0.25% | October 2058 | Aa3/AA |
| B3 | Junior (1) | 69,670 | 69,670 | Additional Return | October 2058 | unrated |
| | **Total** | **6,157,925** | **1,882,349** | | | |

*(1) Unlisted Junior Securities.*
*(*) Rating as at 31 December 2022.*

*Accessory financial transactions*

The structure of the transaction envisaged the establishment of a Cash Reserve of 64 million, constituted mainly through the disbursement, which took place on 21 December 2012, of a subordinated loan totalling 60 million by the Originator Banks, now Banco BPM.

As part of the transaction restructuring that took place during 2019, on 14 March 2019, the cash reserve was further increased by 24.6 million via the disbursement by Banco BPM, of a limited loan of the same amount.

*Other information*

In February 2022, the rating agency DBRS upgraded the rating of the Class A1, Class A2 and Class A3 Senior Securities from "AH" to "AA”.

### Consumer credit securitisation – ProFamily SPV (February 2021)

On 16 December 2020, ProFamily S.p.A., now Banco BPM, with the signature of the relative contracts, sold a portfolio of performing consumer loans to the SPE Profamily SPV S.r.l. for 958.5 million. On 24 February 2021, the

SPE issued two classes of Securities: (i) Class A (Senior Notes), rated, listed on the ExtraMOT PRO segment of Borsa Italiana and (ii) Class J (Junior Notes), unrated and unlisted. Both classes of securities were subscribed in full by the Originator ProFamily S.p.A., now Banco BPM; the Senior securities are currently used by Banco BPM for monetary policy transactions with the Eurosystem. During the revolving period, the SPE purchased a further four portfolios of performing consumer loans from ProFamily.
As part of the transaction, the Originator ProFamily, now Banco BPM, acted as Servicer to manage the collection of the loans.

*Loans portfolio*

| Bank | Value 31/12/2022 | Value 31/12/2021 |
|---|---|---|
| Banco BPM (former ProFamily S.p.A.) | 469,013 | 783,955 |

*The amounts indicated represent performing, unlikely to pay, non-performing past due and bad loans, net of the relative write-down provisions, amortised cost, including mortgage loan instalments.*

*Issue characteristics*

| Class | Type | Issue value | Value 31/12/2022 | Interest rate | Maturity | Rating DBRS/Fitch (*) |
|---|---|---|---|---|---|---|
| A | Senior | 860,000 | 374,549 | 1% per annum | December 2040 | AA/AA |
| J | Junior (1) | 100,932 | 100,932 | 5% per annum | December 2040 | unrated |
| | **Total** | **960,932** | **475,481** | | | |

*(1) Unlisted Junior Securities.*
*(*) Rating as at 31 December 2022.*

*Other information*

The rating of the Senior Class A Notes was increased (i) from “AH” to “AA” on 22 February 2022 by the rating agency DBRS and (ii) from “A+” to “AA” on 7 November 2022 by the rating agency Fitch.

## 1.5 BANKING GROUP - OPERATIONAL RISKS

### Impacts resulting from the Russia-Ukraine war

From the operational risk perspective, the Russia-Ukraine war has led to a potential increase in the emergence of cyber security & IT risk which, however, the Bank adequately oversees and monitors thanks to its internal control systems. In this regard, access to the bank’s online systems was further strengthened.
In this regard, information relating to the cyber attacks suffered by the Bank was also shared with the system (CERTFin).

### Impacts resulting from the Covid-19 pandemic

Banco BPM Group proactively managed the Covid-19 health emergency, with a view, first and foremost, to safeguarding the health of all of the people involved in its business activities (employees, customers, suppliers etc.), as well as guaranteeing adequate business continuity, in accordance with the provisions of the laws in force at that time.
In terms of operational risk, the pandemic did not have any extraordinary effects, with the exception of those relating to updating operating processes (cost of specific sanitisation equipment, increase of digitalisation to enable customers and employees to work remotely etc.).

QUALITATIVE INFORMATION

## A. General aspects, management processes and measurement methods for operational risk

*Type of risk*

Operational risk is defined as the risk of losses suffered as a result of inadequacy or malfunction of procedures, human resources and internal systems, or of external events. Losses resulting from fraud, human error, interruption of operations, non-availability of systems, contractual breaches and natural disasters are included in this type of risk. Operational risk also encompasses legal risk, while strategic and reputational risks are not included.

*Risk sources*

The main sources of operational risk are: the low reliability of operational processes - in terms of effectiveness/efficiency - internal and external frauds, operational mistakes, the qualitative level of physical and logical security, inadequate IT structure compared to the size of operations, the growing recourse to automation, the outsourcing of corporate functions, a limited number of suppliers, changes in strategies, incorrect personnel management and training policies and finally social and environmental impacts.

*Risk management model and organisational structure*

Banco BPM Group fully adopts the Traditional Standardised Approach to calculate capital requirements for all companies that make up the Supervised Group, while with regard to the other qualitative-quantitative elements envisaged by Supervisory Regulations, as requested by the ECB, it meets all of the requirements of the CRR (Regulation (EU) no. 575/2013) for the TSA, as well as those envisaged by the above-mentioned AMA in Articles 321 (points b-e) and 322 (points b-f).

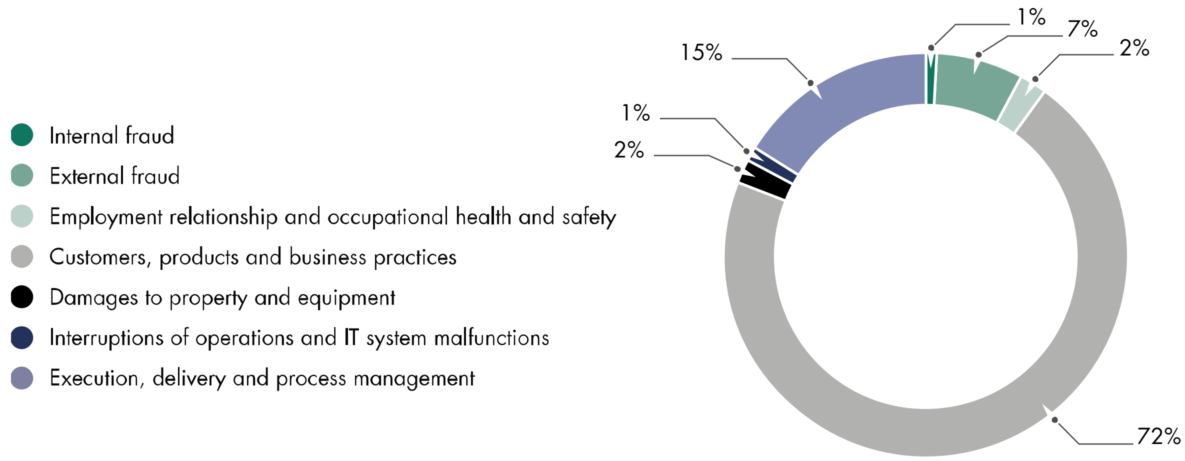
Also in compliance with the relevant regulations, the Group adopted an operational risk management model that illustrates the management methods and the people involved in risk identification, measurement, monitoring, mitigation and reporting. In particular, the model refers to centralised oversight functions (governance and control functions) and decentralised oversight functions (coordinators and ORM contacts, which are specifically involved in the key processes of collecting operating loss data, continuously assessing the operating scenario and forecasting exposure to risk). This model is governed by a specific Group Regulation approved by the Corporate Bodies.
Banco BPM Group adopts a reporting model, consisting of a management IT system for the Corporate Bodies and Top Management (significant losses and related recoveries, overall assessment of the risk profile, RAF indicator profile, capital absorption and risk management policies implemented and/or planned) and an operational reporting system, for the purposes of adequate risk management in the relevant areas.

In line with mission of Banco BPM Group, the main risk impacts regard the “Commercial practices” category, followed by “Processes”, which together represent the predominant portion of total risk and which, for the most part, arise in the Group’s sales networks. With reference to the category of “External Fraud”, given the trend of increasingly sophisticated techniques (e.g. identity theft, cyber risk phenomena, etc.), the Group is constantly reinforcing physical and logical security, therefore containing these phenomena both in terms of frequency and the average impact on loss events of this kind. The Group takes the appropriate mitigating measures (e.g. training, implementation of application processes/procedures etc.) as protection against the main risk factors that arise.

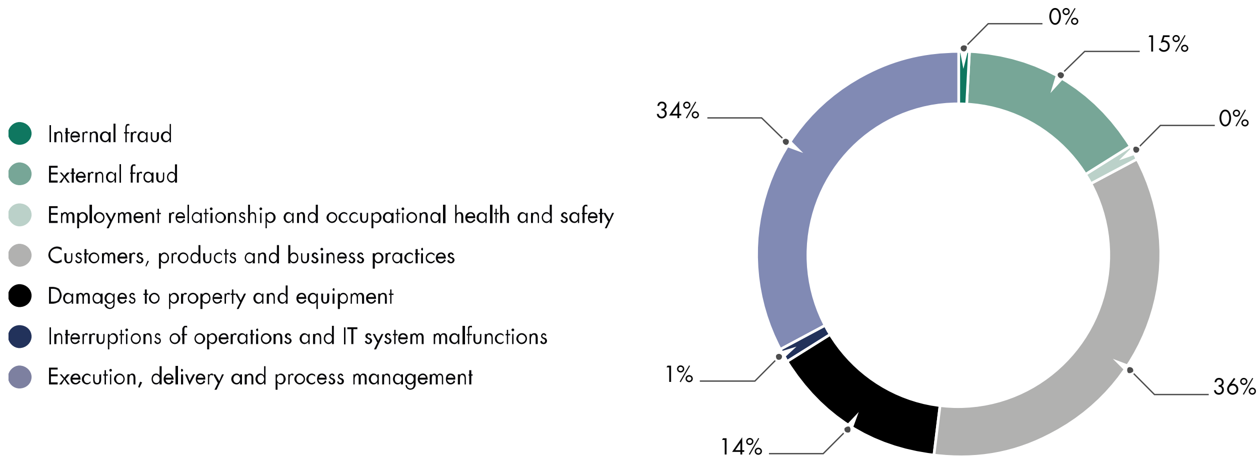
QUANTITATIVE INFORMATION

Regarding the sources of operational risk, an analysis was conducted with reference to operational risk events, with a gross loss greater than or equal to 200 euro (minimum materiality threshold) and with a reporting date of 1 January 2013 or later.
The loss data in question, recorded in the Group's Loss Collection management archive, have been broken down by type of event, with views by impact and by number of events, according to the event classification standards provided by the Regulator.

**Breakdown by impact**




**Breakdown by number of events**




The analysis of the graphs reveals that the main event categories in terms of impact relate to:

- commercial practices, with losses resulting from failures to meet professional obligations towards customers or from the nature or characteristics of the product or service provided. The category in question includes operational risk impacts connected to the diamond situation;
- processes, with losses related to errors/inefficiencies/delays in the execution, delivery and management of processes;
- external crimes, with losses due to fraud, undue appropriation or infringement of the law by parties outside the Bank, including phenomena relating to cyber risk.

### Validation activities

In the area of Operational Risk, the Internal Validation Unit oversees the management framework and the calculation of Pillar II risks through annual audits of measurement metrics. In particular, the stability, robustness and uncertainty of the model, the consistency of the calculation dataset, through independent repeat tests and checks during the Loss Data Collection and Risk Self Assessment campaign, compliance with current regulatory requirements and best-practices are continuously verified. On the basis of the checks conducted, the Internal Validation unit addresses specific suggestions to the competent departments and monitors the solution in order to ensure the high standards of quality and reliability in risk management are maintained.
Moreover, during the ICAAP process, the stress scenarios and methods applied to the entire scope of the Group are verified.

## Section 3 - Risks to insurance companies

### Impacts deriving from the Covid-19 pandemic and the Russia-Ukraine conflict

Since the initial spread of the Covid-19 pandemic, with reference to the risks related to the insurance business, a series of extraordinary periodic monitoring activities of solvency and liquidity have been launched in compliance with the requirements of the Regulator.
The current geo-political context, and in particular the risk of a large-scale evolution of the conflict, has generated considerable uncertainty on the financial markets, causing a correction of all risk-on assets.
The delicate situation and the increasing sanctions by Western countries against Russia, combined with the monetary policy decisions implemented by Central Banks worldwide, and in particular by the European Central Bank, which led to a substantial increase in benchmark interest rates, in order to combat rising inflation, led Banco BPM Vita and Banco BPM Assicurazioni to implement appropriate monitoring actions and to adopt the measures needed to guarantee the continuity and positive management of the business. Even considering the typical risks associated with the sector in question, at present there are no critical elements relating to business management and it should be noted that there are no material exposures in the portfolios of Banco BPM Vita and Banco BPM Assicurazioni towards Russia, Belarus or the Ukraine.

LIFE BUSINESS - QUALITATIVE INFORMATION

The main risk factors of the life insurance portfolio (Banco BPM Vita) are linked to underwriting risks, which can be classified into:

- biometric risks, i.e. risks linked to the uncertainty of the assumptions considered in the measurement of insurance liabilities, such as mortality and longevity rates;
- operational risks, i.e. risks deriving from the uncertainty of the amount of expenses and the exercise of contractual options by policyholders.

More specifically, life underwriting risks are divided into the following types of sub-risk:

- Mortality risk: risk of losses or of an unfavourable change in the value of insurance liabilities, deriving from an increase in mortality rates;
- Longevity risk: risk of losses or unfavourable changes in the value of insurance liabilities, deriving from a decrease in mortality rates;
- Lapse risk: risk of loss or unfavourable change in the value of insurance liabilities, due to a change in the exercise rates of lapse options (surrender, reduction, suspension of the policy) by policyholders;
- Expense risk: risk of loss or unfavourable change in the value of insurance liabilities, due to a change in the expenses incurred for the management of insurance contracts;
- Catastrophe risk: risk of loss or unfavourable change in the value of insurance liabilities, deriving from changes in claims due to extreme and exceptional events.

With regard to the calculation of the solvency capital requirement, the risks of the Company are quantified on the basis of the standard formula, according to the methodology defined by the reference regulations. More specifically, the capital requirement for life underwriting risk is calculated by aggregating, using the correlation coefficients, the Solvency Capital Requirements (SCR) determined for each risk sub-module described above (mortality, longevity, surrender, expense and catastrophe).
Life underwriting risks are monitored through the calculation and subsequent control of specific risk indicators defined in the Risk Appetite Framework (RAF). In particular, the exposure to life underwriting risks is mainly linked to the trend of surrender risk, which is also monitored through the quarterly calculation of a specific indicator, namely the surrender frequency.

LIFE BUSINESS - QUANTITATIVE INFORMATION

The following tables provide details on the amount of the mathematical reserves as at 31 December 2022 of the life portfolio broken down by contractual maturity intervals and by minimum guaranteed return.

| Mathematical reserve: maturities | 31/12/2022 | % |
|---|---|---|
| Up to 1 year | 268,943 | 4% |
| 1 - 5 years | 1,998,781 | 33% |
| 6 - 10 years | 1,244,606 | 21% |
| 11 - 20 years | 1,746,702 | 29% |
| Over 20 years | 754,331 | 13% |
| **Total** | **6,013,363** | **100%** |

| Mathematical reserve: annual return guarantee | 31/12/2022 | % |
|---|---|---|
| 0% - 1% | 3,656,847 | 80% |
| 1% - 2% | 833,216 | 18% |
| 2% - 3% | 36,889 | 1% |
| 3% - 4% | 46,809 | 1% |
| > 4% | - | - |
| **Total** | **4,573,760** | **100%** |

As shown in the previous tables, the mathematical reserves of the life portfolio are mainly concentrated on medium and medium/long-term maturities (from 1 to 5 years and from 11 to 20 years) and on annual return guarantees of between 0% and 1%.
The breakdown by maturity of the financial liabilities, represented by the assets hedging the commitments deriving from other insurance products, is shown in the following table:

| Mathematical reserves: maturities | Maturity < 12 months | Maturity > 12 months | Total |
|---|---|---|---|
| Other liabilities to policyholders | 222,590 | 4,351,170 | 4,573,760 |
| **Total** | **222,590** | **4,351,170** | **4,573,760** |

In addition, in relation to the life business segment, the concentration of gross direct premiums is reported separately for Class I and Class III.

| Gross premium | 31/12/2022 | % |
|---|---|---|
| CLASS I | 613,443 | 75% |
| CLASS III | 199,538 | 25% |
| **Total** | **812,982** | **100%** |

Lastly, the underwriting risk sub-modules determined using the standard formula, calculated as at 31 December 2022, are shown. In this regard, it should be noted that lapse risk is the main driver of underwriting risk.

| Life Underwriting risk | 31/12/2022 |
|---|---|
| Mortality risk | 5,867 |
| Longevity risk | 651 |
| Lapse risk | 113,669 |
| Expense risk | 7,560 |
| Catastrophe risk | 4,103 |
| **Total** | **119,203** |

NON-LIFE BUSINESS - QUALITATIVE INFORMATION

The main risk factors typical of the non-life insurance portfolio (Banco BPM Assicurazioni) are underwriting risks, which may depend on an inadequate estimate of the frequency and/or severity of the claims considered in the tariff-setting and reserving phase, the risk of early surrender by policyholders and losses deriving from extreme or exceptional events.
More specifically, non-life underwriting risks are divided into the following types of sub-risk:

- Premium risk: risk of insufficiency of insurance premiums to cover the cost of claims and related contractual expenses, deriving from changes in the frequency and/or severity of claims;
- Reserve risk: risk of insufficiency of technical reserves with respect to a time horizon of one year, deriving from unfavourable fluctuations in the payment of claims;
- Surrender risk: risk of loss or unfavourable change in the value of insurance liabilities, due to a change in surrender rates by policyholders;
- Catastrophe risk: risk of loss or unfavourable change in the value of insurance liabilities, deriving from changes in claims due to extreme and exceptional events.

The main risk mitigation technique used for the non-life portfolio is reinsurance, which aims to optimise the use of capital by selling part of the underwriting risk to selected counterparties.

NON-LIFE BUSINESS - QUANTITATIVE INFORMATION

The following tables show the changes in claims by generation and the value of the claims reserve in the financial statements as at 31 December 2022 in relation to the classes in which the Company operates.

| Claims Reserve | 2018 | 2019 | 2020 | 2021 | 2022 | Total |
|---|---|---|---|---|---|---|
| As at 31/12 of year X | 3,267 | 3,113 | 2,075 | 3,364 | 3,677 | - |
| As at 31/12 of year X + 1 | 1,449 | 1,273 | 1,770 | 1,339 | - | - |
| As at 31/12 of year X + 2 | 692 | 640 | 816 | - | - | - |
| As at 31/12 of year X + 3 | 392 | 241 | - | - | - | - |
| As at 31/12 of year X + 4 | 162 | - | - | - | - | - |
| Cumulative claims paid | 4,973 | 4,943 | 3,881 | 3,321 | 1,986 | 19,104 |
| Claims reserve as at 31/12/2022 | 162 | 241 | 816 | 1,339 | 3,677 | 6,235 |
| Closing claims reserve of previous years | | | | | | 1,249 |
| **Total Claims Reserve as at 31/12/2022** | | | | | | **7,483** |

Lastly, the non-life and health underwriting risk sub-modules determined using the standard formula, calculated as at 31 December 2022, are shown.

| Non-life Underwriting risk | 31/12/2022 |
|---|---|
| Premium & Reserve risk | 13,173 |
| Lapse risk | 8,669 |
| Cat risk | 4,252 |
| **Total** | **17,169** |

| Health NSTL | 31/12/2022 |
|---|---|
| Premium & Reserve risk | 6,379 |
| Lapse risk | 2,166 |
| Cat risk | 230 |
| **Total** | **6,798** |

## 3.2 FINANCIAL RISKS

LIFE BUSINESS - QUALITATIVE INFORMATION

When conducting its life business, the Company (Banco BPM Vita) is required to invest the premiums collected in a variety of financial assets, mostly long-term, with the main objective of guaranteeing the return expected by policyholders, honouring its future commitments. The main risks to which the Company is exposed therefore derive from market risks which may result in losses or unfavourable changes in the financial situation due to fluctuations in the market value of the assets in the financial statements.

More specifically, the market risks of the life business are divided into the following types of sub-risk:

- Interest rate risk: risk of loss or unfavourable changes in the market value of bonds, deriving from changes in the term structure of interest rates or in the level of volatility of the same;
- Equity risk: risk of loss or unfavourable changes in the market value of shares, due to changes in the level or volatility of share prices;
- Real estate risk: risk of loss or unfavourable changes in the market value of real estate, deriving from changes in the level or volatility of real estate market prices;
- Exchange rate risk: risk of loss or unfavourable changes in the market value of securities in foreign currency, deriving from changes in the level or volatility of exchange rates;
- Spread risk: risk of loss or unfavourable changes in the market value of assets, due to changes in credit spreads with respect to the term structure of the risk-free rate;
- Concentration risk: risk of losses due to an insufficient diversification of the counterparties to which the Company is exposed.

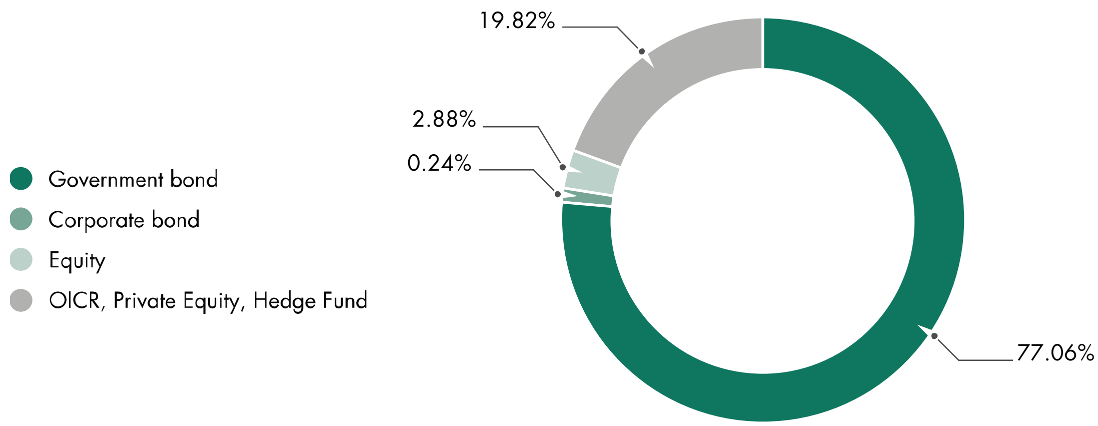
With regard to market risks, the Company does not use any specific mitigation techniques, but rather monitors these risk factors through the calculation and subsequent control of risk indicators defined in the Risk Appetite Framework (RAF). In particular, given the composition of the asset portfolio, the Company is particularly exposed to the concentration risk of government bonds. This risk is monitored by calculating a specific indicator.

LIFE BUSINESS - QUANTITATIVE INFORMATION

### Exposure to concentration risk

The following table shows the breakdown by asset class of the investment portfolio relating to the life business as at 31 December 2022 with an indication of the duration (data prepared according to national accounting standards).

| Financial assets | 31/12/2022 | % | Duration |
|---|---|---|---|
| Government bonds | 3,528,492 | 77.06% | 4.95 |
| - of which Italy | 2,939,032 | 64.19% | 4.87 |
| Corporate bonds | 11,210 | 0.24% | 0.05 |
| Equity | 131,916 | 2.88% | 0.00 |
| UCITS, Private Equity, Hedge Funds | 907,352 | 19.82% | 0.00 |
| **Total** | **4,578,970** | **100.00%** | **4.93** |




As shown in the previous table, investments in the life insurance segment are exposed to concentration risk. An analysis of the government bonds segment shows that the percentage weight of investments in Italian government bonds out of total investments in government bonds represents 64.2%.

Below are the Company's market risk modules determined using the standard formula as at 31 December 2022.

| Market risk | 31/12/2022 |
|---|---|
| Interest rate risk | 12,102 |
| Equity risk | 60,243 |
| Real estate risk | 2,929 |
| Spread risk | 13,912 |
| Exchange rate risk | 3,810 |
| Concentration risk | - |
| **Total** | **81,595** |

## Exposure to interest rate risk

The sensitivity to the fair value of the portfolio of financial assets with respect to a parallel movement of the curve of +/- 100 basis points determines a negative/positive change in the securities portfolio of -155.4/+171.3 million respectively, as shown below:

| Financial assets | 31/12/2022 | % | +100 bps | -100 bps |
|---|---|---|---|---|
| Fixed rate bonds | 3,420,863 | 100% | 3,265,471 | 3,592,188 |
| Floating rate bonds | - | - | - | - |
| **Total** | **3,420,863** | **100%** | **3,265,471** | **3,592,188** |

## Exposure to equity risk

65% of the life investment portfolio is comprised by investments in equities, with the remaining 35% in equity investment funds. The sensitivity of the equity portfolio to a deterioration in share prices of 10% has an impact on the book value of 20.4 million.

| Financial assets | 31/12/2022 | % | -10% |
|---|---|---|---|
| Equity securities in financial companies | 26,492 | 12.98% | 23,842 |
| Equity securities in non-financial companies | 106,482 | 52.18% | 95,834 |
| Funds | 71,106 | 34.84% | 63,995 |
| **Total** | **204,079** | **100.00%** | **183,671** |

NON-LIFE BUSINESS - QUALITATIVE INFORMATION

When conducting its non-life business, Banco BPM Assicurazioni makes investments in financial assets, generally short-term, in line with the maturities of the non-life portfolio and thus exposing itself to market risk.
However, unlike the investments made for the life portfolio, almost all of the non-life portfolio is invested in government bonds, so in terms of market risk, this portfolio is mainly exposed to interest rate risk.

NON-LIFE BUSINESS - QUANTITATIVE INFORMATION

### Exposure to concentration risk

The following table shows the breakdown by asset class of the investment portfolio relating to the non-life business as at 31 December 2022 with an indication of the duration. Note that all securities in the portfolio are Italian government bonds (data prepared according to Italian accounting standards).

| Financial assets | 31/12/2022 | % | Duration |
|---|---|---|---|
| Government bonds | 51,894 | 100.00% | 1.99 |
| of which Italy | 51,894 | 100.00% | 1.99 |
| Total | 51,894 | 100.00% | 1.99 |

### Exposure to interest rate risk

The sensitivity to the fair value of the portfolio of financial assets with respect to a parallel movement of the curve of +/- 100 basis points determines a positive/negative change in the securities portfolio of -979/+1,016 thousand euro, as shown below.

| Financial assets | 31/12/2022 | % | +100 bps | -100 bps |
|---|---|---|---|---|
| Fixed rate bonds | 51,895 | 100.00% | 50,916 | 52,911 |
| Floating rate bonds | - | - | - | - |
| **Total** | **51,895** | **100.00%** | **50,916** | **52,911** |

## OTHER RISKS

### Liquidity risk

Liquidity risk is the risk deriving from the inability to efficiently meet expected and unexpected cash commitments, or to be able to meet them only through access to the credit market at adverse conditions or by liquidating financial assets at a considerable discount.

The objective of Banco BPM Vita and Banco BPM Assicurazioni is to ensure an adequate and sufficient levels of capital and liquidity to guarantee all commitments that the insurance companies are responsible for. To achieve this, the exposure to liquidity risk is calculated using a specific indicator, called the Liquidity Ratio, which compares the available resources and the resources needed over a medium/short-term time horizon, monitoring their performance and compliance with specific thresholds defined as part of the Risk Appetite Framework (RAF).

### Operational Risk

Operational risk is the risk of losses deriving from inefficiencies of people, processes and systems, including those used for online sales, or from external events, such as fraud or the activity of external suppliers. In general, operational risks may also have effects on reputational aspects, therefore the management of operational risks is also considered to potentially impact the mitigation of reputational risks.

Operational risk management by Banco BPM Vita and Banco BPM Assicurazioni is conducted through the identification and qualitative and, if possible, quantitative assessment, on an annual basis, of the various categories of operational risks (e.g. shortcomings linked to outsourcing of activities, violations of the security of IT systems by third parties, insufficiency of internal or external human resources, non-fulfilment of regulatory obligations, errors or omissions in accounting or financial transactions, violation of the obligation of data quality, theft, fraud and improper use of assets by third parties). Depending on the frequency and impact of the event, the various operational risk factors identified are quantified on the basis of a standardised scale of values, envisaging the implementation of appropriate risk mitigation activities where necessary.

## Section 4 - Other company risks

No significant additional risks are reported for the remaining companies falling within the consolidation scope that are not part of the Banking Group or of insurance companies. As regards the Group's real estate companies, including those acquired following credit restructuring arrangements, note that the book value at which said real estate is recognised is consistent with the value stated in specific appraisals and valuations.
The risk of impairment of real estate assets is in any event covered by a specific capital requirement - in terms of credit risk - which the Group calculates in accordance with regulatory methods. Furthermore, the Risk Function uses internal operational methods to check the adequacy of the regulatory capital requirement vis-à-vis real estate risk on a quarterly basis.